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DEPARTMENT OF VALUE NETWORK MANAGEMENT

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BUILDING A ROADMAP FOR A MARKET INTELLIGENCE FUNCTION IN A GLOBAL B2B COMPANY

Master's Thesis

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ABSTRACT

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The emphasis of this thesis is on building a Market Intelligence (MI) function for a large-scale, global business-to-business (B2B) company. The value of an efficient market intelligence function becomes more and more important in the competitive, and complex high-technology industries. In today's changing markets, an industrial company needs to be market oriented, and have a clear understanding of the customers' perceptions, in order to survive. Market Intelligence is not only insight about the marketplace, but a provider of operational flexibility, competitive insights and sustainability in strategic decision-making.

The research was conducted as a qualitative, action research including a literature review, a case study, and an in-depth analysis of the case company. The empirical study incorporates the research setting, which covers a desk research, and the two phase study including both 20 managerial interviews and one extensive and collaborative workshop.

The outcome of the study is a three step roadmap for establishing an MI function for a complex B2B company. The outcome suggests that an MI function should be located in the customer-end of the company and support cross-functional integration. Market intelligence sharing requires systematic MI practices and communication of clear MI needs and targets intra-organizationally, in order to gain valuable insight from the customer. The communication between the company and the customer should be reciprocal for gaining mutually beneficial results, which improves the customer relationship. While customer relationship reaches a satisfying level, the company may learn valuable market intelligence in return.

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Tämän diplomityötutkimuksen tarkoituksena on luoda markkinaälyyn (MI) erikoistunut funktio suurelle, globaalisti toimivalle B2B-yritykselle. Tämän päivän muuttuvilla markkinoilla, teollisuusyrityksen on oltava markkinalähtöinen selviytyäkseen. Markkinatiedon tehokas hyödyntäminen ei pelkästään luo tietoa markkinoista, vaan tuottaa kilpailukykyistä tietoa ja toimii strategisen päätöksenteon tukena pitkällä aikavälillä.

Tämä tutkimus on kvalitatiivinen toimintatutkimus, joka sisältää kirjallisuuskatsauksen, yritystapaustutkimuksen sekä syväanalyysin yrityksen MI-ympäristöstä. Kirjallisuuskatsaus pitää sisällään teoriaa liittyen markkinaälyyn useassa eri kontekstissa, asiakassuhteeseen, sekä prosessinmallintamiseen. Empiiriseen osaa seuraa tutkimusmenetelmäkappale, joka sisältää kaksivaiheisen tutkimuksen mukaan lukien 20 päällikkötason haastattelua sekä yhden laaja-alaisen työryhmätapaamisen.

Työn tuloksena syntyy kolmivaiheinen tiekartta, jonka tarkoitus on toimia pohjana uuden MI-funktion rakentamiselle Case-yrityksessä. Tuloksen mukaan MI-funktio tulisi sijoittaa yrityksen asiakasrajapintaan sekä tukea yksiköiden välistä integraatiota. Markkinaälyn jakaminen yrityksen sisällä vaatii käytäntöjen, tarpeiden ja tavoitteiden systemaattista viestintää eri organisaatiotasoille, jotta yritys voi edelleen saada asiakkaalta tarpeeseen vastaavaa tietoa. Viestintä yrityksen ja asiakkaan välillä on oltava molemminpuolista, jotta tulokset voisivat parantaa asiakassuhdetta. Kun asiakassuhde paranee, yritys voi oppia asiakkaalta arvokasta tietoa, markkinaälyä.

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This thesis project has been full of ups and downs, yet I find it the most intriguing project, I have ever worked with. The amount of knowledge a person can learn from a thesis project is incredible. Even though this project has taken over 10 months now, hundreds of cups of coffee, many cries and laughters, I would do it all again.

Firstly, I would like to thank my 1st Examiner Professor Anne Jalkala for giving me the support to exceed myself throughout the project. It has been an honor to work with such a distinguished researcher. Secondly, I would like to thank my Supervisor from the Case Company, Mr. Olli Mansikka, for giving me the opportunity to be a part of the company's Intelligence activities. The people that were involved in the research process at the case company, thank you all for supporting me.

Thirdly, and most importantly I want to thank my significant other, my family, and friends for the priceless support, they have provided me – not only during the thesis project, but during my studies. For my mother, Satu, I would like to say special thanks for everything. I hope this is a pleasant birthday present for You.

Elizabeth Kerppola

Helsinki, 2.12.2014

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LIST OF ABBREVIATIONS

B2B, B-B	Business-to-Business
BI	Business Intelligence
BPM	Business Process Model
BU	Business Unit
Capex	Capital expenditure
CoI	Competitor Intelligence
CRM	Customer Relationship Management
CuI	Customer Intelligence
CI	Competitive Intelligence
DSS	Decision Support System
EI	Environment Intelligence
GIA	Global Intelligence Alliance
KSF	Key Success Factor
MI	Market Intelligence
MO	Market orientation
NPS	Net Promoter Score
Nvivo	Tool for Qualitative Research
OEM	Original Equipment Manufacturer
Opex	Operational expenditure

PG	Product Group
PI	Product Intelligence
PU	Production Unit
R&D	Research and development
ROI	Return on investment
ROMI	Return on marketing investment
RQ	Research Question
VoC	Voice of Customer

1 INTRODUCTION

Market Intelligence (MI) is a concept requiring constantly more attention as the demand for knowledge increases and becomes more critical within organizations (e.g. Jamil 2013; Mintzberg et al 2009; Porter 2008; Marchand et al 2001). The need for market intelligence grows significantly especially when a company begins expanding its operations internationally (Vaarnas et al. 2005). In order to succeed in a competitive marketplace, a company needs to have in-depth and broad knowledge about the business environment it is operating in (Aaker et al. 2007; Cornish 1997). Especially in large-scale organizations, the management is often forced to make decisions based on inaccurate or poor sources of market information (GIA 2014). This takes time, a valuable resource, from the individual decision-makers, which can lead to a loss of a business opportunity (Hedin et al. 2011).

In today's changing market environment, the understanding of the buyer-seller relationship becomes more and more important in business-to-business (B2B) markets (Zehetner et al. 2012), and the MI should focus on strengthening this relationship (Hedin et al. 2011). In order to even survive in the current marketplace, a company needs to prioritize the needs and wants of customers as the primary purpose of operations (Mintzberg 1983), and deliver customer value (Kotler et al. 2006). Today, a B2B company should increase investing on finding flexibility and competitive advantage in its business (Mithas et al. 2005; Hogan et al. 2002) with the support of a market intelligence (Hedin et al. 2011; Vaarnas et al. 2005).

There have been some previous studies about the importance of market intelligence. The fundamentals of the concept have remained, yet global B2B companies haven't quite understood the value of a well working MI function as a competitive advantage (Vaarnas et al. 2005). The main reason for not understanding the value is that the perceived benefits and profits of market intelligence are hard to assess (GIA 2014), because of its qualitative nature (Vaarnas et al. 2005).

This master's thesis is about studying the visibility and coverage of the current, global, market intelligence function of a B2B company. The outcome of the study will be a three-step roadmap for establishing an MI-function. The thesis is a part of Master's degree studies of Value Chain Management at the faculty of Industrial engineering and Management at Lappeenranta University of Technology (LUT). The study is executed for a multinational technology-oriented, B2B company.

1.1 Research scope, objectives and limitations

The objective of this research is to find out the current state and quality of the market intelligence activities in a global business-to-business company, understand the needs and suitable practices for market intelligence, and finally to build a roadmap for establishing a new MI function. The scope of the study is presented in **figure 1.** Market intelligence is a market related type of intelligence, which includes knowledge customer, competitor, and the market environment. Market intelligence is generally in the literature discussed as a part of a wider intelligence scope, business intelligence.

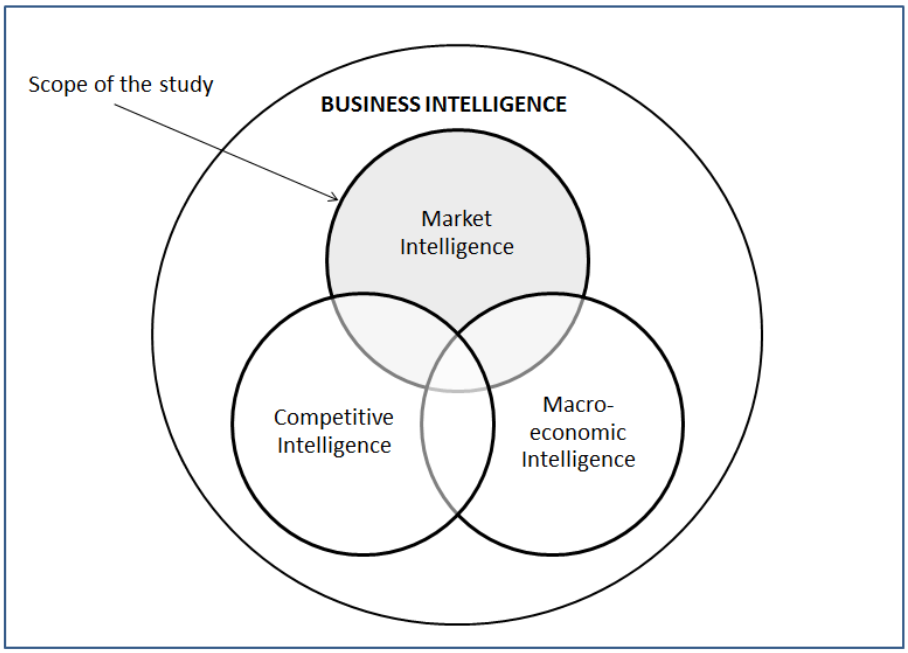

Figure 1. Scope of the research

The research's main objective is to provide suggestions for implementing an MI function, which will operate under the supervision of the Business Intelligence (BI) –function of the case company. The thesis project is a part of a larger project scope of the case company's top level marketing strategy. Since market intelligence is considered as a part of business intelligence, the relationship between business intelligence and market intelligence is discussed in the study. Other types of intelligence (competitive and macro-economic) are left out of this research.

The study includes mapping the needs for market intelligence and the suitable practices for market intelligence processes and deliverables. The primary data collection of the research will cover all the case company's management groups that require market intelligence in the day-to-day work to support their decision-making.

The research will be performed in a specific business unit (BU) of a large-scale enterprise. The topic and the two research questions (RQ's) are shown in **figure 2**.

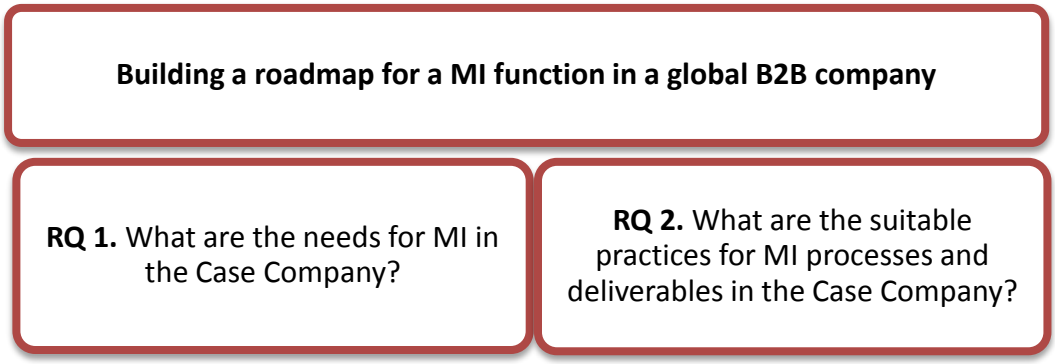

Figure 2. The topic of the thesis and the research questions

1.2 Overview of the Case

Currently the case company's market intelligence activities are evolving, and the managers have understood the potential value of an MI function in order to support the decision-making. The company does not have systematic market intelligence processes, which lead to a situation where departments are: 1) wasting time, 2) making decisions based on poor market intelligence, 3) reinventing the wheel by acquiring the same information that is already available internally, and 4) not having knowledge about the current or future needs of customers.

The information is not shared efficiently intra-organizationally, and many functions are doing the same work another function has already done. The current market intelligence flow can be described as reactive and it is unsystematic in all parts of the organization, whereas the ideal MI function would be possess a solid structure, a balance of pro-activeness and reactiveness, and systematic MI practices.

The management groups in the case company requiring market intelligence in for decision-making are: 1) Top Management, 2) Sales, 3) Marketing, 4) Product management, and 5) Research and Development (R&D). In **figure 3** are presented the

main activities, where market intelligence is utilized among the management groups. For Top Management the main activity that requires market intelligence is strategic planning. In order to make successful strategic planning, the Top Management needs to have knowledge about the markets; what are the short- and long-term trends and how the markets are evolving. The strategic decision-making sets up the direction for the company's future operations. As in figure 3 is shown, the Top Management is organizationally higher in the hierarchy compared to the other functions, and for this reason the Top Management is expected to get the market intelligence from the lower organizational levels.

The management functions at the lower organizational level are Sales, Marketing, Product, and R&D. For the Sales function, the market intelligence is mainly related to customers and competitors; where the customers are, what the customers buy, why the customers buy, where the competitors are, what products the competitors offer, how the competitor products differ from the company's offerings and so on. The Marketing function is more focused on the trends and opportunities in the markets the company is operating in. The trends can be related to customer and competitor as well, but the focus is different than the Sales function has. The focus of the Sales is to increase and intensify the sales activities, whereas Marketing is more focused on the trends in market environments as a whole. In some Product Groups (PGs) of the company, Sales and Marketing functions are integrated as one, because the close relationship the functions have. There are still some distinctions between the two functions, and for that reason, they are dealt as separate entities in this research.

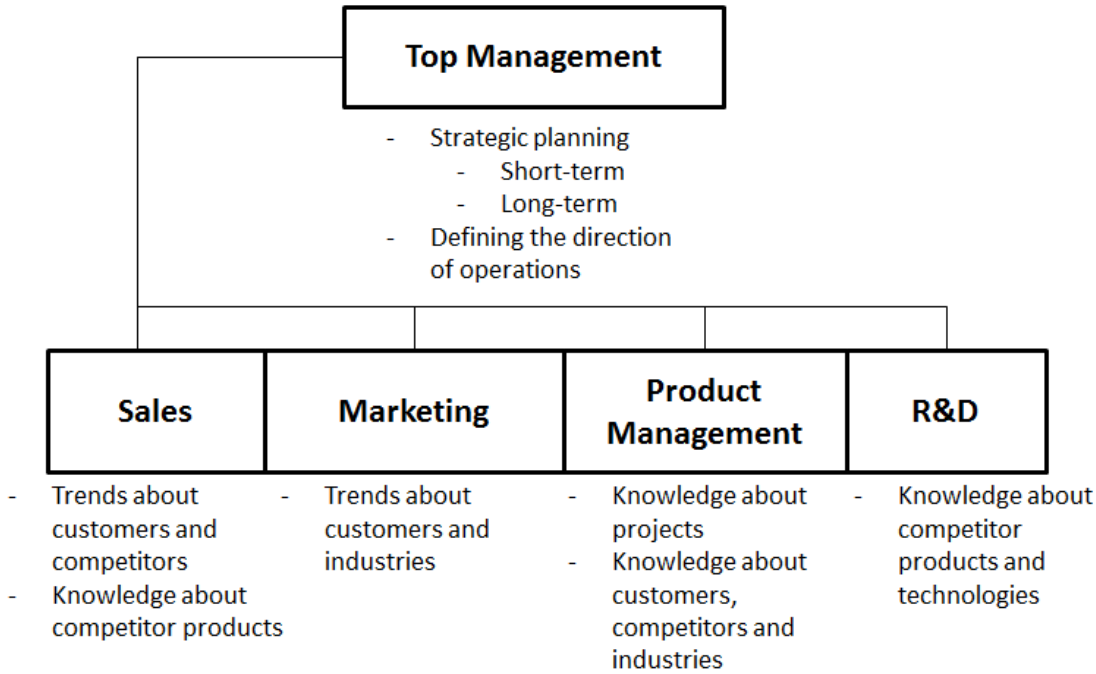

Figure 3. Different functions in the Case Company utilize MI

The Product Management is a new function in the company, and the responsibilities vary depending on from whom the responsibilities are asked. Mainly the role of Product Management requires both economic and technical skills, and is targeted to work as project management positions globally. The R&D function is the most distant function from the customer in the Case Company, and is mainly specialized in learning about competitors; what kind of products they have, what technologies and patents they own, how their products differ from the Case Company's own products, what they have in their portfolio, where they operate, and so on.

1.3 Implementation of the thesis

The research is divided into two main parts in addition to a literature review and desk research. The first part aims to find out the needs and deficiencies in the com-

pany's current market intelligence activities. For the first part of the study, multiple managerial interviews are conducted globally. The results of the first part will also provide answers to the first research question:

What are the needs for MI in the case company?

The findings in part 1 lead the study towards finding specific needs for sources in part 2. The decisions for suitable processes and deliverables will be sought out in a collaborative workshop with the support of the customer end (sources of market intelligence). The second part will answer to research question 2:

What are suitable practices for MI processes and MI deliverables in the case company?

The building of the roadmap will be a logical continuum to parts 1 and 2 of the research and will combine the findings together in a roadmap (**fig. 4**) for the MI function. The roadmap will be includes three steps, which provides suggestions for the establishment of an MI function in the case company. In Step 1 concrete and mainly short-term suggestions are made for improving the current MI environment in the Case Company. Here, the MI practices (processes and tools) are additionally taken into closer review. Step 2 suggests an establishment of an MI function. During Step 3, market intelligence will become a part of the company's MI-culture and long-term strategic planning.

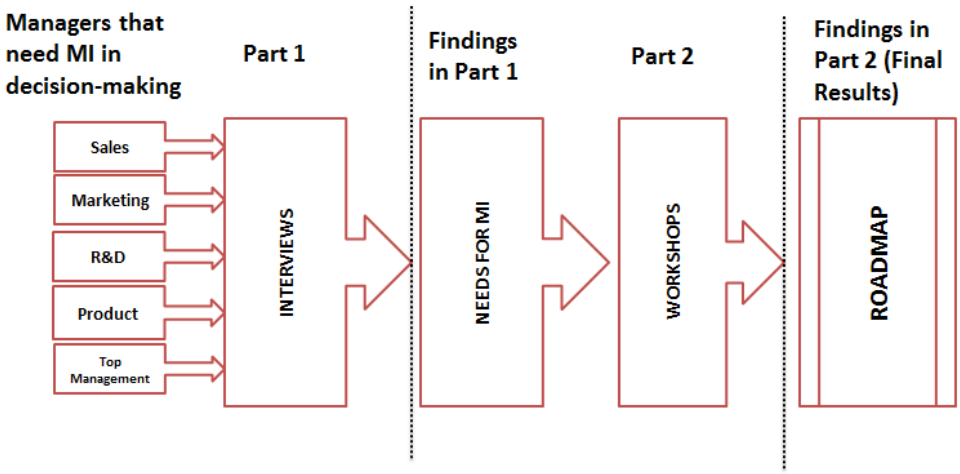

Figure 4. Implementation of the research

1.4 Structure of the thesis

The outline of the thesis is introduced in **figure 5**. It shows how the entities are divided into theoretical and empirical parts. The research begins with chapter 1: **Introduction** in which the research topic and questions, targets, scope and limitations are introduced. In the end of the first chapter, the research strategy, implementation and methodology are represented. The theoretical part of the research begins in chapter 2: **Literature Review.** In chapter 2, the main theory is introduced for understanding the topic. In the first sub-chapter, the concept of market intelligence (MI) is researched from different perspectives. The second sub-chapter discusses the relation of market orientation to market intelligence. This includes the concepts of industrial customer relationship and customer value. Chapter 3: **Research Methodology** incorporates the methodology of the research, the research design and the data collection techniques. Chapter 4: **Empirical study** begins the case related section and the empirical part of the research. The fourth chapter examines the basic company information and organization structures.

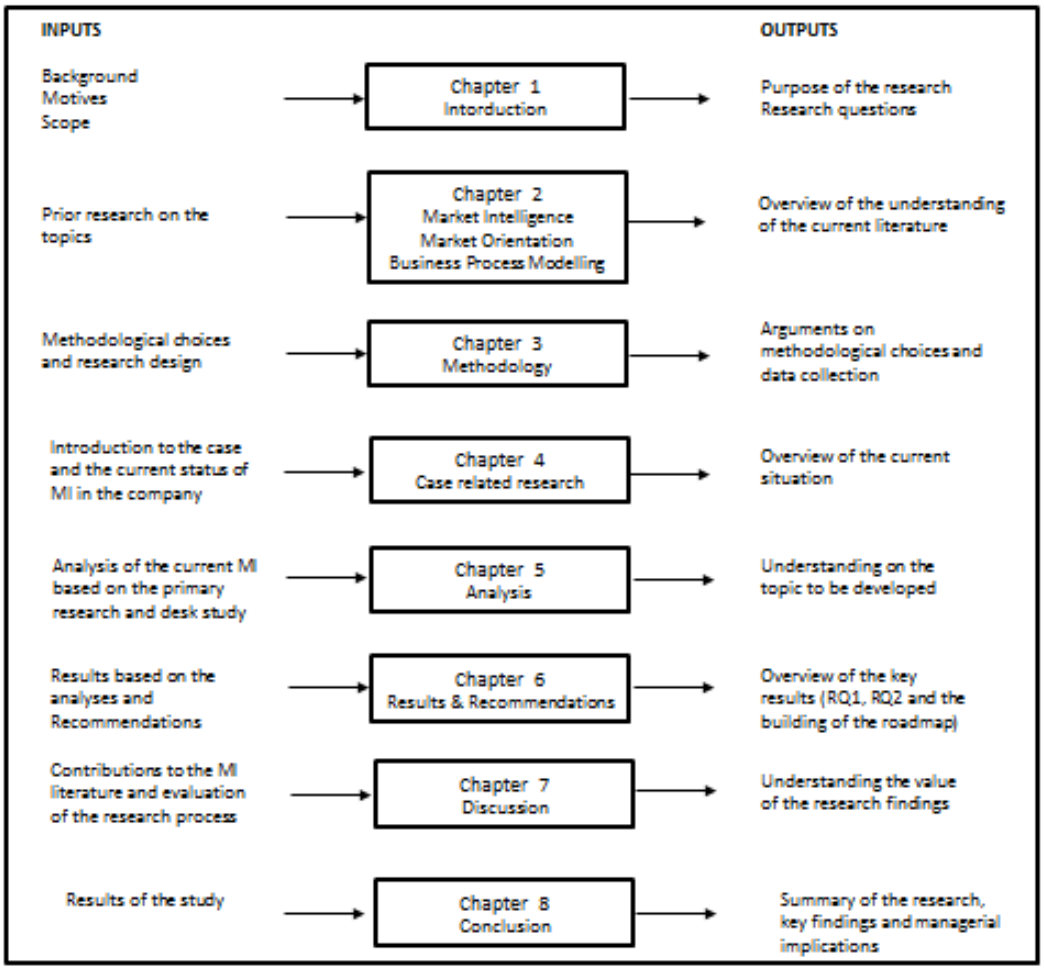

Figure 5. Outline of the research

Chapter 5: **Analysis** includes the analyses of the primary data from the desk study, interviews and workshop. Chapter 6: **Results and Recommendations** present the findings of the research (results for research questions 1 and 2) and the building of the roadmap. Chapter 7: **Discussion** reflects the findings of the research to the literature and presents the contributions of the research to the existing literature. The evaluation of the research process is additionally in the end of the chapter. Chapter 8: **Conclusion** summarizes the key findings of the research and presents the Managerial Implications.

2 LITERATURE REVIEW

Chapter 2: Literature review introduces the concepts of market intelligence (MI), market orientation (MO), customer relationship, customer value, and business process modelling in the academic literature. The literature review includes market intelligence in a few contexts and the creation of an intelligence system. The benefits of market intelligence for different functions in an organization are discussed here. The different perspectives are: strategic planning, sales and marketing, and innovation and product management.

Market orientation (MO) is considered a requirement for a company that is devoted to market intelligence activities. For a successful market intelligence collection, a company should have knowledge about the market environment it is operating in. The relationship between the customer and the ability to deliver customer value becomes more important. In this sub-chapter, industrial customer relationship and business process modelling in a customer perspective are introduced.

2.1 Market Intelligence

The concept of market intelligence (MI) needs constantly more attention as the demand for knowledge increases within organizations (e.g. Jamil 2013; Mintzberg et al 2009; Porter 2008; Marchand et al 2001). By definition, market intelligence is a process, which incessantly generates knowledge for business functions. The knowledge can be from *dispersed data* and information sources that reflects the business environment. (Jamil et al. 2012) In other words, market intelligence is a process where information is acquired and analyzed in order to comprehend the market (Cornish 1997). Market comprehension means that both the existing and potential customers need to be specified: their needs, preferences, attitudes and in general, customer behaviors. Furthermore, the changes in the marketplace that have impact on size and nature of the future markets are to be evaluated. (Cornish 1997;

Aaker et al. 2007) According to Le Bon & Merunka (2006), market information as a global concept can be divided into marketing research and market intelligence (Le Bon & Merunka 2006). According to Le Bon & Merunka (2006), both marketing research and market intelligence focus on collecting and providing information for managerial decision-making purposes. However, the two concepts differ in three key elements: 1) *information flow*, 2) *provided type of information*, and 3) *use of information* (Le Bon & Merunka 2006).

