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How external management consultants add value in IS strategy in the public sector

A thesis submitted to

University of Dublin, Trinity College

For the degree of Doctor of Philosophy

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DECLARATION

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Edmond J. Cussen
Trinity College, Dublin
3rd. March 2009

ABSTRACT

Information systems (IS) can transform an organisation and there are now many business models which are fundamentally defined by technology. Despite the success stories, IS initiatives have been prone to failures which are exemplified by public sector experience in the USA where losses due to IS failures have exceeded $50 billion in a single year. Private and public sector organisations have typically made IS investment and resourcing decisions on the basis of IS strategies which have, understandably, been an area of focus for academic IS researchers over several decades. Research in the IS field has shown that failures in IS strategy are rarely attributable to technology. Failure is much more likely to stem from people or process issues. Against this background, it is striking that academic research in IS strategy formation has focused to a far greater extent on the methodologies and tools used in IS strategy formation and has paid far less attention to the participants in the process and their roles.

Research into participants in IS strategy formation has centered on top management, business management, and IS management. The contribution of external management consultants has not been the subject of specific inquiry. A UK Government agency (CCTA), which is charged with responsibility for policies and approaches to the beneficial use of IS and telecommunications by government, has suggested that external management consultants can make a positive contribution to public sector organisations who are engaged in IS strategy formation. The corresponding government agency in Ireland (CMOD) has also adopted a positive attitude to the employment of management consultants in IS strategy formation and it has published guidelines to the public sector on their effective use. Research has shown that management consultants are employed by public sector agencies in Ireland in 80% of the IS strategy formation initiatives surveyed. Another Irish government agency, which has a Constitutional responsibility for the oversight of public expenditure, conducted an investigation which found it difficult to assess what contribution consultants make to the public sector or how that contribution can be optimised. The academic community has also judged that, despite the very large and growing expenditures on management consultants, the nature of their contribution continues to be ambiguous.

A three-year, longitudinal investigation, involving three partnering organisations from central government in Ireland, was carried out for the purpose of developing an exploratory contribution to theory on how external management consultants add value in IS strategy formation in the public sector. The research employed qualitative methods although the research paradigm is a functionalist one. Analysis of data from three case studies revealed four distinct modes of management consultancy

contribution in IS strategy formation. These contribution modes were *Ally*, *Broker*, *Innovator*, and *Engineer*. The analysis also uncovered a number of distinctive characteristics of each of the contribution modes which enabled a typology of management consultancy contribution to be developed from the analysis. The analysis showed that top managers, business managers, IS managers, and external management consultants exhibited diverging degrees of association with each of the four modes of contribution. The research provided an original contribution to knowledge in the academic IS field. The research has also provided a synthesis of a number of previous theoretical perspectives which will provide a baseline for future research. The new research typology will also provide a valuable template and diagnostic tool for those charged with responsibility for IS strategy formation in the public sector in the future.

DEDICATION

To Anne, my wife, for her love, encouragement and support throughout the years.

To my son James and my daughter Helen for their love and sense of humour at all times.

To my late parents, Jim and Kathleen whose lives and experience were an inspiration always.

To my siblings Anne, Jim, and Jean.

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ABBREVIATIONS

ALSA	Actor's Logics Systems Analysis
AP	Assistant Principal
BASIS	Business Access to State Services
BICS	Business Information Control Study
BPR	Business Process Re-engineering
BSO	Business Systems Option
BSP	Business Systems Planning
CCS	Central Computing Service
CCTA	Central Computing and Telecommunications Agency
CCTS	Criminal Case Tracking System
CDPS	Central Data Processing Service
CICS	Customer Information Control System
CIO	Chief Information Officer
CITS	Centre for Information Technology Services
CMOD	Centre for Management and Organisational Development
CRLC	Customer Resource Lifecycle
CRM	Customer Relationship Management
CSF	Critical Success Factors
CSO	Central Statistics Office
CvCTS	Civil Case Tracking System
DBG	Delivering Better Government
DFSA	Department of Social & Family Affairs
EAS	Electronic Access Service
EDP	Electronic Data Processing
ERP	Enterprise Resource Planning
FCPS	Fixed Charge Processing System
HEO	Higher Executive Officer
HRM	Human Resource Management
ICIS	International Conference on Information Systems
IMAS	Information Management Advisory Service
IMI	Irish Management Institute
IPA	Institute of Public Administration

IPR	Intellectual Property Rights
IS	Information Systems
ISPU	Information Society Policy Unit
ITES	Information Technology Expenditure Section
ITRIS	Integrated Title Registration System
ITT	Invitation to Tender
ITTEC	IT & Telecommunications Executive Committee
MIS	Management Information Systems
NPM	New Public Management
NTMA	National Treasury Management Agency
OASIS	Organisation for the Advancement of Structured Information
OD	Organisational Development
OECD	Organisation for Economic Co-operation and Development
PAC	Public Accounts Committee
PAS	Public Appointments Service
PETRIS	Process Enhanced Title Registration Information System
PPARS	Personnel Payroll and Related Systems
PPP	Public Private Partnership
PRA	Property Registration Authority
PRINCE	Projects in a Controlled Environment
PROMIS	Prosecutors Management Information System
PSORG	Public Service Organisation Review Group
PULSE	Police Using Leading Systems Effectively
RAMIS	Registry of Deeds Abstract Management Information System
ROS	Revenue Online Service
SISP	Strategic Information Systems Planning
SMI	Strategic Management Initiative
SSADM	Structured Systems Analysis and Design Method
SWOT	Strengths Weaknesses Opportunities and Threats
TLAC	Top Level Appointments Commission
TQM	Total Quality Management

1 INTRODUCTION

"Learn from yesterday, live for today, hope for tomorrow. The important thing is not to stop questioning".

Albert Einstein, Physicist (1879 – 1955)

1.1 Introduction

Information systems have been important to mankind from the earliest scholarly texts to the complex technologies underlying the super-computers of the early twenty-first century. The study of information systems (IS) has continued to be an important academic pursuit as we continue to expand the horizons of human achievement in this area. The importance of the pursuit of knowledge in the field is underscored by the continuing importance which practitioners in IS have attached to the strategic use of IS over the years. The challenges for practitioners have increased as systems have become more complex and their impact has become more pervasive since the first IS emerged more than half a century ago. Early visions of IS offered opportunities to change the way organisations worked and these visions have been overtaken by systems which have changed the very nature of businesses. The public sector has also been transformed by IS as governments and public agencies strive to deliver on visions of e-government and e-democracy. The challenge of managing IS has also increased as the scope and scale of systems grows.

This first chapter sets out the basis for an investigation into IS strategy formation in the Irish public sector. The research centres on the contribution which external management consultants make in the process. The rationale for investigating this particular topic is outlined as well as the limitations attaching to the work. A number of key definitions are included in the chapter as an aid to interpretation of the later text.

1.2 Research Background

The information systems (IS) field is relatively new and has been evolving since its emergence in the 1960's (Hirschheim and Klein 2003). Reflections on the status of the field were obscured through the first two decades by the rush of technological success and innovation (Keen 1980). As the IS field entered the 1980's, no coherent cumulative research tradition had emerged and the absorption of IS

into other 'more clearly-defined' disciplines was a possibility although, at that point, distinct technical, managerial, and technical constituencies had emerged (Keen 1980).

The debate on the legitimacy of the IS field has continued post-millennium despite the fact that there is now "*an identifiable academic field with academic departments, journals, and conferences*" (King and Lyytinen 2004:541). Contributions in the IS field have come from management science, organisational science, and computer science although there continues to be concern that the absence of an intellectual core exposes the field to potential absorption into other disciplines (Adam and Fitzgerald 2000). The colonisation of other reference disciplines was essential in establishing the legitimacy of the IS field with other academic communities but IS researchers will need to ensure that the IS dimensions of their contributions are brought to the forefront if legitimacy is to be deepened (Benbasat and Zmud 2003). The IS field is set apart from the earlier reference disciplines by the focus of IS researchers on socio-technical phenomena which are distinctive to the field and are exemplified by Lynne Markus' (1983) research on resistance to IS implementation (Baskerville and Myers 2002). The IS field has made considerable progress over the years; it has made a mark on other fields of management, and has the potential to become a reference discipline for other fields (Wade, Biehl et al. 2006). The recent 'dot.com' failure and the growth of 'offshoring' of IS are contributing to some of the pessimism around the future of the academic field despite the successes (Hirschheim and Klein 2003). Baskerville & Myers (2002) suggest that the field has already achieved reference status.

It is now fifty years since Leavitt and Whistler (1958:41) pondered on the organisational and social implications of the new '*information technology*' for managers. The intervening years have seen information systems evolve into complex socio-technical systems (McBride 1998; Ciborra 2002) with the capability to integrate value chains, provide short-term competitive advantage and global management capability (Porter 2001). Information systems can transform an organisation (Reponen 1994) and there are many recent examples of business models which are "*fundamentally defined by technology*" (Ward and Peppard 2002:51).

Despite the undoubted successes, some 50% of private and public sector IS initiatives fail, while only 10% are delivered on time or within budget (McDonagh 2004). The failures include large-scale programmes of change supported by high levels of investment and management consultancy participation, as exemplified by a number of published studies (Currie 1994; Oz 1994; Rocheleau 2001). More recent research has shown that the risk of failure increases as the scale of the IS project becomes larger (Kappelman, McKeeman et al. 2006; Goldfinch 2007). The success rate for IS projects in the public sector in the USA is 18%, while it is 27% in the financial sector and 59% in the

retail sector (Goldfinch 2007). The Internal Revenue Service in the US has managed a series of IS failures costing taxpayers $50 billion per year (Goldfinch 2007). Failures in IS projects are *'almost never'* due to technical causes but are more often the result of people and process issues, with lack of top management support or commitment being ranked as the top warning sign of failure (Kappelman, McKeeman et al. 2006:32).

The impact of IS in organisations can be wide-ranging and the challenges in managing IS investments are considerable for both the technologists and the business managers. The successes in IS have been considerable but the scale of sub-optimal outcomes can also be wide ranging. It is not surprising that IS strategy formation has been an enduring area of concern for executives for many years (Brancheau and Wetherbe 1987; Galliers, Merali et al. 1994f; Brancheau, Janz et al. 1996; Luftman and McLean 2004).

Data from the public sector have shown that IS strategy formation in the sector is also a risky undertaking (McDonagh 2004; Goldfinch 2007). However, The Central Computing and Telecommunications Agency (CCTA), a UK government organisation, has suggested that external management consultants can contribute positively to public sector organisations in IS strategy formation settings. The endorsement of management consultancy by a UK government agency should not be surprising when one considers that management consultancy had become a feature of public administrations in many Western countries following the adoption of the New Public Management (NPM) philosophy in the 1980's (Saint-Martin 1998). The Irish Comptroller & Auditor General shows less certainty about the utility of management consulting in the Irish public sector. In the past decade he has observed that it is difficult to ascertain what contribution consultants make or how their contribution can be optimised (Comptroller 1998). The academic community has also asserted that there are almost no studies of the role of consultants in public administration (Saint-Martin 1998). Irish government expenditure estimates for 2008 anticipate that €22 million will be spent on 'expert analysis and advice' from management consultants (Department of Finance 2008). The amount expended on management consulting services by government is assumed to be significantly higher because of the fact that consultancy expenditure on software development and implementation or on major investment programmes is not included in the 'consultancy' estimate (Department of Finance 2006b). The combined UK and Irish consulting market for 2005 was just less than £15 billion which provides an indication of the expenditure in the overall sector.

Global fee revenue in the management consulting sector grew from $3 billion in 1980 to an expected $125 billion in 2005 (Fincham and Clark 2002; Kennedy Information 2004). It would be reasonable to

assume that a sector of this magnitude would have become a focus of academic inquiry. However, it has been suggested that the research endeavours before the late 1990's emanated from academics with a consultancy background who were motivated by self-interest and enhancement of the image of the consultancy profession (Bloomfield and Danieli 1995; Alvesson and Johansson 2002). The literature has become more balanced in recent years. A large body of academic research, which emerged after the 1990's, has been conducted from a critical perspective. Many of the contributions to this stream of research have been categorised as 'extreme' and 'categorical' (Alvesson and Johansson 2002).

The statistics of failure in IS implementation, allied with the polarisation of the academic research community, provide little comfort for a chief executive on the cusp of a large-scale IS strategy formation programme involving external management consultants. Doubt about the nature of management consultancy contribution in IS strategy formation raises major questions about the utility of public sector expenditures in this area and suggests that greater certainty on the topic is necessary.

1.3 Research Question

The research is exploratory and will be directed towards the development of a robust theory of how external management consultants contribute in IS strategy formation in the public sector.

The research endeavour is centred on how the external management consultancy constituency contributes to, or shapes, the IS strategy process as it unfolds within the organisational context.

The academic literature on management consulting includes two contrasting perspectives. These perspectives range from an uncritical literature, which tends to affirm the profession, to a critical literature, which examines the exploitative strategies used by consultants to take advantage of their clients. The current research is based in the former perspective in which management consultants' 'contribution' is analysed as a value-adding activity. While this approach tends to narrow the focus of the research, the researcher judged this approach to be warranted, in view of the dearth of previous research in the topic.

The investigation is based on the proposition that the strategy 'process' can be defined as "*a pattern in a stream of actions*" (Mintzberg and Waters 1985b:257). The researcher was persuaded by Mintzberg's (1985b) rationale that patterns of actions are more representative of organisational strategies than decisions, which are merely intentions which may not be realised. The focus of process research therefore is not on individual decisions, but on "*patterns of decisions and actions that*

accumulate over time" (Chakravarthy and White 2002:183). The research is also based on the premise that strategy can be both rational and emergent so that it is composed of both deliberate and unintended activities (Mintzberg and Waters 1985b).

IS strategy has been conceptualised as occurring through both a 'formal-rational' mode and a 'power-behavioural' mode (Waema and Walsham 1990b). IS strategy formation has also been characterised as a "*complex, socially-located activity*" (Horton and Dewar 2001:1). The 'formal-rational' school focuses on planning and analytical approaches and is not particularly concerned with contextual or behavioural factors (Waema and Walsham 1990b). A meaningful investigation of the strategy process will be required to attend to historical and contextual factors (Chakravarthy and White 2002). The investigation sets out from a position that IS strategy formation is a socio-political process and that aspects of the organisation context are germane to the research.

1.4 Research Contribution

Firstly, the current investigation will make an original contribution to academic knowledge in the field of IS. A member of the IS research community in the UK has observed that "*relatively little attention has been paid in the academic IS literature to the study of consultants and their work*" (Jones 2003:258). Research on the IS strategy formation process has also been sparse (Allen and Wilson 2003). The main focus of academic researchers has been on normative and prescriptive work suggesting what *should* be done rather than examining what *is* done in practice (Hann and Weber 1996; Horton and Dewar 2001). The IS strategy process can be conceptualised in terms of both methodologies/tools and participants/roles (Smits, Van der Poel et al. 1997). The latter of these, participant influence and behaviour, has received relatively little attention in published empirical research. Kappelman, McKeeman et al (2006) have asserted that failures in IS projects are more likely to emanate from people or process issues rather than technology. A review of the literature, conducted during the course of this research initiative, found that empirical investigations of participant influence and behaviour in IS strategy formation numbered nineteen such studies in the period from 1985 to 2006 (Appendix 2.1). None of these studies set out to examine the contribution of external management consultants in the process although nine of the studies did refer to the involvement of consultants in the process. Most of the studies refer to private sector organisations. This finding bears out an earlier assertion that much of the empirical research in IS strategy formation has been conducted in the private sector (Allen 1995). The absence of empirical research on external management consultants' contribution to IS strategy formation in the public sector represents a gap in the literature which the current investigation sets out to address.

Secondly, the current investigation will make a contribution to the community of practice. A survey of Irish government departments and state agencies in 2004, which was carried out as part of the current investigation, showed that almost 80% of central government respondents had used the services of external management consultants in their IS strategy formulation projects. The high level of utilisation of external management consultants contrasts with the earlier finding of the Irish Comptroller & Auditor General that it was "*very difficult to establish what contribution consultancies make to the quality of public services, or how that contribution can be maximised*" (Comptroller 1998:37). The research endeavour reported here is based on the experience of three Irish public sector organisations which are subject to the oversight of the Comptroller & Auditor General. Accordingly, the investigation responds to a specific, real-world need for greater clarity on how external professional advisers contribute in IS strategy formation initiatives in which they are involved.

It would be wrong to assume that the research is only relevant to the community of practice in Ireland. A recent large-scale survey of IS management concerns in the USA found that more than 300 IS managers ranked IS strategy formation as the second most important issue[1] facing them (Luftman and McLean 2004).

Thirdly, the research will make an original contribution to the field of management consulting research. Researchers in that field have acknowledged that, although there has been an exponential increase in the presence and role of consultants, the exact nature of their contribution to client organisations remains ambiguous (Buono 2002). The value of management consulting is also difficult to measure and research in the field lacks relevance to the world of practice (Kieser 2002). The combined Irish and UK market for management consulting in 2005 was £15 billion (Kennedy Information 2006) which underlines the relevance of the research to organisational decision makers.

The research addresses a gap in knowledge which has been acknowledged by academics in both the IS and management consulting fields as requiring attention. It also focuses on an area in which a central government agency in Ireland has acknowledged as one where there is an absence of information about the utility of public expenditure on management consulting.

1.5 Methodology

A comprehensive review of the academic literature in IS, management consulting, and research approaches suggested to the researcher that the investigation should be conducted from an exploratory

[1] The top issue in the survey was IS and business alignment (Luftman and McLean 2004)

perspective with no particular hypothesis to be tested or no particular candidate theory under consideration. The investigator also chose to make methodological decisions on the basis of the research problem to be resolved rather than on any preconceived preferences (Bonoma 1985; Smith 1990).

It is now well established that IS are socio-technical systems and, as such, an inductive approach is best suited to the investigation of social phenomena (Hirschheim 1985; Trauth 2001). Accordingly, the research into how management consultants contribute in IS strategy formation in the public sector is conducted using qualitative methods. The IS strategy process is at the centre of the investigation which suggested that a processual focus would be required to capture the full range of activities and influences involved.

Longitudinal comparative case studies have been a characteristic of strategy process research because case studies provide the researcher with the opportunity to search for holistic patterns within and between cases (Pettigrew 1997). The use of case studies also provides the investigator with an opportunity of capturing the knowledge of practitioners, observing how context and change interact, and generating new theory from practice (Benbasat, Goldstein et al. 1987). The approach has also been found to be particularly appropriate in the IS field where research is frequently playing catch-up with developments in the community of practice (Benbasat, Goldstein et al. 1987; Dube and Pare 2003). A case study approach is considered appropriate in exploratory, theory building research (Eisenhardt 1989).

A review of the academic literature on management consulting showed that the research tradition in the field is composed of both a 'functionalist' tradition and a 'critical' tradition (Fincham and Clark 2003a). The functionalist tradition focuses on maximising effectiveness and identifying practical theories and frameworks for practice (Fincham 1999). The critical theorists focus on the strategies and techniques used by consultants to persuade their clients (Fincham and Clark 2003a). Critical theorists are concerned with the value of consultancy to the client (Fincham and Clark 2003a). The current research endeavour adopts a functionalist or traditional perspective because of the lack of previous research in the Irish public sector setting.

A survey of IS strategy formation practice in the Irish public sector was carried out in 2004 to assess the feasibility of conducting the research in central government departments and agencies. The survey results, together with meetings with senior officials in the policy making departments, were used to build support for the research and identify candidate case study sites. Three partner organisations were

chosen as research sites. The fieldwork in the three partnering organisations was completed in a two and a half year period between January 2005 and May 2007 and a total of 43 interviews were conducted with senior managers from four management constituencies. These were top managers, senior business managers, IS managers, and external management consultants. The researcher was able to draw on his own contemporaneous notes of IS strategy decisions and actions over a twenty year period in one of the case study organisations (Cussen 1984 - 2004).

1.6 Structure of the Thesis

The thesis is presented in eight chapters with supporting appendices, lists of figures, and a bibliography. The thesis structure was chosen in order to set out the material in a logical sequence which would best help the reader to gain an understanding of choices made and conclusions reached in the course of the research endeavour. The chapter headings and content are summarised at Figure 1.1.

Chapter 1 provides the background to the research, the research question, the research contribution and other introductory material.

Chapter 2 reviews the IS strategy literature which is relevant to the research and sets out a number of cumulative streams of research which have emerged over the lifetime of the IS field.

Chapter 3 provides a review of the management consultancy literature. Whereas the IS literature is the primary area of focus, the management consultancy literature is also relevant to the research.

Figure 1.1 – Thesis Structure

Chapter	Chapter Title	Chapter Content
1	Introduction	Research question and background
2	IS Strategy Formation	Review of the IS Literature
3	The Advice Business	Review of the Management Consulting Literature
4	The Choice of Method	Rationale behind the methodology choices
5	The Approach to Inquiry	Description of the Investigation
6	IS Strategy in the Irish Public Sector	The Public Sector Context and Case Study Narratives
7	Management consultants contribution in IS Strategy Formation	Analytical Outcome and Theoretical Context
8	Conclusions & Implications	Conclusions and Implications of the Findings

Chapter 4 reviews the methodological options for the investigation and sets out the rationale for the choices made between the alternative approaches. The chapter is specific on the philosophical underpinning of the research and the theoretical foundations upon which it is based.

Chapter 5 describes the practical conduct of the research task. It recounts how candidate research sites were approached and selected; how data acquisition took place, and how the analysis was conducted.

Chapter 6 begins with a context-setting piece describing the public sector context, within which the case study organisations operate, and their origins, structure, and governance. The chapter contains three longitudinal narratives of the IS strategy formation experience in the three case study organisations. The chapter ends with a summary and analysis of the three cases.

Chapter 7 sets out the findings of the cross-case analysis and elaborates on the framework by reference to the case data. The existing theory from both the IS and the management consultancy literature is revisited to seek support or disconfirmation on the basis of the new theory emerging from the research.

Chapter 8 examines the implications of the research findings for theory and practice. The chapter also looks at the limitations of the research and at what opportunities exist for further related research in the field.

1.7 Definitions

1.7.1 Information Systems (IS)

Information systems broadly defined, include the alignment of information technology, business strategy, management processes, people and structure embedded in organisations as a whole (Hsiao and Ormerod 1998:23).

1.7.2 IS Strategy

IS strategy defines the organisations requirement or demand for information and systems to support the overall strategy of the business. It is firmly grounded in the business, taking into consideration both the competitive impact and alignment requirements of IS/IT. Essentially, it defines and prioritises the investments required to achieve the ideal applications portfolio, the nature of the benefits expected and the changes required to deliver these benefits within the constraints of resources and system interdependencies (Ward and Peppard 2002:44).

1.7.3 Strategic IS Planning (SISP)

Strategic IS planning (SISP) is the process of identifying a portfolio of computer-based applications that will assist an organisation in executing its business plans and consequently realising its business goals (Lederer and Sethi 1988:446).

1.7.4 Strategy

Strategy is a pattern in a stream of actions, not decisions, since the latter represent intention (Mintzberg and Waters 1985b:257).

1.7.5 IS Strategy Context

IS strategy context can be defined as phenomena at different levels that affect and are affected by the strategy process (Walsham and Waema 1994:154).

1.7.6 Process

A process is a sequence of events that describes how things change over time (Van de Ven 1992:169). A process is a pattern that is seen in reference to time (Monge, Farace et al. 1984:22).

1.7.7 Consulting

Consulting includes any activity that has as its main apparent justification the giving of advice to organisational participants about how to improve the effectiveness of organisations or specific individuals in them (March 1991:21).

1.8 Delimitations of Scope

Firstly, the research focus was confined to identifying the contribution that external management consultants make in the course of IS strategy formation in the three case study organisations.

Secondly, all three partnering organisations were 'transaction processing' departments or agencies (Clince, Blennerhassett et al. 1992) and no policy making or specialist public sector departments or agencies were amongst the chosen cases.

Thirdly, each of the case study organisations had begun and completed a formal IS strategy development project with management consultancy assistance in the years preceding the researcher's

investigation. This meant that there was a considerable focus on the deliberate strategy formation activities although the researcher adopted an inclusive approach.

Fourthly, interviewees in the case study organisations were at management grades or higher. Lower grades were not interviewed although they would sometimes be included in the consultation process during an IS strategy assignment in the public sector. Their overall level of engagement in the process would be low.

Finally, all the management consulting organisations, who were involved in the research, were well-known global consulting organisations. Smaller local consulting organisations were not represented amongst the case study sites although some conducted engagements in central government departments and agencies.

1.9 Conclusion

Chapter 1 has outlined the basis and justification for the investigation which unfolds in the following chapters. It has also acknowledged the limitations attaching to the research. A summary of the thesis structure and some key definitions have been provided to facilitate the reading of what follows. Chapter 2 turns to a review of the scholarly literature on the topic of IS. The chapter has been structured around the major themes in the field to provide a level of synthesis of the material. The chapter ends with a summary of the academic contributions which bear most directly on the research topic.

2 IS STRATEGY FORMATION

"The universe as we know it is a joint product of the observer and the observed"

Teilhard De Chardin, Philosopher (1851 – 1955)

2.1 Introduction

This chapter contains a review of the academic literature in the information systems (IS) field to ascertain the present state of academic knowledge of how external management consultants contribute in IS strategy formation.

The chapter begins by tracing the evolution of the field over the past fifty years and noting its roots in the academic reference disciplines of computer science, management science, and organisation science. The early part of the chapter refers to the geographic polarisation of the field between the largely positivist tradition in North America versus the movement towards an interpretive orientation in Europe. The IS field has also been preoccupied with the so-called 'anxiety debate' amongst those who fear a dissolution of the existing IS field back to its roots in the reference disciplines because of the lack of a distinct theoretical IS core emerging.

The second major focus of the chapter is on the fragmented nature of the field in which five distinct streams of research have developed. The third of these relates to information systems management which is at the centre of the present investigation. It is in this third stream of research that the contribution of external management consultants in IS strategy formation is located. Before turning to the literature in this area, the literature on organisational strategy is referenced in order to consider aspects of organisational theory which have become central to the study of IS strategy formation.

A number of academic researchers in the IS field have adopted a contextualist perspective in order to better understand the IS strategy process. A contextualist analysis decomposes strategy into its content, context and process dimensions in order to understand the interaction between the individual dimensions and their totality. The literature review also adopts this approach and the content, context and process literatures are presented and the major lines of investigation in each of the areas are set out.

The current research is concerned primarily with the process dimension of IS strategy and the literature in this dimension tends to focus on (a) methodologies/tools and (b) participants/roles. The methodologies and tools used in IS strategy formation have been the major focus of academic investigation although the present research is focused on the participants in IS strategy formation, with special emphasis on external management consultants.

The penultimate sections of the review bring together the IS literature of how the different management stakeholders contribute in IS strategy formation. Each constituency is considered in turn ending with the external management consultancy constituency. The chapter ends by examining critical perspectives which include managerialism and management consultancy discourse.

2.2 IS - an evolving domain

IS first became a focus for academia just a half century ago when Leavitt and Whistler published a seminal article in which they speculated on the implications of the new technology for management and organisations (Leavitt and Whistler 1958). The novelty of the technology was such that the authors were obliged to coin the term *information technology* for readers' convenience. The first academic programmes in IS began in the 1960's and other landmarks followed with the publication of major IS journals in the late 1970's and the launching of the International Conference on Information Systems (ICIS) in 1980 (Avgerou, Siemer et al. 1999). There was a sense that the speed of developments in the world of practice outstripped the academic community who had to play 'catch up'. The challenges for academia and practitioners alike can be inferred from Peter Keen's (1980:10) observation that "*MIS*[2] *has been rushed along by a combination of successful innovations in technology*".

By 1980, IS faculty had become established in business schools and "*behavioural, managerial, and technical camps*" had emerged although no cumulative research tradition had become established (Keen 1980:10). The early IS field was also hindered by the lack of reference disciplines to which academics could refer for guidance on how IS research would be evaluated (Keen 1980). Grover, Lyytinen et al (2008:44) suggest that the reference disciplines were intended as "*the preferred route to strong theory in the IS field* ". Analysis of the academic IS literature, which was conducted in the 1980's, showed that computer science, management science, and behavioural science had become de facto reference disciplines for the new field (Culnan 1986). The research showed that the links to organisational theory were weak and this as attributed to the prior technical background of IS

[2] MIS is an acronym for Management Information Systems

researchers (Culnan 1986). The low emphasis on organisational science in the early IS field tended to confirm the assertion at ISIS1980 that management science had been a dominant force in early IS research (Kendall and Kriebel 1980). An evaluation of the state of the IS field in the mid 1980's confirmed the three primary reference disciplines and found evidence of a cumulative research tradition emerging in the published research in the field (Culnan and Swanson 1986a).

In the years since 1986, there has been a high degree of unanimity around the three primary reference disciplines of computer science, management science, and organisation science (Culnan 1986; Culnan and Swanson 1986a; Adam and Fitzgerald 2000; Khazanchi and Munkvold 2000; Benbasat and Zmud 2003; Hirschheim and Klein 2003). In addition to these, a number of other reference disciplines have been identified in the literature including economics (Culnan and Swanson 1986a; Adam and Fitzgerald 2000; Khazanchi and Munkvold 2000; Benbasat and Zmud 2003), accounting and operations research (Benbasat and Zmud 2003; Hirschheim and Klein 2003), and sociology (Adam and Fitzgerald 2000; Khazanchi and Munkvold 2000).

The evolution of the IS field has been accompanied by an ongoing debate and continuing concerns amongst academics about its viability and survival as a distinct field. One reason for the emergence of the IS field had been the reluctance of researchers in the computer science field to engage with the business and managerial dimensions of the new technology (Adam and Fitzgerald 2000). Concerns about the possibility of the IS field dissolving back to its roots in the reference fields had been expressed by Keen as early as ICIS in 1980. In borrowing concepts from other fields, the IS community has "*created bridges which researchers have crossed to pursue research in the IS field*" (Adam and Fitzgerald 2000:8).

The debate on the viability of IS to prosper as a distinct academic field continues and was brought into sharper focus by the so-called 'dot com' collapse in the last decade and the decline in the IS job market (Benbasat and Zmud 2003). The ongoing debate, which was characterised 'the anxiety discourse' by King and Lyytinen (2004:539), attributes the legitimacy debate to the perceived lack of a strong theoretic core in the IS field. The debate on the shortcomings of the IS field continues and a recent analysis of research in IS journals point to the fact that the IS field has made only a 'modest imprint' on other sub-fields of management (Wade, Biehl et al. 2006). Wade et al (2006) acknowledge that IS has the potential to become a reference discipline for other disciplines but has not achieved that status as yet.

It would be erroneous to characterise the 'anxiety debate' as a purely academic preoccupation given that the implications of the debate extend beyond academia. The concerns which are at the root of the discourse are fuelled by declining IS student numbers, 'offshoring' of IS jobs to lower cost economies, and potential impacts of a decline on faculty and research funding (Adam and Fitzgerald 2000; Hirschheim and Klein 2003). Hirscheim & Klein (2003) suggest that, if the practitioner community is dispersed, the corresponding academic community loses much of its relevance. The fragmented nature of the IS field would tend to accelerate the absorption of the academic community back into the disciplines from which the field originally emerged (Hirschheim and Klein 2003).

The diversity of research topics and the scarcity of cumulative streams of research has led to the IS field being described as 'fragmented', or as a 'fragmented adhocracy' (Avgerou, Siemer et al. 1999; Adam and Fitzgerald 2000; Hirschheim and Klein 2003). The IS field has roots extending back into other disciplines from which IS researchers have borrowed widely in their work. The IS field tends to be weakened by the uncritical adoption of findings from other fields which are sometimes adopted without their original context (Adam and Fitzgerald 2000). These aspects of the IS field have contributed to its research focus being fragmented and cognitively diverse (Avgerou, Siemer et al. 1999).

The dominance of the positivist orientation in IS has also been a notable aspect of research in the field (Orlikowski and Baroudi 1991; Hirschheim and Klein 2003; Chen and Hirschheim 2004). Analysis of 155 research articles in IS, which were published during the 1980's, showed that positivist research predominated with 96.8% of studies being conducted in that tradition (Orlikowski and Baroudi 1991). Just over 3% were conducted in an interpretive mode and none adopted a critical perspective (Orlikowski and Baroudi 1991). A similar survey of articles published in three leading[3] US journals in IS in the period 1991 to 2001 showed that more than 90% represented the positivist tradition (Chen and Hirschheim 2004). One effect of the predominance of positivism in IS research has been its effect in restricting the topics studied and the manner in which research is conducted (Orlikowski and Baroudi 1991). Despite their popularity, in the USA especially, the positivist approaches are less satisfactory for the investigation of management issues in IS research (Galliers 1993). Orlikowski & Baroudi (1991) had earlier drawn attention to the tendency of the positivist tradition to bypass the investigation of managerial and organisational issues in IS.

[3] The journals were MIS Quarterly (91%), Information Systems Research (94%), and Journal of Management IS (94%). These data are explored in greater detail in Chapter 4.

Geographical variations divide IS research foci. A positivist research orientation is more typical of the North American continent than within the corresponding European IS research community (Avgerou 2000; Chen and Hirschheim 2004). European IS researchers have generally been seen as fostering interpretive approaches to IS research and the Scandanavian countries have been credited with fostering socio-technical approaches to the field (Avgerou, Siemer et al. 1999). Variations within Europe are characterised by the technology-orientation in the German IS field which contrasts with the social-impact focus of many Scandanavian researchers (Avgerou 2000).

The impact of research methods on the research topics chosen by IS researchers is probably one factor in restricting the relevance of research output to practice. Hirschheim & Klein (2003) and others have drawn attention to the relevance issue in IS research. Robey and Markus (1998:8) suggest that practitioner interest in IS research is diminished by the academic pursuit of rigour with its "*arcane explanations, advanced statistical analysis, extensive mathematical notation, excessive references to other published work, and a shortage of practical advice*". They illustrate the diminishing practitioner interest by pointing out that non-academic subscribers to MIS Quarterly have dropped from 2,000 to less than 800 (Robey and Markus 1998).

Another perspective in the relevance debate is that streams of research and distinct research communities can emerge in response to pressures within academia and the funding sources which are important resources for academia (Ramiller, Swanson et al. 2008). The dominant focus of the IS field has been on business organisations rather than the public sector (Avgerou, Siemer et al. 1999). This focus may be related to the structural issue. It has also been suggested that academics pay attention to the research areas which are of commercial interest to the business and technology communities such as ERP[4] systems for example (Ramiller, Swanson et al. 2008).

Accelerating technological change is posing problems for IS researchers in this area because of the long lead times which are typical of academic journals (Robey and Markus 1998). In contrast, consultancy publications and periodicals aimed at CIO's have shorter cycle times and can respond to practitioners' appetite for timely and concise information more effectively (Robey and Markus 1998).

Despite the institutional obstacles to maximising the relevance of IS research to practice, the IS field has been acknowledged as '*very influential on practice*' (Avgerou 2000:568). IS has produced

[4] Enterprise Resource Planning (ERP) systems have been a focus of academic researchers as well as IS vendors for a number of years. ERP systems such as SAP have been marketed commercially by software vendors and have experienced significant market penetration.

knowledge with an immediate impact on practice because the field tends to be issue driven rather than theory driven (Avgerou 2000). The complex inter-disciplinary challenges which are associated with the investigation of IS phenomena make it necessary that the IS domain be a cross-disciplinary one (Benbasat and Zmud 2003). The diverse and inter-disciplinary composition of the IS field has enabled the wider IS research community address "*the unfolding complexities of evolving multifaceted phenomena*" (Avgerou 2000:575). The wider picture in IS has been one of significant success as organisations have continued to invest large resources in IS and the organisational and business landscape has been substantially transformed by technology (Lucas, Swanson et al. 2007).

The emergence of IS as an 'applied' discipline with *"a distinct subject matter, a distinct research perspective, and a well developed communication system that includes respected journals*" is characteristic of the optimists view of the field (Baskerville and Myers 2002:3). The ranking of IS journals and the acknowledgement of research by IS researchers are amongst the aspects of the field which point to the emergence of IS as a discipline in its own right (Baskerville and Myers 2002).

2.3 An eclectic field

The IS field has already been described earlier in the chapter as a fragmented adhocracy. Adam & Fitzgerald (2000) refer to a study of IS journals conducted by Holsapple et al (1993), which identified 1,366 journals that were potentially relevant to a review of literature in the IS field. This figure gives a sense of the challenge facing a researcher in making an assessment of the state of the science. North American researchers conducted a survey of the academic literature published in *Management Science* journal in the period 1954 to 2003 (Banker and Kauffman 2004) and this research identified five distinct and distinguishable streams of research which had appeared in the publication. These streams of research are;

1. Decision support and design science,
2. Value of information,
3. Human-computer interaction,
4. IS organisation and strategy , and
5. Economics of IS and IT

An IS researcher from the UK also identified five separate streams of research in the IS field (Avgerou 2000). Although she titles the five streams somewhat differently, the themes are generally the same. Avgerou described her five streams of research as;

1. Applications of IT,
2. The systems development process,
3. Information systems management,
4. Organisational value of IS, and
5. Societal impact of IS

Avgerou's five streams of research are expanded upon in the following paragraphs to give a broader sense of some of the themes which have attracted the interest of researchers in the IS field.

2.3.1 Applications of IT

Whereas the initial applications of the new computer technology were in the military and scientific fields, these were followed in time by the development of systems for business purposes. Research endeavours centred on applications of the new technology to support business managers and organisations in their tasks. Applications were developed for transacting business processes, for electronic data interchange, for co-operative work systems, and for experts systems (Avgerou 2000). The academic focus in this area of research was on researching how managers work. Studies were conducted on decision support systems, group decision making, and executive information systems. Work carried out in these areas has led to the emergence of many applications of the technology as well as a significant market in software products.

Research carried out in this sector of the IS field is based on organisational theory, operational research, decision theory, and psychology.

2.3.2 The systems development process

A second area of academic interest has been on methods for developing systems efficiently and effectively. Systems analysis methods were first developed in the 1960's in order to systemise the process of systems design and development and include them in academic curricula. The focus of the IS field in its early years tended to be normative and this is typified by the preoccupation with systems development methodologies and IS strategy in the 1980's (Avgerou 2000)

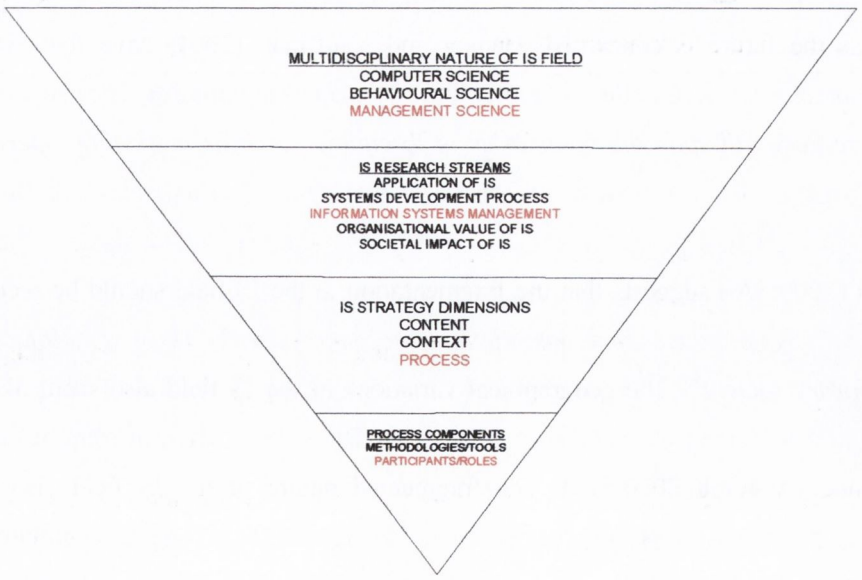
Much of the research in this particular topic adopted an engineering focus and was slow in acknowledging the social dimensions of IS in an organisational setting (Avgerou 2000). The imperative for systems which were reliable, predictable and auditable were a factor in the adoption of

engineering principles. The emergence of separate disciplines for software engineering and IS has contributed to the diminution of the tensions between the engineering and social perspectives (Avgerou 2000). The widespread availability of affordable, commercial software products has also eased the previous tensions which existed and shifted the focus of IS researchers from systems development to management and implementation topics.

2.3.3 Information systems management

This stream of research reflects both the evolution of technology and the organisational learning which has accompanied the adoption of IS in organisations. Topics such as end-user computing emerged with the emergence of lower-cost technologies, miniaturisation, and the personal computer. As expensive mainframe computers ceased to be the only technology available to business users, so decentralised versus centralised management and architectures became a topic for research. Benefit realisation, risk management, business process re-engineering, and outsourcing have followed as topics of academic interest as IS has evolved and become more pervasive. The IS field has adopted learning from other business studies areas to develop streams of research in IS strategy formation and strategic alignment of business and IS (Avgerou 2000). The information systems management stream is the one in which the current research is situated and this aspect of IS will be explored in greater detail later in this chapter. Figure 2.1 provides a visual representation of the locus of the research contribution in the IS field.

Figure 2.1 – Locus of the research contribution in the IS field



2.3.4 The organisational value of IS

Early research on the organisational value of IS dealt with issues of efficiency although interest moved on to concerns about the appropriate criteria for evaluation. Automation of manual tasks, which was an early area of interest, evolved into cost benefit analysis which seemed to be a useful way to measure value. Themes such as competitiveness and profitability were central to research in this area in the 1990's as new research directions were developed.

The focus of research moved beyond the economic factors when the academic focus moved to the effect of IS on organisational and industry structures, employee morale, and organisational politics. The current understanding of IS as an enabler of organisational transformation has moved research onwards from economic measures to theoretical perspectives from the social sciences.

2.3.5 The societal impact of IS

The fifth stream of research is centred on the costs, risks and benefits of IS beyond the boundaries of the owning organisation. Academics investigated the impact of systems on social life, working life and wealth creation. Topics studied include privacy, democracy, identity and national economic development. The relevance of this research topic can be inferred from survey data which suggests that 30% IS researchers in Europe have conducted, or plan to conduct, research in this area within a five year period (Avgerou 2000).

2.3.6 Reflections on the IS field

Insofar as the future is concerned, Banker and Kauffman (2004) have forecast that the level of interdisciplinary research in the IS field will grow rather than diminish. They suggest that in the future "*IS researchers will span the boundaries of disciplines such as marketing, operations, accounting, finance, organisational behaviour, and strategic management*" (Banker and Kauffman 2004:294).

Avgerou (2000:576) suggests that the fragmentation in the IS field should be seen as a reflection of "*the limitations of the academic institutions to accommodate the study of multifaceted phenomena in contemporary society*". The geographical variations in the IS field also seem likely to persist. The field manifests "*clear biases of thematic focus and of method*" between countries and these are likely to continue (Avgerou 2000:576). The fragmented nature of the IS field also contributes to the continuing paradigm polarisation between the 'techie' and 'softie' research cultures (Hirschheim and Klein 2003:248). The paradigm debate imposes an obligation on researchers to be specific on the

philosophical basis of their research and this aspect will be attended to in detail in Chapter 4 following.

The five research streams which were identified in the preceding paragraphs illustrate the diverse range of themes which have concerned researchers in the IS field. With its roots in a number of academic disciplines, it is hardly surprising that the IS field has extended it's boundaries to accommodate topics from a number of areas (Hirschheim and Klein 2003). The themes do not reflect a single unified body of knowledge as much as a diverse set of 'understandings' which have been developed by different research methods and various theoretical perspectives (Avgerou 2000:576).

The present research endeavour lies within the 'information systems management' stream of research which was referred to earlier. Accordingly the remainder of this chapter turns to a review of the published academic literature on the phenomenon of IS strategy formation and the participants in that process. Given that the management field has been a dominant force in early IS research, the next section first deals with some aspects of organisational strategy theory which has informed theory in the IS field. The theoretical perspectives addressed will provide context in the IS strategy literature review.

2.4 Organisational Strategy

The management literature suggests that an organisation's strategy can be expressed as *"the determination of the basic long term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out the goals"* (Chandler 1962:13). The academic literature is replete with definitions of strategy (Chandler 1962; Ansoff 1965; Andrews 1971; Lorange and Vancil 1977; Beard and Dess 1981; Mintzberg and Waters 1985; MacDonald 1991a; Baets 1992).

There are different perspectives on how organisational strategy is formed. Chandler (1962) defined strategy as a rational planning process based on choices between alternative courses of action and resources. Chandler's (1962) definition falls within the 'linear' model of strategy which sees strategy as an outcome of a deliberate process of planning and choice between alternatives. The management literature also distinguishes between strategy 'formulation' and strategy 'formation'. Strategy *formulation* describes the deliberate 'planning' approach in which the planning activity is conceptualised separately from implementation (Mintzberg 1985a). Strategy *formation* is the term used to encompass strategising which occurs through an emergent process of both formulation and

implementation (Mintzberg 1985a). Mintzberg's (1985a) usage of these terms is the one which is informs their use elsewhere in these chapters.

The adaptive view of strategy formation is based on power-bargaining between organisational actors and others which produces compromise and sometimes incoherent strategy (Cyert and March 1963). Organisational politics, culture, and stakeholder behaviours are factors which contribute to the formation of strategy in the adaptive model (Sminia 2005). Logical incrementalism (Quinn 1995), in which rational analysis and political activity combine to produce strategy outcomes is typical of the adaptive model. The adaptive model considers the organisational environment as a "*complex organisational support system, consisting of trends, events, competitors and stakeholders*" which play a part in the shaping of organisational strategy (Chaffee 1985:81).

Strategy formation can also be thought of as a process of 'punctuated equilibrium' when changes in the culture of the organisation bring about alterations in the interpretive scheme leading to periods of disruption and change (Tushman, Newman et al. 1986). A 'change model' of strategy formation suggests that strategy can be inferred from a pattern in a stream of decisions made over time (Mintzberg 1978). The importance of 'outcomes' in strategy formation was underscored when Mintzberg explained that he "*had been drawn into studying strategies as patterns in streams of actions, not decisions, since the latter represent intentions*" (Mintzberg and Waters 1985:257). This refined definition suggests that an organisation's pattern of actions made over a period of time is more informative than a pattern of decisions which may, or may not, translate into actions. A longitudinal, evolving view of strategy formation suggests that an organisation's strategy can be inferred "*when a sequence of decisions in some area exhibits a consistency over time*" (Mintzberg 1978:935).

Another theory of strategy formation suggests that it is derived through organisational learning. Strategy as 'knowledge' or 'learning' has also been supported by recent theory testing (Auer and Reponen 1997). This view of strategy suggests that it consists of what an organisation knows rather than being the outcome of a rational planning process. The derivation of strategy as an organisational learning process is also favoured in more recent literature (Ciborra 2002).

Organisational strategy has different levels of focus. The strategic level is focused on the external environment; the administrative level is focused on the internal business or administrative environment while the operational level is concerned with operational matters (Ansoff 1965). Corporate-level strategy is concerned with the external environment and what business the

organisation should be in whereas business-level strategy is focused on how the organisation competes within its sector (Beard and Dess 1981).

Pettigrew (1987:650) suggests that '*major transformations of the firm*' be conceptualised "*in terms of linkages between the content of change and its context and process*". This 'contextualist' perspective has been useful in structuring research in both management and IS. Pettigrew's (1997) use of these three dimensions of strategy as a basis for analysing strategy is useful in enabling aspects of content, context and process to be isolated. The content, context and process dimensions can also be useful in outlining the state of development of the strategy research field.

Research must also take account of these three dimensions of organisational strategy. Strategy *content* is concerned with *what* business decisions and actions the organisation or business takes to achieve its goals and objectives (DeWit and Meyer 2004). Strategy *content* research "*focuses exclusively on what strategic positions of the firm lead to optimal performance under varying environmental contexts. In contrast, strategy process research is concerned with how a firm's administrative systems and decision processes influence its strategic positions*" (Chakravarthy and Doz 1992:5).

Strategy content research has tended to dominate the organisational strategy landscape in which strategy process research is less common and less established (Pettigrew 1992). Strategy *process* is focused on the 'how, who and when' issues which are part of the strategy formation process (DeWit and Meyer 2004). The strategy process issues are 'political, informational and temporal' (Rajagopalan, Rasheed et al. 1994:327).

The strategy *context* dimension is focused on the *where,* or the environment within which strategy is formed (DeWit and Meyer 2004). Context includes both the internal organisational context and the wider environmental context (Pettigrew 1987; Klein and Myers 1999; Webb and Pettigrew 1999). Pettigrew (1992) stresses the importance of the enabling and constraining influences of the inner and outer context of the organisation on the strategy process. Social processes are affected by the external and internal context within which they take place (Pettigrew 1997). Experience has shown that a phenomenon can only be understood within the context of the cultural setting in which it takes place (Kumar, van Dissel et al. 1998). Accordingly, strategy process research must take account of the external economic, political and social context as well as the internal political, cultural and social context in which the strategy process is enacted (Pettigrew 1997). Pettigrew (1990) also suggests that both the horizontal and vertical levels of strategy should be considered in an investigation of the strategy process. The horizontal level '*refers to the sequential interconnectedness among phenomena*

in historical, present and future time' whereas the vertical level refers to interdependencies in the internal or external contexts (Pettigrew 1990:269). These aspects of the research endeavour will be elaborated on in a later chapter.

The management literature has provided a number of concepts and approaches from the organisational strategy literature which have been adopted by IS strategy researchers in the IS field. A number of these concepts have been introduced in this section in order to explain their provenance in the context of the IS strategy literature. The chapter next turns to reviewing a number of concepts from the IS literature which form part of the context to an investigation of how external management consultants contribute in IS strategy formation.

2.5 *IS Strategy*

Researchers in the field of IS strategy have followed the lead of their counterparts in the reference field of organisational strategy by using the dimensions of 'content', 'context' and 'process' of IS strategy as a theoretical lens in empirical studies (Waema and Walsham 1990a; Waema and Walsham 1990b; Walsham and Waema 1994; Smits, Van der Poel et al. 1997). The relevance of organisational science theory to this review is underscored by the fact that it is necessary at the outset to recall that the present research is focused on one specific dimension (process) of IS strategy. The significance of addressing this issue at the outset stems from the choices which must be made in choosing a definition of IS strategy at the outset of this part of the literature review. The IS literature contains a number of choices which include both 'content' definitions and 'process' definitions.

The Ward and Peppard (2002:44) 'content' definition of IS strategy provides a private sector manager with a prescription of what an IS strategy for his organisation should address. This definition of IS strategy tells us that it "*defines the organisations requirement or demand for information and systems to support the overall strategy of the business. It is firmly grounded in the business, taking into consideration both the competitive impact and alignment requirements of IS/IT. Essentially, it defines and prioritises the investments required to achieve the ideal applications portfolio, the nature of the benefits expected and the changes required to deliver these benefits, within the constraints of resources and system interdependencies*". The definition is a comprehensive one which incorporates elements which will shown in this chapter to be key ingredients of a successful IS strategy. Those key ingredients of IS strategy 'content' will be identified in this review because, although they are not process dimensions of IS strategy, they form a large part of the academic research within the IS management stream. The three dimensions of IS strategy provide a useful unifying structure for presenting the knowledge which has been accumulated in the four decades since the first contributions

emerged in this field of academic endeavour. Accordingly, the following paragraphs focus first on the 'content' stream of literature which is followed in turn by the context and process dimensions of IS strategy.

2.6 IS Strategy Content

Figure 2.2 sets out a number of definitions of IS strategy. The Ward and Peppard (2002) definition is the most recent of these and is also the most informative. The early definitions focus on the functional dimensions of IS strategy and adopt a technology, or engineering focus. Ward and Peppard highlight the need to address competitiveness, alignment, and change readiness aspects of the IS strategy. The Wilson (1989) definition also addresses the need for alignment of the IS strategy with the business.

Figure 2.2 – IS Strategy (Content) Definitions

Definition	Reference
It "*defines the organisations requirement or demand for information and systems to support the overall strategy of the business. It is firmly grounded in the business, taking into consideration both the competitive impact and alignment requirements of IS/IT. Essentially, it defines and prioritises the investments required to achieve the ideal applications portfolio, the nature of the benefits expected and the changes required to deliver these benefits, within the constraints of resources and system interdependencies*".	(Ward and Peppard 2002:44)
"A plan comprised of projects for application of information technology to assist and organisation in realising its goals. The term plan refers to a written document"	(Gottschalk 1999)
"*Strategic content can involve planned changes to products and services, business processes, formal organisation structures and roles, and human perceptions, with the last including attempts to bring about cultural and political change in the organisation"*	(Walsham and Waema 1994:153)
"*An information systems strategy brings together the business aims of the company, an understanding of the information needed to support those aims, and the implementation of computer systems to provide that information. It is a plan for the development of systems towards some future vision of the role of information systems in the organisation."*	(Wilson 1989:246)
"A plan for implementing future technology"	(Miller 1988:29)

The Walsham and Waema (1994) definition also makes specific reference to the need to address cultural and political change as part of the IS strategy. This focus on organisational change, which is also accommodated within the Ward and Peppard (2002) definition is not prominent in the IS strategy literature generally.

Earl (1993) suggested that IS strategy should target the following;

- Aligning investment in IS with business goals;
- Exploiting IT for competitive advantage;
- Directing efficient and effective management of resources, and
- Developing technology policies and architectures.

Once again Earl's perspective on IS strategy includes alignment of IS with business goals and the quest for competitive advantage as specific aspects of the IS strategy in addition to technology and resource dimensions. In each case the definition assumes that the target audience is a private sector one.

Galliers, Leidner et al (1994:25) suggest that an IS strategy should include,

- An information strategy;
- An information management strategy;
- An information technology strategy; and
- A change management strategy.

It is necessary to bring the Galliers et al (1994) description of IS strategy to a greater level of detail to ascertain whether there are new dimensions included which have not been identified in the definitions reviewed above.

Smits, Van der Poel et al (1994:63) tell us that an information strategy is "*a complex of implicit or explicit visions, goals, guidelines and plans with respect to the supply and the demand of formal information in an organisation, sanctioned by management, intended to support the objectives of the organisation in the long run , while being able to adjust to the environment*" (Smits, Van der Poel et al. 1994:63). This definition discloses that Galliers et al (1994) have adopted a 'data' perspective on IS strategy rather than the functional view that tends to appear elsewhere in the literature; especially

in the process literature. This dimension of the IS strategy focuses on how information can serve the needs of the organisation.

The second of Galliers' et al (1994) dimensions refers to information management strategy. Edwards, Earl et al (1994:85) do not offer a specific definition of information management strategy but they do disclose that its sets out the strategy for 'organising the information systems function'. This aspect of the IS strategy would set out the appropriate organisation structure whether that be centralised, decentralised, federal, outsourced or otherwise. This aspect of the IS strategy would probably require greater attention in the event that the IS strategy envisaged an approach other than 'business as usual'.

Galliers et al (1994) point out that information technology (IT) strategy, the third dimension, usually attends to issues of hardware, software and infrastructure. Schein (1994) takes a broader view and suggests that the IT strategy should take a more strategic stance and should also incorporate a vision for the organisation.

Markus and Benjamin (1994) highlight the importance of a change management strategy for the implementation phase of the IS strategy. They point to the fact that IS professionals frequently subscribe to 'technological determinism' which is based on a belief that technology will bring about change rather than people. Roles of facilitator and advocate are suggested as important in promoting organisational change.

When we consolidate the various academic contributions on IS strategy content, we find that an IS strategy should attend to the following matters;

- Vision of the future
- Information
- Technology including hardware, software, and infrastructure
- Management and organisation
- Resourcing
- Organisational change
- Competitive advantage
- Alignment of IS and business strategy

In embarking on IS strategy formulation, the IS strategist is confronted with a diverse set of deliverables as can be seen from the list above. The array of deliverables will draw on his expertise in technology, organisational change, human resources, economics, and management and organisation. An external management consultant, or an internal management stakeholder, could well find such an IS strategy formation assignment a challenging one. A brief review of the 'content' dimension of IS strategy confirms the assertion which was noted earlier that the academic IS field needs to concern itself with a broad array of subject matter if it is to continue to be relevant to practice.

There is a low level of focus in the recent IS strategy literature on what should be contained in an IS strategy. This may be because the topic has been exercising IS scholars for many years and a degree of unanimity has grown around the components identified here. The greater part of the IS strategy literature is focused on normative prescriptions for IS strategy formulation (Walsham and Waema 1994). This is in contrast to the reference field of organisational strategy where the strategy content research has tended to dominate the organisational strategy landscape (Pettigrew 1992). The difference in academic focus is not surprising. It would be reasonable to assume that management scientists would have a greater emphasis on content and outcomes. In contrast, we have already noted that the IS community has shown a bias towards the technical dimensions of their science which would explain their emphasis on process rather than content.

2.6.1 Focusing IS Strategy on Business Imperatives

A number of academic recommendations for IS strategy content have drawn attention to the need for the IS strategy to be aligned with business strategy (Earl 1993; Ward and Peppard 2002). Venkatraman (1991) had set out a prescription for alignment of IS and business strategies as part of the Massachusetts Institute of Technology (MIT) programme of research on how IS could deliver business advantage (Scott Morton 1991). The 'strategic alignment' stream of research has been the largest and most enduring element in the 'content' dimension of IS strategy research in the intervening years.

Using IS to improve the competitive position of the enterprise depends on 'internal consistency' between business planning and IS planning (Henderson and Sifonis 1988). The strategic alignment model (Henderson and Venkatraman 1991; Henderson and Venkatraman 1992) expresses organisational strategy and IS strategy as consisting of three dimensions of scope, competencies and governance which must be aligned. The research suggests that these domains must be aligned and that both circular and cross-domains should be integrated also. An earlier empirical study had recommended the *co-ordination* of the content, timing and personnel dimensions of business strategy

and IS in order to achieve management objectives (Lederer and Mendelow 1989b). CEO's were also urged to 'mandate' methods which would ensure co-ordination (Lederer and Mendelow 1989b).

A number of academic studies have been conducted for the purpose of identifying alternative alignment dimensions. Additional models have focused on environmental threats and opportunities (Weill and Broadbent 1998), on strategic and functional fit (Pankratz 1991), on social and communications alignment (Reich and Benbasat 1996; Reich and Benbasat 2000), information needs (Baets 1992), on organisational transformation (Luftman, Lewis et al. 1993), on strategy formation processes (Broadbent and Weill 1993), and performance and effectiveness (Chan and Huff 1993a; Chan and Huff 1993b; Hartung, Reich et al. 2000). It is clear that there are a number of dimensions by which IS strategy can harnessed more effectively to deliver on business objectives.

While the benefits of alignment between IS strategy and business strategy would appear intuitively to be considerable, the academic output on this topic is surprisingly limited. The benefits of strategic alignment include efficiency and effectiveness (Lodahl and Redditt 1989; Venkatraman 1991; Rosser 1996a; Sabherwal 2001), cost savings (Venkatraman 1991; MacDonald 1991b; Rosser 1996a), and market positioning and strategic capability (Venkatraman 1991; MacDonald 1991b).

The need for a more granular approach to research in strategic alignment is argued in recent research which suggests that the outcomes may vary depending on strategy orientation (Sabherwal 2001). Thus, *analyser*[5] and *prospector* types were found to derive performance benefits from strategic alignment whereas *defender* organisations did not. However, it is arguable that the apparent shortfall in performance could be attributable to the strategy orientation rather than the alignment level.

A number of enablers of strategic alignment have been identified in the literature. The most frequently cited of these is based on the degree of communications between the IS domain and the user domain (Nath 1989; Lederer and Mendelow 1989b; Teo and Ang 1999; Burn and Szeto 2000; Reich and Benbasat 2000). Other key enablers are top management support for IS (Nath 1989; Teo and Ang 1999; Luftman and Brier 1999a), IS involvement in business strategy development (Nath 1989; Lederer and Mendelow 1989b; Luftman and Brier 1999a), IS understanding of the business (Nath 1989; Teo and Ang 1999; Luftman and Brier 1999a) and IS department efficiency (Nath 1989; Teo and Ang 1999; Burn and Szeto 2000).

[5] These typologies are drawn from Miles, R. E., C. C. Snow, et al. (1978). "Organisational strategy, structure and process." Academy of Management Review **3**: 546-562.

Empirical research has shown that strategic alignment is brought about by top management mandating aligned planning rather than by intervention by IS managers (Lederer and Mendelow 1989b). Research has also shown that the prospects of strategic alignment can be enhanced by cross-education of business managers and IS managers (Nath 1989). Creation of a Chief Information Officer (CIO) function could facilitate strategic alignment by bringing responsibility for disparate information resources under one manager (Lodahl and Redditt 1989).

Environmental change has been identified as an inhibitor of strategic alignment in two recent studies (Luftman and Brier 1999a; Hirschheim and Sabherwal 2001). Indeed, the pace of change in both technology and the business environment makes it difficult for organisations to achieve and sustain alignment in the IS and business strategy domains (Luftman and Brier 1999a). Poor communication was also found to inhibit alignment (Lederer and Mendelow 1989b; Baets 1992).

The proliferation of electronic business channels, which was alluded to by Luftman et al above (1999a), has indeed made it difficult to sustain alignment. One possible response has been the inclusion of IS strategy as a central component of business strategy, rather than as a parallel activity (Galliers 1999).

Despite the fact that a large amount of academic endeavour has been invested in the IS strategic alignment stream of research, there continues to be room for further work in the field (Chan and Reich 2007). The research to date has included both (a) contingency perspectives addressing organisational size, strategic orientation, industry sector, environment, as well as (b) process perspectives focusing on internal and power issues (Chan and Reich 2007).

The IS strategy literature has clearly put a major emphasis on the need for alignment between IS strategy and business strategy. The academic research has identified several dimensions through which alignment can be delivered. The IS strategy process must therefore take cognizance of the alignment imperative if the IS strategy is to deliver optimum business benefit. Delivery of an IS strategy, which attends to the strategic alignment dimension, is clearly a priority for the IS strategist or the external management consultant who is engaged in such an undertaking.

2.6.2 Exploiting IS for competitive market advantage

The impact of economic theory on IS researchers is again illustrated by the academic focus on competitive business advantage through IS which was most prominent in the 1980's. Michael Porter's theories on competitive business advantage (Porter 1979; Porter 1980) and on the use of information

as a competitive advantage (Porter and Millar 1985b) were influential in the early writings on the topic.

The potential of IS to change market sectors emerged in the USA as the airline industry began to experience significant restructuring in the 1980's (Parsons 1983). The airline industry showed that the relentless exploitation of IS opportunities could ultimately lead to monopoly if competing entrepreneurs failed to recognise the importance of exploiting both technology and knowledge (Copeland and McKenney 1988). The business advantages of inter-organisational systems and the impact on the USA aviation industry continued to feature in the IS literature in the late 1980's (Johnson and Vitale 1988a).

The 'information revolution' provided opportunities for new entrants to industry sectors and for positive impacts on sectoral 'value chains' (Porter and Millar 1985b). Inter-organisational IS provided a link between businesses and their clients which could be exploited as a competitive advantage by business although it could also alter the balance of advantage between business and client (Cash and Konsynski 1985; Johnson and Vitale 1988a).

Research showed that the competitive opportunities from IS were not a constant across all business sectors. The impact of IS on the competitive structure varied from *strategic* in the case of banking to *support* in a large manufacturing company (McFarlan 1984). Companies whose top management were technologically oriented also enjoyed a competitive advantage over others (Frohman 1982). Industry conditions were identified also as a factor in enabling organisations identify and exploit a competitive advantage (Johnston and Carrico 1988c).

Case study research in a USA telecommunications company showed how strategic IS could be identified (Rackoff, Wiseman et al. 1985). The Customer Resource Life Cycle (CRLC) model could be used to identify strategic IS applications which could provide competitive advantage and the model also built on the earlier work of McFarlan and Porter (Ives and Learmonth 1984). Research also showed that management are best placed to identify strategic applications which should incorporate significant amounts of external data and be easily adapted as requirements change (Huff and Beattie 1985).

The academic research on competitive advantage is credited with leading to the upgrading of IS management posts within the corporate hierarchy (Rackoff, Wiseman et al. 1985). It may be that IS had begun to be seen as an instrument of business advantage rather than a back-office activity.

By the early 1990's, the academic focus on the 'mythology' surrounding competitive advantage from IS had begun to wane (Galliers 1993a). It had become clear by then that sustainable competitive advantage through IS was not possible because competitors could imitate the changes implemented by new IS (Galliers 1993a; Peters, Heng et al. 2002; Finnegan, Galliers et al. 2003).

More recent perspectives on the competitive advantage debate suggests that firms can adopt either an 'exploitation' strategy or an 'exploration' strategy (Peters, Heng et al. 2002; Philip 2007). In the former 'exploitation' mode, the organisation aims for operational efficiency in their use of IS rather than pursuing competitive advantage (Philip 2007). In the latter, the firm adopts the 'exploration' mode in pursuit of competitive advantage from IS. Peters, Heng et al (2002) contrast the traditional administrative and operational role of IS in organisations to the more competitive stance which is typical of the 'exploration' perspective. Private sector case studies involving UK and Canadian firms suggest that conscious adoption of the more conservative 'exploitation' mode can be successful (Philip 2007).

The 'competitive advantage' research illustrates once again the diversity in the reference disciplines which inform the academic IS field. Participation in IS strategy formation may well require that the competitive business advantage will be amongst the palette of strategic choices to be made by the IS strategists or their external advisers.

2.7 The impact of context on IS strategy formation

The IS strategy literature suggests that aspects of the organisational context can influence IS strategy formation or be influenced by it. These findings suggest that, in undertaking an IS strategy initiative, the management stakeholders and their external advisers would need to be cognisant of the potential pitfalls or opportunities on the horizon. Aspects of the organisational context may well need to be considered.

"Context can be defined as phenomena at different levels that affect and are affected by the strategy process" (Walsham and Waema 1994:154). The environment in which IS strategy formation takes place influences the process by which the IS strategy content is produced (Smits, Van der Poel et al. 1997). Context has been shown to act as a major barrier to change (Auer and Reponen 1997). It is apparent then that the trajectory of IS strategy formation can be altered by external environmental factors and that awareness of this possibility is important to managers.

Examples of contextual factors identified in a case study in a UK building society included competitive pressure, poor financial performance, and covert resistance to change (Walsham and Waema 1994). Other contextual factors include (a) reliance on IS (b) market heterogeneity, (c) existing knowledge and experience, and (d) level of agreement on IS planning issues (Sambamurthy, Venkatraman et al. 1993)

The social context is an important aspect of the context within which IS exist. Waema and Walsham point out that "*information systems have an information technology component but are embedded within social systems*" (1990a:394). The relevance of context in IS strategy formation was illustrated in a case study from the private sector in which the introduction of an external consultant by the CEO created a 'context of resistance' amongst senior managers (Waema and Walsham 1990a). The consultant also formed coalitions with managers in an effort to bolster his influence in the organisation (Waema and Walsham 1990a).

A case study in a UK building society also underlined the importance of organisational context in analysing the IS strategy formation experience (Waema and Walsham 1990b). In this instance, changes in the regulatory environment, a change in leadership style, and the introduction of greater formalisation in IS governance had a significant effect on IS strategy formation and an understanding of the changing context was necessary to a full understanding of the organisational experience (Waema and Walsham 1990b). The case shows that an IS strategist need to be aware of the potential influence of contextual factors on the IS strategy process.

Insufficient attention has been paid to culture, power, IT risks, buy in, role of IT, assumptions and so on in approaches to IS planning (Boynton and Zmud 1987). IS strategy formation should be seen as a 'micro-level activity' which is set in the wider social context of the organisation (Horton and Dewar 2001; Horton and Wood-Harper 2006). A case study in a steel company and a rail company in the United Kingdom emphasised the need for "*consideration of the specific context of the organisation in terms of its culture and political structures*" (Hackney 1999:120).

The IS strategy literature has offered some solutions to overcoming contextual barriers in IS planning. IS strategy development projects require a process to be designed and a method chosen which will feed back into the organisational context (Ormerod 1993). In undertaking IS strategy formation, an understanding of the organisational environment is important (Salmela, Lederer et al. 2000). Auer and Reponen (1997) have shown that managerial enthusiasm, knowledge and motivation can be more

important to success in IS strategy formation than more tangible resources such as infrastructure and systems.

The preceding paragraphs have highlighted the relevance of both 'content' and 'contextual' factors in IS strategy formation. The relevance of both dimensions has been emphasised in the academic IS literature. The literature has also disclosed that the challenges faced by IS strategists can include behavioural and cultural considerations in addition to the technical ones. The range of potential pitfalls is such that managing IS strategy formation requires a diverse skill set. The remainder of this chapter turns to reviewing what is known of the IS strategy process to ascertain what contribution is made by external management consultants. It is apparent from the literature that there are likely to be challenges in addressing aspects of both content and context.

2.8 IS Strategy Formation

Research in IS strategy formation has been criticised for being largely normative and lacking a cohesive account of what organisations are doing in the IS strategy process (Hann and Weber 1996). The present research endeavour has set out to contribute to the development of theory on how external management consultants contribute in IS strategy formation. The focus is on the 'process' dimension of IS strategy and Smits Van der Poel et al tell us that the activities by which IS strategy content is developed or changed can be described as the IS strategy process (1997). Our attention therefore turns to considering to what extent the existing IS literature can reveal how an IS strategy is formed and how participants contribute in the process. The earlier parts of this chapter have revealed the components of an IS strategy and which aspects amongst these have preoccupied IS researchers over the years. The preceding sections have also revealed how aspects of the organisational context, both internal and external, can act as influences on the formation of IS strategy.

IS strategy formation has been an area of enduring concern for IS practitioners over the years which suggests it continues to be challenging. A survey of IS executives in the USA in 2003 showed that 'IS strategic planning' ranked second behind 'IT and business alignment' amongst the current concerns of senior IS managers surveyed (Luftman and McLean 2004). Both issues had been consistently ranked amongst the top ten issues of concern in all previous surveys since 1980, which suggests that IS strategy formation is an issue despite a significant level of focus by practitioners and researchers for many years (Luftman and McLean 2004).

Once again aspects of organisational science theory are evident in this stream of IS management literature insofar as there are multiple academic perspectives on how strategy is formed in the IS field. Waema and Walsham disclose that IS strategy has been conceptualised as occurring through both a 'formal-rational' mode, and a 'power-behavioural' mode (1990b). The formal-rational mode contains echoes of the organisational science literature in which strategy making continues to be equated with 'planning' and in which formal methods are used to formulate plans which are then implemented (Mintzberg 1985a). The 'formal-rational' school focuses on planning and analytical approaches and it is not particularly concerned with contextual or behavioural factors (Waema and Walsham 1990b). Conversely, the 'power-behavioural' theorists acknowledge the socio-political nature of IS strategy formation and the potential for "*coalitions, and multiple goal structures (*and*) political differences between participants*" (Waema and Walsham 1990b:30).

The formal, rational, or 'planned' approaches to IS strategy formation are frequently typified in the academic literature as strategic IS planning (SISP) approaches which are *"a combination of method, process and implementation"* (Doherty, Marples et al. 1999:263). This explains the appearance of 'planning' as a synonym for IS strategy formation in much of the literature. The difference between the two perspectives is illustrated in the comment that "*while strategy formulation seeks to separate thought from action, strategy formation regards the two as inseparable"* (Baker 1995:66). Strategic IS planning (SISP) is "*the process of identifying a portfolio of computer-based applications that will assist an organisation in executing its business plans and consequently realising its business goals"* (Lederer and Sethi 1988:446). Much of the 'strategic IS planning' (SISP) literature in the IS field adopts a 'one size fits all' focus on iterative methods for IS strategy development which rarely take account of contextual factors.

An alternative to the 'planning' view of the IS strategy process is that IS strategy forms through a continuous learning process and that IS strategy consists of what an organisation 'knows' rather than what is written down (Auer and Reponen 1997). IS strategy develops through organisational learning which can be reinforced through more formal planning sessions (Auer and Reponen 1997). The IS strategy process can also be classified as mechanical, problem-oriented, or political (Smits, Van der Poel et al. 1997). The *mechanical* type describes a systematic approach involving a series of steps, while the *problem-oriented* approach is based on learning and problem solving (Smits, Van der Poel et al. 1997). The political approach describes a situation where IS strategy forms from the political, power behaviour of those involved (Smits, Van der Poel et al. 1997).

Smits Van der Poel et al (1997) summed up the IS strategy process succinctly as consisting of both methodologies/tools and participants/roles. Both these dimensions will be reviewed individually in the following pages to assess the extent to which they can provide insights into the contribution of external management consultants in IS strategy formation. The contribution of IS strategy formation participants is more likely to be illuminated in the participants/roles literature which will be the second of the two literatures to be considered.

2.8.1 IS Strategy methodologies and tools

Avgerou (2000) has characterised the academic literature in the early IS field as being dominated by IS strategy methodologies and tools. The research in the topic adopted an engineering focus and was slow in acknowledging the social dimensions of IS in an organisational setting (Avgerou 2000). The prominence of IS methodologies as a proportion of the literature was highlighted in the observation that *"there is a large literature on information systems strategy in organisations, but almost all of it is concerned with prescriptive methods and frameworks aimed at aiding management in the formulation of strategy"* (Walsham and Waema 1994:152). The preoccupation with this aspect of the IS field is symptomatic of the challenges faced by managers in absorbing the rapid evolution in technology in the early IS research literature. Booth and Philip (2005:393) suggest that the proliferation of academic research dealing with methods is "*symptomatic of an immature and disorganized research community*". The research focus on IS planning methodologies has waned since the 1990's and the reasons for this will be considered further in this chapter.

