

**An Exploration of How Social Media
Data is Used in Companies
Evidence from the Telecom Industry**

A Thesis submitted to



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Declaration

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Abstract

Social media (SM) has fundamentally changed how companies and consumers communicate and interact with each other. Comprehensive understanding of companies' use of SM requires an in-depth investigation of how companies use SM data, as well as the associated managerial challenges. Existing studies of SM showcase a strong focus on the *what* research questions, such as SM's impacts and benefits which have been extensively discussed in the literature, while the *how* type of questions have received less attention. Review of the studies of companies' use of SM revealed that many studies show a range of potential benefits of using SM for companies. On the other hand, literature suggests a range of challenges companies are facing in dealing with SM data, which are mainly focused on the data related challenges. While the managerial challenges of using SM in companies need more academic attention, the wide range of potential benefits coupled with the discussed challenges highlight the need for insight into the details of the processes involved in using SM data in companies. Furthermore, the extant conceptual literature strongly suggests that SM data should be used in companies. However, the empirical evidence for a holistic and detailed view of how companies use SM data is lacking in the literature. Based on the above, the research questions for this study include: '***How is social media data used in companies?***' and '***What are the managerial challenges in using SM data?***'

The empirical part of this thesis is comprised of a critical realist and qualitative case-based inquiry. Four cases were chosen from the telecom industry, as the most appropriate setting for the conduct of the research, which were believed to provide the required data richness and depth. Data from SM and marketing managers involved in the SM activities of the case companies were collected through interviews, and other sources of company documentation, reports, and observations. The collected data was then analysed using the detailed and systematic techniques in the Grounded Theory Data Analysis Method. The fruit of this analysis is the development of an outcome model which exposes three types of SM data use processes within companies, including proactive, reactive, and analytical SM data use process types, as well as three main subprocesses of content creation, individual SM data use, and aggregated SM data use. The findings of the study also revealed 12 stages of SM data

use, which form the building blocks of the subprocesses. The combination of the revealed process types, subprocesses, and stages provide a holistic and detailed view of how SM data is used within companies. Moreover, the findings of this study reveal that SM information utilization includes instrumental, conceptual, and affective types of utilization, and it mainly happens in limited areas of business, in an immediate or short-term timeframe, and in relation to operational decisions.

Regarding the managerial challenges of using SM, the findings reveal a number of managerial challenges which include content creation challenges (including creating constant, interesting, and real-time content, and finding the right balance between the promotional FGC and other types), customer related challenges (including SM negativity challenge, customers' high expectations challenge, and misinformation challenge), SM data actionability challenge, and resourcing challenge. The outcome model was then embedded in the context of the extant literature, delineating the main areas of contribution for this study. The thesis then puts forward the contributions, implications and recommendation for future research, subject to the discussed limitations.

***‘The mind is not a vessel to be filled, but a fire to be ignited.’
– Plutarch***

***To my dear maman, and all the single parents doing their absolute best
in raising their children,***

To the memory of my father and every breath I take with him in mind,

***To Bahram, for his courage, honesty, wisdom, and being the great
person he is,***

***To my son, Farham, to always try and be the best version of himself and
always reach out for the stars and ∞ ...***

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Abbreviations

B2C: Business to Customer
C2B: Customer to Business
C2C: Customer to Customer
CIE: Customer Influence Effect
CIS: Customer Information Systems
CLV: Customer Lifetime Value
CMO: Chief Marketing Officer
CRM: Customer Relationship Management
CSI: Customer Satisfaction Information
eWOM: electronic Word of Mouth
FGC: Firm Generated Content
IS: Information Systems
IT: Information Technology
OIPT: Organizational Information Processing Theory
OL: Organizational Learning
PR: Public Relations
ROI: Return On Investment
SCMS: Social Content Management Systems
SLA: Service Level Agreement
SM: Social Media
SWOM: Social Word Of Mouth
UGC: User Generated Content
WOM: Word of Mouth

List of Conference Publications in the Course of PhD

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Chapter 1: Introduction

1.1. Introduction

This research focuses on investigation of how social media (SM) data is used in companies, as well as the associated managerial challenges. This chapter will introduce this research project to the reader, beginning with an outline of the research context and question in section 1.2. Subsequently, the research approach is discussed in section 1.3, and research findings and contributions are summarized in section 1.4. The chapter concludes with an overview of the structure of this thesis, summarizing the content of its seven main chapters in section 1.5.

1.2. Research Context and Research Questions

This study focuses on the investigation of how SM data is used in companies, as well as the associated managerial challenges. Social Media (SM) is increasing being used by the individual and organizations, as diverse and dynamic platforms which have fundamentally changed the interactions between companies and their customers (Gallaughier & Ransbotham, 2010; Kaplan & Haenlein, 2010; Libai, Bolton, et al., 2010). This has led to a growing body of literature in this area. A review of the relevant literature reveals two issues in relation to the definition of SM and relevant terms. These issues include lack of clear, comprehensive, and agreed definition of the term social media (also discussed by Constantinides & Fountain, 2008; DesAutels, 2011; Kaplan & Haenlein, 2010; Parameswaran & Whinston, 2007), and the interchangeable use of social media term with a number of similar terms (Zamani & Brady, 2012a, 2012b). Review of the range of definitions provided in the literature lead to the selection of the SM definition suggested by Plume, et al. (2016) to guide this research. Review of the literature on SM reveals that the majority of related empirical studies are related to the individual and personal use of SM (Ngai, Tao, et al., 2015; Khang, et al.2012), highlighting the need for more studies investigating companies' use of SM (Alves, et al., 2016). Review of studies focusing on companies' use of SM reveals a number of tendencies in the extant literature, as follows:

- a) The majority of SM studies view SM as a form of media and communication channel (e.g. Berthon, Pitt, et al., 2012; Hanna, Rohm, et al., 2011; Zhang, Evgeniou, et al., 2012), with limited attention to the details of information dissemination as the subsequent main aspect.
- b) The majority of empirical studies focus on the **what** questions of SM use in firms, leading to a large body of empirical evidence for a range of benefits of using SM. However, the **how** questions, including how SM data is used in the firms has not received much attention in the literature. Review of the studies of companies' use of SM revealed that the majority of these studies show a range of potential benefits which can be gained from using SM by companies, which are accompanied by a range of challenges. The range of potential benefits coupled with serious challenges raise the question of benefit realization (Maklan, et al., 2015), which highlight the need for insight into the details of how SM data is used in companies.
- c) A large portion of the studies of companies' use of SM uses consumer and end user data (Ngai, Moon, et al., 2015; Ngai, Tao, et al., 2015; Yadav, et al. 2013; Khang, et al. 2012; Rollins, 2012), which highlights the need for more studies using company data.
- d) The majority of SM studies focus on a single or a limited number of SM platforms in firms, highlighting the need for studies focusing on the full spectrum of SM platforms used in firms (Smith, Fischer, et al., 2012; Hanna, Rohm, et al., 2012)

Moreover, in light of the need for more studies focusing on companies' use of SM data, special attention should be given to understanding the key challenges facing managers in SM data use (Alves, et al., 2016). However, discussions of SM challenges in the literature mainly focus on challenges related to data attributes (e.g. Gandomi & Haider, 2015; Sivarajah, et al., 2017), while the other challenges of SM data use are studied in a limited and fragmented scope, and particularly discussion of SM data use challenges from managers' perspective is missing from the literature. This highlights the need for more holistic investigation of the challenges of using SM data within companies, especially from managers' perspective.

Moreover, review of the theories used in the studies of SM noted that more attention to the theoretical frameworks used in these studies is required (Khang, et al., 2012). Moreover, while a large number of studies in the IS literature use organizational theories in studying SM (see Kapoor, et al., 2018, and Ngai, Tao, et al., 2015), individual and social behaviour theories form the majority of theories used in the marketing literature (see Khang, et al., 2012). This leads to the need for more attention to and better use of the existing organizational and management theories in studies of SM, especially in the marketing domain.

The combination of the above issues highlights the need for more attention to **how** SM data is used in companies, as well as investigation of the full range of challenges of SM data use in companies. It also highlights the need for more studies, which use company data and focus on the full range of SM platforms within companies. The above discussions form the two research questions of this research as follows:

How is social media data used in companies?

What are the managerial challenges in using SM data?

This involves investigation of the processes, subprocesses and stages involved in using SM data in companies, as well as managers' view of the associated challenges. In this regard, despite the strongly advocated prescriptions in the literature regarding use of SM data in companies (e.g. Gallagher & Ransbotham, 2010; Larson & Watson, 2011; Chen, Chiang, et al. 2012; Kane, 2014, Moorman, 2011), little is known about the details of how companies actually use SM data. SM data use refers to the processes that companies use to monitor, process, react and utilize SM data. Literature of SM data use in companies is rooted in the literature of market information processing (Moorman, 1995, 1998) and customer information processing (Peltier, Zahay, et al., 2013; Zahay & Griffin, 2002; Morgan, Anderson, et al., 2005), which is based on the Organizational Information Processing Theory (Galbraith, 1974; Tushman and Nadler, 1978; Weick, 1979, 2005, 2012) as its theoretical backbone. Review of the literature on customer and market information processing reveals seven stages to be potentially applicable to SM data use (as a form of customer and market data), including: Information Reciprocity, Monitoring, Analysing, Integration, Dissemination, Utilization, and Storage. However, the limited insight into the applicability of these stages to SM

data, as well as the slight differences in the details of these stages reveal the need for further investigation of the details of SM data use in companies.

Focusing on the existing literature of SM data use reveals limited and fragmented discussions in this area. The existing literature discusses the need for a Social Media Content Management system in companies at a conceptual level (Aladwani, 2014; Herbst & vom Brocke, 2013b). A limited number of studies have investigated the SM data use processes using Jayachandran, et al.'s (2005) model of relational information processes (Diffley & McCole, 2015; Harrigan, Evers, et al., 2017; Harrigan & Miles, 2014; Harrigan, Soutar, et al., 2015), showcasing the overall SM data use processes in this context. SM data use is also the subject of investigation in the of SM analytics literature (Bekmamedova & Shanks, 2014; Holsapple, Hsiao, et al., 2014, Mayeh, et al., 2012). A review of the literature in this new area of academic knowledge shows that many of the studies take a conceptual approach or discuss the methods of data analysis, and more importantly focus on SM data use at the aggregated level. Synthesis of the results of related studies in the area of SM analytics reveals four stages of Monitoring, Analysing, Reporting, and Utilization to be applicable to processing of SM data in this context. However, due to lack of attention to the details of these stages and focus on aggregated level data, these studies fail to provide a detailed and holistic view of how SM data is used in companies, revealing the need for further investigation of SM data use in companies.

Finally, information utilization, which explicates how information is to understand the environment and make decisions (Morgan, et al. 2005), is viewed in the literature as one of the outcomes of data use process (Menon and Varadarajan, 1992; Salojarvi, et al. 2010; Mayeh, et al. 2012), as well as a stage in the overall data use process (Mennon, 1995; Morgan, 2005; Jayachandran, 2006). A review of the literature on customer, market and SM information utilization reveals a limited body of knowledge in this area, which in the case of SM shows some contradictory results regarding the operational or strategic (Sigala, 2011; Tuarob and Tucker, 2013; Quinton, 2013) nature of SM information utilization.

Overall, as illustrated in diagram 1.5, the literature on SM data use is limited and insights into the details of the processes and stages involved in SM data use in

companies is lacking. Based on the above discussions, the purpose of this thesis is to provide a holistic and detailed view of how SM data is used in companies, and the associated managerial challenges, by answering the following research questions:

How is social media data used in the companies?

What are the managerial challenges in using SM data?

1.3. Research Approach

The research approach was developed in alignment with the research question. In order to investigate *how* SM data is used in companies, a qualitative approach was justified as being most suitable, in particular with regards to the intended contribution in the form of theory development. The research approach involves two stages of pilot interviews, and case studies. Based on Yin's (2009) proposition to select rich cases, the Telecom sector was selected as a sector with relative maturity in their SM activities (judged based on the number of Irish SM awards won by the players at the time of the start of the research), and also as an environment of high competition and interactivity with the consumers, capable of providing an interesting field for research and rich empirical data. In-depth multiple case study approach (Yin, 2013) was selected, consisting of four carefully selected cases that would enable rich data and required depth of information.

Empirical data was collected in the form of company documentation, observation, as well as interviews with SM team leads, SM managers, marketing managers and other managers involved with SM activities in the case companies. The approach chosen for the analysis of the empirical data is constructivist grounded theory data analysis method, which is believed to provide a systematic and structured basis for the analysis of empirical data.

1.4. Research Findings and Contributions

This study set out to investigate how SM is used in companies, as well as the associated managerial challenges. In this respect, it makes theoretical and methodological contributions to marketing and information systems theory and

literature. Through the conduct of an in-depth qualitative inquiry, this study contributes to the prevalent gap in our knowledge in the following ways.

At the center of the contribution is the outcome model (section 6.2) which identifies three parallel SM data use process types, including Proactive, Reactive, and Analytical SM data use processes. The model also delineates three related subprocesses of SM data use, including Content Creation, Individual SM data Use and Aggregated SM Data Use, as well as 14 stages which form the building blocks of the subprocesses. The findings of this study show that Content creation subprocess includes Content Development and Content Posting stages. The individual SM data use subprocess includes Monitoring, Evaluating, Investigating, Acting Upon the Data and Information Utilization stages. The aggregated SM data use subprocess includes Data Gathering, Data Analysis, Report Generation, Information Dissemination, and Information Utilization stages.

The findings of this study also outline a number of managerial challenges in this regard, including content creation challenges (including creating constant, interesting, and real-time content, and finding the right balance between the promotional FGC and other types), customer related challenges (including SM negativity challenge, customers' high expectations challenge, and misinformation challenge), SM data actionability challenge, and resourcing challenge.

The study mainly contributes by providing a detailed and holistic model of SM data use in companies, identifying the processes, subprocesses and stages involved.

The study also makes a contribution by outlining the managerial challenges involved, showcasing a range of challenges which are more relevant to non-data related aspects of SM data use (including content creation and companies' interactions with customers), as opposed to the data attribute related challenges.

The current study also makes a contribution to managerial practice, by providing a holistic and detailed model of SM data use, which can be used by companies as a tool to assess the state of play of their SM data use activities. The study showcases the outcome model, as it has been used in the different case companies, and hence can be used to assess the stage of SM data use in various other organizations.

1.5. Structure of the Thesis

This thesis is structured in the form of seven chapters, as follows:

Chapter 1 forms the opening chapter of the thesis, and includes a summary of research context, approach, and findings.

Chapter 2 provides the literature review of the existing studies of SM, providing an overview of the extant body of literature, in terms of its history, definitional issues and categorization of SM, theories used, and the observed trends in the studies of SM, as summarized in figure 1.5.

Chapter 3 provides an overview of the Organizational Information Processing theory, as the theoretical backbone of relevant literature. It also provides a review of the literature on customer and market information processing, SM data use, and SM analytics, as related areas to answer the research questions as summarized in figure xxx.

Chapter 4 introduces and justifies the philosophical standpoint of the researcher, as well as the chosen methodology and research design for this study. It includes justification of a critical realist approach to research, and the choice of qualitative, case-based approach for this research. It includes the justification and details of techniques used in industry selection, case selection, data collection, and other methodological choices made during the course of this research. It concludes with the justification of the choice of Grounded Theory data analysis method, and provides details of application of the analysis procedures in practice.

Chapter 5 presents the empirical data analysis. It provides the basis for the understanding of SM data use in companies, and the managerial challenges involved, with reference to the research question. The chapter analyses empirical data regarding the processes, subprocesses, and stages of SM data use, including their transpired activities and salient attributes. Finally, analysis of the empirical data regarding the managerial challenges encountered throughout the SM data use process is provided.

Chapter 6 builds on the analysis presented in chapter 5 to provide a discussion of the core findings of this study in the context of extant literature. It introduces the outcome model which illustrates the observed manifestations of SM data use process,

subprocesses, and stages, as well as the revealed managerial challenges.

Subsequently, the different elements of the framework are discussed in the light of existing literature, allowing for enfolding literature, as an integral part of theory building.

Chapter 7 The final chapter of this thesis delineates the study's contribution to theory and practice, as well as limitations of the study, and avenues for further research, closing with some concluding remarks.

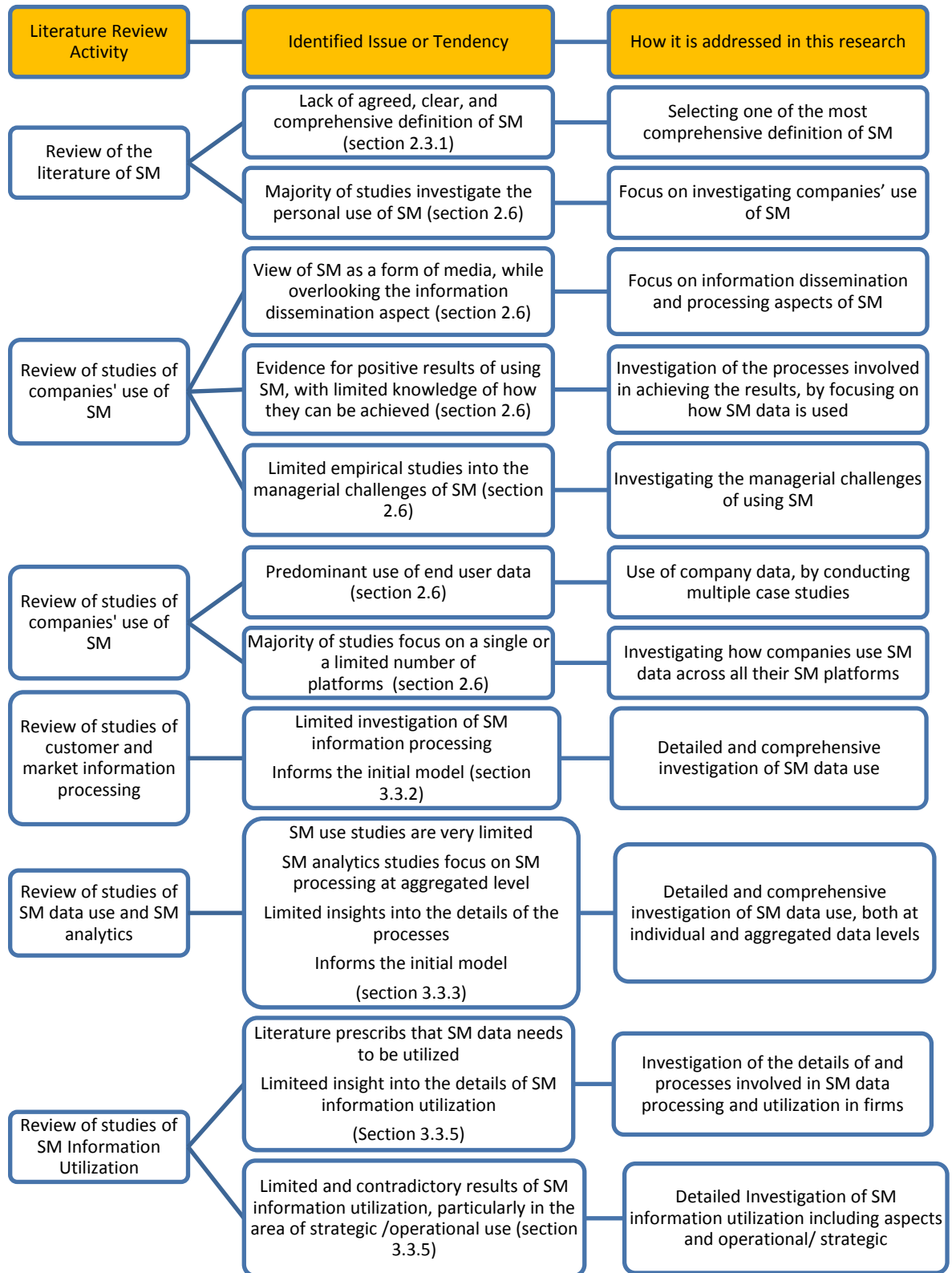


Figure 1.5: Summary of main Points in Chapter 2 and 3

Chapter 2: Review of Social Media Literature

“The digital renaissance will be the best of times and the worst of times, but a new cultural order will emerge from it” (Henry Jenkins, 2001)

2.1. Introduction

In this chapter, the extant body of literature on social media (SM) will be reviewed. It will start by discussing the history of information technology research in marketing in section 2.2, and proceeds to an overview of SM literature in section 2.3, starting by the definition of the term and the existing definitional issues, as well as SM categorization. It will then provide an overview of the literature on SM in section 2.4, followed by discussion of the main areas of focus and observed tendencies in related studies in section 2.5. Subsequently, use of theory in the literature of SM is presented in section 2.6, which is then followed by conclusion of this chapter in section 2.7.

2.2. Exploration of Boundaries between Marketing and IT

The role of Information Technology (IT) in marketing has been of particular interest to marketing scholars for decades, as the increasing reliance of marketing practitioners on IT provoked scholars' interest in how marketing was practiced and managed in the new era (Jiang et al., 1997; Webster, 1992; Sheth & Sisodia, 1995). Over the past decades, most commentators have ascribed a role for IT in much of the discussions on a new era of marketing, highlighting the importance of IT's role in the regeneration of marketing (McKenna, 2000; Moncrief & Cravens, 1999; O'Driscoll, 2008). Even as far back as thirty years ago, changes in the technological and informational environment of marketing is suggested to have changed the nature and activities of marketing (Glazer, 1991; Jagdish N Sheth & Parvatiyar, 1995). To that end, more recent papers have also emphasized the role and impact of IT in the marketing discipline, calling for the marketing practice to change to embrace IT (Brady, Fellenz, et al., 2008; Brady, Saren, et al., 2002; Brinker & McLellan, 2014; Fisher, Raman, et al., 2000; Harrigan & Hulbert, 2011). In this view, in the new era of 'information marketing' (Holland & Naudé, 2004) marketing should be viewed as an 'information handling problem' (Holland & Naudé, 2004, p. 167), and data and information driven marketing is

suggested to form one of the building blocks of the DNA of the 'new marketing' (Harigan & Hulbert, 2011). Inline with this view, Joshi and Gimenez (2014) discuss the concept of 'Decision-Driven Marketing', showcasing the important interplay of IT and marketing in companies, and suggest that marketing managers can be renamed to 'chief marketing technologists' (Joshi & Giménez, 2014).

Various theories have been used to explore the relationship between IT and Marketing, including 'The Stages Theory of IT adoption' (Nolan, 1988, as used by Brady, Saren, et al. (2002) and Brady, et al (2008)), theory of 'Paradoxes of Technology' (Mick & Fournier, 1998; Johnson, Bardhi, et al., 200), and the 'Technology Acceptance Model' (Davis, et al., 1989, Vanketash & Davis, 2000, as used by Muk & Chung, 2015; Zhang&Mao, 2008)), emphasizing the importance of IT use and acceptance in realigning and reshaping marketing.

Scholars consent on the importance of IT for marketing and how it is reshaping and restructuring the marketing practice of today (see Day, 2011; De Swaan Arons, van den Driest, et al., 2014; Joshi & Giménez, 2014; Yadav & Pavlou, 2014), suggesting that "Marketing is, and will continue to be, heavily influenced by IT, and marketers who do not adapt to this new technological era will not survive" (Brady, Saren, et al., 1999, p.1).

Overall, the marketing discipline's view of IT has evolved from 'nice to have', to 'should have', to 'must have' in the first decade of the millennium, and now to an integral part of contemporary marketing practice, without which marketing as known and expected today would simply not have existed.

2.3. Social Media (SM)

The arrival of the internet and in particular broadband high speed connectivity has allowed a wide range of synchronous and asynchronous communications technologies to grow and thrive (Barnes & Barnes, 2009), among which SM has gained considerable growth in the individual and corporate world (Berthon, Pitt, et al., 2012; Kaplan & Haenlein, 2011; Wilson, Lin, et al., 2011). SM are diverse and dynamic, encompassing a range of platforms and applications being used by individuals and companies across the world. There is a contention that SM has fundamentally changed the interactions

between companies and their customers (Gallaughier & Ransbotham, 2010; Kaplan & Haenlein, 2010; Libai, Bolton, et al., 2010). As stated by Rust, et al. (2010, p. 96) *“Never before have companies had such powerful technologies for interacting directly with customers, collecting and mining information about them, and tailoring their offerings accordingly. And never before have customers expected to interact so deeply with companies, and each other, to shape the products and services they use”*.

Suggested changes in the behaviour of consumers and organizations can be categorized as follows:

- changes in the power of customers (Achrol & Kotler, 2011; Berthon, Pitt, et al., 2012; Hennig-Thurau, Malthouse, et al., 2010)
- changes in the form of customers from individual to networked (Achrol & Kotler, 2011; Hanna, Rohm, et al., 2011; Watson & Straub, 2007)
- changes in the demands and behaviour of customers (Zhang, Trusov, et al., 2018; Peng, Agarwal, et al., 2018; Day, 2011; Edelman, 2010; Rust, Moorman, et al., 2010)
- changes in customer communications with businesses and each other (Kupfer, et al., 2018; Gallaughier & Ransbotham, 2010; Patten & Keane, 2010; Sigala, 2011)
- more active role of customers in the value chain (Berthon, Pitt, et al., 2012; Chan, Yim, et al., 2010; Payne, Storbacka, et al., 2008; Zwick, Bonsu, et al., 2008), and more.

At a conceptual level, SM is closely related to the concepts of web 2.0 and User Generates Content (UGC). Web 2.0 is considered to be the second phase or second generation of the web (Patten & Keane, 2010). Web 2.0 was popularized in 2003 by Tim O'Reilly, which he defined as *“the network as platform, spanning all connected devices; Web 2.0 applications are those that make the most of the intrinsic advantages of that platform: delivering software as a continually-updated service that gets better the more people use it, consuming and remixing data from multiple sources, including individual users, while providing their own data and services in a form that allows remixing by others, creating network effects through an architecture of participation”* (O'Reilly, 2005).

As the “*technological and ideological foundations*” of SM (Kaplan & Haenlein, 2010, p. 61), web 2.0 enables the vital related concept of users as content contributors, resulting in the concept of User Generated Content (UGC) (Berthon, Pitt, et al., 2012; Constantinides & Fountain, 2008). UGC gained broad popularity in 2005 and refers to “*various forms of media content that are publicly available and created by end-users*” (Kaplan & Haenlein, 2010, p. 61). The main three criteria for UGC require that content is made publicly available over the internet, it reflects a certain amount of creative effort, and it is created outside of professional routines and practices (OEDC, 2007). The content generated by users in SM is very diverse in its form and applications, it includes a variety of new and emerging sources of online information that are created, initiated, circulated, and used by consumers (Xiang & Gretzel, 2010).

2.3.1. Definition of Social Media

The term SM was first mentioned around 1994 to distinguish the new emerging forms of media from the more traditional ones, where the main characteristic of the new forms of media was defined as the combination of technology, communications and media (Bercovici, 2010). However, 1997 is suggested as the starting point for SM, marked by the emergence of the first web diary known as a blog, as well as the launch of a recognizable social network site, SixDegrees.com (Khang, et al, 2012; p.284). Subsequently, SM started to gain popularity in 2004 (Boyd & Ellison, 2007), and it has been increasingly used by academics and practitioners since (Constantinides & Fountain, 2008; Edelman, 2010; Harrigan & Hulbert, 2011; Kaplan & Haenlein, 2010; Kaplan & Haenlein, 2011; Patten & Keane, 2010). However despite the widespread and increasing use of SM in research and practice (Berthon, Pitt, et al., 2012; Kaplan & Haenlein, 2011; Wilson, Lin, et al., 2011), there is no consensus on a comprehensive definition of SM. This issue was realized in the early stages of this research, and continues to be the case today, and lead to suggestion of the following two definitional issues of SM:

- 1) Lack of clear, comprehensive, and agreed definition of the term social media
- 2) Interchangeable use of social media term with a number of similar terms (such as web 2.0 and social networking), often without a clear explanation of their differences and the underlying concepts (Zamani & Brady, 2012a, 2012b).

Definitional Issue 1: Lack of clear, comprehensive, and agreed definitions of the term social media

The widespread lack of clarity in the definition of SM has been acknowledged in multiple articles in the literature in the past decade (Constantinides & Fountain, 2008; DesAutels, 2011; Kaplan & Haenlein, 2010; Parameswaran & Whinston, 2007), as well as the past few years (Alalwan, Rana, et al., 2017; Durkin, Mulholland, et al., 2015; Christian Fuchs, 2017; Ngai, Moon, et al., 2015; Plume, Dwivedi, et al., 2016). As early as 2010, Kaplan & Haenlein (2010, p. 60) suggested that *“there seems to be confusion among managers and academic researchers alike as to what exactly should be included under this term [social media], and how SM differ from the seemingly-interchangeable related concepts of Web 2.0 and User Generated Content”*.

A large part of related literature simply does not provide any definition (Kim, Yue, et al., 2009), or provides descriptions from certain viewpoints in lieu of definitions (see Schau, et al. (2009, p. 34) and Wang and Haggerty (2011, p. 318) for examples) . Furthermore, the extant literature specifies SM in different ways - including an ecosystem (Hanna et al., 2011), a group of internet based applications (Kaplan & Haenlein, 2010), a group of online technologies (Malita, 2011), and social aspects of the web 2.0 applications (Constantinides & Fountain, 2008) - portraying the extent of ambiguity and lack of clarity in the nature and definition of SM.

This lack of clear definition has been associated with the multi-disciplinary nature of SM (Chaffey & Smith, 2013; Plume, Dwivedi, et al., 2016) which is spread across a number of different disciplines including marketing, management, information systems, social sciences and psychology (Plume, Dwivedi, et al., 2016). As a result, it has been suggested that SM has been associated with multiple concepts in different disciplines (Mandiberg, 2012), and the definitions provided in each discipline would be focusing on the aspects more applicable to that discipline.

Definitional Issue 2: Interchangeable use of Social Media term with similar terms

The second identified definitional issue is that SM is often interchangeably used with a number of related and similar terms including web 2.0 (e.g. Ransbotham & Kane, 2011), social networking (e.g. Porter & Donthu, 2008), social technology (e.g. Chui, Manyika, et al., 2012), and social computing (e.g. Parameswaran & Whinston, 2007;

Wattal, Schuff, et al., 2010). Table below illustrates some of these terms and their interchangeable use in the literature.

No	Example Quote	Source
1.	' Social media (e.g., social networking websites , blogs, virtual communities)...	(C. E. Porter & Donthu, 2008, p. 125)
2.	' Web 2.0 consists of much more than wikis: social networking tools , mashups, blackberries ...'	(Majchrzak, 2009, p. 17)
3.	'... a new class of Internet-based collaborative tools, commonly known as Web 2.0 or social media ...'	(Ransbotham & Kane, 2011, p. 613)
4.	' Social computing tools such as blogs, wikis, discussion boards, and social networking sites...'	(Wattal, Schuff, et al., 2010, p. 147)
5.	'Blogs are a part of the new genre of computer-mediated communication referred to by various terms such as social media and social computing .'	(Wattal, Schuff, et al., 2010, p. 149)

Table 1: Examples of Interchangeable Use of Terms

This shows that the issue of lack of clarity in the definitions also applies to the closely related concepts such as web 2.0. To that end, Constantinides and Fountain (2008, p. 232) suggest that 'There is little clarity as to the exact nature of Web 2.0; for all intents and purposes, there is still no generally accepted definition of the term'.

There is also a myriad of other terms used interchangeably with SM, including social software (Kuegler, Smolnik, et al., 2015; Kügler, Dittes, et al., 2015; Parameswaran & Whinston, 2007; Riemer & Richter, 2010), social business (Dinter & Lorenz, 2012; Kane, Palmer, et al., 2014), and social media based systems (Khan, 2013). For example, Khan (2013, p. 159) defines Social Media-based Systems as *"the application of a wider range of social software and social media phenomenon in organizational and non-organization context to facilitate every day interactions"*, which illustrates the blurring line between a number of these terms. Parameswaran and Whinston (2007, p. 337) confirm this definitional issue by suggesting that *"Web 2.0, social software, social computing, online communities, peer networking, and immersive web are some of the popular terms used to describe these technologies and communities. Their meanings overlap, and definitions are somewhat fluid"*. This verifies the discussed definitional issue in the case of SM and several interchangeably used terms, and highlights the need for comprehensive and improved definitions to be provided.

Towards a Comprehensive Definition of Social Media

As discussed, the extant literature provides a range of definitions of SM, illustrated in appendix A, as well as a range of descriptions and discussions of key features and characteristics of SM. One of the most widely used and cited¹ definitions of SM is the one suggested by Kaplan and Haenlein (2010), defining SM *“A group of Internet based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content” (p.61).*

Review of the range of definitions provided in the literature (see appendix A) shows that although there is an inclination towards the concept of UGC in the above definitions (such as the definitions provide by Constantinides (2014), Strokes (2009), and Weinberg and Berger (2011)), but this association seems to be weakening over time. Also, each of the above definitions seem to be focusing on different delivery mechanisms that SM embodies such as platforms, channels, and applications (such as the definitions by Strauss and Frost (2009)), but it is discernible that each of the above definitions fails to incorporate all the related aspects of SM, depicting the lack of holistic and comprehensive definition for SM.

Recently, there have been a number of attempts towards providing more holistic definitions of SM, such as the one provided by Plume, et al. (2016), as follows:

“An environment that provides a set of tools available to both individuals and organizations, enabling information dissemination, sharing and content creation to facilitate conversation guided toward completion of both strategic and social goals that may eventually lead to consumption.” (Plume, Dwivedi, et al., 2016, p. 11)

In this research, the above definition is regarded as the most comprehensive definition provided to date, which captures the nature of SM use within companies, and is well aligned with the purpose of this study. Hence, it will be used as the definition of SM to guide this research.

¹ The article was ranked first for three years in a row in ScienceDirect's annual list of the '25 Hottest Business Management Articles' (measured by article downloads). In 2013 this publication achieved first place across all of the 24 core subject areas of the ScienceDirect database, containing approximately 2,500 peer-reviewed journals and 12.5 million articles.

2.3.2. Social Media Categories

While multiple categorizations of SM is offered in the literature, the most common categorization is functionality based (Agarwal & Yiliyasi, 2010; Habibi, Hamilton, et al., 2015). A review of the different functionality-based categorizations of SM in the literature shows a set of common categories of SM sites, adopted for the purpose of this research, as follows:

Social Media Type	Definition	Example
Social Networking Sites	which facilitate individuals build social relationships and interests among friends and acquaintances (Ngai, Moon, et al., 2015), or facilitate the interaction and professional relationship among a network of professionals	Facebook, MySpace LinkedIn
Blogs and Micro Blogging	Collection of written posts of different allowed lengths, which allow people to share their views, express their opinions, interact and discuss their views with others.	Twitter
Content Communities/Media Sharing	Allow users to upload, organize and share multimedia materials with people and/or selected communities (Ngai, Moon, et al., 2015)	YouTube, Instagram
Wikis	“Wikis are publicly edited encyclopedias” (N. Agarwal & Yiliyasi, 2010) p.2, or other forms of collaboration among the public to gather related information for different topics	Wikipedia
Social Bookmarking	Allow users collaboratively use tags to annotate and categorize the web contents they found interested (Ngai, Moon, et al., 2015)	Delicious, Pinterest Digg,
Common Interest	Where participants with similar interests can share ideas, views, and information (S.V. Scott & Orlikowski, 2012)	Trip Advisor
Virtual Worlds	Provide computer-simulated environments in web sites where people can live in a virtual world (Ngai, Moon, et al., 2015)	Second Life

Table 2: Categories of Social Media

2.4. Overview of the Theories Used in SM Research

The diverse and multifaceted nature of SM highlights the need for theoretical underpinnings capable of capturing the unique and sometimes contradictory characteristics of SM and the aligned behaviours of managers in dealing with related challenges. However, review of theories used in the studies of SM reveals that a large

portion of these studies do not specify a theoretical lens, and attention to the theoretical underpinnings in most of SM studies is lacking.

In this regard, while only four (Alalwan, Rana, et al., 2017; Boulianne, 2015; Khang, Ki, et al., 2012; Ngai, Moon, et al., 2015; Ngai, Tao, et al., 2015) out of ten identified literature reviews articles, review the articles from a theoretical perspective, all the four articles confirm the low level of attention to the theories and theoretical frameworks in their reviewed articles. The results of systematic analysis of 426 SM related articles in the domains of advertising, marketing, public relations, and communications by Khang, et al. (2012) showed that only 40% of the reviewed articles presented an explicit theoretical framework. Ngai, et al (2015) also found that many of the SM studies do not identify a dominant theory (such as Smith, Fischer, et al., 2012). Moreover, in the context of SM use and participation, based on the result of the meta-analysis of 36 articles, Boulianne (2015) suggest that *“as it stands, the literature discusses multiple theories with little sense of which theoretical process is the most appropriate”* (p.526). In their systematic analysis of the SM marketing related research, Alalwan (2017, p. 1186) have also identified only a *“small number of researchers who have adopted a strong theoretical foundations to propose their conceptual model”*. Notably, there is empirical evidence to suggest that this issue is not specific to SM research, and might be applicable to internet related research. For example, the results of Ye and Ki (2012) review of internet related research in public relations concluded that internet related scholarship lacked theoretical applications. In order to further investigate this issue, the theories, hypotheses, and the research questions of the reviewed literature were probed to determine the theoretical frameworks used within each research. The result of this analysis revealed a variety of theories used across the empirical studies of SM. Amalgamating the results of the theories found in our literature review with the results of the available literature review articles provides an overview of the theories used in the studies of SM, which is presented in appendix C in details, and discussed below.

One of the best systematic reviews of the theories used in the literature of SM is that of Ngai, et al. (2015), who group the theories used in SM literature in three categories of personal behavior theories, social behavior theories, and mass communication

theories. Based on the results of the literature review, this research adapts the categorization suggested by Ngai, et al. (2015), and adds a forth category of organizational theories, which is missing from Ngai, et al.'s (2015) work. Accordingly, this research suggests that a variety of theories are used in the SM literature, which can be categorized in four groups of personal behaviour theories, social behaviour theories, media theories, and organizational theories, as illustrated in figure below. Each of these groups will be further discussed below.

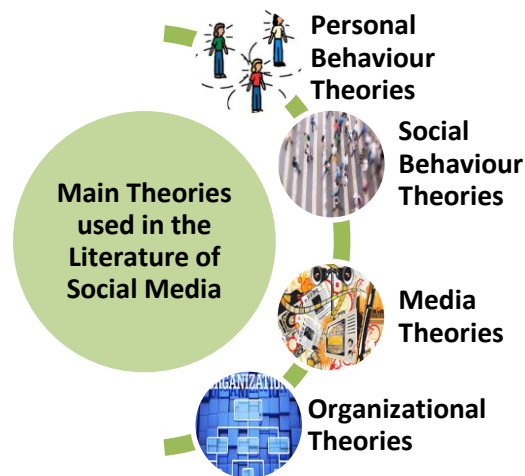


Figure 1: Categorization of Theories Used in the SM Literature

Results of the analysis of the theories used in SM literature shows that a considerable number of these theories belong to the personal and social behaviour theories, and the organizational theories form a small percentage (see appendix C). This is congruent with the observation of the literature discusses in section 2.4 that the majority of literature focus on individual use of SM. Mapping the above categorizations to the areas of SM discussed in section 2.4 is illustrated in the depiction below.

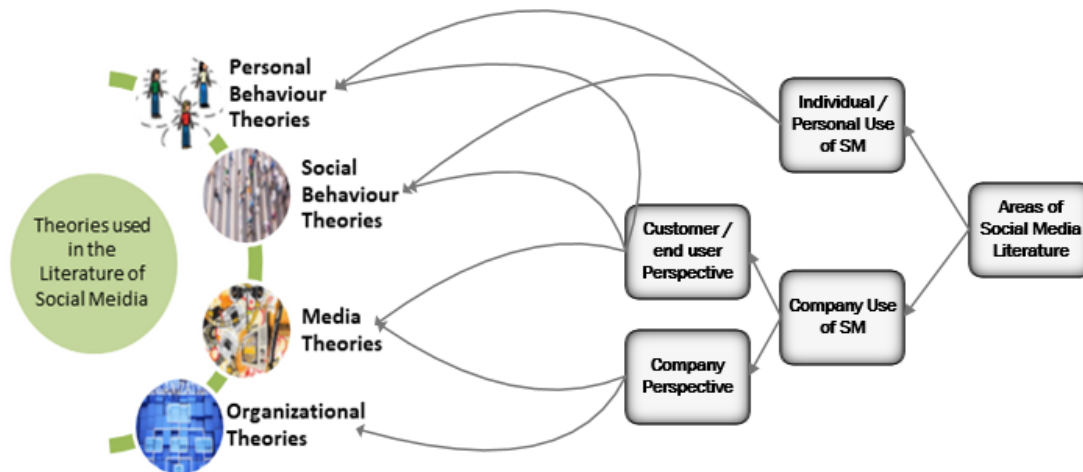


Figure 2: Mapping Used Theories to Areas of SM Literature

Moreover, **the very limited number of the organizational theories used in the studies of SM is striking**. Where organizational theories have been used, they mainly include the resource-based view of the firm (Bekmamedova & Shanks, 2014; Mayeh, Scheepers, et al., 2012; Trainor, 2012; Trainor, Andzulis, et al., 2014), marketing capabilities (e.g. Chang, Park, et al., 2010), dynamic capabilities (e.g. Bekmamedova & Shanks, 2014; Harrigan & Miles, 2014; Harrigan, Soutar, et al., 2015; Mayeh, Scheepers, et al., 2012; Trainor, Andzulis, et al., 2014), and diffusion of innovation theory (e.g. H. C. Chang, 2010; Peslak, Ceccucci, et al., 2010).

The limited use of organizational theories in the studies of SM suggests the need for better use of existing theories, and potentially the need for more theory development research in this area. A related concern in this regard is that despite the pivotal role of SM in the day to day lives of individuals and business in organizations, and their widespread use in our everyday personal and organizational lives, **our ability to theorize these developments has not kept pace with practices on the ground** (Scott & Orlikowski, 2014). Scott and Orlikowski (2014) suggest that *“a similar concern may be raised about studies of technology, where there has been a tendency to use concepts, theories, and approaches developed decades earlier (in the 1970s, 1980s, and 1990s) to investigate contemporary technological phenomena”*, and suggest that *“Different approaches are thus needed to help us engage with the dynamic, multiple, and contingent materialities constituting contemporary organizational realities”* (Scott & Orlikowski, 2014, p.36).

Overall, review of the theories used in the studies of SM shows that although a variety of theories have been used in the literature, understanding of SM as a whole is still incredibly fragmented (Plume, 2016), and can hugely benefit from development of new and improved theories.

2.5. Mapping the Literature of Social Media

The power of SM has been influencing consumers and businesses with astonishing speed (Hennig-Thurau, Hofacker, et al., 2013). There is plenty of evidence for the increasing interest in SM use by individual users (Hennig-Thurau, Hofacker, et al., 2013; Madden & Zickuhr, 2011; OfCom, 2015; Perrin, 2015), and companies (CMO Survey, 2017 ; Smith, Fischer, et al., 2012; Stelzner, 2015), as well as researchers (Alalwan, Rana, et al., 2017; Alves, Fernandes, et al., 2016; Farris, Bendle, et al., 2010; Gironda & Korgaonkar, 2014; Khang, Ki, et al., 2012; Ngai, Tao, et al., 2015).

In reviewing the pertinent body of literature on SM, two main categories of research are discernible, namely **personal use of SM**, and **companies' use of SM**. Articles related to personal use of SM are concerned with examining how and why people use SM, or focus on evaluating users' perceptions or attitudes toward SM (see Khang, et al. (2012) and Ngai, et al. (2015) for more). Such studies, which are amplified by the rapid increase in the personal use of SM, form the majority of the extant literature (Ngai, Moon, et al., 2015; Ngai, Tao, et al., 2015). In essence, the majority of SM studies focus on investigation of impacts and implications of SM use at personal level, and can be categorized in 3 sub categories, as shown in the table below.

Personal Use of Social Media		
No	Category	Example Articles
1	Investigation of how and why individual users use SM	Users' motivations in using SM (Dunne, Lawlor, et al., 2010; W. W. Moe & Schweidel, 2012; Muñiz & Schau, 2011) Consumer behaviour when using SM (Dunne, Lawlor, et al., 2010)
2	Evaluation of users' perceptions or attitudes towards SM	Dynamics of relations of users in SM (Ansari, Koenigsberg, et al., 2011; Trusov, Bodapati, et al., 2010)

Personal Use of Social Media		
No	Category	Example Articles
3	Investigation of the issues and challenges of personal use of SM	Addiction (Fioravanti, Dèttore, et al., 2012; Kittinger, Correia, et al., 2012) Impact on personal and social life (Das & Sahoo, 2011; Elphinston & Noller, 2011) Identity management and self-presentation (Labrecque, Markos, et al., 2011; Marwick, 2011; Papacharissi, 2009; Tong, Van Der Heide, et al., 2008) Privacy (Debatin, Lovejoy, et al., 2009; C. Fuchs, 2011; O'Brien & Torres, 2012)

Table 3: Categorization of Literature on Personal Use of SM

The other group of SM related articles, which have not received as much attention in the literature, are concerned with **companies' use of SM**. Such studies are concerned with how and why companies use SM, their diverse applications and areas of use in the companies (Case & King, 2011; Gallagher & Ransbotham, 2010; Hanna, Rohm, et al., 2011; Singh, Davison, et al., 2010), as well as the impacts and benefits of using SM for companies (Andriole, 2010; P. R. Berthon, Pitt, et al., 2012; Riemer & Richter, 2010). Studies of companies' use of SM can be categorised to internal and external perspectives, whereby **internal perspective** studies investigate the usage of SM within the internal boundary of the firm, i.e. by employees and different departments (Herbst & vom Brocke, 2013a), which is also known as enterprise social networking (Laudon & Laudon, 2017), and enterprise 2.0 (McAfee, 2006). Overall the findings of these studies indicate a range of benefits of using SM within companies, including improved knowledge management (Papadopoulos, Stamati, et al., 2013; Von Krogh, 2012) improved employee innovation (Kijkuit & Van den Ende, 2010), improved intradepartmental knowledge sharing (Baehr & Alex-Brown, 2010), improved human resource management (Brecht, Koroleva, et al., 2011), better recruiting, higher morale, better employee engagement (Leidner et al., 2010), improve work processes, collaboration, and knowledge reuse (Majchrzak et al., 2006).

External perspective studies are concerned with the investigation of **using SM in the wider boundary of the firm including companies' relations and interactions with customers** and other stakeholders (Larson & Watson, 2011), including customers, business partners, suppliers, and other external parties (Herbst & vom Brocke, 2013a, p. 21), as well as competitors as discussed by Gnyawali (2010). Based on the type of

data used in such studies, they can be categorized to two categories of a) consumer or end user perspective, which use consumer and end user data, and b) company perspective which use company data. **Consumer perspective** studies examine different aspects of SM use and the relevant issues in a the consumer behaviour context (Bianchi & Andrews, 2015; Gironde & Korgaonkar, 2014), and are concerned with issues such as consumers' adoption of SM (e.g. Alarcón-del-Amo et al., 2016; Poba-Nzaou et al., 2016; Putzke et al., 2014; Lacka and Chong, 2016; Shokery et al., 2016), consumers' attitudes and behaviour towards SM (e.g. Akar and Topçu, 2011; Gamboa and Gonçalves, 2014), and predicting consumer behaviour (e.g. Hamilton et al., 2016; Zhu et al., 2016) to name a few.

Company perspective studies, on the other hand, use company data to investigate SM use from the companies' side, such as investigation of using SM to facilitate intra- and inter-organizational activities in companies (Ngai, Tao, et al., 2015), such as collaborative product development (Mangold & Faulds, 2009; Porter & Donthu, 2008), creation of knowledge sharing communities (Fernando, 2010; Kasavana, Nusair, & Teodosic, 2010; Yates & Paquette, 2011), implementation of corporate dialog at financial institutions (Bonsón & Flores, 2011), marketing strategies for brand management (Jin, 2012; Laroche, Habibi, & Richard, 2013), and collaborative learning and creativity (Peppler & Solomou, 2011)

Based on the above, the diagram below illustrates the different areas within the literature of SM as discussed. The areas highlighted in red show the focus of this research, which will be discussed in the following sections.

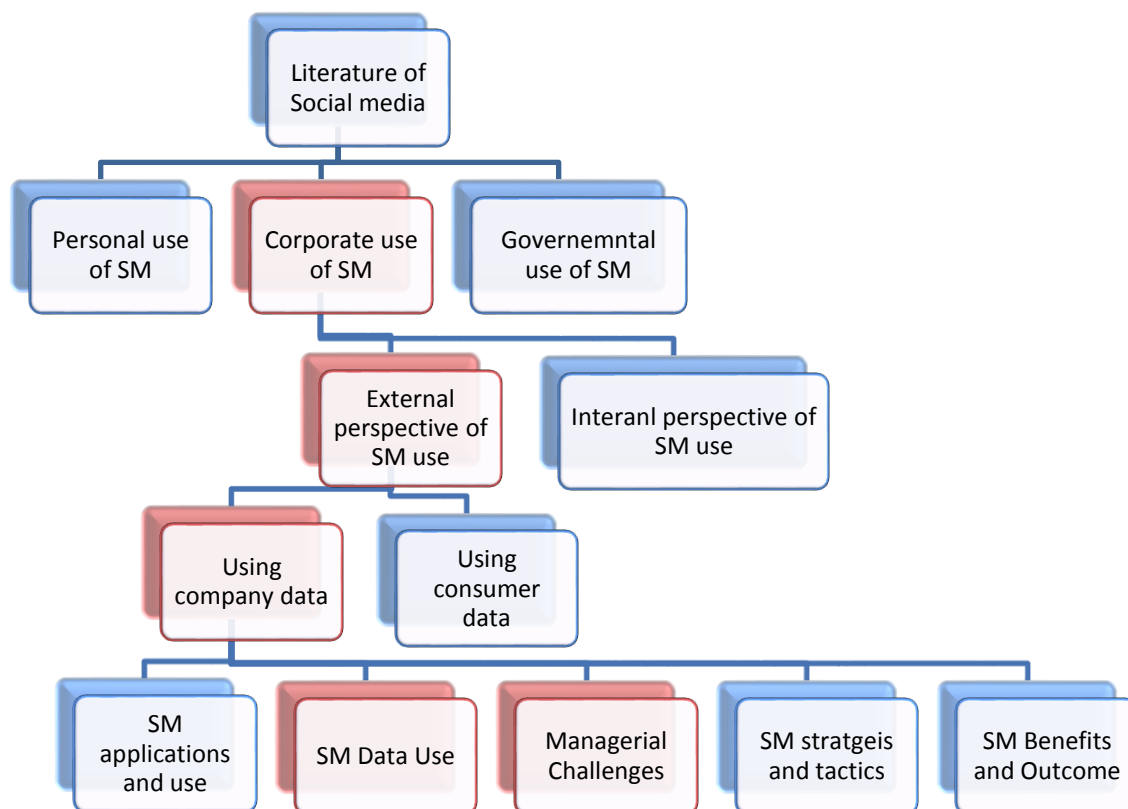


Figure 2.5: SM literature Map and The Position of This Study (highlighted in red)

2.6. Tendencies in Studies of SM Use within Companies

Review of the literature of SM use in companies reveals several tendencies in the literature, which translate to a number of corresponding gaps or issues, and include the following:

- 1- There is a tendency to view SM as a form of media and communication tool, while overlooking the information dissemination aspects
- 2- Literature provides plenty of evidence for the positive results of using SM (answering **what** questions), while investigation of **how** these positive results can be achieved (the **how** questions) have been overlooked
- 3- The majority of studies use end user and consumer data, leading to the need for more studies using company data
- 4- The majority of studies investigate one form or limited number of SM sites or platform, which needs to be complemented by a holistic view encompassing all forms of SM across companies

The identified tendencies above help form the research question for this research, and will be discussed in detail in this section.

2.6.1. SM as a Media and Communication Tool

The term 'media' is the plural form of 'medium', which is a channel of communication that carries information between a source and a receiver (Smaldino, Russell, et al., 2005). The definitions of media in the business dictionary conveys "**Communication channels through which news, entertainment, education, data, or promotional messages are disseminated. Media includes every broadcasting or narrowcasting medium such as newspapers, magazines, TV, radio, billboards, direct mail, telephone, fax, and internet**" (Business Dictionary, 2016), which illustrates the importance of functionality of media as channels of communication and promotion. Among the academic definitions, Rossi and Biddle (1967) define media as any form of device or equipment which is used to transmit information between persons. Briggs and Wager (1981) view media as the physical means for presenting stimuli to a receiver. Salomon (1994) defines media as modes of expression and communication, which are based on technologies, and result in new symbol systems or new blends of symbol systems, which could include different forms of images, videos, audios, etc. These definitions illustrate a strong emphasize on the role of media as channels for communicational and information dissemination. Communication itself includes strong elements of information dissemination, to the extent that Potter (2013) suggests that mass media in the literature "*refers to channels of information dissemination*" (p. 3).

What this means for studies of SM is that the view of SM as a form of media should include strong elements of communication and information dissemination for SM. In line with that, many studies in the extant literature view SM as a media, focusing on its promotional and communicational aspects (e.g. Berthon, Pitt, et al., 2012; Hanna, Rohm, et al., 2011; Zhang, Evgeniou, et al., 2012), or as tactics or effective communication (Felix, Rauschnabel, et al., 2017). Stokes (2011) suggests that "*social media are media (from written to visual to audio to audio visual) that are designed to be shared*" (p.334), whereby the realm of SM is about collaboration, users generating content, sharing and, most of all connecting (Stokes, 2011). Berthon, et al. (2012) also

suggest that SM are forms of media that enable collectivism, which are essentially vehicles for carrying the UGC. In one of the mostly cited articles on the concept of SM by Kaplan and Haenlein (2010), SM is viewed as a form of media, based on which they use theories in the field of media research for providing a systematic classification of SM as discussed in section 2.3.2.

Viewing SM as a media has formed and informed different views of the relationship between SM and traditional media in the literature, leading to multiple calls for research on the interplay between SM and traditional media in more depth (Libai et al., 2010). In this regard, some scholars have discussed SM as an alternative to traditional media (Libai, et al. 2010; Bruhn, et al, 2012). But a more agreed upon stance on the relationship between SM and traditional media is that SM should act as a **compliment to traditional media** (De Vries, et al., 2017; Kumar, 2016), and companies can increase the efficiency and effectiveness of their marketing activities by coupling their traditional media activities with SM (Magnold and Fauld, 2009; Hanna, et al. 2011; Khang, et al. 2012). Mangold and Fauld (2009) suggest that SM can complement traditional media in enabling companies to communicate with their customers. Hanna et al. (2011) suggest that SM does not replace traditional media, but rather should interconnect with it to enable marketers to capture reach, intimacy, and engagement. Khang, et al. (2012) suggest that traditional marketing strategies and tactics (including promotions and Adv) are more effective and efficient when they are coupled with SM. They also suggest that “*earned*” advertising - empowered by SM to be shared among friends - demonstrates more significant effects on brand awareness and purchase intentions than the standard “*paid*” advertising (Khang et al, 2012; p.281). This is congruent with the findings of De Haan, et al. (2016), which demonstrated that advertising is most effective, when integrated across the online and offline channels. To that end, the findings from an analysis of 393 data sets from three different industries (tourism, telecommunications, and pharmaceuticals) showed that while both traditional communications and SM communications have a significant impact on brand equity, traditional media have a stronger impact on brand awareness, and SM communications strongly influence brand image and can complement each other (Bruhn, et al. 2012). This shows that complimenting SM and traditional media

and using each one for different marketing activities could lead to best results for companies. Hence, companies need to have a clear view of the extent to which SM and other forms of media can complement or substitute each other, which needs to be investigated more in the literature (Libai, et al, 2010). On the other hand, there seems to be a consensus in the marketing literature that SM has a number of advantages over traditional media (Stokes and Blake, 2008; Ho and Dempsy, 2010; Evans, 2012). In this regard, Stokes (2011) compare traditional media and SM, as illustrated in figure below, which shows several advantages of SM over traditional media.

Traditional Media	Social Media
Fixed, unchangeable	Instantly updateable
Commentary limited and not real-time	Unlimited real-time commentary
Limited, time-delayed bestseller lists	Instant popularity gauge
Archives poorly accessible	Archives accessible
Limited media mix	All media can be mixed
Committee publishers	Individual publishers
Finite	Infinite
Sharing not encouraged	Sharing and participation encouraged
Control	Freedom

Figure 3: Traditional Media vs. Social Media (Stokes & Blake, 2008)

Hanna et al. (2011) also suggest that “*while the use of traditional media constitutes a trade-off between reach and consumer engagement, social media enables both reach and engagement*” (p. 268). As an example of empirical studies which show the advantages of SM over traditional media in the context of predicting sales, the results of statistical analysis of UGC across a number SM platforms for a sample of 108 music albums by Dhar and Chang (2009) showed that the average consumer ratings in SM platforms have better predicting capabilities of sales than average mainstream media ratings. Above all, SM is believed to have fundamentally altered the unilateral, one-way, and one to many dynamics of communications between firms and their customers (Cash et al., 2008, Cook, 2008; Wigand et al, 2010, Lutz, 2011; Campbell et al, 2011). SM have changed the nature of internet use from a one-way broadcast business-to-consumer (B2C) medium to three-way communication of business-to-consumer, consumer-to-consumer (C2C), and consumer-to-business (C2B) (Patten &

Keane, 2010). In the words of Larson and Watson (2011, p. 3) SM have enabled “*a high degree of two-way dialogue between the organization and its customers, as well as providing a mechanism for customers to collaborate amongst themselves*”. The latter is known as customer to customer, consumer to consumer, or C2C communications (Dahan et al., 2007; Patten & Kin, 2010).

The view of SM as another form of media requires attention to the details of information dissemination and flows within the companies and with their customers, which is made possible by investigation of the details of how SM data is used in companies. Such view would clarify *how* companies use SM data, and how and if it is different from other forms of media.

2.6.2. Positive Results of Social Media Use

Many studies in marketing investigate implications of using SM for firms from different perspectives, including dependency of such implications to factors such as industry (Araujo & Neijens, 2012), and the non-for-profit versus for-profit nature of firms (Waters & Lemanski, 2011). Nevertheless, a review of SM literature reveals that the majority of these studies show positive results of using SM in firms, showcasing a wide range of potential benefits of SM, commonly listed in sentences such as “*The benefits of social media include facilitating strategy, cost reduction, information collection, database enhancement, service delivery [...] and expanded geographic reach*” (Habibi, Hamilton, et al., 2015, p. 4). The conceptual literature suggests SM use can result in benefits for different areas in firms including market research (Cooke & Buckley, 2008; Patino, Pitta, et al., 2012), brand management (Burmann, 2010; Edelman, 2010), and the strategy of the firm (Haefliger, Monteiro, et al., 2011), to name a few.

The empirical literature, also, showcases a wide range of potential benefits of SM use for firms. In the area of **financial performance**, a number of studies provide evidence for the positive relations between firm’s financial performance (i.e. sales volume, revenue, and stock returns) and product sales (e.g. Gelper, et al., 2018) to the volume of related UGC (e.g. Duan, Gu, et al., 2008; Sonnier, McAlister, et al., 2011; Tirunillai & Tellis, 2012). In **customer related activities**, empirical studies provide evidence for positive results of using SM in firms in areas including new customer acquisition (A. J. Kim & Ko, 2011; Trusov, Bucklin, et al., 2009), customers’ purchase intentions (A. J.

Kim & Ko, 2011), new customers adjustment process (Köhler, Rohm, et al., 2011), and non-customers' behaviour towards and perceptions of the firm (John, et al., 2017; Fuchs & Schreier, 2011). In other **marketing activities**, empirical studies have also shown that using SM can benefit firms in different areas including advertisement (P. Berthon, Pitt, et al., 2008; Campbell, Pitt, et al., 2011), public relations (Eyrich, Padman, et al., 2008), WOM (Trusov, Bucklin, et al., 2009), customer communication (Gallaughier & Ransbotham, 2010), and viral marketing campaigns (Bampo, Ewing, et al., 2008; Ho & Dempsey, 2010). An overview of the above studies is provided in appendix B.

The benefits of using SM are also widely discussed in **industry reports**. For example results of a survey of 451 members of the AIIM community in 2011 showed that greater knowledge sharing, faster responses to queries and questions, and fewer multi-copy emails are cited as the top benefits of using SM inside companies (AIIM, 2011). Also, results of a survey of 4,261 executives of companies across different industries in 2011 by McKinsey showed that close to half of the respondents reported measurable benefits as a results of using SM in at least in one of the areas of internal purposes (increasing speed to access knowledge, reducing communication costs, increasing speed to access internal experts), customer purposes (increasing effectiveness of marketing, increasing customer satisfaction, reducing marketing costs), and partner, supplier and external-expert purposes (increased speed to access knowledge, reducing communication costs and increasing speed to access external experts) (Bughin, Byers, et al., 2011).

In summary, the extant literature demonstrates a wide range of benefits which can be gained from using SM in different areas, across a large number of conceptual and empirical studies. While these benefits are also conveyed in the industry reports, they showcase the extensive attendance of the extant literature to the **what** questions of benefits of SM.

2.6.2.1. Concerns of Benefit Realization & Need for Attention to How Questions

The predominantly positive results of SM use in different areas in firms raise the concern over if and how the wide range of benefits discussed in the literature are

being realised in the companies. In this regard, Maklan et al. (2015) suggest that marketing literature lacks understanding of how the benefits of investment in IT, such as CRM and SM, are realized in companies, since the overall focus of marketing literature in these areas has been on the **What** questions: *"If after 30 years, Marketing scholarship remains conflicted over the return on CRM investment, it may be time to reconsider its approaches to how it assesses performance outcomes to combine the **what** (the current focus) with the **how**."* (Maklan, Peppard, et al., 2015, p. 584). In this regard, Customer Relationship Management (CRM) technologies have been extensively studied in the marketing literature (e.g. Boulding et al., 2005; Coltman, 2007; Gummesson, 2002), with extensive evidence for the potential benefits of CRM technologies for firms. However, evidence for the widespread realization of the benefits of using CRM is lacking. In fact, a number of studies have shown that the promised benefits of CRM are either being realized in a small percentage of companies, or is not being realized at all. For example a study by Chang et al. (2010) showed that only 30 percent of the organizations which implemented CRM experience improvement in their performance. This is supported by the findings of other studies such as Hendricks, et al.'s (2007) who found that implementing CRM systems alone have no positive impact on the business performance or share price. The tenuous evidence for the realized benefits of CRM systems in companies is also supported by the findings of Yim, et al. (2004) who found that implementing CRM systems had no effect on customer satisfaction, retention, or sales volume. This is in line with what Brynjofflson (1993) has referred to as the "IT productivity paradox", which entails that technologies which are designed to enable increases in performance often have no effect or even the opposite effect when they are poorly implemented or utilized (Brynjofflson, 1993). The over emphasize on the potential benefits of SM could also be a manifestation of "The Magic Bullet Theory of Information Systems" (Markus & Benjamin, 1997) applied to SM, whereby SM is seen as a *"magic bullet that always hits its target"* (Markus & Benjamin, 1997, p. 56). Potentially, this could be due to marketers' tendency to be fascinated and even obsessed with new forms of technology, which O'Driscoll (2008, p. 99) calls *"marketers' obsession with the new and the novel"*. Another reason could be due to the fact that SM and CRM are often driven by the IT departments (Gummesson, 2002; Rust et al. 2010; Harrigan & Hulbert, 2011),

which are driven by technology and enthused developers, with their axiom that *“all new technology is a blessing to mankind”* (Gummesson, 2002, p. 340). In line with this, Rust et al. (2010) suggest that CRM and data mining systems are examples of information systems where software companies and IT departments lead the way and marketing obediently followed. Harrigan and Hulbert (2011) also suggest that *“the marketing discipline is being driven and led by technology, rather than taking the lead and reclaiming its influence”* (p.255). Gummesson (2002) suggest that as a result since 1960s, the IT adventures of companies has been paved with unfulfilled promises, and resulted in loading costs onto customers and society.

Consequently, there is a question if a similar outcome to CRM has or will happen to SM, since despite the wide range of benefits of SM suggested in the literature, empirical evidence of the realization of these benefits is lacking. Also, the results of an in-depth analysis of the application of SM in four commercial sectors by McKinsey in 2012 showed that the value creation potential of SM within and across firms is largely untapped (Chui, Manyika, et al., 2012). In that regard, the results of CMO survey in August 2012 showed that companies were expecting to increase their spending on SM from 8 % of their marketing budget in 2012, to 11% over the next year, and 19 % in the next five years (CMO Survey, 2012). Interestingly, the results of CMO survey in February 2015 showed that companies have been allocating about 10% of the marketing budget to SM at the time, and the investment percentage was expected to rise to 13.5% over the next year, and 22.5 % in the next five years (CMO Survey, 2015). The results of the same survey conducted in August 2017 shows that while the overall level of investment in SM has declined to 9.8% of the overall marketing budget, the expectations of the CMOs is to increase this percentage to 13% over the next 12 months and to 18.5% in the next 5 years (CMO Survey, 2017). As illustrated in the diagram below, the above numbers show that there has been an increase in the overall budget allocated to SM across the industries until 2014. But between 2014 and 2017 the level of investment in SM has almost stayed the same, and the expected increase in the allocated budget of companies to SM has not been met during this period.

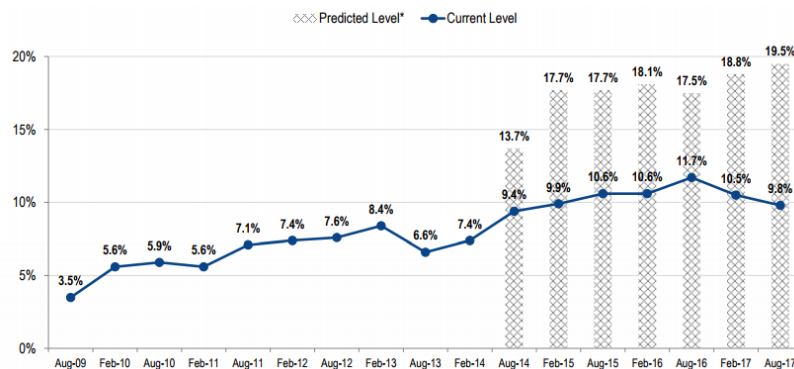


Figure 4: Actual versus predicted SM spending as percent of marketing budget (CMO Survey b, 2017)

This shows that while there is a large body of empirical evidence for the benefits of using SM for different areas of business, it is not known if and how firms manage to realize the potential benefits. As suggested by Maklan, et al. (2015) marketing scholars should not assume a flat benefit realization in the case of new technologies, such as SM, and should investigate how different benefits of these technologies are realised in firms, and how SM data is used in companies. This is an under-developed area in the literature, whereby the literature is yet to address the process of SM data use in sufficient detail, and it is not clear how organizations internally process SM data in order to transform them into actionable insight and to effectively utilize them in various business decisions (Dinter & Lorenz, 2012; Mayeh, Scheepers, et al., 2012). To that end, this research aims to investigate *how* SM data is used in firms to elucidate the overall processes involved in using SM data.

2.6.3. Tendency to Use End User Data and Limited Insight from Firms' perspective

Research shows that the majority of the studies of firms' use of SM use consumer or end user data sets in their investigation (Ngai, Moon, et al., 2015; Ngai, Tao, et al., 2015; Yadav, et al. 2013; Khang, et al. 2012; Rollins, 2012), resulting in consumer or end user perspective being presented across the majority of these studies. This dominance is verified in a number of meta-analysis and literature review articles of the literature of SM (Boulianne, 2015; Ngai, et al. 2015a; 2015b). The results of the content analysis of 436 journal articles related to SM, across 17 journals by Khang, et al. (2012) showed that the most frequently used research methods include surveys (29.4%), followed by content analysis (26.4%), and experiments (14.4%) (Khang, Ki, et

al., 2012, p. 290). Also the meta-analysis of main SM related articles including 36 articles, in academic databases, by Boulianne (2015) showed that the most frequent sample types in these studies include a random sample of the general population (14 out of 36) and student samples (13 out of 36). This over reliance on student samples has also been raised by a number of other studies (Alalwan, Rana, et al., 2017; Bolton, Parasuraman, et al., 2013; Paul Harrigan, Evers, et al., 2017; Jung, Shim, et al., 2016), highlighting that the vast majority of SM studies derive their data from university students (Alalwan, et al., 2017; Bolton, et al. 2013), or rely on self-reports by different age groups (Bolton, et al., 2013). Confirming this, Khang, et al.'s (2012) findings also showed that students were the primary sample (30.6%) of people used followed by online community members (25.6%), and professionals formed just over 7% of the respondents. (Khang et al, 2012; p.290).

One reason for the dominant use of end user data in the literature is that SM has provided a large volume of end-user data, which in many cases is available through publicly available SM platforms. This data has provided a great opportunity for the researchers to gain insight into the usage of SM from a consumer/end user perspective (Plume, Dwivedi, et al., 2016), using measures such as volume of UGC (Dhar & Chang, 2009; Sonnier, McAlister, et al., 2011; Tirunillai & Tellis, 2012), number of likes (de Vries, Gensler, et al., 2012), valence or sentiment of UGC (Duan, Gu, et al., 2008; Sonnier, McAlister, et al., 2011; Tirunillai & Tellis, 2012), number of log-ins (Trusov, Bodapati, et al., 2010), number of friends (Dhar & Chang, 2009; Trusov, Bodapati, et al., 2010), number of referrals or invitations (Trusov, Bucklin, et al., 2009), and other attributes of UGC such as frequency of occurrence of a particular type of conversation (Thomas, et al., 2007) or their degree of brand centrality (Smith, et al., 2012). This is verified by the findings of Khang, et al. (2012), which shows that approximately 70% of the SM related articles used online data collection methods from end users.

The insights provided from the end user perspective need to be complemented with studies that use company data, and provide insight into companies' use of SM from inside the companies (Haefliger, Monteiro, et al., 2011; Yadav, et al., 2013). However, available studies that use company data are mainly restricted to performance related

data, such as sales volumes (Dhar & Chang, 2009; Duan, Gu, et al., 2008; W. Moe & Trusov, 2011; Sonnier, McAlister, et al., 2011), revenue (Duan, Gu, et al., 2008), stock market value (Hu, Liu, et al., 2011), and stock performance (Tirunillai & Tellis, 2012), accompanied by only a limited number of case studies (e.g. Gallagher & Ransbotham, 2010; Scott & Orlikowski, 2012; Wagner & Majchrzak, 2007). As confirmed by Bianchi and Andrews (2015), Leeflang, et al. (2014) and Aladwan, et al. (2017), the relative scarcity of the SM related studies taking an organizational perspective, has resulted in limited view into SM related issues from inside the organizations.

In summary, the over-reliance of the existing body of literature on using consumer and end user data highlights the need for more research in this area using company data. Such studies would provide a company perspective, facilitating insights from within the firms, which complement the findings of studies using end user and consumer data. To that end, this study aims to fill the gap for such studies, by **providing a company perspective and using company data.**

2.6.4. Tendency to Focus on Single or Limited SM platforms

The majority of studies of firms' use of SM rely on the data gathered from one type or a small set of SM platforms, and very few studies have incorporated studying multiple SM platforms in a single study (Smith, Fischer, et al., 2012). The extant literature mostly focuses on Facebook (e.g. Kupfer, et al. 2018; Anderson, Knight, et al., 2014; Blachnio, Przepiorka, et al., 2016; Dhir, Kaur, et al., 2016; Jung, Shim, et al., 2016; Malik, Dhir, et al., 2016), Twitter (e.g. Gong, Zhang, et al., 2018; Margolin, Hannak, et al., 2017; Murray, Durkin, et al., 2014; Porter, Anderson, et al., 2015; Waters & Jamal, 2011), and Instagram (e.g. Klostermann, et al., 2018; Casalo, et al., 2018). Examples of other studies investigating single platforms include TripAdvisor (Scott & Orlikowski, 2012), Wikis (Wagner & Majchrzak, 2007), YahooMovies (Duan, Gu, et al., 2008), Usenet (Godes & Mayzlin, 2004), a major social networking site (de Vries, Gensler, et al., 2012; Trusov, Bodapati, et al., 2010), and a firm's single online forum (Moe & Trusov, 2011). Example of such studies using company data include that of Wagner and Majchrzak (2007), who focused on Wikis as a form of SM platform, and showed

that use of Wikis in firms enables customer engagement and co-creation (Wagner & Majchrzak, 2007).

A limited number of researches focus on studying multiple SM platforms (e.g. Colicev, Malshe, et al., 2018; Buccafurri, Lax, et al., 2016; Canhoto & Clark, 2013; Hughes, Rowe, et al., 2012; Karapanos, Teixeira, et al., 2016; Smith, Fischer, et al., 2012; Zafarani & Liu, 2016). Such studies tend to focus on the user characteristics of the users of these platforms, such as behaviour (e.g. Buccafurri, Lax, et al., 2016) and personality (e.g. Hughes, Rowe, et al., 2012), highlighting the need to identify and recognize the individual differences of users across different SM platforms.

While the tendency of the majority of literature in focusing on single SM platform results in valuable insights regarding that particular platform, it does not recognize the need for channel integration and consistency across communication channels including SM platforms, which is an issue requiring management attention (Hanna, Rohm, et al., 2011; Valos, Haji Habibi, et al., 2016). Moreover the literature suggests that analysing SM data across multiple platforms provides comparative possibility (Smith, Fischer, et al., 2012), and better predictive value than investigating certain channels in isolation (Dhar & Chang, 2009). Also, content analysis of brand related UGC across Facebook, Youtube and Twitter by Smith, et al. (2012) showed that UGC content and dimensions are different across these platforms and managers should not ignore the opportunities provided by each one. Gallagher and Ransbotham (2010) also note that companies need to integrate and incorporate their use of multiple SM platforms in order to achieve better results.

On the other hand, conducting research across multiple SM platforms causes difficulties in terms of the large volume and the sheer magnitude of the data that needs to be analysed, particularly when analysing its qualitative aspects (Sonnier, McAlister, et al., 2011). As a result, many studies use data from a single SM platform (e.g. de Vries, Gensler, et al., 2012; Moe & Trusov, 2011; Trusov, Bodapati, et al., 2010), or restrict the volume of data to be analysed using methods such as choosing a random sample of the data (Godes & Mayzlin, 2004; Smith, Fischer, et al., 2012), or discarding a certain type of data (Tirunillai & Tellis, 2012).

In conclusion, the majority of SM studies, use data from one type or limited number of SM platforms, which brings valuable insight into applications of that particular SM platform, but fails to provide the comprehensive and cohesive view of how the full range of SM platforms are used in accordance together and other communication channels. To that end, this study aims to fill the gap for such studies, **by focusing on the full range of SM platforms used- in firms.**

2.7. Managerial Challenges of SM Data Use

Despite the wide range of benefits of SM discussed in the literature, there remain a plethora of questions and challenges facing firms in using SM and harnessing these benefits. Aral, et al (2013, p. 9) note that *“There is, currently, little understanding with respect to the best ways in which companies should organize and manage social media”* and *“There is no established path of activities that lead a company down the path of “social readiness” and there are no widely accepted industry-specific best practices”* (Aral, Dellarocas, et al., 2013). To that end, the main body of academic articles regarding managerial challenges of using SM include conceptual articles (e.g. Berthon, Pitt, et al., 2012; Day, 2011; Dutta, 2010), and much of empirical knowledge in this area is provided by industry reports and practitioners’ insight (e.g. IBM, Baird, et al., 2011), along with limited number of academic empirical studies (e.g. DiStaso, McCorkindale, et al., 2011; Gallagher & Ransbotham, 2010; Sigala, 2011).

In industry reports, the results of a survey of managers in an IBM study (2011) showed that managers’ top challenges related to SM use include 1) establishing ROI strategies, 2) monitoring employees’ SM use, 3) mitigating the risks associated with negative brand exposure, and 4) the absence of a SM strategy (IBM, Baird, et al., 2011, p. 8).

In conceptual articles, Dutta (2010) identifies 3 categories of risks for managers in using SM, including: 1) managing social capital (concerned with the boundary between personal and professional space, and private and public audience), 2) managing intellectual capital (concerned with intellectual property rights in message contents, consistency in company brand and image, possible breach on regulations), and 3) managing progress.

Examples of empirical studies include the results of focused groups with 54 tourism professionals by Sigala (2011), which show that reliability, authenticity and security of user generated content influences managers' perceptions of risks of using SM. Also the in-depth case study of usage of SM in Starbucks in the US by Gallagher and Ransbotham (2010) lead to the identification of six challenges for SM managers as balancing centralized and decentralized governance and control, balancing facilitating and censoring, using supporters and promoters to counter detractors, managing expectations and results from SM Innovation Forums, responding without reinforcing negative behaviours, and gauging return on investment. The result of 25 qualitative web based interviews with a sample of communication and public relations executives by DiStaso, et al. (2011) showed that the most common challenge with SM for senior managers is accepting the lack of control associated with SM. It also identified other challenges including scepticism in the company regarding the value of SM, employees not knowing how to use SM strategically, staying current with the rapidly changing SM environment, adapting to the immediacy of SM, and *"determining investment decisions, establishing policies and confidentiality, along with measurement issues such as linking social media to sales, systematic monitoring, accurate sentiment analysis"* (DiStaso, McCorkindale, et al., 2011, p. 327). Other studies have also noted that managers need to make cultural changes in their companies in relation to SM in order to view customers as partners and not targets (Sigala, 2011), accept customer empowerment (Fuchs & Schreier, 2011; Sigala, 2011) and accept open conversations with customers (Gallagher & Ransbotham, 2010).

