Research account management

managing customer relations at a corporate research organization

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Award date:
2014

Research Account Management: Managing customer relations at a corporate research organization

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BSc Industrial Engineering and Management Sciences — TU/e 2012
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in partial fulfillment of the requirements for the degree of

Master of Science
in Innovation Management

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Series Master Theses Innovation Management

Subject headings: innovation management, R&D management, account management, relationship management, knowledge management, corporate research, research-marketing interface

Abstract

Innovation has become one of the key drivers of company success. Although sources of innovation from outside the boundaries of the firm have been increasing in number and relevance, corporate research still remains a very important source of innovation, especially for high-tech companies. To ensure that research projects become successful innovations, it is important to manage the research-marketing interface effectively. Alignment between the research strategy and the strategy of the company and its business units ensures that new technologies and applications will be adopted by the business.

Research account management (RAM) relates the principles of account management with innovation management at a corporate research center, in order to build a relationship with the business units and become their co-creation partner. An in-depth analysis at Philips Research shows that the newly introduced term RAM differs from traditional commercial (key) account management in several ways. Effective research account management requires an approach in which there is a continuous mix of technology push and market pull on three levels: strategic RAM, tactical RAM and operational RAM. These three levels have different responsibilities, counterparts and horizons. A RAM framework and 7-step approach are introduced in this report to describe these levels and responsibilities.

"If I had asked people what they wanted, they would have said faster horses." – Henry Ford

Acknowledgement

This report is the result of my graduation project in completion of the Master's program Innovation Management at Eindhoven University of Technology (TU/e). My graduation project was the final stage of my time as a student, which has prepared me for my future career in the best possible way. Although the path of studying Industrial Engineering and Management Science in Eindhoven had to battle with my dream of pursuing a career in classical music, the choice for this study has proven to be the right one right from the start. I feel blessed with the knowledge and skills my Bachelor's and Master's program at TU/e and especially my graduation project have provided me, and this gives me the confidence that I am now ready to take the next step in my life and career.

I would like to thank a number of people who supported me during this challenging and enriching journey. Special thanks go out to dr. Ferrie Aalders, my company supervisor at Philips Research. Ferrie, you have been a great support during my internship, and your knowledge of Philips and critical advice based on your experience in research was just what I needed to complete this project successfully. Thanks as well to all the other colleagues at Philips Research who helped me in so many ways. Innovation has always fascinated me, and I truly believe that innovation will be the key driver of company success in the upcoming decades. Therefore, I am very grateful that I got the opportunity to do my graduation project in Innovation Management at Philips, a company with such a long history in and big emphasis on innovation. I cannot wait to start my career as a Trainee at Philips after my graduation.

Furthermore, I would like to say thank you to my mentor dr. Myriam Cloodt for her supervision and great academic advice. Myriam, during several courses in my Bachelor's and Master's I have come to know you as a very kind and devoted person, and having you as my mentor confirmed this even more. You have been strict when needed, while in the meantime you gave me the freedom to take responsibility of my graduation project and make it into a success. Also thanks to prof. Sjoerd Romme. I was honored to have the dean of our faculty as my second assessor, and your sharp observations and useful advice have helped me in taking a step back from the project from time to time.

Finally, I thank my family and friends for supporting me during my study. You have made my time at university an unforgettable experience. Big thanks to my parents Jan & Rosalie, who have been there for me in every possible way and supported every decision I made. Without you, I would not have been able to accomplish this. Also thanks to my sister Mariëlle, who is always there for me and has given great feedback on my thesis writing. And last but not least, my girlfriend Sabine. Your love and support has kept me going, and I am incredibly happy to have you in my life.

Thomas,
Eindhoven 2014

Management Summary

In the past decades, the belief that innovation is one of the key drivers of firm performance and success has grown. Corporate research is, especially for high-tech firms, a very important source of innovations. Conducting research allows companies to develop new technologies and new applications and products which can sustain the company's competitive advantage. In this process it is essential that new technologies and applications developed in the corporate research organization find an appropriate landing spot in the business unit where they can be turned into successful innovations. Managing the research-marketing interface is crucial in ensuring that research projects will eventually become successful products or services in the market.

Research account management (RAM) is introduced in this report as a useful way of managing the research-business interface of a corporate research organization. This method uses principles from commercial (key) account management and serves to build partnerships with the business units of the company in order to become their co-creation partner.

Research question

The research project aims to analyze research account management and to identify important aspects of the research account management process. An in-depth analysis of the research account management at Philips Research, the central research organization of Philips, is performed. The main research question is formulated as follows:

How can account management be optimized in a corporate research organization?

The study aims to answer this question by suggesting improvements to the current research account management process at Philips Research, but also by suggesting a more rigorous description of key aspects and responsibilities of research account management, which can be useful for other corporate research organizations.

Methodology

This study is designed to answer the research questions properly, by performing an extensive review of the academic literature on the relevant topics related to research account management and applying this to the analysis of the current research account management process at Philips Research. The literature review resulted in a conceptual model, in which the three most important parts are described. These parts are relationship management, knowledge management, and account management. Based on this conceptual model and on the preliminary analysis of RAM an interview protocol is developed. For this protocol, a focus group is used to get a better insight in how research account management is performed and to get input for the interview questions.

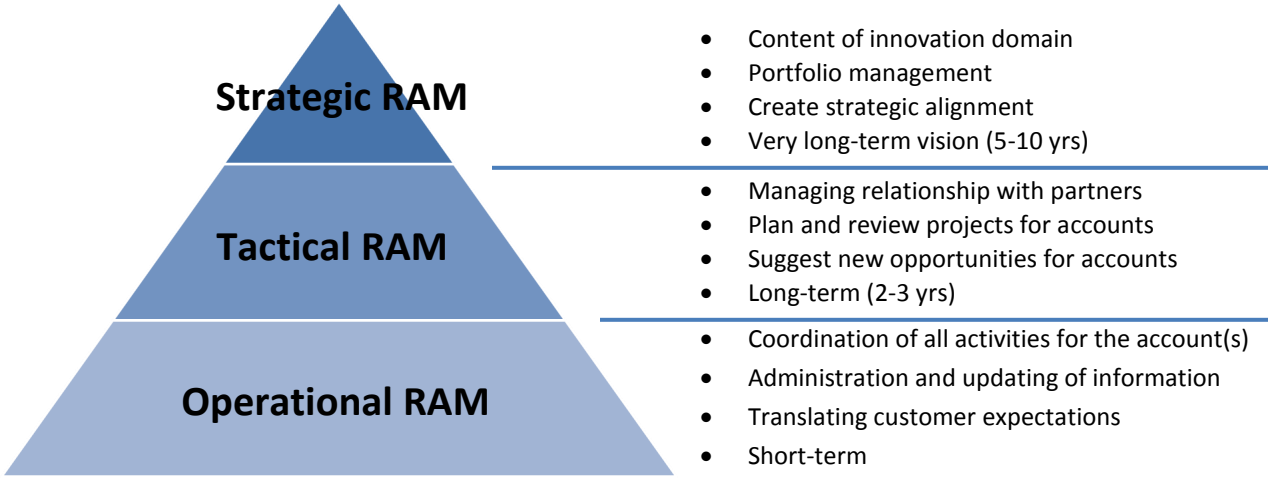
With the interview protocol, 25 semi-structured interviews are performed with people currently active as research account manager. The interview reports provide useful results on how relationships are built and maintained, how knowledge is managed, what research account managers perceive as effective RAM and what the potential improvements of the RAM process are.

The interview results are combined with the results of the partner satisfaction surveys, which Philips Research carries out on a yearly basis to assess the satisfaction of their business partners. The combination of these results shows what the customer wants to see from RAM and what the research account managers themselves think is important.

Finally, a benchmark analysis is performed at four other organizations. This analysis provides useful insights in how other organizations manage the relationship with their accounts and are used to reflect on the analysis at Philips Research.

Results

Based on the results of the study, a RAM framework and a 7-step approach to RAM are proposed. The RAM framework categorizes the responsibilities and tasks of the RAM process, as were revealed by the results, into three levels of RAM: strategic, tactical and operational. The framework structures the RAM process, which enables clarification and improvements of the process. The characteristics and responsibilities of the different levels are presented below.



The framework leaves the possibility to combine levels of RAM in one research account manager. Vertical (between levels of RAM within account) and horizontal (between different accounts) collaboration and knowledge sharing should be facilitated and stimulated to find new innovation and opportunities and to improve the RAM process by sharing best-practices.

A 7-step RAM approach is proposed, to provide a stepwise structuring of the research account management process. This iterative process consecutively covers the plan, the people, the info and the review part of the RAM process. The process steps are:

1. ***Partner analysis***
   - Select strategic business partners (research accounts)
   - Characterize research accounts
2. ***Research account plan***
   - Define goals for research accounts
   - Determine required RAM levels
3. ***Select research people***
   - Define who covers what part of required RAM levels
4. ***Innovation analysis***
   - Analyze industry and relevant technologies
   - Identify innovative ideas and opportunities in Research
   - Build propositions for the business
5. ***Contact plan***
   - Determine counterparts in the business
   - Build a contact network and relationship strategy
6. ***Internal review***
   - Review projects, transfers and impact on business
   - Review status of the research accounts
7. ***External review***
   - Review meetings with the business
   - Evaluate partner satisfaction surveys

The RAM process can be improved further by appointing a responsible person for the complete RAM process, who can check the process on the basis of the framework and the process steps.

Conclusion

Research account management has shown to be a useful approach to manage the research-marketing interface of a centralized corporate research organization. The results of the study provide valuable insights in the RAM process. A corporate research organization is able to add significant value to the front end innovation of its business partners, and RAM plays an important role in aligning the business partners' strategy with the research organization's strategy. This study shows that effective research account management requires a combined technology push and market pull approach.

The framework and 7-step RAM approach offer a useful guideline for the implementation and improvement of the RAM process. It can also act as a starting point for a more rigorous analysis of factors. The exploratory research project has gained useful insights in the newly introduced topic research account management, and the differences with (key) account management, but the implications are limited since the study is largely based on the analysis at Philips Research. More descriptive research, which aims at looking for quantitative evidence of important factors in research account management, is needed. Research projects which include multiple organizations can also increase the rigor of the academic research on research account management.

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1. Introduction

For many decades, Innovation has been one of the most important issues in business research. Innovation can be defined as “an idea, practice, or object that is perceived as new to an individual or another unit of adoption” (Deward & Dutton, 1986, p. 1422). Innovation is a broad topic, and a variety of disciplines address various aspects of innovation, including product development, marketing, quality management, operations management, and economics. Innovation is generally considered to be one of the key drivers of corporate success (Cardozo, Karen McLaughlin, Reynolds, & Miller, 1993). Schumpeter (1934) defined innovation in the beginning of the 20th century already as the motor of economic development. Several studies have shown that a firm’s ability to develop new products and services can enhance its performance (Li & Atuahene-Gima, 2001; Teece et al., 1997). Innovation Management is the discipline of managing the process of innovation. This can concern product innovations, as well as service or organizational innovations. Since innovation is an important driver of company success, management of innovation(s) is of crucial importance for companies, especially large multinational firms which develop a large number of innovations which differ in newness, application, market etc. Effective innovation management allows a company to sustain a competitive advantage. Large technology corporations, under the pressure of decreasing product life times, increasing competition and more complex customer demands, continuously have to be looking for ways to innovate in a successful way. One way to stimulate innovation, especially for technology firms, is to establish a research & development (R&D) department which can conduct research to improve and extend the current product portfolio. A crucial challenge for these research projects is to manage the Research-Business interface (or R&D-Marketing interface), the functional interface between the (central) Research or R&D department and the business unit(s), marketing department or other department which is more focused on commercializing the company’s product(s) and/or service(s) (Gupta, Raj, & Wilemon, 1986). Research account management (RAM), a term which is not used in current academic literature and is introduced in this thesis, is a process which tries to manage this interface effectively by making account managers responsible for specific accounts to which research projects are delivered. This process can ensure that a relationship is built with the (internal) customers of the research department and that input from both sides of the interface is combined and transferred in order to increase the success of the research projects and the resulting products or services.

The goal of this Master Thesis project is to improve the innovation management process at Philips Research, by examining the research account management process. Philips Research is the central research organization of Philips, and is responsible for front end innovation to serve the different business areas of the company. It uses so-called account managers to transfer the technologies and innovations to the business groups of Philips. The next section provides a further introduction on the (research) account management topic, by explaining its importance and describing the different aspects of it. In Chapter 2 an extensive description of RAM based on the current state of academic literature is given. In the remainder of this first chapter, an introduction on Philips and more specifically Philips Research will be given. Finally, the research questions which will form the guidance of this study are formulated and an outline of this thesis report is presented.

1.1. Corporate research

Although their role has been decreasing in the past years, research departments are still an important source of ideas and innovations for companies, especially high-technology firms (Block & Keller, 2009). Conducting research allows companies to develop new technologies and new applications and products which can help the company sustain its competitive advantage. Most international firms which are active in different markets have established one or more central research facilities, where research is executed and transferred to the business units (Bosomworth & Sage, 1995). These centralized research organizations focus on fundamental research and breakthrough innovations. Centralized corporate research organizations aim to deliver radical innovations, and have a long-term focus in working on really new technologies and applications, often in collaboration with universities and other knowledge institutes. Corporate research organizations can support the development departments of the corporation's business units, which typically have a more short-term and product focus, by providing them with new technologies and innovations.

To align their technology strategy with the business strategy, diverse global technology companies have adopted a similar structure for their central research facility, a matrix with a technologies/disciplines on one axis and applications or business units on the other axis, and make use of so-called 'account executives' in research to transfer the technologies to the business units. This allows these companies to focus on their core competencies/technologies, while helping the different business units to maximize their value creation (Chester, 1994). Philips has a centralized research organization, which is headquartered in Eindhoven, the Netherlands. Philips Research has a matrix structure as described before and uses account managers to connect Business Units to research projects. Accounts are typically defined on the application/business axis of the matrix structure, and account managers are responsible to overlook all technologies/disciplines which serve the particular application or business unit.

1.2. Research account management

Account management is the maintaining and expanding of relationships with customers (Storbacka, 2012). Facing increasing levels of competition in quickly changing environments, companies try to build partnerships and strategic alliances with customers, and focus on relationship building through repetitive, rather than single sales transactions (Gosselin & Bauwen, 2006). However, account management is not necessarily purely the practical implementation of long-term buyer/seller relationships, but can also be part of the implementation of a customer-oriented strategy. Research account management typically falls in the second category of account management forms, since it aims at creating a more customer-oriented focus at a corporate research organization. The goal of research account management is not only to sustain and increase revenues from specific accounts, but to ensure that the research organization becomes an innovation partner for customers and helps them in creating innovations. Account managers in Research play a key role in the R&D-marketing interface. Managing this interface is a critical element of success in new product development projects (Song & Thieme, 2006). It is essential that centralized corporate research organizations keep innovating and, by doing that, stay relevant for the overall company. By managing the R&D-marketing interface effectively, and

ensuring that projects at the central research facilities are well aligned with the business units, research account managers can improve the performance of the research organization.

Research account management, which is hardly addressed in the academic literature (as will become clear in Chapter 2), differs significantly from the typical account management that is primarily focused on building a long-term and intensive relationship with a customer to secure income from this account. Several dynamics of the relationships research organizations build with their customers are significantly different from the traditional buyer-seller relationship. This has important consequences for the research account management role, and will be described extensively later in this report, both in the literature review chapter, as in the results and the conclusion chapters.

1.3.Relationship management

Typical job responsibilities of an account manager include the establishment of relationships with (key personnel in) assigned customer accounts and the proactively assessment and validation of customer needs on an ongoing basis (Speakman & Ryals, 2012). Relationship management plays an important role in the execution of account management, since it can help building, sustaining and expanding the relations with customers. In this study, “customers” in most cases are the Business Units in various parts of Philips, but in some cases can also be strategic innovation partners outside the company. Relationship management is a business strategy used to develop mutually beneficial long-term relationship between buyers and suppliers (Djurica, Tomic, & Samardzic, 2011). Information technology can support this relationship management, for example by facilitating the customization of offerings and by gathering and processing available information on customers in the purpose of increasing their loyalty (Bashkar, 2004). Building a relationship with customer accounts is one of the most important elements of RAM.

1.4.Knowledge Management

The high intensity of knowledge within a research organization is a factor that has an enormous impact on research account management. Knowledge is a powerful asset, especially in R&D environments like a central research organization. Leaders who succeed in structuring their organization to maximize knowledge utilization are more likely to deliver products to the market with a sustained competitive advantage (Henard & McFadyen, 2006). Knowledge is widely recognized as a vital source of competitive advantage, and so Knowledge Management has gained more and more attention in business and organizational research (Nonaka, Toyama, & Konno, 2000). As mentioned before, an R&D department or centralized research department, like Philips Research, is very knowledge intensive. Although technical knowledge is often explicit, there is also a lot of tacit knowledge within the research organization. Research account management typically deals with both types of knowledge, since the knowledge about the project is explicit knowledge (technical knowledge), while the knowledge on processes and the relationships with customers is much more tacit. This requires different strategies for creating and transferring, since all these different kinds of knowledge are important for successful performance of the research organization. Knowledge management is an essential aspect of research account management. Successful management of the creation of knowledge and the transfer of knowledge from

the central research organization to the business units partly determine the performance of research account management.

In the introduction to the topic in the previous sections, two important remarks about research account management have been addressed: 1) RAM differs from typical account management; 2) RAM is a multidisciplinary process or role in an organization. The three most important aspects of research account management are: innovation management, relationship management, and knowledge management. This is shown graphically in Figure 1. A research account manager should make sure that (s)he covers all these three parts in his job. The typical character of account management in a research organization and the challenges in achieving the goal of supporting the business units (and other innovation partners) in maximizing their value creation is the main focus point in this research project.

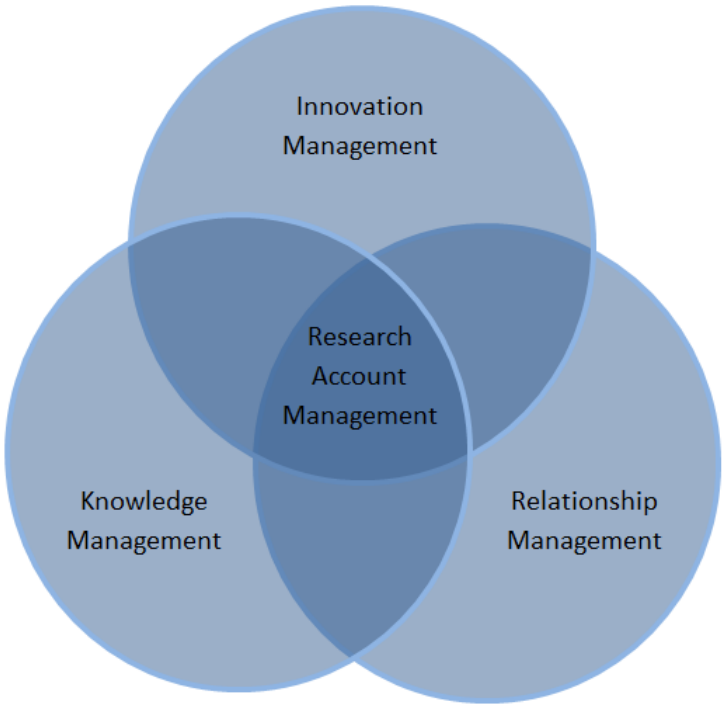

Figure 1: Research Account Management

1.5.Company context - Philips

This study is undertaken at the central corporate research organization of Philips in Eindhoven. Royal Philips is a diversified health and well-being company, focused on improving people's lives through meaningful innovation. It was founded in Eindhoven in 1891 by Gerard Philips and his father Frederik. The company is active in the areas of Healthcare, Consumer Lifestyle and Lighting and is headquartered in the Netherlands[1]. In 2013, the total sales of Philips reached €23.4 billion and the number of

[1] Source: http://www.philips.com/about/company/index.page

employees is approximately 115,000. Philips sells products in more than 100 countries and is a leader in cardiac care, acute care and home healthcare, energy-efficient lighting solutions and new lighting applications, as well as as well as lifestyle products for personal well-being and pleasure with strong leadership positions in male shaving and grooming, home and portable entertainment and oral healthcare (Royal Philips, 2013). In revenues, Philips is the largest manufacturer of lighting solutions and applications in the world.

The Philips Group is divided into four parts: the three business sectors: Healthcare, Lighting, and Consumer Lifestyle, and the Group Innovation & Services. This is shown in the organizational chart in Figure 2. Philips Research is part of the Group Innovation & Services.

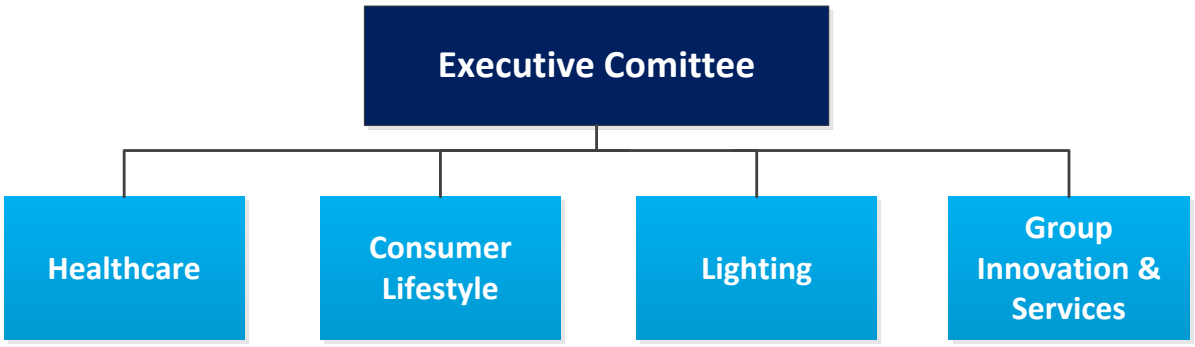

Figure 2: Organizational Chart (Source: http://www.annualreport2013.philips.com/content/en/sector_performance.html)

1.5.1. Mission and vision

The mission of Philips is: *Improving people's lives through meaningful innovation*[2].

This mission is related to the vision of the company, which states:

At Philips, we strive to make the world healthier and more sustainable through innovation. Our goal is to improve the lives of 3 billion people a year by 2025. We will be the best place to work for people who share our passion. Together we will deliver superior value for our customers and shareholders[2].

To accomplish this mission and vision, Philips has formulated three key behaviors. These behaviors determine how Philips employees should behave in their work to reach their full potential and fulfill the mission and vision. The Philips behaviors[2] are:

[2] Source: http://www.philips.com/about/company/missionandvisionvaluesandstrategy/index.page

- *Eager to win;*
- *Take ownership;*
- *Team up to excel.*

It is important to keep the mission, vision and behaviors of the company in mind, especially in the redesign. Redesigning the research account management role and process should contribute to the corporate mission and vision, and should reflect the Philips behaviors.

1.5.2. Philips Research

Philips Corporate Research is part of Philips Innovation Group & Services, and performs research for all Sectors of Royal Philips, and a few other companies. The Philips Sectors directly fund part of this research work through contractual agreements; referred to as 'Contract R&D'. The remaining part is directly paid for by the Executive Committee of Philips, and is allocated mainly to exploratory (longer-term) research. (Aalders, 2013). In the past years Philips Research has undergone a number of re-organizations, the most radical one in 2011 when it split-off its services part and merged this with parts of former Philips Applied Technologies. This has led to a new mission and vision of Philips Research. The mission of Philips Research identifies the activities of Research: "*Improve the quality of people's lives through technology-enabled meaningful innovations – as co-creator and strategic partner for the Philips businesses and complementary open innovation ecosystem participants"* (Aalders, 2013, p. 4). This mission is directly derived from the mission of Philips, as described in the previous section, and contributes to the vision of Philips to make the world healthier and more sustainable through meaningful innovations. The focus of the Research Programs (Healthcare, Consumer Lifestyle and Lighting) is on applied research in line with Philips' mission to improve the quality of people's lives.

