Scenario Planning: an Evaluation of Practice

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The Context
Scenario Planning is fast becoming one of the most popular and persuasive techniques, used in strategic planning and foresighting exercises of all kinds in both public and private sectors. It is likely that the approach will play a more prominent role in helping organisations and agencies from all parts of the economy, governance and society in Ireland think, talk, act and plan differently collaboratively and creatively over the next few years. Whilst the field of urban studies has been slow to recognise and adopt a ‘futures’ approach using techniques such as scenario planning this is starting to change.

In looking to the future the great question is how will we continue to plan, design, construct and manage the built environment? We work in it, rest in it and play in it. We also spend a lot of time travelling to and fro across and within it. The way in which this has all happened has constantly changed over time, but over the next twenty years or so, it is likely that more dramatic change is going to be witnessed than ever before. The forces driving this change are complex and unpredictable – they will also vary according to date, duration and location, but assuredly will encompass such factors as political and economic structures, information flows, lifestyle aspirations, cultural and demographic shifts, environmental sustainability and technological capabilities.

If they are to continue to be relevant and of value, the principal professions attending the built environment need to be able to comprehend and respond effectively and appropriately to these changes. The irresistible thrust of this argument has driven the author to the conclusion that enormous value stands to be gained by those professions of the built environment in embracing and applying the primary techniques of Future Studies, such as scenario planning to the task that lies ahead.

Apart from the studies undertaken by the author, scenario planning has been used in a variety of circumstances in Ireland over recent times, including:

- Technology Foresight Ireland (1998/99)
- The Development of Sustainable Community Indicators for Ballymun (2002)

It can be argued that one of the main criticisms of conventional urban planning is that the concepts, methods and techniques employed tend to reinforce the present. This makes it
difficult for towns and cities to contemplate, design and build alternative visions of the future more suited to their true desires. What is needed is the conception and development of alternative futures, and the adoption of longer perspectives than those commonly afforded by traditional planning approaches. Scenario planning provides this.

**Futures and Scenarios**

Put very simply, the purposes of future studies are to discover or invent, examine or evaluate, and propose and promote possible, probable and preferable futures. They may, however, be more usefully summarised as (Slaughter, 1995):

- Raising issues of common concern that may be overlooked in the conventional short-term view.
- Highlighting dangers, alternatives and choices that need to be considered before they become urgent.
- Publicising the emerging picture of the medium-term future in order to involve the public in the decision-making process.
- Identifying the dynamics and policy implications of the transition to a sustainable world and placing them on the political agenda.
- Facilitating the development of social innovations.
- Helping people to become genuinely empowered to participate in creating the future.
- Helping organisations to evolve in response to the changing global and local outlook.

Clearly, these prime aims are shared with the goals of urban and regional planning.

Fundamentally, in the author’s view, Future studies are dependent upon qualitative research methods. It is generally accepted that qualitative research normally comprises a set of interpretative activities that favour no single methodological practice over another. This makes it difficult clearly to define. There is no single theory or paradigm that is distinctly its own. Nor is there a definite set of methods, techniques or practices that belong entirely to it. Qualitative research is interdisciplinary and cross-disciplinary, cutting across the humanities and the social physical sciences. It is multi-paradigmatic in focus, and multi-method in approach, being many things to different people at the same time. And, all along, it is said to be (Nelson, et al, 1992):

‘Inherently political and shaped by multiple ethical and political positions’.

Inevitably, therefore, the qualitative researcher, has to resort to ‘mixing and matching’ a variety of selected methods and practices to attain their goal. As a result, they have been likened to the *bricoleur*, maker of quilts, who assembles chosen pieces of material to form a coherent whole. Unquestionable, from the authors own experience the scenario planner has to be something of a ‘Jack of all trades’ or ‘professional do-it-yourself’ as Levi-Strauss (1966) has defined the *bricoleur*. Scenarios themselves can very much be viewed as *bricolage*. More formally perhaps, scenario planning thereby involves a ‘triangulation’ or ‘crystallisation of methods’, which is a familiar concept in the literature of qualitative research methods and design. Here, as in the author’s various studies, a range of different methods are deployed such as survey questionnaires, strategic conversations, brainstorming sessions, focus groups,
prospective workshops and published documents. This concept of triangulation is a critical element in confirming the veracity of the various issues and trends identified from different sources; the validity of people’s perceptions as to pivotal uncertainties in the future; and the verification of early warning signals emitted from the systems scanned, the strategic conversations held and the scenarios constructed.

Scenarios themselves, as a prime technique of Futures Studies, have long been used by government planners, corporate strategists and military analysts as powerful tools to aid in decision making in the face of uncertainty. They are instruments for ordering people’s perceptions about alternative future environments in which today’s decisions might play out. In practice, scenarios resemble a set of stories built around carefully constructed plots. Such stories can express multiple perspectives on complex events, with the scenarios themselves giving meaning to these events.

