# Customer Knowledge Management in organisations: Developing a practice framework to achieve 360$^{o}$ view of customer

Pavan Vasireddy

A thesis submitted in partial fulfilment of the requirements of the University of Bolton for the degree of Doctor of Philosophy

March 2016

***

I dedicate this work to Almighty Creator, the original source of all thoughts

***

“Isvarah sarva-bhutanam hrid-dese’arjuna thishtathi,
bhramayan srava-bhuthani yantrarudhani mayaya”

“Almighty Creator who resides in the hearts of all-beings,
drives all-beings like one operating machine, by inscrutable force”

## Abstract

With emergence of knowledge economy and shift in power towards customers, the way of performing business and managing customer markets in organisations has changed significantly. Organisations which are typically reliant on internal knowledge have been setting their sight on customers as a valuable new source of external knowledge. This led to the wide acknowledgement of Customer Knowledge Management (CKM) in both business and academic fields within the last decade. Extant CKM literature has highlighted the need for $360^{O}$ view of customer but there is significant gap regarding how to achieve this in organisations. Thus, the main motivation for this research is to develop theory in terms of practise framework to enable organisations to achieve $360^{O}$ view of customer while taking into consideration the challenges identified in practising CKM. This thesis attempts to address the complex research problem – 'how to manage customer knowledge to achieve $360^{O}$ view of customer in organisations'.

The research problem developed for the study led towards interpretivist paradigm to interpret and understand various relevant organisational phenomena and research is carried out using qualitative approach. The empirical data is collected using case study research method from five large organisations from India, Germany, and the United Kingdom. In-depth case studies were conducted in Biocon, Daimler, Genpact, Honeywell-ADI, and University of Bolton. The empirical data collected was analysed using techniques from grounded theory approach.

This thesis presents findings of the study in the form of five core categories and twenty seven constituent factors influencing the customer knowledge management practice in large organisations. The empirical findings associated with each of these core categories and identified factors have been discussed in the light of current literature. Based on these core categories and constituent factors, a comprehensive CKM practice framework has been developed to achieve $360^{o}$ view of customer, among organisations. This thesis has been concluded with evaluative discussions on theoretical and practical contributions to knowledge, validity of the findings, limitations of the study, and implications for further research.

## Acknowledgment

This research has been one of the life-time memorable things in the journey of my life. This research work has been accomplished with the support and assistance of several individuals and some organisations. Firstly, my foremost thanks go to my director of studies, Dr. Kondal Reddy Kandadi, for his invaluable guidance and inspirational mentorship. I am grateful to the University of Bolton for supporting me through studentship and bursary. I would like to thank my second supervisor, Dr.Zahra Salimi, for extending her timely support as and when requested. I would also like to thank other staff at Bolton Business School (especially Prof. Danny Morton) and my PhD examiners (Prof. David Newton and Dr. Easton Simenti-Phiri) who contributed through interesting discussions and scholarly conversations.

Special thanks to executives and senior managers for sparing their valuable time and supporting me in conducting case studies at their respective organisations which include Biocon, Daimler, Genpact, Honeywell-ADI, and University of Bolton. I would also like to thank my research colleagues and friends at the University of Bolton, for their support and thought-provoking discussions. I am thankful to all my friends and others for giving me support and comfort. Among friends and colleagues, I would like to convey my thanks to Dr. Alfred Chinta, Anik Fouzdar, Krishna Chaitanya, Narender, Dr. Chari, Dr. Subhash Chandra Bose and Sri. Ramachandar Raav for their support in facilitating some parts of this empirical research and thesis refinement. I would like to convey my gratitude to Dr. Pratap Sriram Sundar for his invaluable moral support and guidance during the last phase of this thesis writing.

I would like to express my gratitude to my family for supporting me in everything including this research study. I am grateful to my parents (Sri. Rajendra Prasad and Smt. Krishna Kumari) for their limitless support which has enabled me to come this far. I express my gratitude to my beloved wife, Harshini, for her enormous support and my in-laws for their endurance in my PhD journey. I am grateful for rejuvenating smiles of my son, Taran, which revives me instantaneously. Finally, I would like to express my inability to adequately thank Almighty Creator for wonderful gift of life with these many caring connections and this life-time memorable accomplishment.

# Table of Contents

## List of Figures

# List of Tables

## List of Abbreviations

BCPI – Business focus, Culture, Processes, and Infrastructure
BI – Business Intelligence
CAS – Computer Aided Selling
CDCPT – Components, Drivers, Culture, Processes, and Technology
CGIP – Consumer Generated Intellectual Property
CK – Customer Knowledge
CKEI – Customer Knowledge Enabled Innovation
CKM – Customer Knowledge Management
CLC – Customer Life Cycle
CRM – Customer Relationship Management
CSR – Corporate Social Responsibility
FAQs – Frequently Asked Questions
GRMs – Global Relationship Managers
GROs – Global Relationship Officers
HR – Human Resource
KF – Kooperativa Forbundet
KM – Knowledge Management
i-CRM – Integrated-CRM
IT – Information Technology
MIS – Management Information System
MNCs – Multi National Companies
NPD – New Product Development
PKT – Process Knowledge Test
PR – Public Relations
QA – Quality Assurance
R&D – Research and Development
ROI – Return on Investment
SCV – Single Customer View
SECI – Socialisation, Externalisation, Combination, and Internalisation
SFA – Sales Force Automation
SRCM – Strategising, Re-inventing, Capitalising, and Mastering

# 1. INTRODUCTION

*"A customer is the most important visitor on our premises. He is not dependent on us. We are dependent on him. He is not an interruption in our work. He is the purpose of it. He is not an outsider in our business. He is part of it. We are not doing him a favour by serving him. He is doing us a favour by giving us an opportunity to do so." –* ***M.K. Gandhi***

## 1.1 SETTING THE SCENE

With increase in bargaining power of customers and emergence of knowledge economy, the way of performing business and managing customer markets in organisations has changed significantly. Organisations which are conventionally reliant on internal knowledge have been setting their sight on customers as an invaluable new source of external knowledge. Customer knowledge has potential to provide innovative ideas and new insights that may not be possible with internal sources alone. Customer knowledge and its management in organisations are becoming critical for sustainability of business in long term. Al-Shammari (2009) emphasises that Customer Knowledge Management (CKM) enables organisations to build distinctive core competencies by acquiring and utilizing knowledge residing with customers in order to achieve sustainable competitive advantage.

CKM has gained wide attention in the last decade and is acknowledged in both business and academic fields (Deloitte, 2012; Mukherji, 2012; Wilde, 2011; Kankanhalli and Lee, 2011; Paquatte, 2008; Su et al, 2006; Chen and Su, 2006; Gebert et al, 2003; Gibbert et al, 2002). CKM literature has highlighted the need for holistic view of customer in organisations (Deloitte, 2012; Shannak et al, 2012;

Greenberg, 2009; Pockard, 2009; Smalley, 2000). However, there is significant gap in literature regarding how to achieve $360^{O}$ customer view (Liautaud, 2010; Pockard, 2009; Zanjani et al, 2008; Salomann et al, 2005). The research topic of the thesis, "Customer Knowledge Management in Organisations: Developing a framework for $360^{O}$ view of customer" addresses that gap and intends to contribute through practice framework to the body of knowledge.

## 1.2 MOTIVATION FOR THE RESEARCH

Customer knowledge management and customer-centric processes are being recognised and acknowledged by practitioners and research community as vital for sustainability of organisations in increasingly competitive global markets (Deloitte, 2012; Al-shammari 2009; Stefanou et al., 2003; Gibbert, 2002). Customer Knowledge Management encompasses 'knowledge about customers', 'knowledge for customers' and 'knowledge from customers'. Practising CKM in an effective and efficient manner has major implications for organisations. It improves organisation's ability to capture customer knowledge, and identify patterns and trends that can guide future strategies. CKM is not purely an IT tool that can be bought and installed in an off-the-shelf manner. It mobilises resources towards building customer-centric knowledge-intensive processes, and developing organisational structures and systems that facilitate appropriate knowledge flow between customer and organisation. Rollins and Halinen (2005) propose that CKM competence should concern the following five areas in particular: 1) Inter-functional cooperation, 2) supportive organisational systems, 3) cooperation with customers, 4) supportive IT systems, and 5) organisational culture that support learning and customer orientation.

Implementing and practising CKM incorporates significant organisational challenges. For example, Smith and McKenn (2005) identified challenges in terms of structural, cultural, competency and privacy concerns. Desouza and Awazu (2005) viewed challenges of CKM in terms of segmentation, integration, distribution and application. There is also recognition and acknowledgement of need for $360^{O}$ view of customer in terms of the following aspects: a) creating consistent experience of the customer throughout the organisation, b) improving the quality of customer information, c) communicating with customer in a fully informed way, and d) enabling new channels of innovation and growth (Greenberg, 2009; Liautaud, 2010; Smalley, 2000; Gibbert et al, 2002). There is considerable published work emphasising CKM theories and frameworks (Zanjani et al, 2008; Liautaud, 2010; Salomann et al, 2005; Pockard, 2009). However, there is a lack of literature regarding 'how to achieve $360^{O}$ view of customer in organisations'.

The motivation for this research is to contribute towards customer-centricity in organisations and to address the need to achieve $360^{O}$ view of customer while taking into consideration the challenges identified in practising CKM.

## 1.3 RESEARCH PROBLEM

The proposed research will focus on development of a framework for $360^{O}$ view of customer in the context of CKM. This has three dimensions; knowledge about, for, and from customer. This will require reviewing various organisational elements such as culture, processes, systems, and restructuring relevant functional areas like CRM and marketing to orient towards CKM. Therefore, the following core research problem has been defined for this study.

"**How to manage customer knowledge to achieve 360$^{o}$ view of customer in organisations?**"

## 1.4 RESEARCH GOAL AND OBJECTIVES

A review of literature has revealed that current concepts and theories to adopt and improve CKM in organisations are inadequate to address the research problem (Gibbert et al, 2002; Salomann et al, 2005; Al-Shammari, 2009; Zanjani et al, 2008; Liautaud, 2010). Therefore, the goal of this research is:

"**To develop a holistic framework for practicing customer knowledge management to achieve 360$^{o}$ view of customer in organisations**"

To achieve the above goal, the following research objectives have been derived for this research study:

- Provide an in-depth review of current literature in Knowledge Management (KM) and Customer Relationship Management (CRM) in general, and CKM in particular.

- From the literature review, identify elements which influence CKM and assist in attainment of $360^{O}$ view of customer.

- Conduct empirical studies to determine significant factors that affect CKM for attaining $360^{O}$ view of customer.

- Through the empirical studies, determine how these factors and associated organisational dimensions can be managed for effective Customer Knowledge Management in organisations.

- Evaluate the findings of the empirical studies against current literature and provide critical discussion on each of the organisational elements.

- Develop a CKM practice framework for $360^{O}$ view of customer based on empirical studies and knowledge from extant CKM literature.

## 1.5 RESEARCH PARADIGM, METHODOLOGY AND DESIGN

The research problem developed for the study leads towards interpreting and understanding various relevant organisational phenomena. The research problem and the research questions cannot be addressed effectively either by testing a hypothesis which is positivist paradigm or by critically questioning the existing framework/theory which is critical theory. Analysis of various research paradigms conjointly with research problem and research questions indicate that interpretivist paradigm is more appropriate for this study when compared with positivism and critical theory (Gephart, 1999). Generally, Interpretivist paradigm proposes using qualitative methodologies. In addition, the research goal of this study and the derived research questions seek answers that stress '*how* organisational elements influence CKM', and this illustrates the qualitative nature of this inquiry. A review of different approaches including quantitative, qualitative and mixed methodologies indicates that qualitative research is appropriate to address the research problem of this study as it focuses on many complex organisational elements which are qualitative in nature. The proposed research intends to collect empirical data from organisations within their real-life context through case study method. The sample selection uses purposive sampling encompassing multiple case organisations from varied industry sectors to attain variety and intensity. Primary data would be collected from these case organisations through semi-structured interviews with draft questionnaire. Data collection will also encompass documents, white papers, conversations, notes, observations, and reports about the case organisation. Data analysis includes codification using grounded theory techniques along with reflection to uncover findings which facilitates towards development of CKM framework.

## 1.6 RESEARCH OVERVIEW

A brief academic research process outlined in figure 1.1 (on page 7) presents an overview of important elements at each step along with desirable sequence of steps. This thesis has been structured around these elements with the same sequence shown in the research process overview.

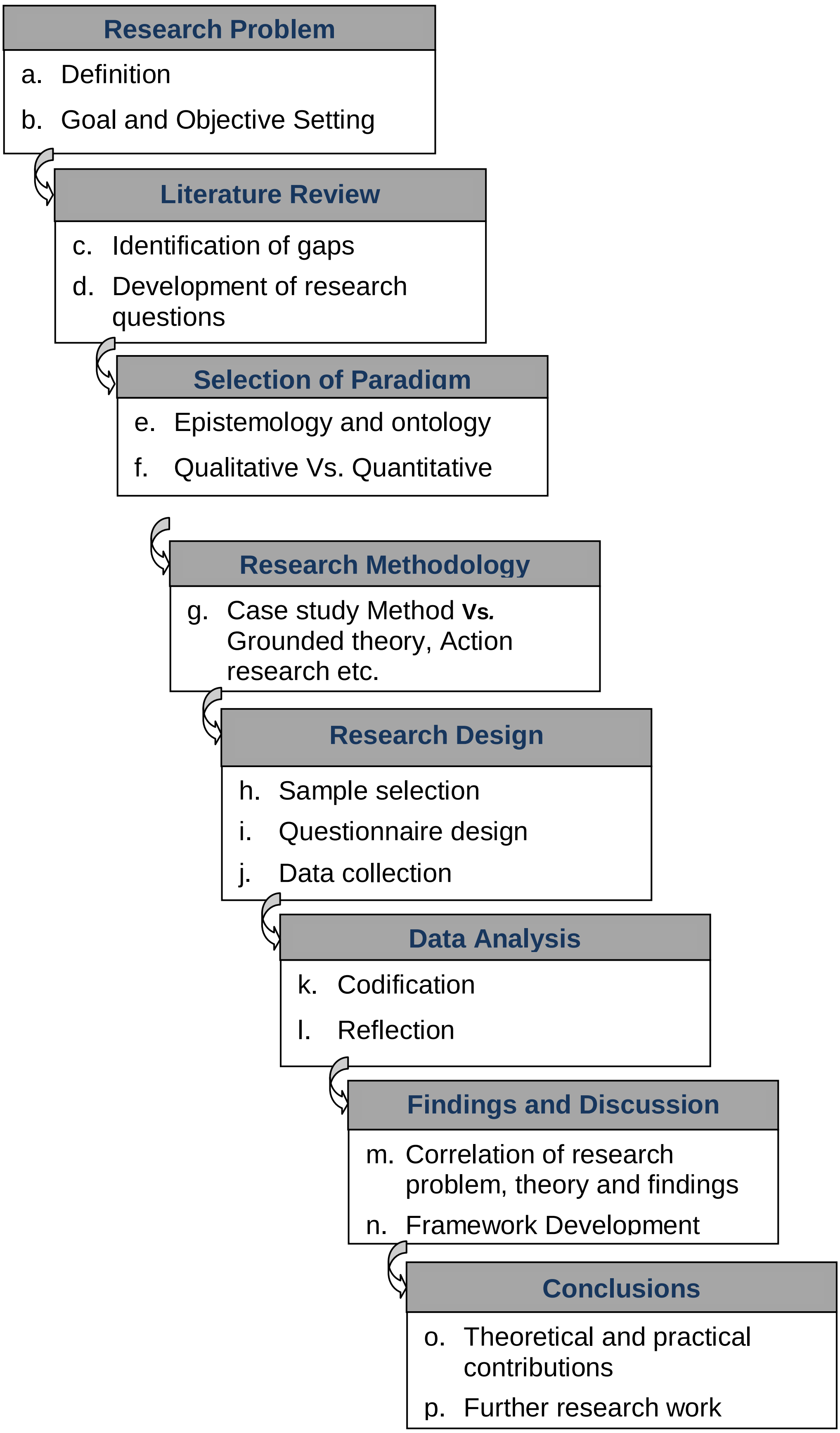



**Figure 1.1: Research Process overview (source: Author)**

## 1.7 RESEARCH FOCUS AND BOUNDARIES

The following sub-sections provide a brief overview of research focus, scope and boundaries in terms of related subject areas, and viewpoint adopted in positioning this thesis.

### 1.7.1 Positioning of the thesis

This research study focuses on developing a set of critical factors and a comprehensive framework for practicing customer knowledge management in order to enable organisations to achieve customer centricity and $360^{O}$ view of customer. The proposed framework is intended to serve as a multi-dimensional guiding theory for practicing CKM in organisations with customer orientation and vision. However, it would not prescribe a definitive way or provide exhaustive steps on trivial aspects of CKM practice, intentionally leaving room for customised usage of framework depending on the organisational specificities.

### 1.7.2 Associated subject areas

The related subject areas such as customer relationship management, knowledge management, information systems management, Innovation management, intellectual capital, and organisational learning have been considered within the context of managing customer knowledge in organisations.

### 1.7.3 Applicability of the framework

The customer knowledge management framework to be developed through this research study will apply to organisations with customer related departments. The framework will have direct implications for customer facing departments and some indirect inferences for other support functions like Information Technology (IT), Research and Development (R&D) etc within organisations. This CKM framework might not be relevant for micro or small organisations catering few customers. However, some aspects of the framework might be applicable for small organisations with vision for customer orientation and growth.

## 1.8 THESIS STRUCTURE

The thesis is broadly structured into following five chapters: a) Introduction, b) Literature review, c) Research methodology and design, d) Findings and analysis, and e) Conclusion and further work. In addition to these chapters, thesis includes references as a separate section and appendices. The following sub-sections provide a brief overview of content within chapters and appendix.

### 1.8.1 Chapter 2: Literature review

This chapter provides a critical review of extant literature in customer knowledge management domain and associated subject areas. The literature review includes synthesis of facts, data, information, and knowledge from multiple sources like peer-reviewed journals, subject-domain books, relevant conference papers, published case studies and white papers, etc. This chapter provides a review of simple concepts and complex elements which lays the foundation for Customer Knowledge Management. This chapter highlights recent developments within CKM landscape through critical review of relevant theories and frameworks. In addition, literature review identifies gaps in CKM research and presents practical challenges in achieving 360$^o$ customer view among organisations. This chapter concludes with formulation of research questions to address these gaps and challenges.

### 1.8.2 Chapter 3: Research paradigm, methodology, and design

This chapter provides a review of various philosophical foundations and multiple research components within business and management domain. It presents rationale for selection of specific research tools based on comprehensive analysis of research problem in association with multiple methodological choices. This chapter presents a variety of criteria considered while selecting five case-organisations for empirical data collection. In addition, it provides a brief description of each of the case-organisations along with limitations and challenges encountered.

### 1.8.3 Chapter 4: Findings, analysis and developing a CKM framework

This chapter focuses on findings and analysis of this research study along with critical appraisal against extant literature. It presents empirical findings based on the analysis of data from five case studies conducted during this research and discusses them in the  in the light of current literature. Based on these analytical findings, a broad set of factors and a comprehensive framework will be developed for practicing CKM as well as achieving 360$^O$ view of customer among organisations.

### 1.8.4 Chapter 5: Conclusion and further work

This chapter presents conclusions and implications of this research study. This final chapter begins with discussion regarding research objectives accomplishment, followed by theoretical and practical contributions to knowledge. Subsequently, it provides discussion on validity of findings and limitations of this study. Finally, the chapter concludes with some directions and potential opportunities for further research work.

### 1.8.5 Appendix A: Research Questionnaire

A copy of research questionnaire that has been used in semi-structured interviews during empirical research is provided as Appendix-A at the end of the thesis.

## SUMMARY

This introduction chapter presented a brief contextual setting and highlighted motivation for the proposed research i.e., customer knowledge management in organisations. This chapter outlined research problem, goal and objectives, and provided an overview of research process within the context of this study. In addition, this chapter presented a short summary of research strategy adopted for the study along with a precise description of research focus and boundaries. This chapter has been concluded with an effort to present the structure of thesis including brief summary of chapters.

# 2. LITERATURE REVIEW

*"Intensive research is like drinking salt water. No matter how much you learn about a person, topic or event, you are left with an unquenchable thirst to find out more. The only solution is to keep researching and learning. Slaking your thirst is not the objective, because you can never learn enough and you will never know everything."* – ***Karl Pippart***

## INTRODUCTION

This chapter presents critical review of extant theories and concepts from Knowledge Management, Customer Relationship Management, and Customer Knowledge Management literature. Firstly, it provides an explanation of research scope of relevant theories and concepts such as customer, knowledge, management, customer knowledge (CK), knowledge management (KM), customer relationship management (CRM), and lead towards Customer Knowledge Management (CKM). This includes a comparison of KM, CRM and CKM based on literature review in order to stress the significance of CKM. This chapter highlights current research developments within CKM and imminent need for $360^{O}$ view of customer in organisations along with some significant challenges. This chapter concludes with formulation of research questions to address the identified challenges as well as fill the gap in literature.

## 2.1 BASIC CONCEPTS: CUSTOMER, KNOWLEDGE, AND MANAGEMENT

This section presents a review of basic concepts such as customer, knowledge and management in the context of this research study, and provides clarity with regard to scope and limitations.

***Customer***

The word customer originated from ‘custom’, meaning ‘habitual practice’. In this traditional view, organisation’s rigid definition of customer is someone who habitually purchases goods or services from that organisation. Even within this rigidity, sensible view from an organisation’s perspective would be, customer is someone with whom organisation had to maintain a relationship to sustain the ‘custom’ i.e., habitual buying. Review of literature indicates that this rigid view of customer and its definition is very narrow for practical and academic purposes (Al-shammari 2009, Imnoff et al., 2001). In contrast some authors define customer too broadly to include every entity that interacts with organisation in a significant manner (Shuman et al 2002; Massnick, 1997). Some of the views of these authors indicate that the term customer encompasses all stakeholders like employees, consumers, suppliers, tax authorities, environmental agencies, etc. Simons (2005) opposes this view and notes that “If everyone is a customer then no one is – and the focus on real customer is lost.” Accordingly, this research adopts the following definition which is neither too narrow nor too broad but at the same time directs organisations to focus their efforts. ***A customer is an individual or an entity that acquires or uses an offering, be it product and/or service, of an organisation. Customer as an entity includes any of the following: buyer, intermediate user, end user/consumer and prospect of an organisation’s offering*** (Al-Shammari 2009).

A brief review of secondary sources (von Hippel 2001; Kotler and Armstrong, 2012; Brassington and Pettitt, 2006; Al-Shammari, 2009) regarding types of customers while considering the above definition has indicated multiple sets with varied forms as follows:

Set A – loyal customers, discount customers, impulsive customers, need based customers, and wandering customers

Set B – previous customers, existing customers, and prospective customers

Set C – individual customers and organisational customers

Set D – lead users, early adopters, routine users, and laggards

Set E – accessible customers, exclusive customers, supportive customers, close minded customers, one man show, unqualified customers

Set F – innovators, early adopters, early majority, late majority, and laggards

Set G – meek customers, aggressive customers, high-profile customers, rip-off customers, chronic complainer customers

These are some of the customer segments based on varied dimensions. For instance, customer segmentation in Set G is based on complaining behaviour. Depending on the context, some of these dimensions and sets are useful in trying to achieve customer focus within organisations. In addition to above sets, customer segmentation can be based on generic profilers like geographic, demographic, psychographic, and behavioural (Kotler and Armstrong, 2012; Brassington and Pettitt, 2006). Within each of these generic profilers there are multiple dimensions as follows:

Geographic: region; urban or rural

Demographic: age, sex, family size; income occupation, education; religion, race, nationality

Psychographic: social class, life style type, personality type

Behavioural: product usage, brand loyalty, type of user

In addition to above generic profilers, organisations and industries tend to have customer segmentation based on organisational requirements and needs of customers. This subsection dealt with the definition of customer and various types of customers within the context of this research and lead towards the concept of knowledge.

***Knowledge***

The term knowledge has gained wide attention and recognition from philosophical perspective, centuries back which is reflected in writings of famous philosophers like Plato, Aristotle and Socrates. Based on epistemological traditions of Rationalism and Empiricism, knowledge is perceived in two distinct ways. Rationalists argue that knowledge is attained deductively through reasoning while empiricists contend that knowledge is obtained inductively through sensory experience. Immanuel Kant synthesised these two schools of epistemology and notes that “though all our knowledge begins with experience, it does not follow that it all arises from experience” (Russell, 1961). Despite the arguments between these two schools of thought, initial description provided by Plato is highly regarded within contemporary KM domain (Nonaka & Takeuchi 1995; Kandadi, 2006). Plato describes knowledge in his writings *Meno, Phaedo, and Theaetetus* as “Justified true belief” back in 4$^{th}$ century BC while Kirkpatrick (1983) defines knowledge on similar grounds with slight variation as “assured belief: that which is known”. These two definitions are based on general philosophical perspective with no inclination to any of the modern management disciplines.

One of the first authors to state the relevance of knowledge in economic context is Alfred Marshal, father of neoclassical economics. Marshal (1920) states that capital consists to a great part of knowledge and organisation. He further emphasises that "knowledge is our most powerful engine of production". Pioneers in organisational Knowledge management domain, Nonaka and Takeuchi (1995) within their phenomenal book 'the knowledge-creating company' propose that knowledge is created through a spiralling process of interactions between explicit and tacit knowledge. Tacit knowledge is personal, context specific and therefore hard to formalise and communicate. Polanyi (1966), in his famous aphorism about tacit knowledge says that "we know much more than we can tell". Conversely, explicit knowledge can be expressed in words and numbers and shared in the form of data, scientific formulae, specifications, manuals and the like. It can be easily transferred across individuals formally and systematically (Nonaka and Takeuchi, 1995; Kandadi and Vasireddy 2009; Polanyi, 1966).

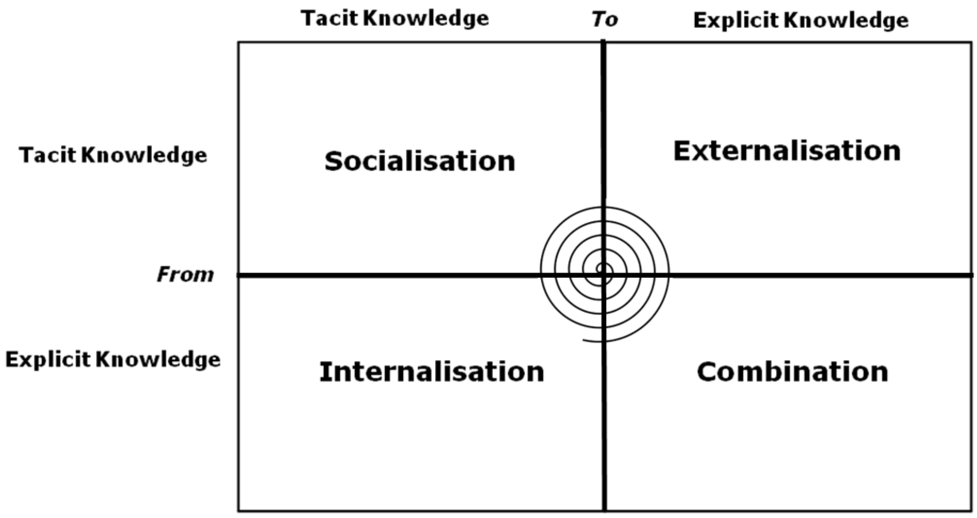



**Figure 2.1: Four modes of knowledge conversion (Nonaka and Takeuchi, 1995)**

In contrast to Polanyi's distinction between explicit and tacit knowledge, Nonaka and Takeuchi view that these two types of knowledge are not totally separate. They suggest that these two forms of knowledge are complementary entities, which "interact with and interchange into each other". Based on the assumption that knowledge is created through the interactions between explicit and tacit knowledge, the framework proposes four different modes of knowledge conversion: Socialisation, Externalisation, Combination and Internalisation (SECI). *Socialisation* is a process of sharing experiences and thereby creating tacit knowledge such as mental models and technical skills. *Externalisation* process involves articulation of tacit knowledge into explicit concepts. Through this process tacit knowledge is converted into explicit knowledge. *Combination* process involves conversion of explicit knowledge into more complex and systematic explicit knowledge. *Internalisation* is a process of learning whereby explicit knowledge becomes embodied into tacit knowledge. Figure 2.1 (on page 16) depicts the knowledge spiral of these four different modes of conversion (Nonaka & Takeuchi, 1995; Nonaka and Nishiguchi, 2001; Polanyi, 1966; Kandadi and Vasireddy, 2009).

In contemporary times, Davenport and Prusak (1998) with focus on organisations defines knowledge as “a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluation and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organisations, it often becomes embedded not only in documents or repositories but also in organisational routines, processes, practices, and norms.” Kandadi (2006) combines traditional philosophical perspective with contemporary management perspective and defines knowledge as “concepts, built through rational imagination, which can bring positive change to universe of discourse. The concepts can be ideas, theories, interpretations, beliefs, models, views or hypothesis.” This research combines the above two contemporary definitions (Davenport and Prusak, 1998; Kandadi, 2006) and tailor it to CKM perspective as follows. This research assumes universe of discourse as organisation along with its customers, and confines the definition of knowledge to ***'fluid mix of interpretations, ideas, values, experiences, views and/or hypothesis that is based on rational imagination, which can bring positive change to organisation and its customers'***.

### *Management*

Management is a process of determining goals, policies, planning, organising, activating employees and controlling processes, which together lead to achieving goals (Schieman *et al.,* 1989 cited in Beijersy, 1999). This research study adopts following definition proposed by Daft (2010) which is similar in meaning to above description but easy to understand. Management is defined as the accomplishment of organisational goals in an effective and efficient way through planning, organising, leading and controlling organisational resources. Management of customer knowledge also needs to consider all four primary management functions. Planning is necessary as it defines where the organisation wants to be in the future and how to get there. Within the context of this research planning enables organisations to decide on tasks and use of resources needed to attain $360^{O}$ view of customer through CKM. Organising which usually follows planning encompasses assorting and assigning tasks, delegating authority, and allocating resources in order to accomplish what organisation wants i.e. to achieve effective CKM capable of attaining $360^{O}$ view of customer. Leading ensures capable managers use influence to motivate employees especially staff dealing with customer interactions and processes to achieve the above stated organisational goal. Controlling when viewed in certain dimensions such as controlling knowledge led to criticism from research community. However, Controlling is considered here in a broader sense which is concerned with monitoring processes and employees' activities to keep the organisation on track towards effective CKM with $360^{O}$ view of customer, and making corrections as required (Daft, 2010; Schermerhorn, 2005).

This section addressed three basic concepts (customer; knowledge; management) and leads to successive concepts ‘customer knowledge’, ‘knowledge management’, and ‘customer relationship management’ which are crucial elements of CKM. The following sections provide critical review of these two crucial elements and some important CKM theories.

## 2.2 CUSTOMER KNOWLEDGE (CK)

The scope of customer knowledge includes not only ‘knowledge about customers’ and ‘knowledge for customers’ but also ‘knowledge from customers’ (Salomann, et al., 2005; Zanjani et al, 2008; Akhavan & Heidari, 2008). Al-Shammari (2009) highlighted another split which is ‘knowledge co-creation with customers’. However for the purpose of this research it is encompassed with in ‘knowledge from customers’. The following subsections provide a detailed description of the three elements of customer knowledge mentioned earlier.

### 2.2.1 Knowledge for customers

To assist customer decision making process with regard to buying products and services, appropriate knowledge flow from the organisation to its customers is crucial. Zanjani et al, (2002) illustrates that ‘Knowledge for customers’ consist of products and services info, organisation's environment and general info with detailed information regarding each of them in second layer as shown in figure 2.2 (on page 21). Knowledge for customers within CKM addresses knowledge needs of customers by providing relevant information (i.e., knowledge on products, markets and suppliers) to take action in terms of purchasing or using products and services.

### 2.2.2 Knowledge about customers

This includes data about a customer like their name, contact information, connections, records of their historical transactions, requirements, expectations, post purchase issues and complaints, and their personal preferences. This accumulation of knowledge about customers is useful to understand Customers' motivations and enable organisations to deal with them in a personalised way. Along with data about existing customers, this includes knowledge about prospective customers and target customer segments. This can be captured through other sources like collaborating with market research organisations. Organisations even utilise business intelligence (BI) and KM tools that attempt to determine overall customer profitability to the organisation (Cody et al., 2002).

### 2.2.3 Knowledge from customers

Interactions either personal or system based are crucial to obtain knowledge from customers. Processes and systems to capture knowledge elements from interactions with customers are of paramount importance for product innovation and new product development. Gibbert et al (2002) emphasises that customer is one of the key source for development of innovative products and they even highlighted the term 'prosumer' to emphasise the role of customer as both producer and consumer. Zanjani et al, (2002) notes that organisations needs to capture organisation-related information as well as competitor-related information from customers (Figure 2.2). Gebert et al, (2003) further emphasises that customers' knowledge of products, suppliers and markets needs to be captured as well. These knowledge elements helps organisations to consistently innovate new products and services; segment their markets more effectively; develop successful business strategies and improve existing products and services (Davenport et al, 2001; Akhavan & Heidari, 2008).

Figure 2.2 below represents the conceptual model highlighting the above three elements of customer knowledge. Salomann, et al., (2005) reinforces the importance of knowledge for, from and about customers through empirical research in Union Investment, Siemens and Credit Suisse respectively.

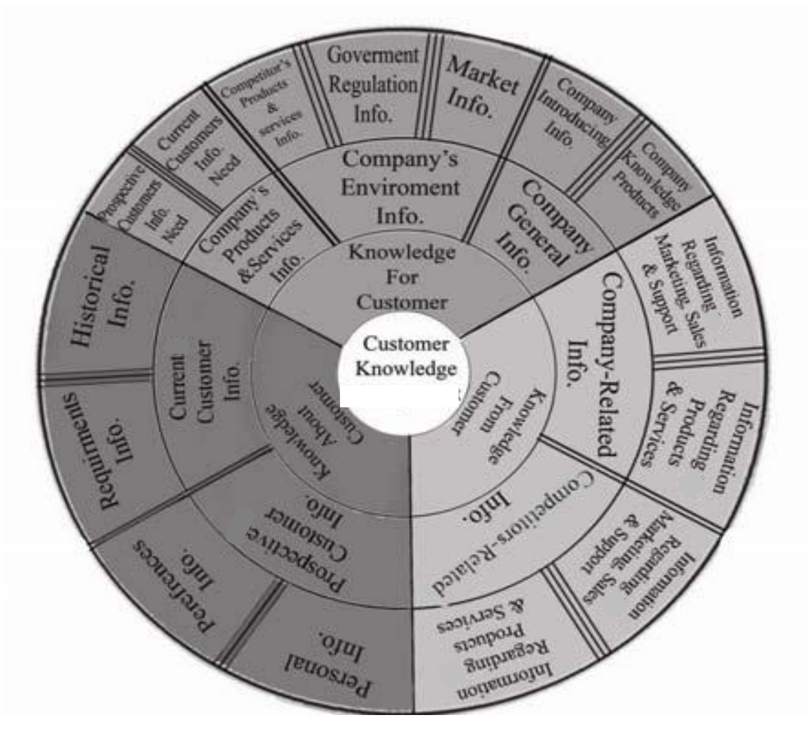



**Figure 2.2: Conceptual Model with three elements of Customer Knowledge (Adapted from Zanjani et al, 2008)**

Wilde (2011) explores each of these three types of customer knowledge based on four different dimensions as shown in the Table 2.1 below. He further explores characteristics of customer-oriented knowledge and cross tabulates them in a two by two matrix as shown in the Table 2.2 below.

| | Knowledge about the customer | Knowledge from the customer | Knowledge for the customer |
|---|---|---|---|
| Company/person | • B2B: industry, creditworthiness<br>• B2C: age, sex, income... | • Own objective, strategies, own expectations, interests... | • Specify problems and ascertain the demand |
| Product/service | • Product portfolio, purchase history, contract duration... | • Strengths/weaknesses of quality compared to the competitor | • Scope of offer, quality features, prices... |
| Actions of the company | • Type, intensity, frequency of customised activities | • Strengths/weaknesses of activities compared to the competitor | • Special offers, individual talks, special conditions.. |
| Reactions of the customer | • Turnover, gross margin, customer life time value, customer satisfaction, complaints | • Insights and intentions concerning products and services | • Achieved customer status (e.g. in customer binding programs) or discount stages |

**Table 2.1: Types of customer knowledge (Source: Wilde 2011)**

| | Explicit knowledge | Tacit Knowledge |
|---|---|---|
| Individual knowledge | • Customer data in a specially managed customer file<br>• Contact person with function | • Customer’s assessment of the market development<br>• Innovative ideas of the customer<br>• Personal preferences of the customer<br>• Detailed procedures at the customer<br>• Customer’s reaction to complaints |
| Collective knowledge | • Customer’s disclosed assessment of the market development<br>• Clearly articulated customer demands or collected through market research<br>• Terms and invoicing practice<br>• Transaction data<br>• Customer master data | • Contact person with his/her power position<br>• Future behaviour of single customers<br>• Requirements to be met by the market service<br>• Rough future development of turnover<br>• Jointly developed perceptions of the customer behaviour |

**Table 2.2: Characteristics of customer-oriented knowledge (Source: Wilde 2011)**

Many studies in KM arena have emphasised the importance of customer knowledge in creating organisational value. (Al-Shammari, 2009; Paquette, 2008; Gibbert et al., 2002; Stefanou et al., 2003; Gebert et al., 2003; Liew, 2008). For example, Al-Shammari (2009) viewed customer knowledge as a source of sustainable competitive advantage while Stefanou et al (2003) notes customer knowledge as the most important asset in maintaining competitiveness. However, managing these knowledge flows between organisations and customers is the most important challenge. Davenport et al, (2002) also emphasises that the most important issue is how to concentrate efforts on managing only useful knowledge while not wasting time and resources on generating non-value adding information which falls in to the domain of knowledge management. The following section provides an overview of knowledge management and contextualises it to this research study.

## 2.3 KNOWLEDGE MANAGEMENT (KM)

With the advent of knowledge economy, focus has shifted from traditional resources like land, labour, and capital to knowledge. Knowledge economies are directly based on the production, distribution, and use of knowledge and information (OECD 1996). Knowledge is not only widely seen as key asset in organisations but also as the most important determinant of economic growth. Within knowledge-based economies challenges lie in making information productive which falls into the domain of Knowledge Management (Beijersy, 1999).

Knowledge Management as an academic discipline has gained wide popularity for the past two decades and many authors came up with definitions for knowledge management within the context of their research. Following are some of the definitions of knowledge management (KM):

a) KM is a set of strategies, systems and processes that enable and simplify creation, capture, sharing, distribution and utilization of organisation's knowledge (Kandadi, 2006)
b) KM is the process of identifying, capturing, sharing, applying, disseminating, and creating knowledge in organisation's context (Liebowitz, 2006)
c) KM enables the creation, distribution, and exploitation of knowledge to create and retain greater value from core business competencies. The primary goal of KM in business context is to facilitate opportunistic application of fragmented knowledge through integration (Tiwana, 2002)
d) KM is the discipline of creating a thriving work and learning environment that fosters the continuous creation, aggregation, use and re-use of both organisational and personal knowledge in the pursuit of new business value (Cross 1998 quoted in Little et al., 2002)

Within the context of this research, a broader view of Knowledge Management is taken and is viewed as a building block of CKM. This research adopts a comprehensive definition provided by Kandadi (2006) which states that *"KM is a set of strategies, systems and processes that enable and simplify creation, capture, sharing, distribution and utilization of organisation's knowledge"*. These set of strategies, systems and processes address Business focus, Culture, Process and Infrastructure (BCPI framework) dimensions which makes it robust and comprehensive framework for practicing KM.

The main aim of KM is to build core competencies based on strategic business knowledge. Hence, the related knowledge processes within organisation needs to be focussed towards market oriented factors like customer needs, preferences and other external elements, along with managing internal knowledge of employees. Burk (1999) explains that knowledge management cycles enable information flow across organisation lines, making knowledge available in a timely fashion and where it is needed the most. Burk (1999) illustrates various components of knowledge management cycle in figure 2.3 below.

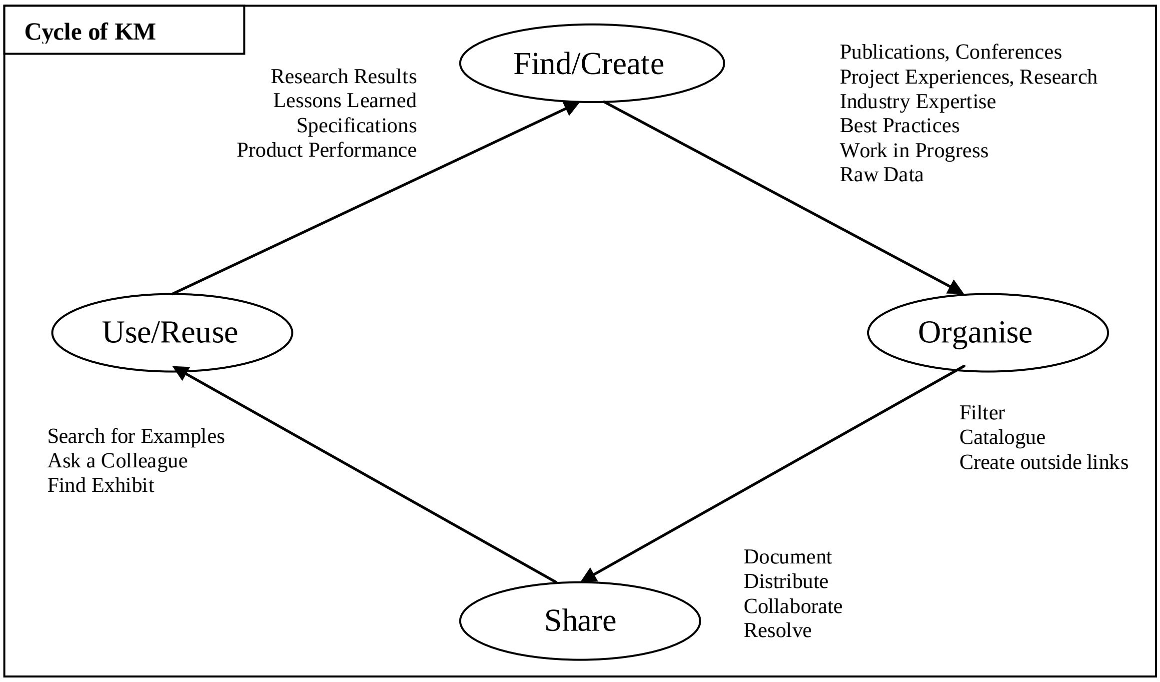



**Figure 2.3: Components of Knowledge Management Cycle (adapted from Burk, 1999)**

These four basic elements of knowledge management cycle (find/create, organise, share and use/reuse) are highly relevant for managing customer knowledge within organisations. Maier and Remus (2002) emphasises that knowledge management should consider and integrate both strategic business areas (market oriented view) and organisational resources and competencies (resource based view).

Within knowledge management context, focus of this CKM research is on specific parts of organisation's knowledge i.e. customer knowledge. Further to the scope of customer knowledge and knowledge management within this research study, following section provides an overview of CRM along with its origins, definitions, and a review of conceptual model.

## 2.4 CUSTOMER RELATIONSHIP MANAGEMENT

Gebert et al (2003) notes that CRM emerged through amalgamation of management approaches like relationship marketing and IT oriented approaches like computer aided selling (CAS) and Sales Force Automation (SFA). CRM as a concept which focuses on nurturing customer relationships came into sight in the light of increasing competition and decreasing customer loyalty. Dyche (2001) defines CRM as "t*he Infrastructure that enables the delineation of and increase in customer value, and the correct means by which to motivate valuable customers to remain loyal – indeed, to buy again*". The main objective of CRM is customer retention through customer loyalty schemes. However, CKM is about innovation and growth through co-creation of organisational value with customers. Different types of CRM include the following (Xu and Walton, 2005; Dyche, 2001):

- Operational CRM : Involves customer-facing business functions. Customer data is collected through a whole range of touch points such as contact centre, contact management system, mail, fax, sales force, web, etc.

- Analytical CRM : Use of data originating through operational CRM to enhance customer relationships.

- Enterprise CRM : Cross-functional CRM system used across various organisations and departments.

- Collaborative CRM : Specific functionality that enables a two-way dialogue between a company and its customers, through a variety of channels, to facilitate and improve the quality of customer interactions.

A review of a conceptual model of CRM proposed by Stefanou et al (2003) illustrates CRM development within organisations in stages leading towards an integrated CRM (i-CRM) as shown in figure 2.4 below.

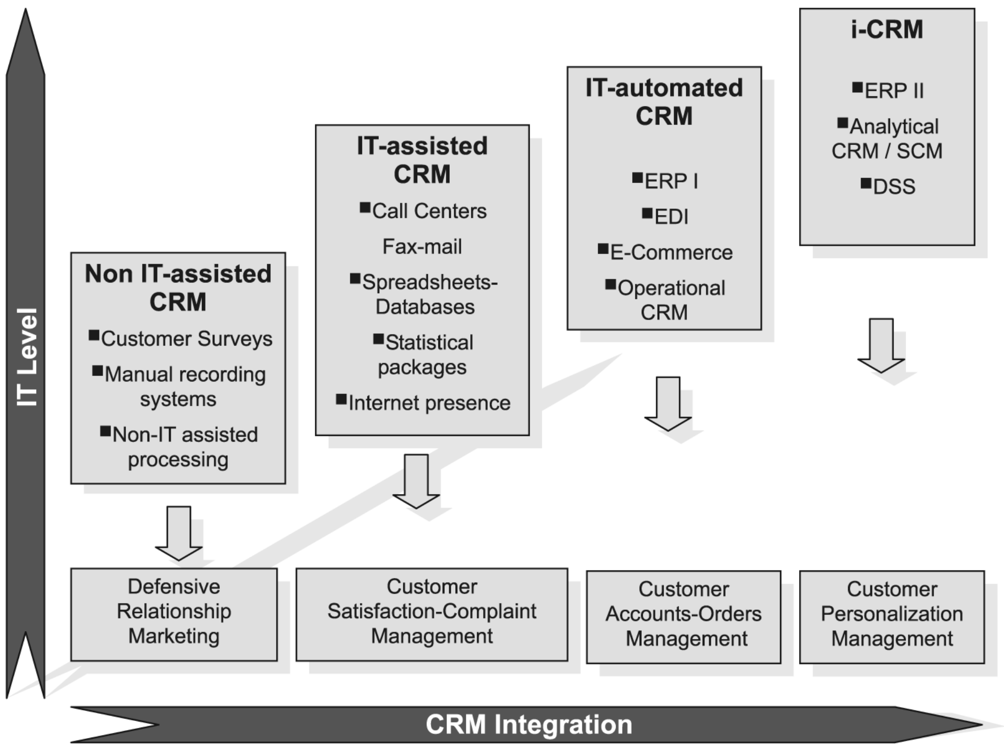



**Figure 2.4: Stages of CRM development (Proposed by Stefanou et al, 2003)**

The first stage is non IT assisted stage in which companies rely on cumbersome manual recording. The second stage is IT-assisted CRM which uses technology to enhance the customer relationship but it is largely a manual process. The third stage is IT automated CRM which uses technology for interaction with customers. The fourth stage of development is integrated CRM which leads to high level of service and customer personalization. Even with integrated CRM (i-CRM) the role of customer is limited to that of a loyal recipient of products and services. Where as, with CKM the role of customer is enhanced to that of an active partner in co-creation of organisational value. Following section provides an overview of CKM including its evolution, definition, and comparison with KM and CRM.

## 2.5 CUSTOMER KNOWLEDGE MANAGEMENT (CKM)

### 2.5.1 Evolution of CKM

CKM which has its roots in Knowledge Management (KM) and Customer Relationship Management (CRM) can be viewed as an extension that has been developed from the combination of CRM and KM. CRM emerged a few decades earlier with an imminent need to focus on developing customer relationships in the light of declining customer loyalty and increasing competition. CRM appeared to address following three fundamental needs of a typical organisation; a) targeting customers with cross-selling and up-selling offers based on their buying behaviour, b) More efficient use of customer-facing staff with real time access to customer information across the enterprise, and c) cost cutting with greater operational efficiency (Newell, 2003; p9). CRM efforts have been focussed on these fundamental needs to organisation's benefit and overlooked some aspects which are crucial for customer empowerment and success. Over decades, competitive landscape changed and nurturing customer relationships alone is not sufficient to sustain organisations. CRM efforts have failed to capture knowledge from customers that will enable organisations to innovate products and services to meet customer needs.

Managing customer knowledge effectively within an organisation, and between organisation and its customers is becoming important than ever before. Consequently knowledge intensity has increased and managing knowledge flows within customer relationships posed a challenge for CRM (Gebert et al 2002). With in this context of managing customer knowledge effectively, KM with its set of strategies, systems and processes to manage knowledge adds a significant value by facilitating knowledge flows between customers and organisation. Liew, (2008) argues that various KM sub-systems must be evaluated and relevant ones to be applied to CRM to achieve knowledge-based customer and value driven relationship management. He emphasises that KM needs to be integrated with CRM strategically in order to achieve this level of relationship and further ascertains that amalgamation of KM and CRM is undeniably a strategic move.