The field of market intelligence has been in the middle of a radical change for a long time now. The change is caused by increase of both supply and demand (Vaarnas et al. 2005). Maltz & Kohli (1996) suggest that market intelligence is actually a business component that improves the quality of scenario prediction, and furthermore allows better planning capabilities especially for marketing strategies (Maltz & Kohli 1996). According to Jamil (2013) and Jamil et al. (2012), market intelligence applies to: *internal, sectorial and external resources*, which can generate specific and consolidated knowledge of marketing processes and decision-making that effects on the total value positioning – "specifically strategic marketing planning tasks and choices, acting as an organizational continuum" (Jamil 2013; Jamil et al. 2012). Additionally, market intelligence applies to designing strategies and tactics for a future positioning to be considered, planned and executed by an organization (Porter 2008; Mintzberg et al. 2009).

Business intelligence (BI) is another type of intelligence. Pirttimäki (2007) suggests that the various intelligence concepts linked to business intelligence (competitive intelligence, competitor intelligence, market intelligence, strategic intelligence and environmental intelligence) and even some of them used in the BI context, yet most of them are primarily concentrated on external environment and use external sources for data collection (Pirttimäki 2007). Choo (2002) argues that business intelligence has in fact the broadest scope compared to other intelligence concepts. Business Intelligence consists of various sources of information and it is used to multiple activities, strategic, long-term decision-making (Choo 2002). The main

difference between BI and other intelligence concepts is how it is managed and enriched in the long-term (Pirttimäki 2007). Aaker et al. (2007) offers another perspective into the context. According to Aaker et al. (2007), business intelligence includes several components: *financial intelligence, market intelligence, accounting intelligence, management intelligence* and others. The intelligence perspective of Aaker et al. (2007) is presented in **figure 6**.

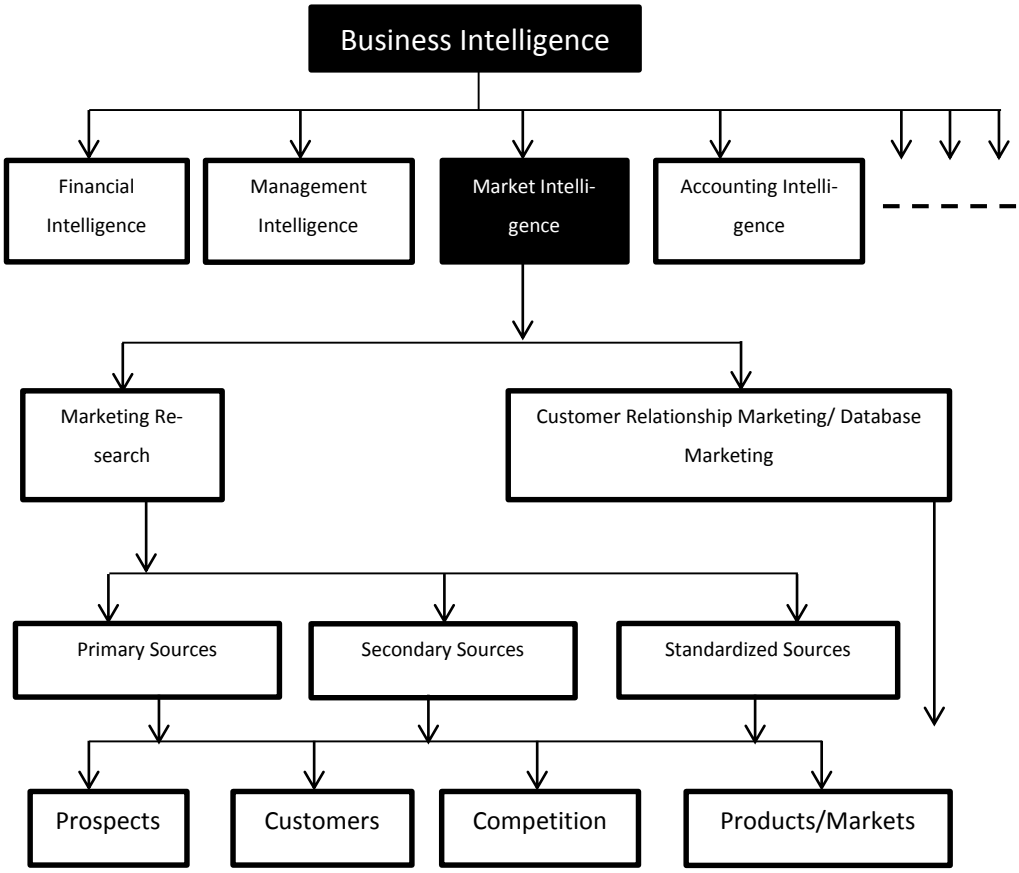

Figure 6. Umbrella of business Intelligence (adapted Aaker et al. 2007)

According to Khan & Quadri (2014), BI systems merge *operational* and *historical data* with analytical tools in order to produce *competitive information* for business planning purposes and decision-makers. The focus of BI is to keep the information updated and at quality-level for deeper comprehension of the position of the company compared to competitors. Business intelligence applications and technologies are to support organizations in analyzing the trends in market share: *changes in customer*

behavior and spending pattern, customers' preferences, company capabilities, and market conditions. The BI function can be utilized for supporting analysts and decision-makers to decide, which measures are most liable to answer the changing market environment, and generate competitive advantage. (Khan & Quadri 2014)

According to the literature, business intelligence provides the technology and tools (Khan & Quadri 2014), and market intelligence is considered as a part of business intelligence (e.g. Pirttimäki 2007; Aaker et al. 2007). According to various authors (e.g. Turban et al. 2008; Clark et al. 2007; Hannula & Pirttimäki 2003) business intelligence can be demonstrated as: 1) *architecture*, 2) *tool*, 3) *technology*, or 4) *system* gathering and storing data, analyzing the data with *analytical tools*, supporting reporting, querying and delivering information in order to improve decision-making (Khan & Quadri 2014).

Market Intelligence is often confused to another type of intelligence, competitive intelligence (CI). These two processes both differ and complete each other (Jamil 2013). Competitive intelligence is defined as a continuous process, which provides decision support for all strategic levels in an organization (Kahaner 1998; Miller 2002). Competitive intelligence as a process was originally intended as a knowledge producer from external understanding of the market environment (Jamil 2013; Kahaner 1998; Miller 2002). According to Vaarnas et al. (2005) the borders of the intelligence types are not always clear and visible. For instance the categorization different types of intelligences can be uneasy to define (Vaarnas et al. 2005). A strict categorization might not be possible to create, but the most important thing in an intelligence process is to address the intelligence data to the correct user groups (**fig. 9**) (Hedin et al. 2011). As the BI function provides techniques and tools for any intelligence system (Khan & Quadri 2014), the market intelligence's focus is to provide specific market related information (e.g. Jamil 2013; Mintzberg et al. 2008; Porter 2008) inside the surroundings of BI (e.g. Hedin et al. 2011; Pirttimäki 2007; Aaker et al. 2007).

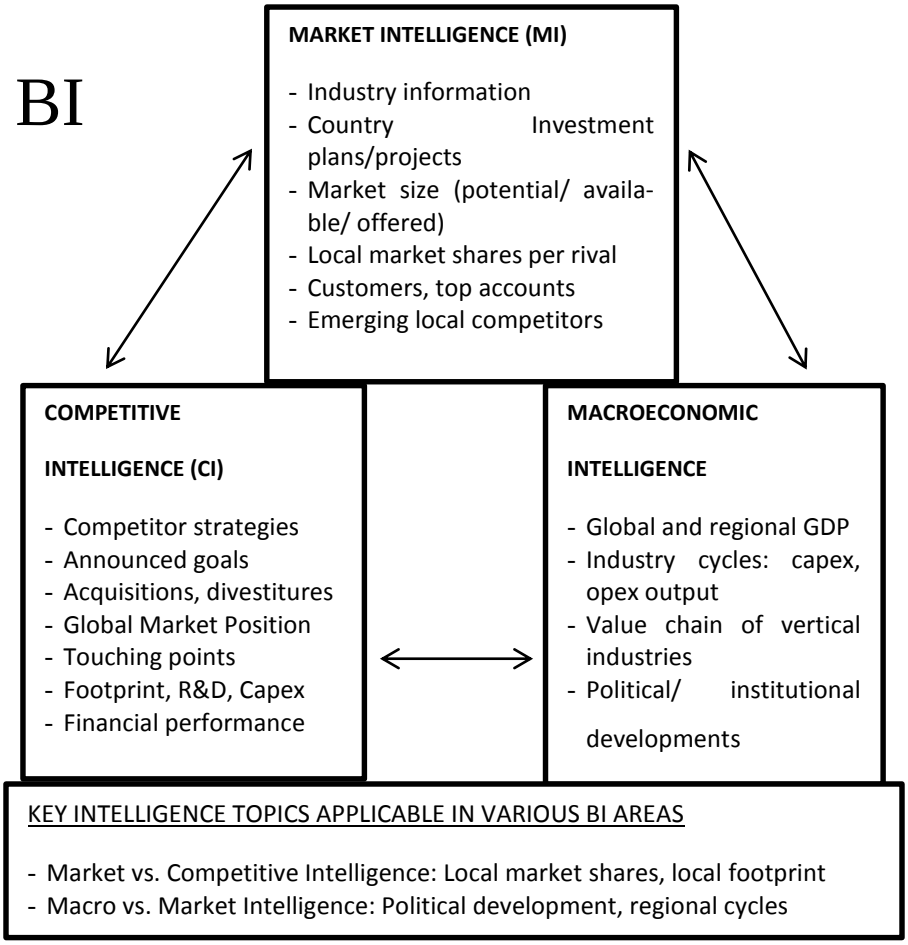

Figure 9. Components of Business Intelligence (adapted Hedin et al. 2011)

Various authors (e.g. Jamil 2013; Jamil et al. 2012; Mintzberg et al. 2009; Porter 2008; Aaker et al. 2007; Le Bon & Merunka 2006; Cornish 1997; Maltz & Kohli 1996) have discussed the concept of market intelligence from different angles, and according to these angles the main elements of market intelligence are summarized and presented in **table 1**.

Table 1. Different angles for market intelligence

Author	MI as a concept	Targets of MI
Porter (2008); Mintzberg et al. (2009); Jamil (2013); Jamil et al. (2012)	MI is a process for designing strategies and tactics, which generates knowledge for business functions.	Supports strategic planning and decision-making.
Maltz & Kohli (1996)	MI is a tool for building business and marketing strategies.	Improves the quality of scenario prediction, allows better planning capabilities especially.
Le Bon & Merunka (2006)	MI is one of the two most essential components of market information.	Collection and providing information for managerial decision-making.
Cornish (1997); Aaker et al. (2007)	MI is a process, where information is acquired and analyzed in order to comprehend the market.	Understanding customer wants and needs, buying behavior, and other external changes in the markets.

Based on **table 1**, the ideology behind the concept of market intelligence remains the same, even though the perspective varies from author to author. We may conclude that:

- Market intelligence is a process, where internal and external information is collected, analyzed and shared inside an organization.
- With market intelligence, the designing of tactics and strategy for different business functions become easier for decision-makers.
- Market intelligence targets on understanding and predicting customer wants and needs, and external changes in the marketplace.

In the following sub-chapter the topic of market intelligence will be presented in different business functions inside an organization. The need of market intelligence for the organization will be presented in various perspectives from strategic planning, sales and marketing, innovation and product management to perspective. These functions are typical for a large-scale organization.

2.1.1 Market intelligence in different business functions

According to Caudron (1994), market intelligence serves four primary purposes in an organization: 1) *competitors' assessment and tracking*, 2) *early warnings of opportunities and threats* 3*) support for strategic planning and implementation*, and 4) *support of strategic decision-making* (Caudron 1994). Aaker et al. (2007) offers yet other domains, which are served by market intelligence:

- Product decisions
- Customer segmentation decisions
- Brand and pricing decisions
- Stakeholder decisions
- Market estimation, competitive benchmarking, and distribution decisions

According to Hedin et al. (2011) market intelligence is a discipline of both old and new. Organizations that are operating in a competitive marketplace need intelligence for learning what the market wants from their products and services (Hedin et al. 2011). According to Hedin et al. (2011), market intelligence is a concept that helps organizations to comprehend their own business environments, and it is a business critical function for two primary reasons:

1) The operating environment of an organizations is getting increasingly complex and. the more complexity occurs the more accurate business information is required at all levels in the organization.
2) Decision-makers are challenged by the lack of time to "distinguish, digest and process" the information that is truly relevant for critical decision-making. (Hedin et al. 2011)

According to Hedin et al. (2011) and Caudron (1994) the opportunities and threats of market intelligence in strategic managerial perspective can be categorized as in **table 2**. According to Vaarnas et al (2005) the ability to recognize changes as opportunities or threats in a market environment requires information; hence market intelligence can be categorized as one of the most essential resources of both strategic planning

and decision-making. When a company owns information about the markets, it can protect itself from the risks involved in business transactions and lower operational expenses (Vaarnas et al. 2005). In this manner, market intelligence can be viewed as *insurance* for the company's operations (Vaarnas et al. 2005). The more knowledge the company owns, the more secured decisions and less mistakes are made (Vaarnas et al. 2005). According to Vaarnas et al. (2005) market intelligence can be viewed as a source of *competitive advantage*. Information is a commodity among others, which can be purchased by the company or its competitors. When more in-depth information is required, the acquiring becomes more difficult and expensive. The comprehensive utilization of market intelligence as a competitive advantage requires clear needs for market intelligence and a full understanding of its purpose. (Vaarnas et al. 2005)

Table 2. Opportunities and Threats of MI (adapted Caudron 1994; Hedin et al. 2011)

Opportunities (high MI commitment)	Threats (low MI commitment)
Mergers and acquisitions	Price erosion
Winning market share from competitors	New competitors entering market
Expanding into new markets geographically or products-wise	Emerging business models
Finding innovative business models	Consolidation or fragmentation of the value chain
Finding new demand for products and Services	Limited understanding of the current trends
Generation of new partnerships	Changing customer behavior

According to Vaarnas et al. (2005) high quality and accurate market intelligence is always expensive, for the structuring and processing of data ask for skills and resources. On the other hand, the more insurance is acquired with market intelligence, the more expensive it becomes for the company. However, fresh market intelligence used in the right time can save the company vast resources and generate large profits. (Vaarnas et al. 2005) The needs for market intelligence grow substantially as the company expands its operations internationally. The factors that affect these needs

can be categorized into three components: 1) *new variables*, 2) *wider and in-depth knowledge*, and 3) *need of quick re-occurrence* (Vaarnas et al. 2005). According to Vaarnas et al. (2005) market intelligence is often underestimated, since the value of the information is hard to assess. For the acquired market intelligence, the *return on investment* (ROI) is hard to calculate, because the investments are hard to position to the sales. On the other hand, the losses due to the lack of investments in market intelligence are hard to calculate. (Vaarnas et al. 2005) According to GIA (2014) the calculation is hard to evaluate for three reasons:

> 1) The revenues of perceived benefits may depend on the *new variables*,
>
> 2) The decisions are made either with or without market intelligence, and once the decision is made the decision-maker cannot choose another path and see would it be a better decision, and
>
> 3) Various benefits of market intelligence are qualitative; hence the calculation of an accurate ROI for the MI system would be extremely hard. However, specific projects or initiatives (e.g. large investments and sales opportunities) can be calculated with particular financial figures. (GIA 2014)

According to Duboff & Wilkerson (2010) one of the most essential challenges among marketing academics and practitioners, is the hardness to measure the value of marketing investments (Duboff & Wilkerson 2010). However, Greenyer (2006) proposes the main challenge isn't the monitoring itself, but the constantly changing expectations of the marketing investments. In today's marketplace a customer expects to receive personally targeted marketing integrated in the customer's own preferences (Greenyer 2006). For the challenges of ROI-monitoring in a marketing context, Tikkanen & Vassinen (2009) have proposed another technique for measuring marketing investments, such as market intelligence. The technique *is return on marketing investment*, ROMI, and it can be calculated as a ratio of the profits and the cost of the marketing investment (Tikkanen & Vassinen 2009).

When creating intelligence inside an organization, trust becomes an important factor (Hunt et al. 2006). Trust exists when a person has confidence in another person's integrity and reliability (Morgan & Hunt 1994), and increases knowledge exchange (Arrow 1974). According to Dawes & Massey (2005) trust is the most essential factor in all forms of social exchange, which include *interorganizational* and *intraorganizational* relationships (Arnett & Whittman 2014; Dawes & Massey 2005). Additionally, it is in a central position *knowledge sharing processes* (Hall & Andriani 2003) and has an impact on both *extent* and *efficiency* of the knowledge exchange (Dhanaraj et al. 2004).

2.1.1.1 Strategic planning perspective

According to Day (1984) all companies have strategies, and these strategies are used to produce and sell offerings. In many cases, strategies are determined by a reaction to a phenomenon beyond the company's control. The reason why companies plan is to gain competitive advantage (Day 1984). It is said that most of the unsuccessful events may have been caused by bad strategic marketing decisions (Jocumsen 2002; Kotler 2000; Corman and Lussier 1996). Managers are to make difficult and different decisions in the organization depending on their department. Often the most complex decisions are unstructured, and *decision support systems* (DSS's) are needed. According to the Anthony (1965) decisions can be divided into many categories, yet the most distinct three categories are: 1) *strategic planning*, 2) *management control*, and 3) *operational control* (Anthony 1965).

The theory of Anthony (1965) has remained the most popular approach for categorizing managerial activities. By *strategic planning*, the approach suggests that a framework must be created for the company. The framework is to help the executive level firstly to decide the objectives of the organization, secondly to reach them. The process incorporates milestones, which push the decision-making towards the objectives under governing policies. *Management control* takes care of the effective use of resources in the terms of performance management when reaching the set objectives. Management control is directly linked to *strategic planning*,

for all the performed activities are to be performed in the context of previously determined policies (Gorry & Morton 1971; White 1971). Vaarnas et al. (2005) contributes that market intelligence offers a significant role in company's the strategic planning and decision-making. All internationalization decisions made by a company require market intelligence (Hedin et al. 2011; Vaarnas et al. 2005). The most significant strategic decisions are among others, the decisions about the target markets and the form of operations (Vaarnas et al. 2005). These decisions are a part of an internationalization process and repetitive (Vaarnas et al. 2005). Vaarnas et al. (2005) claims that one of the most important roles of strategic planning is to find out how the company can most suitably adapt its operations to customers, competitors, own resources and the environmental variables. The role of market intelligence is important additionally in the *operative planning and decision-making* functions (Vaarnas et al. 2005).

According to Tan & Ahmed (1999) market intelligence offers the input and drive for the evolution of elements included in the formulation and execution of effective strategy within a company. The elements suggested by Tan & Ahmed (1999) are:

- Structured and large-scale planning and implementation
- Effective responses to unexpected opportunities and problems
- Innovative and entrepreneurial insights (Tan & Ahmed 1999)

These are contributions to the findings of Sammon et al. (1984), which underlines the importance of the mechanisms of market intelligence in strategic management. Strategic management is an integrated combination of operations that seek for growth and strength of an organization in the long-term (Sammon et al. 1984). The larger input of market intelligence and its relationship to strategic management are introduced in **figure 8**.

According to Bernhardt (1994) there are various components, which contribute to a company's growth in both scale and complexity. The complexity of decision-making is correlated to the growth of the business and market share, and therefore demands

for a strategic focus on customer and competiveness. These elements are vital for market intelligence. (Bernhardt 1994)

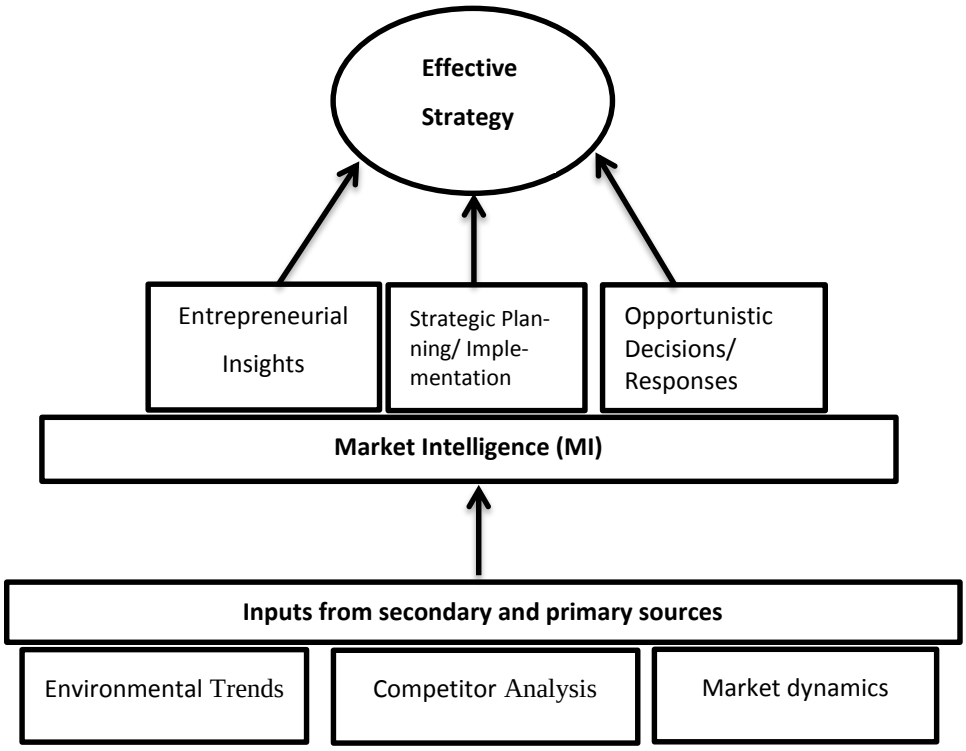

Figure 8. Effective strategy formulation/implementation (adapted Sammon et al. 1984)

According to Mintzberg (1983), the essential strategy creation in a customer-oriented company isn't co-created among senior executives, but in the operational base of the company. Therefore strategies for B2B companies must developed from front-end to back-end, *bottom-up* (Mintzberg 1983). Lucas (2010) presents the Mintzberg's bottom-up strategy as a customer-centric organization in **figure 9.**

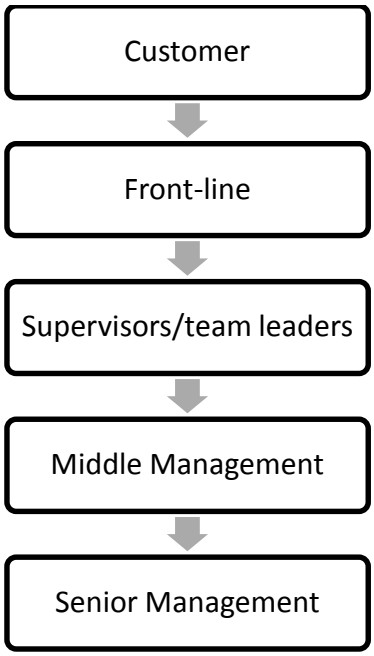

Figure 9. A Customer oriented organization (adapted Lucas 2010)

Many industrial companies are downward oriented, where the customers are left as final elements in the process. According to Lucas (2010) successful companies are the customer oriented ones, which focus on finding out the individual needs and wants of the customer. (Lucas 2010)

2.1.1.2 Sales and marketing perspective

According to many authors including Cespedes (1993), Dewsnap & Jobber (2000), Rouzies et al. (2005), and Kotler et al. (2006) the relationship between sales and marketing functions are profitable for the company in terms of more efficient business performance (Storbacka et al. 2009). The market intelligence needs in the customer processes vary depending on the functions. According to the research of GIA the managerial needs can be categorized as in **table 3**.

Table 3. Market intelligence needs in marketing and sales functions (adapted Hedin et al. 2011)

Marketing and sales planning and management ➢ **Comprehension of the existing and potential target customer segments, rivalry and applications** ➢ **Comprehension of the market size, growth and market shares** ➢ **Comprehension of the potential of new markets** ➢ **Comprehension of the customer needs and wants** ➢ **Comprehension of rival products, rival's sales organization, marketing plan, and pricing strategies** ➢ **Scanning trends and comprehending the impacts**		
Marketing communications ➢ Positioning ➢ Recognizing and assessing media options ➢ Tracking visibility ➢ *Brand analysis*	**Sales (B-to-B)** ➢ Identifying new sales opportunities (target companies) ➢ Public offer follow-ups ➢ Awareness of modifications in customer functions ➢ Deeper comprehension of rival products and sales arguments ➢ Credit ratings of customers ➢ *Competitive pricing* information	**Account management** ➢ Deeper comprehension of key accounts ➢ Awareness of modifications in key account functions

According to Hunt & Arnett (2006), marketing as a function and set of processes, enables the organization to *build*, *communicate* and *deliver customer value*. When the organization enables the delivery of more valuable offerings, it constructs an organizational resource (Hunt & Arnett 2006). According to Day (1990), a fully developed organization transforms into competence (Day 1990). According to Sanchez et al. (1996) the companies whose organizations develop these competences are more likely to coordinate the investments of assets to locations that help them acquire their goals (Sanchez et al. 1996).

According to Webster (1965), the primary sources of market intelligence in a company are the salespeople. The reason for this is merely economical; the additional

efforts of salespeople's collection of market intelligence increase the company costs only by a little (Webster 1965), for they already are positioned at the customer interface collecting external data (Lorge 1998). Moncrief (1986) contributes that salespeople's boundary position is the key for direct access of the company to important information about competitors and customers (Le Bon & Merunka 2006; Lorge 1998; Moncrief 1986).