Philips Research is organized in a matrix structure, with the Divisions on one axis and the Research Programs on the other axis. Research account management is part of the program axis. The Program Management consists of the following roles: Program Managers, responsible for content and value creation of their program (Healthcare, Consumer Lifestyle or Lighting); Innovation Area Managers (IAM), who drive the strategy-development process for their Innovation Area; and account managers (AM), responsible for the customer relationship management of their account(s). Research account managers are appointed for the various businesses in the Philips Sectors. The Research departments are focused on a certain application (e.g. a product or product category in one of the Philips Sectors), or on a technical competence (e.g. data analytics). Research account managers represent all these departments and competences towards their account. Each RAM is responsible for showing "one Research face" to the business, irrespective of the different Research Programs that may serve that business (Aalders, 2013). Program Managers act as account manager towards the overall Philips Sectors, whereas Innovation Area Managers might also act as account manager towards important businesses within their Innovation Area. The matrix organization is shown in Figure 3.

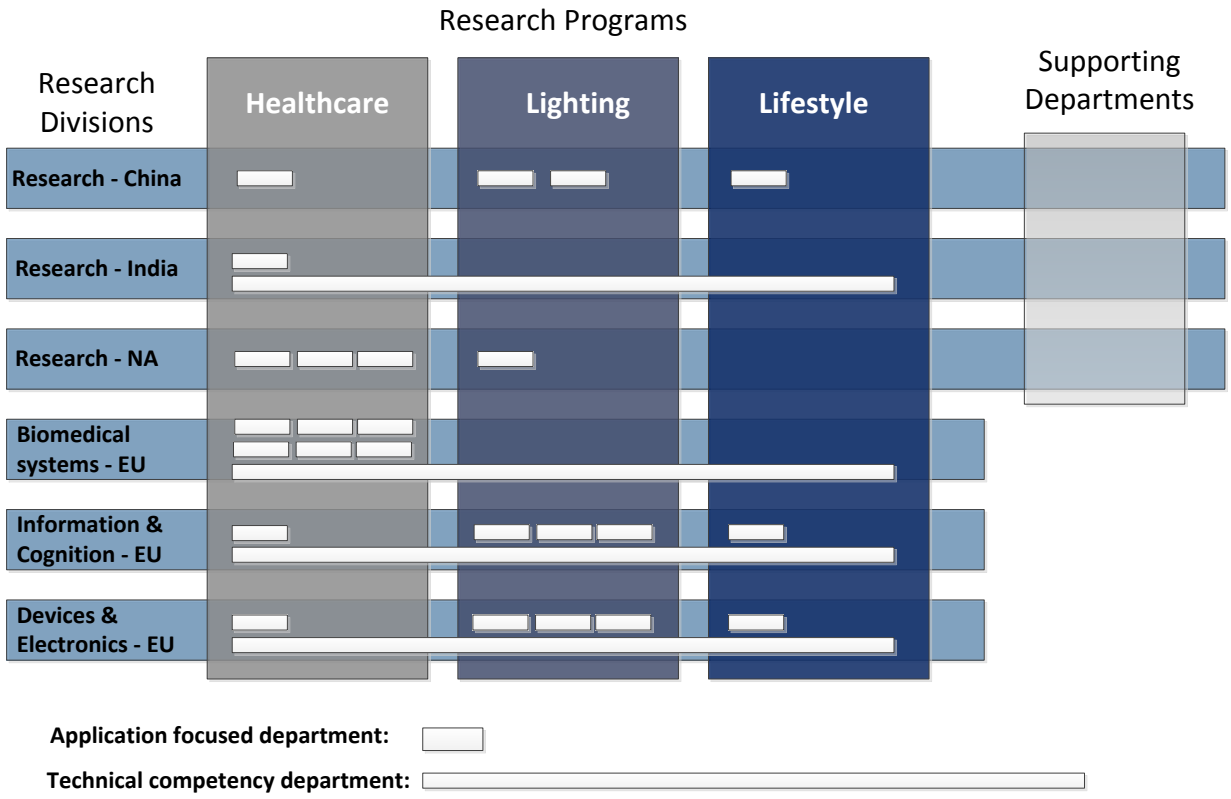

Figure 3: Matrix organization of Philips Research

Program & account management is one of the key processes of Philips Research. The first key process is business management & strategy, which is translated into three key processes which are linked to the innovation partners of Philips Research. Program & account Management is one of these three key processes, along project management and competence & resource management. The key process program & account (P&A) management consists of two important parts: the FTE based P&A management and the hour based P&A management. The first part focuses on the projects which are funded on a yearly/FTE basis. Every year, in the so-called Process-0, agreements are made on which projects to execute in the upcoming year. In the hour based P&A management, contract R&D is executed and funded on an hourly basis. For every project in this model, a contract is drafted. It is the account manager's responsibility to manage this contract and to make sure that commitments from the contract are being met. This distinction between FTE-based and hourly-based projects has impact on the role of the RAM.

1.5.3. Innovation management at Philips

It is obvious that innovations are essential for Philips. In 2013 the company launched its new brand identity *'innovation and you',* emphasizing that the companies aspires to deliver innovations that really matter to the customer and really improve people's life. When innovation is such an important driver of company success, and a company is active in so many different markets and technologies, it is important

to keep an overview on the innovation process. Therefore Philips Research has categorized its innovation projects into four types of innovations. These will be described in the next section.

In current innovation literature, it appears that there is no unambiguous description of types of innovations (Garcia & Calantone, 2002). Innovation projects are characterized as incremental, radical, breakthrough, disruptive, continuous, discontinuous, etc.. The kind of innovation project at the level of innovativeness depends in this case on the company or industry perspective. Philips Research distinguishes four types of innovation projects: 1) sustaining innovation; 2) game changers; 3) adjacencies; and 4) emerging business activities (EBA's).

The first two types of innovation projects focus on markets where Philips is already active with the goal to maintain and increase market share, whereas the last two types of innovation projects aim to create new value spaces, with the goal to give Philips opportunities to grow outside its core business.

Sustaining innovation is a type of innovation project that does not disrupt the existing market and competitive landscape, but is focused on staying competitive in current markets. Research projects in the Sustaining Innovation category often consist of incremental product changes or incremental extensions to the product portfolio. *Game changers* are a more radical type of innovation project: they aim to disrupt the market and current competitive landscape with a radical innovation, with the intention to increase the market share of Philips in the specific market. *Adjacencies* are innovation projects which shape new businesses for Philips by leveraging on current technologies or markets. They create new product-market combinations which can be placed within the scope of the current activities of Philips, without replacing the current products. *Emerging Business Activities*, the last category of innovation projects at Philips Research, aim in contrast to adjacencies to create new businesses for Philips outside the current scope of the sectors. Both adjacencies and EBAs can help Philips to reposition itself for the future by exploring and creating new businesses and markets. See Table 1 for an overview of the four types of innovation projects.

Table 1: Four types of innovation projects at Philips Research

Core		New Value Spaces	
Sustaining Innovation No disruption to the market and competitive landscape; only incremental changes or extensions to the current portfolio.	**Game changer** Disruption of the market and competitive landscape with radical innovation; goal is to significantly increase market share.	**Adjacency** New business creation within the scope of the sector and business group.	**EBA** New business creation outside the current sector scope, but within the scope of Philips.

These four types of innovation projects should all be covered by research account management. It is important to sustain a balance between the different types of innovation, and by doing so creating both short-term and long-term value for the sectors of Philips. RAM should guard this balance in innovation projects.

Project management of innovation projects at Philips Research, one of the key processes as discussed before, is divided into three different phases: exploratory (E), concept (C), and development (D). When the deliverables are completed and a project is handed over to the customer (the business unit in the Philips Sector), a so-called 'transfer' is completed. It is the RAM's responsibility to keep track of all the projects in the different phases for his/her account(s), in order to keep a good relationship with the account(s) and support strategic decision taking in the business.

In 2011, Philips launched a comprehensive change and performance improvement program, entitled *Accelerate!* The aim of *Accelerate!* is to create an agile and entrepreneurial Philips. With the execution of this program, Philips wants to facilitate growth and aims to deliver consistent shareholder value. Two important enablers of the *Accelerate!* program are: (i) becoming increasingly customer-centric; and (ii) transforming Philips from a predominantly functionally orientated organization to one that seamlessly operates along integrated, lean end-to-end customer value chain processes between global businesses and local market teams, delivering with speed and excellence. The Accelerate! Program defines three key processes in which Philips strives for excellence:

- Idea to Market (I2M)
- Market to Order (M2O)
- Order to Cash (O2C)

Although account management is typically a function which is part of a market-to-order process, research account management is part of the idea-to-market process, since this is the key innovation process in which Philips Research plays an important role.

The transformation towards an end-to-end innovation process has implications on the role of RAM. The importance of involving all the different stakeholders in the innovation project, both from Research as from the business partner, is increasing in order to establish an end-to-end innovation process which delivers innovations and technologies that are meaningful to the customer.

1.6.Problem statement

Research account managers play an important role in the innovation process of Philips, by connecting Research with its business partners in the Philips Sectors. Deep understanding of this research account management process and the way how the relationships between Research and the business partners are managed now is important in order to improve the process.

At the start of the research project, there was no complete picture on how account managers (AMs) inside the Research Programs relate to and interact with the business partners, which raised the question whether improvements are possible in this process, which are unknown at this moment. Research has a number of surveys and interviews that have been conducted internally with business partners on some of the subjects, but a comprehensive analysis on the role of the AMs is not yet conducted. Within the organization, there is limited knowledge on the different approaches of account management, both at management level and among the account managers themselves.

Hence, the preliminary problem statement focuses on the fact that because of a lack of a complete picture of the current state of research account management within the organization and the limited sharing of approaches and best-practices, there is no optimal research account management. The problem statement is therefore formulated as:

There is no comprehensive picture of how research account management is done, and possible improvements have not yet been explored.

Based on this preliminary problem analysis and the problem statement, a general research question and a number of sub-questions have been formulated. These will be addressed in the next section.

1.7.Research questions

The problem statement is translated into research questions in order to structure the research. There is a general research question, and a number of sub-question to formulate more concrete parts of the research project. Answers to these sub-questions convert into the answer of the general research question.

Main research question

How can account management in a corporate research organization be optimized?

This general research questions can be divided into five more specific sub-questions. An aggregated answer to these five questions forms the answer to the main research question.

Sub-questions:

1. ***How should research account managers manage their relationships with partners?***
2. ***What can be considered as best practices in research account management?***
3. ***How should management of account information/knowledge be organized?***
4. ***How do research account managers currently maintain relationships with internal business partners?***
5. ***Which process improvements for research account management can be made?***

The design and methodology of the research project should be such, that it will provide answer to these research questions. This will be further addressed in Chapter 3.

1.8.Thesis outline

This thesis report presents a comprehensive and structured overview of the research projects, the results, and a conclusion and discussion. The thesis outline is presented in Figure 4.

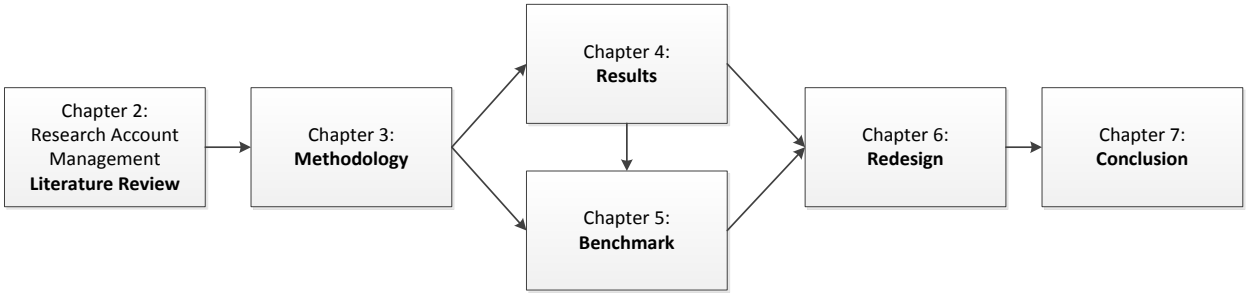

Figure 4: Thesis outline

After the Literature Review in Chapter 2, and the Methodology Chapter 3, the Chapters 4 and 5 will describe the results from the interviews and the benchmark analysis. Subsequently, the redesign is presented in Chapter 6. This redesign combines the results from both the preliminary analysis and the literature review, as from the interviews and benchmark analysis results. Finally, Chapter 7 is the conclusion of this thesis, in which a conclusion, a discussion, limitations of the study and recommendations for further research are described.

2. Research account management

The field of account management has gained increasing attention in the past decades in organizational research. Just like innovation and innovation management, as addressed in the introduction of this thesis, it is common belief that account management has a significant impact on firm performance. The success of a company and the heterogeneity of firm performance is supported by the ability to identify, build and manage customer relationships that (could) contribute significantly to the achievement of a company's goals and objectives, both present and in the future (Burnett, 1992). In the search for new business opportunities and a sustainable competitive advantage, companies, especially in business-to-business (B2B) markets, have increasingly moved away from a transactional form of doing business (Dyer, 1997) and have started looking for closer, more intense and collaborative relationships with their customers (Heide and John, 1990; Cannon and Perreault, 1999).

2.1. Account management

With an increasing search in organizations for an effective account management strategy and implementation, the attention for the field in academic research has also increased. Several approaches and management techniques have been suggested in literature, all focusing on long-term relationships between suppliers and customers, which create value for both. Suggested techniques include relationship management, national account management (NAM), key account management (KAM), and strategic account management (SAM) (Zupancic, 2008). Although these different terms are used in academic literature, it appears that there is no real difference between KAM, NAM, and SAM. In this report KAM will be used as starting point for the research on research account management. Although research on account management has increased in the past decades, it is still stated that the ability to build and maintain successful relationships with customers is and under-investigated source of firm performance (Abratt and Kelly, 2002). It can be concluded that there is a gap between the importance of this organizational problem in practice and the research attention paid to it (Homburg, Workman Jr., & Jensen, 2002).

Zupancic (2008) provides a chronological overview of the development in academic research in the field of key account management (KAM). Over the past decades, the degree of professionalization of KAM has risen, both in business as in academic research. The topic KAM was introduced by Pegram (1972), and developed over the past decades, where the focus shifted from national account management into global (key) account management and the implementation of a successful and professional KAM program. The evolution of academic research in the field of key account management is presented in Figure 5.

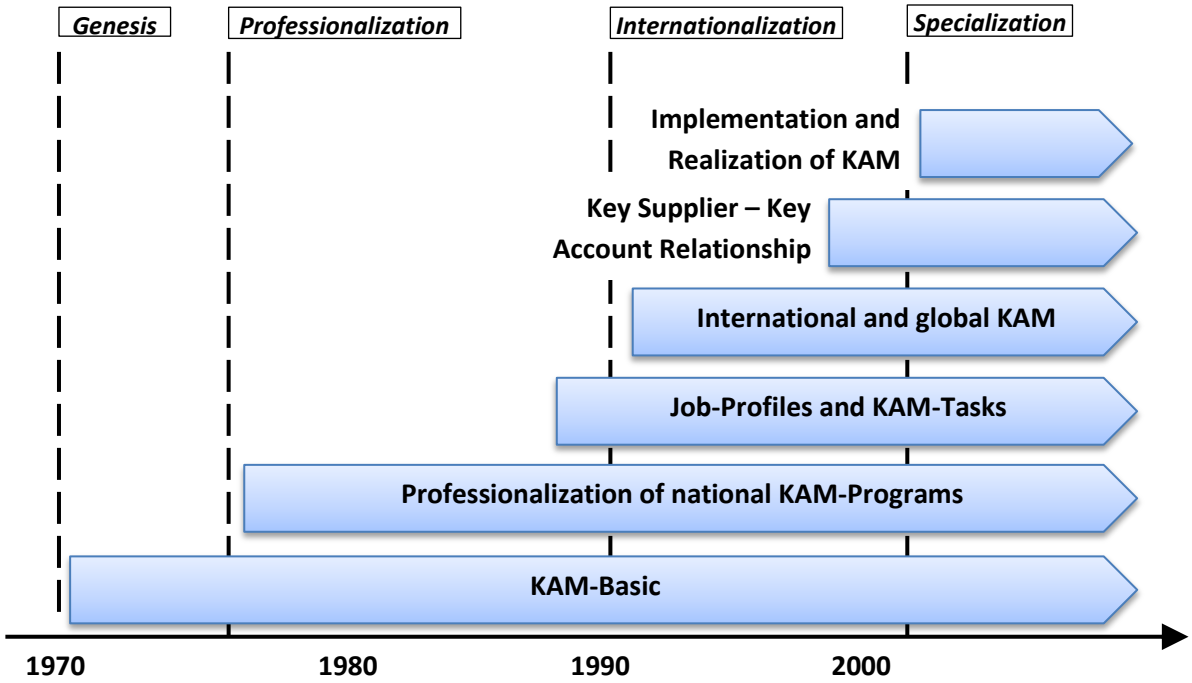

Figure 5: Development of KAM in theory and practice (source: Zupancic, 2008, pp. 325)

As described, key account management has been discussed in several academic articles (Pegram, 1972; Diller, 1989; 1992; Millman, 1994; McDonald et al. 1996; 1997). Diller (1992) describes KAM as a management concept, including both organizational and selling strategies, to achieving long-lasting customer relationships. Another definition of key account management, formulated by McDonald et al. (1997), is: An approach adopted by selling companies aimed at building a portfolio of loyal key accounts by offering them a product/service package tailored to their individual needs." Key accounts in these definitions are customers in a business-to-business setting which have been defined in terms of their strategic importance now and in the future (Diller, 1992).

Based on the different articles and studies on key account management, four elements of successful KAM can be identified (Ojasalo, 2001):

1. Identifying key accounts
2. Analyzing the key accounts
3. Selecting suitable strategies for the key accounts
4. Developing operational capabilities to build, grow, and maintain profitable and long-lasting relationships with key accounts

An effective KAM program should at least consist of these four steps. For the first step, the identification of key accounts, Campbell and Cunningham (1983) propose four criteria to determine strategic important customers: (i) sales volume; (ii) use of strategic resources; (iii) age of the relationship, the supplier's share of the customer's purchases; (iv) profitability of the customer to the supplier. The second phase, the analysis of the key accounts, should present a clear picture of the account and look into factors like the basic characteristics of the customer, the relationship history, and the level of

commitment to the relationship. Suitable strategies depend heavily on the power structure between the seller and the buyer, and on the desired relationship intensity. This will be discussed further in section 2.2. The development of operational capabilities to build, grow and maintain a long-lasting relationship with key accounts refers to the development and customization of products, services, organizational structure, information exchange and human capabilities of individuals (McDonald, 1996). Even with a succesful KAM implementation, the suitability and effectiveness depends heavily on factors as industry, product or service, organizational structure, etc. The adoption of KAM also relies heavily on the ability/willingness of individuals to build close, long-term relationships (Millmann & Wilson, 1995). Successful (key) account managers are able to adapt and use a combination of management behaviors which can be modified throughout different situations (Speakman & Ryals, 2012).

2.2.Relationship management

Since the mid-1990s, the focus in research on account management shifted towards relationship management (Zupancic, 2008), also referred to as relationship marketing. It became clear that successful account management was not only selecting key accounts and finding the suitable strategy to target these customers, but that the building and maintaining of a sustainable mutually-beneficial relationship with strategically important customers was of vital importance for the firm performance.

Like all relationships, buyer-seller relationships evolve over time, and every transaction being affects a certain relationship (Ford et al., 1986). Individual transactions are not only affected by market aspects like price and product need, but also by the relationship a customer has with a certain supplier (Szymanski, 1988). This implies that different relationships ask for a different approach and selling strategy. Millmand & Wilson (1995) discuss different relationship stages, based on relationship models by Ford (1980), Dwyer et al. (1987), Wotruba (1991) and Lamming (1993). Based on these three models, they identify six different phases in key account management : pre-KAM, early-KAM, mid-KAM, partnership KAM, synergistic KAM, and uncoupling KAM. This is shown in Table 2.

Table 2: Comparison of relational models

Ford (1980) Dwyer *et al.* (1987)	Wotruba (1991)	Lamming (1993)	Millman and Wilson (1995)
Pre-relationship awareness	Traditional	Provider	Pre-KAM
Early stage exploration	Stress	Persuader	Early-KAM
Development stage expansion	Resolved	Prospector	Mid- KAM
Long-term stage commitment	Partnership	Problem solver	Partnership KAM
Final stage institutionalization	Beyond partnership	Procreator	Synergistic KAM
			Uncoupling KAM

The different stages of KAM as defined by Millman & Wilson (1995) in the most-right column of Table 2, can be linked to the intensity of a relationship between a buyer and a seller. McDonald et al. (1997) distinguish between four stages: transaction, cooperation, and integration. For accounts to become strategically more important, the relationships with those accounts have to evolve though these stages. More on these KAM stages can be found in Appendix B. Growth in the intensity of the relationship, in other words growth in the stage of KAM, offers growth in the value created for the customer and value captured for the own organization. For key accounts which are strategically important for the organization, the goal should be to establish a high-level relationship (the two highest stages described in Table 2). In this way, a situation is created where there the value added to the customer and to the supplyer can be increased, and the turnover from the specific account can be maximized.

2.2.1. Factors of relationship management

In building, maintaining and expanding a relationship with accounts, several factors play a key role. Kracklauer, Quinn Mills & Seifert (2004) point out the importance of collaboration and the role of culture in building a collaborative customer relation, addressing both organizational cultures and regional cultures. Cultural differences have to be respected, while cultural barriers should be overcome to start building and expanding a relationship which is mutually beneficial for buyer and seller. The collaboration of the two parties is also influenced by goal congruence, both at strategic and at operational level. Goal congruence is also an antecedent of trust, which at its turn is an important antecedent of relationship commitment (Ojasalo, 2001).

Another important factor in successful relationship management is communication, to gain information about key accounts (Irwin, More, & McGrath, 1998). Communication can also help in creating goal congruence and in overcoming cultural barriers (Ojasalo, 2001). Irwin et al. (1998) argue that relational competence is crucial for relationships in innovation management and technology transfer and that communication, both formal and informal, is the most important component of that relational competence. Studies show that 'close ties' and communication are critical for innovation success, especially in high-tech environments and in the context of increasing globalization.

Next to communication, knowing who to address is crucial in gaining customer knowledge (Xu & Walton, 2005). An analysis of key accounts should therefore also focus on the question who are the important stakeholders within the customer organization. As soon as decision-makers at the customer side are identified, the suitable strategy can be defined. Studies argue that relationship management is not anymore purely a sales process, but a strategic business process which requires commitment at multiple levels at both parties (Gosselin & Bauwen, 2006). This implies that there are several counterparts in the customer organization, at multiple levels and disciplines.

The last important aspect in relationship management is the process which is used to build and maintain a relationship with a customer. Payne & Frow (1995) introduce a strategic framework for CRM, which is useful for CRM strategy and implementation. The five identified sub processes are:

- ***Strategy development process***

The strategy development process focuses both on the organization's business strategy, as well as its customer strategy. First, the business strategy of the own organization is defined. Second, the customer strategy is designed, based on the business strategy. How well the two strategies interrelate is a fundamental base for a successful CRM strategy.

- ***Value creation process***

This process transforms the outputs of the first sub process, the strategy development process into a program that delivers value to the organization. The three key parts of this value creation process are: (i) determining what value the company can provide to the customer; (ii) determining what value the company can capture from its customer (in other words: what value the customer can provide to the organization); (iii) successfully managing the value exchange between the organization and its customers with a process of co-production and co-creation, and with that maximizing the lifetime value of customer segments.

- ***Multichannel integration process***

The sub process of multichannel integration focuses on decisions about which appropriate combinations of channels an organization should use, how to ensure that customers experience positive interactions within those channels, and how to create and present a single unified view of the customer, when a certain customer interacts with more than one channel. This sub processes translate the first two relationship sub processes into value-adding activities.

- ***Information management process***

This process concerns the collection, collation, and use of customer data and information, using IT and analytical tools, to generate customer insights and translate these insights into appropriate activities in the market.

- ***Performance assessment process***

The sub process regarding performance assessment, covers the task and responsibilities which aim to ensure that the organization's strategic CRM goals are being delivered to an appropriate standard. The process establishes a basis for future improvement in CRM. The performance assessment process has two main components: (i) shareholders results, which provide a general overview of the overall relationships that drive performance; (ii) performance monitoring, which provides an overview on a more detailed level of metrics and key performance indicators.

These processes are strongly linked with the aforementioned aspects of relationship management. The information management process is a knowledge management process, which will be addressed in further detail in the next section.