When viewed as process, several primary activities of CKM value chain indicate that CKM is an extension that has been developed from KM and CRM. For the purpose of this research this amalgamation of KM and CRM in order to manage customer knowledge effectively is considered as CKM.

### 2.5.2 Customer Knowledge Management Definition

The following sub-section provides some insights into management of 'customer knowledge' in organisations and 'knowledge management' processes that are specifically tailored for customers, and intersection of these two i.e., particular KM processes for customer knowledge. Customer knowledge management is viewed as a combination of three elements and it is represented in Venn diagram in figure 2.5 below. Within this notation, CKM can be represented as union of two sets C[KM] and [CK]M that is ***CKM = C[KM] U [CK]M***

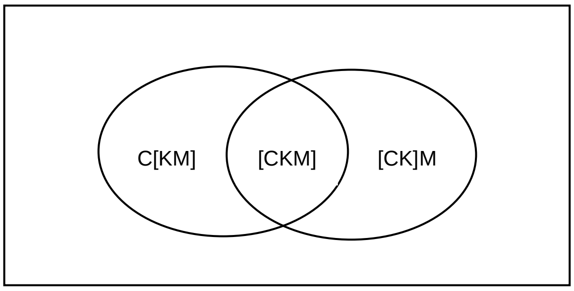



**Figure 2.5: C[KM], [CK]M and [CKM] (source: Zhang 2011)**

These three elements of customer knowledge management i.e. C[KM], [CK]M, and [CKM] are explained in detail in following sub-sections.

#### *2.5.2.1 Customer (knowledge management)*

Zhang (2011) proposes that customer 'knowledge management' represented here as C[KM] denotes the KM processes and practices that are specifically tailored for customers. The KM processes related to customers include not only those between customers and organisations but also processes that facilitate knowledge sharing among customers themselves.

One category of processes enables customers to share and exchange experiences and knowledge among themselves so that they can utilise the knowledge obtained from other customers in purchasing goods or acquiring services. Krishnamurthy (2006) emphasises the importance of these processes in e-marketing context and highlights the following benefits for organisations: a) identifying major problems that are being faced by customers; b) benchmarking against competitive products and services stressing areas that need to be improved; and c) reducing customer service load as customers share and exchange knowledge and solutions among themselves.

Other category of processes facilitates knowledge flows between customers and organisations which include following two aspects:

1. Knowledge flow from organisations to customers that is imparting '*knowledge for customers*' to assist with decision making process to buy organisation's products and services; and
2. Knowledge flow from customers to organisations that is acquiring '*knowledge from customers*' to improve product innovation and engage in new service development.

These two categories of processes which enabled knowledge flows are based on organisational knowledge that indirectly facilitates this KM provision. For example, IT and KM functions that are responsible for knowledge processes and technology infrastructure of an organisation have significant influence on the performance of above two categories of processes even though they need not deal with customers directly.

#### *2.5.2.2 (Customer knowledge) management*

'Customer knowledge' management represented here as [CK]M denotes special type of KM focusing on customer knowledge. Customer knowledge has some distinctive features when compared with general organisational knowledge. For example, customer knowledge is widely spread throughout organisation usually in fragmented form with diverse formats across different functional divisions and has significant direct impact on business performance. Davenport (2007) notes that customer knowledge can be derived from following three major channels:

1) Analysis of customer data
2) Interactions with customers
3) Observation of customers

Dobney (2012) highlights that customer knowledge can be approached from following two ends: a) Collection of information and viewpoints that an organisation has about its customers and b) Collection of information and insight that organisation needs in order to build stronger customer relationships. One end of customer knowledge is internal to organisations, referring to the organisational knowledge relating to customers' needs, whereas the other end of customer knowledge exists outside organisations, residing on customers' side.

Zhang (2011) proposes that [CK]M denotes a set of processes, methods, and styles of managing customer knowledge. For instance, the sharing of customer knowledge between two functional departments also belong to the category of [CK]M.

#### *2.5.2.3 (Customer knowledge management)*

'[Customer knowledge management]' represented here as [CKM] denotes the particular KM processes for customer knowledge, which represents the intersection of C[KM] and [CK]M. Particularly, [CKM] includes multiple processes and methods of interacting with customers, extracting customer knowledge, and utilization of customer knowledge.

Customer Knowledge Management is a combination of above three elements. The main objective of CKM is to gain, expand, share and utilise the customers' knowledge which in turn helps both customers and organisations. KM and CRM have significant roles to play as they are building blocks for CKM.

### 2.5.3 CKM versus KM and CRM

Table 2.3 (on page 34) presents a comprehensive view of differences between KM, CRM and CKM while highlighting the position that CKM is an extension and development of KM and CRM.

| | KM | CRM | CKM |
|---|---|---|---|
| **Knowledge Sought in** | Employee, team, company, network of companies | Customer Database | Customer experience, creativity, and (dis)satisfaction with products/ services |
| **Axioms** | 'If only we knew what we know.' | 'Retention is cheaper than acquisition.' | 'If only we knew what our customers know and think.' |
| **Rationale** | Unlock and integrate employees' knowledge about customers, sales processes, and R&D. | Mining knowledge about the customer in company's databases. | Gaining knowledge directly from the customer, as well as sharing and expanding this knowledge. |
| **Objectives** | Efficiency gains, cost saving, and avoidance of re-inventing the wheel. | Customer base nurturing, maintaining company's customer base. | Collaboration with customers for joint value creation. |
| **Metrics** | Performance against budget. | Performance in terms of customer satisfaction and loyalty. | Performance against competitors in innovation and growth, contribution to customer success. |
| **Benefits** | Customer satisfaction. | Customer retention. | Customer success, innovation, organisational learning. |
| **Recipients of Incentives** | Employee. | Customer. | Customer. |
| **Role of customer** | Passive, recipient of product. | Captive, tied to product/ service by loyalty schemes. | Active, partner in value-creation process. |
| **Corporate role** | Encourage employees to share their knowledge with their colleagues | Build lasting relationships with customers. | Emancipate customers from passive recipients of products to active co-creators of value. |

**Table 2.3: KM and CRM versus CKM (Source: adapted from Gibbert et al, 2002)**

### 2.5.4 Benefits of CKM

Several authors emphasise that an effective CKM is beneficial to both organisations and customers (Davenport et al, 2001; Garcia-Murillo and Annabi, 2002; Gibbert et al, 2002). An effective CKM would enable organisations to achieve following outcomes:

***Innovate existing products:*** Knowledge about usage of products and services by customers can be used to improve them.

***Extend products or services:*** Value-adding knowledge based services can be added along with existing products and services and it will add value to offering in competitive environment.

***Improve success in cross-selling:*** Customer knowledge provides opportunities for cross selling. Many banks successfully use customer knowledge to sell varied financial products.

***Know what your customers want to know:*** Effective CKM would enable to capture customer buying behaviour and reveal aspects that play a crucial role in customer decision making.

***Segment the customer base:*** Based on past transaction history and buying behaviour, CKM enables segmentation of target customers based on offering.

***Prioritise customers:*** CKM enables organisations to determine valuable customers and prioritize resources to cater them in better way

***Understand your customers' internet behaviour:*** With exception of some cases, CKM enables organisations to provide customized knowledge or send customized promotional offers to target customers.

***Engender customer loyalty:*** CKM with its focus on customer success and customer satisfaction engenders customer loyalty

## 2.6 REVIEW OF CKM THEORIES AND RELEVANT FRAMEWORKS

Customer knowledge management as a research area has gained considerable attention over the past decade within academia and industry (Deloitte, 2012; Al-Shammari, 2009; Su et al, 2006; Chen and Su, 2006; Gebert et al, 2003). However, customer as an important source of innovation for organisations has been identified in academic literature much earlier and some insightful theories have been proposed since then (von Hippel, 1986; Herstatt and von Hippel 1992; von Hippel, 2001; Thomke and von Hippel, 2002; Gibbert et al, 2002). Academia has contributed to CKM domain through development of conceptual knowledge and relevant theories based on empirical research even before the term ‘customer knowledge management’ was coined. This section throws light on some old theories which focus on customer led innovation in organisations followed by more broad contemporary CKM theories.

### 2.6.1. Lead User Model

Von Hippel (1986) proposed lead user model for development of novel product, process, or service in rapidly-changing high technology industries. Within these industries, incremental innovation of products based on experience of ordinary users is often outdated by the time product is developed or at the early stages of estimated commercial lifetime. He notes that insights of ordinary users towards new product needs and potential solutions are constrained by their own real world experience. In contrast lead users are familiar with future circumstances well ahead of ordinary users and thus they are valuable for forecasting new product needs. Additionally, as lead users often strive for satisfying their needs and expect high benefit from responsive solution, they tend to assist with new product concept and design (von Hippel 1988; Urban and Hippel 1988; Herstatt and von Hippel 1992).

Figure 2.6 below schematically illustrates lead users' position in the life cycle of a novel product, process, or service. Von Hippel (1986) describes two characteristics of 'lead users' of a novel product, process, or service as follows:

a) "They face needs that will be general in the marketplace - but face them months or years before the bulk of that marketplace encounters them, and
b) They are positioned to benefit significantly by obtaining a solution to those needs."

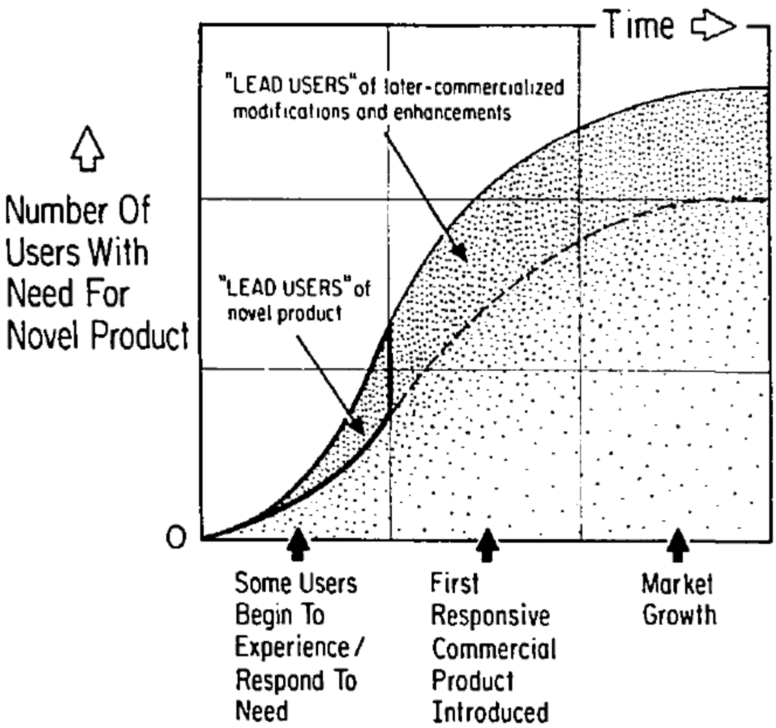



**Figure 2.6: Lear Users' position in New Product Lifecycle (Source: von Hippel, 1986)**

He proposed the following four-step process to integrate lead users into marketing research:

1. "Identify an important market or technical trend;
2. Identify lead users who lead that trend in terms of a) experience and b) intensity of a need;

3. Analyse lead user need data;
4. Project lead user data onto the general market of interest."

However, identifying a major trend along with relevant lead users is not an easy task and von Hippel himself concedes that organisations might face varied challenges while applying this model. Firstly, it is difficult to ascertain that the novel product needs faced by lead users are representative of wider marketplace. Secondly, these new product needs of lead users may be too novel for ordinary users and may not appeal to them in the near future.

In spite of these challenges, lead user model has huge potential to contribute towards developing valuable customer knowledge. Lead user model with its concentrated efforts and intensive personal interaction is capable of imbibing tacit knowledge into organisation through socialisation with customers. This 'knowledge from customer' is very precious and has high potential to lead towards innovation. The following theory of customer/user toolkits for innovation has synergy potential when used in combination with lead user model. This lead user model has high synergy potential when used in combination with customer/user toolkits for innovation. Customer/User toolkit solution is discussed in detail along with customers-as-innovators approach in the following sub-section.

### 2.6.2. Customer/User Toolkits for Innovation

Von Hippel (2001) proposed 'user toolkits' as enablers of outsourcing innovation to customers. Von Hippel and Katz (2002) suggest organisations to provide customers with tools to design and develop their own products, and emphasise that understanding customers' needs thoroughly is a costly and inexact process. In the traditional product development approach, manufacturers first find out customer/consumer needs and then produce products that meet them. Gaining a full understanding of user needs is difficult and consumes significant resources which make this approach very costly. Apart from cost, additional complexity often connected with understanding customers' needs completely is customers' inability to externalise tacit dimensions of their needs clearly.

In order to address these complexities, Thomke and von Hippel (2002) proposed customers-as-Innovators approach in contrast to traditional approach as shown in figure 2.7 (on page 40). This approach enables customers/users to freely innovate, enabling them to design custom products in an iterative process through trial and error. Key to this approach is development of customer/user toolkit.

Toolkit for customer innovation is an integrated set of customer-friendly design tools that enable customers to develop product innovations of their own. These toolkits encompass capabilities of mass customisation and unconstrained customer innovation. Henkel and Thies (2003) highlights following benefits of innovation toolkits from customer/user perspective based on empirical research: (1) customers value the ability to customise basic product with ease; (2) the toolkit proved to be an appealing feature on its own; and (3) the resulting user innovations has potential to enable valuable complements to the basic product attracting wider customers. Jeppesen (2005) evaluates consumer's role in product development and ascertains that user toolkits for innovation as a strong form of consumer involvement when compared with listening to customers and interaction with advanced users.

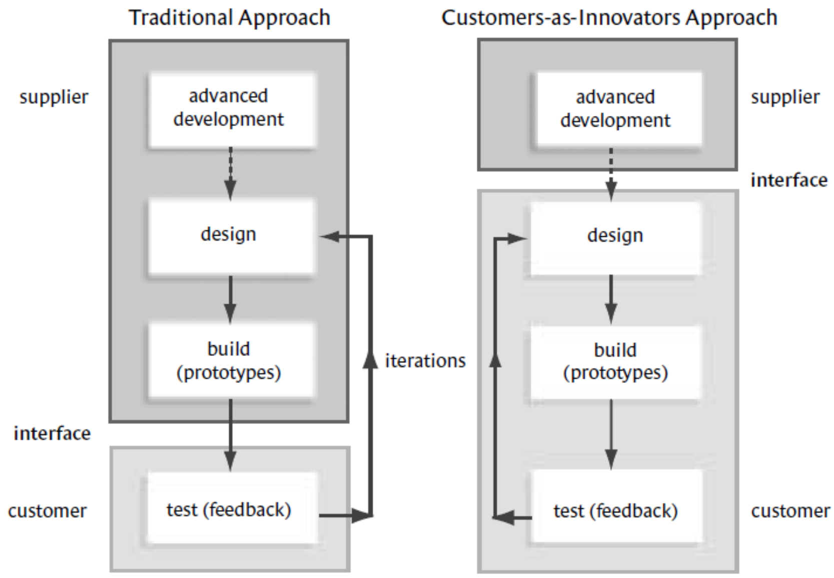



**Figure 2.7: Approaches to develop custom products (Source: Thomke and von Hippel, 2002)**

From manufacturer's perspective, Katz & von Hippel (2002) argue that toolkits have potential to create competitive advantages. The major advantage for manufacturers from right toolkit solution can be "to allow easy, error-free translations of designs made by users into their own production capabilities". They also note that "first-movers" have an opportunity to develop a design language that tends to be easily accepted and has high probability to become standard in that particular market. However, Thomke and von Hippel (2002) concede that "developing the right toolkit for a customer is hardly a simple matter". They emphasise that toolkits need to provide following capabilities.

- Toolkits need to allow users to accomplish a number of design cycles driven by learning by doing.

- Toolkits need to be easily manageable for users, that is familiarising customers with them should not involve learning a new design language.
- Toolkits need to contain libraries of useful components and modules which have been pre-tested and debugged.
- Toolkits need to contain information about the capabilities and limitations of production process

In addition, Jeppesen and Molin (2003) determined a set of three important and interrelated dimensions influencing toolkit approach based on empirical research: solution space, consumer design capabilities, and support.

- Solution space – Size of solution space determines the freedom of user that is a set of functions over which consumers have control. However if the solution space is too large, it complicates decision making as toolkit tends to be more complex and requires user to master more functions. Users need to have flexibility to choose the level of complexity based on their level of mastery over functions.

- Customer design capabilities – “The existing design capability is the embedded level of excellence determining what customers are able to do and refers to relevant experience, knowledge, and hence the problem-solving capacity that a given consumer possesses for dealing with specific tools” (Jeppesen, 2003). These capabilities increase the chances for customers of finding an appropriate solution matching their needs.

- Support – Support in this context can be viewed as training and resources to enhance consumer design capabilities. Support from toolkit providers can be of immense use to consumers when they are not capable of dealing with tools on their own.

These three dimensions of the toolkit solution are very much interrelated. Size of solution space needs to consider customer design capabilities while shortcoming within customer design capabilities can be improved through support provision. This toolkit for customer innovation approach has synergy potential with lead user approach as ‘lead users’ are typically interested in designing custom products to fulfil their needs. These toolkits enable ‘lead users’ to design custom products that address their needs and at the same time allow manufacturers to outsource innovation of futuristic products to lead users as their current needs tend to uncover future standard needs. These Customer/user toolkits enable organisations to gain ‘knowledge from customer’ which not only adds value to customer knowledge but also lead organisations towards innovation. While these two theories (i.e. lead user model and customer/user toolkit solution) illustrate two ways to achieve novel product innovation, the following theory uncovers five styles of customer knowledge management to enable knowledge co-creation with customers.

### 2.6.3. Five Styles of CKM

This CKM theory places emphasis on capturing knowledge resident in customers. Gibbert et al, (2002) identified wide variety of approaches to manage customer knowledge among organisations. They proposed five styles of CKM based on empirical research as follows:

- ***Prosumerism:*** It means customer should handle the roles of producer and consumer. Prosumerism deals with co-production of products and services. For example IKEA, the furniture retailer, provides customers with planning tools (kitchen planner, bathroom planner, etc) to design the furniture that fits the specifications of their living environment there by making them co-producers.
- ***Team based co-learning:*** It utilizes the knowledge of customers and focuses on reconfiguring entire organisation's systems of value. For example, Amazon.com through interactive joint learning and inter-linkages with customer base reconfigured itself as a generalised access channel for various products and services.
- ***Mutual innovation:*** Product innovations come from the end users of the product rather than organisation. For example Ryder Systems, a trucking company, transformed into extensive logistics solutions organisation by utilising knowledge from customers in operations, manufacturing and supply chain strategy through mutual innovation.
- ***Communities of creation:*** This encompasses gathering customer groups with expert knowledge to not only interact with the company but also with each other. For example Microsoft, the computer software developer, make use of free beta versions of its products to identify problems through user community with expert knowledge and willing testers. Microsoft provides them with product news groups and 'chat rooms', where they can learn how organisation is acting on their feedback, there by resulting in user loyalty and sense of ownership.

- ***Joint intellectual property:*** This ensures intellectual property is partly owned by customers along with the company. For example Kooperativa Forbundet (KF), the Swedish co-operative union, which is a federation of consumer co-operatives did set up various industries to support co-operative grocery stores and became pioneer in customer education and the consumer movement through joint knowledge ownership.

In spite of identifying wide variety of approaches used by organisations to manage customer knowledge, it is evident from the below Table 2.4 that there are similarities in these five styles of CKM. Depending on the type of industry and expertise of the customers, one or more of the above mentioned CKM styles can be employed by organisations.

| Style/ Characteristic | Prosumerism | Team Based Co-learning | Mutual Innovation | Communities of Creation | Joint IP/Ownership |
|---|---|---|---|---|---|
| **Focus** | Developing tangible assets and benefits | Creating corporate social capital | Creating new products & processes | Mission-Specific. Professional expertise | Tangible customer IP sharing |
| **Objective** | Improved products & resulting benefits | Facilitate team learning for dealing with systemic change | Create max. return from new ideas | Obtain & explicate professional expertis | Max. returns on IP (jointly) |
| **Processes** | Pre-, concurrent- & post- production integration | Teamwork, empowerment, case development, quality programs | Idea fairs; brainstorming; customer Incubation | Best practices CoP's, expert networks | Apprenticeships Formal training programs On job training |
| **Systems** | Planning, control and decision supply systems | Knowledge sharing systems, digital 'nervous' systems, customer visits in teams | Ideas generation support systems | Expert systems, shared e-workspaces, group support systems | Group IP support systems |
| **Performance Measures** | Effectiveness & efficiency, customer satisfaction & success | Systems productivity, quality, customer satisfaction & success | ROI from new products & processes, customer success | K-sharing behavior, timeliness of decisions, Rate of hyperlinked results | Value of new IP, incremental ROI on new revenue streams |
| **Case Examples** | Quicken; IKEA | Amazon.com; Xerox, Holcim, Mettler Toledo | Silicon Graphics, Ryder | Microsoft, Sony; eBay, Holcim | Skandia |
| **Intensity of Interactions** | Relatively low | Low to high | Relatively low | Relatively high | Relatively high |
| **Type of Knowledge** | More explicit | Explicit and tacit | More tacit | More tacit | More explicit |

**Table 2.4: Five Styles of CKM (Source: Gibbert et al., 2002)**

These five styles of CKM along with lead user model and customer toolkit solution predominantly place emphasis on managing only one of the three major elements of customer knowledge which is ‘knowledge from customer’. The following set of theories deal with customer knowledge management in a broader way taking into consideration remaining two elements as well. For instance, the following ‘CKM cycle’ theory places equal stress on three elements of customer of knowledge.

### 2.6.4. CKM Cycle

Stauss (2002) quoted in Derliyski and Frohlich (2004) links three forms of customer knowledge (i.e., knowledge about the customer, knowledge for the customer, and knowledge of the customer) with knowledge management processes (Figure 2.8 on page 46). Three forms of customer knowledge correlate with three types of customer knowledge discussed earlier except for ‘knowledge of the customer’ which was represented earlier as ‘knowledge from customer’.

CKM cycle assumes acquiring ‘Knowledge of the customer’ is the starting point of the cycle. The theory proposes that by processing the ‘knowledge of the customer’, it becomes ‘knowledge about the customer’. This statement or claim can be argued, as only some portion of this knowledge is converted into ‘knowledge about the customer’ while the remaining part can be added to aggregate knowledge of the broader customer segment.

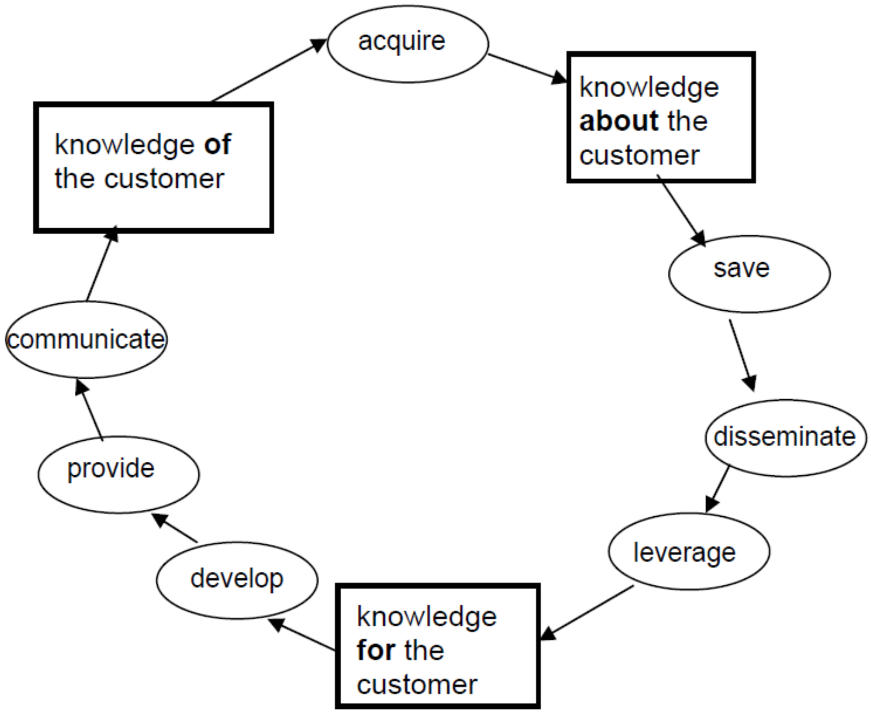



**Figure 2.8: CKM Cycle**

**(Source: Stauss, 2002 quoted in Derliyski and Frohlich, 2004)**

CKM cycle further assumes that this knowledge must be stored and disseminated within the organisation in order to leverage that knowledge for innovations and product improvements. However in the current business environment, a considerable proportion of this stored knowledge needs to be appropriately organised and disseminated beyond the boundaries of the organisation to customers and other stake holders like supply chain partners.

CKM cycle points out towards identifying knowledge deficits of the customer needs in the next step. This ‘knowledge for the customer’ is developed, provided and communicated to the customer in order to dispel the identified deficits. Through this process ‘knowledge for the customer’ turns into ‘knowledge of the customer’ and it has potential to further increase customer’s knowledge. This is where the cycle completes the loop and it marks the starting point for next iteration of continuous process.

This theory focussed mainly on generic KM processes but didn't take into consideration other fundamental organisational elements such as culture and technology. This conceptual theory proposes management of customer knowledge as cyclical process at an over-arching level but lacks empirical evidence and details regarding how to achieve a holistic view of customer in organisations. While CKM cycle theory is developed as an extension of knowledge management, the following University of St.Gallen model of CKM is built based on CRM reflection (Gebert et al 2003).

### 2.6.5. University of St. Gallen Model of CKM

This model emphasises systematic use of knowledge gathered at multiple customer interfaces to nurture and support relevant organisational processes. Gebert et al (2003) propose that KM acts as a service provider for CRM while demonstrating high synergy potential between these two. In order to achieve successful integration of CRM and KM, they proposed a customer knowledge management model (Figure 2.9 on page 48), comprising of following six relevant business processes:

1) Campaign management
2) Lead management
3) Offer management
4) Contract management

5) Complaint management

6) Service management

The authors propose that differentiation of operative processes is essential for focussing appropriate customer knowledge for relevant customer-oriented business processes. These customer oriented processes within marketing, sales, and service functions along with interaction management and channel management, in conjunction with four central knowledge management aspects content, competence, collaboration, and composition forms the basis of this model (Figure 2.9).

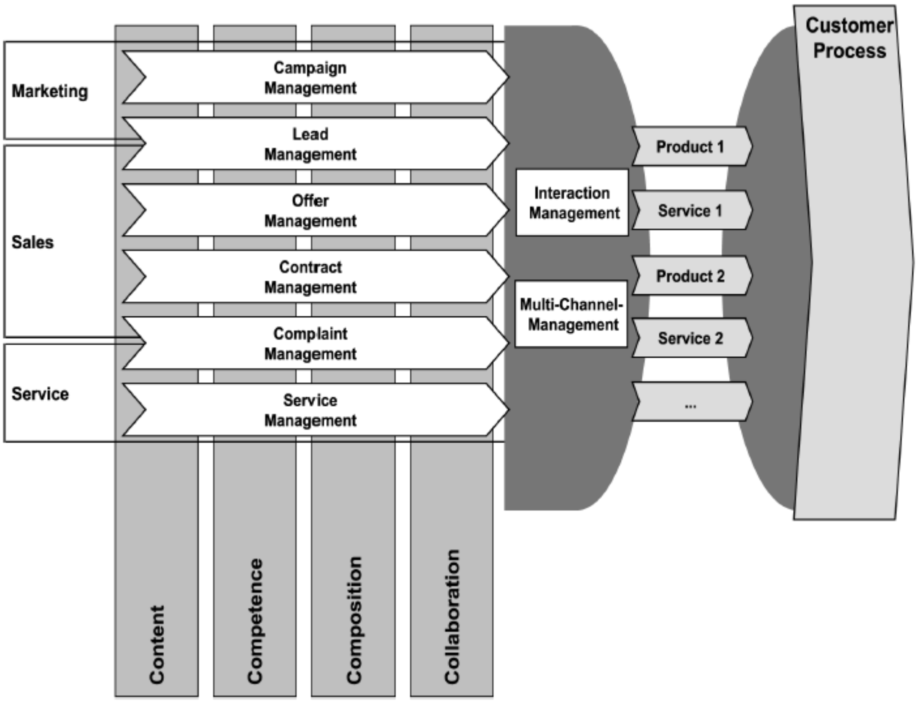



**Figure 2.9: CKM Process Model (adapted from Gebert et al, 2003)**

The authors differentiate these four knowledge aspects and place emphasis on each aspect individually based on business perspective. The content aspect focuses on extracting knowledge from individuals, codifying it into information objects which allows cost efficient storage, and allows reconstruction of knowledge when contextualised. The competence aspect concentrates on implicit knowledge that enables workforce to enhance specific competence areas and provide competitive accomplishments within business processes. The collaboration aspect nurtures knowledge within groups which tends to be implicit through support mechanisms. The composition aspect focuses on effective dissemination of knowledge within organisations through metadata repositories, referencing, glossary, taxonomies etc. The integration of these four aspects of KM with customer oriented business processes lays the foundation for this model. The authors of this model view CKM as combination of customer oriented knowledge management and knowledge oriented customer relationship management.

In spite of stressing the importance of integrating knowledge aspects with customer oriented business processes, this model didn't suggest how processes can be enhanced in order to enable this integration. The model is more technology-oriented and has some important suggestions for managing explicit knowledge within customer oriented functions. This model has little focus on management of tacit or implicit customer knowledge which is an important source of innovation. The model provides limited assistance regarding how to manage customer knowledge in organisations holistically. The following Kano-CKM and E-CKM models throw light on tacit knowledge conversion/codification along with knowledge for, from, and about customers.

### 2.6.6. Kano-CKM and E-CKM Models

Chen and Su (2006) proposed a Kano-CKM model for customer knowledge discovery based on Kano theory of product development and customer satisfaction.

The focus of this model is managing attractive quality creation in new product development through customer knowledge management as shown in figure 2.10 below. Further, Kano-CKM model encompasses the following four CKM process stages: product benefits/preferences identification (Knowledge for customers), customers satisfaction categorisation (knowledge about customers), market segmenting (tacit knowledge codification), and customer usage pattern extraction (knowledge from customers)

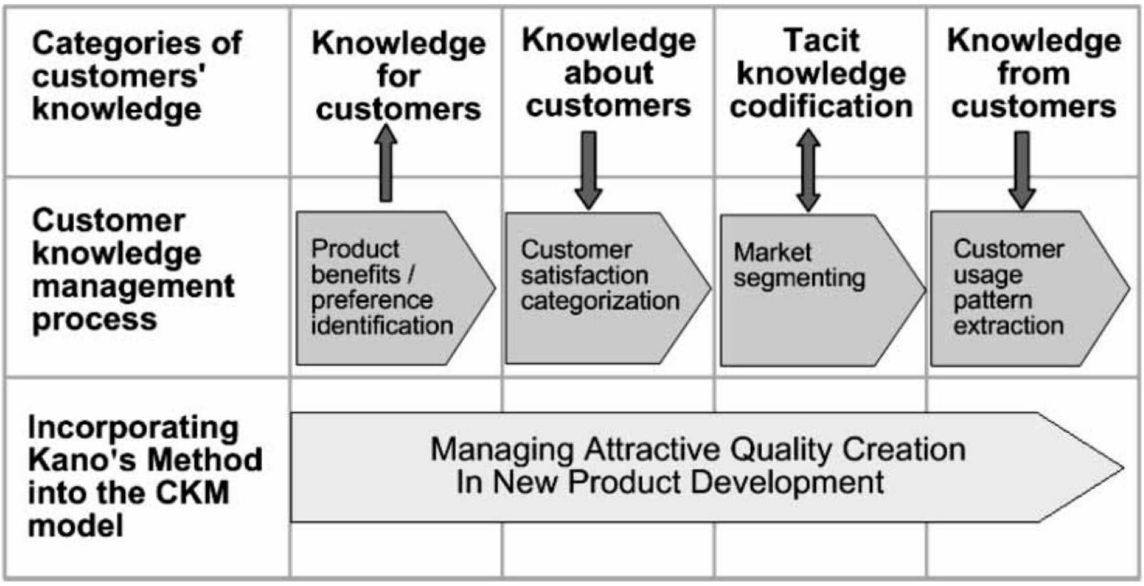



**Figure 2.10: The Kano-CKM Model for attractive quality creation (Source: Chen and Su, 2006)**

Su et al, (2006) proposed an E-CKM model for innovative product development by incorporating information technology and data mining. They described customer knowledge management process to enable customer knowledge extraction from multiple market/customer segments. Similar to Kano-CKM model, the E-CKM process encompasses the following four stages: product features/benefits identification (Knowledge for customers), customers' needs categorisation (knowledge about customers), market segmentation implementation (tacit knowledge conversion), and segment needs pattern extraction (knowledge from customers) as shown in figure 2.11 below.

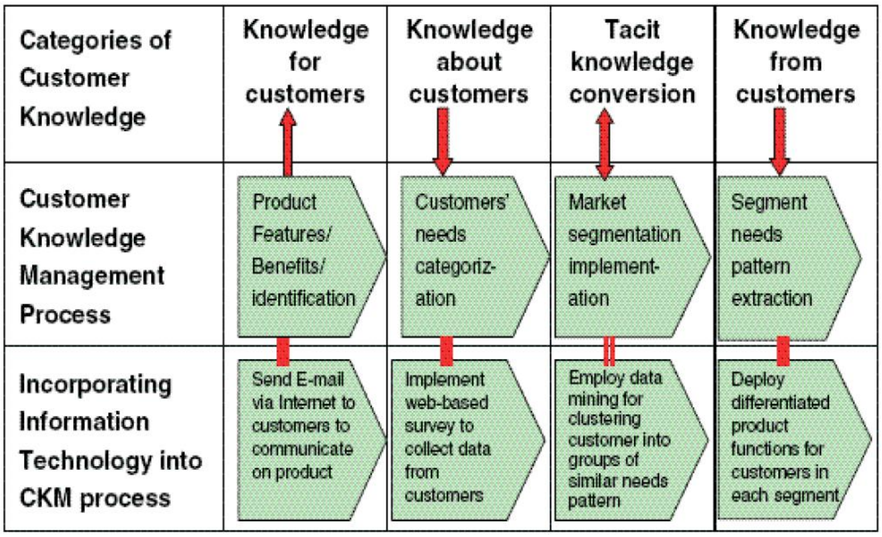



**Figure 2.11: The E-CKM Model (Source: Su et al, 2006)**

The E-CKM model emphasises the incorporation of appropriate IT based procedures such as online communication, web-based surveys, data mining, etc. at relevant stages of customer knowledge creation. The model suggests that linking innovative new product development with customer knowledge ensures market success and reduces project risk.

This model provides reflection on organisational elements such as processes and technology but didn’t take into consideration the role of organisational culture or people dimension in customer knowledge creation. The following theory, CKM model for customer life cycle and schematic CKM framework, provides a multi-dimensional approach to customer knowledge management.

### 2.6.7. CKM Model for customer life cycle and Schematic CKM framework

In addition to three categories of customer knowledge (i.e. Knowledge *for, from and about* customers) discussed earlier, this model has fourth category which is knowledge co-creation with customers. However, it can be viewed as a sub-category within knowledge from customers (Gibbert et al, 2002). Al-Shammari (2009) proposed a model with CKM process dimensions encompassing customer life cycle (CLC) phases i.e. acquisition, retention, and expansion as shown in Table 2.5 below.

| | | **Categories of CK** | | | |
|---|---|---|---|---|---|
| | **CLC Phase** | **Knowledge for Customers** | **Knowledge from Customers** | **Knowledge about Customers** | **Knowledge Co-creation With Customers** |
| **CKM Process** | **Acquisition** | Marketing, Sales, and Services | Customer Specific Needs | Customer Demographics, Profiling, and Segmentation | Collaborative Planning, Forecasting, and Replenishment |
| | **Retention** | Differentiated Product/ Service Offers | Listening to the VOC | Customer Satisfaction and Complaining Behaviour | Collaborative Planning, Design, Development, and Replenishment |
| | **Expansion** | Cross-Selling and Up-Selling Offers | Customer Experiences, and Preferences | Customer Portfolio, Profitability, and Churn Analysis | Collaborative Planning, Design, Development, and Replenishment |

**Table 2.5: CKM model for customer life cycle (Source: adapted from Al-Shammari, 2009)**

At customer acquisition phase, customer knowledge is managed taking in consideration multiple knowledge dimensions of prospective customers while at customer retention and expansion phases existing customers are approached with different focus. This CKM model highlights the steps worth considering at each of the three CLC phases with respect to four categories of customer knowledge (Table 2.5 on page 52).

In addition to CKM customer life cycle model, Al-Shammari (2009) proposed a framework for customer knowledge management as shown in figure 2.12 (on page 54). This framework presents four-stage perspective leading towards sustainable competitive advantage for organisations. These four stages (abbreviated as SRCM - strategising, reinventing, capitalising, and mastering) are organised into four coherent parts that integrates dynamic interactions among basic organisational pillars like people, processes and technology. The elements that enable distinctive core competencies to lead towards sustainable competitive advantage are represented in this framework as follows:

- Setting a CKM Strategy
- Spotting environmental drivers
- Reorganising people
- Retooling ICT systems
- Redesigning processes
- Capturing data from customers
- Compiling profiles of customers
- Creating knowledge about customers
- Maximising value for customers
- Measuring return on relationships with customers
- Managing learning throughout CKM change

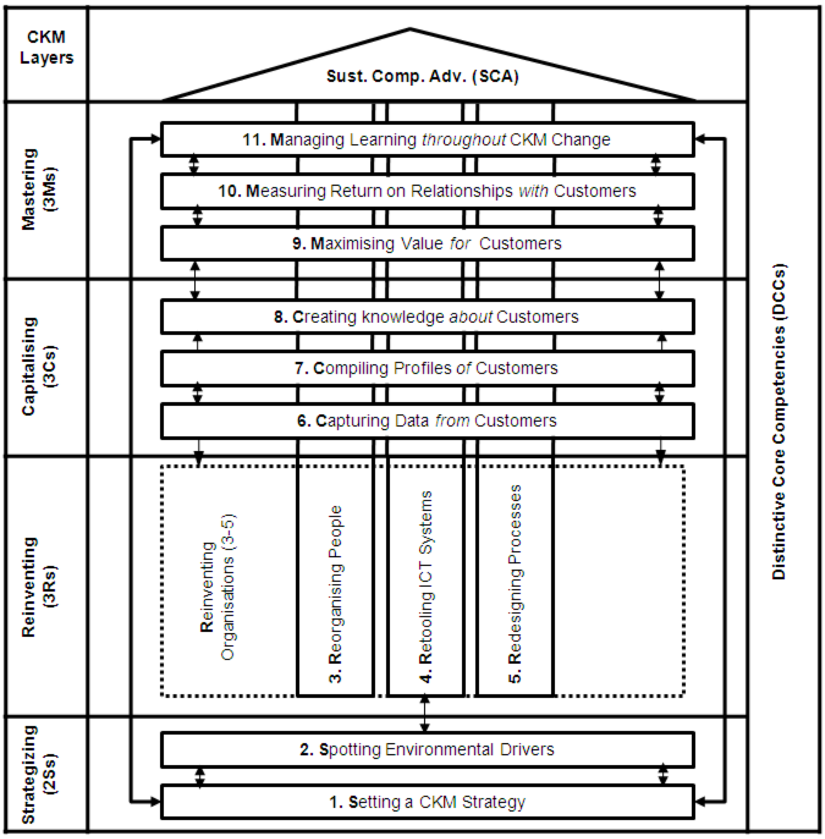



**Figure 2.12: Schematic Diagram of CKM framework (Source: Al-Shammari 2009)**

Each of the four CKM layers i.e., SRCM emphasise on two or three aspects while having inter-connections and integration with other layers as shown in the figure 2.12 above. This CKM framework is very broad covering varied aspects and is primarily based on literature review without empirical research and validation. In addition, this framework didn't provide guidance on how to manage customer interactions holistically, in spite of its importance in capturing knowledge from customers. The following theory provides a brief overview of this aspect i.e. managing these customer interactions across lifecycle.

### 2.6.8. Customer Interaction Management across Lifecycle

Organisations which recognise end to end customer experience with appropriate metrics at each stage are better equipped to manage customer expectations. Through holistic approach, these organisations identify and understand all key interaction touch-points either they are customer led or business led. Figure 2.13 below illustrates a typical customer interaction across the lifecycle

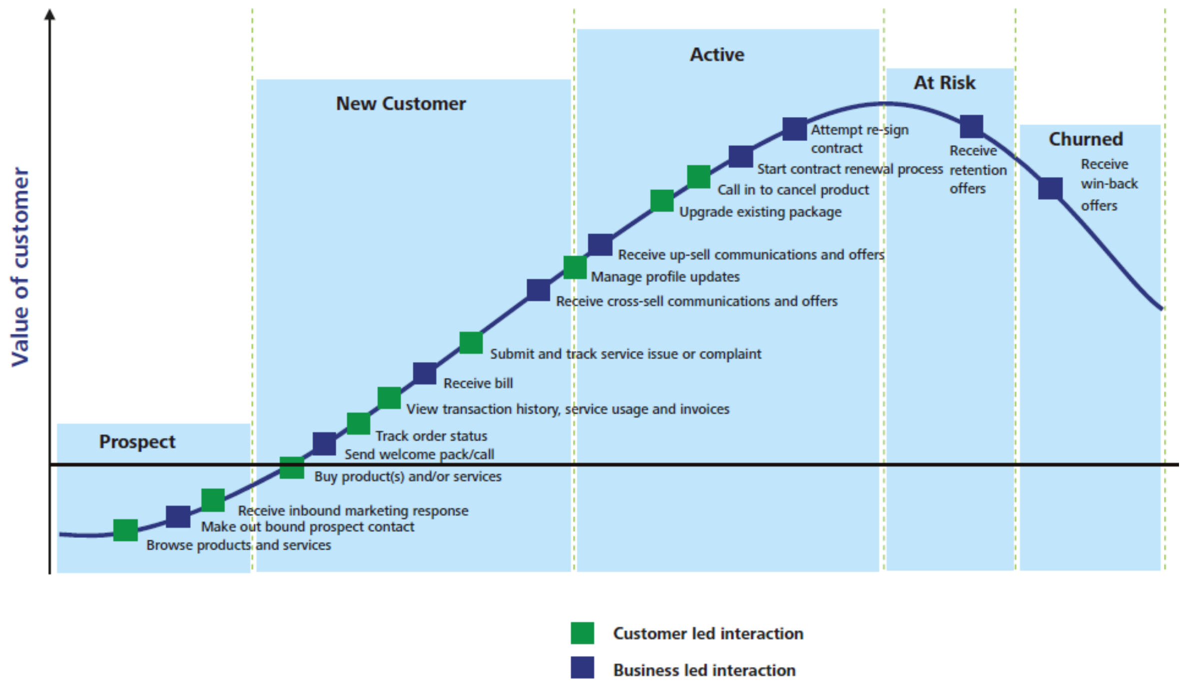



**Figure 2.13: Planning customer interaction across the lifecycle (Source: Deloitte 2012)**

The objective of customer interaction management is to increase the quality and value of interactions while reducing the cost of interactions to both customer and the organisation (Gebert et al, 2003). For instance, banking industry exemplified this through web-based self-service that is by enabling customer to perform interactions and transactions through internet-banking.

### 2.6.9. Other Theories and Contemporary Research

Davenport et al, (2001) identified that insightful companies mix rich customer data with their understanding of the people behind the transaction. They further highlighted the importance of human-centric approach with customers. Similarly many authors highlighted the importance of customer knowledge emerging out of customer transactions, customer interactions and customer communities of practice (Mukherji, 2012; Garcia-Murillo and Annabi 2002; Blosch, 2000; Lesser et al, 2000). Along with technical aspects of managing knowledge for and from customers, effective Knowledge Management more importantly involves organisational, behavioural and cultural issues (Davenport and Prusak, 1998) which are also significant factors in integrative approach for CKM.

Contemporary research within CKM has been focussed on varied aspects such as a theoretical perspective on relationship between knowledge management systems, CKM, and firms competitive advantage (Shannak et al, 2012), managing customer knowledge in retail industry (Mukherji, 2012), knowledge reuse in the context of customer service support (Kankanhalli, 2011) etc. A review of theories and frameworks within CKM domain indicates a gap in empirical research regarding $360^{O}$ view of customers among organisations.

## 2.7 $360^{O}$ VIEW OF CUSTOMER

One of the prominent things that organisations can do to empower employees is to provide a $360^{O}$ customer view with details about customer interactions, relationships, and external activity. Deloitte (2012) represented this $360^{O}$ view of customer as Single Customer View (SCV) and identified four dimensions of this SCV as shown in the figure 2.14 below.

| | '1D' SCV | '2D' SCV | '3D' SCV | '4D' SCV |
|---|---|---|---|---|
| SCV Coverage | Product holdings (internal) | Customer product holdings (internal) | Customer product holdings and relationship (internal) | Customer holdings and relationship (inc. external) |
| SCV richness and quality | Existing customer attributes | Existing customer attributes and external data | New customer attributes | Externally sourced customer insight |
| SCV application/ impact | No SCV – product centric | 'Read only' SCV | Fully integrated SCV | SCV impacting processes and propositions |

**Figure 2.14: Four dimensions of single customer view (Source: Deloitte 2012)**

Deloitte report quotes that "whilst the '4D' view may be seen as utopian by many organisations, it is essential that a realistic roadmap is built to show how the SCV continuously evolves to provide greater insight and functionality right across the business".

The $360^{O}$ view of customer has been sought after in CRM for long time and it is defined as "the ability to aggregate in a single view the entire data organisation has about customer" (Liautaud, 2010). The $360^{O}$ view of customer is also referred to as unified master in customer-data lingo which means a complete record in a single place of all transactions and operational interactions of customer (Greenberg, 2009). In the context of this research study, the $360^{O}$ view of customer is broadened to include all interactions of customer with the organisation while encompassing all the three elements of CKM as proposed by Zanjani et al, (2008) i.e. knowledge for, from and about customers. Smalley (2000) addresses the need for organisations to achieve high customer retention and profitability, and emphasises that understanding the customer means having a full view, not only regarding their purchase history but also their connections with the organisation.

## 2.8 NEED TO ACHIEVE $360^{O}$ VIEW OF CUSTOMER

Many companies are facing difficulty in increasing efficiency as the sales and customer service agents do not have enough time to go through all of the customer information created in the organisation (Deloitte, 2012; Liautaud, 2010). Therefore, the better way is to devise the $360^{O}$ view that presents the insight to the agent such that if the customer needs a service plan the agent can be prompted in real time to offer the exact package. However, if marketing or product development teams need different aspects of the customer, they would be able to drill down to those particular aspects in the same $360^{O}$ view. The main goal is to provide appropriate knowledge to establish the profitable customer relationships, co-value creation, and offer new marketing opportunities.

Communication between the customer and organisation happen through multiple sales channels and through multiple points of contact. Usually, various departments in an organisation are in contact with their customers but rarely know much about the other department’s interaction with customers. Most of the customer knowledge is not shared and all the employees are involved only with partial information about the customer. Only a particular person who interacts with a customer will have a clear idea of that interaction. To construct the most valuable and effective relationship with a customer, it is important for all relevant staff in the organisation to have access to the full $360^{O}$ view of customer transactions and connections. For instance, gathering all customer details, purchase information, service records, product reviews, improvement suggestions and knowledge co-creation opportunities can provide sales, marketing, and product development teams with avenues for gaining the valuable knowledge required.

The aim of $360^{O}$ view of customer is to unite the related data which comes from all points of intersections with the customer in a single environment. Liautaud (2010) notes that achieving this is crucial to 1) converse with the customer in a fully informed way and consequently offer the best possible service; 2) calculate the customer's actual profitability; 3) determine what programs should be implemented to maximize the revenue opportunity from each customer. He argues that technology also plays an important role because organisations who want $360^{O}$ view in their firms need to have a proper network that contains all the customer information from different parts of the organisation. Although it is crucial to have $360^{O}$ view, most of the companies are unable to achieve this. Organisations with a $360^{O}$ view of customers can dynamically mould their offerings to meet customers' requirements and sketch initiatives at individual level as well as group level. In order to cater effectively to the groups of customers, the $360^{O}$ view needs to consider the profile of the customers to segment them into different groups.

Profiling and segmentation are used to group customers based on their behaviour, attitude, demographic and other dimensions, and allows organisations to gain greater share of knowledge for, from and about customer groups. At this stage organisation can utilise customer segment knowledge to provide relevant statistics and reviews for prospective customers. This type of customer knowledge is useful not only to customers but also to organisations in new product development or enabling new channels of innovation and growth. Gibbert et al (2002) explains that the online bookstore retailer amazon.com utilises this type of customer knowledge not only to provide customer reviews of books to prospective customers but also uses this knowledge to feed it back to authors and publishers, and to plan for the emerging demand. Bibb and Ghem (2001) proposes that the development of 360$^{O}$ view of customer needs to consider segmentation and should include strategies like:

- **Development of measurable segment-specific goals, objectives and tactics for every point of interaction customers have with organisation.**

- **Establishment of organisation wide business metrics, tracking, customer satisfaction measurement, and reporting processes for all segments, product lines and points of contact.**

The 360$^{O}$ view of customer enables up to date information which can be used on time by members of an organisation to be involved in useful and well-informed interactions with the customers. This not only offers a consolidated view of organisation’s customer knowledge but also facilitates the staff with access to the required information to support web based customer self service and meet customer service demands. It results in a consistent experience of the customer throughout the organisation. This type of consistency also provides significant benefits in terms of productivity for customer service and sales operations including: 1) reduced call time; 2) improved customer interaction; 3) reduced training time; 4) considerable reduction in data entry errors; and 5) improved quality.