In order to summarize the above, table below provides a summary of a number of managerial challenges discussed in the literature.

Managerial Challenge	References
Establishing ROI	(IBM, Baird, et al., 2011) (DiStaso, McCorkindale, et al., 2011)
Developing SM strategy	(IBM, Baird, et al., 2011) (DiStaso, McCorkindale, et al., 2011)
Managing expectations	(DiStaso, McCorkindale, et al., 2011) (Gallagher & Ransbotham, 2010)
Issue of Control	(DiStaso, McCorkindale, et al., 2011) (Gallagher & Ransbotham, 2010) (Dutta, 2010)
Acquiring the required skillset and resources	(DiStaso, McCorkindale, et al., 2011) (Gallagher & Ransbotham, 2010) (P. R. Berthon, Pitt, et al., 2012) (IBM, Baird, et al., 2011)

Cultural acceptance of SM	(Gallaughner & Ransbotham, 2010) (C. Fuchs & Schreier, 2011; Sigala, 2011) (DiStaso, McCorkindale, et al., 2011)
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Table 4: Managerial Challenges of SM Use

In reality, SM data is at the centre of these challenges. SM data provides great opportunities, as well as big challenges for companies (Libai, Bolton, et al., 2010; Nicholls, 2010). Several studies have discussed the challenges involved in using SM data in firms. For example literature shows that although SM data provides firms with opportunities for listening, monitoring and taking a more active role in shaping conversations (Hamilton, et al., 2017; Sonnier, McAlister, et al., 2011) and influencing customers' opinion (Duan, Gu, et al., 2008), the challenges of managing the sheer volume of SM data creates challenges including demanding new skillsets from IT and marketing employees (Davenport, 2013; Davenport & Patil, 2012). SM has resulted in a *"colossal stream of real-time customer-to-customer interchanges"* (Larson and Watson, 2011, p.10), which is available to companies in huge volumes (Bughin, Chui, et al., 2010). As stated by Day (2011, p. 183) *"marketers are being challenged by a deluge of data that is well beyond the capacity of their organizations to comprehend and use"*. As a result companies are struggling with using all the data that is made available to them via SM (Tzagarakis et al. 2012), since *"methods for shaping those [C2C] conversations have not yet been articulated"* (Mangold & Faulds, 2009, p. 358).

One of the contributing factors to the wide range of SM data use challenges is that the data produced across SM platforms has a set of complex characteristics, which makes it very difficult to handle. Such characteristics include its amount/volume (Hopkins and Brokaw, 2011) , the frequency (Leeftang, 2011; Rust et al., 2010), the type of data (Day, 2011, Verhoef et al. 2009), and its immediacy (DiStaso, McCorkindale, et al., 2011). In other words, SM data is unstructured, difficult to monitor (as it is distributed across many different platforms), of very high volume, and requires quick response (Zamani & Brady, 2013). Moreover, the companies have no control over the produced SM content and data, and the sources of data are in many cases unknown to the companies (Zamani & Brady, 2013). These new trends in information are generally referred to as Big Data (Bizer, Boncz, et al., 2012; Brown, Chui, et al., 2011; Bughin, Chui, et al., 2010; LaValle, Lesser, et al., 2011), which is the move from proprietary

internally created data (Davenport, Barth, et al., 2013). Big data refers to the new forms of data enabled by many forms of internet enabled communications, including SM (Bughin, Chui, et al., 2010), which generate a wide range of challenges for companies. As discussed by Bizer et al. (2012, p. 56) *“in this Big Data World information is unbelievably large in scale, scope, distribution, heterogeneity, and supporting technologies”*. As a result, due to companies’ greater access to customer data, data are flooding into the companies at rates never seen before (Bughin, Chui, et al., 2010). Considering SM data as a form of big data (Gandomi & Haider, 2015; Sivarajah, Kamal, et al., 2017), the data related challenges of big data are applicable to SM data. Such challenges are mainly related to the characteristics of SM data (Bizer, Boncz, et al., 2012; Brown, Chui, et al., 2011; Bughin, Chui, et al., 2010; LaValle, Lesser, et al., 2011), as they will be discussed next.

Literature discusses variations of the Vs model of SM data use challenges, including 3Vs of data [volume, velocity and variety] (e.g. Shah, Rabhi, et al., 2015), 4Vs of data [volume, velocity, variety, and variability] (e.g. Liao, Yin, et al., 2014), and 6Vs of data [volume, velocity, variety, veracity, variability, and value] (e.g. Gandomi & Haider, 2015). Sivarajah, et al. (2017) expanded the 6 Vs challenges suggested by Gandomi and Heidar (2015) into 7 Vs which includes the following:

- Data volume: related to the large scale and sheer volume of the data
- Data variety: multiple data formats from many sources
- Data veracity: related to the untrustworthiness inherent in many sources of structured as well as unstructured data
- Data value: related to extracting knowledge and value from the vast amounts of structured and unstructured data
- Data velocity: related to the *“high influx rate of non-homogenous data, which results in either creating new data or updating the existing data”* (Sivarajah, Kamal, et al., 2017, p. 273)
- Data visualisation: related to *“representing key information and knowledge more instinctively and effectively through using different visual formats such as in a pictorial or graphical layout”* (Sivarajah, Kamal, et al., 2017, p. 273)
- Data variability: related to constantly changing meaning of the data

From the above list, the data volume challenges has been widely discussed in the literature, to the extent that Gandomi and Heidar (2015) suggest that *“Size is the first, and at times, the only dimension that leaps out at the mention of big data”* (p.137). According to Tzagarakis, et al. (2012, p. 1) SM have introduced a plethora of collaboration tools and UGC, which has resulted in massive amount of raw information, which is *“so overwhelming that stakeholders are often at a loss to know even where to begin to make sense of it”*. Although the issue of information overload in firms has been discussed for many years (Cronin & Davenport, 1990; Eppler & Mengis, 2004; Tzagarakis, Christodoulou, et al., 2012), the rise of SM has given this issue a whole new dimension. As of 2012, about 2.5 Exabyte of data were created each day, and that number is doubling every 40 months (McAfee & Brynjolfsson, 2012). In 2015, 2.5 quintillion (10^{18}) bytes of data were created each day. This meant that 90% of the data in the world in 2015 had been created between 2013 and 2015 (IBM, 2015).

The other aspects of SM data use challenges are also discussed in the big data literature. For example, Sivarajah, et al. (2017, p. 265) provide a critical analysis of the literature of the big data (including SM data) challenges firms are facing, and categorize them in 3 categories of data challenges (related to the characteristics of the data itself, i.e. 7Vs model), process challenges (encountered while processing and analysing the data), and management challenges (encountered while managing and governing the data). In their extensive categorization, apart from the 7Vs model of data challenges, process challenges include challenges in data acquisition and warehousing, datamining and cleansing, data aggregation and integration, data analysis and modelling, and data interpretation. In addition, the management challenges include privacy, security, data governance, data and information sharing, cost or operational expenditures, and data ownership (Sivarajah, Kamal, et al., 2017).

While such categorizations provide a good overview of the SM data use challenges, they do not provide the full picture, mainly because SM data use challenges in firms are not limited to data attribute challenges, and also they don't convey the view of managers regarding the challenges they are facing in using SM data. SM data use in firms results in a range of managerial challenges not specifically related to the SM data

attributes and characteristics. Despite that, the majority of the literature on the SM data use challenges focus on the challenges related to SM data attributes. Holsapple, et al. (2014) conducted a literature review of SM data analytics challenges, and were able to locate very few challenges related to post-data analysis. In this regard, they suggest that *“there will very likely be considerable difficulties encountered with suitably packaging and disseminating actionable SMA [social media analytics] results, [...] given the many pre-processing and processing challenges noted”* (p.7). As such they hold that more research on such challenges is required in the years ahead (Holsapple, Hsiao, et al., 2014).

Overall, there is limited and fragmented empirical investigation of the challenges facing managers in using SM data in firms, mainly done in the conceptual or industry/practitioner articles, and mainly focused on the challenges related to SM data attributes. Much of the related discussions in the literature are concerned with a variation of the the 7Vs model of data attribute challenges (e.g. Holsapple, Hsiao, et al., 2014; Shah, Rabhi, et al., 2015; Liao, Yin, et al., 2014; Gandomi & Haider, 2015; Sivarajah, et, al.; 2017), as a testament to the dominance of this view within the literature. This signifies the need for more in-depth empirical investigation of the full spectrum of the challenges facing managers in using SM data in firms. To that end, this research aims to investigate the managerial challenges (referring to challenges facing managers) in using SM data in firms, by answering the following research question:

What are the managerial challenges in using SM data?

2.8. Conclusion

In this chapter, review of the literature of SM was provided through discussion of a number of tendencies and issues observed in the literature. In section 2.2, the vital role of IT in marketing was reviewed through evidence from the literature in the past 30 years, leading to the recent development in the internet enabled information systems and the rise of SM. In section 2.3, the definitional issues of social media term were reviewed, including lack of comprehensive, clear and agreed definition of the term social media and interchangeable use of this term with a number of similar

terms, which was followed by the discussion and selection of the SM definition suggested by Plume, et al. (2016) to guide this research.

In section 2.4 an overview of the literature of SM was provided, revealing that the majority of SM studies focus on the personal use of SM. In section 2.5, review of studies focusing on firms' use of SM was discussed through a number of observed tendencies including:

- e) The majority of such studies view SM as a form of media and communication channel, with limited attention to the information dissemination as its main aspect
- f) The majority of empirical studies focus on the **what** questions of SM use in firms, leading to a large body of empirical evidence for a wide range of benefits of using SM, while the **how** questions, including how SM is used in the firms has not received much attention in the literature.
- g) Review of the studies of companies' use of SM revealed that the majority of these studies show a range of potential benefits which can be gained from using SM for companies, which are accompanied by a range of challenges. The range of potential benefits coupled with serious challenges raise the question of benefit realization, which highlight the need for insight into the details of the processes involved in using SM data in companies. Confirming this view, Alves, et al. (2016) verify the need for more studies to explore the perspectives of companies as they engage in SM, especially in terms of understanding the key barriers and obstacles to their usage. However, discussions of SM challenges in the literature mainly focus on the data related challenges, while the managerial challenges of SM is limited and fragmented, and has been largely overlooked, highlighting the need for more academic attention to the managerial challenges of using SM in companies.
- h) A large portion of the studies of companies' use of SM use consumer and end user data, which results in valuable insight from the consumer perspective, but need to be complemented with studies using company data. This signifies the need for more studies which investigate SM use from the company side using company data, which informs the design of this study. Alves, et al. (2016)

confirm this view, suggesting that *“more studies are necessary to explore the perspectives of companies as they engage in social media marketing”* (p.1036)

- i) The majority of SM studies focus on a single or a limited number of SM platforms in firms, highlighting the need for studies focusing on the full spectrum of SM platforms used in firms.
- j) Review of the theories used in the studies of SM (discussed in section 2.6) reveals that while a small portion of the studies use any theoretical framework, the majority of studies that do, use the individual and social behavioural theories or mass media theories, and only a small fraction of studies use organizational theories. This view is verified in a number of articles (Alalwan, Rana, et al., 2017; Alves, Fernandes, et al., 2016; Filo, Lock, et al., 2015; Scott & Orlikowski, 2014). For example, Filo et al. (2015) noted that *“despite the fact there is a good number of studies that have examined SM and its applications over different area of interest, there is still a need of proposing a theoretical model covering the most important dimensions”* (p.1178). Overall the literature of SM uses a very limited number of organizational theories. This highlights the need for more theory developing research in this area, to potentially open the grounds for more recent and substantiated theories in this area.

The combination of the above issues highlights the need for more attention to the information dissemination dimensions of SM in the form of a **how** question, as well as investigation of the managerial challenges of SM use in companies. It also highlights the need for studies which use company data and focus on the full range of SM platforms within companies. The above discussions form the research questions of this research as: ***‘How is social media data used in companies?’***

‘What are the managerial challenges in using SM data?’

Such investigation is called for by a number of scholars (such as Aral, Dellarocas, et al., 2013; Dinter & Lorenz, 2012; Mayeh, Scheepers, et al., 2012), who have argued that the literature on SM is yet to address the processes related to SM in sufficient detail (Mayeh, Scheepers, et al., 2012), and *“it is not clear how organizations internally process social media data in order to transform them into actionable insight and to effectively utilize them in various business decisions”* (Dinter & Lorenz, 2012). Aral, et al

(2013, p. 9) also suggest that there is currently very little understanding of how organizations should process, manage, and organize SM.

The summary of the above discussions, the sections of the thesis in which they are discussed, and how they are addressed in this research is illustrated in the diagram 2.7 below.

In the next chapter, literature review and synthesis of the customer and market information use, and SM data use literature will be provided.

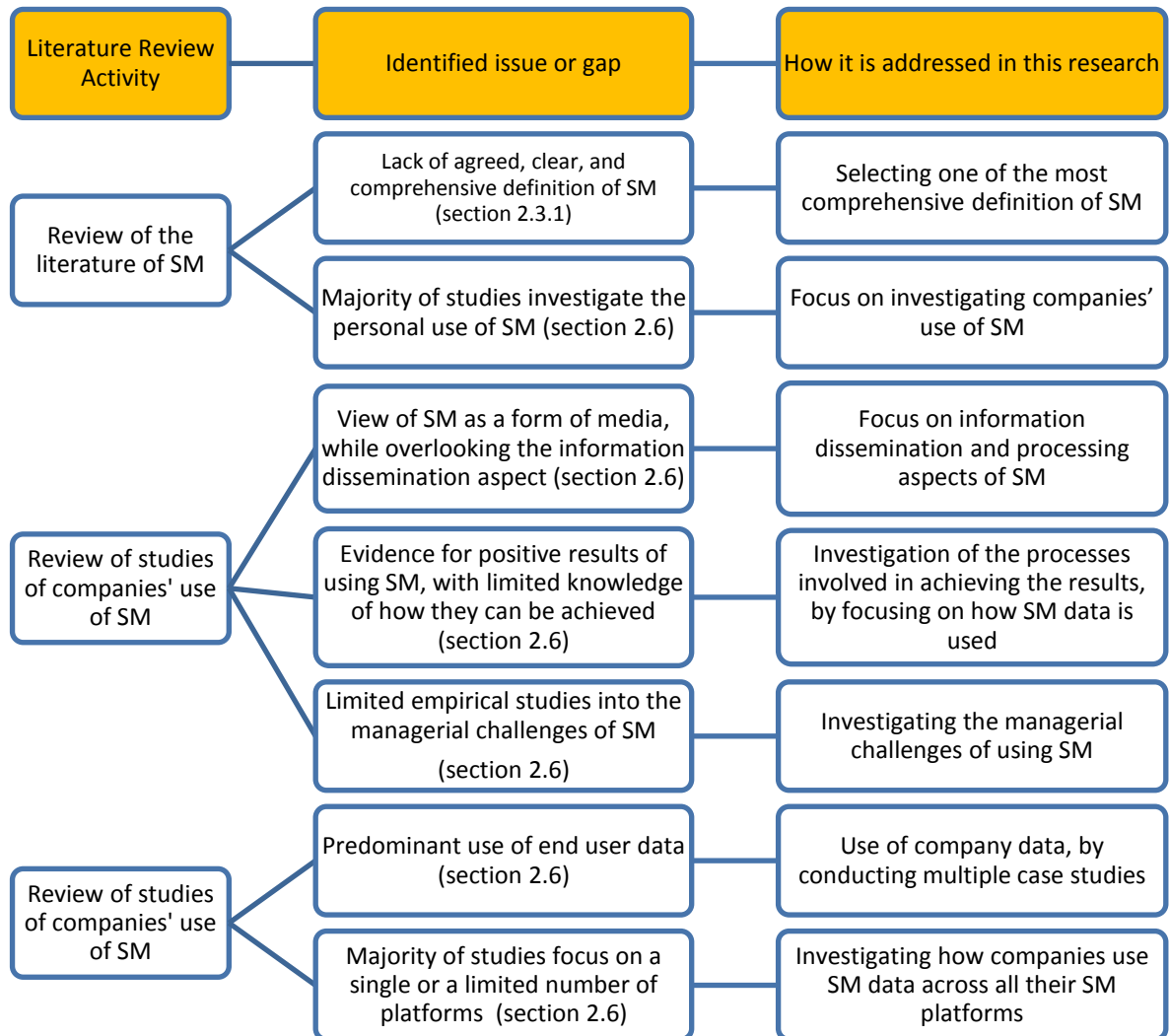


Figure 2.8: Summary of the main points in Chapter 2

Chapter 3: Review of SM Data Use Literature

3.1. Introduction

This chapter serves as the second part of literature review endeavours for this research. It starts by providing the definition of the core terms in this research in section 3.2. Subsequently, it will discuss the literature review market and customer information use, and SM data use in section 3.3. This discussion includes overview of Organizational Information Theory as the theoretical background for related literature, followed by the review of the academic literature on customer and market information use, SM data use and SM analytics, discussion of the initial conceptual model, and review of information utilization literature in separate subsections. Review of this literature provides the point of departure for understanding and explaining the empirical context of this research, which is followed by recapturing the research question and conclusion discussion in section 3.4.

3.2. Definition of the Core Terms

In this section the definition of core terms including information, data, information use, information utilization, and information processing will be discussed, to provide clarity for the future sections of this research.

3.2.1. Distinction Between Information and Data

The terms data, information and knowledge are sometimes used interchangeably in the literature (Kakabadse, Kakabadse, et al., 2003), but there are certain differences between the three terms, forming different views of the continuum of data > information > knowledge (Krishen & Petrescu, 2018; Kakabadse, Kakabadse, et al., 2003). Data is regarded as raw information or *“a constellation of observations or facts that are not context-bound”* (Sivarajah, Kamal, et al., 2017). Data refers to *“streams of raw facts representing events occurring in organizations or the physical environment before they have been organized and arranged into a form that people can understand and use”* (Laudon & Laudon, 2014, p. 48). Data becomes information when it is processed, organized, placed within a meaningful context and given a specific meaning

(Krishen & Petrescu, 2018; Glazer, 1991; Sivarajah, Kamal, et al., 2017), or contextualized, categorized, calculated and condensed (Davenport & Prusak, 1998), which involves being shaped into a form that is meaningful and useful to human beings (Laudon & Laudon, 2014, p. 48). Information which is interpreted (through experiences, skills and competencies) will then constitute knowledge (Sivarajah, Kamal, et al., 2017).

3.2.2. Social Media Data and Customer Data

Customer information is defined as information about and from customers (Salojärvi, Sainio, et al., 2010; Zahay, Griffin, et al., 2004) and is regarded as the most complex form of information within a company (Davenport, Harris, et al., 2001).

Customer data refers to online and offline data (Wedel & Kannan, 2016) about and from customers, which refer to traditional market research data, as well as online customer data, which includes SM data in both forms of FGC and UGC (Lamest & Brady, 2018).

Social Media data is considered a new form of customer data (Harrigan, Evers, et al., 2017; Harrigan, Soutar, et al., 2015; Malthouse, Haenlein, et al., 2013), which includes the data about and from consumers, competitors, and all SM users across SM platforms.

3.2.3. Information Processing and Information Use

The terms information use and information processing have been used interchangeably in the literature (Christine. Moorman, 1995; Sinkula, 1994) with reference to processes involved in the processing of data and information. For example, Morgan, et al. (2005) uses customer satisfaction information use and usage in reference to processing of customer satisfaction data, while Sinkula (1994) and Kohli, et al. (1990) use the term information processing. In this context Sinkula (1994) uses both terms (information processing and use), but clarifies that *“When possible in this article, I avoid using the term market information use in favor of the term market information processing”*, which he defines as *“a term that encompasses the acquisition, distribution, interpretation, and storage of market information”* (p.36). A

number of other scholars use the term information processes (Harrigan & Miles, 2014; Jayachandran, Sharma, et al., 2005; Christine. Moorman, 1995, 1998) in reference to processes related to information processing.

In this research, use of the term 'information processing' was considered confusing, due to repetitive use of terms 'process' and 'subprocess' throughout the thesis. As a result, in line with the established logic used by Morgan, et al. (2005) and Sinkula (1994) in the marketing literature, the term 'information use' is used in reference to the processing of data and information in the context of SM. In this thesis, 'SM data use' refers to the processes that a firm uses to monitor, identify, process, respond and utilize relevant SM data (see Morgan, et al. 2005).

3.2.4. Information Utilization

Different terms are used in the literature in reference to using information in decision making, including information use (e.g. Deshpande & Zaltman, 1982, 1987; Menon & Varadarajan, 1992) and information utilization (e.g. Beyer & Trice, 1982; Loshin & Reifer, 2013; Morgan, Anderson, et al., 2005; Rindfleisch & Moorman, 2001; Rollins, Bellenger, et al., 2012; Salojärvi, Sainio, et al., 2010). This issue was also noted by Menon(1992) in his seminal work, where he suggests that *"A cursory examination of literature on knowledge utilization reveals that the terms "knowledge utilization", "information utilization", "research utilization", "research knowledge utilization", "utilization", and "use" are used interchangeably. We consider these terms as signifying the same phenomenon"* (p.54). Based on the above and following the established logic by Morgan, et al (2005) and Rollins, et al. (2012) and to avoid confusion with 'information use', the term "information utilization" will be used in this research. We adapt the definition provided by Morgan, et al. (2005) (in the context of customer satisfaction information use) for SM, and hold that SM information utilization refers to how firms use SM information to understand the environment and make decisions.

3.3. Customer Information and SM Data Use

Customer data is defined as data about and from customers (Sivarajah, Kamal, et al., 2017; Zahay & Griffin, 2002). Market information on the other hand includes data that

describe customers, competitors, supply chain partners, and environmental trends (Kohli & Jaworski, 1990), which includes customer information. SM data is considered a form of customer data (Harrigan, Evers, et al., 2017; Harrigan, Soutar, et al., 2015; Malthouse, Haenlein, et al., 2013), and market data (see Moorman, 2011). Accordingly, theoretical framework of SM data use and utilization departs from the literature on market and customer information use, which has its roots in the organizational information processing theory (OIPT). Specifically, in the case of *how* customer and market data is used, the body of literature in the customer and market information processing is consistent with some aspects of other organizational study areas, including market orientation, organizational learning, and relational information processes.

In order to fully review the related literature, OIPT will be first reviewed in the next section, followed by the literature on customer and market information processing, showcasing consistencies with other areas of organizational studies. Subsequently, the literature on SM data use and utilization will be reviewed afterwards.

3.3.1. Organizational Information Processing Theory (OIPT)

Information processing refers to processes *"through which information is given meaning"* (Daft & Weick, 1984, p. 294). The organizational studies field have long viewed organizations as information processing systems with limited capacity in processing the information (Heller Baird & Parasnis, 2011). Developing information processing mechanisms capable of coping with variety, uncertainty, coordination, and an unclear environment has been signified as one of the challenges facing organizations (Heller Baird & Parasnis, 2011, p. 555). OIPT² views organizations as information processing systems (Tushman & Nadler, 1978) or open social systems which need to process information (Daft & Weick, 1984), including attaining, deciphering and distributing the information (West & Turner, 2017). So the focus of

² It is important to note that in the field of cognitive psychology, Information Processing refers to the work of Miller (1956), who provided two theoretical ideas that are fundamental to cognitive psychology and the information processing framework, and refers to the information processing models of human mind (Huitt, 2003). Miller's information processing theory has been used in customer behaviour studies in marketing (Tybout, et al. 1981).

OIPT is on the communication of information which plays a vital role in determining the success of an organization (West & Turner, 2017). Information processing refers to *“carrying out of activities through which organisational members gather, store, assess, alter or use organisationally relevant information”* (Trentin, Forza, et al., 2012, p. 3861).

OIPT holds that although individuals send and receive information in the organizations, the organizations' information processing capabilities and characteristics is more than what happens by the individuals in the organizations (Heller Baird & Parasnis, 2011; Weick, 1979). In other words the way in which organizations process information is a function of systems or processes in addition to individual's activities (Daft & Weick, 1984; Moorman, 1995). The literature conveys on two related perspectives of why organizations process information, the first one forms the origins of OIPT by Galbraith (1974), who views information processing as a mechanism to reduce uncertainty in organizations. The second one is Weick's OIPT which posits that organizations process information in order to reduce equivocality (Weick, 1979, 2012). Galbraith's OIPT originally focuses on the structure of organization and its role in reducing uncertainty. But further developments of his work by the likes of Tushman and Nadler (1978) brings about the process aspect of how organizations process information. In line with that, weick's OIPT focuses on the process by which companies collect, manage and use the information they receive, and the process of organizing. What is common between the two is the need for organizations to process information in response to ambiguity, uncertainty and changes in the environments. While a range of shortcomings have been discussed for both approaches of OIPT in the literature, the consequent developments of the stages of information processing provide the common grounds for further studies of how companies process information, which is consistent across a number of research areas, as it will be discussed next.

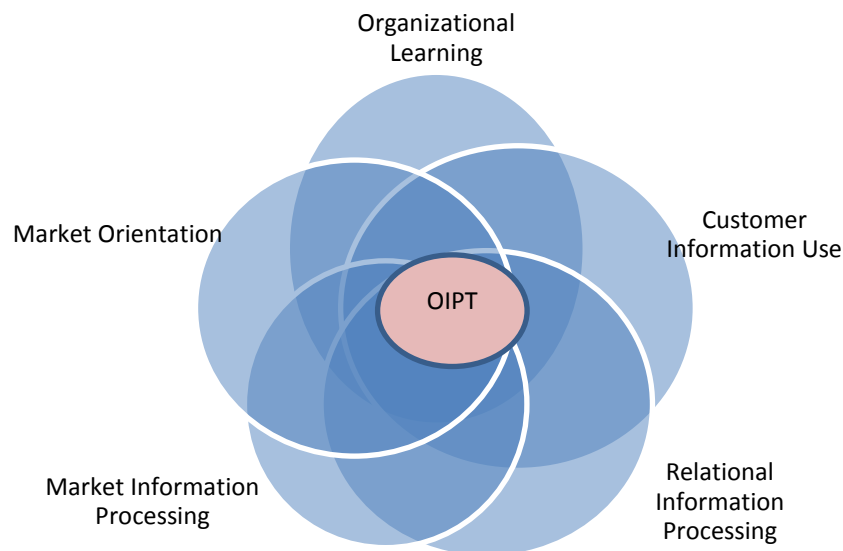
3.3.2. Market and Customer Information Use and Utilization

Information use affects the field of marketing in two areas of individual consumer activities and firm activities (Moorman, 1995, 1998). It has been argued that marketing has primarily focused on the individual consumer outcomes associated with

information processes (Moorman, 1998). In this regard, a large number of studies in the marketing literature have investigated information use and utilization from the perspective of individual decision makers (Moorman, 1995), which includes studies such as those by Deshpande and Zaltman (1982), Menon and Varadarajan (1992), and Forgas and George (2001). In their seminal study, Deshpande and Zaltman (1982) used a two stage study to evaluate the factors affecting the attention given to the use of specific market research information by marketing managers. The results showed that factors such as organizational structure, technical quality, surprise, actionability, and researcher-manager interaction impact market information use (Deshpande & Zaltman, 1982). In another seminal conceptual work on the organizational and informational factors affecting individual manager's knowledge utilization, Menon and Varadarajan (1992) suggest that knowledge utilization in organizations is a function of the direct or indirect effects of environmental factors, task complexity, organizational and informational factors, as well as individual factors.

Other studies in the marketing literature examine the nature of information processing and utilization from **an organizational perspective**, and posit that an organizations' capacity and approach in processing information is more than the sum of the individuals' information processing capabilities, which is based on the organization information processing theory as discussed above (see Moorman, 1995). The view of organizations as information processing systems has long been recognized in the marketing literature, and resulted in a range of studies spread across different areas in the marketing literature including organization learning (Huber, 1991; Sinkula, Baker, et al., 1997), market orientation (Kohli & Jaworski, 1990; Kumar, Jones, et al., 2011), marketing performance measurement (Clark, Abela, et al., 2006b), market information processing (Moorman, 1995, 1998), customer information processing (Peltier, Zahay, et al., 2013; Zahay & Griffin, 2002), customer satisfaction information use (Morgan, Anderson, et al., 2005), and relational information processing (Jayachandran, Sharma, et al., 2005). As depicted below, while each of the above areas are focused on certain perspectives of information processing, what they have in common is the view of organizations as information processing systems, which is based on the principles of OIPT (Clark, et al., 2006b; Galbraith, 1974; Trentin et al.,

2012; Tushman & Nadler, 1978), and results in a number of processes and subprocesses of information use from an organizational perspective. It is notable that as discussed in section 3.2, the literature uses different terms including information use, utilization, processing and information processes interchangeably.



Market Information Processing

In the area of **market information processing**, Moorman (1995, p. 319) defines market information as *“data concerned with a firm's current and potential external stakeholders”*. In Moorman's (1995, p. 391) definition, market information refers to *“external information that cuts across all functional areas of the firm rather than the more delimited ‘marketing information’ that suggests it applies only to marketing departments”* and includes what is known as the result of experience together with primary or secondary data. Examples of market information include data that describe customers, competitors, supply chain partners, and environmental trends (Kohli & Jaworski, 1990). Moorman's (1995) seminal work (as the first attempt in conceptualization of organizational market information processes) is based on a survey of vice presidents of marketing of 300 divisions of firms, in which she conceptualized and measures the organizational market information processes as four processes of **information acquisition, transmission, conceptual utilization, and instrumental utilization** (each one will be subsequently discussed in the next sections).

Clark, Abela, et al. (2006b) studied marketing performance measurement as a specific form of market information processing for the organization. Based on the data gathered from 306 senior executives' responses to a survey, Clark, Abela, et al. (2006b) explored the impacts of **generation, dissemination, and interpretation** of marketing performance measurement with positive managerial attitudes to measurement. They found that while there is no support for information generation as a driver of managerial satisfaction with performance measurement, information dissemination exhibits an inverted U relationship with satisfaction, and information dissemination to top management has the strongest direct effects on satisfaction (Clark, Abela, et al., 2006b).

Market orientation

Market orientation is another area which shares the view of organizations as information processing systems, and posits that the degree to which a company is market oriented is directly based on how well it generates intelligence, disseminates it, and takes actions based on the provided insights (Varadarajan & Jayachandran, 1999). Market orientation literature emphasizes market information processing and learning about markets (Kohli & Jaworski, 1990; V. Kumar, Jones, et al., 2011), and posits that *"firms that are engaged in more extensive market information processing develop superior knowledge about customers, competitors, and channel members"* (Morgan, Anderson, et al., 2005, p. 132). Market orientation is defined as a set of organizational behaviours, and recognizes three main elements of market orientation as **market intelligence generation, dissemination and responsiveness**. In this view market intelligence includes but goes beyond customers' verbalized needs and preferences, and includes the analysis of exogenous factors which influence customers' needs and preferences, including changes in government or competitors' actions which might impact customers' preferences (Kohli & Jaworski, 1990, p. 4). Market orientation entails that a business should engage in three following behaviors:

- a) Generation of market intelligence about customers' current and future needs, wants, and preferences, and any factors which influence them

- b) Dissemination of market intelligence within the business, including vertically up and down the organizational hierarchy, and laterally across different functions and geographic boundaries
- c) Responsiveness to the market intelligence by targeting prioritized market segments and developing, delivering and communicating appropriate value to those select segments (Kohli, 2017)

Customer Information Literature

Customer information is defined as information about and from customers (Salojärvi, Sainio, et al., 2010; Zahay, Griffin, et al., 2004) and is regarded as the most complex form of information within a company (Davenport, Harris, et al., 2001). Customer information is dynamic and rapidly changing in nature and is sourced from different sources within and outside a company (Rollins, Bellenger, et al., 2012a, p. 758). From an information processing perspective, while the market orientation literature focuses on the processes a firm uses to collect market information, **customer information** literature focuses specifically on processes designed to collect information **about and from** customers (Salojärvi, Sainio, et al., 2010; Zahay, Griffin, et al., 2004), leading to two types of customer knowledge. Knowledge about the customers refers to knowledge related to customer needs and aspects such as purchasing history of the customer, whereas knowledge from the customer refers to the customer's knowledge about products, services and the marketplace in general (Salojärvi, Sainio, et al., 2010). Combining the two types forms the basis of customer knowledge, which originates from transforming customer data to customer information, integrating the information across the organization and assimilating the new knowledge into the prior customer-specific knowledge base of the organization (Salojärvi, Sainio, et al., 2010). In this regard, Li and Calantone (1998) defined a firm's customer knowledge competence as processes designed to generate, structure, and organize intelligence about customers.

Based on the literature of customer knowledge management, Song, et al. (2010, p. 559) define customer interaction processes as a set of activities designed to continuously (1) collect information through direct interactions with customers and (2) process collected information, which enable the firm to collect, organize, and structure

customer intelligence. In this regard, Zahay (2002, 2004) define customer information systems (CIS) as learning process capabilities for gaining customer understanding. She suggests that CIS *“captures the overall sophistication of customer information and the associated management processes and systems at the firm, and is used as a way to understand how well the firm learns about customers”* (p.172). Using organizational learning theory, Zahay (2004) suggest the theory of CIS based on four behaviours associated with developing knowledge systems (Sinkula et al., 1997; Slater & Narver, 1995; Day, 1994). They include **generation** (or get or acquire, which involves collecting customer information), **memory** (or store, which involves storing customer information for future use), **dissemination** (or move, which involves diffusing customer information horizontally and vertically throughout the organization), and **interpretation** (which involves giving customer information one or more commonly understood meanings used in that organization (Zahay & Griffin, 2004, p. 172). In this context, Morgan et al. (2005) investigated customer satisfaction information (CSI) use in case studies of 37 firms, based on four distinct processes of data **scanning, data analysis, information dissemination, and information utilization**. Data scanning refers to the generation of CS data, data analysis refers to the examination and organization of CS to imbue it with meaning, information dissemination refers to the exchange of CSI within the firm, and information utilization refers to how a firm uses CSI to understand the environment, make decisions, and deploy resources (Morgan, Anderson, et al., 2005). Also in the context of customer information use in B2B environments, Rollins, et al. (2012a) conducted five case studies in firms of different size and industries, and proposed that generation of customer information involves turning customer data into customer information (p.759). Rollins, et al. (2012a) also propose that processing of customer data happens in three stages of **collection, storage, and analysis of customer data**, which is then followed by **information utilization**.

Customer information processing is also investigated in the area of **Relational Information Processes**, which is a model encompassing *“the specific routines that a firm uses to manage customer information to establish long-term relationships with customers”* (Jayachandran, Sharma, et al., 2005, p. 177). Jayachandran, et al. (2005)

use a survey of 563 key informants to conceptualize and measure customer information processes in the five processes of **information reciprocity, information capture, information integration, information access, and information use**.

Jayachandran, et al.'s (2005) model and constructs have been repeatedly used in studies of the role of technology in marketing and specifically CRM (e.g. (Ahearne, Hughes, et al., 2007; Ahuja & Medury, 2010; Becker, Greve, et al., 2009; Chang, Park, et al., 2010; Verhoef, Venkatesan, et al., 2010)).

Organizational Learning and OIPT

Information processing has also been discussed in the context of **organizational learning (OL)** (Huber, 1991; Sinkula, 1994; Sinkula, Baker, et al., 1997), where reduction of equivocality is viewed as a requirement for organizational learning to occur (Daft and Huber 1987). Equivocality happens when there are multiple and conflicting interpretations of information (Weick, 1979). Hence, for the organization to make sense of its markets and in turn cultivate memory, it must have a proper supply of information and it must be able to reduce its equivocality (Sinkula, 1994). To that end, the OL literature propounds four stages of learning, which include knowledge acquisition, information distribution, information interpretation, and organizational memory (Huber, 1991). **Knowledge acquisition** is the process by which knowledge is obtained. **Information distribution** is the process by which information from different sources is shared and thereby leads to new information or understanding. **Information interpretation** is the process by which distributed information is given one or more commonly understood interpretations. **Organizational memory** is the means by which knowledge is stored for future use (Huber, 1991, p. 90). Information processing theory and literature are particularly important for the field of organizational learning, as organizational learning processes are essentially believe to be information processing capabilities (Peltier, Zahay, et al., 2013).

3.3.2.1. Syntheses of the Literature of Market and Customer Information Processing

As discussed above, a number of studies in different areas of marketing and management literature investigate how organizations process information. While these studies focus on different outcomes or perspectives of information processing,

their relevance to the context of this research is the stages of information use, applicable to different forms of market and customer information. A summary of different stages of information processing discussed in the literature is provided in appendix D. In order to synthesis the related models and discussions of information use in the literature, considering the descriptions and discussions provided in each article, all the stages referring to the same or similar activities have been grouped together, as follows, which is illustrated in the table below:

- Stages referring to scanning, collection, capture, generation, get, acquisition have been grouped together as **monitor**
- Stages referring to data storage and memory have been grouped together as **storage**
- Stages referring to access, transmission, distribution, dissemination and move have been grouped together as **dissemination**
- Stages referring to utilization, interpretation, and responsiveness have been grouped in **utilization**

In doing the above, the names and description of the stages have been taken into consideration, and much attention has been given to the details of each stage in relevant articles. This is particularly important in cases such as the information interpretation stage, which includes elements of both analysis and utilization (Morgan, Anderson, et al., 2005). For example Clark, et al.'s (2006b) description of information interpretation involves activities related to both analysis and utilization as they suggest that *"Data must be coded, sorted, and organized to make sense of it"* (p.194), and *"Interpretation in marketing performance measurement is the degree to which performance information is given meaning"* (p.194). As a result, their description of the interpretation stage has been assigned to both groups of analyse and utilization.

Stage	Information Processing Stage in the Literature	Source
Information Reciprocity	Information reciprocity	(Jayachandran, et al. 2005)
Monitor	Data Collection	(Rollins, et al. 2012)
	Data scanning	(Morgan et al, 2006)
	Information Capture	(Jayachandran et al. 2005)
	Information generation (get or acquire)	(Zahay & Griffin, 2002, 2004)
	Information Acquisition	(Moorman, 1995)

Stage	Information Processing Stage in the Literature	Source
	Knowledge acquisition	(Huber, 1991)
	Information Generation	(Sinkula, 1994; Sinkula, Baker, et al., 1997)
	Information Generation	(Kohli & Jaworski, 1990; Kumar, Jones, et al., 2011)
	Information Generation	(Clark, Abela, et al., 2006b)
Data Storage	Data Storage	(Rollins, et al. 2012)
	Data Memory or Store	(Zahay & Griffin, 2002, 2004)
Data Analysis	Data Analysis	(Morgan et al, 2006)
	Data Analysis	(Rollins, et al. 2012)
	Information interpretation (FZ: analysis)	(Clark, Abela, et al., 2006b)
	After dissemination	
Interpretation	Information interpretation	(Zahay & Griffin, 2002, 2004)
	Information interpretation	(Huber, 1991)
	Information interpretation	(Sinkula, 1994; Sinkula, Baker, et al., 1997)
	Information interpretation	(Clark, Abela, et al., 2006b)
Integration	Information Integration	(Jayachandran et al. 2005)
Dissemination	Information Access	(Jayachandran et al. 2005)
	Information Transmission	(Moorman, 1995)
	Information Distribution	(Huber, 1991)
	Intelligence Dissemination	(Kohli, 2017; Kohli & Jaworski, 1990; Kumar, Jones, et al., 2011)
	Information Dissemination	(Sinkula, 1994; Sinkula, Baker, et al., 1997)
	Information Dissemination	(Clark, Abela, et al., 2006b)
	Information Dissemination	(Morgan et al, 2006)
	Information Dissemination or move	(Zahay & Griffin, 2002, 2004)
Information Utilization	Information Utilization	(Rollins, et al. 2012)
	Information Utilization >> Conceptual and Instrumental utilization processes	(Moorman, 1995)
	Information Utilization	(Morgan et al, 2006)
	Information Use	(Jayachandran et al. 2005)
	Information Responsiveness	(Kohli & Jaworski, 1990; Kumar, Jones, et al., 2011)
Interpretation	Information interpretation After dissemination	(Clark, Abela, et al., 2006b)
	Information Interpretation (use)	(Zahay & Griffin, 2002, 2004)
	Information Interpretation	(Huber, 1991)
	Information Interpretation	(Sinkula, 1994; Sinkula, Baker, et al., 1997)
Memory	organizational Memory	(Sinkula, 1994; Sinkula, Baker, et al., 1997)
	organizational Memory	(Huber, 1991)

Table 5: Customer and Market Information Processing Stages in the Literature

This has resulted in the identification of seven stages of customer and market information processing within the literature, including information reciprocity, monitor, analysis, integration, dissemination, utilization, and storage.

It is notable that data analysis has received relatively little attention within the literature of customer and market information. On the other hand, there are differences within the literature regarding some aspects of the above stages. For

example Sinkula (1994; 1997) and Huber (1991) discuss memory as a stage after utilization; but Rollins (2012) and Zahay (2002; 2004) posit data memory or storage as stages between monitor and analyse. On the other hand, data storage is only regarded as a stage in a limited number of studies (e.g. Rollins, Bellenger, et al., 2012b; Sinkula, 1994; Sinkula, Baker, et al., 1997; Zahay & Griffin, 2002, 2004), and does not exist in the other models. Similarly, information reciprocity and integration are constructs only mentioned in the literature of relational information processing (Jayachandran, Sharma, et al., 2005), and the subsequent work such as those of Harrigan (2015) and Diffley and McCole (2015), which will be discussed in the following section.

While none of the above studies specifically investigate how SM data is used in companies, their models of information processing could be used to guide the investigation of SM data use as a form of customer information.

3.3.3. SM Data Use in Firms

In the literature of SM, there is a wide range of prescriptions in the literature suggesting that companies need to use and utilize SM data (section 3.3.4). However, there are very few studies providing a comprehensive view of the details of SM data processing and utilization in firms (e.g. Aladwani, 2014; Harrigan, et al. 2015). The empirical studies in this area will be discussed in the next sections.

3.3.3.1. Prescriptions in the Literature

The literature suggests that SM data needs to be used and utilized in firms. Such prescriptions indicate that SM data should be monitored (e.g. Gallagher & Ransbotham, 2010; Larson & Watson, 2011) and analysed (e.g. Chen, Chiang, et al., 2012; Kane, 2014), integrated into information management processes (e.g. Faase, Helms, et al., 2011; Greenberg, 2010; Moorman, 2011; Sigala, 2011), and utilized in decision making (e.g. Davenport, Barth, et al., 2012; McAfee & Brynjolfsson, 2012).

Davenport, et al. (2012) suggest that capitalization on big data, including SM data, requires companies to pay attention to data flows as opposed to stocks of data. In this regard, **processing SM data** provides firms with opportunities for listening, monitoring and taking a more active role in shaping conversations (Sonnier, McAlister, et al., 2011) and influencing customers' opinion (Duan, Gu, et al., 2008). Empirical research

shows that **monitoring and analysing** SM enabled C2C communications can lead to customer insight and market intelligence for companies (Gallaughier & Ransbotham, 2010). The capability of firms to monitor C2C communications has been suggested as *“one of the biggest sources of benefit to firms introduced by social media”* (Larson & Watson, 2011, p.9). In line with the above, Chen, et al. (2012) suggest that analysing SM information can lead to better profiling and classification of customers, better prediction of customer behaviour, better target marketing and more cross and up-selling. Confirming the above, Kane, et al. (2014) suggests that ability to analyse SM data is the most important differentiator between companies that are and are not successful in using SM for business purposes (Kane, Palmer, et al., 2014).

Moorman (2011) also suggests that the effectiveness and efficiency of SM use within companies requires the **integration of SM data** with information management and new information exchange activities. Companies need to make sure that information about customers’ SM activities are integrated with other customer information, insights are communicated with the rest of the company, and SM strategies are discussed as part of firm’s strategic planning process (Moorman, 2011). In line with Moorman’s (2011) suggestion for an integration of SM data into other information management systems, a number of articles suggests that SM should be integrated with CRM (Faase, Helms, et al., 2011; Sigala, 2011). Sigala (2011) suggest that SM can bring networking and social intelligence/customer knowledge to CRM practices by integrating and engaging customers and their online social communities along various business operations (Sigala, 2011). Also, as a result of integration of SM into CRM *“not only are valuable data parsed, but the emotional level of the discussions going on are taken into account which gives a much richer picture of the subject matter of interest and can make the information gathered actionable in real time”* (Greenberg, 2010, p. 415). Some scholars have compared SM with market research, and argued that SM has advantages over traditional market research methods, in that SM can provide higher quality insights in less time and at a lower cost compared to traditional market research methods (Constantinides & Fountain, 2008; Cooke & Buckley, 2008; Patino, Pitta, et al., 2012; Quinton, 2013).

Prescriptions regarding SM Information Utilization

While monitoring and analysing SM data enables quick responses to customer issues, giving marketers a feel for sentiment and an ability to influence WOM (Hoyer et al., 2010; Kumar et al., 2010; Harrigan, et al. 2015), the analysis of the data alone is not sufficient, and the analysed SM data needs to be utilized in decision making. This results in a shift in firms' decision making from intuition based and ad hoc analysis to data driven decision making (Davenport & Patil, 2012; McAfee & Brynjolfsson, 2012). The results of interviews with 330 executives showed that companies that use more data driven approaches in their decision making are on average 5% more productive and 6% more profitable than their competitors (McAfee & Brynjolfsson, 2012). Moorman (2011) also suggests that effectiveness and efficiency of SM use within companies requires integration of SM with their strategy. Empirical data shows that the importance and reliance of companies on SM data changes and matures as company matures in its SM activities. Results of a survey of 4,803 business executives, managers and analysts from organizations across 109 countries and 26 industries in 2013 by MIT Sloan Management Review and Deloitte suggests that companies with more mature social media practices are more likely to rely on SM data, which is shown in 88% of respondents from such companies saying SM data are important, compared with 38% of those from companies in the early stages of SM maturity (Kane, 2014). However, there is little evidence within the marketing literature of how SM data is utilized within companies, and to what extent the prescriptions in the literature are adhered to in firms. Where there is evidence, the findings are dispersed and in some cases contradictory. De Swaan Arons et al. (2014) conducted online quantitative surveys of more than 10,000 marketers from 92 countries in 2014, dividing the survey respondents into two groups, of over-performers and underperformers (based on their companies' three-year revenue growth relative to their competitors'), and found that while about 52% of the over-performers believed that their companies leveraged SM data and analytics to improve marketing effectiveness, only 35% of the underperformers believed that their companies do the same. However, the results of a survey of 531 CMOs (CMO Survey, 2012) showed that SM is poorly integrated with firm's marketing strategy (average 3.8 from 7) and customer information is poorly integrated across all communication and SM channels (average of 3.7 out of 7). The

same survey of CMOs, which is being conducted twice per year, shows that effectiveness of integration of customer information across purchasing, communication and SM channels has not improved between 2011 and 2017, and stands in a lower level in February 2017 than that of February 2011 (CMO Survey, 2017). The declining level of integration of SM information in companies is despite the increasing expectations from SM and other forms of big data to make marketing analytics more central to marketing decision making (Moorman & Day, 2016, p. 7).

On the other hand, literature suggests that firms benefit from both conceptual and action oriented information utilization (Morgan, 2005; Day 2000; Slater and Narver 1998). He, et al. (2015) suggest that firms' SM analytics activities result in an increase in business knowledge and innovations, which could bring many benefits for firms in today's knowledge economy (He, Shen, et al., 2015). But these suggestions remain at a conceptual level and do not get empirically tested in the work of He, et al. (2015). Sigala (2011) investigated use of SM technologies in the Greek tourism industry and found that companies mainly use SM data for monitoring reviews and comments for reputation management, handling customer complaints, and market research. Their finding showed that less popular usages include SM use for boosting sales (i.e. creating brand awareness, cross and up-selling), business improvement (i.e. identification of pitfalls/faults), and enhancing customer service. These are a different set of findings than those of Scott and Orlikowski (2011), who conducted a field study of small hotels in UK, and showed that companies mostly utilize the insights gained from the reviews from the TripAdvisor site for employee assessment and appraisals.

Overall, much of the literature on the utilization of SM data in companies is anecdotal or prescriptive, with limited empirical work examining the prescriptions made. Very few studies have empirically investigated the utilization of SM data in companies including their type, nature, timeframe and other attributes. Where there are studies, the results are sparse and not sufficient. This highlights the need for an empirical investigation of the utilization of SM data in companies, which will be addressed in this research. The indicated poor utilization and integration of SM data with other information systems, along with the contradictory findings in relation to SM data use and utilization in companies highlights the need for better understanding of **how**

companies are using the SM data and the processes involved in SM use and utilization within the companies.

3.3.3.2. SM Data Use and Utilization in the Literature

A number of studies in the marketing literature investigate SM data use processes. The majority of studies of SM data use belong to the literature of SM analytics, which mainly investigate SM data at aggregated level, which will be discussed in detail in this section. Alongside SM analytics studies, a small number of studies discuss SM data use including SM Content Management Systems (Aladwani, 2014; Herbst & Vom Brocke, 2013), or investigate the application and role of relational information processes for SM (Diffley & McCole, 2015; Harrigan, Evers, et al., 2017; Harrigan & Miles, 2014; Harrigan, Soutar, et al., 2015), which will be discussed in this section.

Aladwani (2014, p. 134) suggest the 6A model of social content management as *“the deliberate and dynamic management of all aspects of internal and external social content in a business including data, technologies, processes, human, and organizational elements in order to create and maintain long term value for the business”*. The 6A model of social content management – as illustrated below- is suggested as a new tool to help actively manage the informational content of SM to improve business performance, and has six major components of **activity sources, abridgements, affordances, activities context, ascertained boundaries, and actors** (Aladwani, 2014). They suggest that SM content abridgement includes 3 stages of content capture or data extraction, analysis or data mining, and data presentation or visualisation (Aladwani, 2014). However, their model remains at a conceptual level.

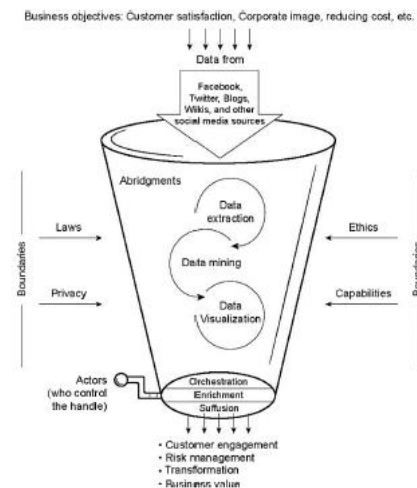


Fig. 1. The 6As model of social content management.

Figure 5: 6A Model of Social Content Management (Aladwani, 2014)

Similar to the above, Herbst, et. al. (2013b) note the concept of Social Content Management System (SCMS) as a new generation of information systems, which focus on management of SM content. They note that the well-deserved attention to SCMS has been missing in the literature, and suggest that *“Recognizing the importance of controlling social content over its entire lifecycle has led to the development of a new generation of information systems for the management of content that is created through using social media, Social Content Management Systems (SCMS)”* (Herbst & vom Brocke, 2013a, P.20). On conducting a survey of 89 professionals from eleven industries in seven countries in Europe, Herbst, et al.’s (2013) findings show that the companies have recognized the importance of SCMS for more successful use and management of SM in their companies. However, their study does not provide any insight into the processes involved in SM data use and utilization.

In addition to the above, Jayachandran, et al. (2005)’s model of relational information processes is suggested to be a suitable model for studying SM (Harrigan, Soutar, et al., 2015). However, the results of the limited number of studies which have used or tested Jayachandran’s (2005) relational information processes in the context of SM shows contradictory results. Diffley and McCole (2015) used Jayachandran’s (2005) relational information processes to investigate the impact of social networking sites on co-creation and the organisational routines necessary for CRM. Based on the result of survey of 125 senior managers in hotels in Ireland, Diffley and McCole (2015) found that the relational information processes are applicable to the context of SM use in

companies, and they are necessary to co-create value with customers (Diffley & McCole, 2015). On the other hand, Harrigan, et al. (2015) adapted Jayachandran's (2005) model to include SM in the context of social CRM use in firms. The results of the online survey of 3000 marketing managers and executives show that using SM in firms will lead to an increase in customer engagement activities, which in turn lead to an expansion of relational information processes in the firms (Harrigan, Soutar, et al., 2015). However, Harrigan et al. (2015)'s study showed that two out of five relational information processes (information reciprocity and information use) did not perform as expected in the context of SM use in firms. Harrigan et al. (2015) explained the possibility that both these processes could have been captured with the additional constructs of engagement and SM technology use, which they had added to the model, and called for more in-depth investigation of the applicability and details of the relational information processes to SM (Harrigan, Soutar, et al., 2015). A summary of the above studies is provided in appendix E.

Social Media Analytics

SM data use and utilization in organizations has also been discussed in the literature on SM analytics, which primarily focuses on the processing, interpretation and use of insights from SM data to achieve organizational benefits, using SM analytics technology (Bekmamedova & Shanks, 2014, p. 3729). The unique characteristics of the SM data engenders the need for a technological solution for capturing, and processing the SM data (Davenport, 2006; Grubmüller, Götsch, et al., 2013a). Davenport (2006) analysed a range of companies regarding their use of analytical tools for customer data, and suggested that companies' success in employing customer-related data requires a significant investment in technology and analytical tools, as "*competing on analytics means competing on technology*" (p. 106). The need for analytical technology in making sense of SM data has brought about a whole industry, born in the past few years (Day, 2011), which is designed to "*help firms track and understand what is being said about them, their products, and their competitors in user-generated content and social media channels*" (Day, 2011, p. 184). Such tools are referred to as SM monitoring technology (Mayeh, Scheepers, et al., 2012) and SM analytics technology (Bekmamedova & Shanks, 2014; C. Holsapple, Hsiao, et al., 2014). SM analytics

technology refer to *“technology tools to implement social listening and measurements programs based on user-generated public content (e.g. postings, comments, conversations in online forums) with different features like reporting, dashboarding, visualization, search, event-driven alerting, and text mining”* (Grubmüller, Götsch, et al., 2013a, p. 4). There is a wide range of SM analytics technology available from different providers with different functionalities (Grubmüller, Götsch, et al., 2013a), supporting different SM platforms and different levels of data analysis (Holsapple, Hsiao, et al., 2014). These technologies have resulted in the emergence of an entire cottage industry of SM analytics tools (Zach Hofer-Shall, 2010; Hofer-Shall, Vittal, et al., 2012). The results of a Forrester report in 2012 shows leading providers of these technologies (e.g. Radian 6, Sprout Social, Visible Technologies) have annual revenues of at least \$10 million, and many of the world’s largest technology companies (e.g. SAS, IBM, Google) have launched SM analysis technologies (Hofer-Shall, Vittal, et al., 2012). The offered functionalities could include different levels of analysis (including basic, predictive or prescriptive analysis) (Grubmüller, Götsch, et al., 2013a), dashboards (Clark, Abela, et al., 2006b) and sentiment analysis (Davenport, Barth, et al., 2012). Dashboards provide *“visualized, compressed, aggregated data that can act as an antidote to information overload”* (Clark, Abela, et al., 2006b, p. 194). Sentiment analysis enable fast identification of customer sentiments about products, brand and companies (Davenport, Barth, et al., 2012), by analysing the sentiment of SM data for firms.

A range of studies investigate the application of data analysis technologies in dealing with customer data in the marketing literature (e.g. Clark, Abela, et al., 2006a, 2006b; T. Davenport, 2006; Davenport, Harris, et al., 2001; LaValle, Lesser, et al., 2011; Pauwels, Ambler, et al., 2009). Using SM analytics technology is discussed in the SM analytics literature in the context of governments and public sector (Bekkers, Edwards, et al., 2013; Khan, 2017), crisis and national disasters (Ruggiero & Vos, 2014), public unrest and security (Agarwal, Sureka, et al., 2015), as well as organizational use (which will be discussed in this section). A review of the relevant literature reveals that while this area of research is a nascent field (Gandomi & Haider, 2015; Mayeh, Scheepers, et al., 2012), it spans across several disciplines, including psychology, sociology, computer

science, mathematics, and marketing as the primary field of its application (Gandomi & Haider, 2015).

From a definition perspective, a range of definitions is provided in the literature for SM analytics. Khan (2017, p. 93) define SM analytics as the *“Art and science of extracting business insights from social media data”*, which involves collection, analysis, and interpretation of SM data. Gandomi, et al. (2015, p. 143) define SM analytics as *“the analysis of structured and unstructured data from social media channels”*. Review of literature reveals that multiple terms including **social media analytics** (e.g. Bekmamedova & Shanks, 2014; Holsapple, Hsiao, et al., 2014; Kurniawati, Shanks, et al., 2013; Yang, Li, et al., 2011; Zeng, Chen, et al., 2010), **social media monitoring** (Bekkers, Edwards, et al., 2013; Fensel, Leiter, et al., 2012; Mayeh, Scheepers, et al., 2012; Zhang & Vos, 2014), **social media intelligence** (e.g. Bose, 2008), and **social media listening** (e.g. Schweidel & Moe, 2014) are used interchangeably in the literature. For example, SM monitoring is defined as *“the continuous systematic observation and analysis of social media networks and social communities”* (Bekkers, Edwards, et al., 2013, p. 353), and *“listening, interpreting and taking action on what people are saying or otherwise conveying”* (Zhang & Vos, 2014, p. 372). Schweidel and Moe (2014) view SM listening as organizations’ efforts in gauging public opinion. Appendix F provides a number of the definitions provided for SM analytics and the interchangeable terms in the literature.

A review of the range of definitions provided in the literature (appendix F) confirms the interchangeable use of SM analytics, SM intelligence, SM monitoring, and SM listening. Mayeh (2012) acknowledge the interchange use of these terms, and suggest that all the above terms are used in the literature to refer to the practice of identifying, gathering, analysing and utilizing SM data. From the range of definitions provide in the literature, the one by Holsapple, et al. (2014) is adopted in this research. Holsapple, et al. (2014) conduct a literature review of the articles related to SM analytics published between 2008 and 2013, based on which they define SM analytics as:

“all activities related to gathering relevant social media data, analysing the gathered data, and disseminating findings as appropriate to support business activities such as

intelligence gathering, insight generation, sense making, problem recognition /opportunity detection, problem solution /opportunity exploitation, and/or decision making undertaken in response to sensed business needs" (Holsapple, Hsiao, et al., 2014, p. 4).

The positive aspects of the above definition in comparison to the other definitions provided in appendix F are as follows:

- a) it emphasizes the importance of all three stages of processing within the definition
- b) it allows for analysis of data pertaining to all stakeholders including employees or customers, hence allowing for an internal or external focus of the firms' SM analytics activities
- c) it allows for all applications, media and SM data forms in the SM analytics process
- d) the definition provides a full range of the potential outcomes of the SM data processing such as recognizing problem/opportunity situation, making sense of situations, generating insight about situations, and making relevant business decisions.

Consistent with Holsapple, et al. (2014), the term **social media analytics** will be used in the remainder of this thesis, as the most popular term.

Models of Social Media Analytics

How SM data is used within firms is discussed in the SM analytics literature, either briefly in the definitions and descriptions (e.g. Bekmamedova & Shanks, 2014), or in the models of SM data analysis (e.g. He, Shen, et al., 2015; He, Wu, et al., 2015; Mayeh, Scheepers, et al., 2012; Sinha, Subramanian, et al., 2012). Such definitions include that of Bekmamedova and Shanks (2014; 2012), which defines SM analytics as a process which involves the collection, analysis and interpretation of SM data to support effective decision-making. Khan, et al. (2017) define SM analytics to involve the collection, analysis, and interpretation of unstructured SM data. Melville, et al. (2009) suggest that businesses need to identify the relevant SM data, and detect and characterize their sentiment in order to extract and drive business insight. In their literature review of social monitoring in the crisis communications, Ruggiero, et al. (2014) described the SM monitoring process as comprising of various steps of preparation, data collection, data analysis and reporting. Fensel, et al. (2012) discuss

the stages of SM monitoring as monitor, analyse, presenting the results, respond and engage.

A number of models of SM data processing are also provided in the SM analytics literature. An early model of SM analytics was proposed based on multiple case studies in the Australian companies, using the dynamic capabilities theory (Teece, Pisano, et al., 1997), by Mayeh, et al. (2012) in a conference paper. The framework is comprised of two major components of Sensing and Seizing. Sensing is comprised of Capturing and Analysing, whereby data from relevant SM sites is gathered or “captured” using SM analysis tools and then “analysed” to generate the required intelligence. In Seizing, the framework includes “acting” on the intelligence with the aid of relevant organizational enablers, such as SM monitoring tools and organizational structure, procedure, and culture as moderating factors (Mayeh, Scheepers, et al., 2012), as shown below.

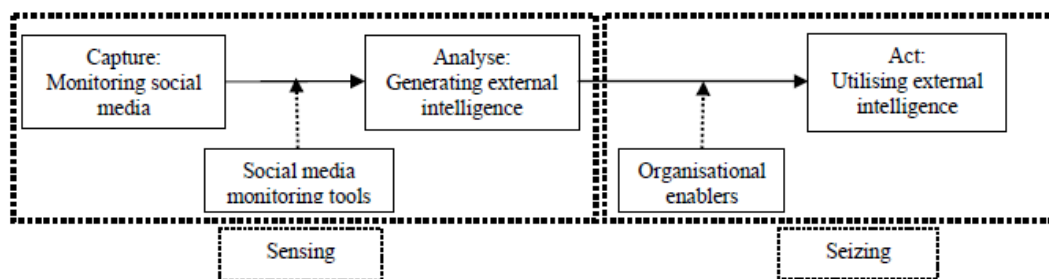


Figure 1: The proposed conceptual framework
 Presumed moderating influence
 — Presumed causal influence

Figure 6: Model of SM Data Analytics by Mayeh, et al. (2012)

Holsapple, et al. (2014) categorize the SM analytics activities in firms to three types of pre-analytics processing activities, analytics processing activities, and post processing activities. Pre-analytics processing activities include searching or scanning, monitoring, finding, or identifying, collecting, and filtering SM data. Analytics processing activities include assimilating, summarising, visualising, analysing, mining and generating insights from the data. Post-analytics processing activities include interpreting, reporting, dashboarding or alerting, and utilising the results (Holsapple, Hsiao, et al., 2014). Another model is proposed by He, et al. (2015), as a framework of SM competitive intelligence, in which SM data is grouped in two categories of SM data at rest (which includes the SM data of competitors and SM data of company’s own) and

the SM data in motion (which includes streaming data of competitors and streaming data of their own), and suggest that applying the data analytics techniques to different types of SM data could lead to actionable insight and business impact for companies (He, Shen, et al., 2015). Applying their proposed framework to the publicly available Tweeter data of the two largest retail chains in the world, Walmart and Costco, they showed that *“analyzing the overall social media mentions and sentiment trend alone is not sufficient. It is also necessary for organizations to look into individual products and identify possible opportunities and issues on individual product level to enhance their competitiveness in different areas”* (He, Shen, et al., 2015, p. 9). He et al. (2015) also propose a SM analytics framework in which user-generated SM data from sites of competing firms in an industry is continuously extracted, which could include quantitative measures (e.g., number of fans/followers or postings and posting frequency) and/or qualitative metrics (e.g., sentiment or emotion). The gathered data is prepared and processed using analytics techniques such as text mining, sentiment analysis, and social network analysis. The analysis results in SM reports which will then be viewed to identify patterns, discover issues, and compare sentiment and trends, finally resulting in recommending actions (He, Wu, et al., 2015).

3.3.3.3. Syntheses of the Literature of SM Data Use and Analytics

A summary of the activities and stages of SM use and analytics as discussed in relevant literature is provided in appendix G. In order to synthesize the activities involved in SM data use and analytics, a list of all activities have been gathered from the literature, as shown in the table below. Next, based on the descriptions and discussions provided in each article, all the stages referring to the same or similar activities have been grouped together, as follows:

- Stages referring to monitor, collect, acquisition, identify, scan, search, detect, capture, and extraction of SM data have been grouped together as **monitoring**
- Stages referring to analyse, assimilate, summarize, mine, characterise, categorise, interpret, and measuring of SM data have been grouped together as **analysing**
- Stages referring to model, presentation, dashboards, visualize, report and alert have been grouped to **reporting and presenting**

- Stages referring to utilization and interpretation have been grouped in **utilization**

SM analytics Stage	SM analytics Stage in the Literature	Source
Monitoring	Monitor	(Zeng, Chen, et al., 2010) (Yang, Li, et al., 2011) (Sinha, Subramanian, et al., 2012) (Stieglitz & Dang-Xuan, 2013) (Holsapple et al., 2014)
	Collect	(Zeng, Chen, et al., 2010) (Yang, Li, et al., 2011) (Stieglitz & Dang-Xuan, 2013) (Grubmüller, Götsch, et al., 2013b) (Khan, 2017) (Holsapple et al., 2014)
	Acquisition and recording/warehousing	(Gandomi & Haider, 2015) (Sivarajah, Kamal, et al., 2017)
	identify	(Melville, Sindhwani, et al., 2009) (Mayeh, Scheepers, et al., 2012) (Holsapple et al., 2014)
	Scan	(Holsapple et al., 2014)
	Search	(Holsapple et al., 2014)
	Detect	(Melville, Sindhwani, et al., 2009)
	Capture	(Aladwani, 2014)
	Extraction	(Aladwani, 2014) (Gandomi & Haider, 2015)
Analysing	Analyse	(Zeng, Chen, et al., 2010) (Yang, Li, et al., 2011) (Mayeh, Scheepers, et al., 2012) (Stieglitz & Dang-Xuan, 2013) (Grubmüller, Götsch, et al., 2013b) (Kurniawati et al., 2013) (Aladwani, 2014) (Khan, 2017) (Holsapple et al., 2014) (Gandomi & Haider, 2015) (Sivarajah, Kamal, et al., 2017)
	Assimilate	(Holsapple et al., 2014)
	Summarize	(Zeng, Chen, et al., 2010) (Yang, Li, et al., 2011) (Stieglitz & Dang-Xuan, 2013) (Holsapple et al., 2014)
	Mine	(Aladwani, 2014) (Holsapple et al., 2014)
	Characterise	(Melville, Sindhwani, et al., 2009)
	categorize	(Grubmüller, Götsch, et al., 2013b)
	Interpret	(Kurniawati et al., 2013) (Khan, 2017) (Sivarajah, Kamal, et al., 2017)
	Measure	(Sinha, Subramanian, et al., 2012)
Reporting and Presenting	Model	(Gandomi & Haider, 2015) (Sivarajah, Kamal, et al., 2017)
	Presentation	(Aladwani, 2014)
	Dashboard	(Holsapple et al., 2014)
	Visualize	(Zeng, Chen, et al., 2010) (Yang, Li, et al., 2011) (Stieglitz & Dang-Xuan, 2013) (Aladwani, 2014) (Holsapple et al., 2014)
	report	(Holsapple et al., 2014)
	Alert	(Holsapple et al., 2014)
Utilization	Interpret	(Holsapple et al., 2014)
	Utilize	(Holsapple et al., 2014)

As shown in the table above, this has resulted in four groups of **monitoring, analysing, reporting and presenting, and utilization**. However, the main focus of the above studies includes processing of SM data at aggregated level, and the processing of individual posts and single units of data is lacking.

Moreover, the majority of SM analytics studies focus on using SM analytics techniques and methodologies to answer other questions or providing improved methodologies for SM analytics. The result of the literature analysis of 27 SM analytics related articles by Holsapple, et al. (2014) showed that in over 66% of the articles, the SM analytics methodologies are used to answer specific research questions, about 48% of the researches are dedicated to developing analysis procedures for SM analytics, about 30% of them develop conceptual frameworks to provide better understanding of SM analytics, and only two studies actually look into describing specific SM analytics application (C. Holsapple, Hsiao, et al., 2014).

This is in line with the discussed issue in the rest of the literature, which involves lack of comprehensive insight and consensus on how SM data is used in companies, and the need for comprehensive investigation of details of SM data use in firms.

3.3.4. Synthesis of Studies of Customer Information and SM Data Use

It is important to reiterate the difference between customer data and SM data, for the purpose of this section. Customer data refers to online and offline data (Wedel & Kannan, 2016) about and from customers, which aligns to traditional market research data, as well as online customer data, which includes SM data in both forms of FGC and UGC (Lamest & Brady, 2018). Social Media data is considered a new form of customer data (Harrigan, Evers, et al., 2017; Harrigan, Soutar, et al., 2015; Malthouse, Haenlein, et al., 2013), which includes the data about and from consumers, competitors, and all SM users across SM platforms.

As discussed in section 3.3.2, a review of the literature on customer and market and information processing revealed the following seven stages to be potentially applicable to SM data use (as a form of customer and market data): **information reciprocity, monitor, analysis, integration, dissemination, utilization, and storage.**

However, the limited insight into their applicability to SM data, as well as the slight differences in the details of these stages reveals the need for further investigation of the details of SM data use in firms.

Also, as discussed in section 3.3.3, a review of the literature of SM data use and analytics reveals the four stages of **monitoring, analysing, reporting, and utilization** to be applicable to processing of SM data. However, the literature on SM data use is very limited and insights into the details of the stages involved in processing of SM data is lacking in the literature, as none of the above studies investigate the details of the activities involved in each of the stages of SM data use. Moreover, since the majority of SM data use studies belong to the SM analytics area, they mainly focus on the processing of SM data at an aggregated level, and a holistic investigation of the full process of SM data use, including the processing of individual units of data, is missing from the literature. This highlights the need for more in depth and holistic investigation of how SM data is used within companies, which is the purpose of this study.

Overall the synthesis of the related literature reveals the following five stages which form the initial model of SM data use, which is discussed and depicted below. While the purpose of this research is not to test this initial model, it will be used to guide the next stage of this research.

- SM enabled information reciprocity
- SM data scanning or monitoring
- SM data analysis and integration
- SM information dissemination or access
- SM information utilization

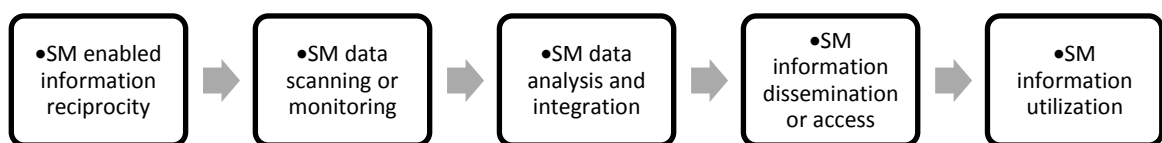


Figure 7: Initial Model of SM Data Use based on the Literature

Information reciprocity refers to the stage *“that enable customers to interact and share information with the firm and that enable the firm to respond to customers”* (Jayachandran, et al., 2005, p. 178). According to Kaplan and Haenlein (2010) due to the combination of technological, economic and social drivers surrounding SM, it provides a great potential for reciprocity between firms and their customers. In the model of Jayachandran et al. (2005) reciprocity captures the essence of companies’

systematic use of customer information in building relationship with customers, which is also applicable in the context of SM data. However, this stage is not captured in the other models of SM data processing, which poses the question of applicability of reciprocity in this form to the SM data use context.

Data scanning or monitoring is one of the stages upon which there is consensus in the literature, as it is discussed both in the customer information processing and SM data use literature. Appendices 6, 7, and 8 shows the range of different terms used in reference to this stage in different areas of literature, including intelligence generation (Kohli & Jaworski, 1990), scanning (Morgan et al, 2006), collecting (Rollins, et al. 2012), capture (Jayachandran, et al. 2005), and acquisition (Moorman, 1995), which involves *“bringing information about the external environment into the boundary of the organization”* (Moorman, 1995, p. 319), including the processes and systems used to collect customer information (Zahay & Griffin, 2002, 2004). In the context of SM data use, this stage

involves bringing the relevant SM data (about company and its customers) within the boundary of the firm.

Data analysis refers to analysing the collected data, which includes coding, sorting, and organizing the data (Clark, Abela, et al., 2006b), as well as examination and organization of data to imbue it with meaning (Morgan, Anderson, et al., 2005). Data analysis is specifically included in some models of customer information processing (e.g. Morgan, Anderson, et al., 2005; Rollins, Bellenger, et al., 2012b), and is consistent with some aspects of the information interpretation as discussed in the organizational learning literature (Huber, 1991; Sinkula, 1994; Sinkula, Baker, et al., 1997; Zahay & Griffin, 2002, 2004). Customer data analysis can be used for understanding customer preferences and market segmentation, customer value and satisfaction, the reach and impact of marketing messages, and even competition analysis (Bijmolt, Leeflang, et al., 2010).

Various categorizations of data analysis exist in the literature. Gandomi and Heidar (2015) categorize SM analysis techniques in two groups of content based analytics,

which focuses on the content of the posts, and structure based analytics, which is *“concerned with synthesizing the structural attributes of a social network and extracting intelligence from the relationships among the participating entities”* (p.142). Kleindienst et al. (2015) suggested that in order to generate business value, the analysis of SM data should be goal-oriented in 5-levels of hierarchical goals including business goals, business unit goals, critical success factors, information requirements and the required SM analysis. One of the most comprehensive categorization of SM data analysis is that of Sivarajah, et al. (2017), who discuss different types of analytics as descriptive analytics, inquisitive analytics, predictive analytics, and prescriptive, and pre-emptive analytics, whereby descriptive, predictive, and prescriptive analytics are the main types (Sivarajah, Kamal, et al., 2017). In this categorization, **descriptive analytics** is aimed at defining the current state of a business situation, in a way that developments, patterns and exceptions become evident in the form of producing standard reports, ad hoc reports, and alerts (Sivarajah, Kamal, et al., 2017). **Inquisitive analytics** probes the data to certify or reject the business propositions, using methods such as statistical analysis (Sivarajah, Kamal, et al., 2017). **Predictive analytics** is concerned with forecasting and statistical modelling to determine the future possibilities (Sivarajah, Kamal, et al., 2017). **Prescriptive analytics** is about optimization and assessing how businesses enhance their service levels while decreasing the expenses (Sivarajah, Kamal, et al., 2017). **Pre-emptive analytics** is about having the capacity to take precautionary actions on events that may undesirably influence the organizational performance, for example, identifying the possible perils and recommending mitigating strategies far ahead in time (Sivarajah, Kamal, et al., 2017, p. 266).

Information Integration: The literature suggests that companies need to make sure that they integrate customer information from the various sources, in order to develop a comprehensive account of customer relationships and to ensure that customer information is not lost (Diffley & McCole, 2015; Frow & Payne, 2009; Payne & Frow, 2005). This requirement not only entails collection of customer information across customer touch points, but it also entails integration and collation of such

information if a true understanding of customers is to be achieved (Diffley & McCole, 2015; Frow & Payne, 2009; Payne & Frow, 2005). This extends to the integration of information collected from SM with information collected via traditional CRM technologies, as well as other customer information systems (Diffley & McCole, 2015; Payne & Frow, 2005; Trainor, 2012). In Jayachandran, et al.'s (2005) model of customer information processing, **the integration of customer data** is one of the main aspects of the overall customer data processing, which refers to the integration of all customer data across all the interaction points in the company.

Information dissemination refers to processes and systems used for diffusing customer information throughout the organization (Zahay & Griffin, 2002, 2004), and the degree to which information is diffused among relevant users within an organization (Moorman, 1995). This provides customer information in a usable and timely manner to customer facing employees and strategic marketing decision-makers (Jayachandran, Sharma, et al., 2005). Information transmission is another term used in reference to the information dissemination stage, mainly by Moorman (1995), who suggests that these *"processes refer to the degree to which information is diffused among relevant users within an organization"* (p.320). The literature discusses a number of attributes of information dissemination including **formality** (Morgan, 2005; Narver and Slater 1990; Menon & Varadarajan, 1992; Moorman, 1995; Bose, 2008; Maltz & Kohli, 1996), **frequency** (Morgan, 2005; Menon & Varadarajan, 1992), and **direction flow** (Moorman, 1995; Bose, 2008; Maltz & Kohli, 1996). From a formality aspect, company communications in general can be categorized to **formal and informal**, where formal communications refer to communication which *"follows the official chain of command or is part of the communication required to do one's job"* (De Cenzo, Coulter, et al., 2013, p. 166), or any communication which takes place within the prescribed organizational work arrangements. Informal communications, on the other hand, are not defined by the organizations' structural hierarchy, and serve two general purposes of 1) permitting employees to satisfy their need for social interaction and 2) improving organization's performance *"by creating alternative, and frequently faster and more efficient, channels of communication"* (De Cenzo, Coulter,

et al., 2013, p. 166). To that end, information dissemination may occur formally or informally (Moorman, 1995; Bose, 2008; Maltz & Kohli, 1996). Formal dissemination includes all forms of organized or structured dissemination, including formal meetings, disseminated reports, policies, training sessions, research presentations (Moorman, 1995; Narver and Slater 1990). In contrast, informal dissemination occurs during interpersonal interactions, such as casual conversations, or when organizational members educate one another on related issues (Moorman, 1995, Morgan, 2005).