2.3.Knowledge management

As has become clear in the previous sections, knowledge and information play a key role in successful relationship and (key) account management (McDonald, 1996; Payne & Frow, 1995; Diller, 1992). Especially in knowledge-intensive markets, like the high-tech industry, knowledge is essential and the

management of knowledge can become complex (Irwin, More, & McGrath, 1998). Companies which succeed in structuring their organization to maximize the utilization of knowledge are more likely to deliver products to the market with a sustained competitive advantage (Henard & McFadyen, 2006). Knowledge Management (KM) is thus an important aspect of account management, and especially of research account management, since research organizations typically deal with complex and extensive amounts of knowledge. Research account management involves transferring knowledge from within the research organization towards the business, and knowledge from within the business towards the research organization and the specific projects. In this chapter, a review of the academic literature on knowledge management is provided.

There is a growing consensus about the importance of knowledge as a starting point for competitive advantage and operational effectiveness in the current global economy, characterized by an immense presence of technology and high competition between companies. “In an economy where the only certainty is uncertainty, the only sure source of lasting competitive advantage is knowledge” (Nonaka, 1999, p. 22). An increase in the creation of more knowledge-intensive products, by either adding value to existing ones or creating entirely new revenue streams, is observed (Beers et al, 1997). R&D processes can primarily be seen as information transformation processes (Clark & Fujimoto, 1991; Moenaert & Souder, 1996), transforming information about client orders, market demands and technological advancements into product and process designs (Kerssens-Van Drongelen, De Weerd-Nederhof, & Fischer, 1996). Nonaka (1999) states that know-how is tacit, and that creating an innovation is a process of trying to convert tacit knowledge to explicit knowledge. The distinction between tacit and explicit knowledge, and the conversion into these different knowledge forms will be addressed, but it is already clear that knowledge plays a vital role in doing R&D and creating innovations. Improving R&D processes means either improving the quality of the information input, or improving the capacity of the R&D organization to transform information into valuable output (Clark & Fujimoto, 1991). A large part of the information needed for R&D and innovation is already within the company, so the challenge of KM is to identify, make available and transfer this knowledge.

Doing corporate research can be seen as a knowledge creation process, and research account management can be seen as a knowledge transfer process. In the following sections, the academic literature on knowledge creation and knowledge transfer will be discussed. First, different types of knowledge are explained. Then, knowledge creation and knowledge transfer processes will be addressed. Finally, the important aspects of knowledge management and its implications for research account management will be discussed.

2.3.1. Types of knowledge

An important distinction in knowledge can be made between explicit knowledge and tacit knowledge (Nonaka & Takeuchi, 1995). Explicit knowledge encompasses tools, techniques, and methodologies, whereas tacit knowledge comprises experience, know-how, and competencies or skills. Tacit knowledge is context-specific knowledge belonging to individuals. Explicit knowledge is more formal and codified knowledge, which can be transferred between persons in systematic ways. While tacit knowledge relies on experience and insights, explicit knowledge is carried forward through documents, images, and other systematic communication processes (Allee, 1997). Bonora and Revang (1993) argue that these two

forms of knowledge also differ regarding the kind of asset they are for an organization: tacit knowledge is a human asset, while explicit knowledge is part of an organization's resources. These different types of knowledge require different approaches in creating, documenting, and sharing, processes which are partly the responsibility of the research account manager. In the next section, different knowledge processes are described.

2.3.2. Knowledge creation and transfer

Creating knowledge is crucial for a company to stay competitive, and a research organization plays a vital role in this process. Nonaka (1999) presents four modes of knowledge conversion process: socialization, externalization, combination, and internalization. These four types of knowledge conversation and creation are based on the distinction between tacit and explicit knowledge. The sharing of tacit knowledge, which is personal knowledge, is socialization. The externalization process is the conversion of tacit knowledge to explicit knowledge, which is knowledge belonging to a team or other organizational group. The combination process then converts team knowledge to organizational knowledge. In this process, the explicit knowledge expands throughout the organization. The last form of knowledge conversion is the internalization process, in which the organizational knowledge feeds back to the individual and becomes tacit knowledge (Nonaka, 1999). The four knowledge creation processes are presented in Figure 6.

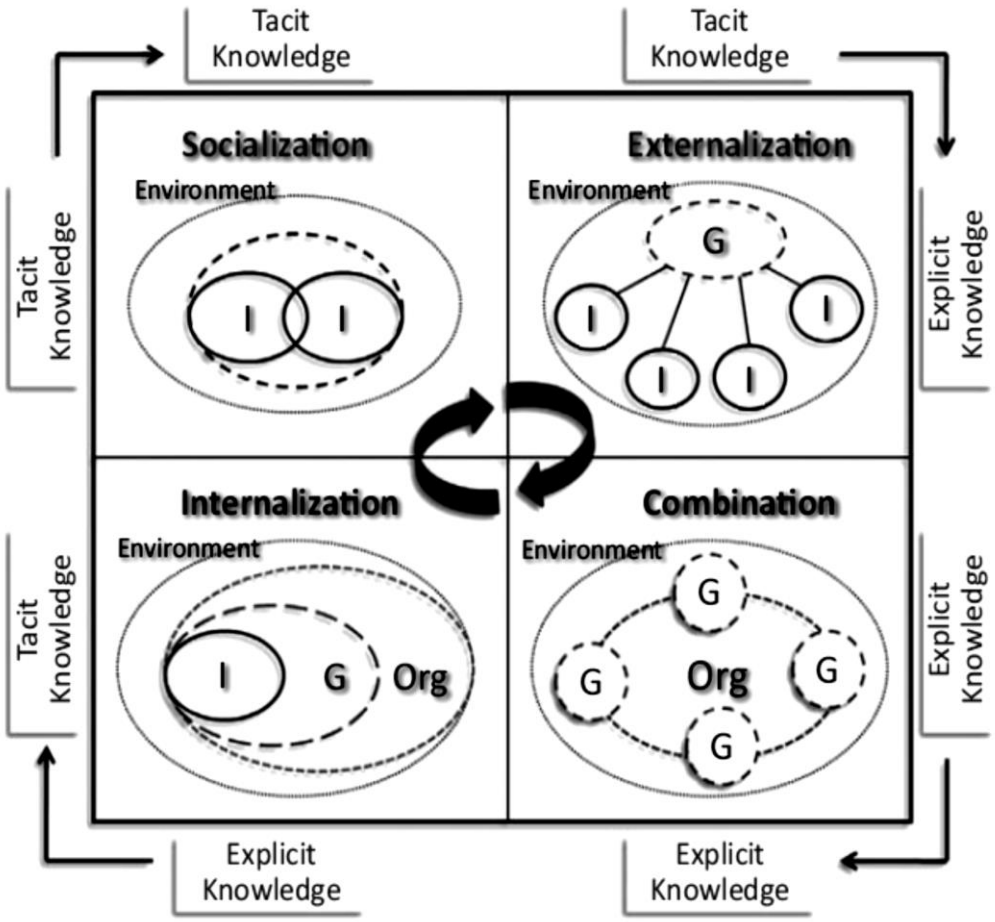

Figure 6: The SECI process (source: adapted from Nonaka & Takeuchi, 1995)

Knowledge is useless without transferring it and actually using it. Davenport and Prusak (1998) argue that if knowledge is not absorbed, it has not been transferred. It is not enough to just make knowledge available. Access to knowledge and/or sharing of knowledge is crucial, but facilitating only these factors is definitely not sufficient to ensure that knowledge will be transferred or used. Knowledge transfer involves two important parts: the use of storage and processing capacity of the human brain, as well as the input and output channels of a person's mind. To speak of the actual transferring of knowledge, a person who receives knowledge should be able to understand it well enough to act on it (Jensen & Meckling, 1996). Leonard (1997) states that the degree of transfer depends on a number of factors. These factors include:

- How tacit or how structured the knowledge is
- How much time workers have to transfer what they know
- What kinds of mechanisms have been designed to support a learning period

Knowledge transfer is thus a complex and challenging process, and an important aspect of knowledge management task, and therefore also an important part of research account management. The next sections show a more strategic approach of KM, and subsequently applies this to RAM.

2.3.3. Knowledge Management models

Organizations need to adopt knowledge management strategies and techniques in order to retain their competitive advantage (Neef, 1997). Knowledge management tries to support the critical issues of organizational adaptation, survival, and competence in the face of increasingly changing and dynamic environment. KM uses the information processing capacities of technology and the creative and innovative capacity of human beings, and tries to combine to improve the performance of an organization or company. It focuses on how knowledge is acquired, created, stored, and utilized within the organization (Myers, 1996).

Several researchers have identified key aspects of effective knowledge management. Ambrecht, Chapas et al. (2001) propose a KM model for Research & Development, in which they model how R&D organizations should manage and use their knowledge flow. The model is presented in Figure 7.

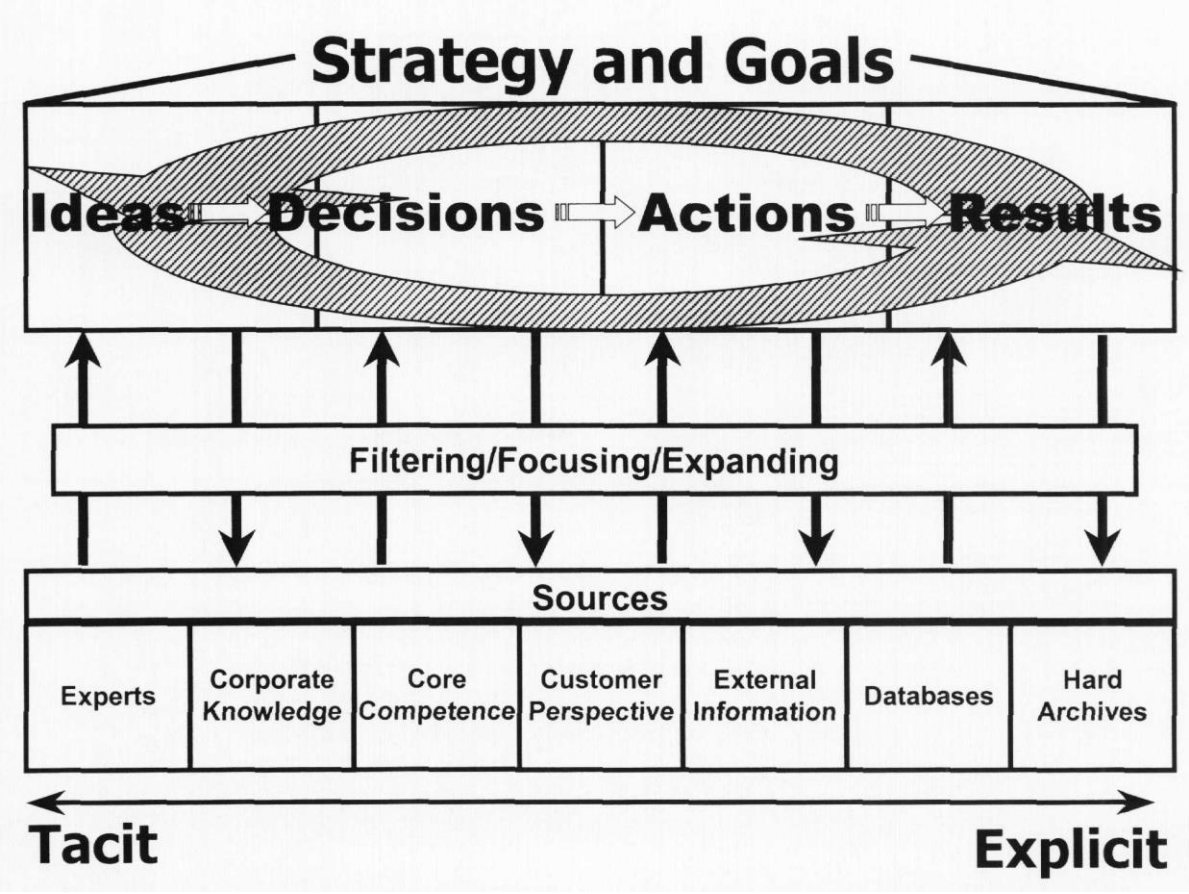

Figure 7: KM model for R&D (source: Armbrecht, Chapas et al, 2001, pp. 32)

The model points out that knowledge flows are non-linear and that the R&D process continuously seeks, uses and produces knowledge. The study point out three important enablers of KM, which determine if

the implementation of a KM strategy based on the framework proposed in Figure 7 will be effective. These three enablers are:

- Culture
- Infrastructure
- IT Tools and Standards

The authors address that a company's culture and structure are of critical importance in KM success, with choice of IT tools of secondary importance (Albrecht, Chapas et al., 2001). Suh, Song & Kwak (2004) present a KM model for R&D organizations, which can support their innovations. This model distinguishes five enablers of KM:

- IT Systems
- Rule & motivation
- Change management
- Formal supporting organization
- Informal supporting organization

These enablers of KM are comparable with the enablers *culture, infrastructure,* and *IT Tools*, as presented in the previous model, since *rule & motivation and change management* are linked to the organizational culture, and a *formal and informal supporting organization* are both supported by an open organizational culture and an effective structure. Malhotra (2004) also names organizational structure and information sharing culture as important enablers of successful Knowledge Management Systems (KMS). In the next sections, the three enablers of KM found in academic literature, will be explained in further detail. To ensure a complete coverage of the KM concept, and with that of RAM, the different aspects of the three enablers of KM will be addressed.

2.3.3.1. Culture

Culture change is essential to the success of KM. According to several academics, developing a culture that values sharing and creating knowledge is the most important issue in KM. Continuous improvement requires a commitment to learning (Garvin, 1999). Allee (1997) refers to the organizational environment and culture as the garden in which knowledge grows. Everyone needs to create, share, and use knowledge in their daily routines. The human resource function of an organization can play a vital role to create a knowledge-sharing culture and facilitate the creation, sharing and use of knowledge (Armbrecht, Chapas, et al., 2001). Coaching and mentoring will increase knowledge transfer and help to make tacit knowledge explicit. It is the knowledge management team's task to constantly support the integrity of beliefs and values concerning knowledge (Allee, 1997). There is a widely recognized need to encourage and enable individuals to interact, collaborate, teach and learn from each other, to create a culture in which the collective knowledge of an organization is more valuable than the sum of individual knowledge.

2.3.3.2. Infrastructure

A second enabler of effective KM is the organizational infrastructure. There is a risk of the organizational structure being a disabler of KM, when a silo, hierarchic or other structure where teams or departments are too isolated causes knowledge to be isolated in individuals, teams or departments. Flat, open, fluid organizational structures open a much better environment for the creation, use and sharing of knowledge (Ambrecht, Chapas, et al., 2001). Meetings, seminars or other activities which encourage knowledge sharing can also be part of a KM-enabling infrastructure.

Another challenge in KM is creating a structure is which crucial knowledge is captured when people are leaving the organization or company. This problem was already difficult enough when retirement and death were the most common reasons for employees to leave the organization, but the labor mobility of (knowledge) workers has increased significantly, making it even more important to capture the knowledge of leaving employees (Ambrecht, Chapas, et al., 2001). Transfer meetings for tacit knowledge and thorough and efficient documentation of explicit knowledge should therefore be part of the KM-enabling structure.

The establishment of a knowledge management team can facilitate an open structure which enables knowledge sharing. This team is usually organized informally, with a single manager and a number of disciplines from the (R&D) organization (Kerssens-Van Drongelen, De Weerd-Nederhof, & Fischer, 1996). Nonaka (1999) addresses the importance of first-level managers in a knowledge-based organization. He argues that these manager are the most important agents of knowledge management in an organization, since they are best positioned to combine abstract strategic information and action-oriented operational information and create new knowledge (Nonaka, 1999).

2.3.3.3. Technology

Technology is an essential part of KM. Many regard KM as the implementation of IT tools for the capturing and sharing of knowledge. However, while technology is clearly a part of knowledge management, knowledge management is much more than technology, as Davenport & Prusak (1998) argue. While knowledge management is a relatively new topic in academic and organizational research, the use of technology to capture and manipulate knowledge has existed for decades (Davenport & Prusak, 1998). The goal of knowledge technology is to take knowledge that exists in humans and make it widely available throughout an organization. In pursuing that goal, knowledge tools can be divided into three general categories: generation, codification, and transfer of knowledge. The application of knowledge-management tools must go beyond data and information management (Ruggles, 1997). In R&D organizations, knowledge management technology often also refers to the standardization of knowledge and the creation and documentation of patents (Ambrecht, Chapas, et al., 2001).

Ruggles (1997) points out that users employ knowledge technologies in an interactive and iterative manner. Therefore, the effectiveness of knowledge technologies is highly independent on the role of people. The level of knowledge required to use a particular technology successfully and the time required to find a knowledge management solution in a particular business application of a tool, define the success and effectiveness of an implemented IT tool.

Technology is thus an important factor in making knowledge available for people in the organization, but the actual transfer of knowledge and the creation and sharing of new knowledge is mainly dependent on the culture and the infrastructure in the organization. It has become clear that KM is an important aspect of RAM. In the next section, academic literature on innovation management and corporate research will be discussed. This enables placing the research on account management, relationship management and knowledge management in the perspective of a corporate research center, and thus to further clarify the concept of RAM.

2.4.Innovation Management

The increasing attention for innovation in academic and organizational literature, as described in the introduction of this report, indicates the growing awareness of innovation as a crucial factor in company success. The management of (technological) innovation is regarded as one of the most challenging in current business. In the vast majority of business sectors, if firms do not innovate, their competitors will and the firm will be put out of business since they will lose their competitive advantage (Dodgson, Gann, & Salter, 2008).

To structure and manage the innovation process, several techniques have been suggested. These techniques aim to increase innovativeness of projects and make sure that new products or services will be successful. Structuring the process, as well as evaluation and assessment of R&D efforts, can help companies in delivering innovations to the market. A stage-gate new product process helps a company to select the right ideas and to make decisions during the new product development (NPD) process, e.g. whether to carry on the NPD project (Cooper, 1994). The stage-gate model is presented Figure 8.

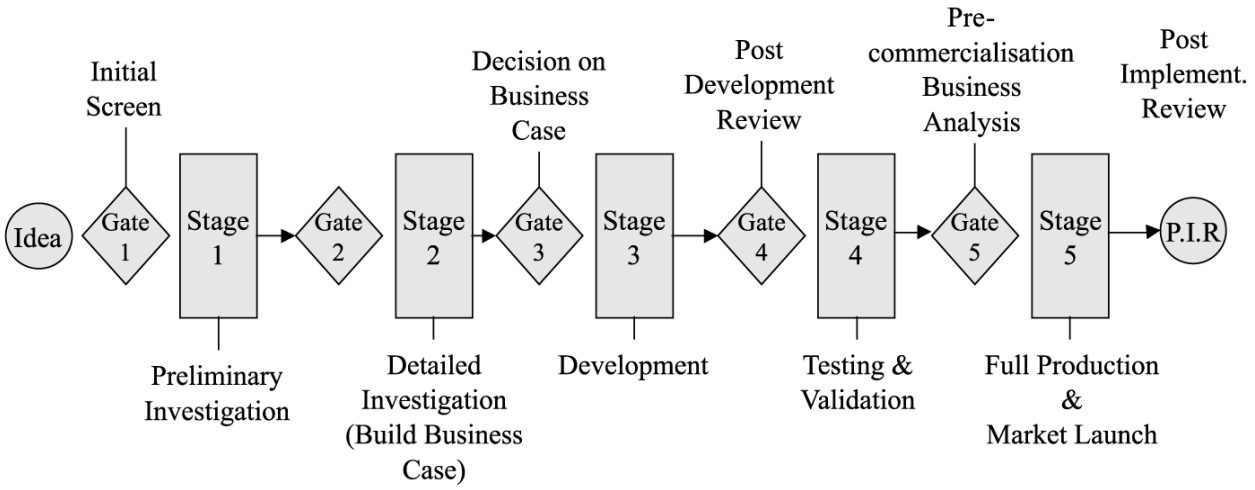

Figure 8: A stage-gate new product process (source: Cooper, 1994, pp. 5)

For large corporations, their innovation process consists of multiple NPD projects. The stage gate model can be useful to select the best ideas and to end projects prematurely to prevent an organization to keep investing in projects which will not be profitable in the market. Portfolio management for product innovation – picking the right set of NPD projects – is critical to new product success (Cooper, Edgett, &

Kleinschmidt, 2001). Portfolio management theories include techniques such as financial models, business strategy models, bubble diagrams and scoring models.

New ideas which are turned into NPD projects feed the innovation funnel of an organization. The innovation funnel is a graphical representation of the set of projects an organization is executing, and the phase in which the projects are in. The model on the left side in Figure 9 shows an example a tradition innovation funnel. Innovation used to be a closed process: ideas from within the firm were turned into research projects and then into NPD projects, and subsequently they were brought to the market within the boundaries of the own firm. Chesbrough (2003) introduced the concept of open innovation: this theory suggests that firms can and should use internal ideas as well as external ideas, and internal and external paths to market, as firms look to advance their technology. The differences between closed and open innovation are shown graphically in Figure 9.

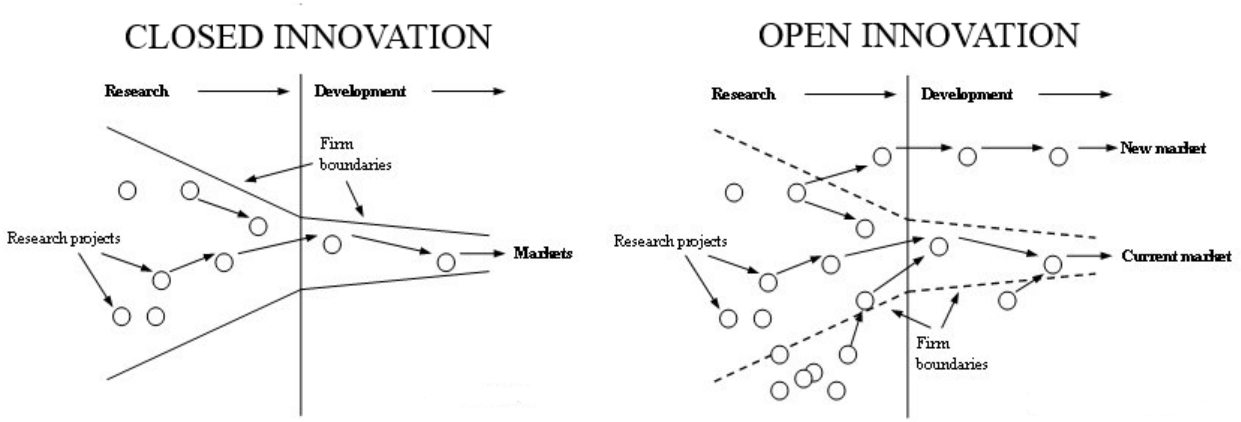

Figure 9: Closed vs. Open Innovation (source: Chesbrough, 2003)

Different sources of innovation and different paths to commercialize research projects will be discussed in the next paragraph, in which corporate research and R&D will be discussed.

2.4.1. Corporate research

There are several possible sources of innovation for a company. Although the term open innovation is a relatively young concept in innovation literature, the idea of looking elsewhere for innovative ideas was already observed in the 1960s (Chesbrough, 2003). The results of the European Community Innovation Survey (Dodgson, Gann, & Salter, 2008) show the most important sources of innovation for firms. These sources include the enterprise itself, clients and customers, suppliers, competitors, other enterprises within the enterprise group, and conferences. Firms use several sources to get innovative ideas for their innovation process, but internal sources both within the own business and within the enterprise group are still very important sources. Block & Keller (2009) point out that the role of R&D departments has been decreasing, but that they are still an important source of ideas and innovation, especially for high-tech firms. That is why these firms are still investing heavily in research & development. R&D is for these firms a major source of rejuvenation and growth, and provides an important contribution to innovation

and competitive advantage (Dogdson et al., 2008). Firms undertake R&D for a variety of reasons, such as:

- Supporting existing business activities;
- Establishing new business developments;
- Selling R&D services to other companies;
- Facilitating related business diversification;
- Helping predict future technological trends.