Leigh & Marshall (2001) suggest the salespeople can create increased customer productivity (Leigh & Marshall 2001). The functions of gathering and sharing market information are ranked four out of ten most important tasks of salespeople within industrial sector (Moncrief 1986). The everyday field presence of salespeople allows them to grow strong relationships with customers and even hear rumors about projects of customers and competitors, hear about new product launches before they "go-live", find new test marketplaces, learn about competitors' discount and pricing policies, learn about changing customs in policies and behavior of customers or distributors, and collect *point-of-purchase* information on promotional activities and efficiency (Le Bon & Merunka 2006).

According to Kotler (2002), the salespeople's contribution to the marketing intelligence systems is acknowledged and recommended, the main problem in involving them to the system is the hierarchical distance from the managerial level (Kotler 2002). Darmon (1992) and Goodman (1971) contribute that the issue is the mobilization of the salesforces to engage marketing intelligence functions (Darmon 2002; Goodman 1971). Albaum (1964) suggests that the issue is in the communication between salespeople and sales and marketing managers. Salespeople don't know *what* should be communicated and *how* (Albaum 1964). According to Robertson (1974), this leads to a situation where few salespeople share the information observed or collected in the field (Robertson 1974). The collected field information may also be biased (Wortruba & Mangone 1979), since salesforces are more qualified on communicating in a subjective rather than objective manner (Evans & Schlacter 1985; Festervand et al. 1988). Aguilar (1967) and Mintzberg (1972) sug-

gest that for their subjective thinking, salespeople are more qualified for providing market intelligence, because organizations need to collect market gossip in order to develop a more generalized picture of the entire marketplace (Aguilar 1967; Mintzberg 1972).

Le Bon & Merunka (2006) suggest a conceptual model for the market intelligence activities between managers and salespeople (**fig. 10**). The model has been constructed from the findings of multiple interviews of salespeople. The findings exhibited that the commitment level to market intelligence activities varied a lot, and only a few salesperson engaged at serious level in the mission (Le Bon & Merunka 2006). The *behavioral effort toward market intelligence* includes an array of tasks that are considered a part of selling function: calls, negotiation, order follow-ups, customer assistance, collecting and transmitting information. These functionalities are not conducted equally; according to Le Bon and Merunka (2006) for the lack of time and behavioral actors of each salesperson individuals (Le Bon & Merunka 2006).

According to the study, *motivation* is the most important trigger to individual engagement and behavioral effort towards marketing intelligence activities (Le Bon & Merunka 2006). Ford et al. (1983) suggested already decades ago, that motivation is an essential concept in order to understand, why salespeople bother to engage in reaching the company's targets (Ford et al. 1983). According to Le Bon & Merunka (2006) motivation can be manipulated by managerial activities. Hence, as motivation can explain the behavioral efforts, it can be characterized as a *mediator* between the managerial factors and the effort. The lack of the managerial factors (recognition, feedback, participation in decision-making, and behavioral control system) decrease the willingness of a salesperson to commit in market intelligence activities (Le Bon & Merunka 2006). The concept of motivation can be categorized as *intrinsic* and *extrinsic* motivation (Le Bon & Merunka 2006). Intrinsic motivation is related to "personality traits and personal factors" (Le Bon & Merunka 2006) and to what an individual enjoys to do rather than forced (Carr & Walton 2014).

Extrinsic motivation can be characterized as the type of motivation that is driven by external triggers, such as upward mobilization and raise in payrolls (Le Bon & Merunka 2006). Le Bon & Merunka (2006), Cravens et al. (1993), and Anderson & Oliver (1987) claim the intrinsic motivation is in fact the direct and more permanent link for increasing individual behavioral efforts towards market intelligence (Le Bon & Merunka 2006; Cravens et al. 1993; Anderson & Oliver 1987).

The research of Carr & Walton (2014) implies that the growth of individual intrinsic motivation is a result of organizational and social identification. The feeling of "working together" increases motivation, and further individual performance on work related tasks. The motivation increases, when employees are treated as partners (Carr & Walton 2014). Already in 1950's Comrey et al. (1952) and Katz et al. (1951) found evidence that supervisory practices have an impact on organizational identification (Comrey et al. 1952; Katz et al. 1951). According to March & Simon (1993): "the more participation in making policy decisions, the stronger the tendency of subordinates to identify with the organization; the more the supervisors are employee- rather than production-oriented, the stronger the tendency of subordinates to identify with the organization" (March & Simon 1993, pp. 94).

Both the types of motivations are essential for market intelligence activities, yet the extrinsic type is claimed to give more short-term boost for individuals (Le Bon & Merunka 2006), whereas the intrinsic type is to increase individual persistence and performance (Carr & Walton 2014).

The concept of *organizational commitment* incorporates the salespeople's willingness to carry out the management's market intelligence mission.

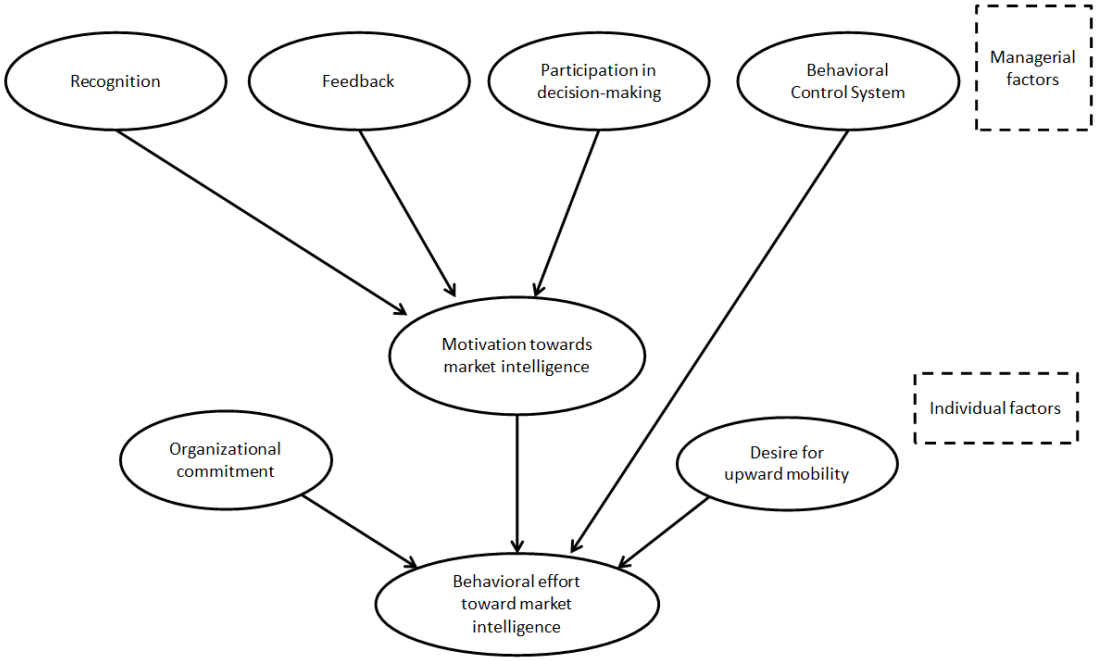

Figure 10. Conceptual model for delivering market intelligence (adapted Le Bon & Merunka 2006)

The salespeople need to feel included in the process and pointed out the benefits they have generated for the organization (Le Bon & Merunka 2006). According to Buchanan (1974), Hall et al. (1970) and Mowday et al. (1982) organizational commitment can be defined as positive attitude of an individual toward the entire organization. Furthermore, it indicates *personal identification* with the organization's values, individual involvement level and goals (Buchanan 1974; Hall et al. 1970; Mowday et al. 1982). In the model of Le Bon and Merunka (2006), *the desire for upward mobility* relates to the consequences of providing valuable information from the source (customer) to the management level. Collecting and sharing market intelligence can be defined as an important and identifiable signal of the desire to aid the organization, and therefore add visibility in a salesperson's career (Le Bon & Merunka 2006). According to various authors (e.g. Arnett & Whittmann 2014; Judson et al. 2006; Speier & Venkatesh 2002) because of the boundary position of

salespeople, they are prime sources of both customer and competitor information. They are in a position to create a strong relationship with the key customers, which permits them to collect both *explicit* and *tacit knowledge*. The process of getting the knowledge flowing from the salespeople to the other parts of the organization is however a challenge for the management (Mellow 1989), and is caused from the lacking internal social networks (Arnett & Whittmann 2014).

2.1.1.3 Innovation and product management perspective

Serving with appropriate market intelligence deliverables call for understanding of the innovation and product life cycle processes. According to Hedin et al. (2011) product management and research and development (R&D) in turn need to recognize the capabilities market intelligence can offer to support their processes and make the organization more innovative. The action of turning ideas into marketable offerings requires decision-making, which need to be backed up with accurate market intelligence. (Hedin et al. 2011) The benefits of market intelligence for innovation and product management functions are presented in **table 4**.

Table 4. Benefits of market intelligence for innovation and product management functions (adapted Hedin et al. 2011)

Innovation Management – Technology and R&D directors	**Product Management**
➢ Enhanced comprehension of trends ➢ Early signals of *disruptive technologies/innovations* ➢ Recognition of partner networks ➢ Reliable information about the *viability of listed innovations, existing technologies and products* ➢ Effective allocation of R&D and innovation management resources ➢ More effective marketability of the company's offerings	➢ Enhanced comprehension of customer needs and wants ➢ Enhanced comprehension of *competitive offerings and related future developments* ➢ *Higher quality product portfolio planning and strategic development* ➢ Enhanced positioning, specifications and pricing of the products at the time of product launch and post-launch ➢ More effective allocation of product management resources ➢ More effective marketability of the company's offerings

2.1.2 Creation of an intelligence system

According to Le Bon & Merunka (2006) *marketing information systems*, such as an MI function, are valuable for marketing and sales managers to recognize process and operate on *competitive signals* (Montgomery & Weinberg 1979; Prabhu & Stewart 2001). These systems are vital elements that lead towards more efficient marketing strategies and operations, and as global concepts can be comprehended. According to Kotler & Armstrong (1997), a market intelligence system is an entity of procedures and sources, which are useful for managers in gaining the information about the marketplace (Kotler & Armstrong 2007). Therefore, market intelligence provides a continuous *information* flow about divisively covered market events and has an impact on the company's competitive position (Le Bon & Merunka 2006). Hedin et al. (2011) claims the every small and large should develop a formal intelligence program in order to target the "customers in an educated manner and maintain understanding about their competitive environment". Especially in large-scale companies, the intelligence programs are the most suitable when they are structured in the management schemes (Hedin et al. 2011).

According to the Global Intelligence Alliance (GIA), the creation of an intelligence program contains six *Key Success Factors* (KSF's). These six factors are:

1) *intelligence scope*,
2) *intelligence tools*,
3) *intelligence process*,
4) *intelligence organization*,
5) *intelligence deliverables*, and
6) *intelligence culture* (Hedin et al. 2011).

The purpose of the *intelligence scope* is for the management to determine the objectives of the function. The objectives are set up by the management's initial drivers and require a decision on how broad and deep the company wants to go towards market intelligence. The intelligence scope already includes the categorized targets

for market intelligence in the short- and long-term. (Hedin et al. 2011) The *intelligence tools* mean all tools that are used for collecting, restoring, analyzing and delivering data. The tools can be, among others, databases, share points, and portals, where data can be restored (Vaarnas et al. 2005). The analyzed data forms the deliverables that can be used as support in decision-making. *The intelligence deliverables* can be categorized into four service areas and five types of offerings (**fig. 11**). (Hedin et al. 2011)

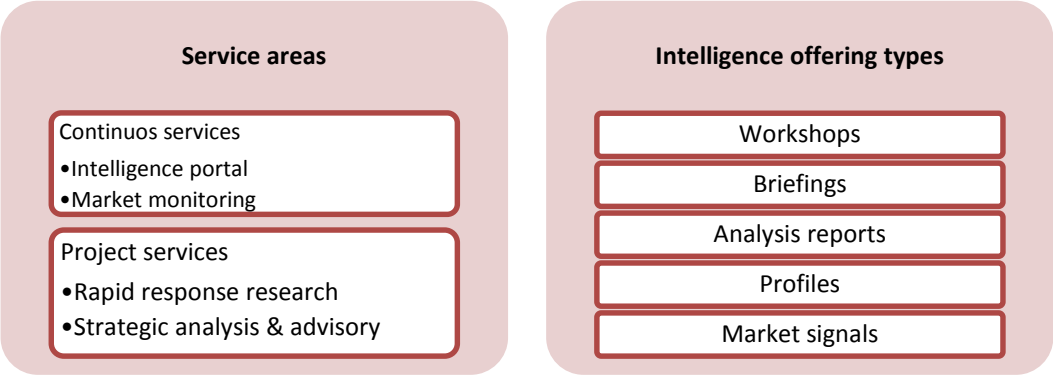

Figure 11. Categorizations of intelligence deliverables (adapted Hedin et al. 2011)

The definition of the needs for market intelligence is to be the first step in the intelligence process according to Vaarnas et al. (2005). The definition of needs becomes the base of the selection of the criteria in the process. The more accurate the needs can be defined, the more likely the data collection will succeed (Vaarnas et al. 2005). According to Hedin et al (2011) and Vaarnas et al. (2005) the development of *an intelligence process* starts with mapping out the needs that require the support of market intelligence. Hedin et al. (2011) offers a perspective about the intelligence process (**fig. 12**). According to Hedin et al. (2011) setting up a market intelligence process requires 6 steps, which presents what needs to collected, how the deliverables are collected, and to whom they are collected. The first step is to *understand the needs* for market intelligence inside the organization. The next step is to cover *the secondary sources* that are available for the company (Hedin et al.

2011). *The primary research* part requires investing on skilled human resources inside the company to collect the data and further analyze it to the right form (Vaarnas et al. 2005).

According to Krizan (1999), the data collection begins by validating the available information sources. The raw data will be processed until it becomes valuable and meaningful for the next step of the process cycle (Krizan 1998). The processing methods vary depending on the intended use of the collected information (Krizan 1999). After the data is analyzed, it shall be *delivered* to the decision-makers (Hedin et al. 2011). The form of intelligence support here is value-added and actionable information about a specific area of intelligence (product, customer, market, industry, and competitor) (Krizan 1999). After *utilizing* the market intelligence as a decision-support, and giving *feedback*, the circle moves to step 1 (Hedin et al. 2011).

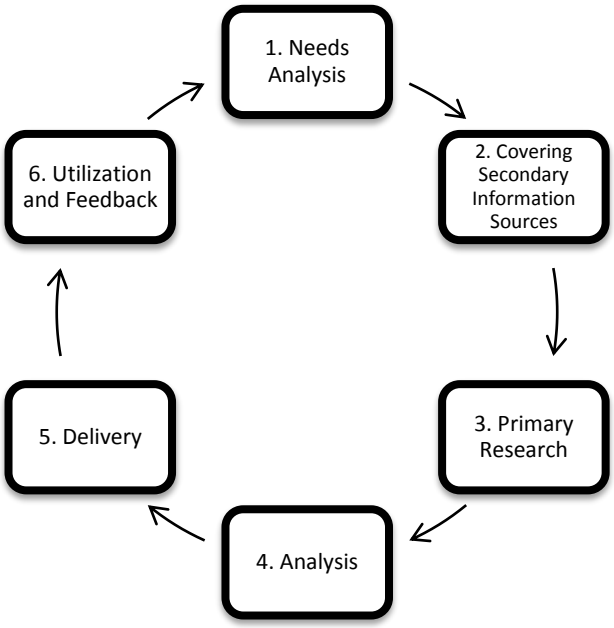

Figure 12. Intelligence Process (adapted Hedin et al. 2011)

According to Hedin et al (2011) the *intelligence culture* is about making the intelligence function visible inside the organization. The first step in branding the intelli-

gence function is to increase its awareness; awareness about responsible people, awareness about the benefits of the function and so on. The next step is to integrate it as a part of the organization and make it an acceptable part of the overall culture. The final step is to make it as a decision-support system and an unbreakable linkage inside all processes inside the organization. An *intelligence organization* arises from utilization of both internal and external resources (Khan & Quadri 2014). External resources are related to the market environment and internal to the resources the company owns (Hedin et al. 2011). According to Vaarnas et al. (2005) the creation of a long-term market intelligence system requires a connection between data collection and the business operations, e.g. beginning by defining the objectives of the company and ending up by utilization and control of the collected data. According to Aaker et al. (2007), market intelligence can be gathered and created by combining and cross-analyzing existing information from the databases.

Vaarnas et al. (2005) lists some international market intelligence data types in **appendix A**. The three types are: 1) *company-specific information*, 2) *industry-specific information*, and 3) *general information from the business environment*. The company-specific information includes among others: business strategy, key numbers, products and service offerings, organizational structures, market locations and sizes, customer information, competitor information, supplier information, among others. The industry specific information includes among others: demand, supply, and change factors of the industry. These factors incorporate the buying behavior, portfolio information, distribution channel structure, pricing, substitute products, product life cycles, and industry trends. The general information from the business environment includes the physical, demographic, political, economic, and technical environments. (Vaarnas et al. 2005)

The next chapter introduces the market oriented business approach, which as a concept is essential to understand, when creating a MI system. In a market-oriented business approach, the marketplace is in focus, which means the customer and competitor.

2.2 Market orientation in a market intelligence context

Decades ago, the production-centered business model was dominant for industrial companies (Kotler et al. 2006; Bartels 1988). During this approach, companies mainly focused on *production capacity* and *efficiency*, because they were considered the factors enabling differentiation among competitors (Lynch et al. 2012). Still in today's marketplace, many of the industrial companies compete on large quantities, low cost and low price advantage (Hirata & Matsumura 2011) According to Lynch et al. (2012) in order to adapt in the current unstable marketplace, companies need to focus on both marketing and production functions (Lynch et al. 2012). According to Drucker (1973), innovation and marketing are the two essential competitive advantages that can increase the company's performance (Drucker 1973). Market orientation (MO) can be defined as superior approach compared to *customer orientation* in a complex and constantly changing marketplace, for the company may better comprehend both the customers and competitors, and improve the *competitive position* (Narver & Slater 1990). The competitive position can be strengthened by satisfying customer needs and simultaneously monitoring competitors and the market movements (Narver & Slater 1990).

Market orientation (MO) is considered an essential company-level resource (Zhou et al. 2008), where a company can engage to the *production, delivery,* and *responsiveness* towards market intelligence related topics, such as *needs and wants of customers* currently and in the future, *competitor strategies* and activities, and taking the business environment wider (Morgan et al. 2009; Kohli & Jaworski 1990). A market-oriented company utilizes proactive and systematic measures for acquiring and evaluating the market intelligence, which is related to "customers, competitors, government, technology and other environmental forces" (He & Wei 2011). In order to be market-oriented, the market intelligence is communicated and delivered effectively throughout the organization by both *formal* and *informal information channels*, which are closely integrated into the company's *strategic decision-making process* (He &

Wei 2011). According to Hult et al. (2005) and (Zhou et al. 2008) MO is valuable, uncommon, difficult to imitate, and impossible to substitute. Additionally, as a unique internal resource and capability, it can produce sustainable competitive advantage (Zhou et al. 2008; Hult et al. 2005).

According to He & Wei (2011), a market-oriented company embraces a systematic and well-structured approach to market intelligence. A company with capabilities of creating market intelligence, the identifying of valuable information sources related to customers and competitors is not the single essence (Jaworski & Kohli 1993), but the capability of assessing the factors that have an impact on customer's needs and preferences (Kohli & Jaworski 1990). According to He & Wei (2011), in a global perspective, the market intelligence creation capabilities make it possible for the company to apply business opportunities in *culturally distant market*. The in-depth understanding of the customers and competitors derives from e.g. informal discussions between the company and the customers. In addition, the obstacles in internationalization, such as *uncertainty in culturally distant markets*, can be minimized if the company is equipped with market intelligence (Slater & Narver 1998A). According to Brouthers & Hennart (2007) company lacking market intelligence may force the company to seek growth in culturally closer markets. The communication of market intelligence inside the organization accrues the *internal knowledge base* that can supply more accurate information about customer assessment, competitors, and the market environment (Kohli & Jaworski 1990). However, O'Grady & Lane (1996) points out that all market information collection does not lead to knowledge, if the information is interpreted incorrectly (O'Grady & Lane 1996).

According to Ketchen et al. (2007) in the case of market intelligence responsiveness, a company with greater market intelligence responsiveness is more likely to take actions on acquiring information about customers, competitors and external marketplace in also unfamiliar markets (Ketchen et al. 2007). According to Kohli and Jaworski (1990), this leads to various strategic improvements in market targeting, production, distribution and promotions. This way the company can more efficiently

react to the changing market needs, which may lead to favorable customer responses and creation of loyalty (Kohli & Jaworski 1990).

Narver & Slater (1990) suggest that market orientation is a concept of *organizational culture* and has three dimensions: 1*) customer-orientation*, 2) *competitor orientation*, and 3) *interfunctional coordination*. According to Slater & Narver (1998B), MO incorporates a process of learning quickly from and about the needs of customers and responding to those needs in a way that generates superior value (Slater & Narver 1998B). Slater & Narver (1998B) emphasizes that a customer-led business is focused merely on the comprehension of expressed customer desires and development of offerings to satisfy these desires. A market-oriented business is committed to comprehend the "latent needs of the customers as well as the capabilities and strategies of the competitors through a process of acquiring and analyzing market information in a systematic and anticipatory manner" (Pérez-Lunõ & Cambra 2013). Market-oriented companies seek pro-activeness and long-term relationships, whereas customer-led businesses can be characterized as "reactive, adaptive and myopic" (Pérez-Lunõ & Cambra 2013).

2.2.1 Industrial customer relationship

Market globalization, technological changes and more demanding customers are daily thoughts for industrial companies (Sanzo et al. 2003). All of these factors have had an effect on the industrial buying behavior and the industrial companies' procurement strategies (Sanzo et al. 2003). Hence, the customers of these industrial companies require more focus on their needs (Sanzo et al. 2003). The comprehension on how companies can profit from the strong customer relationships is an essential field of research for both marketing practitioners and academic literature (Frow & Payne 2011; Reimann et al. 2010). According to Hogan et al. (2002) and Mithas et al. (2005), the companies' investments in leveraging the relationship with the customers can be considered a fundamental effort in gaining or even sustaining

competitive advantage compared to competitors (Hogan et al. 2002; Mithas et al. 2005). The co-operative relationships between the company and customer are becoming more and more significant in the business markets (Ulaga 2003). These collaborative relationships have been researched (e.g. Hewitt et al. 2002; Lyons et al. 1990), and it has been widely recognized that these relationships offer important benefits for companies to generate *competitive advantages* and realize *superior results* (Ulaga 2003).

According to Slater & Narver (1998A) the modern marketing concept incorporates the discovery of customer's needs and wants as the company's primary purpose of operations in its target markets, and satisfaction of the discovered needs and wants (Slater & Narver 1998A). Many authors, such as Jaworski & Kohli (1993), and Narver & Slater (1990), have observed a correlation between a strong customer relationship and *market orientation*. The relationship can be measured by improvements in business performance, such as *profitability, sales growth, and new product success* (Jarowski & Kohli 1993; Narver & Slater 1990). According to Kotler et al. (2006) in order to succeed or even survive in the current marketplace, a company needs to focus on the needs of its target customers, and deliver *superior customer value.* The focus isn't to build products, but to build customers. (Kotler et al. 2006) According to Stein et al. (2013) the complexity of exchange between the industries and markets is growing in today's business environment. This makes companies more dependent on each other's resources and connected through continuous interaction patterns and relationship bonds (Stein et al. 2013). The growing complexity dates back to the increasing level of specialization, *knowledge intensity* and *service intensity,* addition to *technology complexity* (Nordin & Kowalkowaski 2010; Jacob & Ulaga 2008; Moller 2006). As the operational focus transfers from exchanging tangibles towards exchanging intangibles, the buyers and sellers are challenged by the evaluation and communication of the value potential of the offerings. The intangible means in this context *innovative and knowledge intensive offerings* (Stein et al. 2013; Aarikka-Stenroos & Jaakkola 2012).

The following chapter presents the essence of customer value in a market intelligence context. Delivering customer value is the ultimate target of a company's offering. In order to understand how customer value is created and delivered, the company is required to have a deep knowledge on the customer needs and wants. Understanding the needs and wants in turn is the result of a successful customer relationship.

2.2.2 Concept of customer value

Customer value is considered one of the most central concepts in marketing and management literature (Keränen & Jalkala 2013). Customers purchase from a company, which is believed to produce the highest *customer delivered value*, which is the "difference between total customer value and total customer cost" (Kotler et al. 2005). According to Keränen & Jalkala (2013) customer value is usually perceived as the customer's subjective perception of the advantage and the costs implied in exchange (Ulaga & Eggert 2006; Keränen & Jalkala 2013). Anderson et al. (2009) suggests the creation and delivery of superior customer value is considered one of the keystones in business-to-business (B2B) marketing (Keränen 2014).