The creation and distribution of quality information leading to customer knowledge is very important for supporting business initiatives to focus on customer. The $360^{O}$ view in the organisations needs to consider using the customer information from multiple points of intersections in order to enhance information quality. Shanks and Tay (2001) define quality as "fitness for use" and use of the semiotic framework for customer information quality. They argue that development of a whole view of customer information is seen as a codified knowledge management strategy. It holds not only integrated information that helps legacy systems but also additional behaviour and interaction that help to provide high quality customer service. In essence it can be inferred that the $360^{O}$ view has strategic implications in improving the quality of customer information. Once the need for creation is addressed the attention needs to be drawn towards challenges in utilisation of this $360^{O}$ view of customer.

Pockard (2009) found that creation of $360^{O}$ view of customer alone is an imperfect CRM strategy as it does not give profitable relationships with the customer. Therefore, it is very important to use the $360^{O}$ view of customer in a right format for each customer communication. The importance of application along with the creation of the $360^{O}$ view of customer is highlighted. However, in order to achieve creation and application of $360^{O}$ view of customer effectively, there are considerable complexities in terms of organisational elements such as culture, processes, systems and their interrelationships. Al-shammari (2009) discussed broadly some of these elements like people, processes and technologies in the context of CKM. However, they need to be refined and addressed in the context of the 360$^{O}$ view of customer.

The summary of the literature reviewed (Greenberg, 2009; Liautaud, 2010; Smalley, 2000; Gibbert et al, 2002) highlights the need for 360$^{O}$ view of customer in terms of the following aspects: a) creating consistent experience of the customer throughout organisation; b) improving the quality of customer information; c) communicating with customer in a fully informed way; and d) enabling new channels of innovation and growth. There is a significant gap in literature regarding these aspects and 'how to achieve 360$^{O}$ view' (Zanjani et al, 2008; Liautaud, 2010; Salomann et al, 2005; Pockard, 2009).

## 2.9 RESEARCH QUESTIONS

The critical review of literature has shown there is a lack of appropriate framework for managing customer knowledge in order to achieve 360$^{O}$ view of customer in organisations. Hence the core research problem *("How to manage customer knowledge and achieve 360$^{O}$ view of customers in organisations?")* is not yet resolved in the extant literature. The following research questions were derived from the above research problem to address some of the empirical inadequacies and research challenges mentioned from the literature review.

RQ1. What are the factors that affect customer knowledge management in organisations?

RQ2. How do various organisational elements influence CKM in achieving the $360^O$ view of customers and providing effective customer solution?

RQ3. What are the strategies, initiatives and measures to be adopted by organisations for each of the identified factors to manage the customer knowledge effectively and achieve $360^O$ view of customers?

Addressing the above three research questions in an integrated manner provides necessary elements to develop a framework for practicing CKM and thereby achieving $360^O$ view of customers in organisations. To address these research questions and research problem in appropriate way, a research strategy needs to be adopted.

## SUMMARY

This chapter presented extant research within the domain of customer knowledge management and associated concepts. Based on this extant literature, critical discussion has been provided on various CKM theories and frameworks. This chapter also emphasised current CKM challenges with respect to imminent need for $360^O$ view of customers among organisations. This chapter has been concluded with formation of three major research questions based on gaps identified in the literature.

# 3. RESEARCH PARADIGM, METHODOLOGY AND DESIGN

*"The mind can proceed only so far upon what it knows and can prove. There comes a point where the mind takes a higher plane of knowledge, but can never prove how it got there. All great discoveries have involved such a leap"* – ***Albert Einstein***

## INTRODUCTION

This chapter provides a critical review of available methodological choices to deal with the research problem and derived research questions. It includes description and analysis of choices within each of the following: research paradigm with its epistemological and ontological stance, research methodology, and operational research design. This chapter presents the assessment of various options in the light of research aim and objectives, and provides rationale for each of the research options adopted.

## 3.1 CKM RESEARCH: PROBLEM, GOAL AND QUESTIONS

The proposed research will focus on development of a framework for 360$^{O}$ view of customer within the context of customer knowledge management (CKM) taking into consideration all three dimensions; knowledge about, for and from customer. This will require reviewing organisational elements such as culture, processes, systems, and restructuring relevant functional areas like CRM and marketing to orient towards CKM. Therefore, the following core research problem was defined for this study.

"**How to manage customer knowledge and achieve 360$^{O}$ view of customer in organisations while encompassing the fundamental organisational elements?**"

A review of literature has revealed that current concepts and theories to adopt and improve CKM in organisations are inadequate to address the research problem (Gibbert et al, 2002; Salomann et al, 2005; Al-Shammari, 2009; Zanjani et al, 2008; Liautaud, 2010). Therefore, the goal of this research is:

"**To develop a holistic framework for practicing customer knowledge management to achieve 360$^{O}$ view of customer in organisations**"

In order to achieve the research goal, following research questions were derived from the above research problem to address some of the empirical inadequacies and research challenges revealed from the literature review.

RQ1. What are the factors that affect customer knowledge management in organisations?

RQ2. How do various organisational elements influence CKM in achieving the 360$^{O}$ view of customers and providing effective customer solution?

RQ3. What are the strategies, initiatives and measures to be adopted by organisations for each of the identified factors to manage the customer knowledge effectively and achieve 360$^{O}$ view of customers?

The first research question includes a thorough review of existing literature and empirical research in organisations to identify various factors affecting CKM.

The second research question entails how various organisational elements can be improved or developed both individually and in an integrated manner. Therefore, the outcome can guide organisations to effectively manage customer knowledge by aggregating $360^{O}$ view of the entire customer knowledge that the organisation holds.

The third research question considers various strategies, initiatives, practices and measures undertaken by different case organisations for each of the factors and evaluates those findings from empirical studies against extant literature.

Addressing the above three research questions in an integrated manner provides necessary elements to develop a framework for practicing CKM and thereby achieving $360^{O}$ view of customers in organisations. To address these research questions and research problem in appropriate way, a research paradigm needs to be adopted.

## 3.2 RESEARCH PARADIGMS

Some authors define paradigm as “a world view, a general perspective and a way of breaking down the complexity of the real world” (Patton, 1990; Wittgenstain, 2009) while other authors define it as “a basic set of beliefs that guide action” (Guba, 1990; Denzin and Lincoln, 2005). In spite of multiple perspectives with minor variations, the concept of research paradigm and its constituents have been developed continually from the inception among research community. Kuhn (1962) first introduced the concept of research paradigm and defined it as “the set of practices that define a scientific discipline during a particular period of time”. Collis and Hussey (2009) adapted an operational definition of research paradigm as "a philosophical framework that guides how scientific research should be conducted, based on people's philosophies and their assumptions about the world and the nature of knowledge".

The research paradigm is determined based on researcher's epistemological, ontological and methodological premises that guide research. Denzin and Lincoln, (2005) notes that the researcher approaches the world with a set of ideas (ontology) that specifies a set of questions (epistemology) which are instrumental in enabling specific way of investigation (methodology). In other words, the three philosophical foundations (ontology, epistemology and methodology) of research paradigm stimulate researcher's thinking towards following three questions respectively: 'what is the form and nature of reality', 'what is the relationship between the inquirer and the known' and 'how do we know the world, or gain knowledge of it'. The response to these three fundamental questions or underlying philosophical foundations enables classification of research paradigms.

Classification of research paradigms varies widely between two-fold and five-fold with inconsistent terminology in literature. Some authors group research paradigms in to 'positivist' and 'phenomenological' (Burrell and Morgan, 1979; Easterby et al, 1991) while some others group them into 'positivist' 'critical theory' and 'interpretivist' (Gephart, 1999). Saunders et al (2007) used four-fold classification through grouping of paradigms into 'functionalist', 'intertapretive', 'radical humanist' and 'radical structuralist' while Guba and Lincoln, (1994) classified them into 'positivist', 'post-positivist', 'critical theory' and 'constructivist'. At later point, Lincoln and Guba, (2000) extended their four-fold classification to five-fold by adding 'participatory/cooperative paradigm' based on work of Heron and Reason, (1997). There is a bit of vagueness and inconsistency in the usage of terminology among various authors. For example, Lincoln and Guba (2000) view constructivist paradigm as a version of interpretivism while Gray (2004) notes that constructivism epistemology is closely linked to interpretivism theoretical perspective.

Many authors note that there are two main paradigms based on ontological, epistemological and methodological premises (Collis and Hussey, 2009; Gray, 2004: Kumar, 1999; Burrell and Morgan, 1979; Easterby et al, 1991; Morgan and Smircich, 1980). In the context of this research, author adopts two-fold classification of research paradigms and categorises them into positivism and interpretivism. Here anti-positivism, phenomenology and constructivism are considered either as different terminology by different authors for interpretivism or a version of it. The major difference between positivism and interpretivism on the basis of philosophical foundations (ontology, epistemology and methodology) are presented briefly in the Table 3.1 below. The following section provides detailed description and evaluation of these paradigms in order to determine the applicability to the research problem.

| | **Positivism** | **Interpretivism** |
|---|---|---|
| **Ontology** (nature of reality) | Naïve Realism | Relativism |
| **Epistemology** (nature of knowledge) | Objective | Subjective |
| **Methodology** (process of research) | Deductive | Inductive |

**Table 3.1: Philosophical differences between Positivism and Interpretivism**

### 3.2.1. Determination of Research Paradigm

Choosing an appropriate research paradigm is of paramount importance as it determines the philosophical perspective of the research. Burrell and Morgan (1979) support this and note that "to be located in a particular paradigm is to view the world in a particular way". However, aptness of philosophical premises for the research problem determines particular paradigm and resulting view.

#### *3.2.1.1 Positivism*

Positivism with naïve realistic ontology assumes that reality is neither time bound nor context bound and hence it can be generalised. Positivist paradigm presumes that true reality exists and is strictly governed by cause-effect relationship. It also asserts stable pre-existing patterns or order that can be uncovered. With objectivist epistemology, positivists take a stance that knowledge is independent of observer and can be described in a systematic way. With deductive methodological premise, positivists generally use experimental or quantitative methodologies to verify hypothesis and uncover objective knowledge. (Collis and Hussey, 2009; Denzin and Lincoln, 2008; Lincoln and Guba, 2000; Schwandt, 2000, Gephart, 1999)

Gray (2004) notes that natural sciences have been progressing with positivism and are strengthened through discovery of scientific laws. Collis and Hussey (2009) suggest that positivism is applicable in case of hypothesis testing, large sample and artificial setting.

#### *3.2.1.2 Interpretivism*

Interpretivism with relativist ontology asserts that the world is socially constructed and theories are built from multiple realities. Interpretivism assumes that social reality is constructed through experience of social beings with dynamic world. With subjectivist epistemology, interpretivists emphasise that knowledge is based on subjective beliefs, values, reasons and understandings along with observable phenomena. With inductive methodological premise, interpretivists co-create the meaning and induce own subjective experience to the research. Generally, interpretivism makes use of hermeneutics or qualitative approaches to construct knowledge through inductive reasoning. (Denzin and Lincoln, 2005; Gray 2004)

The research problem developed for the study lead towards interpreting and understanding various relevant organisational phenomena. The research problem and research questions cannot be addressed effectively either by testing a hypothesis which is positivist paradigm or by critically questioning the existing framework/theory which is critical theory. A thorough analysis of research paradigms conjointly with research problem and research questions indicate that interpretivist paradigm is more appropriate for this study when compared with positivism and critical theory (Gephart, 1999).

## 3.3 RESEARCH APPROACH (Quantitative & Qualitative continuum)

Based on analysis and discussion, interpretivist paradigm has been adopted to address research problem of this study. Determination of research paradigm leads to analysis of research approaches along the continuum of quantitative and qualitative research in order to determine most appropriate approach for addressing research problem and derived research questions. A brief overview of qualitative, quantitative, and mixed methods is provided in order to explore their suitability to address research problem. Table 3.2 below provides comparison of research approaches across following five criteria: scientific method, view of human behaviour, common research objectives, nature of reality, and nature of observation.

| | **Quantitative Research** | **Mixed Methods Research** | **Qualitative Research** |
|---|---|---|---|
| *Scientific Method* | Deductive or 'top-down' | Deductive and inductive | Inductive or 'bottom-up' |
| *View of human behaviour* | Behaviour is regular and predictable | Behaviour is some-what predictable | Behaviour is fluid, dynamic, situational, social, contextual, and personal |
| *Common research objectives* | Description, explanation, and prediction | Multiple objectives | Description, exploration and discovery |
| *Nature of Reality* | Objective | Pragmatic view of world (What works is what is real or true) | Subjective, personal, and socially constructed |
| *Nature of observation* | Attempt to study behaviour under controlled conditions | Study behaviour in more than one context or condition | Study behaviour in natural environments. Study the context in which behaviour occurs |

**Table 3.2: Comparison of quantitative, mixed methods, and qualitative research approaches**

## 3.4 DETERMINATION OF RESEARCH APPROACH

Generally, Interpretivist paradigm proposes using qualitative methodologies. In addition, the research goal of this study and the derived research questions seek answers that stress '*how* organisational elements influence CKM', and this illustrates the qualitative nature of inquiry. A review of different approaches (Table 3.2) including quantitative, qualitative and mixed methodologies indicates that qualitative research is appropriate to address the research problem of this study as it focuses on many complex organisational elements which are qualitative in nature.

There are different methodologies within interpretivist paradigm and qualitative approach. Collis and Hussey (2003) argue that the important criterion for selection of methodology is to ensure the highest quality in terms of credibility, transferability, dependability and conformability.

## 3.5 DETERMINATION OF RESEARCH METHODOLOGY

Based on interpretivist paradigm and qualitative approach adopted for this study, multiple research methodologies have been considered for evaluative discussion in order to choose the most appropriate one for addressing the research problem and questions effectively. However, some qualitative methodologies such as clinical models, feminism, and post-structuralism have not been considered for evaluation due to its clear inappropriateness in the present research context. The qualitative research methodologies considered for discussion include hermeneutics, phenomenology, narrative-research, ethnography, participative-enquiry, action-research, case-study, and grounded-theory (Creswell, 2007; Merriam, 2002; Denzin and Lincoln, 2005; Greenwood and Levin, 2007; Collis and Hussey, 2009). Practices and criteria within each of these methodologies have been assessed for appropriateness in the context of this empirical research study.

***Hermeneutics*:** Denzin and Lincoln (2005) describe hermeneutics as "an approach to the analysis of texts that stresses how prior understandings and prejudices shape the interpretive process”. Some elements of this research methodology like meticulous analysis of text may be useful in terms of enabling a researcher to read between and beyond lines. However, historic focus and prejudices that shape the interpretive process are major constraints in the present research context. The research problem along with derived questions focus more on contemporary practices/issues of managing customer knowledge in organisations, and weigh against hermeneutics for this research study.

***Narrative-Research:*** Creswell (2007) describes narrative as “a term assigned to any text or discourse, or, it might be text in the context of a mode of inquiry in qualitative research with a specific focus on the stories told by individuals”. Narrative research including its multiple forms such as biographical study, autobiography, life history, and oral history is best for capturing detailed stories or life experiences (Chase, 2005). As the focus of this research aim is not on life experiences this methodology is not appropriate to address the research problem.

***Phenomenology:*** While narrative research focuses around life of a single or small number of individuals, phenomenology centres on phenomenon which is a lived experience of several individuals. Considering that the research problem is not to uncover a phenomenon which is commonly shared among several individuals, this phenomenological research methodology is not relevant within this context.

***Ethnography:*** With its origins in anthropology, ethnography is an in-depth study of culture in its natural setting over a long period of time mainly through observation. This research methodology may be of considerable use in studying the effects of organisational culture in managing customer knowledge but aims and objectives of this research is much broader to include other dimensions such as processes and technology. In addition to this, acquiring organisational access for close observation of people and culture over a long period of time can act as major constraint. These limitations indicate incompatibility of ethnography to this empirical research.

***Participative-Enquiry:*** Collis and Hussey (2009) notes that "participative enquiry is a methodology that involves the participants as fully as possible in the study, which is conducted in their own group or organisation". Within the context of this study, it is not sufficient to conduct research in own group or organisation to address the research problem. To develop a CKM practise framework it is more effective to conduct research in multiple organisations and assimilate best practises from all of them. In addition, involving participants fully throughout the study for research purposes is not practically feasible. These restrictions point out inadequacy of this methodology within this research study.

***Action-Research:*** Initially articulated by Kurt Lewin as a type of research methodology, action-research can be described as a systematic approach to investigation that enables practitioners to evaluate their work and find effective solutions to problems they encounter on job (Stringer, 2007; McNiff and Whitehead, 2006). Herr and Anderson (2005) also support this view and notes that “action research is an inquiry that is done by or with insiders to an organisation or community, but never to or on them”. In contrast to traditional forms of research, a distinctive feature of action research is, it is done by practitioners themselves and is based on the assumption that researcher is able to change the parameters. Taking into consideration that researcher does not have same access as a practitioner to change parameters and analyse effects, practical problems associated with this research methodology makes it difficult to pursue. Within the present research context, it is practically not feasible to make changes to CKM practices in large organisations for research purposes within a given timeframe. It is extremely difficult to obtain permissions to execute changes in organisational practices with uncertainty in effects and outcomes. In addition, the research problem and derived research questions do not necessarily need implementing changes and analysing effects to develop an intended CKM practice framework. A careful consideration of research aims and objectives in the light of above mentioned constraints indicate inappropriateness of action research methodology.

***Case-Study:*** Collis and Hussey (2009) describes case study as a methodology that is used to explore a phenomenon in its natural setting using multiple methods to obtain in-depth knowledge. Careful observation of research questions also indicate emphasis on exploring the phenomenon of CKM within organisations in its natural setting and gaining in-depth understanding in order to achieve 360$^{o}$ customer view. Considering the research aim and objectives, this methodology has shown a close match at peripheral level but would need an in-depth assessment to ascertain its appropriateness.

***Grounded-Theory:*** Glaser and Strauss (1967) proposed grounded theory as an alternative to abstract theorising and hypothesis oriented research methodologies. Basic criterion within this methodology is that the theory needs to be grounded in observations or data. As grounded theory is drawn from data, it is likely to enhance understanding and offer insights. The research problem and derived questions aims to gain insights and develop in-depth understanding of CKM practices in organisations. Preliminary review of this research methodology in the light of research aim and objectives has indicated compatibility at the outset but requires detailed evaluation to ensure its suitability.

An initial assessment of various qualitative methodologies in addressing the research problem and derived questions has indicated incompatibility with hermeneutics, phenomenology, narrative research, ethnography, participative-enquiry and action-research. The following sub-sections present critical evaluation of two short-listed methodologies i.e. grounded-theory and case-study in order to uncover the most appropriate one.

### 3.5.1 Grounded-Theory

Collis and Hussey (2009) define grounded-theory as “a systematic set of procedures used to develop an inductively derived theory about phenomena”. The intention of grounded theory study is to move beyond description in order to generate or discover a theory that explains process, action or interaction on phenomena. Strauss and Corbin (1998) warn that grounded researchers should not be so steeped in the literature that their creative efforts become impeded or constrained. Creswell (2007) also notes that this methodology is good to use when a theory is not available to explain a process. These authors indicate that grounded theory is of immense value only when researcher has little knowledge of the subject field of qualitative enquiry. However, author has reviewed several theoretical frameworks within CKM subject domain and developed an understanding of relevant concepts to guide further research. Some authors criticised this particular aspect of grounded theory that it advocates ignoring implicit theories which guide work at early stages (Bryman, 1998; Silvermann, 2005; Kandadi, 2006).

Creswell (2007) notes that a typical grounded theory researcher conducts 20 to 30 interviews based on several visits “to the field” to collect interview data to saturate the categories. In grounded theory, a category represents a unit of information composed on events, happenings, and instances. This saturation of categories is an iterative process where researcher gathers data/information from field, analyse the data, gather more information, and so forth until the theory is elaborated in all of its complexity.  Considering the timeline of this research study and limited access to empirical organisations, it might be difficult to collect data until the categories are saturated. In addition, it is difficult to ascertain when the theory is sufficiently elaborated or when categories are saturated particularly in broader area like customer knowledge management with multiple dimensions.

The above discussion highlights some concerns of the grounded theory methodology within the context of this research, especially in terms of field study and data collection mechanisms. These limitations have led to non-adoption of grounded theory methodology for empirical data collection. However, data analysis approaches of grounded theory are well developed and would be considered during evaluation of various data analysis techniques.

### 3.5.2 Case-Study

Yin (2003) argues that the type of research question, the control an investigator has over actual behavioural events, and the focus on contemporary as opposed to historical phenomena can determine the suitability of 'case study' as a method of doing research. In the context of interpretivist paradigm and qualitative approach, Creswell (2007) suggests case study research to study one or more cases in a bounded setting or context.

The proposed research intends to collect empirical data from organisations within their real-life context through case study method in order to develop a practice framework for CKM to achieve a $360^{O}$ view of customers. Yin (2003) defines case study as an "empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident." Collis and Hussey (2003) describe case studies as exploratory research, used in areas where there are few theories or a deficient body of knowledge. Eisenhardt (1989) supports this view with a roadmap for building theories from case study research.

The case study method is preferred for this research study as it relies on multiple sources of evidence (Yin, 2003) and has the flexibility to gather data from document analysis, interviews, questionnaires, observations, white papers and archives (Eisenhardt, 1989). It provides great variety of evidence which includes direct observation of the events being studied and interviews of the persons involved (Yin, 2003). This is an effective option to evaluate processes, systems and approaches of CKM in case organisations and to develop a framework. Case study method can deal with a broad research topic (Yin, 2003) like exploring the practice of CKM in organisations. The case study method is used to explain complex multivariate conditions within real-life context. This approach is often used where several elements and multiple dimensions of a subject need to be studied comprehensively (Yin, 2003). The approach is appropriate for this research as development of framework will require an exhaustive study of several organisational factors that can influence CKM in organisations. The explanatory questions such as 'how' and 'why' direct towards case study method as research strategy (Yin, 2003). Therefore, the case study method can assist in addressing the research problem which is 'how to manage customer knowledge and achieve $360^{O}$ view of customers in organisations'. The case study method is preferred when research focuses on contemporary events and has a very limited control of behavioural events (Yin, 2003). In organisations there is very limited control over behavioural events and the proposed research focuses on contemporary events and aspects of managing customer knowledge. Therefore, case study method can serve as a suitable research approach for this study.

A major limitation of case study method is the generalisation of findings. Yin (2003) claims that by adopting multiple case studies instead of using single case study method, this issue can be addressed to a great extent. Other limitations are related to bias in terms of design of research and individual bias in highly subjective areas. Individual bias where there is scope of misinterpretation can be solved to some extent by open-ended questions in questionnaire design and to a large extent by review of questionnaire with experienced researcher. Bias in design and capabilities of researcher is a common challenge in any research methodology and can be addressed by adopting stringent research design and analysis criteria. Yin (2009) also notes that once the methodology is chosen, the next task is to develop a research design. The following section provides a detailed discussion on varied aspects of research design within the context of this exploratory and explanatory study.

## 3.6 RESEARCH DESIGN

Several authors emphasised the importance of research design as a logical plan that enables researcher in getting from initial set of questions to a set of conclusions (Philliber et al, 1980; Nachmias and Nachmias, 1992; Yin, 2003; Bryman, 2004; Kumar, 2008; Collis and Hussey, 2009). Philliber et al, (1980) thinks about research design as a blueprint for a researcher dealing with at least four problems: what questions to study, what data are relevant, what data to collect, and how to analyse the results. Nachmias and Nachmias (1992) also support this view and describe research design as a plan that guides the investigator in the process of collecting, analysing, and interpreting observations. Collis and Hussey (2009) adapt the definition of Vogt (1993) and describe research design as ‘science and art of planning procedures for conducting studies so as to get the most valid findings’. Yin (2009) presents following five core components of case study based research design:

1. *Study’s questions* – This first component has been addressed in chapter-2 through development of research questions based on critical literature review.

2. *Study’s propositions, if any* – A proposition directs attention to something that should be examined within the scope of the study. Two propositions have been incorporated within study to enable research to move in right direction. These propositions have been mentioned in description of research questions (RQ2 and RQ3). They are ‘how various organisational elements can be improved or developed both individually and in an integrated manner’ and ‘what strategies, initiatives, practices and measures lead towards customer centricity and development of 360$^{o}$ customer view in organisations’.

3. *Study’s units of analysis* – Units of analysis within this context are cases and selection of these case organisations will be discussed in detail within sample selection (i.e., sub-section 3.6.1).

4. *The logic linking the data to the propositions* - linking of data to propositions would include developing categories and themes encompassing cross-case synthesis.

5. *The criteria for interpreting the findings* – At data analysis and interpretation stage, various techniques within diverse methodologies will be assessed in order to adopt appropriate one.

As indicated above, the first two components were addressed through formation of research questions and propositions based on critical review of relevant CKM literature. The following subsections emphasise and develop third, fourth, and fifth design components within the context of this research study.

### 3.6.1 Sample selection

The third component of research design i.e. units of analysis refers to selected sample of cases to be investigated as part of empirical research. Stake (2005) notes that unit of analysis can be of varied forms such as an individual, group, project, process, role, event, or entity like organisation etc. Yin (2003) notes that the selection of appropriate sample is based on primary research questions. The research questions defined for this study requires exploring various organisational elements affecting CKM for achieving $360^{O}$ view of customer in organisations. A comprehensive understanding of organisational phenomenon pertaining to CKM needs careful selection of sample for empirical research.

As case-study methodology is adopted for this empirical research, a review of various designs within this methodology would offer guidance on units of analysis or sample selection at an over-arching level. Yin (2009) highlights four main types of case-study designs based on two dimensions as follows: a) holistic single case study, b) embedded single case study, c) holistic multiple case studies, and d) embedded multiple case studies. A brief description of these four case-study designs is presented pictographically within figure 3.1 below.

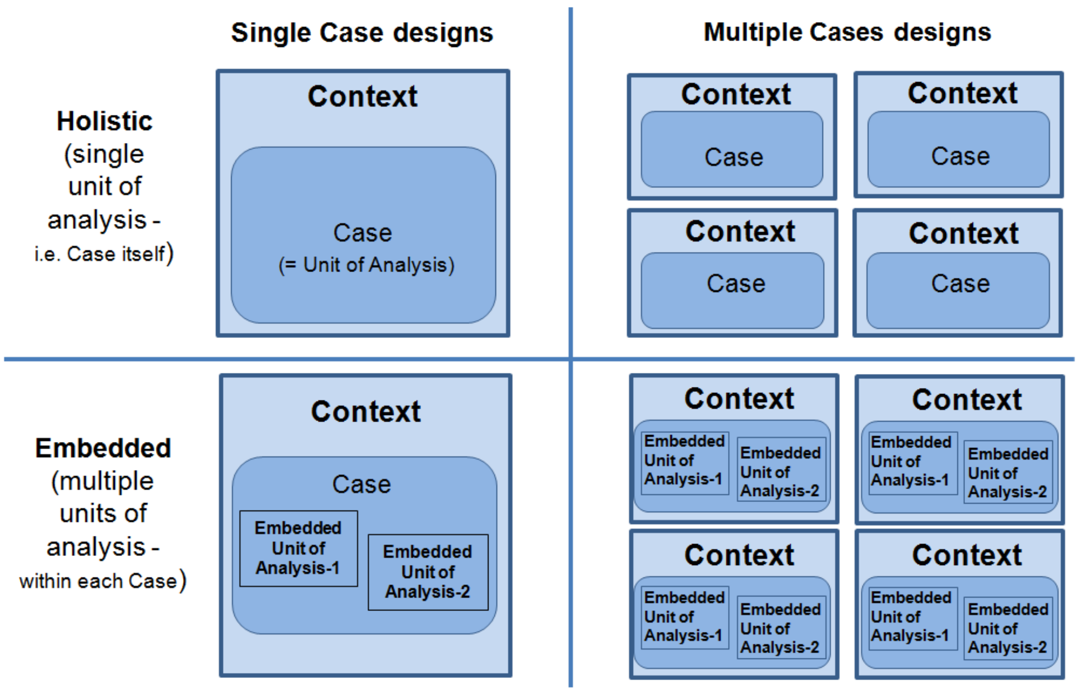



**Figure 3.1: Four types of Case-Study designs (Adapted from Yin, 2009)**

In comparison with single case design, multiple cases design allows analysing within each setting and across settings. This multiple cases design can add value in the present research context as it enables understanding the similarities, differences and patterns between the cases. This research adopts holistic multiple case-study design as research questions defined for this study aims to understand CKM practices in organisations. In order to study CKM's organisational phenomenon, each case organisation is considered as a single unit of analysis. The sample selection for this study uses purposive sampling with an intention to achieve variety and intensity as suggested by some proponents of case study methodology (Miles and Huberman, 1994; Yin 2003). In order to achieve the variety, sample selection will ensure case organisations from varied industries. The case organisations will range from medium to large in size, which have dedicated customer related functional divisions. A sample of five case organisations has been selected based on characteristics like type of industry, knowledge intensity, access to relevant functional divisions, and maturity of CKM practices. Taking into consideration the research problem and derived questions, the following criteria have been used to choose case organisations and interviewees for empirical research.

a) The cases should be either medium or large organisations with dedicated customer related functional divisions.

b) Each of the case organisations should be from a different industry sector to capture variety of practices from multiple industries.

c) The case organisations should have customer-oriented initiatives and practices which will enable research study to capture some important ones.

d) The interviewees should be actively involved in either customer-related functions such as marketing, CRM, customer services or relevant supporting functions.

e) The interviewee’s role within selected case-organisations should be no less than a manager with significant domain knowledge, preferably an executive with comprehensive understanding of customer knowledge management.

Based on the above criteria five case organisations from different industries were selected. This would enable generalisation of the observed phenomena beyond a specific industry in addition to fine diversity of responses. In addition, an average of more than two interviewees for each organisation was chosen for this research study as multiple interviewees would improve validity and reliability. Interviewees are either executives or senior managers with good understanding of customer knowledge within their departments and at organisational level. Some of the designations include 'Marketing head for novel products', 'Vice-President for Supply Chain vertical', 'Head of Customer Services', 'Head of information Technology', 'Regional Manager – Sales and Marketing', 'Senior Manager – Strategic group', etc. Four of these case organisations are private sector companies while fifth is a public sector education provider from the United Kingdom with operations in more than ten countries. Details of these case organisations are as follows:

| Organisation | Total no. of Employees | Operational Presence | Industry |
|---|---|---|---|
| Genpact | ~60,000 | 20 countries | Business Process Management |
| Biocon | ~7,000 | 75 countries | Bio-Pharmaceutical Industry |
| Honeywell-ADI | ~130,000 | 100+ countries | Security Devices Distribution |
| Daimler | ~275,000 | 150+ countries | Automotive Industry |
| University of Bolton | ~600 | 10+ countries | Higher Education Management |

**Table 3.3: Overview of Case organisations**

#### *3.6.1.1 Genpact*

Genpact is a global leader in business process and technology management services with annual revenues of $1.6 billion (2012). Started in 1997 as a business unit within General Electric (GE), Genpact became an independent company in 2005 thereby delivering services to clients outside the GE family most of which are large business organisations. Genpact's customer base in 2013 has been increased to more than 600 clients which are large organisations and services are being provided through a network of 74 delivery centres across 20 countries. Genpact has domain expertise in multiple industry verticals and helped its clients to perform well within their industries. Genpact delivers valuable business insights to its clients through targeted analytics, technology services, reengineering expertise, and advanced risk management.

Taking in to consideration Genpact's wide range of operations and broad range of clients from multiple industry segments, it is a valuable case for studying customer knowledge management and some insights. This is useful to get a glimpse of important aspects in multiple industries as Genpact caters to the needs of clients from varied industries. In addition, prominence associated with deeper understanding of clients and greater levels of customer interaction in order to deliver business process and technology management service provides an excellent opportunity to study the customer knowledge management practices.

#### *3.6.1.2 Biocon*

Biocon, India's largest biotech company is focused on delivering affordable innovation by providing integrated research services to leading global pharmaceutical and biotechnology companies. Biocon was incorporated as Biocon India Private Limited on November 29, 1978 under the Companies Act as a joint venture between Biocon Biochemicals Ltd. of Ireland and an Indian entrepreneur. Over the years, Biocon has grown from an enzyme-manufacturing company into a fully integrated biopharmaceutical enterprise which delivers innovative solutions, ranging from discovery to development and commercialization, leveraging the cutting edge science, cost-effective drug development capabilities and global scale manufacturing capacities, to move ideas to market. Over the decades, Biocon has evolved into an emerging global biopharmaceutical enterprise, serving its partners and customers in over 75 countries.

As a company providing innovation solutions through integrated research services to global pharmaceutical and biotechnology companies, Biocon needs to work intimately with its clients on a long-term basis. Managing customer knowledge along with the needs to maintain long-lasting relationship with clients makes it an appropriate case to obtain some insights into various practices that are useful in building long-term customer relations.

#### *3.6.1.3 Honeywell-ADI*

Honeywell-ADI, which is a subsidiary of Honeywell, is a leading global distribution business encompassing security, fire, A/V and low voltage products, with over 200 branches across the world; covering North America, EMEA (Europe, Middle East, Africa), and Asia Pacific (India, Australia). Honeywell-ADI in India offers its customers a one stop shop value proposition at convenient branch locations, with multiple brands, local stocking, competitive pricing, training & technical support and customer business centre all under one roof. Honeywell-ADI helps its customers to grow with the products they need, saving their precious time and allowing maximum success for all of their installation projects. Honeywell-ADI is a well established distributor representing over 80,000 products from over 700 manufacturers with a goal to build a successful distribution model to complement the local needs. Honeywell-ADI's product portfolio includes highly reputable & well established brands. Honeywell-ADI's success is built on offering customers convenient branch locations, outstanding product selection, training, great service and support. Honeywell-ADI is committed towards building a trusted partnership with its customers by offering business tools, products, and services to enhance their capabilities thereby growing their business.

As Honeywell-ADI has commitment towards building and maintaining trusted partnership with its customers through various supporting mechanisms like customer business centre and training services, the case organisation can provide useful insights into customer knowledge management. Honeywell-ADI in India with its one stop shop value proposition i.e., all services under one roof for customers can present opportunities for comprehensive understanding through empirical data collection at one stop shop.

#### *3.6.1.4 Daimler*

Daimler is one of the world-renowned automotive companies selling its vehicles and services in nearly all the countries of the world. The company has generated revenue of €118 billion in 2013 with sales of 2.3 million vehicles and a workforce of 275,000 people. The Daimler Group is one of the largest producers of premium cars and the world’s biggest manufacturer of commercial vehicles with a global reach. The company’s brand portfolio includes Mercedes-Benz, Smart, Freightliner, Western Star, BharatBenz, Fuso, Setra and Thomas Built Buses. The Daimler group has five divisions Mercedes-Benz Cars, Daimler Trucks, Mercedes-Benz Vans, Daimler Buses and Daimler Financial Services. Daimler Financial Services provides financing, leasing, fleet management, insurance and innovative mobility services.

The Group has won many prestigious awards at regional and international levels. Some of these awards include 1st place in service awards and internet sales awards in 2012. In addition company has won ‘European Data Innovator Award’ in 2013 for its contributions to ‘Linked Data’ and ‘Open Data’.

Taking into consideration global reach of Daimler group with sales of 2.3 million vehicles and prominence associated with managing interactions with customers purchasing high value products, Daimler serves as a useful case in learning the practices associated with customer knowledge management. As the company won service award, internet sales award, and European Data innovator award, it can provide some insights in to best practises within these areas which are closely related to customer knowledge management..

#### 3.6.1.5 University of Bolton

The University of Bolton has its educational roots traced to early 1800’s and education has been delivered on the site in Bolton since 1824 originally as Bolton Mechanics Institute. Over the last 190 years the institution steadily improved its status and became ‘Bolton Institute of Higher Education’ in 1982 before acquiring University status in 2005. The organisation came into being in January 2005 when the Privy Council gave approval for its title choice. This public sector organisation has operations in multiple countries with programmes running in various affiliate institutions. The organisation has a student body of around 11,000 including those studying at partner institutions on the University programmes. Organisation explicitly expressed the mission to ensure that every student matters and it is treated as an individual and has strategic focus to increase empowerment of students as ‘customers’.

With customers coming from diverse backgrounds and the need to create learning experience for each of the customers on an individual basis makes it a useful case to understand the practices associated with customer knowledge management. Prominence associated with enhancing the knowledge of the customer as the core aspect of the service and need to retain customer records in verifiable manner for life-time presents opportunities to learn varied aspects in customer knowledge management.

### 3.6.2 Data Collection

Collis and Hussey (2009) note that qualitative data is normally transient and needs to be understood within context. All four types of case-study designs reviewed earlier (Figure 3.1 on page 83) highlights context as a broader aspect within which ‘cases for data collection’ are placed. Considering the need to understand the context within holistic multiple case-study design adopted for this study, author endeavoured to collect background information before actual data collection. In addition, author made efforts to establish context through presentation and explanation of research intentions at every opportunity starting from the point of contacting selected case-organisations. For instance, invitation letters requesting case organisations to participate in this research study were drafted deliberately with an intention to establish the context.

Many authors emphasise collection of qualitative data from multiple sources (Silverman, 2005; Creswell, 2007). Yin (2009) suggests six main sources for gathering data or evidence within case study methodology. These are documentation, archival records, interviews, direct observations, participant-observation, and physical artefacts. Each of these sources of evidence is reviewed in Table 3.4 (on page 92) with an intention to comprehend their strengths and weaknesses. This empirical research considers all these sources in order to triangulate the data. However, primary data would be collected in these case organisations through interviews with the help of questionnaire. Weaknesses associated with interviews (Table 3.4 on page 92) would be addressed to a large extent through following measures.

a) Bias due to poorly constructed questions would be minimised through review of questionnaire (i.e. data collection tool which is used to assist interviews) by experienced researchers well before actual interviews.

b) Response bias i.e. inaccuracies due to poor recall would be dealt with recording of interviews using a voice recorder, with prior permission from interviewees.

c) Reflexivity (i.e. interviewee gives what the interviewer wants to hear) will be tackled with consolidation of other sources of evidence (eg: participant observation and direct observation within case-organisation). In addition, minimum of two interviewees from each case organisation would minimise interviewee bias as well.

| Source of Evidence | Strengths | Weaknesses |
|---|---|---|
| **Documentation** | 1) Stable – can be reviewed repeatedly<br>2) Unobtrusive – not created as a result of the case study<br>3) Exact – contains exact names, references, and details of an event<br>4) Broad coverage – long span of time, many events and many settings | 1) Retrievability – can be low<br>2) Biased selectivity, if collection is incomplete<br>3) Reporting bias – reflects (unknown) bias of author<br>4) Access – May be deliberately blocked |
| **Archival Records** | (Same as above for Documentation)<br>Precise and Quantitative | (Same as above for Documentation)<br>Accessibility concerns due to privacy reasons |
| **Physical Artefacts** | Insightful into cultural features<br>Insightful into technical operations | -Selectivity<br>-Availability |
| **Direct Observation** | 1) Reality – covers events in real time<br>2) Contextual – covers context in event | 1) Time consuming<br>2) Selectivity –broad coverage difficult without a team of observers<br>3) Reflexivity – event may proceed differently because it is being observed<br>4) Cost – hours needed by human observers |
| **Participant Observation** | (Same as above for direct observation)<br>Insightful into interpersonal behaviour and motives | (Same as above for direct observation)<br>Bias due to investigator’s manipulation of events |
| **Interviews** | 1) Targeted – focuses directly on case study topic<br>2) Insightful – provides perceived causal inferences | 1) Bias due to poorly constructed questions<br>2) Response bias – Inaccuracies due to poor recall<br>3) Reflexivity – Interviewee gives what the interviewer wants to hear |

**Table 3.4: Review of Various Sources of Evidence within Case Study Methodology**

(Source: Adapted from Yin, 2009)

Marshall and Rossman (2006) suggest that in-depth interviews are quite extensively relied as primary method of data collection for qualitative researchers. For a qualitative research study, unstructured or semi-structured interviews are appropriate where interviewer poses more open-ended questions and is likely to query for in-depth clarifications. Primary data would be collected in these case organisations through interviews with the help of questionnaire. In the context of proposed research, semi-structured interviews are appropriate as they will allow designing a question set beforehand which will help guide the interview in desired direction. Although interviews have drawbacks like high cost, time consumption, and issues of confidentiality, they have the advantage of gaining an in-depth understanding from knowledgeable respondents or practitioners (Collis and Hussey, 2003).

Face to face interviews within premises of case-organisations will be emphasised in order to capture supplementary qualitative aspects from direct and participant observations. Participants in this research study will be senior managers and practitioners from relevant departments like marketing, CRM, customer services, and directly associated divisions such as Information Technology (IT), Research and Development (R&D) etc. In-depth interviews with these senior managers in conjunction with questionnaire (Appendix-1) developed for this empirical research intends to capture both individual and integrative approaches practised in case organisations. After each interview, notes will be made to describe contextual observations which are not explicit within interview record. Empirical data collected from each case organisation and associated interviews will be reviewed continually with an intention to improve the process of data collection.

### 3.6.3 Data Analysis: Grounded Theory Tools and Techniques

Creswell (2007) describes that data analysis in qualitative research consists of preparing and organising the data for analysis, then reducing the data into themes through varied stages of coding, and finally representing the data appropriately in findings and discussions. Miles and Huberman (1994) also support this view and define data analysis as consisting of three concurrent flows of activities which are data reduction, data display, and conclusion drawing and verification. In the proposed research study, the above three activities will be considered carefully and data will be analysed in the context of cross case analysis as the study will comprise of multiple cases.

Considering the case-study methodology adopted for empirical research and data collection, suitability of associated case-study data analysis will be assessed and discussed. Yin (2009) suggests five analytical techniques i.e. pattern matching, explanation building, time-series analysis, logic models, and cross case synthesis for case study analysis. Pattern matching and explanation building assume defining specific variables prior to data collection and comparing empirical pattern with the predicted one based on prior defined variables. As this research aims to uncover various factors, it is not feasible to define specific variable prior to data collection and limit the scope to those elements. Time-series analysis is not applicable as the research problem defined for this study is not to analyse and capture sensitivity of the phenomena over a period of time. The fourth technique logic model is not pertinent as the research objective is not to observe complex chain of events by manipulating variables.  The fifth technique cross-case synthesis is relevant for this research as it involves analysis of multiple case studies. Cross-case synthesis suggests aggregating findings across a series of individual cases but does not provide any practical guidance on how to systematically analyse data from each case-organisation. Cross-case synthesis lacks clear and accepted set of conventions to code and analyse qualitative data.

In spite of being a strong proponent of case study methodology, Yin (2009) concedes that “the analysis of case study evidence is one of the least developed and most difficult aspects of doing case studies” because the techniques still have not been well defined. Given these shortcomings and complexities with case study method, alternative data analysis methods have been considered for assessment. These alternative methods include quantifying methods such as informal methods, content analysis and non-quantifying methods such as general analytical procedure, data displays, quasi judicial method, cognitive mapping, and grounded theory (Collis and Hussey, 2009). A review of these varied methods in the light of the research problem and associated objectives indicate grounded theory approach as a valuable alternative for qualitative data analysis due to its well defined techniques (Strauss and Corbin, 1998). Charmaz (1995) also notes that techniques of grounded theory are used extensively in organisational studies. The grounded theory techniques such as open coding, axial coding, and selective coding are well defined and very useful in systematic analysis of qualitative data, particularly primary data emanating through interviews in case organisations. A brief description of these analytical coding techniques is presented in the following sub-sections.

#### *3.6.3.1 Open Coding*

This first analytical step in grounded theory i.e. open coding is meant to ‘open’ up the data and expose the thoughts, ideas and meanings contained therein. Open coding is a process of identifying and categorising concepts along with associated properties and dimensions in data. Strauss and Corbin (1998) define the concept as “an abstract representation of an event, object, or action/interaction that a researcher identifies as being significant in the data”. The concepts identified from the data are named with labels which represent them and similar concepts are grouped together into categories. Open coding process encompasses developing these categories further in terms of their properties and dimensions. The categories developed would be useful in addressing the first research question that is factors influencing CKM in organisations.

#### *3.6.3.2 Axial Coding*

The purpose of axial coding is to begin the process of reassembling data that were fractured during open coding. Axial coding is the process of relating categories to their subcategories around the axis of categories, and linking categories at the level of properties and dimensions. The properties and dimensions are explored in depth to identify variety of conditions, actions/interactions, and consequences associated with a phenomenon. Axial coding enables researcher/analyst to look for cues in the data that denote how major categories might relate to each other (Strauss and Corbin, 1998). Identifying and explaining the conditions and consequences associated with varied aspects of CKM would assist in addressing second research question which is regarding how various organisational elements influence CKM to achieve $360^{O}$ view of customers. Actions and interactions associated with phenomenon of CKM and $360^{O}$ view of customer in organisations would address third research question partially in aspects such as interrelation between various organisational elements and factors within them.

#### *3.6.3.3 Selective Coding*

Selective coding is a process of integrating and refining categories until the major categories are finally integrated to form a larger theoretical scheme. Selective coding provides techniques to aid integration which include a) writing the storyline, b) moving from description to conceptualisation, c) using diagrams, and d) reviewing and sorting through memos. In addition, selective coding assists in refining the theory which consists of reviewing the scheme for internal consistency and logic, filling in poorly developed categories and trimming excess ones, and validating the scheme (Strauss and Corbin, 1998). Within the context of this research study data from cases would be integrated into core categories representing the main theme of research at this stage. Integration of major categories representing varied aspects of CKM to achieve $360^{O}$ view of customers would be helpful in addressing third research question through development of an integrative CKM practice framework for organisations.

### 3.6.4 Data Analysis Protocols: Data Accuracy and Triangulation

Triangulation in the proposed research study will be achieved through the use of multiple case studies and cross-case analysis which in turn will also be supportive in generalisation. Data triangulation in each case will be attained through collection and analysis of data from multiple sources of evidence such as direct observations, documents, archival records, participant observation, physical artefacts and interviews. For instance, the interview data will be compared with data from other sources in case organisations. In addition, within a single case organisation, a minimum of two participants will be interviewed from each case organisation to address interviewee biasness. Investigator triangulation will be accomplished through involvement of experienced researchers at varied stages of data analysis. As part of investigator triangulation, chunks of data will be analysed and compared by other researchers independently. In addition, summary of analysis output will be presented for review from participants and ensure analysis is triangulated.

## 3.7 RESEARCH ETHICS

During the entire course of the research study, appropriate measures will be taken to ensure that due attention is given to research ethics and integrity at each stage including data collection, analysis and thesis write-up. This includes dealing with confidentiality issues with case organisations in terms of data collection such as a) protecting the interests of case organisations by safeguarding the empirical data; b) obtaining informed consent from respondents; c) ensuring that participation is voluntary with an option to withdraw at any stage; and d) Assuring and maintaining anonymity in agreement with participants. With respect to analysis and thesis write-up, accuracy of data will be assured through validation from respondents and triangulation.

## SUMMARY

This chapter presented a brief explanation of research problem, goal and questions and evaluative discussion of research paradigms, methodologies, and research design components. Based on these discussions in the light of research problem and questions, rationale is provided for selection of interpretivist paradigm, qualitative approach, case-study methodology for data collection and grounded theory techniques for data analysis. This chapter concluded with brief description of measures to ensure triangulation and conformity with research ethics.

# 4. FINDINGS AND ANALYSIS

*"All research in cultural [social] sciences in an age of specialisation, once it is oriented towards a given subject matter through particular settings of problems and has established its methodological principles, will consider the analysis of the data as an end in itself". **– Max Weber***

## INTRODUCTION

This chapter presents findings and analysis of this empirical study which forms the basis for the proposed framework. This entire chapter is primarily based on findings emanated out of five case studies conducted during this research and it has been divided into two parts. The first part presents analytical findings in the form of core categories and constituent factors which are derived from data analysis using open, axial, and selective coding techniques of the grounded theory approach. Each of the core category and its constituent factors originated out of empirical data are discussed in the light of extant literature in order to ensure the rigour and reliability of the findings. The second part of this chapter is focused on framework development i.e., all the analytical findings presented in first part are integrated to develop a comprehensive CKM practice framework.