Empirical evidence of the merits of long term planning for IS began to emerge from both academics and management consultancy organisations in the USA in the early 1970's (McFarlan 1971; Soden and Tucker 1976; McFarlan, McKenny et al. 1983; Sinclair 1986). IBM's Business System Planning (BSP) was the most widely used method for identifying the information needs of an enterprise at the end of the 1970's (Rockart 1979). The BSP method was executed by interviewing managers to identify their information needs, organisational context and key decisions (Rockart 1979). Methodologies such as Business System Planning (BSP) and Business Information Control Study (BICS), which had been copyrighted by IBM, included 'enterprise analysis' techniques for the design of organisational IS (Zachman 1982). BSP also represented a shift in focus from computer applications to data architecture and the management of data as a corporate resource (Sullivan 1985; Lederer and Putnam 1987b; Lederer and Sethi 1988; Goodhue, Kirsch et al. 1992).

A number of normative frameworks for 'IS planning' also emanated from the academic community from the late 1960's onward (Kriebel 1968; King 1978; Hayward 1987; Galliers 1987a; Hax and Majluf 1991; Reponen 1993; Andreu, Ricart et al. 1994; Baker 1995; Clarke and Lehaney 1997; Mentzas 1997; Min, Suh et al. 1999; Palanisamy 2005). The frameworks were largely focused on the identification and development of strategic IS applications. A new 'critical success factor' (CSF) approach to IS strategy emerged from the academic community at the end of the 1970's, which sought to circumvent information overload by top managers (Rockart 1979).

Management consultancy organisations such as Accenture (Andersen Consulting) also developed their own proprietary IS planning methodologies for the purpose of translating clients' business objectives into strategic IS (Lederer and Gardiner 1992b; Lederer and Gardiner 1992c). James Martin Associates developed an 'information engineering' approach to IS planning which also incorporated process modelling (Pant. and Hsu 1999). The Butler Cox Foundation issued reports and case studies providing prescriptions and case histories to assist would-be strategists (Butler Cox 1983; Butler Cox 1985). The Gartner Group also developed a framework which was included in their corporate knowledge base in 2000 (Rosser 2000). Management consultancy companies used a wide spectrum of proprietary and standard methodologies in developing IS strategies for clients (Galliers 1986a). Early research in the field suggested that there were wide variations between the effectiveness of different management consultancy organisations who carry out strategic IS planning assignments (Galliers 1986a).

Both academics and management consultancy organisations provided methodologies for the community of practice. Figure 2.3 illustrates the provenance of a number of the IS planning methodologies. By the early 1980's, the IS strategy process in the USA was based on 'integrated decisions, actions and plans' which reflected the rational, top-down view of strategy (Vitale, Ives et al. 1986).

Figure 2.3 – IS Planning Methods

Method	Source	Background
The stage hypothesis	(Nolan 1979)	Academic
Business Information Control Study (BICS)	IBM	Consultants
Soft Systems Method	(Checkland 1990)	Academic
Summit-S	Price Waterhouse Cooper (PwC)	Consultants
4Front	Deloitte & Touche	Consultants
Business Integration Method (BIM) (replaced Method 1)	Accenture	Consultants
Macroscope	Fujitsu (DMR)	Consultants

Weaknesses were subsequently identified in both the CSF approach and the BSP approach (Butler Cox 1983). The former lacked rigour and failed to address architectural issues while the latter tended to ignore implementation issues (Butler Cox 1983). The weaknesses identified were symptomatic of the evolving complexity and scale of IS and the need for corresponding evolution in the methodware used in IS strategy formulation. Raised expectations and dissatisfaction with the wider palette of methodologies were identified in research in North America later in the decade (Lederer and Sethi 1988).

Despite the weaknesses identified by Butler Cox (1983) in the CSF method, experience in the financial services sector in the USA two years later showed that the 'critical success factor' (CSF) approach to IS strategy formulation could be very effective (Shank, Boynton et al. 1985). Shank et al found that the use of the CSF method by a management consultant enabled managers to focus on business opportunities rather than technology at a level which was both strategic and tactical (1985).

In addition to normative frameworks, practitioners have also provided descriptions of the approaches adopted in IS strategy development projects. One such project at Netherlands Gas recounts the steps involved in one such project and offers prescriptions to planners based on the experience (Adriaans and Hoogakker 1989).

The UK experience in the early 1990's was that 56% of the organisations surveyed used an in-house method for IS planning with only one third using a industry-standard method (Flynn and Goleniewska 1993). The experience in the USA was that 78% of private sector organisations used an in-house methodology for IS planning while 22% used an industry-standard approach (Premkumar and King 1991). The quality of the IS planning process is perceived as influencing the contribution of IS to organisational performance (Premkumar and King 1991).

IS executives in Canada reported that less than half their organisations undertook strategic IS planning and those who did tended to focus on an IS perspective rather than on a corporate one (Conrath, Ang et al. 1992). Management consultants had a high or medium involvement in just 16% of projects (Conrath, Ang et al. 1992). Experience from the USA has shown that there are a number of leadership, implementation and resourcing problems associated with the use of the proprietary methodologies (Lederer and Sethi 1992d).

Private sector experience in the United Kingdom shows that IS planning can be categorised into five distinct 'approaches' which can be distinguished from one another through a set of ten separate

characteristics which are contained in figure 2.4 (Earl 1993). The research, which was based on both questionnaire and interview data from IS managers, business managers and line managers, found that respondents considered the organisational 'approach' to be the most successful (Earl 1993).

Figure 2.4 – Earl's SISP Approaches (1993)

Method	**Business Led**	**Method Driven**	**Administrative**	**Technological**	**Organisational**
Emphasis	Business	Technique	Resources	Model	Learning
Basis	Business Plans	Best method	Procedure	Rigor	Partnership
Ends	Plan	Strategy	Portfolio	Architecture	Themes
Methods	Ours	Best	None	Engineering	Any way
Nature	Business	Top Down	Bottom-up	Blueprints	Interactive
Influencer	IS Planner	Consultants	Committees	Method	Teams
Relation to Business Strategy	Fix Points	Derive	Criteria	Objectives	Look at business
Priority Setting	The Board	Method recommends	Central Committee	Compromise	Emerge
IS Role	Driver	Initiator	Bureaucrat	Architect	Team Member
Metaphor	It's common sense	It's good for you	Survival of the fittest	We nearly aborted it	Thinking IS all the time

(Earl 1993)

The Earl (1993) typology provides a template by which an approach to IS strategy formation can be evaluated or chosen. The typology also suggests that a consultant can be more influential in a 'method-driven' approach to IS strategy formation. The typology is also useful in providing a means of categorising the many normative prescriptions which were referred to by Avgerou (2000) and Walsham and Waema (1994) earlier. It is perhaps not surprising that the 'organisational' approach was favoured by IS managers, business managers and line managers, given that it is based on partnership, teaming and interaction.

Executive workshops have proven useful in IS strategy formation although experience suggests that workshop facilitators need to steer a middle course between passivity and prescription (Galliers, Pattison et al. 1994b). This can be a challenge because some managers expect guidance and advice from experienced advisers (Galliers, Pattison et al. 1994b)

Research in a private sector leasing company in the Netherlands showed that the evolutionary approach to IS strategy formation, in which no formal IS planning took place, could be successful (Peters, Heng et al. 2002). The case for IS driven, opportunistic, emergent evolution of IS strategy was also cited in a case study from an architect's office in Australia (Yetton, Johnston et al. 1993). This study identified the risks associated with the large-scale IS strategy formation initiatives driven

by a strategic vision. However, it is difficult to extrapolate this single, small-scale; case study into a negation of the need for formal planning for large scale IS-enabled business transformation initiatives. Many examples of 'silver bullet' IS applications reflect a functional perspective of IS strategy rather than a comprehensive multi-level view such as that envisaged by Waema (1990) and Boynton (1987).

Research suggests that "*critical analysis of the classical approach to SISP leads to the conclusion that such formal-rational approaches are inadequate for organisations in the late nineties which are subjected to continuous change*" (McBride 1998:8). McBride (1998:8) suggests that a dynamic approach would be "*continuous and emerging rather than episodic and fixed*". There is clearly a case for continuous review and adaptation of the environmental factors impacting on IS strategy given the changing environment.

Recent research into the characteristics of both formal and incremental approaches to strategy (Salmela, Lederer et al. 2000) illustrates the greater level of rigour associated with the formal approaches. The research shows that the formal methods provide a higher level of integration within the plans and a greater degree of objectivity in the decision making process. The shortcomings of the existing methods (Baets 1992), and the need for hybrids, or new approaches, (Galliers 1991) appeared in later literature, which suggested that strategy formation should attempt to capture creative thinking as well as following formal prescriptions (Galliers 1991).

New enterprise networks, which have been made possible by developments in technology, pose new challenges for IS planners who need to consider the needs of customers, suppliers, distributors and alliance partners (Chan 2005). Porter's (2001) vision of integration of entire value chains suggests that IS strategists of the future will need to match the increasing complexity of technology with more sophisticated approaches to IS strategy formation.

The research focus on IS planning methodologies has waned since the early 1990's (Peters, Heng et al. 2002). The newer methods tend to emerge from the management consulting and technology sectors where, like other methodologies and toolsets, they become a competitive differentiator against other external service providers (Gartner Research 2002). Little information is available in the public domain on the current IS strategy methods used by the management consulting organisations. Academic reviews of IS planning methods continue to focus on BSP, Information Engineering, and the early methodologies (Palanisamy 2005; Philip 2007). Many of the IS 'planning' methods used before the 1990's fell out of favour because they failed to recognise the dynamic nature of strategy (Henderson and Venkatraman 1993).

It is clear that the IS planning methodware has evolved over the years and new methods have come into use which have not been the subject of academic enquiry in the same way that the early approaches have been. The evolution of the methodware has been accompanied by a greater level of focus on the organisational context of IS strategy formation and the contribution of those involved in the process.

The academic literature on IS strategy is 'dominated' by prescriptions for IS strategy formulation (Walsham and Waema 1994; Avgerou 2000). The academic literature on methodologies does not illuminate the question of how external management consultants contribute in IS strategy formation. It does disclose that management consulting organisations have been at the forefront of developing their own in-house methodologies which have evolved over time. Academic interest in methodologies has diminished since the first decades of academic endeavour in the IS field and more recent methodologies have not been subjected to academic enquiry in the same way the earlier methodologies had been.

The review of the IS strategy formation methodologies suggests that an IS strategist or his external adviser is likely to be confronted by choices concerning the use of a methodology in formulation and implementation of IS strategy. The remainder of the review turns to a review of the academic literature relating to the participants in IS strategy formation and their contribution in the process.

2.8.2 IS Strategy Participants

Premkumar and King (1994b) concluded that the 'primary resources' used in the IS strategy process are the methodology, top management, IS management, and user management. The preceding paragraphs have shown that the methodology dimension has dominated the IS management literature over the decades. The present research focus is on the participants in the IS strategy process rather than on the methods and tools used. The academic literature dealing with the participants is less extensive and the review carried out here will disclose that, to date, **no research has been undertaken to specifically ascertain how external management consultants contribute in IS strategy formation**. The review which follows will set out what is known of the participation of managerial groups in IS strategy formation for the purpose of informing the research endeavour and providing context to the research. Nineteen empirical contributions on participant influence and behaviour in IS strategy formation are set out in Appendix 2.1 following. Nine of the contributions refer to IS strategy situations in which external consultants were involved to a greater or lesser extent. Two of these nine were survey research.

Formal and participative management structures for IS strategy formation can be introduced by top management as a signal of change in the organisational management style and as a response to the socio-political nature of IS strategy formation (Waema and Walsham 1990b). Doll and Torkzadeh assert that Steering Committees are associated with larger and more formal IS strategy endeavours (1987). The purpose of a steering committee is to resolve scope and resource issues, while functional managers should provide information about their areas, and IS managers should assess the existing IS facilities (Lederer and Gardiner 1992a). The importance of structures to facilitate 'participatory processes' were alluded to in case study research from the USA which asserted that consultation is characteristic of public sector organisations (Penrod and Douglas 1988). The focus of this section of the review is on the managerial groups rather than the institutional structures.

2.8.2.1 Political and power behaviours in IS strategy formation

The most singular aspect of the research on IS strategy participants is the extent to which the process has been shown to be dominated by political and power behaviours. This is true of both the European and North American research communities as can be seen from the published research.

Research in IS strategy formation in the National Health Service (NHS) in the UK has shown that the IS-enabled modernisation imperative may also provide a context in which power behaviours can be legitimised in the name of strategic intent (Jones 1994). In this instance, Matthew Jones found that the IS strategy process was used to legitimise and facilitate the exercise of power by managers within stakeholder groups (Jones 1994). A further example drawn from a longitudinal case study of IS strategy formation in a UK metropolitan council found that the IS planning process was political rather than strategic with IS decisions being made in the interest of those charged with planning (Flynn and Hepburn 1994). More recent experience of IS strategy formation in a UK university setting also showed that trust amongst superiors and subordinates was important in the process (Allen and Wilson 2003). All three of these examples are drawn from public sector settings in the UK. The political nature of IS strategy was also reflected in UK survey research which found that political conflicts, middle management attitudes, and senior management attitudes ranked amongst the ten top barriers in IS strategy development and implementation (Wilson 1989).

Recent public sector experience in Greece underlined how contextual factors could alter the trajectory of a large-scale regional health network (Constantinides and Barrett 2006). A dispute about intellectual property rights (IPR) transformed a new IS from being a point of collaboration to a point

of conflict amongst participants and it mobilised an opposing network of power (Constantinides and Barrett 2006).

Power behaviours are not solely the preserve of the public sector and examples have also been found in the private sector. Ruohonen has found that managerial groups engaged in IS strategy formation work in an environment where social and cultural forces are always present (Ruohonen 1990). This assertion is borne out by an action research study in three Finnish private sector companies which showed that "*political, and cultural power relations, behavioural differences and contradictions*" existed in each of the stakeholder groups involved in SISP (Ruohonen 1991:19). While Ruohonen (1991) has pointed to power behaviours amongst managers in IS strategy formation, his earlier (1990) categorisation of managerial characteristics amongst SISP groups (Figure 2.5) does not address this aspect of the groups.

Power behaviours are not confined to the European continent. The political nature of IS strategy formation was demonstrated in a case study of a developing country bank in Africa where 'corruptive alliances' within the management team frustrated efforts to deliver organisational change through IS (Waema and Walsham 1990a). A number of these cases have shown that power behaviours can be a significant barrier to IS strategy formation. The phenomenon of political behaviours in IS strategy formation has also manifested itself in North American IS research.

A case study in a third level institution in the USA found that faculty and staff were hostile to an IS planning initiative and they exhibited a political perspective on the process despite the fact that their systems and processes were outdated and the initiative was likely to improve their situation (Carter, Nilakanta et al. 1990). Another study at the University of Maryland also found that management consultancy findings are likely to be assessed by other strategy formation constituencies to assess their 'political implications' (Penrod and Douglas 1988:54). Analysis of the IS literature by Lederer and Sethi (1996) also showed that (a) bargaining amongst participants is necessary to set priorities, and (b) consensus should be sought on organisational requirements rather than focusing on detail.

2.8.2.2 Managerial groups in IS strategy formation

Research in the IS management field has shown that top managers, business managers and IS managers should be involved in IS strategy formation. Research in the private sector in Finland found that the business, IS and user constituencies should be involved (Reponen 1994). Another Finnish contribution found that members of the group will share at least one common motivation and will

establish a set of group norms over time (Ruohonen 1991). Ruohonen had set out the characteristics of the managerial groups in his earlier (1990) framework which is shown at Figure 2.5.

Figure 2.5 - Characteristics of managerial SISP groups (a corporate view)

Group	Special knowledge	Contribution to SISP	IS Decision power	Previous IS experience	Typical IS attitudes
Top Mgmt	Corporate strategy, external insight	Organisational analysis, strategy analysis, higher level control	Guarantee resources, decide strategic investments in IMEC[6]	Usually none (excl. EUC)[7]	IS Cost awareness, strategic views partly
User mgmt	Business strategy, implementation competencies	Strategy analysis, in-business views of field, bottom-up needs	Business unit responsibility, IS development, control of IS projects	None or in systems requirements (excl. EUC)	IS service awareness, also cost awareness depending on IS accounting practice
IT/IS mgmt	IT/IS opportunities, technical expertise	Feasibility, systems requirements, IT architecture propositions	Co-operation and technical support, architecture development and maintenance	Usually all traditional ISD[8] phases	Up-to-date technology awareness

(Ruohonen 1990)

The framework shows that each of the three managerial groups brought different knowledge, experience, IS attitudes, and knowledge to bear in the process. The data in Figure 2.5 also shows that each of the three participating management constituencies brought a distinctive competency which was related to their experience or responsibility. In the case of the IS manager, his particular expertise was vocational whereas, in the case of the other two constituencies, the knowledge was related to their corporate perspectives. Ruohonen's characteristics did not include external management consultants or others outside the organisational hierarchy.

Ruohonen asserts that there are three 'critical' stakeholder groups in the 'SISP process' consisting of top managers, IS managers and user managers (1990; 1991). These three groups were characterised earlier as the 'decisive groups' whereas others such as IS developers, users and consultants have 'minor authority' on final IS decisions (Ruohonen 1990). He recommends (1991:371) also that *"IS planning should be executed participatorily and co-operatively with a number of organisational interest groups"*. Ruohonen's framework (Figure 2.5) provides a useful template for IS strategy formation and for the allocation of roles or responsibilities in the process. The Finnish case studies did not report any involvement by external management consultants so that it is not clear how their participation, had they been involved, would have informed the contributions, responsibilities, or

[6] IMEC = Information Management Executive Committee (Ruohonen 1990)
[7] EUC = End User Computing (Ruohonen 1990)
[8] ISD = Information Systems Development (Ruohonen 1990)

decision making of the other managerial groups in the cases. The Finnish data is drawn from a private sector context.

Smits, Van der Poel et al (1997) confirm Ruohonen's (1990;1991) finding that a distinction is usually made between the roles of top management, IS management and line management in the IS strategy process although Smits et al acknowledge that other participants such as consultants and planning specialists may also be involved. Smits et al also draw on private sector experience in the Netherlands to show that 'there are some indications' that the roles, responsibilities and influence of the different internal management groups *change* over time (1997). The Netherlands data (1997) is not corroborated in Ruohonen's findings which show that group interaction, within managerial groups in strategic IS planning, leads to the emergence of a set of *stable* roles amongst the participants (Ruohonen 1991). External management consultants were not involved in any of the three cases studied in the Netherlands.

Michael Earl (1990a:4), conducted field studies in IS strategy formation in the UK in which he reported that "*consultants often stress that SISP requires a coalition of IS executives, line managers and senior business executives to ensure technology, 'real needs' and corporate criteria are represented respectively*". All three sources referred to here exhibit agreement that top management, business management, and IS management have a contribution to make in IS strategy formation. All are private sector organisations. None of the three studies has explored how the participation of external management consultants would have affected their study findings.

2.8.2.3 Top Managers' participation in IS strategy formation

Ruohonen (1990) typifies the top manager as being at the level of CEO, managing director, the president or director at board level. He concludes that the top management constituency contributes to IS strategy formation though organisational and strategy analysis and through higher level control (Figure 2.5). The top manager is responsible for business management and decision making and he will also have an interest in the costs associated with IS (Ruohonen 1990).

Private sector research in the UK found that top management involvement, and top management support, were ranked the top two success factors respectively, in IS strategy formation (Earl 1990a). Earl's (1990a) data is compelling especially given that his respondents included top managers, business managers, and IS managers. Despite the importance of their participation and support, top management commitment can be difficult to obtain in IS planning projects (Lederer and Sethi 1992d; Teo and Ang 2001). It has been suggested that top management should be continually involved in an

IS planning project where Method 1[9] is used in order to prevent resistance, maintain confidence, and act as an approver of the process (Lederer and Gardiner 1992b).

Stretch (1988) confirms that it can be difficult to secure top management participation in IS planning projects but he suggests that some management consultants would argue that there is little point undertaking such a project without top management participation. Galliers (1986a) asserts that many management consultancy organisations would decline involvement in an IS strategy project in which the chief executive was not involved (Galliers 1986a). A survey of management consulting organisations in the UK found that 42% of respondents would not conduct and IS strategy assignment without the 'support' of the managing director (Meiklejohn 1986:49).

The Lederer and Gardiner (1992b) data referred to above suggests that top managers have a role in managing resistance and confidence building in IS strategy formation. This behavioural dimension of the IS strategy process is not alluded to in the Ruohonen's (1990) framework at Figure 2.5. However, the inclusion of this dimension to the top manager's contribution would explain why the other stakeholders in the process attribute such a high level of importance to the top manager's participation and why it is directly linked to a successful outcome.

2.8.2.4 Business Managers' participation in IS strategy formation

Ruohonen (1990) typifies the business management constituency as being responsible for a business unit or profit-making division of a corporation. The business manager will report to the top manager or to some such authority. He has credited the business management constituency with contributing to IS strategy formation by strategy analysis, in-business views of the field, and bottom-up needs. The business manager participates as a business expert and will be focused on the service levels provided by IS (Ruohonen 1990). IS costs are not a factor for the business management constituency.

Evidence from a case study at British Rail supported the view that business managers are more likely to support the findings of an IS strategy in which they had been directly involved (Mainelli and Miller 1988). The community of practice has also acknowledged that consultation and involvement of senior management is an important factor in building support for IS strategy recommendations (Mainelli and Miller 1988). A case study in a third level institution in the UK demonstrated that a trust relationship was a key factor in influencing the process and content of IS strategy formation (Allen and Wilson 2003). The key factors affecting trust relationships are that senior managers and systems/structures

[9] Method 1 was a proprietary application development methodology, which was developed by Andersen Consulting. Method 1 has since been replaced by newer methodologies.

should be seen as "*competent, coherent, open, benevolent, reliable and having integrity*" (Allen and Wilson 2003:223). Both these UK cases highlight the importance of the human dimension in IS strategy formation.

Hann and Weber (1996) found that both senior management and IS management are likely to seek control over IS strategy formation because of the resourcing outcomes which are likely to flow from the process. This data underscores the political dimensions of the IS process. It is also likely that both business managers and IS managers will employ management consultants in the strategic management of IS with the objective of improving their own management capability (Sutherland 1992).

Whereas the Ruohonen (1990) framework at Figure 2.5 is consistent with a rational perspective on IS strategy formation, some of the other data referencing the business management community is consistent with a politicised or conflicted process. It is clear from the data that there can be organisational challenges to be managed in the process and inclusiveness in the strategising group can alleviate that problem.

2.8.2.5 IS Managers' participation in IS strategy formation

Ruohonen (1990) characterises the IS manager as the person responsible for the IS function in the organisation. He will have a view of the opportunities and constraints of IS and co-operative work and clear conceptions on the strategic use of IS are important in his role. Ruohonen (1990) found that feasibility, systems requirements, and IT architecture propositions were the areas in which the IS management constituency contributed in IS strategy formation. These findings suggest that the IS manager's contribution is primarily a technical one in which his vocational background is paramount.

Research from the USA suggested that the status of the IS manager is also important to ensure that he/she had appropriate access and status amongst the top management team (Pyburn 1983). The Pyburn findings, though more than twenty years old, could lead to the inference that the IS function may not have been seen as strategic in the USA.

The perception of IS as a technical domain, which was alluded to earlier, may explain why there is little in the IS strategy literature to illuminate the contribution or the participation of the IS management group. As has already been observed, there is a dominant focus in the literature on methods and tools for IS strategy formation or IS 'planning'. The relative dearth of research on participants and their contribution is noteworthy.

2.8.2.6 Management Consultants' participation in IS strategy formation

The IS strategy literature provides very little data on the extent to which external management consultants generally participate in IS strategy formation. A survey of IS planning practice amongst private sector organisations in Canada showed that the IS management constituency participated in 90% of projects, top management and users each participated in 33% of projects, while consultants participated in only 6% of projects surveyed (Conrath, Ang et al. 1992). We know therefore that management consultancy participation in private sector IS strategy formation in Canada was low in the early 1990's.

Survey data from private sector IS managers in the USA suggests that external consultants are not used widely in IS 'planning' initiatives there and that, where they are used, their involvement is not associated with measures of satisfaction or success (Lederer and Sethi 1996a). Contemporaneous data from the UK showed that 'consultancy help' ranked ninth with IS managers in a ranking of success factors in strategic IS planning (Earl 1990a). Consultancy help ranked twelfth success factor with general managers in the same survey. While these data would raise questions about management consultancy participation, Lederer and Sethi (1998) found that they can be valuable in IS strategy formation despite the belief that their involvement is not necessarily a predictor of greater success. The absence of a shared understanding amongst IS strategy participants is underlined in the finding amongst UK managers that management consultants rate their IS strategy efforts higher than do IS managers (Galliers 1986).

It would seem therefore that the academic community has few answers to aid a would-be IS strategist on the potential contribution of an external management consultant. Ruohonen's framework does not enlighten the researcher on the participation or contribution of external management consultants other than to include them in a general category of those with 'minor authority' for IS decisions (Ruohonen 1990). In contrast to the lukewarm support for external management consulting as an aid to IS strategists, the UK Government, in a commentary on IS strategy formation suggested that external management consultants offer a number of advantages in IS strategy scoping studies (CCTA 1991). These include:

- Objective view of structure and processes;
- Perceived as having no vested interest in proposals;
- Independent view;
- Catalyst in consensus building;

- Credibility which would not attach to an insider;
- Change agent;
- Knowledge and experience of public and private sectors; and
- Experience which is not available internally.

Figure 2.6 – Management consultants contribution in IS strategy formation

Consultant Contribution	Reference	Region	Sector	Research Method
Catalyst	Shank, Boynton et al 1985 Lederer and Mendelow 1987a Penrod and Douglas 1988 Reponen 1994	USA USA USA Finland	Private Hybrid Public Private	Case study Interview Case study Action research
Technical expert	Jones 2003 Waema and Walsham 1990a	UK Africa	Private Private	Participant Observation Case Study
Experience	Adriaans and Hoogakker 1989 Lederer and Sethi 1996a Lederer and Sethi 1998	Netherlands USA USA	Private - -	Case study Survey Survey
Independence	Waema and Walsham 1990a	Africa	Private	Case Study
Credibility	Lederer and Sethi 1998	USA	-	Survey

The UK Government view is partially supported by academic insights which are set out in Figure 2.6 and elaborated on in the following paragraphs.

2.8.2.7 The management consultant as catalyst

A case study in a North American financial institution showed that an external consultant acted as a catalyst in introducing the 'critical success factor' (CSF) concept in IS planning (Shank, Boynton et al. 1985). The introduction of the CSF approach led to a redefinition of the core business of the institution. North American researchers (Lederer and Mendelow 1987a) reported that external management consultants would be less threatening than internal IS managers when interviewing top management. They suggested that the consultants could act as 'catalysts' during interviews with top management on this basis. Contemporaneous research in a third level institution in the eastern USA also supported the idea of management consultants acting as 'catalysts' in IS strategy formation (Penrod and Douglas 1988). Action research studies in six private sector organisations in Finland also showed that consultants could act as 'catalysts during thinking' (Reponen 1994). The UK data

referred to earlier (CCTA 1991) had envisaged the external management consultants acting as catalysts in consensus building.

2.8.2.8 The management consultant as technical expert

A UK case study of management consultancy participation in an IS management initiative showed that management consultancy expertise in this instance was based on technical and process skills as well as experience (Jones 2003). Experience from the banking sector in Africa confirmed that technical expertise and access to top management were sources of power for the external consultant who led the IS strategy project (Waema and Walsham 1990a). Waema and Walsham judged that the decision to hire the external management consultant was "*based on his technical experience and an assumed neutrality in organisational politics*" (Waema and Walsham 1990a:399).

North American research also supports the characterisation of the consultant as a technical expert. Canadian management consultants suggested that internal or external consultants should be used to advise on the use and interpretation of IS planning methods (Austin, Reardon et al. 1988). A normative contribution from the USA has also suggested that consultants be used to provide support for their own processes (Lederer and Salmela 1996).

The CCTA data referred to earlier does not allude to the management consultant as technical expert despite the fact that the data is multi-dimensional.

2.8.2.9 The management consultant as a source of experience

Research in a Dutch energy utility found that practitioners in IS strategy formation should hire external management consultants in circumstances where they (the practitioners) lacked experience in the field (Adriaans and Hoogakker 1989). Lederer and Sethi also urged practitioners to use the services of consultants in IS strategy formation in circumstances (a) where the practitioners lacked experience (1996a; 1998) or (b) where the IS constituency did not enjoy the confidence of top management (Lederer and Sethi 1998).

The CCTA data (1991) also envisaged that external management consultants be hired for their experience in IS strategy formation.

2.8.2.10 The management consultant as an independent voice

The management consultant as an independent entity in IS strategy formation is supported in a case study in an African bank (Waema and Walsham 1990a). In this particular case the consultant was hired because of his "*assumed neutrality in organisational politics*" (Waema and Walsham 1990a:399). The CCTA data (1991) had also supported the idea of the consultant as a person with an independent view and no vested interest or stake in IS strategy proposals.

2.8.2.11 The management consultant as a credible voice

An early normative view from the world of practice recommends the use of outside consultants for presenting IS plans to top management on the basis that consultancy *credibility and expertise* carry considerable weight (Shidal 1978). Shidal suggests that, even though the advice of the IS manager is identical; the consultancy advice is more apt to be accepted without challenge (1978).

Lederer and Sethi (1998) urged IS strategists to hire an external management consultant in circumstances where the IS constituency did not enjoy the confidence of top management. This data can lead to an inference that the consultant is a more credible partner in the process than the IS participant. The CCTA (1991) data also supports the view that external consultancy advice is apt to carry more credibility than insider advice.

2.9 A critical perspective

The philosophical underpinnings of the critical perspective on academic research are elaborated on in Chapter 4, which sets out the methodological aspects of the present research. While it is necessary to allude to the critical aspects of the academic literature in this chapter and in Chapter 3, it is not intended to replicate the material on the philosophical basis of the approach here.

North American academics suggest that the critical research tradition is becoming more relevant to the IS field despite the fact that critical research in IS tends to be as 'fragmented' as the IS field at large (Kvasny and Richardson 2006). Critical research is concerned with issues of domination and control and the issues in IS include "*digital inequality, social exclusion, and the strategic location of information technology enabled services by trans-national corporations exploiting low pay and poor conditions*" (Kvasny and Richardson 2006:19). Walsham (2005a:10) suggests that the exponential growth of the Internet will exacerbate the 'digital divide' between rich and poor and he appeals to IS researchers to adopt "*a broadly critical approach*" to their work on issues of development and global futures.

Academic research has also shown that IS strategy formation can become a vehicle for managerialism as a form of social control. Doolin and Stewart (1998) cite the use of an executive information system (EIS) in the reform of the New Zealand health services as a signal of 'managerial competence and rationality'. They point to the 'corporatisation' of public sector organisations and the adoption of new language as symbols of new power relations which were legitimised as the pursuit of efficiencies. The 'reforms' are typically accompanied by an influx of "*IT specialists and management consultancy firms, who tend to reinforce the assumptions of systems rationalism and various 'instrumental' systems development methodologies*" (Doolin and Stewart 1998:304)

North American private sector research (Tillquist 2000:115) also provided an example of "*notions of management promoted through broadly held visions of managerial practice*". A business process re-engineering (BPR) initiative, which was led by the consultants, showed that issues were not raised and in house personnel suffered increasing levels of frustration because of their lack of control over the process. Other planning participants "*were hesitant to offer up problems and potential alternatives for fear of challenging the expertise of the consultant*" (Tillquist 2000:138). The case showed that the change participants "*adopt not only the vision of change but also new ways to talk, act, and plan. This adoption may inhibit change by blocking effective discussion and forcing compliance to ill-fitting prescriptions*" (Tillquist 2000:115). The BPR initiative led to a large-scale reduction in the labour force and the "*public bandwagoning for radical change hid private interests and backroom political maneuvering*" (Tillquist 2000:132).

In reviewing the research on management consultancy participation in IS strategy formation, the Tillquist (2000) case was the only one which exhibited a critical perspective on the case. In terms of the consultants' contribution, the case data suggests that this was enacted in their implementation of the BPR process as a technical contribution. The case also exhibited power and political behaviours amongst the participants and the management consultant was perceived by users as employing the constraints imposed by the BPR method and the timetable to impose changes on them.

2.10 Conclusion

The multidisciplinary nature of the IS field and the anxieties of a section of the academic community regarding its future have been set out in the preceding chapter. The fragmented nature of the field and the emergence of five distinct streams of research have been amongst the characteristics noted. In terms of the future, there is a degree of agreement that the colonisation of additional reference fields is more likely than not.

The literature review disclosed that aspects of the IS strategy content, context, and process could each have a determining effect on how an external management consultant would contribute in IS strategy formation. Whereas the dominant focus of IS strategy researchers has been on the methodologies employed in IS strategy formation, there has been some academic attention directed towards the participants and their contribution in the process.

Despite the fact that no specific research has been conducted to ascertain how external management consultants contribute in IS strategy formation, some support was found for their contribution as 'catalyst, 'technical expert', 'source of experience', 'independent participant', and 'credible outsider'. A critical perspective was noted in a North American study in which the consultancy methodology was a constraining influence on organisational members. Whereas the literature review did provide useful insights on the research, it did not yield a satisfactory theory of how external management consultants contribute in IS strategy formation. The review of the academic literature will be extended to the field of management consulting and this literature will be set out in Chapter 3 following. The 'critical' perspective, which was exemplified by the Tillquist case (2000), will also be followed through in the management consultancy literature.

3 THE ADVICE BUSINESS

"Research on consultancy has to be able to contribute to broader debates about management if it is to grow and prosper. If it remains a self-contained scientific discipline it will atrophy"

(Mohe 2007:257)

3.1 Introduction

This chapter contains of review of the academic literature on management consulting to ascertain the present state of knowledge of how management consultants contribute in general consulting assignments.

The review begins by tracing the origins and evolution of management consulting over the one hundred years since its emergence in North America at the turn of the twentieth century. Over the years, management consulting changed its focus in response to changes in the environment and each era was dominated by new management issues and the emergence of new market leaders in the sector.

The early contributions to the literature on management consulting came from consulting practitioners and from academics who engaged in consultancy practice. The literature from this period has been dismissed by some academics as uncritical and self-serving. Academic research contributions from outside the consulting field became more the norm in the 1990's. The philosophical basis underpinning research in management consulting extended to critical studies in this later period. The literature in the field can now be divided into two categories which have been labelled as 'functionalist' and 'critical'.

The major themes in the critical literature, together with the research contributions related to them, are explored in this chapter. The review then turns to the central themes in the functionalist stream of literature. The major focus in the later part of the chapter is on the engagement of management consultants by organisations and the nature of the management consultants' contribution in consulting assignments. The empirical research on management consultants' contribution in assignments is brought together in a consolidated table in the concluding part of the chapter.

3.2 Management Consulting – a tale of adaptation and growth

Management consultancy first emerged in the early twentieth century in the USA in tandem with the development of Frederick Taylor's scientific management theory (Saint-Martin 1998; Canback

1998b; Fincham and Clark 2003a; Gross, Poor et al. 2004). Management consultancy evolved in three main phases (Fincham and Clark 2003a). The key consultancy skills in each of these phases were different and each phase represents a different management problem (Fincham and Clark 2003a). The three phases are;

Phase	Timeframe
1. Scientific management;	1890's to 1930's
2. Organisation and strategy phase; and	1950's to 1970's
3. Enterprise systems and IS networks.	1970's onwards

Taylor has been credited with the introduction of scientific management by introducing new approaches to the management of employees on the shop floor and in the office, aimed at improving efficiency. Taylor's principles of industrial engineering became the basis for the establishment of a number of new companies who advised managers on workplace efficiency. The scientific management era and the new management consultancy sector continued through the early part of the twentieth century until the next new era emerged (Kipping 2002).

The organisation and strategy phase began in the USA in the 1930's and came to worldwide prominence in the late 1950's. Whereas scientific management had emerged primarily from an engineering ethos, the founder of McKinsey's, one of the dominant consultancies of the new era, had emerged from an accountancy background (Kipping 2002). Boston Consulting Group, which focused on corporate strategy, was typical of the new organisation and strategy consultancies (Kipping 2002).

The third phase of management consulting emerged in the 1970's when successive crises related to oil supplies and the competitive pressures from the so-called 'tiger' economies in Asia created competitive pressures on Western business for better management of value chains and co-ordination of activities. By the late 1980's, shrinking markets led to a series of mergers and consolidations in the management consultancy sector which saw the Anglo-American sector amalgamate into eight major consulting organisations dubbed 'the big eight' (Kipping 2002). Further restructuring in the 1990's reduced the eight organisations to a new Big 5[10] global consultancy organisations as mergers and acquisitions saw a realignment of the top players (Evans 1994; Saint-Martin 1998; Armbruster and Kipping 2003; Fincham and Clark 2003a).

[10] The Big 5 accounting firms were Arthur Andersen, Deloitte & Touche, Ernst & Young, PricewaterhouseCoopers (PwC) and KPMG (Fincham & Clark 2003a). Andersen Consulting evolved from Arthur Andersen. Cap Gemini acquired Ernst & Young in 2000. PwC's management consulting business was sold to IBM in 2002 (Fincham & Clark 2003a). Bearing Point (management consulting) evolved from KPMG in 2002 while Andersen Consulting became Accenture in 2001 (Fincham & Clark 2002a).

The management consulting business has grown exponentially in recent years (Saint-Martin 1998; Canback 1998b; Nippa and Petzold 2002; Trepo 2002; Gluckler and Armbruster 2003). In the period from the early 1980's to the late 1990's, growth rates in the sector were twenty percent per annum (Canback 1998b). Nippa and Petzold (2002) identified annual revenue growth in the sector of between ten percent and twenty percent in 2002. Armbruster and Kipping (2003) asserted that the worldwide market for management consulting was growing at a rate of ten to fifteen percent per year by 2003. The growth in the sector has been attributed to complexity and uncertainty in the environment leading to fear and a growing demand for external advice (Wood 1996; Sturdy 1997; Wooldridge 1997; Gluckler and Armbruster 2003; Koestenbaum 2003).

The growth of fee income of the consultancy sector provides one measure of the growth in the field in recent years (Canback 1998b; Kipping 2002; Wood 2002). In 1980, global fee revenue was estimated to be $3 billion (Fincham and Clark 2002). By the late 1990's, global fee income had risen to $35 billion annually. This figure had grown to $62 billion by 2001 (Fincham and Clark 2003a). The worldwide management consulting revenue for 2004 was predicted to be $125 billion (Kennedy Information 2004). The market was forecast to register a compound annual growth of almost 5% through to 2006 (Kennedy Information 2004). The combined UK and Irish consulting market was just less than £15 billion in 2005 and a compound annual growth of more than 7% was predicted (Kennedy Information 2006). The consulting market in the UK and Ireland was shown to have the most positive growth prospects of all the European countries in 2006 (Kennedy Information 2006). The UK had traditionally been the largest consumer of management consultancy services in Europe followed by Germany which is a close second (Saint-Martin 1998). These two countries accounted for 47% of the European market in 1992 according to a Financial Times survey (Saint-Martin 1998).

Despite the fact that management consulting does not satisfy the accepted criteria for recognition as a profession[11], nonetheless this shortcoming has not had any obvious impact on the growth and continuing success of the major consultancies (Visscher 2006). The lack of institutional standards, industry boundaries, and product standards has contributed to uncertainty in the management consulting sector (Gluckler and Armbruster 2003). This uncertainty has, in turn, meant that competitiveness in the sector is driven by experience-based trust and networked reputation rather than price or measurable quality (Gluckler and Armbruster 2003).

[11] A profession has successfully established jurisdiction over an area of working life and controls knowledge and its application within that area (Visscher 2006). The critical literature argues that management consultancy is not a profession because "*it does not have access to a unique, esoteric, and defendable knowledge base*" (Fincham and Clark 2003a:10)

The exponential and continuing growth of the consulting market over a long period suggests that, irrespective of the criticisms, organisations place value on the services of consultants (Nippa and Petzold 2002). The relative market share of the top ten management consultancy organisations in the UK is set out at Figure 3.1. The data shows that the financial services sector represents a large section of the business while the public sector is also a significant market for management consultants.

Figure 3.1 – Top ten UK Management Consultancies: 1999 fee income (UK£ m)

Management Consultancy	Fee Income (IS based)	Financial Services	Manufacturing	Public Sector	Utilities
Andersen Consulting (Accenture)	468e	286e	31e	49e	85e
PriceWaterhouseCoopers	261	157	27	43	40
KPMG Consulting	70	144	21	25	4
Cap Gemini	31	97e	74e	-	52
FI Group/OSi	172	117	2	16	55
ICL Group	164e	58e	40e	60e	19e
PA Consulting Group	61	38	19	22	10
Ernst & Young	14e	59e	13e	14e	17e
Deloitte Consulting	85	21	22	32	13
McKinsey & Co.	nd	47e	26e	13e	-

Source: Management Consultancy, July/August 2000
e = estimate; nd = no data.

The management consulting sector has evolved and reconfigured itself in response to the pressures and opportunities which have emerged in the business sector over the one hundred years of its existence. The development of the field is remarkable, not least for the fact that the public sector does not feature as an element of the landscape which affected the development of the field. The basis of the consulting field has also shifted from an engineering focus in the early period to accountancy and business in the later period.

Intuition would suggest that a sector which has been the centre of so much change and exponential growth would have attracted significant attention from the academic world. The next section turns to considering the extent to which academic research has featured in the development and evolution of management consulting.

3.3 Management Consulting – a recent focus of academics

Management consultancy is frequently referred to as the 'advice business' (Wooldridge 1997) and the focus on the advice aspect is a recurring theme in the literature. The academic literature on the topic contains few definitions of management consulting and a review of the major streams of academic

research in the field provides some clues as to why this may be so. Recent literature on a theory of management consultancy summarised the "central purpose" of management consulting as "*helping clients effect constructive change*" (Weidner and Kass 2002:181). Figure 3.2 below contains definitions of management consulting which have been reproduced from the literature. Each of the definitions focuses on 'advice' as a major component of the contribution of management consultants to clients. The Greiner and Metzger (1983) definition, which is the most comprehensive, has been used in later academic publications such as Kakabadse and Louchart (2006) and Canback (1998b).

Figure 3.2 – Definitions of Management Consulting

Definition	Reference
"At minimum, consultancy involves two human systems where one (nominally termed the client) believes assistance is needed and the other (nominally termed the consultant) provides it"	(Lundberg 2002:157)
"An advisory activity which necessitates intervention in an ongoing system where the advisers are external specialists and so have no organisational responsibility, and where the aim of the activity is some alignment of the organisational system"	(Clark and Salaman 1996a:155)
"Any activity that has as its main apparent justification the giving of advice to organisational participants about how to improve the effectiveness of organisations or specific individuals in them"	(March 1991:21)
"An advisory service contracted for and provided to organisations by specially trained and qualified persons who assist, in an objective and independent manner, the client organisation to identify management problems, analyse such problems, recommend solutions to these problems, and help, when requested, in the implementation of solutions"	(Greiner and Metzger 1983:7)

The rate of adoption of the new management science approaches in the early 20th century was slower in the UK than in the USA. Data from secondary sources show that Frederick Taylor's ideas on management science were ignored or scorned in the UK until the period between the two world wars (Huczynski 1993). Huczynski attributes the delay in adoption to a lower level of industrialisation and smaller markets in the UK rather than emotion or chauvinism (1993). The transfer of management ideas from the USA to the UK accelerated in the period 1945 to 1953 during a period of exponential American investment in the UK.

The global management consultancy firms evolved from the large accountancy firms who already had a large client-base and had a unique level of access to company executives and business secrets

(Saint-Martin 1998). Wooldridge (1997) also points to the emergence of the management consultancy business because of the opportunities offered by providing solutions to business problems rather than identifying them from an accountancy perspective. The importance of the accountancy connection is underlined by the fact that consultancy growth in the UK far outstripped that of France where accountancy firms were legally debarred from engaging in management consultancy (Saint-Martin 1998).

The management consultancy business escaped the attention of academic researchers for many years after it emerged on the North American continent. Gluckler and Armbruster (2003) make the point that management consulting was largely ignored by the academic community until the late 1990's. The literature in the management consulting field up to the late 1990's had come from within the field itself, whether from consultants or from academics who acted as consultants (Mohe 2007). A notable feature of the literature on management consulting has been the fact that the academic literature tends to lag behind the popular management literature so that the research agenda is not set by academics (Fincham and Clark 2002).

Academics have pointed to a number of shortcomings in the academic literature in the field (Bloomfield and Danieli 1995; Wooldridge 1997; Alvesson and Johansson 2002; Lundberg 2002; Nippa and Petzold 2002; Weidner and Kass 2002; Fincham and Clark 2003a; Sturdy, Clark et al. 2004). Fincham and Clark (2003a) have recently asserted that detailed empirical research in management consulting is slight. Weidner and Kass (2002), provide yet another perspective from the USA, that the literature is relatively underdeveloped in terms of basic theory and there is a noticeable absence of theoretical models on consulting and its impact. Sturdy et al (2004:337) have described the academic literature on management consulting is *"largely sterile, atheoretical and overly prescriptive"*. The management consulting literature has also been characterised as *"fragmented, sometimes vague, and often overly value-infused"* (Lundberg 2002:153). The prospects for the current research endeavour are put in context by the observation that *"there are almost no studies of the role of consultants in public administration"* (Saint-Martin 1998:321).

As recently as 2002 the academic community noted the 'relative lack of empirical work' on management consulting (Alvesson and Johansson 2002). The shortcomings of the academic literature had also been identified by UK academics who dismissed much of the academic literature on management consulting as *'descriptive and prescriptive'* (Bloomfield and Danieli 1995:25). Despite the growth in the consulting sector, it is remarkable that research in the field is lacking to such as degree. Kieser (2002) has suggested that the value of management consulting is difficult to measure.

Wooldridge made the point that *"there are no serious studies of whether consulting really does any good"* (1997:21). Andrew Sturdy had also concluded that there was widespread recognition that very little empirical research existed on *'the practices and perceptions'* of consultants and their clients (1997). The lack of relevance of the academic research output on management consulting to the world of practice has also been criticised by academics (Kieser 2002).

Lundberg's (2002) assertion that the management consulting field is fragmented is borne out by geographical variations which are apparent in the field. Academic research on management consulting continues to be largely a preoccupation of the Anglo-Saxon world (Mohe 2007). This is probably explained by the fact that the two largest markets for management consulting are the USA and the UK (Saint-Martin 1998). As recently as 2007, research in management consulting was notable for being "*predominantly domiciled to the Anglo-Saxon domain*" (Mohe 2007:255). The existence of regional sub-fields was underlined in the observation that a stream of research based on systems theory was unique to the German academic field whereas the 'critical' stream of research was much slower to evolve in Germany (Mohe 2007).

Saint-Martin (1998:321) has drawn attention to the absence of research on the role of management consultants in the public sector and suggested that "*recent accounts of their participation in the process of bureaucratic reform are mostly anecdotal and ahistorical*". Management consultants became of feature of public administrations in many Western countries following the introduction of the New Public Management (NPM) philosophy in the 1980's and adoption of new management principles (Saint-Martin 1998). The administrations in the UK and Canada drew consulting resources from the private sector consulting services whereas, in contrast, the French government developed its own internal consulting services in 1990 on the basis that external consultants "*were seen as having insufficient experience in the working of public administration*" (Saint-Martin 1998:321). The UK administration was more open to management consulting involvement because of the new 'open' environment which followed the Fulton Committee review of the administrative structure in the 1960's and the involvement of management consultants in the new reforms (Saint-Martin 1998).

3.4 Research in management consulting – polar perspectives

The academic literature on management consulting has been dominated by two distinct and polar perspectives over its fifty year history (Fincham and Clark 2003a). The period from the late 1950's to the mid 1980's was notable for a stream of management consultancy research which was mainly

concerned with "*maximising its effectiveness to organisational interventions*" (Fincham and Clark 2003a:9). This literature was focused on consultancy effectiveness and with identifying practical theories and frameworks for practice (Fincham 1999). Many of the theories emerging were based on 'rationalist management concepts' such as contingency theory, stage theories, and resistance to change (Fincham 1999). In this 'functionalist' stream of literature, the relationship between consultants and client is seen uncritically as a "*knowledge-based, helping relationship*" which is bounded by time and by task specification (Werr and Styhre 2003:43). A large part of the literature depicts the consultant as a "*detached expert, advising clients on isolated problems on a relatively short term temporal basis*" (Buono 2002:p.vii). The 'functionalist' or conventional perspective is predicated on the assumption that the consultants superior knowledge is balanced by the clients contractual power (Werr and Styhre 2003).

The 'functionalist' management consulting literature has been described as having come from within the consulting field itself because many of its authors had come from a consulting background. Mohe (2007), a German academic, claims that the literature in the management consulting field up to the late 1990's had come from within the field itself, whether from consultants or from academics who acted as consultants. Swedish academics have also pointed to the number of 'functionalist' contributions which have emanated from academics who are also practicing management consultants (Alvesson and Johansson 2002). Bloomfield and Danieli (1995:25) go further to point to the fact that some of the literature has been authored by writers who were formerly consultants who "*tend to be implicitly concerned with legitimating and maintaining consultants' public image*".

The alternative 'critical' perspective on management consultancy research is based on the premise that the fundamental issue to be addressed in the management consultancy field is the value of consulting to the client (Fincham and Clark 2002). The major focus of the critical theorists is on the 'strategies and techniques' used by consultants to persuade their clients (Fincham and Clark 2003a). Werr and Styhre (2003) point to the recent critical literature in which consultants are perceived to use rhetoric and impression management to exploit the clients 'anguish' in the managerial role. The critical theorists question the knowledge content of the consultants and perceive the relationship as being based on the vulnerability of managers (Werr and Styhre 2003). The inference here is that the vulnerability of managers invests the consultant with power in the relationship through his superior knowledge resources and expertise. Critical theorists claim that the effectiveness of particular approaches to management consulting is of less importance and is not their area of interest (Fincham and Clark 2002). Alvesson and Johansson (2002:229) suggest that the very critical literature can be seen "*as a healthy reaction to earlier dominant, self celebratory texts on management consultants*".

A consequence of the increasingly polarised positions of the functionalist and critical scholars is that "*many authors tend to adopt somewhat extreme and possibly too categorical viewpoints*" (Alvesson and Johansson 2002:228). Fincham and Clark (2002) also point to the difficulties in testing the effectiveness or relative merits of particular approaches. They point to the potential consequences for the reputations of individual consultancy organisations. The claims of the critical theorists that management consultancy knowledge is based on rhetoric are not universally acknowledged. Robin Fincham, in a recent academic exchange, suggested that the picture of management consultants as promoters of hype and management fashions "*doesn't quite square with what consultants do on the ground*" (Mohe 2007:261).

The polar positions of the 'functionalist' and 'critical' scholars were illustrated by an exchange of articles in the *Management Learning* journal in 2004. The exchange was prompted by a normative article in the 'functionalist' tradition by Clegg et al (2004a:31) which characterised the management consultant as "*a source of noise that disrupts established ways of doing things*" and enables change to happen. Clegg and his Australian colleagues suggested that management consultants are more than advisors or organisers and they can also disrupt the status quo and create an environment for change. The article prompted a response from UK academics from the 'critical' tradition, Sturdy et al (2004:337), which asserted that the Clegg et al contribution "*ends up celebrating consultancy as a privileged arena in achieving what is described as radical change, but what is, in effect, typically a reinforcement of existing power relations and of managerialism and of its associated language*" . Sturdy et al also asserted that the history of management consulting has been one of silencing groups such as employees, consumers and citizens rather than disrupting the dominant order. The exchange of views does not seem to have led to any reconciliation of the polar views of the participants in the debate. The exchange appears to have ended in a second article by Clegg et al which acknowledges the value of critique but expressed their concern that "*critical studies preach to the converted only and therefore have little effect other than reinforcing the gap between those painted as saintly critical spirits and those who are positioned as their self-professed managerial others*" (Clegg, Kornberger et al. 2004b:342).

The preceding paragraph has illustrated the divide between the traditional and the critical theorists in management consulting research. The literature in the field yields no sign that there is any basis for reconciliation of the alternative positions. The following pages will turn to a review of the significant bodies of research which exists in the two traditions.

3.5 *Critical Perspectives*

The preceding chapter, which dealt with information systems (IS) strategy, has already referred to the existence of a body of 'critical' research in the IS field. The philosophical basis of the 'critical' orientation in academic research generally is set out in Chapter 4 following and, accordingly, it is not included in this chapter to avoid unnecessary repetition.

The major themes which have emerged in the critical stream of academic research to date concern (a) management gurus (b) management fashions, and (c) management consulting as an exercise of power. These three themes are explored in the following paragraphs.

3.5.1 Management Gurus

The critical theorists have focused their attention on 'management gurus' because the activities of both management gurus and management consultants "*flow into each other and overlap in practice*" (Fincham 2002:191). Fincham supports this assertion by the fact that large consulting organisations frequently promote the reputations of their senior management by publishing their books and crediting them with influential ideas (2002). Clark and Salaman (1996) also attest to the overlap between the two groups by pointing out that managers frequently use 'conventional' consulting organisations to implement the ideas of the gurus.

Jackson (2002) points out that there are no accepted definitions of what constitutes a management guru and he goes on to cite Kennedy's (1991:p.xviii) view that the key qualities of a management guru are "*timing; originality; forcefulness; a gift for self-promotion and perhaps above all else, the ability to encapsulate memorably what others recognise as true*". Management gurus[12] can be distinguished from others in the management advice business by their relative scarcity, wider sphere of influence, use of mass media communication, and high remuneration (Jackson 2002).

Fincham (2002) suggests that management gurus and management consultants depend on different bases of appeal to their clients. The appeal of the gurus depends on charismatic expertise whereas the management consultant relies on technical expertise. The two groups are differentiated in Figure 3.3.

[12] "Academic gurus are business school professors and others who have an educational institution affiliation. Consultant gurus are independent writers and advisors. Hero-managers are current or part-time chief executive officers (usually of major American or British multinational companies) who are acknowledged to have been successful. Each speaks from a different base of authority." Huczynski, A. (1993). Management gurus. London, Routledge. P.40.

Figure 3.3 – Management guru and management consultant expertise

	Management Guru	**Management Consultant**
	Charismatic Expertise	Technical Expertise
Nature of Appeal	Wide	Narrow/proprietary
Acquisition of Knowledge	Chance Acquisition	Systematic Acquisition
Primacy of Knowledge	Fundamental Truth	Real Knowledge

(Fincham 2002)

It is also possible to differentiate the two groups on the basis of their domain appeal insofar as management gurus exercise persuasion on a universal or wide level whereas management consultants exercise their appeal at a client level (Fincham 2002). Fincham also contrasts the dramatic appeal of the guru with the models and techniques of the consultant. Clark and Salaman (1996) support the assertion that the gurus' appeal is based on charisma or drama by suggesting that management gurus use many of the techniques of witchdoctors and shamans to influence their audience. This contribution would infer that those gurus with the most impressive presentation should be the most influential. Research has confirmed the importance of storytelling technique and performance in the public presentations of gurus such as Peters and Kanter (Clark and Greatbatch 2002). The use of rhetoric in creating product vision in the technology world is also underlined in other recent research (Case 2002).

Academic-gurus and the hero-manager have also attained status as sources of management expertise (Huczynski 1993). Hero managers, such as Jack Welch (GEC) and academic gurus such as Rosabeth Moss Kanter (academic) tend to command a degree of credibility and regard from managers which is more than the sum of their contribution to the field of knowledge and which, to some degree, also relies on their expertise in presentation and personal appearances.

Recent survey research from the USA (Prusak and Davenport 2003) has shown that there is a low level of unanimity amongst management gurus themselves on who is most influential amongst a list of 280 of their peers. The emergence of Peter Drucker as the most influential provides a level of support for the standing of the management consultancy constituency, although he secured an unimpressive 7.5% of the "votes".

Fincham's (2002) contrasting attributes of the management gurus and the management consultants, which were referred to in Figure 3.3, provide cause for reflection. He asserts that the gurus' basis of expertise is charisma whereas the management consultants' is expertise and knowledge.

The characteristics of the management guru are reminiscent to the 'strategies and techniques' referred to by Fincham and Clark (2003a) as the hallmarks of a consultant in the 'critical' perception. Werr and Styhre (2003) have also drawn attention to rhetoric and impression management in their 'critical' view of the consultant. In contrast, Fincham (2002) does not attribute impression management to the management consultant in his typology, which is reproduced at Figure 3.3.

Recent critical research in the UK showed that consultants employed paradoxical metaphors in their sales rhetoric when seeking to enlist seminar participants as clients (Whittle 2006). The rhetoric was intended to advance the consultant's salience and legitimacy in the particular setting which, in turn, would improve the prospects of enrolling the seminar candidate (Whittle 2006). The research underlined the assertion that paradoxes underline the contradictory interpretive repertoires which exist in management consulting (Whittle 2006). The research setting in this case was around seminar enrolment rather than a large-scale organisation development (OD) assignment.

Berglund et al (2000) point out that the use of consultancy methods as part of the rhetoric used to legitimise consultancy knowledge is based on contradictory myths. In the first instance, the methods and models are claimed to be universal models which can be used to manage change and, in the second instance, it is frequently suggested that a more local, experience-based approach is necessary (Berglund and Werr 2000). Berglund's (2000) assertion brings back into focus the reference earlier in the chapter to the adaptation of 'universal' consultancy standards, which require adaptation to local conditions (Wood 2002).

3.5.2 Management Fashions

Management gurus have been responsible for the promotion and dissemination of "management ideas" (Huczynski 1993; Jackson 2002). Huczynski (1993) has identified a number of characteristics of management ideas or management fashions which typically exhibit some or all of the following features and characteristics;

Feature	Characteristic
• Timely:	Address the issues of the management era;

- Disseminated widely: Promoted by academics, consultants, schools etc.;
- Personal focus: Meet the individual needs of managers;
- Relevant: Perceived as relevant to business issues; and
- Stimulating: Presented in stimulating and interesting way.

Abrahamson (Abrahamson 1996:257) has defined a management fashion as "*a relatively transitory collective belief, disseminated by management fashion setters, that a management technique leads rational management progress*". Jackson (2002) cites three examples of guru-led management fashions as (a) 'business process re-engineering', which was popularised by Hammer and Champy (Hammer and Champy 1993), (b) the 'effectiveness' movement, which was popularised by Stephen Covey (Covey 1989), and (c) the 'learning organisation' movement, which was popularised by Peter Senge (Senge 1990).

The importance of *management fashions* (Abrahamson 1996; Jackson 2002; Trepo 2002)(Abrahamson 1996; Jackson 2002; Trepo 2002)(Abrahamson 1996; Jackson 2002; Trepo 2002)(Abrahamson 1996; Jackson 2002; Trepo 2002)(Abrahamson 1996; Jackson 2002; Trepo 2002) is underlined in the literature. These fashions come in cycles and, although they are frequently dismissed as fads, they are powerful in their impact. Quality circles, business process re-engineering, and downsizing have had major impacts on many organisations. Abrahamson (1996) suggests that emergence and adoption of management fashions can be influenced by economic and geographic factors.

Swedish academics (Berglund and Werr 2000:649) used an illustrative case to argue that models and methods used by management consultants purport to provide a '*condensation of a large amount of knowledge, previously tested in numerous places*' in order to legitimate their claim to superior objective knowledge. Consultancy methods and toolsets infer that the management consultants can control and manage the challenging problems of organisational change (Berglund and Werr 2000). Critical theorists argue that consulting models such as Total Quality Management (TQM) can become the focus of engagements rather than real business outcomes (Legge 2002). An illustrative case from the USA supports the assertion that the programs used by consultants, such as TQM, can become an end in themselves rather than being linked to specific organisational objectives (Shapiro, Eccles et al. 1993).

The criticism of management consulting reached a high point in the 1990's when management consultants were criticised for their championing of business process re-engineering (Wright and

Kitay 2002). Wooldridge also makes the point that widespread disenchantment with management consultancy began with the concept of business process re-engineering (BPR), which "*ignored the human side of management, sacrificing such intangible goods as commitment and creativity for short-term efficiency. As a result, re-engineering usually led to demoralisation and disruption rather than the revolutionary improvements in efficiency touted by its proponents*" (1997:20). Research from the USA (Shapiro, Eccles et al. 1993) suggests that consultancy can be "faddish" and management consultants can miss the real issues in organisations as a result of the focus on management ideas and fashions.

Empirical research in the Netherlands, in which the interviewees were consultants, showed that the development of concepts such as business process re-engineering (BPR) or customer relationship management (CRM) by consultancy organisations was less straightforward than might be inferred from the critical literature (Heusinkveld and Benders 2003). In the first instance, stories of management fashion tend to infer that all consultancies are alike and, also, they overlook the fact that consultancies are required to deliver on their business obligations (Heusinkveld and Benders 2003).

Australian research into the impact of management consulting found that clients were largely positive in their assessment of the service provided by management consultants whereas, in contrast, the mainstream business press exhibited a more negative interpretation of management consultants' contribution (Wright and Kitay 2002).

It is arguable that some of the management fashions which are referred to in the literature are merely old wine in new bottles. For example, the concept of 'business process reengineering', which is frequently cited as a significant management fashion, is reminiscent of Taylor's scientific management and task deconstruction at the beginning of the last century.

The present research focuses on contributing to the development of theory on how external management consultants contribute in IS strategy formation. It is clear that methodologies, or management fashions, such as business process reengineering could form part of IS strategy formation and that external management consultants could play a part in such an initiative.

3.5.3 Consultancy and the exercise of power

An empirical study of a group of US managers in a classroom exercise (Lebestky and Tuggle 1975) showed how the expertise and power of consultants could tend to counteract the 'legitimate authority'

of business managers. The Lebestky and Tuggle data is interesting because, unlike the other research referenced under this heading, it predates the emergence of the 'critical' research tradition in management consulting which was dated to the 1990's.

Empirical studies from Northern Europe support the assertion that management consulting is an exercise of power (Czarniawska and Mazza 2003; Whittle 2006). An empirical investigation of an IS implementation in the UK health service came to the same conclusion in an IS context (Bloomfield and Danieli 1995). Research into an IS strategy formation in the private sector in the USA suggests that the characterisations of models such as BPR "*embody simple transportable and conceptually ambiguous notions for gaining power and control over the organisational change process*" (Tillquist 2000:146).

A number of normative contributions to the management consulting literature had made the same claim. Management consultancy has been described as a form of persuasion. "*These forms of persuasion are mechanisms of power – and, more to the point, they are attributable power mechanisms*" (Fincham and Clark 2002:9). Recent literature (Lundberg 2002) also suggests that management consultants exercise power through the perception that they can reduce uncertainty for managers. Salaman suggests that "*although consultancy ideas may be smoke and mirrors, faddish and false, they can still contribute to the nature and exercise of power within the organisation*" (2002:254).

Empirical research in the UK found that consultants did not see themselves as power-brokers and they were conscious of their need of high level sponsorship in client organisations (Fincham 2003b). Without high-level corporate support, they were reluctant to undertake projects, especially since their role is often to deflect blame in the event of difficulties (Fincham 2003b). The consultants role is frequently as 'sense-maker and facilitator' rather than as a central character (Fincham 2003b).

Illustrative data from the UK showed that the relationship between consultants and managers could be competitive (Fincham 1999). While consultants tend to see themselves as 'strategic allies' of top management, there was some resistance by managers to the solutions suggested by the consultants (Fincham 1999).

3.6 The functionalist perspective

The earlier parts of this chapter established that the 'functionalist' perspective in academic research in management consulting is concerned with identifying practical theories and frameworks for the community of practice (Fincham 1999). Werr and Styhre (2003:43) had, uncritically, characterised the relationship between consultants and client as a "*knowledge-based, helping relationship*" which is bounded by time and by task specification. The remaining parts of this chapter turn to reviewing the functionalist stream of academic literature in management consulting to ascertain how management consultants contribute in their work in organisations. Before considering the 'how' of management consulting, the review will briefly consider 'why' organisations hire management consultants.

3.6.1 The engagement decision

Survey research cited earlier (Wood 1996) showed that, for a large sample of 124 business managers in the UK, the primary motivation for hiring management consultants arose from the increasing complexity of the business environment. Wooldridge (1997) identified complexity and uncertainty as factors motivating organisations to hire management consultants. These factors lead to fear which, in turn, creates a demand for management consultancy advice (Wooldridge 1997).

Two academic commentaries from the USA (Heller 2002; Weidner and Kass 2002) and one from Germany (Nippa and Petzold 2002) have suggested reasons why managers might hire management consultants. The twenty-three reasons have been consolidated in Figure 3.4. Consolidation of the three academic perspectives on managers' motivation for hiring management consultants indicates a low level of consistency between the three perspectives. Heller's (2002) view suggests a more politicised environment for management consultants' participation than the other two perspectives which reflect a less conflicted environment.

Figure 3.4 – Features of management consulting

No.	Features of Management Consulting	Heller 2002	Nippa & Petzold 2002	Weidner & Kass 2002
1	A service			X
2	Helping clients			X
3	Providing independent advice			X
4	Recommendations		X	X
5	Help client achieve constructive change			X
6	Achieve objectives			X
7	Improved resource and capability use			X
8	Implementation		X	X
9	Information		X	
10	Diagnosis		X	
11	Problem solving		X	
12	Consensus building		X	
13	Client learning		X	
14	Organisational effectiveness		X	

15	Gain ego advantage	X		
16	Organisational rivalry	X		
17	Validate a preferred solution	X		
18	Avoid responsibility	X		
19	Insurance against failure	X		
20	Association with a new trend	X		
21	Specialist assistance with a technique	X		
22	Obtain second opinion	X		
23	Complex phenomenon	X		

Recent empirical research in the UK (Wood 2002) (Figure 3.5) has shown the type of assignments on which external management consultants were used. Organisation change and IS were the top ranked reasons given (Wood 2002). The survey population were 124 *Financial Times* Top 500 Companies. The assignments are ranked in descending order of assignment type. The data in Figure 3.5 shows that management consultancy participation in both organisational change and IS projects in the UK private sector is comparatively high in comparison to other aspects of management activity in the UK. Organisational effectiveness has also been identified as the target of consultancy effort in recent literature (Nippa and Petzold 2002). There is also a growing focus by clients on results rather than reports (Wooldridge 1997).

Figure 3.5 - Patterns of Management Consultancy Use (Wood 2002)

Management Discipline	Number using consultants*
1. Organisation change and development	52
2. Information Technology/Systems	42
3. Market Research	37
4. Personnel/HRM	36
5. Strategic planning	31
6. Legal	29
7. Marketing	24
8. Environmental	18
9. Production/Service Management	14
10. Financial Management	13
11. Financial/Administration Systems	12

(Wood 2002)

3.6.2 Management consultants contribution

The present research endeavour is focused on contributing to the development of theory of how external management consultants contribute in IS strategy formation. The review of the academic IS literature in Chapter 2 provided partial insights on the topic but did not provide the basis for robust theory. The following paragraphs turn to review what is known of management consultants'

contribution in the general management consulting literature. The difficulty in the undertaking can be inferred from a recent observation by a North American academic who points out that "*while there has been an exponential explosion in both the presence and role played by management consultants, the exact nature of their contribution – to client organisations, to our understanding of management and organisation, to our comprehension of the increasingly complex dynamics associated with business in a global marketplace, and to the development of their own firms – remains ambiguous*" (Buono 2002:vii). The management consulting literature includes seventeen empirical studies dealing with management consultancy contribution in general consulting. These studies are summarised at Appendix 3.1. One relates to public sector experience.

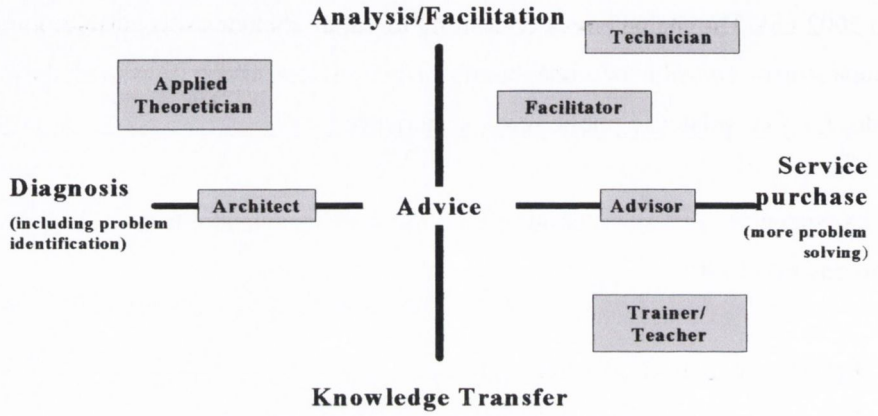
Schein has suggested that an external helping relationship can take three different forms depending on the requirements (1990);

- Providing expert information;
- Diagnosing a problem and proposing a solution; and
- Process consultation.

In the first instance, the client will know what the problem is and there is a common understanding of the problem. In the second, the external helper will test, diagnose and suggest a solution. In the third, the source of the problem is not known, but helper and client will work together in a constructive relationship to resolve the problem (Schein 1990). The second scenario is the one most often associated with management consultancy intervention (Schein 1990). The literature on management consultancy frequently makes no distinction between the different modes of helping.

Nippa et al (2002) provide a model of management consultancy roles and intervention styles based on analysis of the management consulting literature (Figure 3.6). They have suggested that the model be used by other researchers as a basis for further refinement and development. The Nippa (2002) model envisages the management consultant in both advisory and implementation modes. The Nippa (2002) model has placed the advisory contribution at the centre of the consultant's role. Nippa's emphasis on the advisory dimensions is consistent with the definitions of management consulting which were included in Figure 3.2 above.

Figure 3.6 – Management Consultancy Roles and Intervention Styles



(NIPPA 2002)

The Nippa (2002) model also envisages the consultant as architect, diagnostician, facilitator, teacher, and technical specialist. The next section turns to the available research in the field to consider further how management consultants contribute in client organisations. Whereas the Nippa (2002) model provides a perspective on the management consultant's role and intervention style in a general business setting, the current research endeavour sets out to elucidate how the consultancy role is enacted in IS strategy formation.

Nippa et al (2002) also cite Canback (1998a) as suggesting that there are three reasons why management consultancy firms are successful;

1. External consultants can be more objective;
2. They can build experience more efficiently; and
3. Special incentive structures make them more productive.

3.6.3 The consultant as catalyst and innovator

A case study from a winery in the USA (Shuman and Twombly 2002) demonstrated how consultants could assist in moving an enterprise from a traditional business model to a trans-enterprise

collaborative model involving other enterprises. Fincham and Clark observed recently that "*consultants are often perceived as the shadowy presence behind great initiatives*" (Fincham and Clark 2002:8). The contribution of management consultants as innovators continues to appear in the normative literature (Heller 2002) although there is not a significant amount of research on the topic.

Recent Italian research found that the arrival of management consultants in an organisation created a liminal[13] space in which the usual rules and order are suspended (Czarniawska and Mazza 2003). Organisational actors who find themselves in a liminal space are temporarily weakened and in a state of ambiguity (Czarniawska and Mazza 2003). The data, which was based on participant observation in an Italian organisation, suggested that the involvement of the management consultant provided a catalyst which enabled change to occur.

There is a similarity between Czarniawska and Mazza's (2003) conclusions and the theoretical proposition of Clegg et al (2004). The Australian research had characterised the management consultant as "*a source of noise that disrupts established ways of doing things*" and enables change to happen (2004a:31) . The Clegg et al normative article was the one which prompted the exchanges between the 'functionalist' and 'critical' theorists in 2004.

A technology 'showcase' presented by a global management consulting firm in the UK also provided evidence of the consultant enacting the role of visionary and innovator (Bloomfield and Vurdubakis 2002). The case study is analysed from the 'critical' perspective with a focus on the use of rhetoric by the consultants. It is arguable that a setting such as that in the case study might not be generalisable to other organisational settings.

The importance of relationship management is also underlined in the literature. Swedish research has shown that management consultants can provide an impetus for activity which is sometimes built on their relationship with top management (Werr and Linnarsson 2002). The consultant can also provide value by simplifying management problems for the manager and providing him with general concepts to apply (Kieser 2002).

A sceptical observation on the phenomenon of management gurus suggests that senior managers are receptive to the idea of 'grand visions' because it resonates with their vanity (Clark and Salaman

[13] Liminal is derived from the Latin word for a threshold. The term was used by the French anthropologist Arnold Van Gennep (Van Gennep 1909) to denote rituals of transition. Van Gennep distinguished between three rites of passage consisting of separation (divestiture), transition (liminality), and incorporation (investiture).

1996). Thus, "*the reason so much consultancy advice is accepted, despite its lack of empirical justification, is because it resonates with senior managers values of grand strategy and bold vision, which themselves feed off the values of masculinity and status, with little regard for reflection or learning*" (Clark and Salaman 1996:100)).

The literature review in Chapter 2 provided four cases in which management consultants had acted as 'catalysts' in IS strategy formation.

3.6.4 The consultant as expert and knowledge source

The management consultant as a 'source of expert information' is the first category of contribution in Edgar Schein's three modes of helping (1990), which was referred to earlier.

Private sector data from eighty seven (87) Financial Times top 500 companies has shown that management consultants are used in corporate change projects because they bring 'special knowledge and skill' which would be impractical to build internally (Wood 2002). In addition to providing clients with expert knowledge, consultants can also bring ideas and experience from one client site to another (Bessant and Rush 1995).

Swedish private sector experience has shown that business managers place a high value of the contribution of external management consultants and the key to the client consultant relationship is the specific expertise and knowledge of the consultant (Werr and Styhre 2003). The Swedish data also shows that consultants interpret the business and technology environment and are seen as being specialists in this kind of environmental knowledge (2003). The data shows that managers value management consultants for their expertise in making sense of the organisational environment (Werr and Styhre 2003).

Consultants have also been characterised as creators of knowledge which enables managers 'stay ahead of the game' (Fincham 1999). It is not generally practical for organisations to develop similar knowledge resources across a range of specialisms because it is not their core activity. This situation provides the management consultancies with a competitive advantage in the knowledge market over their client organisations. Management consultancies are specialists in building knowledge resources from a wide diversity of organisations and reusing this knowledge across a wide spectrum of business (Fincham 1999; Nippa and Petzold 2002).