Whereas R&D in smaller companies is usually simple and straightforward (one R&D facility where all research and development for the whole company is done), larger companies have to make some strategic decisions regarding their R&D. A key structural question for large, multidivisional corporations is the degree to which their research activities are centralized or decentralized. Basically, there are two extreme types of structures: completely centralized (one central R&D facility serving all business units), or completely decentralized (every business unit has its own R&D facility). The degree of decentralization depends on several factors, such as activities undertaken, scale of research, need for functional integration, and recruitment, labour and other cost considerations (Dodgson et al., 2008). For more fundamental research which is likely to have long-term implications for the firm, a centralized research facility with strong links with the headquarters is advantageous. Large firms often use a mixed model of centralized and decentralized research. An extensive survey among multinational technology firms, which differ a lot in technology, markets, strategic approach to research investment, and the research they are doing, revealed that these firms show a number of similarities in their research activities (Bosomworth & Sage, 1995). The study shows that organizations may differ in structure, (autonomous facility per division, one central facility, corporate central technology advisory group for R&D departments), they all make use of research executives or a similar organizational function to transfer the research projects or their results to the business. Only 10% of the firms use the transfer of research personnel as standard method to transfer research projects or their results to the business unit. Another important outcome of the study is that a formal transfer process increases the transfer time significantly.

Bosomworth & Sage (1995) also address the link between corporate strategy and the central research facility. Central research activities are driven by a corporate need and culture and the clarity of corporate objectives is visible in central research. Central research facilities play a key role in fundamental basic research, and are aimed at generating knowledge & options, understanding theory, and help predict future technological and societal trends. Therefore, central research plays an important role in the fuzzy frond end of innovation (FFE). The fuzzy front end of innovation is the phase in the NPD process prior to the first screening of a new product idea. The FFE is the root of success for firms involved with discontinuous new product innovation (Reid & De Brentani, 2004). While approaches to handling the fuzzy front end have been suggested in the literature, it has become clear that it is hard to manage decision in this early stage of the innovation process, especially for radical new product innovations. Researchers and scientists who are undertaking basic and fundamental research, which is typically intended for long-term innovations, can play a vital role in this front end innovation (FEI), by

ensuring that their research results, such as research papers & patents, form an important input for the innovation process (Dogdson et al., 2003).

2.4.2. Research-Marketing interface

One of the biggest challenges in innovation management, is the systematic integration of marketing and R&D, to increase the success of new products. As has become clear in the introduction and in this literature review, (product) innovation is a multidisciplinary process (Gupta, Raj, & Wilemon, 1986). This collaboration and integration of the R&D and marketing function for innovation purposes, is referred to as the Research-Marketing interface, or R&D-Marketing or Research-Business interface.

Although the integration of marketing with R&D is widely recognized as an important factor for a new product's success, studies show that there is an optimum in the integration and that more integration does not necessarily increase the outcome of the innovation process (Leenders & Wierenga, 2008). The effect of the interaction between integration and new product development resources is stronger for companies with a narrow strategic scope. Companies that do not have specific target markets and that spread their efforts over many market segments and product, will experience fewer benefits from increased integration than companies that compete in fewer segments with a selected number of products and that on a few target markets (Leenders & Wierenga, 2008). The interaction between R&D and marketing functions of an organization is also linked to the impulse by which an innovation is triggered. Generally, there are two basic approaches: (i) market pull, or (ii) technology push (Brem & Voigt, 2009). Market pull indicates the situation where the source of an innovation is an inadequate satisfaction of customer needs, which results in new demands for problem-solving. Technology push on the other hand, indicates an innovation which is an outcome of (internal or external) research; the goal is to make commercial use of technological know-how. Technology push typically results in radical innovations and creative destruction (Schumpeter, 1934), while a market pull approach results in incremental innovations and in replacements of products (Walsh, Kirchhoff, & Newbert, 2002). The challenge for large technological firms is to find the ideal balance between the two approaches in their front end innovation. A pure focus on technology push may lead to a situation where the research organization is organizationally and location-wise separated from the rest of the corporation, focusing fully on development of new technologies. This is referred to as ‘lab in the woods approach’, and the absence of marketing input in the execution of research projects can lead to reinventions of the wheel, to complex technologies and thus to ineffective research (Brem & Voigt, 2009). On the other hand, concentrating too much on a strong market pull tends to result in the ‘face-lifting’ of current products and services, without any real innovations. This may result in competitive threats based on new or improved technologies (Bleicher, 1995) developed elsewhere. Technology roadmaps are a useful tool in aligning R&D activities with business and marketing strategy. These roadmaps are a framework used for assessing and planning potential technological developments. They increase agreements about NPD projects and clarify potential outcomes of these projects, and therefore improve the research organization’s innovation process (McCarthy, Haley, & Dixon, 2001).

2.5.Account management in corporate research

This literature review has provided an overview of the theoretical concepts (key account) management, relationship management and knowledge management, and showed that research account management is a multidisciplinary field which on one hand has several similarities with the traditional account management theories, but on the other hand also several differences due to the dynamic environment of corporate organizations. Besides KAM, RM and KM, the literature review also gave a short overview of relevant aspects from innovation management literature, which make the difference easier to understand and can help to get a clearer view of the RAM process and responsibilities of the research account manager. The results from the literature review have been translated into a conceptual model, which described the newly introduced topic research account management. This model will be discussed in the next section.

2.5.1. Conceptual model

The conceptual model of this research project is shown in Figure 10. It shows the two important aspects relationship management and knowledge management, in which RM is defined by its four aspects: culture, process, communication and stakeholders, while KM is supported by its three enablers: culture, infrastructure and technology, therefore depicted as three separate blocks in the model.

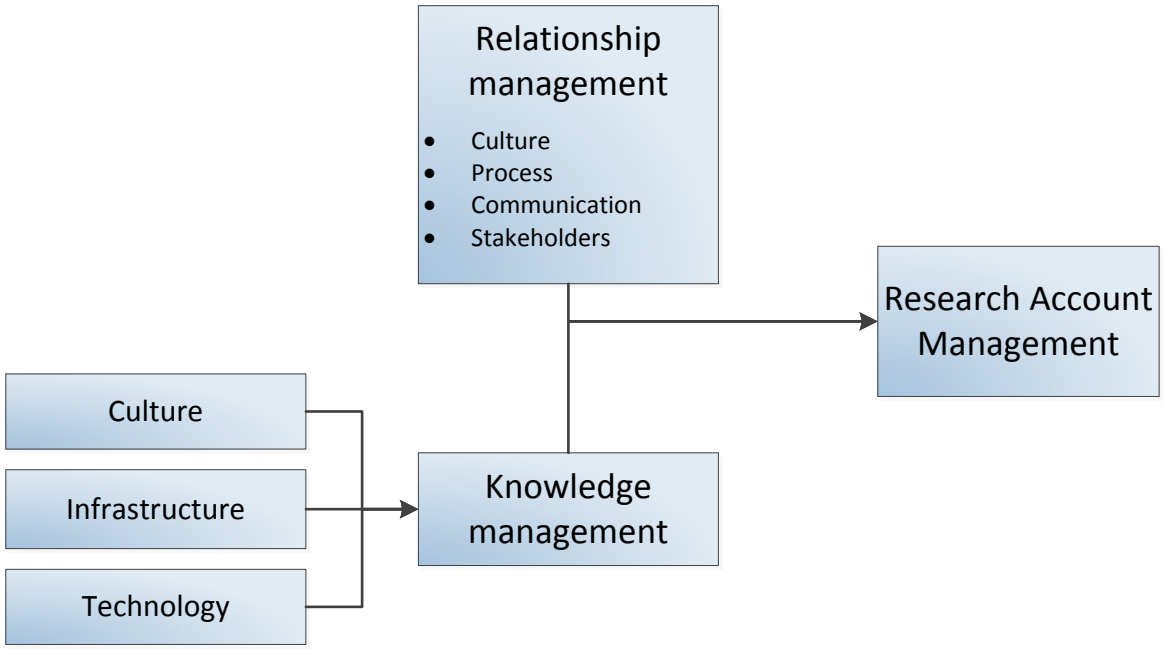

Figure 10: Conceptual Model

The overall goal of this project is thus to examine how research account management is executed, how it can be improved, and what role relationship management and Knowledge Management play in this potential improvement. The conceptual model forms the basis for the further research of this study. The research design and methodology for which this conceptual model was the starting point, will be described in Chapter 3.

3. Methodology

This chapter will discuss the methodology which is used in this project. The research methodology is designed such, that the study results in an answer to the research questions formulated in the first chapter. The next section describes the type of research of this project and will provide an overview of the research methodology. Subsequently, the data collection methods which have been used to answer the research questions are described. Finally, the quality of the study is discussed by addressing the validity, controllability and reliability of the research.

3.1. Type of research

As described in the Literature Review and the Introduction chapters, research account management is an underexposed topic in current academic literature, both since it is only applicable to a small number of large (technology) firms with centralized research organizations/facilities, and since corporate research centers only started to implement a more customer-oriented strategy in the last decade. Therefore, the type of research in this project is exploratory (Van Aken, Berends, & Van der Bij, 2007). The study explores at Philips Research the process of RAM and identifies aspects of RAM and underlying relations which can improve research account management. Potential indicators of optimal RAM are identified and lead to designs for improvement, but are not theoretically analyzed.

This thesis offers an in-depth orientation on the newly introduced topic of research account management, and can be a starting point for further research in this field. This research could then be more descriptive in looking for evidence for important factors in the RAM process. A study which would include multiple corporate research organizations could provide causal research which could gain a thorough theoretical analysis of these identified factors of RAM. More on these directions for further research is indicated in Chapter 7.

3.2. Research methodology

The methodology describes how the theoretical concepts will be applied, and how data will be collected to answer the research question and sub-questions. Organizational research should be both rigorous and a contribution to the current state of the theoretical field, while the research results should at the same time be relevant and offer a significant value to the specific organization and to organizations in general (Vermeulen, 2005).

The research methodology of this project is built on the Business Problem Solving (BPS) project methodology, introduced by Van Aken et al. (2007). This methodology offers a research approach to analyze and improve the performance of a business system, department or a company on one or more criteria. This BPS methodology follows the problem-solving cycle as elaborated in the regulative cycle by Van Strien (1997). This cycle has five basic process steps: (i) problem definition; (ii) analysis and diagnosis; (iii) plan of action; (iv) intervention; (v) evaluation. The regulative cycle is shown in Figure 11.

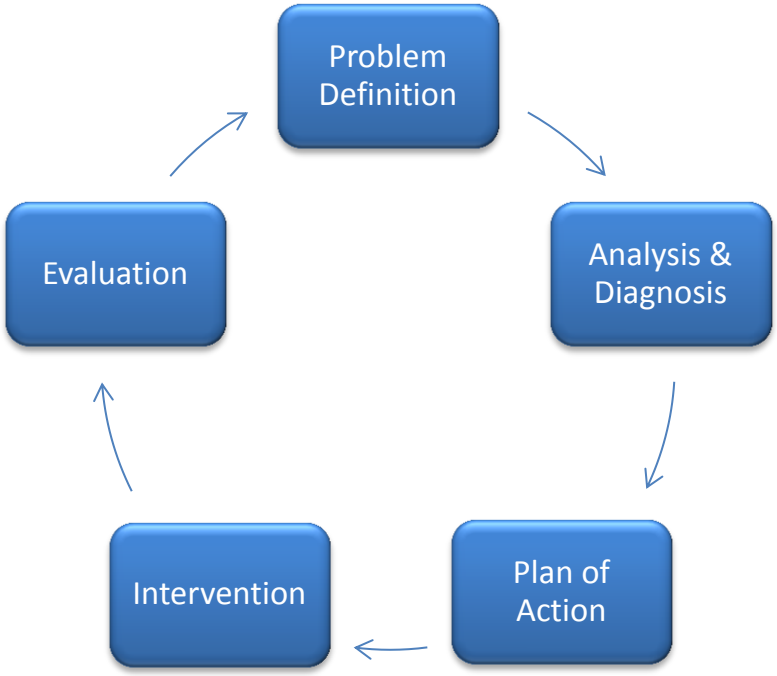

Figure 11: Regulative Cycle by Van Strien (1997) (source: Van Aken et al., 2007, pp. 13)

From the organizational perspective, Business Problem Solving consists of three important parts: a design part, a change part, and a learning part. In the design part, a redesign of the business system or process is made. This corresponds with the first three steps of the regulative cycle. In the change part, the redesign is realized through changes in organizational processes and roles, which corresponds with step 4 of the regulative cycle. The last part, the learning, defines the phase in which the organization learns to realize the intended performance improvement. This corresponds with step 5, Evaluation, in the regulative cycle. The research project presented in this report covers the first three steps completely and results in a redesign which Philips Research (and possible other research organizations) can use to improve their performance. The Problem Definition step was presented in Chapter 1, with the formulation of a problem statement and the research questions. The Analysis & Diagnosis part in this project consists of both a theoretical analysis of the current academic literature, as well as an empirical analysis of research account management at corporate research centers. These two analyses are described in Chapter 2, 4, and 5. The Plan of Action follows from these results and is presented in Chapter 6. The Conclusion of the study in Chapter 7 offers a starting point for both the Intervention and Evaluation step, as well as suggestions of further research and thus for the start of new cycle.

Since research account management (RAM) is a multidisciplinary function, this research project requires a thorough understanding of the different disciplines or aspects of RAM and the theoretical concepts which correspond with these. The Literature Review presented in the previous chapter gave an in-depth insight in the different theoretical concepts related to research account management and resulted in a Conceptual Model for RAM. This conceptual model is an important guideline for the research project, and will also play an essential role in the data collection. The research methodology, the different sources of data and the relations between those, are shown graphically in Figure 12. The Literature

Review and the Conceptual Model which was derived from literature are described in Chapter 2. The other parts of the research methodology will be discussed in the next sections.

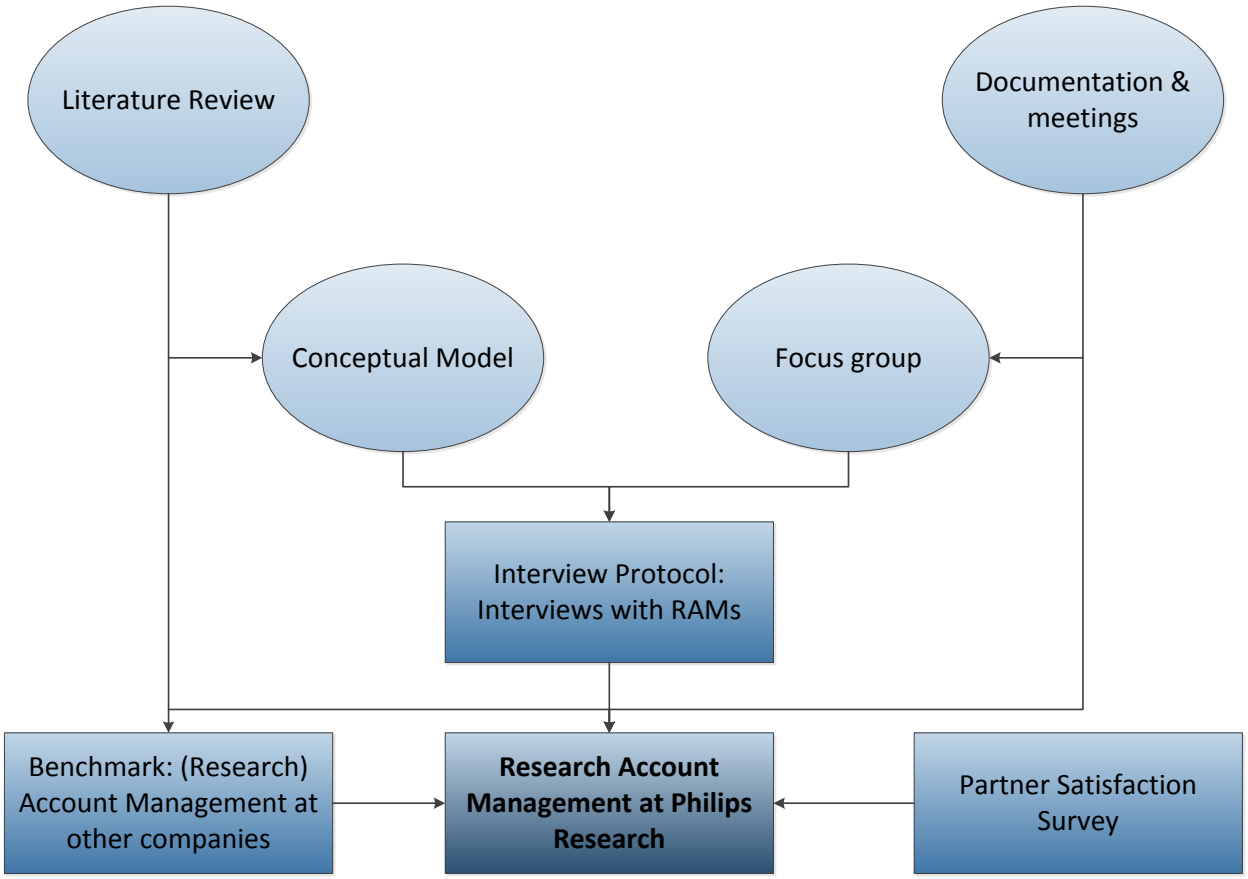

Figure 12: Research methodology

3.2.1. Documentation

Since Philips Research introduced account management, several documents, presentations, interviews etc. have been made and reported. These documents were used for the preliminary analysis of the problem, as well as for the description of the current starting point (the IST situation), from where improvements can be recommended for optimization of research account management (the SOLL situation). Documentation about the introduction and history of account management within the organization are also useful to ensure alignment between the research strategy, the role of RAM in this strategy and the proposed redesign.

Next to studying current documentation, also a number of meetings were held with important stakeholders of the account management key process. These meetings created a better understanding of the process and the challenges, and provided input for the Focus Group and the Interview Protocol. These will be discussed in the next sections.

3.2.2. Focus Group

To develop an interview protocol, a focus group is formed based on preliminary analysis. The focus group consists of a confined number of account managers. Focus groups are an effective way to get a clear view on a specific discipline within an organization (Coule, 2013). The focus group has been observed in the execution of their account management and underwent an unstructured interview. Some of the questions for the final interview protocol can be tested with the focus group, to ensure that the interview questions will result in valuable and useful results. The results from the focus group analysis form the input for the interview protocol.

3.2.3. Interviews

Key aspect of the project is interviewing the people who are currently performing the account management function in the Research organization of Philips. Because of the richness of information, interviews are preferable over a questionnaire or other data collection methods (Kvale, 1996). Since this research project is an exploratory study, interviews form the ideal method to get a complete picture of the current state of research account management, while at the same time it helps exploring possible directions for improvements. Interviews are one of the main methods for data collection for Business Problem Solving projects (Van Aken, Berends, & Van der Bij, 2007). The most used approach, which is also used in this project, is a semi-structured interview approach, using a list of specific questions but leaving sufficient room for additional information. A semi-structured interview can provide a complete and uniform analysis of the current account managers and accounts, while at the same time this form of data collection leaves room for the interviewees to give their own input which may result in unknown problems or unexpected fields of improvement. Interviews are in this case the best way to collect data about RAM, and are preferred over questionnaires or observations. Questionnaires might gain insufficient new insights on the relatively new topic of RAM and can leave misunderstandings for the researchers. Observations on the other hand are not suitable for the analysis of research account management, since it is a non-delimited process which is complex and does not happen at fixed moments and time-intervals. The interviews are the primary source of data for the analysis of the current research account management. A disadvantage of interviews is that the richness of information can also lead to incoherent data, due to personal language, differences in interpretation and terminology. Nevertheless, interviews can be a very useful method for qualitative, but also quantitative data collection in management research (Kvale, 1996).

As Van Aken et al. (2007) pointed out, preparation is key for the effective use of interviews as a data collection method. Therefore, an interview protocol is developed for the interviews. The interview protocol covers the different concepts introduced in the conceptual model. The questions aim to give a complete analysis of the current state of research account management within the organization, and serve as a base for designing further improvements. The questions are divided into four categories: general, relationships, knowledge, and account management. The general questions form an introduction and provide basic information for the analysis. The relationship and knowledge categories focus on the two concepts which underlie research account management. Finally, the account management questions examine the goal of RAM and look at RAM on a higher level. They are also

designed to investigate possible directions for improvement. The interview protocol is shown in Appendix A – Interview Protocol.

The interview is held with all the account managers or similar functions working for the Research organization. This involves people at different levels in the organization and with a different intensity of performing the RAM function, either part-time or full-time. This ensures a complete analysis of the current account management, which is one of the main goals of the project. For the elaborate semi-structured interviews 27 people in the organization have been approached to participate, of whom 25 people have actually participated and were interviewed about RAM. Interviews usually took one hour, but some of the interviews required a second meeting or a follow-up by e-mail to completely fill in all the answers. All the interviews were held and documented by the researcher. During the interview, the employee is also asked to plot the state of their account(s) in two graphs. The first graph looks at the maturity of the account management, and defines five levels of strategic account management: transaction; cooperation; partnership; integration; strategic account management (Goedegebuure, 2010). This is an exercise which has been done before for the accounts in Philips Research. The second graph is a matrix which examines the degree to which an organizational unit, in this case an account, succeeds in capturing value for the own organization, and in adding value for the customer. These two capabilities are strategic drivers of performance, and only if a business succeeds in both capturing value and adding value for the customer, then it can sustain successful performance (Hawawini, Subramanian, & Verdin, 2004). These two graphs are shown in Appendix B.

3.2.4. Partner Satisfaction Surveys

Every year, Philips Research conducts a Partner Satisfaction Survey (PSS) among its business partners, both within the Philips Sectors as external innovation partners. Partners are asked to rate Philips Research on 10 important aspects, such as creativity, partnership and alignment. NPS scores are gathered from all the partners, and data are aggregated on Program and organizational level. The specific results from this survey are confidential, and cannot be used in this report. However, the key takeaways from this PSS can be used to create an overview of what the customers, or better: the innovation partners of Philips Research, want to see in the innovation projects and in the relationship they have.

With these general results from the survey, triangulation can be applied. Results from the interviews and from the satisfaction surveys that lead to the same conclusions and recommendations support each other and help creating a more rigorous and evidence-based solution to the problem.

3.2.5. Benchmark

After the analysis of RAM at Philips Research is finished, a benchmark is executed to verify and reflect the results of the project with (research) account management at other companies. This benchmark will be done in two ways: on one hand it will be based on what can be found in literature about account management (or similar roles/functions) in central research organizations of large companies; on the other hand it will be based on a similar analysis to the research based on input from other companies which have centralized their research organization, or who have a similar structure which requires a

similar account management process to build and maintain a relationship with their innovation partners/businesses.

The benchmark analysis examines the concepts which are presented in the conceptual models: relationship management, knowledge management and account management. A number of questions from the interview protocol are also discussed in the benchmark analysis meetings, but the analysis does not go into the same level of detail as the analysis at Philips Research. Nevertheless, useful insights on (research) account management are collected in the benchmark analysis.

The companies with which the benchmark analysis is performed, are:

- Philips Innovation services;
- COMPANY X (multinational in engineering industry);
- COMPANY Z (management consulting industry).

As described in the previous sections, the analysis of this project is for a large part based on analyzing and aggregating the results of the interviews. Part of this is the identification of best-practices from account managers, which can help to design improvements for research account management. The two other data sets, the benchmark analysis and the Partner Satisfaction Surveys, will be used to reflect on the data gained from the interviews. In this way, an evidence-based redesign for RAM can be drafted, which is both useful for Philips Research as for other companies with central corporate research facilities.

3.3.Quality

To discuss the quality of this study, the controllability, reliability and validity of the performed research are discussed. These criteria are the most important research-oriented quality criteria (Yin, 1994). Consideration of these criteria in setting up a research methodology enable the aim of research to strive after inter-subjective agreement (Swanborn, 1996) and to yield conclusions which are true.

3.3.1. Controllability

Controllability is the first requirement for reaching inter-subjective agreement on the results of the research project, and is a prerequisite for the evaluation of validity and reliability. In this chapter, the research methodology is described in full openness and detail, to provide a clear insight on how the project is executed and the data are collected. As discussed, the data used for this research project are from documentation and customer satisfactions surveys from the research organization and most importantly from the interviews with the research account managers. The interview protocol used for the data collection is included in Appendix A, and can be used to control the current results and to do the same study in the future, either at Philips Research or at another (corporate) research organization. Respondents for this interview are selected based on their function. All Research account managers of the organization were contacted to participate in the study, and with a response rate of 92% the group which was interviewed is representative since almost all the people currently doing RAM are included in the study. The interviews are reported and yielded a combined data set of all these separate reports. This data set is used for this study, but also handed over to the organization to use for further analysis of

the RAM process and for potential new studies in the future. A possible problem with the controllability of the data used in this research is that both the documentation and satisfaction surveys, as the list of respondents and the interview reports are confidential information, and are therefore not included in this report. The results of the interviews are only presented in aggregation and already analyzed, to prevent the revealing of confidential information from Philips Research. This makes it hard to control the data used for the conclusions. However, using data reduction tables the results of the interviews are still visible, and the reports explains clearly how the results lead to the conclusions drawn at the end of the report.