## 4.1 FINDINGS, ANALYSIS, AND DISCUSSION

Primary data has been collected from executives and senior managers of five case organisations, through interviews, as indicated in the research methodology chapter. These interviews have been recorded with the consent of the interviewees. Along with this, supporting documents such as organisational and departmental charts indicating hierarchical structures, relevant brochures and pertinent leaflets have been collected from the interviewees where-ever possible. In some case organisations, sub-ordinates of these executives and senior managers were also interviewed along with extended observations beyond interviews. For instance, senior managers within couple of case organisations encouraged interacting with their sub-ordinates for specific questions and also recommended observing their business environment for longer duration in order to understand the exact context. These unplanned aspects such as interacting with participants sub-ordinates and extended observations beyond interviews along with planned aspects like conducting and recording interviews combined with collection of supporting material from case organisations enabled triangulation of data obtained.

Primary data gathered through interviews in the recorded format has been transcribed manually and this process led to familiarisation with data at a deeper level. This familiarisation presented a broad image and issues in data. Subsequently, upon reflection on ‘how to deal with vast interview data’ which is segregated by interviewees, it has been combined and re-segregated in-line with questionnaire. Then, this re-segregated data has been analysed through application of three ground theory techniques which are open coding, axial coding, and selective coding. The following paragraph provides a brief description on application of these coding techniques which resulted in conceptualisation, cataloguing, and linking consequently.

Initially, 'transcribed and re-segregated data' has been analysed using open coding technique which led to identification and categorisation of concepts along with associated properties and dimensions. This open coding technique has led to identification of over seventy sub-concepts which have been categorised in to forty four concepts. At the second stage of data analysis, axial coding has been applied, which is focussed on relating categories to their sub-categories and linking categories at the level of properties. Application of axial coding technique after open coding technique has led to identification of twenty seven categories which are named as factors here-after. Finally selective coding has been used to integrate and refine the identified factors (twenty-seven categories) to form five core-categories. These five core categories are further integrated to form a larger theoretical scheme i.e., CKM practise framework encompassing all core-categories within this final stage of data analysis. The following paragraphs and subsequent sections provide detailed discussion on findings and analysis along with a brief description of 'how research questions have been addressed'.

The application of open coding and axial coding techniques, from grounded theory approach has resulted in identifying 27 factors influencing CKM in organisations. These factors directly answer the first research question drafted for this study i.e., *'What are the factors that affect customer knowledge management in organisations?' (RQ1)*. These 27 factors are categorised into 5 core categories based on their similarities with the use of selective coding technique (Strauss and Corbin, 1998).

These core categories which can also be viewed as organisational elements aim to answer the second research question i.e., *'How do various organisational elements influence CKM in achieving the $360^O$ view of customers and providing effective customer solution?' (RQ2).* Table 4.1 (on page 104) presents these five core categories and all constituent factors within them. For each of the constituent factors within these five core categories, various CKM practices and associated solutions are derived from the data analysis in conjunction with comparative discussion from the extant literature. The CKM practices and solutions associated with each of the factors intend to address the third research question i.e., *'What are the strategies, initiatives and measures to be adopted by organisations for each of the identified factors to manage the customer knowledge effectively and achieve $360^O$ view of customers?' (RQ3).*

The integration and categorisation of the 27 factors led to the development of five core categories which are components, drivers, culture, processes, and technology. The first core category which is '*Components of CK*' predominantly focuses on different components of customer knowledge such as knowledge for, from, and about customers. The second core category, *'Drivers of CKM'* is mainly associated with formulation of business need, value, and objectives for customer knowledge management. *'Culture'* core category is connected to the development of customer-oriented culture to improve service delivery. The fourth core category, 'Processes' deals with optimisation of various business processes to enhance quality of customer service. The fifth and final core category, *'Technology'* is related to IT infrastructure for facilitating customer knowledge management in organisations. The categorisation of 27 factors into 5 core categories helps in comprehending the findings at an overarching level, as shown in Table 4.1 below. The following sections present analysis and discussion associated with these core categories and their constituent factors in more depth.

**Table 4.1: CKM Core categories and constituent factors (Source: Author)**

| **Core Categories** | **Constituent Factors** |
|---|---|
| | |
| **Components of Customer Knowledge (C1)** | Knowledge for customers (F1)<br>Knowledge from customers (F2)<br>Knowledge about customers (F3) |
| **Drivers of CKM (C2)** | Market Environment (F4)<br>Innovation (F5)<br>Regulatory Environment (F6) |
| **Culture (C3)** | Training (F7)<br>Reward mechanisms (F8)<br>Alert raising (F9)<br>CKM devoted capabilities and resources (F10)<br>Hybrid roles with matrix reporting (F11) |
| **Processes (C4)** | Frequent problems and common solutions (F12)<br>Knowledge of people and their capabilities (F13)<br>Holistic awareness and group decision making (F14)<br>Risk register (F15)<br>Domain experts (F16)<br>Outsourcing (F17)<br>Customer knowledge creation and acquisition (F18)<br>Customer knowledge sharing and usage (F19)<br>Contact with customer (F20)<br>Collaboration with business partners(F21)<br>Quality Assurance (F22)<br>Return on Investment (F23) |
| **Technology (C5)** | IT tools (F24)<br>Knowledge-base or Centralised database (F25)<br>Web-accessibility and access levels (F26)<br>Technology provisions for customer (F27) |

### 4.1.1 Components of Customer Knowledge (C1)

The findings of this study highlighted that customer knowledge provides significant inputs in effective decision making associated with service delivery in multiple forms. All case organisations indicated that the dynamic usage of three types of customer knowledge comprising of 1) knowledge for customers 2) knowledge from customers and 3) knowledge about customers, is vital in providing valuable customer solutions. The empirical research revealed that customer knowledge is useful in earlier recognition of struggling-customers and enables organisations to make smarter interventions to improve their participation. This customer knowledge is useful in proactive diagnosis of customer experience and these smarter interventions are immensely helpful in customer retention. All case organisations confirmed acquisition of customer related information from multiple sources such as business partners including value chain partners, relevant government bodies such as regulatory bodies, and the marketplace which encompasses customers themselves. However, organisations should deliberate on how to use the acquired customer knowledge effectively and efficiently. For instance, Edelman and Singer (2015) highlighted that organisations can use customer knowledge proactively to lead rather than follow, by creating new value at every step of their decision journeys through a combination of effective technologies, processes and organisational structures.

Majority of the case organisations indicated the importance of building wider picture of customer and acknowledged the advantages associated with 360$^{o}$ degree view of customer in this area. For instance, one case organisation demonstrated an initiative named as ‘customer life cycle project’ which is an attempt to map all the things that a customer has to go through and looking at where interventions can be made. This research also surfaced concerns associated with time and resources in keeping up with changes while taking into consideration growing customer communication through contemporary avenues like social media in addition to management of traditional channels. This empirical study not only supports and strengthens the extant CKM literature presented in second chapter but also made valuable contribution to customer knowledge domain with practical insights. Table 4.2 below indicates substantiating concepts associated with this core category which includes constituent factors and presents substantiating codes (interviewee responses) extensively. An alpha-numeral (e.g. LC149), which is assigned to each of the codes displayed, assists the author in identifying code origins and context.

**Table 4.2: Customer Knowledge Components (Core Category C1): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Customer Knowledge Types, Knowledge regarding Customer, Cycle of Knowledge, Knowledge of Customers, Bigger picture of Customer, Knowledge for Customers (F1), Knowledge from Customers (F2), Knowledge about Customers (F3), |
| Substantiating Codes |
| Ya we probably got all of them [that is] knowledge for, from, and about customers [in our organisation]. (LC149) |
| [Our] organisation views this [i.e., knowledge for, from, and about customers] as a cycle of knowledge. (CC175) |
| So that [knowledge for, from, and about customers] becomes a flow of information for us... we also keep sharing with our manufacturers or vendors the sales data... for example, how their brand is performing through our channels... where [and] which states [i.e., regions] they have been [performing] well, which states need much more focus, which state can have a specific scheme... so we keep on feeding those information back. (LC247) |
| We manage what people [customers are] asking for, not asking for, what information to be derived and also what is happening with the government as well. (LC280) |
| What we do very well... is building a bigger picture of customers while they are here... so you can imagine the problems... [may be] customer has a problem with finance [that is] fees, or whatever that the academic doesn't know about (LC303) |
| If they [customers] contacted us, we can log in as an enquiry... it shows the contact details, what contact we had and what he requested and all those things (LC325) |
| I mean it [360$^o$ view of customer] can be good, because you get to know the customer (LC327) |
| 360$^o$ view of customer can be bad, because there are certain aspects of the customer you don't want to know. [Even] if customer does everything right, knowing the legacy of customer which has some mishaps in the past, do you [still] want to associate [those mishaps] with the customer (LC328-9) |
| At my level, I can see information regarding customer and drill down [further like] what his transactions are, along with any technical issues... with respect to that customer, [I can see them] on the same system and within the same screen. (LC358) |
| [In] customer services department, everybody has that same information about you [customer] ... whomever you are talking to... then, that is very efficient customer service (CC364) |
| It's always that inability to share information among the services in organisation... [which] is a big problem around retention of customers. Why these customers choose this [service] and when can organisation identify that the customer is starting to struggle and I think there is a case for having a broader view of the factors that give an indication of the customers struggling. (CC369) |
| There might be some issues like these... struggling customers never used some services they are expected to use, and not being able to identify all [customers] who have financial difficulties... This knowledge about customers can enable smarter interventions. (LC370-1) |
| It is keeping up with [usage of] various social media communications [in strengthening 'knowledge for customers']... and [of course] how we have enough time to service [maintain] them properly (LC379) |
| First listen to the customer... rather than you start digging what you know about their wants (CC420) |

If we start to respond, we [will come to] know what they [customers] want from us, [and] what we want from them. (LC425)

I think, using the information they [customers] have given us, we can make it [service] more specific and relevant to them,... so there are more chances of reaching [customers effectively] (LC426)

It [achieving 360$^o$ view of customer] depends on so many factors, first on the customer... [like] what customers do you have and then it depends on your processes within your own organisation and your organisation culture... probably a lot more factors than [that], for instance your suppliers, suppliers' processes, the supplier's culture and so on and so on. (CC429)

To be very honest, everything about the customer is very important and there are some critical activities and there are some non-critical activities... critical will be financial aspects, so when we deal with customer financial data, then we emphasize our people to pay more attention to it. (LC474)

Along with formal and informal feedback, complaints play a very important role in the first few days or months when starting any new business. It is part of your [organisation's] learning path... if your customers complain you will learn... obviously we can't start from scratch and get 100% smooth from beginning (LC479)

Customers who come up with specific feedback [like] you made a certain mistake please reform [rectify] this... if it is not captured in the knowledge management document, [then] it is incorporated... If it is [already] there in the documents, screenshots of the tools and any simulation documents that we used are very important (LC480-1)

If I wanted to know something that I didn't know already, I will just commission a survey.... the only thing is customers are over-surveyed or I will probably go to the customers union and ask them for a focus group or I could start a focus group of my own. (LC482)

We will try to get customer or market knowledge we do not have, through national government bodies or/and any other organisation that might be able to provide or we will ask specific group or ourselves [teams formed for the purpose] if we need. So [thus], we use focus groups or feedback sessions. We get the groups of customers together and ask them [to obtain required customer knowledge]. (LC483)

In addition to general types of customer or market knowledge acquisition, we use outsourcing to several organisations. General types include [utilisation of services of] market research organisations, ordering private market research, collaboration with value chain partners and business partners, encouraging knowledge acquisition by sales and marketing staff, usage of research publications and relevant industry specific associations. (LC484)

We do [sometimes commission private market research] and it depends on whether the customer is sponsoring it [or not]. So it really has to be a need for [customer] process and then, you seek customer approval (LC488-9)

We have this GRMs [Global Relationship Managers] and GROs [Global Relationship Officers], they interact with customers and then we have our internal reviews with them [GRMs and GROs]. Well, they feed us with the information what customer is asking for, what the main areas are, where we need to improve (LC490)

All the knowledge is given to us by the customer and if external consultant knowledge transfer is required, then it is [always] arranged by the customer (LC491)

We got lots of knowledge of our customer in some ways but in other ways, I don't think, we use the knowledge we have got (LC580)

Lot of key decisions are influenced by customer knowledge. About all sorts of things we do, [we always need to check] are they going to suit customer? I would say 90% of what we do is about service delivery in one form or other.(LC610)

In our customer acquisition team, everything we do is influenced by customer knowledge, because if we get it wrong, we won't [be able to] acquire customers. (LC611)

Customer knowledge has deep impact on [taking] very long term decisions in our 'marketing and innovation' department. Generally it is strategic because all I have to do is to take forward this product which could launch in another 6 years or more(CC612)

Key decisions influenced by customer knowledge include what kind of product you want to sell, what pricing you want, which segment you want to operate in... All put together, you want to walk through the economic segment you want to operate in... Everything that we do, I think, would fall into this (LC613)

I think, if we follow the right method in terms of capturing the [customer] knowledge and more importantly, using it. Then we get really good quality... so we produce quality work for the customer. Quality is a by-product of good knowledge management and you eventually get high customer satisfaction(LC614-5)

Typically in process point of view, time to time we document the history [happenings]. And we keep on adding the history [happenings] to that existing book... we don't erase... we don't overwrite. So you have entire evolution from past many years. [For instance,] what was in 2001, what was in 2002, we have everything. so even [if] I am not there involved in 2001, today I have document exactly [conveying] how it was and it is the source one. (LC628)

From the process history document book, you exactly know what were the things done, what were the flaws... we also document the failures. So, the people know what are the problems faced... why it fails... it may not be lack of knowledge. May be it is lack of information or lack of technology at that time. It's very easy to carry on... You know exactly why we didn't try it. (LC629)

So it [customer knowledge] goes and sits in 'GLUE' [management tool], so it is classified by client and by process. So for a specific client we did such and such process and here is the documentation for it. So that's how it is classified. So everything will be integrated into 'GLUE'. (LC630)

[In my organisation,] 'Customer Life Cycle project' is an attempt to map all the things that a customer has to go through and looking at where interventions can be made. (LC704)

Customer knowledge is shared within the organisation and sometimes [with relevant] business partners (LC786)

The following subsections provide discussion on each of the three components of customer knowledge. As theoretical aspects of these three components are dealt with in literature review chapter, following three subsections focus on empirical findings along with their analysis and discussion. Each factor is divided into two sub-divisions named *'Factor discussion and review'* and *'CKM practices and associated solutions'*. *'Factor discussion and review'* provides analytical discussion on the factor specific empirical findings and comparative review with extant literature, while, *'CKM practices and associated solutions'* presents the CKM related best practices and constructive solutions associated with each factor, precisely in bullet points format.

#### *4.1.1.1 Knowledge for customers (F1)*

**Factor discussion and review**

This empirical research indicated that majority of the case-organisations reach out to customers through interactive ways such as organising open days, customer fairs and exhibitions, and also provides customer trainings where there are provisions for expert advice. Customer training emerged from empirical data in a noteworthy manner and its significance is immensely growing among service-oriented organisations and hi-tech product industries. One case-organisation emphasised that they share case-studies regarding relevant products and packages which provide insights into associated challenges and opportunities. In order to share confidential and valuable information, some case-organisations provide secure online access for customers while some case-organisations prefer face to face meetings with relevant teams from client organisation. In addition to these, all case-organisations highlighted usage of both active and passive media such as organisation website and sales shop broachers to disseminate 'knowledge for customers'. Majority of these organisations collaborate with external advertisement agencies and advertise on various media such as television, radio, billboards, websites, etc to reach out to target customers more effectively.

**Table 4.3: Knowledge for customers (F1): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Customer Training, Social Dissemination of Knowledge for Customers, Interactions with customers, Telephone Support to Customer, After-Sale Customer Support, Customer Access to Knowledge Assets |
| Substantiating Codes |
| [We organise] online training events for customers for specific activities like online enrolment (LC46) |
| We have varied and multiple ways through which we give knowledge for customers. These multiple ways include, conducting events like open days and career fairs, where there are provisions for expert advice. This also includes sending information to customers and making information available [to them] through social media. (LC153) |
| Social dissemination of the information for customer is huge across all the services (LC154) |
| Knowledge for customer, basically we also do [it] when we train customers on different products categories, when we train them on how to install [and] how to mission (LC174) |
| In the category '[Knowledge] for customers' ... we collaborate with external advertisement agencies and... [some aspects are] obvious to the customers [i.e.,] what you can find on our home page, on our sales shops, broachers, ... if we configure a product now, you can find out specifications... that's how it is managed. (LC177) |
| We advertise on radio, billboard, web, digital, Facebook, Twitter and we try to get people [prospective customers] to relevant events here. (LC210) |
| We will include them [prospective customers' contact details] in our list to send our publication and newsletters. (LC212) |
| For direct customers, we run marketing programmes where marketing team typically stays in touch with the customer where they talk about [relevant upcoming events including] trainings. (LC220) |
| For example, we share case studies [with customer] regarding relevant products and packages including challenges and opportunities. (LC223) |
| In terms of loyalty schemes, we have certain practices... in every branch, top set of customers get some benefits. For example, it can [be] price, technical support, or free trainings. (CC224) |
| Training is a very core part of our business, so we do provide training rather in our premises or customer premises (LC253) |
| In customer services department, we got to the stage where we are so busy clocking [in] how many people we got and what they were asking us, [sometimes] we have no time to answer what they were asking us (LC274) |
| We don't provide price online, customers get in contact with account managers because we don't know who is accessing our system, whether it is customer or customer's customer. (LC453) |
| [We use] EXCEL spreadsheets mostly... but talking about [business analysis or business intelligence tools] we have this PR tool which helps us to understand sales, further [beyond] the quotations sent out to customers (LC460) |
| Customers have also got [access to] the trainings that we organise. Specialised training that we organise in the branch itself. (LC516) |
| Events [that we organise] give us that knowledge base [and] platform because I get a chance to interact with my customers while I am training [them] on something… I am learning back something form them. (LC529) |
| When we are talking about giving the knowledge to the customer, I talk mostly about the training part. There are very strong strings and parameters [our] training centres have [in place]. The trainings are designed [thoughtfully]... absolutely [all] the modules are designed so as to ensure that we add the right value and impart the right knowledge to the customer (CC646) |
| Customers have access to product portfolio for viewing and downloading. Customers also have access to their own statement of transactions they did with us and this is designed in the process. In addition, they get information from us on demand. (LC702) |
| Customers have all the access online in terms of booking orders and tracking their items. So, customers can transact with us online. (LC703) |
| Online support and telephone based support is free but if we are going on-site [i.e., customer premises], it will be chargeable basis (CC805) |
| [In our] call centre these guys sit in the two member team, right now they are planning to extend [it] to four members, one for each major category (LC826) |
| [In our organisation] GCSE – Global Customer Support Centre is only telephone support [to customers] (LC827) |
| It is not necessary that they [customers] need to buy, they can bring the end users to our branch and they can show the products and working condition. (LC828) |

This empirical study also stressed the growing importance of social media in dissemination of knowledge for customers. One case organisation highlighted that social dissemination of information for customers is huge across all the services. Call-centre support emerged as one of the important sources for dealing with customer queries especially within the context of after-sale service. Table 4.3 (on page 109) presents substantiating concepts and codes for this factor.

**CKM practices and associated solutions**

a) Organisations need to acknowledge the importance of disseminating ‘knowledge for customers’ and consider multiple avenues to reach out to customers along with interactive ways such as customer fairs and exhibitions.

b) Organisations can collaborate with external advertisement agencies to design content and advertise on both active and passive media such as television, radio, websites, billboards, banners, broachers, point of sale kiosks, etc.

c) Organisations especially within hi-tech or service oriented industries can give considerable importance to customer training as it one of the emerging areas that has potential to develop sustainable competitive advantage.

d) Organisations can consider fast growing social media to facilitate social dissemination for a wide variety of services and enable call centre support within after-sale service context especially, for dealing with specific customer queries.

#### 4.1.1.2 Knowledge from Customers (F2)

**Factor discussion and review**

Empirical research indicated that organisations recognise the importance of acquiring knowledge from customers and adopt practices like commissioning surveys, organising focus groups, enabling customer feedback mechanisms to gauge quality of experience, etc. In addition, case-organisations capture relevant information from day-to-day interactions while dealing with customer issues or queries, and get hold of customer comments and complaints by being part of customer associations and networks. Case-organisations even attain knowledge from consumers or end-users through demand-chain partners by enforcing feedback reporting mechanisms through central systems at consumer interaction points. One case-organisation in India even gives due importance for acquiring knowledge regarding customer demand through other avenues such as manufacturer commissioned consumer research and analysis. This case-organisation also has customer segmentation based on how much knowledge it can gain from customers. The empirical data further indicates that organisations tend to form partnerships or collaborations with business customers and try to understand their needs at more depth by discussing required documentation, finances, and all other relevant stuff in order to set joint goals in advance. This empirical research highlighted that case-organisations give high importance to aggregate knowledge from customers that is either a number of customers raising a certain aspect or a particular concern notified more often by customers. Table 4.4 (on page 112) presents some substantiating concepts and codes for this factor.

**Table 4.4: Knowledge from customers (F2): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Knowledge Co-creation with Customers, Feedback from Customers, Joint Collaboration with Customers, Learning back from Customers |
| Substantiating Codes |
| [We get] 'knowledge from customers' at organisational level through research like surveys and focus group work (LC7)<br>[We get] 'knowledge from customers' at national level by being part of that [national] network of organisations (LC8)<br>Along with knowledge [acquisition] through surveys and focus groups, we get the knowledge from front-line dealing with customer issues and queries. (LC150)<br>It is difficult to get customer involvement due to which, 'knowledge co-creation with customers' is difficult. [However,] some specific services like customer mentoring within customer services department might do knowledge co-creation with customer (CC155-6)<br>Getting knowledge through commissioned research in certain areas like 'prospects to different customer segments' can be thought of as knowledge co-creation with third party organisations. (LC159)<br>Knowledge from customers helps us to ensure that we pick the right product to reach up to the customer. (LC171)<br>Knowledge from customer... is our feedback process. Well, I think, we could get better there. I think, companies like Apple and Virgin... they are quite leading in this area [of] consumer and customer feedback. We are probably not so much advanced.... we have processes ... extended up to our sales shop....if there is a quality problem it is directly forwarded to us... indirectly it is customer feedback [through our retailer].... [Retailer] directly reports us through central system and [accordingly] we can really focus [on] which part, which category and so on... [and then] correct the quality problem.... we got good view of quality issues of customers. In terms of subjective things, our processes give feedback... details [through] questions like; do you like our particular product and so on and so on. (CC179)<br>In joint collaboration with customers, goals are set upfront. (LC190)<br>[We do] customer segmentation based on how much knowledge we can actually gain from the customers... c1, c2, c3 (LC194)<br>Once prospective customers are here, we register their details and take feedback from them regarding the event including whether they got the information that is needed. (LC211)<br>We make sure that the information and knowledge from customers will pass through the entire supply chain. (LC243)<br>In terms of attaining customer demand knowledge, we have a number of feedback mechanisms firstly we have comments and complaints system where everyone can put in the comment... all comments can be placed [on a single system] (CC270)<br>The feedback most probably can be around facilities, environments they interact with etc, [and] feedback of the particular services (LC271)<br>We also do annual survey where we ask people what they think. (LC272)<br>We will try to get feedback on quality of experience. (LC273)<br>I try to understand my customer needs and as I am in partnership with my customers (organisations) we discuss required documentation, finances and all relevant stuff. (LC285)<br>We attain customer demand knowledge through the manufacturers and through the feedback we keep on getting form the customers (LC294)<br>Demand knowledge, it's about what we get as feedback from the customers i.e., the quantity they order (LC297)<br>When you say identifying important customer knowledge, couple of things come to mind... one is, critical things may pop up once in a while [and] at that time, if we see something different happening or something difficult happening or something happening, we generally have an internal meeting weekly, [there we] see if this is critical, then we will look through our risk register (LC456) (LC457)<br>In terms of knowledge received from customer, it may come in the form of mail from customers. Even though there is no formal process or formal document, regular interactions happen between customers and sales guys or the account manager. These interactions happen every now and then [and] it is a regular process. (LC473)<br>In terms of different types of knowledge received from customer, it can be comments, formal feedback through questionnaires, informal feedback just talking face to face, and complaints received through complaints procedures. (CC475)<br>Along with comments, formal feedback, informal feedback and complaints, one more source is press (i.e. published press). If something happens to my organisational customer [it may be published in a newspaper]. If we see important news about our organisational customer, we try to see what the implications are to us. (LC476)<br>Customers can really write to us. Every customer knows the escalation metrics, so they would write to us directly (LC477)<br>Majorly feedback comes in the form of interactions, daily transactions that we do with customers. (LC478)<br>Events [that we organise] give us that knowledge base [and] platform because I get a chance to interact with my customers while I am training [them] on something… I am learning back something form them. (LC529)<br>Based on analysis of feedback from customers, a new tool and process is designed to enable quick response from sales person to customers in terms of quotations with prices. (LC636)<br>Sales and marketing people have interactions with customers and they contribute to knowledge base through constant feedback in formal discussions and meetings. (CC694)<br>Gone are the days when marketing is an inside out approach, it is now more often outside in approach. So you have to go out to the market and give what the customer wants, you can influence things but at the end of the day, you have to give what the customer wants, so you need to know the customers well (LC769)<br>If 40 customers are telling me something or 10 customers are telling me something then I would say that was reasonable... if |

| |
|---|
| 10 customers are telling me this doesn't work then that doesn't probably work. If only one customer is telling me that it might be that they had an unfortunate experience, then I can put it right (LC782) |
| If I have heard something a couple of times... well I mean I might hear it once and I might think its alright, if I am hearing it again then I might think, well, there might be something in that and we must be looking at that and I would hope that work through the whole department bearing in mind, you [may] never find the perfect [outcome]... its about trying to find... provide the best service you possibly can... within in the resources you have got to do it (LC783) |

**CKM practices and associated solutions**

a) Organisations should recognise significance of acquiring knowledge from customers and can make conscious efforts to capture relevant knowledge from multiple sources such as customer surveys, focus groups, commissioned research, customer complaints, feedback mechanisms, etc.

b) Organisations can look at every customer interaction as an opportunity to gain knowledge from customer and can consider joining customer associations and networks to get access to valuable interactions.

c) Organisations operating through demand chain partners can enforce central feedback reporting systems and mechanisms at customer interaction points.

d) Organisations can assimilate knowledge from individual customers and look at commonalities like many customers raising a certain aspect or a particular concern notified more often.

#### *4.1.1.3 Knowledge about customers (F3)*

**Factor discussion and review**

This research study indicated that organisational knowledge strategy would constitute of capturing information about customers along with their business relationship. The empirical data also highlighted that knowledge about customers is useful in ensuring whether organisations are making efforts in right direction to increase business in terms of average revenue per customer besides providing them with avenues to understand customers at more depth. In addition, knowledge about customers enables organisations to see services being used by each customer along with any details such as optional extras they have chosen, duration of service usage and associated implications for service delivery. The empirical data of this research study indicated that case-organisations have dedicated teams and multiple departments which have varied responsibilities for acquiring knowledge about customer. For instance, one case organisation has sales and marketing department, market research department, and even Macro/Micro economic analysis department which have implications for attaining and analysing knowledge about customers at both individual and aggregate levels. This research indicated that press media such as news papers and industry specific magazines can be a useful source for acquiring knowledge about organisational customers. This is in addition to normal ones such as capturing relevant customer information at various points during service delivery and registering details at events organised for prospective customers. Table 4.5 (on page 115) presents some substantiating concepts and codes for this factor.

**CKM practices and associated solutions**

a) Organisations should recognise the importance of gathering knowledge about customers as it guides their efforts in right direction i.e. towards sustainable growth by focussing more on appropriate customer segments.

b) Organisations can use knowledge about customers, their product consumption patterns, and business relationship to promote and cross-sell other useful products or value added services.

c) Depending on the size of the organisation, it can have dedicated teams or multiple departments with varied responsibilities to acquire knowledge about customers at both individual and aggregate levels.

d) Organisations can consider press media like news-papers and industry specific magazines or trade journals as a valuable source for gathering knowledge about organisational customers.

**Table 4.5: Knowledge about customers (F3): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Knowledge of Customers, Information about Customers, Knowledge about Market Changes, Customer or Market Demand Knowledge |
| Substantiating Codes |
| Being a pure B2B [Business to Business] format, knowledge strategy would constitute [acquiring] information about customers and their business relationship with us (LC80) |
| Organisation has huge knowledge of [about] customers because it does huge number of returns [interactions] about all sort of issues, [and] is always analysing a lot of statistical data available from government funding bodies. (CC151) |
| Organisation has knowledge about customers like what service they are using, how long they are using it, etc. If the usage [utilisation] of service by customer takes more than expected time, it has implications for the service. (LC152) |
| Knowledge about market changes and knowledge that impact customers would be [knowledge] about customers as well. (CC160-1) |
| Knowledge about the customer helps in terms of ensuring us whether we are in the right form [and] in right way. It also helps us in terms of understanding how do we increase our business like the average revenue per customer. This is [one of the] key elements for us as a [in terms of] measurement (LC172) |
| Knowledge about customer gives us lot of stuff and lot of strategising [strategic thinking] like whether we are doing the right things. For instance, whether organisation is growing or sinking in term of revenue from that customer (CC173) |
| The second category '[knowledge] about customers', is something within sales, relates to market research obviously... internal market research they also owns projects... external [market research] companies obviously [do research for us]... we have special department just for macro/micro economic coherences, analyses [on a] very big scale of countries ... in relation to our industry changes and things like that. (CC178) |
| Once prospective customers are here, we register their details and take feedback from them regarding the event including whether they got the information that is needed. (LC211) |
| Customer demand or market demand knowledge is gathered by market research department and microeconomics department. Sources from various prominent industry associations can [also] be helpful. There is a separate department [in our organisation] which looks at [takes care of] this aspect. (LC301) |
| If the impact of the loss of revenues for business customer is low on our revenues and our ability to continue the work, then that is immaterial (LC332) |
| It depends on what you need to know about the customer and it's so complicated to know all this stuff (LC430) |
| Along with comments, formal feedback, informal feedback and complaints, one more source is press (i.e. published press). If something happens to my organisational customer [it may be published in a newspaper]. If we see important news about our organisational customer, we try to see what the implications are to us. (LC476) |
| Gone are the days when marketing is an inside out approach, it is now more often outside in approach. So you have to go out to the market and give what the customer wants, you can influence things but at the end of the day, you have to give what the customer wants, so you need to know the customers well (LC769) |

### 4.1.2 Drivers of CKM (C2)

This research study surfaced three major organisational drivers for CKM, which are market environment, regulatory environment, and innovation. Market environment constitutes of competitors' disruptive products, attrition, change in market conditions, etc. Regulatory environment refers to legislation which enforces organisations to provide relevant 'knowledge for customers' both at corporate and product level and maintain 'knowledge about customers' within the guidelines of Data Protection Act. The present study revealed that regulatory guidelines and their execution varied significantly from one nation to another. Innovation is one of the key drivers for CKM as rising customer needs drive organisations towards developing new products and services in order to provide better solutions. Table 4.6 below presents substantiating concepts and codes for this category while the following sub-sections deal with factors within it.

**Table 4.6: Drivers of CKM (Core Category C2): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Customer Knowledge Drivers, Changes in Market Conditions, Competitive Environment, Market Environment (F4), Innovation (F5), Regulatory Environment (F6) |
| **Substantiating Codes** |
| Preparing a database with market information and analysing the data would help in identifying future [customer] retentions and reaching out to further customers including those in expanded horizons. (CC81) |
| If you want to manage innovation properly [continually], you obviously have to analyse the requirements of the customer, abilities of the supplier and [think about] how you bring them together. (LC257) |
| Change in market conditions is also important because we are speaking of novel products. (LC286) |
| Regulatory conditions, customer interactions and comparative products in the market can give good insights. (LC288) |
| Disruptive products from competition or some new discovery within the domain can have significant impact [i.e., challenges to organisation] in terms of providing better customer solution. (CC289) |
| Evaluating innovators' products or competitors' products gives good insights. (LC293) |
| In order to know complete 360 degree view we need to know [various aspects] from the regulators, innovators, marketers and [especially about] products which are available in the market. (LC390) |
| Innovation is more like how can I service [serve] my customer [in a better way]... many times we do focus through discussion, we talk to customers, we see their feedback. At least the loyal ones who have been with us for long time give us feedback [regarding] what needs to be changed in the system (LC502) |
| Our customers lead us towards innovation. We ask them lot of questions and try to get [valuable] information from them. (LC511)<br>Customers keep on feeding us with the issues they face while transacting with us. So that gives us opportunities to know [those that] we can improve upon further and stuff. This is a continuous process because our transactions require a lot of interactions and dealings with customers. (LC515) |

#### 4.1.2.1 Market Environment (F4)

**Factor discussion and review**

This empirical research indicated that dynamic market environment is one of the important drivers for CKM, as it has implications for organisational strategies and operational aspects. For instance, one case-organisation indicated that group targets are set based on data from previous years and market intelligence. Many case-organisations highlighted the importance of disruptive products from competitors in the marketplace and their position among customers' minds. In addition to disruptive products, market environment constitute of issues associated with attrition, i.e. competitive advantages going out along with employees leaving the organisation. Majority of the case-organisations acknowledged the challenges linked with attrition, while one case-organisation stressed the importance of customer knowledge management, considering high attrition levels in the range of 100 to 200% among specific teams. This empirical study indicated that recognising the emerging changes in market conditions and analysing the long-term impacts would help organisations in reaching out to potential customers in expanded horizons and identifying valuable future retentions. Even knowledge about market changes, that would impact customers, is also important as it has indirect implications for organisation's future approach.

Aghamirian et al (2015) emphasise that acquisition of knowledge and information from customers and consumers is vital, for survival and future success of organisations. They further assert that CKM forms a continuous and stable strategic process which enables organisations to gain competitive advantage, by changing customers from being passive recipients to strong partners with adequate knowledge. Al-shammari (2009) also echoes the same view and advocates that customer knowledge management is instrumental in attaining sustainable competitive advantages. Table 4.7 below presents substantiating concepts and codes for this factor.

**Table 4.7: Market Environment (F4): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Competitive Advantages, Market Knowledge, Attrition, Market Requirements, Market Intelligence, Disruptive Products from Competitors, Market Behaviour, Knowledge about Market Conditions and changes, Evaluation of the Market |
| Substantiating Codes |
| Preparing a database with market information and analysing the data would help in identifying future [customer] retentions and reaching out to further customers including those in expanded horizons. (CC81) |
| Lot of information has to flow in from the market and depending on that strategies have to be designed (LC82) |
| Once off-shored [i.e., work is outsourced], competitive advantages are going out of the company. (LC90) |
| Customers biggest fear is attrition (LC94) |
| Attrition can be quite high in some specific teams (may be more than 100%) even though it is reasonable at organisational level (CC97) |
| In KPO [Knowledge Process Outsourcing] kind of work... you have planning, you have [to assess] how the market is behaving... all those are the ones which are handled by KPOs, analytics teams and people are on that [task](LC107) |
| Practice teams do three things i.e., capturing knowledge from outside organisation, working on projects with clients, and working with analysts from the market. (LC122) |
| Knowledge about market changes that would impact customers [is very important] (LC161) |
| Change in market conditions is also important because we are speaking of novel products. (LC286) |
| The changes that happened today [would] have an impact 5 to 10 years down the road and foreseeing how they could impact... [and handling them] is my job (LC287) |
| Regulatory conditions, customer interactions and comparative products in the market can give good insights. (LC288) |
| Disruptive products from competition or some new discovery within the domain can have significant impact [i.e., challenges to organisation] in terms of providing better customer solution. (CC289) |
| Evaluating innovators' products or competitors' products gives good insights. (LC293) |
| For the companies that sell to masses... or huge amount of customers, I think it is important... to have a good statistical evaluation of the market, market requirements and customer requirements (LC360) |
| In order to know complete 360 degree view, we need to know [various aspects] from the regulators, innovators, marketers and [especially about] products which are available in the market. (LC390) |
| We will try to get customer or market knowledge we do not have, through national government bodies or/and any other organisation that might be able to provide or we will ask specific group or ourselves [teams formed for the purpose] if we need. So [thus], we use focus groups or feedback sessions. We get the groups of customers together and ask them [to obtain required customer knowledge]. (LC483) |
| Customers will come up with some enquiries which I would like to know [further]... we will identify the guy who is working on this, then we get update on what is happening in the market, so that creates knowledge for us. (CC530) |
| With respect to the [sales] funnel [and] opportunities that are happening, what is competition doing... for example, competition informs (indicates) something which comes on, much more like this when we interact with customers directly (LC531) |
| Customers are the best source [to get market information]..., with 500 customers that we are working with; we believe that's a huge resource to get information on different types. In the same market, you can verify the information regarding what is happening and [any relevant] stuff (LC647)<br>There is a stand-alone CRM system to maintain good relationship with some of the key influencers in the market. However, it is tricky to communicate certain things directly due to data protection issues (LC695)<br>Group targets are generally based on previous years' figures and market intelligence (LC741) |

**CKM practices and associated solutions**

a) Organisations should recognise the importance of scanning market environment to identify emerging changes in market conditions, such as varying customer demographics and analyse their implications on operational aspects and organisational strategies.

b) Organisations need to develop market intelligence, so that, they can figure out disruptive products from competitors in the marketplace and further assess their position among customers' minds through effective customer knowledge management.

c) Organisations need to consider growing attrition rates among market environment and understand the importance of retaining customer knowledge and competitive advantages in-spite of very high attrition in some teams.

d) Organisations should consider analysing long-term impacts of emerging changes, within the market environment, in order to identify valuable future retentions and potential customers in expanded horizons.

#### *4.1.2.2 Innovation (F5)*

**Factor discussion and review**

This empirical research study highlighted that innovation is a very important driver for customer knowledge management among organisations. Most of the case-organisations recognise that customer knowledge plays a pivotal role in effective innovation management, on a continual basis. One case-organisation stressed that 'knowledge from customers' i.e. varying customer requirements become the starting point for product or service innovation, while another case-organisation emphasised the importance of long-term collaborative projects with customer in developing innovative products. One case-organisation revealed that the practice of facilitating periodical review forums, where customers get together and participate in focussed interactions, helped it in generating new ideas and managing innovation continually. Another case-organisation stated that potential customers approaching them and saying that they are interested in a particular thing is a major source of innovation.

Most of the case-organisations also acknowledged that customers keep on feeding them with the issues, they face while transacting, and this continuous process of interaction and dealing with customers provide organisations with opportunities to innovate and improve further. This innovation can also be within the domain of service delivery process, i.e. when customers say things aren't working; organisations try and do things differently, so that, the entire process is effective in providing right solution to customers. This empirical study also revealed that customer-supplier coordination or linkage can have positive impact on innovation. For instance, one case-organisation highlighted the significance of facilitating a common platform where customer and supplier come together, while another case-organisation stressed the importance of analysing customer requirements, supplier abilities and bringing them together in managing innovation properly.

These empirical findings support and augment the extant CKM literature dealing with innovation (Lettl, 2007; Belkahla and Triki, 2011; Mei and Nie, 2007; Belkahla et al., 2014; Fang et al., 2009; Berthon et al., 2015). For instance, Belkahla et al (2014) argued that customer knowledge as a resource, for managing innovation, can improve organisations' primary ability to develop sustainable competitive advantage and enable them to do better than their opponents. Berthon et al (2015) emphasised that the activity of value creation is shifting from firms to customers based on their research on consumer-generated intellectual property (CGIP) and recommended that organisations should to manage CGIP strategically. Fang et al (2009) illustrated positive impact of customer participation in new-product value creation, based on their research on customer integration in the innovation process. They further suggested organisations to increase information sharing and customer-supplier coordination, along with customer and supplier specific investments, for continual innovation and development of products. Mai and Nie (2007) also ascertained this point i.e. 'knowledge sharing with customers and suppliers has a positive impact on innovation', through their empirical research.

Belkahla and Triki (2011) proposed an integrative approach that takes into consideration customer knowledge management and innovation, and came up with a concept of customer knowledge enabled innovation (CKEI). In addition, Belkahla et al (2014) further developed CKEI measurement scale, a practical tool, which allows managers to adjust and modify their innovation strategies continually among organisations. They further emphasise that CKM can play a key role in nurturing innovation and highlighted it as a superior determinant of innovation success. In similar lines, Lettl (2007) came to the same conclusion that, CKM plays a positive role in innovation process through customer involvement. Table 4.8 (on page 122) presents some substantiating concepts and codes for this factor.

**Table 4.8: Innovation (F5): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Innovation Management, Customer Led Innovation, Innovation for Cost Reduction, Inventiveness, Innovative Practices from Other Industries, New Ideas Generation, Innovation for Customer Convenience, New Discoveries within the Domain |
| Substantiating Codes |
| We are looking at innovation for cost reduction [in our organisation] and cost reduction makes products affordable to customers. [For instance], innovation to reduce cost by 50% or more in one vertical [is being pursued]. (LC164-6) |
| [In our industry,] customer comes up with a sector, an agenda and funds [the project aimed at] cost reduction innovation. So organisation need to innovate to get to that position (LC168) |
| Organisation has to [continually] think through and get better product or version either in inventiveness or cost reduction. (LC169) |
| We have to be in continuous watch to update our knowledge and to do this, constant interaction with academia and going to [i.e., attending] international conferences, is helpful. This provides access to empirical research based on precious customer knowledge (CC191) |
| We organise [trade] expo, which is platform where you bring the manufacturer and customer on one platform, and there is exchange of views and exchange of interactions and happenings…. so that the customers get an opportunity to talk to the manufacturers directly. The manufacturers gets an opportunity to talk to many customers as the average attendance that we have for an expo is about 250- 300 organisations (CC248) |
| What was happening in our industry is... more innovation is not coming from the supplier... so... to my mind it is not really knowledge..., it is more information, simply statistics... but knowledge... is sophisticated information. (LC256) |
| If you want to manage innovation properly [continually], you obviously have to analyse the requirements of the customer, abilities of the supplier and [think about] how you bring them together. (LC257) |
| Obviously ERP systems are critical, if they don't work, nothing works. Then, on the very strategic basis, you can look up on the internet the 'diamond supplier network'. It's a collaboration process... we offer 'strategic talks' to very highly sophisticated suppliers which are rated by a system. To the most important ones, we offer top level 'management talks' to plan future products and future innovations (LC267) |
| Disruptive products from competition or some new discovery within the domain can have significant impact [i.e., challenges to organisation] in terms of providing better customer solution. (CC289) |
| Project cycle with customer can range from eight to ten years in developing innovative products. (LC335) |
| We are quite good at innovation or generating new ideas within our team/organisation because resources (including people) are constantly being reduced. We are all the time looking at the ways of doing things [with reducing resources] more efficiently. (CC492) |
| Do we actually need to do this or do we do it because we like it? ... or, if we think, all of the customers like it and we really have to do it... or, is it just a nice thing to do but that's quite hard. I mean, customers are more demanding [i.e.,] they always want more rather than less. (LC493) |
| In our customer service department, we are always looking and trying to find examples [i.e., commendable practices from other industries]... like a concept of the one stop shop for customers… [with these] we are way ahead [than competitors]. (LC494) |
| Along with in-house expertise, we will ask our external agencies like design agencies or media agencies that we need to contact this group of people [prospective customers] and how best we will reach them. So, they will come up with many new techniques looking at demographics of customers. (LC495) |
| Certain radio station has different listeners. So, if we want to get to [those who are] over 40s, we would look at which stations' demographics have their audience at that particular age and lifestyle (LC496) |
| In terms of how innovation occurs, a lot of times [it happens through] brainstorm and a lot of times, just accidentally. (LC497) |
| Potential customers approaching us and saying [that] I am interested in a particular thing is a major source of innovation (or generating new ideas). (LC498) |
| In terms of how innovation occurs, it just happens you know, its [through] lot of interactions that keeps on happening. We have these quarterly review forums, we have review forums that happens on a weekly basis where we talk about the issues, talk about the challenges, and talk about possible solutions. So it's a continuous process (LC499) |
| The quarterly review forums [are] basically with customers [business dealers] and above all, they get together and the consequent interactions lead to new ideas and innovation (CC500) |
| Interactions originating from regular review forums give us a lot of information in terms of what solutions are drawn for us. Innovation basically in my business would be more about how can I do [devise] a better service using customer data (LC501) |
| Innovation is more like how can I service [serve] my customer [in a better way]... many times we do focus through discussion, we talk to customers, we see their feedback. At least the loyal ones who have been with us for long time give us feedback [regarding] what needs to be changed in the system (LC502) |
| Focus group with customers, it really happens once in a quarter at least (LC503) |
| We had a dedicated quality team which takes care of all basic SIX-SIGMA, LEAN, and idea generation activities. (LC504) |
| We understand how the process is and we do a future statement. So, we try and understand what steps could be avoided, what steps could be included... i.e., simplify and shorten the length of entire process. So, we do have a dedicated team. (LC505) |
| Customers are also involved in helping us implement new ideas as that requires costs [funding] and/or accreditation of tools and in those cases, we need to reach out to customers and seek their approval and proceed accordingly. (LC506) |
| When customers say 'things aren't working', we try and do it differently if we possibly can... it depends whether it is something |

| |
|---|
| the customers say it is not working for them because somebody has not done [properly], or not thought it through, or not done the right thing. (LC507) |
| If the system is such that, it disadvantages the customer, now if we could do something about that... if we change the system, we can make it better and we do try. (LC508) |
| What we try to do is, make it easier for the customer and make it quicker. (LC509) |
| We always try to do things quicker and faster because we always feel [we are only] few of us to do it. Some of the innovation comes [directly] from customers but that is not huge. (LC510) |
| Our customers lead us towards innovation. We ask them lot of questions and try to get [valuable] information from them. (LC511)<br>For example, we had a new home page on the websites and we had an audit as well as reviews with one of our partners and the prospective customers we get from that partner... and the usability is tested and what their opinions are... so we got feedback sessions... mainly focus groups (LC512) |
| To build my pipeline [demand chain], I rely entirely on outside i.e. customers (LC513) |
| So, customers come to us saying we have this new technology, can we use your technology to enable and make [our innovation] it happen. If you like it, we jump in. (LC514) |
| Customers keep on feeding us with the issues they face while transacting with us. So that gives us opportunities to know [those that] we can improve upon further and stuff. This is a continuous process because our transactions require a lot of interactions and dealings with customers. (LC515) |
| Customers have also got [access to] the trainings that we organise. Specialised training that we organise in the branch itself. (LC516) |
| We organise expos where lot of customers come in. It's an industry event where new customers also come in. (c517) |
| We also organise our company day, it is basically you know a mini expo kind of thing that we will do in a particular city where we don't have a branch. We do organise that day and four or five friends join us. This is basically an event [through] which we go on to these 2-tier 3-tier cities targeting our industry specific customer base there.... A couple of vendors also travel with us for those events where they would like to propose their products and stuff. It is also a platform where we get the customers in. It almost happens every month (C518-19) |
| Mini Expo is an event which is being managed centrally by the marketing team but it gets driven majorly by the regional manager and branch manager (LC520) |
| It is a customer's process at end of the day, there are so many you want to change for their process but without their approval, we cannot make any changes. So, we need to keep them in a loop and make them aware when we see an opportunity i.e., in terms of streamlining particular activity or reducing that and going to next step (CC522) |
| Very deep understanding of customers' activities [that are] taking place is important [for continual innovation] (LC523) |
| Customers might let us know [that] their process is required for some [other] purpose which might have a lot larger scope beyond that process. For this reason, we meet with customer all the time and seek their approval (LC524) |
| Business case generally kept forward for new product development is not very reliable and almost third of the products we conceived which went through product development cycle didn't acquire any customers. (LC685) |

**CKM practices and associated solutions**

a) Organisations need to recognise, the importance of long-term collaborative projects with customers, in developing innovative products continually, and can look at varying customer requirements, as starting point for product or service innovation.

b) Practice of organising periodical review forums to bring customers together and make them participate in focussed interactions, helps organisations in generating new ideas and managing innovation continually.

c) Organisations need to acknowledge that the customer issues, while procuring and using products or services, can be a great source of continual innovation, as they can improve products or solution delivery processes, with right attitude and customer orientation.

d) Organisations can consider analysing customer requirements and supplier abilities, along with creating a platform to encourage customer and supplier coordination, in order to manage innovation properly.

#### *4.1.2.3 Regulatory Environment (F6)*

**Factor discussion and review**

This empirical study indicated that regulation or legislation is one of the drivers for customer knowledge management among organisations. Many case-organisations acknowledged that external regulatory environment has implications, towards providing relevant knowledge for customers, about their products in addition to presenting corporate details transparently. For instance, one case-organisation revealed that they are developing a key information system to present relevant ‘knowledge for customers’ in a standardised format as driven by new legislation, from regulatory authority in that industry. In some industries, each individual organisation needs to report customer demand knowledge to the regulatory authority and in return they can attain aggregated nation-wide picture. Another case-organisation indicated that they continually assess the impact of ongoing changes in legislation upon client processes and contextually review the entire documentation with customers.