Swedish research in five large management consulting organisations showed that management consultants believe that it is the consultants' experience rather than particular methods which is most influential in bringing about change (Werr, Stjernberg et al. 1997). The researchers point out that they were unable to base their findings on data from informants other than consultants.

The growth of the knowledge society and the growing importance of knowledge transfers across organisations has meant that consultancy organisations are now playing an important role as knowledge brokers, as facilitators of learning and as experts and diagnosticians in the area of knowledge management (Werr and Linnarsson 2002). Knowledge-intensive firms have been described as "*organisations where esoteric and exclusive expertise (whether embodied in people, physical and social capital, routines or culture) is the most important input*" (Legge 2002:75).

The contribution of management consultants to promoting best practice and adapting international experience to local markets appears in survey research from the UK (Wood 2002). Thus, *"Consultancy success nowadays depends on its claim to promote state of the art, national and even international business practice standards. But the delivery of their advice cannot be generally effective at a distance, since they are expected to adapt it to localised client needs and capabilities"* (Wood 2002:53)

The management consultants' contribution through knowledge transfer is also included in the Nippa (2002) typology in Figure 3.6. The management consultant as 'technical expert' also emerged from the review of the IS strategy literature in Chapter 2.

3.6.5 The consultant as diagnostician

Early empirical research from the USA (Tilles 1961) identified organisational diagnosis as part of the management consultancy role. A more recent empirical study in the UK public health sector found that management consultants "*discover and diagnose problems*" in an IS context (Bloomfield and Danieli 1995:31). A Harvard academic (Turner 1982) drew on illustrative data to identify independent problem diagnosis as one of the functions of the management consultant.

Schein's second typology of management consulting also focused on the consultant as 'doctor' (Schein 1990). This typology of consulting sees the consultant as conducting tests, making a diagnosis of the problem, and suggesting a solution. A normative contribution from the UK suggests that consultants act as diagnosticians in helping clients prioritise and understand what needs to be done in innovation and change programmes (Bessant and Rush 1995). Consultants are useful in this role

because clients lack the experience or resources to bring themselves through the early stages of change (Bessant and Rush 1995).

More recent research based on a review of literature (Nippa and Petzold 2002) includes problem diagnosis as one of eight "fundamental objectives" of management consulting. In this particular case, redefinition of the problem, based on the diagnosis, is also regarded as part of the consultancy remit, as is the framing of recommendations based on the diagnosis. A normative contribution from the USA infers that diagnosis can be important as part of the management consultant's repertoire because *"too often consultants commence engagements without assessing a client's readiness and willingness to change"* (Weidner and Kass 2002:188). Trepo has pointed to the danger that "one size fits all" solutions may emerge from management consultants and that there may be a tendency to diagnosis without analysis (2002).

The academic literature on management consulting has put 'advice' as a central aspect of management consultants' contribution in client engagements. The centrality of the 'advice' dimension would lead to an inference that the consultancy 'advice' would be based on some level of prior 'diagnosis' of the client situation.

Diagnosis did not emerge specifically as an aspect of management consultants contribution in IS strategy formation in the literature review in Chapter 2. However, the Bloomfield and Danieli (1995) data is drawn from an IS implementation in the UK.

3.6.6 The consultant as a source of endorsement and validation

Research into an IS implementation in the United Kingdom provided evidence of the external consultant as "*objective originators of a policy which would not be accepted internally if thought to be derived from in-house senior management*" (Bloomfield and Danieli 1995:25). An illustrative case, which was also from the UK, showed that management felt happier in 'sticking his neck out' when he had the external backing of management consultancy (Fincham 1999).

Empirical research in the UK shows that management consultants provide a sense of reassurance to their clients who can provide justification for investment decisions and convincing decision makers that the approach proposed is in accordance with industry trends (Sturdy 1997). The case is analysed from a critical perspective and it also explores the approaches used by management consultants to reinforce the appeal of their advice. More recent evidence also suggests that the consultant can also become a champion of ideas developed internally (Werr and Linnarsson 2002). Australian research, in

which the informants were both consultants and clients, found that managers use consultants to legitimise decisions which they anticipate as being unpopular (Wright and Kitay 2002).

Empirical research from the UK, in which the informants were management consultants, showed that, in organisational change programmes, clients are apprehensive about the cost and impact of major change (Fincham 2003b). In these settings, consultants frequently have to craft proposals which the client is comfortable with, while also encouraging the client to accept risk (Fincham 2003b).

Data from North America confirms the European experience that management consultants can be used as 'rubber stamps' and 'security blankets' to lend credibility to decisions made by organisational managers (Shapiro, Eccles et al. 1993). More recent normative contributions to the management consultancy field have also confirmed that management consultants contribute to client organisations as validators of management thinking (Heller 2002; Nippa and Petzold 2002; Salaman 2002).

The review of the IS strategy literature in Chapter 2 found empirical evidence that management consultants contribute in IS strategy formation by lending credibility to client proposals.

The review of the academic literature on management consulting has identified a number of examples of empirical research concerning the contribution of management consultants in a general consulting context. These studies have been consolidated in Figure 3.7. The aspects of management consultancy contribution which emerged from the review of the management consulting literature show some similarities with the findings from the IS strategy literature review.

Figure 3.7 – Management consultants' contribution in general consulting research

Consultant Contribution	Reference	Region	Sector	Research Method
Catalyst and Innovator	Bloomfield & Vurdubakis 2002 Czarniawska & Mazza 2003 Shuman & Twombly 2002 Werr & Linnarsson 2002	UK Italy USA Sweden	Private - Private Private	Case study Participant study Case study Interview
Expert & Knowledge source	Fincham 1999 Nippa & Petzold 2002 Werr & Linnarsson 2002 Werr & Styhre 2003 Wood 2002	UK Germany Sweden Sweden UK	Private - Private Private Private	Interview Literature review Interview Interview Survey

Diagnosis	Bloomfield & Danieli 1995 Tilles 1961 Nippa & Petzold	UK USA Germany	Public Private -	Case study Case studies Literature review
Endorsement and Validation	Fincham 1999 Bloomfield & Danieli 1995 Sturdy 1997 Werr & Linnarsson 2002 Wright 2002	UK UK UK Sweden Australia	Private Public Private Private Private	Interview Case study Interview/Survey Interview Interview

The data in Figure 3.7 will be brought forward to Chapter 7 where it will be considered again in the context of the analysis of the data emerging from this current research.

3.6.7 Power and Politics in the 'functionalist' perspective

The 'functionalist' stream of management consulting literature is not devoid of references to power and political behaviours in management consultancy assignments. However, power is not as central in the analysis as in the 'critical' literature. Early research from the USA and a more recent review of the literature by German academics showed that management consultants can serve as scapegoats for the introduction of unpopular changes inspired by management (Tilles 1961; Nippa and Petzold 2002). Empirical research from Sweden has also shown that consultants are seen as being capable of bypassing the 'knowledge filters' of the organisation's hierarchy and the effects of organisational politics (Werr and Styhre 2003).

3.6.8 Independence and Objectivity

Bloomfield and Danieli (1995) draw on case data from an IS implementation in the UK National Health Service to assert that management consultants claim to be independent and objective when seeking assignments. Greiner and Metzger's definition of management consulting also characterises the consultant as acting "*in an objective and independent manner*" (1983). This aspect of management consulting receives a low level of focus in the management consulting literature and may be more relevant to a discussion on ethics in the consulting business.

3.7 Conclusion

The management consulting literature provided a number of insights into the practice of consulting and how practitioners contribute in consulting engagements. These insights have been consolidated in

Figure 3.7 and will be brought forward to the analysis phase of the research. Twelve separate empirical studies on management consultancy contribution were identified, one of which was conducted in a public sector context. The review of the management consulting literature did not provide a basis for the construction of a robust theory of how management consultants contribute in IS strategy formation.

Chapter 4 will be concerned with the methodological choices to be made in a specific academic investigation of how external management consultants contribute in IS strategy formation.

4 THE CHOICE OF METHOD

"Studying processes involves qualitative approaches, case-studies, observation and interviews, longitudinal and in-depth studies, the hallmarks of a different approach to studying organisations than had been central for some 20 years"

(Hinings 1997:500)

4.1 Introduction

The preceding two chapters referenced the academic literature on both information systems (IS) and management consulting to ascertain what is known about the contribution of external management consultants in IS strategy formation in the public sector. The review disclosed that, whereas there are references to management consultancy involvement in IS strategy in the literature, the topic remains to be explored though specific research.

This chapter will turn to considering the choices to be made on how best to conduct such a research endeavour. The research design will be dictated by both the research question and the established paradigms for research in the IS field. Walsham (1995a) has urged academic researchers to be specific about the philosophical foundations underpinning their research endeavours and this matter will be attended to in some detail. The processual character of the research question will also be a determinant in how the research is conducted. The following are the key aspects of the research approach to be addressed in the following paragraphs;

- Philosophical approach
- Role of theory in the investigation
- The conduct of a process inquiry
- Choice of a case study method
- The action oriented option
- Data collection
- Data analysis

4.2 Philosophical Approach

The current research lies within the functionalist research paradigm (Burrell and Morgan 1979), which assumes that society has a concrete existence, follows a certain order, and

that there is an external reality which exists independently of the observer (Ardalan 2003). The functionalist paradigm has been dominant in IS research for many years and the ontological primacy of functionalism has been matched by a corresponding dominance of positivist epistemology in the field despite an increase in the use of interpretive research methods in recent years (Goles and Hirschheim 2000). The interpretive paradigm assumes that the social world is created by individuals and consists of a network of assumptions by the 'observer' (Ardalan 2003). The assumptions which underpin the functionalist and interpretive paradigms and epistemologies lead to inferences as to the most appropriate research methods in each domain (Fitzgerald and Howcroft 1998; Ardalan 2003). The functionalist or 'hard' orientation implies objective, confirmatory, quantitative research methods, while the interpretivist or 'soft' philosophy implies subjective, exploratory, qualitative approaches (Fitzgerald and Howcroft 1998). Despite the fact that paradigms in IS research lead to inferences as to the research methods which best fit the assumptions underlying the paradigm, it is possible to detach research methods from a paradigm and use them within a context which makes different assumptions (Mingers 2001; Trauth 2001c). The socio-technical nature of IS mean that the so-called 'scientific methods' of positivist science are appropriate only insofar as they are appropriate for the social sciences (Hirschheim 1985). Accordingly, qualitative methods may properly be used in within the functionalist paradigm (Trauth 2001c). The choice of research method should be contingent on the research problem to be resolved.

Research in the social sciences has been dominated by two distinct epistemologies as a basis for knowledge generation (Morgan and Smircich 1980; Orlikowski and Baroudi 1991; Chen and Hirschheim 2004; Brannick and Coghlan 2006). At one end of the scale, extreme positivism is based on a conception of the world as a "mechanical structure", or closed system, whereas in the alternative interpretive tradition, the world is perceived as an organic system which exists or evolves in tandem with its environment (Morgan and Smircich 1980; Hirschheim 1985; Chen and Hirschheim 2004).

Qualitative researchers evaluate knowledge on the basis of criteria such as credibility, transferability, dependability and confirmability (Weber 2004). One of the challenges of the interpretive methods is that there is no objective observation and issues of life experience, background, race and gender may act as a filter on the investigator and his data (Denzin and

Lincoln 2003). The interpretive researcher acknowledges his own subjectivity as part of the interpretive process (Darke, Shanks et al. 1998). The emergence of the interpretive approaches, from what had previously been a purely positivist tradition in scientific research, occurred at the close of the nineteenth century from new theories which claimed that different approaches were appropriate in the human sciences than in the natural sciences (Schwandt 2000; Wynn 2001).

The positivist or deductive approach is based on the proposition that reality can be captured in formal propositions which satisfy the four requirements of falsifiability, logical consistency, relative explanatory power and survival (Lee 1991; Orlikowski and Baroudi 1991; Walsham 1995a; Creswell 1998; Chen and Hirschheim 2004). The positivist approaches are based on an iteration from problem statement, through hypothesis, data collection, data analysis, leading to deductions and conclusions from the data (Simon, Sohal et al. 1994). As a general rule, research in IS can be typified as positivist when conclusions are drawn on the basis of *"inferences about a phenomenon from a representative sample to a stated population"* (Klein and Myers 1999:69). Most positivist researchers assume that human action is rational or boundedly rational and conflict is a dysfunctional aspect of the system (Orlikowski and Baroudi 1991).

Quantitative researchers are less concerned with rich descriptions because their focus is on generalisation (Denzin and Lincoln 2003). Darke et al (1998) suggest that, in the natural science model, case studies are evaluated on the basis of controlled observation, controlled deduction, replicability and generalisability. Case studies in the positivist tradition would also be concerned with issues of 'typicality' and 'extrapolation' (Mitchell 1983).

The abstraction and simplification introduced by positivist research designs tend to strip the research findings of potentially deeper insights (Kaplan and Duchon 1988). Another weakness of the positivist approaches has been that paradigms become established which are difficult to challenge and that the academic community are generally uncritical of the established paradigms (Simon, Sohal et al. 1994).

Discussions on the relative merits of qualitative and quantitative research approaches are endemic in the academic research community, in research training and in research publications irrespective of the equally pressing issue of selecting the approach which is most likely to answer the research question being addressed (Hinings 1997). Both approaches have value and each has contributed in its own way to the advancement of knowledge in the IS field (Weber 2004). The approaches are not mutually exclusive and it is possible to conduct organisational research using a

combination of both approaches (Kaplan and Duchon 1988; Lee 1991; Cavaye 1996). The decision to conduct the current research endeavour using interpretive approaches is based on choices indicated by the research problem rather than the researcher's adherence to any particular ideological hegemony (Morgan and Smircich 1980; Fitzgerald and Howcroft 1998). Trauth (2001) has also suggested that the researcher should separate the choice of research method from their philosophical orientation. The choice of a qualitative approach in IS research does not necessarily imply an "*anti-positivist*" stance (Lee, Liebenau et al. 1997).

The proponents of interpretive approaches have argued that the perception of IS as socio/technical systems has weakened the arguments for causal analysis (Klein and Hirschheim 1983; Trauth 2001). The emergence of the interpretive approaches coincided with the realisation that research in the IS field should be concerned with behavioural and organisational considerations in addition to technology considerations (Galliers and Land 1987). IS are socio-technical systems and, as such, an interpretive approach is likely to be best suited to the investigation of social phenomena (Hirschheim 1985; Trauth 2001).

Conversely, positivist studies are "*premised on the existence of a priori fixed relationships within phenomena which are typically investigated with structured instrumentation*" (Trauth 2001:6). Both approaches continue to co-exist and, despite the acknowledgement that "*human behaviour is messy*" studies of organisational processes continue to be conducted through the use of variance models (Dooley and Van de Ven 1999:369). For example, Ring and Van De Ven (1994) suggest that process events from a longitudinal[14] study of inter-organisational alliances be subjected to computer analysis to test alternative hypotheses for success. Das and Van De Ven (2000) recently conducted an investigation to develop and test a process model of strategy in which longitudinal data were analysed using statistical techniques.

A number of literature surveys have been conducted by academic researchers to assess the relative proportion of positivist and interpretive research studies in academic IS journals – see Figure 4.1. Although it has been suggested that the dominance of the positivist tradition in journal articles has begun to diminish (Orlikowski and Baroudi 1991; Urquhart 2001; Chen and Hirschheim 2004) a summary of the data in Figure 4.1 suggests that the balance remains strongly positivist.

[14] Research is defined as longitudinal when it evolves over an uninterrupted period of time and focuses on process (Chen & Hirschheim 2004).

Figure 4.1 – Positivist and interpretive empirical studies in selected IS journals

Source	Survey Period	Journal Articles	Positivist	Interpretive
Orlikowski & Baroudi 1991	1983 – 1988	155	96.8%	3.2%
Mingers 2003	1993 – 2000	902	75%	18%
Chen & Hirschheim 2004	1991 – 2001	1,893	81%	19%

Figure 4.2 – Research Designs in USA/European IS Journals 1991 -2001
(From Chen & Hirschheim 2004)

Journal Title	USA/ Europe[15]	Positivist Research	Interpretive Research	Survey Design	Case Study	Action Research
MIS Quarterly	USA	91%	9%	46%	34%	1%
Information Systems Research	USA	94%	6%	38%	14%	0%
Journal of Management IS	USA	94%	6%	50%	22%	0%
ICIS[16]	USA	83%	17%	39%	36%	3%
European Journal of IS	Europe	88%	12%	51%	40%	2%
Information & Organisation[17]	Europe	63%	37%	14%	64%	5%
Information Systems Journal[18]	Europe	60%	40%	23%	50%	12%
Journal of Information Tech.	Europe	60%	40%	39%	52%	7%

The positivist tradition has been noticeably strong in the IS field in North America (Galliers 1993). Data from a recent study (Chen and Hirschheim 2004), which has been included in Figure 4.2 above, shows that, despite the higher representation of interpretive studies in European journals, the positivist tradition dominates overall.

Whereas academics tend to focus on positivist and interpretive perspectives in their treatments of philosophical orientations in academic research, a third perspective which is labelled the 'critical' perspective is adopted by a number of academics (Orlikowski and Baroudi 1991; Klein and Myers 1999; Mingers 2001; Mingers 2003; Walsham 2005a). Critical studies "*aim to critique the status quo, through the exposure of what are believed to be deep-seated structural contradictions within social systems, and thereby to transform these alienating and restrictive social systems*" (Orlikowski and Baroudi 1991:6). Critical researchers differ from interpretive researchers insofar as, in addition to interpreting the social world, the critical researcher believes that aspects of domination within the research context need also to be understood and critiqued (Orlikowski and Baroudi 1991). Critical research focuses on "*asymmetries of power, alienation, disadvantaged groups or structural inequality*" (Walsham 2005a:113). Social commentary and societal

[15] The distinction between USA and European journals is based on the region where they originate.
[16] *Proceedings of the International Conference on Information Systems* (ICIS) is not an academic journal
[17] *Information Systems Journal* was published as *Journal of information Systems* until 1997.
[18] *Information and Organisation* had been *Accounting, Management & Information Technology* pre-2001.

dysfunction are major preoccupations of the critical researcher as is the assumption that these conditions can be altered by social action (Klein and Myers 1999). A weakness of critical research is that investigators are sometimes guided by assumptions about sources of domination which can include issues of economic class, race or gender (Orlikowski and Baroudi 1991).

The investigator subscribes to the view that an interpretive IS researcher can only unlock the subtleties of organisational behaviour by means of approaches based on 'thick description' of the phenomenon under investigation (Walsham 1995b). Interpretive research approaches are also indicated where little existing information is available in which to ground the study (Trauth 2001). The applicability of the research findings to the community of practice is supported by the fact that the use of thick description in interpretive case studies can broaden the applicability of the case to other settings (Firestone 1993).

Having reflected on what is known of management consultants' contribution in IS strategy formation, and the socio-technical nature of the phenomenon under investigation, the researcher was persuaded that the investigation should be conducted using qualitative methods.

4.3 The role of theory in the investigation

There are three distinct uses of theory in interpretive studies (Eisenhardt 1989). These are

- An initial guide to design and data collection
- Part of an iterative process of data collection and analysis
- A final product of the research

The question of how external management consultants contribute in IS strategy formation in the public sector will be conducted as an exploratory, theory developing, investigation because of the absence of a prior hypothesis to be tested. The review of the IS strategy and management consultancy literature, while providing some insights which will be revisited in Chapter 7, did not suggest hypothesis testing as a worthwhile approach. Accordingly, the current research sets out to contribute to the development of theory in answering the research question. The research falls in to the third of Eisenhardt's (1989) categories above.

Eisenhardt (1989:536) has advocated that theory-building research should be begun as closely as possible to the ideal of "*no theory under consideration and no hypothesis to test*". Despite this counsel, she acknowledges that it is impossible to achieve this in reality. Pettigrew (1987:649)

suggests that "*few social scientists would claim to enter the field with empty minds waiting to be gradually filled by evidence*". Pettigrew's view is echoed in a more recent assertion that it is impossible to enter any study free of theory (Perry 1998). Grounded theorists would take the view that the exploratory researcher should be open to the emergence of theory directly from the data rather than being informed by prior theory (Glaser and Strauss 1967).

The use of theory as an aid in the early stages of design or analysis has been likened to the use of scaffolding in the early stages of construction, although the proponents of such an approach would also caution against the possibility that over-reliance on prior theory could restrict the researchers openness to the data (Walsham 1995b).

Some researchers in IS strategy formation have drawn on contextualist theory (Pettigrew 1987; Pettigrew 1990; Walsham and Waema 1994; Walsham 1995b; Klein and Myers 1999; Pettigrew, Woodman et al. 2001) in focusing on the content, context, and process of IS strategy formation in their research on the IS strategy process – see Appendix 2.1. A contextualist analysis of process draws on phenomena at the horizontal and vertical levels of analysis (Pettigrew 1990; Pettigrew, Woodman et al. 2001). The horizontal level '*refers to the sequential interconnectedness among phenomena in historical, present and future time*' whereas the vertical level refers to interdependencies in the internal or external contexts (Pettigrew 1990:269). Contextualist theory informs data collection and case study structure in a number of empirical studies of IS strategy formation including some included in Appendix 2.1.

A recent commentary on the conduct of interpretive research suggests that the choice of theory is subjective and likely to be informed by the researcher's own experience, interest and background (Walsham 2006). The current research used the content, context and process dimensions of IS strategy as a guide to data collection, the structuring of the case presentation and the case study analysis. The new contribution to theory development emerging from the data analysis in Chapter 7 will also be situated within existing theory in the wider IS field (Gummeson 2005). Accordingly, prior theory will have had a role in data collection, presentation and analysis as envisaged in Eisenhardt's (1989) three typologies.

Having already decided that the investigation would be conducted from an interpretive perspective, the absence of prior theory or strong insights from other investigations, suggest that an exploratory, theory building stance will be adopted. The choice of an interpretive, exploratory orientation will inform other aspects of the methodological choices to be made.

4.4 Conducting a process inquiry

The current investigation is focused on the IS strategy formation process and the contribution of external management consultants within that process. The choice of a research design on the IS strategy process "*cannot be undertaken without a clear conception of what process means to the researcher and what theory or theories of process are expected to guide the study*" (Chakravarthy and Doz 1992:12). Accordingly, the nature of the inquiry suggests that three further aspects of the investigation should be clarified at this point (Van de Ven 1992). The three central themes are:

- The definition of process used by the researcher;
- The theory of process underpinning the investigation; and
- A research strategy that is consistent with the definition and theory of process set out.

4.4.1 Definitions of process

Pettigrew, Woodman et al (2001:700) have defined organisational change processes as "*sequences of individual and collective events, actions and activities unfolding over time in context*". The organisational process has also been defined as "*a pattern that is seen in reference to time*" (Monge, Farace et al. 1984:22). The temporal aspects of organisational processes are identified in both definitions while context and patterns are also included.

The word process has been used in three distinct ways in the literature on strategy process (Van de Ven 1992). Process has been characterised as (Van de Ven 1992:169);

1. "*A logic that explains a causal relationship between independent and dependant variables*
2. *A category of concepts or variables that refers to actions of individuals or organisations, and*
3. *A sequence of events that describes how things change over time*"

The first of these is a variance perspective in which the focus of the investigation would be on independent and dependant variables rather than on the flow of activities over time (Shaw and Jarvenpaa 1997). The limitations of these cross-sectional research designs in the investigation of the strategy process have been widely acknowledged by many including those who created them (Webb and Pettigrew 1999). Of the three usages, only the third provides a characterisation of the

strategy process which is capable of direct observation in action and susceptible to analysis by the process researcher (Pettigrew 1997). This third temporal perspective on process is the one which is used in the current research. Acknowledging the weaknesses of the variance models in process research, the current investigation will focus on events, states and outcomes which are the appropriate concepts for a process investigation and which either exist or not (Shaw and Jarvenpaa 1997).

Process models are underrepresented in the IS research field which tends to be dominated by the variance models (Shaw and Jarvenpaa 1997). The relative rarity of process research may be explained by the amount of 'time, energy and effort' which are required, especially in a field setting (Monge, Farace et al. 1984:30). Process and variance approaches continue to co-exist and, despite the acknowledgement that *"human behaviour is messy"*, studies of organisational processes continue to be conducted through the use of variance models (Dooley and Van de Ven 1999:369).

4.4.2 Process Theory

Van De Ven (1992:174) suggests that a theory of process should "*consist of statements that explain how and why a process unfolds over time*". In embarking on the investigation of the IS strategy process, the researcher is aided by the existence of some existing meta-theory. A number of meta-theories of process have emerged in the different academic disciplines and these have been consolidated into four general categories of (a) lifecycle, (b) teleological, (c) evolutionary, and (d) dialectical process theories (Van de Ven 1992). Each theory of process assumes a different 'motor' of the process. The process 'motors' have been categorised as (a) programmed (b) purposeful (c) dialectical and (d) evolutionary (Van De Ven and Poole 1995).

A lifecycle theory of process assumes that the change cycle being observed is pre-ordered and each stage of the change process determines the next stage (Van de Ven 1992). External events and context can influence the way in which the change process manifests itself but the process will unfold in accordance with its own logic and rules (Van De Ven and Poole 1995). The Lewin 'unfreeze change re-freeze' model of organisational change is an example of a lifecycle theory of process (Dooley and Van de Ven 1999).

The second category of teleological process theories assume that change may occur purposefully through a range of alternative possibilities that are informed by choice and rationality (Van de Ven 1992). Outcomes are not predetermined and external circumstances may alter the trajectory

of change or upset equilibrium states (Van de Ven 1992). The motor of change in a teleological theory of process is the actor or unit who acts creatively to enact the process (Van De Ven and Poole 1995). Pare and Elam (1997) situated their case study of the IS implementation process within a teleological process meta-theory on the basis that the implementation was a purposeful and rational endeavour.

Dialectic theories of process are based on the assumption that change occurs as a result of a loss of equilibrium or inertia when opposing forces, events, or values go out of balance or are disturbed (Van de Ven 1992). "*The relative strength, power or legitimacy of an antithesis may emerge or mobilise to a sufficient degree of force to overthrow the current thesis or state of affairs and produce a synthesis, which then becomes the new thesis as the dialectical process recycles and continues*" (Van de Ven 1992:179). The opposing entity may be another organisation or an entity within or outside the organisation (Van De Ven and Poole 1995).

Evolutionary theories of process assume that change occurs in an ongoing process of variation, retention and selection to fit with the environment and context (Van de Ven 1992). Change is cumulative and ongoing and it occurs across communities, industries or society in general (Van de Ven 1992). Burgelman's (1996) case study describing how the Intel Corporation exited from its core dynamic random access memory (DRAM) business and became leaders in microprocessor production is a real-world example of an evolutionary strategy process in action.

Chakravarthy and White (2002) suggest that research on the strategy process has typically been conducted from a single theoretical perspective, whether that be programmed, purposeful, dialectical, or evolutionary. Each of these perspectives is likely to provide a partial understanding of a complex process and they urge researchers to seek an integrated perspective through unifying findings from the alternative viewpoints (Chakravarthy and White 2002).

4.4.3 Investigating Process

Qualitative researchers have been urged to choose their approach to investigation in 'an explicit and reflective way' and to set out the basis of their choices when reporting research results (Walsham 1995b:78). The preceding paragraphs have set out the basis for choosing an interpretive, exploratory, processual approach to the investigation of how external management consultants contribute to IS strategy formation in the public sector.

Acknowledging the weaknesses of the variance models in process research, the current investigation will focus on events, states and outcomes which are the appropriate concepts for a process investigation and which either exist or not (Shaw and Jarvenpaa 1997). The focus in a corresponding variance model would be on independent and dependant variables (Shaw and Jarvenpaa 1997). Process theories do not assume a causal relationship between cause and outcome but merely that the precursor condition is necessary to the outcome (Markus and Robey 1988).

Traditional studies of strategy process were also focused on the relative merits of the rational or synoptic versus incremental perspectives and the development of concepts and constructs to facilitate measurement of the these (Frederickson 1983). Monge (1984) suggests that variance techniques, while useful in studying effects, are not adequate for studying change over time. In the current investigation, each case study will adopt a process perspective consisting of "*a series of sequentially interconnected events and interactions, which essentially tells the story of this organisation, yields valuable insight that would be difficult if not impossible to capture in a variance model*" (Shaw and Jarvenpaa 1997:77).

The current study will combine retrospective and real-time analyses of change processes in order to *"(1) catch reality in flight and (2) to study long term processes in their context*" (Pettigrew, Woodman et al. 2001:598). The importance of combining retrospective and real-time analysis of events and activities within the investigation is also important because of the fact that past events tend to influence emerging events (Pettigrew 1997). It is rare to find strategy process studies which are historically and contextually situated despite the fact that meaningful process research needs to be linked through time and context (Chakravarthy and White 2002).

Strategy process research requires detailed longitudinal field work so that the investigator does not make assumptions about the nature of the process (Chakravarthy and Doz 1992). The collection and analysis of longitudinal data will be central to the research effort given that research will be conducted from a process perspective (Monge, Farace et al. 1984)

Pettigrew (1992) stresses the importance of the enabling and constraining influences of the inner and outer context of the organisation on the strategy process. Social processes are affected by the external and internal context within which they take place (Pettigrew 1997). Experience has shown that a phenomenon can only be understood within the context of the cultural setting in which it takes place (Kumar, van Dissel et al. 1998). Accordingly, strategy process research must

take account of the external economic, political and social context as well as the internal political, cultural and social context in which the strategy process is enacted (Pettigrew 1997).

Questionnaire surveys, field studies and action research and 'intrusive' methods are necessary to capture reality in process investigations (Chakravarthy and Doz 1992). Cross-sectional studies are only appropriate if the organisational is in a steady state such as is implicitly assumed in many contingency models (Chakravarthy and Doz 1992). Participant observation has been categorised as the 'classic' approach to data collection in process studies but time constraints have meant that semi-structured interviews, direct observation and secondary sources have become the primary data collection methods (Hinings 1997). Participant observation, or ethnography, requires the investigator to spend a considerable length of time immersed in the research setting and this may be impractical (Klein and Myers 1999).

Despite the advantages, the large volume of data generated by process studies can be challenging for the investigator (Pare and Elam 1997). While the use of process research may present the researcher with a more complex picture of events, it does offer the opportunity for generalisation to other settings and subsequent testing of predictions (Markus and Robey 1988). The argument in favour of a process investigation is strengthened by the assertion that "*process theories may enable researchers to find patterns in empirical data that variance theorists might miss*" (Markus and Robey 1988:592).

A set of internally consistent guiding principles for strategy process research have been proposed for researchers based on experience at the University of Warwick (Pettigrew 1992). These five principles are (Pettigrew 1992:9);

1. "*Embeddedness, studying processes across a number of levels of analysis;*
2. *Temporal interconnectedness, studying processes in past present and future time*
3. *A role in explanation for context and time*
4. *A search for holistic rather than linear explanations of process; and*
5. *A need to link process analysis to the location and explanation of outcomes*"

Recent private sector research in the UK used an interpretive, longitudinal, case-based approach to investigate the strategy process from the perspective of the organisational participants in the process (Paroutis and Pettigrew 2007). Interviews and secondary sources were used in data

collection and the analysis was conducted by means of both narrative and the use of interpretive qualitative techniques (Paroutis and Pettigrew 2007).

The importance of time and temporal interconnectedness in the investigation has emerged as a strong theme in processual investigations in the preceding paragraphs. The importance of a longitudinal focus in the investigation has been underlined by a number of sources (Monge, Farace et al. 1984; Orlikowski and Baroudi 1991; Chakravarthy and Doz 1992). Accordingly, the current research will adopt a longitudinal orientation because "*longitudinal studies typically focus on issues of process*" (Orlikowski and Baroudi 1991:4).

4.5 Choosing the case study method

Case study research has been characterised as especially suited to an exploratory, theory building investigation such as the one undertaken in this case (Eisenhardt 1989; Naumes and Naumes 1999). Case studies have a strong tradition in theory building research (Cavaye 1996). There has also been general acceptance amongst academic researchers that the case study approach is appropriate for processual research (Hinings 1997). The case study method is the most widely used interpretive research method in the IS field (Darke, Shanks et al. 1998).

A case study has been described as "*a description, directly obtained, of a management situation based on interview, archival, naturalistic observation, and other data constructed to be sensitive to the context in which management behaviour takes place and to its temporal restraints*" (Bonoma 1985:204). Case study research is distinguished by the fact that it examines *a)" a contemporary phenomenon in its real-life context, especially when (b) the boundaries between phenomenon and context are not clearly evident"* (Yin 1981a:59). Case studies have also been conceptualised as 'bounded systems' which describe a process, problem or event within a system, which exists within boundaries such as time or place (Creswell 1998). The key characteristics of case studies are included in Figure 4.3 below (Benbasat, Goldstein et al. 1987).

A case study setting offers an opportunity to examine the temporal and contextual dimensions of the phenomenon under investigation (Bonoma 1985). The temporal and contextual dimensions of IS strategy were shown, in the preceding section, to be key aspects of the current investigation (Pettigrew, Woodman et al. 2001; Chakravarthy and White 2002). It is a feature of case study research that the investigator seeks to develop an in-depth understanding of the context of the phenomenon (Cavaye 1996). In choosing a case study setting for the investigation, the researcher

was persuaded by the opportunity it presented for dealing with the temporal dimensions of the investigation, the possibility of illuminating context, and the opportunity of rich description of the IS strategy process. These have already been shown to be important in the current investigation. Case studies have also been regarded as useful for the investigation of broad or complex phenomena or when a holistic, in depth investigation is required (Dube and Pare 2003).

Figure 4.3 – Key characteristics of case studies

1.	Phenomenon is examined in its natural setting
2.	Data are collected by multiple means
3.	One or few entities (person, group, or organisation) are examined
4.	The complexity of the unit is studied intensively
5.	Case studies are more suitable for the exploration, classification and hypothesis development stages of the knowledge building process: the investigator should have a receptive attitude towards exploration.
6.	No experimental control or manipulation are involved
7.	The investigator may not specify the set of independent and dependant variables in advance
8.	The results derived depend heavily on the integrative power of the investigator
9.	Changes in site selection and data collection methods could take place as the investigator develops new hypotheses
10.	Case research is useful in the study of "why" and "How" questions because these deal with operational links to be traced over time rather than with frequency or incidence
11.	The focus in on contemporary events

(Benbasat, Goldstein & Mead 1987)

The preceding paragraphs confirm that a case study setting would meet the requirements of an exploratory, processual investigation in which the temporal and contextual dimensions of the case are important in the construction of a robust theory of how management contribute in IS strategy formation in the public sector. Accordingly, a case study approach provides a good fit with the other methodological choices already made in the preceding sections.

The case study approach has been found to be particularly appropriate in the IS field where research is frequently playing catch-up with developments in the community of practice (Benbasat, Goldstein et al. 1987; Dube and Pare 2003). Case study research has been the most widely used research approach in interpretive studies in the IS field (Darke, Shanks et al. 1998). A survey of research designs in USA/European IS journals for the period 1991 to 2001 (Figure 4.2 – column 6) underlines the popularity of the case study approach in IS research, especially in European publications.

A survey of research methods used in published empirical IS studies, which was conducted in 1991, showed that 13.5% of the research had been carried out by means of case studies (Orlikowski and Baroudi 1991). A similar survey of IS research carried out ten years later showed that the percentage conducted by means of case studies had increased to 36% (Chen and Hirschheim 2004). It is clear that the proportion of empirical research conducted by means of case studies had increased significantly in the period of time between the two surveys. A survey of 210 case studies conducted in the IS field in the 1990's showed that 87% had adopted a positivist approach to the research (Dube and Pare 2003).

Although, case studies have been used in both interpretive and positivist studies (Cavaye 1996; Dube and Pare 2003), experimental researchers would typically strip positivist cases of their context in the analysis (Yin 1981a). Darke et al (1998) suggest that, in the natural science model, the case studies are evaluated on the basis of controlled observation, controlled deduction, replicability and generalisability. Case studies in the positivist tradition would also be concerned with issues of 'typicality' and 'extrapolation' (Mitchell 1983).

In the interpretive case study tradition, the narrative writer is seeking to deliver a narrative on which the reader can impose his own interpretation rather than a "*highly structured package of explicit knowledge*", which is more typical of the positivist school (Remenyi, Money et al. 2002:18). An interpretive, process-oriented case study approach was chosen in a recent investigation of the strategic data planning and management process in the financial services sector (Shanks 1997). The unit of analysis in this case was the central data administration group and the IS project teams (Shanks 1997). The investigation ranged across the activities of the organisational participants and well as the wider organisational context (Shanks 1997).

In the current investigation, each case study will adopt a process perspective consisting of "*a series of sequentially interconnected events and interactions, which essentially tells the story of this organisation, yields valuable insight that would be difficult if not impossible to capture in a variance model*" (Shaw and Jarvenpaa 1997:77). In an interpretive study, such as this, the case study approach facilitates the distillation of understanding from apparently irrational behaviour in an organisational setting (Cavaye 1996). Longitudinal comparative case studies have been a characteristic of strategy process research because case studies provide the researcher with the opportunity to search for holistic patterns within and between cases (Pettigrew 1997).

The use of case studies provides the investigator with an opportunity of capturing the knowledge of practitioners, observing how context and change interact, and generating new theory from practice (Benbasat, Goldstein et al. 1987). In choosing this particular approach, the researcher was conscious of the challenges this approach represents to a "*trained observer*" in calling for "*skilled clinical judgements about what to watch and what it means*" (Bonoma 1985:204). Ultimately, the interpretive case study researcher will be required to report his interpretation of other people's interpretations (Walsham 1995b).

The preceding paragraphs have set out the rationale for the choice of a case study setting in this particular investigation. Apart from the 'fit' between the research problem and the method chosen, the finding that case study research tends to be widely accepted by the world of practice is a further compelling argument in favour of this particular choice (Simon, Sohal et al. 1994). The relative accessibility of case study research to those struggling with the problems being investigated should also be a factor in choosing this particular approach (Darke, Shanks et al. 1998).

In setting out the advantages of adopting a case study approach it is important also to acknowledge the drawbacks. Darke et al (1998) have pointed to the risks of subjective bias, the difficulties in analysis, and the challenges of dealing with large volumes of data. Walsham (1995b) refers to the problem whereby the outside researcher may be excluded from data which are regarded as too sensitive for sharing with an outsider, but which might be accessible to a participant observer. Eisenhardt (1989:547) suggests that theory building from cases can lead to over-complex theory or theory which is 'narrow and idiosyncratic'. It is arguable that subjective bias is a weakness in the researcher rather than the case-study method. The data collection and access challenge is arguably an access issue rather than a weakness in the case method. The case-study researcher should be conscious of the challenges in conducting case-based research and will need also to attend carefully to the issue of theory construction. The difficulties have also been offset by developments such as the publication of academic principles for evaluating interpretive case studies in IS (Klein and Myers 1999).

Case studies are tied to specific situations and the results are not generalisable (MacNealy 1997). The interpretive researcher can extrapolate the case findings to similar settings without claiming generalisability for the results (Firestone 1993). The inferences drawn from cases in the interpretive tradition rest on "*the plausibility and cogency of the logical reasoning*" rather than representativeness in a statistical sense (Klein and Myers 1999:75). While the use of process

research may present the researcher with a more complex picture of events, it does offer the opportunity for generalisation to other settings and subsequent testing of predictions (Markus and Robey 1988).

Case studies are expensive to conduct and may be subject to 'researcher bias' in that the researcher may have approached the case with preconceived ideas (MacNealy 1997). In the social sciences, the researcher must be conscious of the influence of his own "*theoretical presuppositions*" as he moves to a modified theoretical position on the basis of the data (Otley and Berry 1994:47). Whereas a researcher does not necessarily bring pre-determined concepts to the study, case research can provide an opportunity for developing and refining such concepts (Cavaye 1996).

Case study research in IS has also been seen to be subject to three kinds of bias (Curtis, Krasner et al. 1988);

- Social desirability bias
- Self preservation bias
- Plausibility bias

It is arguable that the first and third of these types are more general, or subjective, than situational in character. The second bias is less likely to be relevant where the investigator was no longer part of the organisational context. The researcher was cognisant of the fact that it has also been argued that the collection and analysis of data is inevitably bound up with the researcher's own subjectivity and the researcher will inevitably influence those with whom he interacts, especially in a longitudinal case study (Walsham 1995b). The investigator was mindful of the general caveat that the interpretive schemes of all researchers tend to intervene in the conduct of research (Orlikowski and Baroudi 1991). The management of these risks is dealt with in detail in Chapter 5.

Having distinguished between the three separate domains of strategy content, strategy context and strategy process in an earlier chapter, it is now necessary to allude to the potential '*intellectual trap*' of separating these three dimensions in investigating the strategy process (Pettigrew 1992:6). While the distinction has been useful in facilitating the emergence of a vibrant stream of process research, it is arguable that a rigourous analysis of strategic change would benefit from simultaneous exploration of the links between all three dimensions and their interplay over time

(Pettigrew 1992). The case study approach facilitates consideration of all three dimensions concurrently.

The three dimensions of IS strategy offer the prospect of a clear conceptual framework for the case studies, avoiding a typical pitfall in which the case study follows no predictable structure and is difficult for the reader to follow (Yin 1981a). In choosing a case study approach for the research, the investigator made a further choice to structure each of the case narratives around the three dimensions of IS strategy content, context and process in order to make these elements more visible to the reader.

The difficulty for the non-participant researcher of interpreting other people's interpretations can be overcome by the direct involvement of the researcher in the field setting through an action research approach. This methodology option is considered in detail in the following section. An action research approach can be accommodated within a case study setting which fits with the choice of an interpretive, exploratory, processual, longitudinal, case-based approach.

4.6 Rejection of an action oriented research option

The objective of a case study is to conduct research rather than to effect change in the setting under investigation (Benbasat, Goldstein et al. 1987). Conversely, the action researcher acts as an enabler of the process of organisational change as a participant, adviser and facilitator (Gummesson 2003). Action research provides the investigator with an unparalleled opportunity for learning because of Lewin's assertion that "*one only understands a system when one tries to change it*" (Coghlan 2007:339). Action research is chosen in situations where the researcher adopts the role of 'change agent' (Gummesson 2003:490; Gummeson 2005). The action researcher observes the change process in action because of their participation. This provides opportunities for personal insight rather than reliance on post-facto evidence.

Action research differs from case study research in that the action researcher is directly involved in planned organisational change (Avison, Baskerville et al. 2001). However, action research can be conducted within a case study setting (Cavaye 1996; Chen and Hirschheim 2004). Action research solves practical organisational problems while increasing scientific knowledge (Baskerville and Myers 2004). It facilitates joint learning by both researchers and organisational insiders (Baskerville and Myers 2004).

Despite the advantages of an action research approach, analysis of the research designs used in 1,893 published empirical IS studies between 1991 and 2001 showed that case studies and surveys are by far the most popular approaches while the numbers of action research studies and field experiments were 'rather insignificant' (Chen and Hirschheim 2004). Action research has not been popular in IS research, especially in North America. It is more favoured by the organisation development community although usage has been growing (Baskeville and Myers 2001). Figure 4.2, which appeared earlier in this chapter, underlines the relatively low level of action research use in the empirical studies surveyed. Action research was more widely used in studies reported in European academic journals.

The strengths of the participative action research approach are also the reasons why it was set aside as the preferred approach to the current investigation of how management consultants contribute in IS strategy formation. Action research is a two stage process consisting of the (a) diagnostic stage and the (b) therapeutic stage involving collaborative change (Baskerville and Myers 2004). In the latter, changes are introduced and the effects are studied (Baskerville and Myers 2004). By its nature, the interventionist character of action research poses challenges in organisational settings where the researcher is seeking to gather data and formulate theory without influencing the research setting (Huxham and Vangen 2003).

The researcher's intervention will affect the data available for collection and aspects of the intervention will be a factor to be considered in the interpretation of the data (Walsham 1995b; Huxham and Vangen 2003). In an action research setting, the researcher becomes an integral part of the phenomenon being investigated and the researchers input frequently influences the outcomes of the phenomenon (Cavaye 1996; Chen and Hirschheim 2004). Chakravarthy and Doz (1992:10) suggest that action research is an appropriate approach to the investigation of strategy process while acknowledging that "*it is true that the strategy process cannot be researched well without possibly affecting its very nature*". The dichotomy of the strategy process researcher, in choosing an appropriate approach to inquiry, is underlined in these comments.

Diagnosis and prescriptions for change were found in the management consultancy literature as potential contributions of management consultants to clients in engagements (Davison, Martinsons et al. 2004). One of the criticisms levelled at action research has been its "*lack of distinction from consulting*" (Davison, Martinsons et al. 2004:65). However, action research "*differs from consultancy in that one of its major aims is a contribution to both practical and theoretical knowledge*" (Mumford 2001). Participation of an academic researcher, as a

diagnostician and/or adviser, in an IS strategy formation assignment in which external management consultants were also engaged as external service providers, seemed unlikely to yield objective insights into the contribution of external management consultants in public sector settings generally. The researcher decided that an action research approach was not appropriate in this particular case, having regard to the nature of the research problem being investigated. The choice of research method must be dictated by research question rather than philosophical orientation or subjective bias (Fitzgerald and Howcroft 1998).

The chosen approach to the investigation was an interpretive, exploratory, processual, longitudinal, case-based approach in which the researcher was not involved as an action researcher. Despite the fact that the research was not conducted in an interventionist mode, the investigator was in a position to report as a participant observer in one of the cases in which he was directly involved.

4.7 Data Collection

Case study design has been acknowledged as difficult (Darke, Shanks et al. 1998). The choice of a case study approach for the conduct of the research presented the researcher with a number of further choices on the selection of cases, the decision to conduct a pilot case, and on data collection and analysis options.

A multiple-case design was necessary because of the theory-building nature of the research (Benbasat, Goldstein et al. 1987). The use of multiple cases would provide an opportunity for cross-case analysis (Darke, Shanks et al. 1998) and multiple cases also offered the prospect of increased confidence in the research findings as a result of higher levels of pattern matching (Amaratunga and Baldry 2001). At the outset, the researcher proposed to restrict the number of cases to provide the opportunity for depth in the narrative (Creswell 1998). The intention was to cease adding cases when it became clear that no new insights were likely to emerge from subsequent cases (Cavaye 1996). While there is no general rule for the number of cases necessary for drawing conclusions (Gummeson 2005), the researcher was mindful of the advice that not less than two cases would be required and that four to six cases would be a reasonable number (Perry 1998). The proposed approach would conform to the principle for interpretive research *"to find the cases that give a maximum of information - and guided by saturation – stop when the new information of additional cases approaches zero"* (Gummesson 2003:488).

A screening process was used to select suitable cases for the investigation (Yin 2003). The selection criteria were determined by their likelihood to deliver those cases offering the maximum opportunity for learning (Stake 2000). Approaches to candidate case study sites were carefully structured to improve the prospects of a successful outcome to the individual cases (Benbasat, Goldstein et al. 1987). The detailed approach to the screening and selection of cases is set out in Chapter 5.

Having reflected on the merits of conducting a pilot case study before going ahead with subsequent cases, the decision was made to embark on a pilot case. The pilot case would enable the researcher to become familiar with IS strategy formation in a new organisational setting (Benbasat, Goldstein et al. 1987). The pilot case study would also confirm the operationability of the research approach and guide subsequent cases (Amaratunga and Baldry 2001). The opportunity to test and refine the approach to data collection was also an important factor in deciding to conduct a pilot case (Dube and Pare 2003).

Agreement on protocols governing the research was seen as essential at the outset to establish ground rules and a relationship of trust between the researcher and the partner organisations (Weerd-Nederhof 2001). Ground rules were important to ensure that there would be no ambivalence subsequently which would derail the research effort or cause difficulty for any of the stakeholders. A decision was made to prepare a case study protocol at the commencement of the field work to provide structure to the cases and ensure that data collection remained focused and that note taking was facilitated (Creswell 1998). An initial introductory letter to each of the candidate case organisations set out the data collection requirements in addition to setting down protocols for the conduct of the case. These requirements were also reiterated in subsequent correspondence with chief executives and interviewees.

Data used in case studies can be drawn from documentary sources, interviews, observation and artefacts which will be available in the research sites chosen (Benbasat, Goldstein et al. 1987; Simon, Sohal et al. 1994; Rowley 2002; Dube and Pare 2003). The approach facilitates multiple means of data collection and data sources (Benbasat, Goldstein et al. 1987; Eisenhardt 1989). The goal of data collection in a case study setting should be to capture rich data on the research issue as well as capturing the *'contextual complexity'* (Benbasat, Goldstein et al. 1987:374). Evidence for case studies may be drawn from the following six sources (Walsham 1995b);

- Documents

- Archival Records
- Interviews
- Direct observation
- Participant observation
- Physical artifacts

Interviewees were selected on the basis that they played a role in IS strategy formation during the relevant period or possessed stakeholder insights into the process (Pare and Elam 1997). The researcher was mindful of the suggestion that studies of IS management practice could be enriched by looking at stakeholders outside the IS department (Earl 1993).

Interviews in qualitative studies should focus on approximately five open questions (Creswell 1998). The researcher was cognisant of the advice that a PhD level investigation would require about 35 to 50 interviews (Perry 1998). The researcher decided against providing questions to interviewees in advance in order to facilitate a more semi-structured approach to the meetings. The researcher was mindful also of the advice that, in case studies, questions were rarely specified and, where they were, it was in very general form (Benbasat, Goldstein et al. 1987). Unstructured interviews are associated with qualitative research whereas structured interviews are more appropriate in quantitative approaches (Fontana and Frey 2000).

Open questions were used to ensure that the perceptions gathered were those of the interviewee rather than the interviewer (Perry 1998; Naumes and Naumes 1999). Interviews were conducted at the interviewee's place of work to put respondents at their ease and to allow the researcher to get a better understanding of the interviewee's environment (Naumes and Naumes 1999). The researcher focused on the collection of process data, which "*consist largely of stories about what happened and who did what when – that is events, activities, and choices ordered over time*" (Langley 1999:692). Researchers have been urged to tape record case study interviews because of the difficulties in making comprehensive notes where a single interviewer is involved (Barnes 2001). However a decision was made not to electronically record interviews lest interviewees were inhibited or less truthful (Walsham 1995b; Walsham 2006). It has been suggested that recording of interviews is not warranted in interpretive case study research (Perry 1998). Contemporaneous written notes were transcribed within twenty four hours to avoid the risk of distortion introduced by delay (Miles 1979).

4.8 Data Analysis

The analysis of case study data depends heavily of the "*integrative powers of the researcher*" (Benbasat, Goldstein et al. 1987:374). The process of qualitative data analysis includes data collection, data reduction, data display and interpretation (Miles and Huberman 1994). The approach to data acquisition has been described earlier in the chapter and the remaining steps in the process are described hereafter.

Analysis was conducted within each individual case initially, followed by cross-case analysis to identify similarities and differences between the cases. In addition to using cases as the unit of analysis, the data was also analysed on the basis of the individual management constituency perspectives. This approach offered the best opportunity for learning.

In determining the suitability of the chosen approach to theory generation, the researcher was mindful of the counsel that there are seven possible choices of approach to theorising from process data (Langley 1999);

1. Narrative
2. Quantification
3. Alternate Templates
4. Grounded Theory
5. Visual Mapping
6. Temporal Bracketing
7. Synthetic

Narrative, or the first of Langley's options, was chosen for case level analysis because of its particular suitability to the research endeavour. Narrative involves the "*construction of a detailed story from the raw data*" (Langley 1999:695). Narrative research "*is concerned with the ways in which social actors produce, represent and contextualise experiences through narratives*" (Gummeson 2005:324). Narrative also dominates the work of strategy researchers, such as Pettigrew, who adopt a contextualist perspective (Langley 1999). The narrative approach, often with a contextualist focus, is typical of much of the research which has been carried out to date on participant influence and behaviour in IS strategy formation – see Appendix 2.1 column 4 in which contextualist studies of IS strategy formation have been identified.

The choice of narrative over the other possible approaches is also based on the fact that the alternatives are less suitable. Langley's (1999) quantification approach would have called for complex coding and statistical analysis which would be more appropriate in a research team situation. This approach would also be better suited to a theory testing approach (Langley 1999). The Alternate Templates approach would involve drawing theories from outside the case data and is essentially positivist (Langley 1999). A Visual Mapping approach was excluded on the basis that the narrative approach being adopted by the researcher could be supplemented by process maps or a taxonomy which would provide adequate visual representation of the theory derived from the data. Temporal Bracketing was excluded on the basis that it would be less transparent to practitioners than the chosen narrative approach. The Synthetic approach was also excluded on the basis that it would deliver a variance theory rather than a theory of process (Langley 1999). A 'grounded theory' approach to data analysis was chosen in the cross-case round of data analysis which is consistent with Langley's seven options in interpretive process research (Strauss and Corbin 1998; Langley 1999). The analysis is 'grounded' in the sense that it is "*derived from data, systematically gathered and analysed through the research process*" (Strauss and Corbin 1998:12). The analysis is also 'grounded' insofar as "*it involves the systematic comparison of small units of data (incidents) and the gradual construction of a system of 'categories' that describe the phenomena being observed*" (Langley 1999:700).

4.8.1 Case level analysis

Case level analysis begins with a detailed write-up, or narrative, for each of the cases (Pare and Elam 1997). The data analysis focused on individual cases initially to enable the researcher develop case-specific insights which could be lost if a broader approach was taken from the outset (Eisenhardt 1989). Given that the research is based in the interpretive research tradition, the narrative structure is intended to enable the reader bring his own interpretation to bear on the data (Remenyi, Money et al. 2002). Each of the narratives shares a common layout and structure to make them more readily accessible to the reader (Yin 1981a).

The inclusion of data on both the internal context and external context enables a contextualist perspective to be developed on the cases (Pettigrew 1987; Klein and Myers 1999; Webb and Pettigrew 1999). An interpretive case study investigation of strategic data planning in an Australian bank focused on the wider environmental context and the internal organisational context in the case (Shanks 1997). The narratives are structured around the IS strategy content,

context, and process in each of the participating organisations. These are important perspectives in the case study analysis (Pettigrew 1987; Webb and Pettigrew 1999). Meaningful process research also needs to be linked through time and context and this approach was adopted in the narratives (Chakravarthy and White 2002).

The researcher was careful, in the early stages of the case-writing, of the risk of becoming focused on the minutiae of data generated rather than on the evidence (Yin 1981a). Therefore, the case narrative was focused on meaningful events in the IS strategy process rather than on the detail (Yin 1981a). The investigator was conscious of the caveat that "*process theorization needs to go beyond surface description to penetrate the logic behind observed temporal progressions – whether simple or complex*" (Langley 1999:694). The researcher was mindful of the advice that the narrative should contain sufficient quotes to enable an observer reach an independent judgement on the merits of the analysis (Dube and Pare 2003).

The wider public sector context is described at the beginning of Chapter 6 in order to provide an external context to the data. The three narratives describe the evolution of IS in each organisation and describe the IS strategy process, context and content in each case. A detailed narrative, based on the data collected during the research, was constructed by the researcher for each of the cases and these are also set out in chapter 6.

4.8.2 Cross-case data analysis

The purpose of cross-case analysis is to compel researchers to go beyond initial surface impressions from the data though the use of structured lenses (Eisenhardt 1989). This objective can be achieved though the identification of dimensions or categories which can then be sought across the cases (Eisenhardt 1989). Good qualitative data analysis in investigations of the strategy formation process need to employ coding techniques to classify and categorise the data (Barnes 2001). Coding consists of segmenting the data into units and "*rearranging them into categories that facilitate insight, comparison, and the development of theory*" (Pare and Elam 1997:552). A provisional set of codes was drawn up, prior to analysis, based on the research question and the concepts which emerged during data collection (Miles and Huberman 1994; Barnes 2001). Data reduction was carried out at the individual case level to facilitate efficient retrieval, clustering and comparison of data (Pare and Elam 1997). Coding has been characterised as a subjective process because the concepts are chosen by the researcher (Walsham 2006). The basis for the provisional set of codes and the mechanics of the coding process are described in greater detail in Chapter 5.

Analysis took place at the level of the individual cases in addition to cross-case analysis searching for patterns, similarities and divergences across cases (Eisenhardt 1989). Empirical research has shown that cross-case pattern matching was used in data analysis in 88% of explanatory case studies and in 64% of exploratory case studies (Dube and Pare 2003). Care was taken to avoid smoothing or aggregating variations between cases (Miles and Huberman 1994). The focus was on noting variations and seeking to explain these in order to build richer theory. The process of seeking matches and mismatches across the cases ensured that the analysis process went beyond the early impressions and multiple perspectives were explored (Eisenhardt 1989). The cross- case analysis was also expanded by examining the data from the perspective of the different stakeholder constituencies to seek out any patterns or inconsistencies in the data. Cross-case analysis was an iterative process of seeking to develop propositions at the individual case level and seeking support, disconfirmation or an alternative explanation from the other cases (Pare and Elam 1997). The search for holistic patterns within and between longitudinal case studies has been characterised as a feature of strategy process research (Pettigrew 1997).

The analysis focused on the development of tentative theory and concepts (Simon, Sohal et al. 1994). Cross-case analysis enables themes and concepts to emerge from the data which can be systematically compared to the case data "*iterating toward a theory which closely fits the data*" (Eisenhardt 1989:541). A process of confirmation and disconfirmation between the constructs emerging from the cross-case analysis and the case narratives facilitates robust theory construction and development of additional insights (Eisenhardt 1989). The embryonic theory was compared with the extant theory to identify anomalies or consistencies for further consideration and analysis (Eisenhardt 1989). For example, Pare & Elam (1997:555) describe their research into IS implementation in which they proposed a set of propositions based on a teleological meta-theory of process. A different choice of meta-theory would have required an alternative explanation to fit with the meta-theory used.

4.9 Conclusion

The rationale for the methodological choices to be made in the investigation of how external management consultants contribute in IS strategy formation in the public sector has been explored in this chapter. The choice of an exploratory approach to the investigation was made on the basis that a review of two separate academic literature sets in Chapters 2 and 3 failed to suggest any compelling initial propositions for a hypothesis-testing approach. The second choice of an

interpretive research method was indicated by the socio-technical nature of IS strategy formation and the need to focus on the complexities of participant interaction and behaviour in the process. The processual nature of IS strategy formation in an organisation context suggested that the research be both processual and longitudinal. A case-study setting was chosen by the researcher because of the need to consider the contextual and temporal dimensions of the phenomenon under investigation. The choice of a longitudinal case study approach was found to be consistent with current practice in interpretive IS research and the choice also increases the accessibility of the research output to the community of practice. The investigator was conscious of the potential advantages of an action-oriented approach to the investigation and this option was explored in some detail. Ultimately, the researcher was persuaded that such an approach was not viable given the potential overlap between the contribution of external management consultants and an insider action researcher.

A number of decisions about the conduct of the case studies, site selection, data capture, and data analysis were also made following consideration of best practice and the optimum approach to developing rich theoretical insights into the contribution of external management consultants in IS strategy formation in the public sector. The practical implementation of the methodological choices made is set out in greater detail in Chapter 5 which follows.

5 THE APPROACH TO INQUIRY

5.1 Introduction

The preceding chapter has set out the rationale for adopting a longitudinal, process-oriented approach to the investigation of how management consultants shape information systems (IS) strategy formation in public sector organisations. A review of the available methods of inquiry has provided compelling evidence in favour of setting the investigation in a case study context. The approach taken to the investigation is set out in detail in the following paragraphs. The approach can be summarised in the following sequence of events;

- Government departments/offices were surveyed to capture basic case data
- Selection criteria were set down to identify candidate cases
- A formal written approach was made to the selected pilot case study site
- An approach to the conduct of the pilot case study was agreed
- The pilot case was conducted and reviewed
- The approach taken to the pilot case was reviewed
- The second and third cases were conducted
- The case study narratives were authenticated by the participating organisations
- Case level analysis was carried out on the case study narratives
- Narrative and documentary data was coded for data reduction and analysis
- Cross-case analysis was carried out on the coded data
- Additional data reduction took place to provide management constituency perspectives

The investigation was conducted in a structured manner and in accordance with the norms of the wider academic community of inductive IS research peers.

5.2 Identifying candidate case organisations

A one page questionnaire (Appendix 5.1) was mailed to the most senior IS manager in each of twenty four government department/agencies in July 2004 for the purpose of ascertaining the extent of formal IS strategy activity involving management consultants across central government. Completed questionnaires were returned by twenty of the twenty four organisations polled representing a response rate of 83%.

Fifteen of the organisations who returned questionnaires had engaged external management consultants in the course of formal IS strategy projects. The questionnaire responses are tabulated at Appendix 5.2 which also illustrates the application of the case selection criteria. The number of candidate sites for inclusion in the investigation was narrowed down significantly on the basis of three selection criteria. The criteria were;

- Participation by external management consultants in IS strategy formation, other than in a quality assurance or support role (this criterion reduced the number of candidate sites to twelve)

- Choice of a different management consulting organisation in each of the cases to increase the opportunities for learning (this criterion reduced the candidate sites to eight)

- Availability of key senior managers for participation in the research (this criterion reduced the number of candidate sites to six)

The application of the selection criteria reduced the pool of candidate cases to six. One further candidate organisation was eliminated from consideration as a result of difficulty in securing participation. The pool of candidate sites was five at that point.

The three sites chosen from the remaining five had each employed one of the 'Big 5' global management consultancy organisations in the IS strategy formation initiative which was to be central to the case study. The remaining two sites, which were not chosen, had employed smaller local management consulting organisations. The investigator was of the view that the sites using the 'Big 5' consulting organisations were the best choices in an exploratory study given the likelihood that their contribution in IS strategy formation would be more representative of experience elsewhere. The three sites chosen offered the best opportunity of learning of all twelve original candidates. The three sites selected had all belonged to the same parent department although two had had their legislative status changed and were now largely autonomous. The common background on the three case organisations offered potential opportunities for greater depth in the presentation of the case context and the analysis.

5.3 Enlisting case organisations

The questionnaire survey conducted in 2004 signalled to each of the departments/agencies that a research initiative was underway. The high percentage of positive responses provided the researcher with a positive indication of interest in and support for the research. The invitation to participate further in the research endeavour was introduced to each of the candidate sites through a formal letter to the most senior IS manager in the organisation setting out brief details of what would be required from participants and suggesting an early meeting with the most senior IS manager to explain the case study approach further. A copy of one such letter is included at Appendix 5.3. This approach was adopted in order to built trust with candidate organisations and ensure that a later formal approach to the chief executive would have the best possible level of support from the most senior IS manager in the organisation. The introductory meeting with the IS manager was also used to confirm that the criteria set out for candidate case sites were met by his particular organisation.

In each case, the initial meeting with the IS manager was followed by a further formal letter to the chief executive officer, or his representative, seeking formal approval to proceed with the case study. A copy of one such letter is reproduced at Appendix 5.4. The third step in the process was to make a formal written approach to the appropriate partner-level representative in the partnering management consultancy practice enlisting their participation in the research and setting out what would be required. A copy of such a letter is included at Appendix 5.5. The investigator was conscious of the need to build support for the research amongst the IS management community and of the importance of transparency and openness in enlisting that support (Benbasat, Goldstein et al. 1987).

The pilot case site was selected following a meeting with a senior official in the Centre for Management and Organisation Development (CMOD) in the Department of Finance in January 2005. The pilot site was selected from the pool of candidate sites on the basis of CMOD advice that a significant level of IS transformation had taken place there and that the organisation itself had undergone significant transition over recent years. The pilot organisation was a significant site although not the largest in the pool of candidate sites. The choice of the second and third sites was not finalised until the preceding case was almost concluded. This allowed the investigator the maximum flexibility in choosing sites and it provided some insurance against changed circumstances in the candidate organisations.

One candidate case was dropped from consideration after formal approaches had been made to the IS manager and a member of the top management team. The decision not to proceed with the case was

made by the investigator when the IS manager was transferred to another organisation and his vacancy remained unfilled over the ensuing weeks and months. Contacts with the candidate organisation after the IS manager had departed did not provide sufficient sense that the requisite level of support existed for the research endeavour to continue.

Three partner organisations were enlisted as case study sites. The selection criteria for cases had the effect of narrowing the choice of organisations considerably. Each of the organisations chosen has undergone significant structural change over recent years. Each organisation has enlisted the assistance of external management consultants in their formal IS strategy development efforts.

When all three cases had been completed, the case narratives were sent to the senior IS manager for verification that they were factually accurate and that they had been conducted in accordance with the agreement set out with the organisation at the outset of the study. The IS managers expressed themselves as satisfied that the cases were accurate and the research had been conducted as agreed. A letter confirming the authenticity of the case study narrative was obtained from each senior IS manager and three letters of authentication are included at Appendices 5.8, 5.9, and 5.10.

5.4 Structuring the investigation

The pilot case did not suggest that any major change to the planned approach was necessary. The experience of the pilot case helped with interview focus in the subsequent cases and it also confirmed the viability of the chosen approach. Execution of the pilot case took longer than the two subsequent cases because the researcher used the experience of the pilot case to ensure that participants were comfortable with the approach adopted and more follow-up interviews took place in the pilot case than in subsequent cases.

Initial meetings were held in early 2005 with senior personnel in the Department of Finance (CMOD) to obtain information on the approach to IS strategy development in the public sector. The meetings with CMOD were also intended to promote the value of the research initiative and ensure that the work was supported. In the event, the meetings with CMOD were instrumental in helping to identify the Courts Service as an organisation in which to conduct a pilot case study.

The decision to conduct a pilot case study before embarking on subsequent cases meant that a largely serial approach to the cases was established from the beginning. The researcher found that this approach facilitated concurrent fieldwork, interview transcription and case writing and that the

conduct of concurrent cases would be difficult to accommodate. The serial approach to the cases also facilitated reflection on each of the individual cases before proceeding to the next. This approach to the case has been described as one of the advantages of the inductive approach to case study research (Eisenhardt 1989). There was some overlap between individual case timelines to avoid lost time during the negotiation process which was a necessary prelude to commencing a new case.

Figure 5.1 – Data collection timeline

Task/Duration	2004	2005	2006	2007
Survey of CIO's (2 months)	**June/July**			
CMOD Meetings (2 months)		**Jan/Feb**		
Courts Field Work (15months)		**Start Feb. 2005**	**Ends April 2006**	
Garda Field Work (9 months)			**April to Dec. 2006**	
PRA Field Work (7 months)			**Start Dec. 2006**	**Ends May 2007**

A timeline of the fieldwork is shown in Figure 5.1. The preliminary survey of potential case sites was carried out and reviewed in mid 2004. The meetings with CMOD and the pilot case in the Court Service took place between January 2005 and April 2006. The second case study in An Garda Siochana was conducted from April 2006 to January 2007. The third and final case in the Property Registration Authority (PRA) was conducted from December 2006 to May 2007.

The fieldwork in each of the cases began with a review of the published literature on the organisation and archive material. This was followed by a review of annual reports, corporate strategy documents, government reports, IS strategies and invitations to tender for management consultancy studies. Individual interviews with key informants were arranged after the available documentation had been reviewed. This ensured that the investigator approached interviewees with as much knowledge of the organisation as possible at that point in the research. Interviews with key informants such as chief executives and management consultancy executives were left until late in the data collection process

to ensure that the interviewer had gathered as many perspectives as possible and was as fully informed as possible when conducting interviews with the most senior personnel.

A letter was sent to each potential interviewee explaining the research and proposing a follow up call to respond to any questions and arrange an appointment for the interview. One such sample letter is included at Appendix 5.6. Interviewees were informed that the data captured in the interview would be anonymised in the subsequent case narrative. Interviews were arranged for the respondents' place of work or at a convenient hotel subject to their choice. Interviews were generally of between one and two hours duration. Interviews were not recorded electronically lest interviewees were inhibited or less truthful (Walsham 1995b; Walsham 2006). Contemporaneous written notes were transcribed within twenty four hours to avoid the risk of distortion introduced by delay (Miles 1979). Some key informants were formally interviewed on more than one occasion and, in many cases, data was captured or refined in informal conversations and settings during the research.

Writing of each of the case narratives began as soon as the investigator went on site. The case study was populated with data as soon as the data from the field became available. The narrative was continuously reviewed as new data became available. This approach to the work ensured that insights were captured and compared with existing data on an ongoing basis.

5.5 Data Collection

The longitudinal nature of the cases means that the case narrative covers a period of approximately thirty years in each of the cases. This period coincides with the introduction of IS in the case sites and generally throughout much of the Irish public service. The investigator was fortunate in being able to access multiple documentary and oral sources of record for the period. The investigator was also fortunate in being able to use his personal journals in one of the cases which contained contemporaneous notes of meetings and events related to IS covering more than twenty years.

Documentary sources are identified individually in the bibliography and they generally consist of;

- Academic journals
- Published literature
- Annual reports
- Corporate strategy reports
- Reports of Commissions of Inquiry

- Invitations to tender
- IS Strategy reports
- Minutes of meetings
- IS Working Papers
- Archive papers
- Personal journals
- Legislation
- Correspondence
- Press reports

Figure 5.2 – Case Study Interviewees

Management Constituency	The Courts Service	Property Registration Authority	An Garda Siochana	Dept. of Finance (CMOD)	Institute of Public Administration	TOTAL
Top Managers	1 CEO	1 CEO	2 Commissioners			**4**
Business Managers	4 Directors	3 Directors	2 Deputy Commissioners			**9**
IS Managers	1 CIO 4 IS Mgrs.	1 Head of IS 1 IS Mgr.	3 Heads of IS 3 IS Mgrs.			**13**
User Managers	2 User Mgt.	-	2 Change Mgt 1 User Mgt.			**5**
Mgt. Consultants	1 Partner	2 Partners	3 Partners			**6**
Public Sector Informants				1 Asst. Sec. 4 Principals	1 Academic	**6**
TOTAL	**13**	**8**	**16**	**5**	**1**	**43**

A breakdown of the management constituency, role and numbers of persons interviewed in the cases is set down in Figure 5.2. The name, grade and management constituency of interviewees from each of the three selected organisations are set out in the Appendices and referenced in the individual case studies. Interviewees from CMOD and the Institute of Public Administration are identified in Appendix 5.7. Interviewees in each of the cases included the chief executive, the most senior IS

manager, the most senior business managers, and the external management consultancy managers involved in the IS strategy assignment. Key informants were interviewed on more than one occasion and interviewees would have participated in follow-up telephone calls and informal meetings and gatherings as necessary to fill in gaps and elaborate on the narrative.

The investigator prepared a set of 'open'[19], value-free, questions before each interview and the questions were used as an aide-memoire to the agenda rather than to dominate the agenda. The question list was the researcher's own and it was intended to stimulate the respondent to speak broadly on the IS strategy formation experience in the organisation. Interviewees were given the latitude to speak freely of their experience of IS strategy formation and to reveal their thoughts in their own way. The availability of multiple informants from the different constituencies meant that questions were broadened or adapted as the work progressed and as signs of repetitiveness emerged on key topics. Questions were tailored towards the particular management constituency being interviewed so that, for example, discussions with chief executives were dominated by issues of broad policy whereas discussions with middle managers tended to focus on more detailed process issues. The following is a sample of questions used;

- What did the respondent perceive as his role in the various IS strategy development projects?
- To what extent were the major decisions related to IS difficult to make or reach agreement on?
- Who were the influential stakeholders?
- What did management consultants contribute that differentiated them from other stakeholders?
- How was decision making done in IS strategy development and implementation?
- How difficult was it to implement change in the organisation?
- Did management consultants challenge the status quo and, if so, in what way?
- What were the major problems encountered during IS strategy development or implementation?
- What would the respondent like to see changed if a similar IS initiative was taking place in the future?

[19] 'Open' questions are those which are least likely to suggest or prompt a particular response and which offer the best prospect that the response will be the interviewees own unbiased answer.

5.6 Prior experience of the Investigator in the field

The researcher has a background in IS management and operations in a large public sector organisation in Ireland. He has experience in the oversight of IS strategy and implementation at European Union level through his membership of governance bodies on behalf of Europol and the EU Council of Ministers. The investigator was an employee of An Garda Siochana for more than forty years. He was assigned to the IS Division of An Garda Siochana from 1974 until February to 2005 with the exception of two short periods from 1978 to 1980 and 1988/1989. He was on secondment to the Department of Finance (CDPS) in 1981/1982. He was Head of IS Division in An Garda Siochana from 1991 until February 2005. He ceased to be employed in An Garda Siochana some fifteen months before commencing the case study there. He was a member of the PULSE Project Directorate and the IT & Telecommunications Committee (ITTEC) throughout the PULSE project.

The investigator had no involvement in IS in either of the other two organisations who formed part of this study. He was interviewed as an external stakeholder in the e-Courts IS strategy and the CIO of the Courts Service was also interviewed as a stakeholder in the Garda IS strategy (2006). Neither interview is referenced in the subsequent IS strategy report. The researcher's background was useful in obtaining access to the case organisations and data sources. His knowledge of procedures and constraints was useful in enabling him to become grounded in the cases and establishing a rapport with informants. Research into process models in IS has shown that, in conducting a process investigation, it is important that the investigator understands the real world process so that he will know what data is relevant and how to use it (Shaw and Jarvenpaa 1997).

5.7 Potential risks in the investigative approach

The investigator identified a number of potential pitfalls in the conduct of the research. First of these was the risk of bias or subjectivity through conducting qualitative research in a programme of work and an organisation in which the investigator played a leading part (Creswell 1998). This issue arises because of the fact that the investigator was a principal in one of the three case studies described in the research. This was moderated by the choice of narrative in the case study approach which opens the case-level analysis to a degree of transparency. It was also balanced by the fact that the researcher also included narratives from two other cases in which the researcher was not directly involved. The potential risk is also balanced by the opportunity presented for an ethnographic perspective on one of the cases which arises because of the researcher's direct participation and the availability of contemporaneous field data in the form of journals.