3.3.2. Reliability

The research methodology is designed such that the results are as independent as possible of the particular characteristics of the current study, and can be replicated in other studies in the future. Swanborn (1996) identifies four possible sources of bias: the instrument, the researcher, the respondents and the situation.

The instrument reliability depends on the set-up of the interview. By the use of the focus group, in which a more open conversation and an observation of the research account manager's job is held, the it is ensured that the interview protocol and with that the results from the interview are in line with the actual situation. To further increase the validity of the research project, triangulation is used, as described in the previous section. Triangulation, the combination of multiple sources of evidence, is well suited for BPS projects (Yin, 1994). Next to the interviews, results of customer satisfaction surveys are available, which obtain data from the customer's viewpoint on the account manager's role. The third important source of data is the existing documentation on the topic which is used in the organization.

For the reliability of the researcher, it is an advantage that he did not have any relation or history with the research organization at Philips and started the project from scratch. This allowed him to design and execute the study and interviews without any subjectivity and prejudices. The researcher has strived to stick closely to the interview protocol, and in doing so to reach a level of standardization of results (Yin, 1994). He tried to leave ideas and opinions about the topic of RAM gained from the literature review, documentation analysis and previous interviews out of the interviews. A disadvantage regarding researcher reliability is that all the interviews are held by the student researcher, so unfortunately the inter-rater reliability (Swanborn, 1996) cannot be assessed.

The high response rate of 92% of the complete population of research account managers has a good influence on the reliability of respondents. This response rate indicates that the results are very representative and can be used to get an inter-subjective view on RAM by combining perspectives of all the research account managers. However, from the perspective of the total research organization the respondent reliability could have been higher if also people who are not doing RAM themselves, but are directly or indirectly involved in the process would have been interviewed for this study. This is partly covered with the inclusion of the results from the customer satisfaction surveys, in which the view from the customer side on RAM is used for the conclusions. Future research might consider to take this into account when designing a new study, and can increase respondent reliability by involving other functions in the research organization in the interview.

Although the interview protocol provides a tool to cover all the topics related to RAM, the answers to the interview questions may depend on the situation. Performing the same research at a different point in time may result in different results from the interviews, since research account managers may be led by the issues of the day in their answers. The results might be heavily depending on current problems in the organization and the challenges which the Research organization is facing at this moment in time. In the interview results, answers led by recent negative experiences are identified and not used to draw strong conclusions. Because of the student's presence for several months in the research organization, he has become an insider and was able to recognize what were unique and what were common circumstances. This has a positive impact on the situation reliability of the study.

By covering all the potential sources of bias, the reliability is increased. The design for improvements and conclusion of the project are reliable and also focusing on the long-term. To increase the rigor of the academic result of the project, and also to make sure that the design is a sustainable solution for the problem, the result of the project is such that it is a general and sustainable answer to the research question and sub-questions.

3.3.3. Validity

When conducting qualitative research in general, and interviews in specific, it is always important to consider validity (Swanborn, 1996). The semi-structured interviews gain data which may not represent the reality correctly. To discuss the validity of this research project, the construct validity, the internal validity, and the external validity will be discussed.

3.3.3.1. Construct validity

The construct validity, the extent to which a measuring instrument measures what is intended to measure (Swanborn, 1996), of this research project is defined by the extent to which the results of the study actually correspond with the meaning of the research account management topic. The fact that RAM is a newly introduced term and a rather uncovered topic in academic literature, makes it difficult to reach a high construct validity. The precision and care with which the interview protocol is developed, increases the construct validity, by making sure that the results of the interviews cover the concept of RAM completely and at the same time do not contain components which are not related to the concept. The interview protocol is based on the outcome of the focus group and the conceptual model of RAM, which at its turn is based on the outcomes of the preliminary analysis and the literature review. Before starting the interviews, the interview protocol was reviewed intensively with supervisors from university and Philips, which also increased the construct validity (Swanborn, 1996).

3.3.3.2. Internal validity

Since this study is an exploratory research project, no firm conclusions about causal relationships between phenomena are made. This has a negative impact on the internal validity of this study, since it might be possible to explain proposed relationships by other causes. The interview results only suggest possible relationships, and are based on the subjective response of one interviewee. Nevertheless, the aggregated results of the interviews can deliver adequate conclusions about the relationships between certain aspects and optimal research account management as identified in the preliminary analysis. The fact that RAM is viewed in this study from multiple angles (account management, relationship

management, knowledge management, innovation management) is beneficial for the internal validity. To increase the internal validity, future research should be more descriptive or even causal research, to examine relations of RAM in a more theoretical way. The results from this study deliver a good starting point for this kind of research.

3.3.3.3. External validity

BPS projects like this research project have a relatively low external validity, because they focus on one specific problem, in this case RAM at Philips Research, which can be contradictive with looking for conclusions and recommendations which can be generalized to other companies or organizations. The external validity of this research project is on one hand limited, in the sense that there are not a lot of companies or organizations for which the results on the RAM process are relevant, but on the other hand high, in the sense that for companies with centralized corporate research the study results in a number of useful insights and recommendations. To generalize the results to other companies' corporate research, some important factors have to be taken into account, such as way of funding research, organizational structure, complexity of technology and projects, maturity of the market, etc. But taking these factors into account the results and redesign from this study are also interesting for companies other than Philips that want to improve their RAM and make efficient connections in the research-marketing interface at their centralized corporate research organizations. To increase the external validity, a benchmark analysis is performed, as described in section 3.2.5. The views on how other organizations manage their (research) account management, can give some useful extra insights and help to generalize the results. In a broader sense, the results might also be useful for companies with an internal service/consultancy organization or for other companies.

4. Results

This chapter will present an overview of the results of this research project, and an analysis of these results. In the last part of this report, the results and analysis will be used to make a redesign of the research account management process and answer the research questions.

Before the actual results of the interviews are discussed, some general observations and striking topics which were gained from the documentation, the interview preparation and of course the presence at Philips Research for several months, are discussed. These will put the results of this study in a broader context and will also help to understand the results better.

Studying the research account management process at Philips Research and preparing the interviews, it became obvious that there is no clear overview of the process and the people involved in it. This is one of the reasons that the study was undertaken in the first place. It appeared to be that a lot of different definitions and terms are used for the process of research account management. These terms are: account management (AM), topic ownership (TO), innovation area management (IAM), key account management (KAM). In this chapter and in this report in general, (research) account manager has been used to address the group of all people who are active in the RAM process, thus topic owners, (key) account managers, and innovation area managers. The roles are not all exactly the same, but the terms are all used for functions in the research account management process. The fact that several people in the organization combine their function as account manager (or similar function title) with a different function makes it even more difficult to identify who are the people involved in the RAM process.

The different definitions and terminology are partly explained by the difference in approach of RAM between people, innovation areas and the three research programs. The interview results will give a deeper insight in these differences, their origin and will try to explain why these differences are existing in the Research organization. The goal of this research project in general and the redesign of the RAM process in specific is not to eliminate all these differences, but to look for explanations and justifications and to clear out which approach is appropriate in which situation.

4.1. Interviews

The interview reports were coded and transferred into data reduction tables. These tables give a good insight in the most important takeaways per question and allow a more solid and quantitative analysis of the interview results. As mentioned in the Methodology chapter, the results of the interviews are confidential and will not be published in this report. The aggregation and analysis of the interview reports give a good insight in the view of the research account managers on relationship management, knowledge management and account management, point out a number of problems in the current situation and suggest several improvements for the RAM process. Like the interview protocol itself, the presentation of the results in this chapter is categorized on the basis of the conceptual model (Figure 10), in which relationship management, knowledge management and account management form the important blocks. The results form a good basis for the redesign of the research account management process, which will be discussed in Chapter 6.

4.1.1. General

Looking at the background of the research account managers, it is revealed that the majority (92%) of the respondents has a technical educational background. Account managers often point out that a technical background helps them to truly understand the content of the research projects and makes them able to have a content discussion with the business partners. Only 5 of the respondents have experience outside the Philips company, but the majority of the account managers have experience outside the Research department, in one of the businesses of Philips or in the former Apptech organization. Eight account managers have worked for the Research organization for their entire career. The results indicate that the biggest advantages of experience outside Research or Philips enable a better business sense and out-of-the-box thinking, while respondents with only Research/Philips experience point out the advantages of knowing the company very well and having a large network within the research organization and the business. The average experience in the RAM process is 4.5 years. Some people believe that account manager is a good development step in the Philips organization, with the risk of high circulation on the account management positions, but it appears that there is sufficient experience, especially given the fact that account management was only implemented in the Research organization seven years ago.

The accounts differ significantly in size and maturity. Looking at the turnover of the contract research for the different accounts, this ranges from €300,000 to €50 million, with an average of €9.6 million. The results on maturity of the correlating business units indicate that most of the accounts are active in a mature market, but the Philips business is often still immature and/or the Research organization is active in the immature part of the market. This is typical for the type of projects Philips Research is involved in. Although there is a mix of exploratory, concept and development projects, most account managers point out that there are mainly exploratory projects running for their accounts. Development projects are least mentioned by the account managers. Especially for the immature Philips businesses and immature markets, the research projects are mainly in the exploratory phase.

4.1.2. Relationship management

The interview results show that the need of having a good relationship with the business partners is widely recognized by the research account managers. One of the interviewees describes this need as key to the research account management: “We have to ensure that the relation between BG management (especially R&D management) and Research is good, and that we are continuously working to improve this relation.” The results show no strict process or dominant approach for building and maintaining a relationship with the business partner. Account managers use a combination of regular meetings (monthly or quarterly review meetings) and ad hoc meetings, calls and telco’s to build a relationship with their business partners and discuss relevant topics and issues. Face-to-face communication is preferred, but not always possible: “In the beginning the communication is more face-to-face, when the relation is good there can be more digital contact.” Counterparts in the business differ from executive level to persons at the operational level. The CTO, R&D manager, innovation leader or other technical managers of the business are the most frequently mentioned contacts: more than 90% mentions them as their contact in the business. It is notable that only 16 of the account managers specifically mention the CMO, Marketing manager or similar function as their important contact, and the ones who do point

out that contact with marketing people is secondary to that with the technical people and that they have less contact with the marketing functions. One of the research account managers states: “In general I build a relationship with the R&D manager and Product Manager, sometimes also with the General Manager. If possible also with Marketing people, but this is not an ingrained process.”

Transparency is often pointed out as an important prerequisite for a partnership. An account manager claims during the interview that “being as transparent as possible is key in all our work.” As pointed out, the majority of the account managers have regular meetings with their business partner, either to review the status of the accounts and the project running for it or to discuss the strategy for the future and design a joint technology roadmap. This continuous discussion on reviewing and looking towards the future is an important part of building a good relationship for account managers. The Healthcare program has institutionalized this meeting the furthest, and is organizing Research Sounding Boards (RSB) during which the BU representatives are invited to visit Research, the research projects are reviewed, and new opportunities are discussed. All dedicated account managers, who do not combine their RAM role with another role in the research organization, address the importance of visiting the customer frequently. Three of them had for themselves the rule that they would be present at the business partner’s site one day per week.

The interview results suggest a number of problems the account managers are facing in building and maintaining a good relationship with their business partners. These problems range from practical to more cultural or organizational. The most frequently mentioned problems are listed below. Between brackets there is described which aspect of relationship management the problem is related to.

- Business is at another location (Process; Communication).
  This makes communication and establishing a relationship more difficult. This is experienced by both parties (research and business organization) as a nuisance. Relying only on phone calls is a risk in building a relationship. “It is a limitation that we are not located at the same site,” answered one of the account managers.
- Business is too much focused on short-term (Culture; Process).
  The people in the business are often busy with short-term issues, and act in a firefighting mode. They have the feeling that Research is delaying them, and that doing things themselves is faster. Time pressure prevents the possibility to explain and show the added value of Research to the business.
- Transparency is lacking (Culture; Communication).
  Due to several mentioned reasons, such as fear of leaking information and the lack of understanding of Research’s added value, information is not shared in a transparent way with the account manager and other people in the research organization. This hinders establishing a good relationship.
- Marketing people do not understand technical issues (Communication).
  The different viewpoints and priorities of the marketing people in the business and the technical people from the research organization, complicate the communication. AMs point out that it is their responsibility to enable this communication, but the interview results show also situations

in which the AM decides to leave the marketing function out of the discussion. An account manager points out in the interview: “Although input from the Marketing people is very valuable, it is often a problem that they lack a technical background.”

- Unstructured business organization (Process).
  For young and immature businesses, a clear and good structure is often lacking. This makes it difficult to build a content-related discussion. The account manager is then acting as a business development manager in helping the business organize themselves. However, once the business is more mature and established, the relationship with the research organization is strong.

4.1.3. Knowledge management

There is no specific knowledge management technology system for the research account management process in place. Account managers who worked for Apptech before, point out that they used the CRM system from their Apptech period for a short time in Research, but then it became obsolete. Most account managers state that a CRM is not useful, since the majority of projects are defined in Process-0. On the other hand there are several account managers who assign the lack of a CRM system for the RAM process to a lack of capacity to maintain this system. “It is a dream to have all account management information available from a central location, but we lack the capacity to process this information,” as one of the interviewees points out.

The account managers that are looking for leads for short-term hour based projects use a simple document or Excel file for this purpose. Review meetings are documented and typically shared by e-mail. Nine account managers point out the fact that they have access to the Sharepoint of the projects which are relevant for their account, but that this results in an overload of information. Account plans used to be made when (key) account management was introduced to the research organization, but according to the interview results most of the account managers stopped making and updating the account plans. Only five account managers mention that they still make use of an account plan for their accounts. In general the knowledge about the accounts is not documented very well. This is also mentioned by multiple account managers.

On the contrary, account managers point out that knowledge about the content of the projects is documented well. This documentation of explicit knowledge and externalization of tacit knowledge is done at the project level by the researchers and department heads involved in the projects. It is pointed out that the Research organization has a history of strict and rigorous documentation of knowledge. This knowledge is accessible for the account managers as well. The interview results show that account managers do not classify projects, and that they either state that this is done on the project level or that they do not know how this is done at all. Several account managers state that they have a facilitating and controlling role in the transfers, and that they make the link between the research project and the business to which it is transferred. The actual transfers are, according to the interview results, typically done by the people working on the project.

The knowledge sharing infrastructure between research and business is perceived to be good, as the account managers mention in the interviews. “There is enough bottom-up idea generation. Account managers can judge whether these ideas are appropriate for the customer,” says one of the research

account managers about the idea generation by the research organization. At least 76% of the account managers get sufficient input from the researchers to serve the business with new ideas, although there are complaints about the fact that account managers need to pull the information from the researchers. Important sources for new ideas from researchers are the own department (for account managers who are also department head or have another function in the research organization), via other IAMs or AMs and by visiting research departments frequently. Account managers look for opportunities to share propositions and new ideas with the business. The regular review meetings, which were also mentioned in the relationship part of the interview, are used for the presentation of these propositions. Documentation of these review meetings (for example the RSB meetings in the Healthcare program) is shared between the business and Research.

The majority of the account managers prefer that researchers come to them first with propositions, to check and filter them, to prevent that the business hears the same idea multiple times, and to make sure that the proposition is presented in the right way. Once projects are running, account managers allow and actually stimulate direct communication on all levels between the research organization and the business. They do not want to be the bottleneck in the knowledge sharing between the co-creation partners. While knowledge sharing between the research organization and the business partners is good according to the interview results, knowledge sharing amongst account managers needs improvement. This concerns both knowledge about the content of the research projects and knowledge about the way of working. Several account managers point out that there is too little collaboration between the account managers and that the research organization might miss unobvious opportunities. Cultural issues or the power of knowledge are not mentioned as causes of this lack of collaboration and knowledge sharing. The reasons which are mentioned are a lack of capacity/time, lack of possibilities to share knowledge and current focus on the own innovation area.

The interview results show that in general research account managers do not consider knowledge management as a very large part of the research account management responsibilities. One of the account managers states in the interview that “in general, Research does little knowledge management on the program level.” Research account managers do not actively participate in the knowledge documenting and creating processes, and consider this part of the project execution level instead of the program management level. Nevertheless, it appears that research account management can play a crucial role in the knowledge processes within Research and between Research and the business units of Philips. Table 3 provides an overview of which role research account managers can have in the four knowledge processes described in literature, based on the interview results. These roles are either currently already embraced by the research account managers or are suggestions for improvement of knowledge management as part of research account management.

Table 3: Role of RAM in different knowledge process

Knowledge process	Role of RAM
Internalization	*Facilitate and stimulate* the internalization of explicit knowledge by making relevant explicit knowledge about the business available to people in the research organization.
Socialization	*Facilitate* interaction between Research and the business to enable socialization of tacit knowledge. *Interact* with research and business people to socialize relevant tacit knowledge for the research account.
Externalization	*Facilitate* the externalization of research knowledge by enabling interaction between Research and the business. *Actively participate* in the externalization of knowledge about the business partners (e.g. making knowledge explicit in account plans).
Combination	*Stimulate and coordinate* the combination of knowledge among Research and the business. *Actively participate* in the combination of knowledge about the accounts and about the RAM process among research account managers

Applying the interview results to the three enablers of knowledge management – technology, infrastructure, and culture – shows that the technology to document and share knowledge about the accounts is lacking. Technology for the content knowledge about the research projects is present in the organization, but this is used and maintained largely by the research people working in the projects, and not by the research account managers. The infrastructure for knowledge sharing and creating is well-established between the researchers and the research account managers. This also yields for the knowledge flows between Research and the business units. The meetings with the counterparts in the business enable the sharing of relevant knowledge and the creation of new knowledge. This is facilitated and stimulated by the research account managers, by encouraging interaction between researchers and people from the business. The knowledge infrastructure among research account managers is insufficient. The interview results point out that a lack of knowledge sharing among research account managers might cause missed opportunities. The organizational culture is suitable for effective knowledge management: people in the organization are aware of the fact that Research is a knowledge-creating organization. However, some of the account managers point out in the interview that transparency between the business and Research is sometimes lacking. This impedes effective knowledge sharing and creating. According to the interview results, the research account manager should aim to create this transparency to facilitate effective knowledge sharing and creating.

4.1.4. Account management

The interview results provide a long list of tasks and responsibilities which account managers mention when asked what they think are the responsibilities of RAM and what in their view is perfect RAM. The responsibilities which were mentioned most are listed below, in decreasing relevance by the number of account managers pointing it out as part of RAM:

- Managing relationship with customer;
- Delivering innovations;
- Building a partnership;
- Creating alignment;
- Defining strategy;
- Managing the portfolio;
- Constructing road map with the business;
- Acting as business developer;
- Communicating what Research competences are;
- Showing added value of Research;
- Managing expectations;
- Facilitating communication;
- Guarding and reviewing project execution;
- Ensuring the business partner is satisfied;
- Administrating contract agreements.

The long list of tasks and responsibilities indicate that RAM is a multidisciplinary and complicated function and process, which requires a broad set of capabilities. All account managers point out that it is an important process for the Research organization and that it can and needs to be improved, as will be discussed later in this section.

It is remarkable that two aspects are not relevant in the RAM process in the eyes of the majority of the account managers: the management of funding/money and the management of knowledge/information. The first aspect is not a large part of the RAM process, since it is for a large extent covered by Process-0, in which the funding of projects for the upcoming year is discussed. According to the account managers, a discussion on money prevents the establishment of a partnership and has a counterproductive effect on the innovation process. The account managers who are still involved in the short-term hour-based projects point out that for them it is difficult to explain the existence of both the models (FTE based and hourly based projects). As section 4.1.3 already showed, the management of knowledge is perceived to be part of project management. Nevertheless account managers indicate that knowledge sharing can be improved.

The majority of the account managers does not use a formal function description for their job as research account manager, as they mention in the interview. These descriptions do exist, but the current account managers consider them as irrelevant or outdated. Only seven account managers mention them in the interview. Objectives are formulated by a small number of account managers. Six

account managers have formulated specific objectives for their account, based on money, number of transfers or product developments. Several account managers point out that it is difficult to determine metrics or KPI's for the RAM process, as said by an interviewee: "Having a lot of KPI's is dangerous in terms of innovation." Contribution to innovation and impact on the business are difficult to measure and have a long-term effect.

In question 4.3 of the interview, the account managers are asked how they think the RAM process can be further improved. This results in a list of possible improvements, which are used for the redesign of the RAM process (Chapter 6). The most important potential improvements, according to the interviews, are:

- Clarified RAM process and structure:
    - Who is responsible?
    - Alignment with PInS
    - What are the goals and tasks of RAM
- Communication and knowledge-sharing:
    - Between IAM or TO and account manager
    - Among account managers (act as a team)
    - Share best-practices
- Focus on meaningful (front end) innovation:
    - Delivering meaningful innovations to the business
    - Cross organizational frontiers (integration between Research and BU)
    - Identify cross-topic opportunities
    - Not only technology-driven
- Eliminate combination of department head and research account manager:
    - Prevent conflict of interest
    - AM suggests ideas and competences from own department
- Partnership analysis:
    - Identification of key accounts
    - Differentiation of approach
- Stay relevant as Research:
    - Penetrate to core knowledge of topic
    - Identify global and industry trends
    - How to act when business is strong and mature?

The suggested improvement of uncoupling the role of department head and the role of account manager is an ongoing discussion within Research. People who think that the roles should be uncoupled state that there exists a potential conflict of interest when department heads will only suggest ideas and competences from their own department and that account management requires full dedication and attention and cannot be combined with a different role in the organization. Eight of the interviewees believe that RAM is a function, which covers a full-time job and has specific responsibilities and required skills. People who believe that RAM is a role which can be combined with a different role (68% of the

respondents, mostly the people who are currently having such a dual role) address that their role as department head allows them to be very close to the projects, the problems that occur and the new ideas that arise and that this benefits their role as RAM. Next to that, several of these account managers mention that there is a large overlap between their role as a department head and their role as an account manager. It appears that the dual role is not the most ideal in theory, but that it does not automatically lead to problems in practice.

Most of the research account managers cannot describe specific best-practices from their RAM role. Below characterizations are given of best-practices described by account managers. Specific examples are left out, to protect confidentiality:

- Involvement of marketing manager in meetings was a breath of fresh air. Also forced Research to gain insights in the industry and look at what the competition was doing in the field.
- Being part of the MT meetings of the business allowed the AM to align the research project very well with the maturing process of the business.
- Really helping the project into the next phase (development) helped the business in making the innovation a success.
- Preparation and evaluation of quarterly review meetings prevents miscommunications and strengthens alignment.
- A project in which Research and the business jointly execute the innovation process. There were integrated teams with people from Research and the business working on the project.

There are some final important outcomes which arise from the interview results. The first and most important one is that currently there are numerous forms of RAM present in the Research organization. These different forms can for a large extent be explained by several characteristics of the account and the account manager's area of responsibility. The most important factors are:

- Responsibility for different stages of the innovation process (E, C and/or D)
- Responsibility for what kind of projects in terms of contract model (FTE-based vs. Hour-based)
- Internal (within the Philips sectors) vs. external business partners
- Maturity of the business partner
- Location (regional RAM vs. Eindhoven-based)

Next to that, the background and experience of the account manager play a role in the different forms of RAM. More specifically, the account managers with a history in the Apptech organization have a different approach to RAM than the people coming from within the Research organization. The interview results show that it has appeared to be difficult to apply the AM model of Apptech to Research.

The second important general outcome of the interviews is that there are obvious differences between the RAM approaches in the three different programs of Philips Research (Lighting, Healthcare, and Consumer Lifestyle). The three RAM structures of the programs will be shortly explained in the following sections.

Lighting

The Lighting program has a matrix organization for the RAM process. A simplified illustration of this matrix is presented in Figure 13.