**Table 4.9: Regulatory Environment (F6): Substantiating concepts and codes**

| Substantiating Concepts |
| --- |
| Regulatory Conditions, Government Legislations or Guidelines, Legal Challenges, Data Protection Act, Knowledge from Regulatory Authorities or Funding Bodies, Compliance with Guidelines |
| Substantiating Codes |
| New legislation or schemes from government funding bodies might have implications [for customer knowledge] at strategic and operational levels. (CC16) |
| Our organisation has database and [also] guidelines. If anyone disobeys guideline or general rule setup by the employer, one can be fired. This is very strict and is centralised for the whole organisation [all divisions]. (LC206) |
| Broad guidelines for holistic organisation are there in order not to lose focus. (LC207) |
| We constantly advice supply chain partners to follow the guidelines which have been set by the regulatory authorities as it has implications for our final product. (LC240) |
| Everything is documented but abstracts and summary is submitted to regulatory [authority]. If they want elaborate versions they might ask us to provide more details. (LC245) |
| In this entire value chain what flow is goods, [which] flow from manufacturer to the end customer. At the same time, we start feeding the manufacturers who are our business partners, basically with customer response, in terms of quality of the product, or any particular gap that needs to be filled up, or any change that is happening with respect to the regulations. (CC246) |
| I would like to be in the position where you [customer] ring up and somebody [employee] lifts the call and pulls out the screen which has all sort of interaction anybody [from the organisation] has with you. So, you don’t have to be referred on to someone else, who had interaction with you earlier, except in case of very sensitive data... but we are not really ready yet. (CC278) |
| From government sources as well we get lot of relevant information including demographics, stats (statistics) regarding what numbers are there, where people buy in, where they are in the countries as well as their focus area. (LC281) |
| Regulatory conditions, customer interactions and comparative products in the market can give good insights. (LC288) |
| ‘Customer demand’ knowledge can be attained with regulatory updates from the authorities (LC292) |
| There are really problems around data protection act, we collect information to support customers while learning/experiencing, and they can opt to withdraw information. (LC306) |
| It is useful to have 360 degree view for varied reasons. One, this holistic view is helpful to assess the participation of the customer and support him or her as and when needed. On the other side, there are some regulatory requirements which can only be fulfilled through monitoring and updating customer information. (LC307) |
| We do particularly for the disability service [one of our customer services] where we are up [prone] to legal challenge... where we record every single conversation (LC309) |
| Some specific services which are prone to vulnerability tend to record every conversation. (CC312) |
| Another key challenge is data protection as well as issues associated with opt-out, contact sharing etc. (LC377) |
| In order to know complete 360 degree view we need to know [various aspects] from the regulators, innovators, marketers and [especially about] products which are available in the market. (LC390) |
| Well, absolutely stuck at the moment with rolling out the system [for 360 degree customer view] to other departments. We can only roll out key bits of it because, legally it is sensitive data. So, you can only do it with express permission of the customer concerned (CC412) |
| Using knowledge [that] regulatory/funding bodies have got and building on that instead of re-inventing the wheel [is always better]. (LC424) |
| Depending on sensitivity, customer knowledge is shared across the table or sometimes through our virtual system. Sometimes, I don’t want any legal implications for either of us. Then, I say, this is what needs to be done [orally] because I don’t want to keep anything or any data on paper. (LC625) |
| We review the entire documentation; we go through [that] with customer and check if there are any changes required in documentation, because, this scenario is so dynamic these days, the tools change, the way we process [also] changes, the tax rate changes, and every year all those changes need to be updated. (LC639) |
| There is a stand-alone CRM system to maintain good relationship with some of the key influencers in the market. However it is tricky to communicate certain things directly due to data protection issues. (LC695) |
| Even for simple things like using electronic records instead of physical records, [it] is incredibly difficult and the amount of time it took to do that is so high. With big drive, it went up to 95% compliance and dropped down again to 80% compliance when the massive push on that stuff is off. (LC697) |

Case-organisations also revealed, issues associated with data protection act in terms of managing ‘knowledge about customers’ such as securing data safely, as well as limitations in sharing sensitive information to other departments or value chain partners, and more importantly customers' right to withdraw information at any point of time. In-spite of organisations' best intentions to serve customers well based on CKM, customers can withdraw information due to external factors such as possibility of data leakage. The empirical data revealed that in case of vulnerable customer services where organisations are prone to legal challenge, concerned departments tend to record every conversation with customer to safeguard themselves.

The extant CKM literature within this area of regulatory environment is little and that too at a very basic level. For instance, Zanjani et al., (2008) just mentioned that organisations need to provide government-regulation related information within 'knowledge for customer' component, while many prominent authors in CKM domain have not even touched this aspect among their publications. Table 4.9 (on page 125) presents substantiating concepts and codes for this factor.

**CKM practices and associated solutions**

a) Organisations should consider legislative implications with respect to presenting product related knowledge for customers, or providing relevant customer knowledge to regulatory authority, in addition to disclosing corporate social responsibility (CSR) activities and financial statements transparently.

b) Organisations need to consider Data Protection Act and convince customers, about their genuine intentions to serve customers in a better way and take their consent while collecting and storing relevant customer data.

c) Organisations need to take necessary measures in compliance with regulation to safeguard against data leakage, while securing customer data and sharing customer knowledge with various departments or value chain partners.

d) Organisations need to be very careful with vulnerable customer services, where they are prone to legal challenge and take necessary actions such as recording every conversation with customers to safeguard themselves.

### 4.1.3 Culture (C3)

This empirical study reveals that organisational culture is an important aspect in developing customer focus as well as enabling flexibility to adapt in-line with dynamic customer requirements. Pheysey (1993) views culture as ‘a way of seeing that is common to many people’ while Hofstede (1980) presents it as ‘a programmed way of seeing’. Al-shammari (2009) emphasises that at organisational level, culture is dynamic and exists at corporate or unit level where as Bratton et al (2010) defines organisation culture as “the basic pattern of shared assumptions, values and beliefs governing the way employees in an organisation think about and act on problems and opportunities”.

All case-organisations acknowledged the long-term impact of culture while a few have stressed the importance of customer oriented culture among all divisions of the organisation. For instance, some case organisation stressed the importance of customer orientation among IT (information technology) and HR (human resources) departments in addition to R&D (research and development) and customer services departments. More specifically, one case organisation attributed the failure of one major project to lack of customer orientation among IT division.

**Table 4.10: Culture (Core Category C3): Substantiating concepts and live codes**

| Substantiating Concepts |
|---|
| Organisational Culture, Work Culture, Surrounding Culture, Suppliers' Cultural Alignment, Corporate Culture, Organisational Behaviour, Training (F7), Reward Mechanisms (F8), Alert Raising (F9), CKM Devoted Capabilities and Resources (F10), Hybrid Roles with Matrix Reporting (F11) |
| Substantiating Codes |
| Our communication skills certainly need a lot of work (improvement) and I am not saying that it's organisation's fault. I think, it is more cultural and... our dealing with the things (LC57) |
| Organisational culture also draws a lot from surrounding culture (LC61) |
| It might be a quite simple thing ... it could be cultural, it could be things around that ... we just do certain things in certain fashion which... may not go that well, inside the people. We might be rigid in certain areas, so there will be times when we will not cut short whether it is on compliance whether it is on...moving certain things faster.... if you [customers] complaint ... we would go ahead and do it (LC133) |
| Important factor in achieving '360 degree view of customer' is [to have a] good IT department [which is customer oriented], it sounds stupid, but it is critical (LC391) |
| Important factors in achieving '360 degree view of customer' are customer focused IT department and other way round i.e., sales department with good knowledge about IT systems (LC392) |
| So I think, the factors are known but it's really hard to get there [i.e. achieve $360^o$ view of customer] because you have to really have open mind... I think personnel i.e., HR [Human Resource] is extremely important ... it becomes understandable [that]... organisation [needs] to be very open minded, very flexible organisation (LC399) |
| It [achieving $360^o$ view of customer] depends on so many factors, first on the customer... [like] what customers do you have and then it depends on your processes within your own organisation and your organisation culture... probably a lot more factors than [that], for instance your suppliers, suppliers' processes, the supplier's culture and so on and so on. (LC428) (CC429) |
| We have got lot of matrix reporting that makes the organisation [structure] pretty flat (LC553) |
| As I said, customer information for us is very important, [then] it is the analysis that we do. In terms of culture, it's there in every organisation [that] the customer is the king... we follow that. (LC604) |
| Inclination in our culture is to move on to the next thing, record keeping isn't necessarily great. Employees don't update the data whatever they update in the dairy and it is not captured in the system. Your culture has to align with what you do (LC696)<br>Even for simple things like using electronic records instead of physical records, [it] is incredibly difficult and the amount of time it took to do that is so high. With big drive, it went up to 95% compliance and dropped down again to 80% compliance when the massive push on that stuff is off. (LC697) |
| It is pretty much in the culture that we do focus [on customers]... every year, we will do once a quarter meeting with our clients (LC754) |

This study reveals that organisational culture draws a lot from surrounding culture which supports the views of Hofstede et al (2010) regarding substantial influence of national culture on organisational culture. For instance, senior managers within some case organisations expressed the need for extra efforts to obtain communication openly (i.e., more frankly) from sub-ordinates within India in comparison to their Western counterparts. The empirical research also demonstrates that cultural transformation needs significant push and enormous efforts among organisations at both corporate and unit level. Peters and Waterman (2004) present the relationship between organisational culture and corporate performance, and emphasises that 'closeness to customer' is one of the major attributes of excellence. The present study also exposed this aspect in terms of maintaining regular contact and closeness with customer as being part of the organisation's culture and the importance of it is stressed with phrases like 'customer is the king' from one of the case-organisations in India. Table 4.10 (on page 128) presents substantiating concepts and codes for this category while the following sub-sections deal with factors within it.

#### 4.1.3.1 Training (F7)

**Factor discussion and review**

This empirical research highlighted that training enables organisations to continually update their knowledge and expertise. Training emerged as one of the very important ways through which expertise is created and knowledge is shared within and sometimes beyond organisations. Along with 'training for staff' component, 'training for suppliers' and 'training for customers' have also been identified within case organisations in this study. Customer training, which surfaced from empirical data in a noteworthy manner, has already been discussed within 'Knowledge for Customers' factor (F1). This section emphasises predominantly on staff training along with a brief discussion on supplier training. Staff training is observed as one of the common practices in all case organisations reviewed but there are various approaches to achieve it. For instance, one interesting approach which is identified as a gap in the literature and a valuable finding that emerged from this empirical study is 'buddy-up training'. This means 'someone who is already working on a specific process starts buddying up with the new one commencing to work on that process'. Some of the common approaches for staff training include organising training events like workshops and conferences, specific activity-based training, on-the-job training, and external training. Some specific approaches include cross team briefings, buddy-up training, staff rotation, online/virtual trainings, managing training centres with trainings imparted by vendors, and organising private training about delivering services to the customers.

This study shows that training is crucial in developing staff knowledge which in turn helps in delivering customer solutions effectively. Al-Shammari (2009) also emphasises that training and development based on gap analysis with respect to desired levels of skills, knowledge capabilities, and behavioural characteristics of customer-centric team members needs to be carefully planned within organisations.

A majority of respondents in this research study acknowledged the importance of this constituent factor ‘training’ and highlighted how their organisations carry out varied training activities within the context as indicated in next sub-section. In addition to staff training, some case organisations have provisions for supplier training on specific collaboration systems i.e., they offer them to do courses to get familiar with these systems. This factor training plays a crucial role in developing customer-oriented culture and thereby contributes in achieving $360^{o}$ view of customer among organisation through creation and development of required expertise. The following approaches within training provide solutions to problems associated with retaining customer knowledge among organisations and delivering effective customer solutions. Table 4.11 (on page131) presents substantiating concepts and codes for this factor.

**Table 4.11: Training (F7): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Staff Rotation, Buddy Up, Cross Team Briefing, Training Events, External Training, Specific Activity Training, Workshops, Conferences, Vendor Provided Training, Private Training, Training Centre, On-The-Job Training, Online/Virtual Training |
| **Substantiating Codes** |
| They [staff] would go on trainings, it is more limited than it was as the budget has been significantly cut... but then they go out. (LC1) |
| We are doing lots of team briefing, each team is going to brief all the other teams [about their specialisations] and we started this because our staff development budgets[are] so restricted... we all work together pretty much in one big office or on the whole there is a lot of face to face communication… about what is going on. (LC11) |
| What we are trying to do is, building up people’s [employees] knowledge. The staff at the front desk have a vast knowledge, they have huge knowledge of all these services, We do cross team briefings, so that, people are aware of ‘what each other’s services are’, we are doing [briefings] on ‘what the key issues are’, for that particular service. (LC15) |
| we rotate the staff through, so this is a lot of knowledge sharing (LC43) |
| We... join the training events especially when there is change, we might get a good review [of] where the change is (LC44) |
| The two main desks we have are the IT service desk and the information desk... they provide primary support to customers on the IT side... so they two work together [to improve training quality]. (LC45) |
| [We organise] online training events... for specific activities like online enrolment (CC46) |
| We try and get more than one person who can do every function... [so that] there is always someone who knows how to do it [and] knows how to do certain tasks (LC50) |
| We also undergo constant trainings and conferences (LC77) |
| Buddy up - Somebody already working on those [customer] processes starts budding up with this guy... who now knows the standard 60-70% of the process but the rest typical nuances of that [client]… he can only learn when he works with that team, with the FLM which is your Front Line Manager and then goes and solves it all (LC102) |
| Biggest thing which is successful in retaining knowledge and expertise is actually humans [rather than systems and tools]. So, what we do is, we actually have people cross trained on the same process, so [for instance], you have 10 people with 3 different activities [that] they do, everybody is cross trained, so that, when one is not there the other can do it (LC103) |
| The way it (customer knowledge) is tried to retain is... discussions and training. Somebody with experience of the process starts leading, directing and training the people [colleagues] on the job... then obviously over a period of time more people then gain that experience (CC115) |
| So, [in terms of retaining knowledge], it is not just about the guys who are doing re-engineering, it’s about the guys who are working here on the ops [operations] floor. It is about the guys who are talking to the clients and have the sales guys on the regular basis. It’s about the quality organisation which is constantly driving improvement projects. It’s about the support functions, which are training, building more and more improvements which will enhance the product. So, there is knowledge residing in pretty much all [of] these (LC116) |
| We have to be in continuous watch to update our knowledge and to do this, constant interaction with academia and going to [i.e., attending] international conferences, is helpful. (LC191) |
| We also get our data updated, we go to some trainings and workshops (LC192) |
| We don’t have [employee] exchange program... but manufacturers do invest in training [our] people in their places [premises]. So, our engineers and our technical guys do travel across to the manufacturing sites and stuff [training centres]. (LC252) |
| We have specific collaboration systems for suppliers and obviously we have suppliers to work with them. So [for] processes, we are making... we offer them to do courses to get familiar with these systems. (LC266) |
| We would have a [training] session and then [we] go and try to solve all our problems... All the information is held internally, within the organisation, but external company from which we bought the system, help us with that system i.e. how it works and how to use that system. (LC406) |
| External company, from which we bought the system, train us and IT department people, on how to implement and use the system. (LC407) |
| All staff can tap into this external training, thus we are moving much more to personal development planning (LC585) |
| We do organise private training... not so much about organising the data development but about delivering it to customers. (LC586) |
| There is employee training and development from us and HR. For example, we direct relevant staff towards innovation workshop which goes through a chair. (LC603) |
| Employee training and development to deal with customers is one more thing. (LC609) |
| Our investments in recent projects include CRM system, upgrades for customer record system and more importantly trainings. (CC706)<br>All trainings... [are] a responsibility of the technical manager [in our organisation]. These include trainings for customers... as well as for the internal team i.e., sales team (LC800) |
| We do conduct regular trainings, approximately four to five trainings in a month. It will be either by the individuals or form the vendor. (LC801) |
| There will be two types of trainings [in our organisation], viz. sales people training [and] technical training. (LC802) |
| Vendors travel to our branches and give trainings... We are providing a space where customers undergo training from vendors. (LC803) |

**CKM practices and associated solutions**

This subsection presents valuable training approaches such as cross training, buddy-up training, job rotation or staff rotation, vendor imparted trainings, and training events which have been effectively used in case-organisations.

a) Cross training: Organisations have identified that people are crucial in retaining knowledge successfully and accordingly stressed the usage of cross-training within their organisations. Some of the associated techniques observed within this area include a) cross team briefings where each team briefs all the other teams within one functional area and b) two different teams which provide primary support to customers work together.

b) Buddy-up Training: This refers to a technique where someone who is already working on a specific process starts buddying up with the new one commencing to work on that process. This is a very useful practice in dynamic industries where there are frequent improvements to processes.

c) Job rotation or staff rotation: Organisations can use job rotation or staff rotation to overcome problems associated with knowledge retention and sharing within and across different customer service teams.

d) Vendor provided training: Organisations should recognise the importance of vendor provided training in terms of providing technical training and marketing training associated with products that vendor manufactured. Organisations should also consider long-term implications associated with systems upgrades, operational problems, and associated trainings.

e) Training events: organisations should be aware of prominence associated with training events in terms of updating knowledge especially when there are any changes associated with way of performing activities. Organisations can encourage or direct staff towards conferences and innovation workshops relevant for them. Within this area, online or virtual training events are gaining wide-acceptance and organisations can use them for their cost-effectiveness.

#### *4.1.3.2 Reward Mechanisms (F8)*

**Factor discussion and review**

This empirical study shows that employee reward mechanisms are one of the important factors in developing intended organisational culture and customer focus among employees. Reward mechanisms constitute of designing incentives to motive staff and improve their performance. Many authors within the subject area of organisational performance management have stressed the importance of reward systems and mechanisms in motivating staff towards intended behaviour (Armstrong and Murlis, 2007; Thorpe and Holloway, 2008; Hume 1995; Armstrong 2006). This section highlights important aspects in assessing and rewarding employees for customer knowledge creation and management, based on empirical data.

Majority of the findings associated with reward mechanisms from this study are in-line with prominent literature on performance and rewards management. For instance, this study highlights the importance of awareness at senior level regarding non-financial rewards such as recognition and acknowledgement for employees in organisations. Recognition of employee’s performance, potential and more importantly, acknowledgement of any exceptional customer-oriented service at senior management level, works as an effective reward mechanism to encourage that behaviour. This supports the Armstrong (2006) standpoint that non-financial rewards can make a long-lasting and more powerful impact. Table 4.12 below presents substantiating concepts and codes for reward mechanisms.

**Table 4.12: Reward Mechanisms (F8): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Incentives, Recognition, Appraisal Schemes, Performance Targets, Assessing Potential, Acknowledgement, Variable Pay, Monetary and Non-Monetary Incentives |
| Substantiating Codes |
| We address that [time allocation for CKM]... you have 8hrs of work, on an average half an hour every day you can do this, we encourage our people to go and use that tool [GLUE], we encourage our people to go and contribute on that, we encourage that behaviour (LC127) |
| The way we assess our people, it is also on the basis of their ability to solve. So, every year at the end, we do the assessment. We don't do it only on the basis of call sheet [may be with five things].... these are the five things that you are performing fantastic and that only tells about your performance. [But] what is your potential, how you, as an individual, are contributing for the development of the company, how ready you are to take... [on] bigger roles in the company, and that happens, when you are able to do such behaviour, where you are able to actually deliver on larger benefits (LC128-9) |
| More of it again go back to the recognition... actually [you] have visibility to lot of people. So, I might be working here in Bangalore but [while] solving problems for somebody... the leadership in china... can see my behaviour....may be the CEO is reading, he himself is there on tool (LC130-1) |
| There is a process called PKT... it is called Process Knowledge Test and this takes place every month. It is part of their variable incentive pay that happens every month... so if they score good, they get paid as well as their knowledge is also [proved] good... so, based on the scores that we get, more importantly in terms of knowledge management,... there is a threshold, a person has to score 80% to get through... [and] receive his bonus. But more importantly, if he is below 80%, then we know that there is a problem. So, we send all the ones below 80% for a fresher course...so that they can come back and perform better... This is mostly customer knowledge [that is] everything about customer process. (LC627) |
| In terms of measures that have been taken to improve organisational culture [for CKM]... in our organisation, we keep reorganising [structures and services]. (c582) (LC581) |
| [As a part of reducing overheads], there is a move to get rid of the managers [in our organisation] so [that] there would not be quite so many levels. There is lot of streamlining going on [in this direction] and more there is the feel... that it is actually leading towards a more coherent [organisational] structure (c583) (LC582) |
| I think, actually there is a kind of more of the strategic view of what organisation needs to deliver and what you want to do? So, I would say that's got better (c584) (LC583) |
| In terms of creating culture among employees... organisation has a significant staff development programme [in place] (c585) (LC584) |
| All staff can tap into this external training, thus we are moving much more to personal development planning (c586) (LC585) |
| We do organise private training... not so much about organising the data development but about delivering it to customers (c587) (LC586) |
| We do try hard to get people to take responsibility at least for directing the person [customer] to somebody [appropriate]... so, nobody [among staff] should say that I don't know... so, they should say I will go and find out (c588) (LC587) |
| There is an organisational appraisal scheme, it is just being re-vamped. Some teams are better than others but we do [innovative] appraisals (LC589) |
| It's quite difficult to teach it [right way of interaction with customers] out. For example, recently one team looking at a customer issue found out that the member of staff concerned has not really grasped the issue...with a thought that the employee just skate over it hoping that the customer would go away and it [the issue] wouldn't rare its head. So, yes, I mean, we do a lot about 'are you interacting correctly with the customers' (LC590) |
| I mean in developing teams, the team leaders would be expected to work with staff about how [well] they interact with customers and I would say, most of them did (LC591) |
| If you are not dealing with customers correctly, then I have to say, I would expect it to be done before it has ever got to the appraisal (LC592) |
| We would know non-performance and we tend to deal with that before the time gets to the appraisal round (LC593) |
| In terms of CKM, we give staff, split up of our main contacts [of customers], there will be these groups. So, we say, you must have contacted these, you must have so many visits or so many presentations. (C596) |
| We are very small team... you [each of us] know quite a lot but we don't do bonuses or monetary incentives. We just do look at what they are doing and what we can do best basically (C597) |
| Employee training and development is one of the significant things [in improving customer-oriented culture]. (C598) |

| |
|---|
| Quite often, I will take them out to lunch. Ya, the entire group comes out sometimes... it is as big as 80 people. So, you know that's big so that the whole group will come out and we go through and have five lunch parties all organised, sometimes some of us will go out for a R&R i.e., Rest and Relaxation (C599) |
| I am trying to change [in terms of] improving our communication skills and planning. The Indian [national] culture is not very used for planning (C600) |
| I meet with my people on a regular basis and say how we are doing. [We] assess their performance and if the performance is not up to record, then I will say [to] them, you need to change this, this, [and] this ...ok, this is not expectable and sometimes they may know, what I am liking (C601) |
| There are incentives, performance wise. However, it is at the end of the year, it's the annual thing. (C602) |
| There is employee training and development from us and HR. For example, we direct relevant staff towards innovation workshop which goes through a chair. (C603) |
| As I said, customer information for us is very important, [then] it is the analysis that we do. In terms of culture, it's there in every organisation [that] the customer is the king... we follow that. (C604) |
| We are in demand fulfilment process. So, we have to listen to our customers, we have to go and give them what they want. (C605) |
| We actually have to customise ourselves, depending on the requirement of the customer. The report that we carry actually gives the opportunity to the customers to pick and choose what they want (C606) |
| So it is very important... [and] is very essential part of our organisation, our business model... to be responsible for the customers, listen to them and bring them the product that they want. (C607) |
| Yes, we have internal administration stuff associated with monitoring, incentives or performance appraisals. (C608) |
| Employee training and development to deal with customers is one more thing. (C609) |
| Average turnaround time [to repair the product] is 16.5 days, it has been improving... previous year it is 19.5... now you have target of 15 at country level and for my region it is 13.5 (C824) |
| Annual packages [are] like 90:10. 90% is fixed and 10% is variable, based on annual performance. (C825) |

### CKM practices and associated solutions

a) Organisations should develop and implement mechanisms to assess and reward relevant employees based on their performance in customer knowledge processes and activities.

b) Although performance on routine day-to-day tasks is important, organisations should also assess employee's potential and actual delivery on larger organisational benefits like customer knowledge creation and sharing.

c) In addition to monetary incentives based on performance, organisations need to give importance to non-financial rewards like recognition and acknowledgement at senior level, for employees who demonstrated exemplary efforts associated with customer knowledge creation and management.

d) Organisations have to consider customer focus and customer knowledge activities with appropriate weightage in appraisals. They can have assessment mechanisms in terms of setting targets and monitoring performance with respect to these aspects. Organisations can have variable pay as part of remuneration package.

e) Organisations can have rewards like socialising events for teams in relaxed environment away from organisational premises and briefing the importance associated with customer focus and intended practices.

f) Organisations should encourage employees with indirect reward such as specific time allocation within working hours for customer knowledge creation and management while delivering customer solutions.

#### *4.1.3.3 Alert Raising (F9)*

**Factor discussion and review**

The empirical study has indicated that encouragement of 'alert raising' and having appropriate provisions in place is very effective in addressing important issues associated with customer solution delivery. Alert raising mechanisms with necessary infrastructure would enable senior management teams among organisations to become aware of the issues that are obstructing the delivery of customer solutions. This awareness and involvement of senior management and remedial measures recommended along with resources allocated at that level will be helpful in making organisations move faster in resolving the issue. However, empirical data from this study stressed that the practice of 'alert raising' is viable only when there is positive orientation towards this in organisational mindset. Organisations should make sure that the environment within teams is conducive towards this practice and the person who raised alert will not be penalised. Instead, organisations need to create a perception within teams that alert push makes things move faster in resolving the issue. This concept ‘alert raising’ is identified as a gap in the literature and a valuable finding that emerged from this empirical study. As there is significant gap in literature with respect to this concept, ‘alert raising’ and associated discussion adds new knowledge to the domain. Table 4.13 below presents substantiating concepts and codes for this factor.

**Table 4.13: Alert Raising (F9): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Alert Push, Critical Issue Awareness, Alert Mechanism, Alerting Senior Management |
| Substantiating Codes |
| What we also have is, what we call as an alert. So, this tool is, I think pretty unique to our company. I don’t know if other companies have actually even copied it later or not. If you know the tool, anybody on our floor can send an alert... anybody after the management training plus level can raise an issue saying... because of this issue, our delivery is failed (LC137)<br>One thing which is told throughout the company is, whoever sends the alert, he will not be penalized. If his boss goes and says, why the hell you do it, immediately his boss will be in trouble not the guy (LC 138)<br>You then have this information going to the top 300+ people of the company irrespective of their location, irrespective of their role, irrespective of their clients which they support... it goes as an email... [to] all, including the CEO (LC139)<br>It could just be [that] we brought it up to senior people’s notice and they push... the organisation to move faster and certain other things, they could be approvals, they could be hiring delays,.. and ... that the push just makes it go faster (LC140) |

### CKM practices and associated solutions

a) Organisations should have provisions that enable staff beyond certain level (for instance employees after management training plus level) can send an alert regarding any critical issue.

b) Senior management should ensure stance among staff that the person who raised the alert or issue will not be penalized.

c) Organisation needs to have technology infrastructure to send out alert to whole of top management

d) The alert push needs to make things go faster i.e., initiates remedial measures and resolves issues associated with customer solution delivery.

#### 4.1.3.4 CKM Devoted Capabilities and Resources (F10)

**Factor discussion and review**

This empirical study has revealed the significance of specialised capabilities and resources devoted to customer knowledge. Many case organisations have varied roles ranging from customer relationship managers to business analysts to manage customer knowledge at different levels. For instance, customer relationship managers contribute towards customer knowledge at individual customer level while business analysts work on customer knowledge at aggregate level. Some organisations even have macro-economic analysts and market research departments to provide forecasts and insights into customer demand at much broader level. Many case organisations have roles such as customer relationship managers or global relationship managers and they feed customer knowledge to relevant departments through internal review meetings.

The findings associated with CKM devoted capabilities and resources at individual customer level echoes with some aspects of the extant CRM literature. This empirical research provides evidence of CRM prominence through dedicated roles in case organisations and supports the academic literature about CRM as discussed in literature review chapter. Even though the emphasis of CRM is on customer retention and loyalty by nurturing customer relationships (Gebert et al 2003; Dyche 2001), the empirical data shows that customer relationship managers and global relationship managers play an important role in managing customer knowledge at individual customer level. Table 4.14 (on page 139) presents substantiating concepts and codes.

**Table 4.14: CKM devoted capabilities and resources (F10): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Devoted Human Resources, Customer Solution Capabilities, Client Dealing Resources, Customer Relationship Capabilities, CKM Capabilities, CKM Resources |
| Substantiating Codes |
| The second category '[knowledge] about customers', is something within sales, relates to market research obviously... internal market research they also owns projects... external [market research] companies obviously [do research for us]... we have special department just for macro/micro economic coherences, analyses [on a] very big scale of countries ... in relation to our industry changes and things like that. (CC178) |
| In terms of acquiring customer knowledge, we do have specialised people in the team who work on this, whose work is to talk to lot of people around, market research firms and stuff (LC485) |
| We have this GRMs [Global Relationship Managers] and GROs [Global Relationship Officers], they interact with customers and then we have our internal reviews with them [GRMs and GROs]. Well, they feed us with the information what customer is asking for, what the main areas are, where we need to improve (LC490) |
| We have dedicated customer relationship manager (LC563) |
| We have business analyst, who will be looking after the mass. The customer relationship manager looks after the marketing activities, mark on [assign] activities, and marketing communication activities to the customers (LC564) |
| As of now, for us customer relationship managers are stand-alone people who would be reporting to the marketing structure (C565) |
| CRM guys are the junior level guys but they would actually work with these [senior level people]. They support the regional structure, they will support the branch structure (C566) |
| So, our relationship is done by our GRMs Global Relationship Managers (LC567) |
| Global Relationship Managers are with the clients and that person [GRM] is responsible for building that relationship and makes sure, all our teams run along the same direction. Otherwise, different vertical specific teams will do different things for same client. (C568) |
| So, Global Relationship Manager ties things together in terms of knowledge and in terms of need. (C569) |
| GRM reports to business leader for the vertical, and the business leader reports to the CEO. (C570) |
| GRMs job is [to maintain] relationship and tie up all delivery locations (for delivery you have delivery leaders). We have one GRM for a client, there is no region and it is global. He takes care of the relationship with that client. (C571) |
| We have customer services manager (my deputy) who would really take on operational stuff but I would expect all team leaders to have their customer in mind. (C572) |
| We are looking at staff performance, we are looking at how staff are interacting with customers, we are getting information about what customers think about the service and that's in everybody's job description (LC573) |
| Customer services manager leads a team of her own but all team leaders would have a customer services responsibility (C574) |
| Customer services manager or some team leader would have meetings with relevant departments when needed, perhaps not regular meetings. If one of the team leaders within customer services has got something they want to do, there would be no problem about going out into the organisation and discussing with the people that they need to discuss with, about how to do it (C575) |
| Customer knowledge in marketing and communication is mainly led by one person (C576) |
| Our resource may not be dedicated in doing just one activity, So, they do lot of data crunching and presentation to the client. There could be several activities (LC578) |
| What we are looking at is how to integrate these [important knowledge elements from customers]. You have GRMs who are doing this, business leaders who are meeting them, and as we get that information, we share that with the delivery teams in multiple areas. Then, the delivery teams are lining themselves to [meet] those needs (LC755) |

## CKM practices and associated solutions

a) Organisations should have roles like Customer Relationship Manager (CRM) or Global Relationship Manager (GRM) with responsibility for crucial aspects of customer knowledge management incorporated among these roles.

b) Organisations should have mechanism in place to have internal review meetings with CRMs or GRMs in order to feed customer knowledge to relevant departments.

#### *4.1.3.5 Hybrid Roles with Matrix reporting (F11)*

**Factor discussion and review**

This study has revealed importance of hybrid roles with matrix reporting among various teams dealing with customers. Several authors within the area of organisational behaviour have indicated that matrix structure is one of the prominent organisational structures (Schermerhorn et al, 2011; Wanger and Hollenbeck, 1992; Gitman and McDaniel, 2006). Some authors use the term 'matrix organisation' instead of matrix structure referring to the type of organisation in which product or project form is superimposed on a functional form (Greenberg and Baron, 2008; Gibson et al, 1994). At the outset, they all view it as a combination of functional and product divisional patterns wherein an employee is assigned to more than one type of unit. Greenberg and Baron, (2008) emphasise that employees in matrix organisations have two reporting managers that is a functional manager and a project manager. They further note that neither functional manager nor project manager has complete authority over subordinate and they work together to ensure that their efforts mesh rather than conflict.

Findings of this study emphasise that flat structure is an important aspect in using resources effectively. Some case organisations referred to matrix reporting as one aspect that makes their organisations flat in structure. Organisations have indicated importance of designing hybrid roles for staff i.e., employee in one team having a support role in another team. Empirical data also emphasised that this would help in knowledge retention and effective resource utilisation. Table 4.15 below presents some of the substantiating concepts and codes within this area.

**Table 4.15: Hybrid roles with matrix reporting (F11): Substantiating concepts and live codes**

| Substantiating Concepts |
|---|
| Matrix Structure, Hybrid Job Roles, Reporting in Matrix |
| Substantiating Codes |
| Yes, all the staff do bits of other people's jobs... they can't do it to a highest level but the person who deals with the [customer] accommodation (one service), picks up the phone and should be able to answer the basic funding queries (another service). The staff on the front desk can operate most... [most of the staff are hybrid in this team] (LC547) |
| They all have a support role in one of the other teams... so, one of the customer advisors will go in and help the disability services [one of our customer services] team and one [another adviser] will go and help the immigration and welfare officers (LC548) |
| I ['Head of Customer Services'] am not interested in you [any member of team] saying 'that's not my job', I don't care [you are] here and employed to do a job... we [teams within customer services] provide you with the expertise and we could go and do it, not at the highest level... but... if somebody went off sick, there is somebody else to do the work, we wouldn't stop (LC549) |
| We have got lot of matrix reporting that makes the organisation [structure] pretty flat (LC553) |
| It's not about the dotted-line reporting structure... which could be looking at some set of information... [i.e.,] the employee will make some set of information know [to reporting managers].... it's like a matrix reporting, means there are two people who are responsible for you [the employee] (LC554) |
| [Employees] reporting through dotted line to me [manager] would be with respect to their admin data and [about] their expenses, cost of materials and stuff. (LC555) |
| They [some employees of other teams] contact me [service manger] in matrix (LC793) |
| Service manager will be reporting to the technical head at national level and will do matrix [dotted line reporting] to the director. (C794) |

**CKM practices and associated solutions**

a) Having matrix reporting enables organisations to have flattened structure which enables staff to provide faster service to customers through access to multiple functional expertise and authority.

b) Designing hybrid roles for staff within customer related services would enable organisations to retain knowledge and use resources efficiently.

c) Providing customer facing staff with expertise in areas beyond routine tasks as a back-up resource would enable organisations to manage customer related services without any disruption.

### 4.1.4 Processes (C4)

The present research study indicated that key organisational processes that have direct or indirect implications for customers are important in managing customer knowledge effectively. Majority of the respondents in this study have acknowledged that core business processes are knowledge intensive and reiterated that they determine organisation's sustenance through effective delivery of customer solution. This 'Processes' core category encompassed significantly higher number of factors compared to that of any other core category. All case-organisations within this research study have been continually developing and refining customer-oriented processes to keep up with the changes in the market and regulatory environment.

Several authors within CKM domain also stressed the significance of organisational processes (Thomke and Von Hippel, 2002; Gibbert et al, 2002; Jeppensen and Molin, 2003; Gebert et al, 2003; Derliyski and Frohlich, 2004; Chen and Su, 2006; Al-Shammari, 2009; Deloitte, 2012). For instance, Gebert et al, (2003) primarily focussed on process aspect and came up with CKM process model as the output of their research, while Deloitte (2012) concentrated on the process of customer interaction management across all the stages of the lifecycle. Similarly, Chen and Su (2006) described CKM process to enable customer knowledge extraction from multiple customer segments in the market, while Al-Shammari (2009) advocated importance of redesigning processes for effective CKM. Table 4.16 (on page 143) provides substantiating concepts and codes for this core category, while the following sub-sections present factors within it.

**Table 4.16: Processes (Core Category C4): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Client Processes, Process Knowledge Test, Frequent Problems and Common Solutions (F12), Knowledge of People and their Capabilities (F13), Holistic Awareness and Group Decision Making (F14), Risk Register (F15), Domain Experts (F16), Outsourcing(F17), Customer Knowledge Creation and Acquisition (F18), Customer Knowledge Sharing and Usage (F19), Contact with Customer (F20), Collaboration with Business Partners (F21), Quality Assurance (F22), Return on Investment (F23) |
| Substantiating Live Codes |
| Somebody already working on those [customer] processes starts budding up with this guy... who now knows the standard 60-70% of the process but the rest typical nuances of that [client]… he can only learn when he works with that team, with the FLM which is your Front Line Manager and then goes and solves it all (LC102) |
| Practise team goes across all the similar processes [with multiple clients] and understands what's the best practice is, on that. So that, organisation can avoid same mistakes with new clients. (LC118) |
| Customer knowledge... creation starts from an activity called knowledge transfer. A team that understands the process will take screenshots of the processes and the tools they are supposed to work on. They will come back and give an overview on what the processes is about. It is all documented in (like a word document) and then verified and then signed off by the customer. This is how it is and then it goes through periodical changes... every six months it is reviewed with customer. (LC454) (c455) |
| When we realise that a particular team is doing a good job process and satisfying customer, then we pick up on the process for that customer and share [the] practice. So, the representative just makes teams walk through 'what they do to make this a success' and more importantly 'what do they do to get the high customer satisfaction' results. (LC546) |
| There is a process called PKT... it is called Process Knowledge Test and this takes place every month. It is part of their variable incentive pay that happens every month... This is mostly customer knowledge [that is] everything about customer process. (LC627) |
| Typically in process point of view, time to time we document the history [happenings]. And we keep on adding the history [happenings] to that existing book... we don't erase... we don't overwrite. So you have entire evolution from past many years. [For instance,] what was in 2001, what was in 2002, we have everything. so even [if] I am not there involved in 2001, today I have document exactly [conveying] how it was and it is the source one. (LC628) |
| From the process history document book, you exactly know what were the things done, what were the flaws... we also document the failures. So, the people know what are the problems faced... why it fails... it may not be lack of knowledge. May be it is lack of information or lack of technology at that time. It's very easy to carry on... You know exactly why we didn't try it. (LC629) |
| So it [customer knowledge] goes and sits in 'GLUE' [management tool], so it is classified by client and by process. So for a specific client we did such and such process and here is the documentation for it. So that's how it is classified. So everything will be integrated into 'GLUE'. (LC630) |
| Based on analysis of feedback from customers, a new tool and process is designed to enable quick response from sales person to customers in terms of quotations with prices. (LC636) |
| This PR tool is not there anywhere else in our organisation other than this national market. Right now, we have different ERP platforms in different nations, but we are working towards common platform globally. (CC637) |
| We review the entire documentation; we go through [that] with customer and check if there are any changes required in documentation, because, this scenario is so dynamic these days, the tools change, the way we process [also] changes, the tax rate changes, and every year all those changes need to be updated. (LC639) |
| We have external accreditation, so, that forces us to review, what we are doing [in terms of quality assurance] (LC640) |
| Quality assurance function happens internally within the team itself. (CC641) |
| We come under the matrix assurance for the customer service, information, advice and guidance which comes as a part of that [quality assurance]. (LC642) |
| There is a very close relationship that my R and D, QA [Quality Assurance] will have with the customer to make sure that each of the processes that is happening, is happening as planned or designed (CC643) |
| Generally there is an ethic that is set (which I set up), which is where the communications comes from... What is the communication that is going on, which are the channels that need to know, which are the channels that have been formed, etc (CC644) |
| We do sanity check on the security database we have, which includes updating customer related details especially important changes. For instance, many times organisational customers go bankrupt [in our industry] and that happens on a regular basis. (CC645) |
| When we are talking about giving the knowledge to the customer, I talk mostly about the training part. There are very strong strings and parameters [our] training centres have [in place]. The trainings are designed [thoughtfully]... absolutely [all] the modules are designed so as to ensure that we add the right value and impart the right knowledge to the customer (CC646) |
| Customers are the best source [to get market information]..., with 500 customers that we are working with; we believe that's a huge resource to get information on different types. In the same market, you can verify the information regarding what is happening and [any relevant] stuff (LC647) |
| They [quality team] get involved in reviewing final documentation, before it is sent out to the customer. The person, who is responsible for creating and maintaining documentation, goes and sits with quality team to ensure everything in the document is correct, before it is presented to the customer. (CC648) |

#### 4.1.4.1 Frequent problems and common solutions (F12)

**Factor discussion and review**

This empirical study has shown that organisations have mechanisms in place to provide customers with solutions for frequently cited problems. Organisations keep track of frequently asked questions (FAQs) or regular issues that customers face and are ready with answers or common solutions even before a customer asks for one. For instance, some case organisations have informational leaflets with solutions to frequent problems and they are made available to customers in easily accessible locations. This study supports the views of Ramanigopal et al (2012) as they note FAQs are appropriate when tagged in a computer based environment and Fahey et al (2001) as they stress that organisations such as Dell place emphasis on customer support services that include FAQs and solutions to potential problems. They further argue that Dell has mechanisms in place to accumulate data on FAQs and frequently cited customer problems, and transform that data into shared know-how i.e., making front-line employees in CRM aware of common elements in the questions or problems as well as enabling them with knowledge regarding how to deal with these issues in a best way. Table 4.17 below presents substantiating concepts and codes within this area.

**Table 4.17: Frequent problems and common solutions (F12): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Frequently asked questions FAQs, potential problems, predictive solutions, Frequent problems, common solutions |
| Substantiating Codes |
| There is a knowledge base... especially, IT side problems have been recorded ... so, if customer wants to know how to connect his iPhone to network... whatever pick up email on it... we have a kind of informational leaflet on that we can give him... so, we can create those things which we can store and retrieve them (C38)<br>We have from the IT side... the helpdesk system which not only allows to record the data... requests things like that, but also can record solutions and things like that....there are ya, common solutions (C41)<br>we have [a record of] frequently asked questions [FAQs]... so we know [answers as well] ...we do some work on what people ask us most, and try to give them answer before they ask us (LC275) |

**CKM practices and solutions associated**

a) Organisations should have mechanisms in place to accumulate data on frequently cited customer problems and transform that into shared know-how.

b) Organisations should come with best solutions to issues arising from frequent problems and enable customer service staff with knowledge regarding how to deal with them.

c) Organisations can develop self-service tools and aids for customers such as on-line search facility and information-leaflets with solutions to potential problems and make them available to customers even before they ask.

#### *4.1.4.2 Knowledge of people and their capabilities (F13)*

**Factor discussion and review**

This empirical study has revealed that knowledge about people providing different services within the organisation and their capabilities are important. Cross et al (2001) emphasises that people are important source of informational needs and often used much more than impersonal sources. They emphasise that knowing what someone else knows is prerequisite to seek assistance with a specific person when encountered with a problem. It has been observed that organisations try to make customer facing staff aware of expertise of people within different services so that they can access that expertise in order to provide effective customer solution or direct customers to appropriate service. However, organisations need to be aware that it takes time to learn capabilities of different functions in organisations and to know people within organisation. Table 4.18 below presents substantiating concepts and codes within this area.

**Table 4.18: Knowledge of people and their capabilities (F13): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| People's knowledge, Employees and their Capabilities, Employees in Different Functions and their Capabilities |
| Substantiating Codes |
| If you are dealing with a customer who has got a specific issue he might pickup on... or there is a counselling issue or a finance issue….. and then people [front desk employees] would know where to refer him. But what we are trying to do is build up people's knowledge. The staff at the front desk have a vast knowledge, they have huge knowledge of all these services but we do team briefing so that people are aware of each other's services….. we are doing [cross team briefings] on what the key issues are ….. for that particular service (LC14)<br>So, that's where the knowledge management should also be... do they [employees or functional teams] really have the expertise... [knowing] that takes the time. Some aspects of the knowledge management takes [more] time than other aspects, because [over a period of time] you learn about the other people you work with, in an organisation, and also capabilities of different functions in organisations (LC64)<br>Biggest thing which is successful in retaining knowledge and expertise is actually humans [rather than systems and tools] (LC103) |

**CKM practices and solutions associated**

a) Organisations should have long-term mechanisms to build knowledge about people in different functional divisions and their expertise along with approachable access to people and expertise in timely fashion.

b) Organisation can equip customer facing staff with access to experts in providing effective customer solution or at least directing customers to appropriate person or service.

### *4.1.4.3 Holistic Awareness and Group Decision Making (F14)*

**Factor discussion and review**

This empirical study pointed out that creating holistic awareness of client related activities would help staff to understand their task within the comprehensive context and enable them to come up with ideas that would benefit customers. This study revealed that developing a holistic outlook among staff about their common objective i.e., what the entire group is working towards is important. It is advisable to present overall objective or target to the entire group and then seek specific inputs from relevant subgroups in front of the entire group. This will enable the entire group to view contributions from different sub-groups along with any likely inter-linkages paving the way for effective group decision making. Goh and Richards (1997) argue that organisational structures and systems need to encourage group problem solving by employees and reduce the dependency on the upper management. O'Loughlin and McFadzean (1999) also argue that groups are important to organisations and made a specific reference to interacting groups, in which members constantly interact to generate ideas about ways of tackling a problem. Empirical data also highlighted the importance of group perspective in knowing where each sub-group has a role in the process of tackling the problem and how different sub-groups are dependent on each other's work. Table 4.19 below presents substantiating concepts and codes within this area.

**Table 4.19: Holistic Awareness and Group Decision Making (F14): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Holistic Awareness of Customer Problems, Entire Group Integrated Vision, Holistic Decision Making |
| Substantiating Codes |
| From a development perspective or group perspective, making people aware of problem and what the entire group is working towards, is important. [It's like] showing people what the end point is, for the entire group and then asking specific inputs from specific sub-groups in front of the entire group. (LC65) |
| From knowledge perspective, contributions of different sub-groups and more importantly, inter-linkages [i.e., dependency on other sub-groups to complete their tasks] come in. (c66) |
| This [holistic awareness] will help in knowing how others are dependent on your work. When process flow is drawn, that is, in Gantt chart you can see where your work will fall and what it is going to impact. (c67) |
| Lot of people don't know, what work we do for the same client in different areas. Somebody [staff] sitting there right now at a entry level thinks that we only do this [work] for this client but many times we do so much other work for that client in different areas. If people [staff at all levels] have access to such information, they look at what's happening in the other world. They take a clue form there and probably try to change the way they work here or come up with ideas that benefit the customers. So, it's very important from that perspective to have overall picture. (CC777) |
| Lot of people at entry level don't understand the business. They know that after step1, do steps 2, 3, 4, 5, 6, 7, 8, 9, and 10. He does not know why he is doing those 10 steps, all he knows is I have to come and do 10 transactions of 10 steps every day but these [knowledge management] tools will help them understand why they do it. (LC778) |
| If companies encourage their employees at all levels to look at what's happening in different areas, bearing the fact nobody has time to do but if they can dedicate some time to understand the various activities that we do, there is a lot of scope in terms of improvement, getting more business, creating lot of opportunities for the organisation and stuff like that (LC779) |

**CKM practices and solutions associated**

a) Organisations need to develop mechanisms to present holistic picture of client related activities among relevant staff. This would enable them to understand the importance of tasks they perform and come up with ideas that would benefit customers.

b) Organisations should encourage staff at all levels to know varied aspects of client-related activity and comprehend the overall picture. Taking into consideration, the time constraints for employees to look at those aspects, organisations need to ensure appropriate time allocation for learning and comprehending these activities.

c) Organisational mechanisms need to encourage group decision making and problem solving i.e., senior management can make entire group aware of problem or end point and seek specific inputs from sub-groups. This mechanism would illustrate inter-linkages to the entire group along with anticipated contributions from each sub-group.

#### *4.1.4.4 Risk Register (F15)*

**Factor discussion and review**

This empirical study has revealed that managing risk register i.e., identifying all risks and creating knowledge base to address those risks is very much invaluable to organisation. This knowledge which encompasses practical solutions and thought-through plans to address current and potential risks need to be elaborately documented. Organisations can develop procedures to review dynamic new phenomena i.e., when something is happening differently, asses the criticality and update the risk register accordingly. D'Arcy and Brogan (2001) notes that operational risks comprise of issues related to customer satisfaction while strategic risks include factors such as customer preferences, competition, technological innovations etc. Managing risk register would mitigate operational risks by enabling organisations to respond faster with appropriate solution considering past experience of dealing with similar risk or comparable situation. Organisations can mitigate strategic risks by having balance of portfolio i.e., if a client project is promising enough, it can be associated with other client projects that does not have the same risks.