The concept of customer value is essential in the market intelligence perspective, for according to e.g. Le Bon & Merunka (2006), Lorge (1998), Moncrief (1986) and Webster (1965) customers are in fact the most important sources of market intelligence. According to Slater & Narver (2000) "it has become conventional wisdom that an organization's ability to continuously generate intelligence about customers' expressed and latent needs, and about how to satisfy those needs, is essential for it to continuously create superior customer value". Slater & Narver (2000) suggest that a structured and well-developed intelligence system is correlated with superior customer value creation. Practices focused in market-oriented intelligence creation is, according to the study results of Slater & Narver (2000), positively related to *superior sales growth*, which is considered as a primary measure of

customer value. Market intelligence focuses, among other topics, on revealing the underserved markets and undervalued market segment, where growth opportunities and profits will be the largest (Slater & Narver 2000).

Superior customer satisfaction is another type of measure, which generates customer value, and is related to market intelligence (Slater & Narver 2000). Customer satisfaction is the result of successful buyer-seller or company-customer interactions. The relationship can be improved, if the processes of interactions are refined and improved by the seller-side. (Slater & Narver 2000) Customers are the most essential drivers for any organization (Hedin et al. 2011), and in order to add value for customers, the company is required to understand the customer needs and wants (Kotler & Armstrong 1997). The ultimate customer value can be achieved when a company's representative (for example a salesperson) can advise customers in occasions where the customer wants differ from the actual needs (Hedin et al. 2011).

According to Piercy (2010), Le Bon & Merunka (2006) and Webster (1965) the salespeople are in many organizations the representatives that communicate with the customers and create the relationship between the company and the customer. The communication can generate value for both the representative and customer. Piercy (2010) suggests the role of market intelligence in strategic sales organization is concerning *higher quality inputs* for making strategic decisions and development of "superior knowledge-based value propositions for customers". The *cross-functional role* of the strategic sales function is in the consolidation of functional and partner-function offerings to the processes, where customer value is created and delivered. (Piercy 2010)

The understanding of the customer's value creation logic is required in addition to displaying customized value potential, and winning the sponsorship of the customer (Keränen & Jalkala 2013) According to Keränen & Jalkala (2013) the accurate customer value assessment requires assembling data and information from all types of activities related to the process. The sales function is generally considered responsible

for the value potential identification, whereas service, delivery, or project management functions may be in charge of the baseline assessment and long-term value realization. In companies, where various functions are involved in the customer value processes, and a lot of cross-functional activities are required, e.g. *sharing data* inside the organization is important. (Keränen & Jalkala 2013)

Day (1984), Kohli & Jaworski (1990) and Narver & Slater (1990) claim that a market-focused intelligence generation strategy's main target is to acquire the expresses and latent needs of customers', and the capabilities and strategies of competitors' (Narver & Slater 1990; Kohli & Jaworski 1990; Narver & Slater 1990). The intelligence sets the targets for product development and sales growth efforts, which enables the seller to develop a stronger relationship with the company's key customers while giving insight into market opportunities (Slater & Narver 2000). According to Day (1984) the market-oriented organizations have an ability to develop intelligence about the requirements of the market as well as understand the best practices for meeting or exceeding these market requirements via superior capabilities at detecting the markets, link the customer, and channel bonding (Day 1984).

The next chapter introduces the fundamentals of business process modelling. In industrial companies, business process models are utilized as portrayals of the company's operations. The model presented in chapter 2.3.1 is applied later in the research in a MI end-to-end process model.

2.3 Business process modelling

The importance of business processes was discovered decades ago. In 1960's Levitt was first to mention "business processes" and their vitality (Levitt 1960), and already in the 1970's Drucker introduced the concept of "business model" (Drucker 1973). Nevertheless it was only in late 1990's, when processes acquired proper importance in enterprise design (Casadesus-Masanell & Ricart 2010; Aguilar-Savén 2004). According to Casadesus-Masanell & Ricart (2010), during the past three decades, the field of strategy has evolved in substantial proportions. The companies

have been compelled to learn how to analyze their competitive environments, position themselves in the markets, elaborate corporate and competitive advantages, and comprehend the way to sustain these advantages in terms of competitive challenges and threats (Casadesus-Masanell & Ricart 2010). Casadesus-Masanell & Ricart (2010) suggest that a business model refers to the *logic of the company* and provides an idea for *how* the company operates and generates value for its stakeholders. A business process model (BPM) is argued to be a mirror of the company's *realized strategy* (Casadesus-Masanell & Ricart 2010).

According to Chesbrough (2007), all companies have a business models, yet some companies articulate them better than others (Chesbrough 2007). Business processes are characterized as structured and measured ranges of functionalities designed to generate particular outcome for a specific customer or marketplace (Aguilar-Savén 2004; Davenport 1993). According to Aguilar-Savén (2004) there are various definitions for business processes, nevertheless the essence in all definitions are the same: "processes are relationships between inputs and output, where inputs are transformed in outputs using a series of activities, which add value to the inputs" (Aguilar-Savén 2004). According to Hammer (1990), a business process incorporates a sample of activities that require input(s) in order to create an output, which is valuable for the customer. The two main objectives for a business model are to fill the following two functions: 1) *value creation* and 2) *value capture* (Chesbrough 2007). According to Aguilar-Savén (2004) before choosing the suitable technique for modelling, the modeler must be familiar with the purpose of the constructed model. Some models portray a single process, other an entire system that controls the process. (Aguilar-Savén 2004)

Melão & Pidd (2000) suggests that there are four types of BPM's:

1) Deterministic machines,
2) Dynamic systems,
3) Interacting feedback loops, and

4) Social constructs (Melão & Pidd 2000)

The BPM, which is presented in the following sub-chapter, is business process model as a social construct, since market intelligence activities in an organization is a process of linked social activities of groups and individuals.

2.3.1 Business process as a social construct

According to Melão & Pidd (2000), in business process modelling (BPM) it is essential to understand the organization, as the organization sets the boundaries for the business process. Business processes are often considered as *predictable machines* or as *dynamic organisms* that pursue visible objectives. The perspective of *social construct* emphasizes that inside an organization, the business process can be made and enacted by people, which have "different values, expectations and (possibly hidden) agendas" (Melão & Pidd 2000). According to March & Simon (1993): "Organizations are assemblages of interacting human beings and they are the largest assemblages in our society that have anything to resembling a central coordinative systems." According to March & Simon (1993) and Cyert & March (1992) the concept of an organization is an entity of individuals, sub-groups and larger groups with different tasks. In order to understand how the organization works, the social theory concepts need to be clear for the researcher (Cyert & March 1992; March & Simon 1992).

In the concept of Melão & Pidd (2000), the business model is constructed from multiple of individuals' and groups' perceptions, which result in different *frames of interpretation*. The frames that are honed by *beliefs, values, expectations* and prior *experience* can act as filters that enable people to receive some information and disregard other. Melão & Pidd (2000) discusses that different functions inside an organization have different agendas; a production manager's objective is to see that the orders are manufactured on time, whereas a marketing manager's objective is to satisfy customer's needs (Melão & Pidd 2000).

The business model of Melão & Pidd (2000) is presented in **figure 12.** The actors (A1…A5) demonstrate the individuals and groups that are a part of the process.

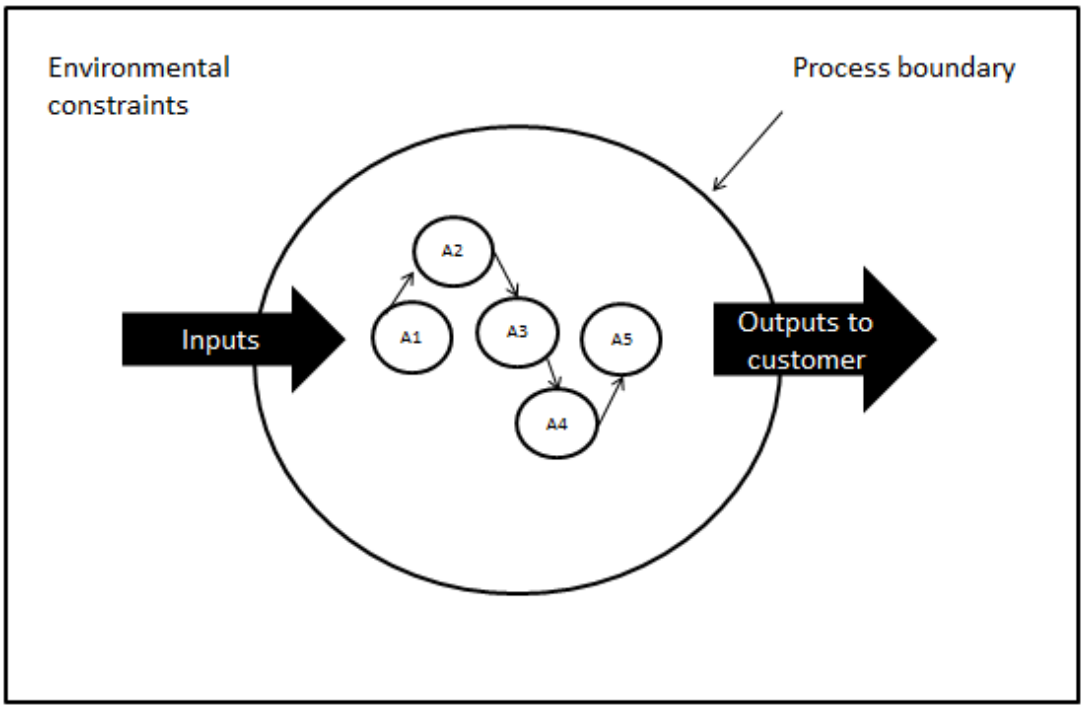

Figure 12. Business process as a social construct (adapted Melão & Pidd 2000)

3 RESEARCH METHODOLOGY

The chapter incorporates the methodology of the research, the research design, strategy, and data collection techniques. The main primary data collection techniques for this qualitative research were interviews and a workshop.

3.1 Methodology

The research can be described as an empirical research, and specified as qualitative **(figure 13)**. Qualitative research, as a method, includes drivers that take the researcher physically closer towards the research problem. In qualitative research, a case setting with selected material is typical. This method is process-oriented in which the researcher itself is the main instrument (Gummesson 1991). The method utilized in this research is extended case method (Danneels 2011).

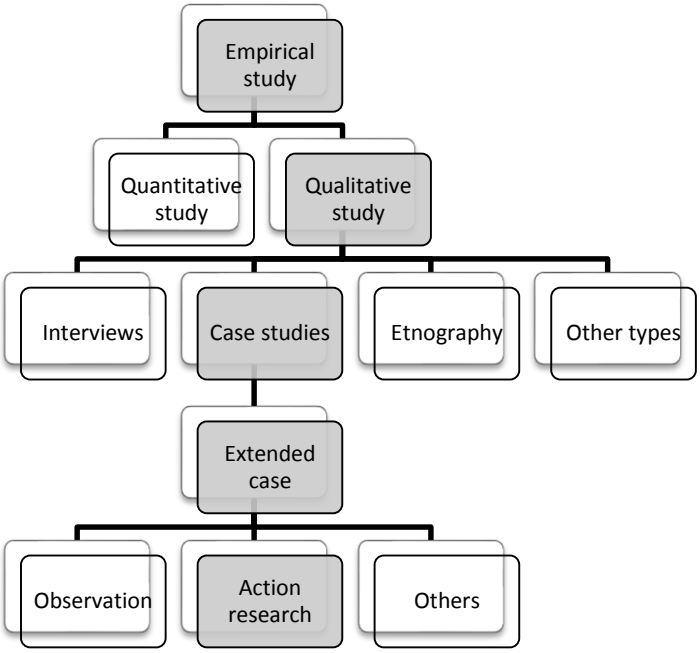

Figure 13. The methodological outline of the study

The method uses empirical data collection through a case study to extend the theory. According to Danneels (2011) the extended case method can be described as cyclical and iterative process, where data is confronted with the theory.

At deeper level, this research is a holistic action research, for there is merely one case and the purpose of the research is to influence the processes under the study (Gummesson 1991). Action research is a form of qualitative research, and according to Gummesson (1991) the focus in action research is particularly on decision-making, implementation and change processes inside a company or organization. The type of the research is an action research, because of the following two factors: 1) there is only one case, and 2) purpose to influence the processes under the study (Gummesson 1991).

3.2 Research Design

According to Smith & Albaum (2012), the research design is a framework for executing a study and the data collection plan. The research design includes the practices and procedures for data collection. (Smith & Albaum 2012) The focus of this research is to cover the case company's needs, which are related to the development of the current MI function. The research design applied in this research is presented in **figure 14**.

The research practices and procedures applied for this research include:

- Multidisciplinary literature review
- Desk Research
    - 10 interviews of external and internal experts
    - Observation in the case company
    - Study about the current MI practices (tools, deliverables)
    - Learning about "best practices" in a social media (LinkedIn)

- 20 managerial interviews for mapping the needs and current situation of MI in the case company.
- One extensive workshop. Each member is working at the customer interface playing as sources of market intelligence or a part of the market intelligence data flow at the company side.

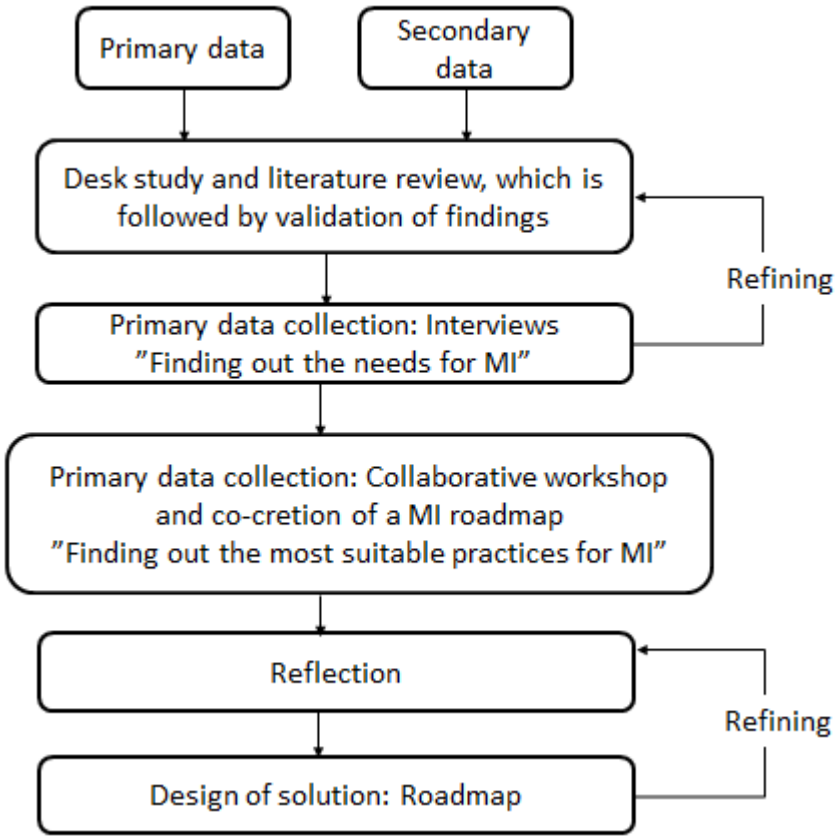

Figure 14. Research design applied in the research

3.3 Research Strategy: Triangulation

According to Denzin (1978) a research strategy is defined as *triangulation*, if the researcher involves more than one method to form the empirical reality. The utilization of different angles to attain an objective viewpoint about a research problem provides

the researcher a more comprehensive knowledge about the object (Denzin 1978). Triangulation is used by researchers to check and validate the veracity of the qualitative research evidence and its findings (Patton 2002). According to Guion et al. (2011) there can be defined five different types of triangulation: 1) *data triangulation*, 2) *investigator triangulation*, 3) *theory triangulation*, 4) *methodological triangulation*, and 5) *environmental triangulation*. The triangulation type utilized in the research is *data triangulation*. In data triangulation, the researcher uses different sources of data for increasing the validity of the research. (Guion et al. 2011)

3.3.1 Data collection techniques

The sources collected for this research are presented in **table 5**. The secondary data sources utilized in the research, where related to the literature review and desk research. The literature review covered more than 100 pieces of academic literature, journal articles and studies. The desk research utilized both primary and secondary sources of data. The method for primary data collection in the desk research incorporated multiple interviews that were not included in the chapter 3.3.2 Part 1: Interviews. The interviewees were mostly from different managerial positions in the case-company, yet not found suitable for the research. One of the interviewee was a former expert informant of GIA (Global Intelligence Alliance), who gave insight about collecting market intelligence for the research. The focus of the interviews was to find out about MI data collection practices generally (GIA) and learn how the case company operates (company's internal workers). The desk research incorporated secondary sources as well, which incorporated studying the current BI-tools that were to deliver market intelligence, organizational structures and other case company related data. The literature review and desk research acted as support in the main research.

The two main research methods utilized in this study were both primary data collection methods (the interviews and the workshop), and they are discussed in a more profound manner in chapters 3.2.2: Part 1: Interviews and 3.2.3: Part 2: Workshop.

Table 5. The data collected for the research

Source	Method	Purpose	Motivation
Secondary	In-depth literature review	To understand the topic and main applications.	Support in building of the roadmap.
Primary and Secondary	Desk research about the case-company and MI practices.	To understand how the company operates and how it is structured.	Support in RQ2 and the building of the roadmap.
Primary	Interviews	To find out about the current state of the MI activities in the case company, processes and deliverables.	Answering to RQ1.
Primary	Workshop	Finding out the suitable practices for MI activities in the case company.	Answering to RQ2.

The data collection plan for the research followed the model of **figure 14**. The research questions (RQ1 and RQ2) defined the objectives for the data collection plan. The sources for data collection are both internal and external, since the literature review is a mandatory part in the research. The internal sources are the interviews, workshops and desk study about the case company. For the designing of data collection, people were interviewed before the actual research for understanding how qualitative methods could be utilized the most efficiently. The GIA's former expert informant gave insight about the "best practice" of the interview structure. The workshop incorporated exercises, based on the issues and needs, which were discovered after the first phase (interviews) of the research. After a fundamental analysis, the design of the roadmap of market intelligence for the case company was built.

In sub-chapters 3.3.1.1, 3.3.1.2 and 3.3.1.3 the desk research, the interviews and workshop are presented more accurately.

3.3.1.1 Desk research

The desk research is incorporated with both primary and secondary data collection techniques in addition to observation inside the organization during the project. The primary data (10 additional interviews that are not part of part 1) received from the desk research was:

- Insight about current MI practices in the case company
- Insight about MI practices in general (interview with the GIA's former expert informant)
- Insight about current attitudes towards MI
- Insight about MI practices looking improvement
- Insight about organizational practices looking improvement

The current MI practices in the case company was both studied by interviewing regional sales and marketing managers that were located in Finland (primary data collection) and the current MI/BI –tools were researched (secondary). The "best practices" were researched by interviewing the GIA's former expert informant, who has a long-term background of consulting industrial companies to improve their usage of MI as a support in decision-making. The researcher also subscribed to a social group in LinkedIn to follow the thoughts of MI professionals and learn about "best practices".

During the desk study, the researcher also observed the attitudes and behavioral factors that influenced the current MI practices in the organization. The secondary data collection in the desk research included learning about MI by reading from the company's MI related reports, memoranda, and exploring the NPS- and MDR-processes, and most importantly learning about the organization and the case company itself.

For learning purposes, the researcher subscribed to a social media site, LinkedIn, and benchmarked practices in other industrial companies. The LinkedIn site for "MI Professionals" was a source of articles, researches and columns about common practices

in different companies. The information from LinkedIn was found a valuable support for the research.

3.3.1.2 PART 1: Interviews

The first part of the research is about mapping the needs for market intelligence. The research method for finding out the needs was *open-ended interviews*. According to Yin (2003), interviews are guided discussions in a case study, which provide also observation to the case information. Open-ended interviews are discussions, where the researcher can ask facts about a specific topic, and opinions about events (Yin 2003). The researcher can even ask the respondents own insights and suggestions into some occurrences (Yin 2003).

The open-ended interview method was applied by selecting a wide range of managers that are in need of market intelligence for support in their decision-making. In the case company's business unit (BU), these managers belong to:

- Top Management
- Sales Management
- Marketing Management
- Product Management
- R&D Management

The interviewees in part 1 have been chosen on various criteria, most importantly on relation to market intelligence and rank at PG or BU level. For a study with large coverage of decision-makers, the interviewees have been chosen from BU-level as well as PG-level. All the PG's were covered. The amount of interviews has been chosen until the results reached saturation. The interviewees are currently working within the case company as managers. The managers to be interviewed were situated in:

- Finland

- Sweden
- Switzerland
- Italy
- USA
- UK
- China
- France

The 20 interviews were conducted mainly face-to-face or by video conference calls, a smaller amount was by phone and one literally. The durations of the interviews ranged from 24 minutes to 1 hour 5 minutes. All the interviews were audiotaped for further analysis. The interview questions (**appendix C**), where formulated to be simple enough to understand, yet informative.

The data processing tool used as a support in analyzing the contents of the interviews was QSR Nvivo 10, which is a tool for qualitative research. All the interviews were transcribed and uploaded in QSR Nvivo 10. The conducted 4 (**table 6**) runs are word frequency queries, and the criteria in finding matches allows only stemmed words and the search fields are only in the transcribed text. The first run is to find out similar needs within the entire group of interviewees except the MI-specialists. The second run is about finding out similar needs within the PG's and BU. The third run is categorized by management functions. The fourth run is based on geography.

With a multiple-angle analysis of the research phase 1, the study seeks to find difference in the needs for market intelligence by different managerial groups with the support of the analysis tool QSR Nvivo 10. The runs seek to find particular needs for all managerial groups (top management, sales, marketing, product and R&D), for creating a more specific understanding of the actual needs in each of these groups. Additionally the geographical practices are monitored in order to find best already utilized practices and tools for market intelligence.

Table 6. The NVivo runs 1-4

RUN	Managers	Categorization
RUN 1	ALL	- No categorization
RUN 2	ALL	- PG 1 - PG 2 - PG 3 - PG 4 - PG 5 - PG 6 - BU
RUN 3	ALL	- Top Management - Sales - Marketing - Product Management - R&D
RUN 4	ALL	- Italy - USA - Finland - Sweden - Switzerland - France - UK

3.3.1.3 PART 2: Workshop

In the company at PG levels the sales, marketing, R&D, and Product Management functions are closely connected. From the findings of the interviews, the market intelligence needs of managers form the goals for the draft model. Together with the participants (sources of market intelligence at the company end), the most suitable processes and deliverables will be thought out to match the needs.

The participants of the single extensive workshop are Sales managers, Product managers and Marketing managers at the lower level that is closer to the customer end. According to literature, and verified by the interviews, the sales function forms the most important source of market intelligence. As we speak of creating a market intelligence organization, the literature suggests that the strategy should be created *bottom-up*, which means that the voice of customer should affect the management's

decision-making. This is the reason why the focus of the workshop is finding out what happens in the customer-end and how the insights could be useful for the decision-makers.

The main customers in the company are:

- Company's internal system integrators
- End Users
- OEM's
- Distributors

The setting of the workshop is to present the MI flow model of the current market intelligence, discuss the problems of the MI data flow, and look into the customer-end. The seven participants are given exercises in order to develop the current practices at the customer-end. The exercises for the extensive workshop are presented in **appendix D**. The draft model is re-modeled based on how the customer-end works and how the communication between sales, marketing, R&D, and product management functions work at the customer-end.

4 EMPIRICAL STUDY

In the first sub-chapter, the organization structure and the basic company and offering information are presented. The second sub-chapter gives an in-depth description of the issues involving market intelligence, and presents the current MI-function in the case company's business unit. The Third sub-chapter goes through the research setting incorporating in-depth presentation of parts 1 and 2 of the research.

4.1 Case Company Introduction

The case company is a multinational engineering group specialized mainly in power and automation technologies. The Group's business activities are divided into five (5) global divisions (**fig. 15**). The divisions are built up of business units focused on particular industries and product groups.

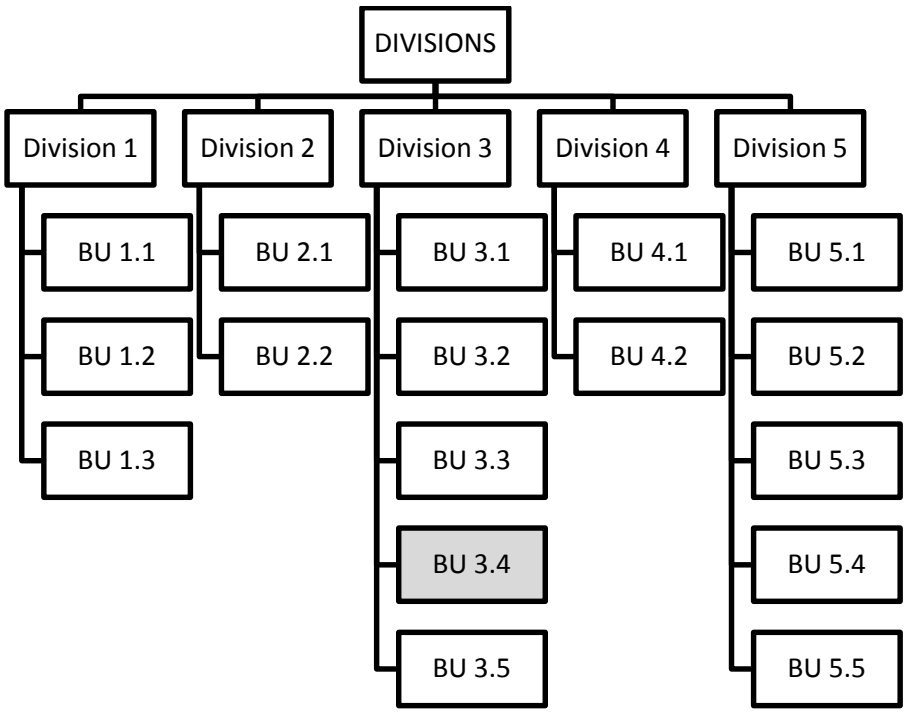

Figure 15. Group Structure of the case company

The case company is operating in B2B markets, and has operations in 100 countries. The company is a matrix and line organization, and as a large-scale group, it seeks organic growth, where occasionally acquisitions are needed. The current group is a result of a merge of several large power providers. The group is currently one of the world's largest conglomerates and provides its customers help in finding more efficient solutions for using electrical power, to increase industrial productivity and to decrease environmental impact in a sustainable way.