From a flow direction aspect, two categorizations of dissemination are discussed in the literature, whereby dissemination is categorized as horizontal and vertical (Morgan, Anderson, et al., 2005; Zahay & Griffin, 2002, 2004), and downward, upward, lateral, and diagonal (De Cenzo, Coulter, et al., 2013). In the first categorization, horizontal dissemination includes making data accessible to other departments, and vertical dissemination includes down-up or upward (to senior managers) and top-down or downward (to frontline employees) (Kohli & Jaworski, 1990; Christine. Moorman, 1995; N. Morgan, Anderson, et al., 2005; Zahay & Griffin, 2002, 2004). In the second categorization, downward communications refer to a communication which flows from managers to the employees, which is used to inform, direct, coordinate, and evaluate employees (De Cenzo, Coulter, et al., 2013). Upward communications refer to communications flowing upward from employees to managers, which is mainly used for informing purposes, and can include status and performance reports, and suggestions and feedbacks (De Cenzo, Coulter, et al., 2013). Lateral communications take place among employees on the same level in the company, and are frequently needed in the rapidly changing environment to save time and facilitate coordination, and are particularly useful in cross-functional teams (De Cenzo, Coulter, et al., 2013). Diagonal communication refers to communications which cut across work areas and organizational level, and can be beneficial in the interest of speed and efficiency (De Cenzo, Coulter, et al., 2013)

The discussed attributes of information dissemination are of particular importance in relation to their effect on the utilization of information. Prior literature, such as the result of an empirical study by Maltz and Kohli (1996) suggest that that dissemination frequency and formality has a positive impact on information utilization, in that more

formal and frequent dissemination of information is likely to enhance information utilization. In line with that, Menon and Varadarajan (1992) also suggest that *“information must be produced and disseminated to the various departments and managers in the most appropriate form to enhance use”* (p. 53).

Despite the importance of dissemination stage, the literature has not paid much attention to this aspect of SM data use in companies. The need for developing dissemination processes of SM information and intelligence has been highlighted in a number of articles (see Culnan, et al, 2010; Mayeh, 2012; Holsapple, et al. 2014; Diffley & McCole, 2015), and further investigation of the details of SM information dissemination in companies requires further investigation (Holsapple, et al. 2014).

Information Utilization: due to the importance and magnitude of the discussion around the utilization stage, it will be discussed separately in the next section.

3.3.5. Information Utilization

Information utilization has been discussed both as a stage in the information use process (Menon, 1995; Morgan, 2005; Jayachandran, 2006) and as the outcome of information use (Menon & Varadarajan, 1992; Salojärvi, et al. 2010; Mayeh, et al. 2012). Several studies have argued for the importance of information utilization as the stage where knowledge, information or intelligence are utilized by decision makers (Menon & Varadarajan, 1992; Deshpande & Zaltman, 1982; Keh et al., 2007; Menon & Varadarajan, 1992; Citrin et al., 2007), and as the only means which delivers business value (Peppard & Ward, 2004). As noted by Salojärvi et al. (2010) *“knowledge [information] utilization may be the most crucial aspect, since all the benefits of the earlier phases (i.e. acquisition and dissemination) should accumulate in the utilization process and provide tangible benefits for the firm”* (p. 1396). Information utilization has been defined, conceptualized, measured and categorized in a variety of different ways in the marketing and management literature (Menon & Varadarajan, 1992). It has also been interchangeably used with knowledge utilization, knowledge use, and research utilization (Menon & Varadarajan, 1992) (see section 3.2).

A simplified view of information utilization involves using information to guide decision making (Khan, 2017; Rollins, Bellenger, et al., 2012b), leading to *“Informed and insightful decision making”* (Khan, 2017, p. 93). Menon and Varadarajan (1992, p. 54) propose that information utilization can be defined as the extent to which information is used directly to guide behavior and make decisions, the extent to which information leads to the reduction in uncertainty in decision makers, as well as the specific changes in behavioural, cognitive, and affective areas of psychology. Holsapple, et al. (2014, p. 4) view information utilization as the final goal of SM data analytics, which includes *“support business activities such as intelligence gathering, insight generation, sense making, problem recognition/opportunity detection, problem solution/opportunity exploitation, and/or decision-making undertaken in response to sensed business needs”*. To that end, the result of the survey data collected in the Irish hotel industry by Diffley and McCole (2015) showed that SM information utilization has a positive association with customer and financial performance in companies. Morgan, et al. (2005, p. 70) note that utilization refers to how a firm uses information to understand the environment, make decisions, and deploy resources, which is the definition which will be used in this research.

The two main categorizations of information utilization types belong to Menon and Varadarajan (1992) and Moorman (1995), which include slight differences. Menon and Varadarajan (1992) classify information utilization into action-oriented use (including instrumental and symbolic use), knowledge-enhancing or conceptual use, and affective use. Menon and Varadarajan’s (1992) classification has been used by many researchers including Jayachandran, Sharma, et al. (2005) and Mayeh, et al. (Mayeh, Scheepers, et al., 2012). Moorman (1995) classifies information utilization into instrumental and conceptual use, which was later used by Morgan (2005). Other studies tend to use either of the above models, or a combination of both. For example Rollins, et al. (2012a) categorize information utilization into action-oriented, knowledge-enhancing, and symbolic.

3.3.5.1. Information Utilization Types

Based on a review of the main articles on categories of information utilization, the categorization of SM information utilization for this research are as follows:

- Action Oriented: including two types of Instrumental and symbolic utilization
- Conceptual or knowledge enhancing utilization
- Affective utilization

Action Oriented Utilization

Action-oriented information utilization refers to a direct application of information at hand (Menon and Varadarajan, 1992; Menon and Wilcox, 2000, Rollins, et al. 2012), and is demonstrated by *“changes in the user's activities, practices, or policies that can be directly linked to the findings and implications of a study”* (Menon & Varadarajan, 1992, p. 62). Morgan et al. (2005) find that action-oriented is the predominant way of utilizing customer satisfaction information in companies. Rollins, et al. (2012a, p. 759) suggest that action-oriented customer information utilization happens in customer service situations, preparing sales calls or tracking customers' payments. Action-oriented utilization is divided into two sub-categories of instrumental use and symbolic use (Menon & Varadarajan, 1992), which will be further discussed below.

Action Oriented >> Instrumental Utilization

Instrumental use refers to the *“direct application of the research findings and conclusions to solve a policy problem”* (Menon & Varadarajan, 1992, p. 54), and situations whereby the solution to a problem is dependent on the research providing the information to fill the information gaps. Instrumental utilisation has also been defined as *“the extent to which an organization directly applies market information to influence marketing strategy-related actions”* (Moorman, 1995, p. 320), which includes the use of information in making, implementing, and evaluating marketing decisions. Example of instrumental utilization includes using market research findings and recommendations in introducing a new product (Menon & Varadarajan, 1992).

Action Oriented >> Symbolic Utilization

In instrumental and conceptual types, information is utilized in a manner consistent with the intended purpose of the research. Whereas, symbolic utilization refers to situations whereby research findings are misused or distorted beyond their correct intent and used more symbolically or selectively (Menon & Varadarajan, 1992). This includes utilizing information for appearance's sake (Menon & Varadarajan, 1992; Rollins, Bellenger, et al., 2012a), and not to bring any real insights to the decision-

making (Rollins, Bellenger, et al., 2012a). Symbolic utilization is studied least in academic literature (Rollins, Bellenger, et al., 2012a), and could refer to situations whereby information is:

- used to justify actions taken for other reasons (Menon & Varadarajan, 1992, p. 56)
- used to justify decisions that already have been made (Rollins, Bellenger, et al., 2012a) to legitimize and sustain previously held dispositions (Menon & Varadarajan, 1992)
- used politically while responding to a hidden personal agenda such as self-promotion (Rollins, Bellenger, et al., 2012a)
- misused, *“by taking conclusions out of their context and disclosing only those that confirm an executive’s pre-determined position, or by oversimplifying findings, and/or by consciously ignoring any accompanying caveats or assumptions that may weaken the findings”* (Menon & Varadarajan, 1992, p. 56)

Knowledge Enhancing or Conceptual Utilization

Sometimes information is not directly applicable to a problem or relevant to a given situation. In such cases, information can be utilized in a more indirect way (Menon & Varadarajan, 1992; Rollins, Bellenger, et al., 2012a), for developing the managerial knowledge base (Menon & Varadarajan, 1992), or to provide general enlightenment (Beyer & Trice, 1982), which is known as knowledge enhancing utilization or conceptual utilization (Christine. Moorman, 1995). Conceptual utilization *“results in changes in user’s knowledge and understanding of the issue”* (Menon & Varadarajan, 1992, p. 62), and refers to *“the indirect use of information in strategy-related actions”* (Christine. Moorman, 1995, p. 320), which would result in more strategic use of customer information (Rollins, Bellenger, et al., 2012a).

Although the benefits of knowledge-enhancing information utilization can be enormous for any company, its process is subtle and in-direct, and it is difficult to identify by the users themselves (Rollins, Bellenger, et al., 2012a, p. 759). Therefore, managers may not be able to identify specific effects or directly *“observe the influence”* (Manon & Varadarajan, 1992; p.56). Conceptual utilization might include

collaborative aspects, for examples in the case of customer projects completed within a company which can provide concepts and models that help solving a customer's future problems (Rollins, Bellenger, et al., 2012a, p. 763). Other examples of conceptual utilization includes scenarios where information is utilized in the form of concepts, assumptions, models, and theories entering managers' orientations and priorities, how they formulate problems, consider solutions and the criteria of choice they apply (Menon & Varadarajan, 1992, p. 56).

Affective Utilization

Affective utilization happens when managers use information with the intent of 'feeling good' about their decision (Menon & Varadarajan, 1992, p. 62). It is also related to "*general levels of satisfaction or dissatisfaction, confidence or lack thereof, and trust or mistrust*" (Menon & Varadarajan, 1992, p. 62) related to utilization of the information. Menon and Varadarajan (1992, p. 62) propose that the overall level of satisfaction and confidence created in affective utilization could be manifested in product based (as a result of information and its implications), and process based (because the research is done or information is gained), which could happen during the conduct of the research or over a period of time thereafter (Menon & Varadarajan, 1992).

3.3.5.2. Other characteristics of Information Utilization

Research into information utilization needs to be explicit about what is and what is not being measured, through circumscribing the boundaries of and specifying the dimensions of information utilization (Menon and Varadarajan, 1992, p. 58). In doing so, the type and extent of information utilization can be evaluated along the following five dimensions:

- 1) **The individual or group responsible for decision making:** which could include the researcher, manager, individual user, or group of users, and each one could have a different perspective of what information utilization entails and how they circumscribe it to (Menon & Varadarajan, 1992).
- 2) **The domain where utilization occurs:** which refers to the functional area where the information is used as an input into decisions (Menon &

Varadarajan, 1992; Morgan, Anderson, et al., 2005), and the level at which information utilization occurs, which could include corporate, business unit, or functional level (Menon & Varadarajan, 1992), or if the information is utilized in operational or strategic type decisions (Power, 2015; Morgan, et al, 2005). Power (2015) holds that the types of decisions in which SM data and other forms of big data are utilized can be categorised to administrative (routine, recurring decisions), operational (or tactical decisions, referring to decisions which support execution of strategic decisions, and strategic decisions (referring to “*choices made by managers that are broad in scope, long term, and risky*” (p.2)). He notes that strategic decisions are normally made by senior managers, and they are unstructured and more complex than administrative or operational decisions (Power, 2015). Examples of most challenging strategic decisions for senior managers include launching a new product, entering a new market, acquiring a competitor and hiring and promoting managerial talent (Power, 2015, p. 2).

- 3) **The level of analysis for determining utilization:** the type and extent of knowledge utilization will vary, depending on the level of analysis. The level of analysis can be either a research study, a policy or strategy decision, an individual decision maker, a group of decision makers, the firm, a business unit, or a division.
- 4) **The time frame within which utilization occurs:** Information utilization can occur immediately or can take place over a period of time (Larsen, 1985, Menon and Varadarajan, 1992). Menon and Varadarajan (1992) suggest that the time frame of information utilization can be regarded as short term, medium term, or long term.
- 5) **Number of Decisions** refers to number or percentage of decisions made using the information as an input, and if information is utilized in a large or limited number of decisions (Morgan, Anderson, et al., 2005)

This brings the overall attributes of information utilization discussed in the literature to the number of decisions (Morgan, Anderson, et al., 2005), the decisions’ domain (Menon & Varadarajan, 1992; Morgan, Anderson, et al., 2005), the level of analysis

(Menon and Varadarajan, 1992); the time frame of utilization (Menon & Varadarajan, 1992), and the individual or group responsible for decision making (Menon & Varadarajan, 1992).

In the context of overall customer information utilization, the result of empirical findings by Rollins, et al. (2012a) showed that all three forms of conceptual, instrumental and symbolic utilization is present in the companies, and symbolic customer information utilization coexist in companies along action oriented and knowledge-enhancing customer information utilization. Their empirical findings also showed that short-term orientation in customer information utilization favours using customer information symbolically as *“people only want to show an effort using customer information, not truly gain insights from it”* (Rollins, Bellenger, et al., 2012a, p. 763). The results of the 37 case studies by Morgan, et al. (2005) shows that in most firms, customer satisfaction information utilization is typified by instrumental use, such as the identification of key drivers of overall satisfaction and the execution of decisions designed to manage the firm's performance. Their empirical findings also showed that most of the firms use customer satisfaction information as an input in only a limited number of decisions, most of which are in the domain of customer service and account management (Morgan, Anderson, et al., 2005). Diffley and McCole (2015) note that the information acquired from customer interactions via SM needs to be applied to provide both knowledge- enhancing and action-oriented use, and utilized to result in customer engagement and creation of long term connection between firms and their customers, improving customer relationship, and co-creation of value.

The limited studies of SM information utilization in the literature point to both operational and strategic SM information utilization. In fact, this dualistic nature of the utilization of SM data is atypical of many other documented studies in information utilization in organizations that often only manifest at the operational level (Mayeh, Scheepers, et al., 2012, Power, 2015). In this regard, the results of the empirical findings in 126 firms in Greek tourism industry by Sigala (2011) showed that these companies use the insights provided by SM data for market research, including

customer profiling, identification and targeting, as well as identification of pitfalls and faults in business and enhancing customer service.

Modoran (2015) showed that using SM for customer service and providing instant feedbacks leads to richer customer insight and increases communication transparency, which in turn enhances the overall customer service experience, customer satisfaction, and loyalty. Wan and Paris (2014) also found that utilization of SM data obtained from customer feedback through SM can improve government services. Other studies have also shown utilization of SM data in operational decisions, in areas such as employee appraisals (Orlikowski & Scott, 2011), recruitment (Roth, Bobko, et al., 2016), and reputation management (Seebach, Beck, & Denisova, 2013). Roth (2016) suggests that it is time that companies use SM data in employee appraisals and recruitment, and view SM as “*a new class of selection methods*” (p.269). Scott and Orlikowski (2011) also showed that hotels use SM data for employee assessment, as an instance of operational decisions. Seebach (2012) showed that SM data can be used for reputation management decisions.

Other studies have shown that SM data is and should be used in longer term **strategic decisions**. In her discussion paper, Quinton (2013) suggested that in the digital environment of today, SM could and should be employed as both the source and the tool for research, resulting in customer insights and valuable new knowledge from SM analytics from which companies can develop strategy. In empirical studies, the result of analysis of survey data from 357 online technology ventures by Nguyen, et al. (2015) showed that knowledge acquisition from SM contributes to brand and service innovation, which equate to instances of strategic utilization. Tuarob and Tucker (2013) illustrated that mining the publicly available SM data about products can lead to meaningful insight about the products, such as predicting new product market adoption, predicting sales which has massive potential to be utilized by decision makers and designers in companies. Their methods also showed that SM can be utilized for spreading rumours about products in advance of their release. Grubmüller et al. (2013a, 2013b) demonstrated that SM can be utilized as information and feedback source, and used by governments for future-oriented policy making.

The instances of strategic utilization of SM data is in contrast to the views of Power (2015) who holds that *“claims that new data streams can support strategic decision making by senior managers have not been demonstrated. Managers want better data and desire the “right” data at the “right time” and in the “right format” to support targeted decisions”* (p.8). This reflects the contradictory views of SM information utilization within the literature.

3.4. Conclusion

In this chapter, an overview of the literature of customer and market information use and SM data use has been provided. Section 3.2 provided the definition of core terms including the data, information, knowledge continuum, as well as the distinction between information processing, use and utilization, including justification of the choice of terminology for this research. Section 3.3 provided an overview of relevant literature, including an overview of organizational information processing theory as the theoretical backbone of relevant literature (section 3.3.1), overview and synthesis of the literature of customer and market information processing (section 3.3.2), overview and synthesis of the literature of SM data use and analytics (section 3.3.3), overall synthesis of the related literature (section 3.3.4), and overview of the literature on customer information and SM information utilization (section 3.3.5).

An illustration of the discussed issue in the literature, the sections of the thesis in which they are discussed, and how they are addressed in this research is illustrated in the diagram 3.4 below.

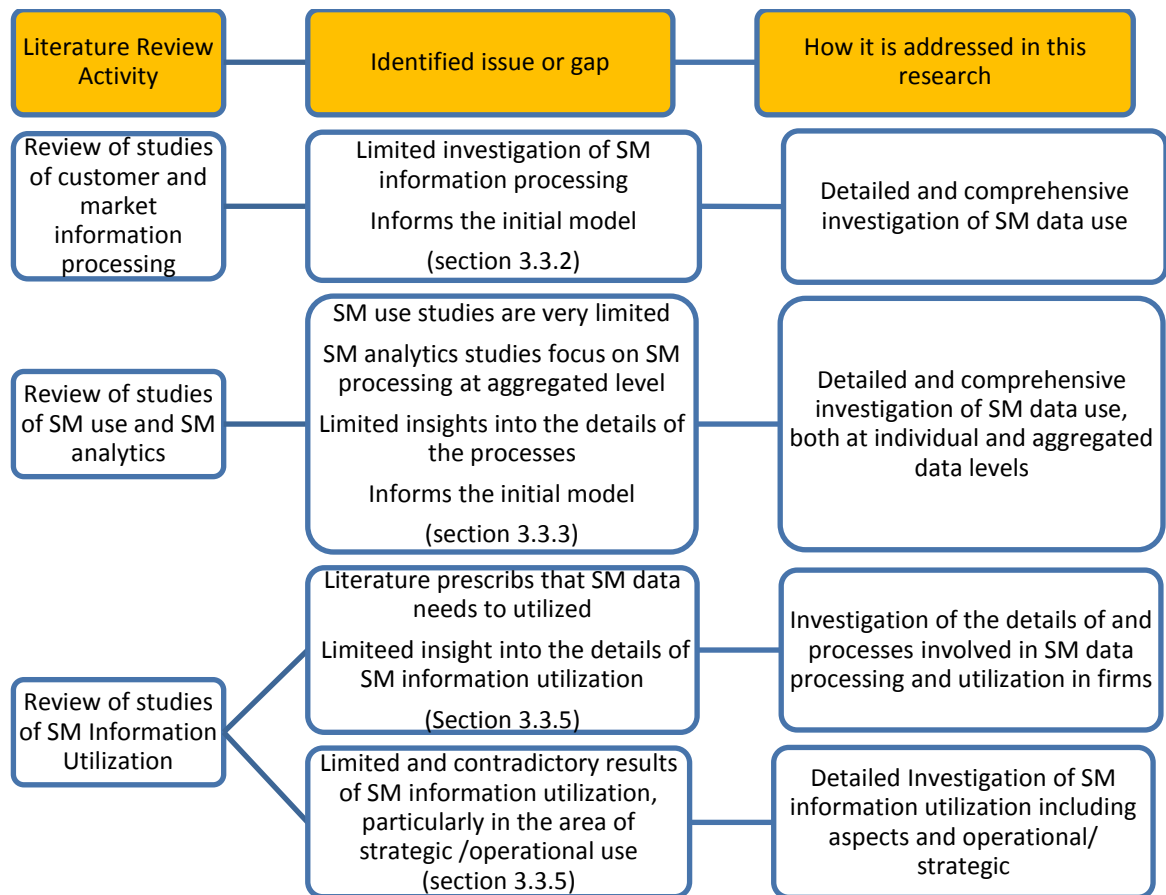


Figure 3.4: Summary of the Main Points in Chapter 3

The above issues combined with the discussions in chapter 2 form the following research questions of this research:

How is social media data used in firms?

What are the managerial challenges in using social media data?

Next chapter provides the discussion and justification of the choice of research methodology and methods adopted for this research.

Chapter 4: Methodology and Research Design

4.1. Introduction

This chapter describes the research methodology and method chosen for the investigating of the research question, and is structured as follows. First, the research approaches in marketing are discussed in section 4.2. Next, an overview of the methodological limitations of SM literature are discussed in section 4.3. Subsequently, the researcher introduces the concepts in the philosophy of research, along with presenting her personal choice of research philosophy in section 4.4. Overview of the research methodology is provided in section 4.5, followed by the justification for the choice of case study in section 4.6. Section 4.7 introduces the research design, by elaborating on the criteria for industry selection, case selection and the details of case protocol and data gathering. Section 4.8 provides an overview and justification of constructivist grounded theory data analysis method for this research, followed by the details of data analysis techniques and procedures in section 4.9. Section 4.10 outlines the different strategies used to address validity, reliability and ethical quality of the research. Finally, different views of theories and theorizing and an overview of the theorizing efforts in this study is provided in section 4.11, followed by the conclusion of this chapter in section 4.12.

4.2. Methodological Limitations of Studies of SM

The extant literature has a significant impact on the boundary of the research and the research design (Bonoma, 1985; Eisenhardt, 1989; Silverman, 2009). Miles, Huberman, et al. (2013) suggest that prior theorizing and empirical research play an important role in the design of the research, as they help to layout the focus and boundary of research, which is manifested in the research question(s) and conceptual framework(s) (both playing important roles in the research design). A review of relevant literature (as discussed in chapters 2 and 3) forms and informs the research question and initial SM data use model discussed in section 3.4, and hence inform the research design of this research as suggested by Miles, et al. (2013). Moreover, as discussed in section 2.6, a review of the extant literature on companies' use of SM reveals two methodological limitations regarding data sources, highlighting that: a) the majority of

these studies use end user data, b) the majority of studies investigate a single or limited number of SM platforms. Both of these limitations have been discussed in section 2.6, due to their relevance to the context of chapter 2.

On the other hand, review of the SM literature from a methodology perspective shows that the majority of empirical studies in this area are positivist studies, which use quantitative methods (Khang, Ki, et al., 2012; Maklan, Peppard, et al., 2015). Results of meta-analysis of 436 SM articles by Khang, et al. (2012) showed that quantitative methods (58.5%) were dominant across the disciplines. Frequently applied data analysis methods in the majority of these studies include modelling, regression tests, multivariable time-series and other statistical analysis methods (Khang, Ki, et al., 2012; Maklan, et al., 2015).

In conclusion, while positivist and quantitative studies form the majority of SM studies, the empirical studies in the area of companies' use of SM data often use end user data and investigate one or a limited number of SM platforms. These issues will inform the design of this research, as it will be discussed in the next sections.

4.3. The Philosophy of Research

Creswell (2013) suggests that each study needs a section which elaborates on the philosophical worldview proposed in the study, definitions of the basic ideas of that worldview, and justification of how the particular worldview have shaped their approach to the research (p.6). This section introduces basic belief systems and philosophical approaches which guide the research through different stages. It first introduces the elements of the research philosophy, ontological and epistemological views adopted in this research, followed by the discussion of the choice of critical realism as the best fit for this research.

Research philosophy can be thought of as the main assumptions about the way in which the researcher views the world, which will underpin the research strategy and the research methods chosen as part of that strategy (Saunders, Lewis, et al., 2011). Saunders, et al. (2011) suggest that there are no better research philosophies, but rather different ones are suited to achieve different outcomes. They suggest that in reality no practical research question can be fully answered only within the realm of

one research philosophy (Saunders, Lewis, et al., 2011). Especially in the context of qualitative research, the researcher, as a socially conditioned agent, plays an important role in the determination of the different aspects of the research, including the philosophical orientation. Denzin and Lincoln (2011) and Creswell (2013) suggest that the research process starts with the researcher, and her personal history, research preference, philosophical position, as well as her position regarding the ethical and political issues in research. It is strongly suggested that the researchers should clearly state their philosophical views and preferences at the outset of the research to help the readers in understanding her role as the researcher, as well as better understanding the research process and the steps involved (Creswell, 2013; Denzin & Lincoln, 2011; Saunders, Lewis, et al., 2011).

4.3.1. Ontology

Ontology is concerned with assumptions researchers make about the nature of reality and the way the world operates (Saunders, Lewis, et al., 2011), what the basic elements of reality are (Silverman, 2013), what the form and nature of reality is, and what is there that can be known about it (Guba & Lincoln, 1994). Saunders, et al. (2011) suggest two aspects of ontology as objectivism and subjectivism. **Objectivism** posits that the world (including social entities) exists as a *“meaningful reality external to the social actors concerned with their existence”* (p.131). Whereas **subjectivism** posits that social phenomena are created through the perceptions and consequent actions of social actors (Saunders, Lewis, et al., 2011). Subjectivism views are likely to be relativist view of the world, as opposed to an absolutist views, and they hold that reality can be perceived differently by different people. At an ontological level, this researcher believes in the subjectivism view of reality.

4.3.2. Epistemology

Epistemology is concerned with the nature and status of knowledge (Silverman, 2013), what constitutes acceptable knowledge in a field of study (Saunders, Lewis, et al., 2011), and how this knowledge is obtained (Becker & Niehaves, 2007). There is a wide range of epistemological orientations, some of which differ fundamentally and some that are merely extensions or derivations of others. For example, researchers such as

Saunders, et al. (2011) organize research philosophies into the four categories of positivism, interpretivism, realism, and pragmatism. **The view adopted for this research divides the overall philosophical views into the two categories of positivism and interpretivism, whereby interpretivism in itself is divided into realism, critical theory, and constructivism** (Bonoma, 1985; Guba & Lincoln, 1994; Chad Perry, Riege, et al., 1999; Sobh & Perry, 2006).

Positivism is based on the ontological assumption that reality is external, objective, singular and independent of social actors (Guba & Lincoln, 1994). The epistemological view in positivism is that only observable phenomena can provide credible data and facts with a focus on causality and law like generalizations. Positivist research is undertaken in a value-free way, is highly structured and mostly quantitative (Saunders, Lewis, et al., 2011). Positivism is associated with theory testing, rather than theory generation and development (Guba & Lincoln, 1994). To that end, positivism follows the principles of deductive reasoning, in which the link between empirical data and theory is established through deductive approaches, such as surveys (Creswell, 2013).

Interpretivism, emphasises the role of humans as social actors and their differences in the research settings. In interpretivist research, epistemology is based on subjective meanings and social phenomena, research is value bound with the researcher an integral part of what is being researched (Saunders, Lewis, et al., 2011), and data collection techniques are mostly qualitative. In contrast with positivism, interpretivist approaches believe that reality is socially constructed, subjective, and subject to change. Interpretivism is frequently associate with inductive approaches, and theory building research.

The underdeveloped state of knowledge in the area of investigation suggests an approach which allows for inductive theory building research (Bonoma, 1985). To that end, considering the level of theoretical development in the field of SM in marketing (see section 2.6), and the researcher's perspective on reality and knowledge, **interpretivism** is chosen as the philosophical perspective best fit for this research.

From the three interpretivist approaches, critical realism is adopted as the philosophical approach by this researcher for this research, which will be justified and discussed next.

4.3.3. Critical Realism as Philosophical Perspective

The essence of Realism is that *“what we sense is reality: that objects have an existence independent of human mind”* (Saunders, Lewis, et al., 2011, p. 136). There are two forms of realism. The first form is direct or naive realism which holds that *“what we experience through our senses portrays the world accurately”* (Saunders, Lewis, et al., 2011, p. 136). Direct or naive realists believe that the only way of experiencing the world is through our senses, and that we will not be deceived by our senses (Saunders, Lewis, et al., 2011). The second form of realism to which this study ascribes, is Critical Realism. **Critical realism** in social science is associated with the work of Roy Bhaskar who labelled this transcendental realism in opposition to empirical realism (Bhaskar, 1978, 2008, 2013), and labelled this transcendental realism focusing on the requirement of real mechanisms which can be actualized to create outcomes for the subjects of under investigation.

At an ontological level, while different strands of interpretivism tend to view reality as multiple and subjective, and positivist view tends to assume a single apprehensible reality, realism assumes an understanding of reality located between the two poles of positivism and interpretivism. Realism acknowledges that there is a reality that exists independently of our perceptions, and that a ‘real world’ or an ‘outside reality’ exists, which is external to human cognition (Healy & Perry, 2000). So critical realist researchers believe that although reality exists independently of human thoughts (realism), but is interpreted through social structures that have given rise to the phenomena which they are trying to understand, so our knowledge of reality is a result of social conditioning (Saunders, Lewis, et al., 2011). In this manner, critical realism leads to an ontological understanding where knowledge can penetrate levels of reality but never achieve a perfect comprehension. The result is a perspective where research is seen as a process of conceptual improvement, focusing on the mechanisms that give rise to observations.

Critical realism draws on distinction between three primary strata of reality: the Real, the Actual, and the Empirical (Bhaskar, 1989, 2008; Danermark, Ekström, et al., 2002). The Real is the domain of the underlying mechanism of structures that are responsible

for what can be observed but is not directly observable by humans, and includes the entities, the structures and the causal powers inherent to them. The Actual is the domain of events and processes caused by the mechanisms in the Real. The Actual is considered as a subset of the real and may or may not be observed by humans. The Empirical is understood as a subset of the actual, and where observations are made and experiences are measured or perceived by observers (Danermark, Ekström, et al., 2002).

At an epistemological level, realism places strong emphasise on the researcher's role in interpreting real world phenomenon, which is why it is closely aligned with other interpretivist approaches. To that end, the 'critical' aspect of critical realism stems from the acknowledgement that researchers' data, description and explanations are fallible, are always open to critique, and cannot be justified in an absolute sense (Scott, 2005).

Considering the above, justification of the choice of critical realism for this research is as follows:

First, critical realism is adopted for this research by the researcher, as it provides a high degree of objectivity (Healy & Perry, 2000), and hence is corresponds best with the researcher's view of the word and the purpose of this study. The researcher truly believes that there is a reality existing independently of our discovery endeavors and our knowledge or theories about it. But we perceive that reality with our senses and embark on discovering as much of that reality as we can.

Second, realism has been suggested as one of the most important paradigms for conducting qualitative research and case studies in marketing (Healy & Perry, 2000; Chad Perry, Riege, et al., 1999). In fact the 'external reality of marketing' (Sobh & Perry, 2006, p. 1196) and the importance of the external environment for marketers' (Gummesson, 2005) portray the need for the realist view in marketing (Sobh & Perry, 2006). The need for more critical realist research in marketing, coupled with the suitability of this approach for theory building research highlights its fit for the purpose of this research. Critical realism is well suited to guide an in-depth investigation of SM data use and related challenges in firms, which aims to develop a theory of the same in the field of marketing.

Third, critical realism also has a strong appeal for the investigation of research subjects related to technology and people in organizations, since it recognizes the existence of a variety of objects of knowledge such as material, conceptual, social, and psychological (Maxwell, 2012), and it portrays a complex and dynamic interaction between people and technology (Maxwell, 2012). This aspect is well aligned with the subject of this study, which is at the interplay of company managers and SM.

Finally, critical realism calls for a constant search to discover the underlying mechanisms that drive the phenomenon at the empirical level (Healy & Perry, 2000). This can be equated to the search for the underlying mechanisms which shape the patterns, outcomes and especially the context of the processes (Sminia, 2009). These are well aligned with the purpose of this study, which aims to investigate the underlying activities that shape the patterns of empirical data in SM data use in firms.

4.3.4. Abductive Research Approach

Both inductive and deductive approaches are useful and necessary in different types of research, to the extent that they have been suggested as parts of the same wheel (Zaltman, LeMasters, et al., 1982). Although interpretivist research is frequently linked to inductive approaches of research (Guba & Lincoln, 1994), conducting the process of research with critical realism can follow different forms on inference, including deduction, induction, and abduction (Danermark, Ekström, et al., 2002).

The underdeveloped state of knowledge in the area of this research calls for more inductive theory building research (Bonoma, 1985; Morgan, Anderson, et al., 2005). In this regard, Morgan, et al. (2005) hold that *“whereas inductive research in marketing has been most closely equate with the ‘interpretive’ perspective in consumer research, it has also been successfully used to enhance the understanding of key organizational issues”* (see also Kohli & Jaworski, 1990). Similar to the field of customer satisfaction information use, studied by Morgan, et al (2005), and as illustrated in section 3.3, the conceptual background for this research is spread across a number of areas, including market information use, customer information use, social media analytics, etc, which creates a challenge in identifying the conceptual origins of the theory to be used in this research.

On the other hand, the nature of SM data use requires attention to underlying concepts at different levels in both literature and fieldwork. As a result, rather than choosing one of the inductive or deductive approaches in research, and relying on field work observations or the previous literature alone, abductive approach is adopted for this research. This means that both literature and field base empirical data are used to develop a detailed and comprehensive view of how companies use SM data and the managerial challenges involved.

Through subscribing to abductive inquiry, both deductive and inductive endeavours are adhered to throughout the course of the research. It follows an inductive-deductive approach in which *“whilst drawing on our existing body of knowledge in the formulation of research questions and the clarification of concepts, is also data-driven in allowing new insights and conceptual developments to emerge during the collection and analysis of data”* (Dawson, 2003, p. 2). In this regard, the initial conceptual model driven from the literature review has been used to inform and educate the research design and methodology (see section 3.3.4).

4.4. Research Methodology

Methodology is one of the main philosophical dimensions for each research, and is concerned with the process and language of research (Creswell, 2013). Methodology is a bridge between the philosophical standpoint (ontology and epistemology) and how knowledge is produced (Nagy Hesse-Biber & Leavy, 2011). It refers to the choices we make in planning and executing a research study, including cases to choose, methods of data gathering and forms of data analysis (Silverman, 2013).

Silverman (2013) suggests that in social research, methodologies can be broadly defined as qualitative and quantitative. In 1985, Bonoma (1985) suggested that many important phenomena in the field of marketing meet the dual conditions of *“little theoretical knowledge and high complexity”* (p. 203), which makes them well suited to the application of qualitative research methods. Thirty years on, the area of SM research meets both criteria mentioned by Bonoma (1985), as well as other criteria which makes it suitable for qualitative study design, including:

- It is aiming to develop a deep understanding of SM phenomenon by talking to people as one of the main sources of information (Creswell, 2007)
- It is aiming to answer 'How' type of research questions (Walsham, 1995)
- It is a contextually-based study of socio environments where reality is perceived as a composite of multiple and subjective views (Orlikowski & Baroudi, 1991))
- It seeks evolved, in-depth explanations and descriptions of a situation or circumstance (Miles, Huberman, et al., 2013)
- It is an exploratory oriented study (Yin, 2009)
- Its objective is to build theory (Eisenhardt, 1989)

Based on the above, this research takes a qualitative approach for investigating how SM data is used in companies, and the associated managerial challenges. Discussion of Processual Analysis as an alternative methodology for this research, and why it was not chosen is provided in appendix 21.

4.5. Research Strategy: Case Study

Research strategy acts as the methodological link between the research philosophy and subsequent choice of methods to collect and analyze the data (Saunders, Lewis, et al., 2011), and can be defined as a plan of how a researcher will go about answering her or his research question (Denzin & Lincoln, 2011). Qualitative researchers are faced with a great number of choices of research strategy, as evident in examining multiple classification and typologies of qualitative research which has emerged over the years (Creswell, 2013). Some scholars such as Denzin and Lincoln have been modifying and refining their list of qualitative research approaches in the Sage Handbook of Qualitative Research for years (see Denzin and Lincoln 1994, 2005, 2011). Silverman (David. Silverman, 2013) suggests two models of qualitative research as naturalism and constructionism. Guba and Lincoln (1994) also suggest that interpretive research is *"frequently linked to inductive approaches in which researchers interact with a reality that is subjective and multiple"* (p.11), and include case study, ethnographies and grounded theory. Creswell (2013) suggests five main approaches to conducting qualitative research, which include narrative research, phenomenological research, grounded theory research, ethnographic research, and case study. Looking

closely at the categorizations and approaches provided in the literature, it is clear that some approaches of qualitative research have been appearing consistently over the years, which include case study, grounded theory, ethnography, action research.

Case study is chosen as the qualitative research approach and research strategy for this research. Creswell (2013) defines case study research as involving the study of an issue explored within a bounded system in which the investigator explores this system through detailed in depth data collection techniques involving multiple sources of information. Saunders, et al. (2011) view case study as exploration of a research topic or phenomenon within its context (p.179). Yin (2013) states that case study should be the preferred method, if a) the main research question concerns 'how' and 'why' questions, b) the researcher has little to no control over the events, and c) the focus of study is a contemporary set of events. Saunders, et al. (2012) suggests that case study is a relevant research design if the researcher wishes to gain a rich understanding of the context of the research question, as well as the processes involved. He also agrees with Yin (2013) that case study has a considerable ability to generate answers to the question 'why' as well as 'what' and 'how' questions (Saunders, Lewis, et al., 2011, p. 179). As a result, case study research is systematic, holistic, and largely interpretive research (Gummesson, 2005, p. 1), which is intended *"to give full and rich accounts of the relationships and interactions between a host of events and factors"* (Gummesson, 2005, p. 322). From a marketing perspective Bonoma (1985) suggests that case studies are particularly useful when *"a phenomenon is broad and complex, when the existing body of knowledge is insufficient to permit the posing of causal questions, and when a phenomenon cannot be studied outside the context in which it naturally occurs"* (p. 207). The area of SM data use is well aligned with the characteristics discussed above, as:

- The focus of the study is to answer 'how' questions (Saunders, Lewis, et al., 2011; Robert K Yin, 2013)
- The researcher does not intend to manipulate the behaviour of those involved in the study (Robert K Yin, 2013)
- SM data use is a contemporary phenomenon (Robert K Yin, 2013)

- The research is aimed to gain a rich and in-depth understanding of the context and processes involved in SM data use and the associated managerial challenges in companies (Bonoma, 1985; Gummesson, 2005; Miles, Huberman, et al., 2013; Saunders, Lewis, et al., 2011; Yin, 2013)

Using Yin's (2013) categorization of case studies as exploratory, explanatory and descriptive, this research fits into the **exploratory case study** category, as it aims to investigate the basic facts and settings of SM data use and the associated managerial challenges, and gain deep insight into the details of the activities and processes involved, while paying attention to the relevant context.

4.6. Research Design

Research design is the general plan of how the researcher would go about answering the research question, including the objectives driven from the research question, sources for data collection, data collection and analysis approach, as well as the discussion of ethical issues and constraints (Saunders, Lewis, et al., 2011).

This study adopted a two-stage design for the collection of empirical data, including pilot interviews, and multiple case studies. Pilot interviews were conducted between June to August 2013, and case study data collection took place between January to November 2014.

4.6.1. Phase 1: Pilot Interviews

Pilots are discussed as one of the tools in informing the contextualised case selection process (Poulis, Poulis, et al., 2013). Pettigrew (1997, p. 344) suggests that *"theoretically informed interviews pro-forma can act as an important mechanism to build structure into the data collection process"* (p.344). Poulis, et al. (2013) also note that conducting pilot cases can help studies in terms of identifying the population of case studies of interest, informing further methodological choices, including the criterion for case selection, and excluding non-fitting firms. Sampson (2004) emphasises the benefits of systematic use of pilots in qualitative research as they foreshadow the research problems and questions, highlight the possible gaps in data

collection, and highlight broader issues such as research validity, ethics, representation and the risks involved in conducting the research.

In this research, a number of pilot interviews were conducted to establish the initial boundaries of the investigation (Bonoma, 1985; Eisenhardt, 1989), discussing the best choices for case companies (Poulis, Poulis, et al., 2013), informing and structuring the data collection process (Pettigrew, 1997), as well as strengthening the interview questions and case study protocol (Majid, Othman, et al., 2017; Yin, 2013). Particularly in relation to the interview questions, the interview questions are at the heart of data collection in this research, which highlights the importance of verification of interview questions in pilot interviews. The other benefit of conducting pilot interviews was to facilitate the researcher in obtaining experience in conducting in-depth, semi-structured interviews (Majid, Othman, et al., 2017). Considering these benefits, pilot interviews have been conducted with four experts active in the SM area in Ireland.

No	Participant	Country	Data gathering technique	Duration
1.	Social Media Consultant	Ireland	Skype Interview	1.5 hour
2.	Social Media Consultant	Ireland	Interview	1.5 hours
3.	COO of a social media data analytics company	Ireland	Interview	1.5 hours
4.	CEO of a social media data analytics company	Ireland	Interview	1.5 hours

Table 6: Pilot Interviews Details

Robson (2002) defines three types of interview as structured, semi-structured and unstructured. Unstructured interviews were chosen for the pilot interviews, in which the interviewer has a general area of interest and concern, but lets the conversation develop as it progresses. In the pilot interviews, the researcher discussed the below areas with the participants and asked for their opinion:

- 1- Area of research and its application to today's companies
- 2- Research questions and research model
- 3- Participants' experience with the use and utilization of SM data and their insight
- 4- Participants experience with the managerial challenges associated with using SM data in companies
- 5- Interview questions and their suitability

6- Suitable industries and companies for this research

The results of the pilot interviews helped the researcher to clarify the boundaries and focus of the research and the choice of industry, prepare the case study protocol, and improve interview questions.

4.6.2. Phase 2: Case Studies

As discussed in section 4.7, the case study is the chosen research method for this research. This section discusses various aspects of the design of case study method for this research including choice of industry, choice of the number of cases and criteria for choosing the case companies, as well as the case study protocol.

4.6.2.1. Choice of Industry: Telecommunication

Empirical studies show different levels of SM use and engagement in firms depending on their industry (Araujo & Neijens, 2012), country (Araujo & Neijens, 2012), and non-for-profit versus for-profit nature of firms (Waters & Lemanski, 2011), which highlights the importance of choice of industry for this research. In this regard, an analysis of top global brands' usage of SM by Araujo and Neijens (2012) showed that SM presence is significantly higher for information technology and telecommunications (telecom) companies. On the other hand, the literature suggest that companies that are facing fierce competition need to rely on higher levels of engagement and focus on customers in order to survive (Rust, Moorman, et al., 2010).

The telecom industry is facing growing penetration rates across the world (ITU, 2012) in a very competitive environment, where *"the provision of mobile cellular and mobile broadband services remains very competitive in 92 percent of all markets"* (p. 3). The high level of competition and speed of change highlights the sensitivity of telecom companies to the changes that occur in the market (Belasen & Rufer, 2013; Kwayu, Lal, et al., 2016). As a result, SM is exerting influence on the organizational processes within the telecom industry, especially in the areas of marketing strategy and operations (Belasen & Rufer, 2013; Kwayu, Lal, et al., 2016).

Based on the above, the telecoms industry has been chosen due to its need for more customer focus (due to high penetration rates and high competition in the market

(Belasen & Rufer, 2013; ITU, 2012; Xevelonakis & Som, 2012)), as well as the high adoption rates of SM in the industry (Araujo & Neijens, 2012; Kwayu, Lal, et al., 2016). Besides the appropriateness of the telecoms industry for the purpose of this research, a second factor that contributed to the selection of the telecom industry was its accessibility for the researcher. In conducting qualitative research, accessibility is a crucial aspect to gain and maintain access to suitable organisations in the field (Walsham, 2006). Miles, et al. (2013, p. 29) note that convenience is a valid strategy in choosing cases in qualitative studies, which enables saving time and effort for the researcher, but the information richness and credibility of the research might suffer as a result. The researcher had been working in the Irish telecom industry for a number of years prior to start of data collection in 2014. Although the researcher was not an employee of any of the case companies at the time of data collection, her network and connections in the industry made the telecom industry more accessible for conducting this research.

4.6.2.2. Criteria for Number of Cases

Case studies can involve either single or multiple cases (Eisenhardt, 1989; Yin, 2009). Yin (2013) suggests that the purpose of analysing multiple cases is not to increase representativeness, but to enhance theory building by either producing similar or contrary results for predictable reasons (Yin, 2014; Saunders, 2012). Multiple cases have been discussed as providing a stronger base for theory building (Eisenhardt & Graebner, 2007; Yin, 2009), because *“the propositions are more deeply grounded in varied empirical evidence”* (Eisenhardt & Graebner, 2007, p. 27). Investigating multiple cases also allows for cross case analysis and comparison and the investigation of a particular phenomenon in diverse settings (Darke, Shanks, et al., 1998). This implies that in multiple case design, cases are not randomly selected, but they are *“purposefully”* chosen to provide *“information richness”* (Patton, 2001, p. 181).

In this study multiple-case design was chosen in order to increase validity and reliability, increase the robustness of findings, enhance theory building, and provide rich insight into the area of SM data use in companies. Multiple case study selection has been used in similar studies such as Morgan, et al. (2005) and Rollins (2012a).

As suggested by Yin (2014), Saunders (2012) and Eisenhardt (1989) the rationale for using multiple cases in this research focuses on whether findings can be replicated across cases, whereby cases have been carefully chosen on the basis that similar results are predicted to be produced from each one (Saunders, 2012). So multiple cases were 'carefully' (Yin, 2014; Saunders, 2012) and 'purposefully' (Patton, 2001) selected from large companies with established and active presence in SM. The reason for choosing large companies was that the literature suggests that small companies differ from big companies in their characteristics and should be studied separately (Donnelly, Simmons, et al., 2012). This suggests that a mix of companies from different sizes would not be suitable for this research. Small businesses normally have specific issues of resource constraints relating to time, expertise, finance or labour (Donnelly, Simmons, et al., 2012), and typically emphasize on operational decision making (Morgan, Thorpe, et al., 2000). Such constraints might limit how small companies use and utilize SM data.

Perry (1998) discusses the different views regarding the ideal number of cases, and suggests that the accepted range of the number of cases in multiple case design falls between two to four as the minimum and ten to fifteen as the maximum. Eisenhardt (1989) also suggests that between four and ten cases are ideal for theory building from case study. As a result, four to six cases were decided upon in order to strike the balance between the required depth and breadth for this study.

4.6.2.3. Criteria for Case Selection

Choosing correct cases to study is critical in case study design (Yin, 2014; Miles and Huberman, 2013). In contrast to positivist studies, the purpose of case study design is not to provide the grounds for statistical generalizability. Hence, applying random sampling techniques to case studies is wrong (Eisenhardt 1989), and even considered a 'fatal flaw' (Yin, 2014; p.40). Yin (2013) notes that in a multiple-case study, the selection of the cases should follow **a replication** rather than sampling logic (p.26), whereby each case provides an *"opportunity to shed empirical light about some theoretical concepts or principles"* (p.40). This view is aligned with that of purposeful sampling (Fletcher & Plakoyiannaki, 2008; Patton, 2001), which includes the selection

of information-rich cases, from which the researcher can learn a great deal about the purpose of the study. The sampling strategies used in this research mainly included literal sampling technique (Yin, 2009; p. 58), and typical cases (Miles, Huberman, et al., 2013), with a focus on selecting good (Pettigrew, 1990; Yin, 2014), and information rich cases (Patton, 2000) from the Irish telecom industry.

The number of cases which can be studied is limited by available resources as well as the available cases. To that end, Walsham (2006) suggests that whatever the style of involvement, researchers need to be able to gain and maintain good access to appropriate organizations for their fieldwork. The landscape of Irish telecom industry in 2013 included 10 players, consisting of eight companies (Eircom, Meteor, O2, Three, Vodafone, Skye, UPC, BT), and two Mobile Virtual Network Operators (Tesco mobile, Anpost Mobile). Selection from the above companies involved careful consideration of their SM presence and activities, including review of their websites for identification and review of any links to SM activities, review of companies' activities in Facebook, Twitter, Instagram, and other company owned SM sites, as well as review of related blogs, websites, and industry news to collect information in this regard.

Based on the above, selecting information rich cases for this research translated to selecting companies with an established and active presence in SM, including good engagement with their customers and other SM users, based on the following criteria:

- They had an active presence in a number of SM platforms, including at least Facebook, Twitter and company owned community, as the standard of the industry at the time of data collection
- They actively published content in SM sites to engage the audience, as well as responding to consumers' posts, showcasing engagement with consumers in SM
- They had shown a high level of achievement with regards to their SM activities, including winning SM related prizes or being praised in the relevant media outlets

A total number of five companies were initially selected and contacted for the purpose of this research. After the initial access negotiation and initial data collection stage,

case five had to be discarded as the managers in company five only granted access for two interviews, which did not provide the richness required for case study.

All the remaining four case companies had won SM awards for different aspects of their SM activities. Due to the confidentiality agreement between the researcher and the case companies, no details of the awards can be revealed in this thesis, as it would lead to their identification. However, it should be noted that all four case companies have either been in the finalist list or won an award in different categories of the Irish social media award (the Sockies - <http://sockies.ie/>) in the year prior to data collection. An overview of each company in relation to the area under investigation is provided in section 5.2.

Based on the above, this study followed an **embedded design** (Yin, 2013) in terms of its unit of analysis, whereby the focus on SM use at organizational level was adopted, but on a within-case level, the focus was narrowed down to the level of processes, stages and activities (Miles and Huberman 1994 p. 29).

4.6.2.4. Data Collection Phase

Gummesson (2005) notes that using case study research has the advantage of various data generation techniques –including in-depth interviews, observation and company documentation, whereby the researcher can address the complex and ambiguous issues in qualitative research and attain a substantial level of rigour. Silverman (2013) suggests four main sources of data in qualitative research as observation, textual analysis, interviews, and transcripts. In line with the others, Bonoma (1985) holds that case studies incorporate multiple data sources, including verbal reports (personal interviews), and un-obstructive observations as primary data sources. Other sources of information in case studies include financial data, market performance data, market and competitive data, written archives, business plans, and direct observations of management interactions (Bonoma, 1985). According to Yin (2013), sources of data in a case study research can come from different types of documentation archival records, interviews, direct observations, participant observation, and physical artefacts.

Using triangulation as the method of confirming the findings, this research undertook a number of data collection methods to ensure that a comprehensive view of the

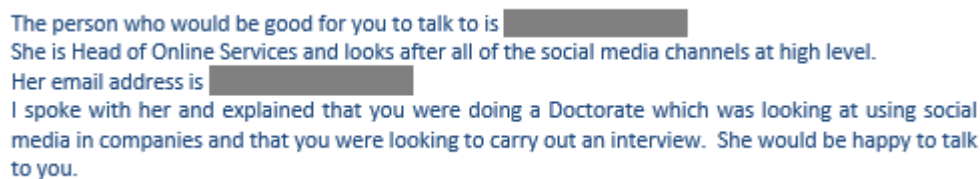
phenomenon under study was obtained. Multiple data sources in this research included personal interviews, observations, company documentation including SM reports, memos, SM guidelines, and training material, as well as data obtained from company managed online platforms including company website, SM sites, and relevant media outlets in web (based on guidelines provided by Bonoma (1985), Silverman (2013), Gummesson (2005) and Yin, (2014)), which will be discussed below. An overview of the researcher's purpose for including each of the data sources is provided in the table 7 below, details of which will be provided in the following sections.

Data Sources	Details	Purpose	Relevant section in thesis
Interviews	Interviews with key informants in each case study	Seek deep insight into the details of how SM data is used within the cases, and the associated challenges	4.6.2.5
Company Documentation	Sample reports, Org charts, company communications, SM guidelines, SM Analytics report, SM reports, any company reports including SM	Seek additional information on the details of how SM data is used within the cases, and the associated challenges	4.6.2.6
Observation	The researcher visited the case companies and made observations regarding how they use SM data, and how the teams operate	to obtain a holistic insight into the details of the practices involved in using SM data in the case companies, as well as the associated challenges	4.6.2.7
Company pages in SM platforms	SM content in companies' SM pages, Sample SM Content	Seeking additional details on companies' activities in SM including activity stats , mainly used for exhibition purposes	4.6.2.8
Company website, Consultancy company website	Content related to company's social media activities in the case companies' website or their consultancy companies' websites	Seeking additional details on companies' activities in SM, including activity stats, as well as any other relevant information	4.6.2.8
Follow up Interviews	Follow up emails, phone call, and face to face interviews	Follow up discussions with the interviewees to provide clarity and depth of information where required within the body of collected data	4.6.2.9

Table 7: Overview of Data Sources and Researcher's Purpose for Inclusion of Each

4.6.2.5. Interviews >> Interviewee Selection

Interviewee selection was done using a combination of key informant, and snowballing, strategies, with the help of an opportunistic strategy to a lesser degree at the outset. At the beginning, the interviewees in some of the case companies were selected based on a partially opportunistic strategy, which is using personal connections and one's professional organizational networks in the research (as defined by Baskerville & Pries-Heje, 2004). However, the main strategy in choosing the interviewees included **key informant strategy**, as suggested by Marshal (1996) whereby the interviewees were chosen based on the relevance of their role and expertise to the research question. **Snowballing or chian** strategy was also used, in the sense that each one of the interviewees were asked who else they would nominate or suggest in their organization to be interviewed. Figure below shows an email response from one of the interviewees in company C, regarding his suggestion for another interview.



The person who would be good for you to talk to is [redacted]
She is Head of Online Services and looks after all of the social media channels at high level.
Her email address is [redacted]
I spoke with her and explained that you were doing a Doctorate which was looking at using social media in companies and that you were looking to carry out an interview. She would be happy to talk to you.

Figure 8: Sample email from an Interviewee

The combination of the above techniques allowed for the selection of the 22 interviewees across the 4 cases, who have been selected from SM managers, SM team leads, SM marketing managers, online and digital managers, and heads of marketing in the case companies, all of whom are involved with case companies' SM activities. Table 7 illustrates the list of interviewees in each case.

No	Company	Role	Reference in the thesis	Length of Interview
1.	A	Social Media Manager	(CAI1)	1.5 hour
2.	A	Digital Marketing Manager	(CAI2)	1.5 hour
3.	A	Senior Data Analyst	(CAI3)	1.5 hour
4.	A	Social Media Care Team Lead	(CAI4)	1.5 hour
5.	A	Head of Digital Communications	(CAI5)	2 hours
6.	B	Digital Marketing Manager	(CBI1)	1.5 hour
7.	B	Social Media Manager	(CBI2)	1.5 hour
8.	B	Social CRM Manager	(CBI3)	1.5 hour
9.	B	Social CRM Team Lead	(CBI4)	1.5 hour
10.	B	Data Analytics Manager	(CBI5)	1.5 hour
11.	C	Head of Online Services	(CCI1)	1.5 hour
12.	C	Social Media Manager	(CCI2)	1.5 hour
13.	C	Social Media Customer Service Manager	(CCI3)	1.5 hour
14.	C	Marketing Communications Manager	(CCI4)	1.5 hour
15.	C	Social Media Team Lead	(CCI5)	1 hour
16.	C	Social Media Content Manager	(CCI6)	1 hour
17.	D	Head of Online Services	(CDI1)	1.5 hour
18.	D	Social Media Manager	(CDI2)	1.5 hour
19.	D	Social Media Customer Service Manager	(CDI3)	1.5 hour
20.	D	Marketing Communications Manager	(CDI4)	1.5 hour
21.	D	Head of Digital Marketing	(CDI5)	1 hour
22.	D	Social Media Team Lead	(CDI6)	1 hour

Table 8: List of Interviewees for each Case Company

In the following chapters, the references in the 4th column of table 8 will be used to refer to the data from each of the interviews in the format of CXIY, whereby X refers to the case company (either A, B, C, or D), I stands for Interviewee, and Y refers to the interviewee number (1 to 6). So CAI1 refers to the data from interview 1 in company A.

4.6.2.6. Company Documentation

Using company documentation as a data source provides a number of benefits, including their unobtrusive nature and the exactness that stands in contrast to the inaccuracies that are potentially inherent within interviewee expressions (Yin, 2013; p. 86). A number of company documentation were used as data source, including SM reports, SM guidelines and training material. Full list of all the company documentations used as data source for each case company is provided in the table below.

	Data Source	Reference in the thesis
Company A	Company Annual Report on Digital Activities	CAS1
	Behind the scenes of one of ad campaigns (including SM) in Agency website	CAS2
	Report on SM awards won in agency website 1	CAS3
	Case study on company in the Journal of Marketing and Psychology	CAS4
	Comparison of Irish Telecoms in socialmedia.ie	CAS5
	Company org chart	CAS6
	Company SM manager's personal website	CAS7
	Company website on SM	CAS8
	Content calendar sample	CAS9
	Case study on company in agency website	CAS10
	SM Analysis tool website	CAS11
	Company website on the SM team	CAS12
	Report on SM activities in agency website	CAS13
	Report on company SM activities in Irish Internet Association website	CAS14
	Report on company SM activities by one of the known bloggers in Ireland	CAS15
	Report on SM activities of company in Silicon Republic.com	CAS16
	Independent case study of SM activities	CAS17
	Company SM flowchart sample	CAS18
	Information gathered on Radian 6	CAS19
	Independent agency report on SM activities	CAS20
	Self-reported Job Description of a number of SM team	CAS21
Company B	Irish Social Media awards website	CBS1
	Irish Social Media awards website	CBS2
	Expert blog 1 in company website	CBS3
	Expert blog 2 in company website	CBS4
	Digital Marketing Manager self-reported Job spec	CBS5
	Digital strategy and engagement manager self-reported Job spec	CBS6
	Newspaper article about the SM activities of the company	CBS7
	The Journal.ie article about the SM activities of the company	CBS8
	Self-reported job description of Loyalty and Retention manager	CBS9
	Self-reported Job description of Social CRM Executive 1	CBS10

	Data Source	Reference in the thesis
	Self-reported Job description of Social CRM Executive 2	CBS11
	Self-reported Job description of Social CRM Executive 3	CBS12
	Self-reported Job description of Social CRM Executive 4	CBS13
	Self-reported Job description of Social CRM Executive 5	CBS14
	Self-reported Job description of Social CRM Executive 6	CBS15
	Self-reported Job description of Social Media CRM Manager	CBS16
	Self-reported Job description of Social CRM Executive 7	CBS17
	Information gathered on Radian 6	CBS18
Company C	Company Social Media Report sample 1	CCS1
	Company Social Media Report sample 2	CCS2
	Company Social Media Report sample 3	CCS3
	Company Social Media Report sample 4	CCS4
	Company Social Media Strategy Report by the SM agency	CCS5
	Self-reported Job description of Social CRM Executive 1	CCS6
	Self-reported Job description of digital content manager	CCS7
	Self-reported Job description of Social CRM Executive 2	CCS8
	Self-reported Job description of Social CRM Executive 3	CCS9
	Self-reported Job description of Social Media manager	CCS10
	Self-reported Job description of digital content manager	CCS11
	Sprout Social website	CCS12
	Information gathered on Sprout Social	CCS13
	Company Internal guidelines on social media 1	CCS14
	Interview with social media strategist in company's internal SM section	CCS15
	Irish social media awards website content	CCS16
	Company internal guidelines on social media 2	CCS17
Company D	Company Social Media monthly report sample	CDS1
	Self-reported Job description of Social Media Executive 1	CDS2
	Self-reported Job description of Social Media Executive 2	CDS3
	Self-reported Job description of SM community manager	CDS4
	Self-reported Job description of Social Media Executive 3	CDS5
	Self-reported Job description of SM content manager	CDS6
	Self-reported Job description of Social Media Executive 4	CDS7
	Self-reported Job description of Social Media Executive 5	CDS8
	Self-reported Job description of Social Media Manager	CDS9
	Self-reported Job description of content manager	CDS10
	Sprout Social website	CDS11
	Information gathered on Sprout Social	CDS12
	Irish social media awards website content	CDS13
	Company internal guidelines on social media	CDS14

Table 9: Company Documentation List for Each of the Case Companies

In the following chapters, the references in the 4th column of table 9 will be used to refer to the data from company documentation listed above in the format of CXSY, whereby X refers to the case company (either A, B, C, or D), S stands for source, and Y

refers to the source number. So, CAS12 refers to the data from source 12 of company A, as per the above table.

4.6.2.7. Observation

Charmaz (2014) suggests that researchers should code their observation of the setting, scene, and participants, as well as the interviews, as *“revealing data resides in such observations”* (p.136). The researcher’s observations can be useful to cover events in real-time as well as the context in which they occur (Yin, 2013; p. 86). In order to obtain a holistic impression of the practices under review, the researcher visited each of the case companies and made observations regarding how they use SM data. In some case companies, the researcher was allowed to observe the SM team in action and have a conversation with some of them regarding their activities. Where possible, the SM tools used by the companies were observed and the researcher was briefly guided through how the SM team use the tools.

4.6.2.8. Other Sources of Data

Other sources of data across the case companies include data collected from company managed online platforms, including company website, sample content and information in company SM sites, and relevant information in other SM sites, as listed in the table 10. The only exception to the above list is the use of consultancy company website was not applicable to case A, as they do not use a SM consultancy firm.

Data Sources	Details
Sample Report	SM Analytics report, SM reports, any company reports including SM
Sample SM Content	SM content for social media team members, developed to be posted to company’s website
Company website	Content related to company’s social media activities
Company pages in SM platforms	Used for activity stats, as well as sample content for exhibition purposes, including Facebook, Twitter, company Forum, and Boards.ie*
Consultancy company website	Reviewed for any relevant information
SM Analysis Technology details on web	Radian 6 for companies A and B Sprout Social for company C and D
Field Notes	Interviewee notes written by the researcher during and after each interview sessions (immediately or afterwards)

Data Sources	Details
Analytical memos	Researchers' reflections, interpretations and notes during the process of data analysis

Table 10: Other Sources of Data for Each Case Company

*Boards.ie is the largest general topic discussion board in Ireland, which covers a wide variety of topics. According to the company stats, at the time of data collection it had over 615000 accounts, about 2,500,000 threads, as well as more than 36 million posts.

In order to provide an overview of the ratio of data driven from each of data source types, table below lists the number of data nodes captured in the NVivo software for interviews, versus other sources of data for each case company. It shows that the predominant data source across the case companies was interviews, in the ratio of almost 1 to 10. All other data sources were therefore used to corroborate information from the interviews.

Case	No of interviews	No of Data Nodes from Interviews	No of Other Data Sources	No of Data Nodes from Other Data Sources
Case A	5	2748	21	242
Case B	5	2524	18	174
Case C	6	2881	17	258
Case D	6	3488	14	183

Table 10: Number of Data Nodes Driven from Data Sources for case companies

4.6.2.9. Follow up Data Collection

During the follow up data collection phase, a number of interviewees were contacted by email, and phone to seek clarification on some of the themes emerged from the data and also to collect more data in some areas of the research.

Out of the 22 original interviewees, nine had changed jobs (based on their LinkedIn profiles) and moved to other positions or other companies, which manifests the high turnaround of the SM related jobs in the industry. The remaining interviewees have been contacted by email and asked for short meetings or conversations over the phone. Follow up emails were sent to the interviewees in the case of no response within 2 weeks of the original email. Maximum of three emails have been sent to each of the interviewees regarding the follow up data collection phase.

The follow up phase resulted in one face to face meeting (e.g. with CA15), multiple phone conversations, as well as multiple emails, which led to provision of additional data in the areas that data saturation had not reached, as well as clarification of multiple points in the data and emerging patterns. An example of an email invitation for follow up data collection is shown in appendix H4.

4.6.2.10. Presenting the results to selected interviewees

After the data analysis stage of the research, subsequent meetings were held with two of the interviewees to present the results of the research. In these meetings, the findings of the research were presented to the participants and feedback was received from them in order to confirm the internal credibility of the data analysis (Guba & Lincoln, 1994).

4.6.3. Designing a Case Study Protocol

The case study protocol contains the instruments to be used in the case study, as well as the procedures and general rules to be followed in using the protocol (Yin, 2013). Yin (2013, p. 84) discusses the importance of case study protocol for multiple case study design by suggesting that *“having a case study protocol is desirable under all circumstances, but it is essential if you are doing a multiple case study”*. Case study protocol increases the reliability of case study research, and it helps the researcher in carrying out the data collection in each single case (Yin, 2013). Yin (2013) suggest that the only commonality between a case study protocol and a survey questionnaire is that they are both directed at a single data point. In other words, the case protocol is always directed at a single case, even if the research is following a multiple case design (Yin, 2013). In summary, the researcher considers the case study protocol as a crucial tool to improve the rigour and quality of the investigation of real world events, and has therefore developed the following outline which forms the structure of the case study protocol for each individual case study.

4.6.3.1. Introduction to Case Study through Introductory Letter

An introductory email and letter outlining the purpose of the research and its context was sent to all participants via email, which is illustrated in appendix H3. The main interview questions were provided upon request prior to each interview.

4.6.3.2. Preparation Prior to Site Visits

As a means of data triangulation, additional material related to case companies' use of SM sites and data was reviewed prior to each site visits. This material included publicly available data on company history and structure, as well as companies' website and SM sites used by each case companies, details of which is illustrated in appendices 15 and 16.

4.6.4. Interviews as a source of data collection

In-depth interviews should provide the means to understand why human actors act as they do, and to enable the researcher to understand the meaning and significance humans give to their actions (Harrigan & Hulbert, 2011). Robson (2002) defines three types of interview as structured, semi-structured and un-structured. Semi-structured interviews were chosen for the case study interviews, in which the researcher provides predetermined questions, but the order can be modified based upon the interviewer's perception of what seems most appropriate (Robson, 2002).

4.6.4.1. Interviews Questions

The general strategy in the interviews was first to let the interviewees describe how SM data is used in their company and the associated challenges, in their own words. The interviewees were then specifically asked about the stages emerged as the result of the literature review and shown in the researcher's initial conceptual model (page 80), as discussed in sections 3.3.4 and 3.3.5.

The list of interview areas and questions used to guide the interviews, as well as examples of relevant literature and areas in the thesis where they are extensively discussed is provided in the table 11.

Area	Questions	Thesis Area	Examples of Related Articles
Area A	The definition of social media	Section 2.3.1	(Alalwan, Rana, et al., 2017) (Durkin, Mulholland, et al., 2015) (Christian Fuchs, 2017) (Ngai, Moon, et al., 2015) (Plume, Dwivedi, et al., 2016) (Constantinides & Fountain, 2008; DesAutels, 2011; Kaplan & Haenlein, 2010; Parameswaran & Whinston, 2007)
	How would you define Social Media? What similar/interchangeable terms are used in your business in this context? Do you think we need better definitions of Social Media? why?		
Area B	Overall roles and responsibilities		Initial interview question with the aim of establishing context
	Can you please walk me through your role and the responsibilities that you have in general and on a day to day basis in relation to social media?		
Area C	Company SM Platforms, History and Context		Initial interview question with the aim of establishing context
	What SM platforms are used in your company? And by which departments? Can you tell me a bit about the history of SM in this company? Which department/who is overall in charge of SM management / making decision regarding how you use SM?		
Area D	Overall SM data use and processing	Section 3.3.4	(Gallaugher & Ransbotham, 2010) (Larson & Watson, 2011) (Chen, Chiang, et al., 2012) (Kane, 2014) (Faase, Helms, et al., 2011) (Greenberg, 2010) (Moorman, 2011) (Sigala, 2011) (Davenport, Barth, et al., 2012) (McAfee & Brynjolfsson, 2012)
	Can you please explain what you use SM for in this company? Can you please explain how you use SM in this company and what happens to the SM data here? Can you please provide examples, responsibilities, timings, related process?		
Area E	Initial Contact	Section 3.3.4	(Jayachandran et al., 2005) (Kaplan & Haenlein, 2010) (Harrigan, et al, 2014)
	What is the first stage of engagement between the consumers and your company via SM? What are your main challenges in this stage?		
Area F	SM Data Scanning & Capture	Section 3.3.4	(Kohli & Jaworski, 1990) (Rollins, et al. 2012) (Jayachandran, et al. 2005) (Moorman, 1995) (Zahay & Griffin, 2002)
	How is SM data scanned in your company? Who/which department is responsible? Frequency? Process? What data? What tools? Where is it captured? What are your main challenges in SM data scanning and capture?		
Area G	SM data Analysis & Integration	Section 3.3.4	(Clark, Abela, et al., 2006b) (Morgan, Anderson, et al., 2005) (Rollins, Bellenger, et al., 2012) (Huber, 1991) (Sinkula, 1994) (Sinkula, Baker, et al., 1997) (Zahay & Griffin, 2002) (Gandomi and Heidari, 2015) (Sivarajah, et al., 2017) (Diffley & McCole, 2015) (Payne & Frow, 2005)
	How is SM data analysis performed in your company? Who/which department is responsible? Which tools are used? What type of patterns are examined? Frequency? Processes Are the results integrated to any other information system or data set? What are the main challenges in this stage?		

Area	Questions	Thesis Area	Examples of Related Articles
Area H	SM Report Generation and information Dissemination	Section 3.3.4	(Morgan, et al. 2005) (Narver & Slater 1990) (Menon & Varadarajan, 1992) (Moorman, 1995) (Bose, 2008) (Maltz & Kohli, 1996)
	How is SM data disseminated in your company? Who/which department is responsible? Which tools are used (e.g. Dashboard, reports)? Frequency? Processes Who is it disseminated to? How can SM reports be accesses? What are your main challenges at this stage?		
Area I	SM Information Utilization	Section 3.3.5	(Menon, 1995; Morgan, 2005; Jayachandran, 2006) (Menon & Varadarajan, 1992) (Deshpande & Zaltman, 1982) (Keh et al., 2007) (Citrin et al., 2007) (Khan, 2017) (Rollins, Bellenger, et al., 2012b) (Diffley and McCole, 2015)
	How is SM information used in decision making in your company? • What type/domain of decisions SM data feed into? • In what types of decisions are SM data a routine input? • In what types of decisions are SM data an infrequent input? • How important are SM data for these decisions? • Who/which department use SM data in their decision making? • Does it follow a process? formal or informal? • Frequency and time frame of decisions Examples of above decisions? What are your main challenges/area of improvement in this stage?		

Table 11: Case Interview Questions, used to guide the semi-structured interviews

The above questions were presented to the interviewees in the format of PowerPoint slides. In answering question I, after recording the participants' initial response, the researcher presented slides of the marketing mix and marketing framework, to help the participant think about any instances of utilization of SM data in any of the areas shown in the slides.

4.6.4.2. Interview Recording and Transcribing

Upon agreement with the interviewees, interviews were recorded and transcribed (Yin, 2013). Transcribing entails reproducing the interviews in written (word-processed) format using interviewees' actual words (Saunders, Lewis, et al., 2011, p. 550). Also, according to Saunders, et al. (2011) and Yin (2013), the qualitative researcher is not only interested in what people say, but also the way and how they say it. So notes of the interviewees body language, tone of voice, or any discernible

relate information have also been captured in the researcher's notes and filed notes (appendix I).

4.6.5. Use of Case Study Database

Yin (2014) suggest that researchers need to develop a case study database to organize the case material and improve the reliability of research. Case study database provides a single repository of all case material which can be easily referenced in relation to and in support of the research findings. The case study database consists of two separate collections of: 1) the data and evidentiary base documentation and, 2) the researcher's report, whether in article, report, book, or oral form (Yin, 2014; p.123). Accordingly, the case study database for this research was organized in the two following collections for this research.

NVivo Case Database

For the case data and evidentiary base documentation, the qualitative data analysis software, NVivo, was used to manage the relevant documentation and aid the analysis. NVivo was chosen due to the advantages it offers in managing the case databases, performing data collection and carrying out the coding of a large contextual dataset, including increased manageability of large contextual data sets, protection of data via the ability to back up electronic datasets, ability to code various forms of data simultaneously, portability of dataset, enabling version control of data extracts and datasets. NVivo is very useful in management of large quantities of data and it is considered an accepted practice in qualitative research (Onwuegbuzie & Leech, 2011; Atherton & Elsmore, 2007). NVivo enables the researcher to collect, organise and analyse content from empirical data sources, and provides a central repository for qualitative research data and facilitates structuring and exploration of the data. It is the leading software for analysing unstructured data, with over 1.5 million users in 150 countries. An NVivo database was established for each case. This meant that each of the four cases had their own unique contextual dataset setup in separate folders in NVivo. Interviews, company reports and other sources of empirical data have been imported for each case which resulted in the total of 92 documents, as per the lists and summary in appendix 15.

Folder Structure Database

The other case material has been organized using a hierarchical folder structure in Microsoft Windows comprising of four first order folders containing:

(1) Case Protocol: including documents relating to the conduct of the case including the research protocol and interview details

(2) Fieldwork documentations: including interview presentations, audio recordings, interview transcripts, case notes, respondent communication.

4.7. Data Analysis and Coding

Data analysis and coding has been discussed as one of the most challenging parts in the overall qualitative research process (Miles, Huberman, et al., 2013; Saldaña, 2013). In reference to the challenges of analysing and interpreting the qualitative data in qualitative research in marketing, Gummesson (2005) uses the metaphor of ‘Achilles heel’, highlighting its importance and challenging nature. Miles and Huberman (2013) hold that the craft of the qualitative researchers is the explicit, systematic methods used in data analysis, which need to be credible, dependable, and replicable in qualitative terms. Different methods of qualitative data analysis involve a linear and iterative process (Langley, 1999; Miles, Huberman, et al., 2013; Yin, 2013), which start with a close inspection of a sample of data about a specific issue, which is used to *“discover, explore, and generate an increasingly refined conceptual description of the phenomenon”* (Silverman, 2015, p. 276).

In the next section, suitability of Grounded Theory (GT) data analysis techniques is argued as the chosen method of data analysis for this research, rather than a methodology to drive the entire research process.

4.7.1. Constructivist Approach in Grounded Theory

This section first introduces GT as an overarching research methodology, as well as the different schools of thought within GT, which leads to the choice of constructivist GT as the closest fit for this research both at a philosophical and methodological levels. It

will then proceed to discuss the details of GT data analysis method and how it has been conducted in this research.

As one of the most influential paradigms for the discovery of theory from empirical data (Denzin & Lincoln, 2011; Wagner, Lukassen, et al., 2010), Grounded theory (GT), in its origins, has been developed as a research methodology as *“the discovery of theory from data – systematically obtained and analyzed in social research”* (Glaser & Strauss, 1967, p. 1). GT emerged from the work of sociologists Barney G. Glaser and Anslem L. Strauss (Glaser & Strauss, 1967) in their work on the experience of death in hospitals in early 1960s in the US, in which they advocated for discovering and developing theories from data which is systematically obtained from research, rather than deducting testable hypothesis from existing theories (Charmaz, 2006; Glaser & Strauss, 1967). Over the years, the disagreements among the pioneers and their close colleagues have engendered a number of approaches within GT, including classic or positivist GT and constructivist GT. The positivist classic GT assumes that data exists objectively in the world, which researchers would find and discover theory from through careful application of and adherence to GT steps, while remaining distant from the research participants (Glaser & Strauss, 1967; Mills, Bonner, et al., 2006; Strauss & Corbin, 1994; Strauss & Corbin, 1990).

In contrast to the positivist stream, the constructivist stream of GT, which is developed in the work of Charmaz (2014) takes a more interpretivist standpoint. As she notes: *“I assume that neither data nor theories are discovered. Rather, we are part of the world we study and the data we collect. We structure our grounded theories through our past and present involvements and interactions with people, perspectives, and research practices”* (p.10). This approach of GT is congruent with the philosophical standpoint of this researcher and fits to be used for the data analysis method in this research, for the following reasons: First, from an epistemological standpoint Charmaz’s view that any theoretical rendering offers a portrayal of the studied world and not an exact picture of it, is in line with the critical realist stand of this researcher. That said, it differs from Charmaz (2014) in believing in the existence of multiple or one single external reality, but agrees with her on our partial and imperfect discovery of the world.

A second reason lies in the difference in the mode of inference between the different GT approaches. The classic approach of GT (Glaser & Strauss, 1967) is based on a purely inductive approach of theory building, with emphasizes on delaying literature review to the final stages of research and immersing the researcher in data and data only. However, the constructivist approach of GT ascribes to abductive inference, through which, as previously outlines, recognizes that the resulting theory is an interpretation of researchers who cannot disavow their prior knowledge and theoretical preconceptions (Mills et al., 2006, Charmaz, 2008). Charmaz (2006) outlines that abductive reasoning entails *“considering all possible theoretical explanations for the data, forming hypotheses for each possible explanation, checking them empirically by examining data, and pursuing the most plausible explanation”* (p.104).

The abductive inference is well aligned with the strong process elements of this research as well, as noted by Charmaz (2006; p.46) *“Grounded theory coding fosters studying actions and processes”*.

4.7.2. Grounded Theory as a Method of Data Analysis

GT has been used in a large number of empirical studies in different disciplines, to the extent that it *“has become a general qualitative method that cuts across disciplines and professions”* (Charmaz, 2008, p. 461). What varies among the different studies using GT is the degree of its usage, which varies from using GT as a methodology to guide the entire research process, to using it as a data analysis method only (Denzin & Lincoln, 2011). The structured, systematic and generative method of data analysis in GT, known as **the GT data analysis method** (Langley, 1999; Silverman, 2015) offers *“a logically consistent set of data collection and analysis procedures aimed to develop theory”* (Charmaz, 2001 p. 245). GT data analysis method is suggested as one of the three main types of qualitative data analysis methods proposed by Silverman(2015). The GT data analysis method also forms one of the seven data analysis strategies of process related data, as suggested by Langley (1999).

Using GT as a method for data analysis is well established in disciplines such as information systems (IS), to the extent that GT is considered to be often confused as

just a coding method in the IS research (Bryant & Charmaz, 2007; Suddaby, 2006). The result of an analysis of 76 papers which claimed to have followed GT, published in the IS journals, showed that 34 out of the 76 papers had used GT as a method for data analysis (Matavire & Brown, 2013). Another review of 27 exemplary IS articles claiming to have drawn upon GT, found that 15 out of 27 articles pursued GT as a data analysis method, rather than the full methodology for generating theories (Müller & Olbrich, 2011).