Secondly, there was a risk of post-facto rationalisation of events by informants in respect of events that occurred many years ago. This risk was moderated by a number of factors such as

- Case study narrative is available for scrutiny:
- Multiple informants were used:
- Retired officials made themselves available for interview:
- Documentary sources were still available:
- Contemporaneous journals and records were available:
- The completed cases were verified by the partnering organisation: and
- The researcher had first hand knowledge of events in one case organisation:

Thirdly, there was a risk that commercial considerations or the preservation of intellectual property rights could prove a major barrier to the disclosure of proprietary methods and approaches used by management consultants in the course of assignments in the Irish public service. In the event, the management consultancy informants participated fully in the interviewing process and it was not necessary to negotiate agreements on intellectual property rights in order to conduct the research. The fact that the approach used in the projects had been prescribed to some extent by the clients was also a mitigating factor.

Fourthly, there was there was a possibility that, because involvement in the research effort represented no particular advantage to the individuals concerned, there might be a poor response from those approached to participate. All the organisations approached as potential case study sites agreed to be involved although the investigator decided not to proceed with one particular case when a key informant left and was not replaced. Only one potential interviewee declined to be interviewed and, in this particular instance, the individual concerned had been retired for some years. Two further potential interviewees were somewhat difficult to schedule and the matter was not pursued. In both cases it was possible to use alternative informants from the same constituency so that the investigation was not materially affected. The investigator also sought the support of key stakeholders before investing time in the research efforts. The researcher was satisfied overall that the investigation was conducted as planned at the outset and the integrity of the research effort was not compromised in any way.

5.8 Data Analysis

The rationale for investigating the process of IS strategy formation though three longitudinal case studies in the Irish public sector has been elaborated in detail in Chapter 4. The approach to identifying candidate organisations and to sourcing the data on which to construct theory have been set out in the preceding paragraphs. The specific approach to theory construction from the case data is set out in the following paragraphs. Theory construction was based on (a) case level analysis, (b) cross-case analysis, and (c) management constituency analysis. The rationale behind the analysis was set out in Chapter 4 and the operationalisation of the analysis is addressed hereunder.

5.8.1 Case level analysis

The data analysis began at the individual case level when narratives were developed for each of the cases describing the organisational context and the IS strategy context, content and process over the lifetime of each of the organisations. The individual narratives, which are included in Chapter 6, are preceded by a context-setting account of the Irish public sector dealing with aspects of sectoral policy, IS strategy, modernisation, and governance. Each of the case narratives was analysed to develop case-specific insights on the IS strategy formation process. Particular attention was focused on identifying patterns in the case data which was also scrutinised to identify behaviours and influences in the decisions and actions around IS. Environmental and organisational factors affecting IS strategy were sought out and noted in the data. Turning points in the organisational IS experiences were identified as were the particular circumstances surrounding changes in direction. Particular attention was paid to the effect of the internal and external context in the case level analysis. The structuring of the case narratives, and the inclusion of data on the wider environmental context, enabled the researcher to see the individual organisational stories through a contextualist lens (Pettigrew 1987; Klein and Myers 1999). A summary of the case narrative and conclusions were included at the end of each of the narratives. An overall summary of all three narratives is included at the end of Chapter 6 which brings together the findings from the case level analysis.

5.8.2 Cross-case analysis

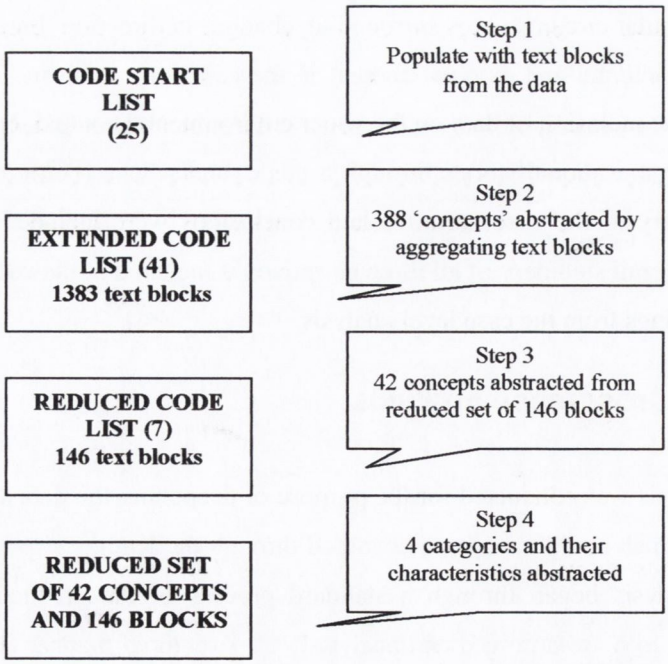
Cross-case analysis was conducted for the purpose of deepening the data analysis and removing case-specific filters which could have been absorbed through the lengthy exposure to the case study sites. This deeper analysis began through a standard process of data reduction and segmentation that allowed the data to be re-arranged and analysed in a structured manner (Eisenhardt 1989; Miles and Huberman 1994). Data reduction was achieved by a data coding process which is described in detail

below. The coding process introduced a degree of abstraction in the data which enabled new aspects of the organisational experience to be revealed in analysis.

5.8.3 The coding process

The coding process commenced after the narratives had been written and all documentary data sources and interview transcripts had been aggregated at the individual case level to facilitate the commencement of analysis. An initial set of codes was drawn up by the researcher to enable the data to be managed, manipulated and accessed at a relatively high level of disaggregation. Twenty-five codes were selected by the researcher prior to the commencement of the coding process. The initial codes were based on concepts which emerged from the research question and the literature review. The codes were chosen on the basis that they would enable data related to the research question, the organisational context or particular stakeholder groups to be aggregated and managed. The choice of codes by the researcher underlined the subjective nature of the process (Walsham 2006). The 'start list' of codes fell within the range of 'a dozen up to 50-60' prescribed for qualitative research (Miles and Huberman 1994). A number of new codes were added when the coding process was underway and additional dimensions of the case data presented themselves. Figure 5.3 below provides a visual representation of the coding and data reduction process which is described in detail in the following paragraphs.

Figure 5.3 – Coding and data reduction process



Although the 'start list' of codes had numbered twenty-five, forty-one separate codes had been generated by the time the coding process was completed. The final list of codes is set out at Figure 5.4 below. The codes were grouped into three groups as follows;

- IS Strategy Codes
- Public Sector Codes
- Stakeholder Codes

Figure 5.4 – List of Codes

Code Group	Code Title	Total Codes
IS Strategy	Benefits, conflict, champion, SLAs, participants, obstacles, scope, ISS experience, priority, change management, initiator, decision, influence, outcome, supporter, process, context, content, method, vision, turning point, frequency	22
Public Sector	Resources, business strategy, context, security situation, modernisation, financial control, technical direction, risking	8
Stakeholder	Steering Committee, private sector, Justice, staff associations, trades unions, consultants, CEO, IS manager, business manager, user, Finance (CMOD).	11

Coding was done by going through interview transcripts and documents and seeking out blocks of text that could be associated with that particular code or a new code. On a number of occasions it was possible to associate a block of text with more than one code. The researcher chose to associate a single block of text with more than one code on the basis that it was too early in the analysis to make choices which could prejudice later phases of the data reduction or analysis process. A well-known proprietary spreadsheet package was used to store and manipulate the coded data. Three separate code files were created for the IS Strategy, Public Sector, and Stakeholder code lists. Each text block retained its document identifier throughout the data reduction process so that the data block association was not lost in the process. The researcher decided that all forty-one codes would be subject to the complete data reduction process initially, irrespective of their potential relevance to the specific research question. This course of action would ensure that no potential insights would be overlooked and it would also allow the researcher to explore other aspects of the data in the future.

Figure 5.5 contains an example of how blocks of text from case study interviews were coded under the 'process' code. Column 1 contains the case and interviewee reference so that the text can be traced back to its source. Column two contains the blocks of text associated with the particular code.

A total of 1,383 text blocks from the case data were extracted and associated with individual codes – see Figure 5.6. The largest number of blocks associated with a single code was 193 and the lowest number was 2. A number of codes with small amounts of data associated with them became peripheral to the analysis as the process unfolded.

Figure 5.5 – Extract from the IS strategy 'process' code

Case Ref	'Process' Code
LI-32	The consultants met all grades from top to bottom
LI-34	The consultant advised on the pros and cons of each choice and would give an opinion
LI-34	Technical decisions in the IS strategy needed advice from the consultants
LI-34	IS strategy can be contentious
LI-30	The ITT for the IS strategy was typical. Public service ones are almost boiler plate
LI-27	Suggestions for IS could come from the business side of the organisation
LI-26	The consultants provided strategy management expertise
LI-24	There were workshops on information and sources of information
LI-24	She has experience of business discussion and option selection. It starts that way and then gets technical
QI-36	IS strategy can be quite political
QI-36	You have to pick up on agendas (in IS strategy) and find out who is looking for what particular answer
QI-36	The IT Director initiates the work and you get a maelstrom of agendas from others
QI-36	You have to sort through all the agendas and build towards a solution which can take forever
QI-33	He would approach an IS strategy in the public sector in a much more collaborative approach
QI-33	The public sector doesn't want surprises in IS strategies. Its collaborative and involves much more participation and involvement of stakeholders
QI-33	In the private sector, the consultants would deal with a small number of people

Figure 5.6 – Data blocks abstracted in the coding process

Code Group	Number of Data Blocks
IS Strategy	910
Public Sector	180
Stakeholder	293
TOTAL	**1,383**

In the next phase of the analysis, the 1,383 text blocks were trawled to abstract those which contained data pertinent to the research question and to a reduced set of codes relating to the research question. Codes such as 'participant', 'consultant', and 'contribution', were amongst the seven codes from which 146 text blocks were abstracted for the further analysis in step 3 of the process. In step 2 of the analysis process, 42 concepts were abstracted from the data. These concepts were formed by extracting codes from the data which represented a higher level of abstraction. Concepts such as 'consensus', 'validation', 'risk', 'challenge' and 'credibility' were other examples which emerged from the second phase of data reduction – see figure 5.7.

Figure 5.7 – Extract from the 'Credibility' Concept

Case Ref.	Credibility Concept
LI-29	Consultants are sometimes used to endorse ideas. You need the credibility of a consultant's report. Consultants did add value
LI-34	An IS strategy done without the consultants would not have the same status
QI-21	The value of the consultants was that they had credibility. The fact that they were external helped
QI-23	The consultants main contribution was to dig to the level they did, come up with plans and emerge with credibility because there was resistance
QI-26	The consultant pointed to the fact that the data model had no centre. Top management found this perceptive
QI-31	Top management relied on IS managers although there was a conflict insofar as top management was reluctant to fully accept internal advice
QI-31	IS managers were asked in the IS strategy could be delivered but top management was reluctant to fully accept their assurances
QI-33	Consultants can bring an unprejudiced view. They have no agenda.
QI-36	Internal IS managers have to fight for credibility whereas management consultants get access to senior management
QI-38	Without something strong, such as the consultant's report, it was hard to make things happen
SI-24	If the recommendations were not on consultancy notepaper they would not get the same respect
SI-25	Consultants gave credibility to the IS strategy to others such as unions, Justice and Finance. Justice would not have given funding otherwise
SI-25	The consultants major contribution was lending credibility to the IS strategy findings
SI-27	Top management knew that if they did an IS strategy it would not be accepted no matter how good it was
WI-22	Consultants bring deep expertise as well as credibility, 'ass covering' and insurance

In the third and final phase of the analysis, the 42 concepts and the associated data was trawled again to bring the data abstraction to a further level of refinement. Further patterns were sought within the concepts and the case data to build a coherent set of categories which would unify the concepts abstracted from the analysis and the case narratives. A total of four categories were abstracted and these four categories were supported by other attributes which also emerged from the analysis of the concepts and the case data. The four categories were 'Innovator', 'Engineer', 'Ally', and 'Broker' – see Figure 5.8. The four categories and their associated attributes are set out as a theoretical framework in Chapter 7.

Figure 5.8 – Extract from the 'Broker' category

Case Ref.	Mgt.[20] Con.	Broker Category	Concepts
LI-30	CNM	There is a carefully crafted section in the IS strategy dealing with that divergence of views	Facilitation Conflict
LI-34	ISM	Any organisation has tensions and the consultants brought facilitation and independence	Facilitation, Independence
LI-34	ISM	A consensus was reached whereby Notes was kept for e-mail and Microsoft was used as the client operating system	Accommodation Consensus
QI-21	ISM	The consultants could access top management and put issues on their desks.	Access
QI-21	ISM	The consultants could step outside the hierarchy and they had access and credibility	Independence
QI-23	ISM	The consultants would run things by several people and they were sensitive in how they played back their findings	Consultation Sensitivity
QI-23	ISM	The consultants could read the organisation mood well. They maintained the vision while moving the work along without losing people.	Sensitivity Inclusiveness

[20] TPM = Top Management; BSM = Business Management; ISM = IS Management; CNM = Management Consultants.

5.8.4 Management constituency analysis

In addition to the case level analysis and cross-case analysis, an additional round of data analysis based on the data relating to the 'consultant contribution' dimension was conducted. The objective of this round of analysis was to ascertain whether there were any particular similarities or differences in perception between the management constituencies which would provide additional insights in the research. The opportunity existed to analyse the coded data regarding 'consultant contribution' on the basis of the management constituency of the contributor of the data. Accordingly, a new work file was created containing worksheets for each of the management constituencies who had participated in the research. The management constituencies were;

- Top Management (chief executive level)
- Business Management (Functional responsibilities)
- IS Management
- Management Consultants

The analysis of the 'consultancy contribution' data did not require multiple phases of data reduction because of the uni-dimensional focus of the analysis. The data from all three cases was combined for the purpose of analysis although document identifiers remained associated with the text blocks in the worksheets.

A total of 187 text blocks related to 'consultancy contribution' were analysed. The analysis showed a pattern whereby each of the management constituencies tended to focus on different aspects of the 'consultancy contribution' as these had emerged from the cross-case analysis. The focus of the management constituencies was inferred from the number of occurrences of each of the 'contribution' categories in the data. Figure 5.9 provides an example of how the management constituency analysis was conducted. The contribution modes of 'Ally and 'Engineer' are apparent in the extract included in Figure 5.9.

The additional round of analysis based on management consultancy constituency was based on a simple numerical analysis of the narrative text. No abstraction or coding was indicated or considered necessary. The decision to conduct the analysis was made on the basis that useful insights might be found which could support or enhance the case level or cross-case analyses. The analysis of the management constituency data is discussed in Chapter 7.

Figure 5.9 – Extract of data from the Business Management Constituency analysis

Case Ref.	Mgt. Con		Category
LI-29	BSM	Consultants are sometimes used to endorse ideas. You need the credibility of a consultant's report	Ally
QI-26	BSM	Finance would take the consultants word	Ally
QI-26	BSM	The consultant pointed to the fact that the data model had no centre. Top management found this perceptive	Ally
QI-30	BSM	The consultants helped him. They would give him a 'heads up' on what was really happening	Ally
QI-30	BSM	The consultants provided a sense of confidence and he doesn't think we would have the bottle to go ahead without them	Ally
QI-24	BSM	The consultants shaped IS strategy through their ability to co-ordinate and synthesise disparate ideas	Engineer
QI-26	BSM	Consultants had intimate knowledge of computer systems and how to get things done	Engineer
QI-30	BSM	People were well briefed in making decisions because of the level of analysis provided	Engineer
QI-34	BSM	Management consultants bring previous successful experience from other organisations and they have a track record	Engineer
QI-34	BSM	The consultants have discipline and professionalism in the way they do their business	Engineer
QI-35	BSM	We couldn't expose our people to the experience the consultants had. He hoped there would be learning from the consultants	Engineer

5.9 Conclusions

This chapter has described the conduct of the research effort and how partner organisations were enlisted in the investigation of how external management consultants shaped information systems (IS) strategy formation in three public sector organisations.

The investigation began with a survey conducted in 2004 and field-work continued for more than three years with the active engagement of three different organisations and their external advisers. While the focus of the research was on the contribution of external management consultants, interviewees were drawn from the ranks of chief executive officers, business managers, IS managers, users, senior consultancy practitioners, and others (Figure 5.5) to provide a comprehensive picture of the organisational IS strategy formation experience.

The investigation was conducted in accordance with best practice as espoused by the wider academic research community in IS. The researcher was cognisant of the pitfalls which can undermine the academic worth of a research endeavour of this magnitude and took steps to minimise any such risks by following the established norms of the research community.

The fruits of more than three years of field-work are to be found in the narratives which follow in Chapter 6. These narratives recount the experiences of three large public sector organisations that have undergone major transformation over the last number of years. In each case, information systems (IS) became a major element of the transformation which has occurred. The case narratives describe the part played by management consultants and other stakeholders in IS strategy formation.

The case study narratives are preceded by a description of the wider public sector context within which IS strategy is formed in the partnering organisations. The preceding chapter has shown that the environmental context and the organisational context can be important determinants of the IS strategy formation experience for organisations.

6 IS STRATEGY IN THE IRISH PUBLIC SECTOR

6.1.1 Introduction

"Context and action are always interwoven whenever human beings make their own history"
(Pettigrew 1992:7)

Chapter 5 has described the approach used in the investigation of how external management consultants contribute to information systems (IS) strategy formation in the public sector. The chapter ended with a description of how the research methodology espoused in Chapter 4 was enacted in practice.

Chapter 6 now turns initially to setting out the real-world external context in which IS strategy is formed in the Irish public sector. Initially, the attention is turned to considering the unique characteristics of the public versus the private sectors. Next, trends in IS in different public sector contexts are noted with particular reference to those countries which are considered to be at the forefront of modernisation.

The focus next turns to the constitutional and administrative context in Ireland in order to fill in the background landscape to IS strategy formation in an Irish setting. The progress of a number of modernisation initiatives is recounted and the corresponding efforts to deliver IS strategy formation programmes in the public sector are also described. The early context-setting part of the chapter ends with an outline of the system of oversight which is in place to ensure that IS strategy formation conforms to both EU and domestic policy and legislation.

The larger part of Chapter 6 focuses on the IS strategy formation experience of three public sector organisations in Ireland. Each organisational experience is recounted in the form of an individual case study and each of the case studies includes a brief treatment of the internal organisational context. A number of interviews were conducted in the course of the individual case studies and these are referenced in the cases. A number of persons were also interviewed during the context-setting phase of the research and these interviewees are identified in Appendix 5.7.

6.1.2 The public sector – a complex environment?

The current investigation is directed at the public sector rather than the private sector which suggests that, at the outset of this chapter, it is appropriate to reflect on some of the characteristics of the public

sector which may be useful in interpreting the Irish public sector experience. The purpose of the public domain is to nurture and protect the collective life of the community as a whole and to provide those goods and services which are necessary for the wider community but which are generally impractical for citizens to provide for themselves as individuals (Ranson and Stewart 1989). Infrastructure, health services, and sanitation are examples of public goods and services. Ranson and Stewart, who are UK academics, set out the objectives of the public sector as being *"to constitute those (political) conditions which presuppose agreements upon the most fundamental concerns in any society: the collective conditions for common well-being but also individual dignity"* (1989:9). This particular view of the public domain is preferred because it tends to echo the Westminster tradition of government which is also common to Ireland. Chandler (1991) has suggested that this particular view of public administration may be more 'collectivist' than would be acceptable in other jurisdictions. Lachman (1985;672) expresses similar sentiments in pointing out that "*the legitimising goal of public ownership is social amelioration that would not be achieved under private ownership*".

The public and private sectors are frequently differentiated by ownership and funding (Solomon 1986; Boyne 2002). On this basis, public sector organisations are funded from exchequer or public resources while the private sector is funded from private sources and ownership resides in an individual or group of individuals, or equity holders. Boyne (2002) has suggested that, while the 'conventional' distinction between the two sectors is funding, public sector organisations are largely controlled by political forces rather than market forces. The three dimensions of ownership, funding and control represent criteria by which the relative 'publicness' of organisations can be judged. It is interesting to note that, almost thirty years earlier, another UK academic had considered that "*the key distinction between the public and private sectors is the accountability factor*" (Murray 1975:367). However, there is no inconsistency between the views expressed insofar as accountability is merely the other side of the 'control' dimension. Ranson and Stewart (1989) later observed that one of the unique characteristics of the public domain is the scrutiny to which it is subjected (Ranson and Stewart 1989).

The sectors may also be differentiated by their legal status (Rainey, Backoff et al. 1976; Lachman 1985; Solomon 1986). The public sector is regulated by its own legislative framework and, while the private sector is also subject to legal regulation, separate legislative provisions exist for each. The private sector has seen increasing legislative regulation in its sector in recent years with the emergence of laws on environmental protection, competition, health and safety, and equality in the workplace. The level of market exposure of each sector is also different insofar as the public sector is supported by state funds and is not as exposed to the vagaries of the market as its private counterpart which may not enjoy the same level of financial resources (Rainey, Backoff et al. 1976; Lachman

1985). Political influence in its affairs is also a feature of the public domain (Rainey, Backoff et al. 1976; Lachman 1985; Solomon 1986) whereas, in contrast, the private sector operates autonomously and is free of the checks and balances of the public sector (Murray 1975).

A recent UK contribution on public management underlined four particular challenges facing public sector managers (Boyne 2002). The first of these is 'complexity', which is attributable to the variety of stakeholders placing constraints and demands on managers. Stakeholders may include politicians, consumers, regulatory authorities, taxpayers, or service providers. The second challenge is 'permeability' which arises from the fact that public sector organisations are open systems which are subject to influences from external events such as public opinion, pressure group activity, or media comment. The third challenge arises from 'instability' which can bring sudden policy changes because of the demands of electoral cycles, economic cycles or other pressures which impact on management. The fourth differentiator of the public sector is the 'absence of competitive pressures' which puts managers in a position where they are expected to collaborate with other service providers rather than compete. The public sector manager is expected to avoid duplication of services. Murray (1975) asserts that the private sector model is based on rational economic efficiency whereas the public sector operates on the basis of consensus and compromise.

Differences in performance criteria can also be found in the private and public arenas. In government, what appears to be inefficiency is sometimes essential to the public purpose of the agency (Murray 1975). Performance is linked to rewards in the private sector to a greater degree (Solomon 1986). High levels of oversight of activities, additional degrees of inclusiveness and transparency in procurement, and other 'inefficiencies' which would not be viable in a rational economic model of operation are typical of the public environment. Chandler (1991) also makes the point that public sector organisations can be less efficient.

A UK perspective suggests that public sector organisations are more structured in their procedures for decision making, are less flexible and more risk-adverse than their private sector counterparts (Boyne 2002). A recent study in the USA found that risk-adversity was not more characteristic of the public sector there than it was of the private sector (Bozeman and Kingsley 1998). The research, which was based on survey data, found that 'goal clarity' is important to risk taking irrespective of sector.

The complexity which faces managers in the public sector has been identified by a number of academic researchers. Managers in the public service have to cope with more ambiguity, more

uncertainty, and a greater possibility of change (Ranson and Stewart 1989). Chandler (1991) suggests that goals in the public sector can be less tangible and they can also be conflicted.

Despite the contrasts between the public and the private sectors, "*a new language of economic rationality and performance*" has been emerging in public sector management (Doolin and Stewart 1998:302). The 'new public management' (NPM) movement, or managerialism, became a feature of public administration in countries such as the UK and New Zealand during the early 1990's. The NPM movement espoused private sector management principles for the public sector. The dominant academic view in the public policy and administration fields is that "*public and private organisations are so different that NPM prescriptions are inappropriate*" (Boyne 2002:118). The suggestion that public sector managers can learn from their private sector counterparts is worthy of serious but cautious consideration (Boyne 2002).

6.1.3 Trends in IS programmes in the public sector

Whereas the new public management has been arguably the most noteworthy development in public sector management in the past two decades few would argue that the emergence of the e-government phenomenon has also been an equally significant change in the sectoral landscape. E-Governments have been defined by Tapscott (1996) as 'digitally interconnected public agency networks'.

Public administration is usually conceptualised in terms of the traditional hierarchical bureaucracy. A North American researcher points to the adoption of this Weberian model of organisation in order to support the standardised and departmentalised processing of work and to take advantage of transaction cost economies (Ho 2002). The arrival of the Internet, which offers fast and inexpensive ICT connectivity, has introduced potential new economies of scale together with high transaction processing capability which undermine the rationale on which the traditional administrative model was based.

Online governmental information services first emerged on the World Wide Web in the mid 1990's (Coursey and Norris 2008) and the OECD (2005) suggests that e-government success in its member states was initially judged by the numbers of services transferred online. OECD governments are now aiming to integrate services on the basis that "*there is not unlimited support for administrative transformation through e-government*" (OECD. 2005:3). US research suggests that governments are likely to progress through stages from basic information provision to fully transactional service as services to citizens are transformed (Coursey and Norris 2008). Progress is likely to go through (a)

catalogue or information provision, (b) transaction processing (c) vertical integration through upper and lower levels of government, and (d) horizontal integration by online sharing of data across departments. Vertical integration, or information silos, were the most common approach to service delivery by governments in the OECD countries according to a recent report (OECD. 2005).

The impact of e-Government has been growing and its influence on public administration is becoming more dominant (Tan, Pan et al. 2005). North American research found that the most obvious positive impacts of IS on public administration are in the area of efficiency and productivity of government performance (Danzinger and Andersen 2002). The potential benefits of e-Government include operational efficiency, transformation of processes, client convenience, and political gains through increased citizen participation and improved empowerment of the community (Tan, Pan et al. 2005).

Canadian research in e-government raises a cautionary note because of e-government "*permeation of all aspects of public sector management and reform*" (Allen, Juillet et al. 2001:102). The Canadians highlight the need for the adoption of new behaviours and administrative culture and the acknowledgement that, while Westminster style government is based on vertical accountability, e-government is fundamentally dependent on the implementation of a horizontal model. The challenges involved in such a transformation are likely to be significant.

The United Nations has recently published an index of national e-government 'readiness' based on website assessment, telecommunications infrastructure, and human resource endowment. The top ten ranked UN member states in order of readiness in 2008 were Sweden, Denmark, Norway, United States, Netherlands, Korea, Canada, Australia, France, and United Kingdom (United Nations 2008). Ireland was ranked at nineteenth in the survey. The United Nations have also published data on national 'e-participation' in the same survey. E-Participation measures governments' implementation of products and services for e-information, e-consultation, and e-decision making. The top ranked countries in this index are USA, Korea, Denmark, France, Australia, New Zealand, Mexico, Estonia, Sweden, Singapore, Canada, and the United Kingdom (United Nations 2008). Ireland is unranked amongst the thirty-five ranked member states in this particular index.

The initial focus by national governments for migrating large numbers of e-services online was rightly judged by the OECD to be premature (OECD. 2005). The United Nations data underlines the need for governments to adopt a multi-dimensional assessment of the new public administration environment.

A recent academic assessment of e-government in the UK noted that, while "*the potential for usage is great*" the government is concerned that the numbers of citizens using online government services is low (Phippen and Lacohee 2006:205). The authors contrasted the UK citizen usage rate of one user in ten with the corresponding figure for Canada which was five users in ten (Phippen and Lacohee 2006). Phippen and Lacohee (2006) did not speculate on reasons for the variation in usage rates but it would be easy to conjecture that geographical and infrastructural variations would play some part in the disparate figures. The data do underline the newness of the e-government phenomenon and the need for comprehensive research in order to provide much needed information for decision makers.

6.1.4 The Irish Constitutional and Administrative context

Ireland is a parliamentary democracy with a written Constitution (1937) providing for a division of powers between the Legislature, the Executive and the Judiciary (Devlin 1969). The Constitution of 1937 sets out in Article 28 that the Government act as a collective authority, with not more than fifteen Ministers heading government departments (1937). The Constitution (Article 28) also sets out that the organisation and distribution of Departments, and other matters, should be dealt with by legislation. The fifteen government departments are listed at Appendix 6.1 (www.irlgov.ie).

The Department of the Taoiseach and the Department of Finance are 'co-ordinating' departments who exercise oversight and control over the remaining 'operating' departments (Barrington 1980). The Department of Finance is also empowered to review the structures and procedures of departments and offices through the Economic Planning and Development Order 1980 (Daly 1987). There are also a number of Ministers of State assigned to departments who are not members of the government although they assist ministers in the running of departments (Dooney and O'Toole 1992).

The Ministers and Secretaries Act (1924) provided a legislative underpinning for the system of government and administration after the foundation of the modern Irish State (Dooney and O'Toole 1992). The Act set out the principle of Government Ministers as a 'corporation sole' with full responsibility for all the actions of the officials in his Department (Department of the Taoiseach 1996). Although Ministers are responsible for all the decisions and actions of their department, a system of 'implicit delegation' operates whereby civil servants act in the name of their minister in conducting the day to day business of the department (Dooney and O'Toole 1992). The civil service assists ministers in the development of policy as well as in implementing policy decisions.

The Office of Comptroller and Auditor General was established under Article 33 of the Irish Constitution to ensure that public money is properly administered and spent to good effect (Comptroller 2006). The Comptroller reports to the Legislature and the affairs of the Office are governed by legislation.

The most senior official in a government department is the Secretary General, who is advisor to the Minister as well as Accounting Officer for the department's public expenditure (Dooney and O'Toole 1992). The Secretary General must present the account for his Department to the Comptroller & Auditor General and to the Public Accounts Committee (PAC). The Secretary is required to appear as a witness at the hearings of the PAC and to account for expenditure. The Comptroller is an official appointed under the Constitution whereas the Committee (PAC) is made up of members of the Legislature (Dooney and O'Toole 1992).

Ireland's accession to the European Union in 1972 changed the Constitutional landscape (Dooney and O'Toole 1992). Adoption of the Rome Treaty (1973) by the vast majority of voters gave legal effect to the laws of the European Union in Ireland and introduced a new momentum for harmonisation of laws across Member States. Membership of the Union increased the workload of those Departments with cross-cutting responsibilities such as Departments of the Taoiseach, Foreign Affairs, Agriculture, Enterprise Trade & Employment etc. (Dooney and O'Toole 1992).

The civil service is made up of those officials recruited by the Public Appointments Service to administer the business of government (Dooney and O'Toole 1992). The traditions of the service were inherited from the British civil service, 21,000 of whom were assimilated into the Irish civil service on the foundation of the modern State (Barrington 1980). The Irish civil service has been professional, loyal, honest and intelligent (Barrington 1980). The civil service is permanent with officials remaining in situ through changes in governments (Dooney and O'Toole 1992). The principle of ministerial accountability has been credited with having a major impact on the way in which civil servants go about their work (Dooney and O'Toole 1992). Discretion and freedom of action are limited and errors by officials are likely to reflect unfavourably on ministers leading to an emphasis on caution and consistency in dealing with the business of the department (Dooney and O'Toole 1992). A programme of modernisation was launched in the 1990's for the purpose of addressing some of the weaknesses in the civil service system (Department of the Taoiseach 1996).

A system of local government operates in addition to the central government (Dooney and O'Toole 1992). Local government consists of both elected and non-elected statutory bodies exercising a full

range of local government functions. The system is regulated by legislation and local authorities' jurisdictions can be municipalities, counties or urban areas (Dooney and O'Toole 1992). Their responsibilities are local and relate to matters such as amenities, environment, housing, roads, traffic, sanitation and infrastructure. Officials of local authorities are appointed by the Public Appointments Service and officials have a standard appointments career structure separate from the civil service (Dooney and O'Toole 1992).

The State Sponsored Bodies, or semi-state bodies, are primarily executive bodies established by government to fulfil a particular function such as public enterprise (Devlin 1969). An example of such a body is the Electricity Supply Board which was established in 1927 (Dooney and O'Toole 1992). The primary rationale for their existence is the need to free them from the rigidity of ministerial control, particularly in the case of the bodies operating in a commercial environment where a more agile response may be required to changes in the environment (Dooney and O'Toole 1992). The semi-state bodies frequently adopt a private sector mode of operation and a number of them engage in strategic commercial activities such as power generation, transportation, the arts or broadcasting (Devlin 1969). The management of semi-state bodies is determined by the circumstances of the particular body and many of them include directors from the private sector with experience more relevant to the environment in which they operate (Dooney and O'Toole 1992).

6.1.5 Public Service Modernisation in Ireland

The modernisation of the Irish public service, which was referred to earlier, had a significant impact on the perception and expectations of IS within the overall system. The story of the modernisation of the Irish public service, which brought about a change in the systems laid down in the 1920's, is described in the following paragraphs.

After its foundation, the Irish State continued with the administrative legacy of the former administration which was easily adopted by the new administration (Murray 2001). The first significant review of the civil service was conducted by the Brennan Commission (1932), which recommended a greater degree of intervention by government in social and economic matters while judging the administrative system to be satisfactory (Murray 2001).

The next significant review of the administrative system culminated in the publication of the so-called 'Devlin Report', or the Public Service Organisation Review Group (PSORG) Report in 1969 (Devlin 1969). Devlin identified institutional faults in the system of public administration including a "*built-in*

resistance to change" (Devlin 1969:142). The Devlin report also found that the most senior officials were so engaged in the detail of daily business of government as to have little opportunity to address matters of policy (Devlin 1969). The Report led to the creation of the new Department of the Public Service and the introduction of policy units, or Aireacht, in Departments (Devlin 1969). The Report also led to the introduction of a new Top Level Appointments Commission (TLAC) in 1984 and it sought to improve public access to civil servants and eliminate the prevailing culture of anonymity of officials (Murray 2001). The Devlin Review concluded that the weaknesses in the administrative system were structural and organisational rather than human and that the essential unity of the civil service had been lost (Devlin 1969).

The absence of both political will and commitment to reform by politicians and civil servants meant that the renewed focus on policy issues advocated by Devlin was ignored (Murray 1990). Apart from the establishment of the Department of the Public Service, the changes which followed the review were characterised as 'relatively minor and operational' (Daly 1987:23). The wide terms of reference for the PSORG review and the lack of consultation with key officials were identified as contributors to the failure to progress the reforms in the succeeding years (Murray 1990).

Reflecting on the Irish system of public administration in 1980, Barrington observed that the Department of the Public Service had failed in its mission to provide a focus for public administration (Barrington 1980). He identified professionalism and consensus as the two main forces for linking the entire system (Barrington 1980). The characterisation of the civil service as a unitary, homogenous organisation has been challenged by a number of commentators. The observation that "*there are as many civil services as there are Departments*" is typical (Murray 1990:127).

The judgement of a senior civil servant with more than twenty years of experience was that the civil service culture of the time was averse to innovation and consultation and tended to defer decisions or seek consensus (Connolly 1986). Initiation of change was seen as part of the political process and not primarily a matter for the civil service (Connolly 1986). Jobs were not precisely defined and there was a predisposition towards continual adjustment through personal interaction and the formation of coalitions (Connolly 1986).

In the next phase of modernisation, a White Paper entitled "Serving the Country Better" (1985) set out an agenda for improving the civil service (Dooney and O'Toole 1992). The White Paper was the first formal government paper on the public service, or the civil service, in the sixty three year history of the modern Irish state (Murray 1990). The Paper promoted an ethos of public management and

results-based performance (Dooney and O'Toole 1992). The White Paper is notable not least for the fact that it focuses on people rather than structures as the basis for improved performance (Murray 1990). The thrust of each of these modernisation initiatives was the need for improved public management and service to citizens across the public sector (Dooney and O'Toole 1992).

External reviewers were not alone in their pre-occupation with the structural reform at the expense of other issues. The perception of some senior managers at the time was that the Department of the Public Service was focused on improvements in the application of bureaucratic principles at the expense of political and cultural issues which needed to be addressed (Connolly 1986).

The difficult national economic climate of the 1980's pushed the reform of the Irish public service into the background (Murray 2001). In 1987, the Department of the Public Service was absorbed back into the Department of Finance from whence it had sprung in 1973 and the emphasis of the administrative system focused on controlling public expenditure (Murray 2001). The preoccupation of the Administration with the Northern Ireland conflict and the difficult economic climate of the 1980's had stifled the capacity of the system to deal with administrative renewal (Dooney and O'Toole 1992).

Yet another administrative reform initiative emerged in 1994 following a report entitled "Strategic Management in the Irish Civil Service" which had been prepared by the 1993/94 M.Sc. class of Assistant Secretaries (Department of the Taoiseach 1996). Following this, the Irish Government announced a 'strategic management initiative' (SMI) in February 1994, which aimed to introduce a process of strategic management in the Irish Civil Service (Murray 2001). The objective of the SMI was to develop 'best practice' in the areas of personnel, finance and strategy followed by the extension of the process to the wider public service, especially in strategic issues spanning Departments (Murray 2001). Ireland was not unique in its concern for administrative improvement at the time (Dooney and O'Toole 1992). New Zealand, Australia, Canada and the UK, all of whom used the Westminster model of public administration, were also engaged in administrative reform. The Government assigned a Co-ordinating Group of Secretaries[21] the task of ensuring that Departmental strategy statements were developed and recommendations made for the changes envisaged by the Government (Murray 2001). The Public Service Modernisation Division in the Department of the Taoiseach[22] was given responsibility for promoting the public service modernisation programme (Department of the Taoiseach 2006b).

[21] The Group comprised the most senior officials from a number of Government Departments.
[22] A Prime Minister would be the corresponding government minister to Taoiseach in other Common Law countries

Although the principles set down in 1924 had remained in place for three-quarters of a century, by 1996 the most senior officials in the administration informed the Government that "*the existing structures and reporting systems promote a risk-adverse environment, where taking personal responsibility is not encouraged and, equally, where innovative approaches to service delivery have not been developed*" (Department of the Taoiseach 1996:21).

The Co-ordinating Group of Secretaries responded to the mandate of Government by producing a second report to Government entitled "Delivering Better Government" (DBG) in May 1996 (Department of the Taoiseach 1996). This second report set out a vision for government, new structures of management, a new approach to human resource management and financial management, a conceptual framework for implementation, and a call for better use of information technology in the administrative system (Department of the Taoiseach 1996). The Group also recommended that external management consultants be employed in the implementation process to ensure the necessary level of expertise in performance management, communications strategy and change, and the development of a corporate identity for the public service (Department of the Taoiseach 1996). The DBG Report acknowledged that the SMI Process up to that time had been led by a Co-ordinating Group of Secretaries drawn from nine Departments but that, if the process was to be broadened and deepened, Secretaries and Heads of Offices would have to develop detailed proposals in the following seven key areas which were essential to a successful implementation (Department of the Taoiseach 1996). These areas were;

- Quality Customer Service
- Human Resource Management
- Financial Management Systems
- Open and Transparent Service Delivery
- Legislative Change
- Regulatory Reform
- Information Technology

In the years following the DBG Report, a number of changes were made in public administration. The Public Service Management Act 1997 placed a statutory obligation on Secretaries General of Departments to prepare strategy statements setting out objectives, outputs, resources and related strategies for approval by the Minister (1997). The Act also set out the responsibilities of the Secretary General Vis a Vis the Minister, ministerial advisers and others. Ministers and Ministers of

State would be responsible for the development of policy while the public service would be responsible for developing strategy to deliver the policy outcomes required (PA Consulting Group 2002). The Act also clarified a number of issues of responsibility and accountability in the administrative system (1997). The purpose of the Act was to improve management effectiveness, transparency and accountability (Department of the Taoiseach 2006).

A Quality Customer Service initiative was launched in 1997 requiring all Departments to produce Customer Action Plans (Department of the Taoiseach 2006a). The Initiative was followed in 2002 by a Customer Charter Initiative which included a set of guidelines approved by Government to assist Department in producing charters (Department of the Taoiseach 2006a). The Customer Service Initiatives were a further development of the proposals which had emerged in the DBG Report in 1996.

The DBG Report spoke of the 'unparalleled opportunities' offered by information technology to develop new ways of working in the public service (Department of the Taoiseach 1996). The Report referred to the efficiencies which some departments had gained in the past but found that technology had not "*yielded all the benefits that could reasonably have been expected*" (Department of the Taoiseach 1996). The Group recommended that the use of IS in the public service be reviewed especially in the context of the emerging Information Society and European Union policy[23] (Department of the Taoiseach 1996). The DBG Report found that the experience and skills required to realise the benefits of IS were not lacking in the Civil Service.

Before considering the IS environment in the public service, it is useful to reflect on the achievements of the DBG agenda. The vision underpinning the DBG initiative had been based on five key result areas (Murray 2001);

- Quality service in policy advice and decision making
- Reducing red tape – regulatory reform
- Open and transparent service delivery
- Delivery of quality services
- Tackling cross departmental issues

[23] A Ministerial Conference on the Information Society was held in Brussels in February 1995 under the aegis of the European Union Commission. The conference launched a number of work programmes, including e-government, aimed at advancing the Information Society.

An assessment of progress made in 2001 by the Policy Unit at the University of Dublin (Murray 2001) suggested that progress in the first, third and fourth headings were 'considerable'. The assessment acknowledged the progress made on the remaining two result areas while pointing up the need for more effective action (Murray 2001). The Policy Unit stressed the importance of both structure and IS as enablers of progress in progressing public service modernisation going forward (Murray 2001). Progress in HRM, leadership and devolution were also identified as challenges to be dealt with (Murray 2001). The need for devolved structures supported by greater levels of 'outsourcing or agentising' which would enable managers to focus on strategic rather than operational issues was identified as a continuing issue for those driving the change agenda (Murray 2001).

An evaluation of progress in delivering the SMI/DBG modernisation was carried out by PA Consulting at the behest of the Department of An Taoiseach and published in 2002 (PA Consulting Group 2002). The Report called for accelerated progress in implementing three 'internal facing' components of SMI/DBG over the following five years (PA Consulting Group 2002). These components are;

- HR Management
- Financial Management
- IS Management

Assessing the extent to which the most recent modernisation objectives set by government have been achieved is not the purpose of this particular research. Nevertheless, it is noteworthy that the shortcomings which have been identified by both the Policy Unit at Trinity College and by PA Consulting fall into areas of activity where IS can provide effective support for change and empowerment of management teams.

6.1.6 Developing the Information Society

The modernisation programme had identified IS as an important part of its agenda for change. The Brussels Ministerial Conference of the EU in 1995 had also stressed the importance of the Information Society for the Union (Department of the Taoiseach 1996). Both these developments are significant in the context of the unfolding story of IS strategy in the Irish public service.

The Government launched an Action Plan for the Information Society in Ireland in January 1999 (Department of the Taoiseach 1999). The Introduction to the Plan underlined the importance of the

Information Society to Ireland's continued economic and social progress as well as setting out a series of goals and plans for the future (Department of the Taoiseach 1999). The Plan set down 74 specific targets under the following headings;

- Telecommunications Infrastructure
- Electronic commerce and business opportunities
- Enabling measures
- Legislative and Regulatory measures
- ICT for delivery of public services
- Skills, Communications, Resources and Implementation

In addition to tackling the infrastructural and regulatory environment for the Information Society, the Government identified a number of specific projects to be undertaken by nominated government departments and offices which would deliver outputs of the kind envisaged in the Information Society policy (Department of the Taoiseach 1999). A new Information Society Policy Unit (ISPU) was set up in the Department of An Taoiseach to oversee the implementation of the policy. Departments were to set up websites, public procurement was to be done electronically, electronic payment systems were to be developed, and electronic filing of tax returns was to be introduced amongst other initiatives. An Inter-Departmental Group was to be established to ensure that the Action Plan was implemented. An Information Society Fund was also put in place by Government later in 1999, to facilitate the achievement of the objectives set down in the Information Society Action Plan (Department of the Taoiseach 2006c). Some €206.6 million had been allocated to the fund by 2005.

The Government launched the REACH agency in 2000 with responsibility for developing a strategy for the integration of public services and a framework for electronic government (REACH Agency 2006). REACH was also mandated to deliver the Public Service Broker[24] which would provide an integrated set of processes, systems and procedures for access to public services (REACH Agency 2006). Government portals for business access to state services (BASIS) and citizen access to services (OASIS) were launched in 2001 as a further development of the Information Society initiative (OASIS Agency 2006).

[24] The REACH broker is an electronic gateway provided by the REACH Agency which facilitates electronic interoperability between individuals and agencies using its' services. The interoperability is supported by standards and guidelines which facilitate collaboration between users.

By 2002, most Departments and Offices had made 'significant progress' towards the provision of online information (PA Consulting Group 2002). The European Commission placed Ireland at the top in a survey of electronic service delivery in Member States in 2001 (PA Consulting Group 2002). The Revenue Commissioners' online service (ROS) and the Land Registry Electronic Access Service are examples of the improvements delivered. Nineteen out of twenty-three Departments/Offices surveyed in 2001/2002 had an IS strategy in place although these varied in their quality (PA Consulting Group 2002). All twenty-three Departments/Offices had a website in place providing static information and downloadable forms. Delivery of the REACH Broker had fallen behind schedule in 2002 and the absence of a leader or champion to drive through the delivery of the Broker was identified as an issue by PA Consulting (PA Consulting Group 2002).

A second Action Plan to realise the Information Society was launched by the Department of An Taoiseach in early 2002 (Government Action Plan 2002). The new Action Plan was accompanied by an expanded Information Society Policy Unit (ISPU), a new Cabinet Committee on the Information Society, and an e-Strategy Group at Secretary General level (Government Action Plan 2002). The Action Plan pointed to Ireland's position in the top four of the Organisation for Economic Co-operation and Development (OECD) 2001 Science, Technology and Industry Scoreboard as evidence of success in developing the Information Society vision (Government Action Plan 2002). The new Action Plan set out objectives and delivery dates across seven headings;

- Telecommunications Infrastructure
- Legal and regulatory environment
- e-Government
- e-Business
- Research & Development
- Lifelong Learning
- e-Inclusion

The new Action Plan identified specific e-Government projects for Departments and Offices with delivery dates ranging from 2002 to 2004 (Government Action Plan 2002).

The Information Society Commission, an advisory group to Government, underlined the potential of e-Government to 'radically transform' the public service in a set of recommendations to Government in 2003 (Information Society Commission 2003). The Commission urged policy makers to recognise the potential of IS in the public sector and cautioned against the narrow view of e-Government as

automation of existing services (Information Society Commission 2003). The Commission acknowledged the difficulty in delivering major IS programmes within time and budget and recommended the use of innovative delivery models for such projects. The Report pointed to the scale of the organisational change encompassed by the Government's Action Plan and suggested that budgetary constraints and complexity could well render the target date of 2005 unachievable (Information Society Commission 2003).

The most recent progress report on the Information Society Action Plan in 2004 pointed to ongoing progress on the implementation of e-Government (Department of the Taoiseach 2004). Births, marriages and deaths were being registered electronically and clients could also renew their motor vehicle registration online (Department of the Taoiseach 2004). The REACH agency had selected a supplier for the design and build of the Broker which was scheduled to be completed in late 2004 (Department of the Taoiseach 2004). Ireland had been ranked joint second amongst seventeen European countries in the online sophistication of its services by late 2004 (Department of the Taoiseach 2004).

The period from 2004 to 2007 was generally unremarkable in terms of system-wide progress in modernisation enabled by IS in the public sector. The Comptroller & Auditor General reported to government in late 2007 on the progress of the eGovernment initiative (Comptroller 2007). He found that the momentum on eGovernment which had been evident in the early years had faded although the Property Registration Authority, the Revenue Commissioners, and two departments (Agriculture and DSFA), had recognised and addressed the opportunities (Comptroller 2007). The Comptroller identified the absence of unitary management structures and the existence of 'silo-focused' funding arrangements as barriers to progress (Comptroller 2007). Other departments appeared uncertain or "*unwilling to move forward because of the risks and investment involved*" (Comptroller 2007:12). The REACH Agency ceased to exist as an entity on the 1st April 2008 and its functions and responsibilities were transferred to the Department of Finance.

A worldwide United Nations survey on e-readiness in 2008 ranked Ireland as nineteenth amongst the top thirty five in the survey (United Nations 2008). The top ten ranked UN member states in order of readiness in 2008 were Sweden, Denmark, Norway, United States, Netherlands, Korea, Canada, Australia, France, and United Kingdom (United Nations 2008). Ten EU member states appeared above Ireland in the ranking. The loss of momentum behind the eGovernment programme which had been identified by the Comptroller (2007) is confirmed in the United Nations survey data (2008). The United Nations have also published data on national 'e-participation' in the same survey. E-

Participation measures governments' implementation of products and services for e-information, e-consultation, and e-decision making. The top ranked countries in this index are USA, Korea, Denmark, France, Australia, New Zealand, Mexico, Estonia, Sweden, Singapore, Canada, and the United Kingdom (United Nations 2008). Ireland is unranked amongst the thirty-five ranked member states in this particular index.

A major review of the Irish administrative system by the Organisation for Economic Co-operation and Development (OECD) continued the trend of poor performance reports on the public sector (OECD 2008). While acknowledging the difficulties in leading system-level change, the report found that a "*renewed emphasis is needed on the role of ICT and e-government in strengthening information sharing and integrated service delivery*" (OECD 2008:13). The report also pointed to the problem of fragmented responsibility for different elements of e-government.

The challenge of public sector modernisation supported by IS has been underlined by international experience. Despite its high standing in the United Nations e-government readiness survey in 2008, online transactional e-government systems in the USA had achieved only modest or extremely low usage levels (Rocheleau 2007). One of the challenges in the Irish environment was echoed in the observation based on Canadian experience that "*whereas Westminster systems continue to emphasise vertical accountability, government on-line is (correctly) being pursued in a horizontal fashion*" (Allen, Juillet et al. 2001:100).

Some of the challenges to be faced in achieving the Information Society vision are set out in the preceding paragraphs. The government's funding commitment provides a signal of the government's intent to maintain its challenge as a European leader in the exploitation of ICT in the public sector. At the same time, leadership has been identified as an issue to be addressed and external consultants have also found that the quality of IS strategies vary. It is apparent also that the focus of much of the modernisation agenda is on infrastructure and service delivery channels while there is little mention of the impact on public servants who will be required to meet the challenge posed by the organisational impact of change. These are factors which will need to be addressed. The pattern of a risk-adverse public sector management culture is again underlined in the Comptrollers report on e-government progress in late 2007 (Comptroller 2007).

6.1.7 The evolution of IS in the Irish Public Sector

"Our focus has shifted from getting public services online to using technologies to transform what we do" (Hanafin 2003:1)

(Minister of State with responsibility for the Information Society)

In 1962, an inter-departmental committee identified thirty-five areas in twelve departments where IS could be used to process data and contribute to efficiency (Pye 1992). A separate committee, chaired by the Institute of Public Administration was set up in 1963 to examine how IS could be exploited by the smaller semi-state bodies although the Irish Sugar Company, a semi-state body, had been first in the country to use an IS in 1958 (Pye 1992). The Revenue Commissioners introduced a pilot scheme for an IS to support the collection of tax as early as 1963 (Connolly 1986). By 1986, the Revenue Commissioners had more than 300 networked computer terminals and annual expenditure on hardware, software and telecommunications in 1985 had grown to €5.3 million (Connolly 1986). The number of personnel allocated to the IT Division in Revenue in 1986 had also grown to 278 ranging from Principal Officer grade to Clerical Officer (Connolly 1986). The first formal IS strategy initiative was launched in Revenue in 1985 when one of the Principal Officers in the IS Division carried out a study, based on the critical success factor approach, as part of an M.Sc. Programme at the Irish Management Institute (Connolly 1986). The Department of Health had carried out a formal information needs assessment in 1982 and had sought the services of an external expert from a large beverage manufacturer in Dublin to assist in the work (Connolly 1986).

Initially, the Revenue Commissioners and the Department and Posts and Telegraphs were deemed to be the only organisations requiring their own dedicated data processing systems while the remaining departments would be catered for through spare capacity or a shared system (Pye 1992). A small unit was set up in the Department of Finance in 1964 for the purpose of meeting the IS needs of the Civil Service. This unit evolved into the larger Central Data Processing Services (CDPS) in 1973. The remit of CDPS included formulation of IS policy for the public service, development of systems for departments, and sanctioning of IS expenditure (Pye 1992). CDPS later evolved, through various changes in title and responsibilities, into the current Centre for Management and Organisation Development (CMOD) in the Department of Finance.

Devolution of the IS function and processing facilities to the larger departments followed a Report of a Review Body on Computerisation in the Government Services which reported in 1982 (Pye 1992).

A government decision was made in 1984 to establish local IS facilities in a number of government departments which had formerly been part of the CDPS client base. The departments affected included Justice, Education, Agriculture, Social Welfare and Defence. Personnel from CDPS were re-deployed to the Departments of Social Welfare, Health, Justice and other large departments in 1985 and investment in IS also began to increase. The government also split CDPS into two separate organisations named (1) the Information Management Advisory Service (IMAS) and (2) Central Computing Service (CCS) (Pye 1992).

In 1985, a White Paper on the public service entitled "Serving the Country Better" recommended that departments should prepare strategic plans for the introduction of office automation (Pye 1992). The first IS strategies in the public sector began to emerge around 1986/1987. In the absence of a strategic planning methodology for IS, IMAS developed an approach based on 'critical success factors' and information modelling. This led to the establishment of IS Units in those departments where none existed previously.

Strategic planning for IS had become well established by 1992 and 'considerable progress' had been made in ensuring that investment decisions in the IS area were well founded (Clince, Blennerhasset et al. 1992). IS investment (excluding personnel costs) in the Irish public service had grown from €13 million in 1985 to almost €40 million in 1992 (Clince, Blennerhasset et al. 1992). The differing rates of progress in the take-up of IS by departments and agencies can be inferred from the fact that more than €5 million of the €13 million expended in 1985 was attributable to the Revenue IS expenditure referred to earlier.

The role of CDPS as policy-maker and controller of IS expenditure for the wider public service contributed to the marginalisation of departmental top managers from IS policy and decision making in line departments in the early years in the evolution of the new technology (Pye 1992). In the period between 1960 and 1990, the organisational impact of IS generally in the Irish public service was 'fairly low key' (Pye 1992:112). Apart from CDPS, Revenue, Social Welfare, Posts & Telegraphs, the Central Statistics Office (CSO) and the Meteorological Service, IS had not become a strategic issue for departmental top management. The modernisation programme and the Information Society in the 1990's have become the latest vehicles for delivery of IS–enabled change in the Irish public service. Progress in these initiatives has already been outlined in the preceding section. The next section explores the issue of oversight of IS in greater detail and in a wider context.

6.1.8 Oversight of IS activities in the Irish Public Sector

No distinction has been drawn between the IS needs of different departments and agencies in the preceding sections. In order to understand the public sector IS context fully, it is necessary to differentiate the organisations concerned. In IS terms, Departments fall into three broad categories (Clince, Blennerhassett et al. 1992):

- Those which formulate/monitor policy to be implemented by others and require decision support systems or integration with others (e.g. Health, Environment);
- Those with direct contact with the public requiring transaction processing systems (e.g. Justice, Agriculture and Revenue); and
- Those with specialised IS requirements (e.g. Ordnance Survey, Central Statistics Office).

Having reflected on the policy context for IS in the public sector, it is appropriate to examine the administrative context within which IS strategy formation takes place in public sector organisations. The story of IS evolution in the Irish public sector in the preceding section has shown that the Department of Finance has been at the centre of developments in the majority of departments from the beginning. In earlier years, CDPS both oversaw the investment in IS and provided systems delivery services to those departments and agencies that required them. Both IMAS and CMOD, who replaced CDPS over the years, continued to exercise oversight over IS activities although their role as IS service providers ceased in the mid 1980's.

The Department of the Taoiseach has responsibility for both the 'formulation of policy and the overseeing of settled policy' within the system of public administration in Ireland (Dooney and O'Toole 1992). The Department of Finance also exercises oversight on policy and proposals for IS and management consultancy expenditure within the public service (Department of Finance 2006). The Centre for Management and Organisation Development (CMOD) in the Department of Finance provides a 'unified and co-ordinated approach to the delivery of advisory and support services' to Departments and Offices in the area of staff development and management, information technology, organisational development, and management services (Comptroller 2005:1). The Information Technology Expenditure Section (ITES), which is also part of the Department of Finance, is responsible for the evaluation of line departments' proposals for expenditure on information systems (Comptroller 2005). The ITES allocates resources to line departments and monitors projects to ensure that they conform to policy, guidelines and IS plans (Comptroller 2005). Departments and offices in the wider public service operate in a context whereby overall policy related to the Information Society

is set centrally at the Department of the Taoiseach while both CMOD and ITES in the Department of Finance exercise a degree of oversight and control over other aspects of the IS agenda (Comptroller 2005).

Although each Department and Office is free to determine its own approach to the management of IS, guidelines have been published by the Department of Finance on the engagement of management consultants and on planning for IS (Department of Finance - CITS 1995). As long ago as 1995, CMOD advised the wider civil service to make effective links between business strategies and IS while also stressing the importance of an organisational culture that is receptive to change together with a capable and committed staff (Department of Finance - CITS 1995). The CMOD view in 1995 was that IS in most Departments was already based on a strategic, business-driven approach and that what was required for the future was a flexible, evolutionary review process. A study of IS benefit realisation by the Irish Institute of Public Administration in 1992 concluded that the use of 'critical success factors' and 'information modelling' were conducive to a business-driven and strategic approach to IS strategy planning (Clince, Blennerhassett et al. 1992). High level IS reviews were to be defined by senior management using methods such as 'Critical Success Factors' and elements of 'Soft Systems Business Analysis' (Department of Finance - CITS 1995). The 'Soft Systems' approach was described as:

- Developing an "Ideal World" vision for the organisation;
- Comparing the 'real' and 'ideal worlds' and agreeing an optimum solution;
- Defining the issues, findings and recommending actions; and
- Specifying projects to implement the solutions

CMOD requires each department/agency to have a current IS strategy as a prerequisite for delegated authority to expend Departmental IS budgets (Department of Finance 1997). CMOD does not prescribe particular methodologies for project management or planning. They recognise that many contractors have their own preferred methodologies and CMOD are satisfied if the methods used equate to best practice. There is a recognition also that, in some circumstances, the overlay of management and project offices can be superfluous and incur avoidable costs. While CMOD does not adopt a prescriptive approach to how individual departments and agencies form IS strategies, they issued Guidelines in 1986 to departments and agencies on a recommended approach (see overview of the guidelines at Appendix 6.2). There is also an expectation that each IS strategy should contain the following elements:

- Information Strategy,
- Application Strategy,
- Technical Strategy, and
- E-Government Strategy.

The Lisbon Agenda is aiming to make the European Union a worldwide leader in the Information Society. There are no EU Directives relating to the Information Society although there are EU Benchmarks. Senior CMOD officials believe that most countries in the European Union are aiming to implement an integration broker similar to the REACH initiative in Ireland. CMOD are also of the view that the major issues for IS in the public sector in the 21st. century are around integration and centralisation of IS.

The following section examines the environment within which public sector departments and agencies procure external management consultancy services.

6.1.9 Procurement of Management Consultancy Services

Irish Government Departments and Agencies are bound by European Union[25] and domestic legislation and regulations which govern the way in which goods and services are procured (Department of Finance 2004). Good corporate governance demands that public procurement is honest, fair, cost effective and upholds the highest standards of integrity (Department of Finance 2004). The Comptroller and Auditor General (Amendment) Act 1993 provides for the auditing of public procurement by the Comptroller and Auditor General and Accounting Officers[26] are publicly accountable for expenditure incurred within their areas of responsibility (Department of Finance 2004).

The European Union Treaties provide for free movement and non-discrimination on the grounds of nationality in the provision of goods and services (Department of Finance 2004). Contracting authorities are permitted under the EU Directives to award contracts either on the basis of (a) the lowest priced tender, or (b) the most economically advantageous tender having regard to a number of

[25] EU Directive 2004/18/EC cover the procurement procedures of public sector bodies. Directive 2004/17/EC covers the procurement procedures of entities operating in the utilities sector. They are published in the Official Journal L.134 of 30th April 2004 and can be accessed on the EU Publications Office portal at http://europa.eu.int/eur-lex/en/index.html or on the EU public procurement website http://simap.eu.int which has a link on www.etenders.gov.ie

[26] Secretaries General of Departments are Accounting Officers for their Departmental expenditure. They are publicly accountable to the Houses of the Oireachtas (Legislature) for all such expenditure.

additional criteria (Department of Finance 2004). The Directives also set down minimum time limits for different stages of the procurement process.

Procurement of management consultancy services falls within the ambit of the procurement regime described above. The procurement rules ensure that there is competitive tendering for management consultancy contracts except in exceptional circumstances which are covered in the legislation/regulations. Guidelines setting out best practice principles in the procurement of external management consultancy services were issued by the Department of Finance (CMOD) in 1999 when "*the level of expenditure by the civil service on external consultants and the number and variety of tasks for which they are engaged*" had increased (Department of Finance 1999). Earlier guidelines had been issued in 1976[27] and 1993 and the new (1999) guidelines revised the earlier documents (Department of Finance 1999). The guidelines were not intended to promote the wider use of consultants and, on the contrary, Departments were encouraged to develop their own skills and expertise as much as possible.

The Department of Finance's (CMOD) perspective is that when departments procure external consultancy services, they are buying *"intellectual help and advice"* (Department of Finance 1999:3). Consultancy is regarded as "*an intangible service, critically dependant for its effectiveness on the individuals involved and on the context within which it is deployed*" (Department of Finance 1999:3). Consultants are engaged to carry out specific, finite tasks whereby skills are transferred to the client department or office which does not have these particular skills or where an independent assessment is required (Department of Finance 1999).

A distinction is drawn between what is regarded as 'management consultancy' and what is not (Department of Finance 1999). Strategy planning and advice is regarded as 'management consultancy' whereas software development or implementation is not (Department of Finance 1999). Management consultancy is categorised under four distinct headings as follows (Department of Finance 1999):

- Research Consultancy involving the transfer of *knowledge;*
- Process Consultancy involving the transfer of *skills;*
- Developmental Consultancy whereby a *learning* process enables the client diagnose or resolve their problem; and

[27] It has not been possible to obtain a copy of the 1976 Guidelines despite the best efforts of all concerned

- Resource Consultancy involving a once-off, non-routine *service*.

The Department of Finance Guidelines were updated in 2006 and included a definition of what constituted management consulting. Consultancy is defined as "*where a person, organisation or group thereof is engaged to provide intellectual or knowledge-based services (e.g. expert analysis and advice) through delivering reports, studies, assessments , recommendations, proposals, etc. that contribute to decision or policy-making in a contracting authority*" (Department of Finance 2006b:4).

The Department of Finance (CMOD) recognises that external management consultants are a more expensive option than having departmental managers resolving management problems (Department of Finance 1999). Nevertheless, consultancy is seen as justified in the following circumstances:

- specialist expertise is required which is not otherwise available;
- objective or independent advice is essential;
- timescales are critical;
- consultancy involvement is mandated by an external body; and
- opportunity costs of an alternative course are prohibitive.

Management consultancy organisations are expected to address three key dimensions of the task in proposals, or bids, for public service management consultancy contracts (Department of Finance 1999). The Technical Proposal should set out *how* the work is to be done, an Administrative Proposal should specify *who* will do the work and a Cost Proposal should specify costs (Department of Finance 1999). The Department of Finance had identified a set of four 'success factors' in the use of external contractors in the 1993 Guidelines (Department of Finance 1993). These are:

- Clear agreement on project scope and deliverables;
- Clarity of responsibility between parties;
- Effective project management controlled by the client; and
- Confidence in dealing with external experts.

The 1993 Guidelines identified "*objective judgement, novel thinking and a more detached viewpoint*" as aspects of the advice which external consultants could bring to consultancy projects (Department of Finance 1993:3).

6.1.10 Aspects of the Irish Public Sector Context

This first part of Chapter 6 has contrasted the complexity facing a public sector manager with that of his private sector counterpart. The review has also identified the considerable progress which has been made by some national administrations in the provision of e-government services to citizens. In contrast, independent assessments have shown that the Irish public sector has lost some of the initial momentum of its e-programme and the Comptroller (2007) has found that public sector managers are unwilling to embark on e-programmes because of the risks and investments involved.

In the administrative reform arena, the review shows that successive initiatives in this area have tended to focus on structures rather than people as the basis for renewal. Diagnoses of the body administrative have uncovered inbuilt resistance to change, risk adversity, and failure of IS to deliver the changes expected.

The first part of the chapter concludes by setting out the regulatory framework in which IS strategy formation takes place. The Departments of An Taoiseach co-ordinates policy while the Department of Finance exercises oversight and overall budgetary control on IS investments. Procurement also occurs within a regulated framework which also applies to other EU national administrations.

The remainder of the chapter will explore the IS strategy formation experience of three public sector organisations who form part of the Department of Justice, Equality and Law Reform family of organisations. These organisations are:

- The Courts Service;
- The Property Registration Authority, and
- An Garda Siochana.

Prior to dealing with the three organisations, a brief outline is provided on the 'parent' Department.

6.2 THE DEPARTMENT OF JUSTICE, EQUALITY, AND LAW REFORM

The mission of the Department of Justice, Equality and Law Reform is to "*help make Ireland a safer and fairer place in which to live and work*" (Department of Justice 2006a:6). There are approximately 750 staff working in the head office of the Department in Dublin and there are 24 organisations in the Justice and Equality sector. The 24 organisations, which are listed at Appendix 6.3, include four which The Department describes as 'key organisations' within the Department (Department of Justice 2006a:17). These four are also the largest organisations in the Justice 'family'. These 'key' organisations are:

- An Garda Siochana;
- The Courts Service;
- The Irish Prison Service; and
- The Probation Service.

The high level goals of the Department fall into seven categories which are:

- Tackling crime;
- Developing criminal justice services;
- Asylum, Immigration and citizenship;
- Promoting a fair, tolerant and caring society;
- Contributing to a secure and peaceful society;
- Civil law reform; and
- Business delivery and modernisation.

The most recent published annual report of the Department recorded progress on the business delivery and modernisation goal under the heading of policy planning and research, customer service, information technology, and financial management (Department of Justice 2006a). Progress in the information technology area included the implementation of new IS for the processing of visas and also for the immigration and naturalisation service. The IT Division of the Department is also moving to a shared service model of IS provision for the Justice sector which will facilitate decentralisation of some offices. The Department reported 'substantial progress' on a criminal justice interoperability pilot which would provide a link between IS in An Garda Siochana and the Courts Service

(Department of Justice 2006a:40). The link will become operational in March 2008 and it will be implemented through the REACH Broker.

Both the Courts Service and An Garda Siochana are amongst the three partnering organisations in the research reported here. The experience of all three organisations is recounted in the following pages.

6.3 THE COURTS SERVICE

6.3.1 Introduction

The IS strategy formation experience of the Courts Service over a period of almost thirty years is recounted in the following case study narrative. The narrative addresses a number of aspects of the case including the context, content and process dimensions of the IS strategy experience. Field work in the Courts Service was conducted over a period of fifteen months beginning in February 2005 and ending in April 2006. Interviews were conducted with thirteen managers who participated in IS strategy formation and those from the Service, both serving and retired, are listed at Appendix 6.4.

6.3.2. Mission and Business Strategy

In 1965, a text on the Irish system of public administration observed that "*the Department of Justice administers the courts, prisons and police force in discharge of its primary function of preserving law and order and protecting the community against crime*" (O'Donnell 1965:133). At the time, the Courts Division of the Department of Justice had responsibility for providing resources to the courts system to enable it to operate efficiently and effectively (Courts Commission 1996). In that era, Departments had responsibilities rather than strategies, thus the terse description of the wider Justice portfolio. The Courts Service did not exist as a distinct entity until the end of 1999 and its first Business Strategy was published in September 2000 (Courts Service 2000). This was the first published strategy document dealing with the court system in Ireland. The mission statement of the new Courts Service, as expressed in the first Strategic Plan 2000 – 2003 is;

"To manage the courts, support the judiciary and provide a high-quality and professional service to all users of the courts"

The five key mandates of the Courts Service, contained in Section 5 of the Courts Service Act 1999 (Courts Service 2000a), are:

- To manage the Courts;
- To provide support services for judges;
- To provide information on the Courts system to the public;
- To provide, manage and maintain Court buildings, and

- To provide facilities for users of the Courts.

In summary, the Courts Service has responsibility for management, funding and administration of the courts whereas the judiciary has responsibility for the administration of justice in the courts (Business 2000 2005). The Constitutional separation of powers draws a clear line between the responsibilities of the Courts Service and the judiciary. A feature of the new courts administration environment in 2000 was that Judges had begun to work with the management of the Courts Service on the development of the IS programme and the building programme (Courts Service 2000). The Courts Commission had judged it appropriate for the judiciary to work with the executive branch of government in such circumstances. A set of guiding principles was set out as part of the business strategy of the Service in the first Strategic Plan (Courts Service 2000). The principles are (Courts Service 2000);

- Quality service to judges and the public;
- Prompt and effective service;
- Public accountability and value for money;
- Equality, fairness and integrity, and
- Public trust and confidence.

A second Strategic Plan for the years 2002 to 2005 was published by the Courts Service in November 2002 (Courts Service 2002). The Courts IT infrastructure at this point had been developed from a very basic level to a position claimed to be comparable to any in the public sector. The Chair of the Board of the Service pointed to significant strides over the preceding three years as well as progress towards electronic courts in Ireland. The second Strategic Plan acknowledged the enormous amount of change which had occurred in the Service over the preceding period as a result of IS (Courts Service 2002). The two Strategic Plans developed thus far by the Court Service have made IS a major feature of the business strategy of the Service. The CEO of the Courts Service believes that IS integration will be important for achieving efficiencies in the courts system.

6.3.3. The Courts Service - Structure & Governance

The Irish judicial system was established in 1924 under the second Irish Constitution which had been adopted in 1922 at the foundation of the State (Dooney and O'Toole 1992). This system replaced an earlier judicial system which had evolved under the former British administration (Dooney and O'Toole 1992). The Constitution provided that justice should be administered in public in courts established by law and by an independent judiciary comprised of judges appointed by the President of

Ireland on the advice of the Government (Courts Service 2000:10). The statutory basis for the administration of justice by the judiciary is the Courts (Establishment and Constitution) Act, 1961, which was enacted pursuant to Article 34 of the (third) Constitution adopted by the people in 1937 (Courts Service 2000:10). The courts administration was established within the framework of the Department of Justice and it continued in that institutional structure for three quarters of a century until 1999.

The establishment of the current Courts Service followed upon the publication of a series of Reports (1996) of a Working Group on a Courts Commission (Courts Service 2000). This was the first major review of the management of the courts administration since the foundation of the State (Courts Commission 1996). The Working Group had identified a number of shortcomings in the institutional framework of the older courts administration system. Some of these shortcomings were (Courts Service 2000);

- The Courts system was largely unchanged since 1924;
- There was a lack of support services to Judges, and
- Absence of adequate systems for communicating information and modern computer and IS to support the growing workload;
- Lack of clear management structures with accountability and responsibility;
- Lack of clear reporting structures;
- Lack of adequate performance measurements;
- Absence of adequate planning, with emphasis on day to day planning and procedures;
- Lack of professional management support;
- Lack of adequate information to the public, and
- Limited statistical information in a meaningful format.

The new Courts Service was established with effect from 9th November 1999 and the management and administration of the law courts was transferred from the Department of Justice, Equality and Law Reform to the new Service on that date (Courts Service 2000a). The legal transfer of responsibilities took place on the basis of the Courts Service Act 1998 (Courts Service 2000:12). The Courts Service is now an independent statutory agency of the State with a Chief Executive Officer (Courts Service 2000). The Courts Service is now overseen by a Board, which is presided over by the Chief Justice or a judge of the Supreme Court nominated by the Chief Justice (Courts Service 2000). The functions of the Board are (Courts Service 2000);

- To consider and determine policy in relation to the Courts Service, and
- To oversee the implementation of that policy by the Chief Executive.

The members of the Board include the Chief Executive Officer, members of the judiciary; representatives of the legal profession, Ministerial nominees, a trade union nominee, and a member elected by the staff of the Courts Service (Courts Service 2000). The Board has established a number of sub-committees to deal with finance, judicial support, building, audit and court matters (Courts Service 2000). The Service has a network of more than 60 operational offices throughout the country with over 1,050 employees (Courts Service 2005). The senior management team of the Service is made up of the Chief Executive Officer and eight Directors (Figure 6.1).

Figure 6.1 – Courts Service Senior Management Team

6.3.4 *The IS Strategy Environment*

The story of IS in the Courts Service can be divided into three time periods which can be differentiated insofar as the involvement of external management consultants in IS strategy is concerned. These periods are;

Phase 1 – 1977 to 1997 the PROMIS[28] era;
Phase 2 – 1997 to 1999 the modernisation era; and
Phase 3 – 2000 onward the e-Courts era.

6.3.4.1 The PROMIS system era – (1977 to 1997)

The processes and procedures in the courts prior to 1982 were largely unchanged since the formation of the new State in 1922. Records were created manually by teams of junior civil servants and replication of data in multiple ledgers and minute books was widespread with the same set of data held in different offices for different purposes. Inefficiencies also existed elsewhere in 'downstream' courts processes. For example, convicted persons seeking to pay fines in the Fines Office encountered delays while officials attempted to reconcile fine payments with the initial summons record which was held elsewhere under a Garda reference number.

Throughout the period from 1977, when computerisation was first mooted, to 1980 when contracts were signed for the new PROMIS IS, the environment in the Dublin District Courts was inimical to IS. The closed system of promotion within the courts system, where seniority was the major criterion for selection, meant that individual initiatives such as the computerisation proposal were perceived as self-serving actions, geared towards promotion, and they caused resentment within the local organisation. Senior management in the Department of Justice was supportive of the PROMIS initiative but local management in the courts was not co-operative (Clince, Blennerhassett et al. 1992). Training of courts personnel was 'problematic' because of resistance from local management (Clince, Blennerhassett et al. 1992).

In 1990, ten years after the PROMIS contract was signed and the system had been in operation for a number of years, the state of IS in the Courts Service was described as "in the dark ages" compared to other parts of the public service. Progress in IS in the Department of Social Welfare in the last five years of the 1980's had been quite speedy by comparison and staff there were highly supportive of IS

[28] PROMIS is an acronym for PROsecutors Management Information System. This is a commercial software package developed by INSLAW in the USA for prosecution management in the courts.

because it removed the drudgery from their work. The contrasting levels of IS sophistication between Courts and the Department of Social Welfare in the 1980's suggests that the difficult public sector economic climate of the period was not the sole cause of the hiatus in the Courts. No further IS implementation took place in the Courts in the ten years following PROMIS because of local resistance to IS (Clince, Blennerhassett et al. 1992).