The group employs approximately 150,000 people and the total revenue in 2013 was $42 billion (**table 7**). The case division (Division 3) is by revenues approximately 22 % of the total.

Table 7. The figures of the case Division compared to the Group

Part of the organization (% of total)	Revenue (USD)	People
The Group (100 %)	$42 billion	150,000
Division 3 (22 %)	$9.2 billion	~30,000*
BU 3.4 (~10%)	~$5 billion*	~15,000*

*The figures are based on an estimations

The case business unit (BU) is named BU 3.4 in the group structure figure, and is focused on different types of motors and generators. The BU 3.4 incorporates 6 product groups (PG's) (**table 8**). 5 of the 6 produce motor and generator products and one is a service function with after sales services and spare-parts. The operations of the case BU are global, and the industries and applications, where the company's offerings are situated in:

- Marine
- Mining
- Oil, gas and petrochemical
- Power
- Water

Table 8. Product groups and their main offerings

BU 3.4	Offerings	Main application
PG 1	Large induction or asynchronous motors	Pumps, compressors, fans, blowers etc.
PG 2	Low Voltage motors	Marine motors, brake motors, synchronous motors etc.
PG 3	Mechanical power transmission products	Conveyor components, bearings, gearings dodges etc.
PG 4	Generators	Wide range of industrial applications as emergency or stand-by power supplies.
PG 5	NEMA standardized motors	Same applications as PG 1 and 2
PG 6	Service	After sales services, spare-parts etc.

4.2 Current status of MI in the Case Company

The current business intelligence (BI) function has been formed after a large-scale acquisition in 2011 that doubled the revenue of the business unit. Before, the business was scarcely divided into regional, almost separate and autonomic entities. The large-scale of the entire group has forced to a process called *organizational harmonization* and decentralization of operations, including BI and MI activities inside the business units. In the new organization culture, the business intelligence function (**fig. 16**) regarding the case business unit is responsible for collecting and delivering the market intelligence within the business unit.

The culture of acquiring other large-scale players within the industry has caused a situation, where regional activities, processes and business cultures vary a lot. In some regions a customer is considered more important of a source of market intelligence than in others. In regions, where interaction in the customer interface plays the most important (informal) role in doing business, the relationship and involvement level between the company and customer is stronger.

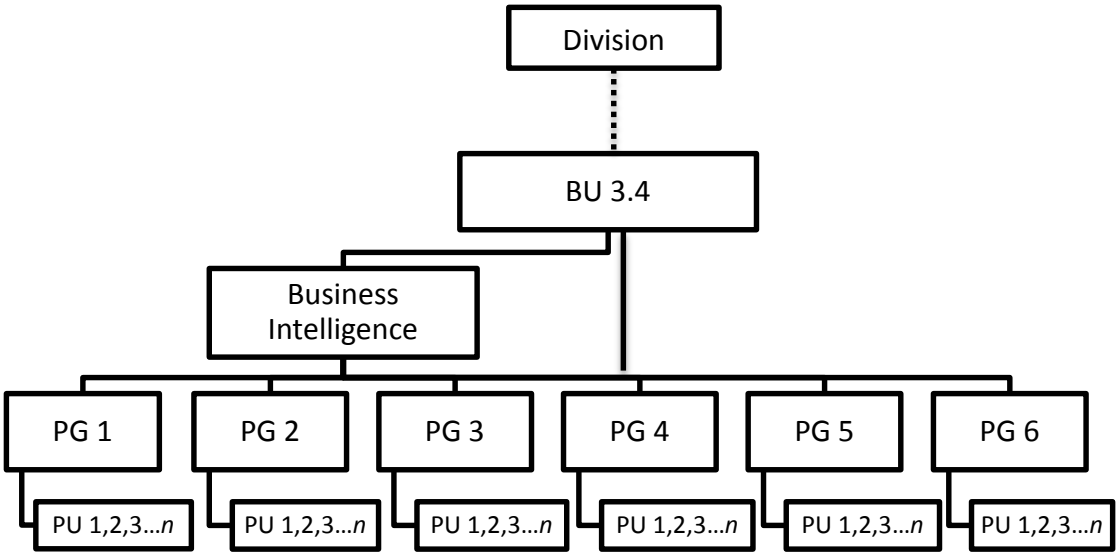

Figure 16. Structure of the business unit (BU)

All product groups (PG's) are global and have business activities in many regions. Each PG consists of the following management functions:

- Top Management
- Sales
- Marketing
- Product Management
- R&D

In some regions the level of internal knowledge and intelligence sharing within a PG is more efficient than in others. The information flow is working at different efficiency levels and the best internal practices should be mapped, processed and delivered. The business intelligence function hasn't got a clear vision of all the market intelligence activities that are conducted within the business unit. Furthermore, the needs for market intelligence are not visible nor clarified, which reflect to all stages of the organization. The responsibilities within the global BU have been

declared, yet they are not understood or promoted efficiently inside the organization. The data flow in the current MI environment is mostly vertical from the MI function to PG's. Some data and demands come from the Group level.

The decision-making in the Case Company follows a hierarchical structure, as presented in **figure 17**. The decision-making is done based on information that is delivered upwards in the organization. According to the literature this decision-making structure is a typical one for technology-oriented and high-tech industries.

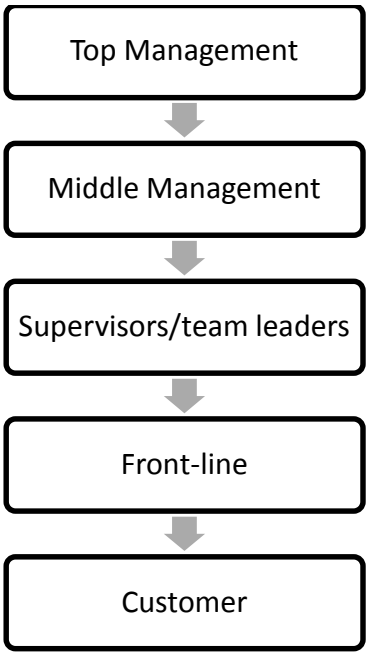

Figure 17. The organization type of the Case Company

The tools, processes and deliverables utilized vary largely on the PG level and depend on the department discussed. The current MI function doesn't have specific information about the actual needs, and processes each PG and departments utilize and need related to market intelligence. There is a global Business Intelligence – portal in use, which is a database for intelligence related topics, such as competitor

news, reports and so on. The company tries to keep track on customers mainly by *NPS* and other surveys that provide mostly quantitative data.

The case company has recently invested in market intelligence indirectly by adding a new function (Product Management), and directly by appointing a business intelligence manager. The focus of the new Product Management function is supposed to integrate functions together, yet a clear scope of market intelligence has not been presented inside the organization. The detailed job description of a product manager is presented in **appendix B**.

Reflected to the literature in chapter 2.2, the responsibilities in the case company go in the following manner: strategic planning is the responsibility of Top Management, sales and marketing is the responsibility of Sales and Marketing functions, innovations and product management is the responsibility of both Product and R&D Management functions.

5 ANALYSIS

Chapter 5 includes the following topics: analysis of the interviews and workshops, analysis of the current MI processes, tools and deliverables, and finally an analysis of the case company's KSF's (*Key Success Factors*).

5.1 Analysis of Part 1: Interviews

The structure of the analysis part 1 based on the interviews is the following:

- Sources of market intelligence
- The needs for market intelligence

5.1.1 Sources of market intelligence

According to the desk study, there are three different sources for MI data (**table 9**).

Table 9. Different sources of data inside the company

Source	Data type	Data collection
1. Group/Division level	• Macro-economic	• Continuous • Systematic
2. BI-function	• Reports • News • Analyses • Association data	• Ad hoc • Continuous • Unstructured • Unsystematic
3. Customer interface	• Customer information • Competitor information	• Continuous • Unstructured • Unsystematic

The Group or division provides macro-economic data mainly to BI and the highest ranked managers at BU and PG levels. The insight is mainly intelligence deliverables such as reports and business, raw and processed data.

The BI function provides intelligence deliverables from various sources among others. The deliverable types are presented in **table 10**.

Table 10. Deliverables provided by the BI function

Deliverable type	Data type
Third-party-reports	Competitor data Industry data Customer data Market predictions
Competitor information	News, revenue and profitability monitoring
Market data (e.g. size, share)	Associations - Industrial, trade and other non-profit organizations MDR-process (internal) Market research companies
Customer data	News, revenue and profitability monitoring Surveys, NPS among others

This data is currently stored in the BI-portal, from where people can access the data. However, there are various issues in the portal: 1) lack of categorization, 2) lack of processed data, 3) lack of knowledge where to find relevant data, and 4) lack of information about the quality of the data.

The third, and the most important source of MI, comes directly from the customer interface. This data is the most valuable data for building a stronger customer relationship, yet it doesn't have a systematic data collection channel at the moment. The value of customer insight is considered the most powerful kind of data, because it can't be purchased.

The first model created for the research is a process model draft (**fig. 19**) of the current market information and knowledge flow. This is created based on the findings of the interviews and the basis for the further development of the MI organization. This model shows how well the managers find the MI is currently covered inside the PG.

In the model, the directions of the arrows indicate the direction of market intelligence inputs. At the moment, the data flow from the customer-end isn't systematically collected or clear how it should be collected. At the moment the co-operation horizontally between functions (sales, marketing, product management, and R&D) partially exists; the market intelligence comes from a customer to the sales that delivers parts of it to the marketing and product management functions. The R&D function gets market intelligence from the customer-end only, if it is delivered for them by product management. According to the interviews, the delivery depends on personal insights about what could be important for R&D from the perspective of other functions, and activeness in getting information from the R&D side. The delivery of market intelligence goes from the sales function to first marketing function (in more than one PG the sales and marketing is considered as one function), then to product management and sometimes to R&D function. The delivery is unstructured, and according to the interviews, in many cases valuable market information hasn't been delivered to R&D, which has caused a situation, where competitors have discovered new technologies and created new applications that fill up the customer needs more efficiently than the company's offerings.

The lack of communications both horizontally and vertically was found relatively hard. The problem wasn't that the managers didn't know who to contact, but that they didn't know what kind of information could have been available. In some cases, the communication inside a PG would have been essential for a better regional performance. Many of the interviewees claimed that they knew market intelligence should be a part of the organizational activities "the minute they started realizing what market intelligence actually meant, what opportunities it could offer, and what information could be more available".

Based on the interviews, the sources of market intelligence varied a lot depending on how much knowledge the interviewee's team had on market intelligence. The level of knowledge was dependent on both regional and cultural factors. The same countries that considered customers as the most important sources of market intelligence (Italy

and USA), had an advanced understanding of market intelligence as a concept, and the importance of market intelligence as a competitive advantage. These countries had also more advanced tools for analyzing markets (customers and competitors), such as *Orbis*, which is a tool used in investment banking and banking sectors.

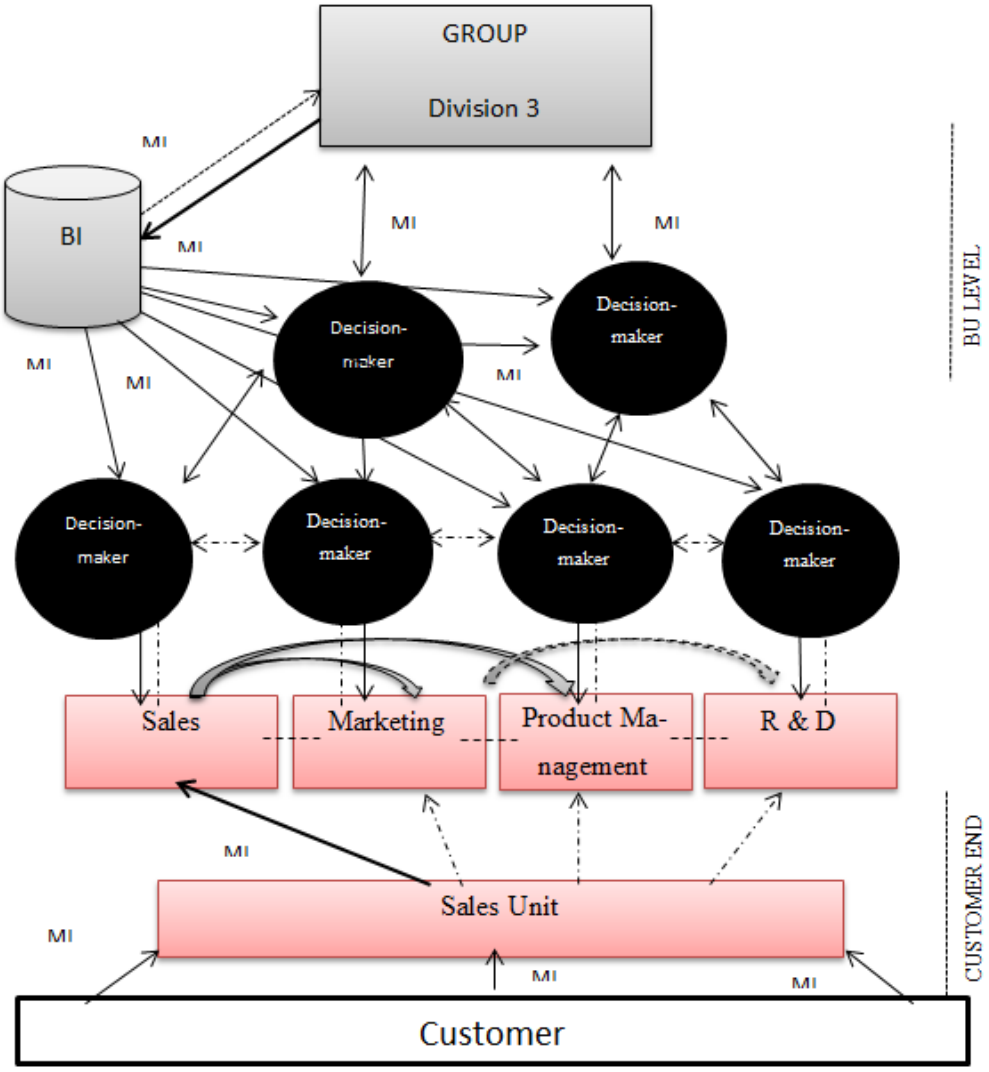

Figure 18. The current flow of MI inside a PG

In overall, the processes, tools and deliverables were found satisfying, yet there where a lot to improve. Firstly, the lack of systematic procedures caused a situation, where units have done their own researches without consulting other departments' cross-

functionally or cross-PG. Secondly, the quality of the current market intelligence varies. The quality of data is usually good after triangulation, where the figures from different industrial or trade association sources are compared to the figures of the MDR process, which is an internal process for monitoring sales figures by country and for calculating the market size. In some regions, mostly the transitional regions, the figures are completely wrong and unreliable, even though they are received from a governmental, neutral organization. The unreliable data affects mostly the sales functions' decision-making, and further the decision-making of the top management level. In addition, it affects the strategic marketing and sales planning in both short- and long-term.

5.1.2 The needs for market intelligence

The need for MI was related to the themes presented in **table 11**.

Table 11. The themes discussed during the Interviews

No.	Theme	Functions
1.	The awareness of the function - Scope - Needs - Structure - Responsibilities	All interviewed functions
2.	Accuracy of the market intelligence data - Market size data (in transitional countries) - Customer data (needs and wants)	Sales, marketing, top management
3.	Customer data collection and delivery - Unsystematic, unorganized	All interviewed functions
4.	Competitor data collection and delivery - Unsystematic, unorganized	Sales, R&D, Product management, Marketing
5.	Training - Tools and processes - Skilled organization	All interviewed functions
6.	Co-operation - Information sharing is poor - Resources used in re-inventing the wheel	Sales, Marketing, Product management, R&D

The first theme in the company's market intelligence can be fixed with mostly structural planning and the establishment of an MI roadmap. The second theme stated in the function would require resources in monitoring the quality of the deliverables. This would mean hiring people specialized in market intelligence, and who are familiar with the industries the company operates in and who would have regional knowledge in the transitional countries.

The third theme needing more attention inside the organization and looking into the customer-end; what kind of information is already collected, and what is or could be available. The sole use of surveys and other impersonal data collection methods are not enough for competing in a changing, customer-focused and complex environment. As complimentary sources of market intelligence, these methods are welcomed. The third theme in the current market intelligence was the remoteness of customer in the operational decision-making. As in the first result set of top 10 key words of the interviews (**appendix E**), the customer and the customer needs are valued highly as a source of market intelligence. In some regions, the customer is valued more than in other regions. In Italy and US, based on the sample, the customer-end is considered the most important, yet informal source of market intelligence. The point of collecting the data from the surveys (NPS and others) is to get masses of data in form that is easy to process and analyze. The weak points in many of the conducted surveys are that they don't connect the company to the customer or strengthen the customer relationship. Exploring the voice of customer (VoC) should be a more visible target in the market intelligence activities, in addition to the overall operations.

The needs and wants of the customer should be monitored for predicting the market trends and changes. The customer desires cannot only be monitored impersonally by surveys and other tools, and more face-to-face interaction is required for gaining a strong and long-term relationship. The needs of customer may change rapidly depending on multiple factors, for instance a change of a strategy or economic situation. When the changes happen, the company should be alert and respond to the changes quickly. The value and benefits of the market intelligence activities are not

easy to assess, and therefore the market intelligence activities haven't been the target of investments in the case company. The lack of structured MI operations has been noticed, yet it hasn't been addressed inside the organization.

The activity of current customer interface varies from regional and PG perspective. Some regions find customer engagement the most vital part of the whole business activity of the company. In some PG's, the natures of the products make it harder to involve customers at the early stages of R&D activities. Some offerings require long-lasting customer relationships and are almost entirely tailored to fill the customer's expectations. These products are larger investments and take time to manufacture. Other products are quicker to manufacture, smaller and less expensive in the customer perspective. Additionally, the type of customer and sales channel vary from PG and single product perspective.

The fourth theme in the current market intelligence function is the lack of systematic processes related to competitor analyses, competitor news, and other competitor related matters. The competitor assessment should be a part of a function more precisely, whether it was the market intelligence function or for instance the responsibility of product management or marketing. Currently the competitor analyses are done by departments inside PG's and not in co-operation (theme 5). According to the interviews, for instance competitor product testing is done separately in both R&D function and Sales function inside the same PG. The targets of the testing naturally vary (sales looks for sales arguments, R&D technical details), yet the testing could be done by one product. Here, the additional purchasing costs could be cut down and by cross-functional co-operation; many other valuable insights could be shared two-ways. The business intelligence function offers competitor news in the BI Portal. However, the content is too unorganized, the information is not fresh, and there is too much information.

It seems that the responsibilities regarding market intelligence are not clear to people in charge of the functions. This leads from an unclear market intelligence strategy and

scope. All interviewees are expecting the MI decisions to be done from the upper, divisional or group-level, yet the actual market intelligence is should be collected from the front-end.

5.2 Analysis of Part 2: Workshop

The analysis of the workshop is divided into different categories: communication of needs and targets, MI data flow in the organization, motivation, customer relationship, and structure of the ideal MI organization, since they were the most essential topics discussed in the workshop.

5.2.1 Communication of needs and targets

The main problems in the market intelligence perspective are that the needs for market intelligence and the market intelligence scope are not clear in the customer-end. It is hard to collect specific information if one does not know what they should be collecting. This is mainly a matter of structure and responsibility. On the other hand, it is hard for managers to make good decisions, when the customer needs and wants are not specified. The customer-end is visualized in **figure 19**. Since the communication and trust are great issues inside the case organization, a role to monitor the communication related to MI would be required.

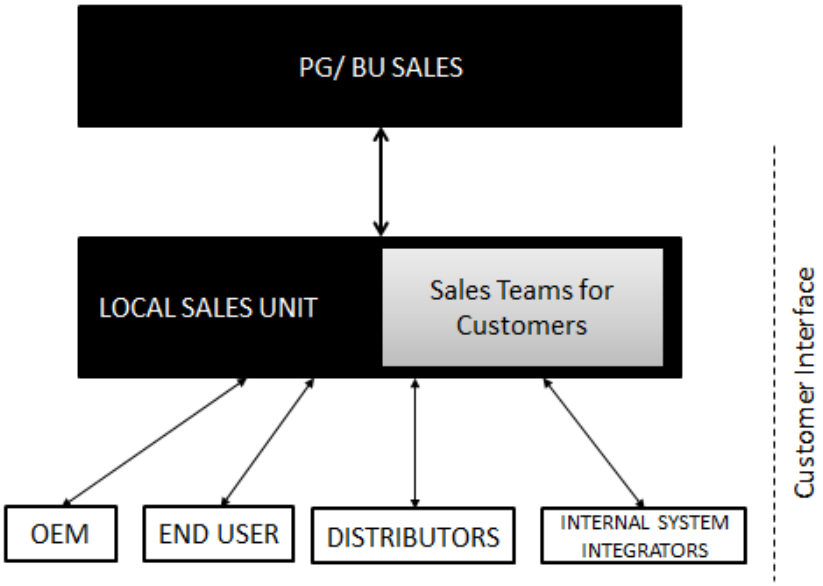

Figure 19. The customer interface of the case company

5.2.2 MI flow from the customer-end

The MI data flow and communication of needs should be systematically delivered two-ways. The main tools for communicating with customers are: 1) emails, 2) phone, 3) visits. The tools for collecting data vary, because there aren't systematic processes for collecting data, and the managerial needs are not communicated to the customer-end. The customer needs vary from different type of customers, and different type of products. According to the workshop, the salespeople own a lot of explicit and tacit knowledge about their customers, but there isn't a systematic way or need to share this knowledge inside the organization. The knowledge is shared in weekly meetings, but what happens after the meeting is the question to be answered.

The methods for improving communication at the customer-end, could be arranging customer panels, customer boards and other events, where the customer could express their expectations towards the company's offerings. Together with the customer, a direction for filling both the customer and the company needs would be co-developed. This way, a better understanding of the futurity of the customer (strategies

and targets) could be reached, and the customer relationship improved. The information flow should be in balance in order to get insights. If the customer feels they won't get anything in return from the invested inputs, the delivery of MI ends.

5.2.3 Motivation

An issue that affects the market intelligence flow within the organization is the lack of motivation for collecting and delivering the MI data. Salespeople are looking for factors that increase their motivation in communicating with the customer. In this case, the motivation would be in the form of a simple feedback; if the salesperson discussed with the customer, the discussion needs to be two-ways in order to firstly create a customer relationship and then deliver customer value. The salespeople feel that if they take insight upward in the organization, the insight will not create any kind of action. The current problem is in sharing the possible MI from the customer, not that the salespeople didn't possess any market insight from the customers and competitors. The salespeople and the front-line management discussed that the personal chemistry and trust were great obstacles in sharing insight upward the organization (**fig. 20**). This is an additional result of the unstructured MI practices.

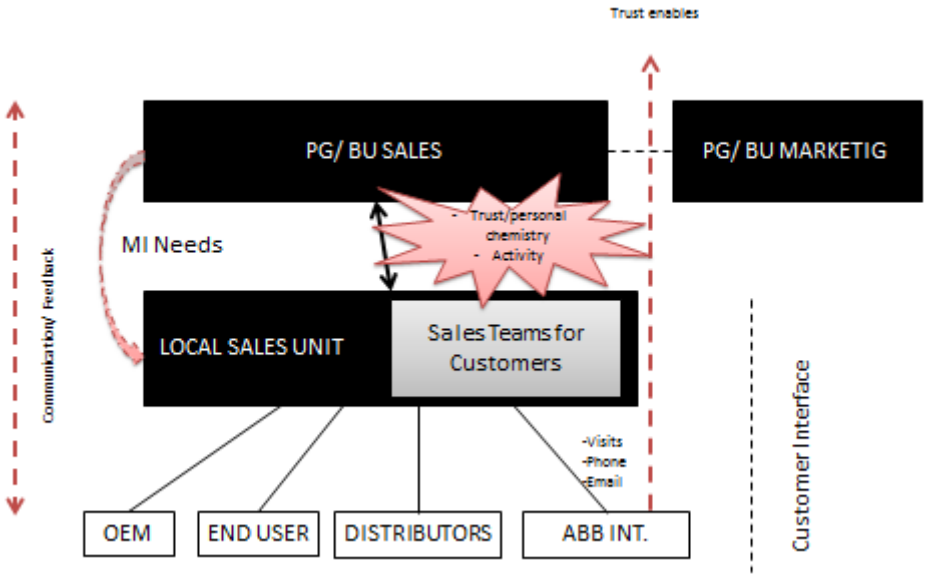

Figure 20. The case company's current MI status at the customer-end

5.2.4 Customer Relationship

Currently, the salespeople cogitate that if the company asks questions from the customers, the dialogue is working one-way and the customer won't get answers to their questions. The ideal situation in a market intelligence and customer relationship perspective would be that when the salespeople get answers from the customer (inputs in an organizational perspective), the customer gets also answered to their problems from the company side (outputs in an organizational perspective). This would improve the customer relationship to a level, ultimately where customer value would be created. The two-way dialogue is considered also healthy a thing for improving a customer relationship.