Despite their story-like qualities, scenarios follow systematic and recognisable phases. The process is highly interactive, intense and imaginative. It begins by clarifying the decision to be made, rigorously challenging the mental maps that shape people’s perceptions, and hunting and gathering information, often from unorthodox sources. The next steps are more analytical: identifying the driving forces, the predetermined elements and the critical uncertainties. These factors are then prioritised according to importance and uncertainty. Subsequently, three or four thoughtfully composed scenario ‘plots’, each representing a plausible alternative future, against which policy options can be tested and implications identified, are developed. Then, the deeper structures and systems behind the scenario stories, and their underlying logics, are elaborated to explain them and reveal their crucial differences. Finally, the key events, or turning points, that would channel the future towards one scenario rather than another are identified.

The main characteristics of such scenarios are that they:

- Present alternative images instead of extrapolating trends from the present.
- Embrace qualitative perspectives as well as quantitative data.
- Allow for sharp discontinuities to be evaluated.
- Require decision-makers to question their basic assumptions.
- Create a learning organisation possessing a common vocabulary and an effective basis for communicating complex, sometimes paradoxical, conditions and options.

Good scenarios are plausible and surprising. They have the power to break old stereotypes. And, by rehearsing tomorrow’s future, they produce better decisions today.

The Aim

The aim of this article is systematically to review many of the experiences gained, and capture most of the lessons learned, from the dozen or so Studies undertaken by the author over the past few years in the field of foresighting and scenario planning. In doing so, it also examines some of the actual operating practices, problems and pitfalls that occur in such exercises. Overall, however, it helps record the success of using the foresighting approach through scenario planning methods in promoting and supporting strategic thinking in various sectors of the built environment.
The studies conducted were titled and held as follows (Ratcliffe, 2001):

1: Strategic Construction Industry Planning (1999)
3: Built Environment Faculty Futures (1999/2000)
4: DIT Scenario Foresight Exercise (2000)
5: Global Real Estate Futures (1997-to date)
6: The ‘Wind Tunnel’ – Future Directions in Real Estate Research and Development (2000)
7: Imagineering Sustainable Cities (2000)
8: Sustaining the Tourism Industry (2000)
9: Dublin City Foresight (2001-to date)
10: Alternative Futures for Irish Property (2000)
12: Scenarios to Examine Construction Innovation (2000)

While the studies brought out a wide range of experiences and issues, which are examined in what follows, several specific findings can be spelled-out that cut across the whole enterprise.

• The future inherently is unpredictable. The overriding emphasis, therefore, is on imagining a range of possible futures and not on making a single precise prognosis of the future.
• The process is often more important than the product. Bringing the right agencies and people together to share their perceptions and ambitions, and enabling them to think creatively and flexibly, is frequently as valuable as the particular findings derived from the effort.
• The scale of the Study is not necessarily commensurate with the impact. Sometimes short, simple exercises can be every bit as effective as more extensive, elaborate ones. What matters is when, how, why and for whom they are conducted.

The following is a distillation of the key lessons drawn from the studies which can serve as a checklist to guide the adoption, preparation and delivery of a scenario planning approach to assist in more timely and effective decision-making.

In preparing this evaluation the author has drawn heavily from the experiences described by Sohail Inayatullah (2000) and by Jerome Glenn and others (2000). In this, the familiarity of events and concurrence of findings are reassuring. Mention is also made to the ‘strategic conversations’ which increasingly play an important part in the author’s approach towards scenario planning, and, in this context, the debt to Kees van der Heijden (1996) should be recorded.

The sections that follow – Purpose, Participants, Process, Method and Implementation – provide a common framework by which the dozen studies considered by the author could be characterised and evaluated. The bullet-ridden catalogue of points, though somewhat stylised, is deemed to be the best way of conveying the findings.
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Purpose

- **Foster client comprehension.** It is important to make sure the client organisation or ultimate decision maker for whom the findings are intended understands the basis of futures studies, the principle of foresighting and the purpose of scenario planning. What can be done and what cannot. They should further have commissioned or requested the exercise, and have accepted the resource and logistic implications. Ideally, a statement of what they would consider to be a successful outcome should also be produced.

- **Establish clear goals.** As with any other process connected to strategic planning or strategic thinking, there is a need to define clear goals and objectives at the outset. The goals, however, must, be realistic. Scenario planning, for example, takes time, and results are not always immediately apparent. The exercise, of itself, moreover, does not produce a plan, but helps in either demonstrating what will happen to current plans in various possible futures, or in promoting strategic thinking prior to strategic planning. Goals, furthermore, are not static, they change as organisations gain new understandings about the future, and thus need to be reviewed on a regular basis. The very exercise of foresight and scenario planning will often lead to a significant change in thinking and the consequent establishment of fresh goals, adjustment of existing goals or alteration in the timing of goal attainment.