In marketing, Gummesson (2005) notes that GT strategies and techniques are especially useful for a complex and dynamic domain like marketing, and they will greatly assist the much needed theory development in this domain. However, GT is not widely used in the marketing discipline as a methodology, nor as a data analysis method (Goulding, 2005; Evert Gummesson, 2005), and as stated its *“concepts and guidelines are clearly underused in marketing”* (p.323). A number of studies in marketing have used GT as a research methodology, including the research by Goulding (Goulding, 1999, 2000, 2005) into consumer experiences at heritage sites and museums (for more examples of GT research in marketing see Johnson, 2015; S. M. Wagner, Lukassen, et al., 2010). But using GT data analysis methods in the marketing literature is scarce.

Considering the above, the GT data analysis methods is chosen for the purpose of this research for the following reasons:

First, GT data analysis method focuses on theory building as the focus of overall GT methodology, in which *“researchers develop inductive theoretical analyses from their collected data”* (Charmaz, Bryant, et al., 2011).

Second, GT as a methodology is an extensive and systematic general methodology, whereby *“actions and concepts can be interrelated with other actions and concepts”* (Fernández, 2004, p. 43). As a result, GT data analysis methods are well suited for studying actions and processes (Charmaz, 2014), which makes it well suited for the purpose of this study.

Third, GT is well congruent with and increasing used in case studies (Fernández, 2004; Müller & Olbrich, 2011), as it involves actual practices, meanings and interpretations ascribed by practitioners to the phenomena under study (Fernández, 2004, Charmaz,

2006), and it provides specific and rigorous methods and guidelines for theory generation in case studies (Charmaz, 2014). This shows the methodological alignment of GT with this research. At a data analysis level, Yin (2013) notes that the analytical procedures used in GT are relevant to and can be used to guide all case studies (p.138), which shows their suitability for the design of this research.

Fourth, in GT nothing happens in a vacuum and everything is integrated (Glaser, 1978; Glaser and Strauss, 1967). This results in detailed attention being paid to the context of the data analysis processes and related activities, which is important for the exploratory nature of this research.

4.8. Data Analysis in Practice

GT data analysis methods entail a number of defined procedures to collect and analyse data, which are defined and developed by some prominent advocates of this method who state fairly precise procedures to be followed in relation to each of its analytic processes (Saunders, et al, 2012). The general principles underpinning the GT data analysis method is that the data analysis is undertaken through a coding procedure (Charmaz, 1996, Mills et al., 2006, Hekkala, 2007) which is defined as *“the analytical process through which data are fractured, conceptualized, and integrated to form theory”* (Strauss & Corbin, 1990, p. 3). As demonstrated by Miles and Huberman (2013), the GT data analysis method is one of the well established genres in qualitative research, which *“uses a series of cumulative coding cycles and reflective analytic memoing to develop major categories for theory generation”* (p. 8).

The exact details of GT data analysis techniques vary between the main advocates and sources that outline this method (e.g. Bryant and Charmaz 2007; Charmaz 2006; Corbin and Strauss 2008; Glaser and Strauss 1967; Strauss and Corbin 1998, and Charmaz, 2006, 2014). While some grounded theorists prefer more elaborate coding schemes, in an effort to keep GT coding simple, direct, and spontaneous, Charmaz (2014) suggests that GT coding involves at least two main phases of initial coding and focused coding, and could include theoretical coding. The other important factors in the GT data analysis method includes memo writing, and constant comparison (Charmaz, 2014; Denzin & Lincoln, 2011; Miles, Huberman, et al., 2013; Silverman,

2015; Onwuegbuzie & Leech, 2007 & 2011). Following this approach, data analysis in this research involves three stages of open coding, focused coding and theoretical coding, accompanied by constant comparison and memo writing, which is illustrated in the figure below, and will be discussed in detail next.

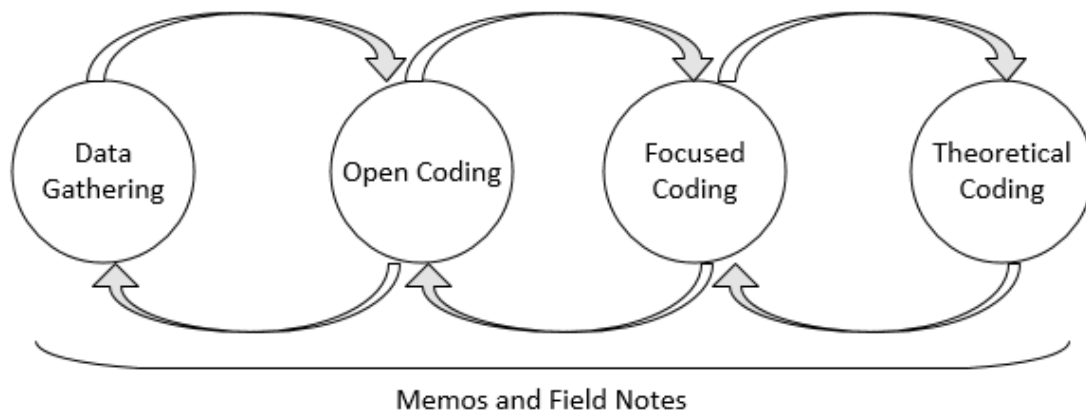
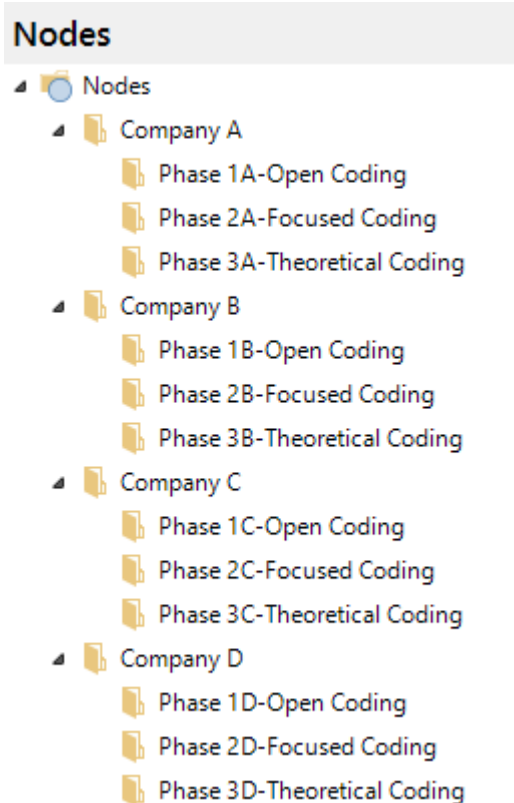


Figure 9: Constructivist GT Data Analysis Method

4.8.1. Preparing the Data for Analysis

NVivo was used as the qualitative data analysis software to facilitate and assist the coding endeavors. Coding procedures were set up separately for each of the cases to assure full familiarity and intimate knowledge of the full spectrum of the empirical data for each case (Eisenhardt, 1989; Miles and Huberman, 2013; Saunders, 2012). This entailed analysing the data for each case separately first, whereby the empirical data for each case was approached and analysed in all its richness. In doing this, separate code folders were setup for each step of the coding procedure for each one of the four cases as illustrated below.



4.8.2. Initial Coding in Theory and Practice

Initial coding or open coding is the first major stage of coding, encompassing a truly open-ended method for the researcher's first review of the corpus of the empirical data, and "*fracture or split the data into individually coded segments*" (Saldana, 2013; p.55). As stated by Charmaz (2014, p.114), "*During initial coding, the goal is to remain open to all possible theoretical directions indicated by your readings of the data*". In initial coding, fragments of data such as words, lines, segments, and incidents are closely studied for their analytic importance. While the initial coding in GT analysis can be done through sentence by sentence, line by line, or paragraph by paragraph coding (Saldana, 2015 p.115), Charmaz (2014) advises that detailed, line-by-line Initial Coding is more suitable for interview transcripts.

Initial coding in GT can include process coding and InVivo coding, as the foundation methods for GT coding. **Process Coding** is one of the major facets of initial coding in grounded theory, and uses gerunds exclusively for codes. In this method, data is searched for processes, participants' actions that have antecedents, causes, consequences, and possibly a sense of temporality, which all need to be captured

(Charmaz, 2006; Saldana, 2013). **InVivo Coding** or literal coding draws from the participant's own language for codes (Saldana, 2013; p.97), and includes adopting the participants' telling terms (Charmaz, 2014), or direct quotes expressed by the interviewee in the raw data. Both process coding and InVivo coding techniques have been used in the initial coding stage of this research. **Descriptive Coding** or topic coding is also used in this stage, as the coding technique which can be used in all qualitative studies, especially by new qualitative researchers. This involves summarizing the basic topic of a passage of qualitative data to a word or short phrase, or assigning labels to the data (Miles, Huberman, et al., 2013; Saldaña, 2013). Descriptive coding or topic coding provides an inventory of topics for indexing, categorizing and further analysis and can be used in the initial stages of GT data analysis. However, it needs to be accompanied by other coding methods (such as process coding and InVivo coding as done in this research) to enable deeper and more complex theoretical analysis (Miles, Huberman, et al., 2013; Saldaña, 2013).

Based on the above, the coding process started with open coding, in which codes were assigned to chunks of data, including sentences, lines, and paragraphs, depending on the richness of the data and context. In keeping with the approach of Charmaz (2006), line by line coding was kept in the mind as the overarching approach in the initial code assignments, as it encourages the researcher to see otherwise undetected patterns in everyday life, and enables the researcher to take compelling events apart and analyse what constitutes them and how they occurred (Charmaz, 2014; p.33). In parallel to line by line coding, codes were also assigned word groups, line sub sections, or paragraphs as well. This strategy helped the researcher to generate as many codes as possible to capture the full essence of the empirical data, while remaining open to all possibilities in the open coding stage. It also helped the researcher to avoid selecting too small or too big chunks of data for code assignment, and helped in ensuring that no part of the data has been missed in the initial coding efforts. Two sets of questions suggested by Charmaz (2014) and Saldana (2015) guided the open coding efforts in this research. Additionally, clear operational definitions are developed and assigned to the emerged codes in order to increase the validity and reliability of the research, ensuring that the

same meaning is assigned to each code during the stages of coding and that the codes can be applied consistently by a single researcher over time (Miles, et al. 2013; p.84).

In adherence to the abductive nature of this enquiry, assigned codes were influenced by the researcher's preconceptions derived from the literature review to some extent, however the utmost care was taken in this stage by the researcher to remain self-critical and open to all new possibilities of emerging concepts, to remain true to the data and not to force any specific choice.

The main coding techniques used in the coding stages of this research include Initial Coding, InVivo coding, Process Coding, as well as smaller degrees of descriptive coding. Special attention was given to verbs, especially gerunds used and described in the empirical data in order to fully utilize the process coding aspect of the open coding stage. To a lesser extent, descriptive coding was used to summarize the chunks of text in phrases, and InVivo coding was used to capture the essence of the data using the original words, were applicable. The table Below shows examples of how process coding, InVivo coding, and descriptive coding methods have been used to assign initial codes to the empirical data in this research.

Block of text	Initial Codes		
	Process Codes	InVive Codes	Descriptive Codes
"It's completely driven by consumer expectation. People shop online, people don't want to wait two months if they shop online. The speeds and delivery responses have increased." (CCI2)	Increase in consumer expectation	'consumer expectation'	
"We have agents sitting there, I seat with the team and we are in constant communication as to what's happening and how we handle the posts as they come in." (CCI2)	Handling posts as they come in	'Constant communication'	SM care team and manager seat together
"they deal with everything they can themselves and then they escalate as appropriate, so if they can't get an answer or if they're finding a lot of issues around a particular thing like say logging into one of our websites, they'll go to the appropriate	Dealing as much as they can themselves Escalate to other departments – if cannot answer Escalate to other departments – of high volume	'escalate as appropriate'	Escalation

Block of text	Initial Codes		
	Process Codes	InVive Codes	Descriptive Codes
business owner and try and escalate the problem.” (CDI1)	Escalate to managers		
“Areas that we are doing very well, I think we are good at where we can at resolving customer issues, and proactively posting” (CAI2)	Resolving customer issues Proactive posting		Strong Points
“we have a shared document that just keeps track of each post's performance.” (CAI1)	Measuring each post's performance Using shared document for performance		Performance measurement
“They would normally include coverage issues, account issues, billing issues, technical issues, any issues customers might have would be raised in social” (CCI2)	Customer using SM for their issues		Customer Contact Types Coverage issues Account issues Billing issues Technical issue

Table 12: Instances of process coding, InVivo coding, and descriptive coding in the open coding stage

As evident in the table above, not all three coding techniques have been used in the case of every line or every chunk of data. Rather, different coding techniques have been applied to the empirical data where applicable.

As another example, the figure below illustrates the open codes developed in relation to associated managerial challenges for company C in the initial stages of coding, which amounted to 75 open or initial codes.

- Abusive Comments - Abusive Platform - Abusive Platform-Why - Acquisition of Fans - Annonimity - Backlash on Campaigns - Behaving Like Grown Up Companies in SM - Below the Line use of Data - Budget Issues - Change of SM from Promotional to Service To - Cleanning Up SM sites - Companies not able to neutralize negative con - Company Culture - Company Culture-Not Giving Information - Company Wide Challenges - Competition - Competitive Analysis - consistant and constant communication - Content Challenges - Content-Frequency	- Control - Customer Advantage in SM - Customer Demographics - Customer Expectation - Customer Power - Damage to Brand - Engagement - Engaging Content - Facebook Algorithym - Facebook as Customer Complaint Channel - Facebook Challenges - Getting the Balance right - Jumping on the Bandwagon - Lack of Time - Lack of Visibility within SM team - Limited Knowledge of the Tools - Limited Visibility into Agency - Linking SM to CRM Persona - Misinformation
- Need for Clear Communications with Customer - Need for Clear Communications within compa - Need for Integrated Systems - Need for more Integration of SM into Business - Need for Quick Action - Need for RealTime Reports - Negative Channel - Negative Comments - Negative Comments-Why - Negative Tone of Customers in SM - Negativity - Negativity on Facebook - Negativity-Agents want to deal with good me - Negativity-Why - People dont like ads in SM - Power of Companies Fear of Reputation - Power of Public Openion	- Reporting-Time Consuming - Resources - Response Rate - Response Time-Exceptions - ROI - Senior Managers' Support - SM and other communication channels - SM Changing Company Communication wit - SM -Company Culture - Starting Slowly-Complaints - Telecom-Challenges - The power of public opinion - The whole world watching - Time Consuming - Volume of Queries - Workload Very Busy

Figure 10: Open codes developed in relation to associated managerial challenges for company C

All the interview transcripts and relevant secondary data were coded in the open coding stage for each case, as it is shown in the diagram below for case A.

Company A Interviews			
Name	/	Nodes	References
Company A-Interviewee 1		513	850
Company A-Interviewee 2		594	1105
Company A-Interviewee 3		460	1003
Company A-Interviewee 4		200	337
Company A-Interviewee 5		92	196

Company A-Secondary Data Sources			
Name	/	Nodes	Referen
CA S10-SM Guidelines		3	21
CA S11-iReach-Social Insights		1	1
CA S1-2013 Integrated Report		35	53
CA S12-Social Media-Where You'll Find Us		9	15
CA S13-SM Award		2	2
CA S14-Online Business Community-Irish Inter		4	4
CA S15-Byrne Blog		3	3
CA S16-2013 Bord Gáis Social Media Awards		2	8
CA S17-Social Media Case Study 2		74	97
CA S18-Company A SM Flowchart		5	5
CA S19-Radian 6		4	4
CA S20-Website Content 1		3	3
CA S2-Behind the Scenes Report		3	3
CA S3-Brando Report		4	4
CA S4-Cahill_et_al-2013-Case Study		8	8
CA S5-SM Analysis-Irish Mobile Sector		10	15
CA S6-Comapny A Org Chart		2	2
CA S7-Company A SM Achivements-Brian Pag		8	22
CA S8-Company A WebPage on SM		59	101
CA S9-Company A-SM Calendar Example-Wor		2	2

Figure 11: Open Codes assigned to each data source for company A

4.8.3. Focused coding in theory and practice

Focused coding is the second cycle of coding in the constructivist GT data analysis method, whereby the codes resulted from the first cycle coding are literally and

metaphorically constantly compared, and reorganized. In focused coding, codes are “focused” into categories. Focused coding is a process designed to narrow initial codes down to frequent and important codes (Charmaz, 2014). It involves searching for the most frequent and most significant codes, based on which initial codes make the most analytical sense (Charmaz, 2006, p.57). It also involves developing ‘the most salient categories’ in the data corpus (Charmaz, 2006; p.46). In the focused coding stage, codes are synthesized to *“formulate a central or core category that becomes the foundation for explication of a grounded theory”* (Saldana, 2013; p.55). The emerged categories also have “properties” and “dimensions”, which are the variable qualities that display the range or distribution within similarly coded data. Charmaz (2014, p.138) suggest that *“after you have established some strong analytic directions through your initial coding, you can begin focused coding to synthesize, analyze, and conceptualize larger segments of data”*. As a result, the researcher may use special procedures to elaborate the code, or depending what the emerging analysis indicates, might move to extant theoretical coding (Charmaz, 2014).

In this research, after completing the open coding stage, the focused coding stages were progressed, which involved refining, reordering, re-labelling, clustering, merging, and raising the open codes to the level of category. Focused coding endeavours entailed identifying and using the most significant and/or frequent initial codes to sift through and analyse the large amounts of empirical data. Decisions needed to be made as to which initial codes made the most analytical sense to categorize the data incisively and completely, which also involved coding the initial codes (Charmaz, 2014; p.138). During the focused coding stage, the assigned codes were reviewed and assessed for their theoretical relevance to the overall research, and their adequacy had to be determined, and their inclusion to the overall themes of the research needed to be reworked. In some cases, reconfiguration (Saldana, 2013; p.3) of the codes developed in the open coding stage was deemed necessary, whereby the codes needed to be renamed or redefined. In this sense the activities described were fully examined to establish if they could be grouped into activities relevant to SM data use and utilization, or applicable subprocesses. In doing this, the researcher formed categories of initial codes by segmenting information, whereby within each category

data in dimentionalized, and several properties or subcategories are discovered and assigned to each code (Charmaz, 2014; Creswell, 2013, 2015). The table 13 illustrate how the different attributes of a main focused code ‘SM information utilization’ were developed in this stage, which include type, domain, data type, area, and timeframe.

Attributes Focused code	Utilization Instance / Example	Utilization Type	Utilization Domain	Utilization Data type	Utilization Area	Utilization Timeframe
SM Information Utilization	Clarification of communication regarding NGB offer	Instrumental	operational	Based on volume of feedback - Aggregated	Clarifying customer Comms	Short term
	Improve website self-help section	Instrumental	operational	Based on volume of feedback - Aggregated	Improve customer experience	Short term
	Clarification on VAT cancellation charges	Instrumental	operational	Based on volume of feedback - Aggregated	Clarifying customer Comms	Short term
	Inform marketing roadmap as good to know	Conceptual	Operational	Results of analysis - Aggregated	Inform managers decision	Mid-term

Figure 12: Developed attributes of the main focused code: ‘SM Information Utilization’

As another example, figure below illustrates how categories have been developed for the focused code ‘Reporting’.

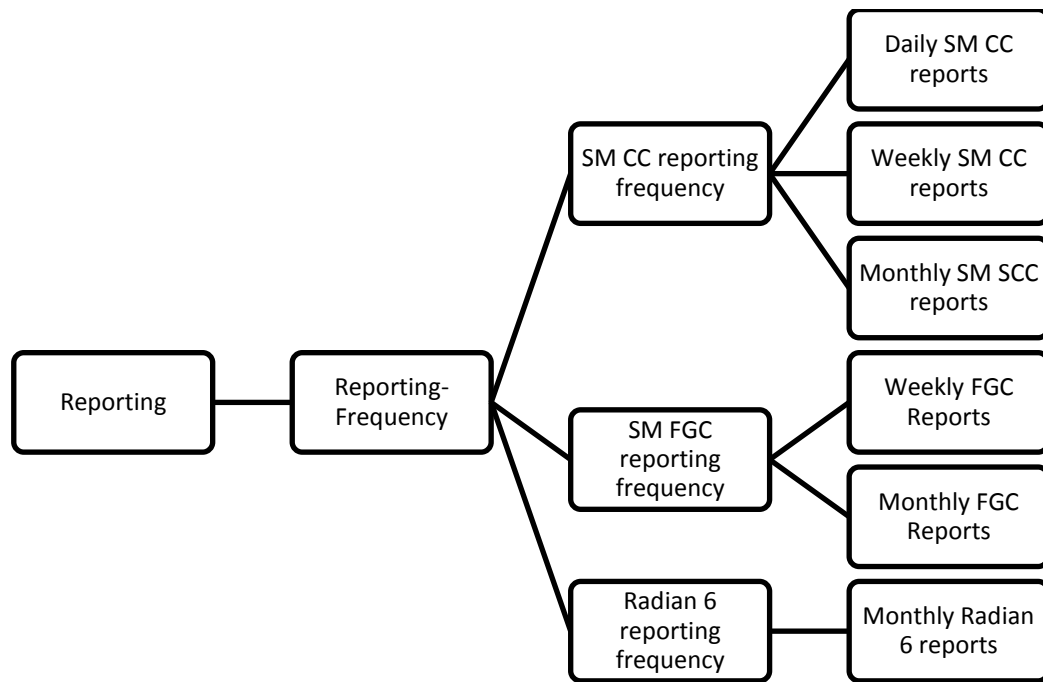


Figure 13: Developed categories for the focused code 'Reporting'

4.8.4. Theoretical coding in Theory and Practice

Theoretical coding is the third cycle of coding in constructivist GT data analysis.

Theoretical coding is a sophisticated level of coding that follows the codes developed during focused coding, and have been referred to as selective coding in the earlier publications of GT (Saldaña, 2013). It is a process used to find relationships between codes and categories, and has the potential to result in a theory (Charmaz, 2006). In theoretical coding, the researcher writes a story line that connects the categories; alternatively propositions and hypothesis may be formed at this stage which state the predicted relationships (Creswell, 2013). Theoretical codes connect and integrate the focused codes, in the emergent or applied form (Charmaz, 2013), and are aimed at moving the analytic story in a theoretical direction, resulting in a substantive level theory.

As the final stage of coding, the theoretical coding stage in this research was aimed at constructing cohesive codes pertaining to the research question. Charmaz (2014) suggest that theoretical codes can be emerged or applied. In the course of doing the above, different terminologies and theoretical codes were tried for best fit with the

meanings contained in the data. Visual mapping technique (Langley, 1999) was also used in this stage, by drawing visual representations of the focused codes for each of the cases to help the researcher in making sense of the data and discovering the patterns and codes, as well as enabling better comparison between cases.

4.8.4.1. Cross-Case Synthesis

Cross-case synthesis of data is a method used when compiling data in multiple case study design, which mostly happens in the theoretical coding stage of constructivist GT data analysis method. Cross-case synthesis involves examining the results of data analysis (focused or theoretical coding in this case) for each individual case, and then observing the pattern of results across the cases (Yin, 2013, p. 238).

In this research, in order to arrive at the most cohesive theoretical codes, the researcher prepared the lists of the codes resulted from the focused coding stage for each of the cases, to delve into theoretical coding at two levels of within case and cross case for all the four cases. These codes were contrasted and compared together, to identify the commonalities and trends across the cases and to assist in driving to theoretical codes. According to Miles and Huberman (2013) conducting such a cross case analysis serves two purposes of a) enhancing “*generalizability or transferability to other context*” (p.101), and b) deepening the “*understanding and explanation*” (p.101) and strengthening the theory by examination of similarities and differences across cases. To that end, as illustrated in figure below, upon arrival at a set of provisional theoretical codes for each one of the cases, they were compared together analytically, including comparing the codes themselves and the incidents, to enable arriving at a set of theoretical codes which are grounded in empirical evidence, as well as theoretically accommodating the range of meanings embedded in each case site and across the cases.

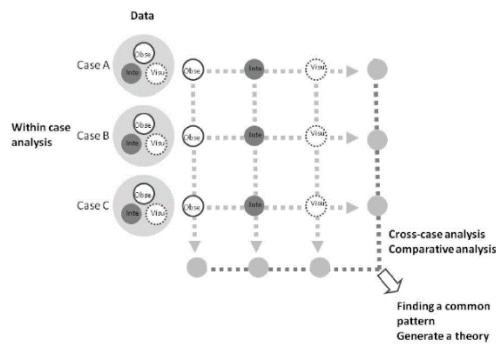


Figure 14: Data Analysis in Within and Cross Case (Adapted from Cho and Lee, 2014)

Table below illustrates an example of how the focused codes for the evaluating stage of SM data use were distilled, studied, and compared across the case companies.

Theme	Pattern	Company A	Company B	Company C	Company D
Evaluating	steps	- Evaluating the type of UGC - Evaluating the Sentiment of the UGC - Evaluating the User - Evaluating the impact of the UGC			
	Evaluating the types of UGC	which team to process the UGC SM data type 1: SM reactive team SM data type 2: marketing & SM team (responsible for proactive team)			
	Evaluating the sentiment	Determining if it's positive, negative, or neutral			
	Evaluating the user	- Evaluating the user influence - Evaluating the user history with the company - Evaluating the user demographics and profile			
	Evaluating the impact of UGC	Virality Severity and importance Reputation management	Headache Crisis Virality Reputation management Crisis management	Brand protection Reputation management Virality Crisis management	Cause trouble Brand protection Reputation management Virality Crisis management

Table 13: Cross Case comparison and synthesis of 'Evaluating'

4.8.5. Constant Comparison in GT Data Analysis

A parallel process which is very important in the overall process of GTdata analysis is **Constant Comparison**, which refers to a comparison of each item of collected data and

the consecutive codes with the others during each stage of the data analysis (Charmaz, 2014). The purpose of constant comparison is to check for similarities and differences, as well as promoting consistency when coding data and to aid the process of analysis (Creswell, 2013; Leech & Onwuegbuzie, 2007 & 2011). In this research, constant comparison entailed an iterative process, proven vital in generating concepts and themes, which involved comparing data with data, data with code, code with code, code with category, category with category, and category with concept (Charmaz, 2014) at different stages of the data analysis.

In the initial coding stage, constant comparison involved going back to the transcripts very often to assure the participants' views were allocated to the appropriate codes, as well as comparing data with data, and codes with other codes within each case, and then comparing initial codes across different cases.

In the focused coding stage, the most useful initial codes were selected and tested against extensive data, which involves comparing data with data, and then data with codes, as well as comparing incidents applicable to each category, themes and concepts which were emerging within and across the cases (Charmaz, 2014).

In the theoretical coding stage, constant comparison involved comparing and integrating concepts, themes and categories and their properties, as well as comparing instances of emerged themes and categories within and across cases.

4.8.6. Role of Analytical Memos and Field Notes in GT Data Analysis

Writing and qualitative data analysis are mutually exclusive elements in case study research, whereby writing is not only viewed as the final product of the research, but different forms of writing throughout the analysis process are pivotal in the abductive endeavor of the researcher (Charmaz, 2014; Klag & Langley, 2013). In this regard, reflective writing (Charmaz 2006; Glaser and Strauss 1967) is of particular importance (Saunders, Lewis, et al., 2011), as it *“actually holds pride of place in qualitative research, consecrating writing as both a process and product of theorizing”* (Klag & Langley, 2013, p. 162). Two forms of reflective writing used in this research include analytical memos and field notes, which will be discussed in this section.

4.8.6.1. Analytical Memos

Analytical memos have been written from the early stages of this research, and especially throughout the data collection and analysis stages, mainly as opportunities for the researcher to take note of her ideas, thoughts, or information worth noting. At a high level, analytical memos have been used in the form of interim or progress summaries (including what has been found so far, how they can be improved, what needs to be done next), transcript and document summaries (including summary of the key points, and how it relates to the research and its significance), based on Saunders' (2012) guidelines.

At a more detailed level, analytical memos have been written in the following areas (Saldana, 2013; Charmaz, 2014):

- How the researcher relates to the participants and/or the company
- Comparisons between data and between codes and categories
- Identified gaps or vagueness in categories
- Hunches, questions, fresh ideas and newly created concepts
- Comparisons between categories and a range of theoretical codes
- Comparison and links to the literature
- The participants' routines, rituals, rules, roles, and relationships
- Notes on emergent patterns, categories, themes, concepts, and assertions
- Any problems with the study
- Future directions for the study
- Tentative findings and answers to the research questions
- Notes on the final report for the study

Saunders, et al. (2011) suggest that researchers can research notebooks, or reflective diaries or journals to record their reflections and ideas for analytical memos. In this research, NVivo was used to manage the analytical memos, especially since it provides a capability to link special memos to certain data sources or nodes, as shown in the screenshot below.

	Challenge of Actionability in Company A	
	Lack of Clear R&R and Process for Reciprocity Stage	
	Lack of Visibility within SM Teams	
	Listening vs Monitoring vs Scanning	
	Monitoring - Manual and Limited	
	No Step Taken to Resolve the Biggest Issue of Actionability	
	Operational vs strategic view of SM	
	P- CC team's relation with customers	
	Paradox- Standard Response vs. Human Touch	
	People don't like SM Ads	
	Platforms-Need revision	
	P-Listening-Understand the Need vs Not Done Properly	
	Positive vs. Unfavourable Engagement	
	Proactive vs Reactive Posts	
	Reciprocity vs. Engagement	
	Relying on Unreliable Team Members	
	Resourcing challenge is linked to Management support and Budg	

Figure 15: Sample list of analytical memos and their link to the codes in Nvivo

Screenshots below illustrates an example of an analytical memo written during the data analysis stage for company A.

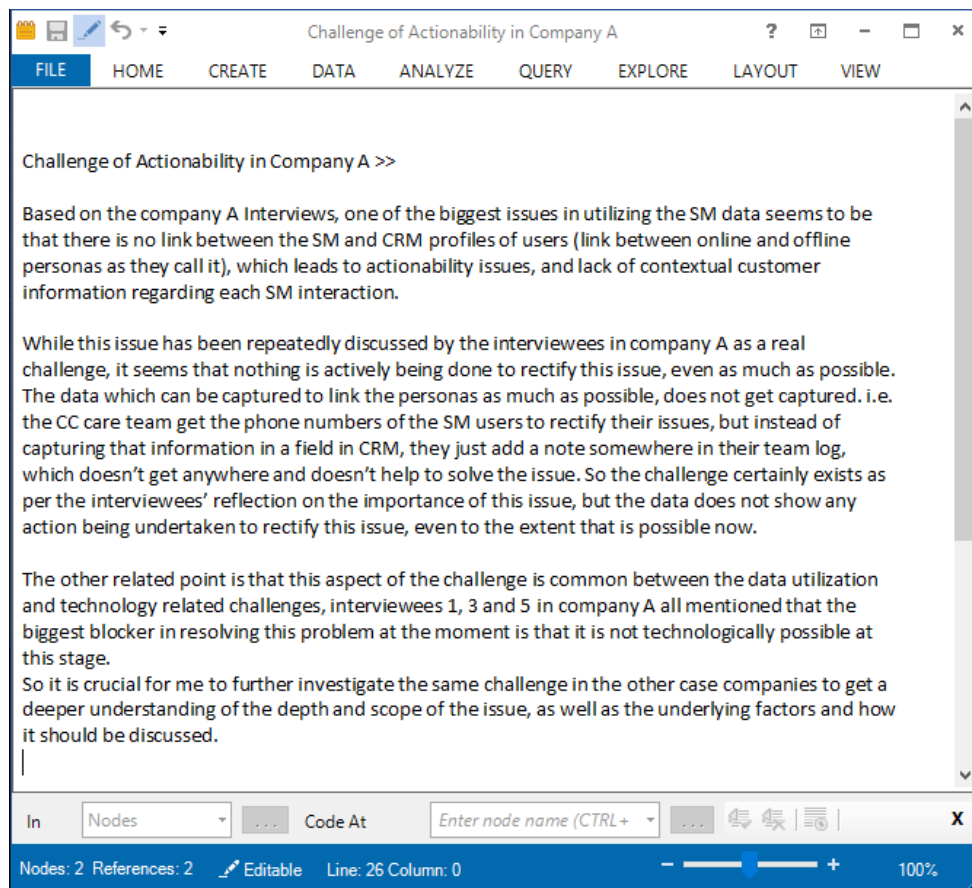


Figure 16: Example of an analytical memo written in Nvivo

4.8.6.2. Field notes

Field notes are the other type of reflective writing, which include the researcher's written notes of participant observation, which may include the observer's personal and subjective responses to and interpretations of social action encountered, as well as valuable observer's comments and insights that address the recommended categories for analytic memo reflection (Saldana, et al. 2013). Field notes were viewed as potential passages of text in which rich analysis may occur for this research. They have been written from the outset of data collection for each one of the interviews conducted, immediately after the conduct of the interview and then at several points afterwards if deemed necessary. The field notes for the four cases are included in appendix I.

Overall the constructivist GT data analysis method has provided a useful, detailed, and systematic approach in analysing empirical data in this research.

4.9. Reliability, Validity, Generalizability and Ethical Quality in Case Study Research

Scholars agree that attention to the quality of the research including reliability, validity and ethical quality should begin from the beginning of the research (Neuman, 2013; Yin, 2013). Different methods and techniques used to address reliability, validity and ethical issues in this research are discussed in detail in this section.

4.9.1. Addressing Reliability

The issue of reliability is highly important in determining the quality of research as it refers to the extent to which the findings of a research are independent from unintentional influences during the research phase (Silverman, 2013, p. 360).

Reliability deals with dependability, consistency, and repeatability of the research and suggests that if the same experiment is repeated or recurs under the identical or very similar conditions, it should lead to stable and consistent results (Neuman, 2013; Yin, 2013). As suggested by Yin (2013): *“if a later investigator followed the same procedures as described by an earlier investigator and conducted the same case study all over again, the later investigator should arrive at the same findings and conclusions”* (Yin, 2013, p. 45). In other words, reliability is concerned with the question *“whether your data collection techniques and analytic procedures would produce consistent findings if they were repeated on another occasion or if they were replicated by a different researcher”* (Saunders, Lewis, et al., 2011, p. 192).

In order to address reliability in this research, the procedures and processes of the research have been described in as much accuracy and precision as possible, with the purpose of providing guidelines for repeating the research or conducting similar ones (Robert K Yin, 2013), and *‘leaving an audit trail’* (Onwuegbuzie & Leech, 2007). All the procedures and steps undertaken during different stages of the research are documented and explained, as discussed in detail in this chapter. The use of case study protocol and developing case study database are other tactics used in this research to address reliability, as advised by Yin (2013), as illustrated below.

Factor	Case Study Tactic	Phase of research in which tactic is applied and section in which it is treated
Reliability	- Documenting and explaining the details of the procedures and steps undertaken in different stages of the research - Use case study protocol - Develop case study database	Research Methodology and design- throughout chapter 4 Research design - Section 4.7 Case Study details – Section 4.7

4.9.2. Addressing Validity

Validity suggests truthfulness and addresses the question of how well the social reality being measured through research matches with the constructs researchers use to understand it (Neuman, 2013). Onwuegbuzie & Leech (2007) suggest that validity of a qualitative research is relative to its purpose and circumstances. They developed the ‘Qualitative Legitimation Model’, which includes 16 threats to internal credibility and 14 threats to external credibility in qualitative research (Onwuegbuzie & Leech, 2007). Based on that, Onwuegbuzie & Leech (2007) developed a typology of methods for assessing and increasing legitimation in qualitative research, which have been used in the range of tactics used in this research as discussed in this and the following sections.

The main types of validity include construct validity, measurement validity, internal validity (Yin, 2013). Yin (2013) defines construct validity as the third category of validity along with internal and external categories, whereas Neuman (2013) views construct validity as a sub-category of measurement validity. Construct validity is concerned with establishing correct operational measures for the concepts being studied (Neuman, 2013; Yin, 2013), or *“the extent to which your research measures actually measure what you intend them to assess”* (Saunders, Lewis, et al., 2011, p.192). Measurement validity is concerned with establishing correct operational measures for the concepts being studied (Neuman, 2013). Internal validity or rigor means there are no errors or alternative explanations of results internal to the design of the research (Neuman, 2013), and is of particular importance for qualitative researchers (Saunders, Lewis, et al., 2011).

Numerous attempts have been made to assure validity concerns have been addressed in this research. At a broad level, the researcher has consistently tried to keep an open mind and include and study all the relevant aspects of the phenomenon, and to avoid

imposing her own ideas to the empirical data especially during data collection and analysis stages. At a more detailed level, the table below provides a list of tactics used to address different types of validity in this research, as well as the stage of research and section of the thesis whereby the tactics have been applied.

Test	Case Study Tactic	Phase of research in which tactic is applied and section in which it is treated
Construct Validity	- Defining the concepts under research (Yin, 2013; Onwuegbuzie & Leech, 2007) - Use multiple sources of evidence (Yin, 2013; Onwuegbuzie & Leech, 2007) - Establish chain of evidence (Yin, 2013; Onwuegbuzie & Leech, 2007) - Have key informants review draft case study report (Onwuegbuzie & Leech, 2007)	Literature review - Chapters 2 & 3 Data collection – Section 4.7 Data collection – Section 4.7 Research design – Section 4.7
Internal validity	- Pattern matching within and across the cases - Constant comparison technique in data analysis, applied to codes, themes, and patterns (Onwuegbuzie & Leech, 2007, Leech and Onwuegbuzie, 2007 & 2011) - Address rival explanations (Onwuegbuzie & Leech, 2007): Listing and analysing all the possible explanations to make sure that all rival and alternative explanations are addressed (to address Internal Validity as defined by (Neuman, 2013, Yin, 2013) - Researchers need to make sure that no expectancy of the final results is communicated to interviewees (Neuman, 2013; Onwuegbuzie & Leech, 2007) - Collecting additional data in the 2nd round of data collection, where required (to address measurement validity) - The findings of the study to be reviewed in the literature, which reflects the position of the findings in the research community opinion (to address face validity in measurement validity (Neuman, 2013)	Data analysis – Chapter 5 Data collection – Section 4.7 Data collection – Section 4.7 Data collection – Section 4.7 Data collection – Section 4.7 Discussion chapter - Chapter 6

4.9.2.1. Generalizability

External validity or generalizability is the ability to generalize findings from a specific setting and small group to a broad range of settings and people (Neuman, 2013), which in the case of case studies such as this research, does not take the form of statistical generalization from the sample to the population, but rather refers to theoretical propositions that could be used to explain other sets of events outside the

case (Yin, 2014). In other words, in case study research generalizability is done from one case to the other, on the basis of match to the underlying theory, and not to a larger universe, especially since the choice of cases are usually made based on conceptual grounds, rather than representative grounds (Miles, Huberman, et al., 2013).

In this study, at an epistemological level, critical realism holds that the aim of generalisation is to generalize to theoretical propositions and not to populations (Sobh & Perry, 2006). From a research design perspective, the findings of this study are believed to be generalizable to other cases using **analytical generalization**, as it's understood how the findings of this research work and there is no reason to believe that other cases that hold similar characteristics would work differently, hence the findings of this research can be generalized to other cases (Yin, 2013).

In addition to the above, the table below illustrates the tactics undertaken to address generalizability in this research, as well as the stage of research and section of the thesis whereby they have been applied.

Test	Case Study Tactic	Phase of research in which tactic is applied and section in which it is treated
Generalizability / External Validity	• Use replication logic in multiple case studies (Onwuegbuzie & Leech, 2007) • Data to be collected from real company and real users (Neuman, 2013; Onwuegbuzie & Leech, 2007)	Research design – Section 4.7 Research design and data collection – Section 4.7

4.9.3. Ethical Quality

The ethical issues are important aspects in a research, and continuously accompany the qualitative researchers in their studies (Creswell, 2008). This research complies with Trinity College Dublin's Good Research Practice (PGS Office, 2009), as well as general social science ethical principles (Miles, Huberman, et al., 2013) and management research ethical guidelines (Bell & Bryman, 2007), and follows the ethical standards regarding individuals and organisations during all stages of the research.

Ethical considerations are one of the central practical issues in case studies, especially due to the extended and close links between the researcher and case companies, and involvement of human subjects (Pettigrew, 1997; Yin, 2013). Addressing ethical

considerations in this study involves conducting the case studies “*with special care and sensitivity*” (Yin, 2013, p. 78), which includes:

- Obtaining *informed consent* or agreement with study participants, by informing them of the nature of the study at the outset (Miles, Huberman, et al., 2013; Pettigrew, 1997; Yin, 2013)
- Formally soliciting free choice of participation in the study by all potential respondents (Miles, Huberman, et al., 2013; Pettigrew, 1997; Yin, 2013)
- Following the classic principle of human conduct, as ‘first, do no harm’ (Miles, Huberman, et al., 2013, p. 56), including protecting the participants from any *harm*, and avoiding any form of deception (Miles, Huberman, et al., 2013; Yin, 2013)
- Protecting the privacy and confidentiality of all participants (Miles, Huberman, et al., 2013; Yin, 2013)
- Respecting all persons and points of view (Miles, Huberman, et al., 2013; Pettigrew, 1997; Yin, 2013)

Moreover issues related to company confidentiality, anonymity and attribution were negotiated in the initial contacts with companies (Pettigrew, 1997). Prior to the start of the research in each company, a consensus of agreement by the senior manager in charge of the SM activities, and other relevant managers were obtained in regard to conducting the case study in the company.

In line with the above, the intention of researcher and objectives of the research were fully communicated to the participants in the initial contacts. The confidentiality of the information provided by the participants was reassured in the initial contact (see the interview invitation letter in appendix H3), as well as at the beginning of the interviews, whereby a signed confidentiality agreement was provided to each interviewee (see confidentiality agreement in appendix H1). It was also emphasized that participation is completely voluntary and the participants don’t have to answer all the questions.

In accordance with the terms of the confidentiality agreement with the case companies, the names of the companies and all the participants are kept anonymous

in this thesis, and any parts of the empirical data or findings referring to any names as such are censored.

4.9.4. Triangulation

Triangulation is considered a *“near obligatory method of confirming findings”* (Miles, Huberman, et al., 2013, p. 299), which *“involves the use of multiple and different methods, investigators, sources, and theories to obtain corroborating evidence”* (Onwuegbuzie & Leech, 2007, p.239). The basic idea underpinning the concept of triangulation is that the phenomena under study can be understood best when approached with a variety or a combination of research methods (Given, 2008). Silverman (2013, p. 449) defines triangulation as *“the comparison of different kinds of data (e.g. quantitative and qualitative), and different methods (e.g. observation and interviews), to see whether they corroborate one another”*. Given (2008) also suggests that triangulation has come to mean using multi-method approaches to data collection and data analysis techniques, as well as multiple sources of data, multiple investigators in team research. Miles, et al. (2013) define 4 types of triangulation as by data source (e.g. persons, places, times), by method (e.g. interview, document, observation), by researcher (investigator A,B,C), by theory, and by data type (qualitative text, audio/video recording, quantitative data).

Using Miles, et al.’s (2013) categorization, this research uses the following triangulation types:

- Triangulation by **data source**: multiple data sources have been used in this research, including multiple interviewees, company websites, company SM sites, as listed in appendix 15
- Triangulation by **method**: multiple data collection methods have been used in this research, including interviews, observations, and use of secondary data sources such as company documentation and reports
- Triangulation by **data type**: multiple data types have been used in this research, including audio recordings of interviews, qualitative textual data in company reports, as well as researcher field notes (appendix I)

Triangulation by **researcher** and by **theory** have not been used in this research.

4.10. Theory Building and Theorizing in This Research

There are different views as to what exactly theory is and what purpose it serves. Martin and Turner (1986) define theory as *“a process of developing ideas that can allow us to explain how and why events occur”* (p. 5). Cooper, et al. (1993) define theory as a systematic explanation in the hypothetic deductive sense that can be observed or empirically tested. This study takes the views by West (2017) and Gregor (2006) on the definition and the role of theory. West and Turner (2017, p. 44) note that *“Generally speaking, a theory is an abstract system of concepts with indications of the relationships among these concepts that help us to understand a phenomenon”*. In line with that, in one of the most widely used taxonomies of IS theory suggested by Gregor (2006), she describes theories as *“abstract entities that aim to describe, explain, and enhance understanding of the world, and in some cases, to provide predictions of what will happen in the future”* (p. 616). Attending to the epistemological differences which form the background of different theory development endeavours sheds lights as to how these differences are played out in different theory building efforts, giving rise to a variety of forms of theory and the consequent disagreements as to what theory is and what it is not (Weick, 1995; Welch, et al. 2010; Charmaz, 2006). In the long discussion of what theory is and is not (Sutton & Staw, 1995; Weick, 1989, 1995b), Weick (1995b, p. 384) views the concept of theory as belonging to the family of words that includes *“guess, speculation, supposition, conjecture, proposition, hypothesis, conception, explanation, model”*, suggesting that *“if everything from a ‘guess’ to a general falsifiable explanation has a tinge of theory to it, then it becomes more difficult to separate what theory is from what isn’t”*. Against this background, Sutton and Staw (1995) take a different approach and outline what theory is not, noting that reference to prior works, mere empirical data, and lists of constructs and diagrams cannot be used in lieu of theory. Agreeing with this approach Weick (1995) suggests that the aforementioned ‘theory products’ need to be placed in *“the context of what came before and what comes next”*, or what Weick (1995; P. 389) terms as *“the process of theorising”*, and others have referred to as the *“conceptual leap”* (Klag & Langley, 2013, p. 151). This concerns the thought process undertaken before considering the final theory products and the practical activity of

the uncovering of new viewpoints on the phenomena being studied (Charmaz, 2006; Holmström, 2005, Swedberg, 2014).

In this regard, the distinction between general and middle range theories plays a key role across disciplines. General theories (Brodie, Saren, et al., 2011; Weick, 1995b) are broad, abstract and integrative, which tend to explain large phenomenon and unite less general theories (Brodie, Saren, et al., 2011; Hunt, 1983). As such the general theories, or grand theories (Glaser & Strauss, 1967) have no foundation in systematically analysed data (Charmaz, 2006), which results in the inherent difficulty between the general theories and empirical research. This has resulted in the recognition of the need for middle range theories in different fields of business and management (Eisenhardt & Graebner, 2007; Weick, 1989), including marketing (Brodie, Saren, et al., 2011; Hunt, 1991).

In contrast to general theories, the middle range theories do not aim to explain all aspects of a general subject (such as how markets function), rather they focus on a subset of phenomena relevant to a particular context (Brodie, Saren, et al., 2011). Middle-range theories consist of *“abstract renderings of specific social phenomena that were grounded in data”* (Charmaz, 2006), which means that they can be used as a basis to investigate empirical research questions (Brodie, Saren, et al., 2011, p. 80).

In light of the above, five points need to be reiterated regarding theory building efforts in this research. **First**, it needs to be reiterated here that abduction forms an essential element in theory building endeavours, as suggested by Lock (2004) and Klag and Langley (2013). In this respect, abduction is recognized as a source of ideas in the conceptual leaping from data to theory in the theory building efforts (Klag & Langley, 2013), and researchers are expected to become more attentive to a variety of practices including drawing on the world of extant literature not only to be theoretically informed prior to entering the fields, but also as an inspirational resource to highlight new possible ways of thinking about the data (Locke, 2004; Hassan, 2014).

Second, the other important part of theory building entails comparing the emergent concepts with the literature, which is referred to as **‘enfolding literature’** by Eisenhardt (1989) and Pare (1997) (see also Jaworski (2002)). Also according to Yin (2013) comparing the propositions/ emergent concepts with the relevant literature

increases the external validity of the research result. Hence, the extant literature in the field of SM, information processing, market and customer information use, and SM data use have been used to complement the fieldwork.

Third, Gregor (2006) suggests four central goals for the theories, including analysis, explanation, prediction, and prescription. To that end, the theoretical contribution of this research is that of 'type II: theory for explaining' as described by Gregor (2006). According to Gregor (2006), this type of theory *"provides an explanation of how, why and when things happened, relying on varying views of causality and methods for argumentation. This explanation will usually be intended to promote greater understanding or insights by others into the phenomena of interest"* (p. 12). As such the theory presented in this research is of explanatory nature, and is aimed at explaining how SM data is used in firms, and the associated managerial challenges.

Fourth, as discussed above the role of middle range theories is vital in empirical investigation and theory development across all disciplines of management, where middle range theories are necessary to make the process of theorizing manageable (Brodie, Saren, et al., 2011; Charmaz, 2006; Weick, 1995b), and specially in marketing where the need for a more cohesive and comprehensive approach to theorizing has been identified as one of the main challenges of the 20th century (Day & Montgomery, 1999). This study follows the tradition of many empirical studies in developing a middle range theory, to answer the question of how SM data is used in companies, and the associated managerial challenges.

Finally, it is notable that while Sutton (1995) and Weick (1995b) suggest that diagrams cannot be regraded in lieu of theory, they are regarded as a powerful tool in explaining the theories, whereby the role of presenting and explaining the theoretical model or framework has been left to the researcher. In this regard, diagrams of the outcome model of the findings of this study have been presented and explained in chapters 5 and 6.

4.11. Conclusion

This chapter has provided a detailed account of the research methodology appropriate for the conducting this research. First, it identified the research approach and methodological limitations of relevant studies in section 4.2 and 4.3, which are primarily rooted in their dominant use of end user data and limiting the scope of studies to one or a few of the SM platforms. Subsequently, philosophical questions were elucidated and a critical realist approach to research was justified in section 4.4, as it is in line with the philosophical standpoint of the researcher, and is well suited to guide an in-depth investigation of the research question of this study. Research methodology was discussed in section 4.5, followed by review of the different methods available to conduct research, from which case studies was identified as the most suitable method to provide an in-depth understanding of how SM data is used and utilized in companies., as discussed in section 4.6. An outline of the details of case studies and research design including choice of industry and research sites, four phases of research, data collection methods and case study protocols were also reviewed in section 4.7. Subsequently, the suitability of the constructivist approach of GT data analysis for this research was illustrated in section 4.8, followed by the details of data analysis and coding procedures in section 4.9. Section 4.10 outlined the different factors and strategies used to address validity, reliability and ethical quality of the research. Finally, different views of theories and theorizing and an overview of the theorizing efforts in this study were provided in section 4.11.

Influenced by the methodological approach suggested in this chapter, next chapter will provide the analysis of empirical data.

Chapter 5: Data Analysis

5.1. Introduction

The objective of this chapter is to provide the analysis of the empirical data for the four case companies. Section 5.2 provides an overview of the four case companies including their history, social media (SM) related organizational structure and an overview of SM activities. Section 5.3 provides the empirical evidence regarding the definitions and definitional issues of SM. Section 5.4 provides analysis of the empirical evidence related to the three SM data use process types, including Proactive, Reactive, and Analytical. Sections 5.5 introduces the main SM data use subprocesses, including Content Creation, Individual and Aggregated SM data use, which is followed by detailed discussion of each subprocess and relevant stages and salient aspects in sections 5.6, 5.7, 5.8. Section 5.9 provides a summary of the previous sections, as well as two depictions of the main revealed themes in the data.

Section 5.10 then discusses the data analysis regarding the managerial challenges of SM, which is followed by the conclusion of this chapter in section 5.11.

This analysis encompasses the views of SM managers, SM team leads, marketing managers, and senior level marketing managers (as illustrated in section 4.7.2), as well as the data collected from company reports and documentations, and observations made in all four case companies.

5.2. Overview of the Four Case Companies

Appendix J provides an overview of each of the case companies, including their SM history, organizational chart, main SM activities, as well as the volume of SM content related to each case companies in their main SM platforms. It's notable that according to the terms of confidentiality agreement between the researcher and the interviewees (see appendix H1), the researcher is not allowed to include any information which results in the identification of the companies in the thesis. Since the telecom industry in Ireland includes a small set of companies, disclosure of specific information regarding the number of customers, share of market, years of activities, the conditions of the ownership, merger or acquisition plans, or in some cases even

information regarding companies' main target markets could reveal the identity of the case companies, and cannot be provided in this dissertation.

This section provides a summary of the above, which is also illustrated in the table in appendix J, and includes the following:

- Overall the scope of the activities of the four case companies across SM are very similar. All the case companies started their SM activities in a limited scope and unstructured way, with no central management of companies' SM activities. The starting point for organized and structured SM activities can be regarded as the year 2011 for companies A and B, and the year 2010 for companies C and D.
- As discussed and illustrated in appendix J, the SM activities across all four case companies are managed and executed in a cross functional and multi team setting, which is mainly spread between the marketing and customer service departments.
- The main focus of SM activities across the case companies include three categories of sales and promotion, branding, and customer service.
- The main SM platforms in which case companies are active includes Facebook, Twitter, the company forum, and Boards.ie. These SM platforms are believed to cover all of the important and relevant UGC, or *"all the platforms which matter to us"* (CAI4), including all the content which needed to be responded to by the case companies.
- All case companies have limited activities in Google+, Twitter, Instagram, and Youtube. These platforms have been referred to as *"less active"* (CBI3, CCI2, CDI3) or *"light touch"* (CAI1, CAI4) since the volume of SM posts in these platforms are considerably less than the others, as stated: *"we also keep an eye on LinkedIn and Google+ and Youtube, but very light touch, because they are not really busy"* (CAI1)
- Numerous references in the empirical data showed that LinkedIn is used differently from other SM platforms across the case companies. LinkedIn activities are executed and managed by different departments than other SM platforms (CAI1, CBI2, CCI1, CDI1). Moreover, LinkedIn is only used for recruitment purposes (CAI1, CBI3, CCI2, CDI3) and B2B customers (CAI2, CBI3, CCI4, CDI3). Recruitment

purposes are focused on company-employee interactions, as opposed to company-customer interactions and are hence considered out of scope for this research (see section 2.5). B2B context is also considered out of scope for this research (see section 2.5), as it is believed to be different in the areas of customer information processing (e.g. Rollins, et al, 2012) and SM data use (e.g. Brennan and Croft, 2012).

As a result, Linekdin activities of the case companies are considered out of scope for this research, and LinkedIn is not included in the range of SM platforms studied.

The table in appendix J summarizes the case companies, as well as the activities of each of the case companies in the SM platforms.

The following sections provide the details of data analysis and coding, as well as the emerged themes and patterns across the four cases.

5.3. Definition of Social Media

The definitional issues of SM were discussed in section 2.3. In order to further investigate the definitional issues of SM, the interviewees were asked to define SM and explain what related terminology they use in their companies (see case study protocol, section 4.7.3). The results of the analysis of the responses provided by interviewees, as well as additional related data from other data sources revealed the following:

First, the data showed that the interviewees did not find it easy to provide a definition of SM, which was evident in their body language, use of interjection words such as aaaah (CAI1), Ooooof (CBI5), as well as quotes such as *“that’s [the question is] a big one”* (CAI2), *“I’ve never actually looked up a definition”* (CDI4), *“I’m sorry, I know I’m just rambling [in response to the question] ...”* (CCI2).

Second, it was also found that the interviewees believed that the meaning of the term social media was clear (CAI3, CBI2, CCI1, CDI1), which was reflected in quotes such as *“I actually think that [...] social media for those of us who use it and engage in it is absolutely set and clear, we know exactly what it is, and what it can do for us and that’s only going to grow.”* (CCI2)

Third, while both the terms ‘social media’ and ‘social’ were used in all the four case companies in reference to SM, ‘social’ was the most common term used in reference to SM as noted by 18 out of 22 interviewees, who mentioned that in their companies ‘social’ was the term mainly used in reference to SM. In the words of the Head of Online Services in company C: *“I think the term social is fairly all-encompassing and I think it changes so quickly as well ... so I think something fairly general like **social** actually fit the bill” (CCI1)*

Fourth, two main themes appeared in how SM is defined in companies, which include SM as a **communication tool**, and SM as a **broad and all-encompassing term**.

SM as a communication tool entails the view of SM as an enabler of two-way communications (CAI1, CBI5, CDI2, CDI5), and many to many communication (CAI4, CBI5), the conversational aspects (CDI4), as well as the view of SM as an enabler of interactions between firms and customer (CAI2, CBI4).

SM as an all-encompassing term entails the view of SM as a broad (CBI3, CCI2, CCI2, CDI2) concept, which encompasses many aspects depending on the use and subject matter in question, as evident in the quotes mentioned in the table below.

The above themes and examples of supporting quotes for each one are provided in the tables below.

Main Theme	Theme	Definition Provided by Interviewees in Company A	Definition Provided by Interviewees in Company B	Definition Provided by Interviewees in Company C	Definition Provided by Interviewees in Company D
Two way communication	Customer Communications	“I think it's very much about the 2 way communication between us and the customers.” (CAI4)	“a way for people to communicate and share everything from personal information to cool things they've seen to photographs; so, it's the ultimate way to share your life with other people and brands.” (CBI1) “Social Media for my point of view is any media that provides a two-way communication” (CBI5) “Social Media is all about communication” (CBS13)	“I think it's communication with customers via a number of different platforms really” (CCI1) “I think it is just basically another communications tool [...] is just how we communicate and interact” (CCI2) “monitoring and responding communications with our customers through what would be termed as new methods of	“I would see social as very much the outward communications to our customers and potential customers” (CDI5) “I see it very much as not only an advertising platform but it's a communication path as well, so we can communicate with our community and they can communicate with us” (CDI5)

Main Theme	Theme	Definition Provided by Interviewees in Company A	Definition Provided by Interviewees in Company B	Definition Provided by Interviewees in Company C	Definition Provided by Interviewees in Company D
				online communication” (CCI2)	
	Interaction	“... it’s interaction with consumers, and potential consumers.” (CAI2)	“[SM] platforms which are enabling people to have social interactions in virtual communities” (CBI4)	“[SM] is just how we communicate and interact ...” (CCI2)	“It’s about interacting and engaging with customers [...]” (CD, I6)
	Conversation with customers	“it’s a two way conversation between brands and their customers” (CAI5)	“It’s where we have open and honest conversations and listen to feedback without bias” (CBS13)	“Just somewhere that people can go on the page and find out what’s on and join in a conversation, that’s the whole idea of what social media is.” (CCI6)	“it’s more of a conversational piece, more personal, a personal chance to talk to your customers” (CDI4)
Broad Term	Broad Term	“It’s actually quite a broad term.” (CAI3)	“Social media is just such a broad term [...] I think that social media is such an umbrella term that people very often think that it’s just networking” (CBI3)	“I think the term social is fairly all encompassing [...] If you try to define it more narrowly you’d find that the definition doesn’t work” (CCI1) “I think social media has become such a part of companies’ lives, and a lot of industry commentators and customers that social media stopped becoming anything spectacular” (CCI2)	“I think it sort of depends to whom you’re speaking about social media. It could mean different things to different people.” (CDI2)

The above table shows the main themes revealed in the definitions provided by the case data, identifying SM as an enabler of two-way communication and as a broad term.

Comparing these two themes with the chosen definition in section 2.3.1 reveals that they are aligned with the chosen definition, as it views SM as an environment which facilitates conversation between organizations and individuals.

5.4. Social Media Data Use Process Types

As discussed in section 3.2 and 3.3, SM data use refers to the processes that a firm uses to monitor, identify, process, respond and utilize relevant SM data. An analysis of the empirical data across the four case companies revealed three types of SM data use processes, including Proactive, Reactive, and Analytical SM data use processes. These process types apply to different types of SM data, and run simultaneously but independently of each other in the case companies.

In all the four case companies, there was a clear distinction between the reactive and proactive SM data use processes. For instance, in the words of the SM manager in company B: *“we need to have the understanding that at what level do we need to **proactively** post as opposed to **reactively** post.”* (CBI2)

The social CRM manager in company B noted that *“Overall the marketing side is the **proactive** side, and the care team are the **reactive** side of the house.”* (CBI3)

Also, in the internal documentation, the overall SM strategy of company B was noted as containing reactive and proactive SM strategies: *“Social Media Strategy, including **proactive and reactive social media strategy**”* (CBS15).

This section hereafter discusses the SM data use process types, their relevant subprocesses, as well as salient aspects, including their responsibility and data types. It will then proceed to a discussion of the details of the each one of the subprocesses, as revealed in the empirical data. Table 16 below provides an overview of the emerged processes, subprocesses, and stages, as well as the structure of the following sections.

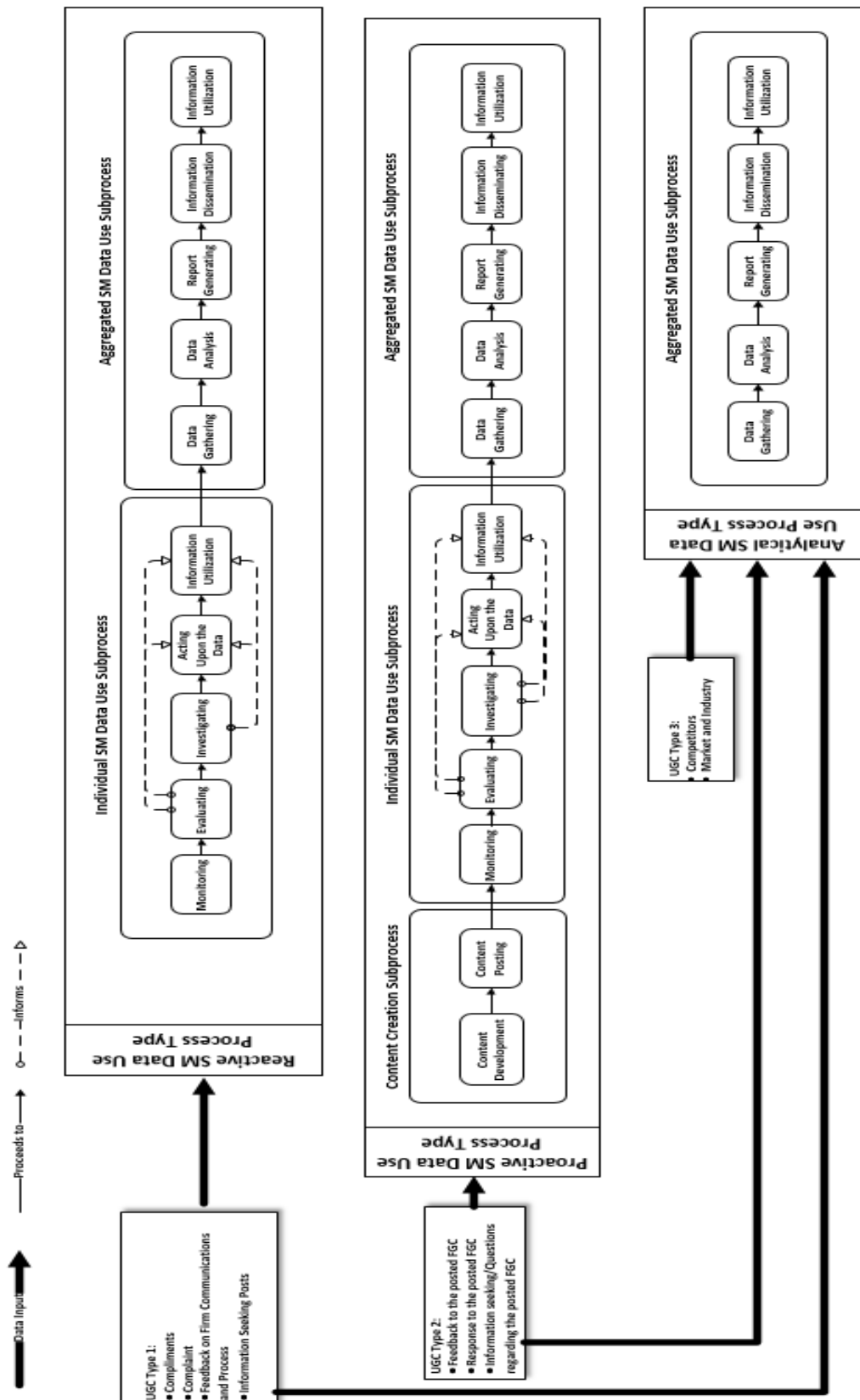


Figure 17: Overview of SM Data Use Processes, Subprocesses, Stages, and Data Input Types based on Case Study Data

5.4.1. Inclusion of Proactive SM Data Use, Content Creation and related Managerial Challenges

Inclusion of the proactive SM data use, content creation subprocesses, and related managerial challenges may appear to deviate from the research questions, and hence merit additional clarification and justification ahead of their detailed discussion in future chapters. This inclusion is meant to be read through the lens of both the **how** of SM (which in this case is how content creation is viewed as an essential part in the overall process of SM data use in companies), and the **managerial challenges** of this process, which is concerned with challenges that **managers** are facing is using SM data, as opposed to challenges in managing SM, which can cause confusion. Similar studies of managerial challenges in the context of SM data include Lamest and Brady (2018) and Saxena and Lamest (2018).

This research did not set out to study how SM content is created in the companies. However, content creation subprocess, and related activities and challenges emerged organically and very strongly in the empirical data, to the extent that they were deemed relevant in answering the research question. The reason for that is that the findings of this study showed that managers have a wider than expected perspective on SM data use, and see its commencement at the content creation stage, rather than as previously expected, at the monitoring stage.

Within the relevant literature, the expectation for the SM data use process is to start after the SM data enters into companies' SM channels (see section 3.3.3), but **this research shows that in the eyes of SM managers, it actually starts before at the content creation stage**. This is a major finding and contribution of this work, which shows that the proactive SM data use, content creation activities and the associated challenges are under-studied and under-valued areas of research which are viewed by managers as part of the overall SM data use processes within companies. Based on that, the related subprocesses and challenges are considered relevant in the findings of this study.

5.4.1. Proactive SM Data Use Process Type

The proactive SM data use process encompasses the activities related to the development and posting of Firm Generated Content (FGC), as well as responding to and processing the User Generated Content (UGC) created in response to the posted FGC.

The term Proactive has emerged during the course of interviews as a reference to the proactive role of the case companies in the initiation of this type of SM use process, using terms such as “posting to” (CAI1, CBI2, CDI4), and “publishing” (CAI5, CCI4). This delineates the nature of this process in generating and posting FGC, as reflected in below quotes: “on the other hand, it’s going **proactively** saying here’s what we want to promote” (CDI1)

*“We have started to use it [SM] in a **proactive way** [...] we are improving in terms of knowing what to publish that is interesting for customers.” (CAI5)*

The proactive process is considered within the realm of the **marketing** activities of the case companies in SM, as it was repeatedly referred to as **SM marketing activities** (CAI1, CAI2, CAI4; CBI1, CBI2, CBI4; CCI1, CCI2, CCI3, CCI6; CDI1, CDI2, CDI3, CDI4). Such activities include SM marketing communications (CBI1; CCI2, CCI3, CCI4; CDI1, CD2, CD4), such as: “the marcomm [marketing communication] side of things, [...] which we engage in it **proactively** by posting messages” (CBI2), and specific marketing activities related to sales and branding, such as: “in terms of sales and brand **proactive** messaging, [...] Facebook and Twitter are the two main ones that we **proactively** and regularly post to” (CAI1)

5.4.1.1. Subprocesses of Proactive SM data Use

The proactive SM data use process includes a set of activities which are grouped in three subprocesses of the content creation subprocess (including content development and posting stages), the individual SM data use subprocess (including monitoring, evaluating, investigating, acting upon the data, and the information utilization stages), and the aggregated SM data use subprocess (including data gathering, data analysis, report generation, information dissemination, and information utilization stages) as illustrated in the diagram below. Each of the

subprocesses and relevant stages will be discussed in detail in the sections 5.6, 5.7, and 5.8.

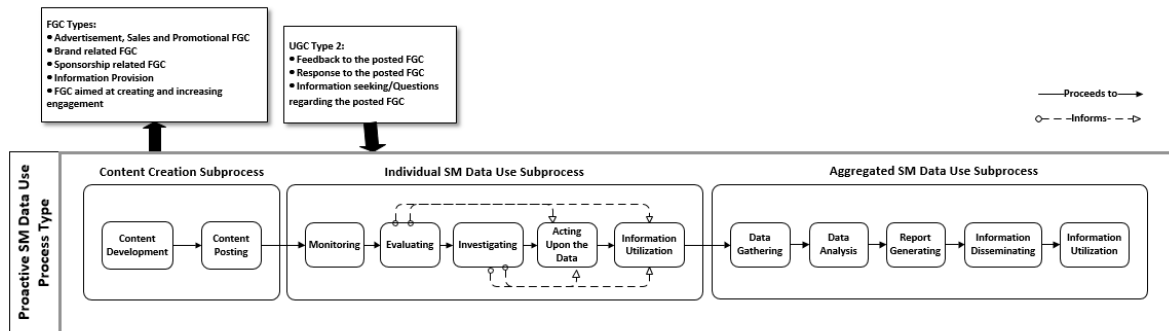


Figure 18: Proactive SM Data Use Process Type (Based on Case Study Data)

5.4.1.2. Responsibility of Proactive Process

Company A conducts all the proactive SM data use process activities in house between the SM and the marketing team (field notes, appendix I). The other three companies (B, C, and D) use the help of an outside SM agency, in conducting the activities of the practice process, as reflected in the below quotes:

“We would outsource that stuff to our agency who have a social media team, and would come up with the content” (CBI1)

“As well as our own teams [SM and marketing teams], the agency would be in and out of social, checking on the posts every day, so they would be responding back and flagging issues.” (CCI4)

However, from the three companies which use an outside agency, only company C agreed to very briefly discuss their engagement with their agency and arranged for an interview with them. Companies B and D provided some information about how they engage with the agency, but refused to reveal in-depth details due to competition concerns. The SM manager in company B stated that: *“we have been advised by the senior management to provide information only to this level and through the people you have interviewed and not to engage any of the agency staff in the company.” (CBI2)*. This issue has resulted in very limited insight into the details of the collaborations between the case companies and the SM agencies in this research. As a result, **the details of the collaborations between the case companies and the**

agencies are considered out of scope for this research, and will be discussed as one of the limitations of this research in section 6.3.

In all the four cases, companies representatives from the marketing departments work with the SM team on their proactive SM activities. The realm of responsibility for the proactive process is between the SM team and representatives from the marketing team for all companies, and an outside SM agency in the case of companies B, C, and D (field notes, appendix I).

5.4.2. Reactive Social Media Data Use Process Type

An analysis of the empirical data revealed that the activities companies undertake in reaction to company related UGC in their SM pages follows a pattern. Such activities form the **reactive** SM data use process type, which concerns the companies' responding to and processing company related UGC, including their identification and processing, as well as reacting and responding to them.

The terms Reactive has emerged in the course of a number of interviews, including the following from the digital marketing manager (CAI2) in company A: *"... in terms of issues around network or billing it's very **reactive**"* (CAI2), as well as: *"the care team are the **reactive** side of the house"* (CBI3)

5.4.2.1. Social Media Customer Service

The reactive SM data process is aligned with what is known in the literature as Social Media Customer Service (see Canhoto & Clark, 2013; Modoran, 2015). It entails the provision of customer service through SM sites in the case companies (CAI1, CAI2, CAI4; CBI1, CBI2; CCI3, CCI2; CDI2, CCI3), as stated: *"Just like you'd traditionally have picked up the phone to say why isn't my whatever working, now people are first of all coming directly to us because they know at this stage that the [SM] team is there"* (CAI1)

SM customer care is aimed at *"providing the best possible service in response to our customers' needs, responding to their issues and questions about our products and services and how they work"* (CDI1). It has been referred to as *"the care side of it [SM activities] that manages the care aspects to social"* (CDI5), *"the inbound, outbound*

responses to care queries” (CDI5), and signified as “the most hands on with our social platforms” (CAI2) and “the most direct engagement” (CBI2), as well as “a very targeted way, which makes huge amount of sense” (CAI2).

Numerous references in the empirical data show the importance of the reactive SM data use process, which includes using SM for the provision of customer service, customer support, resolving customer issues, responding to customer questions, improving customer experience, and building relationships with the customers, as shown in the below example quotes.

SM Use Category	Supporting quote example in company A	Supporting quote example in company B	Supporting quote example in company C	Supporting quote example in company D
Customer Service / Customer Care				
Serving Customers / Customer Service	“we need make them [the customers] feel loved and served and happy, and social channels are very good tools for that” (CAI4) “we are using social to engage and interact with our customers and provide even better service to them than what we were before” (CAI4)	“So an important part of our social strategy is the social customer service or as we call it the social CRM element” (CCI3) ““It’s more of a care channel to be specific” (CBI5)	“So a lot of our time and effort is actually spent serving customers through social” (CCI1) “demonstrating our dedication to world class customer service” (CCS10)	“Work with customer service manager to ensure proper customer service is being delivered” (CDS8)
Resolve customer Issues	“effectively what they’re doing is interacting with customers, trying to solve problems, trying to pick up on issues” (CAI1)	“Interacting with customers [...] diffusing issues and closing them in a timely manner” (CBS11) “I think we are good at where we can at resolving customer issues” (CBI2)	“Work effectively with all stakeholders to ensure issues are resolved quickly” (CCS8) “My role is to develop and extend our social customer support presence across multiple brands and channels” (CCS10)	“Resolve customer complaints via social media” (CDS8)
Respond to customer questions	“We use social to show them that we care about their needs and problems and questions and are there to help them in every step of the customer journey” (CAI4)	some people are so online that they don’t want to call the call centre, so they go to Social Media and raise their request or question there” (CBI5)	“offering real response to our customers’ queries” (CCS10)	“Work effectively with all stakeholders to ensure issues are resolved quickly.” (CDS7)
Improve Customer Experience				

SM Use Category	Supporting quote example in company A	Supporting quote example in company B	Supporting quote example in company C	Supporting quote example in company D
Improve Customer Experience	"I look for how to maintain & enhance a customer's experience with us, while helping them smile" (CAS8) "So I think social can be a great tool for creating that superior experience with customers" (CAI4)	"Our aim is to offer a world-class customer experience through Social Media" (CBS13)	"We would absolutely like to take care of any queries related to customer experience" (CCI2)	"doing searches online and find anywhere customers might have experienced negative interaction with the company, trying to turn that around [...] create a good experience to the customer" (CDI2)
Improving Customer Relationship				
Buidling Relationship with Customers	"enhance our customer relationship and form a deeper relationship with our customers" (CAI4)	"Social Media for me is all about communities and relationships. I'm always working to foster and grow relationships with our customers" (CBS13)	"I think you do build up a lot more of a relationship" (CCI1)	"It's about building relationships with customers" (CDI1)

Overall the reactive SM data use process includes using SM for the provision of customer service. It is viewed as a *"powerful tool"* (CBS12), whereby *"Twitter, Facebook and online communities should be strings to the bow of any company serious about customer service"* (CBS12). It has been identified as a growing trend among businesses as per one of company B's blog posts: *"Most businesses have already integrated social media into their marketing strategy, but there is a growing trend to take it to the next level and use it for customer relationship management (CRM). According to Gartner, by 2020, 90% of companies will be using social media for customer service"* (CBS3)

SM customer service is believed to bring many benefits to the companies, including *"A space where companies can cultivate customer loyalty and grow their customer base. Having a meaningful presence where your customers are engaging is a crucial part of any Digital Engagement strategy"* (CBS12). Customer service is one of the three key pillars of SM strategy in the case of company C, as illustrated below (CCS5):

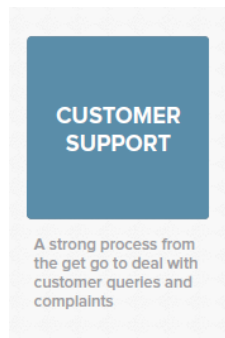


Figure 19: Customer Support as one of Key Pillars of SM Strategy (Case C)

One of the other purposes of using SM for customer service is cost saving and reducing the number of calls to the call centres, as illustrated in quotes in table below. This is also signified in one of company B website's blog posts: *"HP reports that its social media support agents can handle up to 40% more customers per day than their phone agents, and handling a Facebook or Twitter interaction is three times quicker than chat and twice as fast as phone support"* (CBS4)

SM Use Category	Supporting quote example in company A	Supporting quote example in company B	Supporting quote example in company C	Supporting quote example in company D
Cost Saving				
Reduce Calls to Call Centers & Cost Saving	"we have a set figure that a phone call costs and for every phone call that we can avoid it's a cost saving of that much through social media" (CA12)	"promoting lower cost digital customer care channels" (CBS16)	"to reduce the number of calls that we get to customer care" (CCI4) "It's cheaper. they don't have to pay a whole lot of people to man the sites and stuff where we can put it out on a tweet, on a post on Facebook. It's a cost thing." (CCI2)	"It's cheap to have a social media team do that. It's a very effective way of doing it" (CD12)

Overall the reactive SM data use process includes activities companies undertake in reaction to company related UGC in their SM pages for provision of customer care and service, improving customer experience, building relationships with customers, and reducing costs to the call centres.