5.2.5 Structure of the ideal MI organization

Based on both the interviews and the workshop, the role of product management could easily be specialized in working as an integrator inside the PG, since they carry a lot of information both sides (**fig. 21**). The Product Management function communicates occasionally directly to the customer, so the function itself might possess insight about markets that other functions are not aware.

The Product Management function is the only link between Sales and Marketing functions, and the more technical R&D function that includes product development, because the profiles in the newly established Product Management function possess both commercial and technical skills. The company's official job description of a product manager (appendix B) includes a lot of activities related to market intelligence, yet the daily activities of a product manager as an integrator is to be strengthened and meet the job description.

Based on the interviews and workshop, product managers do a lot of different chores and come across with vast amounts of market intelligence data. Sometimes this data is shared, but most of the seemingly valuable data is forgotten, because of the lack of structure of the market intelligence activities and lack of demand for specific market intelligence from other parts of the organization. It seems that other

functions are not always aware, what information is possessed by the product management function.

The need for a full-time MI responsible is additionally requested based on the interviews and the workshop. The MI responsible could be appointed to support in communicating the needs of market intelligence as well as monitor and assist in the customer-end activities.

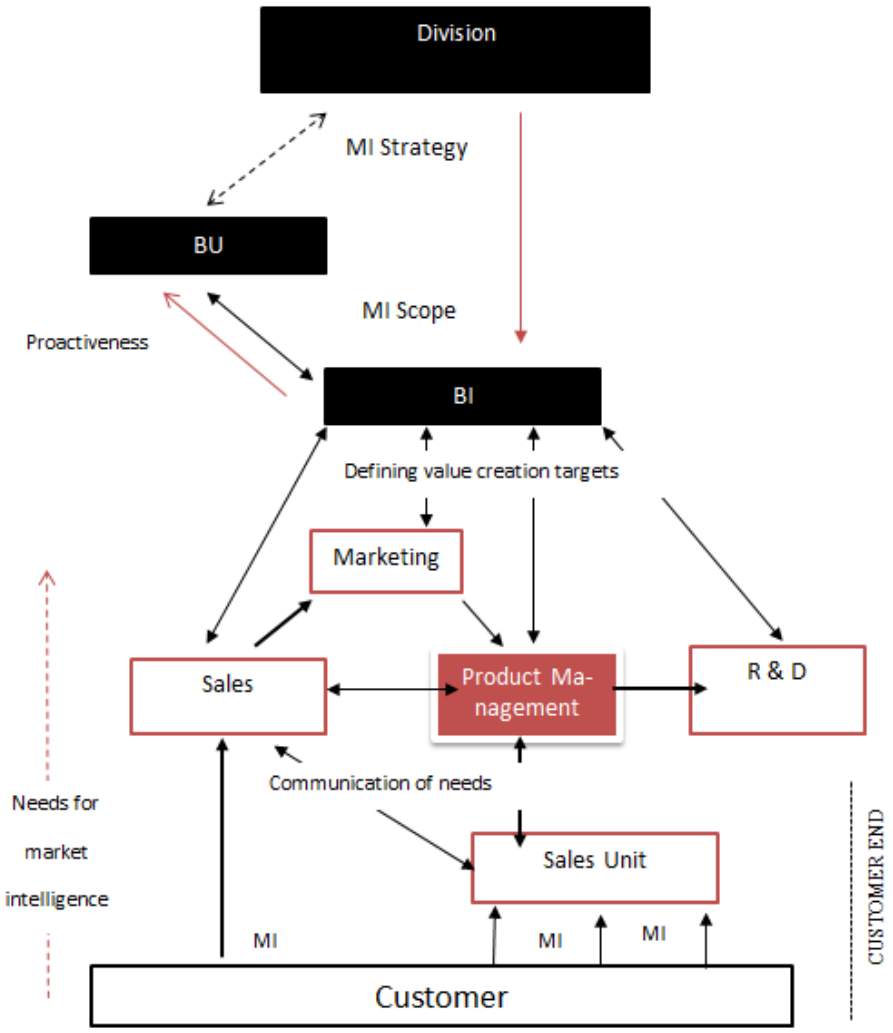

Figure 21. The Product Management –centric organization

5.3 Analysis of the Case Company's Key Success Factors for MI

In the case of *intelligence deliverables* the company needs to establish a systematic and structured manner to monitor the markets and analyze the changing environment. This would require assistance of an MI representative to monitor and advice the internal data collection, processing and sharing.

For the *intelligence tools* part, where currently the BI portal is the main tool for acquiring and sharing market intelligence in the case company, need to be done the following improvements:

- Cleaning
- Structuring
- Updating
- Marketing

The processes and tools should be more systematic and training more available for people working with market intelligence. The company should focus more on the quality of the current MI and try to find out more reliable sources of deliverables. The BI portal would be more useful, if it was more organized, showed more structure, and updated information.

The tools and processes that were in general found satisfying were:

- MDR (process)
- IHS-report and others (deliverable provided by a Market research organization)
- Association reports
- Cognos, Orbis, Capital IQ (tools for analyzing internal capabilities, other companies and markets)
- Customer communication tools (phone, emails, face-to-face visits, customer panels and other customer events)

The tools and processes looking for some development are: the BI-portal and customer data collection and capturing processes. Even though the salespeople communicate with customers, they don't communicate the findings effectively, because no one requires an effective communication of the knowledge salespeople learn. For communicating the needs, the findings suggest that the product management function should have more responsibility in the case company. The improvements in the *intelligence organization* require advanced skills in the intelligence function. For this objective, the company should invest in obtaining the skills and locate the skills wisely in the organization.

6 RESULTS AND RECOMMENDATIONS

The results and recommendations chapter presents the main results (6.1 and 6.2) concerning the interviews and workshop. In addition, the building of the roadmap (6.3) is included in the chapter as a recommendation for the case company. The sub-chapter 6.4: Summary of the Roadmap summarizes shortly the steps of the built roadmap.

6.1 Results Part 1: Interviews

The results are divided into two sections; firstly the needs for market intelligence are presented in sub-chapter 6.1.1. The sub-chapter answers to the research question 1. The second sub-chapter 6.1.2 presents the evaluation of the current MI processes, tools and deliverables.

6.1.1 Needs for MI in the case company

According to the word comparison queries, the top 10 main topics involved with the interviewees in RUNS 1-4 are presented in **appendix E.** The main needs for MI among the decision-makers, which are related to market intelligence, are introduced in the **table 12**. The findings are in line with the findings of NVivo.

Table 12. The needs for MI by function

Function	Theme	Need
Sales, Top Management, Marketing	Inaccuracy of MI data	Policies to monitor the accuracy of the market size data (specifically in the transitional countries).
ALL interviewed functions	Invisibility of MI	Awareness and marketing of the MI function, pointing out responsibilities and structure is needed.
Sales, Marketing, Product Management, Top Management	Customers	Voice of customer, customer needs and wants are unclear.
Sales, R&D	Competitors	Deliverables and information about the competitor products and sales strategies are not systematic or transpar-

		ent.
Marketing, R&D	Lack of Training	Trainings for utilizing tools and processes systematically should be more available.
ALL interviewed functions	Lack of co-operation/cross-functionality	Co-operation and data sharing (e.g. competitor product testing with sales, customer data and customer needs and wants) is needed.
Top Management	Deliverables	Proactive delivery of MI deliverables should be more available.
ALL interviewed functions	Organizing the MI tools and data	Need of fresh and filtered data delivered in an organized manner.

6.1.2 Evaluation of the current MI processes, tools and deliverables

The main market intelligence tools, processes and deliverables that are important for decision-makers based on the interviews are presented also in **table 13**.

Table 13. MI tools, processes and deliverables supporting decision-making

Name	Type	State
BI portal	Database for deliverables about market information.	Poor; too much topics, not organized or updated.
MDR-process	Process for monitoring market sizes.	Good, except the accuracy varies a lot depending on the country.
NPS	Tool or process of finding out customer satisfaction level.	Average; the customer satisfaction can be measured in more efficient ways.
Third-party reports	Deliverable. The object depends on the order.	The quality varies depending on the skills to assess what is important.
Association reports	Deliverable. The objects are usually related to market information and competitors.	Good.
Cognos, Orbis, Capital-IQ etc.	Tools for analyzing internally and externally the market environment.	Good. The use of advanced analyzing tools are required for a successful MI. Currently, these tools are not used systematically.

In overall, the current MI tools, processes and deliverables were found satisfying, even though there were things to improve. The main issue is at the top levels of the hierarchical organization that the decision-makers are currently not getting insight from the markets as efficiently as they probably could get. In-depth suggestion for the development of BI Portal can be found in **appendix F**.

6.2 Results Part 2: Workshop

The results part 2 is divided into three sub-chapters; the new MI function in case the organization, themes affecting the MI flow currently, and the creation of an end-to-end MI process model for the case company based on the findings.

6.2.1 The new MI function

The first step for the company should strengthen the MI function inside the organization, and then make it a part of the customer-processes. According to the workshops, there should be someone in charge of market intelligence closer to the customer-end (**fig. 22**), who would communicate the needs and address the processes for collecting the needs for the right representatives. The BI function still continues to deliver continuous and ad hoc reports on the higher organizational level.

In overall, the organizational structure after part 2 of the research differs from the current situation by two changes:

1. The MI Specialist is a new position for supporting in MI practices
2. The Product Management receives more responsibility in communicating MI needs and targets, as well as the insight horizontally and vertically inside the company.

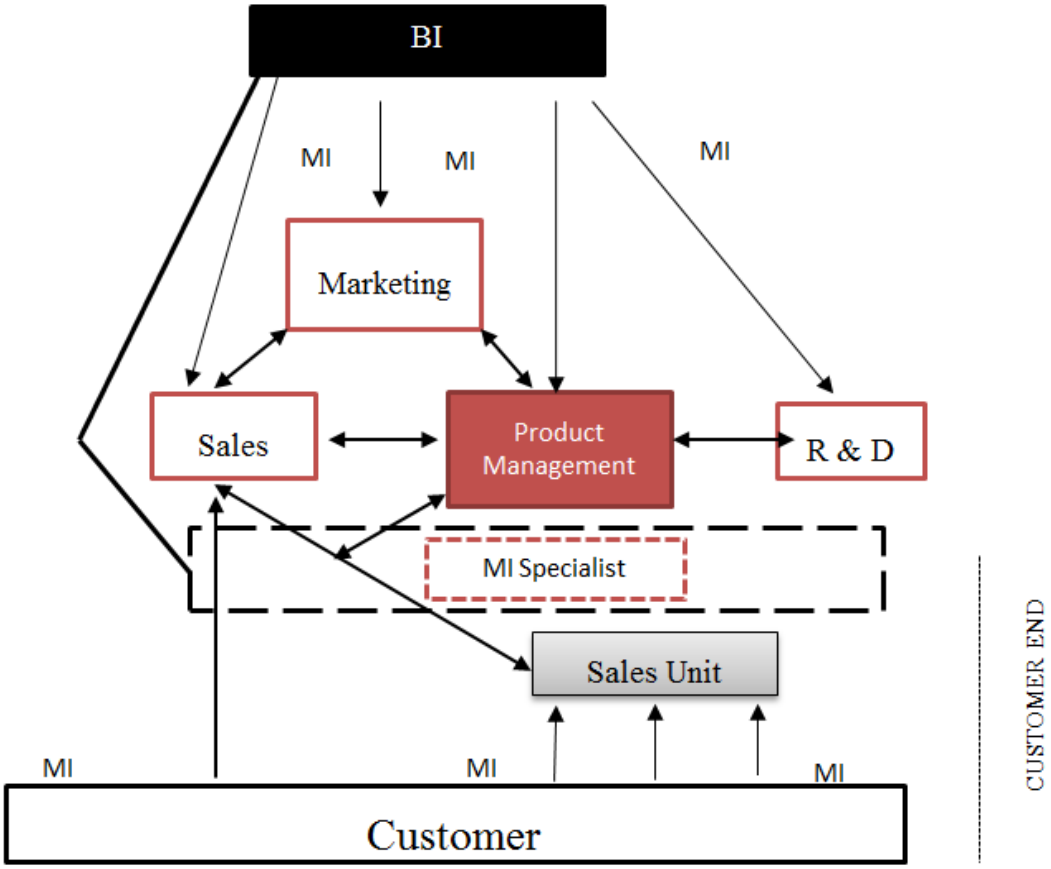

Figure 22. The most suitable position for an MI function in the case company

6.2.2 Themes affecting the MI flow

The main themes that were discussed at the workshops and needed problem solving are presented in **table 14**.

Table 14. Main themes discussed in workshops

No.	Theme	Issue
1.	Need for MI	The target of collecting data: why should the data be collected?
2.	Responsibility	Responsibilities, descriptions and other parts of MI are unclear.
3.	Feedback	Does the customer feedback impact the

		company's activities?
4.	Motivation	Demonstrating the output of the invested inputs increase motivation in all parties. Motivation is improved by giving feedback and value to one's work.
5.	Communication needs and targets	Demonstrating the logical path for the MI processes. Connecting the dots.
6.	Awareness	What MI-function?
7.	Customer	The relationship is built two-ways; if the customer is asked needs, the improvements should be demonstrated directly back to the customer.
8.	Offerings	Defining the customer value of the offerings whether it was a product or a solution.
9.	Competitor offerings	Where they buy? Where the offerings come from? What are the lead times? When are the delivery dates? What are the obstacles the competitors have?
10.	Structure of the current MI practices	Tool vs. practice? Proposed a database with metadata located in the customer-end. Systematic tools and practices needed.

6.2.3 An end-to-end MI process model

Based on **table 14,** an end-to-end MI process model (**figure 23)** is constructed. The objective of the model is to demonstrate how MI could be effectively received from the customer (input) and what the organization has to do in order to get the information (output). The process model emphasizes the ideal end-to-end MI process in the case company and integrates both the fundamentals of the business process modelling perspective of social construct by Melão & Pidd (2000) (introduced in chapter 2.3.1), which is integrated with the simple MI process by Hedin et al. (2011) (introduced in chapter 2.1.2).

The actors in the model are: customers, individual salespeople, the functions in the case company (sales, marketing, product management, R&D and top management and MI). The role of MI function is to provide internal support in all of the activities related to market intelligence. Based on the findings of the primary research, the product management function is in a key role in the case organization.

The activities in the model are based on the topics discussed both during the interviews and in the workshop. The main topics in the workshop were:

1. Clear communication of scope, needs and targets
2. Motivation among individual salespeople at the customer-end
3. How the customer relationship can be leveraged into a level where the company could deliver value to the customer, and
4. In return the organization receives market intelligence.

From the organization's perspective the inputs and outputs of the end-to-end model are presented in **table 15**.

Table 15. The procedures of the end-to-end MI process model

Organizational level	Input	Output
Top Management	Deliverables	Communication of clear MI needs and targets
BI/MI	Insights, MI	Analyses
Product Management	Insights	Sharing insights and communicating needs and targets
Sales	MI, Customer needs and wants	Giving feedback to motivate the staff
Salesperson (individual)	MI	Responding to customer needs and delivery of customer value

The awareness of market intelligence is the responsibility of the entire organization and needs transparent communication at every level in the organization. Of course, one of the duties of the new MI Specialist, would be presenting the benefits of market intelligence for the decision-makers and to support in MI-practices.

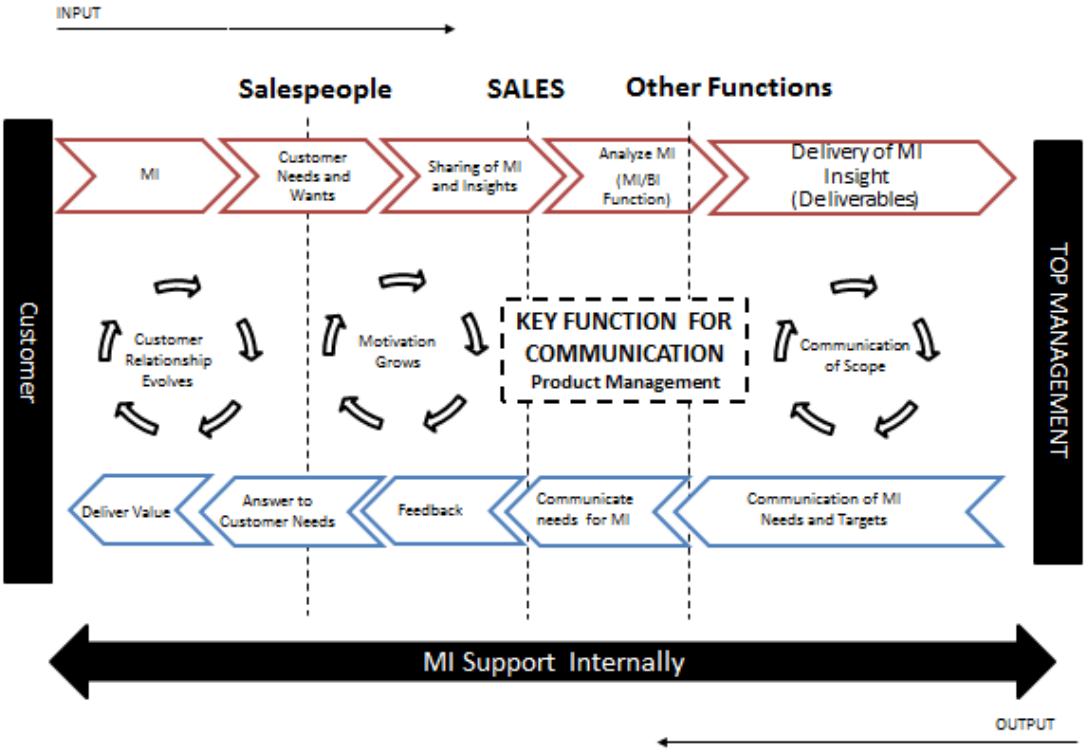

Figure 23. An End-to-end MI process model

6.3 Building the roadmap

The structuring of the roadmap is divided into 3 steps. The first step is a continuum for the analysis of the workshop and for the created framework for the product management centric organization. The first step suggests that the role of Product Management ought to be in a more centric position inside the PG's organization structure. The first step is merely to strengthen and prepare the organization for a new market oriented perspective, and improve the communication internally. In the first step, an MI Specialist will be supporting the functions at the customer-end. The second step suggests a new MI function ought to be established to the customer-end of the organization. The leader of the MI function is named the MI Manager, who is reporting to the BI Manager. For the assisting tasks an MI Coordinator is also recruited. The third step, the ideal situation, is further developed and owns four

different type of MI Specialists. Their positions would include collecting and sharing particular MI data effectively inside the organization.

6.3.1 Step 1: The Beginning (0 months – 12 months)

The current MI function hasn't got a clear vision about the needs for MI from the decision-maker perspective, has a shortage of resources, and is unknown inside the organization. This is due to the distant position of the BI-function, who is currently responsible for the MI activities. The BI-function is currently situated in the BU-level.

The scope of the future market intelligence should be transparent throughout, and to all stages of the organization. As stated previously in the literature review, a customer-oriented model, such as market intelligence model, is the most effective when created bottom-up. This means that the creation of market intelligence scope and strategies in the long-run require a strong understanding of the customer needs. In order to understand these needs, a strong relationship needs to be built between a company and the customer. The end-to-end MI process model (**fig. 23)** demonstrates the MI inputs and outputs in the case company.

The future market intelligence flow could also be more Product Management centric near the customer end (**fig. 21**), since the Product Management function is the most cross-functional unit in the organization based on both the interviews and the workshop. The function has potential for a closer relationship inside the organization as a linkage between marketing and sales functions, and R&D function. In this position, the function could easily communicate and address the market intelligence needs to people in the customer end with the support of the MI function. As it has been intended for a product manager to implement various MI related activities based on **appendix B**, the targets would be more fulfilled if the function was in closer interaction with the customer-end.

In addition, the MI activities are to be placed near the customer end to in order to collect data and communicate the needs to the BI function. Currently, the market

intelligence is provided from the BU-level in the BI function, where the daily customer needs won't be reached. The first step for the organization is to get closer to the customer-end (**fig. 22**).

The MI Specialist (**appendix G**) would work and report for the BI Manager. The most important work of the MI Specialist would be communicating the customer needs internally and develop the current and future practices related to data storing, processing, and delivering market intelligence. The MI Specialist is additionally responsible of ensuring that the practices are easily available for the internal stakeholders. Developing and maintaining the tools and processes related to market intelligence are a part of the role of the MI Specialist. The MI Specialist works in cross-functional teams, which include the Product Management in BU, PG-level and local sales units (LSU).

The MI activities would support the BI function in deciding the future targets and scope of the BI and MI activities. The daily work of an MI specialist would involve:

- Monitoring and improving activities in the customer-end
- Supporting the functions in MI related topics
- Communicating targets for MI collection in the customer-end
- Communicating market intelligence horizontally and vertically inside the organization
- Assessing fields to be developed in MI processes and organizing training
- Assessing "best practices" for systematic and structured internal MI collection (learning from the practices conducted in Italy and the US)
- Developing systematic tools and processes for MI activities (improving the tools the company already has)
- Arranging structured customer events (visits) for strengthening customer relationship together with the Product Management function

- Improving the communication two-ways between the company and the customer together with the Product Management function

The current MI activities, which are facilitated by the BI Manager, should be addressed to the responsibility of the MI Specialist both to organize and co-ordinate inside the organization, closer to the customer-end. Customer boards, workshops, and other events, where the customer can communicate their needs and future targets to the company representative and co-develop a direction for the co-operation, increase communication two-ways and improves the customer relationship. The comparison of the current MI activities and the suggested ones in Step 1 is presented in **figure 24.**

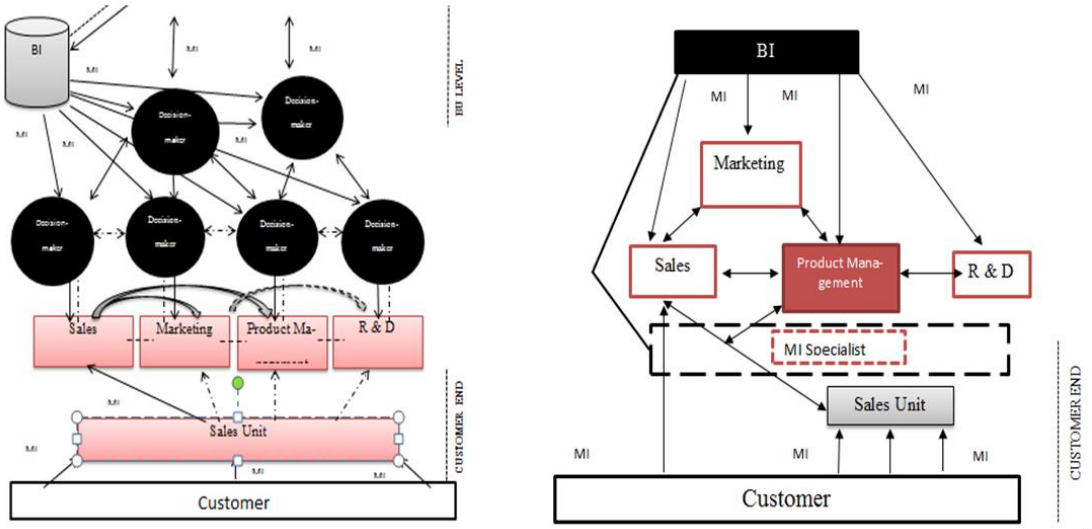

Figure 24. Comparison of the current (in the left) MI activities and the suggestion for Step 1 (in the right)

The market intelligence activities of the MI specialist by function and target group (customers, markets, competitors and products) are introduced in **table 16**.

Table 16. The MI activities by function and target group

Target Function	Target Group	Activity of MI function
Sales	Customers	➢ Participation in the weekly meetings of the sales teams for understanding the activities and needs in the customer interface. ➢ Organizing workshops for R&D, Product Management and Sales for better understand the company's own offerings and competitor offerings. ➢ Organizing monthly Sales meetings cross-PG or regionally for learning purposes ("best practices" of collecting MI data). Introducing methods of different regions and co-development.
Marketing	Markets	➢ Sharing market related data from customer-end and BI (via BI-portal or face-to-face). ➢ Attending marketing meetings and sharing information. ➢ Organizing monthly Marketing meetings cross-PG for learning purposes.
R&D	Products, Competitors	➢ Organizing workshops for R&D, Product Management and Sales for better understand the company's own offerings and competitor offerings. ➢ Offering support in MI processes and tools. ➢ Organizing monthly/quarterly R&D meetings cross-PG for learning purposes (discovering "best practices" of analyzing customer products).
Product Management	ALL	➢ Participating in product management meetings for sharing MI information. ➢ Support in organizing follow-up meetings regarding the projects. ➢ Monitoring and support in daily activities. ➢ Finding ways to involve product managers more in customer interactions.

Step 1 aims to create awareness of the MI activities inside the organization and support in both utilization and communication of the received insights. Firstly, the MI practices are piloted in a project, and secondly enlarged to a broader audience.