During the PROMIS era, the Courts Service lagged behind many other parts of the Irish public service in its use of IS. The Courts Service was an integral part of the Department of Justice at the time and progress in advancing IS was slow in the Service. Middle managers within the Courts Service attributed the lack of progress in IS to the relatively small size of the courts within the wider criminal justice system. Courts tended to rank low in the Department of Justice priorities compared to 'larger fish' such as the Garda. This situation changed when the Courts Service was established. Apart from the structural issues, there was a perceived reluctance to use IS in the courts.

6.3.4.2 The modernisation era (1997 – 1999)

In the period from 1997 to 1999, developments in IS strategy in the Courts Service came about in response to bottom-up pressures from within the criminal justice system. The low level of importance accorded IS in the Service, up to that time, was illustrated in a statement by the Chairman of the Court Service Board in 2000 that "*IT had never been an important feature of the courts*" (Business 2000 2005:4). The Courts environment prior to 1999 has since been characterised by the CEO of the Courts Service as lacking clear management structures, clear reporting structures, an absence of strategic planning and revolving around a large number of court offices operating as separate entities with little responsibility or accountability (Courts Service 2005a). The Chair of the new Courts Service Board, in a reference to IS, commented that "*because IT had never been an important feature of the courts, the Courts Service has had to start from a very low base*" (Courts Service 2005a:4).

At the time that the first CEO was appointed to the newly established Courts Service there was no e-mail or no personal computers in courtrooms. Some €880 million in funds administered on behalf of minors was managed through local accounting systems based on manual ledgers. The funds themselves were held locally throughout the country where opportunities for maximising the overall fund were not availed of although there was no legal impediment to better management of the funds. The modernisation era was marked by legislative and administrative change during the transition to the new governance arrangements for the Courts Service which were formally adopted through legislation in 1998 (Courts Service 2000:14).

6.3.4.3 The e-Courts era – (2000 onwards)

The Courts Service issued an invitation to tender (ITT) for the development of a five year high level strategic plan for IS in mid 2000 (Courts Service 2000a). The Invitation to Tender stated that "*many court operations and procedures are performed using manual systems that have remained unchanged for many years*" (Courts Service 2000a:4). The ITT also stated that "*initial examination and reviews have indicated significant scope for improved efficiency and productivity through the use of information technology*" (Courts Service 2000a:4).

In his introduction to the first five year IS Strategic Plan for the Courts Service (2001), the Chief Executive of the Service explicitly referred to the alignment between the IS Plan and the Business Plan which had already been developed for the period 2000 to 2003 (Courts Service 2001a). The CEO also acknowledged the contributions and participation of the Judges and staff of the Service, the management consultants KAPPA[29], and others. He further acknowledged that the Plan presented "*many challenges for the Courts Service*" (Courts Service 2001a:3). He referred to the IS strategy "*as part of our overall programme to provide a world class Courts Service*" (Courts Service 2001a:3).

The IS Strategy environment in 2001 was described in the e-Courts IS strategy as follows (Courts Service 2001a:11):

- The Courts Service is a new agency, just over one year in existence;
- IS investment in the Courts Service up to 2 years previously was confined to maintenance of older systems;
- Much of the work in the preceding 2 years had been aimed at Year 2000 compliance under accelerated timescales; and
- A wish to perform significant business process innovation in the near future is evident within the Board and management of the Courts Service, as well as within the Judiciary and users.

User management in the Courts Service point to the establishment of the new Courts Service governance and management structures as seminal in advancing the modernisation and improvements in the Service in recent years. The new emphasis on planning and autonomy in funding is perceived as

[29] KAPPA is one of the 'Big 5' global management consultancy practices. The identity of the organisation has been anonymised in accordance with the undertakings given to participants at the commencement of the research.

enabling Courts personnel to have more influence and involvement in decision making as well as providing greater openness and accountability. Consultants can now be engaged when necessary and more staff have 'come on board' in IS matters. Local managers would like to see CCTS extended to all aspects of the case workflow and greater integration of processes and data to eliminate some remaining workarounds.

6.3.5 IS Strategy Formation

The case for IS in the courts began in 1977 when IS was 'strongly advocated' by one middle manager in the Dublin Metropolitan Courts despite opposition from local management (Clince, Blennerhassett et al. 1992). The official, who was a newly-promoted Higher Executive Officer (HEO) in the Summons Office in the Dublin courts, was seeking a means to improve the efficiency of the office and eliminate the tedious transcription of summons records and multiple entry of the same set of data in different ledgers and offices. Although lacking support and encountering opposition in internal courts management, the HEO enlisted support elsewhere at middle management level in the Department of Justice, the Land Registry and An Garda Siochana which enabled him to surmount the obstacles and have proposals for computerisation tabled in the Department of Justice. Following a feasibility study by CDPS officials in 1979, a procurement process was undertaken which led to the signing of a contract in 1980 and implementation of the first phase of the PROMIS system in 1982 (Clince, Blennerhassett et al. 1992). The PROMIS initiative had been pushed by 'local enthusiasts' in the face of internal resistance (Clince, Blennerhassett et al. 1992). Figure 6.2 sets out a consolidated chronology of IS evolution in the Courts Service over the years.

Figure 6.2 – Evolution of IS in the Courts Service

Year	Evolution of IS
1977	An official in the Courts Summons Office in Dublin proposes an IS system
1979	An IS Feasibility Study for Courts is carried out by CDPS (Finance) officials
1979	Department of Justice establishes a committee to identify IS opportunities
1982	The first phase of the PROMIS system is implemented in Dublin courts
1987	PROMIS is implemented in Limerick following a local initiative
1992	PROMIS functionality is extended to processing charge sheets
1996	Courts Commission Working Group points to lack of innovation in IS
1997	OMICRON[30] conduct an IS strategy/scoping study in Courts at the behest of Justice
1999	KAPPA implement CCTS case tracking system to replace PROMIS
2001	KAPPA complete the e-Courts IS strategy for the period 2001 – 2005
2001	The ITT for Project Gateway is issued to finalise the IS network
2002	The ITT for a 3-tier service catalogue to deal with IS problem resolution issued

[30] OMICRON is one of the Big 5 global management consulting practices. The name of the organisation has been anonymised in accordance with the undertakings given to participants at the commencement of the research.

It would be incorrect to assume that opposition to IS was confined to key managers who were concerned at the potential disruption which could be caused by the imposition of a major change programme on an already over-stressed system. Internal opposition at ground level was also based in concerns by some officials that the closed, seniority-based system of promotions could be disrupted by individual initiatives, or 'solo-runs', such as the computerisation plan, by individual officers . The computerisation initiative in the courts eventually circumvented internal opposition through the efforts of a small, informal, middle manager alliance which favoured change and was drawn from different elements of the criminal justice system. The impetus for change in the courts was internal and no professional external advisers were involved.

The Organisation Division in the Department of Justice had established a Committee in 1979 to identify opportunities for computerisation across the criminal justice system. The Committee included representatives from CDPS, the Department, An Garda Siochana, the Land Registry and others. The Committee were especially anxious to identify IS projects in areas other than An Garda Siochana where a number of systems were already operational. The proposal for computerisation in the Dublin District Court was approved by the Committee who also sanctioned a visit to the United Kingdom (UK) by a small group to carry out some fact-finding within the courts system there. Two different IS systems had been identified in courts in the UK by the Dublin courts official. Officials from CDPS and the Department of Justice supported the Dublin Courts IS project which was brought through the procurement process to contract signing in 1980.

A development team drawn from CDPS, courts management, An Garda Siochana, and the suppliers INSLAW managed the development from 1981 until the initial implementation of the modified PROMIS system in late 1982 (Clince, Blennerhassett et al. 1992). Underestimation of the amount of modification required to the core PROMIS package for the Irish courts led to separate implementations of the pre-courts elements of the system in 1982 and the post-court elements in 1983 (Clince, Blennerhassett et al. 1992).

The Dublin Courts official who had initiated the PROMIS project in 1977 was assigned to IS duties when the PROMIS project was underway and new premises for the system and staff were provided in Bow Street in Dublin. He continued to head up a small IS Unit of seven persons until a newly-appointed Assistant Principal took charge of the Unit as part of a re-structuring of the Courts administration in 1984. The re-structuring had led to an increase from one to three in the number of

Assistant Principal positions in the Courts. The Dublin Courts official was promoted to an Assistant Principal position in the Department of Justice in 1985 following liberalisation of the 'closed' system of promotion in the Courts. He was assigned to the Courts Division in the Department of Justice where he had a role in facilitating a number of other IS initiatives in the Courts in the following years.

In 1995, prior to the modernisation era, two officials from the IS Unit in the Dublin Courts began working on a requirements specification for a new criminal case tracking system (CCTS). This work was undertaken on the initiative of the IS team because of the anticipated failure of the PROMIS system on the millennium. This would be the first major IS initiative, other than the PROMIS upgrades, which had taken place since 1979/1980.

Two years later, the internal initiative taken by the IS Unit was supplemented by the IS strategy/scoping study initiated by the Department of Justice. The external management consultants (OMICRON) who carried out the IS strategy/scoping study on behalf of the Department had no direct involvement with the IS Unit in the Courts Service during the work. Senior management in the Courts Service were involved in the IS strategy/scoping study and the various projects were agreed at that level. This was the first formal IS planning initiative targeting IS in the Service.

The Department of Justice, Equality & Law Reform commissioned the IS strategy/scoping study to identify a core set of operational support, accountability, management information and control systems for the Department itself and its new agencies, including the Courts Service (Courts Service 2000a). When the Study was completed in October 1997, the Department of Justice began a procurement to select a prime supplier to analyse, design, develop and implement a range of IS applications to support the management and administration of the new Service (Courts Service 2000a). Other initiatives also flowed from the work (Courts Service 2000a).

- External management consultants (OMICRON) were appointed to the Courts Service as advisers on IS;
- An invitation to tender for a criminal case tracking system (CCTS) was issued in 1998; and
- An IS cabling network infrastructure was begun by Courts IS Unit in Dublin and Cork in 1998.

The IS strategy/scoping study had yielded a list of seven IS applications – Appendix 6.5. The study did not specifically address implementation, resourcing, or issues of costs associated with the proposed programme of work.

KAPPA, which was part of the successful bid for CCTS, provided project management expertise to the Courts Service as part of the CCTS implementation. KAPPA personnel chaired meetings, drew up project reports and monitored the system delivery by the external suppliers. The KAPPA CCTS solution selected by the Courts Service was one which had already been implemented in the courts system in another courts jurisdiction. The new CCTS system was implemented jointly by KAPPA and two partner companies. The CCTS implementation in the Courts Service required a number of modifications to the 'base' CCTS system and the implementation was broken into three phases to meet pre-millennium targets. The management consultancy organisation (KAPPA) who were responsible for implementing the CCTS system were not the same management consultancy (OMICRON) as was appointed as advisers to the Courts Service following the modernisation programme.

The e-Courts IS strategy initiative in 2000 was the first major strategic initiative undertaken by the new Courts Service. The Invitation to Tender (ITT) for the IS strategy was issued in 2000 and the closing date for tenders was 1st September 2000 (Courts Service 2000a). The ITT was not published in the EU Journal because the anticipated cost for the work was below the threshold required for publication. The Specification of Requirements, which provides details of the work to be done by the successful supplier, is reproduced at Appendix 6.6 (Courts Service 2000a). The ITT also specified that OMICRON would act as external quality assurance advisers on behalf of the Courts Service for the duration of the work and would have membership of the Project Board for that purpose (Courts Service 2000a).

The ITT sought the development of an "*IT Strategic Plan and direction*" for the Courts Service for the period 2001 – 2005 inclusive (Courts Service 2000a). Coherent strategies were to be developed for (Courts Service 2000a):

- Information Strategy;
- Applications Strategy; and
- E-Services Strategy.

The ITT also sought reviews of (Courts Service 2000a);

- The appropriateness of the existing technical infrastructure/environment;
- The effectiveness of the existing office automation environment;

- The structure of the IT function; and
- The options for a Strategic Support Model.

The ITT sought a prioritised implementation plan as well as any additional 'downstream' projects to emerge during the work (Courts Service 2000a). No 'downstream' projects emerged during the e-Courts IS strategy project. The ITT did not ask respondents to produce any deliverables or recommendations related to the organisational or 'people' aspects of IS.

Following the ITT process, KAPPA management consultants were appointed to work with the Courts Service in 2000 on the formulation of a new IS strategy. KAPPA considered the ITT requirements as being typical of the public service where they tend to be very similar to one another. The successful bid from KAPPA for the IS strategy contract was based on the use of their own 'in-house' method. KAPPA found that the project was atypical insofar as much of the work on functional analysis had already been done by OMICRON in the earlier IS strategy work during the modernisation era. The project was also different to others insofar as there was significantly more interviewing and analysis than normal in KAPPA projects. At the time that KAPPA began work on the e-Courts IS strategy, the IS Unit in the Courts Service consisted of five persons. KAPPA began work in October 2000 and the e-Courts IS strategy was approved by the Board of the Service and published in February 2001 (Courts Service 2001a). The engagement lasted about three months overall.

The top management team filled the roles of steering committee as well as user group for the IS strategy project. Given that many of the top management team were new appointees, this may have been important in building an IS strategy which enjoyed a high degree of consensus at top management level as well as in providing an opportunity for team building. The top management team also spent more time than usual on the business strategy assessment phase of the work. This is understandable given the fact that new governance and institutional arrangements were being put in place for the first time. The top management team also participated in visioning workshops for the new IS systems and IS strategy.

KAPPA sought guidance from the CEO on how radical the IS strategy should be. The decision was made that the IS strategy should be one which would stretch the resources and capacity of the Service and should also be visionary rather than conservative. The exploration of a public private partnership (PPP) arrangement to fund the overall cost of the IS strategy proposals was cited as an innovative aspect of the IS strategy implementation. The PPP initiative was first mooted by the Department of

Finance (CMOD) and, despite general support for the idea it petered out after a number of avenues had been explored by IS management in the Service.

Twenty eight persons from inside and outside the Courts Service were interviewed by KAPPA in the course of the IS strategy project (Courts Service 2001a). These included representatives of the Department of Justice, An Garda Siochana, The Prison Service, the Law Officers and law societies, and the Insurance Federation (Courts Service 2001a). The other major strand of the work was based on four workshops with key business units. The workshops addressed (a) application and information needs (b) strategic options (c) strategic planning, and (d) future information architecture (Courts Service 2001a). The workshops were organised around specific functions or organisational units. There was a provincial courts workshop, a finance/HR workshop, a Dublin District workshop, and so on. It is notable that the all workshops dealt with aspects of systems and infrastructure rather than context. KAPPA also identified a set of critical success factors and recommended that these be agreed and addressed by the Court Service before undertaking the IS strategy implementation (Courts Service 2001a).

The CEO of the Courts Service was personally involved in the direction of the project and was clear that IS would be a critical business enabler in the new Courts environment. The CEO had come from a background in the health sector in Ireland where IS strategy formation has been identified as a key enabler of radical transformation of that service. The CEO considered that external consultants add value and provide a different perspective when they are involved in IS strategy formation. Members of the judiciary also participated in the IS strategy process. Senior management at CMOD were also more actively involved in the IS strategy project than usual.

The KAPPA assessment at the outset of the e-Courts IS strategy project was that there was a disjoint in the IS developments taking place in the Courts Service. Both KAPPA and top management in the Service had concluded that there was a poor fit between the IS strategy inherited from the earlier Department of Justice initiative and the IS strategy that the Courts Service considered appropriate.

Workshops were facilitated by the partner who managed the IS strategy assignment on behalf of KAPPA. The KAPPA partner used the initial workshops to generate ideas which were passed to other breakout groups which brainstormed the emerging ideas. The partner teased out the positive and negative aspects of each idea and offered an opinion. The workshops worked from PowerPoint slides rather than detailed reports. Workshop outputs were developed into reports after the workshops. The subjects discussed included business and IS options as well as infrastructure and applications. The

decisions on the various options were made ultimately by the Project Board which comprised sixteen people. The Project Board would also tease out the options and the workshop sessions were also seen as an important part of generating 'buy-in' and consensus around the conclusions reached.

User management says that they were widely involved in the IS strategy development process. Both KAPPA and OMICRON set up offices amongst the user community and personnel from all levels of the organisation were consulted. There were many meetings with user managers dealing with functional specification, process mapping and court practice and procedures. The user management perception is that no systems areas were identified which the Service could not have identified for themselves.

The business and user constituencies found the e-Courts IS strategy project a learning experience. Their inexperience of IS at the time of the e-Courts project meant that they were more accepting and less questioning than they would be in a similar situation in the future. They thought that the management consultancy methodology inhibited creativity because of the focus on the method. They also thought that the e-enabled vision of the Courts Service business strategy was not fully realised through the e-Courts IS strategy. The business constituency found that the management consultants added value during the IS strategy process through their endorsement of business change which had been resisted previously at local level. The e-Courts IS strategy provided endorsement for a number of strategic initiatives and provided a roadmap for future strategy in some aspects of the Courts Service business. Some business and user constituencies in the Courts Service engaged more actively than others in the IS strategy process and this is also reflected in the extent to which those involved believe that their expectations have been met. The Courts Service personnel had a high dependence on CMOD during the e-Courts work and CMOD were influential in the early stages. The level of reliance on CMOD expertise has completely diminished in the intervening period. The IS strategy environment and its technical language was challenging for some users.

The working sessions required participants to reach compromises and the KAPPA facilitator was perceived within the Service as achieving a good balance and a co-ordinated approach to this aspect of the work. Courts Service management acknowledge that, like all organisations, there are tensions to be managed in workshops of this kind but that KAPPA brought important facilitation skills and independence to what could otherwise be a contentious task. Consensus building and solution brokering by KAPPA included the crafting of reports in a way which accommodated the different views expressed without diminishing the viability of the overall IS strategy. Top management were positive on the benefits of management consultants in IS strategy. The top management view is that

management consultants bring a different perspective to bear and add value to organisational capability. Consultants provide a greater awareness of IS potential as well as providing a stimulus to workshops.

There were four management consultants from KAPPA involved in the assignment. There were no issues with users and people at all levels were consulted. The perception internally is that users were receptive to the IS strategy, not least because of the shortfall in IS systems in the Service at the time the strategy was undertaken.

KAPPA prepared a set of options/recommendations for the Courts Service arising from the interviews, workshops, and other data collection and analysis sessions. The consultants organised 'breakout' sessions to brainstorm ideas. A SWOT analysis was also done for each of the options. The Courts Service accepted about two thirds of the recommendations and demurred on about one third. KAPPA recommended a single contract for procurement and operation of new systems but this was rejected by CMOD because of potential issues with procurement guidelines. Another proposed software solution was rejected because the technology was incompatible with the overall technology directions envisaged by CMOD.

6.3.6 IS Strategy Content

The IS strategy/scoping study, which had been carried out in 1997 as part of the modernisation programme, identified seven application development projects. The seven projects are shown at Appendix 6.5 (Courts Service 2000a). The study also led to the appointment of management consultants as advisers to the Service and to the issue of an ITT for a Criminal Case Tracking System (CCTS) and network infrastructure (Courts Service 2000a). The strategy content was much narrower than the subsequent eCourts IS strategy content.

The e-Courts IS Strategy identified four sets of outputs consisting of applications, data stores, technology infrastructure, and an IS organisation of 29 full time staff (Courts Service 2001a). The 'applications' consisted of 19 identified projects which are reproduced in Appendix 6.7 (Courts Service 2001a). The implementation plan envisaged that these projects would be completed over a five year time frame costing €68 million in capital and revenue costs. The IS strategy recommended a full-time complement of 29 personnel in the Courts Service IS Unit (Courts Service 2001a). This was a very significant increase on the number of IS personnel then in place. Recommendations were also

included to address risk analysis, risk management, disaster contingency planning, and development of security standards for the Service (Courts Service 2001a).

The e-Courts IS Strategy (2001) identified a number of critical success factors for the success of the strategy. The challenge of achieving the IS objectives during a time of major organisational change for the Service was identified as well as the need for the IS strategy to be "*driven by a dedicated unit*" (Courts Service 2001a:13). The critical success factors are enumerated below.

1. In organisational terms, staffing levels and skills capabilities were identified as critical as well as the need for a dedicated programme manager for the strategy implementation. The involvement of key personnel from business units as well as an enhanced IS organisation was also highlighted. A staffing complement of 29 full time equivalents for the IS unit was identified as necessary (Courts Service 2001a).

2. A budget of €70 million over a five year period was set for the programme of work. This was broken down into capital and revenue costs (Courts Service 2001a).

3. Provision of an e-Services component in each project was recommended because of the workflow requirements of others involved in the criminal justice system such as barristers, solicitors, Gardai etc. (Courts Service 2001a).

4. Development of quality management across the IS function in the Service was also recommended. The report was specific in saying that the inclusion of quality assurance would increase costs but should be provided for (Courts Service 2001a).

5. The need for dynamic strategic alignment between the IS strategy and the business strategy of the Service was also identified as a critical success factor (Courts Service 2001a).

6. A common desktop standard for the Courts Service was identified as critical (Courts Service 2001a).

7. Business process improvement was targeted as an objective of the new systems and as a way of obtaining value from the proposed IS investment (Courts Service 2001a).

The e-Courts IS strategy also set out a proposed Information Architecture, an Applications Architecture, and a Technology Architecture (Courts Service 2001a). A Benefits Study provided an outline of the different business benefits which were expected. A series of e-Services were identified which would provide electronic channels for the public and other agencies with which the Courts Service interacts. A series of project charters described the projects which were required to implement the e-Courts IS strategy over the period (Courts Service 2001a).

The e-Courts IS strategy differs from the 1997 IS strategy/scoping study insofar as the e-Courts IS strategy included a set of enabling projects through which implementation would take place. Technologies, benefits and costs were identified which would make it easier for decision makers and executives to understand what would be required to deliver the change from a systems and infrastructure perspective.

6.3.7 IS Strategy Outcomes

The PROMIS initiative in the early 1980's led to a reduction in overtime expenditure within the criminal justice system (Clince, Blennerhassett et al. 1992). The system also led to increased transaction processing capability and a reduction in the numbers of manual interventions in the overall business processes surrounding summons and fines processing in the Courts. A study commissioned by the Department of Finance found that the PROMIS system had enabled the Courts Service to cope with a 100% increase in transactions with no increase in personnel allied with a reduction in overtime payments for the Department by €770,000 per annum (Clince, Blennerhassett et al. 1992).

When the e-Courts IS strategy was published in 2001 it was envisaged that the implementation would be completed in five years, or in 2006 (Courts Service 2001a). By the end of 2005, every Courts Service employee had access to a networked personal computer with internal and external e-mail, word processing capability and spreadsheet functionality. A fully integrated network infrastructure is in place to support the various systems. The CCTS project has also been extended nationwide to all users. Of the nineteen projects recommended in the e-Courts IS strategy (Appendix 6.7), all but eight are underway or delivered. The most significant projects remaining to be done are the Civil Case Tracking System (CvCTS) and the second and third phases of CCTS. The financial systems envisaged in the e-Courts IS strategy are all completed or well advanced.

One of the more easily quantified outcomes of the e-Courts IS strategy was the improvement brought about in the management of funds invested on behalf of litigants. Management of these funds had

been controlled locally which had drawn criticism from the Legislature. Successful consensus-building in the e-Courts IS strategy led to the introduction of IS-enabled central management of the funds with positive financial gain to beneficiaries. The judiciary have also pointed to the improved statistical information which has become available to academics, the media, the law agencies and the general public (Courts Service 2002).

Top management believe that personnel in the Courts Service are now more literate and familiar with IS and what can be achieved. The improved IS literacy is fuelling demand for more IS facilities and there is a challenge for management in bringing everybody to the same level of IS literacy irrespective of age or background. The ITT for the e-Courts IS strategy did not include any deliverable related to the organisational aspects of IS. The CMOD guidelines do not suggest any organisational deliverables either. The CCTS project involved a major learning curve for the Courts Service and the first few months were difficult for users and management. The introduction of e-mail was a turning point insofar as this was a visible manifestation of the modern era and users would be embarrassed if they could not use what some would regard as a mainstream IS feature.

Although great progress has been made in recent years in the exploitation of IS there are still a small number of users who avoid the use of IS or e-mail where possible. The numbers who do not use IS are a small minority and resistance is more likely to stem from apathy rather than age. There is a tendency amongst these users to blame technology for human errors in data. This points to a need to focus on the organisational aspects of IS in addition to the technology issues. User training has also been problematic because of the geographic distribution of personnel and the impact of training absences on offices with small numbers of officials.

The recommendation in the e-Courts IS strategy that the strength of the IS Unit be increased to twenty-nine (29) full-time equivalents was not implemented in that form. Personnel numbers in the IS Unit were increased to fourteen (14) fulltime equivalents following the IS strategy rather than the twenty nine (29) recommended. The increased numbers in the IS Unit were achieved by transferring some personnel from the IS Unit in the Department of Justice and through the increased numbers of personnel which were assigned following establishment of the new Service. A managed service arrangement was considered essential by top management because of the lack of people with IS expertise, and the difficulties in recruiting and retaining specialist IS personnel in the prevailing buoyant economic environment.

Column 3 of Appendix 6.7 provides a status on each of the projects which formed part of the e-Courts IS strategy, as of March 2005. Significant progress has been made in the e-Courts IS strategy implementation plan since the formal IS strategy was approved in 2001. The underlying technology infrastructure is fully in place. Most of the planned financial systems are completed. The core HRM system is also in place. The civil case tracking system (CvCTS) has not been addressed, as yet, although it was first identified in the modernisation programme in 1997. Nevertheless, it is apparent that, since the e-Courts IS strategy was approved, progress has been made towards the vision of a world class courts service. Fully electronic courts are operational on a pilot basis in Dublin and Cork and top management envisages far wider use of electronic courts as funding permits. The Small Claims Online project includes an online payment module and the Court Accounting System II (CAS2) will also support e-payments. The e-Courts IS strategy has also provided a more strategic focus on the delivery of the vision which was set out at the time the new Courts Service was established.

The other major initiative which had not been flagged in the e-Courts IS strategy was the decision made in 2002 to outsource the monitoring, detecting and resolving of support for desktop operating systems, network management, and application support (Courts Service 2002a). The managed service arrangement was initiated by senior IS management as a strategy to maximise available resources and it has been successful.

The evolving strategic importance attached to IS in the Courts Service was further underlined at the end of 2004 when a new Chief Information Officer (CIO) position was created at Board level in the Courts Service. The CIO post was created through the abolition of another post at Director level. The creation of the new post was decided at Board level and had not formed part of the e-Courts IS strategy.

The Courts Service issued an invitation to tender for a review of the IS Strategy in the Courts Service in 2005 (Courts Service 2005). The 2005 IS Strategy will "*undertake a review of progress to date since the publication of the existing strategic plan in February 2001*" (Courts Service 2005:20). Alignment is specified as a strong requirement in the review of the e-Courts IS strategy (Courts Service 2005). The other key requirement in the ITT is that "*the selected tenderer will be expected, in consultation with the Courts Service to develop a future strategy for the delivery of electronic services based on the provision of incremental efficiencies and business benefit*" (Courts Service 2005:23). The ITT also specifies that the implementation plan must be realistic and take account of resource availability within the Service (Courts Service 2005).

The case data shows that the focus of IS in the Service in the coming period will be on electronic business channels, outsourcing, and more streamlined technology in courtrooms. The case data also shows that the review of the e-Courts IS strategy will lead to a less visionary and more pragmatic IS strategy going forward. The more pragmatic approach is called for because of the experience gained during the e-Courts implementation when external organisations failed to deliver on key external dependencies for the Courts Service. The Courts Service will adopt a more self-reliant planning approach and will carry out bi-partite discussions as a basis for developing electronic channels with external organisations. The more pragmatic approach being adopted by the Courts Service in the next phase of development is a reflection of the organisational learning which has taken place in the previous period. The new approach represents a setback for the widely-held belief by policy-makers and users that greater integration is essential.

Discussions with top level officials in the Courts Service disclose a general consensus that greater levels of integration across the criminal justice system are essential in the interest of efficiency and cost effectiveness. There is also a belief that IS will play a key role in the future in enabling the Service to provide a cost effective and efficient service within the levels of resources available.

The key targets for IS which had been published in the first Business Plan of the Courts Service in 2000 (Business 2000 2005) continue to be a major focus. These were;

- Users will conduct their business with the Courts Service electronically;
- Fines and fees would be paid electronically; and
- Data would be exchanged electronically with other state agencies such as police and prisons.

The case data shows that progress is continuing on each of these targets although they have not been fully achieved. The more pragmatic position being adopted for the coming period recognised the external dependencies and organisational challenges which are now being addressed.

6.3.8 Insights on IS strategy formation

External management consultants did not become involved in IS strategy formation in the Courts Service until the late 1990's, when an IS strategy/scoping study was initiated by the Department of Justice at the time of the establishment of the new Service. The first significant engagement of Courts Service personnel with management consultants in IS strategy formation took place at the time of the

eCourts IS strategy in 2000. The case study narrative shows that, in the course of the IS strategy initiative, management consultants contributed by endorsing change which had been resisted in the past, by facilitating compromise and consensus, by managing tensions, and by facilitating workshops. Some managers in the Courts Service also thought that the IS applications which emerged from the IS strategy initiative could have been identified by the Service itself. There was a perception also that the consultancy method inhibited creativity.

Despite the negative comments, the perception of the management consultants' contribution was almost universally positive and there was a broad sense that good progress had been made although the IS strategy implementation had stretched the capabilities and resources of the Court Services to a greater degree than had been expected. The IS strategy formation experience was also seen by the Courts Service managers as a learning experience. The challenging targets, which the Service set for itself at the outset of the eCourts IS strategy had been replaced by a less ambitious approach by the time that the case study fieldwork was done. Management had also come to the view that the former reliance on CMOD had evaporated since the IS strategy project had begun. By the time the case study was conducted, a settled view had formed that integration with other parts of the criminal justice system would proceed on the basis of bi-lateral agreements when there was certainty that commitments could be met by the partnering organisations.

The new governance arrangements and the leadership of the new CEO were also important factors in changing the environment for IS in the Courts Service. The CEO brought a positive perception of the potential of IS from his former employment and he was personally involved in the direction of the eCourts IS strategy. His response to the management consultants was that the IS strategy should be one which would stretch the resources and capacity of the Service and it should be visionary rather than conservative. The coalition of the new chief executive and the external management consultants provided an impetus behind IS which had been lacking in previous IS strategy.

6.4 THE PROPERTY REGISTRATION AUTHORITY

"Technology is both a driver and an enabler in the implementation of change. It gives rise to increased customer expectations and demands, and while it offers opportunities for innovation and improved productivity, it poses increased challenges for management and staff in a constantly evolving working environment"

Source - Catherine Treacy, CEO, Property Registration Authority – February 2002
(Land Registry & Registry of Deeds - Statement of Strategy and Business Plan 2002-2005).

6.4.1 Introduction

The IS strategy formation experience of the Property Registration Authority (PRA) over a period of more than twenty-five years is recounted in the following case study narrative. The field work on which the case study is based was carried out between December 2006 and the end of May 2007. Interviews were conducted with eight managers who were drawn from the top management, business management, IS management, and management consulting constituencies. A number of documentary sources used are referenced in the bibliography.

6.4.2 Mission and Business Strategy

The role of the Property Registration Authority (PRA) is expressed succinctly in its mission statement as "*safeguarding the legal, social and economic fabric of property ownership*" (Land Registry and Registry of Deeds 2002a:5). The role of the PRA is expressed more comprehensively in the establishing legislation (Department of Justice 2006) which enacts that:

"(1) *the functions of the Authority are –*

(a) *to manage and control the Registry of Deeds and the Land Registry,*

(b) *to promote and extend the registration of land,*

(c) *to deal with applications under Part III of the Landlord and Tenant (Ground Rents) (N.2) Act 1978,*

(d) *to undertake or commission, to collaborate or assist in, research projects and activities relating to the ownership of land, including the compilation of statistical data needed for the proper planning, development and provision of services related to such registration,*

(e) *to perform any additional functions conferred on it under subsection (4), and*

(f) To keep the Minister informed of progress in relation to the registration of ownership of land and to assist him or her in the development of policy in relation to such registration".

The twenty-first century legislation setting up the Authority could lead to the inference that the role of the Authority is of recent origin. This is far from the case. The Registry of Deeds, which is referred to in Section (1)(a) above was established in 1707 under an Act of the Irish Parliament (Murphy 1992). The role of the Registry was to keep records of "*registered interests in the order of their registration*" (Murphy 1992:2). The establishment of the Registry of Deeds in Ireland in 1707 provided a system of registering transactions such as mortgages on property (Murphy 1992). The preamble to the 1707 Act stated its purpose to be "*for securing purchasers, preventing forgeries and fraudulent gifts and conveyances of land*" (Land Registry and Registry of Deeds 1996:9). The system did not register ownership or title to land or property and the existence of multiple deeds referring to the same property meant that searches or other transactions conducted via the Registry of Deeds could be very expensive and time consuming (Murphy 1992).

Almost two centuries elapsed before the Local Registration of Title (Ireland) Act was enacted in 1892 to provide a system for recording title to land rather than transactions concerning the land (Murphy 1992). The Land Purchase Acts of the nineteenth century had provided a stimulus for "*a comprehensive and secure system of title registration for agricultural tenants wishing to purchase their holdings*" (Land Registry and Registry of Deeds 1996:7). Newspaper comment in the mid nineteenth century had also drawn attention to the corrosive effect of the earlier labyrinthine process of establishing the status of title to property on matters such as conveyancing, banking, commerce, manufacturing and investment (Murphy 1992). A new Land Registry was brought into being under the legislation which was in addition to the Registry of Deeds.

The Registries provide a range of services (Land Registry and Registry of Deeds 1996):

- Registration of title and related transactions in accordance with legislation;
- Maintenance of accurate registers, records and related maps in respect of registered title which are authoritative, up to date, open and accessible by the general public;
- Certification and enquiry service;
- Facilitation of amendments in cases of boundary disputes;
- Registration of Deeds;
- Searching facilities for law searching firms;
- Copy facilities;

- Negative searches/Common searches by Registry of Deeds staff, and
- Genealogical Services.

The clients of the Registries include the following (Land Registry and Registry of Deeds 1996);

- General public;
- Legal profession;
- Professional law searching firms;
- Government departments;
- Local authorities;
- Public utilities;
- Professional bodies, and
- Financial institutions.

By the time that the new Authority was established in 2006, 85% of titles to property were registered by the Authority representing 90% of the land mass of the country (Property Registration Authority 2006).

The Chief Executive of the Registries published the first formal Statement of Strategy in 1996 (Land Registry and Registry of Deeds 1996). The Strategy acknowledged the strategic management process which had been signalled by the Delivering Better Government document while also acknowledging that the Strategy was an organisationally agreed one (Land Registry and Registry of Deeds 1996). The 1996 Statement of Strategy set out the mission statement of the Registries as (Land Registry and Registry of Deeds 1996:1);

"To maintain, develop and extend a secure, reliable system for authenticating and recording property transactions which is efficient, cost effective and self financing"

Five objectives were set out in the strategy statement as follows (Land Registry and Registry of Deeds 1996);

- The reconstitution of the organisation as a viable commercial State-sponsored body;
- The successful decentralisation of part of the Land Registry operation to Waterford City;
- To achieve continuously improving levels of service delivery to customers;

- To foster improved communications within the Registries, and
- The implementation of a continuously improving and evolving programme of Training and Development.

The Statement of Strategy & Business Plan for the period 2002 to 2005 was published in February 2002 and contained some new elements (Land Registry and Registry of Deeds 2002a). The new business strategy was underpinned by an environmental analysis which had been informed by a customer requirements survey undertaken by the Registries (Land Registry and Registry of Deeds 2002a). A SWOT[31] analysis was also conducted as part of the business strategy to enable stakeholders assess critical success factors and actions required (Land Registry and Registry of Deeds 2002a).

Ten objectives were set out in the strategy statement as follows (Land Registry and Registry of Deeds 2002a);

- Provide all services within defined response times;
- Anticipate and meet market demands and customer expectations;
- Create a flexible and responsive organisation;
- Maintain a working environment which supports the welfare, health and safety of staff;
- Acquire a new building adjacent to the Four Courts;
- Develop and maintain strategy/business continuity plans to preserve the value of the Registries major assets;
- Ensure that the Registries continue to operate on a self financing basis and put procedures in place for delivery of Government investment funding (as committed in the memorandum for Government confirming the objective to reconstitute the registry to semi- State status);
- Progress the enactment of up-dated, consolidated legislation which matches the business needs of the Registries and achieve a smooth transition to a properly funded and commercially viable semi-State body;
- Identify and contribute to the resolution of cross-departmental issues affecting the Registries, and
- Secure an improvement in the standard of applications submitted for Registration.

[31] A SWOT analysis identifies strengths, weaknesses, opportunities, and threats in the organisational context

6.4.3 PRA - Structure and Governance

The legislation establishing the Land Registry in 1892, placed it within the ambit of the Judiciary rather than the Executive structure (Hayden 1992). Fifty years later, the Registration of Title Act, 1942, provided for the transfer of the Land Registry from the oversight of the Land Judge to that of the Minister for Justice (Hayden 1992). In 1990, almost fifty years later, the then Minister for Justice announced the Government's intention to change the status of both Registries to that of semi-State bodies. An interim board structure was put in place in 1992 to advise government on the transition to semi-State status and to manage the affairs of the Registries. This did not lead to semi-State status for the organisation but it did lead to the creation of a new Authority. The Authority, which came into being in 2006, enabled the existing staff in the Registries continue as members of the Civil Service.

Prior to the establishment of the new Authority under the 2006 legislation, the Land Registry and Registry of Deeds operated under the aegis of the Department of Justice as provided by the Registration of Title Act, 1964. By this time, the function of the Registry of Deeds was to provide a system for recording the existence of deeds and conveyances affecting unregistered land (and property) whose title was not recorded in the Land Registry (Land Registry and Registry of Deeds 1996). The new Property Registration Authority took over responsibility for the functions of both the Land Registry and the Registry of Deeds which had evolved as separate organisations within the Department of Justice, Equality & Law Reform family of organisations (Department of Justice 2006).

Figure 6.3 – PRA Senior Management Team

The Authority was established by the Registration of Deeds and Title Act, 2006 which became law on 4th. November 2006. The Minister for Justice appoints the eleven members of the Authority, one of whom must be a practising barrister, one a practising solicitor, one an officer of the Minister, and one a staff representative (Department of Justice 2006). The PRA is headed by a Chief Executive Officer who is also Accounting Officer under the terms of the enabling legislation (Department of Justice 2006). The Chief Executive is supported by an eight member senior management team as shown in Figure 6.3 (Land Registry and Registry of Deeds 2002a).

Almost 700 full-time legal, technical, and administrative personnel conduct the business of the Authority (Land Registry and Registry of Deeds 2002a). The Authority may also appoint advisory committees, advisors and consultants subject to the approval of the Minister for Justice (Department of Justice 2006). Fees and expenses payable to external advisors and consultants must be sanctioned in advance by the Minister for Finance (Department of Justice 2006). The Authority is organised on a geographic basis for administrative purposes with four offices in Dublin, one in Waterford, and twenty four local offices in each Circuit Courthouse except Dublin and Waterford (Land Registry and Registry of Deeds 2002).

6.4.4. The IS Strategy Environment

Despite their early provenance, the Registries were not untouched by the political upheaval which marked the birth of the modern Irish State in the early twentieth century (Deeney 1992). In April 1922, the then Registrar of the Land Registry reported to the Treasury in Dublin Castle that business would be temporarily relocated to the Registry of Deeds because the Registry offices in the Four Courts had been occupied by military elements opposed to the newly founded State. Happily, the Registries resumed normal business some four months later.

The political rationale for the legislation establishing the new Authority was to simplify procedures, eliminate delays, reduce costs, and "*enhance national competitiveness by making the country a more attractive investment location within the international community*" (Dail Debates 2005:1857). The establishment of the Authority was seen as an important step in providing a modern property registration system to facilitate and underpin a vibrant and expanding international market economy.

The Land Registry moved some of its operations from Chancery Street to the Setanta Centre in the late 1970's. This move exacerbated an existing problem with the management of manual records in

the Registry. These manual records were central to the case processing operations of the Registry and when folios were removed from their filing place for consultation, this created a lot of difficulty when the same volumes were required by other staff or external searchers.

The PROMIS IS, which was implemented in 1982, was the first IS solution in the Registries. The PROMIS implementation coincided with a period of retrenchment and staff embargos in the Irish public service when it was very difficult to secure resources. Four personnel were assigned to IS duties in the Registry and there were never enough resources to keep data capture current or to expand the system. The PROMIS implementation was the first of a number of IS developments in the following years.

The Minister for Justice attended the launch of the RAMIS[32] IS system in the Registry of Deeds in 1990. RAMIS was the first IS to be implemented in the Registry of Deeds. The Minister used the occasion to announce the Government's intention to legislate for the transfer of the two Registries to Semi-State status. Momentum for a change in the status of the Registries had existed for a number of years. The role of the Registry did not fit especially well with the wider mandate of the Department of Justice. The Law Society had also been seeking change because of the backlogs and delays in the Registries and the impact of these on the legal profession and their client base. There was a sense that the Registries needed to be freed from the Civil Service structure because of the potential impact of poor performance in the Registries on the economy. The policy statement of 1990 did not translate into legislation until 2006.

The decision to proceed with the IS strategy project in 1990 coincided with the appointment of a new Registrar/CEO in the Registries. The post had been vacant for a period and the new Registrar was appointed by the Top Level Appointments Commission (TLAC) following a competitive process. The new Registrar was adjudged a strategic CEO by personnel in the Registries and she was also regarded as a driver of change. The new Registrar/CEO had completed the M.Sc. programme at Trinity College and she brought a new impetus to bear. The arrival of the new Registrar/CEO was also supplemented by a new impetus for modernisation and change which was typified by the Delivering Better Government (DBG) programme. There was some cynicism about modernisation in some quarters but the Registries management team was always positive and committed to modernisation. The government modernisation programme provided a convenient hook for change and technology in the Registries but the government programme was not the driver of change. The impetus for change and

[32] RAMIS is an acronym for Registry of Deeds Abstract Management Information System.

modernisation came from within the Registries. The change in the structure of the Registries did not provide the level of autonomy necessary to enable the Registries reach their potential. The corresponding land registration authorities in the UK and elsewhere have a great deal more autonomy to do things such as re-investing their surplus income. The Department of Justice was not seen as a factor in driving modernisation in the Registries. The Department of Justice was focused on law and order. The Department tended to be reactive and respond to crises rather than economic issues. Whereas the Department of Justice tended to be reactive, CMOD was more supportive.

The emergence of low-cost electronic access channels via the Internet is regarded as a significant external development in IS terms by management at the Registries. The Registries had been investigating the viability of providing external IS access via X400 connections prior to the emergence of the less expensive Internet option. Both broadband and the Internet have been important facilitators of modernisation in the Registries. The fact that large numbers of new lawyers with IS skills are qualifying in recent years has facilitated the modernisation programme. The Registries have been marketing their services since 1999 when the Internet was a concept rather than a reality in Ireland.

The economic surge in recent years has been accompanied by corresponding growth in construction and property transactions (Land Registry and Registry of Deeds 2005). These in turn have led to a spike in the workload of the Registries. This growth can be illustrated by the fact that legal transactions in the Registries grew from 93,000 in 1990 to 222,967 in 2004, an increase of 140% (Land Registry and Registry of Deeds 2005). The environment in which the Registries operate has become more challenging because of an increase in the use of property as a basis for mortgaging and the fact that house ownership changes once every seven years on average. Titles registered in the Land Registry are underwritten by a State guarantee which also imposes a potential liability on the Authority. A customer needs survey carried out in 2001 confirmed that further development of the ITRIS[33] and EAS[34] IS was the most effective means of delivering on customer expectations of the Authority (Land Registry and Registry of Deeds 2001). A decision was made in 2002 to transfer the remaining manual folios in the Registries into electronic form. An external contractor (EPSILON[35]) transferred more than one million folios to electronic format. The increasing take-up of the electronic

[33] ITRIS is an acronym for the Integrated Title Registration Information System, which was implemented in the Land Registry in 1999.
[34] EAS is an acronym for the Electronic Access Service implemented in the Land Registry in 1999 to provide web-based access to Land Registry services.
[35] EPSILON is a large systems integrator in the technology field. The name of the organisation has been anonymised in accordance with undertakings given to participants at the commencement of the research.

customer channel was underlined by the statistics in Figure 6.4 below which show an exponential increase in both the number of professional users and the number of online transactions (Land Registry and Registry of Deeds 2001). The Registries have coped with a very large increase in workload in recent years without any corresponding increase in personnel resources. Fee income for the year 2007 was in the order of €80 million which a significant amount of revenue. IS management is of the opinion that increased use of IS in the Registries has been instrumental in the additional capability and productivity.

Figure 6.4 – Property Registration Authority – Electronic Access Service Usage

Year*	2000	2004	2005	2006	2007
Number of Professional Users	1,700	7,500	9,200	10,900	13,000
Number of Online Transactions	0.2 m	1.2 m	1.7m	2.5m	3.1 m

*The EAS became operational in August 1999

6.4.5 IS Strategy Formation

The IS strategy formation experience of the PRA over a period of more than twenty-five years is recalled in the following paragraphs. A number of significant developments in the IS strategy formation story, in both the Land registry and the Registry of Deeds, are summarised in Figure 6.5.

Figure 6.5 – Evolution of IS in the Registries

Year	Land Registry	Registry of Deeds
1982	The PROMIS system goes live for folios in the Dublin Region	
1990	A new Registrar/CEO is appointed	A new Registrar/CEO is appointed
1990	A decision is made to develop a strategic plan for IS in the Registries	A decision is made to develop a strategic plan for IS in the Registries
1990		The RAMIS system is implemented
1990	Minister for Justice announces a change to semi-State status for the Registries	Minister for Justice announces a change to Semi-State status for the Registries
1990	First IS strategy is developed by the Registries	First IS strategy is developed by the Registries
1991	A data model is developed for the Registries	A data model is developed for the Registries
1994/95	PETRIS system specification is completed by IS Unit	
1997	Decision is made to shelve PETRIS concept and develop a restricted ITRIS design for implementation before Y2K	
1999	Integrated Title Registration System (ITRIS)and Electronic Access System (EAS) implemented	
1999	Electronic Access Service (EAS) provides web-based access to the Land Registry data for customers	
2002		Tenders are invited for e-Services Strategy for the registry of Deeds

The transition from a totally manual mode of operation in the Registries came about through frustration by two middle managers in the Land Registry with the inefficiencies inherent in a records system that was dependant on a single set of records which could only be accessed by one user at a time. At the time, it was not uncommon for middle managers in the Registries or in regional offices to make suggestions for improvements. Similar levels of frustration had led middle managers in the nearby Dublin Metropolitan Courts to launch a separate initiative to secure IS facilities in the Courts (Clince, Blennerhassett et al. 1992).

The officials in the Land Registry secured support for their proposals for an IS solution in the Departments of Justice and Finance and an American PROMIS case tracking system was implemented for the Dublin Region in 1982. PROMIS was supplied by a US company (INSLAW) and it was mainly used for courts work. The Land Registry folios were recorded electronically in the PROMIS system which reduced the access problem but left the old business processes unchanged.
The PROMIS solution had also been identified as the IS solution for the Courts Service and both agencies shared a single WANG computer facility in Bow Street, in Dublin. A small team of four IS personnel had been put in place in the Registries to support the PROMIS system and this team developed a specification for an IS system for the Registry of Deeds in 1988 for the purpose of providing electronic backup for the memorials[36] and abstracts[37] held there. A member of the Registries IS Unit developed a specification for a new system using the structured systems analysis and design method (SSADM). The RAMIS system, which was based on the Registry specification, was implemented in 1990 by external contractors.

The PROMIS solution was extended to the Western Region of the Land Registry in 1987. The extension of PROMIS to the Western region came about as a result of the transfer of an official from the IS Unit in the Registries to the Western Region and his belief in the potential of the PROMIS system to improve efficiency in his new workplace. PROMIS was not implemented in the other Regions for a variety of reasons, which were mainly budgetary and also as a result of the emergence of new technologies.

[36] A memorial is a record of the date, parties and witnesses to a deed in addition to details of the land to which the deed refers. More than 4.4 million memorials have been created since the foundation of the Registry of Deeds in 1707.
[37] An abstract is a summary of a memorial. It is created during the registration process and contains a summary of information from the memorial. Abstracts were set up under the Registry of Deeds Act 1832 and are available from 1833.

A decision was made in 1988 to develop an IS for recording memorials and abstracts of memorials in the Registry of Deeds. The Registries' IS personnel developed specifications for the new system using the Structured Systems Analysis and Design Method (SSADM). The RAMIS[38] system was built by PROSE using the PROGRESS software and was implemented in 1990. RAMIS contains property ownership records and indices going back as far as 1970 (Land Registry & Registry of Deeds 2002c). Access to RAMIS for law searchers and others is provided via facilities inside the Registry and there is no general external access via the Internet (Land Registry & Registry of Deeds 2002c). Personnel from the Department of Justice (IT Division) provided project management for the RAMIS project. RAMIS was the first IS implemented in the Registry of Deeds and it continues to be in service.

A management meeting took place in the Registries in January 1990 to discuss the further extension of the PROMIS system to other Regions outside Dublin (Land Registry 1990). The meeting gave some consideration to the conversion of the PROMIS system to the newer (PROGRESS) technology used in the RAMIS system in the Registry of Deeds. An official from the Department of Justice (IS Division) suggested to the meeting that a consultation with the Department of Finance (CMOD) take place with a view to developing a strategic plan for IS in the Registries (Land Registry 1990). The meeting agreed that the systems analyst from the Department of Justice (IT Division) should make contact with the Department of Finance to seek their views on "*a long term strategic technological plan*" for the Registries (Land Registry 1990:3). Some of the officials present were concerned that the time required to conduct a strategic planning project would delay the implementation of a technical solution. In the event, it was agreed to develop a 'strategic plan' before December 1990 (Land Registry 1990).

The decision to launch an IS strategy project in the Registries in 1990 was not an isolated one. IS Planning Guidelines had been issued by the Department of Finance in 1986 and 1987 (Department of Finance 1987) – see Appendix 6.2. The Department had been promoting a more strategic approach by top management and encouraging top management participation in IS strategy development and oversight (Department of Finance 1987).

The Department of Finance (IT Control Unit) issued a letter of sanction for the proposed Information Technology Plan for the Registries in June 1990 (Department of Finance 1990). The sanction contained the proviso that a Steering Group, chaired by the CEO of the Registries and including a nominated official from the Department of Finance, should oversee the project. An Invitation to

[38] RAMIS is an acronym for Registry of Deeds Abstract Management Information System

Tender (ITT) for the IS strategy study was issued to the market in June 1990 (Appendix 6.9). The ITT had been developed in conjunction with the Department of Finance (CMOD) and the Department of Justice (IT Division). Whereas the ITT was specific on the deliverables sought, it did not mandate any particular approach to the work (Appendix 6.9). The Invitation to Tender for the IS strategy project stated that the purpose of the 'strategic plan' was "*to link the business goals and objectives of the organisation with the optimum technological requirements and organisational functions to enable better usage of existing and future resources*" (Land Registry & Registry of Deeds 1990c:1) – Appendix 6.9.

Seven management consultancy organisations competed for the IS strategy contract. The seven included the leading management consultancy organisations. OMICRON[39] was selected to carry out the IT strategy project following an evaluation of the bids. The IS strategy project was carried out over a period of 6/8 months and a core team of three consultants from OMICRON and three representatives from the Registries comprised the project team.

The management consultants conducted a briefing for Registry management in August 1990 (OMICRON 1990). The Registry management were to be at the centre of the IS strategy process and they would specifically be responsible for:

- Agreeing priorities;
- Approving organisational options;
- Approving system requirements;
- Identifying benefits;
- Approving plans and resources;
- Participating in interviews and workshops, and
- Participating in the Steering Committee.

The working approach consisted of four phases (OMICRON 1990);

Phase 1 Analyse business objectives and needs;
Phase 2 Analyse current organisation and IT;
Phase 3 Define target systems infrastructure, and

[39] OMICRON is one of the so-called Big 5 global management consulting practices. The name of the organisation has been anonymised in accordance with undertakings given to participants at the outset of the research.

Phase 4 Complete strategy and plans.

OMICRON used their own in-house approach to the IS strategy project. The consultants interviewed fifteen senior personnel and key customers as well as conducting five structured workshops. Six management consultants from OMICRON were assigned to the project which was expected to require a total of 132 days of management consultancy overall. The highest level of engagement would be 42 days of elapsed time by the third most senior consultant. Workshops were conducted to identify (a) business functions (b) business objectives, and (c) critical success factors (Land Registry & Registry of Deeds 1990a). A briefing paper, based on OMICRON materials, was issued to all workshop participants by the project team before the workshops took place. The focus was on the business rather than what users wanted. OMICRON also used a workflow modelling tool called VISION to evaluate existing processes in the Registries. The modelling showed that many of the existing processes existed because of manual paper channels. The modelling work had a major strategic impact because it identified low level tasks and structural anomalies which could be improved.

The consultants conducted a current status assessment, looked at technology options and prepared a migration strategy. The key influencers in the decisions made in the IS strategy were the Registrar/CEO and the Department of Finance (CMOD) representatives. Registry and management consultancy members of the project team met formally with Department of Finance (CMOD) technologists to discuss technology options. Senior business managers in the Registries and Department of Justice (IT Division) personnel also exercised influence on the choices made. There was no particular conflict on the content of the IS strategy amongst the various stakeholders. There was some debate about priorities but there was a natural sequence to projects so that priorities did not become an issue.

The management consultants recommended that a data model for the Registries be developed to underpin subsequent systems development. This was a new idea which had not emerged elsewhere and it would not have emerged but for the management consultancy participation. The data model proposal turned out to be an important contribution to the IS strategy. The concept of a data model underpinning an enterprise view of data became a key issue for the Registries. The new approach subsumed the earlier 'silo' approach to development and the new strategic view of the data repository was important. Subsequent IS development became more structured and obvious. The new technical architecture was also an important development.

The new Registrar/CEO of the Registries chaired the Steering Committee for the IS strategy project and issued a supporting memorandum to Registry personnel promising consultation with staff representatives and urging full co-operation with the initiative (Land Registry & Registry of Deeds 1990b). The Registrar/CEO urged an iterative approach to the project, with periodic reviews along the way, before conclusions were finalised. All constituencies were represented on the IS Steering Committee to ensure that there was maximum buy-in to the IS strategy. The Steering Committee met twice yearly to make policy. The Committee selected interviewees who were briefed before and after interviews. Participation was important to avoid opposition to the IS strategy. The fact that there are six unions/staff associations in the Registries could have been a source of difficulty. There was some misunderstanding about the purpose of the IS strategy by some union personnel but this did not become a problem. The consultation process enabled interviewees say what they wished to the consultants in private. There was a great deal of consultation done by the consultants for the purpose of mitigating fear and concern amongst stakeholders.

OMICRON brought structured methodologies and a systematic way of working to bear on the IS strategy development. They galvanised the Registries into action and built confidence in internal personnel that they could bring about change. They also brought an objective view and international experience to bear. OMICRON brought a level of expertise which was not available within the Registries. They also transferred knowledge to the Registries that was reused later. The management consultants had other private and public sector experience and they had a strategic perspective. IS management believed that the IS strategy proposals would not have been as persuasive without management consultancy participation and endorsement of the recommendations. This view was also shared by senior business managers who believed that the consultants lent credibility to the IS strategy in the eyes of other stakeholders such as trade unions, the Departments of Justice and Finance. Support would not have been forthcoming from the Department of Justice without the consultant's endorsement. There was a sense also that risk-taking is not rewarded in the public sector and that an external management consultancy report can insulate management from serious error. While the consultants brought credibility to bear on the IS strategy, many of the ideas came from Registry personnel and were enhanced and packaged in a professional manner. Everyone was involved in workshops and everyone got their input.

Following the presentation of the IS strategy in January 1991, a competitive process was undertaken to select consultants to carry out the data modelling project recommended by OMICRON. SIGMA[40] Consulting was successful in the tendering process. A team of three consultants from SIGMA, six persons from the Registries and one from the Department of Justice (IT Division) were involved in the data modelling project which was completed in November 1991 (Land Registry & Registry of Deeds 1991). SIGMA utilised 130 consultancy days on the assignment (Land Registry & Registry of Deeds 1991).

After RAMIS was completed in the Registry of Deeds in 1990, the focus turned to the implementation of word processing and the design of PETRIS, which included the functionality identified in the IS strategy. By 1994/1995, the IS Unit in the Registries had completed the design of a Process Enhanced Title Registration Information System (PETRIS), which would provide the functionality envisaged in the IS strategy (1991). PETRIS was still under discussion in 1997 when there was a realisation in the Registries that replacement of PROMIS had become urgent because it was not deemed Year 2000 compliant.

Although the IS strategy project was completed at the end of 1990 and presented in early 1991, the PROMIS system was not replaced until 1999, almost ten years later. The initial focus after 1990 was on setting up the IS Unit in the Registries. A lot of work was also done on planning and implementing local and wide area networks as well as the implementation of an extensive application tracking facility. During this period the Registries built up expertise in modelling workflows and business processes which now forms an integral part of all business projects. There was a focus on decentralisation in 1996 through to 1998. Senior management was frustrated at the lack of progress on PROMIS replacement. The imminent approach of the Millennium made replacement of PROMIS a priority and something needed to be done. The scale of the PETRIS design was considered to be too great to implement in time for the Millennium and a decision was made to implement a less ambitious replacement for PROMIS. Eventually, management in the Registries decided to begin development of ITRIS in anticipation that sanction would ultimately be given.

The Integrated Title Registration System (ITRIS) was implemented in the Land Registry in 1999 and it was described by the CEO as a "*key strategic system*" (Land Registry and Registry of Deeds

[40] SIGMA is a medium sized management consulting organisation which is not one of the so-called Big 5. The name of the organisation has been anonymised in accordance with undertakings given to participants at the commencement of the research.

1999:iii). The ITRIS system was developed by an external contractor (EPSILON[41]) using an ORACLE Forms solution. ITRIS was implemented in 1999 in advance of the Millennium and PROMIS was replaced. ITRIS has been enhanced considerably in the years since 1999 and it now includes all the functionality originally envisaged in the IS strategy (1991) and most of what was envisaged under PETRIS. The ITRIS project was especially challenging because it had to be conducted without the assistance of any additional personnel and existing personnel had to be diverted from casework to ensure that it was delivered successfully (Land Registry and Registry of Deeds 1999).

The implementation of ITRIS also coincided with the launch of a new electronic access system (EAS) which enabled customers of the Registry conduct searches via the Internet as well as requesting some services electronically (Land Registry and Registry of Deeds 1999). The EAS was implemented as a flagship project under the governments Information Society Programme and was the first such project to 'go live' under the e-Government initiative (Land Registry and Registry of Deeds 1999). The availability of funding for e-Government initiatives has been an important enabler of modernisation in the Registries in recent years.

Dealing with organisation culture posed a problem in the implementation of the IS strategy. The technology aspect of the implementation was the easier aspect to get right. Technology removes discretion from people. The IS strategy work also exposed hand-offs in work processes caused by grade demarcation. Compromises were necessary in some cases to get around some of the demarcation issues. It proved difficult to achieve consistent change processes and management of change required a more focused effort. Technology exposed some anomalies and showed that organisational change is difficult. Management of users' expectations also proved challenging because people had far greater expectations of technology than they did of the older manual system. Although technology improved productivity there is a challenge in managing user expectations.

Business managers found that the management consultants identified issues quickly although they also got caught up in individual agendas. The consultants didn't have to broker solutions or decisions because decisions were made at whatever level were appropriate in the organisation. The bigger decisions were made at Steering Committee level.

[41]EPSILON is a pseudonym for a multinational systems integrator which does business in Ireland.

The implementation of ITRIS took place quickly because of the Millennium deadline. There were teething problems and disagreements with the union representing more junior personnel. A good deal of management time was taken up with managing industrial relations issues during the live implementation phase. The union representing more junior staff insisted that the implementation was a 'pilot' rather than a full implementation and this position persisted for a long time.

Demarcation was also a big issue in implementation. Deconstructing processes and introducing new methods of working was a major issue. Unions wanted episodic change in return for compensation and there was a culture of embedded union influence resisting change. The interaction between the clerical officer and executive officer grades was one example. The mappers union tended to be resistant to change and it was difficult to be confident of their participation in new ways of working.

The implementation of ITRIS required major restructuring and more than 160 posts were upgraded. The bulk of these promotions came about as a result of workflow revisions and the unions were disenchanted at the ex gratia nature of the benefits which were achieved without union initiation. Some 37% of folios in the Registries were not captured electronically because of management concerns at the possibility of union resistance to outsourcing of the work at the time. All folios have been scanned as images but only 63% have been subject to fully-structured data capture. The work could have been completed before now if funds and resources were sufficient to do so. There is also a need to ensure that the speed of change is at a pace which can be assimilated by the client organisation. This work has been outsourced following a public procurement exercise and it will be completed by the end of 2009.

The Registries issued an invitation to tender (ITT) (Appendix 6.10) for an e-Services Delivery Strategy for the Registry of Deeds in 2002 (Land Registry & Registry of Deeds 2002c). The invitation to tender (ITT) pointed out that, although 200,000 self-service transactions had been carried out electronically by RAMIS/EAS customers *within* the Registries in 2001, no general *external* access was available externally to customers via the Internet or an Extranet (Land Registry & Registry of Deeds 2002c). By 2002, the Registry of Deeds held more than 4.4 million memorials in respect of deeds registered since the year 1708 (DELTA 2002). Abstracts of these memorials were transcribed into books up to 1960 and records from 1970 onwards were recorded electronically in the RAMIS system. The business of the Registry was conducted manually with the assistance of the RAMIS system at the time of the DELTA[42] project in 2002.

[42] DELTA is one of the so-called Big 5 management consulting practices. The name of the organisation has been anonymised in accordance with undertakings given to participants at the outset of the research.

This work was carried out by a team of three consultants from DELTA and Registry personnel (DELTA 2002). DELTA looked at international experience in e-Services in Canada and elsewhere in the course of the assignment. The DELTA e-Service project identified a number of shortcomings in the RAMIS system including the following (DELTA 2002);

- Limited searching functionality;
- Data for some years not included;
- No external interfaces;
- Character based screens, and
- Additional functionality required.

The e-Services report proposed that a single point of electronic access be put in place for both Registries and the RAMIS infrastructure be upgraded to enable this to happen (DELTA 2002). The e-Services project has not gone ahead because sanction has not yet been given by the Department of Finance and the Registries are examining storage issues etc. The decision to pend implementation was taken because, if registration of the remaining unregistered titles is made mandatory, the Registry of Deeds will cease to have a function in title registration. This would remove the rationale for spending many millions of Euro on the conversion of the abstracts and memorials into electronically accessible format.

There is a greater acceptance of IS in the Registries than was the case in the past. Acceptance of change programmes has been built into national pay bargaining in the public sector which has facilitated the change agenda. It has become common for members of the top management team in the new Authority to attend regional management meetings to listen to what the operational requirements and challenges are. Road shows and seminars are also arranged in regions to cater for the external customer base. The financial services sector is a big customer of the Registries and there are also regular meetings with the Law Society, law searchers, and representatives of the land surveying profession.

6.4.6 The IS Strategy Content

The key recommendations of the IT Strategic Plan (1991) were that the existing mix of IS technologies be migrated to new 'open' software and hardware platforms. It also recommended that the head of the IS function should report at the highest level of the Registry because IS are "*all*

pervasive across Registry activities" (Land Registry and Registry of Deeds 1991a:17). The IS Steering Committee was designated as the main IS policy-making body which would be chaired by the Chief Executive Officer and would include senior management from all the major functions, including IS management. Recommendations also included the establishment of user groups for all major systems and an increase from seven to twelve in the strength of the IS Unit in the Registry (Land Registry and Registry of Deeds 1991a). The Strategic Plan (1991a) recommended that a new management structure be put in place which would include a Chief Executive Officer (CEO), five heads of function, and a Board of Management. The role of the Board of Management was not specified pending legislation. The legislative changes did not materialise until fifteen years later in 2006, by which time the number of heads of function under the legislation had increased to eight.

The IT Strategic Plan (1991) also recommended enhanced governance and resourcing for IS, a new 'open' technical architecture, and a suite of new and enhanced applications (Land Registry and Registry of Deeds 1991). The accompanying implementation plan covered the years 1991 to 1995 and incorporated thirty projects in seven phases (Land Registry and Registry of Deeds 1991a).

The IT Strategic Plan (1991) comprised four deliverables. These were (Land Registry and Registry of Deeds 1991);

Phase 1	Business Objectives and Needs;
Phase 2	Current Organisation and IT;
Phase 3	Target System Infrastructure, and
Phase 4	Strategies and Plans.

The first phase identified a number of critical success factors for the Registries (Land Registry and Registry of Deeds 1991);

1. Adequate trained staff;
2. A responsive management process;
3. Simple efficient support systems;
4. Mapping standards, procedures and facilities;
5. Consistent performance standards;
6. Elimination of arrears;
7. High, enforceable application standards;
8. Adequate accommodation and storage;

9. Simple and efficient search systems;
10. Up-to-date and appropriate legislation, and
11. Effective planning & control procedures.

The IT Strategic Plan (1991:6) also identified a number of opportunities for "*the beneficial use of information technology*".

- Extension of the computerisation of folios to regions and local service points
- Computerisation of maps
- Improved search and enquiry of the Registry of Deeds IS System
- Public 'self-service' search and enquiry
- Case management
- Application processing
- Legislation Practice & Procedures database
- Accounting, Personnel & Administration d
- Land Information database
- Systems integration

6.4.7 IS Strategy Outcomes

Business management believes the IS strategy in 1991 was a major catalyst for change in the Registries. There was a clear focus after the IS strategy and the new Registrar/CEO was dynamic in pushing ahead and securing funding and support for change. The ITRIS support for case processing, which has been enhanced by the mapping project, has led to great labour saving. The availability of case material on www.landirect.ie has led to a saving of about sixty people centrally as well as a saving of about one person in each court office around the country. Many formerly manual tasks are now done electronically. Web-based access to digital maps and images has been very beneficial to the legal profession, law searchers, financial services and other professional users. IS have solved the problem of manual records being 'in use' elsewhere and not available to professional searchers and staff. Business management can envisage further opportunities to integrate time and attendance recording with the HRM system to streamline processes further.

Business management is of the view that a member of the Registries staff from the 1892 era could have resumed work in a largely unchanged system of registration one hundred years later. The changes that have taken place between 1992 and today are of an order that a member of staff from 1992 would require significant retraining to resume work today.

Top management believe that the increased use of IS has freed up valuable intellectual capital which can now be used more productively by the Authority (Property Registration Authority 2006). The Registries have had a sound business case supporting each IS initiative. Benefits have exceeded the promised targets in all cases. The Registries are struggling to cope with a vast increase in workload currently. It would not have been possible to cope with the growth in workload and services without IS.

Business managers in the Registries would like to see e-Registration being included in the next phase of modernisation with IS. The Registries would like to accept documents electronically. Legislation will be needed for this to go ahead. The Law Reform Commission is supporting an e-Conveyancing vision and is seeking an 'owner' for the overall project which would also involve the Registries. The Revenue Commissioners are already addressing the e-Stamping dimension of property transactions. The three jurisdictions within the United Kingdom are also seeking to get e-Conveyancing projects moving forward. E-Conveyancing would link both the public and private sector channels in a seamless process for completing property transactions.

6.4.8 *Insights on IS strategy formation*

IS were first implemented in the PRA in 1982 and the appointment of a new CEO in 1990 coincided with a decision to formulate a first IS strategy with external management consultancy involvement. The Department of Finance mandated that the CEO should be centrally involved in the governance and operational aspects of the new IS strategy and the Department also appointed one of its officials to the Steering Committee.

The participation of the management consultants in IS strategy formation was adjudged to be beneficial by the management groups who were involved. The consultants brought both public and private sector expertise, structured methodologies and a systematic way of working to the assignment. The other stakeholders thought that the external consultants brought credibility to the proposals which emerged and their endorsement was considered essential. There was a belief in the PRA that risk-taking is not rewarded in the public sector and consultants can insulate management from the effects

of error. The proposal to develop an enterprise data model and adopt a system wide view of data was also considered innovative by the client who judged that it would not have emerged but for management consultancy input.

The business process re-engineering (BPR) proposals which emerged in the IS strategy exposed inefficiencies and unnecessary hand-offs in the workflow in the Registries. The new workflow proposals prompted resistance from unions and the case data showed that some changes were successfully negotiated while others were deferred. The changes which were introduced delivered significant restructuring and a capability to process much larger volumes of work with the same numbers of personnel. The management consultants were not involved in consensus-building.

The consultants brought a new strategic focus to bear on modernisation enabled by IS in the Authority. The consultancy briefings prior to workshops and interviews underlined the fact that the focus was on the overall business of the organisation rather than on what users wanted. The consultation process was perceived as enabling interviewees say what they wished privately to the consultants. A participative approach was also seen by management as important in managing opposition to the IS strategy.

Management in the PRA remains committed to the expansion of electronic workflow to other stakeholders such as the Revenue Commissioners and the Law Society. The experience of IS strategy formation in the period from 1991 to 2007 has provided a basis for further development.

6.5 AN GARDA SIOCHANA

6.5.1 Introduction

The IS strategy formation experience of An Garda Siochana over a period of more than thirty five years is recounted in the following pages. The field work on which the case study is based was carried out over a nine month period between April and December 2006. Sixteen managers drawn from top management, business management, IS management, and management consulting constituencies were interviewed during the course of the research. The Garda interviewees are identified in Appendix 6.11.

6.5.2 Mission and Business Strategy

The legislation establishing An Garda Siochana in 1922 did not statutorily define its role or remit, perhaps because of the centuries of common law underpinning the position of peace officer in the British Isles and overseas (Walsh 1998). However, the parliamentary debates on the enabling legislation support the presumption that An Garda Siochana was established *"to discharge the traditional police responsibilities of preventing and detecting crime, keeping the peace and maintaining public order"* (Walsh 1998:141).

Section 7(1) of the Garda Siochana Act 2005 set down the functions of the Garda in statute form for the first time as providing policing and security services for the State with the objective of:

(a) Preserving peace and public order,
(b) Protecting life and property,
(c) Vindicating the human rights of each individual,
{d) Protecting the security of the State,
(e) Preventing crime.
(f) Bringing criminals to justice, including by detecting and investigating crime, and
(g) Regulating and controlling road traffic and improving road safety.

The statute acknowledges that the police force also has other responsibilities assigned to it under other legislation including immigration.

In practical terms, An Garda Siochana is responsible for law enforcement and public safety at rural, municipal, and national levels (Cussen 2003). It also has responsibility for state security, traffic and white collar crime. There are no separate township police, traffic police or transport police as is common in many other countries which means that An Garda Siochana is responsible for a very diverse range of functions and responsibilities. In addition to its domestic responsibilities, contingents from An Garda Siochana have participated in United Nations peacekeeping and monitoring missions in Africa, Asia and Europe since 1989 (McGee 2005). It participates in the work of international institutions such as Interpol, Europol and various European Union groups (Cussen 2003).

Commissioner Patrick Culligan published the first corporate strategy in 1993 (Garda Siochana 1993a). The Corporate Strategy (1993 – 1997) provided an analysis of the existing situation, set out the elements of the Strategy as well as goals to be achieved over the timeline of the four year period (Garda Siochana 1993a). Publication in April 1993 of the first corporate strategy policy document (1993 – 1997) was "*the advent of a new self-consciously modern and progressive, market oriented, 'managerial science' approach to policing in Ireland*" (O'Mahony 1996:160).

The first Corporate Strategy promised that "*the application of Information technology will play a key role in the achievement of all our corporate goals*" (Garda Siochana 1993a:15) as the means by which:

- Accurate and relevant information could be collated for management decision,
- Crime information could be collected and correlated, and
- Information could be collected once for re-use throughout the organisation leading to a reduction in Garda paperwork and increased time on outdoor work

Annual Policing Plans were published by the Garda Commissioner from 1998 onwards for the purpose of setting out specific policing objectives, informing the public about policing services, and to help the Commissioner monitor performance (Garda Siochana 1998). The Policing Plans set out a series of action plans under each of the strategic goals in the corporate strategy and recorded progress on these (Garda Siochana 2004).

The third, and current, Garda Corporate Strategy set out the mission of An Garda Siochana succinctly as "*to achieve the highest attainable level of personal protection, community commitment and State security*" (Garda Siochana 2005:4). Six strategic goals were identified, which included for the first time the issue of cultural diversity (Garda Siochana 2005). The goals are under the headings of:

- National/International security,
- Crime,
- Traffic,
- Public safety,
- Public confidence, and
- Ethnic and cultural diversity

The Garda Siochana Act 2005 established a statutory obligation on the Garda Commissioner to submit a strategy statement to the Minister every three years containing a mission statement, medium term objectives and issues of concern. The Commissioner is also required to prepare an annual policing plan under the legislation. At the end of each three year period, the Commissioner is required also to provide the Minister with a report containing a review of the efficiency and effectiveness of the management and deployment of organisational resources during the preceding period.