**Table 4.20: Risk Register (F15): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Risk Identification, Risk Mitigating Measure, Sensitive Issues Handling, Managing Vulnerability |
| Substantiating Codes |
| Other thing that I ['Head of Marketing and Innovation'] was also trying to… push very hard is managing the risk register. Identify all the risks we have, all the knowledge of good objectives. And if something goes wrong, what is the plan, how you mitigate those, are the things that I want. (LC70)<br>I would like to be in the position where you [customer] ring up and somebody [employee] lifts the call and pulls out the screen which has all sort of interaction anybody [from the organisation] has with you. So, you don't have to be referred on to someone else, who had interaction with you earlier, except in case of very sensitive data... but we are not really ready yet. (CC278)<br>The immigration and welfare staff [as it is vulnerable service], they record every conversation… we do tend to record what we [are] saying to the customer (CC312)<br>The way to do that is mitigate your risk if the project is good enough if the project is promising enough you mitigate your risk by associating with other customers that don't have the same risks (LC331)<br>The way I look at it [mitigating your risk] is you just have to balance your portfolio (LC333)<br>Well, absolutely stuck at the moment with it because, we want to roll it out to other departments. But, we only can roll out key bits of it because, legally its sensitive data. So, you can only do it with express permission of the person [customer] concerned (LC411)<br>When you say identifying important customer knowledge, couple of things come to mind... one is, critical things may pop up once in a while [and] at that time, if we see something different happening or something difficult happening or something happening, we generally have an internal meeting weekly, [there we] see if this is critical, then we will look through our risk register (LC456) (LC457)<br>[If a issue comes up] we go through risk register and then you say, ok it does match up, or if it is a new issue then [we think about] how do we deal with it and then document that (LC457) (LC458) |

This research study pointed out the importance of appropriate measures in place to deal with sensitive customer issues that are prone to risk. Some case organisations with specific customer services which are prone to vulnerability tend to record every conversation. However, there are issues in sharing this sensitive information with other departments as it can only be done with express permission of customer concerned. Organisations overcome these issues by only sharing key bits of sensitive data with relevant staff and pertinent teams. Table 4.20 (on page 149) presents substantiating concepts and codes within this area.

**CKM practices and solutions associated**

a) Managing risk register is advantageous for organisations as it would enable mechanisms to identify risks and build knowledge base in relation to addressing those risks.

b) Organisations can mitigate strategic risk by having balance of portfolio i.e., by associating one promising client project with other client projects that does not have the same risks.

c) Organisations can benefit from recording all interactions and make them available to relevant staff to deal with customers effectively and efficiently. Recording every conversation is especially important for specific customer services which are prone to vulnerability to safe-guard organisations against associated risks.

#### *4.1.4.5 Domain Experts (F16)*

**Factor discussion and review**

This empirical study revealed wider usage of specific domain experts or subject matter experts in acquiring and sharing knowledge within organisations. Depending on the industry sector, services of these domain experts are utilised differently in varied functions. For instance, one case organisation involves subject matter experts who have gained specific knowledge about nuances and special things associated with a client along with generic domain knowledge to pass on that knowledge to new members joining on that client project through buddy-up training. While another case organisation has advisory boards with professors and researchers from world-renowned institutions to assess knowledge requirements and advise on potential level of organisational involvement within that specific subject area.

**Table 4.21: Domain Experts (F16): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Subject Matter Experts, Subject Domain Experts, World Renowned Experts, Advisory Boards |
| Substantiating Codes |
| [We among customer services department] would expect the leader of that team or the expert in that field to have the in-depth knowledge [regarding their team specific services]. (LC2) |
| [In terms of] strategy for managing the knowledge [in our organisation]... we manage through verticals one way... the second way is individual research groups, the specialisation in domain (LC72) |
| We have advisory boards with world-renowned experts… you might have seen in our website who are like MIT, Harvard post-doctoral researchers... scientific advisory board has people like professors and they can assess what kind of knowledge requirement is there… and advise on potential level of [organisational] involvement in specific domains where in we may just stay or we may achieve excellence (CC75) |
| We have people recruited from wide variety of companies and wide variety of top institutions like MIT, Harvard, Boston, etc.… So, we have this top scientist and you know industry guys who are recruited in as leaders for these domains, further recruit people and increase capacity. This would help in knowledge acquisition. (CC76) |
| Working with a specific customer, employees kind of made that relationship... they kind of got that knowledge [with] them... they kind of know how to work around the problem [within customer specific context] and can solve it... that is not documented anywhere… so that is transferred from one person to the other by saying something what we call SME that is Subject Matter Experts... so, they not only know about the domain but they know about that client and that thing... so, they can do things better. (LC100-1) |
| Somebody already working on those [customer] processes starts budding up with this guy... who now knows the standard 60-70% of the process but the rest typical nuances of that [client]… he can only learn when he works with that team, with the FLM which is your Front Line Manager and then goes and solves it all (LC102) |
| Practise team goes across all the similar processes [with multiple clients] and understands what's the best practice is, on that. So that, organisation can avoid same mistakes with new clients. (LC118) |
| Different practice teams are there for different domains. For instance, a different team for social enterprise, finance and accounting, engineering services, health care, etc. (LC121) |
| Practice teams do three things i.e., capturing knowledge from outside organisation, working on projects with clients, and working with analysts from the market. (LC122) |
| With these domain specific teams, we are responding back to RFP [Request For Proposal] with better proposal (c124) |
| We have couple of [virtual] platforms where you can actually go to the industry and ask for experts... to comment on the problem... in some cases, we pay [as well] (LC125) |
| One of the factors we call it idea insertion, where different domain experts talk about a case just pouring ideas and knowledge. Each domain expert is open to express any point, any opinion (open speech kind of thing) and we just start writing without judging any comment. We just tabulate it and that will be stored in our central database. (CC435) |

In some case organisations, there are teams instead of an individual i.e., one case organisation has different practice teams for different domains which review all the similar processes and understand the best practice. These teams with in-depth domain expertise help organisation to avoid likely mistakes and assure quality of service to clients. Zack (1999) argues that a subject matter expert with a specific functioning to assure quality of content and context has perhaps the most important role among the new organisational roles. Considering the prominence of domain expertise, organisations have devised innovative mechanisms to look for needed expertise even outside the organisation along with monetary incentive for those external resources. These external domain experts can be utilised effectively in idea insertion through open discussions along with specific mechanism to capture their points and opinions altogether without any bias. Table 4.21 (on page 151) presents substantiating concepts and codes within this area.

**CKM practices and solutions associated**

a) Organisations should devise mechanisms to utilise subject matter experts or domain experts to ensure high quality service to customers as they play an important role in ensuring quality in content and context.

b) Organisations should build innovative mechanisms to explore and identify domain experts beyond organisational boundaries and devise appropriate incentive structures to acquire right expertise to solve problems at hand.

c) Organisations can involve domain experts effectively in idea insertion stage by allowing them to openly express any point or opinion and capturing all relevant aspects without judging them at the initial articulation stage.

#### 4.1.4.6 Outsourcing (F17)

**Factor discussion and review**

This empirical research revealed that outsourcing of some services including those associated with customer knowledge management is a common practice in majority of case organisations. As one of the case organisation's core focus is providing outsourcing services to client organisations, empirical data captured insights from both provider and receiver perspectives. Traditionally, the primary objective for outsourcing a certain function, instead of having it in-house is cost saving through efficiency (Murphy et al, 2012; Franceschini et al, 2003) and it came out as one of the important criteria within case organisations as well. However, empirical data highlighted that some additional aspects such as retaining competitive advantage and return on investment are also significant in assessing the suitability of outsourcing in spite of cost saving.  Shereazad et al, (2012) note the classification based on the geographical location of the outsourced project i.e., onshore and offshore which refers to acquiring services from an external source in the home country and overseas respectively has prominence in outsourcing world.

Empirical data from this research indicated that outsourcing can lead towards competitive advantages going out of the company as jobs are off-shored. This Empirical study pointed out that due to some of the risks associated with outsourcing, organisations sometimes take employees with required process knowledge and expertise from the service provider for stipulated period of time rather than outsourcing the work. This practice is more prominent in activities like 'negotiating with vendors' and 'driving sourcing engagement' as return on investment (ROI) for these activities is quite high and there are long-term implications associated with retaining competitive advantage within organisation. Table 4.22 below presents substantiating concepts and codes within this area.

**Table 4.22: Outsourcing (F17): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Outsourcing, Off-Shoring, On-Shoring, Traditional Outsourcing, Strategic Outsourcing, Futuristic Outsourcing |
| Substantiating Codes |
| Biggest fear, probably for our customers is about knowledge management and that probably is reasonably unique in our kind of an environment, because once jobs are off shored [i.e., work is outsourced] you will find... competitive advantage going out of the company... so it need not only be your R & D, it can just be our ability to execute fast and also ability to go into the market fast. At different stages, different things can enable you to differentiate yourself from competition (CC89-90)<br>If you look at any company which is outsourcing, it will have 60% transactional work, 20-25% give away work and 10-15%, which is their proprietary and which they will never give out (LC108)<br>Negotiation with vendors… i.e., actually driving 'sourcing engagement' is probably the last thing you would give it up [outsource], because the ROI of that is much higher. So, among options to outsource it or do it yourself, you will always end up doing it yourself because you see so much of money being saved (CC110)<br>In terms of outsourcing to clients... we actually operate in multiple models... we actually give them the resource from here for two years we are going to work with them (LC112)<br>[In customer services department] we are really a user of services, we refer customers to specific services a lot.... with the disability service [one of our customer services], we contracted out a lot of services which the bigger organisations wouldn't do. So, the customers who need the assessment would approach us in the disability service. We work with an organisation very closely that they come in and do their assessments here, whereas lot of organisations would have an in-house service to do that but we haven't. We work with education psychologists... we would have a bit contracting out (CC227)<br>If it is about the provision, the buying-in of services is slightly different and there are services we work in [which] are free services provided by the support workers for the disable customers. We work closely with them because, we don't have a bank of our own, and so we use an agency. But the rest of time, for example, if we want to buy a boiler for hall of residence, we just buy a boiler [do it ourselves]. If it is a big contract, that will be tendered for us, we wouldn't do by ourselves (LC228)<br>In addition to general types of customer or market knowledge acquisition, we use outsourcing to several organisations. General types include [utilisation of services of] market research organisations, ordering private market research, collaboration with value chain partners and business partners, encouraging knowledge acquisition by sales and marketing staff, usage of research publications and relevant industry specific associations. (LC484) |

### CKM practices and solutions associated

a) Organisations can think about outsourcing of non-core functions taking into consideration cost savings and efficiencies it would make but they need to contemplate on other important aspects such as return on investment and retention of competitive advantage.

b) Organisations can take employees with required process knowledge and expertise from service provider for a stipulated period of time rather than outsourcing the activity in order to retain competitive advantage.

#### 4.1.4.7 Customer Knowledge Creation and Acquisition (F18)

**Factor discussion and review**

The empirical research showed that all case-organisations have mechanisms for creating and capturing customer knowledge while one case-organisation in Europe does not have it in a formalised manner. All case-organisations indicated that the processes for capturing customer knowledge have provision for usage of IT tools i.e., processes are built taking into consideration effective usage of advanced technology tools adopted. These tools vary in terms of complexity from simple ones like word and PowerPoint documents to sophisticated ones like Epiplex (which captures screenshots as well documents the steps that needs to be followed) and WebEx (which is a video based live demo constituting of screen by screen explanation from customer representative). Organisations even have processes to make relevant teams attentive towards dynamic customer interests on a regular basis with tracking tools on their portals. These processes with the assistance of tracking tools on web portals capture pertinent information such as product categories visited and datasheets downloaded at an individual customer level.

This empirical study indicated that organisations have mechanisms to create and capture customer knowledge through analysis of transactions and interactions with customer. This research study also pointed out that organisations can acquire extensive customer knowledge from business partners through relationship building and collaborative arrangements. This supports the academic literature which highlighted the importance of acquisition phase within customer knowledge building process and significance of customer interactions in this phase (Salojarvi and Sainio, 2010; Ramani and Kumar, 2008).

**Table 4.23: Customer knowledge creation and acquisition (F18): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Customer Knowledge Creation, Customer Data Capture, Customer Information Acquisition |
| Substantiating Codes |
| There is no formalised way [of creating or capturing customer knowledge] in my organisation... in my perspective, there is generally each team member [storing information] and you know what information is stored and [where it is] hidden [i.e.,] in different subdirectories and folders... and you know [where] all relevant information is (CC447) |
| Regarding customer knowledge creation and capturing, one major thing is in terms of transactions they are doing with us, second thing is we have this online portal (normal website) where customers do login and download sheets and stuff... so we can actually check all product categories customer has visited, all data sheets (i.e. technical specifications) he has downloaded. That gets captured... so, it gives the information that this customer is interested in this particular product (LC451) (c452) |
| Customer knowledge... creation starts from an activity called knowledge transfer. A team that understands the process will take screenshots of the processes and the tools they are supposed to work on. They will come back and give an overview on what the processes is about. It is all documented in (like a word document) and then verified and then signed off by the customer. This is how it is and then it goes through periodical changes... every six months it is reviewed with customer. (LC454) (c455) |
| When you say identifying important customer knowledge, couple of things come to mind... one is, critical things may pop up once in a while [and] at that time, if we see something different happening or something difficult happening or something happening, we generally have an internal meeting weekly, [there we] see if this is critical, then we will look through our risk register (LC456) (c457) |
| We have certain parameters like filtering... you know that human being will do subconsciously, we will get a lot of lot [data], so we extract the data whatever we want. As I was talking about the sales data (monthly wise), what they [customers] are buying the category wise, what they are buying the classification wise, so we have the provisions for bandwidth of the data and how we wanted (required format). Depending upon what we want to achieve at that particular time, we take out the data from the entire master base (LC458) |
| [We use] EXCEL spreadsheets mostly... but talking about [business analysis or business intelligence tools] we have this PR tool which helps us to understand sales, further [beyond] the quotations sent out to customers (LC459) (LC460) |
| Price quote can be sent, only through the tool to the customer. So, it gets captured. (LC460) (LC461) |
| In terms of acquiring customer knowledge, we do have specialised people in the team who work on this, whose work is to talk to lot of people around, market research firms and stuff (LC485) |
| Sales and marketing staff are the key sources of feeding information back in system. (LC486) |
| In terms of mechanism to capture and organise customer knowledge, one is transactions that they are doing with us, while [the other one is] interactions that we have with them. (LC616) |
| Many of the customers do value sharing their knowledge with us. They help us, help them better, that's what they do (LC617) |
| If it's the market information its known to the market. (LC618) |
| So, any normal time, we would know that this guy is working in a particular [prospective customer] project and so we talk to him. We have to keep following up, our sales guys don't leave it like that, they don't leave it easily, they keep on following (c619) |
| In terms of mechanisms to capture and organise customer knowledge, there is a tool called Epiplex that helps us. So when a person is logged on to the computer, that tool runs down in the back ground and there are shortcut keys. So the person has to click those shortcut keys to capture that particular screen and document the steps that need to be followed. So, that's a very common practice across our industry. (c620) |
| We have recently adopted WebEx based trainee documentation. So, what happens in that is, a live person is making you walk through, on performing a particular activity and in fact the entire process activity. He is talking and he is also explaining you screen-by-screen and that is captured as a video and presented to the other groups to understand and learn. So, that's what the other method which is very successful these days. (c621) |
| The WebEx starts from the customer. So, one of the customer's representatives is doing a live demo and that live demo is presented to a team here. This happens with every new customer. We don't need to do that other way round normally, but we do it only in the case of reverse transitions... So, when a client is taking back a particular account, we need to do that. (c622) |
| Based on lessons we learned from our previous transitions and mistakes that we committed, we could go back to the new client and explain that we did seven such client-cases earlier, we had such an experience, we could avoid such things [mistakes]. We generally do that on a power point presentation. There is no knowledge management as such, but it's a collation of all the things that we would want to improve in the new transition (LC623-4) |
| Epiplex and WebEx are two major tools used in gathering and sharing customer knowledge within organisation. (CC663) |

Making important aspects of communication with customers, like price quotations, pass through work-flow approval process that is encompassed within one common system will enable organisations to gather customer knowledge in one central database. Filtering techniques will enable organisations to retrieve relevant customer data based on what is needed at that point of time from the master database. Menguc et al, (2013) argues that customer-related knowledge resides in individual members of sales teams and these well-coordinated sales teams are an effective means for organisations to bring together abilities to create customer knowledge. Empirical data also pointed out that sales and marketing staff are the key resource in feeding organisations with customer-related knowledge and it is desirable to have mechanisms to gather diverse knowledge on a regular basis through various means like internal meetings, updating reporting systems, etc. Table 4.23 (on page 156) presents substantiating concepts and codes within this area.

**CKM practices and associated solutions**

a) Organisational processes for capturing customer knowledge shall be designed taking into consideration effective usage of relevant IT tools especially once that are adopted by the organisation or industry.

b) Organisations shall build processes to create attention towards dynamic customer interests on a regular basis by capturing customer visits on web-portal including navigations with assistance of tracking tools and sharing that information with relevant teams in a timely manner.

c) Organisations shall have processes for capturing and analysing customer interactions along with transactions as this is one of the very important sources of customer knowledge.

d) Organisations can process important aspects of communication with customer like price quotation or proposals for client solution through one common system as this will enable easy retrieval of relevant data from master database through filtering mechanism.

e) Organisations shall design processes to gather customer-related knowledge from sales and marketing staff on a regular basis through various means such as internal review meetings and reporting mechanisms.

f) Organisations can acquire extensive customer knowledge through collaborative arrangements and good relationships with business partners

#### 4.1.4.8 Customer knowledge Sharing and Usage (F19)

**Factor discussion and review**

The empirical research indicated that all case-organisations recognise the importance of sharing and using customer knowledge and they have relevant mechanisms in place. For instance, one case organisation stressed that if a particular team is doing a good job process and satisfying customer, then they pick up on the process for that customer and share that practice with other teams. A representative gives an illustration of what they do to achieve high customer satisfaction and make other teams 'walk through' that process. Most of the case organisations use knowledge management tools either commercial off-the-shelf tool like SharePoint or in-house developed one like Glue which is designed specifically for organisation in disseminating customer knowledge. Some case-organisations place emphasis on documenting customer knowledge and updating it on a regular basis within knowledge management tool and making it accessible to relevant functional divisions.

This research study supports the view of Sedighi et al, (2012) as they emphasise that the new customer knowledge should be organised and combined with the existing knowledge in central knowledge-base, and disseminated throughout the enterprise. However, the research study also presented evidence of some exceptions based on the sensitivity of customer knowledge where only direct instructions are given across the table without putting anything on paper to avoid any legal implications. Salojarvi and Sainio (2010) acknowledge that systems not only enable formalised dissemination of knowledge by storing customer-specific knowledge including customer-visit reports in the central location but also emphasise that the knowledge dissemination depends mostly on the people within the organisation and their willingness to interact with each other.

This empirical study also pointed out that customer knowledge is shared through lot of interactions and various other means such as general and staff bulletins, intranet, group discussions, multiple forums, meetings, etc. Some of these means are used extensively by case-organisations, for instance one case organisation indicated usage of wide variety of meetings such as periodically scheduled meetings, adhoc meetings, team meetings, personal meetings, virtual meetings, formal meetings, and informal meetings. In addition to these typical means, one case organisation indicated that usage of process knowledge tests for employees is very helpful in sharing customer knowledge and enable them to learn appropriate client processes effectively. Table 4.24 (on page 160) presents substantiating concepts and codes within this area.

**Table 4.24: Customer knowledge Sharing and Usage (F19): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Customer Information Sharing, Customer Knowledge Usage |
| Substantiating Codes |
| Glue is our knowledge management tool and in terms of giving resources [to customers], it is part of a transition plan. So, when we sell a particular service to a customer, we do commit that we would send a team who will work with customer's team and acquire knowledge, document it and update it on regular basis [within GLUE]. So that in a way [is our] knowledge management process - acquire, create and update (CC532) |
| I mean marketing [department] runs open days and do [distribute] prospectus and ask for important things [from prospective customers]. They do give us the feedback from open days, so, we should act on that but I don't think it is hugely shared with us [customer services department]. I think, it should be [shared] with departments related to product development and delivery, because the customer knowledge... [regarding] 'what the market is for products and services' should be shared with them. (c533) |
| We place campaigns and 'how we are doing' on SharePoint. So, various divisions can see what campaigns we have running on, how we are doing with customer applications and enquiries. They [other department staff] can ask us or come to the customer marketing forum meetings (CC534) |
| Any support functional divisions need or any questions they [have]... they use database to contact relevant people. So, it is done through the marketing practitioner group (CC535) |
| When they [employees/staff members from other functional division] ask us questions, we directly send them direct link from there [SharePoint] so that they can look (LC536) |
| We do send out with the bulletin, for example our [prospective customer] application stats [statistics] every week in the bulletin it's called 'how we are doing' (LC537) |
| We have the information [and] that's what we do put on [SharePoint]...i.e., what campaigns we are running... what we are doing at that time for [customer] recruitment...where we are in the [customer recruitment] cycle (CC538) |
| There are problems with using that [SharePoint] as well. So, we do put the things in the bulletin to get through everybody [in the organisation] (LC539) |
| Customer knowledge is generally shared between various functional divisions [in our organisation] through the intranet, personal meetings and a lot of interaction (LC540) |
| Customer knowledge is also shared within organisation through periodically scheduled meetings and then adhoc meetings, when we just stop by. (LC541) |
| That [Customer knowledge sharing] happens... full-fledged information [i.e.,] the data that [we are] talking about is accessible to all the people [employees]... people have access to the data which we are creating and the data which we are maintaining, [including] our sales data or our purchase data (LC542) |
| Based on hierarchy, there are different access levels i.e., data accessibility is different at different hierarchical levels. (c543) |
| we have multiple forums to share customer knowledge. (LC544) |
| We have various verticals.... and teams within each vertical get together in a month or a quarter and discuss with each other in terms of what we are doing in our world which can be replicated in your world. For instance, we see lot of success in our area with this particular aspect, see if you can do it. So, those kinds of efforts happen. (LC545) |
| When we realise that a particular team is doing a good job process and satisfying customer, then we pick up on the process for that customer and share [the] practice. So, the representative just makes teams walk through 'what they do to make this a success' and more importantly 'what do they do to get the high customer satisfaction' results. (LC546) |
| Depending on sensitivity, customer knowledge is shared across the table or sometimes through our virtual system. Sometimes, I don't want any legal implications for either of us. Then, I say, this is what needs to be done [orally] because I don't want to keep anything or any data on paper. (CC625) |
| In terms of ensuring that customer knowledge is shared with relevant employees and is applied appropriately... we do data analysis with all the stakeholders including customer's company manager. That information gets shared even to the level of account manager and he knows that it is periodically shared. (c626) |
| There is a process called PKT... it is called Process Knowledge Test and this takes place every month. It is part of their variable incentive pay that happens every month... This is mostly customer knowledge [that is] everything about customer process. (LC627) |
| Epiplex and WebEx are two major tools used in gathering and sharing customer knowledge within organisation. (CC663) |
| If I am picking something up, I mean it might not necessarily be about what I do because we see lot of customers, we might pick up or it depends what it was... if it was something that was kind of picking up informally from people [customers] saying [to] me, I might say to the person who is delivering that service, we are just picking up that this is happening or that is happening but if it is something more strategic and it affects the organisation then I would go to my boss or I would [discuss]... in one of the many committees on which I sit, depending on what it was. (LC784) |
| It depends on what the knowledge was, it might be something that we found out about dealing within the department and we can do something about it. It might be some sort of product knowledge that we have got about somebody else's department but on the more strategic level, I would feed it in through various committees that I go to (LC785) |
| Every week we will be having a discussion on these cases [i.e.,] technical support cases and sales support cases. See all these people who sit in the branch, region wise will have a control and we will be addressing their issues. (CC807) |

**CKM practices and associated solutions**

a) Organisations should place importance in sharing customer knowledge and there is good scope for effective usage of knowledge management tools in dissemination of customer knowledge bearing in mind some exceptions depending on sensitivity and potential legal implications.

b) Organisations can consider wide variety of means such as intranet, group discussions, multiple forums, meetings, general and staff bulletins in addition to routine interactions for sharing customer knowledge effectively.

c) Organisation can consider knowledge tests associated with customer process as a means for sharing customer knowledge as well as ensuring effective learning among staff.

#### *4.1.4.9 Contact with Customer (F20)*

**Factor discussion and review**

This research study pointed out that 'contact with customer' is one of the crucial factors in value-addition and as business evolves, the need for organisations to be much closer with customer also correspondingly increases. Case-organisations use multiple channels to maintain customer contact such as organising customer events, customer trainings, visiting customers, and contact through social media in addition to regular ones such as phone, email, and periodical meetings. However, depending on customer segment, organisations adopt different ways such as going out to meet prospective customers while existing customers are made aware of relevant events during service encounter or through email.

**Table 4.25: Contact with Customer (F20): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Customer Engagement, Direct Customer Contact, Indirect Contact with Customer, Current Customer Contact, Prospective Customer Contact, Customer Closeness |
| Substantiating Codes |
| All clients, they come and spend two days with us and discuss, what's happening with them and how it does affect our oraganisation (c141) |
| At the end of the day, it is an attempt towards getting as much information as possible. That's why you have more and more people visiting or reaching out to customers regularly, having more discussions and knowing what's happening on their side. Every quarter, majority of us are expected to go out to sit in front of customers talking to them regarding what's happening [in] their work. (c143) |
| As business evolves, you need to be much closer [with customers]... so you got to use all the channels to keep relevant, that regularly (c144) |
| In terms of direct and indirect contact, organisation has with customers... it depends on the different groups (of customers)... for prospective customers... we will go out to see them (CC208) |
| [We contact] current customers by email and invite them to the relevant events, and our staff as well, make them aware of the events we got and [what's] happening at that time [LC209] |
| We invite prospective customers for open days. We advertise on radio, billboard, web, digital, Facebook, Twitter and we try to get people [prospective customers] to relevant events here. (LC210) |
| we register them [prospective customer details] and we will follow up and tell back when the next open day [is]... so we put them in register and contact them again (LC214) |
| In terms of direct or indirect contact... we maintain contact with customers through phone, email, face to face, meetings [and] everything you know [in] general. (LC215) |
| With most of our customers, we try to meet at least twice a year – once at their location and once in our location. (c216) |
| For direct customers, we run marketing programmes where marketing team typically stays in touch with the customer where they talk about [relevant upcoming events including] trainings. (LC220) |
| Customers get mailers about any specific schemes, sales incentives or special prices being offered etc. (CC221) |
| We add a lot of value to the customers by bringing them on to the knowledge platform. (LC222) |
| We do product placement and we do things, where people get engaged in events... formula-1 attached to [racing cars]... there is also in united kingdom, people get engaged with [our organisation and brand]... spends... a lot of stuff. Customers should get involved and there are special events for drivers, safety events and special drive events for AMG [motorsport] customers, who buy sportive cars to go to race tracks, to do luxury trips to New York... basically lot of things, what they do to get engaged with customers and to gain their loyalty (CC225) |
| With most of my customers we have weekly meet... or periodical meetings. (CC235) |
| Then the particular project we work on where we have... 10 telecom [meetings] within each group per week (CC236) |
| Some [Service/Product development departments] don't know and some don't come to us [customer services department] but we can be quite a good resource because we have the contacts [with prospective customer and relevant government bodies], we can say that's a popular area, that's a growing area, that's a reducing area. (c283) |
| I try to understand my customer needs and as I am in a partnership with my customers (organisations) we discuss required documentation, finances and all relevant stuff. (c285) |
| Regulatory conditions, customer interactions and comparative products in the market can give good insights. (LC288) |
| We will be in touch with our customers and know the projects they are going to work upon and we can get some amount of estimate regarding this much value worth of products he would need soon. For us, it's more of a demand forecasting model. (c298) |
| I think it [360 degree view of customer] is good as we like to know [that] we record every contact, prospective customers held with us and every time we contacted them (CC323) |
| If they [customers] contacted us, we can log in as an enquiry... it shows the contact details, what contact we had and what he requested and all those things (LC325) |
| You are still many years away from developing your product or marketing your product [but] it requires your time now... to involve with the customer, tomorrow the customer may not exist (c330) |
| [In] my interaction with customers... I have few that are late stage customers [compared to early stage customers]... you know one customer may have many candidates (LC338) |
| 360 degree view of customer [is used]... primarily [by] sales [people] and whenever they get in contact of a customer (LC446) |
| We don't provide price online, customers get in contact with account managers because we don't know who is accessing our system, whether it is customer or customer's customer. (LC453) |
| That [tool] gives the major information depending on how we look at the data files, in a sense to review and certainly how customer engagements are going on, so that is done (CC461) |

Organisations advertise on varied media such as radio, billboards, web, digital, Facebook, Twitter, etc to get visits from prospective customers to relevant events. Organisations register prospective customers' details in these events in order to enable further contact with these customers. Organisations even facilitate entertainment events and luxury trips for premium customers which enables contact with customers at a more intimate level.

Spencer-Matthews and Lawley (2006) notes that customer contact services have been growing due to increasing customer expectations as well as the impact these contact services have on shaping customer interactions i.e., how customers interact with a business. They further stress the importance of customer contact management which collects, records and accesses relevant customer information from multiple contact points in real time in order to enable effective delivery of customised contact service. Table 4.25 (on page 162) presents substantiating concepts and codes within this area.

Several authors note the prominence of customer contact measurement and supports a measurement model which comprises of communication duration or time, information richness, and communication intimacy as three essential components (Jiun-Sheng and Chia-Chuan, 2011; Lovelock and Wirtz, 2007; Kellogg, 2000). Jones and Jillian (2003) highlights strong association between contact management and customer loyalty based on a survey with 2000 respondents. They argue that organisations can improve chances of customer retention, loyalty, and positive recommendations by the way organisations manage customer contacts.

**CKM practices and associated solutions**

a) Organisations shall reach out to customers at regular intervals in order to understand what is happening in customer domain and how it impacts their business dealings.

b) Organisation can use multiple channels such as organising customer events, customer trainings, visiting customers, and contact through social media in addition to regular ones such as phone, email, and periodical meetings in order to maintain customer contact.

c) In case of premium customers, organisations can consider facilitating entertainment events and luxury trips which enables contact with customers at a more intimate level.

#### *4.1.4.10 Collaboration with Business Partners (F21)*

**Factor discussion and review**

The study revealed that building relationships through collaboration with business partners can provide organisations with access to extensive customer knowledge. Organisations can collaborate with other organisations at horizontal level who provide similar services and value chain partners who assist in flow of information and products. Some case-organisations described the importance of collaboration by the way of organising events which provide a common platform for bringing business partners especially suppliers together with customers. Organisations can benefit from strategic collaborations with highly sophisticated suppliers which facilitate top level management deliberations towards future products and innovations that ensure high value for customers. Some case-organisations have specific collaboration systems for suppliers and they even offer courses to get familiar with these systems. In addition to in-house expertise, there is good scope for collaborative arrangements with other business partners such as design agencies and media agencies to obtain insights into new techniques in reaching and communicating with varied customer segments.

Preston (2011) emphasises that improving collaboration among suppliers, partners, and customers has been identified as strategic priority among organisations across the range from large companies to small and midsize businesses. The empirical research supports this view in the literature; however the scope of this study is limited to large organisations. Heimburger and Dietrich (2012) identified performance elements of collaboration such as customer benefit, supplier benefit, collaboration efficiency, conflicts recovery, uncertainty management, operational fluency, flexibility and adaptability, execution capability, trust, actor incentive alignment, goal alignment and shared vision, strategic integrity, and learning and development capability. Some of these elements such as customer benefit, supplier benefit, and strategic integrity have been echoed in this research study as well. Table 4.26 below presents substantiating concepts and codes within this area.

**Table 4.26: Collaboration with Business Partners (F21): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Supplier Collaboration, Partner Collaboration, Business Collaboration |
| Substantiating Codes |
| We have been working on… building power relationships with employers [some crucial partners]. So, they can [access our knowledge] and we can get the knowledge that they have got. (LC229)<br>We did a careers fair [specific event] recently where we managed to get employers in a big way and we got some interesting feedback about our customers' behaviours and perceptions. (CC230)<br>We have partners at horizontal level and we work together collaboratively. (CC231)<br>We used to work with data management company but we have got it in-house now. (CC232) |

| |
|---|
| We speak to whom we advertise with, i.e., organisation closely works with advertising agencies. (CC233) |
| The way we manage that [raw-material supply] is through an internal mandate where we have to have these [materials always]. We have to have a material of three months and accordingly we have collaborative arrangements with suppliers. (LC237) |
| We constantly advice supply chain partners to follow the guidelines which have been set by the regulatory authorities as it has implications for our final product. (LC240) |
| [We] constantly audit them [suppliers]… audit their processes, their supply chain management, etc., so that, what we actually get is, what they are supposed to be… supplying (LC241) |
| We do constant audits and do constant interaction with them [suppliers](LC242) |
| We make sure that the information and knowledge from customers will pass through the entire supply chains. (c243) |
| In this entire value chain what flows is goods, [which] flow from manufacturer to the end customer. At the same time, we start feeding the manufacturers who are our business partners, basically with customer response, in terms of quality of the product, or any particular gap that needs to be filled up, or any change that is happening with respect to the regulations. (CC246) |
| We also keep sharing with our manufacturers or vendors the sales data... for example, how their brand is performing through our channels... where [and] which states [i.e., regions] they have been [performing] well, which states need much more focus, which state can have a specific scheme... so we keep on feeding those information back. (CC247) |
| We organise [trade] expo, which is platform where you bring the manufacturer and customer on one platform, and there is exchange of views and exchange of interactions and happenings…. so that the customers get an opportunity to talk to the manufacturers directly. The manufacturers gets an opportunity to talk to many customers as the average attendance that we have for an expo is about 250- 300 organisations (CC248) |
| Expo is a big value addition to the manufacturers, when they are part of our expo which happens globally. We have been organising this expo for long now, in all locations that we have got our branch. (CC249) |
| Yes we do share information, manufacturers share information… because each of these manufacturers would have their own sales team also working on the ground, along with our team (CC250) |
| Manufacturers do invest in training [our] people in their places [premises]. So, our engineers and our technical guys do travel across to the manufacturing sites and stuff [training centres]. (CC252) |
| We share information with them [supply chain partners], there are systems for doing this, there are ERP systems and what so ever... there are ... all these Japanese principles that are very famous like ‘KANBAN’ and so on (CC255) |
| If you want to manage innovation properly [continually], you obviously have to analyse the requirements of the customer, abilities of the supplier and [think about] how you bring them together. (LC257) |
| You have to bring that information together, that is where real knowledge management takes place rather than bringing people themselves together. The thing… [about] knowledge management is to bring information together, knowledge together and not the people. (CC258) |
| [We] organise events, where you have this knowledge sharing with business partners (c259) |
| There would be... exchange of information for instance, orders and things like that. (LC261) |
| We have access to each other’s knowledge bases and portals but it is on a very general basis. (LC265) |
| We have specific collaboration systems for suppliers and obviously we have suppliers to work with them. So [for] processes, we are making... we offer them to do courses to get familiar with these systems. (LC266) |
| Obviously ERP systems are critical, if they don’t work, nothing works. Then, on the very strategic basis, you can look up on the internet the ‘diamond supplier network’. It’s a collaboration process... we offer ‘strategic talks’ to very highly sophisticated suppliers which are rated by a system. To the most important ones, we offer top level ‘management talks’ to plan future products and future innovations (LC267) |
| We attain [some] customer demand knowledge through the manufacturers (CC294) |
| [Regarding] demand generation, I would talk about the pull, that is being created in the market by the manufacturer, for this particular brand (LC296) |
| For an organisation to start CKM project to achieve 360 degree view of customer, it depends on so many factors, first on the customer... [like] what customers do you have and then it depends on your processes within your own organisation and your organisation culture... probably a lot more factors than [that], for instance your suppliers, suppliers’ processes, the supplier’s culture and so on and so on. (CC429) |
| Along with in-house expertise, we will ask our external agencies like design agencies or media agencies that we need to contact this group of people [prospective customers] and how best we will reach them. So, they will come up with many new techniques looking at demographics of customers. (LC495) |
| We also organise our company day, it is basically you know a mini expo kind of thing that we will do in a particular city where we don’t have a branch. We do organise that day and four or five friends join us. This is basically an event [through] which we go on to these 2-tier 3-tier cities targeting our industry specific customer base there.... A couple of vendors also travel with us for those events where they would like to propose their products and stuff. It is also a platform where we get the customers in. It almost happens every month (C518-19) |

**CKM practices and associated solutions**

a) Organisations shall build relationships with business partners through collaborations in order to enable access to extensive customer knowledge.

b) Organisations can facilitate events to bring business partners and customers on to the same platform as an effective means of collaboration.

c) Organisations can have collaborative arrangements with external agencies such as media partners, research organisations, and design agencies to reach out to customers in innovative ways.

d) Organisation can develop specific collaboration systems for suppliers and assist them in familiarisation with those systems and processes to obtain fruitful results from the collaborative process

e) Organisations can consider strategic collaboration with sophisticated suppliers in order to work collaboratively towards future products and innovations through top-level management deliberations.

#### *4.1.4.11 Quality Assurance (F22)*

**Factor discussion and review**

Empirical data indicated that quality assurance can be achieved internally within the team itself or it can be enforced through membership and compliance with external accreditations such as matrix assurance for customer service. Some case-organisations have separate quality assurance department which works closely with other departments and customers to ensure that each of the processes is being done as per the plan or design. The research study revealed the scope of quality assurance in each of three components of customer knowledge through the following organisational practices. Some case-organisations do sanity checks on 'knowledge about customers' which include verifying and updating customer position, performance and other relevant details while 'Knowledge from customers' is ascertained from the market. Quality assurance plays a very prominent role in ensuring that 'knowledge for customers' adds right value through appropriate communication to customers. This research also highlighted the significance of considering qualitative and subjective elements along with objective aspects, i.e. to achieve the right balance between objectivity and subjectivity.

Terziovski and Dean (1998) notes that external focus of quality is on meeting or exceeding the customer's expectations but inherent emphasis is towards intensification of organisational quality initiatives which leads to higher service quality and customer satisfaction. Yusof and Ghouri (2013) summarise service quality as cognitive construct with an orientation towards factors that form customer perceptions while customer satisfaction is viewed as an affective reaction to service encounters. Yang (2008) emphasises that organisations should make efforts to harvest full value of knowledge management in quality assurance and argues that product or service quality can be influenced by varied dimensions of knowledge acquisition and dissemination. The empirical study also supports this view in literature as it highlighted the importance of quality assurance in components of customer knowledge both in terms of acquisition and dissemination. Table 4.27 (on page 169) presents substantiating concepts and codes within this area.

**Table 4.27: Quality Assurance (F22): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Quality Organisation, Professional Accreditations, External Accreditations, Matrix Assurance for Customer Service |
| Substantiating Codes |
| It is important to give some provision for qualitative and subjective elements as well. (CC346) |
| I think if we follow the right method in terms of capturing the [customer] knowledge and more importantly, using it. Then we get really good quality... so we produce quality work for the customer. Quality is a by-product of good knowledge management and you eventually get high customer satisfaction(LC614-5) |
| We have external accreditation, so, that forces us to review, what we are doing [in terms of quality assurance] (LC640) |
| Quality assurance function happens internally within the team itself. (CC641) |
| We come under the matrix assurance for the customer service, information, advice and guidance which comes as a part of that [quality assurance]. (LC642) |
| There is a very close relationship that my R and D, QA [Quality Assurance] will have with the customer to make sure that each of the processes that is happening, is happening as planned or designed (CC643) |
| Generally there is an ethic that is set (which I set up), which is where the communications comes from... What is the communication that is going on, which are the channels that need to know, which are the channels that have been formed, etc (CC644) |
| We do sanity check on the security database we have, which includes updating customer related details especially important changes. For instance, many times organisational customers go bankrupt [in our industry] and that happens on a regular basis. (CC645) |
| When we are talking about giving the knowledge to the customer, I talk mostly about the training part. There are very strong strings and parameters [our] training centres have [in place]. The trainings are designed [thoughtfully]... absolutely [all] the modules are designed so as to ensure that we add the right value and impart the right knowledge to the customer (CC646) |
| Customers are the best source [to get market information]..., with 500 customers that we are working with; we believe that's a huge resource to get information on different types. In the same market, you can verify the information regarding what is happening and [any relevant] stuff (LC647) |
| They [quality team] get involved in reviewing final documentation, before it is sent out to the customer. The person, who is responsible for creating and maintaining documentation, goes and sits with quality team to ensure everything in the document is correct, before it is presented to the customer. (CC648) |
| Each customer and his view is different. So, that depends on my view of the technology they went, our desire to other technology, and our interest to that technology. If I have a high interest, then I will be more subjective. If I have low interest, then I will be more objective. (LC749) |
| The subjective and objective elements can be different to each customer. So that's the trick and how we balance that [is the key]. (LC750) |

### CKM practices and associated solutions

a) Organisations should either focus on quality assurance internally or through compliance and membership with external accreditations such as matrix assurance for customer services.

b) Organisations need to ensure quality assurance in each of the three components of customer knowledge through appropriate sanity checks at different stages within knowledge acquisition and dissemination.

**c)** Organisations can intensify and pursue quality initiatives taking into consideration subjective elements along with objective aspects with an appropriate balance between the two.

#### *4.1.4.12 Return on Investment (F23)*

**Factor discussion and review**

The research study indicated that return on investment (ROI) calculation associated with customer knowledge related projects is quite difficult as it is not feasible to precisely measure the overall benefit emanating out of a specific project in many instances. In cases such as implementation of a new system to provide additional information for customers, it is hard to justify costs with foreseeable financial benefits. In terms of ROI on customer knowledge related projects, this empirical study pointed out that organisations most likely take a 'balanced scorecard' approach where it takes into consideration not only financial benefits but also other aspects such as customer results, internal business processes, and risk associated with learning and growth. Examples of some of these aspects which are considered among case-organisations are increase in sales, increase in proposals going out to customers due to increase in available lead times, reducing number of required staff hours, increasing productivity, growing business, increasing quality score, increasing satisfaction of customers, etc. The presentation of business case indicating these aspects emerged as a worthy idea from empirical data. In spite of little scope for hard speaking, preparation of business case is still quite useful in achieving organisational buy-in.

**Table 4.28: Return on Investment (F23): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Return On Investment (ROI), Key Performance Indicator (KPI), Financial Returns, Non-Financial Results, Growth Measures, Balanced Scorecard |
| Substantiating Codes |
| It [return on investment - ROI] is a difficult one to do… what we have been doing [is] we [are] trying to formalize the business cases. ROI assumes that you have growth in customers, something like that… that's where the money comes from (LC715) |
| You can look at whether the new system is cheaper to operate than an old system, invariably it is not the case because of the way pricing structure works, implications in the new system… it could cost you more and the running cost also will be more but reducing the number of staff hours is one I can think (LC716-7) |
| With the new system [to provide additional information to customers] you can show the benefits but it would still be lot less than actual cost of the system... but the reason we are going for it is not to regret… the reason [is] we sell by chance... If I don't provide this information the customers might not come (LC718-9) |
| KPIs [Key Performance Indicators] can include meeting regulatory requirements and providing additional information to enable more enquiries from prospective customers. (CC720) |
| It is difficult to separate the effect of one specific thing when you are changing so many things. For instance, we have placed price comparison with direct competitors on our website. So, depth of the information/knowledge which is relevant for customers is added in as a feature on the website. In terms of ROI it is most likely a 'balanced scorecard', where it looks financial benefits, the customer results, the risk and that kind of thing is built in to a business case. (CC721-4) |
| We don't have a formal way of doing things, but the idea of business case is quite worthy. It's not hard speaking as it is quite difficult to do. (LC725) |
| In terms of ROI, I might be able to say, right if you invest in this, I could make a saving of half a person. (LC726) |
| Depending on what it was, I may not be able to say that it is going to make saving, not in any sophisticated way. (LC727) |
| We try to [calculate ROI] but it is difficult. We don't know what makes people [customers] come here, eventually from my point of view... suppose customer wants to join us, we get an income from them, but we don't know precisely, what influenced them to come. So, there is return on investment in everything (LC728-9) |
| In terms of ROI for customer projects, because they [processes for calculating ROI] are not in place, it's difficult for us. I believe that buy-in happens because there was a need seen [within organisation]. (LC730) |
| Because we were very adhoc for a long time, we were not able to do resource planning. It is highly beneficial to have this structured. (LC731) |
| Our ROI calculations consider scientific contribution, publications and commercialisation. Success in terms of reducing cost is our major ROI. (LC732) |
| For instance, ROI for our PR tool is calculated by measuring the increase in sales, i.e., bump up sales due to increase in lead time [through utilisation of the tool]. Measuring the difference in number of potential quotations going to customers after implementation of tool is considered in calculating ROI for that tool. (LC733) |
| The productivity itself is a big ROI for us. For instance, the sales person was able to sell this much of business before, now he is able to sell this much of business because he is reaching out to these many number of customers. By doing this activity, he [is] shortening his time, so it's all part of that, so we can measure it. We believe in one thing that anything can be measured with time. (LC734-5) |
| For the practice team, one of the biggest elements is growing the business. Business leaders make a decision on how much to invest on the practice team based on things the practice team is giving them. This [is] done on a year-on-year basis. (LC736-7) |
| Calculating ROI on customer related projects is questionable, as need for calculation is not clear. (CC738) |
| How good is the quality score and how satisfied our customer is, these are 2 parameters that will determine whether knowledge management practice is good or not. (LC739) |

Hoffman and Fodor (2010) argue that evaluating investments in customer knowledge related initiatives such as social media relationship illustrates the likelihood of a long-term payoff rather than tangible short-term results. Xu (2004) emphasises that 'marketing ROI' measurement needs to consider future impact of each contact with the customer and profitability over the lifetime of customer relationship. Alsyouf

(2006) suggests that balanced scorecard approach provides a framework for assessment of contributions associated with support functions to the strategic business objectives. The empirical data also supports this view in the literature and advocates the usage of business case with multiple aspects from the balanced scorecard approach. Table 4.28 (on page 171) presents substantiating concepts and codes within this area.

**CKM practices and associated solutions**

a) Organisations should take long-term strategic view while calculating ROI on customer knowledge related projects such as profitability over the customer lifetime rather than narrowly focussing on short-term financial returns.

b) Organisations can adopt balanced scorecard approach in calculating ROI of customer knowledge related projects as it considers aspects such as customer results, internal business processes, and risk associated with learning and growth in addition to financial benefits.

c) Organisations can consider preparation of business case with multiple aspects from balanced scorecard approach in order to achieve organisational buy-in.

### 4.1.5 Technology / IT Infrastructure (C5)

The study indicated that the contribution of technology infrastructure which can store and retrieve knowledge assets such as customer issues and associated common solutions is very valuable among large organisations. The research also highlight the importance of information technology (IT) system to manage customer data with provisions for multiple customer segmentations at different levels which enables retrieval on varied criteria. Empirical data indicated that some of the prominent IT systems which assist directly or indirectly in delivering effective customer solutions among organisations include CRM system, customer record system, ERP systems, business intelligence systems, purchasing systems, logistics systems, and data exchange system. Data further indicates that customer related IT systems and relevant upgrades are important in reaching out to customers in effective way taking into consideration dynamic environment. In addition to systems, customer focussed IT department with capacity to deliver solutions is important for achieving 360 degree view of customer which is considered valuable among case-organisations.

Aghamirian et al, (2013) argue that information technology is an essential and basic source to manage knowledge among organisations and further note that information technology creates competitive advantage through improved customer relations. Rowley (2002) also highlights the importance of technology infrastructure in providing access to knowledge repositories and argues that organisations should place emphasis on tools and technologies that provide connectivity, access and transfer. The research study also supports this emphasis on technology infrastructure in the literature. Table 4.29 (on page 174) provides substantiating concepts and codes for this core category while the following sub-sections present factors within it.