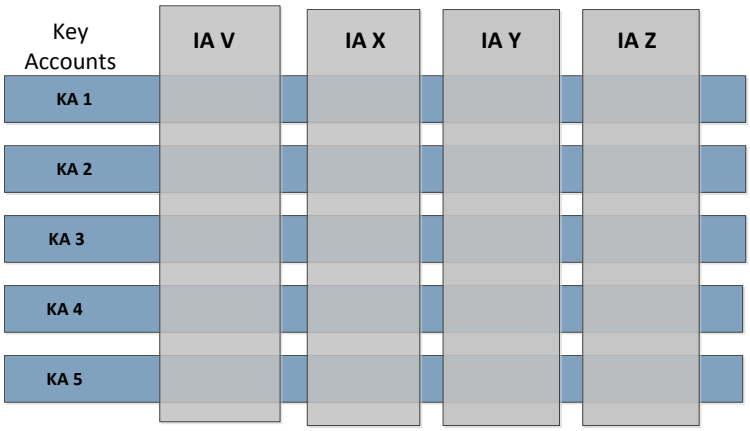

Figure 13: RAM structure of Lighting program

The innovation area managers in the Lighting program also act as key account manager towards selected accounts. This dual role of IAM and KAM stimulates the combination of opportunities from certain innovation areas with different key accounts. In the interviews the account managers state this as an advantage, but also mention the workload as a disadvantage. There is no capacity to dive into a specific topic or market, since the account managers have the responsibility for both their whole innovation area and for their key account.

Healthcare

In the Healthcare program the department heads act as an account manager and have responsibility for the exploratory and concept phase projects for their specific account. Multiple accounts form an innovation area, which is led by an innovation area manager. The innovation area covers multiple accounts and the innovation area manager has a team of account managers. For the D phase projects for the HC accounts, there are dedicated account managers. These account managers are typically the people coming from the former Apptech organization, and they are also responsible for a number of external business partners for which the projects have Hour-based contracts. During this study, changes were already announced and partly made in the RAM organization of the Healthcare program, to improve the partnerships and to better utilize the capabilities of the RAM team.

Consumer Lifestyle

The Lifestyle program is regarded as one innovation area, and therefore has one innovation area manager. He oversees a number of innovation topics, managed by topic owners. The topic owners are responsible for the relationship between the Research organization and the business unit. The topic owners are also department head of one of the Research departments. Next to this dual role of department head and topic owner, the Lifestyle program also has dedicated account managers (from the former Apptech organization) who are looking for more short-term projects on an hourly basis for the CL accounts. The interview results show that the collaboration between the topic owners is not

optimal. There have been situations in which the topic owner and the account manager approach the business independently from each other. This leads to confusion and does not improve the relationship with the business.

A real explanation for the existing differences cannot be gained from the interview results. Important remark is that the goal of this project is not to eliminate the differences between several approaches of RAM and the differences between the programs. RAM is, as part of the innovation process which is based on creativity, a process which needs a personal approach and room for creativity and does not need an overkill of procedures and structures, as was stated in several interviews. The reasons that the differences are discussed in this section, is that they might provide useful aspects for the redesign of the RAM process.

4.1.4.1. Indicating the account status

The graphs below resulted in an estimation of the current stage of the relationship of accounts with their correlating BU, and an estimation of the current value capturing and value creating capability of the research account. The results are subjective judgments, and are based on the personal perception of the account manager and therefore may not represent the actual state of the account, but nevertheless the graphs can give a useful overview of the current situation. Figure 14 shows what kind of AM relationship the different accounts have with their business partner. The specific accounts are confidential, but a distinction has been made between the three programs of Philips Research, as indicated in the graph. The graph shows that 18 out of the 28 plotted accounts are at partnership level or higher, and 6 of the accounts believe they have reached the integration level. This is a good score, but given the fact that Research only has strategic business partners as its customers and wants to be a co-creation and innovation partner for them, the goal is to reach the partnership level for all accounts.

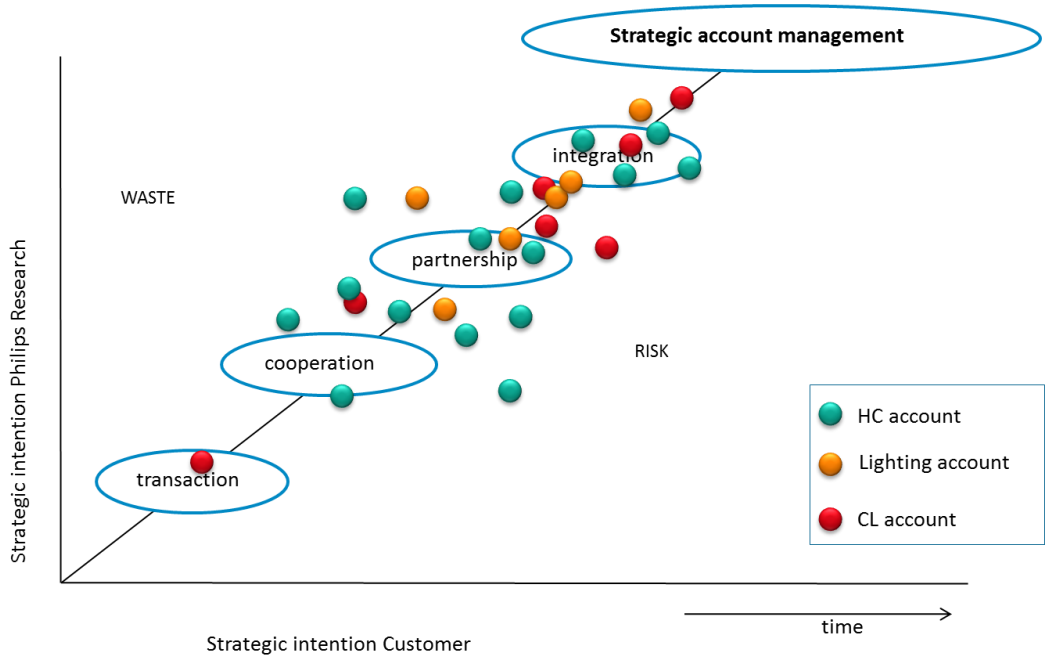

Figure 14: Relationship stages of RAM and perceived current relationships per account

The results of the estimation of value-creating and value-adding capacity of the accounts and of Research as a whole are presented in Figure 15. There results of this graph indicate two relevant observations:

- The majority of account managers (18 of 32 accounts) position their account in the upper right quadrant. This is good for the Research organization, since it is the situation in which there is value captured for the own organization and value added for the customer. This situation allows for growth of the account. Nevertheless, many accounts in this quadrant are positioned close to the center, so there is room for improvement.
- All account managers who estimated the value capturing and adding capabilities of the whole Research organization, positioned them in the two quadrants on the right side, but only 8 out of 15 positioned Research in the upper right quadrant. This indicates that the account managers believe that the Research organization is overall good in capturing value for its own organization, but not always good in adding value to the customer.

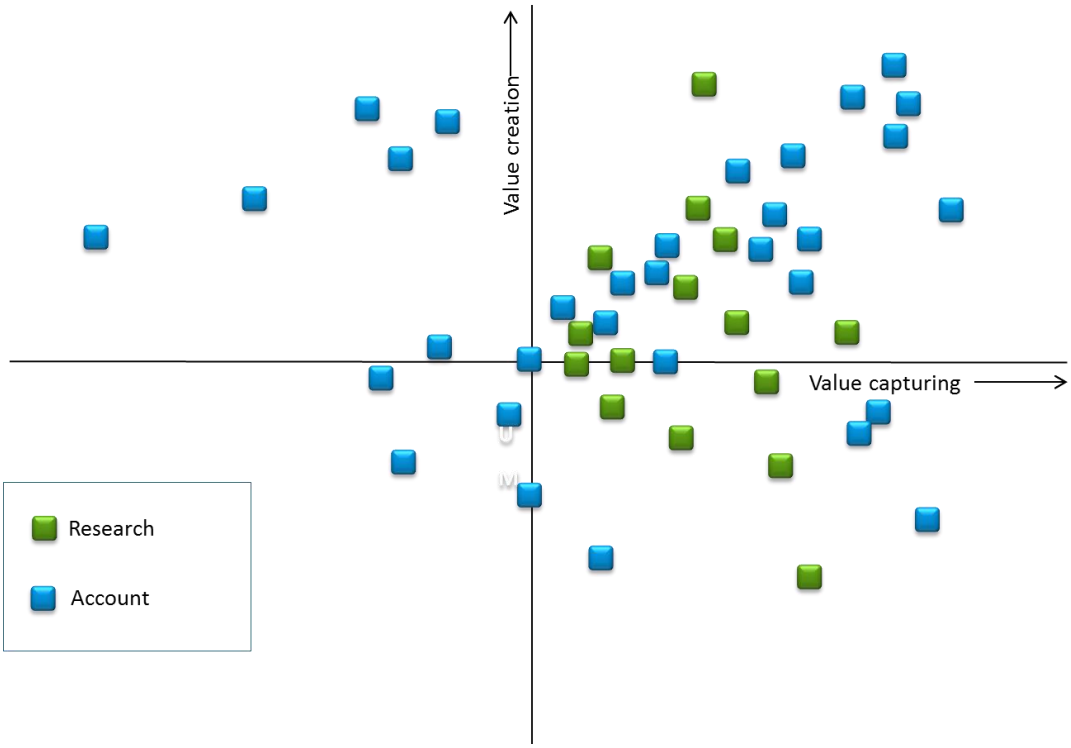

Figure 15: Value capturing and value creating of research accounts

Note that the differences in the number of displayed accounts between Figure 14 and Figure 15 is caused by the fact that some account managers manage multiple accounts and wanted to make a distinction between these accounts in one or both graphs. Besides that, the difference between number of positioned accounts and Philips Research as a whole is caused by the fact that several account managers felt that they did not have enough information or experience to make an estimation for the whole Research organization.

As mentioned before, the graphs present a display of the current situation of the different accounts. The graphs can be used to make an analysis of the accounts, and indicate which accounts need improvement.

Combining the results from the two graphs can deliver insight in whether a higher perceived level of AM relationship also results in a higher perceived captured value and/or created value. To examine the existence of these correlations, the perceived stage of the relationship (transaction, cooperation, partnership or integration) from Figure 14 is displayed in the corresponding account dot in the value matrix of Figure 15, using different colors. The result is shown in Figure 16. The darker the color of the specific account, the higher the perceived level of the relationship is.

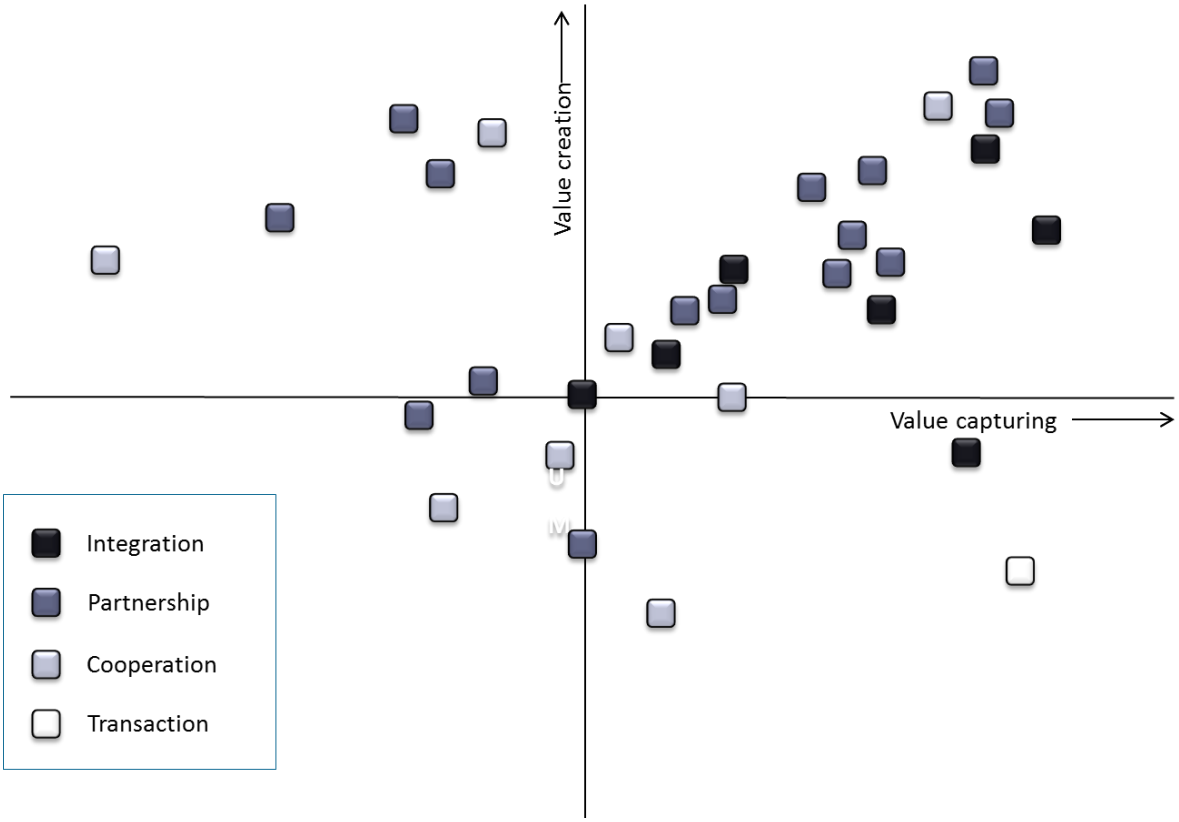

Figure 16: Combination of perceived relationship and perceived value captured and created

The graph shows some interesting outcomes. For the accounts for which the perceived relationship was integration, 5 out of 7 accounts (71%) are in the 'heaven' quadrant, where both value captured as value created are high. The other two accounts on the integration level are perceived to be close to this top right quadrant. For the partnership level accounts, 9 out of 15 accounts (60%) are positioned in this quadrant. Four of the partnership accounts are in the quadrant where value captured is relatively low, while two of the accounts on this relationship level are in the 'nightmare' quadrant, where both value captured and value created are low. Looking at the accounts on the cooperation level, the graph shows that 2 out of 8 accounts (25%) are in the desired top right quadrant, with the remaining six accounts

equally distributed over the other three quadrants. The account on the lowest relationship level, the transaction level, is perceived to be in the 'dream' quadrant, where value created is relatively low.

The results indicate that the higher the perceived level of the relationship, the higher the possibility that the account is perceived to be in the top right quadrant of the value capturing / value creating matrix. This is the desired quadrant, since it offers the largest value to both the partners and is the only situation which offers a basis for growth. There appears to be a correlation between the perceived intensity of the relation and the perceived value creation and value capturing. Figure 17 provides a graphical presentation of the results.

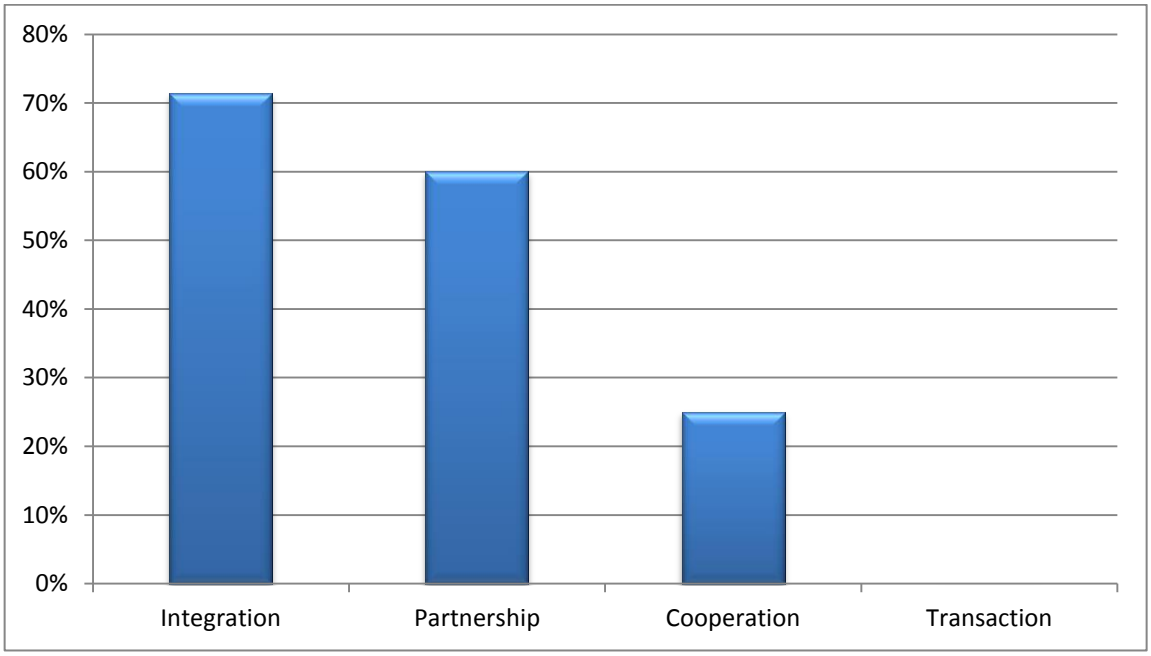

Figure 17 Percentage which is positioned in 'heaven' quadrant in value capturing / value creating matrix.

The correlation between perceived relationship and perceived value creating and capturing capability of the account indicates that it pays off to invest in reaching a higher level of relationship with the strategic business partners, since it can result in high value captured for the research organization and created for the business partner.

4.2.Partner satisfaction surveys

The partner satisfaction surveys are performed on a yearly basis with all co-creation partners of Philips Research. The exact scores and specific results of this survey are confidential, but in this section the key takeaways of the survey will be discussed, as well as striking observations from the surveys. The results are based on the surveys carried out in 2013. Seventy-two participants from all three Philips sectors participated in the survey. After the presentation of the important takeaways, they will be used to reflect on the interview results. The results of the analysis of the partner satisfaction surveys are shown in Figure 18.

Compelling strategy	•Understand big trends and movements in the industry •Scout for additional sources of technology •Provide the business with a sucessful future vis-à-vis big players
Line-up for future opportunities	•Single entry point for Research towards the business •From departmental focus to contribution to subject focus •Prioritize for larger projects, incl high risk high pay-off •Better innovation structure for adjacencies
Improve Process-0 & project management	•Upfront agreement on plan & deliverables •Specific reviews •Strengthen position of Research in the E2E project
Transparent process	•Alignment on strategy requires communication and transparency, also on company-project portfolio •Do not overdo with structures and processes •Improve combined productivity
Strengthen E2E Network	•Enhance visibility & alignment of Research •Influence breakthrough innovation with visionary propositions
Balance portfolio	•Get out of the box! •Business point of view instead of Research looking for a home
IP creation	•Prevent slowing down of IP creation •Creativity is at risk in the Research organization
Prove innovation power	•Pro-actively proposing partnerships •Discuss outside-in opportunities •Ensure technical foundation of transfers •Show world-class expertise in technology

Figure 18: Key takeaways of partner satisfaction surveys

The results indicate that the strategic business partners of Philips Research consider the Research organization as a valuable partner in their innovation process (this was supported by high NPS scores in the survey). The business partners expect Research to be a real innovation provider, based on world-class technological expertise. At the same time the innovation opportunities which Research suggests for the business need to embrace a business point of view and need to be connected with the business strategy. The creation of alignment between Research and the business is named several times as an important aspect. Process improvements which can increase the alignment are suggested, such as more transparency, communication on plans, and combined productivity.

The survey results show that there is a difference in perceived responsibilities and priorities among the account managers. Not all account managers operate in a way which is coherent with the desires of the business partners. An important result from the surveys is that the business partners want a mix of technology push and market pull approach from the Research organization: they want technological opportunities for innovation, but from a business point of view. This means that a pure technology push or market pull strategy does not create alignment with the business. Although integration can improve productivity and alignment on the project level, the business wants Research to also be focused on breakthrough innovation, cross-department opportunities and the creation of IP. This requires a step-back from the business, which typically has a more short-term view. It is therefore important to realize that striving for more integration on all levels is not necessarily good in research account management. Both the interview results as the partner satisfaction surveys show that it is important for Research to show their added value to the business. This should therefore be part of the responsibilities of the RAM.

It is remarkable that the results from the surveys focus largely on the relationship aspect, combined with the provided innovation power of the research organization. Knowledge management and typical account management procedures, such as funding and planning, are less present in the survey results. This indicates that the business partners consider a good relationship and clear added value in their innovation process as the most important aspects of their rating of the research organization. This should be taken into account when redesigning the RAM process.

The requests from the business partners of Research indicate that the organization needs to build strong partnerships, while in the same time keeping an independent and long-term vision on technology development which can help the business units in their innovation process. This requires continuous balance, and is an important aspect of the RAM process.

5. Benchmark

Three benchmark analyses were performed, which can be used to reflect on the results of the in-depth analysis at Philips Research. The three benchmarks will be described in this chapter.

5.1. Philips Innovation Services

Philips Innovation Services supports high-tech companies (inside and outside the Philips Group) and knowledge institutes in their innovation process with advanced innovation services, expertise and high-tech facilities. This benchmark at Philips Innovation Services (PInS) has a bilateral goal: first an analysis is made how PInS manages its relationships with customers and how it builds a partnership with its customer to sell its services to them. This is the same analysis which has been done with other (research) organizations, which will be discussed in the next sections of this chapter. Secondly, the benchmark at PInS also tried to clarify what are the differences between these two organizations, where are they located in the total innovation process of Philips, and how inconsistencies and confusions can be prevented (see the interview results discussed in Chapter 4). In the next two subsections, these two subjects will be addressed.

5.1.1. Account management

Philips Innovation Services executes projects for both internal Philips businesses and external (technical) companies. The organization has no restrictions or criteria for these external customers. Being at the customer's facility is very important for PInS. If the customer relation managers (as account managers are called at PInS) do not visit their customers regularly, they will lose connection and will not be able to bring in new projects or perform services. The time CRM's visit their accounts, is monitored as Customer Facing Time (CFT). The organization sets a target for the CFT at 30% of the total working time for customer relation managers. This target is an incentive for them to visit the customer often, to hear their needs and try to help them in their innovation process. Since PInS does not have very long-term fixed projects, this is important.

Customer meetings are documented as presentations, and shared within the organization. Sharepoint is not used that much, because it is not sufficient in terms of operations. Over time, the bulk of information on sharepoints is not functioning anymore. The organization uses a CRM system to document leads and track its sales funnel. By filling in opportunities with all the relevant information and a probability that the opportunity will lead to an actual project or service, a funnel with a rolling forecast is created, which gives an estimation of upcoming projects. Everybody in the PInS organization has the possibility to consult the CRM system and bring in new opportunities.

Financial targets are one of the metrics used to monitor the account management process at PInS. The customer relation managers are responsible for amongst others, the turnover of their account(s). The CFT is a helpful target in ensuring that customers are visited sufficiently, but money stays the leading metrics, because it is an easy and objective measure. There are two important differences in the account management process at Philips Research and Philips Innovation Services: (i) the goal of AM at Research is to bring meaningful innovation to the business as fast as possible, while the goal of AM at PInS is to

find customers and improve on operational efficiency by increasing the turnover from those customers by helping their innovation; (ii) Research generates new options and meaningful innovations for Philips, whereas PInS supports these activities now and is prepared for future needs.

5.1.2. Innovation process of Philips

The differences between Philips Research and Philips Innovation Services can to a large extent be traced back to a reorganization late 2010, when the former department Philips Applied Technologies (Apptech) and former Research were reshaped/mixed to fulfill their dedicated tasks. Although each organizations was sound, in the course of time there was too much overlap in ways of working of both organizations. This resulted in two new organizations: Research (combination of Research departments focusing on research activities and product-development departments of Apptech) and Innovation Services (combination of the Research services departments and parts of Apptech). The way of doing AM is often explained by this historical background. As described in the previous section, AM at PInS is more similar to the traditional AM (and to the AM at the former Apptech), where an account manager is responsible for a certain (number of) account(s) and tries to increase the turnover from these accounts. RAM is not only increasing turnover from accounts, but involves also bringing new ideas and innovations to its customers. These customers are not just any company, but are internal business units of Philips or selected external companies, defined as strategic business partners. Since RAM is thus not just a process of finding a customer and increasing turnover from that customer, research account management is also a process of business development, portfolio management, etc.