- **Connect with strategic planning.** There is a need to ensure that where appropriate the foresight and scenario exercises have a formal connection to the strategic planning process, and that this link firmly is maintained. On the one hand, some decision makers become so captivated by the process of peering into the future and producing scenarios that they forget that these pictures of the future are not an end in themselves, but merely a means of opening participants minds to new possibilities and fresh options. On the other hand, there is an equal danger that senior managers become distanced from, or dismissive of the scenario learning exercise. Too often, there is an anticlimactic at the end of the scenario planning exercise – a ‘Now what?’ It is only possible to achieve significant results with foresight and scenario planning if it is an integral part of the organisation’s decision-making process. Stand-alone stories, with no links to the strategic planning and decision-making processes, will not create change.

- **Resolve whether the purpose is learning or planning.** It must clearly be understood if the scenario exercise is only supposed to be a learning experience, rather than connected to the strategic planning and decision-making processes. Exposing members of an organisation, or interested parties to a policy area or a particular issue, is a perfectly legitimate objective. Indeed, scenarios offer organisations and group a way to learn better and faster. They also allow decision makers continually to test their perceptions of an uncertain future.

- **Decide who exactly is the target audience.** This might be the leadership of an organisation engaged in strategic planning. It might be the entire staff or membership of an organisation as part of a communications or consultative exercise. It might be the research arm of an organisation exploring new opportunities, products, services or innovations. Or it might be a way of influencing external bodies or collaborating parties to a particular policy or proposal. In any event, each of these congregations would have different expectations,
understandings, responses and receptivity’s, for which the respective exercises would have to be especially structured and presented.

- **Determine precisely which issues or topics the organisation concerned is trying to understand.** If the exercise is too narrowly focused, important aspects might be missed. Conversely, if the exercise is too broadly based, it may not be seen as relevant to the task in hand. A global scenario, for example, will be of little help in determining the future use of a particular site or building. Similarly, an institutionally restricted scenario may be inadequate for investigating change within a whole sector, such as built environment education or architectural heritage.

- **Pose a pertinent strategic question.** All scenarios must start with a focused question that has to be addressed in order to put the exercise into context. They should also conclude with it! From the author’s studies, two distinct types of strategic question emerged: first, those directly concerning organisations, institutions or companies facing decisions in a competitive environment; and second, those largely relating to entire industry or public policy decision areas. In the former, there was a tendency to frame the question too narrowly, and in the latter too broadly. In both cases, however, the proper decisions on which to focus are strategic rather than tactical. This said, the narrower the scope of the decision or strategy, and thus the more focused the question, the easier will be the scenario construction and interpretation. A cautionary note should be struck at this stage, however, for while clarifying the strategic question is critical for a successful project, it is not the time for ‘strategizing’. The testing of strategy comes at the end of the process. But decision-makers have impatience with analysis and a natural inclination to want to ‘cut to the chase’. This has to be constrained.

- **Aim ultimately to develop a shared ‘vision’ of the future.** While scenarios provide an excellent means for creating and exploring alternative futures, they do not make the future more cohesive. Indeed, quite the reverse. They open up choices, but do not pull an organisation forward. Developing a preferred vision or shared mission towards the future is ultimately the objective for most organisations in formulating a strategic planning policy. It has been stated that such a preferred vision (Inayatullah, 2000):

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  ‘.....acts as a strange attractor, providing the glue that creates community.
  The vision is essentially about root values in the context of changing times. It
  must enable and enoble...’
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Care must be taken, of course, to ensure that such a preferred future is arrived at as a result of the scenarios and not as one of them. Nevertheless, scenarios can contribute greatly to the development of a new vision, mission or strategic intent.

- **Create a shared language within an organisation.** One of the most powerful outcomes of a foresighting exercise through scenarios is the generation of not just a common understanding of uncertainty and the future within an organisation, or community of thought, but also a collective way of discussing and expressing it. So far as possible, the language of an organisation must be rational, and scenario thinking and planning foster the construction of a solid line of strategic reasoning around which an organisation can gather. The process is also evocative, and stimulates widespread debate and deliberation
with an affinity of purpose. It is surprising how the names of particular scenarios, or the recalling of certain simulated events, conjure up a stream of productive thought or reminder of necessary action.

- **Remember that scenarios are not predictions.** Scenarios are projections of a potential future. They are estimations of what might happen, and make assumptions about what could happen, but they are not forecasts of what will happen. Such projections should be interpreted as one view of the future that is based upon specific information and a set of logical assumptions. It is amazing how much time can be taken, and effort wasted, in arguing the likely veracity or otherwise of particular elements of a scenario – especially among academics!

- **Pay attention to the ‘organisational culture’**. It is very difficult to lay down a set of ground rules, or even guidelines, in this context. Every organisation, however, has its politics, personalities, problems, practices, past history and hidden agendas. Sometimes these can be addressed directly; sometimes a high degree of diplomacy is required. Confrontation can be productive, or it can be divisive. Consensus might promote sharp strategic thinking, or it might produce sterile mediocrity of outlook. This is where experienced, skilful facilitation comes into its own.