**Table 4.29: Technology (Core Category C5): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Information Technology (IT), IT Support, Customer Focussed IT Department, CRM System, IT Tools (F24), Knowledge Base or Centralised Database (F25), Web-Accessibility and Access Levels (F26), Technology Provisions for Customers (F27) |
| Substantiating Codes |
| We can create those things [knowledge assets useful for customers] which we can store and retrieve [LC39] |
| Helpdesk system… [not only] allows [us] to record the data and requests… but also can record solutions and things like that [LC40] |
| They [helpdesk and service desk systems] have that [common solutions] provision and they have been used [by the organisation]. (LC42) |
| We encourage our people to go and use that tool [GLUE], we encourage our people to go and contribute on that, we encourage that behaviour (LC127) |
| Customer information related IT system has provisions for multiple customer segmentations at different levels. That is, information can be retrieved on varied criteria. (CC182) |
| Organisation usually has a system for particular function. It [system] is only an enabler... it is just for making something efficient. (CC204-5) |
| Obviously ERP systems are critical, if they don't work, nothing works. Then, on the very strategic basis, you can look up on the internet the 'diamond supplier network'. It's a collaboration process... we offer 'strategic talks' to very highly sophisticated suppliers which are rated by a system. To the most important ones, we offer top level 'management talks' to plan future products and future innovations (LC267) |
| We have purchasing systems... logistic systems... 3D data exchange systems and so on [from technology perspective] (LC268) |
| We do a lot and lot of that [automation]… but some of the organisation's IT systems really are not... quite speed on this... so customer relationship is one of them from our point of view (LC276) |
| If they [customers] contacted us, we can log in as an enquiry... it shows the contact details, what contact we had and what he requested and all those things (LC325) |
| We could only email… in a very basic form but now, we got upgraded version, we can email in HTML(LC326) |
| We have got a customer support help-line, which is a toll free number, where customers do call for any technical support (LC351) |
| Within the same system, based on hierarchy level, there is a scope for broader picture. At my level, I can see information regarding customer and drill down [further like] what his transactions are, along with any technical issues if there are any… on the same system and within the same screen. (CC357-8) |
| Of course, it [360 degree view of customer] helps because, it's more efficient than having different or too many systems, where you have to look at each information individually. (LC366) |
| I don't think [our] organisation has tried to achieve 360 degree view of customer. I think this is fragmented, it is bits and bits… and another thing is lack of desire… one of the big problems is the way the systems are… and the effort that has to go into doing this. It's quite a major hurdle in terms of resources. (LC372) |
| There has been a small system for specific category of customers; brought in five years ago, which more or less gives 360 degree view of customer. Before that system, we have to do everything manually. (CC374) |
| We don't have as of now, a formal process which is being meant to have a 360 degree view, but we have different processes within our own system which enables us to gather as much information as we can. (LC385) |
| Important factors that make the system, with complete record of customer feasible, includes technical support and everybody using the same system throughout i.e. standardised system through which everything goes through. (CC388) |
| Important factor in achieving '360 degree view of customer' is [to have a] good IT department, it sounds stupid, but it is critical (LC391) |
| Important factors in achieving '360 degree view of customer' are customer focused IT department and other way round i.e., sales department with good knowledge about IT systems (LC392) |
| It's the capacity of the organisation to deliver an IT solution [360$^{o}$ customer view] for you so that [lack of capacity] is the barrier [for our organisation] (LC395) |
| Before [having the] system with '360 degree view of customer', we have to do things in a long winded way like using [different] databases and we will have to keep [data] up to date manually i.e., we have to print off every file and we retype it... [but] now the system enquiry automatically populates [the required document] (LC403) |
| Information is held internally, within the organisation, but external company from which we bought the system, help us with that system i.e. how it works and how to use that system. (LC406) |
| External company, from which we bought the system, train us and IT department people, on how to implement and use the |

| |
|---|
| system. (LC407) |
| I need IT resources and can't get them, I am trying, I keep trying, people are making lot of noises but I am not getting them because it is not seen as a key priority and until I get them I can't develop it [360° customer of customer] any further. (LC413) |
| Different customer related services are working together for the information [regarding various customer solutions], we log everything [in the same system] and all information is on that. (LC432) |
| We got huge data stores that would produce, what we needed to know in order to tailor our services more specifically but I don't think, we tap into the those because that too is a resource issue [viz. insufficient manpower and expertise] (LC581) |
| We review the entire documentation; we go through [that] with customer and check if there are any changes required in documentation, because, this scenario is so dynamic these days, the tools change, the way we process [also] changes, the tax rate changes, and every year all those changes need to be updated. (LC639) |
| Customer record system does not have the capability [provision] to attach all the information that you would want to touch (c665) |
| In terms of interface… we have to create something… [in] many other places they might use the CRM system to do that. We don't have that [CRM system]. (CC666) |
| If somebody has time and energy, they could sit down and find out more or less everything, but it [IT system] is not that sophisticated. We have not developed in that far or that way. (CC667) |
| We do not have technology infrastructure that can enable 360 degree view of customer, we have bits and pieces, different functions capture that data. We are walking towards a system which would enable us to capture a lot of data on one-to-one [customer] basis. (CC668-9) |
| We have technology infrastructure that can enable 360 degree view of customer. All information and knowledge regarding 'engagement with customer' goes and sits in the tool, and everybody can see it in terms of what is happening [with that customer]. (LC670) |
| In terms of NPD [new product development], focus is towards having a business intelligence looking at trends, and having an enquiry process which takes structured enquiries and groups them into different types. (LC686) |

#### *4.1.5.1 IT Tools (F24)*

**Factor discussion and review**

This empirical study indicated that organisations use wide variety of IT tools which range from simple to sophisticated level such as email, excel, SharePoint, intranet, social media platforms, Epiplex and WebEx which capture information through screenshots and videos, databases, knowledge portals, enterprise systems, CRM systems, and many custom-built tools. Majority of the case organisations stressed the importance of tools dedicated for CKM such as customer record system or CRM system which assist in review of ongoing customer engagements. In addition to these dedicated tools, case-organisations acknowledged the relevance of other tools like finance system in terms of their indirect contribution. Some case organisations advocated the adoption and usage of one central tool with progressive investment to develop it further as a continuous process. It is advisable for these tools to have a capacity to hold lots of customer information and carry on throughout the lifetime of the customer with an ability to identify and connect information even if the customer is returning after some years of discontinuity. Empirical data indicated the significance of organisational awareness in terms of resource implications associated with building and maintaining these tools such as capital investment in system development, licensing costs, implementation costs, etc. and their due consideration in strategic planning.

**Table 4.30: IT Tools (F24): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| IT Tool to Assist Management, Multiple IT tools, Knowledge Management (KM) Tool, Organisation-wide Central Tool, Function specific IT Tools, Business Intelligence Tools, Off-the-Shelf Tools like SharePoint, In-house developed IT Tools |
| Substantiating Codes |
| From IT perspective, I am working on developing something, a tool, which senior management or key individuals in organisation can access and get refresh of each [major client] project at regular intervals or at particular pre-set dates. This tool can save lot of management time. (CC68-9)<br>Tools always hold that 70% well [i.e., 70% of all customer knowledge and information] (LC104)<br>We have couple of [virtual] platforms where you can actually go to the industry and ask for experts. Platforms like LinkedIn or Facebook where problems are stated and whoever has knowledge can comment. (CC125-6)<br>Even customers are on this tool [GLUE – our organisational tool] (CC132)<br>Glue [our organisation tool] is where you have everything [related to client] in one place (CC142)<br>[In terms of IT tools in our organisation], there are systems obviously... there is intranet platform, email, SharePoint, ... [we have] access to [our] databases and external databases and so on (LC148)<br>Customer relationship management system is [expensive] about £45000, so the chances of getting that are pretty limited (CC277)<br>With disability service [one of our customer services], we actually have a system where we record every interaction or conversation. (CC315)<br>There is a CRM system where different customer service teams record and scan stuff in. (c316)<br>As some services have sensitive data about customers, it does not go on to generic organisation-wide records system. (CC317)<br>[In] the organisation customer record system, if you recorded some [data]… it's quite clever enough… [to provide] access only to relevant bits of it (CC318)<br>Last year, we used, what we call standard letters as part of our computer system, so every letter sent is logged… we didn't use to be able to do email... later.... we had [new system through which] we [can] email them and we can text them as well… and it records everything (CC324)<br>Customer record system carries on lots through and carries on right through.... If customer comes back 3 years later and joins another service, it has their information there. System will keep original customer number same and keep that number for the life-time of the customer. As long as customers tell us, we can marry-up [link] that information. (CC443-4)<br>[We use] EXCEL spreadsheets mostly... but talking about [business analysis or business intelligence tools] we have this PR tool which helps us to understand sales, further [beyond] the quotations sent out to customers (LC460)<br>Tool gives the major information depending on how we look at the data files, in a sense, to review 'how customer engagements are going on'. (c462)<br>Glue is our knowledge management tool and in terms of giving resources [to customers], it is part of a transition plan. So, when we sell a particular service to a customer, we do commit that we would send a team who will work with customer's team and acquire knowledge, document it and update it on regular basis [within GLUE]. So that in a way [is our] knowledge management process - acquire, create and update (CC532)<br>We place campaigns and 'how we are doing' on SharePoint. So, various divisions can see what campaigns we have running on, how we are doing with customer applications and enquiries. They [other department staff] can ask us or come to the customer marketing forum meetings (CC534)<br>Having one database on site... like the systems and interactive support across the organisation, and everyone is adopting that [can lead to effective CKM] (LC594)<br>We tried to get… one telephone number that come [appear] on everything like advertising, promotion... so, all go through the |

| |
|---|
| same place and everything is on the homepage… rather than specific department pages. (LC595) |
| So it [customer knowledge] goes and sits in 'GLUE' [management tool], so it is classified by client and by process. So for a specific client we did such and such process and here is the documentation for it. So that's how it is classified. So everything will be integrated into 'GLUE'. (LC630) |
| This PR tool is not there anywhere else in our organisation other than this national market. Right now, we have different ERP platforms in different nations, but we are working towards common platform globally. (CC637) |
| In terms of IT applications related to customer information and knowledge, there is customer record system which is the major one and that deals with prospective customers [as well]. [This system captures information regarding] customers and their relationship to the services they are taking and then, life-long relationship is maintained like that. (CC649) |
| Customer records system has two parts, one deals with almost enquiries and applications from customers while the other deals with services and the enrolled customers. (CC650) |
| Finance system maintains the record of customer related payments and status. Finance system is a separate system but has implications for customer record system. When payments come in, finance system is updated first and manual notification is sent to customer record system. This enables the record for customer re-enrolment and there by access to continuation of service. (LC651-2) |
| There is a virtual learning system for customers which enhances the core service [to customers]. (CC653) |
| There is a system, we use for diagnosis, that can provide information regarding customer engagement with service. This system which we use for diagnosis has different access levels and it enables relevant teams to have better understanding of context, when they are dealing with customers. This in-house developed diagnosis system is very helpful when we are trying to support customers at distance as we need a quick way to be able to diagnose, what the problem might be. (CC654-6) |
| Customer record system has lot of modules and you can use particular modules relevant for you. (CC657) |
| The systems [we have] give me particular information about individual customers but they don't give me any trend data [over a period of time]. We got some trend data of our own that we build up over time. (CC658) |
| There are [separate] spread-sheets within our department but we try to put everything through customer record system. (LC659) |
| E-rooms and emails are IT applications that we use in relation to customer information and knowledge. We have ERP system but we don't use it for customers, we use it for internal processes. (CC660) |
| MIS system and PR tool are the major platforms on which we are working. (CC661) |
| Glue is one tool which we use very widely. (CC662) |
| Epiplex and WebEx are two major tools used in gathering and sharing customer knowledge within organisation. (CC663) |
| Sales and Marketing [department] have whole section of customer record system which deals with acquiring customers and they are owners of that particular section. They also have CRM system which has lot of information pulled together. (CC682-3) |
| There is a stand-alone CRM system to maintain good relationship with some of the key influencers in the market. However, it is tricky to communicate certain things directly due to data protection issues. (CC695) |
| Inclination in our culture is to move on to the next thing, record keeping isn't necessarily great. Employees don't update the data whatever they update in the dairy and it is not captured in the system. (CC696) |
| Even for simple things like using electronic records instead of physical records, [it] is incredibly difficult and the amount of time it took to do that is so high. With big drive, it went up to 95% compliance and dropped down again to 80% compliance when the massive push on that stuff is off. (LC697) |
| CRM system has capability to record complete interactions with individual organisation, even though different teams having different contacts within the same organisation. Customer record system does not have this functionality. CRM system is linked to customer record system but they are based on two different databases. (CC698) |
| In our organisation, CRM system is small part within organisation-wide central tool. (CC699) |
| In terms of knowledge portal, we have 'SharePoint', but it is used only by few departments. CRM system has that capability, but limited people have got access to it. (CC700) |
| Customer related projects take different kind of resources, for instance, recent project like acquiring and using CRM system, there is a capital investment in system and implementation costs. For some systems like customer records system, there can be some ongoing costs in terms of licensing costs, which probably are about 20%. (CC705) |
| Our investments in recent projects include CRM system [acquisition], upgrades for customer record system and trainings. (CC706) |
| All the investments with respect to this [our PR] tool designing, have been taken place in last 3 years. (CC707) |
| The central tool we have adopted, we invest in it [continually]. It is a continuous process i.e. it is a continuous existence. (c708) |
| I think, GLUE is the very good tool, I have seen tools in various other companies. I have seen more or less everything is similar, it's just that they have different names. So, there was something called as 'CANE' tool and for the company that I worked, there was something else, 'IDEATION' was the name of the tool in other company. So, every company calls it differently, they create it on different platform but [at] the end of the day the result is same (CC756) |
| There is MIS system where we log in everything such as technical support, sales support, test reports, trainings, and we can see the entire structure. For instance, the technical support cases will be updated by the technical managers in the branches as well as the regional technical manager (CC797) |
| Technical teams update the problems on to the system, which is their primary responsibility. It is up to me, whether to take it or not. In turn, I will support these technical guys. I will not be supporting the users; I will not be taking calls from the customers. So, I will support my technical team. (CC798) |

Natti et al (2006) note that effective customer specific knowledge-transfer is crucial for customer value creation and argue that the role of technological tools such as IT systems deserves research attention. Stokes (2012) further emphasises that ‘customers can be important contributors to knowledge base’ and ‘organisations need technology to provide the tools and realise the benefits’. In line with these views in the literature, findings of this study stressed the importance of IT tools through various considerations and wide usage among case-organisations. Table 4.30 (on page 176) presents substantiating concepts and codes for this factor.

**CKM practices and associated solutions**

a) Organisations should give importance for analysis of ongoing customer engagements through CKM oriented tools such as CRM system while acknowledging the indirect contribution of other tools like finance system.

b) Organisations can encourage convention to use one central tool along with continual development of the tool through progressive investment.

c) Organisations can develop tools that have a capacity to hold lots of customer information and carry on data throughout the lifetime of the customer with an ability to identify and connect information even if the customer is returning after decades of discontinuity.

d) Organisations should be aware of resource implications associated with building and maintaining these tools such as capital investment in system development, licensing costs, implementation costs, etc. and strategically plan these aspects in advance.

#### *4.1.5.2 Knowledge-base or Centralised Database (F25)*

**Factor discussion and review**

The research study indicated that creating a knowledge-base or preparing a database with market information and reviewing that at regular intervals would assist in identifying opportunities to expand business and tailor services more specifically in-line with the changing customer preferences. Majority of the case-organisations stressed the importance of using one central database along with appropriate measures to manage it. For instance, many case-organisations have centralised database linked to primary system such as customer record system which captures details of all existing customers as well as prospective customers who came in to contact. In addition, organisations have obligation to maintain information accurately and safely under data protection act and this study indicated that it is easy to do it in single place with single authority to maintain it. Empirical data indicated that case organisations have measures to perform sanity checks on the information within database and update it continually with changes in the dynamic market environment. This research also highlighted that centralised database can enable executives to be able or see what is going on. However, one case-organisation in Europe indicated that it overcame the problem associated with multiple databases and sources by developing an in-house tool that can link information from various sources and presents all at one place.

**Table 4.31: Knowledge base or Centralised database (F25): Substantiating concepts and codes**

| Substantiating Concepts |
|---|
| Central Database, Standardised Knowledge Management Tool throughout the Organisation, Adopting One Database Organisation-wide, Passing Everything through one Knowledge-Base or KM Tool. |
| Substantiating Codes |
| Preparing a database with market information and analysing the data would help in identifying future [customer] retentions and reaching out to further customers including those in expanded horizons. (CC81) |
| [In terms of IT tools in our organisation], there are systems obviously... there is intranet platform, email, SharePoint, ... [we have] access to [our] databases and external databases and so on (LC148) |
| Our organisation has database and [also] guidelines. If anyone disobeys guideline or general rule setup by the employer, one can be fired. This is very strict and is centralised for the whole organisation [all divisions]. (LC206) |
| Before [having the] system with '360 degree view of customer', we have to do things in a long winded way like using [different] databases and we will have to keep [data] up to date manually i.e., we have to print off every file and we retype it... [but] now the system enquiry automatically populates [the required document] (LC403) |
| The best way is to first listen to the customer and then it must be recorded in a central place…. everything should be in one database and I think someone needs to manage that database (CC420) |
| One of the factors we call it idea insertion, where different domain experts talk about a case just pouring ideas and knowledge. Each domain expert is open to express any point, any opinion (open speech kind of thing) and we just start writing without judging any comment. We just tabulate it and that will be stored in our central database. (CC435) |
| We got huge data stores that would produce, what we needed to know in order to tailor our services more specifically but I don't think, we tap into the those because that too is a resource issue [viz. insufficient manpower and expertise] (LC581) |
| Having the one database on site... like the systems and interactive support across the organisation and everyone is adopting that [can lead to effective CKM] (LC594) |
| We tried to get… one telephone number that come [appear] on everything like advertising, promotion... so, all go through the same place and everything is on the homepage… rather than specific department pages. (LC595) |
| We do sanity check on the security database we have, which includes updating customer related details especially important changes. For instance, many times organisational customers go bankrupt [in our industry] and that happens on a regular basis. (CC645) |
| GLUE is a knowledge management tool and it is a web-page tool, which has functionality of social collaboration. (CC664) |
| ISTHMUS [our in-house developed tool] links information from various sources and presents all at one place. With enhancements [to this tool], this can lead to 360 degree view of customer. (CC671) |
| We use our primary systems like the customer record system and HR system to drive other things [systems]. There is directory service which is called active directory. (c672) |
| You have an obligation under the data protection to maintain information accurately… obviously it is easy to do in a single place… [consequently under] single authority. (LC673) |
| Customer record system is viewed as a centralised database, as it contains record of every [existing] customer and prospective customer who made an application. (CC674) |
| We are trying to build one centralised database, which can pop up all the information to enable high level executives, to be able to see what's going on. (CC675) |
| Central database is in a particular location and there is a backup as well. It's on intranet, so, one can't access it from outside the company. One has to be logged on to the company network for security reasons. We give customer a special access which is a secure intranet access. (CC676) |
| Glue [which is based on a central database] has two portions one in internet and the other is [in] intranet… so, intranet is restricted to outside world… so, glue is more like a Facebook for us. So, Facebook part of it is open to everyone, [but] the knowledge management is only to the employees. (LC677) |
| There is a customer database regarding technical issues and it is updated on a regular basis. We have to continually update the system from beginning till the close [of the issue]. Even though it is not always 100% updated properly, technical teams will update whichever is possible. (CC804) |

Sedighi et al (2012) emphasise that knowledge discovery from databases has a vital role in customer knowledge creation and consequently instrumental in customer value augmentation. Zahay (2008) argues that organisations that are renowned in customer information management practices not only encourage functional divisions in development of customer databases but also advocate use of relational and transactional data in their data applications. Rhee and Mcintyre (2008) further notes that database marketing needs to consider effects of organisation's customer contact efforts before and after purchase. Berger et al., (2006) also argues that the database marketing revolution contributed towards improvement in customer lifetime value and customer equity among organisations and consequently paved the way for database service bureaus. Zahay (2008) emphasises that customer database or marketing database can be used to create superior performance at strategic, functional, and operational levels. This empirical research supports the views presented in the literature as it stressed the importance assigned to development and usage of centralised database among case-organisations. Table 4.31 (on page 180) presents some substantiating concepts and codes for this factor.

**CKM practices and associated solutions**

a) Organisations should develop a customer database or database with market information and use that knowledge base to create superior performance at strategic, functional, and operational levels.

b) Organisations should have measures to perform sanity checks on the information within database and update it continually with changes in the dynamic market environment.

c) Organisations can build one central database or at least a tool that can link information from various sources and presents all at one place in order to assist management in identifying opportunities to expand business and tailor services appropriately.

#### 4.1.5.3 Web-accessibility and Access Levels (F26)

**Factor discussion and review**

This study indicated that website is one of the main components used in managing customer knowledge among organisations and its prominence is growing with time. All case-organisations recognised the importance of developing websites and have mechanisms to update their websites on a regular basis. Majority of the case organisations have been trying to add new features on website to manage customer knowledge effectively at more depth. For instance, one case organisation illustrated an addition of a new feature in order to provide comparative analysis of products along with that of competitors on website to assist customer evaluation in purchase decision making. Some case organisations have knowledge management tools integrated on to the web-pages with a functionality of social collaboration which assists in customer knowledge creation and dissemination. Empirical data indicated that organisations can benefit from providing access to a portion of central database through internet while the knowledge management part is restricted to intranet. For instance, one case organisation has made challenges listed on the database accessible to customers and wider public on internet through a social collaboration tool with an intention to get response, while the accumulated solutions and insights provided by customers and experts are restricted to intranet with limited access to relevant staff.

This research also indicated that case-organisations deliberately use client-server architecture for some of the crucial systems like customer record system which enables them to build the required functionality into the web-client. This front-end web-client can be customised to provide different level of access to different groups based on the requirements. This study illustrated that organisations often restrict access to confidential portions of central databases or primary systems through a secure log-in mechanism along with capability to monitor and track changes. This empirical study also indicated that case-organisations have different access levels based on varied criteria such as level of hierarchy i.e., over-arching access to senior managers while limited access to junior level staff; and relevance of functional department and employees within i.e., edit access is limited to few employees from suitable department.

Sparks (2012) and Clark et al., (2009) notes that corporate website is fast becoming a primary means for communicating with current and prospective customers, and argues that comprehending good website features is a crucial twenty-first century skill set. Nguyen (2012) emphasises the demand for more interactions between organisation and its customers through customer forums, web communities, blogs, online recommendations, and social networking websites. This research study supports these views in literature as case-organisations illustrated addition of new features such as social collaboration forums on websites to encourage more customer interactions. Rajagopal (2011) recommends organisations to use positive association between website design features and product search behaviour by monitoring online customers' expectations while Alreck and Settle (2009) advocate price comparison on website. In-line with literature, empirical data from this study also illustrated development of design features on website to provide comparative analysis of product as per consumers' expectations. Table 4.32 (on page 184) presents some substantiating concepts and codes for this factor.

**Table 4.32: Web-Accessibility and Access Levels (F26): Substantiating concepts and codes**

| Substantiating Concepts |
| --- |
| Communication through Website, Special Access to Customers, Secure Intranet Access, Client Server Architecture, Different Types of Access to Front End Web-Client, Web-Accessible Database with Log-in, Restricted Access Based on Hierarchy, Web-page Tools, Online Access for Customers |
| **Substantiating Codes** |
| What we do with that [customer relevant] information is, sometimes we reverse back and send it out to customers. For example, we do a lot of work on the website, [but] the website is under a bit of development [now]. So, we are a bit struck at the moment because... that [communication through website] is our main method. (CC10) |
| We have a departmental website, we have the shared areas for documentation... what's called L-drive [which is virtual space] (CC34) |
| There are some filters in terms of access to this [central knowledge-base] GLUE. Senior managers can see both sides [open aspects and restricted KM aspects] on their log-in (CC138-9) |
| We are trying to take note of different customer segments on the website, but don't necessarily do anything like mail-shots or anything like targeting particular group… we don't consciously communicate with one group only (LC183-4) |
| GLUE is a knowledge management tool and it is a web-page tool, which has functionality of social collaboration. (CC664) |
| Central database is in a particular location and there is a backup as well. It's on intranet, so, one can't access it from outside the company. One has to be logged on to the company network for security reasons. We give customer a special access which is a secure intranet access. (CC676) |
| Glue [which is based on a central database] has two portions one in internet and the other is [in] intranet… so, intranet is restricted to outside world… so, glue is more like a Facebook for us. So, Facebook part of it is open to everyone, [but] the knowledge management is only to the employees. (LC677) |
| Primary systems are deliberately not made web accessible, while customer record system which works on client server architecture has front end web client. One has to build the functionality into the web client. This front end web client can be customised to have different [types of] access to different groups and we have to build it by ourselves [i.e. within IT department]. (CC678-9) |
| Customer knowledge database is web accessible with log-in id [in our organisation]. (LC680) |
| Sales and Marketing [department] have whole section of customer record system which deals with acquiring customers and they are owners of that particular section. They also have CRM system which has lot of information pulled together. (CC682-3) |
| In terms of NPD [new product development], focus is towards having a business intelligence looking at trends, and having an enquiry process which takes structured enquiries and groups them into different types. (CC686) |
| It [customer record system] works through integration of various modules. So, somebody has got the whole view of the whole thing and then some people have got access to relevant modules or relevant bits within modules. (LC687) |
| In addition to relevant modules within customer record system, we use a standalone but national system for the administration of specific service, which is run by a third party organisation (CC688) |
| Customer knowledge is accessible to employees, but there are team rules where this data is applied. (LC689) |
| Edit access is only given to appropriate employee, even if the manager of the employee has access, documents have date stamp and change stamp. So we can find out who made the last change. (CC693) |
| Above a certain level [i.e., from senior management level] in the hierarchy of our organisation, we have access to all the information. Below senior management level there is limited access. (CC701) |
| Customers have access to product portfolio for viewing and downloading. Customers also have access to their own statement of transactions they did with us and this is designed in the process. In addition, they get information from us on demand. (CC702) |
| Our customers have all the access online in terms of booking orders and tracking their items. So, customers can transact with us online. (CC703) |
| The information or knowledge at appropriate depth, relevant for customers, is added in as a feature on the website. (CC723) |

## CKM practices and associated solutions

a) Organisations need to recognise importance of corporate websites in customer knowledge management and should have mechanisms to update web-pages on a continual basis.

b) Organisations can have social collaboration tools integrated onto the website in order to assist with customer knowledge creation and dissemination.

c) Based on customer expectations and product search behaviour, organisations should develop appropriate design features such as price comparison within their websites.

d) Organisations should provide a secure access to confidential parts of the customer knowledge database through appropriate log-in mechanisms to limit access to specific employees within relevant functional divisions along with ability to monitor and track changes.

#### *4.1.5.4 Technology provisions for customer (F27)*

**Factor discussion and review**

The findings of this study indicated that providing technological provisions for customers would help organisations in creating and managing customer knowledge more effectively. This Empirical research also highlighted the importance of enabling online orders booking and items tracking for customer in addition to provisions such as virtual access to statement of transactions and product portfolio for both viewing and downloading. In terms of further technology provisions or resources for customers, organisations can facilitate common forums, customer blogs or spaces which helps in generating more conversation; use social media such as Facebook pages where customers can ask questions; create web-pages with functionality of social collaboration to enable customer alliances; organise customer training events where there is high scope for learning back from customers while educating them;

and manage e-rooms where customers and organisations can place documents and share them.

**Table 4.33: Technology provisions for customers (F27): Substantiating concepts and codes**

| Substantiating Concepts |
| --- |
| E-Rooms for Customers, Blogging Spaces for Customers, Viewing and Downloading Provisions for Customers, Common Forums or Spaces, Social Collaboration Provisions for Customers, |
| Substantiating Codes |
| In terms of resources for customers like common forums or spaces, we use Facebook, where customers can ask anything. We have two blogs... we got some of our customers blogging, which will hopefully help in generating some conversation. (CC525) |
| We don't do lots of blogs and we ask departments to do and they inform us anything customers said or that is relevant to us (LC526) |
| We tend to have very focussed discussions and interactions with customers [regarding joint innovation] because of intellectual property related issues. We have regularly scheduled interactions either planned or adhoc. (CC527) |
| We have e-rooms where we can put stuff… customers can put stuff and share information. This includes provisions associated with document management systems i.e. same document can be enhanced by us and our customer. (CC528) |
| Events [that we organise] give us that knowledge base [and] platform because I get a chance to interact with my customers while I am training [them] on something… I am learning back something form them. (LC529) |
| Customers will come up with some enquiries which I would like to know [further]... we will identify the guy who is working on this, then we get update on what is happening in the market, so that creates knowledge for us. (CC530) |
| With respect to the [sales] funnel [and] opportunities that are happening, what is competition doing... for example, competition informs (indicates) something which comes on, much more like this [is grasped] when we interact with customers directly (LC531) |
| GLUE is a knowledge management tool and it is a web-page tool, which has functionality of social collaboration. (CC664) |
| Customers have access to product portfolio for viewing and downloading. Customers also have access to their own statement of transactions they did with us and this is designed in the process. In addition, they get information from us on demand. (CC702) |
| Our customers have all the access online in terms of booking orders and tracking their items. So, customers can transact with us online. (CC703) |

Lewis et al, (2011) note that many organisations attain IT-enabled services to overcome barriers to agility and competitive performance. For instance, Browe and Wang (2007) illustrated the applicability of a web-based tool in collecting customer information and feedback for research activities, and facilitating interactive marketing communication and viral marketing within pharmaceutical industry. However, Walker and Johnson (2006) argue that customer adoption of technology enabled services depends on multiple factors such as perceived security and technical reliability, user friendliness, and comparative benefits offered. They strongly recommend service providers to foster customer confidence; develop marketing strategies to convince customers of security measures to mitigate risks; and demonstrate the significant advantages that can be gained through use of technology enabled services. This research study supports these views in literature and highlighted multiple technology enabled provisions and services for customers. Table 4.33 (on page 186) presents some substantiating concepts and codes for this factor.

**CKM practices and associated solutions**

a) Organisations should provide technology-enabled services and provisions for customers, and ensure usage of these provisions through illustration of comparative advantages.

b) Organisations should convince customers about usage of technology provisions by addressing their perceived risks through security measures and technical reliability along with fostering customer confidence.

## 4.2 COMPREHENSIVE CKM FRAMEWORK

A comprehensive framework is developed for practicing customer knowledge management among large organisations. The framework which is based on the empirical findings of this research study can be useful in achieving 360$^{o}$ view of customer. This CKM framework illustrated in figure 4.1 (on page 190) integrates five core categories explored in this study: ***C**omponents, **D**rivers, **C**ulture, **P**rocesses, and **T**echnology* (*CDCPT*). In addition, this framework encompasses five phases associated to five core categories, along with all constituent factors, emerged from the research study. Organisations need to consider this framework as broad template and customise it, in accordance with specific context or business needs. The following subsections present a brief overview about each of the five phases mentioned in the framework. Each phase relates to a core category and provides a sense of direction for practising CKM, by focussing on its intended contribution to the holistic framework.

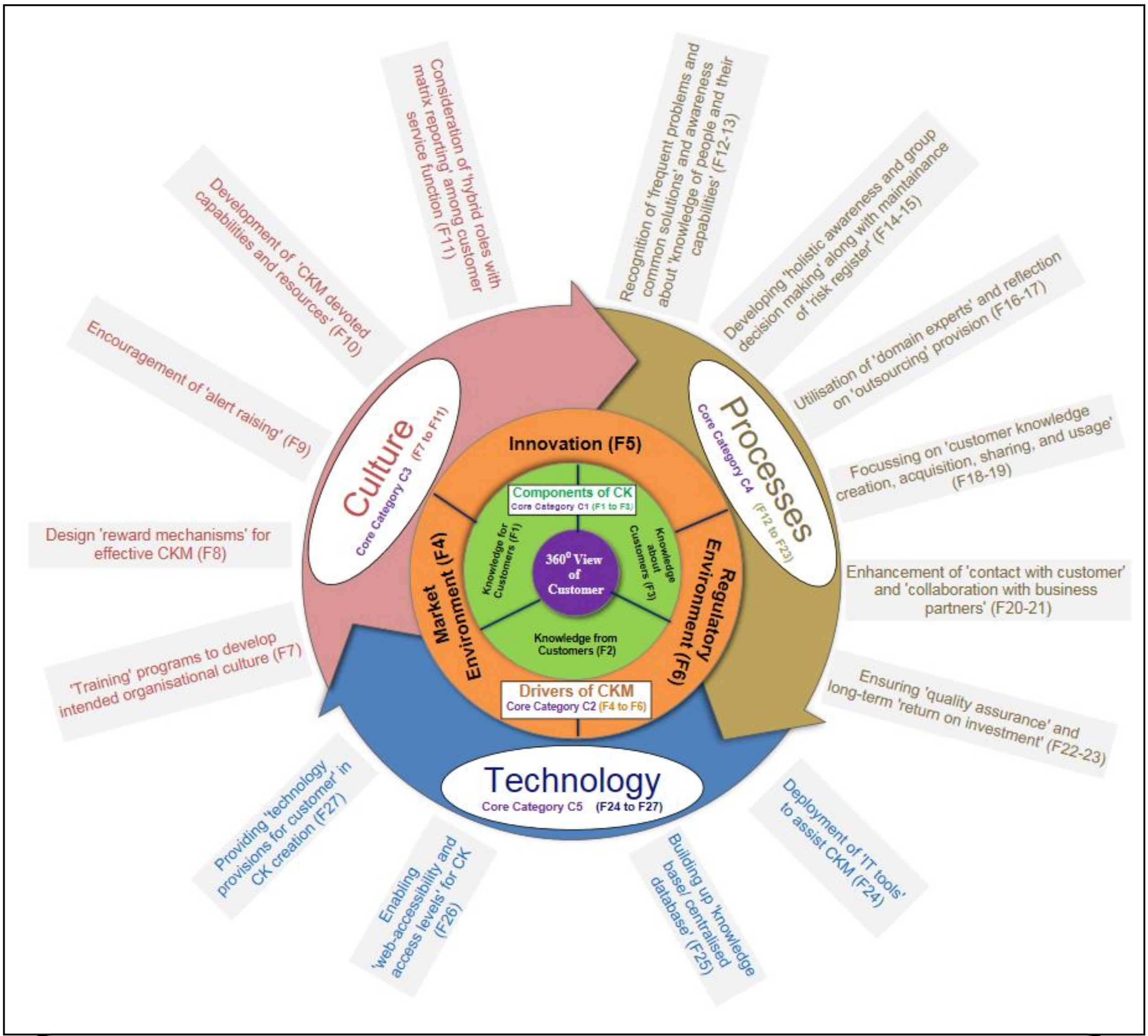
**Phase-1: Understand and assess customer knowledge components within the organisational context**

Organisations need to understand general industry practices with respect to components of customer knowledge (C1) and establish most relevant & important dimensions specific to their business context. Organisations can consider their industry specific dimensions as well as different aspects discussed within 'Knowledge for Customers' (F1), 'Knowledge from Customers' (F2), and 'Knowledge about Customers' (F3) to assess the suitability and adaptability, within their existing context. For instance, organisations can assess the importance of customer training within 'knowledge for customers' component, while, they can evaluate the significance of customer segmentation based on product consumption patterns, in 'knowledge about customers' component. Similarly, they can consider the possibility of collaborative projects with customers to co-create valuable knowledge, among 'knowledge from customers' component. Organisations need to continually monitor business environment, for new developments and industry trends within customer knowledge domain and respond proactively, considering 'CKM solutions' discussed in factors F1 to F3.

**Phase-2: Comprehend prominent CKM drivers within the industry and estimate their impact**

Organisations should consciously make an effort to recognise or deliberately figure-out significant drivers (C2) for customer knowledge management, among their industry or business context. Organisations can consider various aspects discussed within 'Market Environment' (F4), 'Innovation' (F5), and 'Regulatory Environment' (F6) as examples in determining important drivers. Based on the industry segment and business environment of an organisation, there can be a possibility for a number of prominent sub-drivers or other drivers for CKM. For instance, potential sub-drivers within 'market environment' can constitute of poor customer-retention issue, high employee-turnover, continual change in customer preferences, etc. Comprehensive evaluation of relevant industry specific CKM drivers and their implications for organisation can be very useful in obtaining support from senior management and mitigating lapses effectively, through customer knowledge management.

## CKM Framework with core categories and constituent factors




Phase-1: Understand and assess customer knowledge ***components*** within the organisational context ***(factors F1-F3)***

Phase-2: Comprehend prominent CKM ***drivers*** ***(F4-F6)*** within the industry and estimate their impact

Phase-3: Develop and sustain customer-oriented ***culture*** ***(F7-F11)*** in organisation

Phase-4: Appraise and optimise core business ***processes*** ***(F12-F23)*** for effective CKM

Phase-5: Establish and utilise ***technology*** infrastructure to support CKM and 360$^{o}$ view of customer ***(F24-F27)***

**Figure 4.1- Comprehensive CKM framework (Source: Author)**

**Phase-3: Develop and sustain customer-oriented culture in organisation**

This phase aims to develop customer-oriented culture (C3) and ensure its continued maintenance and enhancement throughout the organisation. For developing and sustaining customer-oriented culture, organisations can consider varied aspects discussed within Training (F7), Reward Mechanisms (F8), Alert Raising (F9), CKM Devoted Resources and Capabilities (F10), and Hybrid Roles with Matrix Reporting (F11). For instance, organisations can develop customer-centric culture among staff and suppliers through flexible and innovative training approaches such as buddy-up training, cross-team briefings, job rotations, etc. discussed within 'training' factor. Similarly, organisations can encourage intended culture among staff through proper design of both monetary incentive structures and non-financial rewards, as highlighted in 'reward mechanisms' and 'alert raising' factors. Organisations can also employ dedicated human resources with capabilities to deal with crucial aspects of customer knowledge management, as well as design hybrid roles for staff within customer related services, to retain customer knowledge and utilise resources efficiently, as discussed within 'CKM devoted capabilities and resources' and 'hybrid roles with matrix reporting' factors. All these aspects within factors F7 to F11 would assist in continued sustenance of intended organisational culture.

**Phase-4: Appraise and optimise core business processes for effective CKM**

Organisations need to appraise their core business processes (C4), with respect to Customer Knowledge Management and optimise them for effectiveness. Further, organisations can consider several aspects discussed within 'Frequent Problems and Common Solutions' (F12), 'Knowledge of People and their Capabilities' (F13), ‘Holistic Awareness and Group Decision Making’ (F14), ‘Risk Register’ (F15), ‘Domain Experts’ (F16), ‘Outsourcing’ (F17), ‘Customer Knowledge Creation and Acquisition’ (F18), ‘Customer Knowledge Sharing and Usage’ (F19), ‘Contact with Customer’ (F20), ‘Collaboration with Business Partners’ (F21), ‘Quality Assurance’ (F22), and ‘Return on Investment’ (F23). For instance, organisations can keep track of frequently cited problems from customers and be prepared with appropriate solutions along with capable human resources and their know-how, as discussed in ‘frequent problems and common solutions’ and ‘knowledge of people and their capabilities’ factors. Similarly, organisations can make efforts to develop holistic awareness of client related activities among staff and facilitate group decision making to resolve the client issues effectively as well as evaluate and document all associated risks for future reference, as emphasised within ‘holistic awareness and group decision making’ and ‘risk register’ factors. Organisations can devise mechanisms to utilise domain experts in dealing with specific subject areas to ensure high-quality customer service and consider outsourcing of non-core functions to other organisations with expertise in those areas for cost-savings and efficiencies, as indicated in ‘domain experts’ and ‘outsourcing’ factors. Organisations can build processes for capturing and analysing relevant customer interactions along with transactions, and further develop mechanisms for efficient dissemination and effective usage of customer knowledge as discussed in ‘customer knowledge creation and acquisition’ and ‘customer knowledge sharing and usage’ factors. As business evolves, organisations can adopt multiple ways to maintain customer contact such as devising customer events or activities, encouraging customer participation on social media, educating customers through training, getting constant feedback from customers, generating ideas for improvements, in addition to building cordial relationship with business partners through collaborations as pointed out in 'contact with customer' and 'collaboration with business partners' factors. Organisations should develop mechanisms to ensure quality assurance in all components of customer knowledge and take long-term strategic view while calculating return on investment associated with CKM projects as discussed in 'quality assurance' and 'return on investment' factors. Organisations can appraise and optimise core business processes and relevant mechanisms through CKM solutions and varied aspects presented within factors F12 to F23.

**Phase-5: Establish and utilise technology infrastructure to support CKM and 360$^{o}$ view of customer**

This phase involves establishing and utilising efficient technology (C5) infrastructure to support customer knowledge management as well as 360$^{o}$ customer view. To build and use appropriate technology infrastructure, organisations can consider multiple aspects discussed in 'IT Tools' (F24), 'Knowledge-base or Centralised Database' (F25), 'Web-accessibility and Access Levels' (F26), and 'Technology Provisions for Customer' (F27). For instance, organisations can have information technology tools dedicated for CKM to assist in review of ongoing customer engagements. These dedicated tools can be linked to one central tool with centralised database or knowledge-base, that can enable executives to become aware of what is going on, as discussed within 'IT tools' and 'knowledge-base or centralised database' factors. Similarly, organisations can have corporate website along with social collaboration tools for customer knowledge creation and provide a secure access to confidential parts of knowledge-base, through appropriate log-in mechanisms as emphasised in 'web accessibility and access levels' factor. Organisations can also provide technology enabled services and provisions for customers, and convince them about usage of these provisions through illustration of comparative benefits, as well as fostering customer confidence by mitigating perceived risks with appropriate security measures and technical reliability as discussed in 'technology provisions for customers' factor. Organisations can establish and utilise technology infrastructure efficiently in managing customer knowledge effectively by considering various CKM solutions presented in factors F24 to F27.

These five phases provide a sense of direction and generic sequence for practicing CKM among large organisations. However, organisations need to consider the whole framework including these phases as a template, and customise it as per their specific business contexts. Understanding of CKM factors (F1-F27) and their appraisal, within organisation's specific context, can assist in customising this comprehensive practice framework to suit its business needs.

## SUMMARY

This chapter presented empirical findings from the research study and subsequently developed a comprehensive CKM framework. Empirical findings were presented in the form of core categories (C1 to C5) and constituent factors (F1 to F27) which were derived through application of analytical-techniques from 'grounded-theory' approach. Based on these core categories and constituent factors, a comprehensive CKM practice framework has been developed to achieve 360$^{o}$ view of customer, among organisations.

# 5. CONCLUSION AND FURTHER RESEARCH

“The possession of knowledge does not kill the sense of wonder and mystery. There is always more mystery.”***– Anias Nin***

## INTRODUCTION

This chapter presents conclusions that have been originated out of this research study. This fifth chapter begins with discussion in relation to research objectives accomplishment, followed by theoretical and practical contributions to knowledge. Subsequently, discussion on validity of findings and limitations of this study are presented. Finally, the chapter concludes with an attempt to explore opportunities for further research.

## 5.1 RESEARCH OBJECTIVES ACCOMPLISHMENT

This section primarily focuses on presentation of research objectives set for this study along with discussion on how they have been accomplished. However, before going into research objectives, this paragraph briefly presents an overview of research problem and research goal in the light of findings and analysis. The research problem of this study was to investigate and explain *“How to manage customer knowledge and achieve 360$^{O}$ view of customer in organisations while encompassing the fundamental organisational elements?”* and the research goal set to address the research problem was *“To develop a holistic framework for practicing* *customer knowledge management to achieve $360^{O}$ view of customer in organisations"*. Development of comprehensive CKM framework encompassing five core categories and twenty seven factors has addressed the research problem and achieved the research goal formulated for this study. The following paragraphs present a brief overview of research objectives and focus on how each of these objectives has been accomplished.

***Objective-1***: *Provide an in-depth review of current literature in Knowledge Management (KM) and Customer Relationship Management (CRM) in general, and CKM in particular.*

An in-depth review of extant literature associated with KM, CRM, and CKM was presented in the second chapter of this thesis. This literature review encompassed multiple concepts from varied theories published within CKM domain at detailed level in addition to a brief overview of relevant subject domains within KM and CRM subject areas at generic level. These subject domains within KM and CRM included: knowledge, management, KM theories such as SECI and cycles of knowledge, and CRM with different stages of development. Varied theories and multiple concepts related to CKM within literature review encompassed: customer, customer knowledge components along with multiple dimensions and characteristics, evolution of CKM, lead user model, customer or user toolkits for innovation, five styles of CKM, CKM cycle, CKM process model, Kano-CKM and E-CKM models, CKM model for customer life cycle, and customer interaction management across lifecycle. This critical review has provided an opportunity to view the extent of existing literature as well as identify the gaps which assisted in formulation of research questions (RQ1, RQ2, and RQ3) for this study. (Chapter-2)

***Objective-2**: From the literature review, identify elements which influence CKM and assist in attainment of 360$^{O}$ view of customer.*

Literature review within CKM and associated domains such as KM and CRM led to the identification and understanding of various elements that can influence customer knowledge management in organisations and assist in attainment of 360$^{O}$ view of customer. This understanding of various elements made a valuable contribution in development of research questionnaire (Appendix-A) and it has been immensely useful in conducting case studies especially while conducting in-depth interviews with highly knowledgeable respondents. (Chapter-2)

***Objective-3**: Conduct empirical studies to determine significant factors that affect CKM for attaining 360$^{O}$ view of customer.*

Empirical studies were conducted in-line with evaluative discussion presented in third chapter which is focussed on research paradigm, methodology, and design. This research study adopted interpretivist paradigm and case study methodology as justified in third chapter. The empirical data originated out of five case studies was analysed using grounded theory techniques as pointed out in third chapter. A total of 27 CKM factors were identified from this empirical research and those factors can assist in attaining 360$^{O}$ view of customer among organisations. These factors were then grouped in to five core categories; Customer Knowledge Components, Drivers, Culture, Processes, and Technology. (Chapter-3)

***Objective-4****: Through the empirical studies, determine* how these factors and associated organisational dimensions *can be managed for effective Customer Knowledge Management in organisations.*

The CKM factors (F1-F27) identified within this study and core categories (C1-C5) formulated have been discussed at depth within fourth chapter. For each of the factors relevant CKM practices and associated solutions were presented based on empirical findings. These best practices and solutions can be adopted for managing the respective CKM factor effectively among organisations (Chapter-4)

***Objective-5****: Evaluate the findings of the empirical studies against current literature and provide critical discussion on each of the organisational elements.*

The CKM factors (F1-F27) originated from the findings of this study were grouped into core categories (C1-C5) which can be viewed as organisational elements. The empirical findings associated with these factors and core categories are critically evaluated against current literature within fourth chapter. This comparative analysis is presented in the form of discussion within individual factor as well as at core category level. (Chapter-4)

***Objective-6****: Develop a CKM practice framework for $360^O$ view of customer based on the findings from empirical studies conducted as well as knowledge gained from extant CKM literature.*

A comprehensive CKM framework was developed based on twenty seven factors (F1-F25) which were originated from this empirical research study. These factors were grouped into five core organisational elements; Components, Drivers, Culture, Processes, and Technology as discussed in fourth chapter. These five core categories (C1-C5) along with their constituent factors form the building blocks in development of comprehensive CKM practice framework for $360^{O}$ view of customer among organisations. (Chapter-4)

## 5.2 THEORETICAL AND PRACTICAL CONTRIBUTIONS

A key contribution from this research study has been identification and description of a comprehensive list of factors influencing CKM functions in organisations. Another major theoretical contribution has been development of a practice framework that enables the organisation to achieve 360-degree view of customers. The research contribution also included developing conceptual knowledge regarding how to achieve customer centricity in organisation through integration of CKM factors into framework through core categories such as constituents, drivers, culture, processes and technology. This conceptual knowledge leading to improved understanding of managing customer knowledge is especially useful in large organisations where it is widely dispersed and complex. The original contribution to knowledge encompassed exploration and explanation of new concepts such as ‘alert raising’ and ‘buddy-up training’ which are identified as a gap in extant literature while findings associated with many other factors enhanced the content within the existing body of knowledge. The main theoretical contribution also encompasses enrichment of existing CKM literature through externalisation and combination of best practices from varied industries for managing customer knowledge effectively.

A brief review of value-addition from each of the factors to the body of knowledge can provide a broad-view of theoretical contributions from this research study. ‘Knowledge for customers’ factor enhanced the existing domain knowledge with emphasis on concepts such as customer training and usage of social-media dissemination. ‘Knowledge from customers’ factor pointed out to aspects such as active participation within customer associations and networks, customer segmentation based on proportion of knowledge gained from them, and identification of commonalities from varied interactions with customers. ‘Knowledge about customers’ factor indicated importance of appropriate customer segmentation based on features such as business relationship and product consumption patterns with a focus on their application in right direction towards sustainable growth.

‘Market environment’ factor within ‘Drivers of CKM’ core-category pointed out to aspects such as emerging changes in the market conditions along with changes that would impact customers in reaching out to potential customers and valuable future retentions. ‘Innovation’ factor emphasised the importance of recognising varying customer requirements, organising focussed interactions with customer groups, acknowledging customer issues, and encouraging customer-supplier coordination in order to manage innovation effectively. ‘Regulatory environment’ factor augmented the extant CKM literature with specific dimensions such as legislative implications associated with collecting and presenting customer knowledge. For instance, this factor stressed the impact of regulatory requirements in ensuring transparency among ‘knowledge for customers’. Further, this factor also presented discussion on implications of Data Protection Act in collecting and sharing knowledge about customers.

‘Training’ factor within culture core category pointed out towards new concept of buddy-up training which is gap in the literature while the remaining aspects such as cross-team briefings, staff rotation, training events and workshops support the extant literature. ‘Reward mechanisms’ factor discussed financial rewards like monetary incentives, performance appraisals, and non-financial rewards such as recognition, acknowledgement and time allocation within the context of customer knowledge management. ‘Alert raising’ factor and the associated discussion which is based on best-practises from industry can be considered as new knowledge contribution to CKM literature. ‘CKM devoted resources and capabilities’ factor not only supported the extant CRM literature but also articulated the importance associated with CKM tasks which are generally handed over to ‘customer relationship managers’ or ‘global relationship managers’ among case-organisations. ‘Hybrid roles with matrix reporting’ factor illustrated the impact of generic concepts in specific CKM context with aspects such as designing hybrid roles can help in retention of customer knowledge and usage of resources more effectively. Further, this factor also presented a valuable empirical finding that matrix reporting has a potential to lead towards a flat organisational structure that enables faster service to customers.

‘Frequent problems and common solutions’ and ‘knowledge of people and their capabilities’ factors within processes core category enhanced extant CKM literature by pointing out to aspects such as providing customer solutions to frequent problems even before they ask, and equipping customer facing staff with easy access to experts for effective customer solution. ‘Holistic awareness and group decision making’ and ‘risk register’ factors presented varied perspectives such as comprehending overall picture of client related activities, encouraging group decision making in addressing customer problem, and documenting risks along with counter-measures in delivering customer solution. ‘Domain experts’ and ‘outsourcing’ factors augmented extant CKM literature through elaboration on effectiveness and efficiency in providing customer service i.e., high-quality service through subject matter experts and efficiencies through outsourcing of non-core functions. ‘CK creation and acquisition’ and ‘CK sharing and usage’ factors supported and elaborated the existing CKM literature with aspects such as capturing customer visits on web-portals with tracking tools, acquiring CK through collaborative arrangements and good relationships, sharing CK with the assistance of KM tools, and usage of process knowledge tests for staff in order to ensure effective learning about client processes. ‘Contact with customer’ and ‘collaboration with business partners’ factors pointed out the importance of customer contact and strategic collaborations with partners as business evolves, and presented multiple ways to accomplish them within organisational context. ‘Quality assurance’ and ‘return on investment’ factors added specific dimensions to extant CKM literature with discussion on aspects such as pathways to achieve quality assurance in customer service and approaches for calculating return on investment (ROI) of customer knowledge related projects.