6.5.3 Structure and Governance

The establishment of a new civil police service was an urgent priority of the new post-independence Irish Free State in 1922 (Walsh 1998). Initial recruitment was carried out in secrecy to avoid antagonising anti-government forces and matters such as role, structures, powers and policy received little consideration by the founding committee who had been given three weeks by government to deliver a blueprint for the new police service (Walsh 1998). Over the thirty year period from 1922 to 1952, two thirds of An Garda Siochana had been members of the Irish Republican Army (IRA) during the war of independence and the civil war period (McNiffe 1997). The Garda Siochana (Temporary Provisions) Act, 1923 provided a retrospective statutory basis for the service and this legislation was later made permanent by the Garda Siochana Act 1924 (McNiffe 1997).

The Police Forces Amalgamation Act, 1925 saw the Dublin Metropolitan Police amalgamated with An Garda Siochana and the legislation also set out the rank structures and system of appointments for the new amalgamated police service (Walsh 1998). This legislation also assumed the appointment of an Accounting Officer to manage the Garda Vote although it was silent on his identity (Walsh 1998). As early as 1923, the Commissioner sought control of the Garda budget but this was refused by government (McNiffe 1997). The Minister for Justice has always appointed the Secretary of the Department of Justice as Accounting Officer for An Garda Siochana which means "*that de facto control over policing can be traced ultimately to the government*" (Walsh 1998:139).

The establishing legislation confers on the Garda Commissioner responsibility for the "*general direction and control over the force*" (Walsh 1998:14). Although the Commissioner is appointed and may be removed by government, there had been some doubt over the years whether the Commissioner "*can be curtailed or directed by any political authority*" in his management of the Garda (Walsh 1998:107). However, the Garda Siochana Act 2005 gave the Minister for Justice authority to set out and revise priorities for the Garda in the performance of its duties. The Act of 2005 also obliges the Commissioner to submit a strategy statement for Ministerial approval for each three year period and to provide annual policing plans.

A number of external organisational reviews examined various aspects of the Garda organisation over the years. A number of these are summarised in Figure 6.6.

Figure 6.6 – External Organisational Reviews of An Garda Siochana 1925 - 2007

Year	Review Body	Purpose
1970	Conroy Commission	Review of Garda role, organisation & personnel policy
1979	Louden Ryan Commission	Review of Garda recruitment, training, and promotion
1984	Walsh Training Committee	Review of Garda training programmes
1989	Moriarty Advisory Group	Ministerial Advisory Group on Garda systems & processes
2005	Morris Judicial Tribunal	Inquiry into alleged Garda corruption in County Donegal
2005	Garda Ombudsman Commission	Commission to investigate complaints against Gardai
2005	The Garda Inspectorate	Inspectorate to monitor Garda operations and administration
2006	The Garda Advisory Group	To advise Government on Garda management and leadership

In May 2005, Judge Frederick Morris, who conducted a judicial tribunal of inquiry investigating allegations of misconduct and mismanagement in the Garda division of Donegal, reported to Government that the Department of Justice and the Garda Commissioner "*must address the structural defects and deficiencies*" which had been identified in a series of reports published by the Tribunal (Morris Tribunal 2005:655). In 2005, the Secretary-General of the Department of Justice reported that the relationship between the Department and the Commissioner had evolved over eight decades from one of micro-management of a relatively small police force in a low-crime jurisdiction to one where "*accountability related more to general policy than to the management of individual incidences or events*" (Morris Tribunal 2005:583).

The Garda Siochana Act 2005 addressed a number of the issues identified in the Morris Tribunal reports. The Act set out the statutory duty of Garda personnel at all levels for the discharge of their duties and responsibilities. The Act also provided a new statutory basis for the relationship between the Minister and the Commissioner as well as the Commissioner's obligations to account to

Government. The 2005 Act also transferred the role of Accounting Officer from the Secretary General of the Department of Justice to the Garda Commissioner.

The tide of change continued with the publication of a Report of the new Garda Inspectorate in October 2006 setting out a new management structure for the Garda Siochana (Garda Siochana Inspectorate 2006). It is noteworthy also that the reforms introduced over recent years have maintained the centralised political control of policing which has been highlighted by Brewer et al (1988). Neither was political control diminished by any change in the wide functional remit of An Garda Siochana which had been a political aspiration of the founding fathers in the early years.

The Annual Report of the Garda Commissioner for year 2007 showed that Garda numbers had reached 14,798 (2007). Garda personnel were located at 700 Garda stations throughout the six regions (Garda Siochana 2005). The next section moves to considering the context in which IS strategy evolved in the Garda organisation over the period from the early 1970's to the mid 2000's.

6.5.4 The IS Strategy Environment

The work of An Garda Siochana changed little for the first forty years of its existence and the absence of significant crime or disorder meant that the organisation could focus on community service (O'Mahony 1996). Economic circumstances and the pioneering ethos of the founders of the Garda led Commissioner O'Duffy to declare in 1930 that government policy should be "*to perfect the Garda as the one widespread national service of the State, and its agent, representative and emissary in every town and village*" (Allen 1999:143). An enquiry into Garda organisation structures in the 1950's found that 40% of the work of rural Gardai was accounted for by non-police duties carried out on behalf of a number of other government departments (McNiffe 1997).

From the establishment of the modern State in 1922 up to the late 1960's, Ireland was a traditional homogeneous society with "*strict codes in honesty and integrity and required little policing*" (Walsh, MacDiarmada et al. 1985:21). The three decades from the late 1960's were marked by a long paramilitary conflict in Northern Ireland that began with a civil rights movement and escalated into "*atrocities, deaths and injuries*" to thousands of people (Dunn 1999:720). Political, social and sectarian faults lines in Northern Ireland were such that, in 1996, "*without compromise on a range of matters, there was a real danger of civil war*" (Dunn 1999:725). The nature of the conflict in Northern Ireland was such that both the Irish and British governments saw it as a danger to their

stability. In policing terms, one effect of the situation was that state security was the key organisational priority of top management in the Garda Siochana for more than twenty years.

The degree of change occurring over the period of the Northern Ireland conflict can be inferred from the fact that Garda personnel numbers almost doubled from 6,522 in 1969 (Louden Ryan Commission 1979) to 12,265 in 2005 (Garda Siochana 2005).

6.5.4.1 The CDPS Era - (1972 – 1982)

In 1970, the Conroy Commission recommended the establishment of a Research & Planning Unit at Garda Headquarters to extend further the planning capabilities which had been brought to bear following the establishment of an Organisation and Methods Section in 1965 (Conroy Commission 1970). The Commission had found that there was no comprehensive planning based on research resulting in "*reaction to circumstances and ad hoc decision making*" (Conroy Commission 1970:214). In the period from 1970 to the mid 1990's, changes in administration and personnel policies occurred in response to "*immediate crises rather than amounting to long term planning*" and inconsistencies in government policy proved a barrier to change despite acceptance by management and staff associations that change was necessary (McNiffe 1997:174). By 1968, the incumbent Minister for Justice described the Garda as "a *machine that was outmoded, outdated, and inefficient*" (Breathnach 1974:148). The gradual erosion of initiative and vision from the thirties to the seventies was attributed to the increasing control and influence of "*successive ministries*" (Breathnach 1974:149).

IS became an issue for Garda management in February 1972 when a senior officer at Garda Headquarters acknowledged a letter from Burroughs Ireland and thanked them for their correspondence about developments in computerisation in the law enforcement field (Garda Siochana 1972a). The senior officer went on to say that the Garda Siochana was "*not yet ready to examine the possibilities of the computer in the administration of our Force, as an immediate objective*" (Garda Siochana 1972a:1). Only three months later, in May 1972, an internal Garda memorandum from a chief superintendent in the Garda Research & Planning Unit urged the Assistant Commissioner to seek authority from the Departments of Justice and Finance "*for a general examination and research on what is on offer in the field of automation with a view to the introduction of an automated system of data recording and retrieval for Garda purposes*" (Garda Siochana 1972b). A number of IS applications were implemented with external assistance over the remainder of the decade.

In July 1980, two Garda officers were murdered in an incident which was linked to the ongoing armed conflict which had been underway in Northern Ireland since the 1970s (McGee 2005). In the aftermath of the killings, the Minister for Justice asked the Garda Commissioner to make proposals aimed at responding to the security situation. The Commissioner carried out a review of 'computerisation' and also proposed the establishment of a new aerial wing. The proposals led to the establishment a new post at chief superintendent level to head the IS Division and the creation of additional posts at lower levels.

6.5.4.2 The decentralised era 1982 – 1992

Meetings of the IS Steering Committee through 1986 and 1987 were chaired by Deputy Commissioner (Operations) and were attended by senior Department of Justice personnel and Garda personnel. Discussion at these meetings was dominated by problems arising from the embargo on filling posts for data entry personnel and availability of systems development personnel (Cussen 1984 - 2004). The use of Garda personnel as specialist systems developers was problematic for Department of Justice (Computer Division) although personnel were available (Cussen 1984 - 2004).

In January 1991, Patrick Culligan was appointed Commissioner and two new Deputy Commissioners were also appointed. The three new appointees were dubbed 'the three wise men' in the media and all three were holders of higher qualifications in management. There was an expectation in the Garda organisation that the new management team would bring about positive change.

6.5.4.3 The IS Strategy era 1991 – 2006

The new top management team was instrumental in introducing strategic business planning and strategic IS planning in the Garda organisation. The story of how IS strategy formation evolved is dealt with separately in the next section. The IS strategy formation initiative led to an assessment of organisational readiness to change. The change readiness survey was conducted in 1997 to assess organisational strengths and weaknesses (Garda Siochana 1998b). This survey showed that the organisational disposition to change was fractionally above neutral at +0.22 on a scale of +2 to -2 (Garda Siochana 1998b). The survey pointed to the fact that technology had "*been seen as a control device as opposed to an aid*" in the past (Garda Siochana 1998b:27). The change readiness report also warned that "*it is important that PULSE*[43] *is not seen to add any further restrictions to the current ways of working*" (Garda Siochana 1998b:27).

[43] PULSE is an acronym for Police Using Leading Systems Effectively. PULSE was the 'brand' name given to the new enterprise database which emerged from the implementation of the first Garda IS strategy.

An analysis of previous change initiatives was also conducted in 1997 to learn what lessons could be drawn from experience with large scale change programmes conducted previously (Garda Siochana 1997a). Five previous initiatives were analysed under the criteria of leadership, marketing/communications, ownership, implementation, and training (Garda Siochana 1997a). Weaknesses under these heading were identified as a means of learning lessons for PULSE implementation (Garda Siochana 1997a).

The change initiatives were:

- Command & Control IS,
- The Automated Fingerprint Identification System (AFIS),
- Crime Reporting IS,
- Cork Fixed Penalty Tracking IS, and
- Performance Development and Review Project (PD & R).

The weakness identified in the Change Assessment Report (Garda Siochana 1997) were:

- Insufficient emphasis on explaining why the change was required,
- Limited acknowledgement of the difficulty of the change,
- Little celebration of success,
- Lack of clarity on what constituted success, and
- Criticism of the project was not challenged.

6.5.4.4 IS Strategy 2006

The current strategic context is more challenging than the environment in which formal strategic planning began in the early 1990's. New layers of external oversight of An Garda Siochana were introduced by legislation in 2005 and 2006. Periodic reviews of An Garda Siochana had taken place over the decades since the foundation of the organisation. None of these reviews represented a comparable degree of accountability and scrutiny as was imposed by government in the 2005/2006 period. The new stability in Northern Ireland has also created a climate in which the more traditional aspects of law enforcement and public safety can command greater attention.

The next sections turn from the IS strategy context to the organisational experience of IS strategy formation from 1972 onwards.

6.5.5. *IS Strategy Formation*

A number of significant events in IS strategy formation in An Garda Siochana over a period of more than thirty five years are summarised in Figure 6.7 below. A more detailed account of events is set out in the following paragraphs.

Figure 6.7 – Evolution of IS in An Garda Siochana

Year	Evolution of IS
1972	Burroughs (Ireland) contact the Commissioner proposing IS implementation
1972	An IS fact-finding visit is made to the Police IS Unit in Vienna
1973	A Justice Steering Committee approve the commencement of 2 IS projects
1980	The Minister grants new IS appointments following the murder of 2 Gardai
1980	Garda IS are moved from CDPS to a new Garda Computer Centre at HQ
1988	A controversial new IS for emergency call dispatch is installed in Dublin city
1989	A Ministerial Advisory Group commissions an Information Needs Study
1991	Department of Justice IS Unit withdraw from Garda IS development
1992	An ITT for the first phase of the first IS strategy study is issued
1993	An ITT for the Conceptual Design phase of the IS strategy is issued
1996	A contract for the detailed design & build of a number of IS is issued
1999	The first PULSE systems go live in October 1999 despite an IR embargo
2004	The last of four PULSE 'releases' are deployed to the organisation
2004	The IT & Telecommunications Committee 'sign-off' the PULSE exit criteria
2004	An ITT for a new IS strategy study for 2006 – 2011 is issued
2006	The Garda IS Strategy (2006) is sent to the Department of Justice for sanction

6.5.5.1 The CDPS era - (1972 – 1982)

The first active engagement of the Garda organisation on the topic of IS took place shortly before 1972 when an Organisation & Methods (O & M) Officer from the Garda Research and Planning Unit evaluated an American electronic system for recording and retrieving data on stolen vehicles. The O & M officer, who was a Garda Inspector, rejected the system on the basis that the information retrieval capabilities were insufficient to justify the level of data entry required. Shortly afterwards, the Inspector was instructed to liaise with two officials from CDPS and this group was responsible for leading many of the IS initiatives which followed in the Garda in the following years. The team met with a chief superintendent at Garda Headquarters to get some direction on IS policy but made little progress. Top management left the IS decisions to the Inspector who took de facto charge of IS management.

When the decision was made to embark on a programme of 'computerisation', the next major decisions were around what aspects of Garda business to prioritise. A chief superintendent argued at a meeting in the Department of Justice that records of stolen and suspect vehicles should be

computerised because of the renewed nationalist paramilitary activity in areas around the border with Northern Ireland. Records of legally held firearms were the second area to be computerised for the same reason. The few visual display units (VDU) which were available in the early years of the computerisation programme were largely concentrated in border areas, again because of the security situation arising from paramilitary activity. The Department of Justice had argued in favour of computerisation of crime reporting and recording in 1973 because of difficulties in dealing promptly with parliamentary questions. Although it had been agreed that the crime reporting projects would proceed simultaneously with the stolen vehicles one, the systems favoured by the Garda personnel were done first.

The appointment of Patrick McLaughlin as Commissioner in 1978 provided an impetus for IS insofar as the new Commissioner recognised the importance of modernisation and how IS could help achieve his objectives. The murder of two Gardai in July 1980 brought a political response which led to the upgrading of Garda IS infrastructure and the provision of additional management capability in the IS Unit. The changes included a decision to create a chief superintendent post to head the IS Unit in the Garda. Responsibility for application development and sanctioning of expenditure continued to be responsibility of the Departments of Justice and Finance respectively. In July 1980, the Commissioner was informed of a decision by CDPS that 'sensitive Garda systems' would be transferred to a new Garda computer which would be operated by the Garda Siochana itself (Breathnach 1980). It had also been decided that CDPS would continue to develop systems for the Garda and no change was proposed in this policy (Breathnach 1980). Following this decision, a small group of Garda personnel were seconded to CDPS to begin preparation and training for the management and operation of the new Garda computer installation which began live operation in 1982.

Top management at the Department of Finance had decided by 1980 that line Departments had been slow to take responsibility for IS because it was perceived as being managed by CDPS. The move to divest IS back to line departments was also motivated by the fact that IS such as payrolls were problematic and a source of complaints. The Department of Finance considered that these problems and the loss of experienced IS personnel made the existing arrangements for hosting other departments IS untenable.

6.5.5.2 The decentralised era – (1982 – 1991)

A Radio Advisory Committee which included key stakeholders and external experts was set up to oversee the replacement of the radio communications infrastructure in the mid 1980's. The Committee decided to procure a computerised system to provide support for the processing of

emergency and other calls for service in the Dublin Metropolitan area. The Computer Division from the Department of Justice and the Garda IS Unit were not involved in the procurement or installation of the new IS. IS development in the Garda Siochana had become difficult because of shortfalls in resources and resistance to the use of Garda personnel other than in a user liaison or infrastructure management role. There was tension amongst senior management within the Garda and amongst other stakeholders as a result of the approach to the Command and Control project. Subsequent analysis suggested that the system was perceived by users as "*owned by one or two individuals involved in the project*" and lacked the support of line management (Garda Siochana 1997a:24). The implementation of the new system was accompanied by opposition from Garda staff associations and media criticism of its performance despite the fact that the same system was installed in many other jurisdictions.

A high profile investigation into a kidnapping by paramilitary elements provided the impetus for a political decision to review Garda systems and structures in 1989. This initiative enabled Garda IS personnel to investigate opportunities for improved efficiency and effectiveness and led to the proposal by CDPS that consultants be hired to conduct an IS strategy development project for An Garda Siochana (Cussen, Cahill et al. 1989). An advisor seconded from a major semi-State body to participate in the work of the Advisory Group was opposed to the involvement of external management consultants so that the IS strategy project did not proceed. The advisor recommended that an 'information needs' study be carried out by Garda IS resources. Although a series of recommendations were produced from the study, there was no visible outcome from these recommendations at the time.

The withdrawal of the Department of Justice (Computer Division) from their role as technical specialists within the Garda IS programme provided the impetus for Garda proposals for a first formal IS strategy for the organisation. The proposals were initiated and supported by the Deputy Commissioner in charge of Operations. He had seen how IS were used in the USA to generate management information on crime. He had also been supportive of the Department of Justice proposals during the early years of IS that there was a need for better IS for management information. The Deputy Commissioner met frequently with Garda IS personnel and CDPS personnel during the formulation of his proposals for an IS strategy development project (Cussen 1984 - 2004).

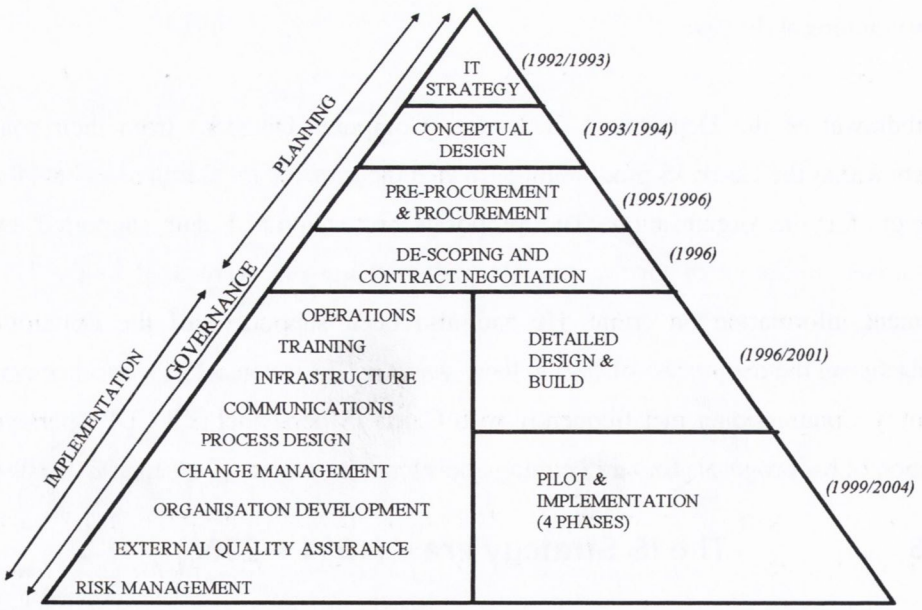
6.5.5.3 The IS Strategy era – (1991 – 2006)

The Deputy Commissioner (Operations) had decided to hire management consultants because of his belief that it would be almost impossible to get significant funding for Garda IS without management

consultancy involvement. He believed that "*consultants had intimate knowledge of computer systems and know how to get things done*". He also believed that the Department of Finance would "*take their word*" and the consultants would create a way in which the Garda system could be computerised. This was to be the first time that external management consultants were involved in IS strategy formation in the organisation. The business priority for IS was to be 'ordinary' crime rather than state security or other law enforcement issues.

In June 1992, the Head of Information Technology in the Garda met with an IS planning adviser in the Department of Finance (CMOD) for a briefing on the approach to be adopted to the hiring of the external consultants (Cussen 1984 - 2004). The CMOD official advised that IS could change the organisation, its functions and it processes. The official stressed that IS should not be seen as a technology issue and that management would need to be aware of the potential of IS to bring about organisational change. He advised that change would need to be addressed up front and that work should be organised on the basis of service delivery rather than tasks. Garda would also need to stress that the consultants would need to stay above the project level. The CMOD official also advised on the phasing of the project and the deliverables (Cussen 1984 - 2004). Key events in the planning and implementation of what became known as the PULSE project are set out in Figure 6.8.

Figure 6.8 – PULSE Planning & Implementation Timeline



The fact that CMOD had set out the phasing and deliverables for each phase of the IS strategy development and implementation meant that the management consultants did not use their own formal methods and toolsets to any significant degree. The approach prescribed for the management consultants (ALPHA[44]) was loosely based on formal approaches such as the SSADM structured systems design method and the PRINCE project management method. During the period in question, ALPHA's comparable methodologies had been upgraded to reflect the new focus on organisational processes and people issues.

As the IS strategy project proceeded, the Deputy Commissioner felt that the management consultants were perceptive while also trying to satisfy his requirements. They had concluded that there was no single central key entity in the Garda data model. This was different to most other organisations. The nature of investigative work meant that Garda personnel expected to search the database on any one of a number of key data fields rather than on a single key field as is more typical of other work environments. The management consultants met with all the stakeholders and tried to build consensus.

The top management perspective in the Garda at this time was that ALPHA brought "*a new concept of how IS could deliver benefits to the organisation*". ALPHA played a vital role in advising and assisting top management in making IS decisions. Garda IS managers understood technology and had a vision but ALPHA supported the vision. Whereas top management relied on Garda IS managers "*there was a conflict insofar as top management was reluctant to fully accept internal IS management advice*". The Garda IS managers were asked by top management if the IS strategy could be delivered but they (top management) were reluctant to accept their assurances on their own. The top management group discussed the risks in the IS strategy implementation and if it could be done. Some were apprehensive. The scale of the training effort required to deliver PULSE was a shock and it carried risks because of the scale of the demand on Garda time and resources.

The top management team, as a policy group, relied on ALPHA to inform them and reassure them. Briefings were provided jointly by IS management and ALPHA. In addition, ALPHA would have had unilateral meetings with top managers from the Garda. "*They (*ALPHA*) had all the access they needed and they availed of the access*". Top management felt that ALPHA had greater expertise and information than internal IS managers. ALPHA had a broader view than internal managers and they brought a more objective view. "*They provided clarification and told you things you might not want to hear*".

[44] ALPHA is a pseudonym for one of the Big 5 global management consulting organisation who were hired by An Garda Siochana for the IS strategy assignment.

A team of 6/7 personnel drawn equally from both the Garda IS Unit and ALPHA worked full time on the IS strategy project (Garda Siochana 1993). One of the Garda IS representatives was impressed by the way in which the management consultants brought structure to bear on what seemed like large tasks. They had approaches which enabled them get to grips with large issues and they were able to synthesise vast amounts of information and make diagrammatic sense of the organisation. "*They were successful because they could subtly challenge your ideas and their mechanisms for validating information worked. They ran it by various people and they were sensitive in how they played back their feelings*".

Senior IS management found that the management consultants could access the Commissioner or Deputy Commissioners and put issues on their desks for consideration or resolution. The management consultants could "*step outside the rank structure*" and they had access and credibility. Senior management consultants were "*dogged and determined and pushed for answers and decisions*".

In July 1994, during the Conceptual Design phase of the IS strategy, ALPHA arranged a residential workshop to carry out two days of brainstorming at a location outside Dublin. The participants in the workshop were decided by the Project Directorate and the objective was to ensure that radical new thinking would emerge. The attendance included senior management from the Departments of Justice. A number of topics which were put forward for discussion did not feature in the IS strategy but emerged many years later as proposals from the Department of Justice. These included the new regional structures, a reserve Garda force, and more intensive civilianisation. An experienced senior officer who attended took the view that priority should be given to the needs of operational Garda personnel.

The management consultants were conscious of the fact that this was their first engagement in the Garda organisation and that management consultants had not been involved in strategic IS initiatives in the past. Their focus was on getting recognition for a good job, and "*getting balance between bringing industry insight to bear on the business, while also listening to the organisational climate, the environment and needs*". There was also a focus on getting organisational buy-in for the IS strategy so that it would be implemented. Buy-in is more important than the actual solution because of the need to ensure implementation. The perception of senior Garda management was that the Deputy Commissioner (Operations) was driving the IS strategy work forward.

Operational Garda managers were impressed by the consultants and felt that they quickly developed an understanding of the organisation and the culture. There was a sense that the consultants had to build trust with the organisation because of the reluctance of police to disclose information. Some of those nearer to retirement didn't engage with the proposed change, probably because they would not be affected by it. Those who were involved through the changes found the experience challenging.

Top level Garda management found that the consultants brought new thinking from abroad and from the private sector. The way they managed, kept records and their approach was new. The consultants were good on process and Garda learned from observing their approach to process and methods. The Commissioner arranged two full day sessions with the top management team to make decisions on the Business Systems Options (BSOs) which had been prepared by the management consultants as possible IS directions – Appendix 6.16.

Management consultants can challenge the status quo and current thinking in a way that organisational insiders are inhibited from doing because of organisational politics and the consultants' freedom from bias. The use of external expertise is important because organisations will only do one or two fundamental IS strategies. Management consultants would claim that the challenge is to reach an IS strategy that is appropriate and that everyone understands. "*If consultants set out to get an IS strategy that wins wide consensus, there will be no real IS strategy at the end*".

The management consultants were conscious of the fact that Garda management was not familiar with the challenges of large-scale IS implementation programmes. Therefore the management consultants invested more time in ensuring that management decisions were fully informed and the consequences of any course of action was fully understood. Whereas there was no particular difficulty in getting decisions made in the Garda organisation, additional time was needed to ensure that the consequences of a decision was fully understood.

The management consultants privately expressed some doubts later about the scope of the IS strategy project because the scale of implementation was very large. These doubts were overshadowed by the fact that an IS strategy has to be bold because it may have to last for fifteen years and decision cycles are also long in the Irish public service. Garda management made the decisions on the IS strategy while the Departments of Justice and Finance provided validation, oversight, and governance.

Within the Project Directorate there was "*healthy tension*" between two of the senior Garda managers. This ensured that different perspectives were explored and different experience was brought to bear so

that it worked well. The ALPHA partner acted as a chairman and as a catalyst in decision making. The Project Directorate exhibited a high degree of "*trust and accommodation*" between the four participants. The "*healthy conflictual*" relationship between the participants meant that issues were argued in detail and matters were agreed without voting or divisions. The management consultancy member of the Project Directorate recognised the tension in the Project Directorate and decided to manage the relationships in the group overtly. "*To do otherwise might lead to the conflicts in the group being played out covertly through political channels*".

The Garda IS perception from middle management was that the management consultants made suggestions which found the right balance between radical and conservative. They were adept at reading the mood of the organisation. They maintained the vision while moving the work along without losing people. "*Their major contribution was to dig to the level they did, come up with plans and emerge with credibility because there was resistance*". The policing elements of the IS strategy came from the Garda managers and the management consultants would have facilitated decision making rather than deciding issues.

Senior user management found that the consultants had structured approaches for tackling the IS strategy implementation tasks. They managed to convert the strategic intent into practical work-plans, processes and applications. The consultants adopted a participative approach in which different user constituencies were involved to a level which might not have happened had consultants not been involved. Decisions were only made after detailed analysis which made it easier to weigh up the pros and cons of the choices available. Top management was briefed by the consultants at a detailed level but there was a sense that some individual senior managers felt that this approach meant that decisions were imposed on them. Senior user management found that changes in the top management team over a lengthy implementation meant that support for some key decisions dissipated over time. The decision to make a change from incident data entry by individual Gardai to a bureau arrangement was the most significant example of this.

Users at middle management level found that the management consultants brought external business knowledge and the ability to co-ordinate and synthesise disparate ideas. The management consultants sought to build consensus in an organisation more used to hierarchical decision making. The ALPHA approach was to identify an issue, gather and analyse the available data, make a decision, and move on.

Pay negotiations with the Garda staff associations were responsible for a delay in implementing the first phase of the IS strategy in late 1999. The Garda staff associations put a hold on implementation until a pay increase was implemented and the negotiating process was more time consuming that the PULSE project schedule could accommodate.

Top management believed that one of the obstacles to the IS strategy was the difficulty in getting the need for change across ground level. Training was also a key factor and training was a difficulty. "*The Commissioner was also trying to get beyond the fact that top managers paid lip service to the IS strategy project but when they left meetings, there was a question as to whether the commitment to selling the IS strategy vision and implementation was really there. The problem comes from a mind set and a lack of understanding that IS strategy requires leadership at all levels of the organisation*".

External pressures for the implementation of an interim warrant tracking system from the judiciary also brought pressure to bear on stakeholder relationships. The Garda College management was strongly supportive of the interim system whereas there was some opposition from the core PULSE management team. The consultants were not involved in the discussions although the interim system did go ahead with technology support from the Garda College.

The sharp increase in the level of immigration and asylum cases, which followed on the economic upturn in the late 1990's, led to urgent development of a comprehensive system for the processing of cases and the identification of illegal entrants to the State (Garda Siochana 2003). The new system incorporated smartcard technology, biometric identification, mobile data terminals and other IS which were not generally available in the Garda organisation at the time (Garda Siochana 2003). The system development and implementation was carried out by ALPHA who had been involved in the development of the PULSE system with the Garda Siochana.

6.5.5.4 IS Strategy formation (2005 – 2010)

IS management in the Garda was the motivating agency behind the formulation of a second IS strategy in 2006. IS management decided that some preparatory work should be done by the IS Division and external management consultants before engaging with Garda management and other stakeholders. This approach was adopted to ensure that the process would not be influenced by organisational politics before it got fully under way. ALPHA arranged a residential workshop attended by the Heads of the IS Division, the Head of IS Planning, the Head of Change Management, and the Head of Telecommunications to discuss the IS strategy (2005 – 2010). The workshop was also

attended by the ALPHA partner responsible for the assignment and the manager conducting the assignment. The workshop was facilitated by an external ALPHA partner.

The deliverables set out in the invitation to tender (ITT) for the IS strategy work presented a problem to ALPHA in terms of the methodology options. In the event, ALPHA decided to structure the work around three phases, an Assessment Phase, a Strategy & Analysis Phase, and a Planning Phase. The findings would then be reverse-engineered into the deliverables set out in the ITT. ALPHA decided not to use their proprietary methodware. ALPHA's methodware had been developed as a response to the new challenges associated with the emergence of client/server technologies in systems implementation and the inadequacy of the earlier iterative methodologies.

ALPHA has a group within the organisation which provides tools, checklists and questionnaires for conducting IS strategy projects. These approaches were not used in the Garda IS strategy project. The formal approaches used by ALPHA are based on repeatability and rigour. The approach focuses on integration although there is no single 'best way' to approach the work. The formal methodology has been used in private sector organisations in Ireland. A key objective of the current IS strategy method is to ensure that IS expenditure is focused on key business areas rather than spread indiscriminately across all areas. In the private sector example, the tools used showed that IS expenditure was focused on non value-added activities and it highlighted the lack of alignment between IS and profitability.

ALPHA interviewed the top management team to identify business requirements. Each of the Assistant Commissioners had already identified a number of systems requirements affecting their own particular areas. The IS strategy development process was conducted with less intervention by top management than had been the case in 1992/93. There was some concern by the management consultants as to whether Garda management would be able to move beyond the residual issues with PULSE to focus on an IS strategy for the longer term

ALPHA met more than five hundred people during the IS strategy consultation process. A small number of the meetings served little strategic purpose but were necessary to avoid the perception that stakeholders were not consulted. Some of those consulted had little input to the IS strategy and a small few sought guidance from the project group on the nature of the input they should provide. Top management in the Garda believe that wide consultation was necessary in the IS strategy project to get user buy-in and ownership.

The challenge for management consultants in the project was to create a mandate amongst senior management to use IS to bring about change. This challenge is the same in both private and public sectors. Management consultants believe that they get access to top decision makers and do not have the same fight for credibility that internal IS managers have. The IS strategy project was a political process and the consultants *"have to pick up on agendas and find out who is looking for what particular answer"*. The internal IS management constituency initiates the work *"but the consultants have to get through a maelstrom of agendas to build towards a solution"*.

The major decision making in the IS strategy came from the Project Directorate and the Deputy Commissioner (SRM). The general body of those consulted were somewhat awed by the process or silently co-operative. Some of those interviewed needed direction and the management consultants provided guidance on occasions. The level of strategic direction coming from the consultation process was limited and the departments of Finance and Justice did not shape the IS strategy process. There was a sense that the Department of Finance would not exercise its influence at the IS strategy development stage but would prefer to do so at the point where firm proposals for expenditure were eventually submitted through the sanctioning process.

The hierarchical structure of the Garda Siochana was evidenced by the fact that controversial issues were closed when they were decided at the appropriate level. The proposal for a strategic partnership had been opposed by IS management, especially by civilian managers. The Commissioner was impressed by the fact that the proposal would free up Garda personnel for operational duty and he endorsed the decision. The proposal would probably not have emerged had management consultants not persisted with it and it may not have survived the internal opposition.

Discussions about outsourcing, strategic partnerships, and costs took up a good deal of time during the IS strategy project. There was also an amount of discussion about the responsibilities of the Commissioner and the ITTEC in approving the proposals contained in the IS strategy. An innovative aspect of the IS strategy (2006) was the proposal to decouple the technical architecture which removed a constraint by which changes had to be done serially and it was not possible to have two major development projects running in parallel. This will be beneficial at a time of major change.

The IS management constituency found that the external management consultants brought credibility to the IS strategy process. This constituency also considers that it is difficult to implement change in the Garda organisation because of its size and the Dublin versus rural split. There is a tendency for managers in different divisions and districts to decide their own priorities and things are sometimes

left to individual managers to decide. IS management also found that the latest IS strategy was informed by individual business users seeking their own particular solutions. The IS strategy differs from the earlier IS strategy which was driven by the needs of the operational Garda and a vision.

Senior IS management found that the management consultants came up with new ideas and provided business advice in which one could have confidence. Senior management are limited in their choice of trusted advisers and management consultants are valuable for their advice. Management consultants exist to make a profit and it is necessary to balance their advice with that fact. A trust relationship was developed with individual consultants but not necessarily with all consultants. Whereas there were a number of external stakeholders consulted in the IS strategy project, the management consultants showed determination to deliver results whereas other stakeholders were less focused on results and success.

The IS strategy project involved more than sixty meetings with more than 200 participants (Garda Siochana 2006). The participants included representatives of all the regions and specialist sections, the staff associations, and external stakeholders such as the Courts Service, The Department of Justice, the Department of Finance (CMOD), the Office of the Director of Public Prosecutions and others (Garda Siochana 2006).

The cost of fully implementing the IS strategy (2006) would be €600 million. The level of cost is such that senior management in the Garda are sceptical that it will be sanctioned as a single package in that amount. Garda senior management believes that it will probably be necessary to cherry pick pieces from the overall package and look for an approach to implement it incrementally.

In reflecting on the IS strategy project in retrospect, the IS management constituency judges that it was a mistake to include proposals for the outsourcing of development and support to a single strategic partner. This proposal is unlikely to find favour with the sanctioning Departments and no approval has been obtained for the IS strategy. The IS strategy proposals were approved by the Commissioner and the IT & Telecommunications Executive Committee before they were submitted to the Department of Justice.

6.5.6 IS Strategy Content

6.5.6.1 IS Strategy 1992/1993

The IS strategy was widely accepted in the organisation and its broad thrust was to consolidate all the information and intelligence held by the Garda organisation into a single central repository. The focus on a consolidated database arose from top management's concern that operational Garda personnel should have access to a rich data repository to counter increasing levels of crime and the ongoing paramilitary campaign by republicans and others. The IS strategy was different from many others in the public sector because, at the time, it was rare to have a totally "green field" approach. The most important decision in the Garda IS strategy was the commitment to information rather than applications. The other major innovation was the commitment to organisational change management and what it would take to get results. The technology direction underlying the IS strategy was to be a messaging architecture with an intelligent client PC workstation connected to a central server (Garda Siochana 1994a).

6.5.6.2 ICT Strategy 2006

The priority in the IS strategy was to fix what was in place and fill gaps which were not being addressed. The Commissioner was anxious to get more Gardai out of back office roles and into front line operational policing. There was sense that the aim was consolidation rather than seismic change. Some senior management felt that the earlier IS strategy in 1992 had set high objectives but that important operational units were left behind and their systems requirements had not been addressed. The threat to state security that had existed at the time of the first IS strategy had diminished but new threats from gangland killings, drugs and major demographic change had brought new functional priorities which were not being addressed.

The ICT Strategy (2005 – 2010) recommended the selection of a 'strategic IT partner' to *"implement, manage and maintain the IT applications listed in the strategy"* (Garda Siochana 2006:4.4). The new applications recommended are listed at Appendix 6.15. A number of niche requirements, which would not have enterprise-wide impact were also identified and are listed at Appendix 6.17. The ICT Strategy (2005 – 2010) recommended a number of technical architecture changes to the central systems and application software infrastructure. The changes proposed also include increased mobile capability, enhancement to the security architecture, and improved document management capability (Garda Siochana 2006). The IS Strategy (2005 – 2010) recommended a number of changes to the

telecommunications infrastructure, new telecommunications applications, security and infrastructure measures, and a range of technical and operational requirements (Garda Siochana 2006).

6.5.7 *IS Strategy Outcomes*

The IS strategy of 1992/1993 met the expectations of Garda personnel involved in its formation although the implementation was slower than expected. The PULSE experience made Garda personnel more aware of what could be achieved by IS and this was apparent when meetings took place with users to formulate the new IS strategy in 2004. Users are more aware of what they want now although they tend to see things in functional rather than strategic terms. The IS strategy of 1992/1993 was an agreed one but there was little realisation in the organisation of how painful the changes it brought would be. By 2006, Garda management knew that major change would be difficult and that much of the complaints about inefficiency in the PULSE system were based on organisational factors rather than IS factors.

Top management were initially frustrated and disappointed with the delivery of PULSE but, as the implementation problems were resolved, they were satisfied. The vital aspect of the IS strategy was on the aggregation of data from more than seven hundred Garda stations. Information was being lost to the organisation and sharing of information is essential. Top management believed that there was a change in attitude to IS over the years. Gathering of information and intelligence had been paper based for many years and it became clear that it couldn't be effective that way. Garda people had been comfortable with the paper systems and they didn't want to accept change or movement away from the status quo. The cutover to PULSE brought duplicated effort for a period but acceptance grew over time. There is a top management view that, in retrospect, PULSE should have been implemented in a more incremental way to ease the organisation more slowly into the changes. This view is informed by the fact that "*there had been an expectation that we only had to switch the new system on and it would work. When that didn't happen, a defeatist attitude emerged around the IS project*".

The most innovative aspect of the 1992 IS strategy was the move from the old mainframe system to the green field PULSE infrastructure. The data entry effort required to feed the PULSE database took a lot of operational Garda personnel off the street. This aspect of PULSE was exaggerated because people tended to attribute tea breaks and time spent on the phone to PULSE. Having Gardai do their own data entry was worthwhile because it made them IS-literate, was good learning and also had an intelligence value. The changeover to PULSE was a steep learning curve for the organisation but top management would do the same again. Data entry was recently re-assigned to back-office, civilian

data entry personnel in Castlebar. The new arrangement has improved data quality and incidents are entered more quickly. The PULSE exit criteria, which signalled satisfactory contract completion between Garda and ALPHA, were signed off by the IT Programme Board in April 2004 and by the ITTEC in June 2004.

User management formed the view that the PULSE project gave the organisation a sense of modernisation and the outcome was positive, especially outside major urban areas where little IS facilities existed in the past. Garda management now uses trend data on crimes and offences to contrast levels of performance between regions, divisions and districts.

The management consultancy constituency sees a challenge for Garda management in managing all the constituencies who can initiate change in the organisation. The establishment of new overseeing bodies creates the possibility, in the short term, of piecemeal changes which could be counterproductive.

6.5.8 Insights on IS strategy formation

IS were first implemented in An Garda Siochana in 1972 and the most significant initiatives in the IS field over the following twenty years tended to emerge as a response to state security crises rather than settled strategy. The emergence of a new top management team at the beginning of the 1990's led to a top management initiative aimed at making IS central to organisational strategy. The combined vision of the new Garda management team, combined with senior officials in CMOD who understood the dynamics of large-scale organisational change, provided a powerful guiding coalition for IS strategy.

The management consultants carried out an organisational diagnostic survey which identified weaknesses in the process dimension of the organisation. The diagnostic group cautioned Garda management against the introduction of greater rigour around processes. They also identified a marginally positive attitude to change. The management consultants found it necessary to manage organisational conflict during the client assignment. Internal management was impressed by the consultants' approach to tasks and their ability to synthesise large amounts of information.

The consultants enjoyed the confidence of top management who were more open to accepting consultants' advice than the advice of their internal IS managers. Top management were apprehensive about the risks in the IS strategy implementation and valued the consultants opinion. Top management

was also of the view that consultancy endorsement was necessary if the new IS strategy was to be approved and funded.

6.6 Conclusion

The chapter began by outlining the public sector context within which the IS strategy of three partnering organisations evolved over the decades. The IS experience of each of the organisations was explored in the succeeding sections. It is clear that the introduction of management consultants coincided with a tipping point in the evolution of IS in each of the organisations. A change of top management was also judged a factor in the introduction of change. The IS strategy experience was a learning one for the management team in each of the case study organisations. Management in each of the case study organisations encountered resistance and political behaviours in the course of the change initiatives. Despite the fact that there were some technical problems exhibited in the cases, the behavioural issues were of equal or greater prominence.

The case study experiences provide a level of validation of the Department of Finance (2006b) assessment that management consultants provide 'expert analysis and advice' to public sector clients. The cases also provide support for the Department's view that the consultants can provide specialist expertise as well as objective and independent advice (Department of Finance 1999).

Chapter 7 turns to a cross-case analysis of the case data to show how external management consultants contribute in IS strategy formation in the public sector.

7 MANAGEMENT CONSULTANTS' CONTRIBUTION IN IS STRATEGY FORMATION

"Much of the 'why' of change is derived from an analysis of inner and outer contexts, and the 'how' of process can be understood from an analysis of process"

(Pettigrew 1987:658)

7.1 Introduction

The evolution of information systems (IS) management in three public sector organisations in Ireland was traced in the preceding chapter. The wider public sector context, within which this evolution took place, was set out at the beginning of the chapter to provide a deeper understanding of the IS strategy formation experience in the three organisations.

This chapter will look at how the data from all three cases was subjected to detailed analysis in order to contribute to the development of theory on how management consultants contribute to IS strategy formation in the public sector. The approach to analysis, which was set out in detail in chapter 5, is revisited briefly at the beginning of the chapter in order to provide context to what follows.

The analysis culminated in the emergence of a typology of management consultants' contribution to IS strategy formation in the public sector. The typology is a multi-dimensional one which provides a wider understanding of how the management consultancy contribution is played out in practice. Each of these dimensions is elaborated in detail through the chapter.

Four separate management constituencies participated in the research endeavour. These were top managers, business managers, IS managers, and consultants. The data analysis showed differences in the extent to which each of these four constituencies associated the management consultants with a particular mode of management consultancy contribution in IS strategy formation. Accordingly, the analysis is extended further by elaborating on how the different consultancy contribution modes in the typology tended to be associated with each of the four management constituencies.

The contribution of management consultants to IS strategy formation is also situated within the wider theoretical IS strategy context as it emerged during the literature review which was conducted

throughout the course of the research endeavour. This aspect of the research was important in order to identify any consistencies or discrepancies between the new findings and existing theory.

The claim for originality of the newly emerged theory is set out at the end of the chapter.

7.2 The approach to analysis

The case narratives which were set out at Chapter 6 provided an opportunity for an initial analysis of the case data. Langley (1999) has identified narrative as an appropriate vehicle for the analysis of process data in those instances where an interpretive approach to theory building has been chosen. Longitudinal case studies have also been recommended as the appropriate approach for qualitative investigation of organisational processes (Hinings 1997). The importance of the wider organisational and sectoral context to the narratives has been underlined in the observation that meaningful process research needs to be linked through time and context (Chakravarthy and White 2002). Accordingly, the case narratives have attended to these dimensions of the investigation.

Chapter 5 set out the approach taken to the coding of data segments from the individual cases and also the steps involved in data reduction through the identification of higher level concepts and categories. The coding process began with the identification of a start-list of twenty-five codes into which blocks of text from the cases could be aggregated for second level analysis. The codes were decided upon by the researcher on the basis of the research question and the nature of the data which emerged from the data collection phase of the work. The code list grew to forty-one as the coding process progressed and additional dimensions of the case data revealed themselves. A total of 1,383 text blocks were associated with the extended code list of forty-one codes. The text blocks, and the 388 concepts abstracted from them in step 2 above, encompassed multiple dimensions of the case data and provided a basis on which a diverse set of research questions could be answered.

In the next phase of the analysis, the 1,383 text blocks were trawled to abstract those which contained data pertinent to the research question and to a reduced set of codes relating to the research question. Codes such as 'participant', 'consultant', and 'contribution', were amongst the seven codes from which 146 text blocks were abstracted for the further analysis in step 3 of the process. In step 3 of the analysis process, 42 concepts were abstracted from the data. These concepts were formed by extracting concepts from the data which represented a higher level of abstraction of the data.

In the fourth and final phase of the analysis, the 42 concepts and the associated data was trawled again to bring the data abstraction to a further level of refinement. Further patterns were sought within the

concepts and the case data to build a coherent set of categories which would unify the concepts abstracted from the analysis and the case narratives. A total of four categories were developed from the concept set. These four categories were labelled 'Ally', 'Broker', 'Innovator', and 'Engineer'. The four categories and their associated concepts are shown at Figure 7.1.

Figure 7.1 - Development of the Management Consultant Contribution Typology from the Concept Set

CATEGORIES	Ally	Broker	Innovator	Engineer
CONCEPTS	Commitment Confidence Credibility Empowerment Objectivity Persuasion Reassurance Resistance Risk Validation	Access Accommodation Apolitical Balance Conflict Consensus Facilitation Inclusiveness Independence Opposition Sensitivity	Catalyst Challenge Change Content Innovation Novelty Options Stimulus Suggestion Vision	Advice Experience Expertise Methods Process Support (infrastructure) Support (technical)

The four categories and their associated concepts provided a resource for the construction of a typology of how management consultants contribute in IS strategy formation in the public sector. The four categories acted as labels for four distinct management consultancy contribution modes, while the associated concepts enabled additional dimensions of the consultants' contribution to be revealed. In addition to the categories and concepts shown at Figure 7.1, the case study narratives and the coded text blocks were also useful in theory construction and sense-making.

7.3 The Contribution Typology

The typology of management consultants' contribution in IS strategy formation in the public sector, which emerged from the analysis is shown at Figure 7.2. The typology summarises four distinct and distinguishable modes of management consultancy contribution. These modes of contribution are assigned labels of 'Ally', 'Broker', 'Innovator', and 'Engineer' respectively. Apart from the different labels, the four modes of contribution are differentiated by means of seven other characteristics which are included in the typology. All the elements of the typology emerged from the analysis of the case data and the case data is referenced in the paragraphs which follow.

Figure 7.2 - Typology of Management Consultants Contribution in IS Strategy Formation

		MODE OF CONTRIBUTION			
		ALLY	**BROKER**	**INNOVATOR**	**ENGINEER**
CHARACTERISTICS	**Constituency Focus**	Top Management	IS Managers/ (Consultants)	Top Management	IS & Business Management
	Dominant Engagement Focus	Empower	Facilitate	Advise	Support
	Value proposition	Objectivity	Independence	Change Orientation	Experience
	Basis of Influence	Credibility	Sensitivity	Vision	Domain Expertise
	IS Strategy focus	Context	Context	Content	Process
	Change orientation	Dialectical	Dialectical	Teleological	Teleological
	Decision orientation	Proactive	Reactive	Proactive	Reactive

The first characteristic of the typology is labelled **constituency focus**. This characteristic of the typology identifies the management constituency who most associate with that particular contribution mode. For example, the top management constituency is the one which most associates the management consultants with the 'Ally' mode of contribution. This characteristic is further elaborated upon later in this chapter.

The second of the characteristics identifies the **dominant engagement focus** of the management consultancy constituency in IS strategy formation in the public sector. In the 'Ally' mode of contribution, for example, the management consultant contributes primarily by 'empowering' management in their dealings with other external and internal stakeholders in IS strategy.

The third characteristic of the typology identifies the **value proposition** which the management consultants exhibit when in that particular contribution mode. In the 'Ally' mode, the management consultant brings 'objectivity' to bear. Both the contribution and the management consultant value proposition provide a wider sense of the overall contribution of the management consultants.

The fourth characteristic in the typology identifies the **basis of influence** of the management consultancy constituency in that particular mode of contribution. For example, 'credibility' is the primary basis of influence which was identified by stakeholders when the management consultants were in the 'Ally' mode of contribution in IS strategy formation.

The fifth characteristic of the typology identifies the **IS strategy focus** associated with that particular contribution mode. The 'content', 'process', and 'context' dimensions of IS strategy have provided a useful lens for academic researchers in the past (Waema and Walsham 1990a; Waema and Walsham 1990b; Chakravarthy and Doz 1992; DeWit and Meyer 2004) and consideration of these aspects in the typology and the analysis suggested potentially useful insights for academia and practice. For example, in the 'Ally' mode of contribution, the focus of the consultants' contribution was on the 'context' dimension of the IS strategy rather than on the 'process' or 'content' dimensions.

The sixth dimension of the typology at Figure 7.2 deals with the theory of process, or **change orientation**, underpinning the particular mode of contribution (Van de Ven 1992). Van De Ven (1992) suggests that a theory of process should consist of statements that explain how and why a process unfolds over time. Accordingly, this aspect of the typology is important for the purpose of situating the theory within the wider meta-theory of process. A number of meta-theories of process have emerged in the different academic disciplines and these have been consolidated into four general categories of (a) lifecycle, (b) teleological, (c) evolutionary, and (d) dialectical process theories (Van de Ven 1992). Each theory of process assumes a different 'motor' of the process. The process 'motors' have been categorised as (a) programmed (b) purposeful (c) conflict/synthesis and (d) competitive selection (Van De Ven and Poole 1995).

The seventh dimension of the typology sets out the **decision orientation** of the management consultants in that particular contribution mode. For example, in the 'Ally' mode of contribution, the consultant adopt a proactive mode of engagement with IS strategy formation.

Each dimension of the typology is important for the purpose of providing a fuller explanation of the particular contribution mode and also for distinguishing between the four modes of contribution. The

four contribution modes included in the theoretical typology are described in greater detail in the following paragraphs.

7.3.1 Management Consultant as Ally

The management consultant as 'Ally' emerged strongly in the analysis. The dominant focus of the management consultancy constituency in this mode of contribution is 'empowerment'. Consultants were used to endorse proposals both to internal stakeholders and to the sanctioning departments of Finance and Justice. Top management found that, without a consultant's report, it was hard to make things happen. The case data showed that an IS strategy which was done without management consultants would not have the same status. Top management in one of the cases were of the view that, if they formulated an IS strategy without consultancy assistance, it would not be accepted by CMOD no matter how good it was. There was also a sense that, in order to obtain funding, consultancy support was necessary. The issue of funding was also relevant because CMOD had advised departments that a current IS strategy was necessary in order to obtain delegated sanction to spend the IS budget. The case data showed that management consultants contributed significantly in IS strategy formation by empowering management who otherwise would have had difficulty in securing the support of the sanctioning departments and their own stakeholders for large-scale IS strategy formation programmes.

The typology shows that the management consultants contributed by empowering managers when in the 'Ally' mode of contribution. The consultants' basis of influence in empowering managers was their credibility. The case data showed that managers relied on the credibility of a consultant's report to make things happen. One top manager pointed to the fact that he was reluctant to accept the advice of his own IS managers and was more trusting of the management consultants. He also pointed to the fact that he was reluctant to rely on internal advice. The consultants enjoyed a high level of credibility because they told top management things they might not want to hear and they gave managers a 'heads up' on what was really happening in their organisations. In contrast internal IS managers talked of fighting for credibility. Management consultants were also shown to have lent credibility to IS strategies with other stakeholders such as trade unions and the sanctioning departments. The case data also showed that top managers relied on their outside advisers to inform them and reassure them. Reassurance and trust were important to management because of their perception that large-scale IS strategy formation programmes are a risky undertaking. One top manager observed that risk taking is not rewarded in the public sector and consultants can provide an imprimatur.

In addition to their credibility, the case data showed that objectivity was the value proposition of the management consultants in the 'Ally' mode of contribution. The data showed that the consultants were viewed as bringing an unprejudiced view to the IS strategy assignment because they had no organisational agenda. There was a perception by clients that the fact that they were external to the organisation was a helpful factor. There was also a sense that organisational politics was served by having an outsider make a particular recommendation. One informant observed that the process had as much value as the result. The status of the management consultant as an 'objective outsider' resonated also with top management who were shown earlier to be reluctant to fully accept internal advice.

The contribution of the management consultants is focused on the 'context' dimension of IS strategy when they are contributing in the 'Ally' mode. The preceding paragraphs suggest that their contribution is aimed at securing support for the IS strategy proposals and neutralising opposition and political pitfalls. This view is consistent with the case data which associates this mode of contribution with terms such as validation, risk, persuasion, and reassurance. The 'Ally' mode of contribution is about empowerment which is focused on context rather than on the IS strategy content or process.

The sixth dimension of the typology at Figure 7.2 deals with the change orientation underpinning the particular mode of contribution (Van de Ven 1992). Dialectical theories of process are based on the assumption that change occurs as a result of a loss of equilibrium or inertia when opposing forces, events, or values go out of balance or are disturbed (Van de Ven 1992). Van de Ven (1992) points out that this can happen when another organisation or entity from within or outside the organisation mobilises sufficient strength, power or legitimacy to overcome the existing status quo to produce a new state of affairs. The management consultant as 'Ally' has been shown to empower organisational stakeholders to a sufficient degree to overcome opposition to large-scale IS formation proposals. The consultants are perceived as having credibility as a result of their objectivity and outsider status. The consultants' focus has also been shown to be on the organisational context rather than on the IS strategy process or content per se. The 'Ally' mode of consultancy contribution is based on a dialectical theory of process where conflict and synthesis are underlying change orientations.

7.3.2 Management Consultant as Broker

The management consultant as 'Broker' was also strongly supported by the case data. The dominant focus of the management consultant in this mode of contribution is 'facilitation' and managing organisation tensions. The case data showed that the management consultants engaged in a significant amount of consultation in all the cases. It was also necessary to cajole people where they did not agree and also to put words in people's mouths on occasions. The consultants would run proposals by

several people and they were conscious of the need to progress assignments without losing support from amongst stakeholders. The case data showed that, in one of the case organisations, the consultancy partner had to manage conflict amongst the management team and ensure that the conflict did not migrate to the political channels in the organisation where it would be more difficult to contain. In another case the consultants were successful in building consensus for the centralisation of funds which had been resisted successfully in the past. The management consultants were also successful in promoting the idea of strategic outsourcing in one organisation where it was opposed by IS management and would not have emerged without consultancy involvement. Organisational stakeholders observed that the consultants tended to find the right balance between radical and conservative proposals which would win support. The consultants saw their challenge as being to create a mandate amongst senior management to use IS for something different.

The management consultants' basis of influence in their 'facilitation' contribution was 'sensitivity'. There was recognition that organisations have tensions and that these tensions have to be managed. The case data showed that there was a consciousness amongst stakeholders that the fact finding phase of the IS strategy assignment provided interviewees with an opportunity to say what they wished to say or convey in private to the consultants. There was also a sense that the high degree of consultation conducted by the management consultants served also to mitigate fear and concern amongst stakeholders. The consultants were conscious of sensitivities in the assignments and sought to manage these constructively. In one example, the consultants crafted a section in one of their reports to accommodate a divergence of views amongst top management which was successfully obscured by the way in which it was presented. Organisational stakeholders were conscious of the management consultants' skills in presenting material in a sympathetic manner. Organisational stakeholders observed that the external consultants were quick to tap into the culture of the organisation. There was also a sense that the consultants set out to build trust with the organisation if they were to be made privy to the kind of information they needed to be successful.

In addition to their basis of influence, which was sensitivity to the organisational context, the management consultants exhibited a value proposition of 'independence' in the contribution mode of 'Broker'. The data showed that management consultants could challenge the status quo because they were perceived as having no particular bias or stake in the politics of the organisation. The perception of the stakeholders was that the consultants could step outside the organisational hierarchy and they had independence to access different levels in the organisation and address any issue. There was a sense that the external consultants could challenge organisational insiders because they were independent of the organisation structure and politics.

The contribution of the management consultants is focused on the 'context' dimension of IS strategy when they are contributing in the 'Broker' mode. The preceding paragraphs suggest that their contribution is aimed at building consensus for particular courses of action, fostering participation in the consultative process, building confidence in IS-enabled modernisation proposals, and seeking accommodation amongst stakeholders. The 'Broker' mode of contribution is about facilitation amongst stakeholders in IS strategy formation and, as such, it is focused on the 'context' dimension of IS strategy rather than the 'content' or 'process' dimensions.

The 'Broker' mode of management consultancy contribution is consistent with a dialectical meta-theory of process (Van de Ven 1992). The external management consultant as 'Broker' is able to use his independent status and facilitation skills to overcome organisational tensions and effect a change to the status quo. The change orientation in this particular theory of process is conflict and synthesis.

7.3.3 Management Consultant as Innovator

The management consultants' contribution as 'Innovator' was the least well represented of all four contribution modes in the public sector case data. The dominant focus of the management consultancy constituency in this mode was 'advice'. In one of the case organisations the management consultants were perceived as challenging the status quo by advising that a strategic partnership be developed with an external service provider. The consultants championed this proposal despite opposition from the internal IS management constituency. The proposal was ultimately supported by top management on the basis that in-house personnel would be released for more strategic deployment. In another of the case organisations the management consultants identified a potential e-government pilot project which they proposed as a good strategic option. In two of the case study organisations, the management consultants were responsible for proposing the construction of an enterprise-wide data model and they recommended an enterprise-wide perspective on data and information. There was a sense that this strategic view of data would not have emerged at the time without the consultants' prompting. The external advisers were also considered to be skilled at stimulating workshops and increasing awareness of the potential of IS to deliver benefits. They were credited with bringing a new concept of how IS could be harnessed to good effect. The data also showed that management consultants prepared option documents and that, although they would offer advice on the options, skilful preparation of option documents was similar to giving advice. In one of the cases, the top management team met in day-long sessions to decide on comprehensive business systems option (BSO) documents. The data also showed that the consultants provided technology advice in addition

to advice on functionality. The proposal to decouple elements of the fundamental technology architecture was labelled as 'innovative' by observers in one organisation. Client organisations also expected the consultants to identify technical opportunities and new ways of doing things.

The basis of influence of the management consultants in advising the client organisations was their 'vision'. The consultants brought new thinking from outside Ireland and from the private sector. They challenged existing thinking and they developed new scenarios. They identified high level strategic direction and the client organisations expected them to see patterns and trends before they emerged generally. The consultants were able to envisage the worth of an enterprise data model, of strategic outsourcing, and of electronic access channels for public sector organisations. The case study organisations were frank in acknowledging that some of these initiatives would not have emerged but for the external consultancy contribution and vision.

In addition to their vision, the case data showed that a 'change orientation' was the value proposition of the management consultancy constituency in the 'Innovator' mode of contribution. Clients pointed to the strong emphasis on organisational change management as one of the innovations that the consultants brought to the IS strategy. One of the obstacles to the IS strategy was the difficulty encountered in promoting a change agenda at ground level. The management consultants conducted a formal assessment of change readiness in one of the case study organisations and they also conducted an analysis of previous large-scale change initiatives. The consultants used these assessments to develop prescriptions for organisational change and they offered specific advice against the introduction of greater levels of IS-enabled controls in re-engineered processes in one of the cases. The challenge of organisational change was highlighted in another of the cases in which the client pointed out that, if management is considering anything other than business as usual, it's wise to get a strategic view from the outside. Management consultants are considered to bring a change perspective to bear in the 'Innovator' contribution mode.

The contribution of the management consultants is focused on the 'content' dimension of IS strategy when they are contributing in the 'Innovator' mode. The preceding paragraphs show that their contribution is on innovative uses of technology and strategic use of IS to effect organisational change. The 'Innovator' mode of contribution is geared towards the introduction of best practice in the use of IS from the private sector and from other countries. The importance of this particular aspect of the consultants' contribution can be inferred from the fact that the content dimension of IS strategy is the one for which CMOD have identified a set of mandatory deliverables in public sector invitation to tender (ITT) documents for IS strategy assignments.

The 'Innovator' mode of management consultancy contribution is consistent with a teleological meta-theory of process. Teleological process theories assume that change may occur purposefully through a range of alternative possibilities that are informed by choice and rationality (Van de Ven 1992). Outcomes are not predetermined and external circumstances may alter the trajectory of change or upset equilibrium states (Van de Ven 1992). The motor of change in a teleological theory of process is the actor or unit who acts creatively to enact the process (Van De Ven and Poole 1995). The 'Innovator' mode of management consultancy contribution is consistent with a rational/purposeful view of the IS strategy process.

7.3.4 Management Consultant as Engineer

The management consultant as 'Engineer' is the fourth mode of contribution in IS strategy formation in the public sector. The dominant focus of the consultants in the 'Engineer' mode is 'support'. In all three cases the management consultants were retained to progress the IS strategy assignment following an invitation to tender (ITT) process. Whereas the deliverables were specified in the ITT, the method used was left to the consultants subject to some general guidelines. In two of the cases the consultants did not use their in-house method because of the need to focus on the deliverables prescribed in the ITT. The case data shows that the participating organisations didn't have the level of expertise required and the consultants were chosen because of their expertise in this area.

The management consultants' basis of influence in the 'Engineer' mode was 'domain expertise'. The clients in one of the cases reported that the IS strategy assignment was completed in three or four months whereas it would have taken in-house personnel twelve months to complete. The consultants were successful because they were able to bring strategy management expertise to the work. Another of the case organisations felt that the consultants' main contribution was that they brought structure to bear on what seemed a very large task. The consultants were also able to co-ordinate and synthesise disparate ideas and they brought best practice to bear on the assignment. They had intimate knowledge of computer systems and how to get things done. Decisions were easier to make because of the level of analysis which they provided. The third case organisation remarked on the consultants' contribution through their project management strengths and the fact that they had templates for conducting tasks. They also applied templates to the work and adopted a formulaic approach in what they did.

In addition to their domain expertise, the analysis showed that experience was the value proposition of the management consultants' in the 'Engineer' mode of contribution. Informants were of the view that client organisations in the public sector could not expose their people to the experience that the consultants had. The management consultants brought previous successful experience from other organisations and environments and they also had a track record in the field. They also brought their international experience to the public sector assignments. There was a sense that the outside experts could demonstrate that a particular approach is practical and feasible by bringing best practice from other organisations.

The contribution of the management consultants is focused on the 'process' dimension of IS strategy when they are in the 'Engineer' mode of contribution. The preceding paragraphs show that their focus is on the delivery of the IS strategy assignment rather than on aspects of organisational or external context or content dimensions. This aspect of the 'Engineer' mode of contribution is a further differentiator between this particular contribution mode and the other three modes.

The 'Engineer' mode of management consultancy contribution is consistent with a teleological meta-theory of process. Teleological process theories assume that change may occur purposefully through a range of alternative possibilities that are informed by choice and rationality (Van de Ven 1992). Outcomes are not predetermined and external circumstances may alter the trajectory of change or upset equilibrium states (Van de Ven 1992). The motor of change in a teleological theory of process is the actor or unit who acts creatively to enact the process (Van De Ven and Poole 1995). The 'Engineer' mode of management consultancy contribution is consistent with a rational/purposeful view of the IS strategy process.

The next section turns to considering the different perspectives of the four management constituencies who participated in the research endeavour. The typology at Figure 7.2 included a 'constituency focus' for each of the four contribution modes and this aspect of the typology has not been elaborated upon thus far in the chapter.

7.4 Management constituency perspectives on the contribution of management consultants

The participation of four different management constituencies in the research endeavour provided the opportunity for deeper analysis of the case data than would have been possible without this level of participation. The additional analysis consisted of examining the data associated with each of the four contribution modes to identify whether there were any discernible differences in the perspectives of

top managers, business managers, IS managers, or management consultants to be found in the data. The additional analysis was carried out by means of examining the coded text blocks associated with each of the four contribution modes to ascertain the extent to which the sentiments in the individual coded text blocks could be attributed to one or other of the four management constituencies who participated in the research. The analysis was described in detail in Chapter 5 with an extract from the analysis included at Figure 5.9.

The perspectives of each of the four management constituencies are based on the extent to which each constituency is represented in the coded data associated with that particular contribution mode. For example, top management was represented to a higher extent than any other constituency in the 'Ally' data and it is possible to accurately measure this in the data. The degree of association by the four management constituencies with each of the four contribution modes is set out in Figure 7.3.

Figure 7.3 –Level of Association[45] between management constituencies and contribution modes

CONSTITUENCY	DEGREE OF ASSOCIATION WITH EACH CONTRIBUTION MODE			
	ALLY	BROKER	INNOVATOR	ENGINEER
Top Managers	**51%**	3%	**41%**	8%
Business Managers	22%	17%	7%	43%
IS Managers	16%	28%	37%	**46%**
Consultants	11%	**53%**	15%	3%

7.4.1 The 'Ally' Contribution Mode

The top management constituency was the one which most strongly associated the external management consultants with the contribution mode of 'Ally' – see Figure 7.3. The top management group was the one most associated with this particular perspective on management consultancy contribution although there was a lower level of association amongst the three other management constituencies who participated in the research. Awareness amongst top management was greater than that amongst all the other combined constituencies. The 'Ally' mode of contribution was the one with which top management was most associated of all four modes of contribution.

Business management was also conscious of this dimension of management consultancy contribution although it was not the one with which that constituency was most strongly associated. This finding

[45] The level of association was determined by counting the number of text blocks associated with each mode of contribution and determining the percentage of these text blocks which was attributable to each management constituency.

points to potentially different perceptions between top management and business management on the contribution of management consultants to IS strategy formation.

The analysis also shows that both IS managers and management consultants were both cognisant of the management consultants contributing to IS strategy formation in the 'Ally' mode although this mode was not the one which they were most conscious of.

The three case narratives in Chapter 6 supported the outcome of the analysis. In all three cases, the top management constituency was found to associate management consultancy contribution with winning support for their proposals with both external sanctioning agencies and internal stakeholder constituencies.

7.4.2 The 'Broker' Contribution Mode

The management consultants' constituency was the one most strongly associated with the contribution of their constituency in the 'Broker' mode – see Figure 7.3. The management consultants' level of association with the 'Broker' mode of contribution was almost double that of the IS management constituency which were closest to them. The IS managers were the internal *stakeholder* group who showed the highest level of association with the 'Broker' mode and, on this basis they are included in the typology rather than the management consultants. Business managers also showed an awareness of this mode of contribution, although to a lesser degree than the IS management constituency.

The 'Broker' mode of contribution is the one with which the management consultancy constituency is most associated in the analysis. This suggests that this is an important aspect of the consultants' contribution from their perspective.

The top management constituency shows an almost negligible level of association with the 'Broker' mode of contribution by the consultants. This finding suggests a low level of awareness by top management of this aspect of IS strategy formation. Alternatively, it suggests that, if top management are aware of this aspect of management consultancy contribution, they attach a low level of importance to it.

The 'Broker' mode of contribution has been shown to be primarily concerned with facilitating agreement and consensus between organisational stakeholders. On the face of it, this would seem to be an issue of concern to top management. The analysis has already shown that the top management

constituency exhibit a high level of awareness of the 'Ally' mode of contribution which is also concerned with aspects of the organisational context. The contrasting levels of awareness by top management of these dimensions of IS strategy formation are worthy of further investigation.

7.4.3. The 'Innovator' Contribution Mode

The top management constituency was the one which most strongly associated the external management consultants with the contribution mode of 'Innovator' – see Figure 7.3. The data also shows a high level of awareness (37%) of the 'Innovator' mode of contribution amongst the IS management participants. There was a lower level of focus on the 'Innovator' mode amongst business managers and management consultants.

The business management constituency showed the lowest level of awareness of the management consultants in the 'Innovator' mode of contribution. There is an echo here of the case narratives in Chapter 6 which showed that some business managers were sceptical about the contribution of management consultants in IS strategy formation. There was also evidence in the case narratives that some business managers paid lip service to IS strategy initiative but that they were not particularly positive.

Top management and IS management showed a good level of awareness of management consultants in the 'Innovator' mode of contribution. This finding is consistent with the positive attitude towards the consultants which was noted in all three case studies. It is also consistent with the finding that top management in all three cases embarked on the IS strategy initiatives in the expectation that IS would be a vehicle for necessary organisational change.

The analysis showed that management consultants exhibited a low level of awareness of acting in the 'Innovator' mode of contribution in IS strategy formation in the public sector. Given that the focus of the 'Innovator' mode is on IS strategy content and the organisational change aspects of IS strategy, this suggests that IS strategy outcomes are less likely to be innovative.

7.4.4 The 'Engineer' Contribution Mode

The IS management constituency is the one which is most strongly associated with management consultants in the 'Engineer' mode of contribution in IS strategy formation in the public sector – see Figure 7.3. Both IS managers and business managers are more strongly associated with this mode of contribution than any of the three other modes emerging from the analysis in the previous section.

While the IS management constituency is more strongly associated with this mode than the business management constituency, the difference is small and both are included in the typology.

Given that the management consultants' contribution in the 'Engineer' mode is primarily delivered through IS strategy 'support' and 'domain expertise', it is not surprising that the IS management constituency exhibit a high level of association with this mode of contribution by the consultants. It is less obvious why the business management constituency would exhibit such a high level of association with the management consultants in the 'Engineer' mode. The scepticism and disassociation by some business managers, which was identified in some of the case narratives in Chapter 6, tends to confirm the disjoint between top management and business management perspectives which emerges in the analysis.

Both top management and management consultants show low levels of association with the perception of the management consultant as 'Engineer'. These two constituencies exhibited the highest levels of association with the dialectical perspectives on IS strategy formation which are found in the 'Ally' and 'Broker' modes of contribution respectively.

The management consultants exhibited a very low level of association with the 'Engineer' mode of contribution. Given that IS strategy methodologies, templates and tools have been shown to be an important aspect of the management consultancy repertoire, this is surprising. However, when one takes account of the case narratives, it becomes apparent that the palate of proprietary consultancy methodologies became irrelevant in the context of the requirements expressed in public sector IS strategy invitations to tender in the case studies. In one of the case studies, a management consultancy participant referred to the capability of the company's latest IS strategy methodology to highlight and prioritise high-yield IS applications. However, this particular methodology was not proposed to the public sector client because of a poor level of fit with the stated ITT requirements.

7.4.5 Variations between management constituencies

The analysis which was set out in the preceding paragraphs disclosed that each of the management constituencies participating in the research exhibited divergent degrees of association with each of the four management consultancy contribution modes in IS strategy formation. The variations were sometimes narrow and sometimes quite large. These variations give rise to the inference that each of the four management constituencies attaches more or less significance to each of the four contribution modes. The case narratives support the view that individual management constituencies associated the management consultancy contribution with one or more dominant modes of contribution. The top

management constituency perceived the management consultants contributing largely in the 'Ally' and 'Innovator' modes, while the IS management constituency perceived the management consultants as contributing mainly in the 'Engineer' and 'Innovator' modes. The management consultants perceived their contribution as largely in the 'Broker' mode. Business management perceived the contribution as largely in the 'Engineer' mode.

The case narratives support the view that top management in the public sector have good reason to enlist the management consultancy constituency when undertaking an IS strategy formation initiative. The public sector has shown itself to be a risk-averse environment where the sanctioning departments are more likely to look favourably on a top management change initiative which is supported by management consultancy. The case data has shown that management consultants can bring large-scale IS strategy programmes to a tipping point where internal and external opposition to top management proposals can be overcome. It is not surprising that the top management constituency has shown a higher level of association with management consultants in the contribution mode of 'Ally' than with the other modes.

The management consulting constituency is the one which showed the greatest level of association with the 'Broker' mode of contribution in IS strategy formation. It is clear from the case narratives that it was the management consultancy constituency which was most conscious of the dissonance between stakeholder perspectives and it fell to the consultants to resolve these. The case data showed that there was more consultation in the IS strategy assignment than would take place in the private sector. There were industrial relations challenges to be resolved in one of the cases. There were management team differences to be overcome in another case. There was scepticism at senior business management level as well as ambivalent management support in all the cases. It fell to the consultants to craft reports in a way which masked potential areas of disagreement and ensure that agreement was secured. The consultants cajoled stakeholders and prompted those who were reluctant to commit to particular courses of action. The IS management constituency was the client constituency which showed the highest level of association with the management consultants contributing in the 'Broker' mode. The case data showed that the IS management constituency was the one which was closest to the day to day conduct of the IS strategy assignment by the consultants and was most likely to be conscious of the day to day activities. The fact that the top management constituency showed such a low level of association with the management consultants' contribution as 'Broker' is interesting. The potential risks which are suggested by the brokering scenario imply that top management would need to ensure that these risks are managed on an ongoing basis if IS-enabled modernisation programmes are to achieve their full potential.