**Participants**

- **Gain management support and involvement.** There is little point in conducting a foresighting exercise through scenarios for the purposes of strategic planning if decision makers at all levels of the organisation are not involved. Much is made in the literature about having the commitment and support, if not actual involvement, of the chief executive officer, or equivalent, in the exercise. And certainly, the imprimatur of the leader of an organisation upon a scenario exercise is of great importance, and sends a strong signal to that organisation that the project is a serious one. Just as crucial, however, is the support and participation of senior management ‘down the line’. If line managers do not fully subscribe to the process, have problems in understanding the need for developing scenarios, or cannot endorse the logics supporting particular plots, then they cannot be expected to appreciate the critical implications of various scenarios, or even to know what questions they ought to ask that would link scenario content to current or future decisions. Top-level and line management support matters, for then the results of the exercise actually reflect management’s concerns and are more likely to be useful and actionable. The same is true of equivalent office-bearers in non-corporate or less hierarchical organisations.

- **If practicable, it is helpful to the exercise if the decision-makers can be included in the initial research process.** This should counter any lack of long-term thinking and short-term dominance over more distant future considerations. At the very least, a ‘strategic conversation’ with selected decision-makers at the commencement of the project is essential.

- **Great care should be taken in scenario team selection.** Normally, *ad hoc* teams are established to oversee, craft and test scenarios. The members should be drawn from a representative range of the organisation’s activities and comprise a fairly disparate set of interests and backgrounds. They should, however, be capable of sharing a common
language and mission, so as to conduct the necessary research for addressing the strategic question, examining the relevant issues and trends, shaping a plot, articulating various end-states and deriving operational implications. The inter-personal chemistry of this group can play a critical part in the level of success achieved by the project.

- Include diverse interest groups and key actors in the research project. This is to make sure that an understanding is gained and the information is created about how a contemplated decision may affect stakeholders and to reduce subsequent political impediments. It is often found to be disruptive, distorting or distracting to include all major interest groups throughout the process, but there may be suitable points at which their reactions are tested and the results taken on-board. Wherever possible, however, it is beneficial to enlist the support of people in this process who will use or be affected by the activity or proposal in question.

- Take testimony from experts. Scenarios frequently require inputs from such specialist sources as management consultants, scientists, demographers, economists, technologists, politicians, journalists and the like. In particular, evidence enabling estimates to be made in respect of probabilities and risks associated with the issues under scrutiny and the policy solutions being proposed is invariably needed.

- Introduce a few ‘remarkable people’. At different stages in the process it is worth exposing the scenario team to the ideas and reactions of more exceptional or maverick thinkers whose opinions about the future are not conformist and who might throw a different light on matters.

- Choose an experienced and appropriate facilitator. The role of such a person cannot be overstated. It is often a matter of ‘horses for courses’, however, because experience alone is not necessarily the sole criterion for selection. Some facilitators have a particular method or approach towards conducting a foresighting or scenario planning exercise which is not suitable in all circumstances. The facilitator acts as a catalyst, stimulating the emergence of new ideas and different ways of responding to change, because it is very difficult for those involved in a scenario based activity to remain detached enough to guide the process. They should also help the group create a common language among themselves. In order to do this effectively, it has been found that the facilitator in foresighting projects should have some knowledge of the area of concern itself.

- Use consultants prudently. As with so many other areas of planning and management there is now a veritable growth industry in consultancy firms offering futures, foresighting and scenario learning services. Unquestionably, some of them have developed considerable expertise in the field and produce useful results. There is a danger, however, of endowing the activity and process with too much mystique. Over elaboration is also a hazard. And there is much to be said for the concerned participants of a scenario planning exercise performing most of the tasks themselves. Process, as has been stated elsewhere, being just as important as product. In some instances, the best accommodation has been found to invite consultants to run a one or two day workshop as a pilot at the outset of a scenario planning exercise which can then be used as a model for the organisation to follow itself thereafter.
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- **Take trouble in selecting interviewees and interviewers for the ‘strategic conversations’**. The ‘quality’ of those selected for interviewing in-depth, and the ‘calibre’ of those responsible for conducting the interviews on the basis of a negotiated text, is crucial to the success of the exercise. There are occasions when it is worthwhile retaining someone eminent and acknowledged in the field to conduct the in-depth interviews if no one suitable from the organisation can be found.

- **Find a ‘champion’**. The importance of identifying someone commanding respect from within and without the organisation that can convene, promote and lead the project cannot be underestimated. It is the key to success. They should, however, be seen to be advocates for the process, and not for any particular predetermined position, policy or viewpoint. There are no common guidelines as to suitability and effectiveness, and the literature has surprisingly little to say on the subject, but from experience, if any one element is singled out to ensure the favourable outcome of a foresighting or scenario planning exercise it is the location, sustenance and appreciation of a potent champion for the project.

**Process**

- **Recognise that there are many ways of conducting foresighting programmes and scenario planning exercises**. Consultants, and other specialists in the field, understandably promote their own proprietary methods. Different organisations have different requirements from the process. For some the learning experience predominates. For others, there is a real need to test a particular policy, project or product. For yet a further group, the use of foresighting and scenarios is a genuine precursor and continuing complementary activity to the formulation and implementation of a strategic plan. The nature of the project, the constituency of the participants, the emphasis on particular stages of the process, the time taken and the use to which results are put, will all vary according to circumstance. There is no preferred model to adopt and no perfect process to follow. Standard scenarios, for example, are often useful, but they need to be customised for the particular client.