‘IT tools’ and ‘knowledge-base or centralised database’ factors within technology core category articulated ideas such as building tools that has capacity to connect customer information seamlessly throughout the customer lifetime, adopting one central tool which can integrate sub-tools and continually developing the knowledge-base or centralised database with progressive investment. Further, these factors pointed out to usage of some advanced IT tools like Epiplex and WebEx in managing customer knowledge and the importance of sanity checks on the information within the central database. These factors not only enhanced the extant literature but also brought in new knowledge to IT specific CKM academic domain. ‘Web-accessibility and access levels’ factor presented aspects such as providing website accessibility for customers, designing website features to assist customer evaluation, and providing secure access to confidential portions of customer knowledge. ‘Technology provisions for customer’ factor emphasised the importance of creating web-pages with functionality of social collaboration to enable customer alliance and fostering customer confidence by addressing perceived risks through security measures. ‘Web-accessibility and access levels’ and ‘technology provisions for customer’ factors augmented the extant CKM literature.

In addition to theoretical contributions, this empirical research study has practical implications for industry and practitioners of KM, CRM, and CKM. The outcomes from this research can guide customer relationship managers, marketing managers, knowledge managers, and IT managers among the following aspects:

Identification of the bottlenecks in existing business processes for effective customer knowledge management through assessment of varied aspects discussed in processes core category and associated factors.

Assistance in proper assessment and justification of investments within CKM related projects through calculation of comprehensive return on investment through tools such as balanced scorecard as indicated in ROI factor.

Support in development of appropriate strategies associated with organisational culture, processes and technology for achieving customer satisfaction both at segment and individual level with consequent business growth.

Presentation of coherent set of best practices associated with identified factors (F1-F27) along with comprehensive framework for 360 degree view of customer.

## 5.3 VALIDITY OF FINDINGS

Multiple measures have been taken at various stages of this research study to ensure validity and reliability of the findings. Adoption of holistic multiple case-study design proposed by Yin (2009) has been very useful in collating a precious set of qualitative data. Selection of five case-studies from varied industries for collecting data has ensured capturing a wide variety of best practices associated with different industries. A sample of five case-organisations has been selected based on characteristics like type of industry, knowledge intensity, access to relevant functional divisions, and maturity of CKM practices which enabled collection of rich empirical data at more depth. Based on the above characteristics, five case organisations with an average of more than two interviewees for each organisation were chosen for this research study. In addition, interview data associated with each case was evaluated and confirmed with data collected from other sources within the respective case-organisation. This triangulation of data i.e., verification of data obtained from one interviewee with that of other in addition to data from other sources within the same case-study helped in improving validity and reliability of data. Many authors advocate the use of triangulation techniques during data collection and analysis stages to improve the validity and reliability of empirical findings (Easterby et al., 1991; Miles and Huberman, 1994; Denzin and Lincoln, 2005).

Data analysis phase of this research study adopted the usage of cross-case analysis which in-turn helped in recognising common patterns in CKM practices prevalent among different case organisations studied. Identification of various CKM factors repeatedly among multiple cases has enhanced their validity and reliability. Systematic analysis of qualitative data through application of well defined analytical techniques from grounded theory approach has improved validity of the findings originated from this study. Extensive display of interview codes for each of the CKM factors and core categories provides justification for derived conclusions and enhances the validity for these findings. Each of the CKM factors originated out of data analysis has been further discussed in the light of extant literature to ensure rigour and reliability of the findings.

## 5.4 LIMITATIONS OF THIS STUDY

One of the important limitations associated with this research study has been 'sample selection' i.e. all the cases selected were large organisations with dedicated customer related functional departments. So it may be difficult to generalise the findings to small and medium enterprises (SMEs). For instance, technology core category (C5) and its constituent factors (F24 to F27) may not be feasible for small enterprises due to financial and operational constraints. In addition to sample selection, small sample size has been one more major limitation. Large sample size would have enabled identification of additional factors and associated best practices for customer knowledge management. However, due to time and resource constraints sample size has been made limited to five case-organisations.

Another significant limitation has been identified with the data collection phase of this research study. Primary data for conducting this research has been collected majorly by interviewing senior executives within marketing and IT departments among selected case-organisations. Collection of data from senior managers of all other departments such as production, finance, research and development (R&D), procurement, etc would have added value to this research. However, considering practical constraints to obtain access to all section managers as well as implications for case-organisations in terms of managerial time consumption, primary data collection has been limited to marketing and IT departments predominantly.

One more minor limitation recognised has been related to data analysis and presentation of findings within this thesis. The findings emanated out data analysis were presented by detaching the specific organisational contexts in order to protect the identity of interviewees and associated organisations. This disassociation of organisational contexts may not allow the readers to contextually interpret the findings based on specific assumptions and derivations. Some of the major limitations discussed earlier within this section can provide opportunities and direction for further research.

## 5.5 IMPLICATIONS FOR FURTHER RESEARCH

This research study developed a foundation in the form of framework for practicing CKM in large organisations. Based on the findings of this study and associated limitations discussed in previous section, the opportunities for further research have been identified and presented in following paragraphs.

Firstly, the findings of this study in terms of CKM factors and framework developed can be applied and empirically tested through a collaborative research project. This can add value to the developed CKM framework by evaluating the validity of the factors and categories developed from this study. This proposed research study can reveal any limitations and implications associated with the findings of this study as well as validate the usefulness of the CKM framework developed.

Secondly, there is considerable scope for conducting an additional set of case studies to expand and enrich the findings of this study. These case-studies can be conducted in organisations from other industry sectors such as banking, healthcare, and aerospace which were not covered during this study in order to expand the findings further. Studies can also be conducted in the organisations from the industry sectors which were already covered to further refine and enrich the findings. Research into a number of case-studies from one industry sector can help in developing customised CKM framework incorporating specific practices apt for the respective industry sector.

Thirdly, future research within this area can also focus on implications of customer knowledge management on various other departments such as production, research and development (R&D), supply chain and logistics, finance, procurement, etc. By collecting data from senior managers within these departments and understanding the associated operational linkages for management of customer knowledge can reveal organisation-wide implications. These varied departmental implications and practices in managing customer knowledge can enhance the findings further.

Finally, there is good scope for research survey with large sample size which can enable evaluation of the research findings of this study statistically. This proposed quantitative research can develop a number of hypothetical assumptions based on the findings presented in this thesis and test their statistical validity. Validation of hypothesis formed from the findings of this study can increase the generalisability of the identified factors and derived conclusions.

## SUMMARY

This concluding chapter presented a brief description of how research problem and research goal charted for this study were addressed and fulfilled respectively. It provided an overview of how each of the research objectives developed for this study was accomplished. This chapter also encompassed concluding discussions on theoretical and practical contributions knowledge, validity of the findings, limitations of the study, and implications for further research.

# References

Aghamirian, B., Dorri, B. & Aghamirian, B. (2013), "Effects of Customer Knowledge Management's Eight Factors in E-Commerce", Management Science and Engineering, vol. 7, no. 4, pp. 1-11.

Aghamirian, B., Dorri, B. & Aghamirian, B. (2015), “Customer Knowledge Management Application in Gaining Organization’s Competitive Advantage in Electronic Commerce”, Journal of Theoretical and Applied Electronic Commerce Research, Vol.10, No.1, pp. 63-78

Akhavan, P., Heidari, S. (2008). “CKM: Where knowledge and the customer meet”, Knowledge Management Review*,* Vol.11, No.3, pp.24-29

Alreck, P.L. & Settle, R.B. (2007), "Consumer reactions to online behavioural tracking and targeting", *Journal of Database Marketing & Customer Strategy Management,* vol. 15, no. 1, pp. 11-23.

Alsyouf, I. (2006), "Measuring maintenance performance using a balanced scorecard approach", *Journal of Quality in Maintenance Engineering,* vol. 12, no. 2, pp. 133-149.

Armstrong, M (2006), “Performance Management”, 3rd edition, Kogan Page Limited, London, England.

Armstrong, M and Murlis, H (2007), “Reward Management”, Revised 5th edition, Kogan Page Limited, London, England.

Al-Shammari, M. (2009), “Setting a CKM strategy”, in Al-Shammari, M. (Ed.) “Customer Knowledge Management: People, Processes, and Technology”, pp.1-30, University of Bahrain, Bahrain.

Beijerse, R. (1999), "Questions in knowledge management: defining and conceptualising a phenomenon", Journal of Knowledge Management, Vol.3, No.2, pp.94 – 110

Belkahla, W. and Triki, A. (2011),"Customer knowledge enabled innovation capability: proposing a measurement scale", Journal of Knowledge Management, Vol.15, No.4, pp.648–674

Belkahla, W.H., Triki, A. and Mjahed, S.H. (2014),"Developing a customer knowledge-based measure for innovation management", European Journal of Innovation management, Vol.17, No.3, pp.349–374

Berger, P.D., Eechambadi, N., Morris, G., Lehmann, D.R., Rizley, R. And Venkatesan R. (2006), "From Customer Lifetime Value to Shareholder Value: Theory, Empirical Evidence, and Issues for Future Research", Journal of Service Research: JSR*,* vol. 9, no. 2, pp. 156-167.

Berthon, P., Pitt, L., Kietzmann, J and McCarthy, I.P. (2015), “CGIP: Managing Consumer-Generated Intellectual Property”, *California Management Review*, Vol. 57, No. 4, pp.43-62

Bibb, R. and Gehm, E. (2001), “The 360-Degree View”, CRM Magazine review, Vol.Jan-Jun.

Blosch, M (2000), “Customer Knowledge”. Knowledge and Process Management, Vol. 7, No. 4, pp.265-268

Brassington, F. and Pettitt, S. (2006), “Principles of Marketing”, 4th Edition, Pearson Education Ltd, Harlow, England.

Bratton, J., Sawchuk, P., Forshaw, C., Callinan, M. and Corbett, M (2010) ‘Work and Organizational Behaviour’, 2nd Edition, Palgrave Macmillan, Basingstoke, England

Browe, C. & Wang, C.L. (2007), "Web-enabled product ID system as a tool in pharmaceutical marketing", *International Journal of Pharmaceutical and Healthcare Marketing,* vol. 1, no. 3, pp. 226-233.

Burk, M. (1999), “Knowledge Management: Everyone benefits by sharing information”, Public Roads Magazine – USDOT/FHWA, Vol.63, No.3, pp.27-30.

Burrell, G. and Morgan, G (1979), “Sociological paradigms and organisational analysis: elements of the sociology of corporate life”, Heinemann, London, England.

Charmaz, K (2005), “Grounded theory: objectivist and constructivist methods”, in N.K.Denzin and Y.S.Lincoln (Eds.), “The SAGE Handbook of qualitative research”, 3rd edition, Sage Publications, Thousand Oaks, CA

Chase, S. E. (2005), “Narrative inquiry: Multiple lenses, approaches, voices”, In N. K. Denzin & Y. S. Lincoln (Eds.), “The SAGE Handbook of Qualitative Research*”,* 3rd ed., Sage Publications, Thousand Oaks, CA.

Chen, Y.H., and Su, C.T. (2006), “A Kano-CKM model for customer knowledge discovery”, Total Quality Management, Vol.17, No.5, pp.589-608.

Clark, W.R., Ezell, J., Clark, J. & Sheffield, D.N. (2009), "Stay or leave: Applying Approach-Avoidance Theory to virtual environments", *Journal of Database Marketing & Customer Strategy Management,* vol. 16, no. 4, pp. 231-240.

Cody, W.F., Kreulen, J.T., Krishna, V. and Spangler, W.S., (2002), “The integration of business intelligence and knowledge management”, IBM Systems Journal*, Vol.*41, No.4, pp.697-713.

Collis, J. and Hussey, R. (2003), “Business Research: A practical guide for undergraduate & post graduate students, 2nd Edition, Palgrave Macmillan, NY.

Creswell, J.W. (2007), “Qualitative Inquiry & Research Design: Choosing among five approaches”, 2nd edition, Sage Publications, Thousand Oaks, CA.

Cross, R., Parker, A., Prusak, L. and Borgatti, S.P. (2001), ‘Knowing what we know: Supporting Knowledge Creation and Sharing in Social Networks’, Organisational Dynamics, Vol.30, No.2, pp.100-120.

Daft, R.L. (2010), “Management”, 10th edition, South-Western, Mason, OH.

D'Arcy S.P. and Brogan, J.C. (2001), 'Enterprise Risk Management', Journal of Risk Management of Korea, vol.12, no.1, pp.1-24.

Davenport, T.H. and Prusak, L. (1998), “Working Knowledge: How organisations manage what they know”, Harvard Business School Press, Boston, MA.

Davenport, T. H., Harris, J. G. and Cantrell, S. (2002). “The Return of Enterprise Systems: The Director's Cut”, Accenture Institute for Strategic Change, Cambridge, MA.

Davenport, T.H., Harris, J.G. and Kohli, A.K. (2001), “How do they know their customers so well?”, MIT Sloan Management Review, Vol.42, No.2, pp.63–73.

Davenport, T.H. (2007), "Managing customer knowledge", CIO, Retrieved from web on 23rd July 2011 from http://www.cio.com/article/108404/_Managing_Customer_Knowledge

Deloitte (2012), “Customer Centricity: Embedding it into your organisation’s DNA”, white paper by Deloitte MCS Limited subsidiary of Deloitte LLP, the UK member firm of DTTL retrieved on 15th of June, 2012 from http://www.deloitte.com/assets/Dcom-UnitedKingdom/Local%20Assets/Documents/Services/Consulting/uk-con-customer-centricity-dna-v2.pdf

Denzin, N.K. and Lincoln Y.S. (2005), “The Sage Handbook of Qualitative Research”, 3rd edition, Sage Publications, Thousand Oaks, CA.

Denzin N.K. and Lincoln Y.S. (2008), “Strategies of Qualitative Inquiry”, 3rd edition, Sage Publications, Thousand Oaks, CA.

Desouza, K.C. and Awazu, Y. (2005) "Segment and destroy: the missing capabilities of knowledge management", Journal of Business Strategy, Vol.26, No.4, pp.46 – 52

Derliyski, Z. and Frohlich, C., (2004), “Obtaining and Leveraging Customer Knowledge for Customer-Oriented Products”, A thesis submitted in partial fulfilment of the requirements of University of Kristianstad for the degree of Master of Philosophy, Department of Business Administration, University of Kristianstad, Sweden.

Dobney (2012), “What is Customer Knowledge”, website dobney.com retrieved from web on 02 July 2012: http://www.dobney.com/Knowledge/ck_definition.htm

Dyche, J. (2001), “The CRM Handbook”, Addison-Wesley Pearson Education, London, England.

Easterby, S.M., Thorpe, R. and Lowe, A. (1991), “Management Research: An Introduction”, Sage Publications, London, England.

Edelman, D.C. and Singer, M. (2015), “Competing on Customer Journeys” Harvard Business Review, November, pp.88-100

Eisenhardt, K. (1989), “Building theories from case study research”, Academy of Management Review, Vol.14, No.4, pp.532-550

Fahey, L., Srivastava, R., Sharon, J. S., & Smith, D. E. (2001), ‘Linking e-business and operating processes: The role of knowledge management’, IBM Systems Journal, Vol.40, *Iss.*4, pp.889-907.

Fang, E., Palmatier, R.W. and Steenkamp, J.M. (2009), “Effect of service transition strategies on firm value”, Journal of Marketing, Vol. 72, pp. 1-14.

Fontana, A. and Frey, J.H. (2000), "The Interview: From Structured Questions to Negotiated Text" in Denzin, N.K. and Lincoln Y.S. (Eds), "Handbook of Qualitative Research", 2nd edition, Sage Publications, Thousand Oaks, CA.

Franceschini, F., Galetto, M., Pignatelli, A. and Varetto, M. (2003), "Outsourcing: guidelines for a structured approach", Benchmarking: An International Journal, Vol. 10, No. 3, pp. 246-60.

Garcia-Murillo, M. and Annabi, H. (2002), "Customer knowledge management", Journal of the Operational Research Society, Vol.53, pp.875-884

Gebert, H., Geib, M., Kolbe, L., and Brenner, W. (2003), *"Knowledge-enabled* customer relationship management: Integrating customer relationship management and knowledge management concepts", Journal of Knowledge Management, Vol.7, No.5, pp.107-124

Gephart, R. (1999), "Paradigms and Research Methods", Research Methods Division Forum, Vol. 4 (published by Academy of Management) retrieved on 10-Jul-2010 from
http://division.aomonline.org/rm/1999_RMD_Forum_Paradigms_and_Research_Methods.htm

Gibbert, M., Leibold, M. and Probst, G. (2002), "Five styles of customer knowledge management, and how smart companies use them to create value", European Management Journal, Vol. 20, No. 5, pp. 459-469

Gibson, J.L., Ivancevich, J.M., and Donnelly, J.H. (1994), 'Organisations: Behaviour, Structure, Processes', 8th edition, Irwin Publishers, Sydney, Australia.

Gillham, B. (2007), "Developing a questionnaire", 2nd edition, Continuum International Publishing Group, London, England.

Gitman, L.J. and McDaniel, C. (2006), 'The Future of Business: The Essentials', 2nd edition, Thomson Learning, London, England.

Glaser, B.G. & Strauss, A.L. (1967), "The Discovery of Grounded Theory: Strategies for Qualitative Research", Aldine Publishing Company, Chicago, IL.

Goh, S. and Richards, G. (1997), 'Benchmarking the learning capacity of organizations' European Management Journal, vol.15, Iss.5, pp. 575–583

Gray, D.E. (2004), "Doing Research in the Real World", Sage Publications, Thousand Oaks, CA.

Greenberg, J. and Baron, R.A. (2008), "Behaviour in Organizations", 9th edition, Pearson-Prentice Hall, Upper Saddle River, NJ.

Greenberg, P. (2009), "The New Customer Record", CRM Magazine", December Issue, Retrived from web on 15th June 2010 http://www.destinationcrm.com/Articles/Columns-Departments/Connect/The-New-Customer-Record-60389.aspx

Greenwood, D. J. & Levin, M. (2007), "Introduction to action research: social research for social change", Sage Publications, Thousand Oaks, CA.

Guba, E.G. (1990). "The alternative paradigm dialog", in E.G. Guba (Ed.), "The pardigm dialog", Sage Publications, Newbury Park, CA.

Guba, E.G. and Lincoln, Y.S. (1994), "Competing Paradigms in Qualitative Research", in N.K. Denzin and Y.S. Lincoln (Eds), "Handbook of Qualitative Research", Sage Publications, Thousand Oaks, CA.

Heimbürger, M. & Dietrich, P. (2012), "Identifying the basis of collaboration performance in facility service business", *Facilities,* vol. 30, no. 11, pp. 504-516.

Henkel, J. and Thies, S. (2003), "Customization and innovation – user innovation toolkits for simulator software". published in proceedings of 2nd World Congress Mass Customization and Personalization (MCPC), Munich, Germany.

Heron, J. and Reason, P. (1997), "A Participative Inquiry Paradigm", Qualitative Inquiry, Vol.3, pp. 274-294.

Herr, K. and Anderson, G.L. (2005), "The action research dissertation: A guide for students and faculty", Sage Publications, Thousand Oaks, CA.

Herstatt, C. and von Hippel, E. (1992), "From Experience: Developing New Product Concepts Via the Lead User Method: A Case Study in a 'Low Tech' Field", Journal of Product Innovation Management, Vol.9, pp.213-221

Hoffman, D.L. & Fodor, M. (2010), "Can You Measure the ROI of Your Social Media Marketing?", *MIT Sloan Management Review,* vol. 52, no. 1, pp. 41-49.

Hofstede, G (1980) 'Culture's consequences', Sage publications, Beverly Hills, CA

Hofstede, G., Hofstede, G.J. and Minkov, M. (2010) '*Cultures and Organizations: Software of the Mind',* 3rd Edition, McGraw-Hill publications, New York, NY

Hume, D A (1995), 'Reward Management: Employee Performance, Motivation and Pay', Blackwell Publishers Ltd, Oxford, England.

Jeppesen L. and Molin M. (2003), "Consumers as Co-Developers: Learning and Innovation Outside the Firm", Technology Analysis and Strategic Management, Vol.15, No.3, pp.363 -383

Jeppesen, L. (2005), User Toolkits for Innovation. Consumers Support Each Other, Journal of Production Innovation Management, Vol.22, No.4, pp.347-362

Jiun-Sheng, C.L. and Chia-Chuan H. (2011), "Modeling service friendship and customer compliance in high-contact service relationships", *Journal of Service Management,* vol. 22, no. 5, pp. 607-631.

Jones, H. and Jillian, D.F. (2003), "Contact management and customer loyalty", *Journal of Financial Services Marketing,* vol. 8, no. 1, pp. 71-78.

Kandadi, K.R. (2006), "Knowledge management in distributed organisations: Developing a meta-level framework", A thesis submitted in partial fulfilment of the requirements of The University of Bolton for the degree of Doctor of Philosophy, University of Bolton, Bolton, England.

Kandadi, K.R. and Vasireddy, P. (2009), "A critical role of knowledge cycle between the industry and academia in the pedagogy of business and management education", published in proceedings of the conference 'Innovative pedagogy in business and management education' held by Jain University in Association with La Trobe University on 10th October 2009 in Bangalore, India.

Kankanhalli, A. and Lee, O. (2011), "Knowledge Reuse through Electronic Repositories: A Study in the Context of Customer Service Support", Information & Management, Vol.48, pp.106-113

Katz, R. and von Hippel, E. (2002), "Shifting Innovation to Users via Toolkits", Management Science, Vol.48, No.7, pp.821-833.

Kellogg, D.L. (2000), "A customer contact measurement model: an extension", *International Journal of Service Industry Management,* vol. 11, no. 1, pp. 26-44.

Kotler, P. and Armstrong, G. (2012) Principles of Marketing, 14th Edition (Global Edition), Pearson Education Ltd, London, England.

Krishnamurthy, S. (2006), "Introducing E-MARKPLAN: A practical methodology to plan e-marketing activities" Business Horizons, Vol.4, pp.51-60.

Kuhn, T.S. (1962), "The Structure of Scientific Revolutions", The University of Chicago Press, Chicago, IL.

Kumar, R. (1999), "Research Methodology: A step by step guide for beginners", Sage Publications, Thousand Oaks, CA.

Kumar, R. (2008), "Research Methodology", APH Publishing, New Delhi, India.

Lesser, E., Fontaine, M. and Slusher, J. (2000), "Knowledge and Communities", Butterworth-Heinemann, London, England.

Lettl, C. (2007), "User involvement competence for radical innovation", Journal of Engineering and Technology Management, Vol. 24 Nos 1/2, pp. 53-75.

Lewis, M.O., Mathiassen, L. & Rai, A. (2011), "Scalable growth in IT-enabled service provisioning: a sense making perspective", *European Journal of Information Systems,* vol. 20, no. 3, pp. 285-302.

Liebowitz, J. (2006), Strategic Intelligence: Business Intelligence, Competitive Intelligence, and Knowledge Management, Auerbach Publishing/Taylor & Francis, New York, NJ.

Liautaud, B. (2010), "Customer Intelligence", copyright, BL-BestPracties.com, Retrieved from web on 29 June 2010 http://www.bi-bestpractices.com/view-articles/4659

Liew, C.A. (2008), "Strategic integration of knowledge management and customer relationship management", Journal of knowledge management, Vol.12, No.4, pp.1-5

Lincoln, Y.S. and Guba, E.G. (2000), "Paradigmatic controversies, contradictions and emerging confluences" in N.K. Denzin and Y.S. Lincoln (Eds), "Handbook of Qualitative Research", 2nd edition, Sage Publications, Thousand Oaks, CA.

Little, S., Quintas, P. and Ray, T. (2002), "Managing Knowledge", Sage Publications, London, England.

Lovelock, C. and Wirtz, J. (2007), Services Marketing: People, Technology and Strategy, Pearson Prentice-Hall, Upper Saddle River, NJ.

Maier, R. and Remus, U. (2002), “Defining process-oriented knowledge management strategies”, Knowledge and Process Management, Vol.9, No.2, pp.103-118

Marshall, A. (1920), “Principles of economics”, 8th edition, Macmillan, London, England. (Retrieved on 02 July 2012 from http://www.econlib.org/library/Marshall/marPCover.html)

Marshall, C. and Rossman, G.B. (2006), “Designing Qualitative Research”, 4th Edition, Sage Publications, Thousand Oaks, CA

Massnick, F. (1997), “The Customer is CEO: How to Measure What Your Customers Want – And Make Sure They Get It”. Amacom Publishing, New York, NY.

McNiff, J. & Whitehead, J. (2006), “All you Need to Know about Action Research”, Sage Publications, London, England.

Mei, and Nie, M. (2007), “Relationship between knowledge sharing, knowledge characteristics, absorptive capacity and innovation: an empirical study of Wuhan optoelectronic cluster”, The Business Review, Vol. 7 No. 2, p. 154.

Menguc, B., Auh, S. and Uslu, A. (2013), "Customer knowledge creation capability and performance in sales teams", *Academy of Marketing Science Journal,* vol. 41, no. 1, pp. 19-39.

Merriam, S.B. and Associates (2002), “Qualitative research in practice: Examples for discussion and analysis”, Jossey-Bass, San Francisco, CA.

Miles, M.B. and Huberman, A.M. (1994), “Qualitative data analysis: An expanded source book”, 2nd edition, Sage Publications, Thousand Oaks, CA.

Morgan, G. and Smircich, L. (1980), “The case of Qualitative Research”, Academy of Management Review, Vol.5, pp 491-500.

Mukherji, S. (2012), “A Framework for Managing Customer Knowledge in a Retail industry”, IIMB Management Review, Vol.24, pp.95-103

Murphy, P.J., Wu, Z., Welsch, H., Heiser, D.R., Young, S.T. & Jiang, B. (2012), "Small firm entrepreneurial outsourcing: traditional problems, non-traditional solutions", *Strategic Outsourcing: an International Journal,* vol. 5, no. 3, pp. 248-275.

Natti, S., Halinen, A. & Hanttu, N. (2006), "Customer knowledge transfer and key account management in professional service organizations", *International Journal of Service Industry Management,* vol. 17, no. 4, pp. 304-319.

Newell, F (2003), “Why Doesn’t CRM Work”, Bloomberg Press, Princeton, NJ.

Nguyen, B. (2012), "The dark side of customer relationship management: Exploring the underlying reasons for pitfalls, exploitation and unfairness", *Journal of Database Marketing & Customer Strategy Management,* vol. 19, no. 1, pp. 56-70.

Nonaka, I. & Nishiguchi, T. (2001), "“Knowledge Emergence: Social, technical and evolutionary dimensions of knowledge creation”, Oxford University Press.

Nonaka, I and Teece, D. (2001), “Managing industrial knowledge: Creation, transfer and utilization”, Sage publications, Thousand Oaks, CA.

Nonaka, I., Toyama, R. and Konno, N. (2000) ‘SECI, Ba and leadership: a unified Model of Dynamic Knowledge Creation’. Long Range planning, Vol.33, pp.5-34.

Nonaka, I. and Takeuchi, H. (1995), “The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation”, Oxford University Press, New York, NY.

OECD (1996), “The Knowledge-based Economy”, Organisation for Economic Cooperation and Development, Paris, France.

O’Loughlin, A. and McFadzean, E. (1999) ‘Toward a holistic theory of strategic problem solving’, Team Performance Management, Vol. 5 Iss: 3, pp.103 – 120.

Patton, M.Q. (1990), “*Qualitative Evaluation and Research Methods”,* 2nd Edition, Sage Publications, Newbury Park, CA.

Paquette, S. (2008), “Knowledge Management Systems and Customer Knowledge Use in Organisations”, A thesis submitted in conformity with the requirements of the University of Toronto for the degree of Doctor of Philosophy, University of Toronto, Canada

Peters, T.J. and Waterman, R.H. (2004), ‘In Search of Excellence: Lessons from Americas Best-Run Companies’, Profile Books Ltd, London, England

Phesey, D.C. (1993) ‘organisational cultures’, Routledge, London, England

Pockard, D. (2009), “Agents don’t need a 360-degree view of the customer: Transforming knowledge into action in the contact centre.” Retrieved from web on 29 June 2010 http://www.crm2day.com/highlights/EpVukpVEEArWQOzWBV.php

Polanyi, M. (1966), “The Tacit Dimension”, Doubleday, New York, NY.

Preston, R. (2011), "The BrainYard: Big Thinking On Business Collaboration", *InformationWeek,* , no. 1296, pp. 4.

Rajagopal (2011), "Consumer culture and purchase intentions toward fashion apparel in Mexico", *Journal of Database Marketing & Customer Strategy Management,* vol. 18, no. 4, pp. 286-307.

Ramani, G. and Kumar, V. (2008), "Interaction orientation and firm performance", Journal of Marketing, Vol. 72, January, pp. 27-45.

Ramanigopal, C.S., Palaniappan, G., and Mani, A. (2012), ‘Knowledge management analysis for business strategy’, International Journals of Marketing and Technology, Vol.2, Iss.3, pp.170-182.

Rhee, S. & Mcintyre, S. (2008), "Including the effects of prior and recent contact effort in a customer scoring model for database marketing", *Academy of Marketing Science.Journal,* vol. 36, no. 4, pp. 538-551.

Rollins, M. and Halinen, A. (2005), “Customer Knowledge Management Competence: Towards a Theoritical Framework”, Proceedings of the 38th Hawaii International Conference on Systems Sciences retrieved on 3rd July, 2011 from http://www.computer.org/comp/proceedings/hicss/2005/2268/08/22680240a.pdf

Rowley, J. (2002), "Eight questions for customer knowledge management in e-business", Journal of Knowledge Management, vol. 6, no. 5, pp. 500-511.

Russell, B (1961), “A History of Western Philosophy”, Unwin Hyman, London, England

Salojärvi, H. and Sainio, L. (2010), "Customer knowledge processing and key account performance", *European Business Review,* vol. 22, no. 3, pp. 339-352.

Saunders, M., Lewis, P. and Thornhill, A. (2007), “Research Methods for Business Students”, 4th edition, Pearson Education, Essex, England.

Salomann, H., Dous, M., Kolbe, L. and Brenner, W. (2005), “Rejuvenating customer management: How to make knowledge, for, from and about customers work”, European Management Journal, Vol. 23, No. 4, pp.392-403

Schermerhorn, J. (2005), “Management”, John Wiley & Sons, New York, NY.

Schermerhorn, J.R., Hunt, J.G., Osborn, R.N., and Uhl-Bein, M. (2011), ‘Organizational Behaviour’, 11th edition, John Wiley and sons Pte Ltd, Hoboken, NJ.

Schwandt, T.A. (2000), “Three Epistemological Stances for Qualitative Inquiry: Interpretivism, Hermeneutics, and Social Constructionism”, in N.K. Denzin and Y.S. Lincoln (Eds), “Handbook of Qualitative Research”, 2nd edition, Sage Publications, Thousand Oaks, CA.

Sedighi, M.M., Mokfi, T. & Golrizgashti, S. (2012), "Proposing a customer knowledge management model for customer value augmentation: A home appliances case study", *Journal of Database Marketing & Customer Strategy Management,* vol. 19, no. 4, pp. 321-347.

Shanks, G. and Tay, E. (2001), “The role of knowledge management in moving to a customer-focused organization”, proceedings of the 9th European conference, Bled, Slovenia.

Shannak.R., Masadeh.R., Alzubi.Z., Obbeidat.B., Alshurideh.M., and Altamony.H. (2012), “A Theoretical Perspective on the Relationship between Knowledge Management Systems, Customer Knowledge Management, and Firm Competitive Advantage”, European Journal of Social Sciences, Vol.32, No.4, pp.520-532

Shereazad, J.G., Gorod, A. and Sauser, B. (2012), "Prioritization of outsourcing risks from a systemic perspective", *Strategic Outsourcing: an International Journal,* vol. 5, no. 1, pp. 39-71.

Shuman, J., Twombly, J., and Rottenberg, D., (2002), “Everyone is a Customer: A proven method for measuring the value of every relationship in era of collaborative business”, Dearborn Trade Publishing, Chicago, IL.

Simons, R. (2005), “Levers of Organisation Design”, Harvard Business School Press, Boston, MA.

Smalley, C.P. (2000), "Relationship technologies: Combining customers knowledge with information technology", Retrieved from web on 7th September 2010 http://searchcrm.techtarget.com/news/333294/Relationship-technologies-Combining-customer-knowledge-with-information-technology

Smith, H. A. and J. D. McKeen (2005), "Developments in Practice Xviii - Customer Knowledge Management: Adding Value for Our Customers," Communications of the Association for Information Systems, Vol.2005, No.16, pp.744-755.

Sparks, A. (2012), "Databases in the cloud: How business communication is changing", *Journal of Database Marketing & Customer Strategy Management,* vol. 19, no. 2, pp. 134-137.

Spencer-Matthews, S. and Lawley, M. (2006), "Improving customer service: issues in customer contact management", *European Journal of Marketing,* vol. 40, no. 1, pp. 218-232.

Stake, R.E. (2005), "Qualitative Case Studies", in N.K. Denzin and Y.S. Lincoln (Eds.), "Handbook of Qualitative Research", 3rd ed., Sage Publicaitons, Thousand Oaks, CA.

Stefanou, C.J., Sarmaniotis, C. and Stafyla, A (2003) "CRM and customer-centric knowledge management: an empirical research", Journal of Business process management, Vol.9, No.5, pp. 1-8.

Stokes, M. (2012), "Is Knowledge Management the Next Frontier in Customer Support?", *Customer,* vol. 31, no. 2, pp. 22-24.

Strauss, A. and Corbin, J. (1998) "Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory" 2nd Edition, Sage Publications, Thousand Oaks, CA.

Stringer, E. (2007), "Action Research", 3rd edition, Sage Publications Thousand Oaks, CA.

Thomke, S. and von Hippel, E. (2002), "Customers as Innovators: A New Way to Create Value" Harvard Business Review, Vol.80, No.4, pp.74-81.

Terziovski, M. and Dean, A. (1998), "Best predictors of quality performance in Australian service organisations", *Managing Service Quality,* vol. 8, no. 5, pp. 359.

Thorpe, R. and Holloway, J. (2008), 'Performance Management: Multidisciplinary Perspectives', Palgrave Macmillan, Basingstoke, England.

Tiwana, A. (2002), "The Knowledge Management Toolkit: Orchestrating IT, Strategy, and Knowledge Platforms", 2nd Edition, Prentice Hall, Upper Saddle River, NJ.

Urban, G.L. and Hippel, E. (1998), "Lead User Analyses for the Development of New Industrial Products", Management Science, Vol.34, No. 5, pp.569-82.

Von Hippel, E. (1986), "Lead Users: A Source of Novel Product Concepts," Management Science, Vol.32, no. 7, pp.791-805.

Von Hippel, E. (2001), "Perspective: User toolkits for innovation," The Journal of Product Innovation Management, Vol.18, pp.247-257.

Walker, R.H. & Johnson, L.W. (2006), "Why consumers use and do not use technology-enabled services", *The Journal of Services Marketing,* vol. 20, no. 2, pp. 125-135.

Wanger, J.A. and Hollenbeck, J.R. (1992), 'Management of Organizational Behaviour', Prentice Hall, Englewood Cliffs, NJ.

Wittgenstain, L. (2009), "Philosophical Investigations", 4th Edition, Wiley-Blackwell, Oxford, England.

Wilde, S. (2011), "Customer Knowledge Management: Improving Customer Relationship through Knowledge Application" Springer, Heidelberg, Germany.

Xu, M. and Walton, J. (2005), "Gaining customer knowledge through analytical CRM", Journal of Industrial Management and Data systems, Vol.105, No.7, pp.1-6.

Xu, S. (2004), "Marketing ROI: The Path to Campaign, Customer, and Corporate Profitability", *European Journal of Marketing,* vol. 38, no. 11, pp. 1599-1601.

Yang, J. (2008), "Managing knowledge for quality assurance: an empirical study", *The International Journal of Quality & Reliability Management,* vol. 25, no. 2, pp. 109-124.

Yin, R.K. (2003), "Case Study Research: Design and Methods", 3rd Edition, Sage Publications, Thousand Oaks, CA

Yin, R.K. (2009), "Case Study Research: Design and Methods", 4th Edition, Sage Publications, Thousand Oaks, CA

Yusof, A.R.b.M. & Ghouri, A.M. (2013), "Educational Service Quality and Customer Satisfaction Index At Public Higher Educational Institutions", *Indian Journal of Commerce and Management Studies,* vol. 4, no. 1, pp. 43-49.

Zack, M.H (1999), 'Managing Codified Knowledge', Sloan Management Review, Vol.40, Iss.4, pp.45-58.

Zahay, D. (2008), "Successful B2B customer database management", *The Journal of Business & Industrial Marketing,* vol. 23, no. 4, pp. 264-272.

Zanjani, M., Rouzbehani, R., and Dabbagh, H. (2008), "Proposing a conceptual model of customer knowledge management: A study of CKM tools in British Dotcoms", proceedings of World Academy of Science, Engineering and Technology, No.38, pp.303-307.

Zhang, Z. (2011), "Customer knowledge management and the strategies of social software", Business Process Management Journal, Vol.17, No.1, pp.82-106.

## Appendix - A

# Customer Knowledge Management Research Questionnaire

**Semi-structured Questionnaire to be used in conjunction with Interview**

Interviewer: **Pavan Vasireddy,** Researcher

School of Business and Creative Technologies/
Faculty of Well Being and Social Sciences
University of Bolton
M2-37, M-Block,
Bolton, Greater Manchester, BL3 5AB, UK
Email: pv1mpo@bolton.ac.uk
Tel: 0044 1204 903773
Mobile: 07809867970

**Interviewee details and Organisation information (**Business Card)**

**Interviewee Details**

Title ………………. (Mr/Ms/Mrs/Dr)

First Name …………………………………..

Surname ……………………………………..

Contact Details (Business Card)

Email ………………………………………………..

Phone ………………………………………………..

Mobile ……………………………………………….

Address ………………………………………………

………………………………………………

………………………………………………

**Organisation Information**

Organisation Name …………………………………………………………..

Interviewee Designation ………………………………………………………...

Department or Business Division ………………………………………………..

Number of employees (business division) ………………………………………….

Number of Customers (if available) …………………………………………………

Annual Business Revenues ………………………………………………………….

Industry Type …………………………………………………………………..

**Organisation Worldwide Information**

Total number of employees ………………………………………………………….

Total Number of Customers (if available) ……………………………………………

Annual Business Revenues …………………………………………………………..

Number of countries operating in …………………………………………………….

Head quarters ………………………………………………………………………….

| 1 | **Customer Knowledge Management Strategy (including Marketing/Sales)** |
|---|---|
| | i. Briefly describe your organisational strategy for managing knowledge? (Please elaborate on strategy for managing customer/sales/marketing knowledge)<br><br>• Please provide a copy of KM or CKM strategy document if possible.<br><br>ii. How would you describe various types of customer knowledge in your division or organisation?<br><br>☐ Knowledge for customers<br>☐ Knowledge about customers<br>☐ Knowledge from customers<br>☐ Others—Please Specify ……………………<br><br>iii. How do you segment your customers and what are the types? (Please explain how this customer segmentation is used in your organisation)<br><br>• Existing/ Prospective/ Target Customers<br>• Individual/ Organisational Customers<br>• Customer segmentation based on demographic profile<br>• Customer segmentation based on buying behaviour<br><br>iv. What direct and indirect contact does your organisation have with customers apart from sales interactions? What measures do you take to maintain contact with customers? (Loyalty schemes, relationship fostering activities…)<br><br>v. How do you share knowledge with your business partners including supply chain partners<br><br>☐ Organise events (please specify)<br>☐ Have access to each others knowledge bases/ portals<br>☐ Employee exchange programs<br>☐ Others please specify …………<br><br>vi. How does your organisation attain customer (market) demand knowledge?<br><br>vii. '360 degree view of customer' is defined for this research as 'entire customer data including interactions in a single view'. Describe your views including advantages and disadvantages regarding this '360 degree view of customer'.<br><br>viii. What are the key challenges or problems your organisation faces (/faced) due to lack of 360 degree view of customer or uniform view of customer? |

| | |
|---|---|
| | Does the organisation ever try for 360 degree view of customer?<br>○ Yes<br>○ No (Skip next section and go to 3) |
| **2** | **360 Degree View of Customer in Organisation**<br><br>i. From your experience what are the important factors in achieving 360 degree view of customer.<br>• Please describe the impact of these factors within your organisation? (please illustrate if possible)<br><br>ii. What are the major challenges your organisation faced in trying to achieve or manage 360 degree view of customer?<br><br>iii. How did your organisation overcome these challenges?<br><br>iv. Describe any challenges you are unable to overcome or address in achieving and managing 360 degree view of customer in your organisation?<br><br>v. If an organisation has to start a CKM project to achieve 360 degree view of customer, what are the series of steps the organisation should take? (Where to start, how to continue, review and improve)<br><br>vi. Would you consider that your organisation is successful in achieving 360 degree view of customer so far and why?<br><br>☐ Yes<br>☐ No (if no go to 3)<br><br>vii. Describe successful practices that you have observed in your organisation or industry for managing dynamic 360 degree view of customer?<br><br>viii. Who uses 360 degree view of customer in your organisation? Explain how they use it? (Please describe how it can be improved further?) |
| **3** | **Customer Knowledge Creation/Sharing**<br><br>i. How is customer knowledge created or captured within your organisation?<br>• Does your organisation adopt any strategies or initiatives to capture knowledge directly from customers?<br><br>ii. How do you identify important customer knowledge in your organisation?<br>• Key sources of customer knowledge – Interactions with customers<br><br>iii. What types of knowledge do you receive from customers? In what form |

| | |
|---|---|
| | is this knowledge received<br><br>☐ Comments<br>☐ Formal feedback<br>☐ Informal feedback<br>☐ Complaints<br>☐ Others -- Pleases Specify……………………….<br><br>iv. When you need certain customer or market knowledge that you don't have in your organisation, how do you acquire that needed knowledge?<br><br>☐ Buying market research reports<br>☐ Ordering private market research surveys<br>☐ Collaboration with value chain partners<br>☐ Encourage knowledge acquisition by sales and marketing staff<br>☐ Through research publications and academic institutions<br>☐ Others – Please specify ………………………….<br><br>v. How innovation occurs i.e., new ideas are generated in your organisation?<br><br>vi. How do you think customers contribute towards innovations of your organisation directly or indirectly?<br><br>• How do you involve customers in KM activities directly?<br>o Events exclusively for existing customers<br>o Events for all potential customers<br>o Events open for customers and other interested people<br>o Others please specify……………………..<br><br>vii. How does your organisation encourage customers in knowledge creation? (i.e., through benefits or providing resources for customers)<br><br>viii. How customer knowledge is shared between various functional divisions such as sales, marketing, research and development etc.<br><br>☐ Inter-departmental events<br>☐ Through Intranet<br>☐ Through Extranet<br>☐ Through Web-based knowledge portal<br>☐ Other – Please specify…………………… |
| **4** | **Organisational Structure and Culture**<br><br>i. Does your organisation have a formal chart of organisation or management structure?<br><br>• Yes (Please describe and provide a copy of it) |

| | |
|---|---|
| | • No (Please describe the underlying informal structure)<br><br>ii. Describe the organisational structure focussing on management of customer knowledge? (e.g. dedicated CKM teams or hybrid roles)<br><br>a) Is there anyone who leads overall customer knowledge management for entire organisation? If so please specify<br><br>o Vice-President Marketing<br>o Chief Knowledge Officer<br>o CEO/MD<br>o Chief Information Officer<br>o Other—Please state……………………….<br><br>b) Is there anyone who leads or responsible for CKM/CRM/KM in your business division? If so please state following details<br><br>• Designation ……………………………..<br>• Department ……………………………..<br>• Role (a copy) ……………………………<br><br>iii. Please explain the roles of managers and front-end executives in CKM. (please provide a copy of roles where ever possible)<br><br>• Senior Managers…………………………..<br>• Middle Managers………………………….<br>• Front-end Executives………………………<br><br>iv. Is your current organisation structure conducive for customer knowledge management? In your view what is a desirable structure?<br><br>v. What measures have been taken to improve organisation culture for effective CKM?<br><br>• In order to create culture among employees for customer knowledge creation and sharing?<br><br>☐ Monetary incentives<br>☐ Performance appraisal<br>☐ Employee training and development<br><br>vi. What types of key decisions are influenced by customer knowledge? |
| **5** | **Business Processes and Mechanisms**<br><br>i. Describe the mechanisms to capture and organise customer knowledge within your organisation? (Learn the roles of customer interactions and customer data analysis) |

| | |
|---|---|
| | • Are your customers willing to share their knowledge with you<br><br>ii. How do you ensure that customer knowledge is shared with relevant employees and is applied appropriately?<br><br>• How you have improved these processes and how can they be further improved?<br><br>iii. How do you integrate customer knowledge that is being generated from different KM processes within your organisation<br><br>iv. Do you think constant analysis and change of business processes is needed for an effective CKM<br><br>v. Is there any process for quality assurance in creation and utilisation of customer knowledge? Please explain?<br><br>vi. Describe any other important mechanisms within your organisation that support in capturing customer or market knowledge. |
| **6** | **CKM Technologies and Portal**<br><br>i. What are the different IT applications related to customer info/knowledge that you are aware of within your organisation?<br><br>• Different types of IT applications used to analyse customer data in creating customer knowledge?<br><br>ii. Describe the technologies that are used for gathering and sharing customer knowledge within your organisation?<br><br>• Different channels through which your organisation shares knowledge (knowledge for customers) with customers? (e.g. CRM system)<br><br>• Various technological means which enable interaction among customers and organisation? (Virtual chat-rooms, online forums for customers etc)<br><br>• Variety of tools that your organisation utilizes for capturing knowledge from customers? (e.g. BI tools, KM tools etc)<br><br>iii. Does your organisation have a technology infrastructure that can enable 360 degree view of customer? Please describe?<br><br>iv. Do you have a centralised customer database (knowledge base) which has total information of organisation's customers?<br><br>• Yes<br>• No (if no go to x) |

| | |
|---|---|
| | v. Is this customer knowledge base capable of providing 360 degree view of customer?<br>• Yes<br>• No (What are the IT factors restricting this? What measures do you suggest to address these IT challenges?)<br><br>vi. Is this customer knowledge base or database web accessible?<br>• Yes<br>• No<br>vii. What software package does your organisation utilize for customer knowledge base?<br><br>viii. What access levels do following functional teams have to the customer knowledge base<br><br>• Sales<br>• Marketing<br>• New product Development (R&D)<br><br>ix. How do your sales and marketing people contribute to the knowledge base? (After asking this question skip remaining questions in this section)<br><br>x. Does sales and customer service have a CRM system?<br><br>xi. Does your organisation have a knowledge portal which includes access and management of customer knowledge within it?<br><br>• Yes<br>• No (Please go to 7)<br><br>xii. What information does the portal hold? If possible please illustrate.<br><br>xiii. Is the CRM system integrated with knowledge portal?<br><br>xiv. Who can access customer knowledge in knowledge portal and to what extent (All or Relevant employees, Total or Limited Access)?<br><br>• Do customers have access to knowledge portal? If so to what level and extent? (In what instances – please give examples) |
| **7** | **Customer related Projects & Impact of these initiatives**<br><br>i. Has your organisation invested in customer info/knowledge projects in last 3 years?<br>• Yes<br>• No (If no skip this section and go to 8) |

| | |
|---|---|
| | ii. How much did your organisation invest on Customer info/knowledge projects (e.g. CRM) in the<br>• Last 1 years…………………<br>• Any planned projects for future……………………<br><br>iii. How do you generally implement customer info/knowledge projects?<br>• Outsource to consultancy or IT firms<br>• Seek partial external assistance<br>• Totally in-house<br><br>iv. Do you calculate ROI on customer info/knowledge projects? If yes how do you calculate returns?<br><br>v. What are critical success factors and key performance indicators of customer info/knowledge projects |
| **8** | **Interviewees Role(s) and Experiences**<br><br>i. Please describe your role with regard to customer knowledge and how long have you been working in this role?<br><br>ii. From your experience, which is the best way to implement a project like achieving 360 degree view of customer in your organisation?<br><br>iii. What is your perspective on evolution of 360 degree view of customer in organisation? Please describe how you feel organisations will perceive '360 degree view of customer' in the future. |
| | **Additional questions**<br><br>How do you value knowledge from customers when compared with knowledge from within the organisation?<br><br>How often do you seek knowledge from your customers when making decisions?<br><br>How does it support your decision making processes? Can you give specific examples?<br><br>How do you know if a customer has knowledge that will help you? Are you able to identify these customers?<br><br>With whom do you share your organisational customer knowledge?<br>o Relevant departments only<br>o Through-out organisation only<br>o Through-out organisation and Business partners only<br>o Organisation, business partners and customers |