However, both organizations basically do the same, namely helping organizations innovate. Therefore, as the interview results showed, it can occur that both organizations approach a certain customer for a similar project. This can be confusing and contradictive. The goal of both organizations and their position in the innovation process of Philips is crucial in solving this problem. Research is more involved in the front end innovation of Philips, and plays an important role in the first steps of the innovation process. In short, they are *inventors*. In the relation towards Philips Research and the Businesses, Innovation Services has two roles: one being the service provider to all projects as aid to the Exploratory (E), Concept (C) creation projects and Development (D) projects that follow E and C-phase, and the other being a contractor for businesses. This is where Research and PInS differ. Research is the self-propelling innovator whereas PInS is the contractor / service provider. PInS typically are more *helping*.

Figure 19 shows the Idea to Market (I2M) process, one of the three key processes of Philips, which were already addressed in the introduction of this report. The I2M process shows the different stages of the process from an idea to an innovation which is put into production. Underneath the different process steps in Figure 19, it is shown which organization is the leading co-creation partner for the business units in the Philips Sectors. For several exploratory and concept phase projects, Research is the leading co-creation partner for the business, but PInS supplies services in these projects as well. Thus Philips Research is in the first phases of the process often also a customer of PInS, since they acquire the services of PInS in the first steps. But also in these cases, the rule that the leading co-creation partners makes the decision and manages the relationship with the (internal) customer in the business yields.

The transition and handover phase is crucial, since this is the phase in which the leading role of Research is transferred to PInS. Most important aspect of this process and the roles of Research and PInS is to clarify which of these two organizations is in the lead as co-creation partner.

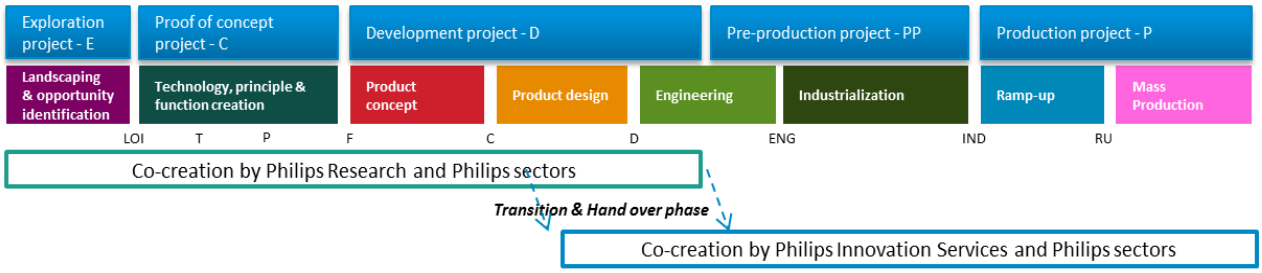

Figure 19: Idea to Market process

5.2.COMPANY X (engineering industry)

COMPANY X has a corporate technology center which supports the R&D departments of the five business groups of the company. The technology center focuses on research, technology development and consulting, and uses approximately 5% of the total R&D budget of the company. The technology center implemented strategic account management, for three important reasons:

- Improve networking between customers and corporate technology center:
  - Overview/knowledge of customers
  - Extensive supply side information to customers
  - Continuous interfacing across all management levels
- Extract and present strategic impacts in management meetings:
  - Identify strategic technology issues top-down
  - Generate impact, support the corporate innovation strategy
- Develop a strategic global partnership:
  - Adopt long-term technology perspective
  - Administration, analysis and evaluation of trends, results and business data

The company has dedicated strategic account managers, who represent the technology center as a whole. They are responsible for the strategic alignment with the business. They are not responsible for any operational aspects, for example contract management and finishing deals. Due to the huge number of employees and projects at the corporate research facility (2000 employees, 5000 projects), it is extremely difficult for the SAMs to keep track of the portfolio. Since COMPANY X regards the SAM function as an ideal management development step for talents, a strategic account manager is typically in his position for a couple of years only. To ensure longer-term stability in the relationship with customers, and to split up all the different tasks and responsibilities in the research account management process, the corporate technology center has implemented three forms of research account management: KAM, SAM, and Operations. Key account management takes place at executive level and is purely strategic, while SAM is more on management level and also looks at business

development opportunities. The operational activities are bundled at the bottom. An overview of the three levels which COMPANY X has defined for its corporate technology center can be seen in Figure 20.

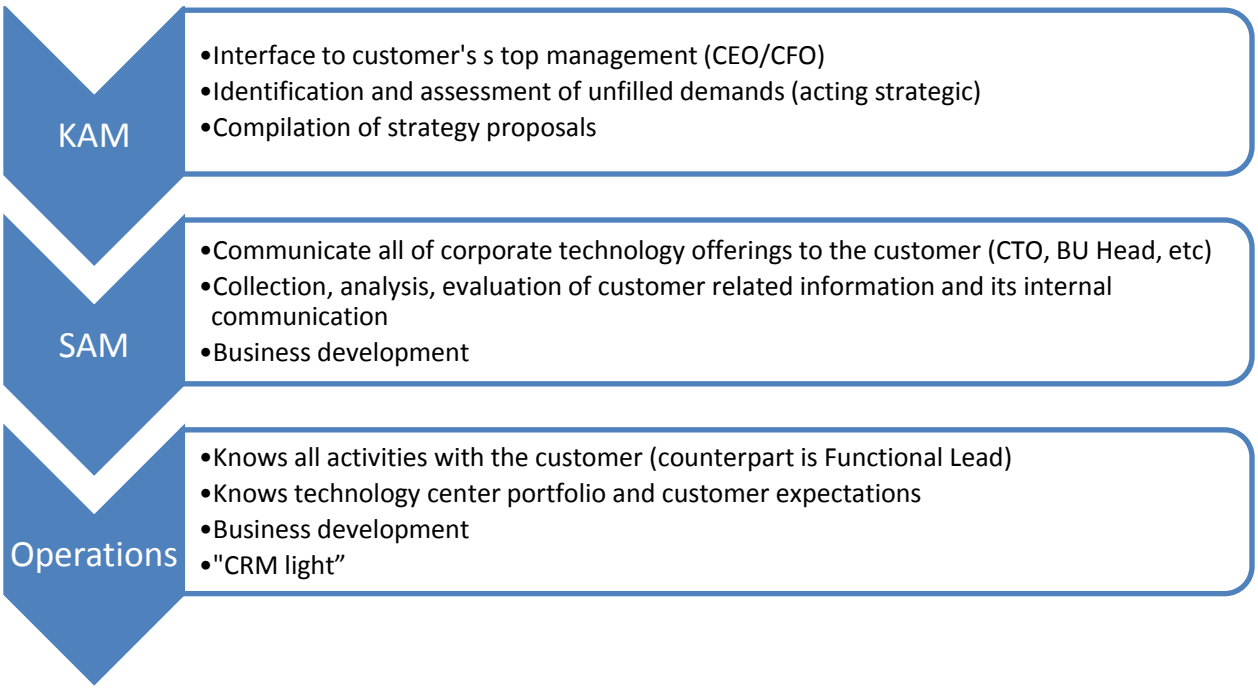

Figure 20: Three forms of RAM at the corporate technology center

Customers are regarded of similar importance, so there are no certain criteria on which key accounts are selected. The goal of this structure is to establish long-term relationships with the customers and to construct visionary and integral concepts and technical roadmaps together. The research organization has no CRM system or tools installed, because it believes that this has no added value for the account management process.

5.3.COMPANY Z (management consulting industry)

Although management consulting differs from corporate research in several ways, there are similarities which justify a benchmark in account management. Management consulting firms also try to build a long-term relationship with their customers and want to become a partner of their clients and work jointly on projects. While corporate research organizations typically work on innovation projects with their customers, management consulting firms are specialized in helping their customers on management issues, like business strategy, organizational design and operations management.

There are several factors which have a large influence on account management or customer relations management within consulting firms. The first is that these firms typically have a very hierarchical structure, with strict definitions of levels, for example (in increasing importance within the organization): business analyst, junior consultant, consultant, manager, principal, partner, senior partner. Second relevant factor is that 60 – 80% of all projects in consulting firms are repeat buying (Bennett & Smith, 2004). This is largely explained by the most important factors on which firms chose a

consulting firm: the consultant's reputation, previous use of the consultant, and third-party recommendations (Clark, 1995). Third, the asymmetry of information plays a big role in the selling of consulting projects. It is difficult to assess the quality of the consultant's service, especially before the project has been executed. Both the consulting firm as the customer can have different degrees of knowledge about the client's problem, and the evaluation of the problem is also highly subjective. Unforeseen events may occur during the project, and the parties' perceptions of what should be done may change as the project develops. This can lead to opportunistic behavior on both sides. A well-established and trustful relationship is therefore very important.

The different levels in the consulting firm all play a role in managing the relation with customers. Accounts are run by an account team, which is led by a partner. Senior partners are typically responsible for the larger accounts. In the account team, a specific analysis of the customer organization is made, in which the relevant counterparts (CEO, CFO, business unit leaders) are identified and linked to a person within the account team to build a one-on-one network with the client. Key is to always be one step ahead of the customer, to identify important trends and to make a plan for the customer's problem.

All consultants which are working on a project for a client, are involved in the customer relationship process. Working on a current project can lead in multiple ways to a good relationship with a client and to future projects. During the project, consultants have to:

- Execute an excellent project.
  - Satisfying the client and building a reputation can lead to future projects.
- Identify additional opportunities.
  - Offering the client advice on future opportunities for business growth can lead to follow-up projects.
- Building good relationships with high-potentials.
  - If career paths of consultants lead to the client's organization, or talents from within the client's organization start to work for the consulting firm, this can lead to future projects from this client.

Everyone involved in the project needs to take this into account and has to think if there are opportunities for more projects for a client. Differentiation is important, and this may involve taking (considered and calculated) risks to really make an impact on the client's business. The account team should make sure that the consulting firm adds value to the client's firm and that the client is aware of this.

The results of the benchmark analysis from this chapter will, combined with the results from the analysis of the documentation, interviews and partner satisfaction survey (Chapter 4) be used for the redesign of the RAM process. This will be presented in Chapter 6.

6. Redesign

In this chapter, a redesign for the research account management process at Philips Research is proposed. This redesign consists of two important aspects: (i) a 7-step RAM approach framework, consisting of process steps that serve to improve RAM and bring the process to a higher level within the research organization; (ii) a framework which categorizes RAM into three levels and structures the tasks and responsibilities of the RAM process.

6.1. A 7-step RAM approach

The RAM process is structured into seven process steps that enable a better structuring of the RAM steps and ensure that the different aspects of the RAM are considered and handled in the process. The 7-step approach is based on a review of academic literature on (key) account management and relationship management, the results from the interview analysis and satisfaction survey, the benchmark analysis and the KAM approach which is used in several Philips businesses and was introduced to Research years ago. The RAM approach has a similar structure of four parts: plan, people, info and review. These four blocks form the basis of an effective account management program.

The results of this project showed that the principles of KAM can be useful in adopting a customer-focused attitude in a corporate research organization, but they also showed that they cannot be copied one-on-one to a centralized corporate research organization. This framework tries to bridge (key) account management principles with managing innovations at a corporate research center. The model aims to comprise both the relationship and knowledge management aspects of RAM, as well as the overall goal of RAM and tries to incorporate improvements suggested by the research account managers in the interviews. The goal of this 7-step approach is not to prescribe a strict procedure that needs to be executed, but to provide a guideline for effective research account management. As discussed before, the RAM process is a multidisciplinary and complicated process. The approach proposed can be differentiated and personalized in terms of the characteristics of the research account, defined in step 1; this differentiation may be necessary for research account management to be successful.

The 7-step RAM approach is shown in Figure 21. After the introduction of the seven different steps, they are described in further detail.

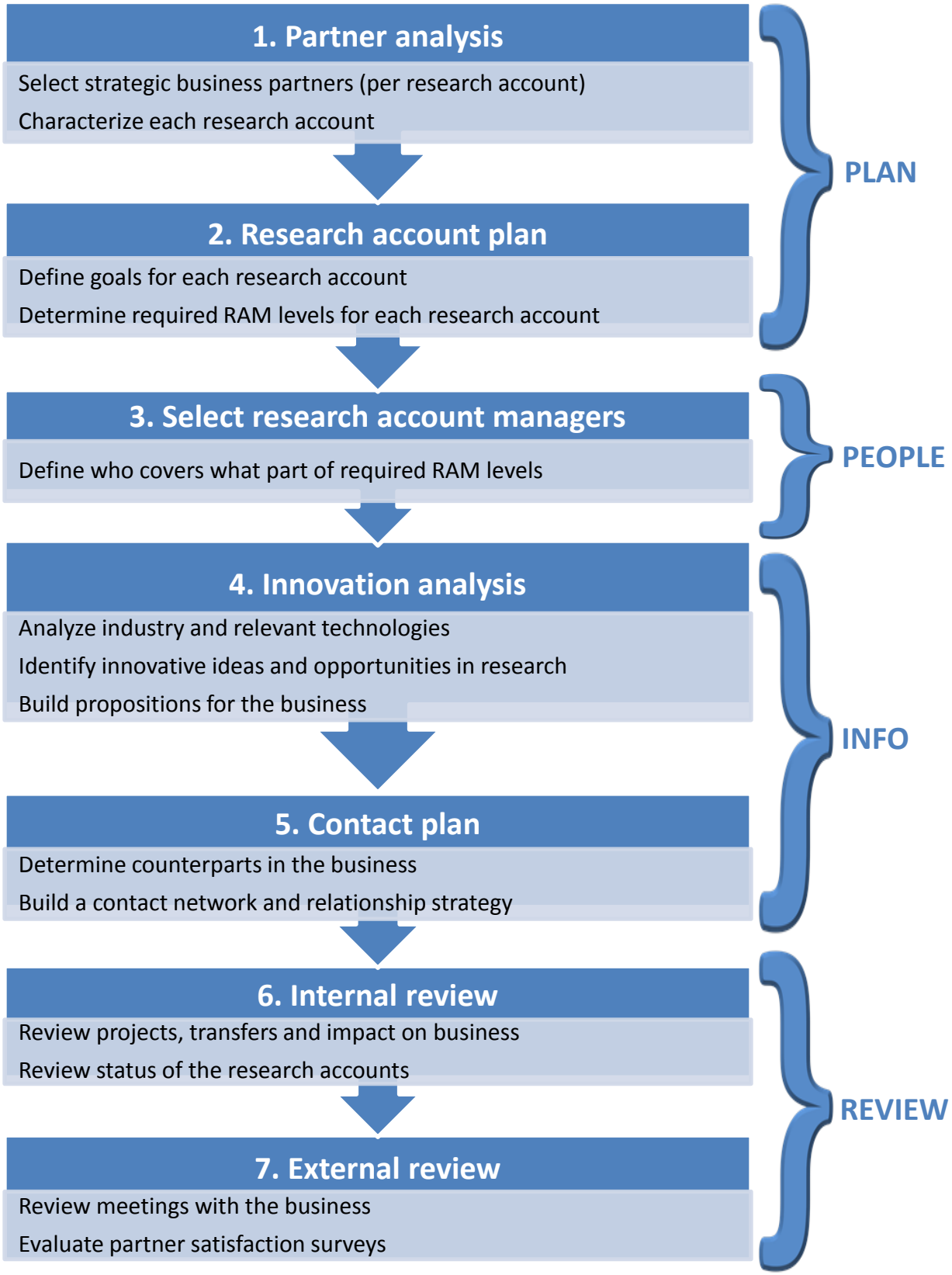

Figure 21: 7-step RAM approach

1. Partner analysis

The first step is to make an analysis of all the research accounts in the portfolio of the research organization. This includes both internal and external accounts. Since the Research organization only works for strategic business partners, it has to be determined if all accounts satisfy the criteria of being a strategic business partner. The accounts need to be assessed on where the research organization can add the most value and co-creation partnerships can lead to successful innovations.

The accounts need to be analyzed on several characteristics, to further structure the research account management which fits the specific account. Important characteristics are:

- Maturity of the market/industry;
- Maturity of the (Philips) business (or external partner's business);
- Current size of the research portfolio for the account;
- Opportunities for growth (how can research organization stimulate these).

2. Research account plan

Establishing and updating an account plan allows the research account manager to have a clear overview of the relevant account information, the characterization of the business, the contact network, the opportunities for the future, etc. This is not only useful when doing RAM, but also when transferring the responsibility of an account to another person.

3. Select research account managers

Once the planning phase has been finalized, the selection of the right people is the next step. It needs to be determined who will cover which level of research account management. These levels will be introduced in section 6.2. This depends on the characterization of the account in step 1. The size and maturity of the account determine if one person can cover all three levels of RAM, or if there needs to be a division of these levels over multiple persons. For large accounts with several growth opportunities and emerging business activities, it is good to have one person focusing on the strategic level of RAM, and one or more persons who focus on the tactical level of RAM (including business development) and the operational RAM.

4. Innovation analysis

Step 4 is the phase in which the research organization can show that it can add value to the account's business and that it desires to be a co-creation partner instead of a business partner. In this step, the selected research account manager of the strategic and tactical level jointly discuss the opportunities for the account. This requires gaining information and knowledge both internally and externally. Relevant ideas, technologies and applications need to be collected to build propositions for the account, while trends in the industry and an analysis of the competition can support strengthening the business' competitive advantage. In this fourth step, the research organization can show its valuable role in front-end innovation by proactively building propositions for the business and looking for game changers and breakthrough innovations. This requires a balanced approach of technology pull and market push: the goal is to jointly create a technology roadmap with the business, which serves both the short-term and the long-term.

5. Contact analysis

Next to the content-related knowledge from step 4, it is important to know the organization of the business partner. It needs to be determined who are the key decision makers in the innovation process, and a contact matrix can be designed who are the important counterparts of the research account managers. This should not only be the technical/R&D people, but also marketing managers from the business. The interview results showed that the input of marketing is very valuable, and that it can help to build proposition more from a business point of view. Marketing input enables the combination of technology push (research input) and market pull (marketing/business input) as described in step 4.

6. Internal review

Important part of the research account management process, is to check the added value and impact on the business. The internal review focuses on the relationship and the status of the research accounts. The level of the relationship can be assessed, as well as the captured and added value. This can be done with the exercise conducted as part of this study, with the graphs in Appendix B. Outcomes of the internal review can be used to update the account plan.

7. External review

Reviewing the performance of the Research organization and the outcomes of the partnerships with the business partner is very important to improve the relationship and ensure the added value of Research to the business. The interview results showed two suitable instruments to perform this external review:

- Review meetings
  Regular meetings with the business partners in which running projects are evaluated and redirected and future opportunities are discussed should be held multiple times per year. They improve the performance of research projects, the relationship with the business partner and prevent the Research organization from working too much in isolation and without a business point of view.
- Partner satisfaction surveys
  The NPS scores and suggestions for improvements from the partner satisfaction surveys, form an ideal input for reviewing the performance of the research accounts and the research account management process. A satisfied business partner indicates perceived added value by the Research organization and good management of the relationship.

The 7-step RAM approach as described above is a process which can be iterated to continuously monitor and improve the research account management process. The yearly Process-0 of Philips Research is an appropriate moment and procedure to walk through the seven steps of research account management.

6.2.Levels of RAM

The analysis showed that research account management is performed at multiple levels, ranging from contact at executive level with a business partner to communication on operational level on the execution of research projects. To structure these different levels and associated responsibilities and approaches, a RAM framework is proposed.

This framework distinguishes three levels of RAM: strategic, tactical and operational. This is based on a commonly used separation in process control (Bilgen & Ozkarahan, 2004). The framework is shown in Figure 22. In the next sections the different levels will be explained in terms of tasks, responsibilities, focus and horizon.

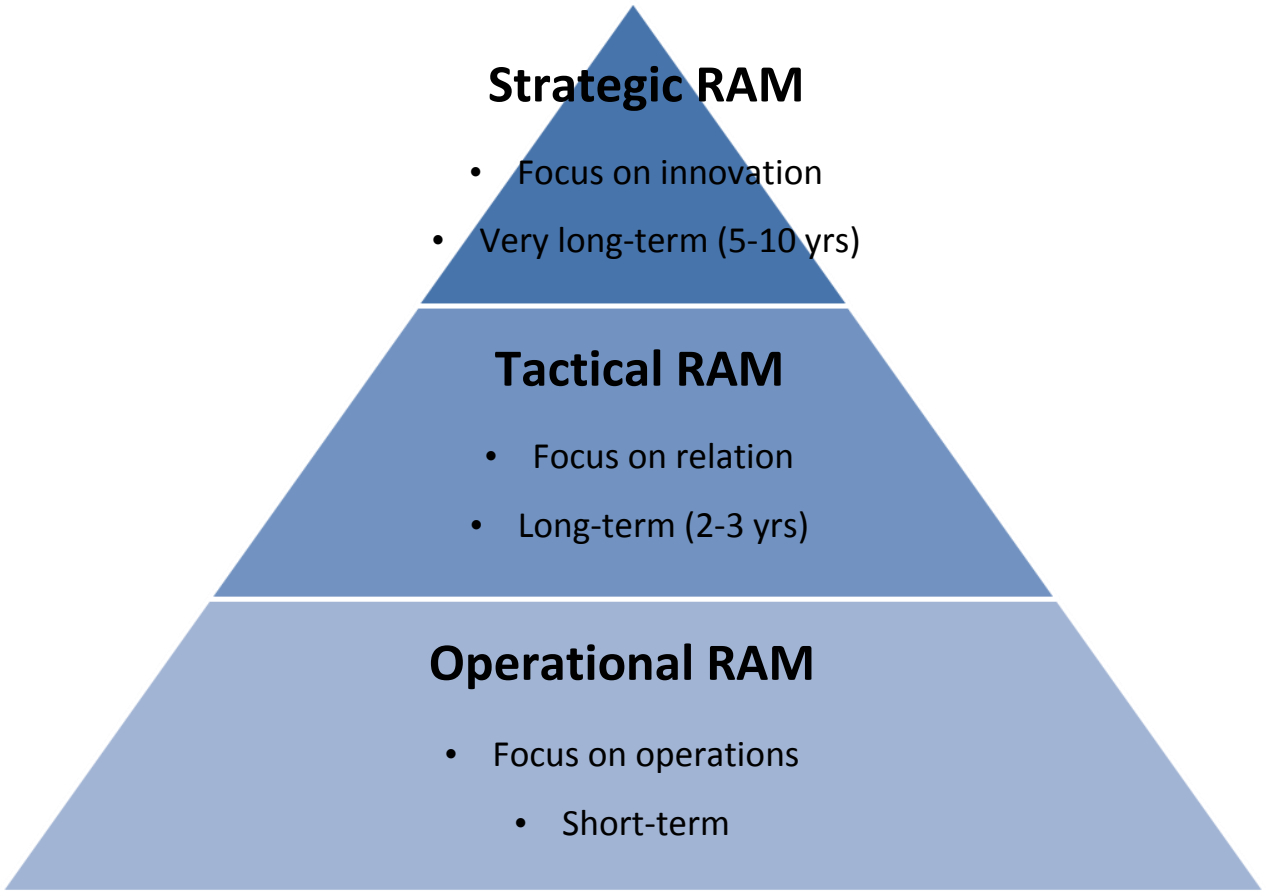

Figure 22: RAM framework

6.2.1. Strategic RAM

Strategic RAM focuses on an innovation sub-domain and on the content discussion of this sub-domain and other correlated innovation topics. The goal of this level of RAM is to agree on direction for the innovation areas and to build a 5-year plan and a technology roadmap for the business partner. The responsibilities of strategic RAM are:

- Content definition of innovation area (or topic);
- Portfolio management;
- Innovation management;
- Create alignment between business strategy and research strategy.

Strategic RAM plays a key role in the Process-0 in which the content of the innovation areas is discussed and agreed upon. The horizon of strategic RAM is very long-term: 5-10 years. It requires the identification of global and industry trends and vision on where the business is heading.

6.2.2. Tactical RAM

Tactical RAM focuses more on the relationship with the business partner. This means that tactical RAM aims to build a good relationship with the business partner, by continuously assessing their (innovation) needs and showing the value that the research organization can add. Tactical RAM has the responsibility of the implementation of the research projects within a certain part of an innovation area, monitored by the strategic RAM in the framework. Key tasks and responsibilities of tactical RAM are:

- Manage business partner relation with specific account(s);
- Design contact network, involve both technical and marketing roles in the process;
- Frequent review of projects;
- Strengthen alignment between business strategy and research projects;
- Making of account plan;
- Business development for new opportunities for account(s).