- **Do not limit the scope of the exercise**. Some organisations mistakenly draw too tight a boundary to their perceived domain. As a result, they are not prepared when the unexpected occurs affecting their operations due to influences, decisions or events considered too remote or peripheral.

- **Time and timing is all important**. At the outset it is vital to devote sufficient time to conduct enough research to be in a position to ask the right questions. There are both propitious and inopportunite times within the life-cycle or rhythms of an organisation to conduct a future based exercise. The time parameters for the scenarios – whether they should be set 10, 15 or 20 years ahead – need carefully to be considered and framed. Such a time-frame should also stretch backward in time, for it often seems easier to face up to the uncertainties of the future if the scenarios are placed in the context of a continuum. The time must also be right in respect of external forces and outside individuals or agencies relevant to the exercise, so as to ensure desired and worthwhile responses, co-operation and impact. In terms of time, it is also necessary to learn patience, because futures oriented projects, organisational change based on foresighting and new
strategies founded on scenario planning exercises, all take time to materialise, and the results be recognised. With regard to timing, a foresighting programme or scenario exercise is most likely to lift-off with the advent of new leadership in an organisation, for that person will be looking to understand the identity, mission and values of the organisation and discover new directions for development, whilst the members or staff of the organisation will be susceptible to collective self-analysis and receptive to change. Although, it should be stated, it sometimes works the other way around!

- **Establish links with similar activities elsewhere.** The futures movement is growing apace, and in most fields of government, business and research some form of foresighting is taking place. It is self-evident, therefore, that great benefit can be gained from communication, comparison and even collaboration. In the Studies conducted, association with, and assistance from, such entities as Chatham House, Shell, Global Business Networks and the Sustainable Urban and Regional Futures Centre have proved invaluable.

- **Futures oriented exercises should be eclectic.** So far as possible, foresighting and scenario building activities should be a combination of quantitative and qualitative, short and long range, predictive and critical approaches. Different participants, and different recipients of the results, will favour different forms of information, analysis and presentation.

- **Foresighting should be about depth as well as breadth.** The need to explore different levels of understanding, information and meaning is a common occurrence in foresighting and scenario planning. There is a delicate balance to maintain. On the one hand, if certain issues are not capable of being pursued with adequate and reliable information the exercise is in danger of losing its credibility through superficiality. On the other, an over-assiduous chase for facts and figures relating to a single factor in the evaluation process can easily distort the findings or deflect the direction of inquiry. Frequently, therefore, information has to be multi-levelled, but its form and detail should be evenly prepared and presented.

- **A pilot study is often advantageous.** The process of foresighting and the use of scenarios are comparatively unfamiliar to most. This is especially true in the field of the built environment, where few related projects have been undertaken. Thus, for a variety of reasons, there are considerable benefits to be gained from conducting a ‘dry-run’ or pilot study at first instance. Not only does it acclimatise the participants to the process, but it enables those responsible for managing the project to define more closely the issues to be addressed and refine more carefully the approach by which this is done. It is also a mechanism for promoting the approach, and gaining support from within and without the organisation.

- **Hold an induction or training workshop.** Given that most participants in the process will be unaccustomed to the approach adopted, the techniques employed and the roles they will play, an introductory workshop at the start of the exercise is productive. In addition, it often helps to invite a guest speaker who has successfully used a similar approach in a related area to make a short presentation – highlighting the positive aspects! In like vein, a workshop towards the end of the foresighting or scenario process specifically to allow for the integration of all the activities, agencies, individuals and
concepts that have been involved in the project prior to the final production and presentation of findings is advisable.

- **The process should be continuous and cumulative.** It is important to keep a dynamic to the exercise, so that what is learned at one stage, or in one iteration, is carried over to the next. Foresighting and scenario exercises, in any case, should not be seen as one-time events, but as on-going processes of feeding information and findings to the decision makers within an organisation, and responding to reactions from results. Ideally, foresighting through scenario planning as an attitude of mind, as well as methodological approach, needs to be incorporated within the thinking, structure and operation of an organisation. In other words, it needs to be institutionalised.

- **The amount of work involved should not be underestimated.** Even in the simplest exercises, which are sometimes the most effective, the amount of time and trouble taken in researching, preparing and presenting material for what might be relatively short workshop sessions can be enormous. Individually, interviews are comparatively brief, but collectively the conversations conducted and the analysis performed can accumulate to very considerable chunks of time. One of the great attractions of the approach, however, is that foresighting through scenarios can be tailored easily to suit the situation. Shortcuts can readily be taken, stages of the process can be combined, the number of interviews contained, alternative sets of scenarios ‘made earlier’ employed and the range of policy options tested reduced to absolute priority proposals.