5.4.2.2. Responsibility of Reactive SM Data Use Process

In all the four case companies a dedicated team is responsible for the reactive SM data use process, which is called the eCare team in company A, the Social CRM team in

company B, and the Social Care team in companies C and D (see appendix J). The SM reactive teams include the SM team members (also called agents, or executives in case B and D), SM community managers or team leads, and the SM managers. For example, in the case of company B: *“it would be the social customer CRM team upstairs, they would be on social media every day across all platforms, constantly looking for and answering queries.” (CBI2)*

5.4.2.3. SM Data Type 1 for Reactive SM Data Use Process

An analysis of the empirical data in all four case companies revealed that certain types of UGC would lead to initiation of the reactive SM data processes, where *“the vast majority are network, technology or billing related” (CAI1), “networks is the vast majority at times (CBI1), and “a lot of the drivers would be customer support issues, either something wrong with the plan, product or a lack of help from customer support agents” (CCI3).*

The SM data types which lead to the initiation of the reactive SM data use processes can be categorized as follows:

- **Compliments:** Users’ direct positive feedback regarding companies’ products or services, communications or processes
- **Complaints:** Users’ direct negative feedback or objection regarding companies’ products or services, communications or processes, which form the majority of the SM data type 1 in all case companies, and mainly include billing issues, coverage issues, technical issues with products or services, and handset issues
- **Feedback on Firm Communications and Process:** Including users’ feedback on their experience with customer service, shops, or the customer online registration process as examples
- **Information Seeking Posts:** Including questions regarding company’s products, services and processes, how products work, when/if they can get an upgrade, etc.

Overall the reactive process is initiated in response to the above types of UGC, which will be called **SM data type 1** hereafter. SM data type 1 is initiated by SM users and

posted to the SM sites. The companies would then identify such UGC, react to and process the data in the subprocesses which will be discussed next.

5.4.2.4. Subprocesses of Reactive SM Data Use Process

The Reactive SM data use process includes a set of activities grouped in two subprocesses of the individual SM data use subprocess (including monitoring, evaluating, investigating, acting Upon the data, and information utilization stages), and the aggregated SM data use subprocess (including scanning, analysis, reporting, dissemination, utilization of social media data), as illustrated in the diagram below. Each of the subprocesses and relevant stages will be discussed in detail in sections 5.7 and 5.8.

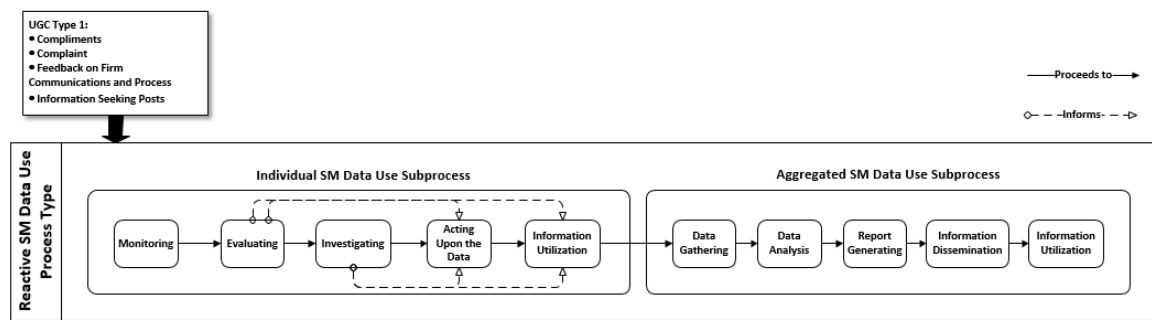


Figure 20: Reactive SM Data Use Process Type (Based on Case Study Data)

5.4.2.5. Reactive process Time Frame

The **time frame** attribute refers to the window of time during each day, in which the reactive SM team conduct the activities of the reactive SM data use process, which is aligned with the working hours of the reactive SM team members, as shown in the table below:

Case	Days	Times	Source
Case A	Monday to Friday	8:00 – 22:00	CAI1, CAI2, CAI4
Case B	Monday to Friday	9:00 – 17:30	CBI1, CBI3
Case C	Monday to Friday	9:00 – 19:00	CCI2, CCI3
Case D	Monday to Friday & Saturdays	9:00 – 18:00	CDI2, CDI3

Table 14: Timeframe of Reactive SM Data Use Process

As illustrated in the above table, a pattern observed across the case companies is that the time frame of the reactive SM data use process is mainly restricted to the normal working days, with the exception of company D which had a team working on Saturdays too.

All four case companies cover office hours, with company C and D extending the hours slightly to 19:00 and 18:00 afterwards. Case A's working hours starts slightly before the office hours (8 am) and is extended to 10 pm.

Despite the office hours timeframe of reactive SM data use process, the managers across the case companies conveyed the need for extending the hours of the SM team beyond usual office hours, as the customers expect the SM team to be available outside the business hours. This will be further discussed as one of social media's customer related challenges in section 5.9.2.

5.4.2.6. Reactive Process Structure & Work Allocation

The **structure** aspect of the reactive SM process refers to how the SM team members divide up the different SM sites between themselves, and how conducting the reactive SM process across different SM platforms are allocated to different SM team members. In all four case companies, the reactive SM team includes the SM team members, and a team lead or community manger (see section 5.4.2.2).

There are three main possibilities for allocating the reactive SM process activities between the SM team members which includes the following:

- Structure 1 >> one platform per team member
- Structure 2 >> Multiple platforms to one team member
- Structure 3 >> Multiple team members to one platform

The details of the team structure, work allocation and supporting quotes from managers for each case company are provide in the tables below.

Case	Normal Work Allocation	Team Structure
Case A	Each team member is assigned to a platform for the day The team lead oversees the work of the team, and dips in and out of all platforms	5-7 team members (including 1 team lead) Work allocation changes during busy times and special occasions

Case	Normal Work Allocation	Team Structure
Case A Supporting Quote	<i>"So normally each person is assigned to one of the platforms and the team leads would oversee the work of the team." (CAI4)</i>	
Case B	Each team member is assigned to a platform for the day The community manager (team lead) oversees the work of the team, and dips in and out of all platforms	6 SM executives that report into a community manager Work allocation changes during busy times, special occasions, or times of crisis, as decided by the team manager
Case B Supporting Quote	<i>"So there would be one person looking at overall/dipping in and out of all 3 platforms, and then the other 3 people are dedicated, 1 is on boards for a day, 1 is on Twitter for a day and 1 is on Facebook for a day." (CBI1)</i>	
Case C	Each team member is assigned to a platform for the day The team lead oversees the work of the team	5 SM team members including a community manager
Case C Supporting Quote	<i>"We have agents sitting around. The way we normally do it is that one person would be on one platform, so one agent on Facebook, one on Twitter, one on Boards, etc." (CCI2)</i>	
Case D	Each team member is assigned to a platform for the day, and possibly looking after a less busy one too The team lead oversees the work of the team	5 SM team members including a community manager
Case D Supporting Quote	<i>"They would normally divide up the main social sites between themselves on a daily basis, so each person would be mainly responsible for a social site throughout the day and they might also get tasked to look after another one, a less busy one, on the side too. (CDI5)</i>	

Table 15: Work Allocation Structure in Case Companies

As illustrated in the table above that work allocation structure changes depending the workload. Structure 1 is the prevalent structure which is used in all four case companies during normal times, i.e. each SM platform is allocated to a SM team member. However, the structure changes according to the overall workload of the team or *"determined pertaining to workload"* (CBI3).

"It depends on the workload. So, it really does depend on whether it's very busy on Facebook, it's very busy on Twitter, the community manager will then determine who goes where at the start of the day" (CBI3)

In that regard, work structure three will be used during busy periods, and work allocation structure two might be used in less busy times. In other words, the findings show that in all four companies, the structure of work allocation is clearly defined for

each day, but it might change according to how busy the platforms are, and if there are any special occasions or crisis happening which impacts the volume of SM data.

“If there is a big event like the [...] they can even upstaff to have more than a member of staff on each of the main platforms all day, but largely speaking there is four of them on and effectively they would get assigned to a particular platform for the day to monitor. If we are going through unusually quite times, they might decide to jump around between the platforms to monitor” (CA12)

“This could obviously change if we have a big campaign or launch, or if something happens and we feel that we need more people to be looking after social” (CD15)

“If it gets busy on a particular platform, then we might have two people on that platform [...] they switch around, everybody is trained cross channel so it’s not just one person all the time.” (CD15)

5.4.3. Analytical SM Data Use Process Type

The analytical SM data use process encompasses the patterns viewed in the activities involved in the processing and utilization of company related SM data using SM analytics technology. While the analytical SM data use process type takes place in parallel to reactive and proactive processes, the most important differentiating aspect of the analytical process is the use of the SM analytics technology. In other words, the analytical process represents companies’ activities to process and make sense of company related SM data, by using the SM analytics technology. As discussed in section 3.3.3.2, there are a number of SM analytics technologies available in the market. At the time of data collection, Radian 6 was the SM analytics technology used in companies A and B; and Sprout Social was used in companies C and D.

It is important to note that in order to establish the boundary of this research, **the details of how each of the case companies work with their respective SM analytics technology is considered out of scope for this research.**

5.4.3.1. Responsibility of Analytical SM Data Use Process Type

The activities of the analytical SM data use process take place in a multi team and cross functional form. The responsibility for executing the analytical SM data use process types is spread between the SM team, the marketing teams, with the addition

of some assistance from the analytics departments in the case companies. The analytics departments are responsible for analysing and reporting on other types of customer data (such as customer satisfaction, focus groups, market research, etc.), and are called analytics team in company A, advanced analytics team in company B, and insights and analytics team in company C and D (see organizational charts in appendix J).

5.4.3.2. Data Types in Analytical SM Data Use Process Type

An analysis of the empirical data in all four case companies revealed that the types of SM data used as an input in the analytical SM data process include SM data type 1 and 2 (as discussed in section 5.4.2 and 5.6.3), as well as a third type of UGC which is specific to the analytical process type, which includes any UGC related to companies' **competitors, markets and the industry posted in SM sites** (CAI1, CAI2; CBI1, CBI3; CCI2, CCI3; CDI3, CDI6), which will be referred to as **SM data type 3** hereafter.

Importance of SM data type 3 is reflected in the below quotes: *"We would be looking at any conversations happening in our specific markets, and across the industry, among the known industry figures for example, as well as specifically around our competitors."* (CBI1)

"Because it's important to see what your competitors are doing in the social space as well and monitor where you are at the same time" (CDI6)

Overall, UGC type 1, 2, and 3 are SM data inputs into the analytical process, which is done using SM analytics technology. The details of how companies use SM analytics technology is considered out of scope for this research.

The analytical SM data use process only applies to SM data at aggregated level, and does not apply to the individual units of SM data. This is aligned with the purpose of SM data analytics technologies offered in the market, which is to make sense of the high volume of the data which firms are dealing with (see section 3.3.3.4)

The analytical process only includes the aggregated SM data use subprocess, which includes data gathering, data analysis, report generation, information dissemination, and information utilization, as illustrated below. Each of the subprocesses and relevant stages will be discussed in detail in section 5.8.

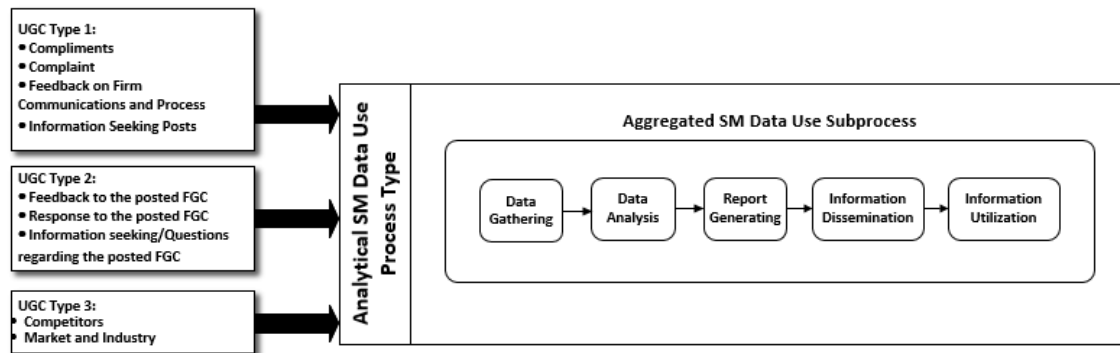


Figure 21: Analytical SM Data Use Process Type (Based on Case Study Data)

5.4.4. Social Media Data Use Subprocesses

The identified SM data use process types discussed above include different subprocesses. SM data use subprocesses form the building blocks of the SM data use processes. Each one of the subprocesses consists of stages. Stages are a set of activities or logically related steps, which form the building blocks of subprocesses³.

Based on the patterns observed in the empirical data, three main SM data use subprocesses have been identified as Content Creation subprocess, Individual SM Data Use subprocess, and Aggregated SM Data Use subprocess, which are discussed in detail in the next sections.

5.5. SM Content Creation Subprocess

The SM Content Creation subprocess encompasses the stages and activities involved in development and posting of FGC by the company in its SM sites, and includes the two stages below:

³ Use of the terms process, subprocesses and stage is done in different ways in the literature including (Morgan, 2005; Kohli and Jaworski, 1993; Jaworski and Kohli, 2017). For example, Morgan (2005) uses terms subprocess and stage interchangeably in reference to what is called stages in this research (e.g. scanning, analysing). Kohli (2017) uses the term 'activities' is reference to what is called stages in this research.

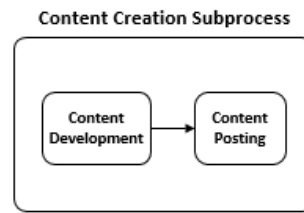


Figure 22: Content Creation Subprocess (Based on Case Study Data)

- **SM Content Development stage:** involves the activities related to generation and development of FGC, with the aim of posting it to companies' SM sites. Differences have been observed in the steps involved in creation of FGC in company A versus companies B, C, and D, which is mainly due to the use of agency in the latter three
- **SM Content Posting stage:** involves activities related to posting the developed and approved content in the specified SM sites and according to the agreed timelines, as they will be discussed below.

5.5.1. Responsibility of Content Creation Subprocess

Across the four case companies, the responsibility for the development and posting FGC is similar to other subprocesses of proactive SM data process, and includes multiple teams including **marketing department, the SM team, and in the case of companies B, C, and D also the agency** (see section 5.4.1.2). From the four case companies, company A is the only one who creates and posts FGC internally/in house, which is explained as *"we have to produce content ourselves. That is the best way of coming up with niche and interesting content that engages the audience"* (CA12). The other 3 case companies, use the help of an outside agency, who *"would do most of the work in creating the posts for me [...] and they would also post them"* (CC14). As discussed in section 5.4.1.2, the details of how the SM agency works with the teams in the company is out of scope for this research.

Other departments, such as public relations and sales would suggest content to be posted in the companies' SM sites, which would be reviewed, and approved or rejected, by the SM manager and relevant marketing managers, as listed in the table below. For example, in the case pf company A, as stated by the head of digital marketing: *"There's a single guy who would be head of the social team ... everything*

has to be signed off with him before it gets published and there's systems in place there, the team can't publish content, he has to sign off and then it's published." (CA15)

Table below illustrates the responsibilities for developing, approving and posting FGC in the case companies:

Case	Responsible for Developing the Content	Responsible for Approving the FGC Content	Responsibility of Content Posting
Case A	- SM Marketing team - SM team - Suggestions and Inputs from other departments	Social Media Manger and relevant marketing manager/s	- SM Marketing team - SM team
Case B, C, and D	- SM team in the agency - SM Marketing team - SM team - Suggestions and Inputs from other departments	Social Media Manger and relevant marketing manager/s	- SM Marketing team - SM team - SM agency

Table 16: Responsibility of content creation subprocess

5.5.2. FGC Types

FGC across the four case companies are related different areas of activities, and can be categorized into the following categories:

- Advertisement, Sales and Promotional FGC
 - Advertisements
 - Sales and promotional FGC
 - Amplifying the impact of traditional media
- Brand related FGC
- Sponsorship related FGC
- Information Provision
 - PR Announcements and Company News
 - Service / Product related information and updates
- FGC aimed at creating and increasing engagement
 - Freebees
 - Competition (Poll / Contest)
 - Fun and interesting FGC
 - Trending topics

Table below shows sample supporting data for each of the above categories.

SM Use Category	Supporting quote example in company A	Supporting quote example in company B	Supporting quote example in company C	Supporting quote example in company D
Advertisement, Sales and Promotion				
Advertisement	"Now we still have trading message and we still have to announce the new deals and the new phones coming in on the market." (CAI1)	"big advertisements and marketing campaigns" (CBI2)	"new products, ads, sales messages and all that sort of stuff" (CCI2)	"I suppose it's a channel [...] to deliver your advertising message in more of a wrapped up way." (CDI4)
Sales	"sales [team] use social media" (CAI1) "Think of fun and interesting ways to tell people about new products" (CAS8)	"Assist the Sales team in strategising, defining and implementing social projects to meet commercial goals" (CBS16)	"So we wanted to cross sell on both those pages so we would often feature [...] offers and prizes aswell" (CCI6)	"from an advertising side on social there would be a sales message aswell so that would obviously be talking to potential customers" (CDI6)
Promotions	"promoting shiny new phones and new product releases" (CAS17)	"promoting company services." (CBS15)	"One of the key themes we set out at the start were to promote new products, and to promote the special offers" (CCI7) "I would see it as a promotional tool" (CCI5)	"We would also talk to price promotions that we would have on so at the moment we have a flash sale, we're talking to that on social" (CDI6)
Amplifying the Impact of traditional media	"it's taking the traditional campaigns bringing it into the virtual realm and amplifying the impact that it has traditionally had" (CAI1) "So they try to echo the campaign message through social on top of other channels" (CAI4)	"what the marketing campaign brief for television and outdoor and radio campaign is and how that could be translated through SM to amplify the campaign" (CBI2)	"the guys [...] do a good job at amplifying their campaign messages through social media" (CCI2)	"we have a campaign, so for instance for Christmas or when we launched 4G and we have an advertising campaign, we'll look at how we can use social media to actually make it more real to people, and amplify and leverage the campaigns through social media." (CDI4)
Branding and Sponsorship				
Branding activities Brand Awareness	"it can benefit your brand and you can create awareness and put on engaging stuff about your brand" (CAI3)	"Using high profile social media channels to boost brand appeal, customer relations and brand image in a team setting." (CBS15) "As demand for brand interaction on social media grows, there is a huge opportunity to use the platform for strengthening your brand image" (CBS4)	"trying to put out positive messages about the brand and leveraging other brand activities that we do" (CCI1)	"we do a lot of brand activity with marketing which wouldn't necessarily be a sales message and it wouldn't necessarily be a customer message either, it would be more talking to the brand" (CDI6)

SM Use Category	Supporting quote example in company A	Supporting quote example in company B	Supporting quote example in company C	Supporting quote example in company D
Sponsorship	“maximizing the impact of our sponsorships” (CAI1) “For example for the likes of sponsorships, which is mainly music and [sport], what we try to do in SM is associating the brand with the stuff that people like, care about, and are attached to” (CAI4)	“we have sponsorship activities for example we sponsor the Irish [...] team, so every time there is a match we would do social media activity in the lead up to” (CBI1)	“Our sponsorship work in social is quite elaborate and we have multiple active sponsoring projects” (CCI4)	“So for instance when we have sponsorships like [...] what we’d do is we’d use our social channels to bring that to life, and bring the content to life. It’s very different to when we had sponsorships in the past, because you couldn’t communicate all that content to people” (CDI4)
Public Relations, Announcements and Information Provision				
Public Relations	“PR is always affected by social, that you can manage social through PR and you get instant feedback for anything that you released to the press or anything that appears in the press, and you make a lot of decisions based on the response that they get” (CAI1)	“The PR use tended to be more focused with customer comments and engaging with customers and then pushing out PR message to social media” (CBI1)	“with statements like the CEO resigns or they could be going bankrupt, all these bigger kind of things and PR announcements we will be there” (CCI2)	“if it was maybe something that we had seen gone out from a PR perspective it’s monitoring the activity or response through social as well and being able to feed that back to the public relations team” (CDI6)
Information Provision to customers	“social can be a platform for companies to share information with their customers, or customers between themselves” (CAI4)	“We had an outage on the network last June, we used it to provide updates to customers as to when the issues will be resolved” (CBI1)	“in an effort to try and proactively give them information on the issues and problems” (CCI4) “So campaigns and announcements we support” (CCI2)	“So we put out updates on the services and issues or incidents” (CDI2)
Customer Engagement				
Engaging with Customers	“But really at the end of the day it’s all about engaging with customers and potential customers.” (CAI8) “I suppose SM is the ultimate tool for engaging with customers.” (CAI4)	“I think we are good at engaging with the wider audience on social media from a fun and inventive way” (CBI2) “It’s another way of engaging with the company and for the company to engage with its customers” (CBI5) “As part of the Social CRM team, I use social media to engage with	Customer engagement is one of the key pillars of social media strategy (CCS5) “for sure social media has a positive impact on the level of engagement between us and our customers, because I think it’s like one-to-one communication even though you’re kind of going out and you’re broadcasting a message” (CCI1)	“it’s a channel that we engage with our customers” (CDI4) “People do stay with you for other reasons than just the cheapest offer. [...] There’s always going to be a new offer in the marketplace, or someone coming out with something else, so every competitor needs to have another level to their brand because that’s what’s going to keep people in there,

SM Use Category	Supporting quote example in company A	Supporting quote example in company B	Supporting quote example in company C	Supporting quote example in company D
		customers across key platforms” (CBS10)		and that extra level is the engagement level.” (CDI4)

Table 17: Sample supporting data for each FGC type

For example, in the case of the company A, “*sponsorships or music*” (CAI1) are the two strong themes in their FGC. In the case of company C, the “*key content themes*” are shown in the diagrams below. In the diagram below and similar figures across the thesis, due to confidentiality agreement with the case companies, the words which reveal the identity of the company have been hidden.

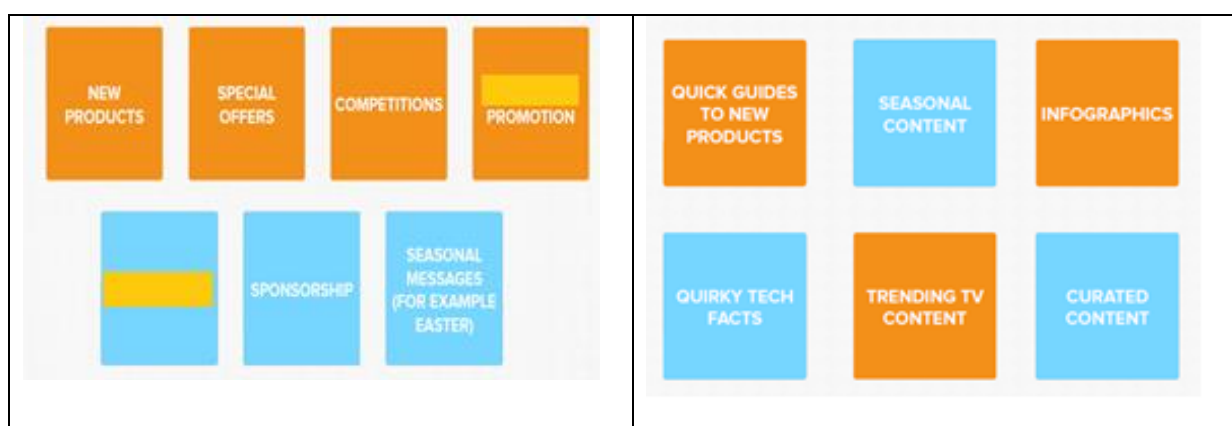


Figure 23:FGC Theme for company C (CCS1 & CCS3)

5.5.3. Types of UGC in Response to Posted FGC (SM Data Type 2)

The SM users’ reactions and responses to the posted FGC, will then be processed through the subsequent stages of proactive SM data use process. This type of SM data, which will be referred to as SM data type 2 hereafter, includes the following:

- Feedback to the posted FGC
- Response to the posted FGC
- Information seeking/questions regarding the posted FGC

As stated: “*So normally what happens is we post something, and they would comment back and show their like or dislike of the post, or ask something like I’m on this plan, am I eligible, or talk about their previous experiences with similar or other offers.*” (CAI1)

5.5.4. Use of SM Content Calendar

All four case companies use content calendars, which are spreadsheets used to schedule, plan, and manage their content creation and posting activities ahead of time. Content calendars are called “*Social Media Calendar*” in company A, “*conversation calendar*” in company B, and “*Content Calendar*” in companies C and D, as stated: “*we would have a conversation calendar and engage in it proactively by posting messages.*” (CBI2)

SM content calendars include different levels of the following information:

- What is the topic and area of the content?
- What is the date and time that content needs to be posted on?
- In what Platforms does the content need to be posted?
- Is there a specific budget allocated for this content?
- What is the main business Objective for this content?
- What is the Suggested Text?
- What is the suggested media including graphics, pictures, videos?
- Which department is suggesting the content?

Examples of the content calendars used in company A and D are shown below.

Social Media Calendar Structure		Month				
		Week 1				
		Date	Date	Date	Date	Date
Department / Business Unit	Which department has raised the need to post this content					
Category	What type of content is it? e.g. sales, sponsorship, press release?					
Topic / Product / Occasion	What topic or product forms the main focus of the content?					
Text & Imagery	The exact text of the content					
SM Platform	Which platform(s) does it need to be posted on?					
Owner	Who would be the main contact person responsible for this content?					

Figure 24: Structure of Content Calendar in Company A (based on verbal description)

DATE	MON	TUES	WED	THURS	FRI	SAT	SUN
W/C 5th May							
Facebook							
Post theme	Competition		Testing Content		offers		Additional content
Copy	Comment to win				Introducing bundles		
Twitter							
Copy	Follow + RT To Win				Introducing bundles		

Figure 25: Sample Content Calendar for Company D

Another form of planning content used by company C, is to schedule different types of SM data to be posted on different days of the week, as shown in the figure below.



Figure 26: Company C Weekly Content Schedule

5.5.5. Flexibility in content posting

Overall the companies develop and post two types of FGC, namely Planned FGC and Ad hoc FGC, to accommodate “the combination between trying to be a bit planned and allowing the flexibility to get stuff in there.” (CDI4)

Planned FGC is planned ahead of the posting time for a special occasion, date or subject, and is normally captured in the content calendar (section 5.6.4). In such cases the SM and marketing teams define and agree upon a series of events, subjects or dates for which the company needs to create and post content in SM through the use of content calendar. For planned FGC, the companies “*have a more structured calendar*” (CCI5) and they “*would equate to quite a large portion of our content*” (CDI5). Examples of such instance includes FGC related to Christmas, New Year, or other occasions, as well as schedule promotions, and new product launches, as reflected in the below quotes:

*“The **planned stuff** such as the campaigns and sponsorship activities” (CAI5)*

“So just in terms of content we would typically have a three-month visibility of what’s happening within the business [...] so we know what product launches are coming up, what campaigns are being planned or launched, and we would plan content around them.” (CCI6)

Ad hoc FGC are not planned ahead of time, but are developed and posted very close to the posting time frame, in order to *“react to things that happen in social and in the world in general”* (CDI5), and *“allowing the flexibility to get stuff in there”* (CCI4). Ad hoc FGC has been referred to as *‘fluid content’* (CDI5); and *‘dynamic content’* (CCI5, CCI6) as: *“[it’s] very much out of hours, [...] posting up images from the matches as they happen and it’s very instant and it’s very much about driving the conversation around the games as they happen”* (CCI5), as well as *“It’s mainly looking at trends and filtering those trends that are relevant to us and then finding content that goes around that”* (CAI5)

The below quote well captures the difference between the two types of FGC:

“So, we have to be flexible in terms of what and when we are posting, because there are some things which we can plan ahead of time, such as new product launches or sales offers. But there are also some stuff which pop up at the last minute, such as some of the content related to our sponsorship events which happen at the scene and we reflect them in social, or last minute offers, etc. So, we need to accommodate those too.” (CAI1)

This depicts the need for **flexibility** regarding the frequency of content posting, which needs to be *“a pretty agile process”* (CAI1). It shows that the frequency of content posting cannot be fully planned (CAI5, CBI4, CCI5) and needs to be flexible in order to accommodate the business needs, and keep up with the flow of ad hoc events which need to be created at the last minute (CAI5)

This aspect of the content posting stage is tied into the content challenges which will be discussed in section 5.9.

5.6. Individual SM Data Use Subprocess

The activities of the companies in the processing of and responding to individual units of SM data form a number of patterns, which have been grouped together as the individual SM data use subprocess and consequent stages. Individual SM data use subprocess is related to processing of, responding to, and utilizing the individual units of SM data. The individual units of SM data refer to the single units of SM content, which in the case of main SM platforms used in the case companies include the following:

Social Media Platform	Single Unite of Content
Facebook	Post Response Share
Twitter	Tweet Reply Retweet
Boards.ie	Post Response
Company owned Forum	Post Comment/Response
Google +	Post Comment Share
Instagram	Post Comment

Table 18: Instances of Individual Unites of SM Data for Case Companies

As evident in the above table, the individual unit of SM data in many cases is aligned with the unit of UGC. As a result, units of SM data and UGC are used interchangeably in some parts of this research. So, the individual SM data use subprocesses are concerned with processing a single post, response, reply, comment, or shared or reposted content, as stated: *“We obviously scan and engage with each one of the individual posts. We can also check the insights around every single post” (CDI4)*

Individual SM data use subprocess forms a part of both reactive and proactive types of SM data use process, and include the following stages, as illustrated below:

- Monitoring
- Evaluating
- Investigating
- Acting Upon the data
- Information Utilization

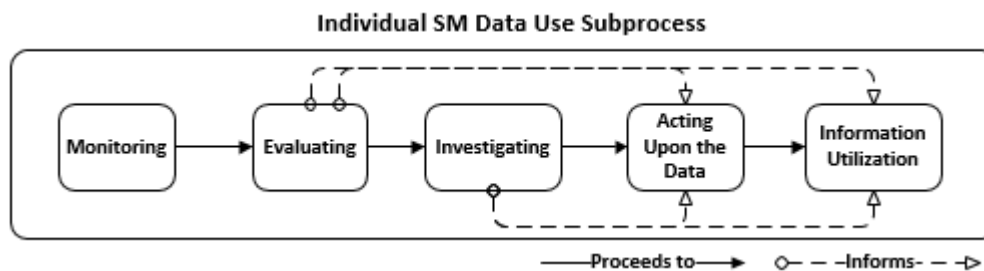


Figure 27: Individual SM Data Use Subprocess (Based on Case Study Data)

This section hereafter provides the details of the analysis of the empirical data related to the stages of individual SM data use subprocess, including their details and salient aspects.

5.6.1. Monitoring Stage

Monitoring is the first stage in the individual SM data use subprocess, and involves scanning and monitoring the relevant SM sites in order to identify a relevant UGC to focus on, and proceed it through the subsequent stages.

5.6.1.1. Monitoring Stage in Reactive SM Data Use Process

The monitoring stage in the reactive process type has been referred to as “*keeping an eye on the platforms*” (CCI3), “*sitting there and reading the posts*” (CDI4), “*monitoring all mentions of our brand*” (CAI1), “*monitor for issues*” (CAI2), and “*looking for the most up to date information or the most up to date queries*” (CCI1). As with the other activities of the reactive SM data use type, monitoring is done by the dedicated team (see section 5.4.2), which in the case of company A: “*We have a dedicated team in Limerick focused on monitoring all mentions of our brand*” (CAI1), in the case of

company B: *“It would be the social customer CRM team upstairs” (CBI2), and “it is done through customer care” (CDI6)* for company D.

5.6.1.2. Monitoring Frequency

Frequency of monitoring stage refers to the number of times various related activities are performed in a given time frame. Empirical evidence from the four cases demonstrated that the frequency of reactive SM data at individual level is **continuous or constant**, and happens **continuously throughout the day**.

This observation was reflected in the interviewees’ use of terms such as *“continuously”* (CAI1 & CDI6), *“constantly”* (CBI2 & CDI1), *“all day, every day”* (CCI3), and *“all the time”* (CDI1), which are shown in relevant quotes below:

“It will be a number of times a day, like their full-time job is answering queries so they’d be constantly looking for the most up to date information or the most up to date queries, so they would be doing that all the time.” (CCI1)

“[They] monitor for issues and address any specific issues the customers are having continuously throughout the day.” (CAI1)

“[...] they would be on social media every day across all platforms, constantly looking for and answering queries.” (CBI2)

“[...] our social media team would be looking at the social platforms all day every day, [...] it’s basically keeping an eye on the platforms” (CCI3)

“[...] they are continuously monitoring the platform when they are online.” (CDI6)

However, as discussed in section 5.4.2 the reactive SM team operate mainly during the office hours. Considering that, the frequency of monitoring in reactive process time is continuous during the working hours.

5.6.1.3. Monitoring: Identification of Posts

An integral part of the monitoring stage includes the identification of posts across SM platforms. Monitoring tools refer to the tools the companies use to assist them in monitoring the SM platforms and identifying the relevant UGC. Company A and B use TweetDeck and Hootsuit as tools to help them monitor SM platforms. In company B blogs, Hootsuit was mentioned as an *“all in one application for managing multiple social media sites, which brings the abilities to track mentioned, re-tweets and*

messages from Facebook, Twitter, LinkedIn, Google+, Foursquare and other selected into one user interface” (CBS3).

Company A and B refused to share any more information on how they use these tools, and refused to share screenshots or sample reports from these tools. Also in order to boundary the scope of this research, the details of how these tools are used are out of scope for this research.

In the case of company C and D, the monitoring of Facebook, Boards.ie, company forum, Google +, and Youtube is done manually, by reading the posts which have been posted since their last monitoring effort, and through *“just reading the posts”* (CCI3). As stated: *“on Facebook we’re just reading posts. There’s no alerts in FB, so the agents would be sitting there and reading the posts”* (CDI4). The method applied to Twitter posts is different, as they use a combination of built-in search functionality and reading the posts: *“So we scan social on Twitter by word searches”* (CDI4).

The table below summarizes the methods used in each company for identification of relevant posts in the monitoring stage, which shows that in both companies monitoring stage is done through a combination of manual and automated activities.

	Company C	Company D	Company A	Company B
Facebook, Google +, Instagram, Youtube owned page or channel	Reading posts in the company page/ company wall, since the last monitoring		Using Hootsuits tool	
Twitter	• Posts in company’s page • Posts mentioning company handle @companypagename • Using Twitter own tool using keyword search to identify the relevant posts		Using Hootsuits and TweetDeck tools	
Boards.ie, Company owned Forum	Reading posts on company page since the last monitoring		Reading posts on company page since the last monitoring	

Table 19: Identification of Posts in Monitoring Stage in the Case Companies

5.6.1.4. Monitoring Stage in Proactive SM Data Use Process

The monitoring stage in the proactive process type follows the FGC posting stage, or *“After the content is posted”* (CAI5), and *“Once something is posted”* (CCI7), and involves scanning and monitoring the posted FGC for any subsequent UGC which is created as a result of users’ reaction to the posted FGC. This stage entails monitoring the responses to the posted FGC, by keeping an eye on the post and the SM platform

(CAI5, CCI5 & CCI7), and checking the responses to content (CBI3 & CCI7), as reflected in the below quotes:

"After the content is posted, the team would keep an eye on the published post, to monitor the engagement it is generating and what responses we are getting." (CAI5)

"Then I would keep an eye on the site just to see what people are saying and stuff like that." (CCI5)

"Once something is posted we would monitor it and check it once it goes by." (CCI7)

Such reactions normally take the form of shares, likes, use of emoji's, and replies and responses under the posted FGC, as discussed in section 5.6.3.

5.6.2. Evaluating Stage

The second stage of the individual SM data subprocess entails the evaluating stage, in which the chosen UGC or unit of SM data is evaluated from different perspectives, as stated: *"We review the person who posts, the content of the post and its potential for going viral, or causing headache of any kind"* (CBI3).

A considerable amount of the collected empirical data refers to activities that the SM agents and managers conduct to evaluate and assess the chosen UGC from different perspectives, which shows the importance of this stage. In this regard, a range of interviewees' statements in all four case companies reveal companies' conditional response to different UGC, such as *"If it is a nice positive message, they would ..., but if the post is negative ..."* (CAI4), or *"The general guidelines is that if the message includes ..."* (CBI4). Such forms of conditional statements, in the form of *"if the message ..."*, or *"in the case of [a specific type of] messages"* refer to actions that take place according to different attributes of the SM data, and differ based on the attributes. Moreover, multiple references were made by the interviewees regarding instructing the SM team on *"how to deal with different types of posts"* (CAI4), and having *"different strategies in responding to different posts and users"* (CDI3).

The activities that companies undertake to evaluate and assess the individual units of SM data from different perspectives, before deciding the best course of action, follow a pattern and form the Evaluating stage. The SM customer service manager in company A referred to evaluating activities as *"Assess"*, and the SM customer service

manager in company C uses the term *“triaging”* in reference to the actions conducted in this regard, as: *“they [the SM team] are very good at kind of triaging the post, and reviewing who the person is, how many followers they have, what their history is with us, what is it they want, what does it mean for the company and our reputation, etc.”* (CCI3)

5.6.2.1. Evaluating as a Subjective Act

Evaluating the SM unit of data or UGC is carried out subjectively by the SM agents in the four case companies. The subjective nature of the evaluation stage emerged from the empirical data through the use of terms such as *“Subjective”* (CCI2), *“Judge”* (act of) (CCI2, CDI2), *“Judgment call”* (CBI3), and *“use their judgement”* (CDI1), as stated in these quotes: *“They [SM team] use their judgement based on the types of queries that come in.”* (CDI1)

“We also need to make a judgment call of the potential impact of what they are raising with us, and if the post or query or the experience has the potential to go viral” (CBI3)

Also, according to one of SM executive in company C, part of his job includes *“Apply sound judgement in choosing how to deal with the customer queries”* (CCS8).

This reveals the subjective nature of evaluating activities in the case companies.

5.6.2.2. Evaluating Perspectives

Across the four case companies, each of the individual units of SM data selected in the monitoring stage is evaluated from four perspectives:

- **Evaluating the type of UGC**
- **Evaluating the Sentiment of the UGC**
- **Evaluating the User**
- **Evaluating the impact of the UGC**

Evaluating the Type of UGC

Evaluating the type of UGC involves establishing if the UGC type is relevant to the team or if it needs to be passed over to the other teams, which is stated as *“as part of the social training that we provide for the team we instruct them how to deal with different types of posts”* (CAI4).

In the reactive processes, only SM data type 1 will be processed. So, the SM team review the type of SM data, and *“use their judgement based on the types of queries that come in”* (CDI1). If the SM data belongs to SM data type 1 categories (including compliments, complaints, feedback on firm processes or information seeking posts, as stated in section 5.4.2), they will proceed with it to the subsequent stages. But if the selected SM data does not belong the SM data type 1 categories, they will pass it to other relevant teams, as evident in the following quotes:

“If it’s somebody talking about their experience in [Company A] that person will be care and they will flag it to a care person and see if they can help. If somebody is talking about plans then it is very top line stuff, but if they are talking about plans in [Company A] then it is someone who’s in active evaluation so they are about to switch, so that would be flagged to the right person and they need to go in and answer that person about their phone or plan or whatever that is and find out about it” (CAI5)

In the proactive process type, evaluating the type of SM data involves determining if the SM data is related to the posted FGC, and if it belongs to any of SM data type 2 categories. In this case, it will be processed through the next stage of proactive SM data use, as stated: *“[we would] review the comments and if there is something around the content of the post we put up, so if it’s about the campaign, “I love this ad or that really cracked me up”, those kind of comments, [we] would respond to them, with “Oh ya, we love it too”, that kind of comments.”* (CBI1)

The quote from the SM manger in company B verifies the above: *“[we would] engage in it proactively by posting messages and then depending on the type of engagement we would get back there [...] with responses.”* (CBI2)

However, if the SM data is not related to the posted FGC, it is passed to reactive SM team members to be processed as parts of the reactive SM data process, as stated: *“because I suppose it’s what we need to remit, customer issues anything like that we will send them to [SM customer care] team.”* (CDI4)

Interviewees revealed that in many cases, the users’ comments under a posted FGC are related to other issues and problems users are facing, as reflected here: *“You could be putting up a new ad for a new handset [...] and people will say the network is down in Fethard, Co Tipperary. What are you doing about it?”* (CAI1)

“I could put up a competition to say I have an i-phone 5 to give away and then someone would come onto the site and say I have an i-phone 4 and it’s not working anymore how can I fix it?” (CCI5)

In such cases, evaluating the UGC type reveals that the users’ comment should be passed to the reactive team, as reflected in the below quotes:

“where the comment involves customer information or customer query that gets brought up to the social CRM team” (CBI1)

“We found that a lot of our proactive comms [communications] get responded from customers with messages that are really about service queries.” (CCI1)

“I don’t have the technical knowledge to answer that query so I would leave stuff like that to [reactive] team because they are trained to respond to those.” (CCI5)

Screenshot below shows examples of such cases for company A.



Figure 28: Example of a UGC posted under but not related to an FGC

Evaluating the sentiment of the UGC

Evaluating the sentiment of UGC refers to the activities involved in determining the overall sentiment of the UGC and if it entails a positive, negative, or neutral tone or message. Across the four case companies, evaluating the sentiment of the UGC was discussed as one of the first aspects of the evaluating stage: *“What they need to do is first to assess the tone and sentiment of the message” (CAI4)*

Moreover, numerous references have been made by the interviews regarding how the company deals with positive and negative UGC differently, and how their reaction to positive or negative posts would be different (details in section 5.7.4.3). This implies that before taking any action, the SM agents evaluate the sentiment of the UGC to determine if it is a positive, negative, or neutral message.

“So, say something like – we’ve 4G launched recently, so we might then look at what the sentiment is around that and then go and look and see what people are saying – where are we getting kind of positive, who’s talking about it in a positive way, that kind of a thing.” (CCI1)

Evaluating the User

Evaluating the user entails evaluating the selected UGC based on the different attributes of the person who has posted the UGC. In this aspect of the evaluation stage, the SM team focus on the user who has posted the UGC in the SM platform, and carry out the evaluation based on the attributes of the user. Highlighting the importance of this aspect of the evaluation stage is the significant share of conversation time in the interviews discussing this aspect, along with the numerous references made to this point across the four case companies, which was reflected in 18 out of 22 interviewees.

The evaluation of users does not mean that the company would only respond to the UGC posted by certain users, but it suggests that the company might *“give them special considerations” (CCI2, CBI3)* or respond differently depending on who the user is, as stated: *“that’s not to say that we don’t response to others, but we kind of assess the profile of the person at the beginning to see if we should give them any special considerations.” (CBI3)*

Evaluating the user who has posted the UGC is conducted based on the following three aspects, which will be further discussed below:

- 1- Evaluating the user influence
- 2- Evaluating the user history with the company
- 3- Evaluating the user demographics and profile

Evaluating the user influence involves reviewing the level of influence of the user who has posted the UGC, and determine if the company should take any actions or give the UGC any priority or special consideration due to his/her level of influence. The influence of SM users was repeatedly referred to in phrases such as *“the influence of people engaging”* (CAI1), and *“very influential or important users”* (CBI5). Moreover, numerous references were made to the **number of followers** or **how many followers** the users have, as the main indicator in gauging the influence of the user (CBI3, CCI3, CDI4, CAI1), as reflected: *“The team are very much aware that not everybody is equal in social media, you look at the profile and **see how many followers they have**, if they have one follower or if they have 5000, and there is a difference in how you would respond to them.”* (CCI3)

*“So, if you have somebody, it’s one thing having a couple of annoyed customers, but it’s another thing to have an **annoyed customer who has 40,000** followers on Twitter. So we have to be really alive to that.”* (CAI1)

‘Known persons’ (CBI3, CDI3) and *‘public figures’* (CCI3, CBI3) such as *“a politician, or a social celebrity or known telco expert”* (CDI4) form a considerable group of the high influence users, which companies take into account as *“a factor for us when dealing with queries in social”* (CBI3), and might lead to reacting *“slightly differently”* to (CBI3), as stated: *“If it’s the case that it is an influencer within either of the segments, or a politician, or a social celebrity or known telco expert, we would give their posts priority.”* (CDI4)

*“We have to be very careful and need to know who is the person who is raising something with us before providing any response, **how many followers they have**, are they a known figure, etc.”* (CCI3)

*“Again, we might react slightly differently if a compliment is from **someone with a lot of followers**, or a known person”* (CBI3)

In such instances, the SM manager and the relevant department managers would be made aware of the comments from influential users, for example, in the case of company C, the head of online communications would be made aware of the comments from influential users: *“So like we had a note from [...], who’s the tech correspondent from [...], and he has spoken very positive about our 4G, and those kinds of comments would definitely come to me.” (CCI1)*

In the case of company D, as illustrated in the screenshots below, a specific section in the SM monthly report is allocated to reporting on the most influential users in different SM platform, with sample screenshots from their posts and the relevant stats.

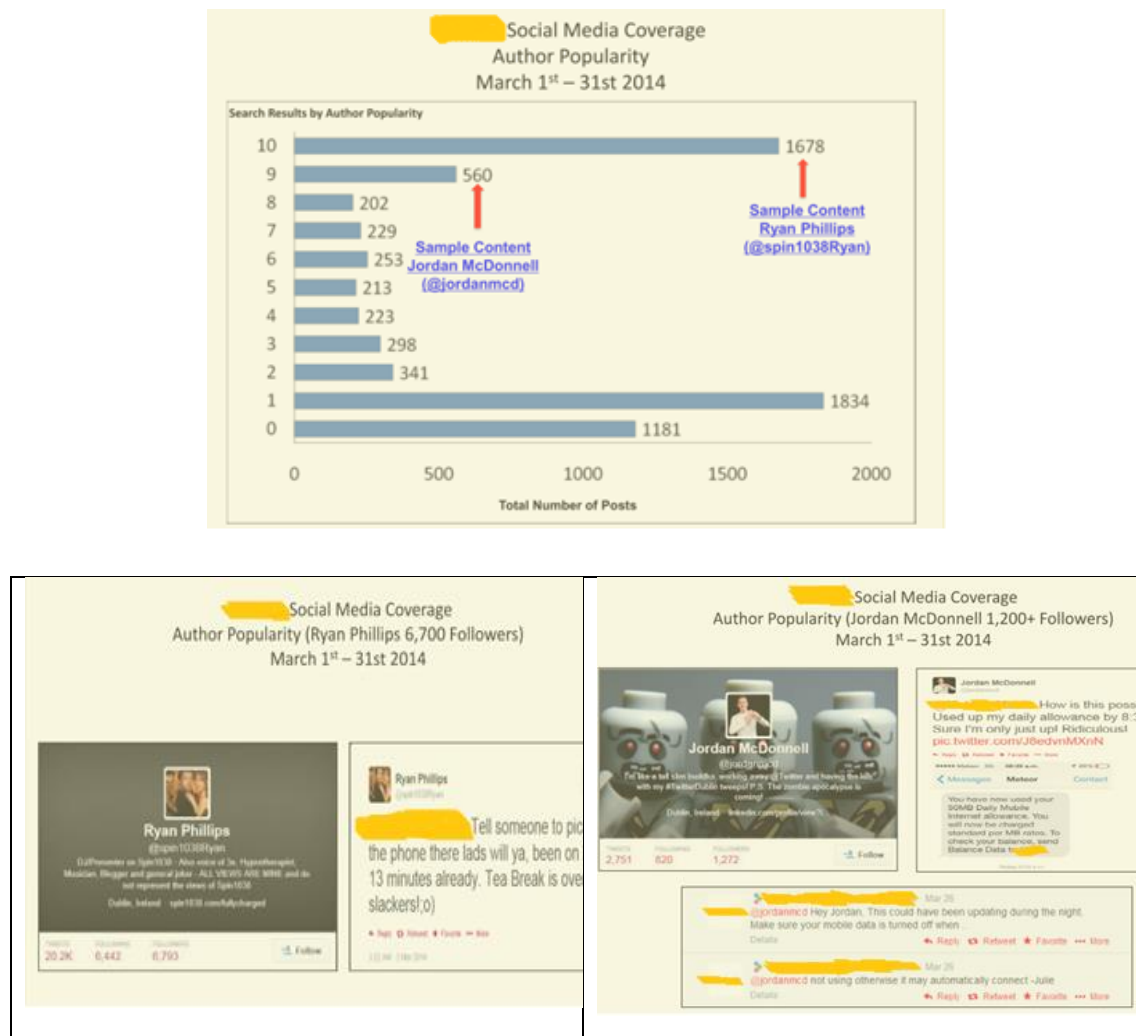


Figure 29: Section in SM report of Company D on influential SM users

This shows that the case companies are well aware of the importance of the influence of the users with whom they engage in SM platforms, and take clear steps in

evaluating and determining the users' level of influence before taking any action in regards each UGC.

Evaluating the user history with the company entails reviewing the users' previous interactions with the company in SM, to assess how they have interacted with the company previously (CCI2, CCI3, CDI2, CDI3) and *'the reputation of the user'* (CDI2). The result of this step will inform the subsequent stages of the subprocess, as stated: *"We also have a look at their history with us [...] so if have a little bit of history that if we have dealt with them in the past, we would be able to see how that came out, how they accepted our help or if they didn't want to. That's very important in how you treat the customer"* (CCI3)

Evaluating the user's demographics and other attributes is another step in evaluating the SM user, and plays an important role in determining the course of action in dealing with a specific SM post. User's demographics refers to any of the user's characteristics, including age, gender, profession, geographical situation, or other situational or personal factors which would help the SM agents in obtaining a better understanding of the context of the user's post.

Each of the case companies focus on certain type of demographical information of users, which are listed in the table below.

Case	Important Demographics	Example of Supporting Quote
Company A	Jokers	<i>"If it [the UGC] is coming from users who are known to us to be jokers, we tell them [the social media team] to keep an eye on the trend and monitor it, but not to get involved in the discussion directly."</i> (CAI4)
	Self-claimed subject matter experts	<i>"[if the posts are] coming from unhappy customers, or the self-claimed subject matter experts ... they the agents are told to escalate their issues or problems to the relevant teams"</i> (CAI4)
Company B	Technical knowledge of users	<i>"But certainly not all SM users are at the similar technical knowledge levels. We would see more of tech savvy users in Boards.ie for example, because a lot of telco employees and subject matter experts and bloggers are active in Boards; and those are the ones we keep an eye on"</i> (CBI3)
Company C	Age, disabilities, geographic location, financial situation	<i>"... very very angry people on behalf of people who are left stranded on an island with no phone, poor students or old or disabled people"</i> (CCI2)

Case	Important Demographics	Example of Supporting Quote
Company D	Age, disabilities, financial situation	<i>“if somebody comes on and says my handicapped mother is sitting in her house, we would take that and give it priority, if somebody comes on and says I can’t believe [company C] took €1600 out of my account, I am now broke and will be kicked out of my house we will give that priority” (CDI2)</i>

Table 20: Factors for evaluating users' demographics in each case company

The above table shows that in the evaluation stage different types of demographics are used by the case companies to evaluate the users and potentially give them priority or special consideration.

In the proactive process, this type of evaluation is particularly important in the case of competitions, whereby the SM team would review if the competition participant is an employee, or if they have recently won another competition, or if the user demographics merits any special considerations, as stated: *“Then pulling competition winners [...] I would check that it’s not an employee that sort of stuff.” (CCI5)*

“see who is the respondent, if they have just won another competition for example.” (CAI5)

Evaluating the Impact and Virality of the UGC

Evaluating the impact and virality of the UGC is another aspect in the evaluation stage. Virality (CBS11) is noted as the chance that the UGC goes viral (CAI4, CBI3) in phrases such as *“if the post or query or the experience has the potential to go viral” (CBI3)* or *“is there is chance that it would go viral” (CAI4)*. Evaluating the impact of the UGC was referred to as *“to gauge and assess the message in terms of severity and importance” (CAI4)*, the *“potential to cause headaches, or worst-case scenario create a crisis” (CBI3)*, or the potential for the UGC to *“cause trouble” (CDI3)*. The SM care team lead in company A stated that *“They need to gauge and assess the message in terms of severity and importance. They need to determine how big an impact could the negative message have” (CAI4)*. He provides examples as: *“is there is chance that it would go viral, does it damage the reputation of the company in big scale, or does it impact our overall brand consideration by other users.” (CAI4)*

In the case of company B, the concerns regarding the **Virality** of the posts were referred to by interviewees as: *“We look at [...] if their point of view or issue is*

something that can go viral, and that is certainly a factor for us when dealing with queries in social.” (CBI3)

“We also need to make a judgment call of the potential impact of what they are raising with us, and if the post or query or the experience has the potential to go viral?” (CBI3)

The potential virality risks were also signified in the job description of one of the SM team members in company B as *“diffusing issues and closing them in a timely manner given the virality risk associated with them.” (CBS11)*

In line with the above, the possibility of going viral and creating damage to the company brand (CCI2) and reputation (CDI3) has been mentioned among interviewees’ main concerns: *“proper brand protection means that anything that looks like it’s likely to cause negative damage to the brand and our reputation, or is quite likely to pick up pace and go viral or even gain say 4000 likes on Facebook or something like that, then we try to get it sorted as quickly as we can.” (CCI2)*

“Also, what does the overall conversation mean for our social reputation as a company, does it have the potential to cause trouble, etc.” (CDI3)

The importance of evaluating the impact and virality risks of the posts is manifested in the pattern in the empirical data regarding using SM for ‘reputation management’ (CAI3, CBI1, CCI2, CDI3), ‘crisis management’ (CBI2, CCS10, CDI5), and ‘brand protection’ (CCI2, CDI2), as illustrated in the table below (also see field notes, appendix I):

Concern	Supporting Quote Examples in Company			
	A	B	C	D
Reputation Management	“it is so important to be doing proper monitoring and reputation management in social, because if you don't it can really damage your brand and relationship with existing or potential customers.” (CAI3)	“so they [senior managers] do see it as very much a reputation management to a certain extent” (CBI1)	“ ... anything that looks like it’s likely to cause negative damage to the brand and our reputation [...] we try to get it sorted as quickly as we can.” (CCI2)	“Also what does the overall conversation mean for our social reputation as a company, does it have the potential to cause trouble, etc.” (CDI3)

Concern	Supporting Quote Examples in Company			
	A	B	C	D
Crisis Management		“[Senior manager see social media as] An annoyance! Because usually they only see it when there is a crisis” (CBI1) “Those two processes [customer service and crisis management] have been significantly impacted by social media” (CBI2)	“As manager of our social media support team I was responsible for developing our customer response strategy, including Tone, KPIs, SLAs, escalation and crisis management, quality and measurement metrics” (CCS10)	“if something was to arise for example if there was a I was going to say crisis management [...] again the two teams would work very closely together just to manage the messaging as well so we would work quite close in that respect” (CDI5)
Brand Protection			“proper brand protection means that anything that looks like it’s likely to cause negative damage to the brand and our reputation, or is quite likely to pick up pace and go viral or even gain say 4000 likes on Facebook or something like that, then we try to get it sorted as quickly as we can.” (CCI2)	“[we would particular attention to posts which are] particularly damaging to the brand.” (CDI2)

Table 21: The importance of evaluating virality, reflected in empirical data

The above shows that the impact and virality risk of the posted UGC is a key factor for the companies, based on which the SM data is evaluated.

Overall, SM data is evaluated from different perspectives in the evaluating stage, which will then inform the subsequent stages of individual SM data use subprocess, which will be discussed next.

5.6.3. Investigating Stage

The investigating stage refers to activities involved in investigating the selected unit of SM data from different aspects, which will inform the subsequent stages, and help in determining the best course of action in regard to the SM data. The investigating stage follows and goes hand in hand with the evaluating stage (discussed above). While the evaluating stage is focused on assessing and evaluating different aspects of the UGC,

the investigating stage is focused on inquiring into the UGC in order to ascertain related facts or information in that regard, or *“try and get as much detail as possible”* (CDI6).

In the Investigating stage the unit of UGC is investigated to ascertain:

- if the information in the post is correct
- if more information is required to decide upon the best course of action in relation to the UGC, which could be required from the user or other departments

5.6.3.1. Investigating if the UGC is Correct

Managers in all four case companies reported that investigating if the UGC is correct is one of the main steps in the investigation of each UGC: *“[They] also need to investigate if the information provided in the message is correct.”* (CAI4)

“We review the post to make sure that the information they are providing – in many cases to the other users – are correct.” (CBI3)

“we need to know if the information we are given is correct first” (CDI3)

In the case of company A, this aspect of the investigation stage is one of the main steps in the social flowchart (CAS18) which comes immediately after the evaluation of the sentiment of the message. Company A’s social flowchart directs the SM agents to investigate if *“the facts are correct”*, to either *“take appropriate action”* or *“gently correct the facts”* accordingly (CAS18).

This step is particularly important in regard to competition type of FGC, where the provided responses need to be investigated *“to make sure if the responses are correct, or if we have a draw and we have asked them to tag their friends or share something with a number of their friends, we just need to make sure that they have done that”* (CDI5)

5.6.3.2. Investigating if more information is required and sourcing the info

The investigation stage also involves investigating if more information is required in relation to the SM data, before making a decision as to the best course of action in dealing with it, which involves two scenarios:

When more information is required from the user who has posted the UGC:

The most common case in such situations is when the SM agents ask for the user's phone number in order to find his/her records in company's information systems, as stated: *"Everything is based off the phone number, so if it's a query like you ate all my credit, [...] we would ask them to provide us with their phone number."* (CAI1)

In the case of coverage issues, the SM team would ask for additional information such as the geographical location of where the coverage issue is happening (CAI1, CAI4, CBI3, CCI2, CDI3), or for the steps the user has already taken in trying to rectify a handset issue (CAI2, CBI2, CCI3, CDI2), as stated: *"what normally happens is that they get a query, if they need customer specific information, they request them through direct message. The customer phone in a number to us and they pick it up and take it from there essentially to look into customer specific queries."* (CAI2)

The screenshot below illustrates an example of such situation for company A



Figure 30: Example of Company Asking for Additional Information

When more information is required from another department in the company

A common example of this scenario is in the case of network or coverage issues, when confirmation or clarification of the situation would be required from the network department, as stated: *"if they needed to clarify something then it would go to the different departments"* (CDI6)

In the case of the proactive process, more information might be required from other departments, regarding obtaining particular tickets for an sponsored event for a customer, or confirming the eligibility of a customer for a certain promotion in complicated cases, as per the below quotes.

"Stuff like sponsorships, or little things like the 6-Nations trophy is being brought around Ireland at the minute, lots of queries as to can you come to Tralee and ... he [the agent] gets the information ... and gets back to the customer with some kind of response." (CAI1)

"In complicated cases we would ask the credit team or the billing team, or others to give us the information we need as required." (CAI5)

Overall the investigation stage might involve one or all of the above scenarios.

5.6.4. Acting Upon the Data Stage

The empirical data shows patterns in the activities of SM teams after evaluating and investigating the SM data, which involves deciding and executing the best course of action in relation to the selected unit of SM data. These patterns in activities which form the Acting Upon the Data stage, are informed by the results of evaluating and investigating stages, and include five forms of action as:

- Escalate to management
- Abdicate to other departments
- Ignore
- Keep an Eye on
- Respond

There have been numerous references to the importance of having clear criteria for each form of acting upon the data stage by the interviewees across the four case companies, such as: *“The key is to be clear on how to respond to each type of posts, and really weigh up the options and reactions before making such decisions.”* (CAI5)

The importance of clear criteria is magnified for companies B, and C, and D since they work with an SM agency in their proactive SM data processing, as well as the internal teams involved. In the words of the marketing communication manager in company C: *“It is particularly important because we work with our agency on the marcomm posts [FGC], and they are obviously not as familiar with our internal processes, so we need that clarity on which ones to engage with and which ones to pass to others, or escalate to me to escalate to management if needed.”* (CCI4)

“we’d have an agreed policy both internally and also with the agency on how we talk to customers, what posts we answer and which ones we don’t answer at all, or monitor for a while and then answer if needed, which ones we pass over to other teams or escalate up the chain, what we should answer, what we need to direct to the social care team.” (CDI4)

“we need that clarity on which ones to engage with and which ones to pass to others, or escalate to me to escalate to management if needed.” (CCI5)

The importance of the clear criteria on how to answer different types of posts is also captured in the below quotes: *“we have to have a policy on what and how we can address ourselves, and what actions we should be taking in each case”* (CDI4)

“We tried different ways of handling the different types of posts under our marketing posts, especially the service queries, but at the end we decided that the only way to do this is to be very clear on who answers what and how they answer it.” (CCI5)

Each of the five forms of acting upon the data stage is discussed in detail below.

5.6.4.1. Escalate to Management

Escalating to management is when the SM agents decide to bring the UGC to the attention of the management. The purpose of escalating a UGC to management is to inform the managers of that particular incident of UGC, and to **seek the managers’ advice or intervention** in regards the best course of action in response to the specific UGC (CCI2), or to **fast track** the response and resolution to a specific UGC (CBS11).

“if it’s a simple case of Lisa doesn’t knowing what to do in regards a particular post, or if she just needs my opinion on something, she comes to me [the social media manager], we discuss and decide.” (CCI2)

“Recording and reporting some issues to management [...]. This allows for faster escalation, responses and resolutions.” (CBS11)

The management might decide that the best course of action in the instance of that particular UGC includes any of the other four possibilities of acting upon the data stage.

Escalate based on Severity and Importance

Instances of UGC which need to be escalated have been referred to as *“If something needs to be dealt with ...”* (CAI2), or *“is it worth escalating immediately”* (CAI4). In other cases, it was referred to as *“When something is big enough and serious enough that it needs to be escalated”* (CBI3), and when *“something is important enough that it needs to be redirected to the management”* (CDI6).

“The cases [of escalation to management] are usually not difficult to spot, because they are either coming from very influential or important users, or the subject is

important enough to merit escalation.” (CAI5)

This shows how the results of the evaluation and investigation stages informs the acting upon the data stage, in order to establish *“is it worth escalating immediately”* (CAI4), which depends on the **severity** (CAI2, CAI4, CBI3) and **importance** (CAI2, CAI5, CBI3, CDI6) of the UGC.

Confirming the above, the social flowchart in company A clearly indicates that the SM agents are advised to make a decision on escalating a UGC based on the importance and severity of the UGC (CAS18).

Deciding what UGC to escalate is subjective

Based on these factors, the SM team in the case companies make the judgment call if a certain UGC needs to be escalated. The subjective nature of escalation is referred to as *“if the agents **feel** that something is important enough”* (CDI6), and *“It’s **pretty informal, they know when it’s right to flag** really”* (CAI2), *“the social team would **judge** that”* (CCI1), and *“They **have that level of** skill that they would ascertain whether this is something that needs to be escalated or whether this is something that they can feed in straight away.”* (CBI3)

The SM managers in the case companies serve as the first line of escalation to management, which means that the SM team would first escalate the UGC to the SM manager, SM customer service manager or the SM marketing manager, who will then escalate the issue to other managers in the company as required, as reflected in the below quotes:

“Those guys will bring that to the social managers’ attention and he would then go to whoever is responsible” (CAI2)

“If the message needs to be escalated they would normally escalate it to me [SM care team manger], and I would discuss that with the relevant managers, like the PR team, or customer experience team, ect.” (CAI4)

“the team would inform me [the SM customer service manager] first. I would examine the issue, discuss it with the other managers and escalate it through the correct channels to ascertain the best course of action in that case.” (CBI3)

“But if it’s something severe that needs to be fed to the senior management or other managers [...] then they would come to me [SM manager] and I would discuss it with senior managers” (CCI2)

“It would be raised to the social media manager first and then he would work with the stake holders that would be then involved.” (CDI6)

Overall, the escalation stage is subjective, done with the purpose of seeking advice or intervention or fast-tracking response and resolution, based on the severity and importance of the UGC, informed by the evaluation and investigation stages, and through the SM manager or customer care SM manager in the company.

5.6.4.2. Abdicate to Other Departments

This form of Acting Upon the data happens in situations whereby the response or resolution needs to be provided by another department in the company, in which case the SM team handover or pass on the UGC to the relevant department to resolve and take action (CBS11, CDI6), or *“re-route queries to relevant sections”* (CCS8), as stated:

“The social team have access to the network team, and billing team and systems [...] If the issues are related to other departments, there’s specialists within the teams that they could contact” (CAI1)

“We need to be very clear on which posts we answer, and which ones we pass over to other teams.” (CCI5)

“... engaging with key stakeholders in business support, networks, PR, marketing and finance to provide feedback and insight on customer issues while working towards resolution.” (CBS11)

In the case of company D, it was noted that: *“they would trouble shoot themselves and if they need to escalate it then it would go to the different departments or if they needed to clarify something then it would go to the different departments” (CDI6)*

Need for clearly Defined Processes and Roles

All the case companies have clearly defined processes for abdicating and passing on the UGC to other departments, as stated *“we would have clearly defined escalation processes in different cases, if it is PR, or Billing, or network, or any other departments”*

(CDI6). Having a **clear list of contacts** in different departments is an integral part of this process across the four case companies. The SM manager in company A refers to the points of contact in other departments as “communication lines” as: *“so they have communication lines for network issues so if they see a load of people in say Tipperary saying what’s the story with [company A’s] coverage in Tipperary, they have lines of communication open with the network team to say hey there’s an issue here”* (CAI1)

In the case of company C, the list of contact people in relevant departments is clear: *“So the guys in the Social Media team have a list of who are the appropriate people in the various businesses”* (CCI1)

The importance of these communication channels is well expressed in this quote from a marketing manager in company D: *“But it’s very important that if something like that does come up that the right people are communicated to”* (CDI6)

The empirical data revealed two approaches of ‘end to end’ and ‘hands off’ in abdicating and passing on a UGC to other departments, which are shown in the supporting quotes in the table further below.

End to end approach in company A and B: The SM team works with the relevant department in providing a resolution or response to the UGC. They obtain the response or resolution from the other department and provide it to the user. In the meantime, they would let the user know that the issue is in progress.

Hands off approach in company C and D: The SM team would fully hand over the specific UGC to the other department, and leave it to them to provide a resolution or response. The SM team would indicate to the user that the issue has been abdicated to another department for resolution.

Case	Approach	Example of Supporting Quote
Case A	End to end approach	<i>“The team have access to the network team and the billing team, but if there’s something they cannot answer themselves, the specialists within the team would work with them to resolve the issue.”</i> (CAI1) <i>“they the agents are told to escalate their issues or problems to the relevant teams (using our contact person in that team), and try to get a resolution using the normal social care process. In the meantime, they would normally provide updates on the progress with the resolution to the users.”</i> (CAI4) <i>“the guys that are working can respond to each individual tweet or each individual Facebook message to say hey thanks for your message, we’ve just</i>

Case	Approach	Example of Supporting Quote
		<i>been in touch with the network team and there's an engineer working on it right now hoping to get it fixed by 5pm. Apologies" (CAI1)</i>
Case B	End to end approach	<i>"Engaging with key stakeholders including business support, networks, PR, marketing and finance to provide feedback and insight on customer issues while working towards resolution" (CBS11)</i> <i>"they will contact their nominated points of contacts in each of those departments and would work with them to resolve the issues, and provide that resolution back to the customer." (CBI1)</i>
Case C	Hands off approach	<i>"In cases where we can't [provide a resolution] we send them on to designated technical support, credit support, technical support, customer experience teams and they will resolve the problem." (CCI2)</i> <i>"In most cases we would prefer if they get back to the customer and we would just say the case is now in hand, you should get a call back, if not let us know. Now we don't follow up on that afterwards" (CCI2)</i>
Case D	Hands off approach	<i>"if they can't get an answer or if they're finding a lot of issues around a particular thing like say logging into one of our websites, they'll go to the appropriate business owner and try and escalate the problem" (CDI1)</i> <i>"the guys in the Social Media team have a list of who are the appropriate people in the various businesses [...] so, they have a list that they would pass on information and feedback to the relevant peopl." (CDI1)</i>

Table 22: Approaches in Abdicate form of Acting Upon the Data Stage

5.6.4.3. Responding

Responding refers to activities concerning the provision of a response or resolution from the SM team to the user for the selected UGC, including answering the questions, providing a resolution to the problems, displaying appreciation, announcing the winners of the competition, etc.

Case companies understand that they need to allow for negative UGC to be posted to their SM sites, as stated: *"we do let people negatively post, because we have to, that's the world it is and you can't just have a favourable page, if you open yourself up to the conversation you have to be willing to take the good with the bad [...] how we deal with each one is different, but I think as a company we have an understanding that we need to deal with both positive and negative comments in social."* (CDI4)

Responding to Positive UGC

The positive UGC would be related to compliments from the customers, such as a customer's feedback on his/her good experience with the company. Compliments are appreciated across the four case companies, in the form of *"a thank you or some kind of credit for their hard work from the customers, which is very nice"* (CAI4), and are

viewed as very important due to the impact they have on other SM users', as stated:

"because people will take that more than what we respond back with." (CCI7)

Responding to positive UGC is usually shorter than those to negative ones, as stated:

"We do still engage but it's a brief engagement with the positive comments" (CCI2). It takes three forms of thanking the user, highlighting to other SM users, and highlighting to managers, which will be discussed below.

- **Thanking the user:** which involves thanking the user and showing appreciation for their positive feedback, as stated

"If it is a nice positive message, they would respond back with a nice positive comment, such as "thank you very much for your post, we are glad that you have had such a nice experience", or depending on the type pf positive experience they would comment back with a nice human response" (CAI4)

"They will then respond with a nice human comment back" (CAI4)

"For positive posts and compliments, we respond back or repost their post, thank them, tell them how much we appreciate their feedback" (CBI3)

"Generally, we get a lot of positive feedback on Twitter, and sometimes other social sites as well, which we really appreciate and try to convey our level of appreciating in our respond." (CCI1)

- **Highlighting to other SM users by retweeting and reposting:** which involves reposting the post (CBI3), retweeting or other actions to help the company leverage the positive atmosphere created as a result of the positive comment:

"Leverage the nice atmosphere which is normally created as a result" (CBI3)

"We also try to get the most out of positive posts, such as posts from satisfied customer in our social pages, we repost their comments in our pages or somehow try and drive attention to that particular customers' positive experience with us" (CBI1)

"[In the case of positive posts] We thank them for their comment and the guys will probably retweet the post to spread the good word and elicit more positivity from that particular user, as well as the others." (CCI2)

“We obviously really appreciate all the positive comments, and normally respond back to show our appreciating and to even build more on that positive experience by for example retweeting it if it’s in Tweeter.” (CDI4)

“So, if we get some really good feedbacks on our content or activities, we repost them and share them and thank the user. Or if the content we get from the users is really good, we might dedicate separate posts for those to show our appreciation for the customers’ engagement and effort.” (CAI5)

Highlighting to managers: which involves reporting on the positive comments to the managers in the company to highlight and *“showcase them to the senior managers or other managers” (CDI4)*, as stated:

“But they also need to decide if it’s worth escalating as an example of good positive feedback, and if they think that it is, then they will raise it as one of the highlights of their daily activity” (CAI4)

“On top of the brief engagement with the user, we also report on the positive feedbacks and use screenshots of good ones in our report decks to managers” (CCI2)

Responding to Negative and Neutral UGC

In the case of neutral posts such as questions about competitions or other information seeking UGC, the team provides the required information in response, as stated *“If it is a competition [...], we answer the questions we might get on the details of the offers for example or if someone is eligible.” (CAI5)*

Responding to negative UGC is discussed in the SM negativity challenge, as one of the forms of customer related challenges in section 5.9.2.

5.6.4.4. Keep an Eye on

This form of acting upon the SM data refers to situations when the SM team decide not to actively respond to or provide a resolution to the UGC, but not fully ignore the post either and keep an eye on it, in case it would require a response or escalation in near future. It was referred to as *“to only monitor the trail” (CAI4)*, and *“keep an eye on the trend and monitor it, but not to get involved in the discussion directly” (CAI4)*.

The overall purpose of keeping an eye on a post is to monitor the other users’

reactions to the post and activities related to the post, to *“make sure it does not turn into something it shouldn’t” (CDI3)*, and *“make sure that it does get out of hand or cause trouble” (CBI3)*.

This form of acting upon the data might lead to any of the other four forms, as stated:

“On the other hand there might be some posts which we decide not to react to, we might gauge the posts and decide that the negative consequences of engaging in certain conversations might actually outweigh the positive ones. And then the post might take a turn and we might have to come in and respond, because especially in social things can go viral very quickly, so we need to be very careful in how we respond to different posts.” (CAI5)

So, keeping an eye on a post might lead to the provision of an answer, as stated *“We’d have an agreed policy on [...] what posts we answer and which ones we don’t answer at all, or monitor for a while and then answer if needed” (CDI4)*, or to ignoring as stated *“[we] might monitor them for a while to make sure that they don’t go viral and then drop them.” (CCI4)*

The ‘Keep an Eye on’ form of acting upon the data mainly happens in reaction to negative posts from users who are known to be jokers or disrupters, or in the words of the social CRM manager in company B show *“trolling behavior”*. Such situations are common with the ones which might merit an ‘Ignore’ reaction, and hence they will be discussed together in the next section.

5.6.4.5. Ignore

One of the interesting patterns revealed in the empirical data showed that across the four case companies, initially the interviewees conveyed their aim to respond to all the relevant UGC in SM, which is evident in phrases such as: *“We would try to respond to absolutely everything that concerns the company” (CCI3)*, *we try to [...] respond to as much as possible” (CCI3)*, and *“We try to respond to everything” (CDI5)*. Also *“We certainly aim to respond to all the posts which require a response. For example, in the case of competitions we don’t have to respond to all the posts, but we aim to answer all the ones which require an answer” (CCI4)*.

However, upon progressing in more detailed questions of their activities, it was revealed that companies do not respond to all posts, and ‘ignore’ certain types of UGC,

and “decide [...] to ignore and let it be” (CCI3). Ignoring involves SM team deciding not to provide a response or resolution to “cases where our company policy is not to engage with a certain type of post” (CCI4).

Ignoring has been described as something that companies need to learn and exercise, as stated “I think as a company we need to come to terms with the fact that we cannot and possibly should not answer each and every post” (CCI4), and “We have to learn to ignore things” (CCI3). In company C, according to the SM manager in company C, almost 90% of the posts get responded, as stated “we respond to about 90% of the posts I would say” (CCI2). This means that about 10% of the posts eventually get ignored. In company D, approximately 85% of the posts receive a response (CDI3), which leaves about 15% of the overall posts with no response or ignored status. The percentage of responded posts were not revealed for companies A and B. The SM manager in company B clearly stated that “I cannot give you specifics on this” (CBI3).

The criteria for when to ignore a UGC is revealed to be the same as the criteria for keeping an eye on a post, as illustrated in the below table. In such cases, the SM team members would review the post and decide to ignore the post or to keep an eye on it. These criteria are defined at the organizational level, or as “company policy”: “Except in some special cases, where our company policy is not to engage with a certain type of post [...] then we follow the company policy, or might monitor them for a while to make sure that they don’t go viral and then drop them.” (CCI4)

The situations where SM team members are instructed to keep an eye on or ignore a UGC have been shown in the table below for each case company.

Company	Criteria for Ignore	Relevant Quote
Company A	Very negative Making fun	“If a post has a negative tone, but it includes correct information, and is written in a funny way, or is coming from users who are known to us to be jokers, we tell them to keep an eye on the trend and monitor it, but not to get involved in the discussion directly” (CAI4)
Company B	‘Trolling behavior’ Very negative Making fun	“On some occasions we have cases of users, especially in our community, who are dedicated to causing trouble by attacking or making fun of certain things, that kind of trolling behavior. We normally would not engage with them.” (CBI3)

Company	Criteria for Ignore	Relevant Quote
Company C	Very negative SM cannot add value Responding would increase the negativity	<i>"The times that we wouldn't [engage] is when somebody's having conversations and we don't really think there's any point of going in" (CCI2)</i> <i>"Because you're only feeding the negativity that's coming through. You can't just keep responding the whole time, because in some cases you'd be encouraging the negativity, so you have to just stop and ignore them." (CCI3)</i> <i>"especially in cases where posts are so negative or we have attended to the customer's demands as much as possible and there is not much point in continuing the discussion much further" (CCI4)</i>
Company D	Abusive or very negative SM team cannot add value	<i>"Now if it's the case that it is abusive or negative I don't think we respond to all of them, we specifically train our social media team not to respond to certain negative comments." (CDI3)</i> <i>"If they feel that they cannot add much value in the conversation or if it might create a situation where the conversation might cause crisis. So they would review the situation, the post, the user, everything and decide to respond or just keep an eye on the post or not respond at all." (CDI3)</i>

Table 23: Criteria for 'Keep an eye on' and 'Ignore' forms of 'Acting Upon the Data' stage

Table above shows that SM data is ignored in cases where the SM team cannot help the SM user with their query or add any more value (CCI3, CCI4, CDI3), as stated: *"we started by responding to everything. You start realizing after a while that you can't help the customer anymore, they keep coming back. You start off and do your best and they come back and say that's not enough and you can't do anymore, then we just stop."* (CDI3)

Other criteria include intentionally making fun (CAI4, CBI3), and very negative UGC (CAI4, CBI3, CCI3, CCI4, CDI3). While the ignoring and keeping an eye on criteria slightly differ across the case companies, the common criteria across the four cases includes very negative posts, which will also be discussed as one of the challenges in section 5.9.2.

Overall the 'act upon the data' stage includes any form of escalating to management, abdicating to other departments, keeping an eye on, ignoring, or responding to the UGC.

5.6.5. SM Information Utilization Stage in Individual Subprocess

Information utilization forms the next stage in the individual SM data use subprocess. Due to the differences between how individual SM data is utilized in reactive and proactive data use processes, each one will be discussed separately below.

5.6.5.1. Individual SM Information Utilization in Reactive

Immediate or Short Term / Instrumental, Conceptual and Affective / Operational

In the individual reactive SM use process, the responsibility of SM information utilization lies with the SM team members and managers (CAI1, CAI2, CBI3, CBI2, CCI2, CCI3, CDI2, CDI3), as well as the employees in other departments to whom acting upon the SM data has been abdicated (CCI2, CCI3, CDI2, CDI3).