If the organization is actively and effectively investing in the project of step 1, the timeline for organizing the basis for step 2, is approximately 12 months.

6.3.2 Step 2: Advanced Level (12 months – 36 months)

Step 2 is a continuum to step 1, and continues to utilize the end-to-end MI process model (fig. 23) as a guideline for MI activities. The role of the new MI function is to observe the environment; customers, competitors, products, and the markets in general (regional and by industries). A Market Intelligence Manager is in charge (former Market Intelligence Specialist) of the function and reports to the BI manager. The daily activities would involve:

- Discussing the MI scope and targets.
- Marketing the new function inside the organization at PG-level.
- Assisting the functions in MI data collection.
- Sharing MI inside the organization
- Organizing training for the MI processes and tools.
- Organizing customer audits, interviews and panel discussions and other events.

Because there are six product groups inside the case business unit, there should be hired at least one Market Intelligence Coordinator, who should report to the MI Manager, and assist in Market Intelligence related tasks. In **figure 25,** the key area in terms of market intelligence, is the customer interface.

The elements of step 2 are:

- Establishment of an MI function
    - MI Manager in charge
    - MI Coordinator works for the MI Manager at the customer-end
- Stronger and more systematic presence of MI throughout the organization.

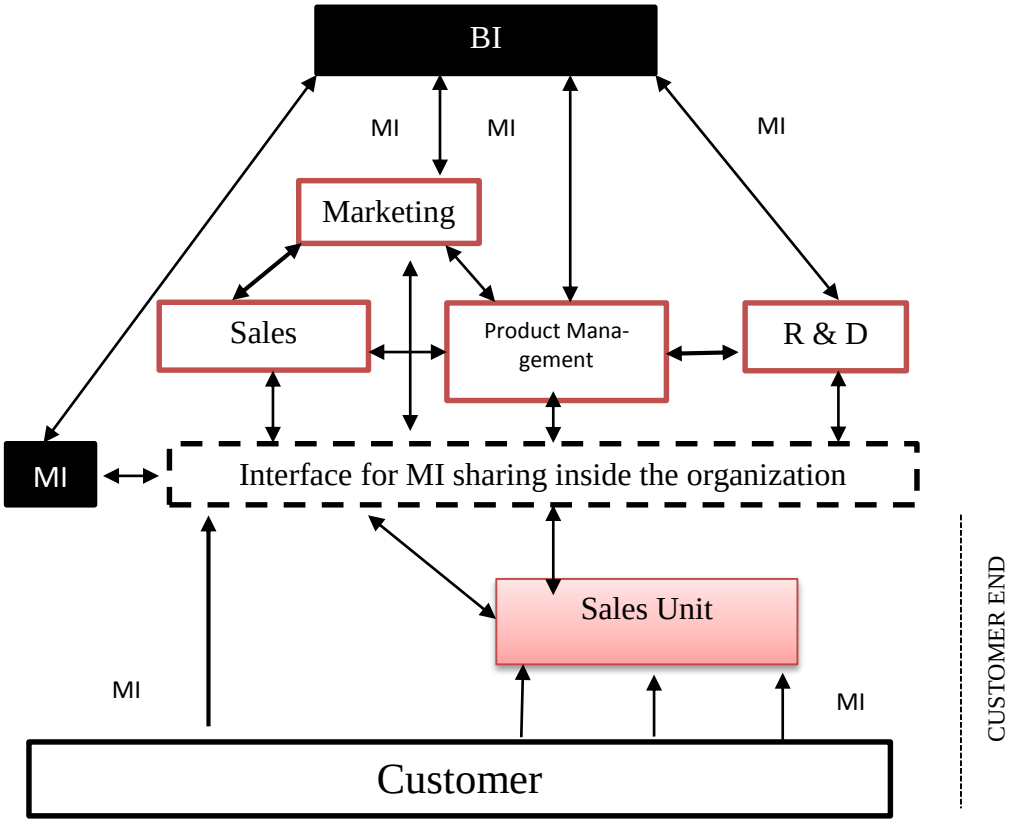

Figure 25. Step 2: The new MI function in the customer-end

During the first step, the MI activities are tested in a pilot study for a smaller audience. The second step targets on enlarging the MI activities throughout the organization. The MI Manager can focus more on long-term development of suitable MI strategy together with the BI Manager and PG managers, whereas step 1 is mainly about monitoring and developing current practices, increasing the visibility of MI and enhancing the internal communication about MI-related topics.

The duration of project of step 2 is around 24 months, since an entirely new function is established. In order to reach this timeline, step 1 is expected to reach its expectations and timeline.

6.3.3 Step 3: Ideal Situation (36 months –)

The third step is the target step of the roadmap. In step 3, the MI function incorporates four MI specialists: 1) Customer Intelligence Specialist, 2) Competitor Intelligence Specialist, 3) Product Intelligence Specialist, and 4) Market Insight Specialist, which all are reporting to the Market Intelligence Manager. The employment of the four specialists is necessary at the point where market intelligence becomes a stronger part of the organization and the business culture. In addition, the needs for market intelligence grow as the company learns to utilize the market intelligence for operational support. Here, the need for systematic and specific market intelligence is required, and the end-to-end MI process (fig. 23) is a part of the daily culture.

The model of step 3 is introduced in **figure 26**. Customer intelligence (**CuI**), environment intelligence (**EI**), competitor intelligence (**CoI**) and product intelligence (**PI**) are considered the main sub-categories for market intelligence in the company. The Customer Intelligence (CuI) Specialist would be in charge of all matters that are related to customers; understanding customer needs and wants currently and in the future, customer's buying behavior, segmentation, customer's profitability, customer's strategy and vision, CRM advisory among others. The Environment Intelligence (EI) Specialist would be in charge of everything that is related to the business environment; market trends, industry, regional advantages, political factors, ecosystem etc.

The Competitor Intelligence (CoI) Specialist would be in charge of the following topics; competitor markets, strategies (internationalization, pricing, segmentation etc.), profitability, technology, acquisitions. The Product Intelligence (PI) Specialist would be in charge of all matters concerning products and services of the company and competitors; products, materials, available technology (components, efficiency rates etc.).

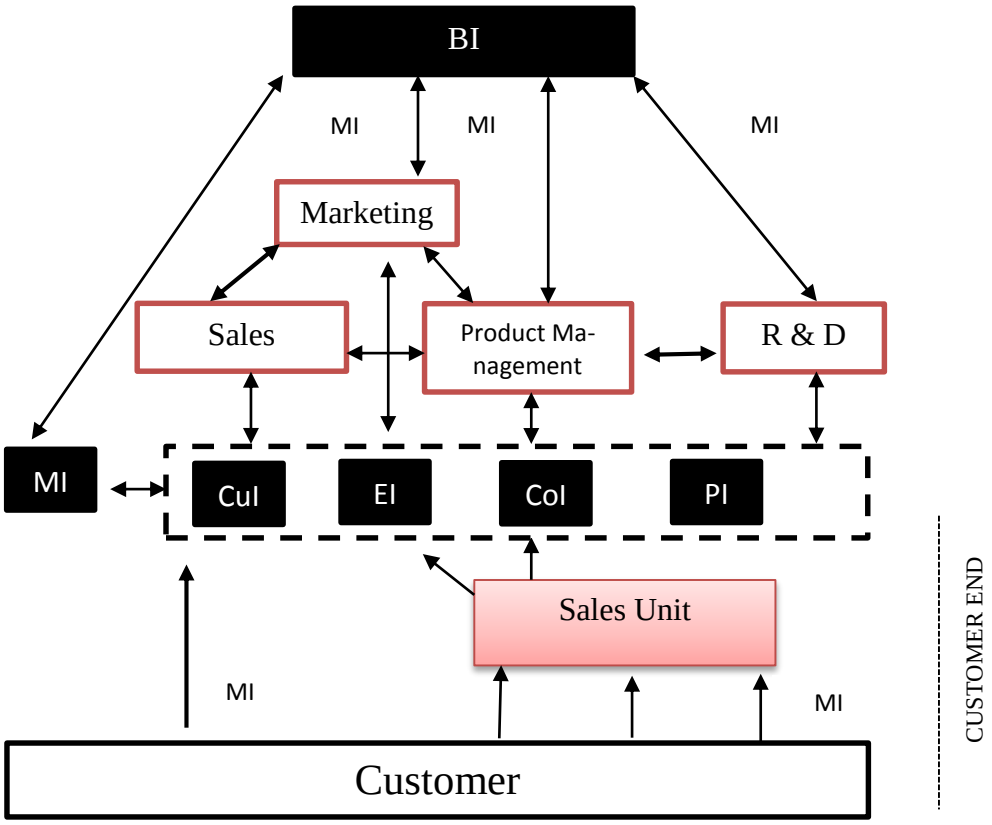

Figure 26. Step 3: The future MI function with four MI specialists

6.4 Summary of the Roadmap

The building of the roadmap incorporates three steps. The steps are emphasized in **table 17**. The summary of the roadmap is presented in **figure 27**. The following step begins after the previous step has ended. Altogether the project of establishing an advanced MI function for the case company, requires a lot of resources and organizational commitment. For reaching the ideal level of MI, the case company will be looking a project that lasts minimum 3 – 5 years. Even after this, the MI function needs to be actively developed

Table 17. The three steps summarized

STEP (beginning-ending)	Main responsible of MI	Activities
1. (year 0-1)	1) MI Specialist 2) Product Management	- Structure of MI organization - Addressing tasks - Improvement of co-operation and organizational integration - Improvement of communication within the organization
2. (year 1-3)	1) MI Manager 2) MI Coordinator 3) Product Management	- Establishment of an MI function in the customer end.
3. (year 3 -)	1) MI Manager 2) 4 MI Specialists 3) Organization	- The organization is full of systematic MI practices. - MI is a part of the organizational culture.

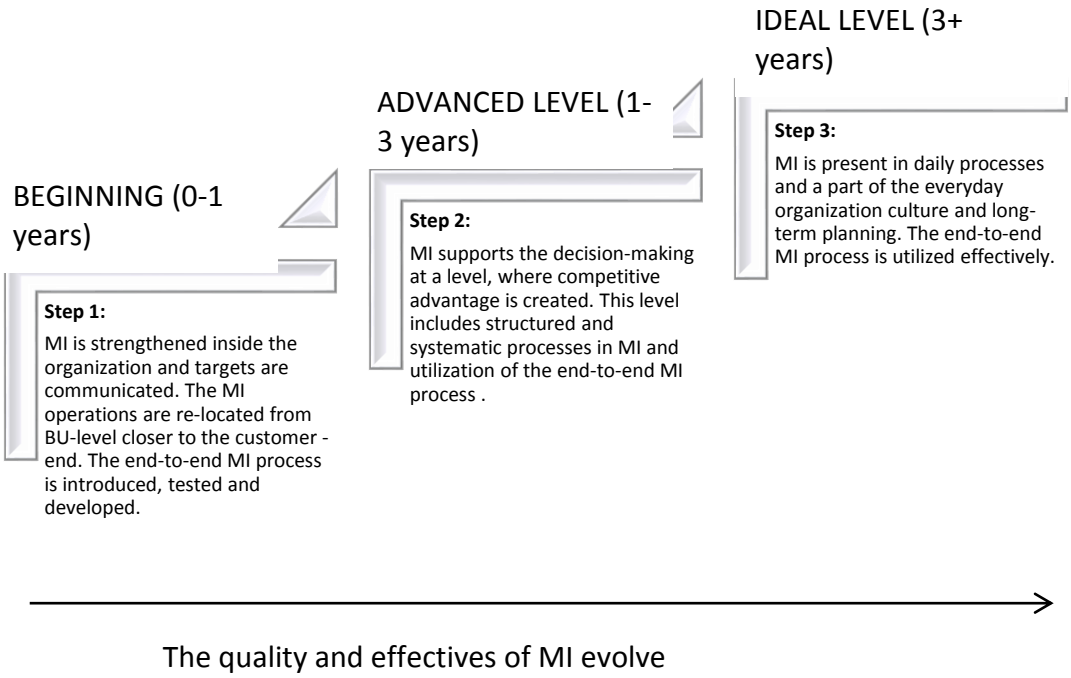

Figure 27. The three step MI Roadmap

7 DISCUSSION

Chapter 7 reflects the findings of the research to the existing literature and evaluates the research process.

7.1 Reflection on the findings of the research

The market intelligence activities are expensive for any company, yet according to the literature (GIA 2014; Vaarnas et al. 2005) obligatory investments for keeping up with customer needs. The technology-oriented organizations are old fashioned (Mintzberg 1983; Lucas 2010), and not appealing the customer that has a lot of expectations towards the offerings (Kotler et al. 2005). The focus of the company should be therefore at the customer. Market orientation (MO) can be defined as *superior type of customer-orientation* according to Narver & Slater (1990), and the type of organization that supports market intelligence activities (He & Wei 2011). Market intelligence can be collected from various sources, yet the findings of the research argue that the customer interface is the most essential position for gaining market intelligence in a way that can generate competitive advantage in the long-term for a B2B company.

> *"Any concrete program of action will acquire a set of operational goals. They may be the goals originally motivated the initiation of the program (if those goals were operational); or they may be goals evolved after the program was instituted (if the original goals were not operational). Once acquired, the operational goals will provide the basis for evaluation of the action program"* - March, J. D. & Simon, H. (1993)

The grounds for collecting, processing and delivering market intelligence come from the organization, which means that the operational targets and responsibilities should be transparent inside the organization. According to Slater & Narver (2000)

a well-structured intelligence system is the essence for understanding the needs and wants of customer and the creation of superior customer value.

> "*Each participant and each group of participants receives from the organizational inducements in return for which he makes to the organization contributions*." – March, J. D. & Simon, H. (1993)

Le Bon & Merunka (2006) discusses the importance of motivation on individual workers in the customer-end (salespeople) as one of the most essential themes around market intelligence collection and sharing. The findings of Le Bon & Merunka (2006) go in-line with the results the research. Lack of motivation in addition to the lack of communication of clear targets of MI activities, are the key obstacles for individual MI efforts. The findings of the study suggest that a simple feedback would motivate salespeople to exceed in their MI efforts, and that clear instructions for MI data collection targets are the most critical factor in an organizations MI-process.

> *"The theory of organizational equilibrum, implies a structure – an organization – underlying the equilibrum. Specifically, there must exist a social system involving the participants that exhibits both the high degree of interrelationship and substantial differentiation from other systems within the social milieu. -- Hence, the organization is 'solvent' – and will continue in existence – only so long as the contributions are sufficient to provide inducements in large enough measure to draw forth these contributions*-- ." – March, J. D. & Simon, H. (1993)

The findings of the research are in line with the two great contributors of organizational theory, James D. March and Herbert Simon. The *equlibrum* refers to the balance of giving and getting. In order to an organization to get information from an individual, it must offer inducements in return. Even though the masterpiece "Organizations" by J. March & H. Simon was written in 1958, the ideology can be seen in the organizations of today. The findings of the study suggest that a balance in all stages of the organization is preferable. A two-ways dialogue in the customer-end

refers to a balance between getting insight from the customer and giving value to the customer. In the middle-management, the balance means giving feedback to the individuals in order to get market intelligence. In the further levels, it refers to providing market intelligence as deliverables and insights to the decision-makers, and getting new needs and targets for MI collection in return.

> *"In a large organization with specialization of function, however, it is necessary to establish regular procedures for transmitting information."* – Cyert, R. & March, J. D. (1992)

The main obstacles in the building of an MI function in the case company were related to organizational matters, rather than lack of skills and capabilities. The communication inside the organization can be defined as poor. There was found MI practices, yet they were not conducted systematically nor the insights were not shared. According to various authors, e.g. Hedin et al. (2011), Le Bon & Merunka (2006), and Vaarnas et al. (2005), organizing and structuring the intelligence practices, supports the organization to compete more efficiently in the complex markets, and even gain competitive advantage from the insights. Cyert & March (1992) already in 1950's anticipated that the intelligence practices need an own, specialized function. The findings of the research suggest that the company should firstly invest in strengthening the MI activities by recruiting a MI Specialist (appendix G) for supporting in the development of systematic and structured MI practices, and secondly establish a MI function that is merely specialized in market intelligence.

> *"The environment of the firm generates an extremely large amount of information that might be relevant to decision making within the firm. As a result, some initial screening decisions are made at the periphery of the organization."* – Cyert, R. & March, J. D. (1992)

Piercy (2010) suggests that a cross-functional unit with external tasks is the most effective for collecting, sharing and delivering MI for the organization and customer value for the customer. The cross-functional unit in Piercy's (2010) theory would

be the strategic sales organization. Hunt & Arnett (2006) argues that marketing is the function, which should take more responsibility in communication and delivering customer value. The literature (e.g. Arnett & Whittmann 2014; Le Bon & Merunka 2006, Kotler 2002, Goodman 1971, Webster 1965, Albaum 1964) suggest that the role of salespeople is essential for collecting market intelligence. The results of the research are in line with literature, yet they suggest that Sales function isn't the most efficient function for a complex organization to communicate the MI insights vertically nor horizontally in the organization, even though the salespeople are the individuals to deliver customer value and acquire market intelligence from the customer. The results of the research suggest that functions with the ability to communicate horizontally and vertically are in a key role for sharing MI targets and insights. The key function needs to have in-depth understanding of both the economic and technical factors that are involved in the MI process and requirements. In the case company, the Product Management function (**appendix B**) owned more capabilities than the Sales or Marketing function in sharing and understanding the value of market intelligence in a more holistic manner. The definition of the key function varies depending on what a company's organizational structure is and the responsibilities within the organization are.

According to Hedin et al. (2011) and Krizan (1999) the intelligence process is a cyclic process (**figure 12**), and the needs and targets should be refined after every round of the MI process. The findings contribute that there are other organizational aspects to the process, which impact the performance of the market intelligence activities inside an organization (**figure 23**), such as hierarchical and individual factors and attitudes. Because the intelligence needs and the targets are constantly changing with the customer needs, the organization should engage entirely to the MI process.

In overall, this research makes contributions to the existing literature about market intelligence in B2B companies. The research offers a more pragmatic approach in setting up a market intelligence system in an organization compared to the existing

literature. Even though the concept of MI is important for organizations, the topic has been researched relatively little among marketing academics and practitioners. The concepts of business intelligence (BI) and competitive intelligence (CI) are more researched compared to market intelligence, even though the concept of MI has been in a radical change for a long time now and needs constantly more attention in B2B context (e.g. Jamil 2013, Mintzberg et al 2009, Porter 2008, Vaarnas et al. 2005, Marchand et al 2001).

7.2 Quality of the research

According to Miles & Huberman (1994), the quality of the research can be evaluated in various different criteria. The most typical criteria are *reliability*, *validity*, and *generalizability* (Miles & Huberman 1994), yet according to Lincoln & Guba (1985) these criteria are more suitable for quantitative research. Lincoln & Guba (1985) suggests that better criterion for evaluation of a qualitative research would be the evaluation of *trustworthiness* of the research. Trustworthiness includes *credibility*, *transferability*, *dependability* and *confirmability* (Lincoln & Cuba 1985). According to Glaser & Strauss (1967) the term *credibility* refers to how well the findings mirror the substance, e.g. how well the findings are understood, relevant to the context and useful in a real world setting (Glacer & Strauss 1967). *Transferability* refers to the generalization of the findings of the research sample to a broader population (Yin 2003). According to Lincoln & Guba (1985) generalization can be found highly challenging in qualitative research, where samples are often defined based on convenience or theoretical basis. Glaser & Strauss (1967) therefore suggest that in the context of qualitative research, the generalizability ought to be evaluated in a broader sense, in other words to evaluate if the findings are useful for potential users in the other contexts as well (Glaser & Strauss 1967). According to Yin (2003) *dependability* refers to the repeatability of the study. Wagner et al. (2010) suggests *confirmability* is the extent to which the researcher's own predictions are in line with the empirical observations and collected data. Here, triangulation, revisions and testing the suggestions increase the

comfirmability (Wagner et al. 2010). *Applicability* is yet a criterion to evaluate the trustworthiness of a qualitative research, and it reflects how well the findings of the research can be utilized in practice (Corbin & Strauss 1990).

The evaluation of the quality of the research based on the criteria for trustworthiness is presented on **table 18.** In overall, the trustworthiness of the research can be approved in the extent of the credibility, transferability, dependability, confirmability and applicability.

The credibility of the research is enforced by using data triangulation as a method. The data has been collected from various external and internal sources. The researcher engaged to the project for 10 months and observed the organization during the time. The qualitative data was analyzed in both tools (NVivo) and the researchers own, subjective, perceptions. The results of the workshop were discussed and refined in multiple occasions, and they were tested in another BU of the case company.

The research is in the researcher's own opinion and in the opinion of the other BU inside the case company, transferable. The data collection has been conducted in a versatile manner from different sources. The roadmap was a result of collaboration and not only based on the researchers own perceptions.

The research was well-structured in the beginning and the implementation went in line with the intended structure. However, the first research question was altered after the interviews, so that the results would answer more precisely the question. In the research, the researcher used formalized techniques for data collection, analysis and interpretation of data.

Altogether the 30 interviews of the research, collaborative workshop, discussions with another BU of the company, and the in-depth literature review make the research confirmable. The outcome of the research, the roadmap, will be implemented firstly at the case BU, and discussions for further implementation in other BU's have been initialized.

Table 18. Methods to confirm the trustworthiness of the study

Criteria	Methods to confirm trustworthiness
Credibility & Validity	**Engagement and Observation:** The researcher was engaged to the project for 10 months and observed the organization persistently. **Data triangulation:** During the project, an in-depth literature review was conducted, 20 managers were interviewed for the research, one extensive workshop was arranged to test the findings, and additionally 10 other interviews was arranged to strengthen the credibility of the research and the researcher joined a social group to learn about best MI practices. These additional interviews included interviews of external expert informants. **Co-creation:** The roadmap was co-created with workers, who had advanced knowledge on customer-interface.
Transferability	**Versatility of data:** The in-depth literature research together with the primary research and collaborative creation of the MI process, which were conducted in the research, suggest that the findings are transferable, even though there is only one case study. **Testing:** Additionally, the findings have been presented to another BU of the company, which operates with different types of offerings than the case company. The other BU has made similar observations on the issues in MI processes that were found in the research.
Dependability	**Design and implementation:** The research design is clear and structured, and the implementation followed the original plan. **Formalized practices:** Data collection, analysis and interpretation of data.
Confirmability	**Data triangulation:** The in-depth in data collection, 3o interviews, collaborative workshop, and testing the results in another BU, prove that the observations and findings have been approved by others.
Applicability	**Implementation of the findings:** The case company is implementing the suggestions of the research for establishing an MI function. The findings can be utilized in practice.

8 CONCLUSION

The first objective of the research was to map the current needs for market intelligence from the managerial side in the case company, and the second objective was to define the most suitable MI practices for the case company. Based on the two above mentioned objectives, the roadmap for an MI function was built. The data collection techniques used in the research were: 1) a literature review, 2) desk research, 3) interviews and an 4) extensive workshop. The data was analyzed in different ways; the 20 managerial interviews were transcribed and analyzed with a qualitative research tool, NVivo 10, which supported the researchers own perceptions. The extensive workshop was collaborative and results were refined in a group of people that are involved with market intelligence data collection in the case company.

The chapter 8 concludes the research by summarizing the results. The results of the research questions and the roadmap is summarized are answered in sub-chapter 8.1. Finally, in sub-chapter 8.2 the managerial implications are presented, which incorporate the key findings of the research.

8.1 Summary of Results

The results for RQ1: *What are the needs for MI in the Case Company?* are presented in **table 19**. The first research question was aimed to finding out the needs for market intelligence in the case company. These needs were inquired by conducting 20 managerial interviews and a desk study that incorporated 10 interviews. The 20 managerial interviews were transcribed and analyzed with a qualitative research tool, QSR Nvivo

The results for RQ2: *What are the suitable MI practices for the Case Company?* are presented in **table 20**. The most suitable practices were discovered in both the interviews and the extensive workshop.

Table 19. Results for RQ1: What are the needs for MI in the Case Company?

Need	Current situation
More systematic and structured practices for MI processes	Inaccurate and missing MI data.
MI function more visible in the organization	Invisibility of MI.
Clearer knowledge of voice of customer (VoC), and customer needs and wants.	Customer information is vague and the collection is unsystematic.
More cross-functional co-operation and data sharing inside the organization	Lack of co-operation/cross-functionality. Nowadays, data is not shared efficiently.
Trainings for utilizing tools and processes systematically should be more available.	Un-skilled workforce dealing with MI.
More proactive delivery of MI deliverables.	Lack of systematic delivery of deliverables.
Need of fresh and filtered data delivered in an organized manner.	The MI tools and data are unstructured.

Table 20. Results for RQ2: What are the suitable MI practices for the case company?

Suitable practice	Current situation
Deployment of MI in the customer-end. See fig. 22.	MI activities are carried out from the BU-level (between middle and top management). See fig. 20.
Appointing a cross-functional role supporting in MI collection and delivering. See appendix G.	There is no one systematically supporting MI collection or delivering.
All levels of organization need to take responsibility in communicating MI needs and targets from end-to-end. See fig. 23.	No one takes currently responsibility in communicating the MI needs or targets inside the organization.
Role of Product Management centric in the future MI communication	No one takes responsibility of communicating the insight horizontally or vertically inside the organization.