- **Executive ownership of the process must be fostered.** The essential purpose of foresighting through scenario planning is to challenge, test and perhaps change policy-maker’s basic assumptions about their present and proposed future operating environment. In the words of Pierre Wack (1985), they should be able to re-make their ‘mental maps’ of the world. Only if those responsible for framing and executing policy wholeheartedly take ownership of the scenario planning process and its product will they truly benefit from the approach and enhance their decision-making.

**Method**

- **Employ a recognisable formal method.** While it is necessary to adopt a flexible and adaptable approach towards the construction and use of scenarios, there is a need to follow a systematic and rigorous process that is tried, tested and known to work. It gives a discipline to those responsible for managing the project and a sense of confidence to those participating.

- **Decide between an ‘inductive’ or ‘deductive’ method.** The inductive method builds step by step on the data available and allows the structure of the scenarios to emerge by itself. The overall framework is not imposed, and the story lines grow out of the progressive combining of data. In the deductive method the analyst attempts to infer an overall framework to start with, after which pieces of data are fitted into the framework, wherever they fit most naturally. The difference between the inductive and deductive methods is thus between letting the framework emerge in the process of building stories from the data upwards, or deducing a framework from the data as a first step (van der Heijden, 1996). There is also a third way of developing scenarios called the ‘incremental’ method, which can be described as slightly less ambitious, and is useful if the scenario
team is inexperienced and sceptical of the scenario approach. Here the 'official future' of the client organisation is used as a starting point, from which scenarios are developed into unknown territory. If there are only a few major overwhelming uncertainties, then the three approaches tend to produce similar results. The deductive method has advantages if time is of the essence, offering a more codified and regimented process. The inductive method suits groups or situations where there is a high degree of tolerance to ambiguity and diversity of view (Ibid). It is of course possible, with skilled facilitation, to combine all three methods - starting with an incremental or inductive approach, then switching to the deductive if time or belief constraints are encountered.

- **Make sure some form of ‘environmental scanning’ is conducted.** An essential starting point for any foresighting or scenario exercise is seeking information about events and relationships in both the macro-environment surrounding an organisation's affairs and the micro-environment within which it has to operate. It is neglected at peril, for there is firm evidence in the corporate field that those companies which undertake some form of environmental scanning consistently and significantly out-perform those that do not (Newgren, *et al*, 1984). Picking-up the signals of impending change and relaying them into the scenario process is a crucial task at the start of every exercise. Over time, a data bank is established, and, if kept current, can be used efficiently for successive scenario exercises.

- **Appreciate that ‘brainstorming’ is at the heart of it all.** Whatever titles the various techniques are given, the key to the success of every foresighting exercise is extracting the right thoughts from the right people, then applying them in the right way. A corollary to this, however, is to make sure that the right question, or questions, are asked.

- **Pay heed to the selection of strategic conversations.** As mentioned previously, it is the quality of the interviews that count in foresighting and not the quantity. A few carefully chosen conversations with those ‘right people’ are often all that is needed, particularly at the start of a project. Revisiting one or two special respondents later in the process has also been found to pay dividends.

- **Have an awareness of the value of ‘metaphor’**. Probably the best way of explaining and examining alternative futures is by way of metaphor. They work at an instinctive, intuitive or emotional level. Most importantly, they capture complexity more readily than other forms of representation. Likewise, the use of image or allegory, can portray more accurately people’s perceptions, priorities and phobias than can any number of prosaic reports or amount of quantitative analysis - however authoritative. Somewhat indulgently, perhaps, the cover quote from Shell’s *Global Scenarios 1992-2020* (Davis-Floyd, 1995-97) springs to mind as an example:

> ‘......night has fallen, and the Barbarians have not come. And some of our men, just in from the border, say there are no barbarians any longer! Now, what is going to happen to us without Barbarians? They were, those people, after all, a kind of solution.’ (Cavafy, 1904)

It should be recognised, however, that the wrong metaphor - a cultural gaffe or political faux pas, for example - can be disastrous.
• **Anecdotes and aphorisms can be helpful.** In similar vein to the use of metaphor, any rational scenario structure can be coloured, humanised or personalised by the telling of stories or the reference to memorable phrases or sayings. These not only brighten-up the proceedings, but, by repetition, become codenames or maxims for the logics of the scenarios. Memorable incidents narrated in the scenario storylines can have the same effect.

• **Invoke a feeling of crisis.** Institutional inertia is often faced in foresighting exercises, and this needs to be challenged. Organisations need to be prepared for surprise, and plan for discontinuity. Unofficial futures to confront official futures should be developed. Wild cards, or potential jokers, need circumspectly to be played, and disruptions or impediments to orderly thinking can productively be introduced into the scenario process. All this can encourage participants to stretch their individual and collective minds, and, colloquially, ‘think outside the box’.