The case narratives support the view that the top management constituency was the one which most associated the management consultants with the 'Innovator' mode of contribution. The first management-led IS strategy initiative in all three cases coincided with the arrival of a new chief executive who expected that a management consultancy led initiative would bring substantial change. In one of the cases the chief executive chose to aim for levels of change which would challenge organisational capability. In another the top management team gave careful consideration to whether the level of risk was too great while the consultants subsequently acknowledged that they had reservations as to whether what was being attempted was achievable. The case narratives showed that IS strategy formation proved to be substantially more challenging than expected at the outset. In one of the cases the IS strategy experience brought top management to the view that a less ambitious approach should be adopted in the future. In another, management consultants reported subsequently that top management support had waned between the first IS strategy and the second. The focus was on the change that the IS strategy envisaged. The IS management constituency also showed a reasonably high level of association with the management consultancy contribution of 'Innovator'. Once again the case narratives showed that the IS strategy content in all three cases envisaged the adoption of an enterprise-wide focus on data and information rather than the stovepipe or application focus which had existed previously. The introduction of comprehensive case management systems coincided with more challenging technical architectures which would be the responsibility of the IS community to manage and support. One of the case narratives showed that the implementation brought technical challenges and negative media attention. In another case the support of the technical architecture was outsourced. The business management constituency showed low levels of association with the management consultants in 'Innovator' mode although all three case narratives showed that the impact of the IS strategy formation was significant for each organisation.

The case narratives support the view that the IS management constituency exhibit the highest level of association with the management consultants in the 'Engineer' mode. The case narratives showed that the IS management constituency recognised that the consultants were experienced at synthesising large volumes of information and bringing structure to what seemed very challenging tasks. They had access to knowledge on assignments done elsewhere and on solutions that had been successful in other settings. The consultants had technical expertise and the case narratives showed a high level of dependency by the IS community on the consultants in technical matters. The IS management constituency was the primary point of organisational contact in the IS strategy assignments and this would also have contributed to greater visibility by the IS community of the management consultancy day to day working. The business management constituency also showed a high level of association

with the management consultants in the 'Engineer' mode. The 'Engineer' mode was the one with which business managers showed the highest level of association of all four contribution modes. The business managers' perception was informed by the professionalism of the consultants, their analysis of problems, their conduct of workshops, their technical knowledge, their experience, and their access to knowledge from other environments. There was little difference between the sentiments expressed by the IS managers and the business managers insofar as this aspect of the consultants contribution mode is concerned. It is not clear why the business management constituency should exhibit the highest level of association with this particular contribution mode. It may be because there was a level of antipathy by a number of business managers to the IS strategy initiatives as shown by the case data. The 'Engineer' mode of contribution is primarily in the area of process 'support' which is likely to have a lower strategic impact than the 'Innovator' or 'Ally' contribution mode.

The diversity in management constituency perspectives provides an additional layer of understanding to the analysis. The relatively low levels of association which were found in some of the contribution modes suggest a low level of common understanding of consultancy contribution across management constituencies which suggest that this may be a matter which is worthy of scrutiny by the participating organisations.

7.5 Theoretical Context

The researcher was cognizant of the need to compare the new findings with extant theory and research to identify potential conflicts or consistencies which could be used to corroborate, modify or extend the findings (Eisenhardt 1989). Michael Earl (Earl 1993:11) suggested that "*one way of validating the model is to compare it with prior research in both IS and general management to assess whether the approaches 'ring true'*". A more recent perspective suggests that new research should be connected to '*other parts of the belief web*' so that the wider field of knowledge is updated by means of a '*bump and shift process*' (Hirschheim and Klein 2003:258). The following paragraphs aim to situate the research findings within the broader theoretical context.

In choosing to adopt a process perspective in the investigation, the researcher was conscious of the need to situate the resulting findings or framework within the broader process meta-theories (Van de Ven 1992). The management consultancy contribution typology (Figure 7.2) has integrated elements from both the teleological and dialectical theoretical perspectives of the strategy process (Van de Ven 1992). The 'Engineer' and 'Innovator' roles envisage a teleological, or purposeful, perspective of strategy formation whereas the 'Ally' and 'Broker' roles envisage a dialectical or conflicted

perspective on the process (Van De Ven and Poole 1995). Integration of two 'separate' perspectives is consistent with the advice that each of the individual perspectives is likely to provide a partial understanding only, and an integrated perspective may be necessary in order gain a full understanding of a complex phenomenon (Waema and Walsham 1990b; Chakravarthy and White 2002).

7.5.1 The IS strategy formation literature

The literature on IS strategy formation (Chapter 2) provided limited data on participant influence and behaviour in the process. Nineteen empirical studies were identified in Chapter 2 and these included nine empirical studies in which aspects of management consultants' contribution in IS strategy formation were reported. One of the cases was based on public sector experience. In all nine cases the management consultancy contribution was not the focus of the research but aspects of it emerged in the cases. In addition to the nine cases, empirical data from two instances of survey research in the USA (Lederer and Sethi 1996a; Lederer and Sethi 1998) provided insights into management consultants' contribution in IS strategy formation. The summarised findings from the literature review in Chapter 2 are reproduced in Figure 7.4.

Figure 7.4 – Management consultants contribution in IS strategy formation

Consultant Contribution	Reference	Region	Sector	Research Method
Catalyst	Shank, Boynton et al 1985 Lederer and Mendelow 1987a Penrod and Douglas 1988 Reponen 1994	USA USA USA Finland	Private Hybrid Public Private	Case study Interview Case study Action research
Technical expert	Jones 2003 Waema and Walsham 1990a	UK Africa	Private Private	Participant Observation Case Study
Experience	Adriaans and Hoogakker 1989 Lederer and Sethi 1996a Lederer and Sethi 1998	Netherlands USA USA	Private - -	Case study Survey Survey
Independence	Waema and Walsham 1990a	Africa	Private	Case Study
Credibility	Lederer and Sethi 1998	USA	-	Survey

The review of the IS strategy literature in Chapter 2 yielded four cases in which the management consultants contributed as a 'catalyst for change' in IS strategy formation (Shank, Boynton et al. 1985; Lederer and Mendelow 1987a; Penrod and Douglas 1988; Reponen 1994) – see Figure 7.4. A 'change orientation' is one of the characteristics of the '**Innovator**' mode of contribution in the new typology of management consultants' contribution in Figure 7.2. In the Shank et al (1985) case, the external consultant introduced the critical success factor (CSF) approach to IS planning which led to a redefinition of the core business of the financial institution. In the Penrod and Douglas case (1988), the consultant was hired to provide technical expertise and to act as a catalyst for change. In the Reponen case (1994), the consultant acted as a catalyst during thinking and brought new ideas and experiences to the IS planning process. In the Lederer and Mendelow (1987a) survey, two IS managers suggested that consultants be hired to act as catalysts in ascertaining top management objectives.

The IS strategy literature yielded two cases which characterised the external management consultant as a 'technical expert' – see Figure 7.4. The typology of management consultancy contribution (Figure 7.2) includes 'domain expertise' as the influencing attribute of the management consultant in the **'Engineer'** mode of contribution. In the Jones (2003) case, the consultants developed an approach to managing IS investments in which their technical and process skills were deployed. In the Waema and Walsham (1990a) case, the consultant was hired on the basis of his technical expertise in IS strategy.

The review of the IS strategy literature also disclosed one case in which the 'experience' of the external management consultants was the key contribution in IS strategy formation (Adriaans and Hoogakker 1989). In this case, the Netherlands utility company hired the consultants for an IS strategy initiative because company personnel lacked experience and the consultants would also bring a methodology to bear. 'Experience' was the characteristic orientation of the management consultant in the '**Engineer**' mode of contribution in the new typology at Figure 7.2. Survey research from the USA (Lederer and Sethi 1996a; Lederer and Sethi 1998) also provided support for the hiring of management consultants because of their experience in IS strategy.

The literature review in Chapter 2 also yielded one case which characterised the external management consultant as an 'independent' participant in IS strategy formation (Waema and Walsham 1990a). In this particular case the consultant was hired because of his '*assumed neutrality in organisational politics*' (Waema and Walsham 1990a:399). The typology of management consultant's contribution

(Figure 7.2.) includes 'independence' as the orientation of the external management consultant in the **'Broker'** mode of contribution.

The literature review in Chapter 2 found that a survey of IS strategists in the USA had recommended that external management consultants be hired in circumstances where IS management did not enjoy the confidence of top management in IS strategy formation (Lederer and Sethi 1998). This data led to an inference that external management consultants enjoyed greater credibility with top management. A normative contribution from the world of practice also recommends the use of outside consultants on the basis that their credibility and expertise carry more weight than do IS managers (Shidal 1978). The typology of management consultancy contribution (Figure 7.2) includes 'credibility' as the influencing characteristic of the **'Ally'** mode of contribution.

Characteristics of all four management consultancy contribution modes were identified in the review of the IS strategy literature review in Chapter 2. These characteristics are reproduced in Figure 7.4 above. The researcher revisited the literature review once again after the typology had been constructed to ascertain if a further review, which had been informed by the typology, would uncover any additional insights from the literature. Some additional academic support for the typology was found in the second review.

The case study of IS strategy formation in a developing African bank (Waema and Walsham 1990a) showed that the formal-rational perspective was inadequate to describe the IS strategy process. The external management consultant, who was hired to assist in the project, found it necessary to manage a 'largely behavioural process' rather than the technical one he had expected. Power-behaviours and coalition-forming was also a feature of the process. The case data showed that the consultant engaged in 'facilitation' in the case which is one of the characteristics of the **'Broker'** mode of contribution in Figure 7.4. The case data also showed that the consultant lacked 'credibility' in aspects of his work which is a characteristic of the **'Ally'** mode of contribution.

The subsequent review also found that in the Shank et al (1985) case the external management consultant had offered a range of advice on the IS strategy content which led to a redefinition of the core business. The typology of management consultancy contribution (Figure 7.2) includes 'advice' as the contribution of the external management consultant in the **'Innovator'** mode of contribution.

Survey research from the USA has also confirmed that managers use the 'status' and 'objectivity' of a consultant's report to legitimise a particular course of action in IS projects (Sturdy 1997). This finding

finds an echo in the Irish cases. The use of an external consultants report as 'validation' was one of the aspects of empowerment which resulted in the characterisation of the management consultant as 'Ally' in the Irish research.

Figure 7.5 sets out the empirical data from the IS strategy literature which supports the contribution modes which emerged from the cross-case analysis. Seven contribution dimensions which find support in the existing IS strategy literature are shown in bold print in column two. Five dimensions which emerged from the research and are included in the new typology in Figure 7.2 had not been referenced in the prior IS literature. The typology of management consultancy contribution in IS strategy formation (Figure 7.2) shows a significant degree of consistency with the prior data which was found in the review of the IS strategy literature.

Figure 7.5 – Empirical IS Research Supporting the Contribution Modes

Contribution Mode	Contribution Dimension	Supporting Research	Research Content
Ally	Empowers	-	-
	Credibility	Waema 1990a	The consultant lacked credibility (Waema 1990a)
		Lederer & Sethi 1998	The credible consultant can replace an IS manager
	Objectivity	-	-
Broker	**Facilitates**	Waema et al 1990a	The consultant had to manage a largely behavioural process (Waema et al 1990a)
	Sensitivity	-	-
	Independence	Waema et al 990a	The consultant was hired for his neutrality in organisational politics (Waema et al 1990a)
Innovator	**Advises**	Shank et al 1985	The consultant advised an information resource approach rather than a functional one
	Vision	-	-
		Reponen 1994	Consultants can act as catalysts in thinking (Reponen 1994)
	Change Orientation	Shank et al 1985	The CSF approach led to a re-definition of the business (Shank et al 1985)
		Penrod et al 1988	The consultant was hired to act as a change catalyst (Penrod & Douglas 1988)
		Lederer et al 1987a	IS managers proposed hiring consultants as catalysts to ascertain top management objectives
Engineer	Supports	-	-
	Domain Expertise	Jones 2003	Consultants deploy technical and process skills in IS (Jones 2003)
		Waema et al 1990[a]	The consultants was hired for his expertise (Waema et al 1990a)
	Experience	Adriaans et al 1989	The consultant has the necessary experience
		Lederer et al 1996a	Supporting survey data
		Lederer et al 1998	Supporting survey data

The focus turns next to the literature on management consulting to ascertain the extent to which the typology of management consultants contribution in IS strategy formation is consistent with the prior academic literature.

7.5.2 The management consultancy Literature

The review of the academic literature on management consulting in Chapter 3 culminated in the construction of a summary of the empirical research contributions in the field which disclosed how management consultants contribute in client engagements. Twelve research contributions were identified of which one had emerged from research in the National Health Service in the UK and focused on the implementation of a new IS. The twelve contributions have been categorised by the nature of the contribution and the summary from Chapter 3 is reproduced in Figure 7.6.

Figure 7.6 – Management consultants' contribution in general consulting research

Consultant Contribution	Reference	Region	Sector	Research Method
Catalyst and Innovator	Bloomfield & Vurdubakis 2002 Czarniawska & Mazza 2003 Shuman & Twombly 2002 Werr & Linnarsson 2002	UK Italy USA Sweden	Private - Private Private	Case study Participant study Case study Interview
Expert & Knowledge source	Fincham 1999 Nippa & Petzold 2002 Werr & Linnarsson 2002 Werr & Styhre 2003 Wood 2002	UK Germany Sweden Sweden UK	Private - Private Private Private	Interview Literature review Interview Interview Survey
Diagnosis	Bloomfield & Danieli 1995 Tilles 1961 Nippa & Petzold	UK USA Germany	Public Private -	Case study Case studies Literature review
Endorsement and Validation	Fincham 1999 Bloomfield & Danieli 1995 Sturdy 1997 Werr & Linnarsson 2002 Wright 2002	UK UK UK Sweden Australia	Private Public Private Private Private	Interview Case study Interview/Survey Interview Interview

The review of the management consultancy literature yielded four cases in which consultants contributed as catalyst or innovator in client assignments. A global management consulting organisation conducted a 'technology showcase' at which the consultants provided a vision of the

future which would be enabled by technology (Bloomfield and Vurdubakis 2002). In a second Italian case, the arrival of management consultants in an organisation was shown to create a 'liminal' space in which organisational actors are weakened and an environment is created in which change can take place (Czarniawska and Mazza 2003). Consultants in a US winery were instrumental in moving the enterprise from a traditional business model to a trans-enterprise business model involving other enterprises (Shuman and Twombly 2002). Research with Swedish telecommunications organisations showed that management consultants could use their relationship with top management to promote change (Werr and Linnarsson 2002). These data were consistent with the management consultants contributing as **'Innovator'**.

The review yielded five empirical studies in which the management consultants contributed to the client organisation through their expertise and knowledge which are characteristics of the **'Engineer'** mode of contribution. Evidence from Swedish telecommunications companies showed that consultants were hired partly because of their 'specific expert knowledge' and their contribution to client learning (Werr and Linnarsson 2002). Another Swedish private sector experience has shown that business managers place a high value on the contribution of external management consultants and the key to the client consultant relationship is the specific expertise and knowledge of the consultant (Werr and Styhre 2003). The Swedish data also shows that consultants interpret the business and technology environment and are seen as being specialists in this kind of environmental knowledge (2003). Two UK cases also supported the characterisation of the management consultants as a source of expertise and knowledge (Fincham 1999; Wood 2002) and 'knowledge transfer' is one of the characteristics which Nippa and Petzold (2002) identified in their review of the management consulting literature.

The review yielded three cases in which 'diagnosis' was identified as a contribution of the management consultant. Early empirical research from the USA (Tilles 1961) identified organisational diagnosis as part of the management consultancy role. A more recent empirical study in the UK public health sector found that management consultants "*discover and diagnose problems*" in an IS context (Bloomfield and Danieli 1995:31). More recent research based on a review of literature (Nippa and Petzold 2002) includes problem diagnosis as one of eight "fundamental objectives" of management consulting. In this particular case, redefinition of the problem, based on the diagnosis, is also regarded as part of the consultancy remit, as is the framing of recommendations based on the diagnosis. Diagnosis is not included as one of the characteristics of the new typology at Figure 7.2. 'Advice' does appear as one of the characteristics of the 'Innovator' mode of contribution and the point was made earlier in the review that one would expect that 'advice' would be given on the basis

of some prior diagnosis of the organisational condition. The Bloomfield and Danieli (1995) quotation earlier in this paragraph also supports the inference that diagnosis of problems is one of the contributions of management consultants as '**Engineer**' in a technology environment.

The review also yielded five empirical studies in which 'endorsement and validation' were identified as contributions of the management consultants. Empirical research from the UK, in which the informants were management consultants, showed that, in organisational change programmes, clients are apprehensive about the cost and impact of major change (Fincham 2003b). In these settings, consultants frequently have to craft proposals which the client is comfortable with, while also encouraging the client to accept risk (Fincham 2003b). Research into an IS implementation the United Kingdom provided evidence of the external consultant as "*objective originators of a policy which would not be accepted internally if thought to be derived from in-house senior management*" (Bloomfield and Danieli 1995:25). Other empirical research in the UK shows that management consultants provide a sense of reassurance to their clients who can provide justification for investment decisions and convincing decision makers that the approach proposed is in accordance with industry trends (Sturdy 1997). More recent evidence also suggests that the consultant can also become a champion of ideas developed internally (Werr and Linnarsson 2002). Australian research, in which the informants were both consultants and clients, found that managers use consultants to legitimise decisions which they anticipate as being unpopular (Wright and Kitay 2002). Data from North America confirms the European experience that management consultants can be used as 'rubber stamps' and 'security blankets' to lend credibility to decisions made by organisational managers (Shapiro, Eccles et al. 1993). 'Credibility' and the empowerment of top managers are characteristics of management consultants' contribution in the **'Ally'** mode of contribution.

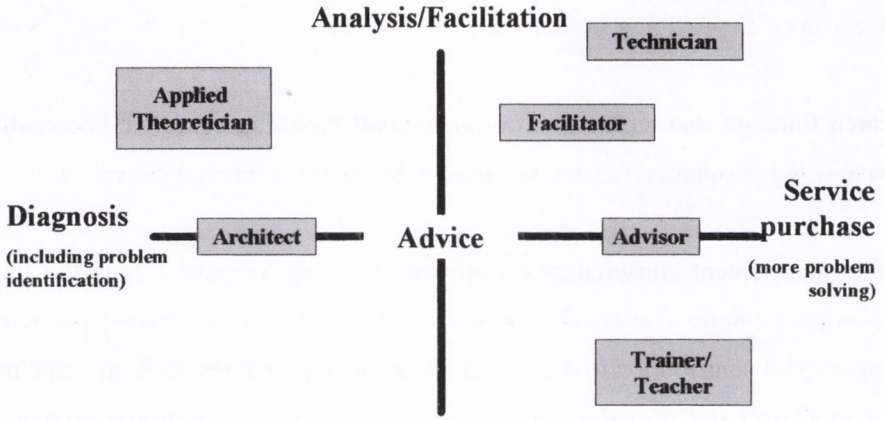
Figure 7.7 sets out the empirical data from the management consulting literature which supports the contribution modes which emerged from the cross-case analysis. Six contribution dimensions which find support in the existing management consultancy literature are shown in bold print in column 2. Six dimensions which emerged in the cross case analysis of the IS strategy data were not referenced in the prior management consulting literature. The typology of management consultancy contribution in IS strategy formation (Figure 7.2) shows a significant degree of consistency with the prior data from the management consulting field.

Figure 7.7 – Empirical Consulting Research Supporting the Contribution Modes

Contribution Mode	Contribution Dimension	Supporting Research	Research Content
Ally	**Empowers**	Werr & Linnarsson 2002	The consultants can champion ideas developed internally
		Wright & Kitay 2002	Consultants can legitimise unpopular decisions
	Credibility	Bloomfield & Danieli 1995	The policy would not be credible if it emanated from management
		Sturdy 1997	Consultants provide reassurance to clients
	Objectivity	-	-
Broker	Facilitates	-	-
	Sensitivity	-	-
		-	-
	Independence		
Innovator	**Advises**	Shuman & Twombly	Consultants proposed a new trans-enterprise business model
	Vision	Bloomfield & Vurdubakis 2002	The consultant provided a technology vision of the future at a showcase event
	Change Orientation	Czarniawska & Mazza 2003	The consultants created a 'liminal' space which enabled change to take place
		Werr & Linnarsson 2002	The consultants promoted change
Engineer	Supports	-	-
		Werr & Linnarsson 2002	Consultants were hired for their specific expertise
	Domain Expertise	Werr & Styhre 2003	The consultants had specific domain expertise
		Fincham 1999	The consultants had specific domain expertise
		Nippa & Petzold 2002	The consultants had specific domain expertise
		Wood 2002	The consultants had specific domain expertise
	Experience	-	-

The major difference between the general consulting (Nippa) typology and the new management consultancy contribution typology (Figure 7.2) is that, while the former adopts a teleological theory of action, the latter combines both teleological and dialectical perspectives. This difference can be explained by the fact that IS strategy formation is a socio-political process (Waema and Walsham 1990b), which combines 'Ally' and 'Broker' roles which are not made specific in the Nippa (2002) framework.

Figure 7.8 – Management Consultancy Roles and Intervention Styles



(NIPPA 2002)

7.6 Definition of management consulting

The review of the literature on management consulting in Chapter 3 yielded a number of existing definitions of management consulting which were brought together in Figure 3.2. The researcher has also formulated a definition of management consulting based on the findings from the current research. The new definition is based on the stream of research which perceives management consulting as a value-adding activity.

The new definition asserts that "*management consultants add value to client organisations by providing advice and support which is independent, objective and based on their experience in other organisational settings. They contribute by acting as allies of top management in support of management proposals, by acting as brokers in organisational decision-making, by offering innovative advice on organisational change, and by providing technical or process support*".

7.7 Originality of the findings

The foregoing sections have shown how the typology of management consultancy contribution to IS strategy formation in public sector organisations was derived from the three public sector case studies. The analysis was deepened to illuminate the differing perceptions of all four management constituencies on how that contribution was enacted. The research findings were also grounded within the existing body of academic theory in the IS field. The findings extend the existing body of knowledge as well as providing support for extant theory.

The research findings also represent an original contribution to academic knowledge in both the IS and management consultancy fields. The basis of this claim is set out below.

Firstly, the management consultancy contribution typology (Figure 7.2) is the first such typology based on original empirical research in either the private or public sectors. The typology provides a significant original contribution to the existing body of empirical research on participant influence and behaviour in IS strategy formation. The typology confirms the empirical finding from the private sector that IS strategy is both a rational and socio-political process (Waema and Walsham 1990b), while also extending this analysis by elaborating, for the first time, on how these dimensions are enacted in the public sector.

Secondly, the management constituency perspectives of management consultants' contribution to IS strategy formation (see Figure 7.3) is the first such analysis illuminating the contrasting views of managers on how management consultants' contribution is enacted in practice. The research extends previous private sector research on the influence of managerial groups in IS strategy formation (Ruohonen 1990) by including external management consultants as one of the managerial groups studied for the first time.

Thirdly, the research responds to a call from researchers in the management consultancy field to extend the existing research on consultant influence to empirical studies in individual cases incorporating client and consultancy constituencies (Nippa and Petzold 2002). Accordingly, the research provides an additional perspective on the typology of general management consultancy roles and intervention styles (Nippa and Petzold 2002) (Figure 7.8).

7.8 Conclusion

The iteration from data to theoretical contribution has been traversed in this chapter. Both case perspectives and management constituency perspectives were used to provide a deeper understanding

of the IS strategy formation experience in the public sector. The typology of management consultancy contribution contains four separate characterisations of how that contribution is enacted in practice.

The findings which emerged from the research has been situated within the existing body of empirical research, both to confirm its fit and to extend the boundaries of existing knowledge in the field. The new theory contributes to the field of knowledge in both the IS and management consultancy fields. The chapter concludes by underlining the originality and novelty of the research findings.

The next chapter will turn to an examination of the significance of the research findings while also considering the implications and limitations of the research.

8 CONCLUSIONS & IMPLICATIONS

"The study and knowledge of the universe would somehow be lame and defective were no practical results to follow"

Marcus Tullius Cicero, Statesman (106 BC – 43 BC)

8.1 Introduction

Chapter 7 has been concerned with the presentation of the framework of management consultancy contribution to information systems (IS) strategy formation in the public sector as it emerged from the cross-case analysis of the three case studies. The analysis in Chapter 7 included consideration of the fit between the framework and previous research findings as those emerged from the literature reviews in Chapters 2 and 3. The case study narratives had been presented in Chapter 6 and these narratives were revisited in Chapter 7 for the purpose of illustrating aspects of the framework and providing further validation of the findings. This final chapter reiterates the importance of the contribution made by this particular investigation, the implications for theory and practice, the limitations applying to the investigation, some further research which is indicated, and some reflections on the quality of the conclusions drawn.

8.2 The Investigation

Survey research in the USA in 2004 found that IS strategy formation was ranked the second most important issue facing 300 IS managers (Luftman and McLean 2004). A survey of Irish central government departments and agencies in the same year (2004), which was conducted as part of the current research endeavour, found that 80% of respondents utilised the services of external management consultants in IS strategy formation assignments. €22 million has been provided in the government's expenditure estimates for the year 2008 for management consulting expenditure by central government (Department of Finance 2008). Actual expenditure will be higher but is difficult to ascertain due to the approach used for recording proposed and actual expenditure (Department of Finance 2006b). A specific evaluation of management consultancy assignments in the Irish public sector, which was published by the Comptroller & Auditor General in 1998, concluded that it was difficult to ascertain what contribution consultants make or how their contribution could be maximised (Comptroller 1998). An academic commentary on management consulting has also claimed that the value of management consulting is difficult to measure and research in the field lacks

relevance to the world of practice (Kieser 2002). A review of the academic literature from both the IS field and the management consulting field showed that, although the topic of how external management consultants contribute in IS strategy formation has been referred to peripherally in the IS literature, there has been no specific investigation of the research topic in the private or public sectors.

It is clear that the investigation of the research question is both relevant and necessary in the light of the preceding paragraph. The research fills a void which has been highlighted by the academic community and by a central government regulatory body. The topic of IS strategy formation has also been shown to be very relevant to practising IS managers in the wider public/private sectors.

8.3 The Findings

The management consultancy contribution framework provides a potentially powerful planning and diagnostic tool for public sector managers who are initiating or evaluating IS strategy formation programmes in the future. The research findings provide a new and novel insight into the IS strategy formation process. The findings have also enabled the researcher to unify a number of isolated theoretical assertions about management consultants involvement in IS strategy formation by comparing prior research with individual dimensions of the new framework.

The case study data shows that the contribution of the management consultant in the 'Ally' mode was important in a public sector context. The fact that the Irish public sector is a "risk-averse environment" in which personal initiative is not encouraged (Department of the Taoiseach 1996:21) means that the endorsement of the consultants was important in securing support for IS strategy and for diverting potential criticism. Previous research concluded that IS strategy formation is a socio-political process (Ruohonen 1990; Waema and Walsham 1990b; Tillquist 2000; Constantinides and Barrett 2006). The new management consultancy contribution framework confirms the previous findings and it provides a deeper perspective on how the process is enacted in a public sector setting where management consultants are involved.

The point was also made in Chapter 5 that a large residual dataset on IS strategy formation in the case study organisations remains for further analysis. This data was set aside after the analysis was narrowed down to those codes which related to management consultancy contribution. This data will enable other aspects of the public sector experience to be explored in the future.

8.4 Implications for Theory

In the first instance, the research set out to contribute to the development of theory on how external management consultants contribute in IS strategy formation in the public sector. This objective has been achieved by the emergence of a theoretical framework containing four contribution modes and a number of supporting dimensions which elaborate on how their contribution is enacted – see figure 7.2. A review of the literature on participant influence and behaviour in IS strategy formation has shown that no prior research on this topic has been carried out although there have been a small number of other

research initiatives in which the contribution of consultants was reported upon as a corollary to the investigation. The research reported here is the first specific investigation of its kind in either the public or private sectors. A UK academic, who has conducted research in both the IS and management consultancy fields, has observed that the work of external management consultants has attracted relatively little attention in the academic IS literature (Jones 2003). Research in the wider topic of IS strategy formation has also been described as sparse (Allen and Wilson 2003). The current investigation has also confirmed that such research as has taken place has tended to be in the private rather than the public sector (Allen 1995). Accordingly, the research reported here has filled a specific void in the IS field and has also provided greater balance in the development of the overall field.

Secondly, additional management constituency analysis has shown that the major management constituencies who are involved in IS strategy formation in the public sector do not share the same degree of association with each of the four contribution modes which make up the framework. The divergences between constituencies which emerged from the analysis suggest that individual management constituencies tend to perceive the contribution of the consultants in one or more dominant modes of contribution. The top management constituency is most associated with the 'Ally' mode, while the IS manager constituency is most associated with the 'Engineer' mode, and the management consultants are most associated with the 'Broker' mode. The case data suggests that in the case of these three management constituencies, the dominant modes are also linked to the area of greatest challenge in IS strategy formation for the management constituency concerned. The business management constituency are most associated with the 'Engineer' contribution mode but business managers did not emerge at the forefront of any one of the four modes. The case data showed that, in some instances, the business management constituency was ambivalent in their level of association with the formal IS strategy programme. The business management constituency showed a very low level of association with the management consultant as 'Innovator' (7%) which in contrast to top managers (41%).

Thirdly, the research contributes to academic knowledge in the wider management consulting field by unifying a number of perspectives on general management consulting contributions into a single higher-level framework – see Figure 7.6. Previous academic literature on management consulting has observed that, although there has been an exponential increase in the presence and role of consultants, the exact nature of their contribution to client organisations remains ambiguous (Buono 2002). Another recent academic commentary has pointed out that academic research in the field lacks relevance to the world of practice (Kieser 2002). The research reported here has provided new knowledge on how management consultants contribute in large-scale client engagements and the research has been set in a specific work setting.

Fourthly, the research responds to a specific call from the management consulting research community for additional studies incorporating "*contextual analyses through comparing different sectors and/or countries and the institutional conditions of consultancy practice and management knowledge*" (Sturdy 1997:409).

Fifthly, the inclusion of top management, senior business management, IS management, and management consultants as participants in the research project ensures that all the key perspectives in IS strategy formation have been captured in the investigation. This responds to the specific call from the IS research community that *"we cannot continue to focus the bulk of our research on business units and middle management. Strategy process research must move aggressively to the level of top management"* (Chakravarthy and Doz 1992:10).

Finally, the inclusion of a descriptive narrative on the external public sector context combined with the case narratives in Chapter 6 provides a basis on which the IS strategy process, content, and internal and external contexts can be the considered together to provide a contextualist perspective on the investigation (Pettigrew 1987; Pettigrew 1990; Klein and Myers 1999; Pettigrew, Woodman et al. 2001). A contextualist perspective has been a feature of a number of interpretive empirical investigations of IS strategy formation and the researcher has concluded that the adoption of this particular approach would make a useful contribution to a cumulative body of empirical research in this particular line of research. The importance of adopting a holistic approach is underlined in the criticism that *"much research on organisation change is ahistorical, aprocessual, and acontextual in character"* (Pettigrew 1987:605). An earlier academic investigation of the IS strategy process in the private sector in the Netherlands ended with a call for further studies of the phenomenon based on consideration of the process, content, and environmental dimensions of the case (Smits, Van der Poel

et al. 1997). The current research also responds to a recent call by Mohe (2007) that research on management consultancy should also contribute to broader debates on management if it is not to remain self-contained and atrophy.

8.5 Implications for Practice

The challenge of establishing the field of IS amongst the wider academic community has led to greater emphasis on the rigour of research in the field at the expense of relevance (Benbasat and Zmud 1999; Hirschheim and Klein 2003). The investigation of external management consultants contribution in IS strategy formation in the public sector satisfies the criterion of relevance insofar as a framework has been developed which can be implemented in the world of practice (Benbasat and Zmud 1999).

The research will contribute to the wider community of practice both internationally and in Ireland. The emergence of a theoretical framework where none existed before provides a valuable planning and diagnostic tool for public sector managers who are contemplating availing of the services of external management consultants in IS strategy engagements. The framework makes explicit the need to address aspects of the internal and external organisational context in IS strategy formation, whether planned or emergent. Pettigrew (1987:657) has pointed out that "*formulating the content of any new strategy inevitably entails managing its context and process*". The framework also isolates for managers the resource and outcome implications of attending specifically to aspects of content, process, and context in IS strategy formation. For example, managers can now choose explicitly which dimensions of IS strategy formation will be attended to by external management consultants or other resources and they can also focus resources based on the new knowledge at their disposal.

The framework offers an opportunity for both the consultants and their clients to shape the approach to projects in a mutually beneficial and more informed way. The research has also uncovered the hitherto unknown phenomenon whereby each of the management constituencies engaged in IS strategy formation associate the consultants with a dominant mode of IS strategy contribution from the framework. This knowledge can be used by practitioners to ensure that adequate focus from all constituencies is applied to the IS strategy content, process and internal and external contexts. This is not to infer that a higher degree of association by a manager with a particular contribution mode can be extrapolated to a greater or lesser amount of focus, but merely to ensure that this is not the case pending further investigation.

The research also contributes to the community of practice in an Irish public sector context. The case data has shown that management consultants were engaged only to address the content and process dimensions of IS strategy in some of the cases. Despite this, the case narratives and the management constituency analysis show that aspects of the organisational context formed a significant part of the consultants' actual work in the field. This suggests that invitations to tender to management consultants for IS strategy assignments in the Irish public sector should include 'deliverables' which address all necessary aspects of the work.

Independence and objectivity were traits which the management consultants were perceived as bringing to bear in all three of the case studies included in the research. This tended to confirm the view of the Department of Finance that objectivity and detachment were strengths that management consultants could bring to an assignment (Department of Finance 1993). A survey of consultancies undertaken in the years 1994 to 1996 had shown that 31% of consultancies in the public sector were commissioned in order to obtain an independent or objective view (Comptroller 1998).

The research findings suggest also that the Irish Department of Finance Guidelines on the engagement of consultants (Department of Finance 1999; Department of Finance 2006b) should be updated to reflect the findings of the research. The general categories of consulting which are included in the Guidelines do not acknowledge the socio-political aspect of assignments which emerged during the course of the research. Consideration of these aspects of organisational change initiatives would be likely to deliver improved performance outcomes. "*To achieve 'breakthrough' changes in efficiency, performance, or competitive advantage, organisations must translate these high concepts into a specific model of change appropriate to their organisational context*" (Tillquist 2000:115). The framework and case narratives also have a practical application in education and consulting situations (Paroutis and Pettigrew 2007).

8.6 Limitations

The researcher acknowledges a number of limitations in the conduct of the investigation reported here.

Firstly, there were a small number of cases which fitted with the selection criteria which provided limited choice in the selection of partnering organisations. The effect of this was that each of the three cases chosen was a case-processing, or operational, central government organisation and the partnering organisations did not include one of the overseeing or policy-making departments (Clince,

Blennerhassett et al. 1992). A further effect of the limited choice of partnering departments/agencies was that all the partnering organisations had been part of the Department of Justice 'family' of organisations during the period to which the cases refer.

Secondly, the researcher's lack of previous experience in conducting a research project of this magnitude was a limitation. The effect of this was that it took time for the researcher to sharpen his focus on key lines of enquiry in the conduct of the cases. This was offset to some extent by the investigator's familiarity with the Irish public sector and the conduct of IS strategy assignments with management consultancy support.

Thirdly, the researcher chose to adopt a 'functionalist' or traditional rather than a 'critical' perspective in the investigation and analysis (Fincham 1999; Fincham and Clark 2002; Werr and Styhre 2003). A significant stream of critical research has emerged in the management consulting field and adoption of a critical approach may have yielded additional insights. This is illustrated in the observation that *"rather more subtle forms of regressive behaviour would emerge if IT is viewed as a controlling mechanism, rather than an enabling presence "* (Allen, Juillet et al. 2001:101). The absence of a prior investigative focus on the management consultancy contribution in IS strategy formation suggested that a functionalist approach was best in an area in which no previous investigation had taken place.

Fourthly, the researcher chose to rely on interviews and documentation rather than participant observation in two of the cases reported in the investigation. In the third case, the data sources were augmented by personal journals which were based on full participation in the events reported over a twenty year period. Participant observation in public sector IS strategy formation was not practical because of the longitudinal focus of the investigation, the time demands involved, and the relative infrequency of large-scale consultancy-assisted projects available for research.

8.7 Further Research

There are a number of opportunities to extend the scope of the research reported here to other theoretical perspectives and situations.

In the first instance, the researcher acknowledges the narrow focus of the research endeavour reported in this thesis. The philosophical approach to the investigation was informed by a rational view of IS strategy formation whereas an alternative philosophical perspective may have yielded additional insights on managerial activity and organisational context. It is also

likely that the choice of an ethnographic or action research approach to the conduct of the case studies would have enabled the researcher to develop sharper insights based on deeper immersion in the partnering organisations. A more clinical approach to the investigation, or another methodological choice, could well provide rich insights on dysfunctional aspects of the IS strategy process. Questions regarding the impact of lengthy management consultancy intervention on organisational learning and staff development in organisations also remain to be addressed in future work.

Additional data collection and analysis could be undertaken to develop a critical analysis of the larger set of data. This extension of scope suggests itself because the case study data contained evidence of organisational tensions which were perceived by management as a barrier to the adoption of IS. An extended analysis would offer opportunities to develop new insights into the organisational change experience. The emphasis in the new analysis would be from an organisational science perspective rather than a management science perspective.

The theoretical scope of the current investigation could also be extended to further data collection and analysis on the managerial perspectives on management consultancy contribution in IS strategy formation. The current investigation found that each of the four management constituencies identified a dominant contribution mode from amongst the four which emerged in the research. The research findings could be deepened by exploring the different perceptions further to extend the new theoretical contribution by means of cumulative analysis.

The situational scope of the current investigation could be extended to other geographical contexts in which the Westminster model of public administration exists. Further investigations based on the same research model would enable researchers to develop further insights into the potential effects of different internal and external organisation contexts on the IS strategy formation process and the contribution of external management consultants.

The situational scope of the current investigation could also be extended by conducing further investigations using the same research model in private sector organisational contexts. Additional data collection and analysis would enable researchers to assess whether the framework which emerged from the current investigation or the management constituency perspectives differed in any way in a commercial environment.

8.8 Quality of the Conclusions

The investigation of how external management consultants contribute in IS strategy formation in public sector organisations was conducted in accordance with the academic standards for interpretive research. The four criteria of (a) confirmability, (b) dependability, (c) credibility, and (d) transferability have been accepted as practical standards by which the quality of the conclusions in qualitative research can be considered trustworthy (Miles and Huberman 1994). These same four criteria have also been set down as tests of validity and reliability in interpretive case study research (Riege 2003).

8.8.1 Confirmability

The standard of confirmability is intended to ensure that the investigator is free of unacknowledged biases and that the research is conducted in a neutral fashion (Miles and Huberman 1994). The confirmability of the research was established by adhering to the following set of standards laid down for interpretive case study research;

- The raw data, on which the narratives and analysis was based, were retained for subsequent audit or analysis. These items included field notes, contemporaneous journals, tender documents, departmental memos, and archive material.

- The different levels of data reduction and aggregation are illustrated in the thesis using extracts from the actual data reduction process. This allows the reader to reach an independent judgement on the process and the conclusions reached.

- The method and process used in the investigation has been described in Chapter 4 and Chapter 5 to enable the reader reach a judgement on the consistency between research problem, the method chosen, and the manner in which the research method was operationalised.

- The researcher has explicitly acknowledged the potential for researcher bias in the investigation and has addressed the issue in Chapter 4.

8.8.2 Dependability

The standard of dependability is intended to address the quality and consistency of the investigation (Miles and Huberman 1994). The following steps were taken to address this issue;

- The philosophical basis of the investigation has been stated explicitly in Chapter 4 and the methodological choices have been situated within the canons of the research paradigm chosen and the academic tradition in the field of research.

- A case study protocol for the research was established at the outset and the corresponding modus operandi was specified in the initial correspondence with each partnering organisation and with each interviewee.

- Informants in the case studies included chief executives, senior business managers, senior IS managers, and external management consultants to ensure that the perspectives of all the management constituencies in IS strategy formation were captured in the investigation. Interviewees included current and former managers representing all the time periods reported in the case narratives. The interviewees included respondents from different organisations and different management consulting organisations.

- The number of interviewees was in the range (35 – 50) which is in the range recommended for a research undertaking at PhD level (Perry 1998).

- There were no unexpected inconsistencies encountered in the investigation.

8.8.3 Credibility

The standard of credibility refers to the truth or trustworthiness of the research findings (Miles and Huberman 1994). The researcher took a number of steps to ensure that the findings from the investigation would meet the necessary standard of credibility.

- Longitudinal, context rich, case narratives were developed describing the IS strategy formation process in each of the partnering organisations. The external public sector context was also described in a separate narrative to enable aspects of the process, content and context of the IS strategy experience to be revealed.

- The case narratives were sent to the senior IS manager in each of the partnering organisations for authentication prior to the completion of the research and publication (Creswell 1998). Changes made were of an editorial nature and did not affect the research findings.

- The academic literature on participant influence and behaviour in IS strategy formation was revisited at the end of the analysis to identify aspects of prior theory from that literature and the management consulting literature which confirmed or disconfirmed the research findings. The conclusions from this work are included in Chapter 7 adjacent to the analysis findings.

- The research was an exploratory, theory development endeavour in an area of investigation where no previous investigation had taken place. Accordingly, there was no candidate theory under consideration at the outset.

- The researcher embarked on the research from the position that the relationship between consultant and client was *'open ended and structurally symmetrical'* (Fincham 1999:349). A functional rather than a critical lens was applied to the investigation which may have excluded other theoretical possibilities from consideration. This limitation is acknowledged in Chapter 8.6.

8.8.4 Transferability

The standard of transferability refers to the potential for the findings to be applicable to other theoretical settings, cases, or populations (Miles and Huberman 1994). The inductive researcher can extrapolate case study findings to similar settings without claiming generalisability for the results (Firestone 1993; Rowley 2002). A number of aspects of the investigation can be invoked to clarify this aspect of the research.

- The case settings, managerial responsibilities and contexts are fully described in each of the cases to permit of comparisons with other settings. The partnering organisations were medium to large transaction processing departments/offices which could be readily compared with other a range of similar public sector contexts. The partnering management consulting organisations were members of the so-called Big Five group of management consulting organisations who would be typical of those widely used in management consulting assignments.

- The case study narratives contain 'thick description' of the phenomenon investigated to enable theoretical and situational transferability to be assessed by readers.

- The congruency of the research findings with prior theory has been set out in Chapter 7.

- Proposals for extending the research to other settings have been explored in Chapter 8.7 which would enhance the transferability of the research findings more generally.

8.9 Conclusion

The investigation of how external management consultants contribute in IS strategy formation in the public sector yielded a new framework setting out four distinct contribution modes together with the distinctive characteristics of each. The research also disclosed that there were differing degrees of association with the contribution modes amongst the managerial constituencies participating in the research. The investigation did not suggest why this should be so. The research had addressed a hitherto unexplored aspect of the academic IS field and has provided a rigourous and relevant contribution to knowledge.

APPENDICES

Appendix 2.1 - Empirical Research on participant influence and behaviour in IS strategy Formation

Year	Region /Sector	Research Orientation	Research Method	Informants	Management Consultancy Participation	Research Topic	Reference
2006	Greece Public	Interpretive	One longitudinal case study	55 interviews	No	An IPR dispute transformed a new IS from being a point of collaboration to a point of conflict and it mobilised an opposing network of power	Constantinides & Barrett 2006
2006	UK Public	Interpretive	3 longitudinal case studies Social worlds theory	54 interviews	No	IS strategy formation in 3 police services was influenced by boundary objects when analysed using social worlds theory	Horton & Wood-Harper 2006
2005	UK Public	Interpretive	6 longitudinal case studies and Alexandrian patterns	182 interviews	No	Three Alexandrian behaviour patterns were identified in IS strategy formation in UK police services	Horton & Dewar 2005
2003	UK Private	Interpretive	One case study 6 months	Participant Observation	Yes	Consultants developed an approach to managing IS investments in which their expertise was enacted in technical & process skills	Jones 2003
2003	UK/ Ireland Private	Interpretive	2 Business Networks	Interviews Documents	No	Specific roles were identified at both network and organisation level in IS planning in inter-organisational networks (IOS)	Finnegan, Galliers et al 2003
2000	USA Private	Interpretive	Two case studies	Participant Observation	Yes	Consultancy discourse and methods in a BPR initiative alienated participants and constrained change	Tillquist 2000
1998	USA	Positivist	Survey	105 IS Planners	No	Survey responses showed that management consultants can be very useful in SISP but their involvement does not guarantee success	Lederer & Sethi 1998

1997	Neth'lns Private	Interpretive	Three case Studies & Survey Contextualism	Not stated	No	The roles, responsibilities and influence of various managers in information management (IM) strategy in Insurance companies in the Netherlands changed over time	Smits, van der Poel & Ribbers 1997
1996	USA Private	Positivist	Survey data	199 IS managers	No	Greater use of external consultants led to less achievement of SISP objectives	Lederer & Sethi 1996
1994	UK Public	Interpretive	One case study 26 months	Participant observation & documents	No	A case study illustrating the role of strategic discourse in IS strategy formation in a UK District Health Authority	Jones 1994
1994	Finland Private	Interpretive	Six case studies 9 months	Action Research	Yes (3 cases)	An external consultant acts as a catalyst during thinking and may bring new ideas and experiences in Information Management strategy	Reponen 1994
1993	UK Private	Positivist	Interviews Quantitative Analysis	63 interviews	No	Consultants have influence in method-driven IS planning initiatives	Earl 1993
1990	Africa Private	Interpretive	One case study Contextualism	11 interviews & documents	Yes Independent Consultant	Implications for IS strategy formation initiatives are drawn from a case study in a developing country bank	Waema & Walsham 1990a
1990	UK Private	Illustrative Case	One case study Contextualism	Interviews & documents	No	IS strategy formation is both a rational and a socio-political process in which context can affect the process and content dimensions	Waema & Walsham 1990b
1990	Finnish Private	Interpretive	Three case Studies Top echelons	Participant Observation	No	Organisational, cultural and political factors affect managerial collaboration in IS planning	Ruohonen 1990
1989	N'lands Private	Interpretive	Case Study	Participant Observation	Yes	The IS planners in Netherlands Gas recommend the use of consultants to provide expertise on the methods	Adriaans & Hoogakker 1989

1988	USA Public	Interpretive	Case study	Participant Observation	Yes	A consultant from a 'Big 8' company was hired by a University to provide IS expertise and to act as a catalyst in IS planning	Penrod & Douglas 1988
1987	USA Hybrid	Positivist	Ranked responses from interview data	20 informants IS managers	-	One respondent reported that top management is intimidated by automation and two suggested that a consultant be hired to ascertain top management objectives	Lederer & Mendelow 1987
1985	USA Private	Illustrative case study	One case study illustrating the use of CSF method	Participant Observation	Yes	Illustrative case showing how the introduction of the CSF approach to IS planning by an external consultant led to the redefinition of the core business of a financial institution.	Shank, Boynton & Zmud 1985

Appendix 3.1 - Empirical Research on management consultancy role enactment

Year	Region/ Sector	Research Orientation	Research Method	Informants	Management Consultancy Participation	Research Topic	Reference
2006	UK Private	Interpretive (Critical)	One case study Sales seminar	Participant Observation	Yes	A consultant used paradoxical metaphors as part of his rhetoric in enlisting clients in a training course	Whittle 2006
2003	Sweden Private	Interpretive (Critical)	Grounded analysis	Interviews	No	Management consultancy expertise is the key to the consultant-client relationship	Werr & Styhre 2003
2003	UK	Interpretive	Interview	16 consultant interviews	Yes	Agency theory explains the deployment of knowledge and power by consultants while they are subordinate to top management	Fincham 2003b
2003	Italy n/s	Interpretive	Interviews & Observation	Participant Observation	Yes	Consulting is a liminal space in which the usual order is disrupted and change is enabled to occur	Czarniawska & Mazza 2003
2002	Australia Private	Interpretive (Critical)	Interview	63 consultants 10 clients	Yes	Endorsement of management decisions and impression management are part of the consultants repertoire	Wright & Kitay 2002
2002	USA Private	Interpretive	One case study	Participant Observation	Yes	A consultant helped a winery move from a traditional business model to a trans-enterprise business model	Shuman & Twombly 2002
2002	Germany n/s	Literature review	Literature Review	Literature Review	n/s	Consultants provide expertise and knowledge to clients	Nippa & Petzold 2002
2002	UK Private	Interpretive	One case study (showcase event)	Participant Observation	Yes	Analysis of a technology showcase as rhetoric for a vision of the future. The showcase was led by a consultant.	Bloomfield 2002

2002	UK Private	Interpretive	Four training sessions	Participant Observation	Yes	Analysis of the use of rhetoric in consultancy-led training sessions in the UK	Sturdy 2002
2002	UK Private	Deductive	Survey	124 Questionnaires	No	Consultants are engaged in order to provide expertise in change projects	Wood 2002
2002	Sweden Private	Interpretive	Two case studies	12 Interviews	No	Consultants can champion ideas developed in the organisation as well as acting as sources of expertise and knowledge	Werr & Linnarsson 2002
1999	UK Private	Interpretive	2 Illustrative cases	Illustrative cases	-	Illustrative cases showed that consultants provide expertise and validation in consulting assignments. Consultants also saw themselves as allies of top management	Fincham 1999
1997	UK Private	Hybrid Approach	Survey data and cases	Interviews	-	Management consultants are used to validate management proposals	Sturdy 1997
1995	UK Public	Interpretive	One case study	Non-participant Observation	Yes	Analysis of management consulting as an exercise of power in an NHS implementation of the MANEX information system	Bloomfield 1995
1993	USA Private	-	Illustrative Cases	Illustrative cases	-	Illustrative cases suggest that management consultants are used to 'rubber stamp' management decisions	Shapiro, Eccles et al 1993
1982	USA	-	Illustrative Cases	Illustrative Cases	-	Illustrative cases suggests that the value of management consultancy lies in its role in organisational diagnosis	Turner 1982
1961	USA Private	Interpretive	12 case studies	Executives & consultants	Yes	Management consultants are used to diagnose organisational problems	Tilles 1961

Appendix 5.1 – Survey of Public Sector Organisations on IS strategy

IT/IS Strategy in the Public Service – Survey 2004

Name (capitals): _____

Title:_____

Department/Office_____

1. In what year was your last information technology (IT) strategy of information systems (IS) strategy developed? (Please circle the relevant response below)

   - Year:_____
   - Planning Horizon 1 Year 2Yr. 3Yr. 4Yr. 5Yr. none stated

2. Were external consultancy or contract personnel hired to assist in developing the IT/IS strategy? (Please circle the relevant response below)

   - Yes No

3. Is your Department/Office likely to formulate a new IS/IT strategy in 2004 or 2005? (Please circle the relevant response below)

   - Yes No Don't know
   - Planning Horizon 1 Year 2Yr. 3Yr. 4Yr. 5Yr. none stated

4. Will external consultancy or contract personnel be hired to assist in developing the IS/IT strategy? (Please circle the relevant response below)

   - Yes No Don't know

5. Please clarify the designation of your strategy from the list below (Please tick the relevant response below)

   - Information technology (IT) Strategy _____
   - Information Systems (IS) Strategy _____
   - Information Management (IM) Strategy _____
   - Information Strategy _____
   - None of the above

Thank you for taking the time to complete and return the survey

If you require any clarification regarding the survey, please feel free to telephone me
Eddie Cussen +353 86 8282320

I would like to receive a copy of the results of the survey: Yes No

Appendix 5.2 - Case Study Sites – Selection Matrix

Ranked Selection Criteria - Requirements

1. Participation by external management consultants in IS strategy formation other than in a support or QA role
2. Choice of a different management consultancy organisation in each case
3. Availability of key senior managers for participation in the research

Department/Office	Consultant Participation	Consultancy Organisation	Department Role	Case Y/N	Remarks
1. Courts Service	**Yes**	**KAPPA**	**Operations**	**Selected**	**New governance arrangements**
2. Garda Siochana	**Yes**	**ALPHA**	**Operations**	**Selected**	**Major organisational change**
3. P.R.A.	**Yes**	**DELTA**	**Operations**	**Selected**	**New governance arrangements**
4. Enterprise & Trade	Yes	GAMMA	Operations	Rejected	Lead partner left and already interviewed in Courts Case Study – failed criterion 3 above
5. Agriculture	Yes	KAPPA	Operations	Rejected	KAPPA case done – excluded criterion 2
6. Foreign Affairs	Yes	KAPPA	Operations	Rejected	KAPPA case done- excluded criterion 2
7. Comms. & Marine	Yes	KAPPA	Operations	Rejected	KAPPA case done – excluded criterion 2
8. Finance	QA Only	KAPPA	Policy/Ops	Rejected	KAPPA case done -excluded criteria 1 & 2
9. Civil Service Commission	Support role only	BETA	Operations	Rejected	Failed criteria - criterion 1
10. Taoiseach	Yes	RHO	Policy	**Suitable**	Local management consultancy
11. Environment	Yes	DELTA	Policy/Ops	Rejected	DELTA case done – excluded criteria 2
12. Health	Yes	IOTA	Policy	**Suitable**	Local management consultancy
13. Revenue Commissioners	QA only	ALPHA	Operations	Rejected	Failed criteria. - criterion 1
14. Attorney General	Yes	OMICRON	Operations	Rejected	Consulting now part of GAMMA – failed criterion 3
15. OPW/Duchas	Yes	Not known	Operations	Rejected	Contact problem
16. Valuation Office	No		Operations	Rejected	Failed criteria. - criterion 1
17. Education	No		Policy/Ops	Rejected	Failed criteria- criterion 1

18. State Laboratory	No		Specialist	Rejected	Failed criteria. - criterion 1
19. Ordnance Survey	No	-	Specialist	Rejected	Failed criteria- criterion 1
20. National Roads Authority.	No		Specialist	Rejected	Failed criteria. - criterion 1
21. DSFA				Rejected	Did not respond to questionnaire
22. Arts, Sports, Tourism				Rejected	Did not respond to questionnaire
23. Defence				Rejected	Did not respond to questionnaire
24. Transport				Rejected	Did not respond to questionnaire

Appendix 5.3 – Letter of Introduction to the IS Manager in PRA

Mr. John O'Sullivan
Information Systems Manager,
The Property Registration Authority,
Chancery Street,
Dublin 7.

Re: Information systems strategy formation in the Irish Public Service.

Dear John,

I am engaged in research in the field of information systems management at the School of Business Studies, Trinity College, Dublin. My research interests are information systems strategy, enterprise information systems management, and international IS integration, and management consultancy. I am also engaged in a PhD research study to establish how external management consultants shape IS strategy formation in the Irish Public Service.

The investigation requires the participation of a small number of departments/agencies who are at different stages in the planning and implementation of IS strategy. I have already had meetings with the Department of Finance (CMOD) to discuss the research and they are supportive of the work.

I am conducting the research through a small number of case studies in central government departments/agencies in the period 2004/2007. The period of engagement with the participating agencies would be roughly twelve months and would involve semi-structured interviews with key stakeholders at senior levels, access to agreed reports and minutes, and informal meetings with key stakeholders and management consultants. I would participate as a neutral observer in the participating departments/agencies and would not participate actively in the IS strategy formation or implementation.

Two large agencies from within the Irish criminal justice system have participated as the first two case studies and my reason for writing is to seek

an opportunity to meet with you to discuss the possibility of the Property Registration Authority (PRA) participating in the research as the third case study organisation. I am confident that a joint research initiative would be of practical benefit to the economy generally as well as to participating departments/agencies. The research study will be written up in the form of a PhD thesis for submission to the School of Business Studies in accordance with normal practice. The draft case study would be sent to the Registration Authority for sign-off before completion.

In addition to my research, I have been Head of IT & Telecommunications in An Garda Síochána for a number of years. Thus, I have practical experience in the formation and implementation of IS strategy with the involvement of external consultants in a public service setting. I am also familiar with custom and practice in the wider public service as a result of my secondment to the Department of the Public Service (CDPS) in the period 1980 to 1982

I know that you have a busy schedule but I hope that it will be possible to meet in the near future. I will telephone you in a few days in order to set up a meeting, if this is possible, to discuss the issues.

Yours faithfully

Eddie Cussen
6th December 2006

Tel: +353 86 8139136
E-mail - cussenej@iol.ie
cussene@tcd.ie

Appendix 5.4– Letter of Introduction to the CEO of the PRA

Ms. Catherine Treacy,
Chief Executive Officer,
The Property Registration Authority,
Chancery Street,
Dublin 7.

Re: Information systems strategy formation in the Irish Public Service.

Dear Catherine,

I am engaged in research in the field of information systems management at the School of Business Studies, Trinity College, Dublin. My research interests are information systems strategy, enterprise information systems management, international IS integration, and management consultancy. I am also engaged in a PhD research study to establish how external management consultants shape IS strategy formation in the Irish Public Service.

The investigation requires the participation of a small number of departments/agencies who are at different stages in the planning and implementation of IS strategy. I have already had meetings with the Department of Finance (CMOD) to discuss the research and they are supportive of the work.

I am conducting the research through a small number of case studies in central government departments/agencies in the period 2004/2007. The period of engagement with the participating agencies would be roughly twelve months and would involve semi-structured interviews with key stakeholders at senior levels, access to agreed reports and minutes, and informal meetings with key stakeholders and management consultants. I would participate as a neutral observer in the participating departments/agencies and would not participate actively in the IS strategy formation or implementation. The contribution of individual interviewees would be anonymised in the case studies.

Two large agencies from within the Irish criminal justice system have participated as the first two case studies and my reason for writing is to raise

the possibility of the Property Registration Authority (PRA) participating in the research as the third case study organisation. I am confident that a joint research initiative would be of practical benefit to the economy generally as well as to participating departments/agencies. The research study will be written up in the form of a PhD thesis for submission to the School of Business Studies in accordance with normal practice. The draft case study would be sent to the Property Registration Authority for sign-off before completion.

In addition to my research, I have been Head of IT & Telecommunications in An Garda Síochána for a number of years. Thus, I have practical experience in the formation and implementation of IS strategy with the involvement of external consultants in a public service setting. I am also familiar with custom and practice in the wider public service as a result of my secondment to the Department of the Public Service (CDPS) in the period 1980 to 1982

I would be happy to provide any additional information in relation to the conduct of the case study or the approach to the work which you require.

Yours faithfully

Eddie Cussen
29th December 2006

Tel: +353 86 8139136
E-mail - cussenej@iol.ie
cussene@tcd.ie

Appendix 5.5 – Letter of Introduction to a Management Consultancy

Addressee

Re: Information systems strategy formation in the Irish Public Service.

Dear ,

I am engaged in research in the field of information systems management at the School of Business Studies, Trinity College. My research interests are information systems strategy, enterprise information systems management, international IS integration, and management consultancy. I am carrying out a PhD research study aimed at gaining a wider understanding of how external management consultants shape IS strategy formation in the Irish Public Service.

The investigation requires the participation of a small number of departments/agencies who are at different stages in the planning and implementation phases of IS strategy. I have already had meetings with the Department of Finance (CMOD) to discuss the best approach to the research and they are supportive of the work.

I am conducting the research through a small number of case studies in central government departments/agencies in the period 2004/2007. The period of engagement with the participating agencies would be roughly twelve months and would involve semi-structured interviews with key stakeholders at senior levels, access to agreed reports and minutes, and informal meetings with key stakeholders and management consultants. I would participate as a neutral observer in the participating departments/agencies and would not engage actively in the IS strategy formation or implementation.

This particular research initiative has been underway for some time and a number of government departments/agencies have participated in surveys and field work. A number of management consultancy practices have also been involved. An Garda Siochana has agreed to participate as one of three case study organisations. The case study would involve the reconstruction and writing of the 'story' of IS strategy formation in An Garda Siochana from the time IS were first introduced in the early 1970's to date. The role of external

management consultants in shaping IS strategy would be a major focus of the work. My purpose in writing to you is to enquire if ALPHA would also participate in the study. I am aware that any such participation would be constrained by commercial considerations such as intellectual property rights etc. I estimate that participation would involve a commitment to one or two interviews by each of three or four senior personnel in ALPHA who have had a leading role in IS strategy formation in the Garda in the period 1991 to date.

I would welcome the opportunity to discuss the feasibility of having ALPHA participate in the research. I am confident that the research will be of practical benefit to the economy generally as well as to participating departments/agencies. The research study will be written up in the form of a PhD thesis for submission to the School of Business Studies in accordance with normal practice.

My purpose in writing to you at this point is to introduce the research and seek a short meeting with you to discuss the work and the specific issues mentioned above. I know that you have a busy schedule but I hope that it will be possible to meet in the near future. I will telephone you in a few days in order to set up a meeting, if this is possible, to discuss the matter.

Yours faithfully

Eddie Cussen
16th May 2006

Tel: +353 86 8139136
E-mail - cussenej@iol.ie
cussene@tcd.ie

Appendix 5.6 – Letter of Introduction to a potential interviewee in the Garda

Chief Superintendent Louis Harkin,
Change Management,
An Garda Siochana,
Garda Headquarters,
Phoenix Park,
DUBLIN 8.

Dear Louis,

I hope all has been well with you since we last spoke.

As you may know, prior to my retirement, I began a M.Sc. by research in TCD. My research area is information systems management and the M.Sc. has since changed to a PhD over time. My thesis deals with information systems strategy formation in the Irish public service. I have completed one case study in the Courts Service and I am currently doing my second case in the Garda Siochana. Courts Service, Garda and the Department of Finance have been supportive and have participated by providing access, documents, interviews etc. I will have one case study left to do after completing the Garda case but have not decided the location.

Each of the case studies will consist of 60/70 pages excluding bibliography and analysis. Data obtained from interviewees will be anonymised in accordance with standard practice. The cases will be 'signed off' by the participating agencies before inclusion in the thesis.

My research is aimed at ascertaining how external management consultants shape IS strategy formation in the Irish public service. My focus is on the strategy process, or how it occurs, rather than on the thrust or content of the IS strategies. The management consultancy organisations have participated fully in each of the cases. In addition to describing each of the cases, it is also necessary for me to write a chapter explaining the public sector context and I have most of this done. The contextual chapter deals with public sector modernisation and more recent developments such as SMI.

I have already done a good deal of background work on the Garda case by going through the archives, by reading the various books on the Garda, and by going through documentation and reports. When I have gotten as far as I can on documented sources, I will begin to fill in the rest from interviews.

Given that you had a central role in the progress of IT in the Garda over the years, and especially during IS strategy development, I felt I should drop you a line to see if you are in a position to provide a perspective on the research topic. I hope to phone you in the next couple of weeks to check if you can assist. I anticipate that I could cover the ground in about one and a half hours at a time and a place convenient to you. The focus of the interview would be on the following areas;

- Main developments in the modernisation programme in the Garda Siochana
- The key stakeholders in IS strategy formation in the Garda Siochana
- How management consultants contributed to the development of IT strategy in the Garda Siochana (with a particular focus on the ICT strategy 2005 -2008)?
- The main challenges to the effective delivery of the IT in support of the corporate strategy?
- What lessons for the future of the Garda organisation, if any, could be learned from the development of IT in the last 10/15 years?

I look forward to following up on these issues with you in the coming days.

Best regards,

Eddie Cussen
19th October 2006

Tel: +353 86 8139136
E-mail - cussenej@iol.ie
cussene@tcd.ie

Appendix 5.7 – Public Sector Context Interviewees (6)

Agency	Interviewee
Department of Finance (CMOD), Lansdowne House, Dublin 4.	Mr. Jim Duffy, Assistant Secretary Mr. Dave Ring, Principal Officer Mr. Tim Duggan, Principal Officer Ms. Dolores Rooney, Principal Officer Mr. Tom Walsh, Principal Officer (retired)
Institute of Public Administration, Lansdowne Road, Dublin 4.	Mr. Frank Litton

tSeirbhís Chúirteanna
Headed Paper
COURTS SERVICE
An tSeirbhís Chúirteanna
Headed Paper

Mr. Eddie Cussen,
School of Business Studies,
Trinity College,
Dublin 2.

Letter of Authentication

This is to confirm that Mr. Eddie Cussen, Ph.D. Researcher, School of Business, Trinity College Dublin carried out case study field work in the Courts Service in the period from February 2005 to April 2006. The study was focused on how management consultants contribute to IS strategy formation in public sector organisations.

Mr. Cussen wrote initially to Mr. P.J. Fitzpatrick, CEO of the Service who agreed to the participation of the Service in the research. Mr. Cussen was provided access to Courts Service personnel for interview purposes and was also provided with relevant documentation.

Mr. Cussen has provided the Service with a copy of his case study narrative for verification that it provides an accurate representation of the IS strategy formation experience of the Authority and the people involved. Having read the final draft narrative, I am satisfied that it is an accurate representation and I agree to its inclusion in the thesis to be submitted to the School of Business, at Trinity College, Dublin.

Signed: John Boyle Date: 5 June 2008

The Property Registration Authority
An tÚdarás Clárúcháin Maoine

1707 - 2007

6th February 2008

Mr. Eddie Cussen,
School of Business Studies,
Trinity College,
Dublin 2.

Letter of Authentication

This is to confirm that Mr. Eddie Cussen, Ph.D. Researcher, School of Business, Trinity College, Dublin carried out case study field work in the Authority in the period from December 2006 to May 2007. The study was focused on how management consultants contribute to IS strategy formation in public sector organisations.

Mr. Cussen wrote initially to Ms. Catherine Treacy, CEO of the Authority who agreed to the participation of the Authority in the research. Mr. Cussen was provided access to Authority personnel for interview purposes and was also provided with relevant documentation.

Mr. Cussen has provided the Authority with a copy of his case study narrative for verification that it provides an accurate representation of the IS strategy formation experience of the Authority and the people involved. Having read the final draft narrative, I am satisfied that it is an accurate representation and I agree to its inclusion in the thesis to be submitted to the School of Business, at Trinity College Dublin.

John O'Sullivan
Information Systems Manager

An Garda Síochána

Teicneolaíoche An Eolaís
Ceanncheathrú An Garda Síochána
Páirc on Fhíonnuisce
Baile Átha Cliath 8

Information Technology
Garda Headquarters
Phoenix Park
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Web Site: www.garda.ie
E-mail: tommy.quinn@garda.ie

Mr. Eddie Cussen,
School of Business Studies,
Trinity College,
Dublin 2.

Letter of Authentication

This is to confirm that Mr. Eddie Cussen, Ph.D. Researcher, School of Business, Trinity College, Dublin carried out case study field work in An Garda Siochana in the period from April 2006 to December 2006. The study was focused on how management consultants contribute to IS strategy formation in public sector organisations.

Mr. Cussen wrote initially to Deputy Commissioner Peter Fitzgerald who agreed to the participation of An Garda Siochana in the research. Mr. Cussen was provided access to Garda personnel for interview purposes and was also provided with relevant documentation.

Mr. Cussen has provided the Garda with a copy of his case study narrative for verification that it provides an accurate representation of the IS strategy formation experience of the Garda and the people involved. Having read the final draft narrative, I am satisfied that it is an accurate representation and I agree to its inclusion in the thesis to be submitted to the School of Business, at Trinity College Dublin.

Tommy Quinn,
Head of IT Planning.

25 April 2008

Ráiteas Misin/Mission Statement:
An léibhéal insroichte is airde a bhaint amach le Cósaint Phearsanta, Tionantas don Phobal and Slándáil Stáit
To achieve the highest attainable level of Personal Protection, Community Commitment and State Security.

Appendix 6.1 – Irish Government Departments

1. Department of the Taoiseach
2. Department of Finance
3. Department of Foreign Affairs
4. Department of Agriculture, Fisheries and Food
5. Department of Health and Children
6. Department of Social and Family Affairs
7. Department of Enterprise, Trade and Employment
8. Department of the Environment, Heritage and Local Government
9. Department of Education and Science
10. Department of Justice, Equality and Law Reform
11. Department of Transport
12. Department of Communications, Energy and Natural Resources
13. Department of Defence
14. Department of Arts, Sports and Tourism
15. Department of Community, Rural and Gaeltacht Affairs

Appendix 6.2 – Information Technology Planning – Overview

(Department of Finance Advice Note)

INTRODUCTION

The IT Planning Guidelines, issued by CITS in July 1986 define the required content of plans and recommend procedures for their completion. This note is an overview of those guidelines and is aimed at IT and non-IT management generally.

Departments are required under Department of Finance Circular 13/86 to "draw up formal annual and multi-annual information technology plans". Increasingly, such plans are having a major bearing on the determination of Estimates provisions, on sanction for expenditure on IT, and on prioritisation of activities in CITS.

THE MANAGEMENT ROLE

The IT Planning Guidelines relate to planning above the level of individual projects so the primary user involvement is at senior and middle management level. IT planning is not a technical IT function; it is concerned more with the management of information and resources than technological options. Management, therefore, should fully appreciate the reasons for IT planning in order that the necessary commitment will be given to it in the department. IT Units must, if necessary, seek to convince management of the need to participate in the process.

THE NEED FOR PLANNING

Planning for It is necessary to ensure that the full potential of modern technology is directed towards improving the effectiveness of the organisation and that the resources and effort expended on the implementation of IT are used to maximum effect. The guidelines achieve these aims by

- consideration of the information requirements at management levels
- provision of sufficient information on costs and benefits for informed investment decisions on IT by management;
- identification of potential inter-relationships between projects, at both the systems and technical levels;
- anticipation of the organisational and personnel impacts of the widespread use of IT;
- consideration of current industry trends in order to achieve a consistent technical strategy and to optimise development procedures

It can be seen that all of these elements should be of concern to management by whom, in many cases, relevant decisions can only be taken.

THE PLANNING PROCESS

The guidelines advocate a 3-phase approach (illustrated in the attached chart) for the development of an IT plan. A Fast-track Approach to Strategic IT planning – FASIT – is available for use in small Departments/Offices.

Phase 1. Analysis of Current Situation

This phase derives an IT policy from aims and objectives at senior management level; assesses the potential impact of IT in each area; produces a preliminary 'Information Systems Architecture'; examines the current status of IT in the department; and, from an analysis of these factors, decides the areas to be examined in greater detail in Phase 2, i.e. the agreed scope.

Phase 2. Specification of Requirements

In this phased, there is a more detailed examination of the areas within the agreed scope – but only to a level of detail necessary for completion of the Strategy.

Phase 3. Completion of Strategy and Plans

This phase involves decisions on alternative strategies and priorities, completion of plans and production of a management report.

TECHNIQUES

Two key techniques are recommended in the guidelines – Critical Success Factors (CSFs) and Information Modelling.

The CSF technique assists in the determination of management information needs; the establishment of IT potential; and decisions on priorities. The CSF approach addresses these issues by working from high level aims and objectives and providing a practical method to define priorities and information needs relative to these aims and objectives.

Information Modelling is used to establish a stable structure for the development of IT systems. The broad approach is to define the information required to satisfy the various needs of the department and to match these information requirements with the function of the organisation. While this match can be achieved without the use of formal information modelling techniques, such techniques provide a very rigourous approach to the task and are recommended in situations where requirements are in any way complex.

ORGANISATION OF PLANNING PROJECTS

Good planning projects require the active participation of management and it is important that arrangements are made to achieve this involvement. Three separate factors need to be addressed in establishing planning projects:

Direction of Projects

Planning projects should be directed and controlled at the highest practicable level. Normally this should be through a Planning Committee at Assistant Secretary level. Where a Management Advisory Committee (MAC) is already established, it may be more appropriate to delegate IT planning to a smaller group under the direction of the MAC.

The functions of the Committee should be to ensure management commitment to the IT planning process, to maintain a strategic focus, to approve investment decisions and to decide on priorities where necessary. It should exercise these functions by setting terms of reference at the commencement of each phase of the planning process, by assessing the output from each phase and by making decisions as necessary on options arising.

Conduct of Projects

Planning projects should be conducted by teams specially assembled for this purpose. The team should be led by a Principal, probably from the IT, Organisation of Planning Unit but the person chosen is more important than the position within the department in that the team leader should have access to, and a good relationship with, senior management together with a good understanding of policy and objectives across the department.

The other members of the team should have a mix of skills and experience in organisational analysis, planning and IT. They should ideally be at AP level with good support at HEO level.

Project Start-up

The following activities are recommended to establish the project on a solid footing:

- Define the objectives and scope of the project
- Obtain the commitment of senior management
- Provide any necessary education for the IT Planning Committee
- Assemble the project team (including any necessary external resources) and provide any necessary training
- Establish project organisation and work programme
- Launch the project

FURTHER INFORMATION

As stated in the introduction, a more detailed description of the recommended IT planning process can be found in the IT Planning Guidelines. For additional information on other topics which may emerge in the context of IT planning, consult the CITS Index of Guidelines and Advice Notes. CITS will be happy to recommend an appropriate reading programme; the Index includes the current contact person in CITS.