The information utilization at this stage is concerned with individual issues and problems, and is done on a case by case basis. Hence the unit of data is individual SM data. As discussed in section 5.4.2, the reactive teams try to respond to and resolve each UGC as close to real time as possible during their working hours (CAI2, CBI3, CCI3, CDI4). So, the timeframe for information utilization in individual reactive SM process is **immediate or short term**, or as noted *“on a daily basis”* (CBI3), as stated: *“There are changes that might go through on a daily basis and they could be just something that somebody is giving out incorrect information. So that is fed into the contact centre immediately that this needs to change”* (CBI3).

SM information utilization in individual reactive SM data use subprocess mainly includes **operational** utilization of SM data and include 1) fixing customer issues and answering their questions, 2) informing the store managers of customer issues and experiences in their stores, and 3) highlighting customers’ positive feedback to managers.

1- Fixing customer issues and answering their questions: As discussed in the section 5.4.2, the majority of SM data processed in the reactive process includes users’ questions and issues related to billing Issue, network issues, and customer experience issues (CAI3, CAI4, CBI3, CCI2, CDI3). As a result, the main form of information utilization in this stage concerns resolving and rectifying individual SM user’s issues

and problems regarding company's products, services or customer experience and processes. As discussed in section 5.4.2, providing customer service, fixing customers' issues and answering their questions, and improving the overall customer experience are a number of the main purposes of the reactive SM data use process. SM information utilization forms the final stage of individual SM data use subprocess, which embodies this purpose, as stated: *"In terms of issues around network or billing [...] if something happens it surfaces on social these days [...] and it definitely does feed into your decision making very quickly"* (CAI2)

Such instances of information utilization form the majority of instances in individual reactive SM data use and resonates with **action oriented and Instrumental** information utilization types. Examples of such utilizations are illustrated in the table below.

Utilization Area	Company	Details of the issue	Trigger	Resolution	Utilization Responsible
Resolving a customer's billing problem	C	Customer has been overcharged in last month's bill	Customer message on company's FB page	SM team abdicated the issue to the billing team, who reviewed and reimbursed the customer	Billing team
Resolving a customer's request re data roaming	B	A customer need data roaming to be activated on her SIM card	Customer raising the request in Twitter	SM team discusses the request with the relevant team and activates the feature for the customer	SM team

Table 24: Examples of Individual SM Information Utilization in Reactive Process

2- Informing the store managers of the issues facing customers in their stores: SM

data is also utilized to assess the quality of customer interactions in the stores. If any of customers are not happy with their experience or the agents in stores, the issue would be escalated to the relevant store manager (CBI2, CBI4), as stated: *"we do get feedback like "I was in the store in Grafton St, and they gave me incorrect information about whatever", or "I think the people in your stores need to know more information about Android or whatever". That happens on an ongoing basis."* (CBI4)

"we definitely get commentary comments around how people have been dealt with throughout our retail stores, and we would get feedback on Carphone Warehouse, or any of the third-party retailers and how they performed." (CBI2)

The SM data received regarding the store interactions would be fed back to the store managers to review (CBI2, CBI4), which is an instance of **conceptual or knowledge enhancing** utilization types. If the information actually leads to an action taken by the store managers, it would be another instance of with **action oriented and Instrumental** information utilization types.

3- Highlighting customers' positive feedback to managers: The other form of information utilization includes using customer's positive feedback to highlight to managers (as discussed in section 5.7.4.3), which resonates with **affective utilization**.

In summary, the instances of individual SM information utilization in reactive process include instrumental, conceptual and affective utilization types, at an operational level, and in immediate or short-term timeframe.

5.6.5.2. Individual SM Information Utilization in Proactive

Immediate and short term / Affective / Operational

As discussed in section 5.6.3, the main forms of UGC in response to the companies' FGC includes questions and feedback regarding the posted FGC. As a result, the utilization of individual SM data in the proactive process is limited to highlighting the positive feedbacks received from the SM users to managers, to inform them of how well the team is doing. Such utilization involves including examples of the very positive SM feedbacks to highlight to the managers, which is of a limited scope at operational level and resonates with affective information utilization, as shown in the example below:

Utilization Area	Company	Details of the issue	Trigger	Resolution	Utilization Responsible
Reporting on customer positive feedback as highlight to managers	B	A customer provided very good positive feedback on company services in social media, which is included in the report to managers	Customer positive feedback in Facebook	SM team includes the customer's positive feedback in the report to management	SM team

Table 25: Example of Individual SM Information Utilization in Proactive Process

The responsibility of information utilization, as other stages in the proactive process type, is with the SM team and SM marketing team members.

Overall, the utilization of individual SM data is limited and happens at an operational level, and in short term or immediate timeframe. The utilization of individual SM data in the reactive SM data use process includes instrumental, conceptual, and affective utilization, but only includes affective utilization in the proactive SM data use process.

5.7. Aggregated SM Data Use Subprocess

The activities of the companies in processing SM data at the aggregated level form a number of patterns, forming the aggregated SM data use subprocess and stages. The aggregated SM data use subprocess is related to the processing of multiple units of SM data, including a number of posts or comments together. As noted *“we tend to try and look at it as a group of posts over a month or so as well, because it’s not giving you a very precise measurement of how you’re doing if you only look at every single post.”* (CDI4)

The aggregated SM data use subprocess forms a part of reactive, proactive, and analytical SM data use process types, and include the following stages, as illustrated below:

- Data Gathering
- Data Analysing
- Report Generation
- Information Dissemination
- Information Utilization

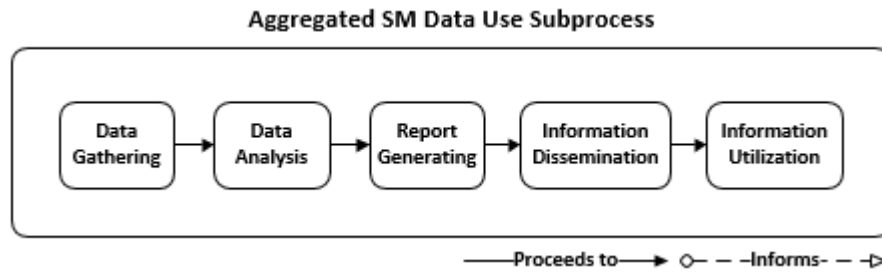


Figure 31: Aggregated SM Data Use Subprocess (Based on Case Study Data)

This section hereafter provides the details of the analysis of the empirical data related to the stages of aggregated SM data use subprocess, including their details and salient aspects.

5.7.1. Data Gathering Stage

Data gathering is the first stage of the aggregated SM data use subprocess, and involves gathering the SM data related to a specified subject or during a specified time, with the purpose of moving the data to the subsequent stages, as stated *“We get the data, analyse it and get reports”* (CAI2). Data gathering is referred to by the interviewees as *“get the data”* (CAI2), *“collect the data”* (CBI3), *“monitor activity”* (CBI2), *“scan the relevant data”* (CCI3), and *“getting the relevant data”* (CDI4). The data gathering stage is discussed separately for each process type below.

5.7.1.1. Data gathering Stage in Reactive

In the reactive SM data use process, the SM team log the data related to each individual interaction manually in systems specific to each case company, which forms the main source of data for the data gathering stage. Across the four case companies, the SM agents log the relevant data when they are done with the individual SM data use activities and before moving to the next one, as stated: *“So they have to log after every interaction, so they answer a tweet, they spend maybe a minute logging it [...] they log the interaction and then they move on to the next one”* (CBI4)

The responsibility for the data logging is with the same SM agent responsible for conducting the individual SM data use stages, as *“all of the information is inputted by the agent, by the person who is doing it.”* (CBI3).

One of the main drivers behind data logging is to keep a record of the interaction as the history of that user's interactions with the company, or to *"leave notes in the system to make sure that if they call into the contact centre that the contact centre agent knows that they have contacted us through social media"* (CBI3). Moreover, reporting on certain aspects of the SM activities of the company at the aggregated data level would not be possible, unless individual level information is logged in this stage. As a result, the other driver for data logging is to be able to report on different aspects of the interaction between the user and the customer, as stated *"because we need to be able to report on them afterwards"* (CDI2).

The SM team log a variety of data types about their interaction with the users. For example: *"If they are on Twitter and there is a customer who's asking them about coverage and it's 3G coverage and they have an Apple handset and they are in Dublin 15, the executive will log as much of that information as they can"* (CBI3)

Time to respond and time to resolve are two data types which are logged across the case companies for each interaction, due to their high importance, as it will be discussed in section 5.9.2. The other data types recorded for each interaction in the case companies are illustrated below.

Case Company	Types of Data Logged	Example of Supporting Quote
Case A	Contact subject and type Resolution Deflections from the call centre Time to resolution Time to respond	"Because they would have to record certain information about each interaction, such as subject, type, resolution, time to resolution, time to respond, deflection from call centre." (CAI3)
Case B	Contact drivers Contact Types and breakdown Query information Number of unique customers Deflection from the call centre Time to resolution Time to respond	"tag the contact [content/request] that are coming in so that I know the contact [content/request] drivers are, what the breakdown is, how many unique customers we're servicing, what the deflection is from our contact centre, it is all logged manually." (CBI3)
Case C	Contact driver Contact topic Deflections from the call centre Resolution Time to resolution Time to respond	"So, it's basically off the very simple spreadsheet that they guys use after each interaction to enter a bit of information about that interaction, things such as the driver, or the topic, resolution, and any special notes they might have, such as previous contact with call centre, very basic and simple stuff." (CCI3)
Case D	Deflections from the call centre Infor about the customer Infor about the issue	"if the customer had contacted customer care before, as much details about the customer as they can, what was the call driver (based on the categories they have),

Case Company	Types of Data Logged	Example of Supporting Quote
	Call driver Resolution Escalated? Who to? Time to resolution Time to respond	who they escalated it to, was the resolution provided.” (CDI4)

Table 26: Types of Data Logged in Each Case Company

The above table shows that case companies log different types of data at the end of each individual interaction. The types of data logged in all four case companies include subject and type of query, deflection from call centre, time to respond and resolution, and the resolution to the interaction. Data gathering in the reactive SM data use subprocess is done manually, and includes the above types of data, as well as other data related to each interaction collected from the SM platforms.

5.7.1.2. Data Gathering Stage in Proactive

In the proactive process, data gathering constantly happens across all of the relevant and available forms of data in the SM platforms (CBI2), as stated *“it is very much being monitoring the whole time when campaigns are running”* (CDI5). Across the four case companies, numerous references have been made to gathering relevant data for each FGC (field notes, appendix I). The relevant data for each FGC are collected from the SM platforms to be further processes in the subsequent stages of aggregated SM data use. The types of data collected across the four case companies include the number of likes, shares, reposts, comments, views and clicks (if applicable), as well as the sentiment of the reactions (CAI3, CBI2, CCI4, CDI6), as stated: *“For our proactive posts we look at the number of likes, shares, retweets, engagement, reach, and any other data we can get from the sites, which should add value for us in terms of what we want to know and what matters to us and our business objectives”* (CCI4).

Simple measures related to each post is kept manually in a logger *“We keep a log as to the performance of the post, to see which posts are performing well and which ones are not”* (CAI1). The more complicated measures regarding each FGC (such as reach, engagement, and sentiment analysis (CAI2)) are obtained from the SM analytics technology, which shows that data gathering in the proactive process type is done in a combination of manual and automated way.

5.7.1.3. Data Gathering Stage in Analytical

The analytical data gathering stage involves using the SM analytics technology to scan the predefined list of SM platforms, to find the SM data relevant to the company and its activities, competitors and market. The gathered data will then be processed through the following stages in the analytical subprocess using the SM analytics technology. The automated nature of analytical data gathering, enabled by using SM analytics technology, (Radian6 in the case of company A and B, and Sprout Social in the case of company C and D) (CAI2, CDI4, CBI3) forms the main difference between data gathering in analytical versus reactive and proactive process types, as reflected here: *“Now Radian 6 is the tool that we use to do that [scanning] to monitor activity”* (CAI2).

“The analytics team monitor activity through Radium 6 primarily” (CBI2).

“The monitoring from a social perspective is done using SproutSocial” (CDI6).

As discussed before, the details of the data collected in each of the SM analytics technologies depend on the requirements of each company and the algorithms used, which is out of scope for the purpose of this study.

Overall the data collection stage of the aggregated MS data use subprocess is done in a combination of manual and automated manner, whereby data gathering in reactive process is done manually, it is done in a combination of automated and manual way in proactive process, and it is done automatically in the analytical process. As discussed above, the sources and types of gathered data form the main difference between the data gathering stages in reactive, proactive and analytical process types.

5.7.2. Data Analysis Stage

The second stage of the aggregated SM data use subprocess entails the data analysis stage, which includes activities related to analysing the data gathered in the data gathering stage. Data analysis stage leads to production of reports or other forms of data analysis results, as stated: *“we get the data, analyse it and get reports around what the top queries were, and other usual metrics”* (CAI2).

The interviewees have been asked about the analysis of SM data and communication of the results of the analysis, especially generation of SM reports, including the details of the reports generated, what is included in each of the reports, and who is the reports disseminated to. This lead to a considerable amount of empirical data regarding the details of the analysis, report generation and dissemination stages, which will be discussed in this section and the following two sections. The empirical data revealed that the data analysis stage happens for all types of SM data use process including proactive, reactive, and analytical in all four case companies (field notes, appendix I). Across all these processes, the result of analysing the raw data gathered in the data gathering stage leads to the production of a number of measures or metrics, which are defined and calculated in each case company.

In the reactive and proactive process types, the SM data is analysed as per the defined set of metrics, as stated: *“we look at how many queries we are getting, how important the issue is and how fast they are coming in [...] Then there are reports around what the top queries were”* (CAI2). The importance of the analysis stage for the proactive process is signified here: *“It’s very, very important that we don’t put out a campaign and then just leave it sit, because if people aren’t responding to it then we have to change it and make it different, and we would know that by reviewing the metrics. That’s the great thing about social is you have the opportunity to do that”* (CDI5).

In the Analytical sub process, gathered data is analysed using the built-in algorithm of the Rasian6 (CAI1, CAI2, CBI2) and SproutSocial (CCI2, CDI3) tools used in the case companies, details of which are out of scope for this research.

Based on the data collected form the interviewees specifically on how they analyse the SM data, the main metrics which have been used in the four case companies at the reactive, proactive and analytical aggregated SM data use process include the following:

Reactive	Proactive	Analytical
• Contact drivers • Breakdown of no of contacts per issue type • Volume of contacts	• Volume of likes, comments, retweets, reports on a post • Engagement per post • Engagement rates for top posts • Reach rates per post	• Overall share of voice • Share of voice per platform • Sentiment analysis • Sentiment score • Engagement rate

Reactive	Proactive	Analytical
- Platform breakdown (for contact drivers and overall volume) - No of unique customers served - Average time to resolve - Average time to response - Resolution Rate - Deflection rate from contact centre - The most active SM platforms	- Sentiment analysis for the week - High traffic peaks - Low traffic peaks and explanations - Click through rate	- Total engagement - Reach - Frequency - Impact on site traffic - Brand scores - Keyword Analysis - Audience analysis

Table 27: Main Metrics in Aggregated Data Analysis Stage

A review of the above table shows that the companies use a limited set of SM metrics. The data gathered in the data gathering stage is analysed as per the above metrics, and are used in different reports generated in the next stage.

5.7.3. Report Generation Stage

The report generation stage refers to activities related to generation of reports based on the result of the data analysis stage. In this stage, the analysed data will be used to generate reports to communicate the results of the data analysis.

An analysis of the data related to the report generation stage resulted in a long list of different reports, which have been repeatedly referred to in each of the case companies (field notes, appendix I). There is a significant number of such reports, including 46 report types across the three SM data use process types in the four case companies, as summarized in the table below.

SM Data Use Process Type	On-demand	Daily	Weekly	Monthly	Quarterly
Reactive	Company A, B, C, D	Company B	Company A, B, C, D	Company A, B, C, D	Company A, B, C, D >> Amalgamated in 1 report
Proactive	Company A, B, C, D	N/A	Company A, B, D	Company A, B, C, D	Company A, B, C, D >> Amalgamated in 1 report
Analytical	Company A, B, C, D	N/A	Company B	Company A, B, C, D	Company A, B, C, D >> Amalgamated in 1 report

Table 28: Types of SM Reports Generated in Case Companies

As illustrated in the table above, report generation can be categorized in two forms of planned and on demand. Planned reports follow the predefined time structure of daily (only in the case of company B), weekly, monthly, and quarterly. On demand reports are generated when they are needed, and are normally used in the reactive and proactive processes.

The most common forms of reports for each process type, along with the measures used in each report are summarized in the table below.

Process Type	On-demand reports	Most common planned reports
Reactive	• Volume of related UGC posts • Platform breakdown • Key contact drivers • Overall sentiment • Important posts	Weekly • Traffic drivers for last week • Key Issues • Volume of contacts per issue type • Volume of contacts per platform • Average time to respond and resolve
Proactive	• Volume of likes, comments, retweets, reports on a post • Engagement per post • Reach rates per post • Sentiment analysis for the post	Monthly: • Top posts • Posts against engagement • Top posts against engagement • Volume of likes, retweets and reposts • Engagement per post • Reach rate per post • Sentiment analysis for the month
Analytical	Not often	Monthly: • Top posts • Posts against engagement • Top posts against engagement • Volume of likes, retweets and reposts for each FGC • Reach rate per post and overall • Sentiment analysis • Sentiment and engagement rates comparing to last month • High and low traffic peaks • Key conversations around company • Share of voice • Most active SM sites • Benchmark against competitors

Table 29: Most Common Reports for Each Process Type

As shown in the above table, the most common form of reactive reports across the four case companies include on demand, and weekly reports (CAI4, CBI4, CBI2, CCI3, CDI2). Weekly reports have been highlighted as the most important reports in the aggregated reactive SM data use process for all the four companies, as reflected in the quotes below: *“the real reporting is weekly” (CBI4)*, and is mainly driven by the customer support issues (CCI3, CDI2), as stated *“the weekly one is very low level, quite detailed, it tends to be more about how many comments are on a post, level of customer care interactions” (CBI2)*. The main metric for reactive reports is contact drivers, as stated: *“our contact drivers’ coverage is always the primary one” (CBI3)*. Monthly reports in the case of reactive and proactive process types include the roll up of the weekly reports (CAI4, CBI2, CBI3, CCI4, CDI3), as stated: *“the weekly one is very low level [...] then we get more high level the further out they go” (CBI2)*. Monthly reports are the most common reports of the proactive subprocess, which mainly focus on the performance of FGCs, and include performance related metrics as shown in table above. Monthly reports are also the main form of analytical reports and include the overall SM metrics, as shown in the table above.

From a metrics and analysis perspective, the metrics used in the reports across the four cases are very **descriptive**, aiming to reflect the current state of SM activities in the case companies.

Overall reporting is viewed as a very important stage in SM data processing stages in the case companies, as it was evident in the large volume of data referring to the details of this stage in the interviews (discussed by all 22 interviewees), as well as other documents (such as the self-reported job descriptions of other team members including CBS14 and CBS16), and multiple references to them in the field notes (see field notes, appendix I). A large number of reports are created across the 4 case companies, which include **descriptive information** regarding the current status of SM activities of each of the case companies.

5.7.4. Information Dissemination Stage

The information dissemination stage involves distributing the information generated as a result of the previous stages to the relevant audience, including managers (middle and senior managers) and other employees to inform them of the information. Since

the information dissemination stage follows the analysis and report generation stages, and uses analysed data or information, it has been named as 'information' dissemination (see section 3.2 on data and information).

Across the four case companies, SM information dissemination is done through **meetings, personal communications, and report distribution**, as stated: *"We have regular meetings, and we also have frequent conversation within our team, within the bigger social team and also with other departments. Where and when necessary, we would call for a meeting with the relevant departments and take appropriate actions"* (CDI5). Analysis of the empirical data regarding each of the three forms of information dissemination will be provided below.

5.7.4.1. Interpersonal Communications

There was a significant level of emphasis from the interviewees on the importance of 'continuous communications' (CCI2, CDI3) or 'Frequent conversations' (CAI2, CDI5), 'regular contact' (CAI1), and 'talking regularly as stuff come up' (CCI4) within the SM team and with other department and managers involved. **Within the SM team**, this continuous communication involves discussing *"most of the issues as they arise"* (CBI2), where the managers would *"seat with the team and we are in constant communication as to what's happening and how we handle the posts as they come in."* (CCI2), and *"we would be in constant communication throughout the day with the team"* (CBI2). The managers would normally review the SM sites, including *"review the platforms and how the team have answered to the posts as much as I can in the morning"* (CDI3), and discuss any issues on a daily basis with the team, as stated *"I will give them feedback and discuss certain cases with them"* (CDI3). The SM team would *"also come to me or their community managers when they need to discuss a special post or raise any concerns or if they have anything they need to discuss"* (CDI3).

Also in the SM team's communications **with other departments**, in most cases the SM team find it easier to discuss the issues as they arise in the form of face to face or phone conversations, as stated: *"it's easier to walk to the marketing team and discuss special issue, or quickly pick up the phone and say would you have a look at this or what do you think"* (CCI2).

The speed of change in SM is regarded as one of the reasons for the need for constant communication, as reflected in these statements: *“because of the nature of our business and how fast things happen in social that you can’t wait for the weekly or monthly review meeting or report to address the issues, in a lot of cases they need immediate attention”* (CBI4)

“Because things happen so fast in social that you need to pick up the phone or walk to the other side of the floor and just talk to the relevant people there and then” (CCI4).

5.7.4.2. Meetings

Regular meetings (CDI5, CAI4, CAI2, CBI3, CCI2) has been mentioned as one of the main formats of disseminating the information resulted from the previous SM data use stages, and mainly include the following formats:

SM Team meetings: which happen between the SM managers and team members, mainly in the weekly format and have been described as *“a dedicated weekly slot to review how we are doing as a team”* (CBI2), as well as biweekly and one to one meetings (CAI4).

The main purpose of such weekly meetings is to discuss details and planning for near future activities, company and team updates, highlights or issues of the last week, team members experience to be shared, as well as how things are going for the team in general (CBI2, CAI1, CCI2, CDI3).

“We also have weekly team meetings, where we would sit down and discuss the work ahead, anything that is planned for the near future, new tools, interesting trends, any training or sessions we have planned for them, any company or strategy updates, as well as how the work is going in general, any experiences they would want to share with the team, or risks and concerns, anything like that we would discuss in our weekly team meetings” (CBI2).

“But we do have dedicated weekly meeting, where I update the team about company level related issues. We will discuss future activities and review the work ahead. We will also go around the table and let each team member raise any issue, concern, risk, or best practice to share with the team.” (CAI1)

Meetings between reactive and proactive managers: which happen between SM managers, SM care managers and SM marketing managers, where they would *“sit with the SM care team and review the progress and the content calendar for the week ahead together”* (CCI4)

Meetings with other departments: which take place between the SM team and the other relevant departments, including PR, customer experience, customer service, and other departments as required (CDI2, CBI4, CAI3) to discuss the information and issues resulting from the SM activities, analysis and reporting, as reflected in the below quotes:

“we also have regular meetings with call centre managers, PR, sometimes product development, and definitely marcomms [marketing communications] team more than others” (CDI2)

“I have regular meetings with my manager obviously and also with marketing, and customer experience, customer service, PR.” (CBI4)

“we have customer experience meetings weekly with the other managers in customer service and customer experience and PR and some other middle managers, where we discuss a whole range of issues in relation to customer experience issues, and social is included as part of the agenda for that meeting too” (CBI3)

5.7.4.3. Report Distribution

The distribution list for different types of SM reports generated in the case companies is provided in the table 23 below. On demand and weekly reports are disseminated to the SM team and managers, as well as relevant business managers. The monthly reports are however disseminated to a broader audience including middle and senior manager of the relevant department.

As stated: *“[the report] goes out to maybe about 15 different people every Monday morning. [.. which includes] marketing, customer experience, and some of the product managers, product development managers, customer care and customer support managers”* (CCI3)

“what I try and do is have somebody from each department whether it be customer experience, propositions, all the varying departments around and I’ll circulate that to

all of them because that's relevant. There's information there that all of them can utilize." (CD15)

The table below shows the details of who each one of the reports are disseminated to for all four case companies, which is summarized in the below table.

Report Type	Distributed to	Summary of Distribution List
On demand	SM Mangers Customer Service manager Customer experience manager Related Marketing Managers Relater operational area manager Depending on the case: directors of customer service and customer experience Depending on the case: Related senior managers	Managers directly working with SM Related Middle Mangers Related Senior Managers only if required
Daily	SM manager Customer service manager	Managers directly working with SM
Weekly	SM Mangers Customer Service manager Customer experience manager Related Marketing Managers Middle managers in other related departments	Managers directly working with SM Related Middle Mangers
Monthly	SM Mangers Customer Service manager Customer experience manager Related Marketing Managers Middle managers in other related departments Senior managers in other relate ddepartments	Managers directly working with SM Related Middle Mangers Related Senior Managers

Table 30: Distribution List for SM Report Types

Overall, as the frequency of the reports decreases, the information in the reports become more high level and they will be distributed to more senior managers.

"I'd say they're mostly all middle managers [...] They're all the people who probably can and should be dealing with the information that's coming in. They would be the customer experience managers who would take this case, get the information, deal with it and then they would pass it on to whoever if it wanted that. A lot of these issues can be resolved without having to go that much higher. So not everything that comes in needs to be passed on to the highest level or as high as it could, it's better that it's passed on to the appropriate place." (CCI3)

The ad hoc reports might be distributed to middle or senior managers, with different frequencies, depending on the seriousness and scope of the issue. For example, in the

case of company B during the 48 hours after an important milestone in the history of the company, SM reports were being sent out to middle and senior managers every hour, as stated: *“for example when [an important company event happened], we were sending updates [...] and those reports were being sent out every hour over a 48 hour period to middle and senior managers. So, it just depends on what is going on.”* (CBI2)

Multiple forms of data visualisation including charts and graphs are used in the monthly reports. But dashboards are not used as a form of information dissemination outside the SM team in any of the case companies (CBI5, CDI5; field notes, appendix I), as stated: *“I just keep it on the shared drive and I send it to who needs to know”* (CDI5). The SM reports are normally distributed in the format of *“Power point decks”* (CBI2) or *“PDF files”* (CDI4), or emails (CAI2, CCI2, CDI3).

Overall, the empirical data across the case companies shows that SM information distribution takes three forms of interpersonal communications, meetings and report distribution in the case companies. This shows that disseminating of the generated SM reports only form one type of SM information dissemination, whereby other forms include meetings and interpersonal communications. The frequency of SM data distribution does not show any particular pattern, and could range from continuous in the case of interpersonal communications to daily, weekly, and monthly in the case of reports, or weekly and monthly in the case of meetings.

SM information dissemination includes both formal and informal methods, whereby interpersonal communications equate to informal distribution methods, and meetings and report distributions equate to formal distribution methods. Moreover, interpersonal communications are regarded as particularly important in dissemination of SM information in the case companies, due to the speed of change in SM, as well as how they facilitate SM information utilization, as stated by the SM manager in company A: *“I don’t think the reports so much, but just in general I think the data is fed into decisions”* (CCI1).

5.7.5. Aggregated SM Information Utilization Stage

Immediate or Short Term / Instrumental and Conceptual / Operational

SM information utilization in aggregated SM data use subprocess entails utilizing the processed SM data at aggregated level, and has emerged in the data related to all process types of reactive, proactive, and analytical. Interviewees have reflected that utilization of SM data in their companies needs improvement (CAI2, CBI1, CCI2, CDI3), and that they would see themselves at the *“beginning of the journey”* in this area (field notes, appendix I). In the words of the marketing manager of the company A: *“The first thing to say is we are not where we should be or we could be in terms of actually analysing the social data and then integrating that into decision making going forward”* (CAI2). Some of the terms used by the interviewees in reference to SM information utilization in the case companies include Ad hoc (CAI3), not at higher level (CAI3), no process (CCI3), *‘for little things, not huge’* (CDI2), not at the macro level (CAI2), *‘Immediate, but not longer term’* (CAI5), *‘not where we should be or could be’* (CBI3), *‘It has a question mark over it’* (CAI2), and no decision making at higher levels (CCI1), as stated:

“but just in terms of you saying decision making it’s very much ad hoc.” (CAI3)

“It’s just when you talk about decision making at a higher level as opposed to just answering tweets, we don’t really do that.” (CAI3)

Overall, when the interviewees were asked if they utilize SM data in any areas in their company, their quick response was that it’s very limited utilization or that they don’t, as stated: *“They don’t use it [SM data] to inform business decisions, not really no”* (CAI5). However, upon further investigation of the question, multiple but limited areas of utilization were revealed in all the case companies. Related analytical memo, written by the researcher is shown in the below screenshot:

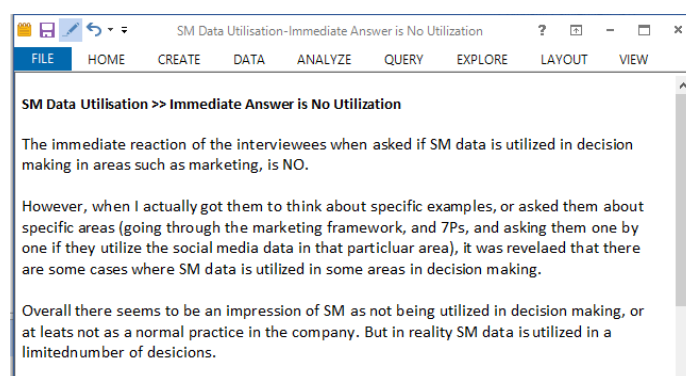


Figure 32: Analytical Memo Regarding Overall SM Information Utilization

SM information utilization in the aggregated subprocess is related to utilizing the insight gained from analysing SM data at aggregated level, in decisions concerning a number or many users, which clarifies that the unit of data utilized here is aggregated SM data.

The **responsibility** for information utilization at aggregated level is not limited to the SM team members, but will also include other managers of the relevant areas, which could include other marketing managers, PR managers, sales and promotion managers. For example, in the case of PR communications, *“If something [PR related] needs to be dealt with, normally what would happen would be fed back through myself and the PR manager [...] if it was really serious, it would be dealt with through the PR office”* (CAI2).

The **timeframe** of information utilization in this stage of SM data processing is **short term**, as stated: *“because social is so real time and we’re able to pull that information very, very easily, so it’s something that we can act on quite quickly and we can see the reaction almost instantaneously”* (CDI6).

Across the four case studies, the results of the processing of aggregated SM data is utilized in the following areas:

- Improving and clarifying company communications with customers, including PR, promotional messages
- Improving promotional campaigns
- Improving customer experience (processes and services)
- SM performance measurement and improvement
- Informing managers of different SM insights and information
- Using SM information to support decisions already made.

In the words of marketing managers in company D, the majority of these areas are *“around customer experience or marcomms [marketing communications] in general”* (CDI1)

Table below shows a summary of each of the aggregated utilization areas, as well as instances from each case company.

Utilization Category	Utilization Domain	Utilization Type	Instance in Company A	Instance in Company B	Instance in Company C	Instance in Company D
Improving and clarifying company communications	Operational	Instrumental	Clarify proposition messages	Clarify company communications	Clarify company communications	- Improve service messages based on the feedback - Clarification re social add on offer
Improving campaigns	Operational	Instrumental	Clarify messages in ads and frequency Capping	- Improve campaign communications - Change timing of campaigns - Change format of information	- change of imagery in ads - Improvement to customer messages in Ads	
Improving Customer Experience Process	Operational	Instrumental	Improve Self Service App	Handset Unlocking Improve voicemail security	Improve website's self-help section	Customer experience process improvement
Improving services	Operational	Instrumental	- Extend SM Care Team Working Hours - Resolve network service issues and quality	- Verify that service has been restored - Resolve network service issues and quality	Resolve network service issues and quality	Resolve network service issues and quality
Product Offering	Operational	Instrumental		Stock more of a certain type pf handset		
SM Performance Improvement	Operational	Instrumental	One of the main areas of utilization	One of the main areas of utilization	One of the main areas of utilization	One of the main areas of utilization
Reputation management	Operational (no example of strategic mentioned)	Instrumental	Deal with negative comments and crisis	Remove offensive campaign messages	Deal with negative comments and crisis	Deal with negative comments and crisis
Inform managerial decisions	Operational	Conceptual	- Inform customer impacting decisions - Overall sentiment is feedback to top managers	- Inform customer experience decisions - Used to support business cases	Inform digital marketing roadmap	- Help with online marketing roadmap - Inform content decisions

Table 31: Aggregated SM Information Utilization Areas and Instances from Case Companies

Overall, it has emerged that SM information utilization at an aggregated level entails a **limited range** of decisions. The main areas of aggregated SM information utilization include improving and clarifying company communication including PR, promotional

messages, and advertisement messages, improving process and services impacting customer experience, and SM performance measurement and improvement, which all show instances of instrumental use. In this stage, SM data is also utilized for informing managers, and as supporting information in making decisions, which both represent instances of conceptual utilization. Moreover, while the timeframe for SM information utilization at this stage is **short term**, all instances of SM information utilization provided by the interviewees merit **operational decisions**, which shows that aggregated SM information utilization happens at the operational level and in **three types of instrumental, conceptual, and affective**.

This shows that despite the repeated prescriptions in the literature that companies need to utilize SM data at both operational and strategic level, our research did not find any instance of SM information utilization at strategic level.

Overall information utilization at the aggregated level includes three types of affective, instrumental and conceptual (knowledge enhancing), across a limited number of decisions and in limited areas of business. The revealed limited scope and low level of SM information utilization in the companies, mainly in operational decisions.

is contrasting with the growing body of literature on the potential benefits of the utilization of SM data, as well as the recommendation of many practitioner papers.

5.8. Summary of SM Data Use Data Analysis

Diagram below provides an overview of the results of data analysis, which is in fact the concatenation of the diagrams provided throughout this chapter, and provides an overview of the SM data use process types, related subprocesses and stages, as well as the data inputs for each one.

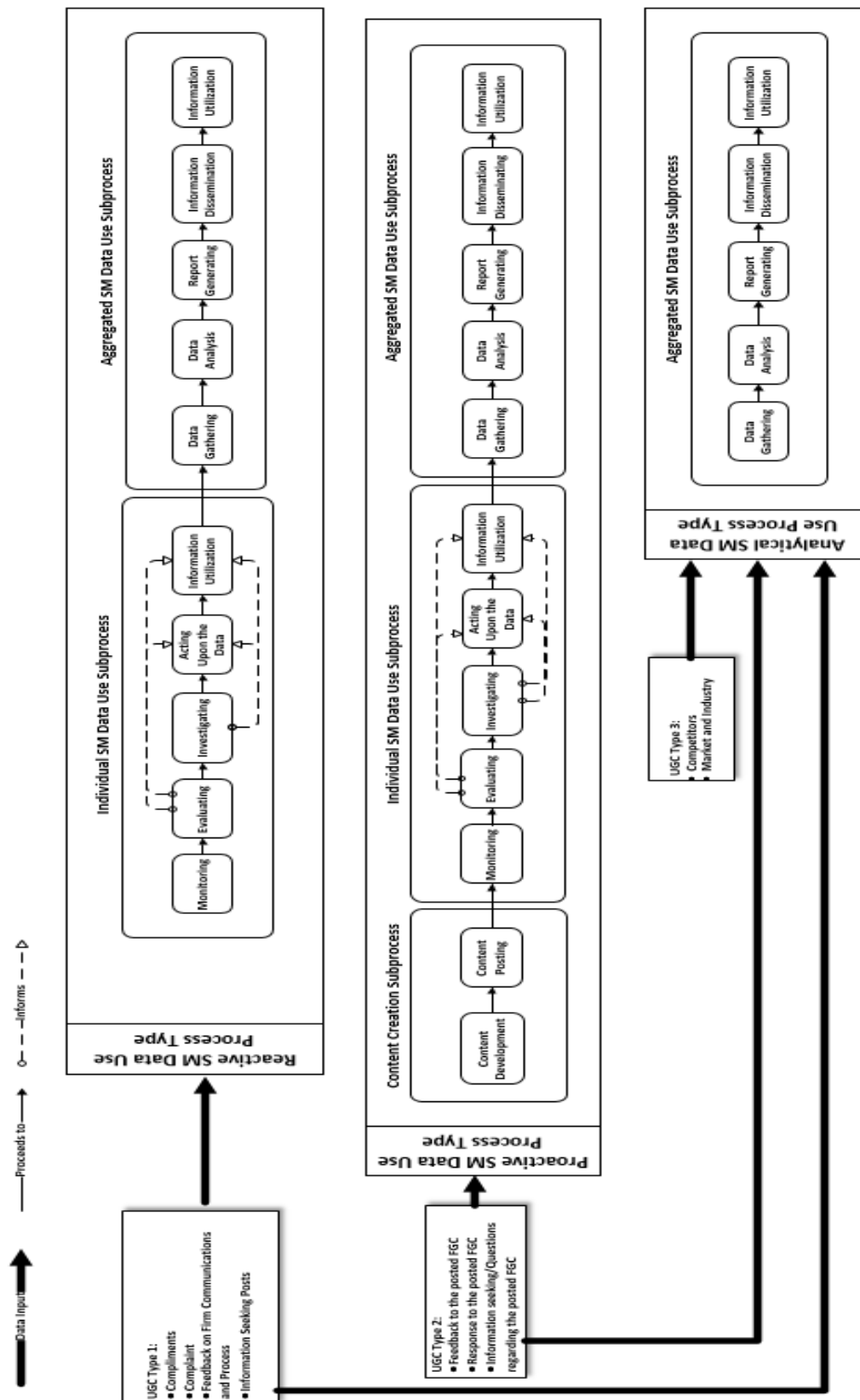


Figure 33: Overview of SM Data Use Processes, Subprocesses, Stages, and Data Input Types (Based on Case Study Data)

Another view of the above diagram is provided below, which is the depiction of the main themes revealed in the empirical data in a more coherent, but less detailed way.

Diagram below illustrates the SM data use process types, subprocesses, and related stages. It also shows that proactive SM data use process includes all three subprocesses on content creation, individual and aggregated SM data use. The reactive SM data use process only includes individual and aggregated SM data use subprocesses, and analytical SM data use process includes the aggregated subprocess only.

SM Data Use Process Types, Subprocesses, and Stages										
Subprocess Process Types →	Content Creation Subprocess		Individual SM Data Use Subprocess					Aggregated SM Data Use Subprocess		
Proactive SM Data Use Process →	Content Development	Content Posting	Monitoring	Evaluation	Investigation	Acting Upon the Data	Information Utilization	Data Gathering	Data Analysis	Report Generation
Reactive SM Data Use Process →										
Analytical SM Data Use Process →										

Figure 34: Depiction of the SM Data Use Process Types, Subprocesses, and Stages

5.9. Challenges of Social Media

“Social media is a very powerful and dangerous tool!” (CBI1)

Social media brings many benefits, as well as a range of challenges to the companies. This research revealed a number of challenges facing managers in using SM data in the case companies, which lend themselves to answering research question two, which is: ***“What are the managerial challenges in using social media data”***.

In this context, managerial challenges refer to challenges facing managers in using SM data, as opposed to challenges in managing SM, which might cause confusion. The

findings of this study show two interesting aspects in relation to the challenges managers are facing in using SM data:

- a) That managers' perspective of the challenges they face in using SM data includes a number of challenges not related to SM data attributes.
- b) As discussed in section 5.5, managers have a wider than expected perspective of SM data use, which includes SM content creation. As a result, managers' perspective of challenges in SM data use also included their challenges related to content creation.

These challenges emerged as one of the strong themes in the empirical data across the four case companies, and include the following, which will be discussed in this section.

- Content creation challenges including:
 - o Generating interesting and engaging content
 - o Generating constant content
 - o Generating real-time content
 - o Getting the right balance between promotional content and other types
- Customer related challenges including:
 - o SM Negativity challenge
 - o Customers' high expectations
 - o Misinformation challenge
- Challenge of actionability of data
- Resourcing challenge

5.9.1. Content Creation Challenges

Content creation challenges are a group of challenges which emerged in the empirical data in relation to the activities in the content creation subprocess of the proactive SM data use in the case companies. They include challenges facing managers in developing different FGC for SM platforms, which has emerged as one of the strong patterns in the empirical data across the four companies, and has been suggested as one of the main challenges, as stated: *"I think it [our biggest challenge] is around the content" (CA11)*

The observed challenges across the four case companies will be discussed next.

5.9.1.1. Creating Interesting and Engaging Content

Creating interesting and engaging content has been observed to be one of the challenges companies are facing, as stated: *“we are trying to produce interesting and engaging content about our brand, who we are as a company, within each brand, and our products and services, and activities; which is not always easy.”* (CCI1)

Companies rely on the content of FGC to attract the interest of the users and drive the engagement expected for the post, as stated *“in terms of posting the content, that would drive the engagement and produce the engagement rates”* (CCI6). However multiple interviewees (CAI2, CAI4, CBI2, CCI1, CCI5, CCI6, CDI4) noted that creating content capable of attracting the attention and driving the engagement has proven to be a challenge for the case companies. As stated: *“You’re far better off to come up with a really clever inventive way of getting a message out through social media, and relying on the engagement levels to drive the uptake for you. But it is sometimes a challenge to do it properly, to have that unique piece of content that drives the engagement for you”* (CBI2).

Engaging content has been defined as *“something that is shareable and its content is attractive and gets people talking and engaging”* (CCI5), or posting something *“which has an impact as well”* (CDI6), and not *“saying something for the sake of saying something”* (CDI6). So, the challenge in creating interesting content is not in *“finding content, it’s finding the right content that’s going to hit the nail on the head”* (CDI6). *“There’s no point going out and saying something for the sake of saying something, it has to have an impact as well. So sometimes that can be quite challenging”* (CDI6)

Creating engaging content has been identified as the ‘core strategic approach’ in company C’s content creation: *“we are saying we really need to put up content that is engaging [...] That’s the core strategic approach that we have in our content creation here.”* (CCI5)

A number of verbal expressions from the interviewees confirm the challenge companies are facing in creating interesting content, as reflected below:

*“I think that is a wider marketing issue around having content to talk about [...] because **we have to engage with consumers on the things that people like and enjoy**” (CA,I1)*

“This creates a challenge for us in terms of how to create the same or similar level of engagement on our posts.” (CAI4)

*“[It is not easy] in terms of producing **engaging and interesting** marketing content, that puts your message out there well, and **creates a decent level of engagement** in social media [...]” (CCI1)*

“I know that between us and the agency we use, it is not always easy to create good interesting proactive content.” (CCI1)

*“We really have to talk to our content in a different way to **make people engage**, so I suppose that’s probably one of the things that makes it the most exciting but obviously challenging at the same time.” (CDI6)*

The importance of creating engaging content is evident in the illustration below which shows that while Engagement forms one of the key pillars of the SM strategy for company C (CCS5), creating engaging FGC or ‘stories’ has been identified as the main path to driving the targeted engagement.

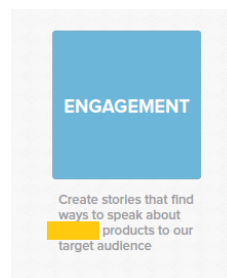


Figure 35: Engagement through content as one of the key pillars of SM strategy for company C

5.9.1.2. Creating Constant Content

Another aspect of content creation challenges is related to creating content consistently throughout the year, or “constant content” (CAI1), as stated: *“Sometimes it is a challenge ... to have it [content] on a regular basis” (CBI2)*. This challenge is manifested in the case companies in the form of having to deal with too many or too few topics for FGC at a certain time, which has been discussed by the marketing communication manager in company D as: *“So really it depends, sometimes there are*

times where you are overloaded and you're going I don't know where I'm going to fit everything and then other times it's like I've nothing this week. So, it's one of those things, it's always loads or none." (CDI4)

One of the main reasons for this challenge is that the sponsorship related FGC, which is one of the most engaging content in SM for the case companies, is very seasonal, and can only be generated in specific and limited times. This creates a challenge for the case companies in creating interesting content consistently and all year around, as stated: *"The issue is that it is very much seasonal and it is huge peaks when activities are happening, but say during the [...] there is very little happening; and I think that is a wider issue around having constant content to talk about [...] And it's a challenge"* (CA,I1)

5.9.1.3. Creating Real Time Content

As discussed in section 5.6, content creation in the case companies take two forms of planned and ad hoc, where the planned content is scheduled and developed using the content calendar. However, the ad hoc or real-time content is what needs to be produced and posted in company's SM sites in 'real time' (CAI4, CCI3) and 'on the fly' (CBI2), which poses a challenge for companies, as stated: *"Sometimes it is a challenge ... to have those unique ideas on the fly, as the events are happening and on the right moment"* (CBI2).

The real-time nature of the ad hoc content has also been referred to as *"dynamic"* and *"instant"* content creation (CCI5), *"as the events are happening and on the right moment"* (CBI2), as well as *"being in the moment and having something interesting to say within the moment"* (CDI5), which forms one of the aspects of the content creation challenge in the case companies.

This type of real time FGC is required to be posted regarding ongoing events, such as *"posting up images from the matches as they happen and it's very instant and it's very much about driving the conversation around the games as they happen"* (CCI5), or in relation to something that has happened and the company needs to reflect on it, *"due to other issues that may have happened within the business or due to other things that have happened in the world in general"* (CDI5).

These factors might lead to the need for “*moving stuff around*” (CCI5, CDI6) in the content, or the need to create and “*add something completely different*” (CDI5), as stated: “*We may have to move or edit something that we’ve done or add something completely different*” (CDI5).

“*Always a challenge would be timelines because it can be quite **tight** sometimes and when you have to move content around. That can be sometimes quite challenging, because you have to prioritize what you’ve done and then sometimes if it’s not relevant anymore you may not be able to use it at all*” (CDI6).

The ad hoc or real-time content forms a very important portion of the content that companies post, because “*generally the real-time stuff is what people really engage*” (CDI5), which portrays the need for “*being in the moment and having something interesting to say within the moment as well because otherwise you’re better off not saying anything.*” (CDI5)

This is in contrast to the planned nature of the content calendar, as stated “*the idea of a social content calendar doesn’t always work, we’re going to tell you what’s going to be popular on social media in 6 months and we’re going to talk about that, it doesn’t work like that*” (CAI5). So, the companies need to keep a balance between the planned and ad hoc FGC: “*It’s all about the balance. It depends week on week, and how much content we have which we need to publish, and how much we can talk about the actually interesting stuff based on the trends which we know will be popular*” (CAI5).

5.9.1.4. Finding the Right Balance between Promotional FGC and other types

Getting the right balance of messages between the promotional and other types of FGC (see section 5.6.2 for FGC type), is one of the other content creation challenges observed across the four case companies. This challenge became evident immediately and intensely during the case study interviews, based on the share of conversation time (case study protocol, appendix 12), which has been referred to as “*trying to get the balance right*” (CCI1, CDI4, CBI4) a number of times including “*so we’ll always have that balance of trying to get our marketing message out there, with a more engaging*

content,... so it's important to get the balance right that people will want to engage with your page" (CDI4).

The challenge is concerned with finding the right ratio of content between the promotional and other types of FGC, as stated: "There is a fine balancing act so that you don't saturate social media with commercial messages" (CBI2).

"But overall it a challenge for us in terms of how to create high levels of engagement on all the posts, especially in sales" (CAI4).

Example of promotional FGC posted by company A (left) and B (right) is shown below.

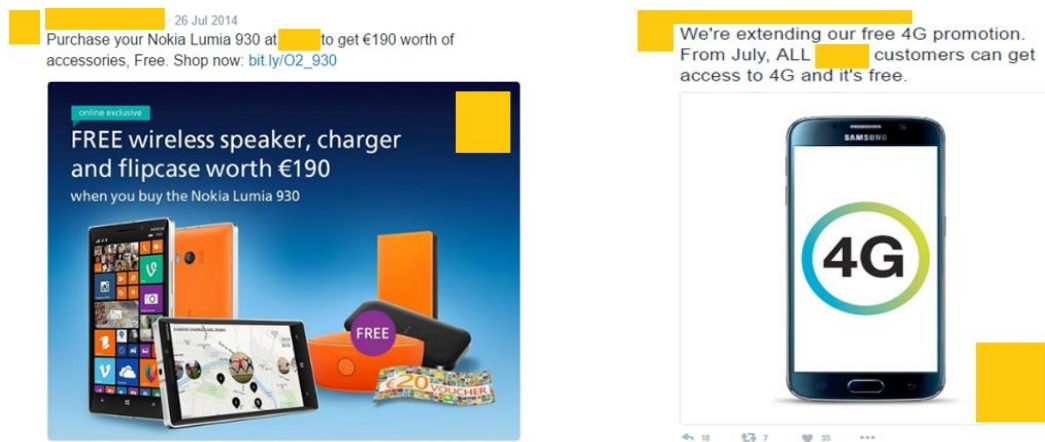


Figure 36: Example of promotional FGC by Company A (left) and B (right)

This challenge was also reflected in the annual digital report of company A, in which one of the 10 recommendations in the Digital Manifesto of the company (which includes all digital platforms including SM) specifically states that the company needs to provide better "*distinction between information and advertisement*" in their online activities including SM (CAS1).

A consensus was found between the interviewees that SM users in general are not interested in the "*direct advertisements*" (CAI4), and sales related content in SM, as "*they don't want to be advertised to*" (CAI1), and "*They don't want to see more ads in social media, and especially not in social media*" (CBI5).

"But in general, I think users do not like the advertisements in social. I think they like the interesting and engaging content, but not the direct advertisements." (CAI4)

Interviewees even used their own experience as an SM user in explaining this challenge:

“we need to be very careful in the marketing and content activities in social, because going back to my own experience I do not like to be bombarded with Ads when I am in social.” (CA,14)

“many people don’t use it [SM] to engage with brands. I am a heavy social media user myself [...] I might follow Brown Thomas on Instagram but I’m not interacting with them. I’m looking at it and that’s my interaction, it’s unilateral interaction.” (CBI4)

Interviewees believed that users see SM as a “personal space” (CAI2) for communication with their social circle, where they would go to “kill some time” (CAI1), or “they are there to be social and communicate with their social circle” (CAI5), and they would not like to see “big brand names and ads alongside of their children’s photos” (CAI4).

Despite the above, “brands tend to treat social like another advertising channel which it isn’t” (CAI5), and companies fail to understand that SM is “not an ad channel, it’s an engagement channel” (CBI2), where “Unless you’re creating incredible content it isn’t a channel where people are going to engage in advertising” (CAI5).

“The problem is if you just use Social Media for promotional and sales messages, people won’t follow you. I think people are already fed up with advertisements, they don’t want to see more ads in social media.” (CBI5)

As a result, companies need “to walk a very fine line as to not be too commercial on social media” (CBI2), or “too salesy” (CDI4), since “It’s more a channel for communicating with customers, not necessarily advertising your products and services.” (CBI5)

“We did and do understand that the promotional and marketing messages are not that interesting for users on their own, and try to be careful with the marketing messages in social, because we don’t want to [annoy] the customers by being too commercial.” (CCI1)

“You don’t want to bombard people with marketing and promotion messages, but at the same time to want to put out messages about your services, products, company activities, etc. So, it’s a delicate balance between what the company wants from social media and what customers want from social media, and again it is very important to get that balance right.” (CCI2)

This leads to the challenge of finding the *right balance* (CCI2, CDI4) between promotional FGC and the other FGC types, which has been observed strongly across the empirical data for four case companies.

Overall, the content creation challenges have emerged as strong themes in the empirical data across the four case companies, and include challenges related to creating interesting and engaging content, creating constant content, creating real time content, and finding the right balance between promotional FGC and other types.

5.9.2. Customer Related Challenges

“The trick is to forget about technology and channels and focus solely on consumer behaviour. Let that be the cornerstone of the plan and the rest of the job is a lot easier.”

(Company C internal SM document, CCS15)

Analysis of empirical data across the case companies reveals that managers face a number of challenges in their interactions with customers and users in SM. These challenges form the customer related challenges, which include the following and will be discussed below.

- SM negativity challenge
- Customers’ high expectations challenge
- SM as a Platform for Misinformation challenge

5.9.2.1. SM Negativity Challenges

Negative UGC in SM is something that companies deal with on a day to day basis. It is a type of UGC which SM users frequently post to the companies’ SM pages to discuss their non-positive experiences and problems, or to provide their negative feedback on the companies’ products, services, and processes. There is a consensus among the case companies that they need to *“take the good with the bad”* (CDI4) when it comes to UGC in SM, and allow for the negative feedback to be posted to their SM sites, as reflected below:

“We do let people negatively post, because we have to [...] as a company we have an understanding that we need to deal with both positive and negative comments in social.” (CDI4)

However, dealing with the negative UGC has become a challenge for the case companies, because the overall level of negativity from the SM users towards the case companies is so high that it is causing problems for the team members and managers alike. This is referred to as the challenge of SM negativity which has been observed as a strong theme across the four case companies. This challenge has been repeatedly referred to in the verbal expressions of the interviewees, including the following: *“I suppose one of the main ones [challenges] which is in particular the case with [customer] care is that **people are quite negative in social** [...] you do get the “thank you very much” and “you made my day” kind of messages at the end, but the process of getting from “What the hell! My phone is down again” to the final thank you is in many cases not the nicest, if you know what I mean” (CAI4).*

*“Because as you know social media can be **a very negative environment** around telecoms. Just flicking through the discussion groups and reviews, people can be very negative, hostile, or even vulgar towards the providers with whom they’ve had a non-pleasant experience.” (CBI1)*

*“So normally what happens is they [customers] post on Facebook or Twitter that [Company A] you ate my credit, what the hell?! **That’s as nice as it gets!**” (CAI2)*

It has even been mentioned in company C’s marketing communication manager’s answer to an unrelated question on how she defines SM, to which she answered: *“It [SM] gives people the scope to be possibly more negative or more critical than they would be face to face or over the phone” (CCI4)*

In the case of company A, this negativity was even reported in an industry case study about their SM activities: *“Many people would have posted comments which were negative in tone, complaining about specific problems or the way they had been treated by [company A] as a customer” (CAS17).*

Examples of this negative UGC for Company A in Twitter and company B in Facebook are displayed below:

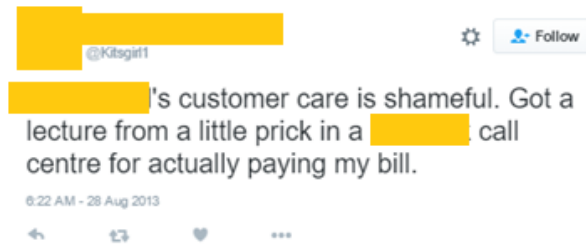


Figure 37: Example of Negative UGC for Company A in Twitter

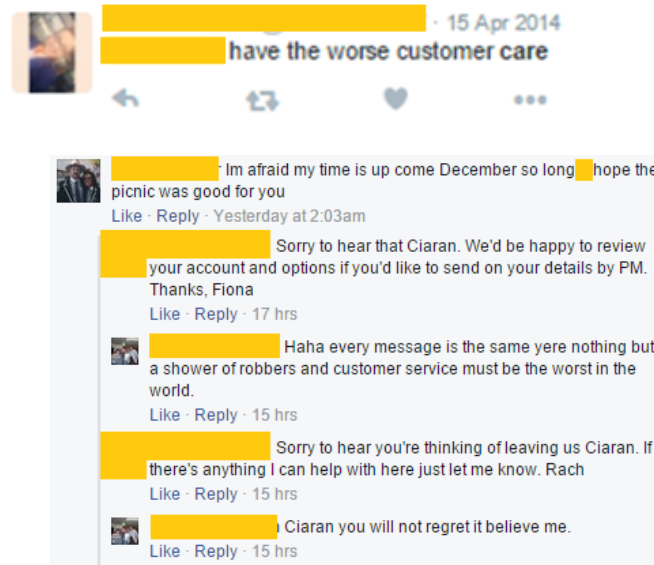


Figure 38: Example of Negative UGC for Company B in Facebook

The latter message serves as an example of another SM user's comments being more negative than the original message (also mentioned by CDI4), and also showcases the overall negativity conveyed in SM users' messages towards case companies.

The overall negativity of UGC challenges the SM team and managers in reacting to and dealing with customer posts in SM, which was reflected in multiple references to the consequent negative emotions and behaviours of SM team members towards SM (field notes, appendix I). Such behaviours and emotions range from "*cursing silently to yourself under your desk*" (CDI4), to more severe forms of reaction inducing a sense of "*frustration*" (CAI4), creating a "*demoralizing*" (CCI4) and "*demotivating*" (CAI4) experience, leading to not liking SM as a whole (CCI4), and even causing SM team members to have "a fear of" (CCI2) or to avoid responding to very negative posts (CCI2). The SM customer service manager in company D suggested that "*in general I*

think the social media world is going to have to take a stand on the negative or abusive comments. I don't think you can have staff sitting there listening to that" (CDI3).

One of the most striking verbal expressions in this regard belongs to the marketing communication manager in company C: ***"When I started working on social media I liked it, but I don't really like it anymore, because it's very negative and people don't go on to social media to say nice things, they see it as a place to get on and have a bit of a rant and that's fine. But you come in some mornings and you just see complaint after complaint, and it is demoralizing" (CCI4).***

The sense of frustration and struggle was also evident in the body language and tone of voice of CCI4, as noted in the company C field notes by the researcher.

Marketing Communications Manager (CCI4)	Special Note: Frustrated with negativity in social media There was an evident sense of dislike and frustration in her tone of voice and body language throughout the interview, but especially when talking about the negativity in social media. Initially I associated the sense of frustration to personal factors, such as being tired or having a very busy schedule. But when she was talking about how negative SM is and the fact that she used to like SM, but not anymore, it became evident that social media is one of the sources of the sense of frustration conveying in her voice and body language.
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Figure 39: Field Note Example

The SM customer service manager in company A also stated that the level of negativity can lead to feelings of frustration and demotivation for her: *"Well, sometimes it gets a bit frustrating... hmmm...because it is on a daily basis and from time to time you come across some demotivating comments which are being read and even commented by other users, sometimes it gets difficult. Sometimes the other users' responses to comments are more aggressive and unfriendly than the comments themselves [...] It's just sometimes difficult."* (CA,I4)

The sense of fear among the SM team members in dealing with very negative posts was reported as: *"There is a certain amount of fear with some agents that they don't want to engage or they only want to engage with good messages and not bad messages or irritated customers" (CDI2).*

Interviewees had different views of the reasons for the high level of negativity of UGC towards companies in SM, and multiple reasons have been suggested by the

interviewees for this challenge. **Anonymity** of users in SM seems to be regarded as the main enabler of the overly negative behaviour and attitude of the SM users towards the case companies, where *“many of the comments in discussion forums are anonymous”* (CAS17). This leads to **“unrestricted” behaviour** (CCI4), **separation of social media personality and offline personalities** (CC,I2), and **feelings of empowerment** when posting negative or abusive comments (CC,I2) among SM users, as stated: *“I think part of it is because it’s anonymous. You’re unlikely to start shouting at someone in a shop because you have had a bad experience, likewise on the phone, you can get a bit angry with someone on the phone but generally people are a bit better mannered, but I think because you are hiding behind your laptop, and I know it’s not anonymous but it kind of is anonymous, people feel that they’re unrestricted and can say what they like”* (CCI4)

Attention seeking (CCI2), and **desire for exaggeration** (CCI6), **showing off on the power they have over companies** (CCI2); have also been mentioned as the possible reasons for users’ overly negative behaviour in SM. Also interviewees believed that **users see social media more as a care channel for telecom** companies, where *“it has become a forum for customers to go on to and ask for help or complain or just be abusive”* (CC,I2).

“it’s customer care using the channels that they feel are more efficient for them, they don’t want to network with us, they don’t really care.” (CBI4)

It was also suggested that since the majority of people use SM when they are having a problem (CAI4, CDI2, CCI2, CDI6), it leads to the overall negativity of their comments, as stated *“But when it comes to care, people are sitting behind their laptops or mobile phones and they have you as the representative of the company with whom they are having a problem with and in a lot of cases they don’t even try to be nice.”* (CAI4)

In one of the case companies⁴, this negativity was shown as a backlash against their campaign for supporting Special Olympics in SM, which was not expected:

⁴ In this case, revealing the case letter would lead to identification of the company.

"[the company] supports the Special Olympics and we recently did a social media campaign around that and we had a thing where we were saying if we get 5000 tweets we'll give the Special Olympics €5000, and it was just to raise awareness that the Special Olympics day was happening, but there was a bit of a backlash against it which we were quite surprised because we were just trying to raise awareness for the collection day, but people viewed it very cynically, thought it was just us trying to promote [the company] and people are cynical. I think it's very easy for people to be negative on social media, and that's the challenge we have at the moment." (I4)

In summary, the challenge of negativity of users in SM is creating emotional and behavioural difficulties in dealing with users in SM, and has emerged as a major challenge for managers in all case companies.

5.9.2.2. Customers' High Expectation Challenge

"Technology changes consumer expectations" (CBS4)

SM users are believed to have a range of expectations from companies on how they resolve their issues and how they respond and interact with them in SM. As reflected in company A's digital roadmap, customer expectations can play a role in the companies' agenda for the future: *"An Open Agenda for a digital future, based on customer's expectations and wishes in order to have the freedom to choose their digital experience and have control over their digital life." (CAS1)*

Customers' expectations from the SM team members can cover a broad spectrum, from knowledgeability to friendliness and quick response, as stated *"It's actually very interesting because the social care team are expected to answer quickly, with accurate information, and in a very nice and friendly manner at all the times. They are expected to be on top of every issue, and be able to fix them quickly" (CA,I4).*

"We've grown to expect but not to the stage where people really appreciate actually getting responses." (CA,I1)

However, these expectations take the form of a challenge when they are not aligned with companies' capabilities and what they can offer to the customers. Such situations have emerged from the empirical data as one of the challenges facing managers in

dealing with customers in SM, and will be referred to as customers' high expectations challenge. Empirical data revealed two aspects of customers' high expectations challenge for managers, including the below which will be discussed in detail in this section.

- 1) SM users expect immediate response and fast resolution from the SM team to their queries and issues
- 2) SM users expect the SM team to be available to respond to them outside business hours

Expectation of Immediate Response and Fast Resolution

One aspect of the high expectations of customers from the case companies in SM is that users expect the SM team to provide almost immediate responses and fast resolutions to their queries and posts, as stated: *"We are expected to answer each question quickly, and in many cases in real time" (CA14)* and *"When it comes to social, they expect an answer if not immediately then very soon" (CC13)*.

Response time refers to the time on average that it takes the SM team to provide an initial response to a UGC in companies' SM sites. In order to be in a position to control and measure the SM teams' response times, Service Level Agreements (SLA) play an important role in managing SM in companies, as they define the expected time it should take to respond to UGC, or provide a resolution to them, as stated: *"internally it gives us the time to control our responses and our work rates and something to measure the team against" (CC13)*.

The importance of response time and SLAs is highlighted in the job description of the SM manager in company D: *"As the manager of our social media support team I am responsible for developing our customer response strategy, including Tone, KPIs, SLAs."* (CDS2)

It is notable that in many cases response time might be different from "time to resolve", which refers to the time that it takes for a customer issue or question to be fully resolved. This difference is explained in the below quote from the head of digital marketing in company D: *"We work on 1 hour SLA in our response time. Now, that is for us to acknowledge receipt of the query and provide the first response and not*

essentially provide a resolution. We would do our best to provide a resolution for the queries as soon as possible, but it's just sometimes not possible, since they are tied into other business processes" (CDI5).

The screenshot below also provides an example for this difference in company B posts in SM, whereby a response has been provided to the user, but no resolution.



Figure 40: Example of response provided to UGC, with no resolution

In all four case companies the interviewees stated that their objective is to answer the messages in SM **as close to Real time as possible**, as stated: *"these guys work at scale answering customer queries as much in real time as possible"* (CAI2).

Table below provides an overview of the SLAs and response times in the case companies.

	SLA for Response or Resolution on		
Case Company	Facebook	Twitter	Borads.ie and company forum
Case A SLA	Time to resolve: 24 hours Time to respond: not provided		
Case A Quotes	Q: <i>How fast are the responses in SM?</i> A: <i>"24 hours [...] we don't want queries to be dragging out both from a cost point of view but primarily if you have to keep going back as a consumer to clarify what your issue is that's a really bad experience"</i> (CAI2)		
Case B SLA	Time to Respond: Previously: 2 hours Current: 1 hour Target: 30 mins	Time to Respond: Previously: 2 hours Current: 15 mins Target: 5 mins	Time to Respond: Previously: 2 hours Current: 1 hour Target: 30 mins
Case B Quotes	<i>"and they would have the SLA of 2 hours to respond to comments [...] obviously with the wider audience reach the last thing you want is negative comments attached to the post being promoted to 200,000 people."</i> (CBI1) <i>"We have service levels that we have agreed to, so we will attempt to respond to every tweet within 15 minutes, we have to respond to every Facebook post within one</i>		

	SLA for Response or Resolution on		
Case Company	Facebook	Twitter	Borads.ie and company forum
	<i>hour, every boards thread within one hour, but we frequently try to make sure that it's sooner, that a tweet is 5 minutes, because it is more immediate" (CBI3)</i>		
Case C SLA for SM team	Time to Respond: 2 hours Time to resolution: not provided	Time to Respond: 15 min/If posted between 9 to 5 Time to resolution: not provided	Time to Respond: 2 hours Time to resolution: not provided
Case C SLA	Response/Resolution from other departments >> 24 hours Overall SLA for comments >> 2 hours		
Case C Quotes	<i>"On Twitter we try to respond to everything that is within the 9-5 timeline within 15 minutes. When we come in in the morning we respond to everything that has been posted since we left at 5pm the last evening [...] So it's as real time as we can make it." (CCI3)</i> <i>"We would ask them [other departments] for as quick a reply as possible and they know because it's social media they should get back within 24 hours. And the case would be dealt with as any other case." (CCI2)</i>		
Case D SLA	Time to Respond: 1 hour Time to resolution: not provided		
Case D Quotes	<i>"We probably need to improve it, but at the moment, we work on 1-hour SLA in our response time. Now that is for us to acknowledge receipt of the query and provide the first response and not essentially provide a resolution. We would do our best to provide a resolution for the queries as soon as possible, but it's just sometimes not possible, since they are tied into other business processes." (CDI5)</i>		

Table 32: SLAs for Response and Resolution Times

As shown above, the SLAs for response times across the four companies are under two hours, and the SLA for resolution time varies between the companies. **What is common is that managers in all case companies revealed the need for improving their SLA time**, which is rooted in customers' expectation from the case companies to provide faster and even immediate responses and resolutions. Multiple expressions in the interviews have been used in reference to the urgency of the expected response, whereby SM users are believed to expect immediate (CAI2, CBI3), instant (CBS4) or near instant (CBS4), real time (CAI4), and very quick (CAI4) responses to their posts in SM.

Also in one of the blog posts published on company B's website, it was noted that *"Consumers increasingly expect fast, personal interaction with the businesses they buy from, and social media is a preferred route" (CBS4).*

The screenshot below provides an example of a SM users' communications with the SM team for company C, where she is expecting the SM team to get back to her quite quickly.

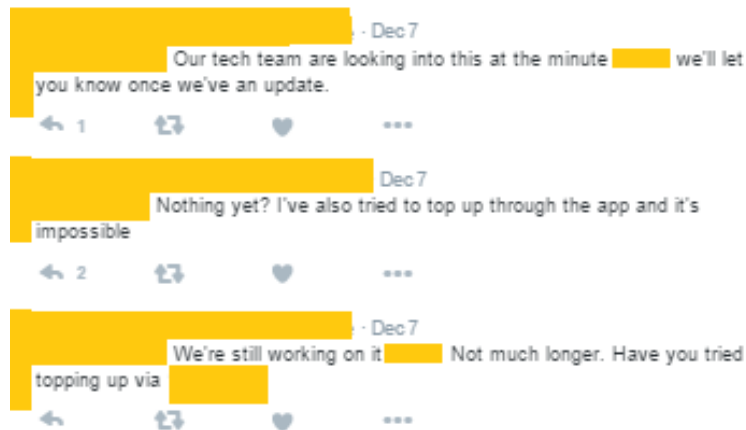


Figure 41: Example of Customer's Expectation of Quick Resolution

Expectation of Availability of the SM Team Outside Business Hours

As discussed in section 5.4.2, the working hours of the SM team mainly aligns with the normal office hours. However, the managers across the case companies conveyed the need for extending the hours of the SM team beyond usual office hours, as the customers expect the SM team to be available outside the business hours, because *"Business hours mean little to people in social, and that is a challenge for us"* (CAI4). SM users expect the case companies to be online and answering their posts 24x7: *"The other issues is working hours issue. Because we work 9 to 5, but customers expect you to be online 24x7. They accept it more from call centres when you say sorry the office hours are over, please call again tomorrow morning; but when it comes to social, they expect an answer if not immediately then very soon"* (CCI3)

In the case of company B, the managers revealed that, in special circumstances the company would assign a member of the SM team to monitor the SM posts outside the normal times and over the weekend: *"We have this information on our Facebook page that the working hours are 9-5.30 Monday to Friday. So, in exceptional circumstances there is somebody from the care team on call over the weekend"* (CBI1)

Screenshot below is an example of a customer asking a *"quick question"* in company B's SM page, when she knows that it's out of hours for the SM team:

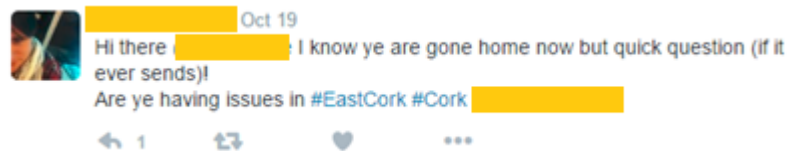


Figure 42: Example of customer requesting a response outside business hours

In summary the expectation of customers to receive fast response and resolution, as well as their expectation to receive response and resolution outside business hours form the main two aspects of the challenge of customers' high expectations.

5.9.2.3. Misinformation Challenge

One of the challenges facing companies in dealing with UGC in SM is that SM can be used as a platform for sharing misinformation by users. Misinformation (CBI3) refers to inaccurate or incorrect information, which in some cases are intended to deceive, or *"anything that includes misinformation or incorrect information, or a different version of the actual story"* (CCI2), which *"could be some ones' interpretation of something, or something that someone has heard from a dear friend."* (CAI4)

Misinformation is enabled by the fact that there is no vetting or checkpoint in SM for checking the correctness of information users post, as stated: *"What people normally share or retweet is normally not subjected to any kind of investigation or fact checking on the part of the person who shares or retweets it"* (CAI3)

Empirical data suggest that SM users would share the misinformation based on their relationship with the sender (CAI3, CBI3, CDI5) and also if they find the information interesting enough (CAI3, CBI3, CDI5) or even dramatic enough (CAI3, CCI2). This increases the associated risk of misinformation going viral, which has been referred to as *"negative uncontrollable content"* which *"can cause you a lot of damage"* (CAI4), raising the concern that *"once it starts going viral, it's out of your control"* (CAI4).

"I share something that my friend has shared just based on my relationship or sometimes just reading something which I thought is interesting." (CAI3)

"It doesn't take much for someone to start sharing false information about a brand, and believe me if the information is interesting enough albeit not true, it will keep being circulated and reposted, and retweeted." (CAI3)

“They know that the more dramatic the message the more likely it’s going to get retweets and the more likely it’s going to get attention.” (CCI2)

As stated: “people would believe and share most interesting or unusual things they hear from their social circle” (CBI3), and “If I’m your friend and I tweet about a horrible experience one of my friends has had in a store, you most probably wouldn’t question the honesty or genuineness of the story, or you might even don’t hesitate to proceed with retweeting my post as an act of support, and that’s how inaccurate or incorrect information get circled and even go viral in social (CDI5).

In one instance, misinformation regarding a free credit code targeted at a small number of high valued customers in company B went viral, as a promotional code for all customers and non-customers. This resulted in a huge volume of calls and queries and associated costs in clarification of the situation (CBI3).

Interestingly two of the interviewees referred to the use of SM as a platform for misinformation as *“the other edge of the same sword” (CAI4)* and *“an interesting twist” (CBI3)*, referring to the capability of SM to be used as a platform for communication and sharing information between companies and users, as well as the potential for it to be used as the platform for sharing misinformation, as stated: *“It is an interesting twist, because social can be a platform for companies to share information with their customers, or customers between themselves, but at the same time it’s a platform for sharing misinformation” (CBI3)*. This suggests a paradoxical dimension of the nature of SM use in companies, embodying its use as the platform for sharing correct information as well as misinformation, which needs to be managed by the companies, as stated: *“This is why we need to be very careful in identifying and managing the incorrect information circling in social” (CDI5).*

How the case companies deal with misinformation has been discussed in the evaluation and investigation stages of individual SM data use subprocess (see section 5.7.2 and 5.7.3). Due to the importance of misinformation, its tendency to be believed by other users and going viral, and the challenges they can create for the companies, all case companies have processes in place to deal with the misinformation, by identifying and correcting it where appropriate, as stated: *“We review the post to make sure that the information they are providing – in many cases to the other users –*

are correct. And if it is not, we make sure that we correct the information to prevent incorrect information about our products and services getting circulated in social.” (CBI3)

“This is why we are very quick in responding to anything that includes misinformation or incorrect information, or a different version of the actual story.” (CCI2)

In summary dealing with misinformation and the incorrect information circulated in SM by users forms one of the managerial challenged in all the case companies.

5.9.3. Challenge of Actionability of SM Data

One of the strong themes in the managerial challenges of SM data in case companies is related to SM data not being linked to other customer data in the companies, as stated: *“So if we see @joesoap on twitter is complaining about [company A], we can’t phone them up, we can’t email them or SMS them, we don’t have the link between their online persona and their offline persona so that’s the biggest weakness that we have”* (CA,I4). This challenge refers to the lack of ability to link users’ SM data to other customer information in other information systems in the companies, and has been referred to as the **Actionability** (CAI5, CAI4, CDI6) challenge.

Actionability has been defined as the lack of **linkage between the online and offline personas of users** (CAI4, CAI3), as well as *“the ability to correlate customer data with social data and having a view of who we are talking to and how relevant that is”* (CAI5), which enables *“an inside view of the customers in social media”* (CAI5). Because in all the case companies the SM users’ data could not be linked to the other customer data, it resulted in a challenge, as stated: *“the real difficulty in terms of the social media data that we get is that the Actionability that we get is limited”* (CAI3)

“From a social media perspective, the big weakness that we have in-house is that it [the SM data] is relatively difficult to action, because we don’t have the system set up at the moment to [...] have the link between their online persona and their offline persona so that’s the biggest weakness that we have.” (CAI3)

It was repeatedly mentioned as one of the main issues in utilizing the SM data (CAI3, CAI5, CDI6), one of the main areas for improvement in future and something which was going to be addressed in future by acquiring new SM tools capable of linking SM

data and other customer data (CAI2, CBI2, CCI2), as stated *“We are going to have a social media engagement tool that would connect us to our current CRM system here”* (CCI2).

This challenge has also been referred to as the **“customer knowledge integration”** (CCI1) **challenge**, which refers to lack of integration of customer information across different information systems. In the case companies, the CRM system keeps the records of customers, including their number, the details of the products and services they are using, and their history with the company. However, SM accounts of users cannot be linked to their accounts in the CRM system, which leads to a *“lack of context around customers in social media”* (CAI3). This lack of customer context creates a challenge in the utilization of the SM data, as stated *“Every time that we’ve talked about doing more on social media the real questions come back to how do you really action it. Unless we have a way to link the offline [CRM] and online personas [SM], then that’s a massive block”* (CAI4)

An example of such cases includes the utilization of users’ feedback on staff interactions in stores, which is used for informing store managers and further investigation, but not directly for decision making and not for formal employee appraisal, as stated *“It might get a pat on the back but it’s not an [employee] assessment”* (CBI2). This is directly because of the anonymity of the user who has provided the feedback, *“because for all we know it could be your brother posting lots of positive comments from different Facebook accounts [...] because it’s nameless and faceless, it’s not an impartial way to judge the performance of an employee”* (CBI2).

User anonymity is viewed as one of the main reasons for this challenge (CDI1, CAI3, CBI2), because anonymity of SM users makes it difficult for companies to identify who the SM users are *“what’s difficult sometimes is that social people are identified by whatever username they have whereas internally we would use mobile numbers or their account number to identify the customer [...] So that’s part of the challenge, it’s the identification of who the customer is.”* (CDI1)

The SM teams in the case companies have been resolving this issue by **making the extra effort** of asking SM users to provide their phone number through private messaging in the investigation stage. They would then use this number to look for

customer information in the CRM or other information systems. However, this information is not automatically linked or systematically stored for future use, as stated: *“What the e-care guys have been doing is if somebody tweets them, they will ask for their telephone number so they will know who they are [...] but It’s not captured and it’s not fed back into the [customer] data warehouse [...] which is a pity, it would be great to get that back in”* (CA,I4).

This lack of integration of customer information leads to a number of issues, including loss of information about customer interactions at multiple contact points (CCI1, CAI5, CAI3), and inability to have customer ratio view in the SM reports and data, in that what percentage of users are customers or non-customers (CAI5, CCI1, CCI6, CBI1).

In summary, lack of linkage between SM data and other customer data in the companies creates the challenge of actionability if SM data, which has emerged as an strong theme in the managerial challenges of using SM in the case companies.