• **Secure the inclusion of relevant and compelling information.** Naturally, the scenarios should be based, so far as possible, upon sufficient accurate, reliable, credible, consistent and appropriate information. Sometimes, however, best judgements must be made. So long as this is done overtly, and with the proper degree of dependence, there is no problem. Information should not, of course, be limited to quantifiable projections, but should include rich subjective descriptions of alternative futures. It is also judicious to incorporate outcomes and findings that demonstrate the success or feasibility of possible recommendations as well as the prospects for failure or impracticability.

• **Special kinds of presentation can enhance participation.** In communicating the alternative scenarios to groups either inside or outside the organisation, recourse to distinctive and memorable forms of presentation can be particularly effective. The Studies described earlier used such techniques as short stories, films, newscasts, interviews, hecklers, obituaries and the like.

• **Choose evocative and germane names for the scenarios.** Ideally, the name or title of a scenario should help understanding at an intuitive level. They can also serve as a useful means of reference. Some seem clever, vivid, or amusing at first glance, but prove to lack a deeper meaning or lasting effect. The true test over time is when someone in the organisation, reacting to a sudden change in events, or even to a crisis, recalls the scenarios by name, in the context of:

  ‘Oh no! We’re moving into Mad Max’; or, ‘With luck, this is the start of Socratic Systems’.

• **Concentrate on ‘pivotal uncertainties’**. In assessing the issues and trends for impact and uncertainty, it should be stressed that it is the pivotal, key or critical uncertainties which are central to constructing the scenario logics and storylines. The identification, positioning, clustering and evaluation of them should be the focus of the scenario team, and the concern of the facilitator. Sometimes too much attention is paid to ‘context shapers’ and ‘significant trends’ which are evident and unexceptional.

• **Decide upon the number of scenarios.** Current thinking, explained to the author by
Douglas McKay of Shell, now has it that four scenarios encourage divergent thinking and are useful for creating vision; three scenarios lead to the expectation that one is 'the forecast'; and two scenarios allows for a couple of very distinct, not necessarily 'low' versus 'high', or 'good' versus 'bad', to be developed. For corporate scenarios, Shell now tends to favour a two future approach. Experience from the Studies undertaken by the author would suggest, however, that the three scenario futures approach can be extremely effective if structured to avoid a 'likely' median scenario outcome.

- **Take trouble in diagnosing 'triggers'**. Perhaps the most difficult task in all scenario planning exercises is getting participants to create a process which alerts them to the trigger points that indicate a perceived uncertainty is becoming more likely. Arguably, the ability to understand how scenarios can anticipate and assess likely change in the organisation's operating environment is the most important use to which the process can be put. Spotting the key indicators or signals of impending change deserves more attention in the whole foresighting through scenario approach.

- **Consider the use of more than one method.** In fact, by its very nature, scenario planning employs a variety of tools and techniques - scanning, surveys, questionnaires, interviews, brainstorming, workshops - and thus qualifies in methodological parlance for the term 'triangulation'. The important point being that the examination of a strategic question from a range of perspectives and by the application of a number of different methods greatly enhances the credibility and credence of the approach.

**Implementation**

- **Determine who is responsible for taking action.** There is a danger at the end of the foresighting or scenario process that the findings and recommendations of the project are not taken forward into the strategic planning or decision-making processes of the organisation. Ideally, this should have been decided at the outset, but sensibly it is advisable to include proposals for who should have the authority and how they should be accountable for putting any recommendations into practice in the conclusions to the exercise. There is a very real danger of a management lacuna occurring between scenario building and strategic planning, and the best way of tackling this is to build-in a procedural device by which the latter has to adopt the findings of the former and take appropriate action upon them.

- **Make the recommendations simple, clear and relevant.** Whatever policy proposals are made from a foresighting exercise, they should also be framed in a way that takes into account the social, cultural, political and organisational environment in which they will be received and considered. It is often easy to forget that the recipients of the results have not had the benefit of experiencing and learning from the scenario planning process, with all that entails, so great care should be taken in relating the findings to the established goals and strategies of the organisation. If possible, the intended actions of related institutions, agencies and individual decision-makers outside the organisation should be included in the recommendations in a plain, precise and politic way.

- **Demonstrate the feasibility of the recommendations.** This should include estimates of what is involved in terms of time, personnel and other resources, as well as an indication of the degree of institutional and technological change entailed in effecting the proposals.
Appreciate that there are other results as well as formal recommendations. The project may well have been set up as a learning process every bit as much as a planning process. In any event, there will often be a number of other outcomes derived from a foresighting or scenario exercise. First, substantive messages might be conveyed to a wide range of people within and without the organisation. Second, a new set of informal networks, understandings and agreements might be reached among the participants to the various activities that formed the entire process. And third, those most directly involved in conducting the scenario building activities might have experienced a significant change in their thinking.

Connect the costs and benefits of the recommendations. There might be a greater willingness on the part of decision-makers to pay for the proposals if they can see the direct financial dividends from pursuing a particular course of action. Clarification of the foretold condition with and without action through the scenarios can also be a salutary message to send.

Devise a set of indicators for implementation. It is not always easy, but developing and popularising appropriate indicators in conjunction with those responsible for implementing policy can be of great benefit.