THE PLANNING PROCESS

Diagram to go in here

Appendix 6.3 - Organisations in the Department of Justice, Equality and Law Reform Sector

1. An Garda Siochana
2. Garda Siochana Complaints Board
3. Garda Inspectorate
4. Garda Siochana Ombudsman Commission
5. National Crime Council;
6. Private Security Authority
7. The Courts Service
8. Equality Tribunal
9. Equality Authority
10. National Disability Authority
11. The Irish Prison Service
12. Probation Service
13. Parole Board
14. Office of the Refugee Applications Commissioner
15. Refugee Appeals Tribunal
16. Office of the Film Censor
17. Censorship of Publications Office
18. Office of the Data Protection Commissioner
19. Criminal Injuries Compensation Tribunal
20. Forensic science Laboratory
21. State Pathology Service
22. Legal Aid Board
23. National Property Services Regulatory Authority
24. Property Registration Authority

Appendix 6.4 – Courts Service Interviewees (13)

Management Constituency	Interviewee
Top Management	Mr. P.J. Fitzpatrick, Chief Executive Officer
Business Management (4)	Mr. Sean Quigley, Finance Director Mr. John Glennon, HR Director Mr. Brendan Ryan, Director Corporate Services Mr. Diarmuid MacDiarmada, Director of District & Circuit Court Operations
IS Management (5)	Mr. John Coyle, CIO Mr. Michael Byrne, Assistant Principal Ms. Catherine Glackin, Assistant Principal Mr. Simon Hall, Assistant Principal Mr. Denis O'Neill (retired)
User Management (2)	Mr. John Molloy, Chief Clerk Metropolitan Courts Ms. Anne Price, Principal Officer
Management Consultants	One partner KAPPA

Appendix 6.5 – IT Strategy/Scoping Study 1997 - Projects

APPLICATION	DESCRIPTION
Criminal Case Tracking System (Phase 1)	A system to track and trace all Criminal and Road Traffic prosecutions in the Dublin and Limerick District Courts. This application was an urgent priority as a replacement for a non Y2K system.
Criminal Case Tracking System (Phase 2)	The extension of Phase 1 nationwide with additional functionality to provide for the processing of appeals and trials in the Circuit Court, Central Criminal Court and Special Criminal Court
Integrated Civil Case Tracking System	A system to track and trace civil proceedings across all Court jurisdictions together with added functionality to support the processing of family law proceedings and the work associated with a number of statutory offices within the aegis of the Courts Service
Jury Selection System	A system to provide for the selection of jurors.
Financial Management System	A system to provide for the management of monies voted by the Exchequer to meet the operational requirements of the Courts Service
Courts Accounting System	A system to provide for the accounting of all monies received and payable by the Courts Service across all Court jurisdictions.
Management Information System	A system to provide management information across all Court jurisdictions

Appendix 6.6 – ITT for IS Strategy Study - Requirements Specification

Invitation to Tender
For
A 5 Year High Level Information Technology
Strategic Plan
For
The Courts Service

Specification of Requirements

Team Requirements

Prospective Tenderers must have detailed experience in the formulation of IT strategies in large organisations together with experience in working with top management in such organisations. In addition, the Courts Service would consider it desirable that included in the team proposed would be a "strategist" who would have specific experience in the development of technologies and strategic information technology principles appropriate to a modernising Courts environment including experience in the emerging technologies including digital signature and electronic filing systems and their application within a modern Courts environment.

Terms of Reference

The terms of reference of this assignment are the development of an I.T. Strategic Plan and direction for the Courts Service for the period 2001 – 2005 inclusive which will include:

(a) a high level review of the overall Courts Information Technology programme to date .The review will include the development of coherent strategies for the Courts Service, taking account of developments to date, in relation to the following;

Information Strategy, including but not confined to

- records management
- management of reference material
- knowledge management
- document management
- case/matter management
- management of data of all types whether to support work operations or for management information purposes
- management information

Applications Strategy, including but not confined to

- human resource management systems
- long-term information management systems e.g. records management and records archiving
- financial and asset management systems
- systems supporting workers as individuals and in groups
- operational systems for supporting and tracking cases/transactions with customers
- operational planning and decision support systems
- enterprise planning and decision support systems
- document management

eServices Strategy, including but not confined to:

- provision of electronic services to the citizen
- Provision of electronic services to Court Officers e.g. barristers, solicitors etc.
- incorporation of the terms of the eCommerce Act 2000 into the overall Courts I.T Programme
- incorporation of the Public Services Broker Model into the overall Courts I.T. programme
- provision of electronic services between agencies in the Criminal Justice System

(b) a review of the appropriateness of the Courts Service existing/proposed technical infrastructure/environment as a platform for the delivery of

- the remaining applications the subject of the IT programme
- any new applications arising from this assignment
- electronic services in accordance with the e-broker model recently endorsed by Government as the framework within which integrated electronic public services should be delivered. Details of the e-broker model are available at www.irlgov.ie/taoiseach/eIreland/intro.htm.
- provision of inter agency electronic services

And make recommendations on appropriate standards and technologies which should be incorporated into the overall infrastructure/environment to ensure effective and efficient delivery of such applications and electronic services

(c) review the effectiveness of the Courts Service existing office automation programme based on the use of the Lotus Productivity toolset for the provision of

- document management facilities
- email facilities
- Intranet access
- Internet access

- Future integration with case management systems

And make recommendations on the incorporation of the office automation programme into the overall Courts service IT programme

(d) to review the existing structure of the IT function within the Courts Service with particular reference to the resources required for

- the delivery of the remaining applications the subject of the Courts IT programme
- the delivery of the Courts office automation programme
- the delivery of new information technology initiatives and technologies identified during this strategic review
- full participation by the Courts Service in the overall Government initiative for the delivery of electronic services including the Public Service Broker Model

And make recommendations on appropriate structures, skills and resources required within the Courts Service to facilitate the successful completion of the overall programme

(e) review the options available to the Courts service for the development of a Strategic Support Model to provide for the future maintenance and support of the outputs from the overall IT programme

(f) prioritise the overall work programme arising from this assignment into broad implementation plans with realistic indicative timescales and prepare indicative costings for Information technology requirements in the period 2001 to 2005inclusive

(g) review and make recommendations for additional studies considered necessary to address "downstream" projects which may emerge during the course of this assignment

The following are considered critical to the success of this project

(a) Identification of projects and Information Technology initiatives within the Courts Service considered necessary for organisational success

(b) The development of Information, Application and eServices strategies

(c) Identification of projects, initiatives, strategies and technologies which will enable the Courts Service to participate to the greatest extent possible in the Government's strategy for developing the Information Society in Ireland

(d) Identification of the key organisational, resourcing and other issues affecting the Courts Service's ability to deliver the overall IT programme and subsequently support the delivered products

(e) Identification of realistic costing model for the overall Courts IT programme which will enable the Courts Service to obtain the funding required to deliver IS which will support the effective and efficient administration of the business of the Service

Tenderers must be in apposition to supply the deliverables requested within 2 months from the date of the award of contract

Appendix 6.7 – Projects recommended in the e-Courts IS Strategy 2001

No.	Application	Status (2005)
1.	CCTS Release 1.5 (including pilot regional roll-out)	Completed
2.	CCTS Phase 2 (including e-Listing, Garda links, prisons & CSSO	Not done
3.	CCTS Version 2	Not done
4.	Gateway Phase 1	Completed
5.	Gateway Phase 2 (replacement of Lotus Smartsuite)	Completed
6.	Civil Case Tracking (CvCTS) Release 1 (including eFiling and eSubmission) Bo	Not done
7.	Civil Case Tracking (CvCTS) (Includes eStamping)	Not done
8.	Court Service Financials Release 1 (GL, AP)	Completed
9.	Court Service Financials Release 2 (AR,FA) includes eProcurement	Completed
10.	Courts Accounting – Fines & Bail (includes ePayment)	In 6 sites
11.	Funds Accounting – Funds Monitoring & Funds Management	Done
12.	Courts Accounting –Interfaces (CCTS, CvCTS, Court Service Financials)	Beginning
13.	HRM System and Payroll implementation	Done
14.	Management Information System & Executive Information System (MIS & EIS)	Partly done
15.	Knowledge Management & Dissemination (including Intranet)	Not done
16.	Jury selection	Postponed
17.	Project Management, Costing and Control	Not done
18.	Property Inventory and Control System (Assets)	Not done
19.	Pilot eServices for eFiling, ePayment and Small Claims	Live 2005

Appendix 6.8 – Property Registration Authority Interviewees (8)

Management Constituency	Interviewee
Top Management	Ms. Catherine Treacy, Chief Executive Officer
Business Management (3)	Mr. Diarmuid Clancy, Deputy Registrar Operations Mr. Michael Treacy, Corporate Services Manager Ms. Fran Leahy, HR Director
IS Management (2)	Mr. John O'Sullivan, IS Manager Mr. Greg McDermott, IS Manager
Management Consultants (2)	Partner DELTA Partner OMICRON

Appendix 6.9 – ITT for the Registries IS Strategy – June 1990

June 25th 1990

Land Registry, Central Office
Chancery Street,
Dublin 7.

Dear Sir,

The Land Registry and Registry of Deeds wishes to prepare a Strategic Plan the purpose of which should be to link the business goals and objectives of the organisation with the optimum technological requirements and organisational functions to enable better usage of existing and future resources. You are requested to submit a specific proposal for the project.

A summary of the responsibilities of the Land Registry and Registry of Deeds is attached together with an organisational chart and summary of the present IT utilisation. The proposed plan would follow the Planning Guidelines as issued by the Department of Finance and would cover all aspects of the Registries functions.

The proposed project will result in a strategic plan with particular reference to;

1. Policies aims and objectives of the registries, identifying critical success factors and targets arising from them.
2. A review of the current situation, e.g. Staffing, Organisation, Budget Control, including existing procedures and practices and existing IT in the Registries.
3. Definition of the information requirements for new and existing functions within the Registries identifying the types of processing required in the Registries. E.g. Data Processing, Word processing, Text Storage and Retrieval, Financial Modelling, Expert Systems Communications, Access to External databases, External access to the Registry Databases, Image Processing, Geographic Information Systems.
4. A definition of special needs or unusual requirements, e.g. Service Levels, Security, Adaptability to legislative and other changes.
5. A specification of the information systems areas and the relationships between them.
6. Defining the broad technical framework and standards within which information systems development will proceed in Registries and identifying the approaches to be taken to the development of different systems within the Registries. e.g. Methods, Standards, and software to be used.
7. A specification of the Organisation required within the registry to support the O & M function and the IT function and, if required, a plan to develop that Organisation.
8. Identification of areas where organisational and procedural changes would improve the efficiency of the Registries.
9. Production of a development programme which would include a transition strategy from existing systems to proposed systems, a development schedule and project briefs.

10. Production of cost benefit projections

11. Identification of legal implications of any proposed changes or developments.

The project will be controlled by a Steering Committee the composition of which will be made up of representatives of the Registry, the Department of Justice and the consultants. A project team will be drawn from the Registry.

It is expected that the project will commence in early September and it is hoped that to complete it by the end of November 1990.

The following information is required as part of a proposal:

(a) A proposed work programme and timetable

(b) The specific personnel proposed for the various tasks with total man-days together with specific costs for each consultant. CVs should be provided for all personnel used.

(c) All costs should be specified inclusive of VAT

(d) Any additional information which you consider relevant to this particular project

Proposals (in triplicate) should reach the undersigned by 5.p.m. on August 3rd 1990 and those firms who submit proposals will be required to make a presentation to management later than week or in the following week. It will be necessary for all those proposed for a significant role to attend the presentation.

If you require clarification on any matter arising from this request please phone John Hennessy at 725555 Ext 320.

Yours faithfully

_____

Catherine Treacy

Registrar

Appendix 6.10 – ITT for E-Services Strategy for the Registry of Deeds

Land Registry & Registry of Deeds
Clárlann na Talún & Clárlann na nGníomhas

INVITATION TO TENDER

for the development of an

Electronic Service Delivery Strategy

for the

REGISTRY OF DEEDS

Issued by : ***Land Registry Information Systems Unit, Land Registry Central Office, Chancery Street, Dublin 7, Ireland***

June 2002

Invitation to Tender

1. Introduction and Administrative Arrangements

This document constitutes an Invitation to Tender (ITT) for the development of an electronic service delivery strategy for the Registry of Deeds in Ireland. This competition is being undertaken by the Information Systems Unit of the Land Registry, on behalf of the Registry of Deeds.

1.1 Background to Land Registry and Registry of Deeds

1.1.1 There are two separate systems for recording transactions in relation to property and land in Ireland; the *Registration of Title* system operated by the Land Registry since 1892 and the *Registry of Deeds* system operated by the Registry of Deeds since 1708.

1.1.2 Both systems are under the control of the Registrar of Deeds and Titles. For administrative purposes, both Registries form part of the one organisation and operate under the aegis of the Minister for Justice, Equality and Law Reform and are collectively referred to as 'The Registries'. The Registrar is Chief Executive of the organisation.

1.1.3 Security of title is the cornerstone of the services provided by the Land Registry and Registry of Deeds. The system of registration offered by the Land Registry is based on a register of guaranteed title, while that offered by the Registry of Deeds is based on the premise that the public interest is best served by publication of the Registry's records. So, easy public access to the Registry of Deeds information is a critical success factor for the operation of its service.

1.1.4 The mission of the Land Registry and Registry of Deeds is to *'safeguard the social and economic fabric of property ownership'* and the organisation's mandate is carried out by providing a range of key property services to its customers; principally the legal profession and associated commercial communities within the State.

1.1.5 The principal aims of the Registries are:

- to maintain and develop a uniform and efficient land registration system
- to guarantee legal title on behalf of the State to interests in land (Land Registry)
- to provide ready access to accurate land information
- to achieve continuously improving levels of service delivery to its customers

1.1.6 Considerable additional background information on the Land Registry and Registry of Deeds is available at www.gov.ie/landreg/

1.2 Electronic Service Delivery in the Registries

1.2.1 One of the core strategies of the Land Registry and Registry of Deeds is to provide high-value information services which take advantage of the organisation's unique and ever-increasing information resource. Through the *Strategic Management Initiative* (SMI) and the *Delivering Better Government* (DBG) process, the organisation has been actively seeking innovative ways of making that information available in the most speedy, convenient and effective

manner. The *Information Society* initiative and the *Electronic Government* agenda in particular, because of the responsibilities which they place on meeting the expectations of users of public services, have also provided a focus for achieving this. Further information on these central initiatives is contained in various publications available through www.gov.ie/taoiseach/publication/default.htm

1.2.2 Accordingly, it is of critical importance to the Registries to increasingly improve the quality of service delivered to its fee-paying customers and other stakeholders. This objective is also clearly reflected in the current service delivery strategies of the organisation which can be summarised as follows:

- Decrease the reliance on paper records and paper transactions
- Reduce turnaround times on services
- Increase the quantity and quality of information that could be provided on-line

1.2.3 In response to its mandate under the above, the *Land Registry* is already operating a very successful e-Government project through its Electronic Access Service (EAS). There is currently underway, as part of the development of the EAS database, a programme to image, index and publish on-line about 6.5 million pages of Land Registry property ownership records. That document imaging project is receiving substantial funding support from the Government's *Information Society* Fund.

1.2.4 The EAS has particular benefits for the legal profession, professional law searching firms, commercial property companies, and the law departments of public and private corporations. Authorised users are able to:

- Conduct on-line searches of the electronically available Land Registry records
- Discover the existence of any relevant transactions which may already be pending in the Land Registry against a particular property
- Track progress of applications on-line
- Order certified copies of official documents
- Avail of these services outside of normal business hours
- Avail of these services at a location of their own choosing

1.2.5 The EAS is an Internet based system (www.landregistry.ie) through which customers of the Land Registry can undertake a variety of services electronically as an alternative to the traditional means of communication and service delivery i.e. personal attendance, letter, fax and telephone. In effect, it is an additional service delivery channel, which is playing an increasingly important role in how the Land Registry serves its customers. Almost 160,000 transactions involving Land Registry data were conducted on-line through the EAS during 2001. As the quantity of on-line information increases through the imaging project, we expect the number of transactions to increase significantly.

1.2.6 Accordingly, the EAS is already an important resource to professionals engaged in the property market. However, it is presently confined to *Land Registry information only* and most of the users of the EAS also have a business

requirement for the information managed by the Registry of Deeds. The addition of the Registry of Deeds information to the EAS would result in a comprehensive database of ownership records for land located in the State.

1.2.7 At present, it is not possible to avail of *Registry of Deeds* records or services through the EAS. However, an IT system that supports the Registry of Deeds internal casework activities, known as RAMIS, has been operational since 1990 and it provides speedy and reliable access to a database of property ownership records and indices which go back as far as 1970. This database is used both by Registry of Deeds staff and by professional law searchers who attend the office. Access to RAMIS for the law searchers is provided from facilities within the Registry of Deeds premises but there is no general external access such as through the Internet or via an Extranet. During 2001, over 200,000 individual transactions were carried out on a *self-service* basis on this database by these customers using terminals located within the Registry of Deeds.

1.2.8 It is anticipated that the provision of Internet access to RAMIS data would transform the delivery of this service and provide benefits for both the Registry of Deeds and its customers.

1.2.9 A project team has been appointed within the Registries to advance the prospect of providing on-line access to Registry of Deeds services. The purpose of this document is to invite tenders for the provision of independent and expert consultancy services, in relation to this project. The consultant(s) will be expected to work closely with the team throughout the assignment.

1.3 Briefing of Interested Parties/Query Handling

1.3.1 The Land Registry is seeking tenders from suitably qualified parties through this open competition. A briefing session for parties interested in bidding for this assignment will be held in the offices of the Registry of Deeds, Henrietta Street, Dublin 1 commencing at **10.00 a.m. on Saturday 22nd June 2002** to clarify any relevant issues arising in relation to the tender document. The Registry of Deeds is located in the building adjoining the King's Inns and access to the premises on the day will be via the main entrance facing Constitution Hill. The building is signposted as '5' on the location map at www.gov.ie/landreg/dub_map.htm

1.3.2 In conjunction with this briefing session, potential respondents will also have the opportunity to inspect the RAMIS and EAS systems, the RAMIS data dictionary and relevant Registry of Deeds paper records. The session will also provide an opportunity to address technical questions which prospective bidders may wish to raise relating to current technical platforms in the Registries. Accordingly, attendance at the briefing session is very strongly recommended for parties interested in submitting a bid.

1.3.3 For logistical reasons and in order to provide the best possible access to the paper

records (which are public documents in continuous use from Monday to Friday) within the Registry of Deeds premises, it has been necessary to schedule the visit outside of the Registry of Deeds' hours of business.

1.3.4 Parties should indicate by e-mail to greg.mcdermott@landregistry.ie no later than 5.30 p.m. on Wednesday 19th June, if they propose to attend and supply the names and responsibilities of the nominees. A maximum of two nominees per bidder may be accommodated. Attendees will be required to bear their own costs.

1.3.5 In order to allow an appropriate opportunity to provide clarification, potential tenderers should endeavour to notify Mr McDermott by fax or e-mail, at the earliest opportunity, of the nature of any clarification required in respect of the contract.

1.3.6 All responses to questions will be subsequently forwarded to the parties who have downloaded this ITT from the www.e-tenders.gov.ie website, whether or not they have attended the briefing meeting. The source of any requests for clarification will not be identified in the response. Issues which have been clearly defined in the ITT will not be responded to.

1.3.7 Whilst every endeavour has been made to accurately inform potential respondents of the requirements for this contract, bidders should form their own conclusions about the methods and resources needed to meet those requirements. The Registries cannot accept responsibility for the bidder's assessment of the assignment.

1.3.8 Any requests for clarifications of this ITT should be directed to :

Mr. John O'Sullivan,

Land Registry Information Systems Unit,

Land Registry Central Office,

Chancery Street, Dublin 7,

Ireland.

Telephone: + 353 - 1- 8048140

Fax: + 353 -1- 8735021

e-mail: john.osullivan@landregistry.ie

or Mr. Greg McDermott, Telephone: 8048139

Fax: 8735021

e-mail: greg.mcdermott@landregistry.ie

1.4 Tender Submission Details

1.4.1 **Two (2)** copies of the tender in paper format, in a sealed envelope, marked ***'Tender for e-Services Delivery Strategy'*** and addressed to:

Mr. Greg McDermott,

Land Registry Information Systems Unit,

Land Registry Central Office,

Chancery Street, Dublin 7,Ireland

must be delivered to reach the above address not later than **12 noon on Monday 1st July 2002**. It is the responsibility of the tenderer to ensure that the tender is delivered on time. Under no circumstances will tenders be accepted after this time.

1.4.2 Tenders by fax or electronic mail will not be accepted.

1.5 Financial Arrangements

1.5.1 Payment for all services will be on foot of appropriate invoices. Invoicing arrangements will be agreed with the successful contractor in due course and will be subject to the provisions of the *Prompt Payment of Accounts Act, 1997* (No. 31 of 1997). Where relevant, the successful contractor will be obliged to pay subcontractors in accordance with the relevant applicable provisions of the *Prompt Payment of Accounts Act, 1997.*

1.5.2 Tenderers should be aware that payments to the successful contractor will be subject to 'Withholding Tax' for professional services pursuant to the Taxes Consolidation Act, 1997.

1.6 Instructions for completing Tender Documentation

The following instructions should be carefully noted and adhered to by parties submitting tender responses:

1.6.1 The tender must contain a response to each paragraph and Section of this document. Replies to paragraphs should be in the same sequence as the paragraphs in this document. Sections and subsections giving information to tenderers shall be answered with the word "noted" followed by any comment deemed necessary. Sections and subsections which give instructions shall be answered with "noted and agreed" or else some statement of conditional agreement or disagreement as appropriate.

1.6.2 Tenders must be completed in either the English or Irish language.

1.6.3 The response document for the contract must identify the name, postal and e-mail address, telephone and fax number of the tenderer and the name of the person within the tendering business dealing with the contract.

1.6.4 The solution offered for the contract may involve the provision of services and products from either a single party or a group/consortium of bidders. Where a particular bid for the contract is based on a group/consortium of business interests, the tender response document must identify:
- the nominated prime contractor in the group/consortium
- the number of parties involved and names of each
- the proposed arrangements for its operation i.e. the area of participation of each party in the context of the contract.

1.6.5 Where a bid from a group or consortium of bidders succeeds in respect of the contract, it is expected that a contract would be concluded with the prime contractor only who will then take sole responsibility for all matters arising under that contract.

1.6.6 The tender document must demonstrate that the bidder has sufficient **financial and economic standing** to undertake the assignment. The following material should be lodged in this regard; either:

(a) a statement of the bidder's
- overall turnover and
- its specific turnover in respect of *IT consultancy contracts* for each of the three previous financial years or,

(b) an appropriate statement from the bidder's bankers providing evidence of the bidder's financial position or

(c) where the above are not possible, other material which would establish that the bidder has the necessary financial standing to undertake the assignment

1.6.7 The tender response must include a CV for each person proposed for the assignment from which the Land Registry can establish the extent to which the respondent company fulfils the requirements set out in Sections 2 herein. The CVs should, in particular, demonstrate the relevant skills, experience and expertise of the proposed personnel for the assignment in question. See sections 2.2, 2.3 and 2.4 herein in particular for expectations in this regard.

1.6.8 The response must include a list of clients for whom similar work has been undertaken, indicating at what stage such clients may be contacted for references. This material should contain details of the nature of the work, its duration, timescale and deliverables and the relevance of the project to the work under consideration by the Land Registry

1.6.9 The response document(s) must contain the tenderer's *best and final offer* for the award of the contract. Fixed pricing in Euro (€) in respect of the services offered must be provided in the response document(s). Indicative or contingent costs (e.g. where a tenderer makes them dependent on currency exchange rates etc.) will not be accepted. The fixed price must include any provision which the tenderer wishes to make for travel and any other incidental expenses.

1.6.10 A Schedule of Costs must be included as part of the tender. This must detail the total fixed costs for the assignment. See Section 3 of this document for a pro forma Schedule of Costs. All prices in the Schedule of Costs must be quoted in Euro currency denominations.

1.6.11 The tender must be kept open for acceptance for at least **90 days** from the closing date for receipt of tenders.

1.6.12 Apart from the information specifically requested, tenderers are free to provide any additional relevant information which would assist the evaluation of their bid for the contract.

1.7 Interviews etc.

1.7.1 The Registries reserve the right to shortlist candidates based on their initial tender responses and, at its discretion, may wish to interview the key personnel proposed for the assignment by the shortlisted tenderers. Accordingly, respondents must be in a position to make such personnel available for interview, at reasonable notice, if so requested. Interviewees will be required to bear their own costs in such circumstances.

1.7.2 It is intended that such interviews would be held in the Land Registry's premises in Dublin.

1.8 Place of Performance and Duration

1.8.1 The project will require on-site attendance at the Land Registry Information Systems Unit premises at Chancery Street, Dublin 7 and the premises of the Registry of Deeds, Henrietta Street, Dublin 1, from time to time. It is envisaged that some aspects of the assignment could, however, be conducted from the contractor's own premises.

1.8.2 It is envisaged that the assignment will be completed before end of November 2002.

1.9 Budget and Funding

1.9.1 This assignment is receiving financial assistance from the Government's *Information Society* Fund for the calendar year 2002.

1.9.2 The indicative budget for this contract is €80,000, net of VAT. This detail is provided for information purposes only and is without prejudice to the outcome of the tender process. It will not bind the contracting authority in any manner whatsoever.

1.10 Provision of Information

1.10.1 The Registries propose to release the following information relating to this competition, on request:

- the name and address of the successful tenderer
- overall contract value of the successful tender

1.10.2 The Registries undertake to hold confidential any information provided by tenderers in their response document subject to:

- disclosure of the information specified at (1) above as being information that will be released to the public on request
- the Registry's obligations under law, including the Freedom of Information Act

Note that under the Freedom of Information Act, 1997 information provided in your tender may be liable to be disclosed where the public interest value of releasing such information is deemed to outweigh the right to confidentiality. The Registries will consult with the tenderer supplying confidential information before making any decision on releasing such information in response to a request under the Freedom of Information Act.

You are asked to consider if any of the information supplied by you in your tender (including that specified at (1) above) should not be disclosed because of its sensitivity. If this is the case, you should when providing the information, identify same and specify the reasons for its sensitivity. If you do not identify it as sensitive and the Registries, on consideration, do not deem it sensitive then it is liable to be released in response to a Freedom of Information Act request without further consultation with you. The Registries will consult with you about sensitive information before making a decision on a request that it receives pursuant to the Freedom of Information Act.

1.10.3 If you consider that none of the information supplied by you is sensitive please make a statement to that effect. Such information is liable to be released in response to a Freedom of Information Act request.

1.11 Conditions of Tender

Detailed contractual arrangements are not within the scope of this document. However, the following conditions should be *noted* by tenderers in their response:

1.11.1 It is a strict condition of this competition that the successful tenderer and his/her agent or agents (if applicable) **will be precluded from assisting or advising any candidates or tenderers or participating in any form whatsoever, either directly or indirectly, in any subsequent tender** for the supply of hardware or software or related services or systems which may arise from this consultancy assignment.

1.11.2 Information provided by tenderers will be treated as contractually binding. However, the Registries reserve the right to seek clarification or verification of any such information.

1.11.3 Before a contract is awarded, the successful contractor (and agent, where appropriate) will be required to comply with the prevailing tax clearance procedures viz.:

- A successful contractor resident in Ireland will be required to promptly produce a Tax Clearance Certificate from the Irish Revenue Commissioners. In addition, such contractors must retain records of tax reference numbers for any sub-contractors, whose payments exceed €650 including VAT.
- A successful non-resident contractor or sub-contractor will be required to produce a statement (in lieu of a Tax Clearance Certificate) from the Irish Revenue Commissioners confirming suitability on tax grounds to be awarded the contract.
- Application for either of the above may be made to the Irish Revenue Commissioners by way of a standard form which will be provided to the successful tenderer(s) by the Registries in due course.
- Where a certificate or statement expires during the course of the contract, the Registries will require a renewed certificate or statement. All payments under the contract will be conditional on contractors being in possession of valid certificates at all times.

1.11.4 The Registries will not be liable in respect of any costs incurred by suppliers in the preparation or submission of tenders, in attending any interviews during the evaluation stage or for any associated work effort.

1.11.5 Whereas this document is issued in good faith, no legitimate expectation shall arise therefrom and the Registries shall not be obliged to award a contract or proceed to further stages in the procurement process.

1.11.6 Tenders which are delivered late will not be considered.

1.11.7 Tenders must be completed in accordance with the format stipulated in this document. Tenders which are incomplete will be rejected.

1.11.8 Any conflicts of interest involving a contractor (or contractors in the event of a group or consortium bid) must be fully disclosed to the Registries, particularly where there is a conflict of interest in relation to any recommendations or proposals put forward by the tenderer. Any registerable interest involving the contractor and the Minister for Justice, Equality and Law Reform, members of the Government, members of the Oireachtas (Parliament) or employees of the Land Registry or Registry of Deeds or their relatives must be fully disclosed in the response to this Invitation to Tender, or should be communicated to the Registries immediately upon such information becoming known to the contractor, in the event of this information only coming to their notice after the submission of a bid and prior to the award of the contract. The terms 'registerable interest' and 'relative' shall be interpreted as per section 2 of the *Ethics in Public Office Act, 1994*, as amended.

1.12 Evaluation of Tenders and Award Criteria

1.12.1 Qualification

Only tenders submitted in the English or Irish language will be considered. Tenders will be initially evaluated for qualification by reference to the following:

- completeness of response document i.e. the tender must address all of the requirements, include any information requested and comply with the 'Conditions of Tender' and other matters itemised in Section 1 above;
- ability of the tenderer to deliver a service in accordance with the requirements specified in Section 2 herein;
- the financial stability and economic standing of the tenderer.

1.12.2 Contract Award Criteria

The contract, if awarded, shall be awarded from among the qualifying tenders on the basis of the *most economically advantageous tender* using the following criteria, listed in order of importance:

(1) Quality of Service offered
(2) Cost

2. Project Brief

2.1 Registry of Deeds Abstract Management Information System (RAMIS)

2.1.1 Since 1990, the Registry of Deeds has operated a computer system known as Registry of Deeds Abstract Management Information System (RAMIS) to manage its repository of 'Abstract' records. These records provide details, in summary form, of land transactions processed through the Registry.

2.1.2 RAMIS is a host-terminal character-based system developed in Progress 4GL accessing a Progress DBMS, Version 8 database. The system is currently hosted on a dual-processor Intel Pentium server running SCO-Unix OpenServer Version 5.05.

2.1.3 The RAMIS database is extensive and covers virtually all abstract records created since 1970 (approximately 1.5 million ownership records) and is already an invaluable resource to the Registry of Deeds customers. This is a dynamic database; approximately 300 new records are added each day.

2.1.4 For historical reasons, the data managed by RAMIS is organised and presented within rather rigid data structures which have tended to restrict the use of the information to specialist personnel (particularly professional law searchers) who have developed skills to search the database and interpret the results.

2.1.5 In line with internal organisational developments and the Government-wide initiatives referred to previously, it is now appropriate to consider how certain Registry of Deeds services, commencing with the RAMIS data, can be provided electronically.

2.1.6 The purpose of this consultancy assignment is to advance this objective by providing a clear strategic direction for the electronic delivery of services from the Registry of Deeds.

2.2 Objectives and Approach of Consultancy Assignment

2.2.1 This assignment does **not** include the supply, development or implementation of a system. See Conditions of Tender regarding preclusions in this regard. If a project to build and implement a system proceeds from this consultancy exercise, it is envisaged that this would be the subject of one or more specific procurements to be conducted pursuant to the procedures of European Union Public Procurement legislation.

2.2.2 The overall objective of this assignment will be to produce a realistic and achievable e-service delivery strategy for the Registry of Deeds. Internal preliminary work undertaken to date has concluded that the overall on-line service delivery strategy for the Registry of Deeds should, perhaps, be implemented in two distinct phases reflecting short term and longer term business goals:

(a) Short term - Focus on on-line delivery of data currently hosted on the RAMIS database and related issues
(b) Longer term - Consider delivering other categories of Registry of Deeds information on-line. This information is currently maintained in paper

documents, some of which have a microfilmed backup. An opportunity will be provided during the on-site briefing session to inspect these records.

This preliminary internal view is summed up in the following table:

Phase	General description
Phase 1 - for short-term implementation	• A focus on the provision of the existing RAMIS data over the Internet either through or in parallel with the existing Land Registry EAS infrastructure, in a customer-focussed, user-friendly style. • This would include specifying any improvements to the methods for retrieving the current RAMIS data and assessing the suitability and comprehensiveness of that data, particularly where related to property location. See 'Preliminary Analysis work' at 2.3.4 hereunder. • To include identification of any requirements arising from developments with the Public Service Broker model (www.reach.ie and www.reachservices.ie refer)
Phase 2 - for possible implementation over the subsequent 2 to 3 year period	• Examining feasibility of providing on-line access to other categories of Registry of Deeds records. • Focussing on the longer-term suitability of the EAS technical architecture. • Examining the potential for providing common or combined access methods and a 'standard' customer interface to both Land Registry and Registry of Deeds data.

Information on this approach is provided for guidance only and will be reviewed with the consultant during the initial stages of development of the strategy.

Scope of Assignment

The following will form part of the tasks to be undertaken by the successful contractor in preparing the e-service delivery strategy for the Registry of Deeds.

2.3.1 Examine current assumptions

In formulating an e-service delivery strategy for the Registry of Deeds, the consultants will, as a first step, be expected to quickly review the business objectives and the soundness of any assumptions underlying the planning to date.

2.3.2 Take account of Background Policies and current Strategies

The e-service delivery strategy for the Registry of Deeds will be required to take account of the policy objectives and imperatives of :

- the Government's 'Information Society' initiative,
- the Land Registry and Registry of Deeds' existing strategies and business

plans, especially the organisation's Electronic Access Service (EAS) initiative and

- the ongoing relevant developments emerging from the Reach programme. Prospective bidders should be aware that any on-line services offered by the Registry of Deeds as a result of this project may be provided within the Public Service Broker framework, and, over time, may use, for example, the methods for electronic payment of fees and authentication facilities which, ultimately, will be determined for public service organisations through Reach. See www.reach.ie for developments currently underway in this regard and www.reachservices.ie for details of recent achievements.

2.3.3 Examine short-term feasibility of delivering RAMIS data on-line

One of the key business issues for the Registry of Deeds is to determine the feasibility of providing on-line access to RAMIS data in the short-term, within the context or framework of the Land Registry's Electronic Access Service (EAS) and/or otherwise. This will be a specific task for the consultants conducting the e-service delivery strategy.

Accordingly, an important element of the strategy would be to provide specific advice on whether and how to proceed with the Web-enablement of the existing RAMIS data. The report would contain:

- conclusions as to the scale of the data preparation/data organisation issues and specific recommendations for addressing such issues. It is envisaged that this work would include identifying new requirements arising from providing the data on-line and conducting gap analysis of the current data, relevant to the identified requirements (see 2.3.4 below for further details)
- an assessment of the risks associated with these issues and how they should be best managed
- recommendations on the technical architecture which should underpin the proposed e-service delivery in the Registry of Deeds in the short and longer terms. This would include reviewing the current Registry of Deeds technical environment in the light of the identified requirements and the current Land Registry strategic technical platforms and producing an outline technical architecture to support the recommended approach for (a) short term plans and (b) longer-term plans
- technical recommendations relating to the security of the data in an on-line environment
- specific technical and functional recommendations which could be later translated into a set of requirements and specifications for the future building of the system, including its integration within the EAS Web-delivery environment, if this is practicable
- a realistic implementation plan containing major milestones and deliverables
- cost projections for core recommendations and for any options recommended.

2.3.4 Conduct Preliminary Analysis work on RAMIS data

In conjunction with identifying the immediate and longer-term strategy and delivery plan for providing external access to Registry of Deeds data, specifying the requirements or assessing the costs for a Web-based delivery of these services, there are important preliminary issues concerning the 'e-readiness' of the underlying RAMIS data which would require examination by an expert in this field.

Accordingly, in order to prepare a strategy for any future delivery of Registry of Deeds information over the Internet in an integrated manner with the existing Land Registry on-line data, or otherwise, it will be necessary for the successful contractor to:

- assess whether and how the RAMIS data would have to be re-organised in order to facilitate delivery over the Internet. This would be expected to include, for example, whether e-delivery would require additional or new *structures* for the data (e.g. database tables, reformatting of data). Probable consideration would also have to be given to whether a revised catalogue of the data would be required, perhaps supplemented by an extended set of business rules.
- examine the content/extent of the existing RAMIS search functions, identifying new searching mechanisms which might be required, possibly supported by additional indices. The outcome would be technical advice on searching mechanisms or other measures which would improve accessibility to the RAMIS data for on-line customers. For example, scope for using technologies such as XML for this purpose might be considered.
- examine the extent to which the existing database tools and data management repositories underlying RAMIS would adequately support on-line delivery of the data.
- advise on issues associated with the user interface for on-line service delivery

The examination of the existing data structures etc. as outlined above, is considered to be a specialised task requiring expert input from a person or organisation already familiar with the tasks, technologies and processes required to transform such data into an operational, transaction-oriented, Web-based system.

2.3.5 Other matters

The Registry is also concerned to ensure that its e-services delivery strategy will address a number of specific matters which have a longer-term significance to the organisation. Accordingly, the strategy will also include:

- an examination of the feasibility of providing on-line access to the remainder of the Registry of Deeds records. Access to these records will be provided during the bidders briefing session. This element of the strategy would be expected to provide high-level conclusions and include an outline implementation plan and preliminary cost projections
- an assessment of the longer-term suitability of the existing EAS technical architecture/platforms, including specific recommendations on strategic

technical direction. The briefing session will include a demonstration of the EAS

- general advice on the potential for providing common access methods and a 'standard' customer interface to both Land Registry and RAMIS data in the future.

2.4 Required Skills, Experience and Expertise

The consultant or consultants selected for this assignment will be required to have a proven track record in fulfilling similar assignments. Skills, experience and expertise in the following specific areas would be expected:

- Preparation of e-service delivery strategies for a public sector environment
- A thorough knowledge of the policy issues relevant to the development and implementation of Web service delivery strategies for Government Departments in Ireland, including a sound understanding of the implications of the Reach programme and deployment of the Public Service Broker model.
- Extensive knowledge of the application of state-of-the-art Web technology to the delivery of transaction-oriented information services, especially involving 'legacy' data and systems
- Analysis of database structures and data modelling/gap analysis
- Identification of the technical risks associated with such projects and the practical measures which can be put in place to reduce or alleviate such risks
- Preparation of technical specifications for the procurement of the relevant technology, and related system development and implementation services, particularly where competitions would be conducted under EU procurement rules

2.5 Independent Advice

The delivery of this service may involve one or more personnel or parties. However, the service provider and any personnel deployed must be in a position to offer impartial and expert advice throughout the assignment. In particular, the personnel must adopt a totally independent and vendor–neutral approach to the work (See also Conditions of Tender, paragraph 1.11.1 above).

2.6 Involvement of Registry Staff

This assignment will be under the control of a small but focussed Project Board, chaired by the Senior Assistant Registrar of Deeds. An experienced member of the Land Registry's Information Systems Unit will be assigned to work in partnership with the consultant. However his/her role will be confined to the following activities:

- Conducting all liaison and briefing activities between the Registry of Deeds and the contractor's personnel throughout the assignment

- General quality control on behalf of the Registry, including participation in any interim reviews of work
- Participation in the work to the extent that a valuable skills transfer can occur. There will be a *very* strong emphasis on skills transfer throughout the assignment.

2.7 ***Project Methodology***

The tender response document should describe the proposed methodology which the company would adopt for the assignment, including project management and control.

3. Schedule of Costs

The response document must provide cost details as a Schedule of Costs. All costs must be quoted in **Euro (€)** and the schedule should take the following itemised format.

Item	
Total fixed cost of assignment, in Euro (€), net of VAT	
Number of mandays estimated for the project	
Applicable fixed daily fee, in Euro (€), net of VAT	

Appendix 6.11 – Garda Case Study Interviewees (16)

Management Constituency	Interviewee
Top Management (2)	Commissioner Noel Conroy Commissioner Patrick Byrne (retired)
Business Management (2)	Deputy Commissioner Peter Fitzgerald Deputy Commissioner T.J. O'Reilly (retired)
IS Management (6)	Chief Superintendent Fintan Fanning Chief Superintendent Patrick O'Driscoll (retired) Mr. Tommy Quinn (Head of IS Planning) Superintendent Clare O'Sullivan Superintendent Paschal Magee (retired) Mr. Thomas Walsh (CMOD and CDPS)
User Management (3)	Chief Superintendent Louis Harkin Chief Superintendent Paul Smyth (retired) Superintendent Jack Nolan
Management Consultants (3)	Partner ALPHA Partner ALPHA Partner ALPHA (former)

Appendix 6.12 – ITT for the Conceptual Design Project (1994)

Addressee:

The Garda Siochana has recently carried out an information technology strategy study, which has been approved by Government and for which the Minister for Justice has announced funding in the amount of IR£26M. The output from the study included;

Present status assessment
Information Needs
Strategic I.T. direction
Projected scope and approach
IS architecture
Technology direction
Migration plan
Cost and benefit projections

The Strategy Report recommended the implementation of a new IS architecture and the replacement of a number of computerised systems on a phased basis over a four year period. The proposed architecture is described in an appendix to this Request for Proposals (RFP). A number of niche systems areas, which are likely to be outside the scope of the integrated architecture, are listed in an appendix also. The technology direction recommended is based on a messaging architecture with intelligent PC client workstations connected to a central server.

The Commissioner wishes to proceed to the next phase of the information technology project and, to this end, your company is invited to tender for the conceptual design of the Operations and Administration systems areas described in the appendices. The objective of this project is to provide a definition of the functional and technical requirements to a level that would allow the technical design projects to proceed.

The project will be controlled by a Steering Committee chaired by Deputy Commissioner O'Reilly and the detailed work will be carried out by a project team comprising the Garda Siochana and the consultants. Chief Superintendent E.J. Cussen, Head of I.T. & Telecommunications Division will be the principal contact point for the Garda Siochana and will be a member of the project team. Day to day project management will be the responsibility of the consultants. The Garda staff assigned to the project will number five persons and will include systems analysts, business analysts and systems programmers who will have completed training in SSADM (V4) and SSM. Secretarial and office facilities will be available at the Garda Computer Centre, Garda Headquarters where the project team will be based.

The methodology to be used in the conceptual design project is SSADM (V4). Respondents should note, however, that the I.T. Strategy envisages a greater level of definition in some of the outputs from the conceptual design phase of the implementation than is required in SSADM. The Steering Committee are committed to the detailed implementation of the Strategy and respondents will be required to provide the following specific deliverables over/above SSADM (V4) requirements.

- Overall application architecture and functional and technical integration requirements (to be addressed early in the Project)

- Technical architecture, change management and business case development to a detailed level
- Early elaboration of the technology environment and preparation of briefing documentation for the I.T. & Telecommunications Advisory Committee
- Refinement of the business process re-engineering opportunities and updated cost, resource and benefit statement
- System management requirements.

Tenderers will have noted the emphasis on the need to consider overall application architecture and functional and technical integration before progressing the design of the individual systems areas. Respondents should clearly indicate how this can be accommodated within the general structure of SSADM (V4) and what modifications, if any, they propose in the methodology. The Steering Committee sees the scope of the core project as spanning SSADM steps 110 to 380 inclusive but Stage 1 of SSADM should not repeat any work done in the Strategy Study. Instead, effort in that Stage should be concentrated on converting the Strategy Study outputs to SSADM format and an acceptable level of detail.

Respondents will be expected to be aware of current developments in proprietary systems for law enforcement and public order. Garda personnel will have initiated enquiries from systems suppliers and users to provide input to the Project Team regarding potential proprietary solutions which will be considered in the Business and Technical Systems Options stages of SSADM (V4).

It is expected that the project will commence in March 1994. Respondents should note that, while a long term decision on project management methodologies and tools has not been finalised, PRINCE (tailored as appropriate) is likely to be used during the project referred to here.

The following appendices are attached for your information;

A.1 Notice to Tenderers

A.2 Garda Siochana – Key Statistics

A.3 Information Needs

A.4 Information Systems Architecture

A.5 Technology Direction – Summary

A.6 Migration Plan – Project Description

A.7 Summary of Niche Systems.

The following information should be included as part of your proposal;

(a) details of the general approach it is proposed to adopt, with specific proposals on suggested modifications to SSADM {V4) and PRINCE

(b) a proposed programme of work and timetable

(c) details of similar work undertaken. Previous experience in a policing environment on the same scale would be relevant

(d) the specific personnel proposed for the various tasks with total man days or each consultant. C.V.'s should be provided for all personnel proposed

(e) the earliest date the tenderer can begin the project

(f) all costs to be specified in Irish pounds exclusive of VAT. Expenses and rates chargeable to be detailed separately

(g) additional information which you consider relevant to this particular project.

Respondents will be liable to security clearance and personnel requiring access to project material will be expected to provide personal data for clearance purposes. The Garda Siochana will have intellectual property rights to material generated by the project team and management.

Members of the I.T. Steering Committee will be available for consultation in an open session, on 31/l/'94, prior to the submission of proposals.

Proposals (in triplicate) should reach Deputy Commissioner (Operations), Garda Headquarters, Phoenix Park, Dublin 8 before 4.p.m. on Tuesday 15/2/94. Firms who are short listed will be interviewed in the week commencing on 21/2/94. It will be necessary for all personnel proposed for a significant role to attend the interview. Before a contract is awarded, the firm and specific personnel will be subject to security clearance.

If you require clarification on any matter arising from this request, please telephone or fax Chief Superintendent E.J. Cussen at 01-6771156 ext. 2424, fax: 01-6794665.

Yours faithfully

T.J. O'Reilly

DEPUTY COMMISSIONER

Appendix 6.13 – List of Functional Systems Areas identified in the Conceptual Design Project for development*

1. General Enquiries
2. Incident Response
3. Court Dispositions
4. Collating and Intelligence
5. Firearms
6. Property
7. Incident Analysis
8. Summonses
9. Charges
10. Bail
11. Custody
12. Dispatch
13. Document production (Road traffic Legislation)
14. Alarms
15. Warrants
16. Juvenile Liaison
17. Traffic Accident Analysis
18. Personnel
19. Rostering & Duty Details
20. Pay and allowance claim generation
21. Fixed Penalty Administration
22. Community contacts and visits
23. Investigation management
24. Public Service Vehicle Licences
25. Surveillance
26. Claims and cash accounting
27. Liquor and betting licences
28. Images/Photos
29. Online recording, storage, indexing, routing of documents and files
30. Mobile computing (i.e. Mobile Data terminals)

*A decision was made by Garda management to exclude the areas numbered from 18 onward from the scope of the PULSE contract in order to remain within the original cost estimate given for the development in 1992

Appendix 6.14 – ITT for ICT Strategy Development (2005 -1010)

Introduction

Request for Tender

The Department of Justice, Equality and Law Reform, on behalf of An Garda Síochána, invites tenders for the development of a Strategic Information and Communications Technology Plan.

An Garda Síochána is the national Police Force in the Republic of Ireland and is responsible for all aspects of criminal law enforcement and national security. It is a single, countrywide organisation and is a largely unarmed force. An Garda Síochána has a central Headquarters and consists of Geographical Operational Units and National Specialist Units. The Geographical Operational Units are organised into 6 Regions, 25 Divisions, 120 Districts and 703 Stations (see chart at Appendix). The organisation is made up of approximately 11,250 sworn officers and 775 civilians. Further information concerning An Garda Síochána is available at the following website: www.garda.ie.

The Strategic Information and Communications Technology Plan for which tenders are now being sought will cover the period 2004 to 2009. The plan will be used to support the Garda Corporate Strategy 2000 to 2004 and associated annual policing plans. The plan will address:

- alignment of the ICT Strategy with the Corporate Strategy
- development of Information, Applications and Telecommunications strategies
- development of an eStrategy for An Garda Síochána
- recommendations in relation to office automation facilities and their integration with the ICT strategy
- recommendations on appropriate standards and technologies to be incorporated into the technical infrastructure
- determination of the funding requirements for the development and implementation of the new strategy
- Structures, resourcing and skills levels required to ensure efficient and effective implementation of the ICT strategy and ongoing support and maintenance of implemented projects. This aspect of the plan will encompass proposals in relation to
    - methodologies for the management of projects and risk
    - standards for application development and maintenance.

Without being prescriptive, An Garda Síochána anticipates that preparation of the Strategic ICT Plan could be completed in an elapsed time of about three months.

Background

Strategic IT Plan 1992/93

The original Strategic Information Technology Plan for An Garda Síochána was developed in 1992/93. This high level plan set out a vision of how information technology would assist the Garda organisation in achieving it's strategic business objectives. This plan recommended a fundamental change in the approach to the provision of information technology support for the organisation:-

- the assimilation of data from the different business applications into a single central record organised around five items of interest viz. person, vehicle, location, organisation and object
- the replacement of the existing mainframe systems with GUI based client server systems
- fourteen systems areas for development.

The Strategic IT Plan also contained a business case identifying the cost and benefits of the implementation of the identified systems excluding niche systems for which no plans were developed.

Conceptual Design

A Conceptual Design was undertaken during 1994/95 and built on the outputs from the Strategy Study. This more detailed analysis of requirements led to the identification of additional systems areas for development and additional functionality in the systems areas identified in the Strategic IT Plan. Business process re-engineering opportunities were also identified during conceptual design. The conceptual design identified twenty-seven system areas, both administrative and operational, for development. Detailed functional requirements for each of the twenty-seven systems were developed. The business case, developed during the Strategy study, was updated to reflect the new systems areas and the consequent changes in costs and benefits.

For funding reasons the IT and Telecommunications Executive Committee reduced the scope of the work to be undertaken in the implementation phase of the project. Seventeen operational systems were identified for development in the first phase of implementation. The case for the development and implementation of the remaining ten systems was to be re-examined when Phase 1 was complete and in the light of the prevailing requirements of the organisation at that time.

Implementation Phase

The implementation phase of the project commenced in December 1995 with the implementation of an Automated Fingerprint Identification System (AFIS) in the Technical Bureau. The AFIS system was fast-tracked and undertaken as a separate procurement because of the benefits that its implementation would give the operational force.

In September 1996 the main development and implementation phase got underway. This phase encompassed the development and implementation of seventeen operational systems. The project was marketed internally under the brand name PULSE, an acronym for Police Using Leading Systems Effectively. From a design and development perspective the PULSE project is completed. Table 1 identifies the system areas developed and their current implementation status.

Table 1

Release 1A	Release 1B	Release 1C	Release 2
Central Record / General Inquiry (1)	Central Record / General Inquiry (2)	Central Record / General Inquiry (3)	Central Record / General Inquiry (4)
Collating/Intelligence (1)	Incident Response	Full Court Outcomes	Warrants
Garda Personnel	Interim Court Outcomes	Bail	Bail Sign-on
Codes Maintenance	Incident Analysis (MIS)	Charges	Domestic Violence Act Orders
	Photographs	Summons	Driving Licence and Insurance Production
	Property Logging	Prisoner Log	Witness-only Summons
	Firearms	On-line Messaging	Letters to Crime Victims
		Property Matching	Non-collator Intelligence
		Information Analysis Service	Registered Interests
		Traffic Accident Analysis	
Implemented	Implemented	Implemented	To be implemented in 2003

The implementation of Release 2 of PULSE is a Garda responsibility and these systems will be implemented in 2003.

The PULSE systems are available to all Gardaí through a network of 181 locations. Within the Dublin Metropolitan Region (DMR) each Garda station is networked. Outside the DMR all Divisional and District Headquarters are networked. Some sub-district stations are networked depending on the volume of incidents at that location. Networked locations outside the DMR must support Gardaí in surrounding non-networked locations. Process and procedures have been put in place for both networked and non-networked locations.

Garda Corporate Strategy

The Garda Corporate Strategy 2000 – 2004 is a five-year strategic plan for policing in Ireland. The Corporate Strategy sets out the mission, the key strategic goals, the core enabling strategies and the service level results expected for the organisation. The Corporate Strategy is implemented through more detailed Annual Policing Plans.

IT Projects Currently Underway

Projects that are currently underway are listed in the table below. The relative priorities assigned to these systems must be factored into the Strategic ICT Plan 2004 – 2009.

Table 2

Project	Drivers	Status
Fixed Charge Processing System	Required to meet the Garda commitments in the National Road Safety plan.	Project development in progress: analysis and technical design complete, construction underway. Implementation scheduled to begin in Q2 2004.
Computer Aided Dispatch	Existing Command and Control system in the DMR needs to be replaced to guarantee continuity of service.	A business case for the development and implementation of this system has been submitted to the Dept. Justice for funding.
Schengen Information System	Required to address Garda requirements under the Schengen agreement.	Phase one complete. Phase 2 RFT has been prepared and submitted to the Department of Justice Equality and Law Reform for consideration.
Technical Architecture Strategy	To provide an independent assessment of the technical architecture direction for the Garda organisation.	Complete
Services Catalogue	Required under the Government's eGovernment initiative.	Complete
Garda National Immigration Bureau system	Required to support the Garda in meeting their responsibilities in relation to the significant increase in immigration.	Complete
Shared Service Centre and Financial Management system	To assist in the development of a common footprint for the financial management function in Dept. Justice, Courts' Service and An Garda Síochána	Project underway.

Telecommunications

Aspects of telecommunications and related ICT services which involve interaction between the Garda IT and Telecommunications disciplines include:

- **Network Services**. Enterprise-wide fixed network services for use in Garda IT applications are provided and maintained by the Garda Telecommunications Section. These services are based on the use of extensive in-house private backbone networks, as well as leased lines and other commercial bandwidth services. The strategy should take account of the potential of the developing Government VPN to meet Garda requirements.

- **National Digital Radio Project** (NDRP). A major project is underway to implement a national secure radio communications system. This will replace inadequate existing systems and meet the current and future mobile communications requirements of An Garda Síochána and other emergency services in Ireland. A pilot, based on digital radio technology, has been successfully completed in the Dublin Metropolitan Region (DMR) and consideration as to how to progress the project is now underway.

  Some key features of the proposed new system are:

  - national radio coverage with seamless roaming across all operational areas; fast and reliable call set-up; simultaneous, seamless voice and data communication; inter-agency as well as intra-agency operability, allowing communication within and between personnel of different emergency services and in different operational areas; closed user group working; security against eavesdropping and denial of service; cross border communications with the Police Service of Northern Ireland (PSNI); flexibility to adapt to future operational and organisational changes.

  Data services offered by the selected technology may include:

  - status messaging; circuit and/or packet switched data connectivity; Short Message Service (SMS); Automatic Vehicle Location (AVL) services.

- **Network management & remote monitoring**. Telecommunications Section provides in-house network management and remote monitoring services, for example, for the Garda data, radio communications and microwave networks.

- **National Control Room Strategy**. Telecommunications Section has established an initial outline for a future national control room strategy for An Garda Síochána. It is based on a consolidation of the current, more than 700, control and communications points down to six regional centres. The proposed national control room strategy is intended to improve the operational efficiency of the organisation and to harness communications and information technology advances to improve the service provided both internally and externally.

Drivers for the development of the New ICT Strategy

2.8.2.1 The principal drivers for the development of the Strategic ICT Plan 2004 – 2009 include:-

- the need to examine the business requirements in the Garda organisation in the context of its Corporate Strategy and Annual Policing Plans. This examination would incorporate
  - identification of new IT developments necessary to meet the business requirements
  - a review of system areas, identified as requirements in the previous strategic IT plan/conceptual design but excluded from development on cost grounds, as to their continuing relative importance to the organisation's business requirements
  - identification/review of any niche system requirements of the organisation.

- the need to identify opportunities and consequent efficiencies which could be achieved in areas relevant to the building of a strategy. The following is a non-exhaustive list of examples of relevant areas
    - the potential merging of IT and Telecommunications infrastructures
    - implementation of technological advances which would enable the Garda organisation to improve the quality of service provided to both external and internal customers e.g. implementation of a universal messaging service across the Garda network and, potentially, extending to external agencies; using ICT advances to support the implementation of the national control room strategy
    - reducing the administrative burden on operational Gardaí
    - addressing issues resulting from the number of non-networked locations
    - streamlining interaction between An Garda Síochána and other Criminal Justice Agencies (Courts' Service, Prisons' Service, DPP/Chief State Solicitors' Office), taking into account advances in computing made in those areas
    - provision of facilities for the amalgamation and sharing of operational and financial information so that improved management information will be available
    - improvement in the efficiency and effectiveness of the delivery of training to operational Gardaí by, for example, the implementation of an eTraining approach
- the need to realise a number of identified technical objectives i.e.
    - requirements in the Garda organisation consequent on the Government's eGovernment initiative and the EU eEurope 2005 plan
    - development of an approach to document management
    - development of an approach for the migration of existing standalone office automation tools into the operational environment.

Inputs to Strategic ICT Plan 2004 – 2009

The inputs to the development of the Strategic ICT Plan will include:-

- Corporate Strategy Document and Annual Policing Plans
- documentation from the original strategy study and conceptual design, including an outline of the functional requirements of the systems areas excluded from the PULSE system
- project documentation from the PULSE project
- Strategic Management Initiative documents
- the services catalogue, which details all of the services provided by An Garda Síochána to the community
- a Technical Architecture Strategy – this document describes the technical architecture direction which An Garda Síochána proposes to adopt
- information on currently implemented ICT architectures, topologies, etc.

Strategic ICT Plan Main Tasks and Deliverables

2.8.2.2 Preparation of the Strategic ICT Plan 2004 – 2009 will be carried out in the context of An Garda Síochána's corporate strategy and its annual policing plans and will, at a minimum, address the principal drivers identified in para. 0 above.

The format of the strategy report will be agreed with the Programme Directorate, described at para. 0 below. The project team will be required to present the main findings contained in the

report to the Executive Management team and to the IT and Telecommunications Executive Committee.

2.8.2.3 Preparation of the plan will encompass the following main tasks and associated deliverables:

A) A high-level review of the Garda ICT strategies to-date and recommendation of complementary strategies, taking into account both developments to-date and the drivers for the development of this Plan, in relation to the following:

Information Strategy including, but not limited to, management of

- long-term information management systems e.g. records management and archiving
- reference material
- knowledge
- documents
- case information (e.g. production of electronic Case Files for the DPP, CSSO etc. and the processing of video recordings of interviews)
- data of all types, both for operational and management information purposes
- management information.
-

Applications Strategy including, but not limited to, development of

- operational systems e.g. systems for supporting and tracking the investigation of cases and for handling major investigations
- administrative system e.g. human resource management and rostering systems
- integration of Garda systems, including the financial and asset management systems which are being developed by the Department of Justice Equality and Law Reform on behalf of An Garda Síochána
- work support systems for individuals and teams
- operational planning and decision support systems
- enterprise planning and decision support systems.
-

Telecommunications Strategy including, but not limited to,

- an assessment of requirements for future deployment of mobile facilities to access existing or planned Garda IT applications, using the data services that may be offered as an element of the national digital radio project mentioned at para. 0 above and/or other appropriate wireless network bearers. Such requirements will include (but may not be limited to) consideration of aspects such as operational needs, applications bandwidth and throughput requirements, potential middleware requirements, terminal equipment and user interface needs, resilience and security requirements, etc.
- definition of adequate infrastructure and applications security measures (e.g. fire-walling) for Garda network services, both fixed and mobile.
- analysis of future requirements, and development of a strategy, in relation to appropriate methods of provision of all network management and remote monitoring services. In addition, the strategy should address and make recommendations on current technical developments in the marketplace, such as Integrated Computer Telephony, voice recognition, Voice Over IP (VoIP), etc.
- in the context of the national control room strategy, analysis of requirements for interfaces within and between control room ICT systems, e.g. Computer Aided Despatch (CAD), telephony, Integrated Communications Control Systems (ICCS), emergency call taking systems, etc., as well as other external systems such as CCTV, Suspect Interview Video Recording Equipment (SIVRE), etc.

- any actual or potential external ICT interfaces required for either in-house initiatives (e.g. the Schengen Project) or external agencies (e.g. Interpol, etc.) must be identified and catered for in the strategy.
- identification of any overarching technical standards/policies to be employed.
-

eServices Strategy including, but not limited to,

- an assessment of national eGovernment proposals and policies in relation to their impact on, and opportunities they offer to, An Garda Síochána
- provision of electronic services to the community, between An Garda Síochána and other agencies in the criminal justice area and between An Garda Síochána and State agencies generally
- incorporation of relevant national and EU legislation (e.g. the terms of the eCommerce Act 2000 and European eGovernment proposals) in the Garda ICT strategy
- an assessment of potential of the Public Services Broker for use as an access channel to central and other services. Details of the e-broker model are available at www.irlgov.ie/taoiseach/eIreland/intro.htm)
- an assessment of the impact of the exclusion of the Garda organisation from use of the Personal Public Service Number (PPSN) in the context of the Public Services Broker Model.

In preparing the above strategies, particular attention must be paid to the following:

- the potential for integration of systems, both within An Garda Síochána and externally, identification of the issues associated with integration and options for resolution of the issues
- identification of requirements in relation to disaster recovery, contingency planning and resilience to ensure that existing and proposed ICT developments are capable of meeting the strategic objectives they are intended to support
- identification and recommendation of general security policy guidelines, especially in the context of data links with external systems and, potentially, messaging with external agencies.

Deliverables: Information, Applications, Telecommunications and eServices Strategies. Each strategy must contain a description of how it will support An Garda Síochána in achieving the organisation's strategic objectives as set out in the Corporate Strategy. There must also be a statement of the ICT principles underlying the strategies.

B) A review of the requirements in An Garda Síochána in relation to office automation facilities for the provision of

- local document management
- email
- intranet and internet access
- integration with any case management systems proposed.

Deliverable: Recommendations on the implementation of office automation facilities and their integration with the overall ICT strategy.

C) A review of the current ICT structure and the project management and application standards in use. This review will have two outputs. The first will be proposals in relation to methodologies for the management of projects and risk and standards for application development and maintenance. The second will be recommendations, informed by the methodology and standards proposals, concerning the required project management structure, training, skills and resources necessary to ensure successful completion of the strategic ICT plan. Those recommendations should contain particular reference to the resourcing levels necessary for

- delivery of application developments which are already underway as part of the existing IT strategy and of applications proposed as part of the Strategic ICT Plan 2004 – 2009
- implementation of the recommendations concerning office automation facilities
- delivery of ICT initiatives and new technologies identified in the course of preparation of this Plan
- fullest possible participation by An Garda Síochána in the Government initiative on delivery of electronic services including the Public Service Broker Model.

Deliverable: Recommendations in relation to methodologies, standards and resources as described above.

D) A review of options in relation to development of a Strategic Support Model to provide for the future maintenance and support of all outputs resulting from implementation of the current and proposed ICT strategy.

Deliverable: A report on Strategic Support Model options including, for each option, an estimation of Garda resource and skills levels required.

E) Development of a high-level implementation plan for the ICT strategy containing implementation priorities based on business requirements and realistic indicative time scales. The plan must

- identify priorities and phases for the development and implementation of the various aspects of the Strategic ICT Plan, including implementation of the proposed technical architecture infrastructure
- take account of the resources available for implementation of the Strategic ICT plan. This may result in alternative models for the development and delivery of systems being proposed
- take account of the organisational impact of the implementation of the Strategic ICT plan.

A five-year ICT development and investment programme should also be produced.

Deliverables: Implementation Plan and five-year ICT development and investment programme.

F) Analysis of the benefits and costs, including provision of indicative costs, associated with the ICT strategy. The analysis must make particular reference to savings in finance and resources. It will also involve a high-level risk assessment and evaluation of the impact of the Strategic ICT plan on the various roles in the organisation e.g. operational Garda, Collator. The analysis must identify costs, benefits and impact separately for each proposed development area.

Deliverables: Cost/Benefit, Risk and Impact Analyses

G) Identification of, and recommendations in relation to, any additional studies considered necessary to address potential projects arising from but not within the scope of the proposed ICT strategy.

Deliverable: Scoping Report

Methodology for undertaking the development of the Plan

2.8.2.4 The methodology options for undertaking the strategy study must be outlined in the response to this request for tender. An Garda Síochána will facilitate the development of the plan by means of:-

2.8.2.5

- providing direction to the project team
- arranging interviews with executive and senior management

- arranging interviews with relevant personnel in the IT and Telecommunications Divisions and external agencies e.g. CMOD, Department of Finance and officials of the Department of Justice, Equality and Law Reform
- establishing user groups and/or arranging workshops as required.

The Project Team undertaking this assignment will report progress on a weekly basis to a Programme Directorate, comprising Chief Superintendent IT, Chief Superintendent Change Management and Head of IT Planning. Monthly reports will be provided to a Programme Board, which will include senior management in An Garda Síochána and representatives of the Department of Justice, Equality and Law Reform. The detail and format of the progress reports will be agreed with the preferred supplier. At various agreed milestones, the Project Team will be required to make presentations to Executive Management to maintain their on-going commitment to the development of the strategy.

In addition to reporting on progress, the Project Team undertaking the assignment will be required to furnish certain key deliverables at specified stages in the assignment. Those deliverables will be subject to review and sign-off by An Garda Síochána before the next stage of the assignment is begun. The specific deliverables that will require sign-off and the stages will be agreed with the preferred supplier.

Project Team Personnel

Prospective tenderers must have detailed experience in the formulation of ICT strategies in large organisations together with experience in working with top management in such organisations. In addition, An Garda Síochána considers it desirable that the team proposed should include a strategist who has specific experience in the development of technologies and strategic information technology principles appropriate to a modernising police environment, including experience in emerging technologies and their application within a modern police environment.

Format of Tender Proposal

2.8.2.6 Proposals must include sufficient information to permit An Garda Síochána to evaluate the competency of the consultants and must address the general terms and conditions in the order as set out in this RFT.

Tenders must adhere strictly to the format and requirements stipulated in this document and must be completed in the English language. Similarly, all tendered documentation must be provided in English.

Respondents should note that a proposal which fails to meet or address any of the requirements laid down in the following paragraphs will be interpreted by An Garda Síochána as failing to comply with a mandatory condition of this RFT and will be rejected without further evaluation. In this respect, the onus is on respondents to ensure that their responses are complete and, except for the purpose of requesting clarification on actual statements made or information supplied in response to this document, An Garda Síochána will not accept further responses from respondents in respect of any mandatory requirement stated in this document following the closing date for receipt of tenders.

An Garda Síochána may require tenderers to make a presentation of their proposals (using the key personnel proposed in the tender) or may decide to interview key personnel proposed to carry out the project at short notice following the closing date for receipt of tenders. Tenderers must confirm their agreement to this requirement. Respondents will be requirentto bear their own costs in relation to any such presentations, interviews or demonstrations. An Garda Síochána reserves the right to invite some or no tenderers to make a presentation of

their proposals. Shortlisting for discussions, presentations and/or interviews will be carried out on the basis of information contained in the proposals submitted.

RFT Response

Responses to this RFT must contain the following details:

a) The name and address of the respondent must be clearly shown on the outside of any proposal packaging.

b) Name, address, telephone and fax numbers of the respondent and details of a contact person.

c) Name, address, telephone and fax number of any third parties involved in the tender.

d) A statement from the tenderer that none of the excluding circumstances listed in paragraph 1 of Article 20 of EU Council Directive 92/50/EEC (co-ordinating procedures for the award of public service contracts) applies. (See Appendix).

e) As a prerequisite to admission to Garda Headquarters, advance identification of personnel will be required together with personal details. In this context respondents must confirm that, if they are successful, the following information in respect of personnel dealing with this business will be furnished to An Garda Síochána prior to the award of contract:

f)

FULL FIRST NAMES AND SURNAMES
PRESENT ADDRESS
PREVIOUS ADDRESS (IF THE ABOVE HAS NOT BEEN THE PERMANENT RESIDENCE FOR THE LAST 5 CONSECUTIVE YEARS).
DATE OF BIRTH

This requirement will apply on an on-going basis to reflect any changes in personnel dealing with this business.

g) Respondents must provide a brief Financial Statement covering the last two financial years

h) A statement identifying any agency or dealership relationship the consultant(s) are engaged in with ICT suppliers

i) Any other information the supplier may consider relevant to the proposal.

Proposed Solution

The proposed solution must also contain: -

a) A statement of the respondent's understanding of the business of An Garda Síochána and the issues and tasks involved in this project

b) Details of the methodology and of the general approach proposed to fulfilment of the assignment

c) Details of the project structure and project management approach which is proposed to ensure that objectives are achieved on time and within budget

d) A detailed work programme which clearly states the specific personnel responsible for each task and the proposed time input for each individual

concerned. An Garda Síochána anticipates a work plan of between 300 and 350 work days. However, tenderers should note that it is their sole responsibility to submit proposals for the number of workdays which they consider are necessary to meet all of the requirements as specified in this RFT. The project plan should include specific review milestones which will enable An Garda Síochána to monitor the overall progress of the assignment.

e) Experience of the respondent in strategic planning with reference to previous projects where the respondent has provided comparable services to those proposed in the response to this RFT. Specific reference should be made to experience in the development of eStrategies and experience of working with other large organisations.

f) Details of the relevant qualifications, skills and experience of each of the personnel proposed to undertake the work in this assignment including: -
   - relevant educational and professional qualifications
   - details of the experience of each of the proposed personnel in the development of information system strategies in large scale organisations with, if applicable, particular reference to the development of such strategies in a police environment
   - details of the experience of each of the proposed personnel in the development of strategies to facilitate the delivery of electronic services
   - details of the practical work experience of the proposed personnel, including a list of projects of a similar nature where the personnel have performed the specific role for which they are proposed in the response.

   The above details should refer to projects undertaken within the last three years and should include a list of contact names, addresses and telephone numbers for the organisations in which the projects were undertaken. An Garda Síochána may contact any of the named organisations to discuss the expertise of the proposed personnel.

g) Respondents must provide an undertaking that, should any original team member have to be replaced, the replacement will be a person of equivalent experience. The suitability of any replacement will be subject to the scrutiny of An Garda Síochána.

h) The response to the RFT should also include an indication of other expertise and experience available within the company

i) Stated agreement to the proposed arrangements for reporting progress outlined in Section 0 above.

j) A description of any role or element of the contract to be carried out by any third party/sub-contractor.

Project Costs

A fixed price contract is required and must contain the following: -

- all costs to be shown in Euro exclusive of VAT. VAT should be shown separately at the appropriate rate
- the total cost of the tender

- details of the daily rate for each of the proposed personnel assigned to the project
- details of the man days for each of the proposed personnel assigned to the project
- details of any other applicable costs
- expenses and rates chargeable should be detailed separately
- confirmation that the tender holds good for a minimum of 180 days after the closing date
- any additional information in relation to the costs of the project which the tenderer considers relevant.

Evaluation of Tenders

Tenders will, initially, be evaluated according to certain qualification criteria. Only those tenders which satisfy all of the qualification criteria will go forward to be examined under the award criteria.

Qualification Criteria

Proposals must be submitted in the English language only. Tenders not excluded under Article 29 of EU Council Directive 92/50/EEC will be evaluated initially by reference to the following qualification criteria: -

- completeness of the tender documentation as specified in this document, including adherence to the format of reply
- stated ability of the respondent to meet all the requirements specified in this document
- confirmation in the response that the company can produce a Tax Clearance Certificate promptly as per Paragraph 3 or 4 of Appendix.

Note: It is intended that only those tenders which meet each of the above qualifying criteria will be eligible for inclusion in the award process.

Award Criteria

The contract will be awarded, from among the qualifying tenders, on the basis of the most economically advantageous tender applying the following award criteria, listed in order of priority: -

- the make-up of the project team, in particular the experience of the personnel proposed, including any third parties that are proposed
- the project plan, project management strategy and methodology proposed
- proven experience and track record of the respondent in successfully undertaking similar projects, including references in relation to such projects
- the cost of undertaking the project
- demonstrated understanding of the business of policing and the needs of An Garda Síochána as set out in the RFT
- the timeframe for completion of the project.

Awarding Authority

The awarding authority is:

Department of Justice Equality and Law Reform,
72-76 St. Stephen's Green,
Dublin 2.

Query Handling

Queries relating to this document and any of the requirements stated herein should be directed **IN WRITING ONLY**, to:

Mr. Tommy Quinn,
Head of IT Planning,
I.T. Centre,
Garda Headquarters,
Phoenix Park,
Dublin 8.
to arrive no later than 3pn on _____, 2003.

Financial Arrangements

2.8.2.7 Payment for services covered by this RFT will be on foot of appropriate invoices. Invoicing arrangements will be agreed with the successful supplier following the award of contract.
2.8.2.8
An Garda Síochána will not be responsible for any travel, subsistence or accommodation costs of the contract personnel assigned, except where such costs are incurred at the request of An Garda Síochána. Any sanctioned travel will be paid at standard Civil Service rates.

NOTICE TO COMPANIES TENDERING

10.1 Responses to this tender must be complete and respond to all questions raised in each section of this RFT, on a point for point basis and in the order in which they appear in this document, specifically those requirements detailed in Appendix.

Responses, which do not comply fully with this requirement, will be rejected.

10.2 Proposals (*three copies*) must be delivered in a sealed envelope to;
T.299/2003 (Closing Date)
Tender Reception Office
Finance & Procurement
Garda Headquarters
Phoenix Park
Dublin 8
Ireland
to arrive no later than 3pm (local time) on _____ **2003.**

SUPPLIERS SHALL PROVIDE A RETURN ADDRESS ON THE OUTSIDE OF THE ENVELOPE

10.3 Proposals that are received late will not be considered and will be returned unopened

10.4 Tenders that are hand delivered will only be accepted by a member of staff at the Tender Reception Office, Finance & Procurement, Garda Headquarters, Phoenix Park, Dublin 8.

10.5 An Garda Siochana will not be liable for any costs incurred by tenderers in the preparation of tenders or any associated work effort.

10.6 Any contract arising on foot of this RFT will be subject to the terms and conditions set out in Appendix.

Appendix 6.15 – List of new applications recommended in the ICT Strategy (2005 – 2010)

1 MANAGEMENT INFORMATION UPGRADE

2 Operational projects and Systems

- Document Management
- Investigative/Intelligence Analysis
- Exhibits/Property tracking
- Ballistics
- Mobile Applications
- Sexual Offenders Register
- PULSE Post – Stabilisation Review and Enhancements
- Community relations developments
- Computer Crime Investigations

3 Administrative projects and Systems

- Financial Data Access
- Finance & Procurement developments
- Garda Website development

Appendix 6.16 – Business Systems Options developed for management decision during the Conceptual Design Project

Business Systems Options

1. Respond to Calls
2. Respond to Incidents
3. Dispose of Crimes and Offences
4. Manage Criminal Intelligence
5. Manage Compliance with Laws
6. Manage Public Order and Safety
7. Develop Policing Partnerships
8. Provide Support to Police Operations
9. Develop Operational Policies and Strategies
10. Manage Personnel Allocation and Deployment
11. Manage Personnel Recruitment and Development
12. Manage Financial Operations and Capital

Appendix 6.17– Niche developments identified in the ICT Strategy (2005 – 2010)

- Computer aided audit tools to support the work of the Internal Audit Section
- Forensic intelligence systems
- Automatic number plate recognition
- Crime scene management applications
- Automation of the central character vetting process
- Biometrics
- Electronic Identification parades, potentially reusing the technology currently in use in GCRO and GNIB

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