The suggested roadmap responds to the need of creating structure and systematic applications for a MI function, and turning weaknesses into competitiveness. The built roadmap for the MI function in the case company is a three step process (**fig. 22**). The first step (**fig. 22**) is to open the communication channel internally and activate the

organization for MI activities. The 1st step requires a stronger presence of Product Management function regarding the market intelligence activities. Additionally, it is required to appoint a MI Specialist (**appendix G**) near the customer-end to support the integration and communication both inside the PG and at the customer-end. The end-to-end MI process model (**fig. 23**) created in the workshop is introduced as a main guideline for the main MI process in the case company.

The second step (**fig. 25)** is the establishment of an individual MI function, where an MI Manager is the responsible. For the assisting tasks (organizing data collection, customer panels, training and so on) an MI Coordinator needs to be recruited. The MI Manager is the former MI Specialist from the step 1.

The step 3 (**fig. 26**) is the suggested the final stage of setting up an MI function. In step 3, the MI-function has evolved in the customer end and provides deeper knowledge of the markets. In step 3, the company has four specialists working with MI: customer intelligence, environment intelligence, competitor intelligence, and product intelligence specialists. The step 3 is the ideal situation in the building the MI roadmap (**fig. 27**) for the case company.

8.2 Managerial Implications

The managerial implications based on the findings of the research are summarized in below:

Customers are the essential target of a company's operations

The company should understand the customer in order to succeed in the markets. In today's competitive markets, the customer has a huge bargaining power of offerings, unless the offerings are unique. Hence, the company's focus should be on customers today and in the future.

The most essential source of MI comes from the customer-end

The location of the future MI function should be at the customer-end. The current MI activities are managed from the BU-level, which is too far away from the customer. For the company, the customer is a channel for external information, which can't be obtained elsewhere. The external information is valuable information related to the customer and the competitors.

The communication of clear targets for MI activities obligatory

Without communicating the targets, there will not be effective inputs from the customer-end. The targets trigger the process of collecting MI. The organization is in balance, when the inputs (market intelligence) and the outputs (needs and targets) are in balance.

Appointing responsibilities for MI activities create structure

There is a need for systematic MI practices in the organization. The first thing is to recruit an MI Specialist (appendix G) to support the MI data collection and delivery inside the organization. The Product Management is suggested to take more responsibility in horizontal and vertical communication.

Sharing insights cross-functionally is essential

Market Intelligence sharing is essential for the company in order to operate efficiently. This way the company won't waste resources in re-inventing the wheel. The company should invest in opening the communication channels inside the organization.

Engaging individuals increase organizational identification

When individuals think they are working *with* the organization rather than *to* the organization, the commitment towards providing contributions to the organization grows.

Inducements increase individual motivation

Feedback as an inducement is the most powerful and long-term source of motivation, when talked about collecting and sharing MI. The inducement policies should be monitored inside the organization. The organization is as strong as its weakest link, which can be an unmotivated individual collecting MI.

Seek sustainability rather than short-term decision-making

Market intelligence is an investments for the future. It provides flexibility for the company in the constantly changing markets, insurance for making better decisions, and insights, which can't be purchased.

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APPENDIXES

APPENDIX A: International market intelligence data types (Vaarnas et al. 2005)

1. **Company-specific information**	2. **Industry-specific information**
➢ **Basic information** • Business description • Key people • Ownership structure • History (past structural changes)	➢ **Demand of the industry** • Value of the industry • Volume • Geographic diversity • Buying behavior • Bargaining power of customers
➢ **Business operations** • Targets and strategy • Organization • Core competences • Products and services • Customers • Suppliers • Partners • International operations • Strengths and weaknesses	➢ **Supply of the industry** • Domestic production (volume and quality) • Import • Product portfolio • Competitor's market share and image • Competitive tools • Distribution channel structure • Price range, pricing and terms of payment • Substitute products • New Entrants
➢ **Key indicators** • Revenue • Profitability • Investments • Efficiency • Market value • Credit worthiness • R&D	➢ **Change processes in the industry** • Growth prospects in the markets • Product life cycles • Price evolvement • Technological development • Standardization and legislation • Spreading best practices and knowledge

3. General information from the business environment	
➢ **Physical environment** • Geography (distances, surfaces, resources, climate) • Infrastructures 1. Transportation (air, land, sea) 2. Energy 3. Telecommunications	➢ **Political environment** • Form of government • Participation of government in local business activities • Bureaucracy • The industry specific support systems
➢ **Demographic environment** • Population, density, growth • Urbanism • Growth centers • Cultural structure	➢ **Economic environment** • GDP • Economic growth • Economic stability • Budget • Taxing policies
➢ **Technical environment** • Level of industrialization • Technological knowhow • R&D • Technological legislation • Safety regulations • Local workforce • Raw materials • Energy	

APPENDIX B: Job description of a Product Manager

MISSION STATEMENT

Product Manager is to ensure that the product is managed throughout the Product Life Cycle from a market and holistic business perspective. The product manager's responsibility is to optimize the market position and financial returns of the total portfolio, consistent product group strategy and targets. Product manager carries out the given mission in cross-functional teams, consisting of resources from e.g. Marketing, Sales, R&D, Operations, Controlling, After Sales, SCM and Market Intelligence and eventual Product Owners and Local product managers.

MAIN ACCOUNTABILITIES

Market situation and Product gap analyzes

Valuation of the Global market size and trends broken down by industries and regions and evaluate our position. Competitor analyzes including identification of product gaps.

Monitor and Managing existing portfolio

Owns the Technical Specification for the product. Maintain product business plan that supports sustainable growth. Portfolio analyzes covering volumes, cost and profitability. Initiates business cases for developments, maintenance, cost reduction and phase-out. Follow warranty and quality cost and NPS feedback including resolutions.

Product Customers Values

Clarify product positioning within portfolio with defined values per product line addressing different segment. Assures customer values per segment is communicated through different channels.

New Product Development

Collect and analyze market data, requirements, customer needs and values and review product roadmap. From identified opportunities, create business cases for product development projects or product transfers. Product launch planning, responsible for content in sales material and sales tools, assure that training material is covered. Follow up on product performance after launch.

Offering to the Market

Keep PG's Sales and channels informed on the topics related to the product, such as new product availability, market, competition, quality, configuration, trends, and limitations. Provide sales support, participate in customer meetings and trade shows on request. Initiate and support marketing programs. Responsible for the content in sales material and tools. Assure training material is available.

Process development

Continuously develops the product management process and tools, along with interfaces to other functions. Maintain and follow a yearly cycle of activities, "Yearly clock", to govern product management.

APPENDIX C: Interview Questions

The interviews of phase 1, where conducted during April – to June 2014. The 10 questions were the same for all the interviewees.

1. **What is your name, position & job description in ABB Motors & Generators?**
2. **How clear do you think is your PG's/BU's current market intelligence activities?**
3. **Is the market intelligence function actively supporting other PG's and PU's decision-making?**

Market Intelligence organization = the business function that collects market intelligence data (competitive analysis, market information etc.), processes and delivers the information further to decision-makers.

4. **What are your currently utilized market intelligence information/data tools and sources?**
   a. How often do you use them?
   b. Is the information simple, average or complex to digest? Can you easily and quickly find the information you are looking for? If not, why?

4. **What kind of market intelligence data/information do you need to support your decision-making? (some examples below)**
   a. News (about raw material prices, competitors, suppliers, buying behavior etc.)
   b. Analyses (about evolving market trends, raw material prices etc.)
   c. First-hand information from the sources of market intelligence (sales etc.) through lower organizational stages.

5. **Do you know from where or whom you can get support to your decision-making (if needed) in a market intelligence perspective? (some examples below)**
   a. Portals, colleagues, other sources

6. **What is the suitable kind of market intelligence information you need in your position? (some examples below)**
    a. Processed data (analysis, figures, statistics etc. with possible further analysis of the impact)
    b. Updated portals with information about the business environment (competitors, suppliers, customers, raw material information etc.)

7. **Do you think it is easy and quick to get updated and relevant market information when needed?**
    a. How would you improve the ease of accessing market intelligence information?
    b. What kind of sources of information should be more available?
    c. How would you like to get your market information data?

8. **How do you think the current market intelligence function is working in your BU? Locally/ Globally?**
    a. Do you know who you should contact if you are in a need of quick consultation or support in decision-making?
    b. Where do you find this information, and do you think you will find it quick enough?

9. **Please tell Your opinion: how should the global, ABB Motors & Generators –wide, market intelligence function be working?**
    a. Do you think that the responsibilities and job descriptions are clear?
    b. Do you have active correspondence vertically and horizontally in the organization? (How well do you know your colleagues at other PGs or at "lower management" stages and at PU levels within You PG?)

10. **Is there some specific area of market intelligence (local or global), which is not well covered in your opinion. How does that make your decision making harder or unnecessarily inaccurate?**

APPENDIX D: Workshop exercises

The workshop was held on July 1st 2014. The participants were from Sales, Marketing and Product Management functions and situated closer to the customer-end. During the workshop, a draft for the roadmap was created based on the 5 below mentioned exercises discussed in the workshop.

1. **Design the PG organization from Manager to customer interface**
    a. What are the channels to contacting the customer?
    b. Who is the customer?

2. **Define as accurately as possible, what the observed topics are in the customer interface, the processes, where the observations are gone through (for instance in weekly meetings?), and at which level in the function's (sales, marketing, R&D, Product Management) organization?**
    a. What topics are important?
    b. What topics and findings are reported and written down? To whom are they reported to?
    c. What kinds of things "are left in the coffee table"?

3. **What the activities of salespeople are in order to sell offerings to customers?**
    a. What are the sales arguments?
    b. Where do the sales arguments base on?
    c. Is there co-operation between functions (for instance sales and R&D)?

4. **Is it possible to write down the observations in the customer-end?**
    a. How and in which part of the organization?
    b. What would this require more from the organization?
    c. What are the most preferable incentives for the extra effort in individual MI activities?

5. **Based on the information collected in question 1-4, a MI function will be established near the customer-end. The purpose of the MI function is to deliver the market intelligence to upper levels of the organization as quickly and as unaltered as possible.**
    a. Where should the function be located, so that it would integrate all functions together and increase the level of communication cross-functionally?
    b. In which ways the MI function could integrate in processes close to the customer (for instance a sales process)?

APPENDIX E: Results of the QSR Nvivo 10 word queries

RUN 1:

Table 1. Result set of all interviews (Run 1) – TOP 10 matching words

Word	Length	Count	Weighted Percentage (%)	Similar Words
marketing	9	166	6,42	market, marketing, markets
function	8	88	3,41	function, functions
products	8	50	1,93	product, products
need	4	38	1,47	need, needed, needs
data	4	38	1,47	Data
customer	8	38	1,47	customer, customers
information	11	37	1,43	informal, information
reports	7	29	1,12	report, reporting, reports, reports'
business	8	23	0,89	business, businesses
competitors	11	17	0,66	competitor, competitors

In overall, the topics where similar to all more specified runs. The important topics that where of MI interest: where: products, customers and competitors.

RUN 2:

Results of the word similarity query by different PG's and BU.

BU interviewees:

Word	Length	Count	Weighted Percentage (%)	Similar Words
market	6	91	3,83	market, marketed, marketing, markets
information	11	53	2,23	information
data	4	52	2,19	data
function	8	39	1,64	function, functioning, functions
need	4	33	1,39	need, needed, needs
reports	7	31	1,3	report, reporting, reports
customer	8	28	1,18	customer, customers, customs
process	7	24	1,01	process, processed, processes
countries	9	23	0,97	countries, country
competitor	10	23	0,97	competitor, competitors, competitors'

In overall, according to the BU representatives: the main issues to be developed, where: more accurate information about the markets, which include reports about customers and competitors.

PG 1:

Word	Length	Count	Weighted Percentage (%)	Similar Words
product	7	54	6,88	product, production, products
development	11	37	4,71	development
information	11	23	2,93	information
market	6	21	2,68	market, marketing, markets
Product management	17	18	2,29	Product management, product managers
competitors	11	15	1,91	competitor, competitors
different	9	9	1,15	different
need	4	9	1,15	need, needed, needs
understand	10	9	1,15	understand, understanding, understands
data	4	7	0,89	data

The PG 1 thought that Product Managers could take more responsibility of sharing information for other units.

PG 2:

Word	Length	Count	Weighted Percentage (%)	Similar Words
products	8	56	2,64	product, products
market	6	43	2,03	market, marketing, markets
customers	9	39	1,84	customer, customers, customers', customize
Market intelligence	18	38	1,79	Market intelligence
information	11	36	1,70	information
competitor	10	32	1,51	competitor, competitors, competitors'
need	4	23	1,08	need, needed, needs
function	8	23	1,08	function, functional, functions
sales	5	21	0,99	sales
business	8	19	0,89	business

PG 2 thought the salespeople get a lot of MI, when they visit customers.

PG 3:

Word	Length	Count	Weighted Percentage (%)	Similar Words
markets	7	27	4,32	market, marketing, markets
products	8	24	3,84	product, products
intelligence	12	15	2,40	intelligence
competitors	11	14	2,24	competitor, competitors
business	8	13	2,08	business, businesses
needs	5	12	1,92	need, needs

customer	8	8	1,28	customer, customers
collect	7	8	1,28	collect
data	4	8	1,28	data
Product management	17	8	1,28	Product management, product managers

PG 3 mentioned Product Managers as a solution for delivering MI close to the customer-end.

PG 4:

Word	Length	Count	Weighted Percentage (%)	Similar Words
information	11	26	4,67	information
customer	8	18	3,23	customer, customers
Market intelligence	18	16	2,87	Market intelligence
business	8	10	1,80	business
sharing	7	10	1,80	share, shared, sharing
people	6	9	1,62	people
data	4	8	1,44	data
market	6	8	1,44	market, marketing, markets
collecting	10	7	1,26	collect, collected, collecting, collection
development	11	7	1,26	development

PG 4 thought MI activities should incorporate more interaction with the customer for finding out the valuable information about both the customers and competitors.

PG 5:

Word	Length	Count	Weighted Percentage (%)	Similar Words
marketing	9	139	7,10	market, marketing, markets
function	8	84	4,29	function, functions
information	11	32	1,63	informal, information
customer	8	30	1,53	customer, customers
data	4	30	1,53	data
reports	7	29	1,48	report, reporting, reports, reports'
need	4	26	1,33	need, needed, needs
products	8	26	1,33	product, products
understand	10	15	0,77	understand, understanding
using	5	14	0,71	use, useful, using

PG 6:

Word	Length	Count	Weighted Percentage (%)	Similar Words
product	7	14	4,70	product, products
market	6	11	3,69	market, marketing, markets
management	10	10	3,36	management, manager, managers
service	7	9	3,02	service, services
information	11	8	2,68	information
global	6	7	2,35	global
competitors	11	7	2,35	competitor, competitors, competitors'
customers	9	6	2,01	customer, customers
need	4	6	2,01	need, needed, needs
country	7	5	1,68	countries, country

RUN 3:

Results by different functions.

Marketing:

Word	Length	Count	Weighted Percentage (%)	Similar Words
marketing	9	166	6,59	market, marketing, markets
function	8	114	4,52	function, functions
information	11	52	2,06	informal, information
customer	8	39	1,55	customer, customers
need	4	37	1,47	need, needed, needs
products	8	34	1,35	product, products
data	4	32	1,27	data
reports	7	25	0,99	report, reporting, reports
sales	5	23	0,91	sale, sales
management	10	22	0,87	management, manager, managers

Sales:

Word	Length	Count	Weighted Percentage (%)	Similar Words
marketing	9	55	3,82	market, marketed, marketing, markets
function	8	44	3,06	function, functioning, functions
information	11	41	2,85	information
Market intelligence	18	31	2,15	Market intelligence

customer	8	23	1,60	customer, customers
project	7	19	1,32	project, projects
sales	5	18	1,25	sales
competitor	10	16	1,11	competitor, competitors, competitors'
data	4	16	1,11	data
products	8	13	0,90	product, products

Product Management:

Word	Length	Count	Weighted Percentage (%)	Similar Words
market	6	85	4,05	market, marketing, markets
product	7	44	2,09	product, products
need	4	37	1,76	need, needed, needs
information	11	36	1,71	information
customer	8	34	1,62	customer, customers
intelligence	12	33	1,57	intelligence
Product management	17	30	1,43	Product management, product manager, product managers
business	8	26	1,24	business, businesses
Market intelligence	18	26	1,24	Market intelligence
competitors	11	20	0,95	competitor, competitors

R&D:

Word	Length	Count	Weighted Percentage (%)	Similar Words
products	8	88	5,48	product, production, products
development	11	40	2,49	develop, development
market	6	32	1,99	market, marketing, markets
competitors	11	30	1,87	competitor, competitors, competitors'
information	11	30	1,87	information
need	4	17	1,06	need, needed, needs
customers	9	17	1,06	customer, customers, customers', custom-ize
managers	8	17	1,06	management, manager, managers
intelligence	12	15	0,93	intelligence
know	4	14	0,87	know, knows

Top Management:

Word	Length	Count	Weighted Percentage (%)	Similar Words
marketing	9	52	5,00	market, marketing, markets
function	8	30	2,88	function, functions

information	11	29	2,79	information
project	7	19	1,83	project, projects
need	4	17	1,63	need, needed, needs
customers	9	15	1,44	customer, customers
company	7	14	1,35	companies, company
sales	5	14	1,35	sales
data	4	11	1,06	data
intelligence	12	11	1,06	intelligence

RUN 4:

Regional word similarity queries by country.

Finland:

Word	Length	Count	Weighted Percentage (%)
Information	11	67	2,99
Product	7	51	2,27
development	11	45	2,01
Data	4	30	1,34
Customer	8	28	1,25
Business	8	22	0,98
Customers	9	17	0,76
Products	8	16	0,71
Sales	5	16	0,71
competitors	11	15	0,67

France:

Word	Length	Count	Weighted Percentage (%)
product	7	10	3,36
information	11	8	2,68
service	7	8	2,68
global	6	7	2,35
market	6	7	2,35
competitors	11	5	1,68
customers	9	5	1,68
management	10	4	1,34
manager	7	4	1,34

need	4	4	1,34
products	8	4	1,34

Italy:

Word	Length	Count	Weighted Percentage (%)	Similar Words
markets	7	159	9,30	market, marketing, markets
function	8	101	5,91	function
information	11	50	2,93	information
project	7	27	1,58	project, projects
customers	9	27	1,58	customer, customers, customers'
sales	5	16	0,94	sales
analysis	8	15	0,88	analysis
important	9	13	0,76	important
business	8	12	0,70	business
competi-tors	11	12	0,70	competitor, competitors, competi-tors'

Sweden:

Word	Length	Count	Weighted Percentage (%)	Similar Words
products	8	46	3,29	product, products
market	6	37	2,64	market, marketing, markets
information	11	23	1,64	Information
competitor	10	21	1,5	competitor, competitors, competitors'
customers	9	19	1,36	customer, customers, customers', customize
manager	7	19	1,36	management, manager, managers
intelligence	12	18	1,29	Intelligence
Product management	17	15	1,07	Product management, product managers
need	4	14	1	need, needed, needs
sales	5	11	0,79	Sales

UK:

Word	Length	Count	Weighted Percentage (%)	Similar Words
market	6	13	3,41	market, marketing
company	7	12	3,15	companies, company
needs	5	11	2,89	need, needed, needs
sales	5	9	2,36	Sales
information	11	8	2,10	Information
competitors	11	7	1,84	competitor, competitors

customers	9	7	1,84	customer, customers
countries	9	6	1,57	Countries
demand	6	4	1,05	Demand
tracking	8	4	1,05	track, tracking, tracks

USA:

Word	Length	Count	Weighted Percentage (%)	Similar Words
marketing	9	166	6,42	market, marketing, markets
function	8	88	3,41	function, functions
products	8	50	1,93	product, products
need	4	38	1,47	need, needed, needs
data	4	38	1,47	Data
customer	8	38	1,47	customer, customers
information	11	37	1,43	informal, information
reports	7	29	1,12	report, reporting, reports, reports'
business	8	23	0,89	business, businesses
competitors	11	17	0,66	competitor, competitors

APPENDIX F: Suggestion for the development of the BI Portal

The BI Portal is so full of uncategorized information that many of the decision-makers rather find the information elsewhere than waste time in searching it in the portal. A suggestion for the first page of the BI-portal is introduced in **figure A**. The first page could incorporate changing topics that are being discussed in the discussion board. The point of the discussion board is that it's easy to enter and the threshold for posting daily topics is extremely low. In the new discussion, it ought to be considered that the BI-portal members could be tagged in topics, for instance if a question was asked. The tagged members would receive a notification via email about the discussion. This way more people would be brought into the communication web, and questions would be answered quicker and more effectively.

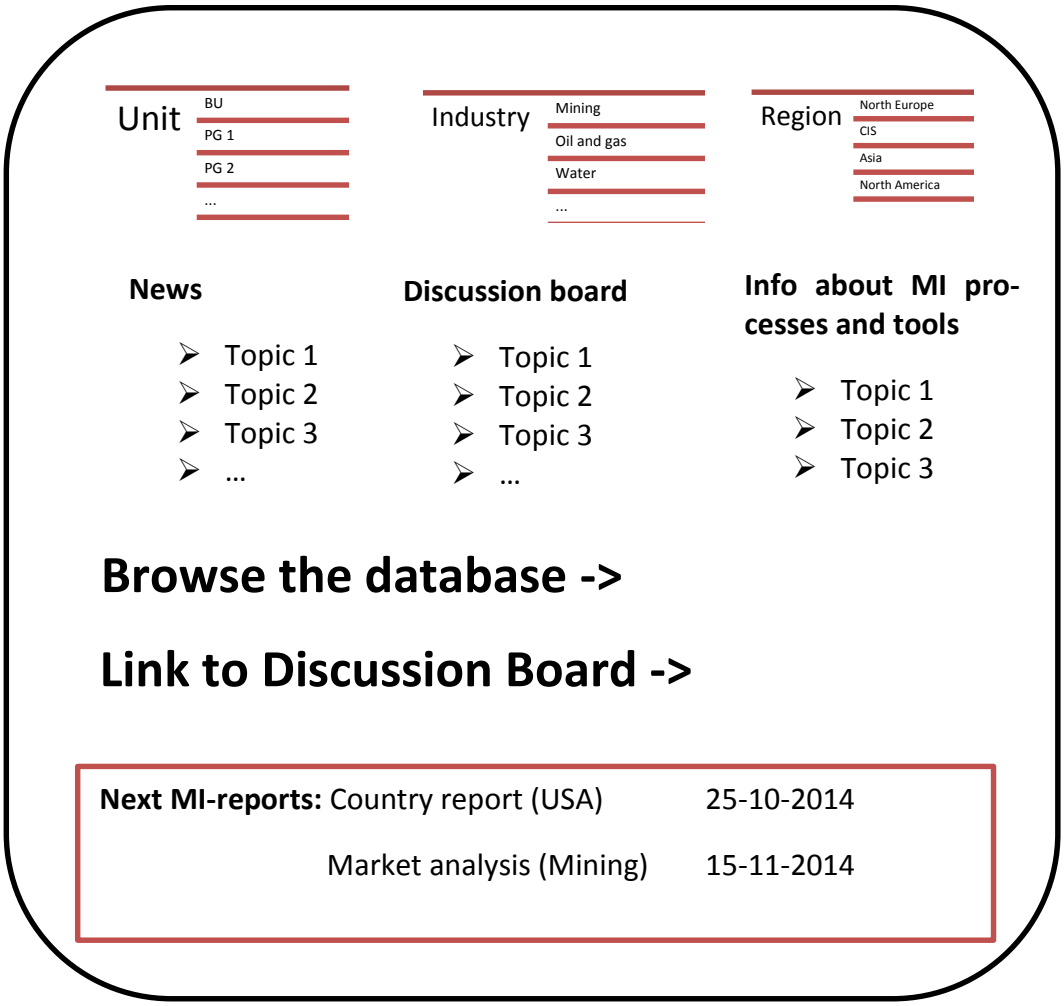

Figure A. Suggestion for the first page of the BI-portal

The contents could be categorized by PG's, by industries, and regionally. In the front page, there could be bulletin of the fresh market intelligence related news that change on daily or weekly basis. Since the portal is already password protected among the portal members, the transparency and communication could be integrated in the portal. This way the portal would be the main, support for MI decision-making. A communications plug-in or an interactive discussion board could be integrated on the site.

APPENDIX G: Job Description of a MI Specialist

Market Intelligence Specialist

Mission statement:

MI specialist is to ensure that current and future tools and practices related to data storing, processing, and delivering are easily usable and available for internal stakeholders. Supports product management in arranging structured processes (like customer visits) to capture the voice of customer. Promotes and develops the use of best practices and communication internally.

<u>Main accountabilities</u>

Tools and process development and usage

- Helps and trains the internal stakeholders to find, use and apply the internally and externally source information like MDR, Product market surveys, macro-economic data etc
- Structures and maintains a platform to enable self service and access to data and analysis
- Participates to product management and other stakeholder meetings and reviews to collect and communicate existing and future market intelligence needs

Data processing and analysis

- Practices to better enable product management to use and analyse the existing and sourced data for product market evaluation.
- Creation of structured reports from sales data to support product gap or performance analysis

Development of best practices

- Organizing workshop meetings between functional teams for information sharing and developing best practices in collecting and using market and competitor data

Mapping the training and competence needs in local organization

- Promote the use and awareness of market intelligence in key geographies and countries (top 10)