5.9.4. Resourcing Challenge

Resourcing challenge refers to the emerged theme in the empirical data, which showed that the SM teams in all four case companies need more resources to conduct the required activities. The interviewed managers have made numerous references to the issue of not having enough resources in their SM teams, and indicated their desire to have more resources in their teams, as stated *“I definitely would like to have more people potentially”* (CDI1). This challenge was also evident in the interviewees’ expressions regarding the difficulties they are facing in getting the resources they need, as evident in these sentences: *“that is a challenge for us in terms of getting the resources”* (CAI4)

“It’s a problem in trying to make them give me the resources I need them to give me” (CCI2)

“They [the SM team] could do with more people because that’s where there’s a difficulty from a resource perspective.” (CCI1)

“It’s something that you definitely need more resource [to work in SM] internally” (CDI4)

Challenge of not having enough resources in the SM team was also manifested in numerous references to **“lack of time”** or **“not having enough time”** (CAI4, CBI3, CCI3, CCI4, CDI4) or multiple references to their workload being **“very busy”** (CAI2, CBI3, CCI4, CDI4), as well as references to the team not having the capacity to do any more work *“If we were to try and do more we would probably spread ourselves too thinly”* (CDI1), or even conduct the tasks which need to be done, as stated: *“We just don’t have the time to properly do each bit that needs to be done”* (CCI4).

In the case of company C, the customer service SM managers did not have enough time to produce a detailed weekly report of the reactive activities of their teams, as he stated: *“I actually don’t have time to make the report as detailed as I could [...] But it’s down to resources”* (CCI3).

The main contributing factor to the resourcing challenge is suggested to be the increasing volume of incoming UGC on companies’ SM platforms, to the extent that it is impacting the responding abilities of the case companies, as *“[there are] cases where we can’t [respond] and that’s becoming more and more because of the traffic coming in”* (CCI3). It was also believed that the existence of companies in SM would attract more and more messages, as *“our existence in social would lead into getting more and more queries through social channels.”* (CAI4)

This has resulted in a challenge for companies which has not been the case in the initial stages of their activities in SM: *“when we started off first we would chase everything for people... get it done, get it resolved [...] but as channels become busier and busier [...] we are unable to get the same quick turnaround as when we were when we started off”* (CCI2).

In summary, analysis of the empirical data in the case companies reveals the resourcing challenge as one of the managerial challenges.

5.9.5. Summary of Managerial Challenges

Overall, the managerial challenges revealed in the empirical data include the challenges of content creation (including creating consistent, real time and interesting content, and getting the right balance between promotional and other types of FGC), customer related challenges (including SM negativity challenge, customers’ high

expectations, and the misinformation challenge), challenge of actionability of SM data, and resourcing challenge, as shown in the diagram below.

Content Creation Challenges	Customer Related Challenges	Other Managerial Challenges
- Create Consistent, interesting, and real time Content - Finding the right balance between promotional FGC and other types	- Negativity Challenge - Customers' High Expectation - Misinformation Challenge	- SM Data Actionability Challenge - Resourcing and budget challenge
SM Managerial Challenges		

Table 33: Managerial Challenges as Revealed in the Empirical Data

5.10. Conclusion of the Data Analysis Chapter

This chapter provided the analysis of the empirical data in two areas of SM data use and related managerial challenges. The section starts by an overview of the four case companies in section 5.2. Section 5.3 provided the analysis of the data in relation to the definition of social media, followed by analysis of data in relation to SM data use process types in section 5.4, which showed that there are three types of SM data use process applicable to different types of SM data, including **reactive, proactive, and analytical SM data use process** type.

Overview of the three SM data use subprocesses in section 5.5 revealed that the SM data use processes in companies include three sub-processes of **SM content creation, individual SM data use, and aggregated SM data use**. Each one of these subprocesses consists of stages and activities which are discussed in section 5.6, 5.7, and 5.8. Section 5.9 provided a summary of the previous sections, as well as two depictions of the main revealed themes in the data.

Section 5.10 then provided the analysis of empirical data regarding managerial challenges, which include the challenges of content creation (including creating consistent, real time and interesting content, and getting the right balance between promotional and other types of FGC), customer related challenges (including SM negativity challenge, customers' high expectations, and the misinformation challenge), challenge of actionability of SM data, and resourcing challenge.

Next chapter will provide a discussion of the findings of this research in the context of extant literature.

Chapter 6: Discussion on Findings

6.1. Introduction

In answering the research question, the core findings of this thesis are manifested in two main areas of SM data use and associated managerial challenges. SM data use processes as discussed in chapter five include three main process types of the reactive, proactive, and analytical, as well as three main subprocesses of content creation, individual and aggregated SM data use. The associated challenges refer to the challenges managers are facing in using SM data, and are manifested in the form of content creation challenges, customer related challenges, SM data actionability and resourcing challenges.

This chapter first introduces the outcome model of this research in section 6.2, discussing the different parts of the model and its relation to discussions in previous chapters. Sections 6.3 and 6.4 subsequently link the core findings of this research to the extant literature, by discussing the core findings in the context of the extant literature. This enables delineating the findings of this study in terms of their relevance to the extant literature of SM, and in the context of answering the research question.

6.2. The Outcome Model

The purpose of this study is to investigate how firms use SM data, and the associated managerial challenges. Through its qualitative approach, it provides deep insight into the relevant processes, subprocesses, and stages of SM data use, and their salient attributes. The key contributions of this investigation are summarized in an outcome model, illustrating two core sections. One encompassing the processes, subprocesses and stages of SM data use. The other focuses on the associated managerial challenges, which refer to the challenges managers are facing in using SM data. Chapter 4 described the details of the research methodology and design which led to the emergence of the outcome model presented below. This model speaks to a number of processes and subprocesses including a series of stages, which forms the building blocks of the overall theory of how SM data is used in companies. Seen in the larger context, the individual themes presented in chapter 5 align to this conceptual model

that describes the most apparent phenomena identified, as illustrated in the figure below.

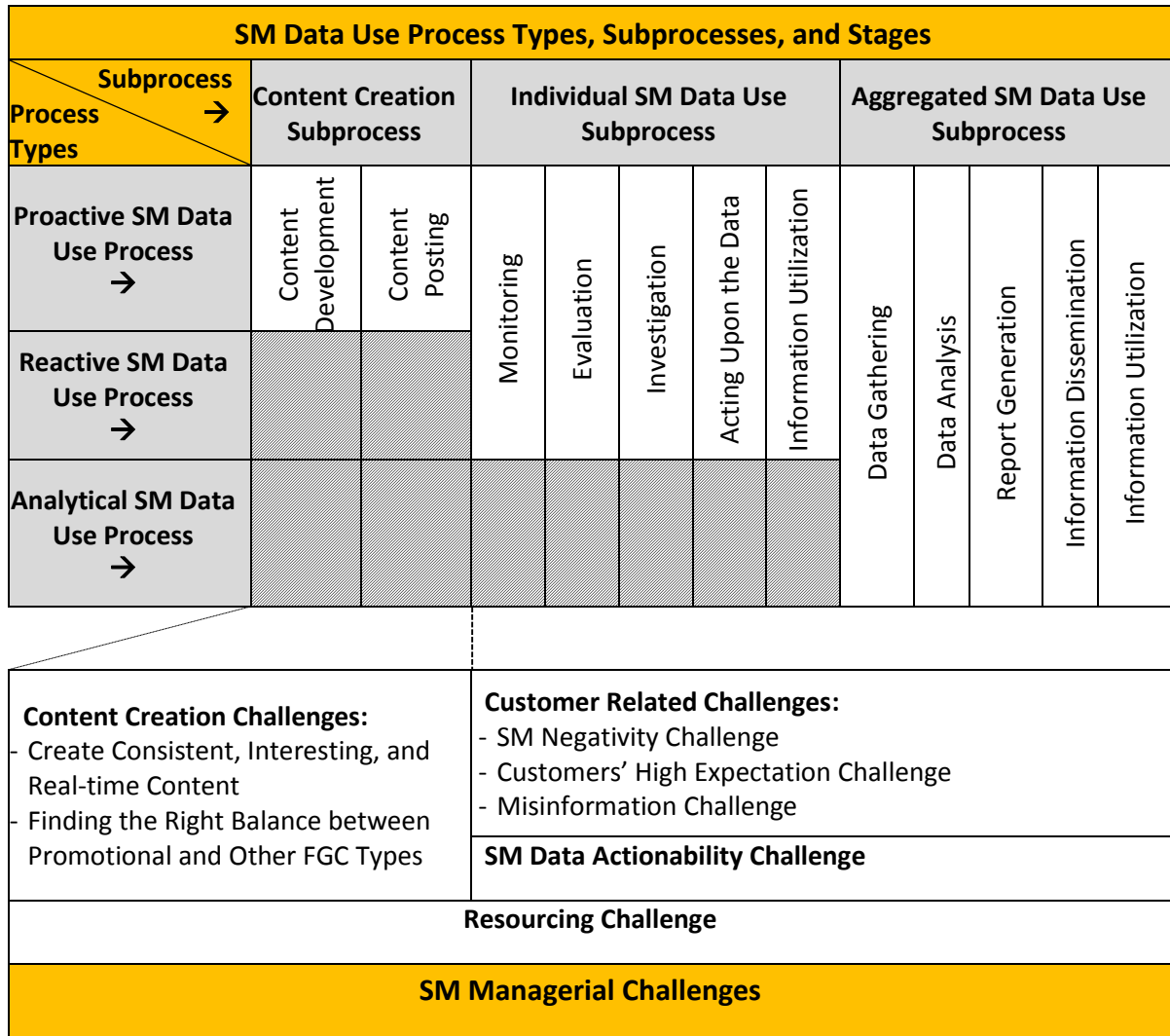


Figure 43: The Outcome Model

The upper part of the above model illustrates the SM data use process types, subprocesses, and stages. It first delineates **three distinct types of SM data use processes** on the left, including **Proactive, Reactive and Analytical SM Data Use process types**, which take place in parallel across the companies. The proactive SM data use process is related to posting FGC in the SM sites and processing of the UGC created in reaction to the posted FGC (SM data type 2). The reactive SM data use process involves identification, processing and reacting to the company related UGC (SM data type 1). The analytical SM data use process involves processing of all the SM

data relevant to the company (SM data type 1, 2, and 3) across a defined set of SM platforms, using SM analytics technology. Each of the process types use different types of SM data as input, and are carried out for different purposes.

Second, the model illustrated three main subprocesses of SM data use including

Content Creation, Individual SM data Use, and Aggregated SM Data Use

subprocesses. Each subprocess consists of a number of stages as their building blocks.

Content creation subprocess includes content development and content posting stages. The individual SM data use subprocess includes monitoring, evaluating, investigating, acting upon the data and information utilization stages. The aggregated SM data use subprocess includes data gathering, data analysis, report generation, information dissemination, and information utilization stages.

Crossing between the process types and subprocesses in the outcome model is the area which shows each SM data use process type include some of the subprocesses.

The shaded areas in the model show the non-applicable stages for the relevant subprocesses, illustrating that:

- The proactive SM data use process includes all three subprocesses of content creation, individual and aggregated SM data use.
- The reactive SM data use process does not include content creation, and only includes the individual and aggregated SM data use subprocesses.
- The analytical SM data use process type does not include content creation and individual SM data use, and only includes the aggregated SM data use subprocess.

This shows that while the data processing stages and activities included in each process type are not the same, there are the same patterns across groups of activities which form the stages of SM data use, as well as the same patterns across groups of stages which form the relevant subprocesses.

The lower part of the outcome model shows the **SM Managerial Challenges** facing managers in using SM data and implementing the identified processes and subprocesses.

As discussed in section 5.9, the findings of this study show two interesting aspects in relation to the challenges managers are facing in using SM data:

- a) That managers' perspective of the challenges they face in using SM data includes a number of challenges not related to SM data attributes.
- b) As discussed in section 5.5, that managers have a wider than expected perspective of SM data use, which includes SM content creation. As a result, managers' perspective of challenges in SM data use also include challenges related to content creation."

To that end, the dotted lines between the two parts of the outcome model show the relevance of each group of managerial challenges to the relevant subprocesses.

Challenges related to the content creation subprocess include the **Content Creation Challenges**, which include creating consistent, interesting, and real-time content, as well as finding the right balance between the promotional and other types of FGC.

Customer related challenges include **SM Negativity Challenge, Customers' High Expectations Challenge, and Misinformation Challenge**, which along with the **SM Data Actionability Challenge** relate to the individual and aggregated SM data use subprocesses. The reason for this association is as follows:

- Customer related challenges are encountered in companies' interactions with customers in SM, as well as processing of subsequent SM data, and are hence relevant to the individual and aggregated SM data use subprocesses.
- SM data actionability challenge is encountered in processing of SM data, and is hence relevant to the individual and aggregated SM data use subprocesses.

Finally, the model shows that the **Resourcing Challenge** forms another one of SM managerial challenge, which is relevant to all the SM data use process types and subprocesses.

Overall, the above model provides a holistic view of how SM data is used in companies, as well as the associated managerial challenges, as revealed in the findings of this study.

The following section will discuss each of the above findings in the context of the extant literature.

6.3. Discussion of the Main Findings on SM Data Use

In this section, the findings from the empirical data are reflected and discussed in the context of extant literature. It first starts with discussion of the SM data use processes, subprocesses and the relevant stages, and will then proceed to the discussion of the emerged managerial challenges.

6.3.1. Differences in FGC and UGC Processes and Types

This research did not set out to investigate the differences between the types of UGC (User Generated Content) and FGC (Firm Generated Content) in companies. However, the findings of this study showed that the SM data use processes related to UGC and FGC are distinct parallel processes, which are incarnated in the forms of the Proactive and Reactive SM data use process types. These processes serve different purposes and incorporate different types of SM data as input (SM Data type 1 for reactive, and SM data type 2 for proactive). All the SM data related to companies' activities and brand (UGC type 1 and 2 and 3) are then processed and used in the analytical SM data use process type using SM data analytics technology.

The literature discusses a range of differences between UGC and FGC types and their implications for the companies (e.g. Colicev, Kumar, et al. 2018), but the literature on the impacts and different types of SM content (e.g. UGC vs FGC) remains fragmented (Gensler, Völckner, et al., 2013). The differences between how UGC and FGC are used by and impacting on companies and users have been discussed in some studies in the literature, showcasing that marketers' need to be aware of the fact that they will not be able to use FGC to impact certain aspects of their interactions with users, but they do have a certain ability to influence C2C communications (Colicev, Malshe, et al., 2018; Peng, Agarwal, et al., 2018; Kumar, 2018; Kumar, et al. 2016; Nguyen & Chaudhuri, 2018).

UGC is shown to have a positive impact on brand equity and brand attitude (Schivinski and Dabrowski, 2014), and can greatly enhance customer satisfaction, loyalty, and delight (Sashi, 2012). On the other hand, FGC has an important impact on functional brand image (Coulter, Bruhn, et al., 2012), as well as a positive impact on brand

attitude, which in return positively influences brand equity and purchase intention (Schivinski and Dabrowski, 2014).

Using SM's interactive nature, companies can use FGC to develop one-on-one relationships with their customers. FGC can also positively affect customer behavior, and help companies to inform customers of their current product offerings, prices, and promotions (Kupfer, et al. 2018; Kumar, 2018; Kumar, Bezawada, et al., 2016) . Kumar, et al (2016) suggest that FGC can improve customer behaviour towards brands by a) informing customers about company product offerings, prices, and promotions, b) through interaction with and virtual presence of other brand aficionados or fans, which can help in reinforcing favourable brand attitude, c) possibility of liking or commenting on FGC by consumers, which can generate more positive brand evaluation.

In that regard, the distinctions between FGC and UGC or firm initiated content and customer initiated content has been discussed in the wider literature of marketing, focusing on the ability of FGC to generate word-of-mouth (e.g., Trusov, et al. 2009; De Haan, 2016; Peters, et al; 2013). In the context of SM, such FGC are aimed at triggering customers to forward such messages or to produce their own content, showcasing a key goal and benefit of firm-initiated marketing, as its *"power to stimulate conversations around a brand or product, which then causes a social media ripple effect that ultimately increases business performance"* (Peters, Chen, et al., 2013, p. 14).

Coulter, et al. (2012) showed the different effects of FGC and UGC on the brand image dimensions, demonstrating that consumers consciously differentiate between the sources of information. The result of structural equation modelling of the 393 data sets resulting from online surveys from three different industries, namely tourism, telecommunications, and pharmaceuticals, showed that firm-created SM communication specifically increases functional brand image, whereas user-generated SM communication positively affects hedonic brand image (Coulter, Bruhn, et al., 2012, p. 782). Moreover studies show that brand trust is believed to be positively related to UGC, whereas brand image is mostly affected by FGC (Zahoor & Qureshi, 2017).

This study showed that different types of SM data are processed in different process types, subprocesses and stages in companies. Delineating the details of related processes led to the identification of different types of UGC in each of the processes, which led to a categorization of FGC and UGC in companies' SM data use processes.

This study showed that the FGC types across the companies include the following types (section 5.6.2):

- Advertisement, Sales and Promotional FGC
 - Advertisements
 - Sales and promotional FGC
 - Amplifying the impact of traditional media
- Brand related FGC
- Sponsorship related FGC
- Information Provision
 - PR Announcements and Company News
 - Service / Product related information and updates
- FGC aimed at creating and increasing engagement
 - Freebees
 - Competition (Poll / Contest)
 - Fun and interesting FGC
 - Trending topics

To that end, this research also showed that the SM data in the companies can be organized in three categories of SM data types 1, 2, and 3, based on the type of related SM process. The SM data types which are processed through the reactive process (SM data type 1) include compliments, complaints, feedback on firm communication and process, and information seeking posts (see section 5.4.2.3).

The SM data types which are processed through the proactive process (SM data type 2) include feedback or response to the posted FGC, and information seeking or questions regarding the posted FGC (see section 5.6.3). Finally, the SM data types processed through the analytical process include SM data types 1 and 2, as well as any SM data related to competitors, market and the industry (see section 5.4.3.2).

Such distinction of SM data types has not been discussed in the context of applicable processes in the literature, since the investigation of the differences between the FGC and UGC type messages in SM is of a certain scarcity and fragmentation in the academic literature. The majority of the studies discuss the differences and impacts of UGC and FGC without discussion of their types. An example of such studies includes that of Panagiotopoulos, et al. (2015), which focuses on the interactivities between SM

enabled companies and consumers, without providing a distinction between FGC and UGC, categorizing such interactions in three types of public queries and complaints, reaction and engagement with the organization's campaigns, news feeds or alerts, and reaction to industry crisis and incidents.

However, a small number of studies have investigated the differences between FGC and UGC types, which includes the investigation of the differences between the interactivities resulting from UGC and FGC in SM (Zhang & Lin, 2015). In their study of the Facebook posts of 20 airlines (total of 1875 firm generated posts and 2990 end user generated posts), Zhang and Lin (2015) categorize all posts into two broad categories of firm-authored and user-authored. Firm authored posts are then divided into two sub groups of firm-initiated and firm-responded. Results of the analysis of the themes pertinent to these messages showed that the user authored posts can be categorized to compliment, grievance, sharing experience, information seeking, community support, social activity, and miscellaneous (Zhang & Lin, 2015), and firm initiated posts have been categorized to advertising, sales and promotion, information provision, sponsorship, real time updates, social activity, poll / contest, miscellaneous (Zhang & Lin, 2015). More importantly Zhang and Lin (2015) showed that the types of interactivities being pursued by companies through FGC is different from the types of interactivities persued by end users. The findings by Zhang and Lin (2015) are similair with the categorization of FGC and UGC and SM data types emerged in the context of the findings of this study.

This shows that while the literature provides fragmented but useful insights into the differences between the impacts of UGC and FGC in SM, there is limited insight as to the details of the different types of SM data related to each one, as well as the details of how each type is used in companies. While the research question for this research did not explicitly seek to investigate the differences between SM data types, different types of SM data have emerged in the context of different processes involved in using SM data as discussed above, which is in line with the findings of the limited literature available in this area.

6.3.2. SM Data Use Process Types >>

Proactive / Reactive / Analytical

In the marketing literature, the exploration of how companies process customer information has been an area of academic discussion for decades. In the present study three main types of SM data use processes have been identified as proactive, reactive, and analytical processes. This shows that there is not a single process which applies to all forms of SM data in the case companies, but there are several parallel processes which are taking place in relation to different types of SM data.

The concepts of reactive, proactive and analytical SM data use processes have not been specifically discussed in the literature as different types of SM data use process in a holistic way. An industry article by Belani (2014) have presented the proactive and reactive nature of SM activities as approaches for listening and engaging customers, in the SM conference in 2014 at a broad level. However, no discussion of a similar nature on reactive, proactive and analytical types of SM data use processes has been located in the academic literature

While the literature of SM does not specifically discuss proactive, reactive and analytical as SM data use process types together, it does discuss each one separately in different streams of research. The literature strongly agrees that companies need to engage in activities related to all three types of process, including the reactive process in the form of listening and responding to customer comments and queries in SM (e.g. Canhoto & Clark, 2013), the proactive process in the form of engaging in well-defined and measured content activities (e.g. Kumar, Bezawada, et al., 2016), and the analytical process type in the form of using SM data analysis technologies to make sense of SM data (e.g. Holsapple, Hsiao, et al., 2018; Mayeh, Scheepers, et al., 2012). As noted by Rajeev Kumar, the general manager of Tata group, engaging in these activities has become the new norm in many industries (Kaul, Chaudhri, et al., 2015). He has observed that *“besides an established passive response mechanism, we proactively engage with all our stakeholders through a variety of media including social media”* (Kaul, Chaudhri, et al., 2015, p. 470).

For example, in the context of the proactive process type, Panagiotopoulos, et al. (2015) show the importance of content activities of companies, as well as using SM

data as an information source, to provide feedback from the public, monitoring conversations, along with trends and sentiment. Mahoney and Tang (2016) also suggest that the focus of SM specialists should be on the creation of content, as well as gathering, reading, and listening to online content.

Regarding the reactive process type, Gartner reports the provision of service and customer support through SM as one of the main uses of SM in the companies in 2017, which includes solving customer service problems and provision of rapid responses to customer queries, as well as enabling peer-to-peer community support, and capturing customer service feedback (Sussin, 2017). Belani (2014) also suggest that responding to individual questions and queries are an important approach in the overall SM activities of the firm.

Regarding the analytical process type, there is a consensus in the literature that using SM analytics technology brings many benefits to companies including facilitating SM monitoring and reporting (Gandomi & Haider, 2015; He, Shen, et al., 2015; Mayeh, Scheepers, et al., 2012), as well as enabling companies to deal with characteristics of SM data including its volume, valence, and veracity (Gandomi & Haider, 2015; Mayeh, Scheepers, et al., 2012; Sivarajah, Kamal, et al., 2017), and generating intelligence (He, Shen, et al., 2015; Mayeh, Scheepers, et al., 2012; Zhang, Guo, et al., 2011), which are in line with the findings of this research.

In summary, the findings of this research highlighted three types of SM data use process, including reactive, proactive, and analytical. While these SM data use process types have not been explicitly discussed in the literature together to provide a holistic view of SM data use process types, companies activities pertaining to each of these process types have been separately discussed in the literature, confirming the validity of each of the process types on their own.

One of the other contributions of this research is found in revealing that while proactive SM data use processes transpire at all 3 subprocesses, reactive processes only happen across individual and aggregate subprocesses, and analytical processes include only the aggregated subprocess (as discussed in chapter 5 and illustrated in the outcome model). While these findings have not been discussed in the literature in

this form, the literature discusses the details of some of these subprocesses and subsequent stages, as it will be discussed next.

6.3.3. SM Data Use Subprocesses and Stages

The outcome model of this research incarnates three subprocesses situated within the processes of SM data use, which include content creation, individual SM data use, and aggregated SM data use. This section hereafter enfolds the literature in the substantive area under investigation by placing the emergent subprocesses and relevant stages in the context of prior work.

6.3.4. Content Creation Subprocess

Direct investigation of the content creation activities of companies was not originally included as part of the purpose of this study. However, exploring the context of SM activities of the case companies lead to the emergence of the content creation subprocess as a strong theme in the findings of this study. The emerged themes and findings could not be excluded from the findings of this research, due to their pivotal role in the context of SM data use and utilization, as well as their impact on the subsequent stages and activities in companies. The findings of this research showed that the content activities of companies are undertaken in two stages of content development and content posting.

The literature confirms the importance of content activities for companies, and prescribes that companies need to engage in content creation activities to be able to fully harness the potentials of SM use (Akpınar & Berger, 2017). Durkin (2013) highlights the importance of companies' online content, including SM content, stating: *"the firm will live or die online based on the relevance and quality of content provided"* (p.2). Mahoney and Tang (2016) refer to content creation related activities as one of their recommended 4 C's (including cognize, congruity, curate, and chase), as the curate stage, whereby companies need to *"determine who, how often and when they engage into conversation on a social media platform"* (p.289). Effing and Spi (2016) identify content activities as one of the key elements in the maturity of SM activities for companies. Klang and Nolin (2011) describe content activity planning as important element of a SM strategy. Panagiotopoulos, et al. (2015) conducted case studies of five

food governance and consumer organizations in the UK and Ireland, and showed that content creation and tailoring in SM form one of companies' key capabilities in the context of organizational responsiveness. Such findings are in line with the findings of this study, highlighting the importance of companies' content creation activities, which can be sources of great benefit, as well as challenges for the companies.

This research also highlighted the need for flexibility in the content activities of companies, and showed that the content creation activities of companies take two forms of planned and ad hoc (section 5.6.5), highlighting the important role of content calendar in the planned content activities of companies (section 5.6.4). In

this regard the literature confirms the importance of planning content activities (Kanuri, Chen, et al., 2018; Effing & Spil, 2016; Klang & Nolin, 2011). Scheduling the content posts (based on a pre-defined timeframe) is discussed as an important factor to warrant frequent contributions to various SM channels (Barnes, 2014). The schedule should be very practical and should also provide organizations with an indication of appropriate content (DiStaso & McKorkindale, 2013). Verifying the importance of planning content planning activities, Peters, et al. (2013) suggest that companies should pay close attention to aspects of content quality, domain, valence, tonality, and volume in their content activities.

The benefits of content planning tools, such as content calendars, have also been discussed in the form of "*content activities plan*", which makes clear in which timeframe and in what order content are generated and posted (Klang & Nolin, 2011; Thackeray et al., 2008). The empirical findings of Panagiotopolous, et al. (2015) also confirm the importance of having a social content management system, to manage content creation and tailoring activities, as well as the frequency and scheduling of content generation.

The above discussions support the findings of this study in relation to the importance of planned content activities, and the use of content calendar. However, little attention has been paid to the ad hoc content activities in companies, which refer to content which cannot be planned before hand and need to be developed and posted 'on the fly'. The findings of this study showed that such content play an

important role in the spectrum of SM content activities in the companies, and need to be further attended to in the literature.

6.3.5. Individual and Aggregated SM Data Use

The other subprocesses of SM data use, as revealed by the findings of this study include the individual and aggregated SM data use subprocesses, in which the unit of analysis is either single (individual) or multiple units of SM data (aggregated).

Interestingly, the great part of the literature concerned with the processing of customer, market, and SM data is in fact only concerned with data at the aggregated level.

As discussed in section 3.3, the exploration and analysis of customer and market data and information processing in the marketing literature has widely focused on the aggregated data level. The majority of studies in areas of market and customer information use investigate how companies use different types of data at aggregated level. For example Kohli and Jaworski (1990) suggest that the results of their interviews show that being customer focused entails making decisions based on market intelligence driven from aggregated data and not only verbalized customer opinions (p.3) (Other examples include Moorman, 1995, 1998; Morgan, Anderson, et al., 2005; Zahay & Griffin, 2002). But overall the marketing literature has paid very little attention to an investigation of how companies deal with and process individual units of customer or market data.

A limited discussion of the processing of individual customer data exists in customer service related literature (such as Beck, Hewelt, et al., 2016; Laudon & Laudon, 2017), which discuss processing of single customer queries (and will be discussed in the next section). For example, Divol (2012) suggests that responding to individual conversations in SM is an important form of engagement in SM, since *“this kind of response can certainly be positive if it's done to provide customer service or to uncover sales leads”* (Divol, Edelman, et al., 2012). However, such studies are limited and are only specific to the context of customer service or customer care management. The large body of literature on market and customer information use in general focuses on data at the aggregated level. A similar situation applies in the case of SM data use,

whereby the literature of SM mainly focuses on SM data use at the aggregated level, as evident in the large body of SM analytics and other related literature as discussed in section 3.3.3.

Overall, the literature on market, customer and SM data use has paid very little attention to processing of individual units of data, as it mainly focuses on processing of data at aggregated level. This research highlights the importance of individual SM data use in companies, noting that SM data at the aggregated level is composed of multiple individual SM data units. Hence, attention to their varied characteristics and attributes, as well as applicable sub processes and stages should not be discounted in the interest of attention to the aggregated level data.

6.3.6. Individual SM Use Subprocess

The findings of this research reveal that the individual SM data use subprocess occurs in the form of the five stages of Monitoring, Evaluating, Investigating, Acting Upon the data, and Information utilization.

As discussed above, the literature does not discuss the details of individual SM data processing. However, limited studies in IS and customer service literature discuss the activities involved in processing of customer data at individual level. For example, Laudon and Laudon (2017) discuss how the customer loyalty management process through customer service includes stages of receiving service requests, obtaining customer information, scoring customer, providing special offers and services, and resolving service issue (Laudon & Laudon, 2017). Beck, et al. (2016) also show that customer service process includes stages of log incident, categorize, prioritize, conduct initial diagnosis, escalate to support, investigate incident, resolve incident, and finally close.

There are a number of similarities between the above models and the findings of this study, including similarities between obtaining customer information (Laudon & Laudon, 2017) and conduct initial diagnosis (Beck, Hewelt, et al., 2016) and evaluating stage in this research, as well as the similarities between the scoring customer (Laudon & Laudon, 2017) and categorize and prioritize (Beck, Hewelt, et al., 2016) stages in the studies above and the investigating stage in this research. However, both the above

studies are conceptual models not based on empirical data, and none of them are discussed in the context of SM data. **This highlights the contribution of this study in showing the details of processes involved in SM data use, including the individual SM data use subprocess.**

Overall a holistic discussion of all stages of SM data processing at an individual level is lacking in the extant literature, as no other study provides a detailed and holistic view of how companies use individual SM data. Different stages of individual SM data use are discussed in disperse studies, which will be discussed in the context of the findings of this study in the following section.

6.3.6.1. Monitoring Stage

There is a consensus in the literature that companies should carefully monitor and listen to what is happening in SM channels (Berthon et al.,2012; DiStaso & McCorkindale, 2013; Klang & Nolin, 2011; Larson& Watson, 2011; Mortleman, 2012; Kaplan & Haenlein, 2010), which forms the essence of monitoring stage at the individual data level. **Although the literature normally does not distinguish between monitoring SM data at individual and aggregated level, there is a consensus in the literature that companies need to monitor SM for individual and aggregated data, and companies need to monitor for and respond to the individual SM posts** (Canhoto & Clark, 2013; Kaplan & Haenlein, 2010). For example, Kaplan and Heinlein advise companies to be aware that firm involvement in SM must extend beyond responding to negative comments and defending product offerings, and be considerate of SM users' desire to actively engage and become both producers and consumers of information, or the so-called "prosumers" (p.66). To that end, Klang and Nolin (2011) and Epping and Spi (2016) signify monitoring as an important element of SM strategy.

Monitoring Frequency

The findings of this research showed frequency is an important aspect of monitoring stage, which is continuous, but limited to the working hours of the SM team in companies. In the area of Customer Satisfaction Information Use (CSIU) Morgan, et al. (2005) define the frequency of customer data scanning as *"the number of times various scanning activities are performed in a given time frame"* (p.137), which was

adapted for this research. The result of their study shows that while literature suggests that companies need to continuously scan CSI, the actual frequency of CSI scanning in companies varied significantly. In the SM area, multiple studies suggest that SM data needs to be responded immediately, which implies continuous monitoring and is tied into the challenge of customers' high expectation (section 6.4.2.2). Our findings show that while the continuous monitoring of SM sites happens in the companies, the limitations posed by the working hours of the SM team in contrast to the expectation of the SM users highlights the importance of monitoring frequency in the larger context.

In summary, while monitoring individual SM data is not discussed as a stage in the SM data use process in the literature, the importance of monitoring of individual SM data is verified in the literature. The findings of this study reveal SM data monitoring at individual data level as an important stage in the SM data use processes in companies, as well as the importance of frequency of monitoring.

6.3.6.2. Evaluation Stage: Not all SM users are the same

The egalitarian nature of SM has made it fundamentally different from other types of media for companies (Peters, Chen, et al., 2013), which means that consumers and companies alike are nodes in the networks within SM platforms. However this does not mean that all consumers are the same for companies. While the marketing literature has long discussed the concept of customers' economic value, a similar view extends itself to the realm of SM, whereby not all SM users hold the same level of value for companies in SM. The findings of this research revealed that individual units of SM data are evaluated from different perspectives, including the type, the sentiment, and the impact of the UGC, as well as the user influence, demographics, and history with the company. **Evaluation has not been discussed as a stage in the overall SM data use process in the literature, however the literature strongly agrees that companies need to evaluate the SM users and their posts from different perspectives, which will be discussed below.**

One of the most interesting empirical findings in this regard is that of Sigala (2011), whose results of panel discussions found that the participants believed that the

traditional view of customers' economic value cannot simply be translated and applied to SM, and companies need to come up with new ways of evaluating customers in SM (Sigala, 2011). Her findings showed that companies need to take into consideration the SM users' technographic profiles, network and SM behaviour, as well as the community and influential value to the companies (Sigala, 2011). This verifies the findings of this study, which revealed that companies evaluate the SM users from multiple demographic aspects, as discussed in section 5.7.2.

Sigala (2011) also found that companies need to pay special attention to the influential users who spread positive eWOM within SM, who might not frequently buy, but would influence and improve other users' perception and behaviours towards the brand. Other studies in the literature also discuss the importance of influencers (Coleman & Heriot, 2014; Kim, Isenberg, et al., 2010; Kumar, Bezawada, et al., 2016; Kumar, 2018), or opinion leaders (Ang, 2011; Kim, Isenberg, et al., 2010) as individuals who spread good eWOM about a company or brand, influencing other customers' evaluation and selection process (Sigala, 2011, p. 660). Influencers are valued for their potential to drive the opinions and purchases of large numbers of potential customers (Coleman & Heriot, 2014).

To that end, Kumar, et al. (2016) have developed the Customer Influence Effect (CIE) as a special metric for quantifying the influence effect for each customer. CIE is defined as *"the net influence wielded by a user (in a social network) in terms of his or her ability to spread positive or negative WOM through his or her direct and indirect connections"* (Kumar, et al., 2016; p.195). They also suggest that consumers' interactions with and the virtual presence of other brand aficionados or fans can help in reinforcing favourable brand attitude (Kumar, Bezawada, et al., 2016).

The above discussions support the findings of this study in relation to the importance of evaluating users from different perspective, confirming that not all SM users are the same to companies. This study adds to the body of literature on the evaluating of SM users by identifying the factors used to evaluate SM users, as well as identifying evaluation as a stage in the individual SM data use subprocess.

6.3.6.3. Investigation Stage

The findings of this study revealed the third stage of the individual SM data use subprocess as the investigating stage, in which individual units of SM data are investigated for the correctness of the information, as well as the need for and sourcing of any additional information required. The extant literature discusses the investigation of the content of SM messages in combination with other stages of SM data processing, especially in the context of fake reviews (Vohra & Teraiya, 2013), whereby some businesses and SM users post spam and fake positive reviews in SM to promote their own products or degrade their competitors' products by giving false negative opinions (Vohra & Teraiya, 2013). Kaul, et al. (2015) suggest that since the spread of such fake information has become an integral part of SM for companies, SM professionals need to make sure to assess the *"the message content and determine the source, the level of credibility attributed to the source, and the network analysis of the community to see who is sharing this content"* (P.465).

In this context, investigation is also referred to as one of the stages in the creation of a competitive intelligence process, whereby the accuracy of the generated intelligence needs to be assessed and measured, including all sources and the data, for the possibility of technical error or misperception (Bose, 2008). However, this view of investigation is that of aggregated SM data.

Overall, the literature discusses the investigation of SM data in the context of incorrect information or at aggregated data level. These discussions support the findings of this study, which show that companies investigate the correctness of SM data. However, the findings of this study provide a more comprehensive view of investigation, as a stage in the individual SM data use subprocess, which also includes the investigation and sourcing of any additionally required information, from other departments, or the SM user.

6.3.6.4. Acting Upon the Data Stage

The findings of this study show that companies act upon the individual SM data in one of the following forms: respond, escalate, abdicate, ignore, or keep an eye on. The literature strongly agrees that SM enables companies to engage in discussions and

conversations with the customers in fundamentally different ways than traditional ways of communications (Kaplan & Haenlein, 2011; Kietzmann, Hermkens, et al., 2011; Mangold & Faulds, 2009). Divol, et al. (2012) show that using SM companies can pinpoint conversations to respond at a personal level, as another form of SM engagement which can bring many benefits for companies.

The concept of acting upon the data stage is reflected in the literature's discussion of the concept of information reciprocity (Jayachandran, et al. 2005; Harrigan, et al. 2015; Diffley and McCole, 2015). Information reciprocity refers to activities that *"facilitate mutual, high-level information exchanges to take place between a firm and its customers"* (Diffley & McCole, 2015). The reciprocity stage was first discussed by Jayachandran (2005) and is defined as *"the process that enables customers to interact and share information with a firm and that enables the firm to respond to customers"* (Harrigan, Soutar, et al., 2015, p. 30), which *"ensures effective communication"* (Jayachndran, et al. 2005; p. 178). Diffley and McCole (2015) discuss interaction and dialogue as the main aspects of information reciprocity, where interaction facilitates dialogue, which in turn facilitates the exchange of important information. Also, according to Kaplan and Haenlein (2010) when marketers are engaging with customers through SM technologies there is a potential for significantly greater *information reciprocity*, through which user generated content are created jointly by marketers and customers" (Harrigan, Soutar, et al., 2015, p. 30).

Discussion of the each of the five forms of acting upon the data stage, as revealed in the findings of this study, is spread across multiple studies in the literature. For example, ignoring market information has been discussed by Sinkula (1994, p. 43), who suggests that *"the time has come for marketing scholars to address the question of when to ignore market information"*. Sinkula (1994) also suggests that the marketing literature needs studies which focus on related information mechanisms, including information routing, summarizing, delaying, modifying, and market information avoidance.

However, no study has discussed all forms of companies' reaction to individual SM data, nor has one identified these reaction types as forms or stages of SM data use processes.

Overall while the concept of acting upon the data has been discussed in the literature in limited studies, the details of this stage including detailed discussion of the five forms of responding, escalating, abdicating, monitoring, and ignoring is lacking from the extant literature, which forms one of the contribution of this research. In particular Keeping an Eye on and Ignoring forms which have received little attention in the SM literature, form some of the main findings of this research.

6.3.7. Aggregated SM Data Use Subprocess

The findings of this research reveal that aggregated SM data use subprocess includes five stages of **data gathering, data analysis, report generation, information dissemination, and information utilization**.

Sections 3.3.3 and 3.3.4 provide an extensive overview of the discussions of aggregated SM data use in the literature, which shows five stages of **monitoring, analysing, reporting and presenting, and utilization** that are applicable to the processing of aggregated SM data. A comparison of the findings of this study with equivalent stages in the literature, as well as examples of references in the literature are provided in the table below.

Stages of aggregated SM data use as revealed in the findings of this study	Stages of aggregated SM data use as discussed in the literature	Examples of references in the literature
Data gathering	Monitoring	(Zeng, Chen, et al., 2010) (Yang, Li, et al., 2011) (Sinha, Subramanian, et al., 2012) (Stieglitz & Dang-Xuan, 2013) (Holsapple, et al., 2014)
Data analysis	Analysing	(Zeng, Chen, et al., 2010) (Yang, Li, et al., 2011) (Mayeh, Scheepers, et al., 2012) (Stieglitz & Dang-Xuan, 2013) (Grubmüller, Götsch, et al., 2013b) (Kurniawati et al., 2013) (Khan, 2017) (Holsapple et al., 2014) (Gandomi & Haider, 2015) (Sivarajah, Kamal, et al., 2017)
Reporting	Reporting	(Gandomi & Haider, 2015) (Sivarajah, Kamal, et al., 2017) (Holsapple, et al., 2014)
Information Dissemination	Presenting	(Zeng, Chen, et al., 2010) (Yang, Li, et al., 2011) (Stieglitz & Dang-Xuan, 2013) (Aladwani, 2014) (Holsapple et al., 2014)
Information Utilization	Utilizations	(Holsapple, et al., 2014)

Table 34: Comparison of the findings of this study with equivalent stages in the literature

The above table verifies the findings of this study in relation to the stages of aggregated SM data processing, and confirms the same as an overall model of aggregated SM data use in companies. In addition to the above, this study reveals details of each of the above stages, which will be discussed in the context of extant literature next.

6.3.7.1. Data Gathering Stage at Aggregated Level

The first stage of the aggregated SM data use subprocess, as revealed in the findings of this study, is the data gathering stage, which involves gathering the relevant SM data with the purpose of moving it to the subsequent stages of aggregated SM data use. This is in line with the well-established literature on customer information and business intelligence, whereby the production of market intelligence begins with the **collection of the relevant information** (Jaworski et al, 2002; Dishman & Calof, 2008; Weiss, 2002), where it is believed that up to date and comprehensive information needs to be obtained about and from customer interactions if customer relationships are to be improved and developed (Jayachandran et al., 2005). This stage is also aligned with what Moorman (1995) calls **information acquisition or collection**, defined as *“bringing the information about the external environment into the boundary of the organization”* (p. 320).

The literature also recognizes the importance of the data gathering stage in relation to SM data (Mayeh, 2012; Zhang et al, 2011; Effing and Spil, 2016). The literature strongly suggests that it is vital for companies to scan and gather the information available through SM sites, to harness their potential benefits (Diffley and McCole, 2015; Kaplan & Haeinlein, 2010; Harriagn et al, 2015). In their study of SM strategy practices of nine case studies, Epping and Spi (2016) identified monitoring and social listening as the main indicators of the maturity stage for the SM strategy of companies.

Moreover, the findings of this study showed that the aggregated SM data gathering stage is done in the three parallel SM data use process types of proactive, reactive, and analytical. This brings a higher level of clarity in relation to the details of the data gathering stage in SM activities in companies, which is called for by a number of scholars (e.g. Dutta, 2010; Effing & Spil, 2016). To that end, the findings showed that

the data gathering of SM data at aggregated level is done with slight differences across reactive, proactive, and analytical process types, showcasing the different types and sources of data, as well as methods of data collection. This verifies the importance of **data sources, data types, and data gathering methods** as the salient aspects of this stage. All of these factors are verified in the literature as important aspects of aggregated SM data gathering, including source of data (Bose, 2008; Daft et al., 1988; Zhang et al., 2011), data types (Morgan, 2005; Mayeh, 2012) and acquisition methods (Daftm et al, 1988).

In this context, the findings of this study also show that aggregated SM data gathering is done in a combination of automated and manual fashions, whereby data gathering in reactive processes is done manually. It is done in a combination of automated and manual fashions in the proactive process, and it is done automatically in the analytical process. These findings are not fully aligned with the recommendations in the literature, which argue for the use of analytics tool in this stage. Effing and Spil (2016) suggest that although conceptual studies suggest the importance of the element of monitoring, their findings show that only four out of nine case companies engage in any monitoring activities, and only one of the case studies uses any tools in the monitoring stage, showcasing the need for more attention to the details of monitoring practices in companies, including using analytics tools for this purpose. In line with that, Dutta (2010) suggests using analytics software to improve progress in the monitoring activities of companies in an efficient way.

Overall the findings of this study are aligned with the literature on identifying SM data gathering as the initial stage of aggregated SM data use, and identifies data type, data source and a manual or automated manner as the salient aspect of this stage.

6.3.7.2. Data Analysis and Report Generation Stage

The next stages in the aggregated SM data use subprocess as revealed in the findings of this study include data analysis and report generation stages, which are confirmed in the SM and business intelligence literature. In the SM literature, the analysis stage encompasses systematic analysis of the structured and unstructured data obtained

from SM channels (Gandomi & Heidar, 2015; Sivarajah, et al, 2017), including using metrics such as numbers of comments, likes, responses, visitors, followers, and friends, to evaluate their activities (Klang & Nolin, 2012). Larson and Watson (2011) highlighted that the key in deriving value from SM data is *“to determine which aspects of these data should be analysed and compared, and how that might be accomplished”* (p. 11). They also suggested that the decision for the above-mentioned issues should derive from the stakeholders’ goals. Loshin and Reifer (2013) note that companies need to identify the business problem, analyse the data, take actions and continuously measure results (P.77). In the business intelligence literature, data analysis and report generation stages entail analysis of the collected data in order to generate intelligence which can be then utilized (Dishman and Calof, 2008, Bose, 2008).

Findings of this study show that companies use **a limited set of SM metrics** in their aggregated data analysis stage (section 5.8.2). Applying the categorization of SM analysis methods by Sivarajah, et al. (2017), the type of analysis and the range of metrics used posits all the case companies in the **Descriptive Analysis** category. This was also evident by the range of metrics illustrated in the most common forms of reports used in the report generation stage (section 5.8.3), which showed that the metrics used in the reports across the four cases are very **descriptive**, and mainly aim to reflect the overall status of SM activities of the case companies.

The importance of analysis type, as a salient aspect of the analysis stage is verified in the literature (Gandomi & Haider, 2015; Kleindienst, Pflieger, et al., 2015; Loshin & Reifer, 2013; Sivarajah, Kamal, et al., 2017), and reflected in the diverse range of analysis types discussed in the literature (section 3.3.4). **As discussed in section 5.8.2 and 5.8.3, the findings of this study show the importance of data analysis and report generation stages in the aggregated SM data use subprocess. Moreover, confirming the importance of the type of analysis as an important aspect of the analysis stage, the companies employ a descriptive analysis type, as discussed by Sivarajah, et al. (2017).**

6.3.7.3. Information Dissemination Stage

The findings of this study show the next stage in the aggregated SM data subprocess includes dissemination of the result of the analysis to relevant people in the company,

including those who have the responsibility and authority to utilize the information. This is aligned with the view of the literature, which is encapsulated as the information dissemination stage (Mooreman, 1995; Kohli & Jaworski, 1990; Maltz & Kohli, 1996; Dishman & Calof, 2008; Day, 2000). It has also been referred to as the information access stage (Morgan, 2005; Diffley & McCole, 2015), and defined as enabling customer information to be provided in a usable and timely manner to customer facing employees and strategic marketing decision-makers (Jayachandran, Sharma, et al., 2005). The literature discusses a number of attributes of information dissemination including **formality** (Morgan, 2005; Narver and Slater 1990; Menon and Varadarajan, 1992; Moorman, 1995; Bose, 2008; Maltz & Kohli, 1996), **frequency** (Morgan, 2005; Menon and Varadarajan, 1992), and **direction flow** (Moorman, 1995; Bose, 2008; Maltz & Kohli, 1996), which supports the findings of this study as follows:

The findings of this study show that the main forms of SM information dissemination include meetings, interpersonal communications, and report distribution. Moreover, the findings confirm the relevance of the attributes **of frequency, formality, and direction flow**.

Data analysis revealed that the **frequency** of SM information distribution ranges from continuous in the case of interpersonal communications to daily, weekly, and monthly in the case of reports, or weekly and monthly in the case of meetings. This confirms the importance of frequency as a salient aspect of information distribution stage as discussed in the literature (Morgan, 2005; Menon and Varadarajan, 1992), and shows that different frequencies of distribution can be used in the case of different distribution types.

From a formality perspective, literature suggests that information dissemination may occur formally or informally (Moorman, 1995; Bose, 2008; Maltz & Kohli, 1996). Formal dissemination includes all forms of organized or structured dissemination, including formal meetings, disseminated reports, policies, training sessions, and research presentations (Moorman, 1995; Narver and Slater 1990). In contrast, informal dissemination occurs during interpersonal interactions, such as casual conversations, or when organizational members educate one another on relate issues (Moorman, 1995, Morgan, 2005). The findings of this study showed that SM information

dissemination includes both formal and informal methods, whereby interpersonal communications equate to informal distribution methods, and meetings and report distributions equate to formal distribution methods. **In this regard, the findings of this study highlight the importance of both formal and informal dissemination of SM information in companies, and show that both formal and informal dissemination happen across the companies as parts of SM data use processes.**

From a flow direction aspect, two categorizations of dissemination as discussed in the literature include horizontal and vertical (Morgan, Anderson, et al., 2005; Zahay & Griffin, 2002, 2004), and downward, upward, lateral, and diagonal (De Cenzo, Coulter, et al., 2013), as discussed in section 3.3.4. Vertical dissemination includes top-down (to lower level or frontline employees) and down-up (to senior or higher level managers), and horizontal dissemination includes dissemination to other departments (Kohli & Jaworski, 1990; Moorman, 1995; Morgan, Anderson, et al., 2005; Zahay & Griffin, 2002, 2004).

In this regard, the findings of the study show that the planned SM reports are normally disseminated upward, downward and lateral, which is especially important due to the cross departmental nature of SM processes and activities. However, the on-demand reports are also disseminated diagonally in the companies. This shows that SM information are distributed in both vertically and horizontally, as well as diagonal and laterally, which shows the importance of all types of dissemination flows in the context of SM data use.

6.3.8. Information Utilization Stages (Individual and Aggregated)

For consistency purposes, discussion of SM information utilization at both individual and aggregated SM data use subprocesses are held together in this section. There is consensus in the literature that while the area of information utilization is a complex research area (Deshpande & Zaltman, 1982; John & Martin, 1984; Menon & Varadarajan, 1992). It is of utmost importance as the whole purpose of the processing of information is to utilize the generated insights in decision making, to the extent that information processing might be regarded as useless if the insights are not utilized by decision makers (Salojarvi, et al. 2010; Deshpande & Zaltman, 1982; Moorman, 1995; Menon &

Varadarajan, 1992). As discussed in section 3.3.5, the different types of information utilization discussed in the literature include action oriented (which includes two types of Instrumental use and symbolic use), conceptual or knowledge enhancing use, and affective use. The attributes of information utilization which need to be attended to include the number of decisions (Morgan, Anderson, et al., 2005), the decisions' domain (Menon & Varadarajan, 1992; Morgan, Anderson, et al., 2005), the time frame of utilization (including short term, medium term, and long term) (Menon & Varadarajan, 1992), and the individual or group responsible for decision making (Menon & Varadarajan, 1992). Moreover, the literature suggests that SM data should be utilized at both levels of operational and strategic. At the operational level, the utilization of SM data informs short-term and operational decisions, whereas at the strategic level, SM information utilization informs longer-term strategic decisions (Power, 2015).

This research reveals a number of interesting findings regarding SM information utilization in companies, which are summarized in the table below.

Subprocess	Process Type	Utilization Aspects			
		Timeframe	Business Domain	Type	Areas
Individual SM Data Use Subprocess	Reactive SM Data Use Process	Immediate or short term	Operational	Instrumental, Conceptual, and Affective	Fixing customer issues and answering their questions, informing the store managers of the issues facing customers in their stores, highlighting customers' positive feedback to managers
	Proactive SM Data Use Process	Immediate or short term	Operational	Affective	highlighting customers' positive feedback to managers
Aggregated SM Data Use Subprocess	Reactive Proactive, and Analytical SM Data Use Process	Immediate or short term	Operational	Instrumental and Conceptual	improving and clarifying customer communications, improving customer experience and services, SM performance measurement and improvement

Table 35: Summary of SM Information Utilization Aspects as Revealed in the Findings

The findings show that SM data is utilized in a limited number of decisions, across a range of business areas. The areas of business in which individual SM data is utilized

include 1) fixing customer issues and answering their questions, 2) informing the store managers of the issues facing customers in their stores, and 3) highlighting customers' positive feedback to managers. The areas where aggregated SM data is utilized include 1) improving and clarifying customer communications, 2) improving customer experience and services, and 3) SM performance measurement and improvement. Our results regarding the utilization of SM data for improving customer facing processes are not aligned with those of Sigala (2011), who found that very few companies utilize SM data for improving processes. Sigala (2011) note that *"very few companies have realized and exploited the worth of UGC and customer feedback for improving their business processes, which showcases that the opportunity loss to use customer feedback generated in SM for improving and correcting processes is obvious"* (P.559).

Considering the above areas of SM information utilization, the findings reveal that SM information utilization in the companies include all three types of instrumental, conceptual, and affective utilization, as detailed in the above table.

Our findings show that across all the SM data use process types, the timeframe for SM information utilization is short term or immediate, and the short term and operational SM information utilization mostly happens in the areas of improving customer communications, improving a limited number of customer experience processes and resolving customer service issues. **The revealed immediate and short-term timeframe of SM information utilization supports the operational nature of utilization instances,** since operational utilization is equated with short term decisions and strategic utilization is equated with longer term decisions (Power, 2015).

The result of data analysis in this study showed that all instances of SM information utilization merit operational decisions. This shows that despite the repeated prescriptions in the literature that companies need to utilize SM data at both strategic and operational level, our research did not find any instance of SM information utilization at strategic level. Our findings in relation to the operational utilization of SM data are in line with recent studies which show that SM data is utilized at an operational level in areas such as customer communications and customer service (Modoran, 2015; Sigala, 2011), improve services (Wan & Paris, 2014), identification of pitfalls and faults in business (Sigala, 2011), employee appraisals

(Orlikowski & Scott, 2011), market research (Sigala, 2011), recruitment (Roth, Bobko, et al., 2016), and reputation management (Seebach, Beck, & Denisova, 2013). However, a limited number of studies point to utilization of SM data in strategic decisions including developing strategy (Quinton, 2013), product development (Tuarob & Tucker, 2013), and sales predictions (Tuarob & Tucker, 2013). Such findings have not been supported in this research.

Overall the literature holds different viewpoints as regards the type of SM information utilization, showing a range of operational and strategic SM information utilization across the companies. However, the findings of this study showed no evidence of strategic utilization of SM data in the companies, and all revealed instances of SM information utilization pointed to short term and operational utilization in limited business areas, while covering all three types of instrumental, conceptual and affective utilization. Our findings are aligned with the proponents of a sceptical view of the strategic utilization of SM data, such as Power (2015, p.8) who notes that *“Analyzing big data to find a great business plan or to identify the next revolutionary product idea seems however like wishful thinking”*.

6.4. Discussion of the Main Findings on SM Managerial Challenges

This research revealed a number of challenges facing managers in using SM data in the case companies, which lend themselves to answering research question 2, which is: ***“What are the managerial challenges in using social media data”***.

In this context, managerial challenges refer to challenges facing managers in using SM data, as opposed to challenges in managing SM, which might cause confusion. The findings of this study show two interesting aspects in relation to the challenges managers are facing in using SM data:

- a) That managers’ perspective of the challenges they face in using SM data includes a number of challenges not related to SM data attributes.
- b) As discussed in section 5.5, that managers have a wider than expected perspective of SM data use, which includes SM content creation. As a result, managers’ perspective of challenges in SM data use also include challenges related to content creation.

Moreover, as discussed in section 5.9, much of the attention and focus of the literature on the challenges of SM is concerned with data and technological related challenges including the 6Vs (Holsapple, Hsiao, et al., 2014), while the managerial challenges of SM has been less attended to.

This study revealed a range of managerial challenges, categorized as content creation challenges (including creation of interesting, consistent, and real-time content, and finding the right balance between promotional FGC and other FGC types), customer related challenges (including SM negativity challenge, customers' high expectations challenge, and the challenge of misinformation), data actionability challenge, and resourcing challenge, which will be discussed in detail in this section.

6.4.1. Content Creation Challenges

The findings of this study show that some of the important managerial challenges of SM are related to content development activities of companies, and include the following:

- Creating interesting and engaging content
- Creating constant content
- Creating real-time content
- Finding the right balance between promotional content and other FGC types

While none of the above challenges have been discussed in the studies of SM challenges, the difficulties involved in related activities have been discussed in the literature, which will be discussed below.

6.4.1.1. Creating interesting and engaging content challenge

The findings of this study reveal that one of the challenges facing managers is in relation to creating interesting and engaging content. In this regard, while the marketing literature recognizes the potential of SM in yielding a higher level of interactivity and engagement for companies, it also acknowledges the challenges of achieving the interactivity and engagement through SM with customers for companies (Zhang, et al, 2015). There is a consensus in the literature that companies need to create engaging and interesting content, as *"Social media raises the stakes for engaging brand content"*

(Fournier, 2011; p.205). While creating engaging content is not specific to SM, the content posted by companies in SM needs to be even more interesting and to be able to create interactivity to be conducive to relationship formulation and development with customers (Zhang, et al, 2015, Fournier, 2011; Kaplan & Haenlein, 2010). Fournier (2011) suggest that *“CEO bloggers have interesting things to say, surely, and tweeting customer service representatives intervene effectively to resolve complaints. But it is questionable as to whether these touchpoints optimize content with engaging messages that are ‘on brand’”* (P.204). Kaplan and Haenlein (2010, p.66) advise companies that: *“If you would like your customers to engage with you, you need to give them a reason for doing so—one which extends beyond saying you are the best airline in town, or manufacture the most robust kitchen blender. The first step is to listen to your customers. Find out what they would like to hear; what they would like to talk about; what they might find interesting, enjoyable, and valuable. Then, develop and post content that fits those expectations”*.

Achieving the above is in fact a challenge for companies in engaging their customers through their content activities in SM (Fournier, 2011; Kaplan & Haenlein, 2010; Zhang, et al, 2015), and creating the SM content capable of achieving the expected objectives (Ashley & Tuten, 2015; Wilson, Guinan, et al., 2011). This requires companies to use strategies to bridge the gap between what the marketers want to say and what the consumer needs to hear (Ashley & Tuten, 2015).

The above discussions support the findings of this study, in revealing that creating interesting and engaging content is one of the important managerial challenges of SM.

6.4.1.2. Creating Consistent and Realtime Content

The importance of consistency of SM content (Panagiotopoulos, Shan, et al., 2015) and planning the related activities (Panagiotopoulos, Shan, et al., 2015) have been discussed in the literature. Moreover, literature prescribes a number of recommendations including creating fresh and frequent content, and combining creative strategies in this regard (Ashley & Tuten, 2015; Ling, Beenen, et al., 2005; Wilson, Guinan, et al., 2011). However, our findings showed that execution of these prescriptions are proving to be a challenge for companies, especially in the area of

creating consistent and real-time content. While the difficulties involved in creating consistent and real-time content have not been discussed in the form of challenges in the literature, the findings of this study support their challenging nature and suggest them as one of the managerial challenges of using SM.

6.4.1.3. Finding the Right Balance between Promotional FGC and Other Types

The extant literature suggests that companies can use SM for informing SM users about their products and services, especially since customers perceive certain SM messages to be more trustworthy than their traditional sources of information, highlighting the power of SM in influencing the purchase decisions and buying behaviours of customers (see Magnold and Fauld, 2009; Mahoney and Tang, 2016). However the findings of this study show that in many cases, promotional and sales oriented FGC fail to generate the expected levels of engagement in companies, which is mainly believed by managers to be due to the fact that SM users do not engage with the promotional FGC in SM, and SM is mainly viewed as a social and personal space (see section 5.9.1.43). This is verified in the practical and theoretical articles in the literature. For example, Fournier (2011) note that SM is *“made for people, not for brands”* (p. 193), and companies are in fact *“party crashers”* who are *“uninvited”* to SM. Supporting this view, De Beule (2013) also notes that *“people use social media to be social, they don't want to be subjected to your online sales pitch”*. To that end, the findings of this research show that companies face a challenge in finding the right balance between promotional and other types of FGC. The literature's discussion of this challenge is indirect, brief, and scattered. For example, in the context of the promotional and communicational benefits of SM, Gensler et al. (2013) suggest that firms' SM content needs to go beyond the promotional messages and be a part of an equity building effort, particularly aimed at managing brands and nurturing customer relationships. Confirming this view, Kumar, et al. (2016) suggest that studies are needed to focus on both the promotional and non-promotional FGC to go beyond generating short term sales and help strengthen the bond between customers and firms.

In this regard, there are a number of recommendations available in the practitioners' articles. For example, Mahoney and Tang (2016) suggest that best SM strategy in this regard consists of 90% listening and 10% content activities, denoting *"most of your marketing strategy should consist of not saying anything at all. Rather, stay up to date on what the public sphere has to say about your product"* (p.290). In an article in SocialMediaToday, De Beule (2013) suggests that companies should apply the 80/20 rule to their SM content activities, whereby only 20% of their SM content should be used to promote their brand, and the other 80% should be dedicated to content that really interests and engages their audience.

The above discussions support the challenge of finding the right balance between promotional and other types of FGC for companies, as revealed in the findings of this study.

6.4.2. Customer Related Challenges

The findings of this study also show a number of customer related challenges facing managers in their interactions with SM users, which include the SM negativity challenge, customers' high expectations challenge, and the challenge of misinformation, which will be discussed in the context of literature in this section.

6.4.2.1. SM Negativity Challenge

The findings of this study show that the overall negativity of users' comments and posts is one of the big challenges facing managers in SM. While the negativity of UGC has not been discussed as a managerial challenge in the literature, a large number of articles suggest that SM can become a world of 'hyper-criticism' (Fournier, 2011; p.203), and a venue for customers for voicing their dissatisfactions and complaints (Fournier & Avery, 2011), because *"All this rating, ranking, and scrutinizing has made consumers much more critical of companies and their brands"* (Fournier, 2011; p.200). Fournier and Avery (2011) note that *"As brands struggled to leverage social media, consumers learned how to leverage brands for their own purposes and ends. Marketers hoping to nurture relationships with their consumers launched online communities and Facebook profile pages, but people came looking for price deals or a convenient place to complain"* (Fournier & Avery, 2011). Verifying this issue, the case study of SM use in

Starbucks in the US by Gallagher and Ransbotham (2010) lead to the identification of 6 challenges for SM managers, which included 'responding without reinforcing negative behaviours'. Supporting that, Sigala (2011) reflects on what she calls the '*defensive use*' of SM aiming "*to address any complaints or abuses*". Based on the results of her investigation through focus groups, Sigala (2011, p.559) notes: "*the respondents' concerns and fears which were heavily expressed during the focused-groups discussions that refer to the reality that the web 2.0 can be and is easily abused by competitors or customers for purposefully harming others' business*". In Sigala's (2011) findings' use of the words '*heavily expressed*' and '*concerns and fears*' highlights the depth of the problem.

The result of the empirical investigation of hotels in UK by Scott and Orlikowski (2012) also revealed that the visibility resulting from using SM can have instructive and useful benefits, as well as problematic consequences, as organizational practices can become "*constitutively bound up with the constantly changing commentaries posted online by others*" (p. 29). Moreover, in their investigation of the usage of SM data for human resource management in companies, Roth (2016) suggests that negative information is given greater weight in forming general impressions of individuals, and in general negative information has a stronger influence on impressions, judgments, and choices than positive information. Fournier and Avery (2011) also note that the networking effects of SM plays a role in spread of negative and critical UGC, where "*critical consumers networked together can wreak havoc on a brand*" (P.200).

The negative implications of SM on SM team members has also been discussed in the literature (Bucher, et al., 2013; Van Zoonen, et al., 2017). For example the results of an analysis of data from a survey of 2,579 marketing and communication professionals by Bucher, et al. (2013) revealed that using SM inside companies introduces new challenges for SM employees including increased stress, due to the challenges of information overload, invasion of private life by professional duties, and the uncertainty of SM environments. Another empirical study using the survey data of 421 employees by Van Zoonen, et al. (2017) showed that using SM in the workplace can result in negative consequences such as exhaustion and reduce engagement for

employees. However, no studies to date have discussed the negativity of SM in the form of a managerial challenge.

The level of negativity found on SM is also related to the industry or area in which the company is active. For example, Fournier & Avery (2011) suggest that *“Keeping up with brand critics can become a fulltime job, especially in industries suffering from low customer satisfaction”* (p.200), which applies to the telecom and utilities industry. Also the results of the empirical findings by Moe and Schweidel (2012) suggest that when a product’s customers are polarized, posted opinions are more negative and exhibit a stronger downward trend in the discussed J-shaped relationship between frequency of posts and satisfaction with the product, which is *“a result of a core group of “activist” customers posting increasingly negative opinions in an effort to differentiate themselves from others in the community* (p.1).

Overall while the negativity of UGC has not been recognized as one of the managerial challenges in the SM literature, many studies discuss this issue, including its depth, its potential impact on employees, and its relation to the characteristics of the business. Such discussions support the findings of this study in relation to the challenging nature of the negativity of SM for managers.

6.4.2.2. High Expectation Challenge

One of the characteristics of SM which has been much discussed in the literature is recency (Agarwal & Yiliyasi, 2010; Agarwal, Sureka, et al., 2015) and immediacy of SM communications (Habibi, Hamilton, et al., 2015), whereby communications in SM happen instantaneous. Agarwal and Yiliyasi (2010) note that SM sites are highly dynamic, where the time lag between communications in SM is almost zero and they can happen instantaneously. This ‘Freshness of Information’ in SM encourages instantaneous response with almost zero delay in communications (Agarwal & Yiliyasi, 2010, p. 3). Habibi, et al. (2015) also suggest that SM facilitate immediacy in companies’ response to their customers. This aspect of SM communications is one of SM’s departing points from more traditional company-customer communications which could take days, weeks or even months (Agarwal & Yiliyasi, 2010). But it also means that consumers expect a rapid response from companies in SM, which they can provide in a multiplicity of ways, including self-service technologies or customer

advocates within online communities, which facilitates low-cost and fast response solutions for companies (Habibi, Hamilton, et al., 2015, p. 4). Confirming the above, the results of an online survey executed by the Lithium technologies company showed that 72% of the survey respondents expected companies to provide an answer to their messages in Twitter in less than an hour, which includes 14% who expect a response in less than 5 minutes and 19% expecting a response in less than half an hour (Lee, 2013). While these percentages are higher for consumers who have posted a complaint on companies' Twitter pages, the majority of respondents (60%) stated that there would be negative consequences for the company if they do not receive a response in their expected time, starting with telling their friends and family about the experience (29%) and escalating their concerns through other forms of communication (26%) (Lee, 2013).

The above discussions in the literature support the finding of this study in relation to the expectation of users for fast and even immediate response and resolution, and the associated managerial challenge.

6.4.2.3. Misinformation Challenge

In the course of interviews, two managers in company B referred to SM as *"Democratization of customer service"* (CBI3, CBI4), referring to the role of SM as giving the customers the power to tell the companies *"what they want, when they want it, and how they want it"* (CBI3). Similar views have been discussed by Scott and Orlikowski (2012) where they note that TripAdvisor is credited with *"democratizing travel writing"* (p. 30) by *"creating a sense of shared experience"*. Peters, et al. (2013) also note that due to the 'egalitarian' nature of SM, companies are just another node in the networks of communications in SM, with no special authority or power over individual consumers.

Against this background, the findings of this study demonstrate that dealing with misinformation is one of the SM challenges raised by managers in companies. Verifying this, there is a growing body of literature focusing on issues related to misinformation, rumours or fake news in SM from different perspectives. A part of the related literature investigates SM rumors as a form of misinformation (Oh, Agrawal, et al., 2013; Oh, Kwon, et al., 2010; Zubiaga, Liakata, et al., 2015), whereby the majority

of such studies focus on the disaster situations (Castillo, Mendoza, et al., 2013; Starbird, Maddock, et al., 2014; Zubiaga, Liakata, et al., 2015), and community communications (Oh, Agrawal, et al., 2013; Oh, Kwon, et al., 2010), and the important role SM and rumors play in such situations. For example the results of Twitter analysis by Castillo, et al. (2013) showed that in the case of the 2010 earthquake in Chile, the number of tweets regarding confirmed facts were almost the same as those regarding false rumors, and that the ratio between tweets supporting and debunking false rumors was one to one, indicating one supporting tweet per one debunking tweet (Castillo, Mendoza, et al., 2013). Also in the initial stages of a large scale study on the 2013 Boston marathon bombings, Starbird, et al. (2014) found that Twitter users did not do so well in telling the fact based Tweets from false rumors, where the equivalent ratio of Tweets for three different studied rumors was found to be 44 to 1, 18 to 1 and 5 to 1 in favour of tweets supporting false rumors.

The growing body of literature related to rumour and misinformation spreading in crisis and disaster situations has also explored the determining factors affecting the attention a particular message receives, and have identified content themes, user characteristics, and context as important factors in spreading a rumour (Arif, Shanahan, et al., 2016; Maddock, Starbird, et al., 2015; Starbird, Maddock, et al., 2014; Zeng, Starbird, et al., 2016; Zubiaga, Liakata, et al., 2015).

Another stream in the literature investigates misinformation in the context of organizational issues related to fake reviews, reputation management, or brand consequences, whereby company communications are believed to run *“the risk of being surrounded by gossip, rumors, inaccuracies, and/or even fanciful facts of what occurred that may have never happened. This misinformation once released can take on a life of its own, being shared and commented on and expanded upon at the velocity of a click or retweet, spinning out of control and ruining either the executive’s or the company’s reputation or both.”* (Gonzalez, 2015, p. 62). In this regard, the UGC created in SM is believed to be *“a mixture of fact and opinion, impression and sentiment, founded and unfounded tidbits, experiences, and even rumors”* (Blackshaw & Nazzaro, 2006, p. 4). This engenders the issues related to online reviews and fake reviews (Gonzalez, 2015; Luca & Zervas, 2016), where some companies are taking

advantage of consumers mistrust in advertisement and their trust in peer recommendations, and place fake reviews in SM sites. The reputation risks involved for companies has also been the topic of much debate in the literature (Kaul, Chaudhri, et al., 2015; Veil, Sellnow, et al., 2012), which is in line with the findings of this research. Veil, et al. (2012) investigate the case study of Domino's response to its 2009 YouTube crisis, and suggested that publicly casting the crisis as a learning opportunity, emphasizing a commitment to the values and norms, and responding to the misinformation through the same medium by which it was distributed is imperative to dealing with these challenges. Kaul (2015) note that companies need to proactively engage with stakeholders in cases of misinformation, emphasizing that in their companies' activities in SM *"honesty, transparency, and a quick response have always helped us arrest misinformation, rumours, complaints and allegations born out of ignorance"* (p.470). Other related areas being increasingly investigated in the literature are related to the political use and impacts of misinformation in SM (Lewandowsky, Ecker, et al., 2012), and the issue of fake news (Margolin, Hannak, et al., 2017).

In summary the extensive discussion regarding different aspects of the challenges related to the spread of misinformation supports the findings of this study in relation to challenges related to misinformation. The findings of this study discuss this challenge from a managerial perspective, and as a form of managerial challenge in using SM.

6.4.3. SM Data Actionability Challenges

The findings of this study reveal that the lack of linkage between SM data and other customer data in the companies creates the challenge of actionability if SM data, which has emerged as an strong theme in the managerial challenges in the case companies.

The literature verifies the need for the integration of SM information with other customer information, as discussed in section 3.3.4. Information integration refers to *"the assimilation of customer information from all firm–customer interactions to develop a detailed history of customer relationships and prevent loss of customer information"* and to facilitate consistent and efficient communications (Jayachandran,

et al., 2005, p. 178). Moorman (2011) also suggest that SM data needs to be integrated across information systems to ensure efficiency and effectiveness of SM implementation. However literature also holds that integrating information from SM sources may be more challenging than other forms of customer information, as SM information is not necessarily quantitative and rarely in a generalizable format (Bijmolt, Leeflang, et al., 2010). This is supported by the result of a recent survey of 219 Chief Marketing Officers in the 2015 CMO Survey report, which showed that the average score of integration of customer and SM information, in their companies acquired the grade of 3.7 out of 7, which is below medium effectiveness (CMO Survey, 2015). While the challenge of actionability of SM data has not been specifically discussed in the literature in this form, this challenge as revealed in the findings of this study is congruent with the prescriptions in the extant literature regarding integration of SM data with other customer information in the companies.

6.4.4. Resourcing Challenge

The resourcing and budget challenge is the last challenge discussed in the findings of this research, in which due to the increasing volume of individual SM posts which companies need to process, SM managers are facing a challenge in allocating resources for conducting the required tasks.

This challenge has been discussed in the literature in a limited scope. For example, in the context of big data – which includes SM data - Power (2015, p. 8) suggests that *“the major strategic decision related to big data for senior managers is how much time and money to allocate to capturing, storing and analysing new data streams”*. Sigala’s (2011) findings confirm this challenge by showing that SM managers are concerned that they need to use the kind of measurement metrics in their SM analytics activities based on which they can ask and gain senior managers’ commitment for getting additional resources they need, which includes the time, budget and resources required for effective use of SM (p.660). While this managerial challenge of SM is related to the increasing volume of SM data coming into the companies, it depicts a different aspect of the SM data volume issue than that of processing high volume of unstructured data, which is widely discussed in the literature (e.g. Gandomi & Haider, 2015; Sivarajah, Kamal, et al., 2017). The limited discussions of the resourcing

challenge facing managers in using SM for companies support the findings of this research in this area.

6.5. Conclusion

This section analysed and discussed the findings of this study. At the centre of the discussion was the outcome model that provided a holistic model of how companies use SM data and the associated managerial challenges, which was discussed in section 6.2. Section 6.3 provided the discussion of the main findings of this research in the context of extant literature regarding SM data use processes, subprocesses, and stages. Subsequently, section 6.3 discussed the main findings of this research in the context of extant literature regarding the managerial challenges of SM, pinpointing the validity of the findings.

Next chapter will provide the contributions and limitations of this research, as well as the avenues for future research in this area.

Chapter 7: Conclusion, Contributions, and Limitations

7.1. Introduction

This study derives its value from focusing on how SM data is used in companies, through providing an in-depth and holistic exploration of the processes, subprocesses and stages involved, as well as the main managerial challenges encountered in using this data, whereby three main types of SM data use processes have been identified as proactive, reactive, and analytical processes, which are executed through three main subprocesses of content creation, individual and aggregated SM data use.

This chapter first discusses the theoretical and practical contributions of this study in sections 7.2 and 7.3. Subsequently, it proceeds to discussion of the main limitations of this research in section 7.4, and suggests avenues for further research in this area in section 7.5. Concluding remarks are then provided in section 7.6, as the final section of this chapter.

7.2. Contribution to Theory and Practice

SM research has continuously evolved as one of the growing areas of research over the past few years, especially as one in much need of theory development (Kane, Alavi, et al., 2014; Urquhart & Vaast, 2012). The present study makes contributions to marketing and information system's theory and practice, by deepening our understanding of how SM data is used in companies, and the associated managerial challenges. This section begins with an outline of academic contributions made on a theoretical level. Subsequently, its contributions to the managerial audience are discussed.

7.2.1. Contribution to Theory

This study contributes to our understanding of how SM data is used in companies and the associated challenges. At the centre of the contribution of this study lies the outcome model (section 6.2) which illustrated three separate and parallel SM data use processes types of reactive, proactive and analytical, which include 3 subprocesses of content creation, individual and aggregated SM data use, and the 12 stages involved

across these subprocesses. The discussed outcome model also aligns the associated managerial challenges.

As suggested in section 5.3.1, the theoretical contribution of this research is that of 'type II: theory for explaining' as described by Gregor (2006), which *"provides an explanation of how, why and when things happened"* (p. 12). As such the theory presented in this research is of explanatory nature, and is aimed to explain how SM data is used in firms, as well as the associated managerial challenges, which is presented in the form of the outcome model in section 6.2.

Based on the developed framework and the previous chapters, this thesis makes the following contributions to marketing and information systems theory:

- 1) This study contributes by providing a detailed and holistic model of SM data use in companies, identifying the process types, subprocesses and stages involved in using SM data at individual and aggregated data level. This is particularly important, since despite of the investigation of SM data use processes by some earlier studies, such studies are mainly focused on aggregated SM data, and the processing of SM data at individual level has been neglected by the existing literature. Moreover, the literature review endeavours in this research has identified no similar study which investigates the details of SM data use stages, including related activities and important salient aspects. This highlights the contribution of this study in providing a detailed and holistic view of SM data use processes in companies.
- 2) This study provides a theoretical contribution by identifying three parallel and separate SM data use process types of reactive, proactive, and analytical, which apply to different types of SM data. This shows that there is not a single process of SM data use in companies, rather there are three processes which are taking place in parallel and use different types of SM data as input.
- 3) The study contributes by delineating the different types of SM data, which are processed in separate SM data use process types, and how these processes differ for different types of SM data (i.e. SM data type 1, 2, and 3 as shown in figure 31) across companies. This is particularly important since the literature

does not differentiate between SM data use processes applicable to different types of SM data, which this study clarifies.

- 4) The study discusses SM information utilization as one of the stages in the SM data use processes. It outlines a number of salient aspects of SM information utilization, including utilization areas, types, timeframe, and domain. It shows that SM information utilization happens in the form of instrumental, conceptual and affective utilization types, in immediate or short-term timeframe. Additionally, this study shows that SM data is utilized only in operational decisions, which is contrary to the prescription of the literature.
- 5) The study outlines a number of challenges related to SM data use. While the data attribute related challenges of SM have been discussed in many studies, the other challenges related to SM data use have not received the well-deserved attention in the extant literature. So, this study contributes by showcasing the importance and full range of SM data use challenges. In this regard, the findings of this study reveal that the main SM data use challenges include content creation challenges, customer related challenges, challenge of actionability of SM data, as well as resourcing challenges. Especially in the area of customer related challenges, this study reveals that managers are challenged in dealing with the negativity of SM, high expectations of customers in SM, and the misinformation circulated in SM, which have not been discussed in this form in previous studies.
- 6) This study reveals the importance of the 'Evaluating' stage in SM data use processes, which shows that not all the SM users are being treated in the same manner by companies.
- 7) This study shows the cavities in the SM data use processes in companies, whereby not all of the SM data is processed, and certain types of SM data and posts do not get any reaction or response from the companies. Such cases are discussed in detail in the 'Keep an eye on' and 'Ignore' forms of the 'Acting upon the data' stage in section 5.7.4.