Be innovative in presentation. The power of scenario work is partly derived from its being an exercise in both reflection and imagination. This quality should not be lost when presenting the findings to others not involved in the process. There are now many ways in which modern technology can be used in the form of video or multi-media to enhance presentation. Consideration should also be given as to how the media itself might be included in the presentation through press releases and conferences, video film productions, television opportunities and internet announcements. The publication of a series of cartoons produced during the scenario planning process was extremely effective in communicating certain messages in one instance.

Provide a proper framework for results. It is important to design a structure to present and communicate the results of a foresighting or scenario planning exercise to those who have not been through the process. In this context, it is worth remembering that care has to be taken not to focus on one set of results or a single scenario.

Be aware that success is hard to pinpoint. As with strategic planning, so with strategic thinking through scenarios, success is difficult to identify and measure in the short-run. Even in the longer term, it is not always easy to credit a particular foresighting or scenario exercise as the key to success. All that can be stated is that scenario learning and planning have created an environment in which people and organisations have come together with the sole purpose of thinking differently. This, in itself, should be viewed as a positive outcome.

Recognise that learning is an iterative process. It has been written that (Kolb, 1984):

"Experience leads to contemplation and appraisal, which leads to theorizing and postulating, which leads to plans and decisions, which leads back to experience".

All effective learning and planning processes have to be iterative in nature – and one of the prime objectives of foresighting and scenario exercises is to create learning as well as planning organisation. Whereas traditional planning approaches tend to have a regular cycle of operation within an organisation, scenario planning, with its relative novelty and unfamiliarity, is still treated too much as a one-off type of exercise, and not sufficiently woven into the threads of organisational planning and management.

- **Gain support.** Involving and committing the key stakeholders, internally and externally, is paramount in achieving a successful outcome to a foresighting through scenarios exercise. A broad base through optimising connections among a variety of networks, and an inclusive approach towards all agencies and individuals that might be effected, should be sought. At the end of the day, it is all about people.

**Evaluation**

Evaluating the effectiveness of any ‘futures’ activity is problematic. A conventional research approach towards measuring the effectiveness of a particular methodology is relatively straightforward. The criteria are not hard to imagine. (Bishop, 2001).

- Was futures research used in making the decision?
- Did the decision-makers in each case take all relevant factors and implications into account?
- How confident or satisfied was each group with the decisions they made?
- Did the decisions have their intended effect?
- Were all the consequences anticipated?

Simples as it sounds, two problems arise. First, actual decisions in future-oriented fields invariably take a long time to make, and a very much longer time to take effect. Second, there simply are not the agencies or individuals around who are properly equipped to undertake such an evaluation. It has, therefore, been recommended that the best approach towards achieving legitimacy and recognition for future work is not to try to measure the benefits of the field directly, but rather to acknowledge and promote those who are clearly doing it well (*ibid*). This concedes that, for the moment at least, futures activity is more art than science, and good futurists rely more upon their skill and experience than they do upon published methods or techniques learned through any formal education or training. Reputation and proven performance are currently better means of estimating professional worth, than any form of official accreditation or certification. What perhaps is needed, however, is some form of establishing and disseminating ‘best practice’ exemplars for the various approaches, methods and techniques that have successfully been developed and used in the futures field. For the time being, perhaps the marketplace is the only reliable mechanism for determining the efficacy of futures work by those proffering such services. It is certainly the simplest. If clients are preparing to pay for it, they must believe they benefit.

**Conclusion**

A good indicator of the acceptance and effectiveness of foresighting through scenario planning is how faithfully those involved or affected choose to update and revise the scenarios produced. In several of the studies undertaken, that test is just now being faced. Only time will tell their continuing relevance and reliability. Nevertheless, there are a few points worth highlighting from the fifty odd observations made above that might enhance the credibility
and use of the approach.

(i) Foresighting and scenario planning exercises, together with their revisions, should be scheduled into the normal planning process for the organisation.
(ii) The more people with different viewpoints who participate in the process the better.
(iii) Environmental scanning procedures should formally be put into place.
(iv) Greater attention should be paid to identifying and monitoring the ‘triggers’ of change.

At the time of writing (October 2002) DIT is embarked upon the venture of establishing a Built Environment Futures Academy for Ireland aiming to:

- foster a more informed, structured and imaginative approach by practitioners and decision-makers working in the land, property, construction and development disciplines towards urban and rural futures;
- contribute generally towards advancing the stewardship of the built environment and subscribe specifically to furthering the progress of sustainable urban development;
- develop an integrated and multi-disciplinary approach towards policy formulation and problem solving in the built environment; and
- Provide positive support to those professions concerned with the built environment in improving the flexibility and robustness of strategic planning and organisational management in the face of uncertainty and change.

Scenario planning will form a central part of the service that the Academy will provide, so that the professions of the built environment in Ireland will be able to embrace the adage that:

‘The future is not inevitable. We can influence it if we know what we want it to be’.

References