Also, following the discussion of Organizational Information Processing Theory (OIPT) in section 3.3.1 and its limited use as a synthesizing lens, this research contributes to

the theory of OIPT by showcasing its applicability to the area of SM data use, as well as its potential as a theoretical lens in future studies in this area.

7.2.2. Empirical Contribution

As discussed in section 2.5.5, the majority of studies on companies' use of SM focus on only one type or limited number of SM platforms. This study provides an empirical contribution by drawing on a dataset of case companies' activities across all of the SM platforms in which they are active, as discussed in section 5.2 and listed in appendix J. From a SM platform perspective, this dataset includes companies' activities across the full range of SM platforms they use, which highlights the empirical contribution of this research.

7.2.3. Methodological Contribution

From a methodological perspective, this study makes a contribution by exemplifying the value of qualitative enquiry using multiple case study design and a critical realist approach, in the field of SM data use. Consequently, from a methodological perspective the research adds to the body of critical realist longitudinal case studies in the domain of SM. Using multiple case study as an overarching research design for conducting the inquiry, coupled with the critical realist approach, and grounded theory data analysis methods facilitate a deeper explication of the dynamics of SM data use and the associated managerial challenges in companies.

The research also presents practical guidelines for the use of case study as an overarching research design for the answering *how* questions in the SM domain, which is dominated by quantitative studies and studies using end user data, thereby offering a much-needed systematic methodology, along with the necessary tools to guide the conduct of the inquiry, which strengthens the rigor and accuracy of the research process.

7.3. Contribution to Managerial Practice

The review of marketing and IS literature and the industry reports show that SM has come a long way from its early days when companies were at a total loss of what to do with different SM platforms and the deluge of subsequent data. However, SM is a

source of many challenges for managers in many companies, which is why several studies have called for more practical guidance on how companies should deal with the large volume of SM data flooding into companies. This study provides a stage-by-stage map of the processes and subprocesses involved in using SM data, which can serve to guide companies' efforts in this regard. The outcome model provided by this study provides practical guidelines for managers on how to use SM data and how to incorporate it into their marketing activities and day-to-day business processes. It provides a tool for managers to assess the state of play of their SM data use activities and processes, as well as determining specific areas requiring improvement. Such improvements will enable the companies to better turn customer data into usable information, which is a critical factor for differentiation and competitive advantage. The findings of this study also highlight the importance of having clear processes and rules of engagement for the SM teams, as another area of managerial contributions. The findings facilitate effective and efficient SM data use activities by clarifying the activities of SM teams in dealing with different types of SM data and different situations.

Another depiction of the outcome model is provided in figure 7.3 below, which shows the subprocesses and processes applicable to each single unit of SM data, as well as the ones applicable to the aggregated SM data. This provides a clear visual guideline for managers as to how SM data travels through the stages of SM data use within companies. Managers should pay attention to the stages included in each of the subprocesses, against which they can bench mark their companies' SM data use activities. This depiction also draws managers' attention to the volume of SM data which are not responded to or ignored in companies' SM data use processes. It also highlights that SM data utilization stage happens throughout the SM data use subprocesses and not specifically at the end, and that it leads into operational decisions, including all three types of action oriented, knowledge enhancing, and affective.

In the area of SM data use challenges, the range of challenges revealed in this study can provide a better view of the difficulties in dealing with SM data for managers. This can be useful in identifying the sources of struggle and prioritizing their resources in

dealing with the challenges. These findings inform managers that for effective confrontation with these challenges, more attention to the interpersonal aspects of SM use and development of effective coping mechanisms are required.

Moreover, managers need to be alive to the needs of their SM team members and make sure that the psychological and emotional negative impacts of the issues such as negativity of the SM environment and customers' high expectations are kept at a minimum level.

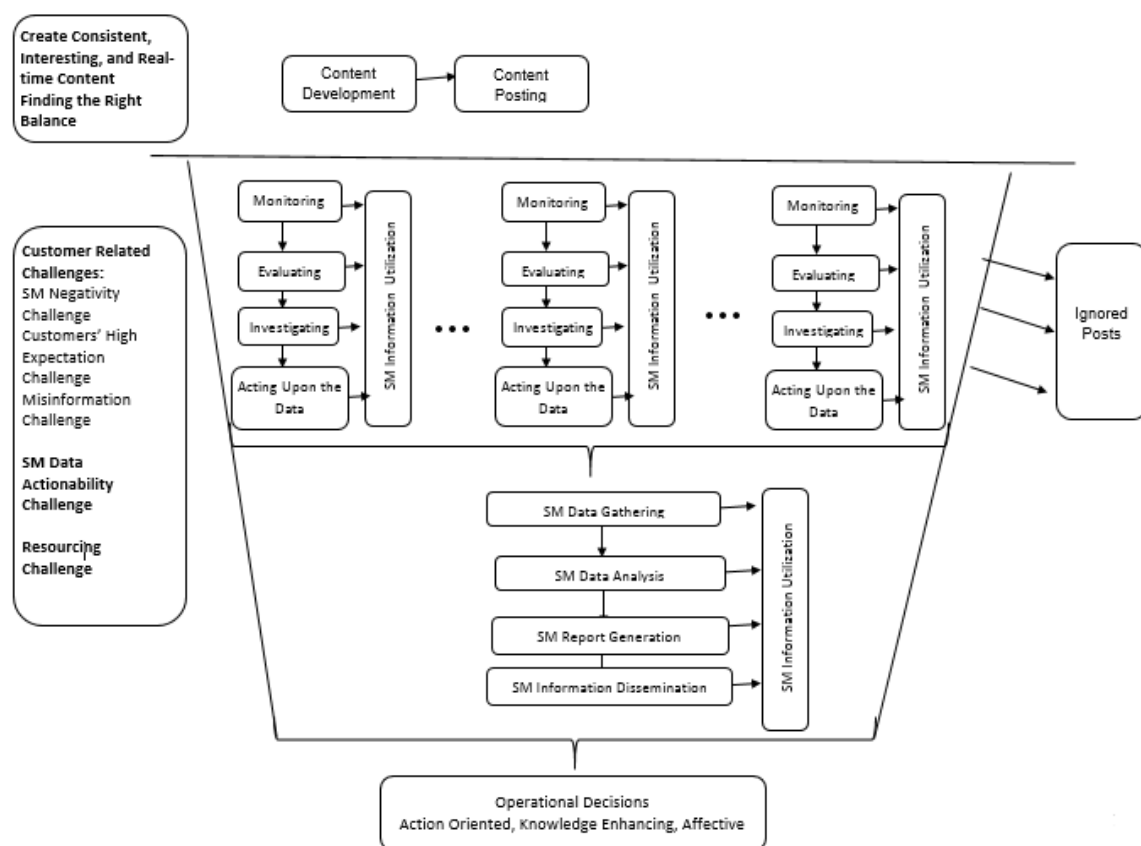


Figure 7.3: Practical Depiction of the Outcome of the Study

7.4. Limitations

As with any research study, this study had several limitations that affected the conduct of the study to some extent. Some of this study's limitations are based on the methodological approach chosen. While existing quantitative studies do not provide

the depth of individual case studies, this research is limited by its focus on four cases within one specific industry. The literature discusses a range of factors which might impact on how companies interact with their customers in SM, which might have a knock-on effect on how they use SM data. One way to take account of such contingency factors is to develop a sampling or replication plan that includes a variety of firms of different contingency factors such as industry, areas of business activity, type of product or service, geographic scope and size (Morgan, et al, 2005). Due to the limited number of cases in this study, it was unable to account for potential contingency factors.

Furthermore, as expounded in the dissertation, this study attempts to illustrate how SM data is used in companies. However, the fact that the four case studies belong to a specific industry (i.e. Telecom) with unique utilitarian characteristics may make the findings not entirely transferable to all other industries and organisations. This is mainly due to the fact that some of the customer-company interactions, or the UGC and FGC types investigated in this study are specific to the service industry in general, and the utilitarian products and Telecom industry in particular. As a result, the findings may have limited value in other sectors such as retailing or consumer packaged goods. In this regard, the literature suggests that the nature of customer activities in utility products might be different from others. For example Alvez, et al. (2016) suggest that the message and the content of SM cannot be the same for utility and hedonic products, as they are perceived differently by individual users. Schulze, et al. (2014) analysed the Facebook viral marketing campaigns of 751 products, and showed that the different sharing mechanism should be applied in the case of utility products, than hedonic or fun oriented products, mainly because the same sharing mechanism that make a hedonic product successful could be a recipe for failure in promoting primarily utilitarian products (Schulze, et al, 2014). Based on the above, it would be interesting to expand the investigation of how SM data is used in companies to other industries and organisations, particularly the ones of hedonic and not utilitarian nature. Such expansion would enable a further investigation of the role of the utilitarian aspects of the telecom industry on the interactions of the firms with their customers, their potential impacts on how companies process SM data, and the associated managerial

challenges. For example, a study might look into how SM data is used in hotels, airlines, game companies and other industries of more hedonic nature.

Additionally, an investigation of the same research question in purely product companies can deemphasize the role of customer service and customer experience aspects of Telecom as a service industry. Such studies can complement the findings of this study, by providing a view of SM data use processes and related managerial challenges in product companies.

Furthermore, the sample of this study is restricted to relatively mature and high performing companies in terms of their activities in SM (based on the SM awards won by the case companies, see section 4.7.2.3). This perspective was justified in order to obtain “rich” cases (Pettigrew, 1990). However, the results of a global study by MIT Sloan management review also indicated that 51% of surveyed organizations were at early stages of social business development, 32% were at the development stage and only 17% were at the maturation stage (Kane, 2014). As a result, while a focus on mature or high-performing companies allows for an investigation of best-practice cases, SM data use processes and managerial challenges in lower performing or less mature companies remain unclear. Particularly, considering that the majority of companies are facing difficulties in using SM data, this focus may narrow the applicability of approaches in use.

7.5. Avenues for Further Research

The area of SM is a young and contemporary area which provides many avenues and has a large potential for future research (Berthon, Pitt, et al., 2012; Gruzd, 2015; Yadav & Rahman, 2017). This research has deepened and extended our understanding of how companies use SM data, and the challenges facing managers in this context. However, due to the limitations outlined above, as well as the fast-changing nature of the phenomena under review, the potential for further research is significant. In addition to the suggestions provided in chapter 2 and 3, this section outlines some avenues for future research.

Given that SM is in a relatively early stage of development in companies, broader qualitative studies are required to explore the phenomenon in companies at different

stages of maturity of SM efforts, including early stages, development stages and maturity stage (Kane, Palmer, Phillips, & Kiron, 2014). In particular, the development of more detailed attributes for each of the components of the presented outcome model, related to maturity of SM efforts of the company could be a valuable extension. Future research also needs to investigate whether the outcome model developed in this study is sufficiently rich to encompass companies at different maturity stages of SM efforts. Sinkula (1994) suggests that there is a temporal or evolutionary dimension associated with market information use, whereby older companies might be perceived as wiser and younger companies might be perceived as collectively obtuse in their market information processing abilities. Such investigation could alleviate investigation of similar propositions in the context of SM.

Furthermore, more research is required to explore the processes involved in using SM data from different perspectives in various industries, including hedonic goods and services and goods only industries. Further studies are required to investigate which aspects of the developed framework might change in different settings, to explore possible additional components of the framework in such situations, and to refine the attributes and the components presented in this study.

Moreover, future research could fully utilize a processual analysis lens (as discussed by Pettigrew (1997); Mintzberg (2005, 2007b); Langley (1999, 2009); Burgelman (2011); Eisenhardt (1989a); Eisenhardt and Graebner (2007); and Van de Ven and Poole (2005) and Poole and Van de Ven (2010)), by conducting longitudinal case studies, which look at the processing of SM data in companies over a period of time. Such a lens could add much value by incorporating a holistic process lens and taking into account the temporal connectedness of the potentially important factors.

In addition, the findings of this study could be complemented with further investigation of dimensions of the organizational information processing theory, to guide further research centring on the interplay of information capabilities (which include the supply of information and processes for its distribution) and information requirements (which include the amount of information needed by managers, its structure, format, and timeliness) (Sinkula, 1994) to provide a more holistic view of the SM data use processes in companies.

Also, given that some organizations might choose to outsource some parts of their SM activities, which was the case with companies B, C, and D in this research, more research can investigate the role of SM agencies and such outsourcing activities in the overall SM data use processes in companies. The dynamics of the relationship between the companies and the SM agencies is an area which needs further research and can have theoretical and practical contribution to this developing area of research.

Moreover, in light of the complexity of the relationship between knowledge and organisational performance (Huber, 1991), further research is required to investigate the relationship between the SM data use activities and capabilities of companies, and their performance over time. Processual analysis might provide a valuable lens in such enquiry, as it is known to be highly relevant to practice (Langley & Tsoukas, 2017), and is often motivated by a desire for a better understanding of events leading to a positive or negative outcome (Langley & Tsoukas, 2017).

Future research would also benefit from the adoption of other related theoretical lenses, such as customer centricity (Kane, Palmer, et al., 2014; Sheth, Sisodia, et al., 2000), or market orientation (Habibi, Hamilton, et al., 2015; Nguyen, Yu, et al., 2015) in the investigation of how companies use SM data, and how it can result in organizational performance and benefits in this context.

Finally, Netnography as the adoption of ethnography to the study of online communities (Kozinets, 2002) can be a useful research method for this research, as it uses the publicly available information in online forums and communities to investigate and identify the needs and decision influences of relevant online consumer groups (Kozinets, 2002). As a result, netnography enables investigation of the research questions from a different perspective, which is through the lens of publicly available data in SM platforms, and could complement the findings of this study.

7.6. Concluding Remarks

This section acts as a conclusion for the body of work presented. Following a brief introduction in section 7.1, section 7.2 delineated different contributions of this study in the areas of theoretical, empirical, methodological and managerial contributions. Section 7.3 presented the limitations of this study, which was subsequently followed by avenues for further research in section 7.4. Finally, section 7.5 presents the concluding remarks for this research endeavour, and presents a brief final conclusion for this thesis.

Albert Einstein's quote is a good start for the concluding remarks. He believed that *"If you can't explain it simply, you don't understand it well enough"* (Albert Einstein), emphasizing the importance of simple explanations of phenomenon as an indicator of our understanding of the same. This thesis attempted to explain the journey and the findings of this study which aimed to provide a greater level of detailed insight into our understating of the SM related activities of companies. Overall, this thesis has attempted to uncover the details of how companies use SM data and the associated managerial challenges. The findings of this study emphasis the types of SM data use processes involved in these activities, as well as the subprocesses and relevant stages. The extant literature of customer and market information use, and SM data use mainly emphasise the processes involved in using customer and SM data at the aggregated level. This study provides a more holistic view of SM data use by focusing on the whole spectrum of SM data, including individual and aggregated data.

The findings of this study in relation to companies' content creation activities are aligned with the fragmented related discussions in the extant literature. This study provides a holistic and detailed view of such activities, highlighting the importance of companies' activities in content creation, and the required attention to the relevant challenges of creating interesting and engaging content and finding the right balance of promotional and other types of FGC.

The findings of this study in relation to companies' activities in processing SM data at the aggregated level provide the much-needed level of details, including the salient aspects of relevant stages, to discussions in the literature.

The findings of this research in relation to the processes and stages involved in processing of SM data at individual level highlight their importance, and aims to fill in the existing gap in the literature in this regard. The focus on the individual SM data also highlights the importance of inter-relations between companies and SM users as individuals, who partake in SM activities to pursuit their personal goals and objectives (Fournier & Avery, 2011), and interact with companies in SM accordingly. This is the departing point for some of the revealed managerial challenges including the overall negativity of SM, SM users' high expectations, and misinformation challenges. In the words of Robert Creeley:

"Communication is mutual feeling with someone, not a didactic process of information."

This highlights the need for a deeper level of well-deserved attention to individuals in SM. Companies need to seek to understand, interact, and communicate with SM users at an individual level, as well as collective.

Finally, this research reveals that despite the literature's prescriptions regarding utilization of SM data in strategic and operational decisions, SM information utilization only happens at operational level in companies. This highlights that despite the high level of attention and investment in SM analytics initiatives in companies, they still have a long way ahead of themselves in their journey from SM data, to information, knowledge, and potentially wisdom.

The below poem from T.S. Eliot provides a well-deserved final point:

"Where is the Life we have lost in living?"

"Where is the wisdom we have lost in knowledge?"

"Where is the knowledge we have lost in information?"

T.S. Eliot poem 'The Rock' (1934)

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Appendices

Appendix A: Range of Definitions of SM in the Literature

Definition	Source
Social media is a hybrid in that it springs from mixed technology and media origins that enable instantaneous, real-time communications, and utilizes multi-media formats and numerous delivery platforms with global reach	Mangold and Faulds (2009, p. 359)
The media that is published, created, and shared by individuals on the Internet, such as blogs, images, video, and more	Strokes (2009, p. 181)
Online tools and platforms that allow users to collaborate online content, share insights and experiences, and connect to business or pleasure	Strauss and Frost (2009, p. 326)
“A group of Internet based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content.”	Kaplan and Haenlein (2010, p.61)
Channels in which active consumers engage in behaviors that can be consumed by others both in real time and long afterwards regardless of their spatial location	Hennig-Thurau et al. (2010, p. 312)
[...] social media is collaborative online applications and technologies that enable participation, connectivity user-generated content, sharing of information, and collaboration amongst a community of users	Henderson and Bowley (2010, p. 239)
an ecosystem of related elements involving both digital and traditional media	Hanna et al (2011)
Consists of a set of applications (e.g., Facebook, Twitter, Flickr) that are built to run on a “Web 2.0” platform. This Web-based platform inherently enables the creation and distribution/ sharing of information created by users/ consumers, namely, user-generated content	Weinberg and Barger (2011, p. 329)
“the online technologies and practices that people use to share opinions, insights, experiences, and perspectives. Social media can take many different forms, including text, images, audio, and video. These sites typically use technologies such as blogs, message boards, podcasts, wikis, and blogs to allow users to interact.”	Malita (2011, p.748)
"a category of online media where people are talking, participating, sharing, networking, and bookmarking online”,	Malita (2011, p.748)
Dynamic, interconnected, egalitarian, and interactive organisms beyond the control of any organization	Peters, et al. (2013, p. 281)
Give marketers a means for direct interaction, which constitutes an ideal environment for creation of brand communities, establishing and reinforcing relationships, and gaining a better understanding of consumers through netnographical research	Scarpi (2010) and Kozimets (2002)

Definition	Source
Web 2.0 applications enabling the creation, editing, and dissemination of user-generated content	Constantinides (2014, p. 42)
"Social media is a broad term encompassing a variety of online platforms that allow users to create and exchange content." P.143	Gandomi and Heidar (2015)
"New media technologies facilitating interactivity and co-creation that allow for the development and sharing of user-generated content among and between organisations (e.g. teams, governing bodies, agencies, media groups) and individuals (e.g. consumers, athletes and journalists)."	(Filo, Lock, et al., 2015)
"An environment that provides a set of tools available to both individuals and organizations, enabling information dissemination, sharing and content creation to facilitate conversation guided toward completion of both strategic and social goals that may eventually lead to consumption."	(Plume, Dwivedi, et al., 2016, p. 11)

Appendix B: Positive Results of Using SM in Firms

Area	Sub-Area	Authors	Finding
Firm performance	Sales	(Dhar & Chang, 2009)	the volume of blog posts about an album is positively correlated with future sales
	Revenue	(Duan, Gu, et al., 2008)	UGC volume leads to higher revenue, UGC valence does not affect movie box office revenues directly, but rather indirectly through an effect on the volume of UGC
	Sales	(Sonnier, McAlister, et al., 2011)	Volume of UGC has an impact on sales all forms of UGC valence (i.e. positive, negative and neutral) have an effect on firm sales
	Stock returns	(Tirunillai & Tellis, 2012)	while the volume of UGC has a significant impact on the stock returns, only negative UGC has a significant negative effect on returns, and positive UGC has no significant effect
Customers/Consumers	Customer acquisition and purchase intentions	(Kim & Ko, 2011)	SM use improves customer acquisition and customers' purchase intentions
	Attitude of non-customers	(Fuchs & Schreier, 2011)	SM activities of luxury fashion brands have positive impacts on customer acquisition and customers' purchase intentions, and can be used to benefit company's brand management activities
	New customers adjustment process	(Köhler, Rohm, et al., 2011)	use of online agents can improve the new customers adjustment process
	New customer acquisition	(Trusov, Bucklin, et al., 2009)	SM use improves new customer acquisition SM WOM referrals are more effective than traditional marketing actions
Other Marketing Activities	Viral marketing campaigns	(Ho & Dempsey, 2010)	SM use benefits viral marketing campaigns
	Branding	(de Vries, Gensler, et al., 2012)	positioning the brand post on top of the brand fan page enhances brand post popularity
	Advertisement – Company Generated	(de Vries, Gensler, et al., 2012) (Campbell, Pitt, et al., 2011)	SM use benefits advertisement
	Advertisement – Consumer Generated	(Berthon, Pitt, et al., 2008)	SM use benefits advertisement
	Public Relations (PR)	(Eyrich, Padman, et al., 2008)	SM enables PR practitioners to engage with their public, and it also provides an avenue to strengthen media relations
	Customer communications	(Gallaughier & Ransbotham, 2010)	monitoring C2C data in SM improves firms' customer communications and leads to customer insight
	Word of Mouth (WOM) marketing	(Moe & Trusov, 2011; Trusov, Bucklin, et al., 2009)	SM use benefits WOM marketing
	Predicting sales	(Dhar & Chang, 2009)	SM data is useful in predicting sales
	Viral marketing campaigns	(Bampo, Ewing, et al., 2008; Ho & Dempsey, 2010)	SM use benefits viral marketing campaigns
Other Process	Knowledge management	(Papadopoulos, Stamati, et al.,	SM use benefits knowledge management

Area	Sub-Area	Authors	Finding
		2013; Von Krogh, 2012)	
	New product development	(Füller, Mühlbacher, et al., 2009)	SM use benefits new product development

Appendix C: Theories Used in SM Studies

Theory	Example Studies	Source
Personal Behavior Theories		
The first group of adopted theories and models in social media research aims to explain the behavior of human beings at the personal/individual level. (Ngai, 2015)		
Attribution theory	Porter and Donthu (2008)	(Ngai, et al. 2015)
Elaboration likelihood model	Zhong et al. (2011)	(Ngai, et al. 2015)
Expectation and disconfirmation paradigm	Chiu et al. (2011) and Hsieh et al. (2010)	(Ngai, et al. 2015)
Goal-directed behaviour model	Bagozzi and Dholakia (2002)	(Ngai, et al. 2015)
Personality traits	Correa et al. (2010), Labrecque et al. (2010), Lu and Hsiao (2010) and Zhong et al. (2011) The five-factor model: Lonnqvist & Itkonen (2016); Ryan & Xenos (2011)	(Ngai, et al. 2015) (Plume, et al. 2016)
Psychological choice model	Zhu and Zhang (2010)	(Ngai, et al. 2015)
Risk perception theory	Shiue et al. (2010)	(Ngai, et al. 2015)
Social cognitive theory	Chiu et al. (2006) and Lin et al. (2009)	(Ngai, et al. 2015)
Switching behaviour	Zhang et al. (2009)	(Ngai, et al. 2015)
Task-technology fit model	Ip and Wagner (2008)	(Ngai, et al. 2015)
Technology Acceptance Model	Casaló et al. (2010, 2011), Hossain and de Silva (2009), Hsu and Lin (2008), Kwon and Wen (2010), Steyn et al. (2010), Siamagka et al., (2015)	(Ngai, et al. 2015) (Plume, et al. 2016) (Alalwan, et al., 2017)
Theory of Planned Behavior	Casaló et al. (2010), Chang and Zhu (2011), Casalo', Flavia'n, & Guinali'u (2010)	(Ngai, et al. 2015) (Plume, et al. 2016)
Theory of Reasoned Action	Hsu and Lin (2008)	(Ngai, et al. 2015)
Social Behaviour Theories		
Cognitive map	Kang, et al. (2007)	(Ngai, et al. 2015)
Effectuation process	Fischer, and Reuber (2011)	(Ngai, et al. 2015)
Involvement Theory	Huang, et al. (2010)	(Ngai, et al. 2015)
Justice Theory	Chiu, et al., 2011	(Ngai, et al. 2015)
Social capital Theory	(Canhoto & Clark, 2013), Chai and Kim (2010), Chiu et al. (2006), Hau and Kim (2011), Lu, Zhao, and Wang (2010) and Porter and Donthu (2008), Ellison, Steinfield, & Lampe, 2007	(Ngai, et al. 2015) (Plume, et al. 2016) & The Literature Review for this thesis
Social exchange theory	Blanchard (2008) and Lin et al., 2009	(Ngai, et al. 2015)

Theory	Example Studies	Source
Social identity theory	Blanchard (2008) and Casaló et al. (2010), Cheung and Lee (2010), Dholakia et al. (2004), Kwon and Wen (2010), Dholakia, Bagozzi, & Pearo (2004)	(Ngai, et al. 2015) (Plume, et al. 2016)
Social influence theory	Bagozzi and Dholakia (2002), Cheung and Lee (2010), Dholakia et al. (2004), Koo et al. (2011) and Wang and Lin (2011)	(Ngai, et al. 2015)
Social Interaction theory	Fischer and Reuber (2011)	(Ngai, et al. 2015)
Social loafing	Shiue et al. (2010)	(Ngai, et al. 2015)
Social network analysis	Hossain and de Silva (2009), Hsiao et al. (2010)	(Ngai, et al. 2015) & The Literature Review for this thesis
Social power	Wei (2009)	(Ngai, et al. 2015)
Social ties	Shiue, et al. (2010)	(Ngai, et al. 2015)
Social Network Theory	Focus on diffusion through peer groups >> Bode, Vraga, et al. (2014); Tang & Lee (2013) Focus on social ties to groups, organizations and activists >> McPherson, Smith-Lovin, & Brashears (2006); Musick & Wilson (2008); Verba, Schlozman, & Brady (1995) Focus on network size >> Gil de Zúñiga, Jung, & Valenzuela (2012); Tang & Lee (2013) Focus on using SM to form or sustain online groups >> Conroy, Feezell, & Guerrero (2012); Valenzuela, Park, & Kee (2009)	(Boulianne, 2015) & The Literature Review for this thesis
Social information processing theory	Westerman, Spence, et al. (2012)	n = 10,5.8% in (Khang, Ki, et al., 2012)
Mass Communication and Media theories		
Media richness theory	Koo et al. (2011); Shiue et al. (2010)	(Ngai, et al. 2015)
Para-social interaction	Colliander and Dahlén (2011)	(Ngai, et al. 2015)
Uses and gratification theory	Chen (2010), Dholakia et al. (2004), Porter and Donthu (2008), Hollenbaugh & Ferris (2014); Raacke & Bonds-Raacke (2008)	(Ngai, et al. 2015) (Plume, et al. 2016) n = 9, 5.2% (Khang, Ki, et al., 2012)
Agenda setting or framing theory	McCombs, Shaw, et al. (2014); Neuman, Guggenheim, et al. (2014)	n = 1,4.0% in (Khang, Ki, et al., 2012)
Online News Theory	Dimitrova, Shehata, et al. (2014); Gil de Zúñiga, Copeland, & Bimber, (2013); Holt, Shehata, Stromback, & Ljungberg, (2013); Pasek, more, & Romer (2009); Towner (2013)	Boulianne (2015)
Organizational theories		

Theory	Example Studies	Source
Marketing Capabilities	Chang, Park, et al. (2010)	The Literature Review for this thesis
Dynamic Capabilities	Bekmamedova & Shanks (2014); Paul Harrigan & Miles, (2014); Paul Harrigan, Soutar, et al. (2015); Mayeh, Scheepers, et al. (2012); Trainor, Andzulis, et al. (2014)	The Literature Review for this thesis
Resource Based View	Trainor (2012); Trainor, Andzulis, et al. (2014), Siamagka et al. (2015); Bekmamedova & Shanks, 2014; Mayeh, et al. (2012)	The Literature Review for this thesis
Diffusion of innovation or technology theory	Chang, (2010); Peslak, Ceccucci, et al. (2010)	<i>n</i> = 6, 3.5% in (Khang, Ki, et al., 2012)
Relationship Management Theory	Levenshus (2010)	<i>n</i> = 8, 4.6% in (Khang, Ki, et al., 2012)

Appendix D: Summary of Studies of OIPT in Marketing

Underlying Concept or Theory	Context	Stages of Information Processing	Article
Information Processing	Organization Design	Information Gathering Information Interpreting Information Synthesizing	(Tushman & Nadler, 1978)
organizational learning-related constructs	Organizational Learning	Knowledge acquisition Information distribution Information interpretation Organizational memory	(Huber, 1991)
Market Information Processing	Organizational Learning	Four components of information processing: information generation Information dissemination Information interpretation organizational memory	(Sinkula, 1994; Sinkula, Baker, et al., 1997)
Market Orientation	Market Information Processing	Three components of market orientation: Intelligence Generation Intelligence Dissemination Intelligence Responsiveness, including response design and response implementation	(Kohli & Jaworski, 1990; Kumar, Jones, et al., 2011)
Market Information Processing	Marketing Performance Measurement	Information generation Information dissemination Information interpretation	(Clark, Abela, et al., 2006b)
organizational market information processes	market information processes	Information acquisition Information transmission Conceptual utilization processes Instrumental utilisation processes	(Moorman, 1995)
Customer Information Systems		Generation (get or acquire) Memory (store) Dissemination (move) Interpretation (use)	(Zahay & Griffin, 2002, 2004)
Customer Interaction Processes		customer interaction processes: (1) collect information through direct interactions with customers and (2) process collected information, which enable the firm to collect, organize, and structure customer intelligence	(Song, Wang, et al., 2010)
Relational Information Processes	Customer Relationship Management	information reciprocity information capture information integration information access information use	(Jayachandran et al. 2005)

Underlying Concept or Theory	Context	Stages of Information Processing	Article
Models of information use in the literature	Customer Satisfaction Information (CSI) Use	data scanning data analysis information dissemination information utilization	(Morgan et al, 2006)
Customer Information Generation and Utilization	B2B	Three stages of customer information generation: Customer Data Collection, Customer Data Storage Customer Data Analysis & Information Utilization	(Rollins, et al. 2012)

Appendix E: Summary of Studies of SM Data Processing

Articles	Stages of Information Processing	Other Related Findings
(Harrigan, Soutar, et al., 2015)	information capture information integration information access Customer Engagement Social Media Technology Use	Uses relational information processes and dynamics capabilities model Findings also show: - As social media technology use increases, customer engagement initiatives will increase. - As customer engagement initiatives increase, relational information processes will expand.
(Diffley & McCole, 2015)	information reciprocity capture integration access use	Social media relational information processes for CRM and co-creation
(Aladwani, 2014)	Content capture/data extraction Data analysis / data mining Data presentation or visualisation	Suggests 6 major components of SMCMS as: - Activity sources - Abridgements - Affordances - Activities context - Ascertained boundaries - Actors SM content abridgement includes 3 stages of content capture/data extraction, analysis / data mining, and data presentation or visualisation
(Rollins, et al, 2012 a)	Three stages of customer information generation - Customer Data Collection, - Customer Data Storage - Customer Data Analysis	Customer Information Generation
(Lee, 2013)	- Creation - processing - dissemination - use stages	the lifecycle of social media information Industry paper

Appendix F: Definitions of SM Analytics and Interchangeable Terms in the Literature

Term	Definition	Source
SM Analytics	“Art and science of extracting business insights from social media data. It deals with the analyzing and interpreting vast amounts of semi-structured and unstructured social media data to enable informed and insightful decision-making” (p. 93) “SMA involves the collection, analysis, and interpretation of unstructured social media data (e.g., Facebook likes and comments and Twitter tweets and follow-following network data) to gain insight into the contemporary issues while supporting effective decision-making” (p.93)	(Khan, 2017)
SM Analytics	“SMA uses advanced techniques to analyze patterns in social media data to enable informed and insightful decision-making. It provides organizations with new ways to create value and gain competitive advantage” (p. 3728).	(Bekmamedova & Shanks, 2014)
SM Analytics	“a rapidly emerging capability that provides organisations with the ability to analyse and interpret large amounts of online content to determine the attitudes and behaviours of people” (p. 1)	(Kurniawati et al., 2013)
SM Analytics	“Social Media Monitoring (SMM), respectively Social Media Analytics (SMA; the terms are often used synonymously) is an information gathering and opinion mining technique that has emerged with the rise of these Web 2.0 technologies.” P.187	(Grubmüller, Krieger, et al., 2013)
SM Analytics	“... measure behavior, conversation, engagement, sentiment, influence, ...;” “monitor exchange of information on social networking sites.” “Applying suitable Analytical tools significant informatics related to behavior, HR and Customers can be extracted, analyzed, understood and predicted.” P.73	(Sinha, Subramanian, et al., 2012)
SM Analytics	“developing and evaluating informatics tools and frameworks to measure the activities within social media networks from around the web. Data on conversations, engagement, sentiment, influence, and other specific attributes can then be collected, monitored, analyzed, summarized, and visualized” (p. 1).	(Yang, Li, et al., 2011)
SM Analytics	“using advanced informatics tools and analytics techniques to collect, monitor, and analyze social media data to extract useful patterns and intelligence”. “developing and evaluating informatics tools and frameworks to collect, monitor, analyze, summarize, and visualize social media data, usually driven by specific requirements from a target application” (p. 14)	(Zeng et al., 2010)
SM Analytics	“Social media analytics refer to the analysis of structured and unstructured data from social media channels.” p.143	(Gandomi & Haider, 2015)

Term	Definition	Source
SM Analytics Business SM Analytics	“all activities related to gathering relevant social media data, analyzing the gathered data, and disseminating findings as appropriate to support business activities such as intelligence gathering, insight generation, sense making, problem recognition/opportunity detection, problem solution/opportunity exploitation, and/or decision-making undertaken in response to sensed business needs” (2014, p. 4).	(Holsapple et al., 2014) (Holsapple, Hsiao, et al., 2018) CHOSEN DEFINITION
SM Monitoring	“listening, interpreting and taking action on what people are saying or otherwise conveying” (p. 372).	(Zhang & Vos, 2014)
SM Monitoring	“the continuous systematic observation and analysis of social media networks and social communities” (p. 335).	(Bekkers et al., 2013)
SM Monitoring	“scanning social media to identify and analyze information about a firm’s external environment in order to assimilate and utilize the acquired external intelligence for business purposes” (p. 2).	(Mayeh et al., 2012)
SM Monitoring	“... social listening and measurements ... based on user generated public content (such as postings, comments, conversations in online forums, etc.)” [using SMA tools] “with different features like reporting, dash boarding, visualization, search, event-driven alerting, and text mining.” “Software systems that automatically find filter and analyze user-generated contents produced on social media.”	Grubmüller, Krieger, et al. (2013)
SM intelligence	“derive actionable information from social media in context-rich application settings, develop corresponding decision-making or decision-aiding frameworks, and provide architectural designs and solution frameworks for existing and new applications that can benefit from the “wisdom of crowds” through the Web”.	(Zeng, Chen, et al., 2010)

Appendix G: Summary of Stages of SM Use and Analytics

Term	Source	SM Data Processing Stages	Term	Source	SM Data Processing Stages
Social Media Analytics	(Melville, Sindhwani, et al., 2009)	Identify Detect Characterize	Social Media Analytics	(D. Zeng, Chen, et al., 2010)	collect, monitor, analyze, summarize, and visualize no details investigated
Social Media Analytics	(Yang, Li, et al., 2011)	Collect, Monitor, Analyze, Summarize Visualize.	Social Media Analytics	(Sinha et al., 2012)	Includes frequent references to: Analysis of patterns Extracting information for behaviour and HR SM monitoring Reporting
Social Media Monitoring	(Mayeh et al., 2012)	Capture Analyse Act	Social Media Analytics	(Grubmüller, Götsch, et al., 2013b)	Collate content Categorization Analysis >> outcome: Serve as decision support
the lifecycle of social media information	(Lee, 2013)	Creation Processing Dissemination use	Social Media Analytics	(Stieglitz & Dang-Xuan, 2013)	(Continuously) collect Monitor Analyze Summarize visualize
Social Media Analytics	(Kurniawati et al., 2013)	Analyze Interpret	Social Media Monitoring	(Bekkers et al., 2013)	Not specified
Business social media analytics	(Holsapple et al., 2014)	Processing activities include: Pre-analytics Analytics Post-analytics	Social Content Management System	(Aladwani, 2014)	Content capture/data extraction Data analysis / data mining Data presentation or visualisation
Social Media Monitoring	(Zhang & Vos, 2014):	Aims of SM monitoring: Listen Interact Influence reflect	Social Media Analytics	(Gandomi & Haider, 2015)	Data Management: including Acquisition and recording; extraction, cleaning and annotation, integration, aggregation and representation Analytics including modeling and analysis; interpretation
Social Media for CRM	(Diffley & McCole, 2015)	information reciprocity capture integration access use	Social CRM	(Harrigan, Soutar, et al., 2015)	information capture information integration information access Customer Engagement Social Media Technology Use
Social Media Analytics	(Gohar F Khan, 2017)	Collection Analysis interpretation of unstructured social media data	Big Data Analytics	(Sivarajah, Kamal, et al., 2017)	Data acquisition and warehousing, Data mining and cleansing, Data aggregation and integration, Analysis and modeling, Data Interpretation

Appendix H: Samples of Communications with Case Companies

Appendix H1: Confidentiality Agreement with Interviewees

The below letter has been signed and provided to each of the interviewees prior to the interview.



Trinity College Case Study CONFIDENTIALITY UNDERTAKING

In this undertaking:

Confidential information means all information, facts or data which I acquire knowledge of directly or indirectly through my investigation at *[name of company]*.

Confidential documents mean to all drafts and final documents to which I have access through my investigation at the *[name of company]*.

I, Farhoodeh Zamani, do hereby undertake:

1. to treat all confidential information and documents under conditions of strict confidentiality.
2. to ensure that unauthorised persons cannot obtain access to confidential documents in my possession.
3. not to disclose or authorise another person to disclose in any way to any third party any confidential information or documents.
4. not to name or link the *[name of company]* to any documents produced in the course of this Ph.D. study.

This undertaking is not limited in time, but does not apply to information or documents that I can reasonably prove was known to me before the date of this undertaking, or which becomes public knowledge other than as a result of a breach of any of the above undertakings.

Signature

Date

Farhoodeh Zamani

School of Business,
Trinity College Dublin
Aras an Pharsaigh, College Green
Dublin 2, Ireland

Appendix H2: Pilot Interview Invitation



TRINITY COLLEGE DUBLIN
COLÁISTE NA TRÍONÓIDE

THE
UNIVERSITY
OF DUBLIN

RE: Case Study Pilot Interview Invitation

Dear Sir/Madam,

I am conducting a doctoral research in Trinity college Dublin in the area of "Social Media Data Use and Utilization in Companies".

As you are aware, how companies use social media data plays an important role in the effectiveness and efficiency of social media related activities in companies, and it is an essential part in the social media management strategy for firms. Importance of how companies use and utilize social media data has been discussed in different articles including the below, which might be of interest to you.

- *How 'social intelligence' can guide decisions*, McKinsey Quarterly, 2012, Issue 4, p 81-89
- *Integrating Social Media-Is your company using social media strategically?*, Moorman, C. Marketing management, 2012, 20(4), p 16-17

The aim of this research is to provide insight into how companies use and utilize social media data, and it aims to have both academic and managerial contributions by clarifying the processes and challenges involved in doing so.

At this stage I need to conduct a number of pilot interviews with key social media experts or related stakeholders in different companies, in order to verify the design of the research and increase the reliability and validity of potential findings in future. Your input, as one of the social media experts is of great value for this research. Hence, I would really appreciate if you would accept to take part in an interview with me over the coming weeks.

Please let me know if you want me to send you the main topics and questions of the interview before hand.

I would appreciate if you could let me know what days/times would suit you better over the coming days.

I am looking forward to hearing back from you.

Kind regards,

Farhoodah Zamani
PhD Researcher

Email: zamanibf@tcd.ie
Mobile: 0866612512

School of Business,
Trinity College Dublin
Aras an Pharsaigh, College Green
Dublin 2, Ireland

Appendix H3: Initial Interview Invitation



TRINITY COLLEGE DUBLIN
COLÁISTE NA TRÍONÓIDE

THE
UNIVERSITY
OF DUBLIN

RE: Invitation to an Interview on Social Media Data Use and Utilization in Companies

Dear Sir/Madam,

A doctoral study in Trinity College Dublin, under the supervision of Dr. Mairead Brady, Assistant Professor, in the area of "*Social Media Data Use and Utilization in Companies*", needs to interview a number of experts in this area. *You have been selected as one of the experts in the area and your input is of great value for this research.*

The aim of this research is to provide insight into how companies use and utilize SM data, the processes and the managerial challenges involved, with the aim of providing understanding and guidance to optimum social media management in the future.

As you are aware, how companies use social media data plays an important role in the effectiveness and efficiency of social media related activities in companies, and it is an essential part in the social media management strategy for firms. Importance of how companies use and utilize social media data has been discussed in different articles including the below, which might be of interest to you.

- *How 'social intelligence' can guide decisions*, McKinsey Quarterly, 2012, Issue 4, p 81-89
- *Integrating Social Media-Is your company using social media strategically?*, Moorman, C. Marketing management, 2012, 20(4), p 16-17

Your support is greatly needed to help this research by providing insights into the processes and challenges involved in use and utilization of social media in your company. Hence, I would really appreciate if you would accept to take part in an interview with me, for any duration that suits your schedule.

Also, please let me know if you want me to send you the main topics and questions of the interview beforehand.

I would appreciate if you could let me know what days/times would suit you better over the coming days.

I am looking forward to hearing back from you.

Yours sincerely,

Farhoodah Zamani
PhD Researcher

Email: zamanibf@tcd.ie
Mobile: 0866612512

School of Business,
Trinity College Dublin
Aras an Pharsaigh, College Green
Dublin 2, Ireland

Appendix H4: Follow Up Data Collection Sample Email

Dear [REDACTED]

Thank you for your time on [REDACTED]. Your insight has been very helpful for moving the research forward, and I really appreciate your help with this research.

I am currently working on analysing the data, which is already showing very interesting results, as well as areas which need more clarification. Following up from our previous conversations, I was wondering if it would be possible for us to have a follow up meeting or a quick phone call to discuss a few areas in which I need guidance and more clarity.

I would particularly need more guidance from you in the following areas:

- Clarification on different response strategies in relation to different UGC types, and any particular challenges you face in this regard
- Clarifications on how consumer initiated posts are evaluated, and what factors are considered, and any particular challenges you face in this regard
- More examples of the decision made using SM data, or other areas in which SM data is utilized in your company
- Samples of any of the SM reports (it could be an old report, or the actual information can be stripped out, as I am mainly interested in the type of reports and data)

I really appreciate your help with this. I am available any date and time that suits your calendar for a follow up meeting, or I can call you when it suits.

Many thanks and Kind regards,

Farhoodeh

Farhoodeh Zamani
PhD Candidate

School of Business
Trinity College Dublin, The University of Dublin
Aras an Pharsaigh
College Green
Dublin 2, Ireland

Appendix I: Field Notes

This appendix includes the field notes for the 4 case studies, created for each case at two levels of a) overall case level and b) interviewee level.

Table I1: Field Notes – Case A

Case A	
Company has been active in social media from 2010.	
Uses Radian 6 for SM data management and does not use the help of any agency.	
Social Media Manager (CAI1)	The social media manager seemed very up to date and knowledgeable about social media. He had won several awards for his social media campaigns, as well as creativity awards during his college years. He also runs a very interesting personal website. This all shows his awareness and involvement with the social media world. He mentioned that SM for company A is basically a care platform, and a content platform, for which the content can be sales focused, brand focused, sponsorship focused. He mentioned 4 main areas of working with AM as Care or customer service, Sales, Brand, and Analytics. Customer service was mentioned as the most obvious one, with proven RIO (he even mentioned a numerical number of ½ ratio of SM costs to call centre costs of the top of his head. They had the team set up and reports and systems in place. Details related to customer service activities were discussed much more elaborately than those of other uses. He showed a strong dislike of using SM for sales, mentioned that it doesn't perfume and doesn't produce the leads. With Brand he meant using SM for sponsorship and branding activities, such as sport, and music. Analytics was a separate department who creates and runs reports and dashboards, with whom he doesn't have a lot of contact (which seemed very odd to me). He also had real concerns as to the validity of SM data, due to the data being skewed (emotionally polarized) and non-representative of their customer base, to the extent that he himself didn't think that SM data should be used in strategic decision makings. He seemed to have a good understanding of how things have changed for companies in the SM era. He cared for the customers, and mentioned repeatedly that they use SM to show customers love and care and support. He conveyed a sense of pride in their care activities. He didn't seem to be macro managing his care team. He was happy with the team and how they handled the queries.
Digital Marketing Manager (CAI2)	In charge of company A's online platforms Much emphasis was given to the evaluations of the posts before choosing how to respond to them. The SM team would receive guidelines on how to gauge that, and the rest was left to the individual team members to make a decision and choose the best course of action. For the marketing posts they would collect the relevant data from the SM platforms, analyse them, produce the reports they need to (multiple reports both for marketing and care side), disseminate them across the company, and then try to utilize the insights in their decisions. The main information utilization from these reports seem to be for performance measurement to guide future activities. He shared concerns around SM data validity with the SM manager, which gave the sense that these issues have been discussed between them and possibly in meetings. He raised concerns about the usability of the reports they get, especially the sentiment analysis.
Senior Data Analyst (CAI3)	The senior data analyst has been working in the company for 4 years. The history of SM activities had started around 2010, when a lady was in charge of all SM activities of the company, but everything was left at a standstill after she left the company, and then picked up again after the new SM manager joined the company. "As a data person", he had deep concerns around the actionability of the data and the fact that they cannot link the online and offline personas of the users, which resulted in a bit of skepticism around the value of the SM data in general. Multiple efforts had been made to find a solution for this issue, but

Case A	
	the data was lacking for connecting the databases and the required budget was too high for the company. At the moment, they don't have any R6 dashboard available to the other managers and employees on the SM activities. He mentioned that they used to have it back in 2010, but it was rarely used and very expensive to maintain. Reputation management mentioned as one of the important areas, to be done well
Social Media Care Team Lead (CAI4)	Interesting views on the role of social media Overall SM activities are conducted by the SM care team (responding to care queries in SM), and Sales and branding team in the marketing department (creating and posting FGC), as well as analytical team (working with R6 on the overall reports). Provided details of their guidelines on how SM team should engage (or not engage) with different types of post Data are collected and analysed, leading to production of a number of reports, including weekly, monthly and quarterly, which are then disseminated to different managers at different levels in the company (details in the quote). Also, weekly meetings and day to day face to face communications play an important role in the overall communications across the company and especially between SM and marketing. Concerns around misinformation. Raised privacy concerns around ads in social media based on her own personal preference
Head of Digital Communications (CAI5)	Very knowledgeable and had interesting views on how social media should be used in companies. Had strong views against using agencies, because he thought they are not close enough to the business to be able to act as agents of business. Interesting views on the importance of personalization of the SM experience for customers, as well as importance of linking SM data with other sources of customer information in the company, which he referred to as the problems in actionality of data (the same term used by i3). He held the vision that unless they can provide a very good customer service experience through social media, they would not be able to get the customers onboard with the rest of their SM activities around creating engagement with content.

Table I2: Field Notes – Case B

Case B	
Company has been active in social media from 2010. Uses Radian 6 for SM data management and also uses a social media agency, with whom I repeatedly tried to have a meeting, but were told that it was not possible.	
Digital Marketing Manager (CBI1)	Very knowledgeable, hesitant in some areas, as she mentioned that she has clear instructions in terms of the degree to which she can share information with my research. In terms of SM use she put much emphasis on the reputation and crisis management aspects, especially in light of the big events that the company has been going through. Despite her role as the marketing manager, she discussed the details of the care activities in much more details than those of marketing SM activities. One potential reason could be that the marketing activities are outsourced to an outside agency, who is in charge of collecting the data for each post and across all the posts on a monthly basis. They collect the data, analyse it, produce the reports and then send them to the digital marketing manager for review and distribution in the company. In summary she views the whole process as engaging in the posts (as per the details discussed for care side), then gathering the relevant data, analysing them and producing the reports, which will then be sent to different managers across the company.
Social Media Manager (CBI2)	Very helpful, but frank and to the point. She had clear guidelines as to the extent of their cooperation with me, which clearly did not include planning meetings with the agency. She seemed to have a clear idea of where SM belongs in the company, as another source of communication with customers, but nothing fundamentally different comparing to more traditional channels of communications. The importance of the influencers was well understood and appreciated in the company, although they do not have any plan of action for endorsing them as such, but they assess the profile of the people who post in their SM sites in details. She mentioned that the 2 processes of customer service and crisis management have been mostly affected by the SM.
Social CRM Manager (CBI3)	Very good with words. Overall SM activities are spread between the SM CRM team, the marketing department (for FGC stuff), and the customer insight and analytics team for working with radian 6. Conveyed a sense of importance on the change board meetings, to the extent that I originally thought they were held for the purpose of SM information utilization, and then understood that SM was only a part of the overall agenda (and probably a small one). Relevant SM data are collected for both marketing and care activities, they are analysed as per the list of defined metrics, and reports are produced based on them, to utilize in decision making (such as the formal change board process, or decisions within the SM team). Automatically generated reports are also produced using Radian 6. As a result, she mentioned a long list of reports, which are produced across the company and sent around to different managers. The long list of reports which are generated for marketing, care and using R6 and disseminated to different managers seemed a bit unorganized and 'all over the place' to me when she was going through the list of reports and who they are sent to. She mentioned that the monthly reports are just the roll up of weekly ones, and the quarterly ones are just the roll up of monthly ones. She was very unhappy with lack of budget which had resulted in not having proper tools for their SM team, and the fact that they had to enter data manually in 3 systems after each interaction. This entails entering data regarding details of the interaction with the customer for

Case B	
	each interaction in a manual data logger, which will then later be used for analyses and report generation.
Social CRM Team Lead (CBI4)	Not all the SM posts get responded to, as it was indicated that certain UGC will not be responded to as per the company policy.
Data Analytics Manager (CBI5)	Very data oriented person, interesting and somehow different views re SM. Didn't see more value in SM data than traditional customer data. If anything, he saw the inability to connect the SM profile and CRM profile of users as a big big negative for SM, which t=until they get it right they cannot get much value out of SM. He saw SM data processing as a nice to have, something that companies should embark on only if they have got all other customer data processing activities (specially CRM) right first. For now, he sees the multiple reports as the best way of disseminating the results of the data analysis. No dashboards to Radian 6 activities is available to other managers and employees, only the SM team have access to it, and he didn't think that the demand is there to justify the costs for extra licenses they would need.

Table I3: Field Notes – Case C

Case C	
Company has been active in social media from 2010. Uses Sprout Social for SM data management and also uses a social media agency, with whom I had a meeting (interviewees 5 and 6).	
Head of Online Services (CCI1)	The overall company's activities are spread across the SM customer care team –who respond to the care queries in SM-, marcomm or marketing communications team – who look after the posts in SM and work with the agency, and the customer's insight team – who work with Sprout Social on reports.
Social Media Manager (CCI2)	He talked a lot about using SM for brand protection, which seemed to be another term used in reference to reputation and crisis management, which seemed to be very important in company C. SM data are collected, analysed and put into weekly, monthly, and quarterly reports which are sent around to about 15 different managers (both senior and middle level managers) for care activities, marketing posts, as well as the not very sophisticated reports which are generated by Sprout social for company's overall activities in SM. The generated weekly reports are rolled up in the format of monthly and quarterly and sent to a larger audience.
Social Media Customer Service Manager (CCI3)	Posts are evaluated from different aspects before deciding the best course of action. He openly discussed that to his eyes not all the SM users are the same and not all of them need to be treated equally.
Marketing Communications Manager (CCI4)	Special Note: Frustration with negativity in social media. There was an evident sense of dislike and frustration in her tone of voice and body language throughout the interview, but especially when talking about the negativity in social media. Initially I associated the sense of frustration to personal factors, such as being tired or having a very busy schedule. But when she was talking about how negative SM is and the fact that she used to like SM, but not anymore, it became evident that social media is one of the sources of the sense of frustration conveying in her voice and body language. For each of the posted FGC relevant data is collected by the agency for each post and then across a number of posts at certain times as per the details of the reports provided.
SM Team Lead (CCI5)	He is the team lead for MS team, managing the SM team in their day to day activities and at the strategic level, dealing with issues, team problems, team training, etc.
SM Content Manager (CCI6)	She is responsible for the operations side of their content management activities, including the details of posts and expectations
Personal Observations of the SM team	I was given the chance to have a quick visit to where the SM team seat and work together. A normal area like any other in the building, with lively and interesting surroundings. The team had made an effort to make their environment pleasant and a bit informal despite the grey cubical. First observation was around how young the team was, probably around the age of 25 and younger, individuals seemed chatty and bubbly, and nice. Second observation was the constant communication between the team members, team leads and the manager. They would easily ask each other for help or show each other interesting messages or posts, and ask for help when they needed. A few poster things on the walls showed the overall guidelines for the team, and also what they expected from the rest of the company. Overall, they seemed very busy, constantly working on their computers, and not much of

Case C	
Company has been active in social media from 2010. Uses Sprout Social for SM data management and also uses a social media agency, with whom I had a meeting (interviewees 5 and 6).	
	the non work-related chatting among the team. I would hear some sighs or sounds of frustration or surprise as they were dealing with the posts.

Table I4: Field Notes – Case D

Case D	
Company has been active in social media from 2010. Uses Sprout Social for SM data management and also uses a social media agency, with whom I repeatedly tried to have a meeting, but were told that it was not possible.	
Social Media Manager (CDI2)	SM Agency is used for SM marketing activities. Details of the SM care team's work including their work allocation, structure, hours and other details are clear and discussed in detail in the interviewees. However not the same level of details was conveyed for the marketing activities, which could be due to use of agency for marketing activities, including content generation and posting. 3 main teams are involved in SM activities of company D, a) the SM care team, who are the customer service team in SM, b) the marcom team or marketing communications team, who look after creating and posting FGC and working with the agency, and c)
Social Media Customer Service Manager (CDI3)	He stated that they prioritize the queries and issues from customers depending on who they are and the impact of the problem on their life and situation. Sprout social has made life easier for them, as it helps in collecting the SM data, analysing it and producing the reports for the company's SM activities. But they would still need to do the same for care queries and marketing posts.
Marketing Communications Manager (CDI4)	Once each of the posts are posted (FGC), they gather the data for that post from the SM platform, analyse the data and produce the reports, both immediately after posting and at certain intervals, mainly to be used for performance measurement.
Head of Digital Marketing (CDI5)	SM data is collected for all care posts, as well as the marketing posts, and lead into production of a number of reports which are sent around to different managers in the company, along with snapshots of the reports generated by the sprout social. This leads to a relatively long list of different types of reports being sent around to different managers across the company, re SM activities. Mostly the monthly reports are just the rolup of the weekly ones, and quarterly ojnres are the roll up of monthly ones, more high level and with less details.

Appendix J: Overview of Each of Case Companies

Company A Overview

Company A is one of the main telecom companies in Ireland, which employed over 1800 employees at the time of interviews in Ireland. The main SM activities of company A include customer service (known as the SM care team within the company), and the content activities including sales, promotion and branding (CAI1, CAI2, CAI4).

Company A started using SM sites around 2008 by creating company specific pages in Facebook and Twitter. However, according to CAI1, CAI2, and CAI4 before 2011 there has been no structure around SM use in the company, in the sense that different departments created separate pages on different SM platforms, and there has been no central management or reporting structure for overall SM activities of the company, as noted here: *“When I started, it was a bit of a free for all, everybody was posting whatever they wanted and there was no consistency.” (CAI1)*

“So really from the reporting side of things it wasn’t like there was a structure or monthly report or anything like that.” (CAI3)

In 2011, company A hired a dedicated SM manager, who took ownership of the management of SM activities in the company. He conducted a *“Social Media cleaning up”* (CAI1) exercise, whereby they would terminate the isolated SM pages created by departments, and centralize all company’s SM activities in one main page in each platform (CAI2). After that, viewing SM as a PR function resulted in situating SM team within the PR department for a while. Then, it was moved to sit among marketing and customer service departments. In the words of CAI4: *“It [Social media] started life in a very unstructured way of different departments creating their own pages, which obviously ended up in a bit of a mess. Then the ownership of it was given to the PR or marketing communication departments, because that’s how it was viewed at the time, as a communication channel to tell the customers about the key messages, such as the news and updates and that kind of stuff. Then I think it was moved around a bit in the org chart between marketing and PR and customer service” (CAI4).*

Finally, company a came to the realization that SM activities are “*combined efforts and need to be managed and coordinated between a number of teams*” (CAI4). At the time of data collection, multiple teams and departments were involved in company A’s SM activities, which is illustrated in the diagram below. The main SM team (highlighted in red in diagram below) is a dedicated team, consisting of the SM manager (CAI2), the SM care team lead (CAI4) and the SM care team (known as the Social Care Team within the company). The management and ownership of all SM activities is the responsibility of the SM manager who operates within the marketing team. The SM care team lead supervises and manages the activities of the SM care team, which from an organizational hierarchy perspective operate under both the SM team and the customer service team. Other teams involved in the SM activities of company A include the Brand team, Sales team, Customer Care team, Insights and Analytics team, and Communications and Public Relations team (highlighted in yellow in the diagram below). As shown in the diagram below, SM activities of company A spread across a number of departments.

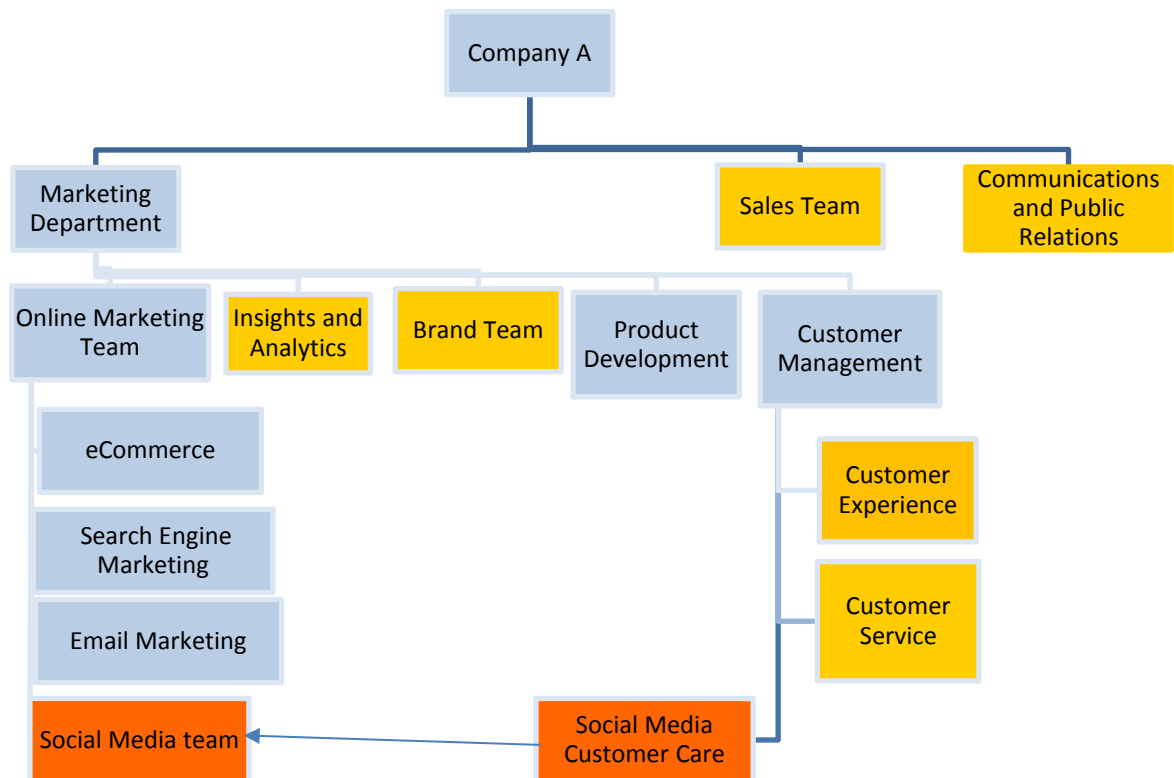


Figure 44: Departments Involved in Social Media Activities Mapped to Org Chart of Company A

Highlighted in orange: Main teams involved in the ownership and execution SM activities of company
 Highlighted in yellow: Other teams involved in SM activities of company, e.g. providing input, ideas, etc

At the time of data collection, company A was actively present in Facebook, Twitter, company owned forum and Boards.ie. It also had pages in Google+, Instagram and Youtube, whereby the scope of company activities was limited, including posting limited content and answering to question (CAI1, CAI2, CAI4), hence they were referred to as “very light touch” platforms (CAI1). In the case of Google +, the digital marketing manager stated that: *“We have the social media team monitoring it [Google +], just to make sure any care queries get answered. But there isn’t any because the user base simply isn’t in Ireland”* (CAI2).

LinkedIn was mainly used for business customers (B2B) and recruitment purposes by the Human Resource department, as stated: *“LinkedIn is only used and it’s specifically used by the business and recruitment teams, so we have very much focused it around our business products and services, as well as just about to launch recruitment features on it”* (CAI1)

As a result, LinkedIn is not considered as one of the platforms company A is actively using in engaging with end users. The level of activity of company A in each of the SM platforms is reflected in the number of active users or volume of content available in each SM platform, which is shown in the table at the end of this appendix for each of the case companies.

Company B Overview

Company B is one of the main Telecom companies in Ireland, who employed over 500 employees at the time of interviews in Ireland. The main SM activities of company B include the customer service function, which is called the Social CRM team, and the marketing activities. Company B uses the help of a SM agency in the development and posting of FGC in SM company pages, details of which is considered out of scope for this research.

Company B started using SM in 2005. They created their first page on Facebook in 2005, and their first page in Twitter in 2010. However according to CBI1, CBI2, and CBI3 the structured use of SM started in 2011, since before then there were no clear roles and responsibilities for management of SM across the company. Hence, the active phase of SM use in company B started in November 2010. According to CBI1, CBI2, and CBI3, in 2010 the SM team was first setup in the Marketing department. Afterwards, due a number of policy and structure changes and viewing SM as a one-way communicational tool resulted in moving the SM team to the PR department. However, due to the recognition of the communicational and marketing functions of SM, it was moved back to the marketing department. CBI1 identifies the reason for this move as: *“I think because it [SM] was seen as more of a communications tool rather than a PR tool. PR tended to be more focused with customer comments and engaging with customers and then pushing out PR message as opposed to using it as a marketing tool to engage with consumers, not just our customers but all consumers and drive an actual communication strategy” (CBI1).*

In company B, the SM team is divided across departments, namely Marketing and Customer Care. Parts of the marketing activities of company B in SM are outsourced to an agency, who are responsible for the creation and posting of FGC. The SM manager

is responsible for dealing with the agency, overseeing the production, maintenance, and management of the FGC posted to SM platforms.

In the customer care department, the Social CRM team is the dedicated team responsible for SM activities in Customer Care. In the SM Care team, there are six SM executives and one community manager, as stated: *“So there are six social media executives that report into a community manager, and the community manager has every day a helicopter view of what’s going on in all of the different channels, looks to see if there is anything that needs immediate attention or if it does need to be neutralised for want of a better description. And then we’ll assign resources wherever they need to go” (CBI3).*

As shown in the diagram and quotes below, the SM activities of company B are cross functional and built across multi-teams (CBI2, CBS12). As stated: *“We’re a little bit unusual in that sense that some companies generally centralise it in one area, they will have it in PR or they will have it in marketing or they will have it solely in customer care, or they will have it in a contact centre and we don’t have that structure” (CBI3).*

“We work across functionally, so social media is split across the different areas that would have use for it, so you have corporate affairs, marketing or as we call it marcomms, and CRM” (CBI3)

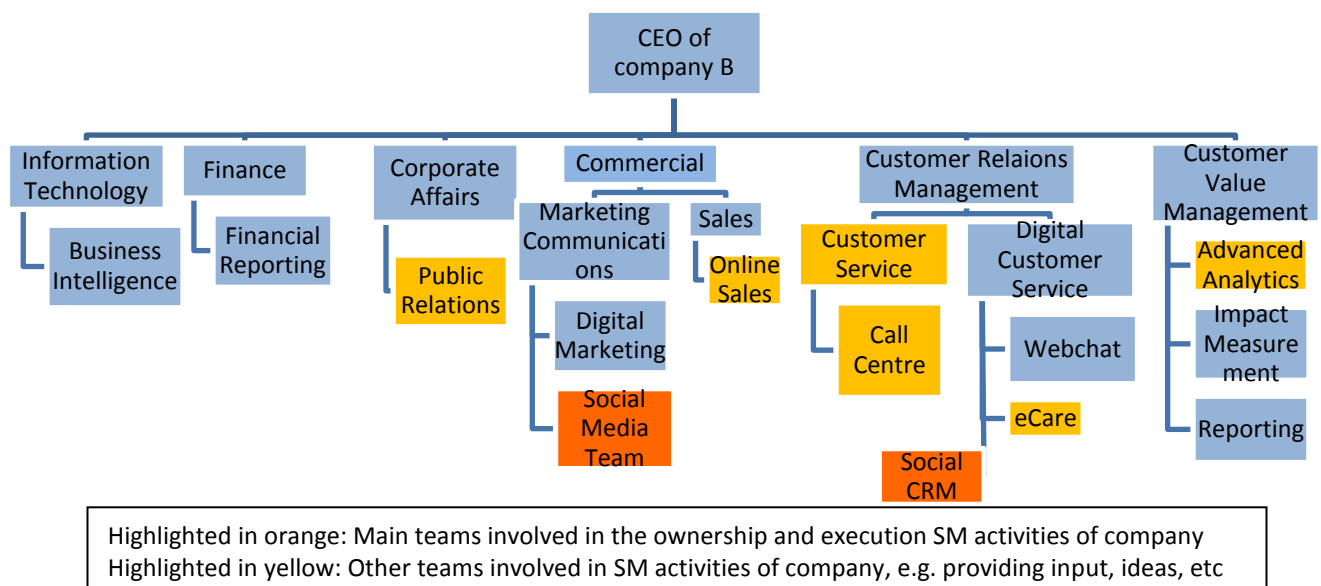


Figure 45: Departments Involved in Social Media Activities Mapped to Org Chart of Company B

The main focus in using SM for company B has been summarised as increasing brand consideration and decreasing the negative impact of word of mouth, as stated: *“The focus for social media would be around increasing brand consideration and the reducing negative word of mouth”* (CBI1).

The overall activities of company B in SM can be organized into two categories of

- a) Producing and posting FGC, which is mainly done by the Marketing Communications department (known as Marcomms)
- b) Responding to UGC, mainly related to customer queries and issues, which is done by the Social Customer Care team (known as Social CRM)

The level of activity of company A in each of the SM platforms is also reflected in the number of active users or volume of content available in each SM platform, which is shown in the table at the end of this appendix for each of the case companies.

Company C Overview

Company C is one of the key players of the telecom market in Ireland, who at the time of data collection employed about 2500 employees. The SM activities of company C started around 2010. Prior to 2010 there was no structure evident in SM activities within company C. In 2010, a dedicated SM manager was assigned to manage all SM activities, and gradually improve and organize them. The main SM team includes nine staff members, consisting of eight SM agents and one community manager. SM activities are performed and managed in a cross functional and multi-team setting, as stated in the internal SM guidelines of company C: *“The Social Team consists of multiple parts of the organization [...] working together as one diverse multi-functional team to deliver excellent customer experience!”* (CCS10)

At the time of data collection, the three main pillars of SM activities for the company, as reported in the internal documentations of the company (CCS5), include the following:

- Acquisition: build up an audience within SM platforms, so the company has a core following to engage with their content
- Engagement: create stories that speak about company products and service to the target audience

- Customer support: strong processes to deal with customer queries and complaints

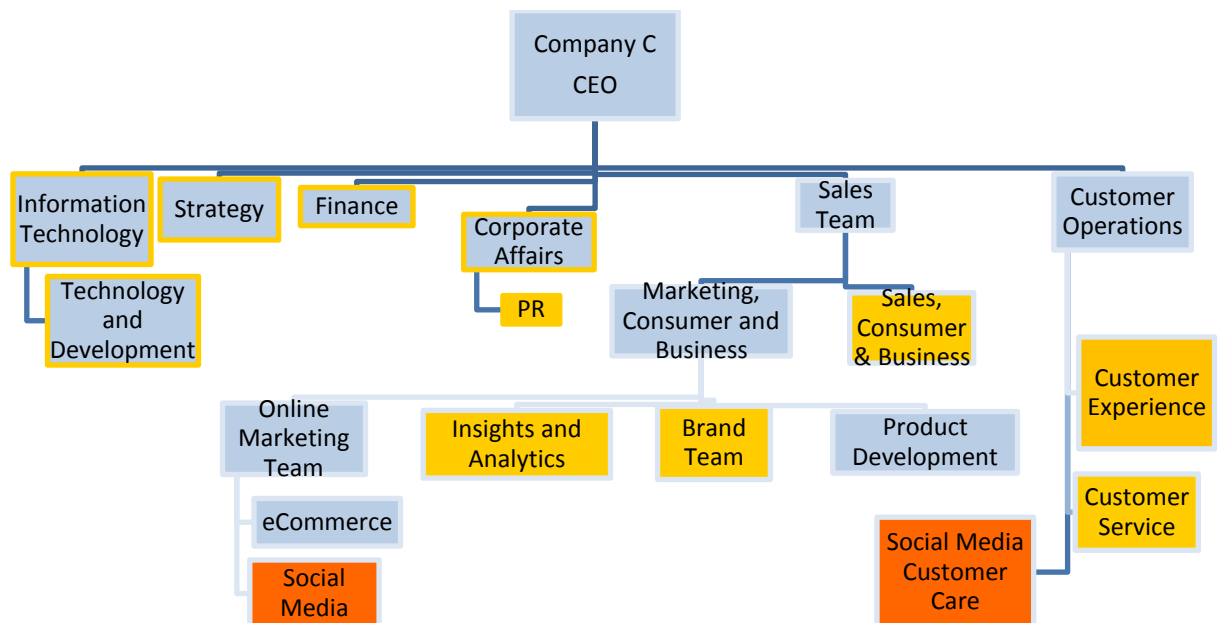


Figure 46: Departments Involved in Social Media Activities Mapped to Org Chart of Company C

Highlighted in orange: Main teams involved in the ownership and execution SM activities of company
 Highlighted in yellow: Other teams involved in SM activities of company, e.g. providing input, ideas, etc

Company D Overview

Company D is another large telecom company in Ireland, which at the time of data collection employed around 800 employees. The main SM activities of company D started in 2010, as stated: *"I suppose we're started really on social about 3 or 4 years ago, probably around the time everyone was"* (CDI4)

Prior to 2010 there was no structure in SM activities in company C. In 2010, a dedicated SM manager was assigned to manage all SM activities, and to gradually improve and organize them. The main strategies for the SM activities of Company D include sales and promotion, brand engagement and customer service, as stated:

"It's another channel and I suppose a more personalized channel we can talk to our customers through. We use it for sales promotion and brand engagement. They'd be the two strands [...] and we have the customer care strand [...] There was a lot of customer queries coming in, so it evolved into a customer service as well, so between the three strands, that's very much how our social works at the moment." (CDI4)

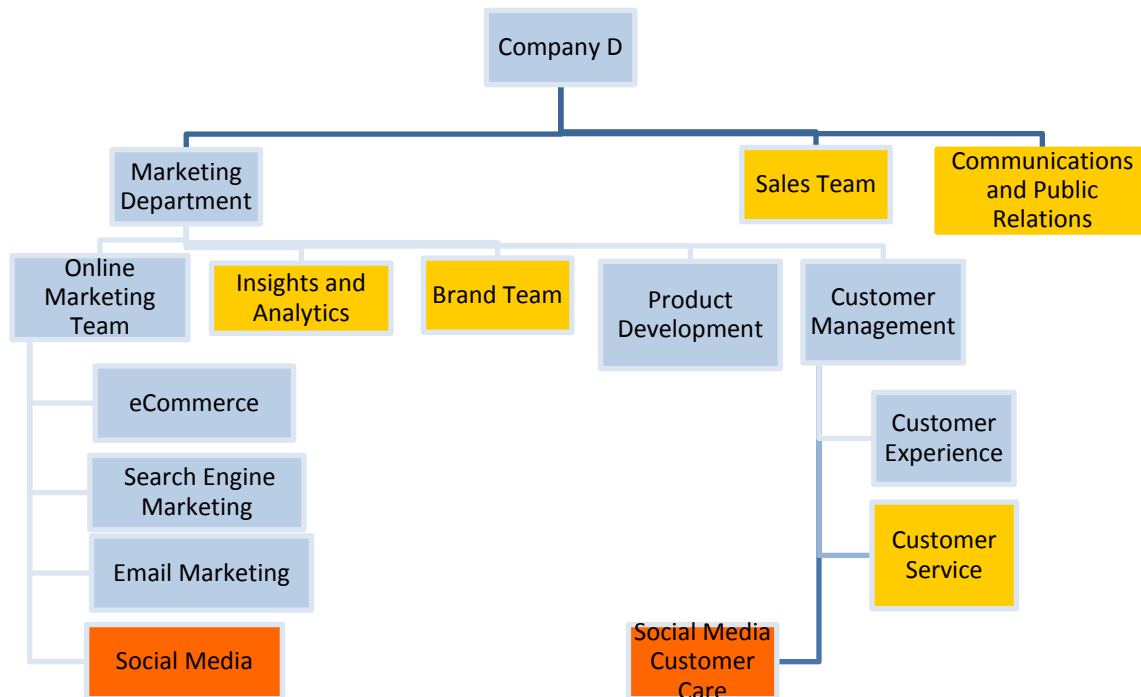


Figure 47: Departments Involved in Social Media Activities Mapped to Org Chart of Company D

Highlighted in orange: Main teams involved in the ownership and execution SM activities of company
 Highlighted in yellow: Other teams involved in SM activities of company, e.g. providing input, ideas, etc

Summary of Case Overviews

Table below provides an overview of the above information for each of the cases.

SM Platform	Company A	Company B	Company C	Company D
Beginning of SM activities	2010	2010	2010	2010
Main strategies of SM activities	Content (including Sales and promotion Branding) and Customer Service	Increasing brand consideration: through promotion and branding Decreasing negative word of mouth: through customer service	Acquisition Engagement Customer Service	Sales and Promotion Brand Activities
SM Activities Structure	Between customer management (social customer care) and online marketing team	Between digital customer service and digital marketing	Between customer operations and online marketing team	Between online marketing and customer management teams
Overall structure of SM team	Cross functional Multi team	Cross functional Multi team	Cross functional Multi team	Cross functional Multi team

SM Platform	Company A	Company B	Company C	Company D
	Mainly between customer care and marketing	Mainly between customer care and marketing	Mainly between customer care and marketing	Mainly between customer care and marketing
Name of dedicated Reactive SM team	eCare team	Social CRM team	Social Care team	Social Care team
Under which department	Customer Management and marketing	Customer Relationship Management and marketing	Customer Operations and marketing	Customer Management and marketing
Use of Agency	No	Yes (out of scope of this research)	Yes (out of scope of this research)	Yes (out of scope)
Details of Followers and Content Volume for SM platforms				
Company Facebook page	About 70 K followers in the main page	About 150 K Followers in the main page	About 40 K Followers in the main page	About 130 K or 25 K? Followers in the main page
Facebook	Active	Active	Active	Active
Company Twitter page	About 20 K Followers About 60 K Tweets	About 22 K Followers and 64K Tweets in Care account About 37 K Followers and 6500 tweets in News	About 10 K Followers About K Tweets	About 25 K or 45 K Followers About K Tweets
Twitter	Active	Active		
Boards.ie	About 6400 related content recorded	About 30 K Related Content Recorded	About 110 K Related Content Recorded	About 45 K Related Content Recorded
Boards.ie	Active	Active	Active	Active
Company Forum	Active	Active	Active	Active
Google+	About 100 followers	About 115 followers	About 40 Followers	About 120 Followers
Google+	Limited activity	Limited activity	Limited activity	Limited activity
Instagram	About 50 followers	About 1800 Followers	About 40 Followers	About 1200 Followers
Instagram	Limited activity	Limited activity	Limited activity	Limited activity
YouTube Owned page or channel	About 250 Subscribers	About 1900 Subscribers	About 200 Subscribers	About 500 Subscribers
Youtube	Limited activity	Limited activity	Limited activity	Limited activity
LinkedIn	About 1500 Followers	About 2800 Followers	About 1000 Followers	About 3000 Followers
LinkedIn	Active for B2B and Recruitment	Active for B2B and Recruitment	Active for B2B and Recruitment	Active for B2B and Recruitment

Table 36: Summary of SM activities of each of the case companies