Communication and transparency are very important for tactical RAM. An important goal is to ensure the connection between the research project portfolio and the business and to secure landing spots for new technologies and applications. Tactical RAM makes research and business knowledge available to both organizations. The horizon is typically 2-3 years.

6.2.3. Operational RAM

The operational RAM looks at the execution of the projects influencing the relationship with the business partner. It enables the strategic RAM and tactical RAM to focus on the content of the innovation projects and supports these two levels in sustaining an effective relationship with the business partner. Tasks of the operational RAM are:

- Coordination of all activities and projects for the account(s);
- Administration and updating of relevant information;
- Enabling content discussions and Process-0 by providing relevant input about activities;
- Translating customer expectations to tactical and strategic RAM.

The operational RAM focuses on the short-term (1 year) and aims to coordinate a successful execution of the research project for the business partners, by communicating issues and other customer expectations to the higher levels of RAM and ensuring that the business partner stays satisfied.

There are some important remarks to be made for this framework, as well as some additional recommendations for the redesign which can further improve the RAM process. The first remark is that the different levels of RAM do not automatically correspond with separate (full-time) functions in the research organization. Depending on the characterization of the innovation topics and the research accounts, it can be determined how the levels of RAM can best be divided. This is described in step 1 and 3 of the 7-step RAM approach in section 6.1. The proposed framework allows for the current RAM

structure of Philips Research to be applied to these three levels. It is not unthinkable that a person combines responsibility for one of the RAM levels with another role in the research organization. It is important that in that case this person has enough capacity to cover all the responsibilities of the concerning level of RAM sufficiently. With this framework, account teams can be created, which cover the complete range of tasks and responsibilities of the RAM process. Collaboration among the members of the account team is important, since it helps acting as the single entry-point to the research organization, it prevents confusing communication towards the business partner and can result in new opportunities to propose to the business. A second remark is that this categorization is based on the three levels of RAM, because they have clear responsibilities and horizons. The interview results show that currently for some accounts there is also a categorization between E-, C-, and D-projects. Although the framework allows for such a horizontal process split to be made, it is argued that this is not an optimal situation. It is useful to work towards a more uniform approach of RAM. This framework enables this structuring of the process, while it still leaves enough space for a differentiated approach for specific accounts and situations.

An important recommendation for improvement is the enabling of collaboration between the RAM levels. This regards both horizontal collaboration and knowledge-sharing between the three levels of RAM for a specific account; as well as vertical knowledge sharing between account teams of different accounts. This knowledge-sharing can create new knowledge by combining the knowledge from the different account teams. For knowledge about content of the innovation areas, this can lead to new propositions and innovations, while for knowledge about the RAM process and the sharing of best-practices this can further improve the RAM process. The second recommendation with this redesign is to appoint someone which is responsible for the RAM process. Philips Research used to have such a role, but this job disappeared. This person can facilitate activities for knowledge sharing, overlooks the seven steps of the RAM process and all the responsibilities in the RAM framework, keep an overview on who is acting on what level of the RAM process and provide updates about the process to relevant stakeholders in the research organization.

Although the redesign is defined specifically to improve the RAM at Philips Research, it can also be used to analyze and improve the RAM at other corporate research organizations. The RAM approach and RAM framework can, when more descriptive and causal research is performed on the effects of certain aspects of research account management, be a valuable addition to the innovation management literature. These topics will be discussed in the next chapter.

7. Conclusion

This study has shown that research account management is a multidisciplinary and complicated process, which can be very valuable to a corporate research organization in managing the research-marketing interface, building co-creation partnerships with the business units and delivering innovations to these business units. The principles of existing (key) account management theory appeared to be useful to implement a customer-focused approach aimed at building long-lasting relationships with the business partners. However, this study also revealed that a standard account management approach is not suitable for centralized corporate research organizations, and that research account management differs in a number of ways from the account management theories in current literature.

The research question of this study reads: *How can account management in a corporate research organization be optimized?* This study has shown the benefits of building relationship with customers for a corporate research organization and provides an answer to this research question in three facets. First, a framework which covers the three levels of RAM – strategic, tactical, and operational - and its corresponding tasks and responsibilities should be implemented. Secondly, optimization of the research account management process requires an approach in which there is a continuous mix of technology push and market pull. Third, research account management can be optimized by following the proposed 7-step approach to RAM. The in-depth analysis of research account management at Philips Research has shown how research account managers are currently managing their relationships with the business partners and how this process can be improved. The proposed framework and 7-step approach to research account management offer useful instruments to optimize research account management. The framework helps structuring the process and covering all the tasks and responsibilities of the RAM process. The 7-step RAM approach offers well-defined process steps which consecutively define the planning, people, information and review of research account management.

A good relationship is essential for successful innovation projects from research and its business partners. Transparent communication and creating alignment and active involvement of the research organization in front end innovation are conditions which can improve these relationships. Research account managers have to embrace a combined approach of technology push and market pull to bring meaningful innovations to the business partners. Better collaboration and knowledge-sharing can improve both the proposed opportunities and innovations for the business partners, as well as the research account management process itself by sharing best-practices.

An important conclusion of this study is that the process of research account management is not a very strict process, and that there is no single optimal solution for the process. The RAM approach depends on the characteristics of the account, the business, the industry and on the person who is performing the RAM role. Research account management deals with innovation, and therefore with creativity. It is no hard science for which an optimal solution can be calculated. The proposed framework and stepwise approach offer useful guidelines for effective research account management, and do not aim to push the research account managers into a strict procedure with rules and regulations.

7.1.Recommendations

Implementing the framework and stepwise approach can help a corporate research organization structure and improve their RAM process. For Philips Research, the suggested redesign and the recommendations for improvement can be an effective method to bring the RAM process to a higher maturity level in the organization. The RAM process is of vital importance for the research organization. In proposing meaningful innovations to the business partners and adding value to their business and addressing this, the research organization stays relevant as an important source of innovation for the whole company. RAM directly touches the mission of Philips Research, which states that becoming a co-creation partner of the strategic business partners is the goal of the organization, in order to bring meaningful innovations. The proposed improvement of RAM connects well with the Accelerate! program, which is transforming the Philips Group in a more agile and entrepreneurial company. The creation of an end-to-end innovation network is an important aspect of this program, and the combined approach of technology push and market pull enables Research to become a part of this E2E network. The RAM framework and process embrace the three key behaviors of the company: research account managers need to *team up to excel* to improve proposition for their business partners, they have to *take ownership* of the relationship with the business partner and have to be *eager to win* in order to suggest useful opportunities and technologies to the business which can increase the business' competitive advantage. The interview results indicated that the current research account managers agree that there is room for improvement. This increases the possibility that implementing the outcome of this study will actually result in an improvement of the process.

The results of this study have some implications. As addressed earlier, the framework and 7-step RAM approach offer a useful guideline for implementing and improving research account management. This study has pointed out the fundamental differences between commercial account management and research account management. In doing so, this study is a good first step in exploring this new research area in the field of academic research on organization and innovation management. It provides a clear overview of the characteristics of this newly introduced term research account management and is another variant in the broad spectrum of account management approaches. It has been proven that RAM is fundamentally different from general/commercial AM and that RAM can make a difference in managing the research-marketing interface at a corporate research organization.

7.2.Discussion

The study has delivered interesting and useful results for managing centralized corporate research, and for managing the research-marketing interface and innovations in general. It is a valuable addition to existing literature in the field of account management, which focuses on commercial account management and traditional buyer-supplier relationships. The newly introduced term research account management offers a very useful approach for corporate research organizations in managing relations with their customers and becoming more customer-focused in their research projects. By focusing purely on account management in a corporate research organization, this study is only relevant to a limited number of companies, but the results of the study provide insight in how an account management approach has to be customized for a research environment. In a time of decreasing

product life times, increasing competition and more complex customer demands, it is essential for corporate research organizations to embed a customer-focus early on in their projects. For corporate research centers in high-tech industries – like Philips Research – research account management offers a useful approach in establishing an effective innovation process between the central research facility and the business units. The design of the methodology ensures that the results and redesign from this study are both relevant for Philips Research - where the study was performed - as rigorous in terms of academic execution of the study. Although RAM is only generalizable and applicable to a relatively small number of organizations, it is of great value to these organizations in creating successful innovations, which is at its turn essential for a firm's sustainable competitive advantage.

It remains a challenge how to assess the performance of RAM and therefore how the evaluate the suggested improvement of this study. It is difficult to define objective and quantitative measures that determine good research account management. The internal review suggest methods for assessing the status of the research accounts, but these are based on personal perception. The external review assesses the satisfaction of the business partner and reviews the ongoing projects. However, these do not measure the total effect of research account management over the long term. This is even more difficult since the effects of good RAM and of innovations in general are typically on a very long-term and should be traced back to the original idea. Besides, innovation is a process in which many different departments and functions play a role, and of which it is hard to put a specific metric on the contribution of a specific function, in this case the research account management process.

The introduction of research account management as a specific form of account management, focused on corporate research organizations, is an interesting addition to the current literature on account management and innovation management. The study offers contributions to both the account management field as the field of innovation management, and more specifically managing corporate research and the research-marketing face. Research account management differs from the current account management techniques discussed in academic literature, and therefore deserves specific attention. Comparing the results of the study with the results from the literature review, it can be concluded that this study confirms the basic idea of account management also yields for research account management: building long-term relationships with partners is valuable for both organizations. The advantages of having a research account management approach in a corporate research organization, which were suggested by the academic literature on both innovation management and account management, were strongly validated by this study. However, two important distinctions between the literature review and the outcomes of this study need to be addressed in this discussion. The first aspect is that traditional account management uses a more commercial buyer-supplier relationship, in which the buyer describes his needs or the supplier tries to identify these needs, and subsequently the supplier tries to fulfill these needs. In research account management, letting the buyer (the business units) always determine the project would undermine the innovative power of the supplier (the research organization). To effectively and optimally utilize the front end innovation power of the research organization, research account managers should pro-actively propose new opportunities to the business partners. This is why research account management requires an approach with a continuous mix of market pull and technology push. The second notable outcome of this study, is that

knowledge management has a different role in the research account management process than it has in account management described in literature. Both relationship management and knowledge management, as presented in the conceptual model, have proven to be an important part of the research account management process. In literature, knowledge management as part of account management focuses on the creating, sharing and documenting of knowledge about the account. In research account management, the knowledge management is two-sided: knowledge about the business partners and knowledge about the projects. A research organization is a knowledge-creating organization, and knowledge management is therefore essential. The outcomes of this study show that research account management does not use an extensive infrastructure for documenting the knowledge about the accounts. Both the literature review and the results of this study suggest that on this aspect there is room for improvement. For the knowledge processes regarding the project knowledge, research account management only has a stimulating and facilitating role in these processes. The actual knowledge management is done on the project execution level. Further research could provide better insight in the role of knowledge management as part of knowledge management.

7.3.Limitations

This study is an exploratory research project which sheds light on research account management, a topic merely discussed in the current academic literature. Although it gives useful insights in research account management and the value of RAM for research organizations, the study does not provide quantitative evidence for existing relationships in the RAM process and for the effects of research account management. In interpreting the results and redesign of this study it should be taken into account that the interview results might be based too much on current problems and issues in the research account management process and that there is an influence of the specific situation of Philips Research on the results of the study. Therefore there are clearly some limitations on the outcomes of this study, and more research is needed to further strengthen the conclusions on important aspects and challenges of research account management. The benchmark analysis has put the results of the analysis of Philips Research in the context of similar research organizations and has provided some useful insights on the process at other organizations, but it is hard to rule out the risk of focusing too much on the context of the organization, in this study Philips Research, completely.

The way the projects at the centralized corporate research center are funded, might have an impact on the research account management process. Factors like the organizational structure, the organization of the R&D in the business and the overall innovation strategy of a company are also factors which can influence the applicability of the research outcomes. This study nevertheless aims to provide a framework and RAM process which is useful in corporate research centers in general, regardless of the specific company situation. If all research projects at Philips Research would have been funded directly by the company, and not by specific business units (the research) accounts, the framework and stepwise process approach would still be applicable and useful to improve RAM. Future research can help assessing which factors are most important in research account management. This will be addressed in the next section.

7.4.Future research directions

This report has shown the results of an exploratory research project in the field of research account management. It has been able to deliver useful insights in this process and the differences between what was already known in academic literature on account management and innovation management related topics. However, although the outcomes of this research are evidence-based, the project still concerns only exploratory research and does not provide hard proof for relationships and success factors in the research account management process. More research, especially descriptive and causal research which looks for quantitative evidence of existing relationships in the RAM process, is needed. This also yields for more research on the effects of good research account management, and how to measure, as was discussed in section 7.2. Research on definition of KPIs of the RAM process and how they can be assessed would be a valuable addition to the research area. Finally, a broader research project which would cover multiple centralized corporate research organizations, preferably in different industries and even different global regions, would increase the academic rigor of the RAM concept and would provide more valuable insights in the challenges and important factors determining how to build effective co-creation partnerships with business partners in a corporate research organization. In this way, the position of research account management in the field of organizational research on account management and on innovation management can further be strengthened, and further insights on how research account management can provide value to corporate research organizations can be obtained.

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9. List of Abbreviations

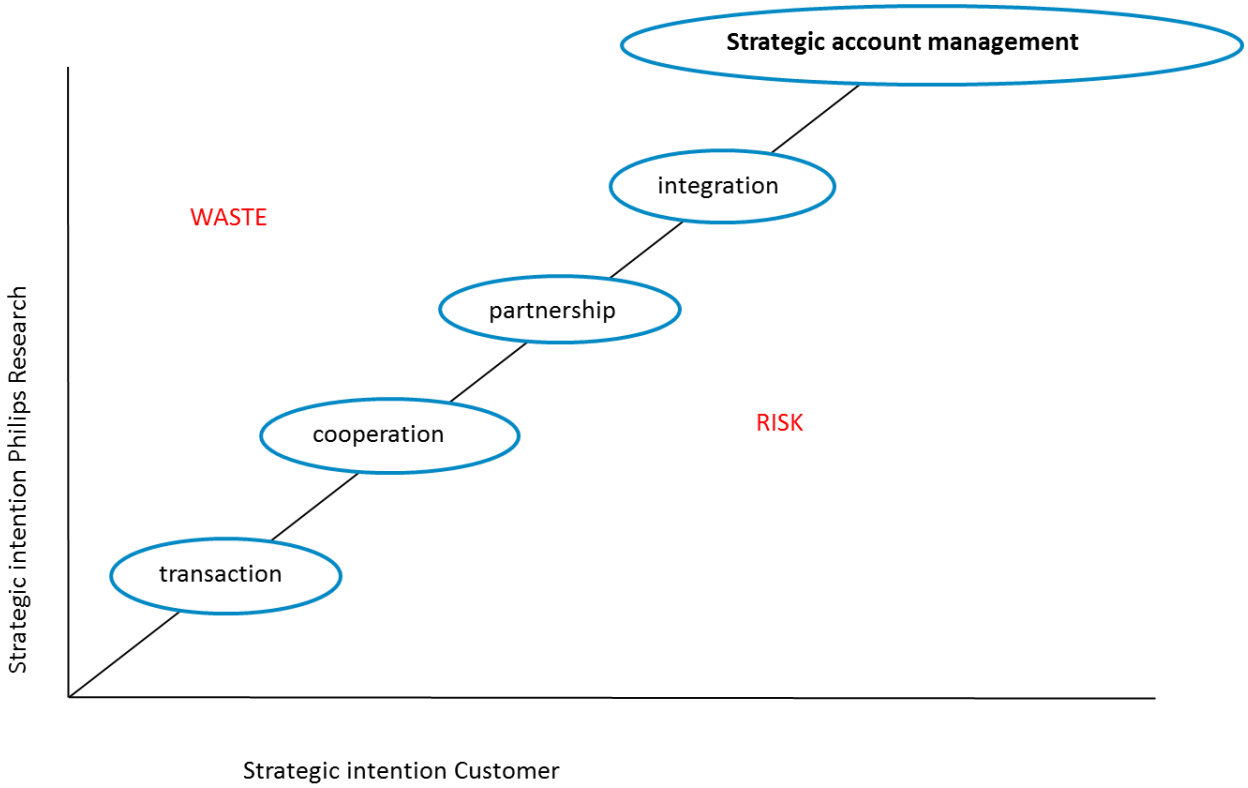
AM	Account management (or manager)
AP	Account plan
BU	Business unit
BPS	Business Problem Solving
C	(Proof of) Concept
CEO	Chief Executive Officer
CL	Consumer Lifestyle
CMO	Chief Marketing Officer
CRM	Customer relationship management
CTO	Chief Technology Officer
D	Development
E	Exploratory
E2E	End to End
EBA	Emerging business activity
FEI	Front end innovation
FFE	Fuzzy front end
FTE	Full time employee
HC	Healthcare
IAM	Innovation area management (or manager)
IM	Innovation management
I(C)T	Information (& Communication) Technology
KAM	Key account management (or manager)
KM	Knowledge management
MT	Management team
NPD	New product development
P&A	Program & account
PInS	Philips Innovation Services
PL	Project leader
RAM	Research account management (or manager)
R	Research
R&D	Research & development
TO	Topic owner(ship)
TSD	Technology strategy document

Appendix A – Interview Protocol

Nr.	Question	Construct	Topic
1.1	What is your background? (study; before becoming AM (internal, external))	General	Background
1.2	For how many years have you been an account manager?	General	YoE
1.3	Which account are you managing?	General	Accounts
1.4	How big is this account? (in FTE's from a Research perspective)	General	Importance
1.4.1	How big and mature is the business unit and market?	General	Size
1.4.2	How is the distribution of work in terms of E, C, and D projects for this account?	General	Phase
2.1	How do you build and maintain relationships with business partners?	Relationship	Management
2.2	With which function(s) do you build and maintain a relationship?	Relationship	Who
2.3	On which occasions and in which forms do you communicate?	Relationship	Communication
2.4	What problems do you experience in this relationship? (e.g. contacts abroad?)	Relationship	Culture
3.1	How do you document information about your account?	Knowledge	Management
3.1.1	Which IT tools do you use?	Knowledge	Technology
3.2	How are transfers prepared and supported?	Knowledge	Technology
3.2.1	On what base do you classify projects as E/C/D projects in the system?	Knowledge	Technology
3.3	How do you collect and share research information from the business?	Knowledge	Infrastructure
3.4	How do you collect research information that is interesting for the business?	Knowledge	Infrastructure
3.5	Do you get sufficient input from Research to do AM in an optimal way?	Knowledge	Culture
3.6	How is the cooperation with IAM?	Knowledge	Culture
4.1	What are in your opinion the tasks of an account manager?	AM	Tasks
4.1.1	Do you have a formal function description?	AM	Description
4.1.2	Did you formulate specific objectives for your account?	AM	Objectives
4.2	Do you see Account Management as a role or as a function? Why?	AM	Viewpoint
4.3	How would you improve the current AM?	AM	Improvement
4.4	How would you describe perfect Account Management?	AM	Improvement
4.4.1	What is the biggest challenge for your own Account?	AM	Challenge
4.5	What are best-practices from your account? Why?	AM	Best-practice
4.6	If you have to transfer your account to someone else, how would you do this?	AM	Transfer
4.7	Can you plot in the graph* where your account is currently positioned?	AM	Plot
4.8	Do you have any other remarks or ideas?	AM	Remarks

Appendix B – Graphs for positioning current state of account

The first figure looks at the intensity of the relationship which an account manager has with the business partner(s). This model has been used before within Philips Research and defines four different stages in reaching Strategic Account Management: transaction, cooperation, partnership and integration. Growth in the relationship, growth for the account is possible along the diagonal axis.



The key words below characterize the different stages in Account Management.

Transactional or basic relationship

- Sales: can be a minimal number of transactions or low, occasional spending.
- Relationship: fulfillment of normal sustainable trading as a minimum.
    - Efficient handling of transactions. Strong focus on financial drivers.
- Trust: create first building blocks (if transaction is not right, a customer will not consider investing in the relationship any further).
- Network: few people or departments involved.
- Organization: no understanding of each other's modus operandi.
- Joint strategic planning: absent.

Cooperation

- Sales: pattern of repeat buying. It does not always signal commitment.
- Relationship: constant fear of losing the relationship.
    - Seen as costly. Supplier is spending a lot of money on the relationship; customer not (yet) ready to spend a lot.
- Trust: supplier is not (yet) fully trusted by the customer.
- Network: loose network; growing web of involvement (more and more people).
- Organization: companies begin to understand each other's modus operandi.
- Joint strategic planning: not yet.

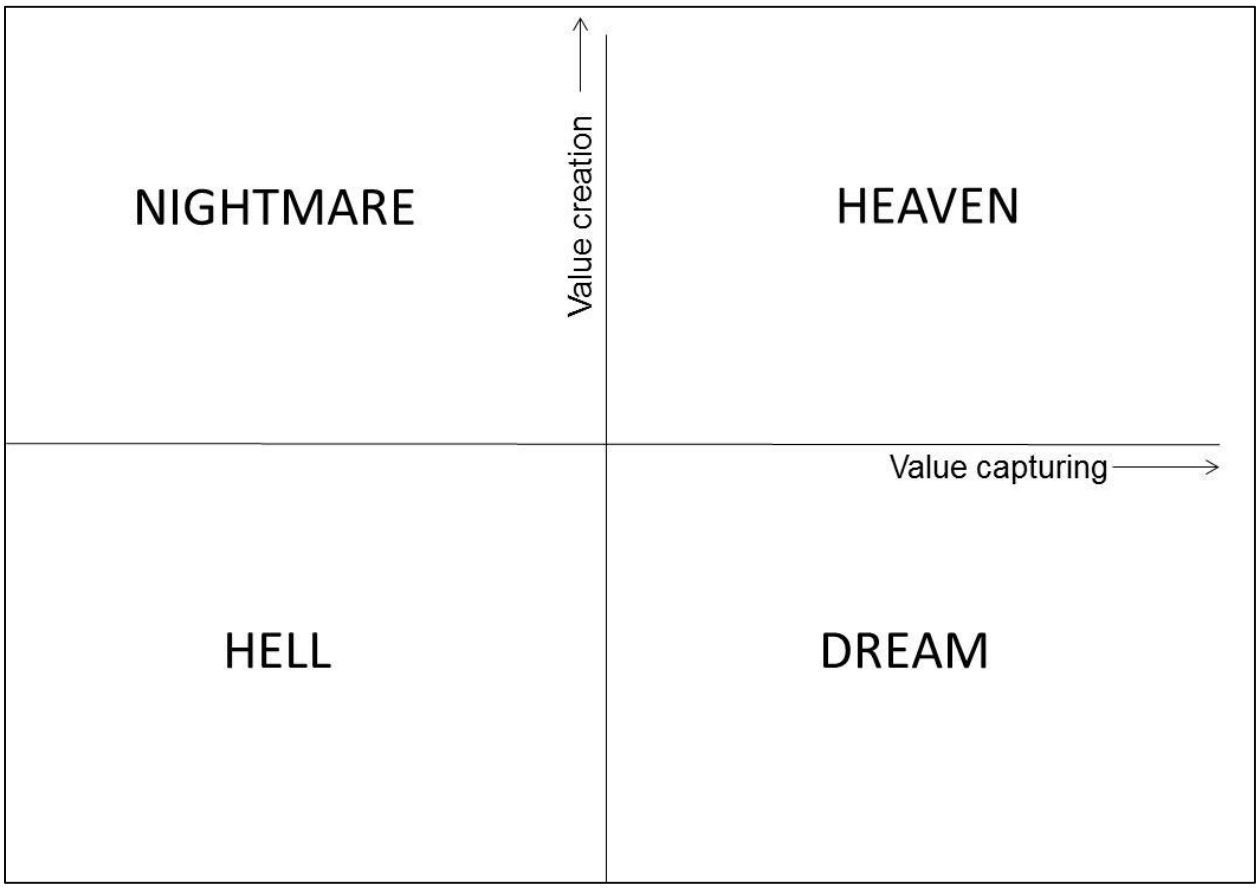
Partnership

- Sales: Higher sales volumes or value; repeat buying.
- Relationship: organizations collaborate across a range of functions.
- Trust: supplier and customer acknowledge the importance of each other.
    - They trust each other. Customer regards the supplier as a strategic external resource.
- Network: strong network; cross departmental contacts, growing web.
- Organization: sharing sensitive information, engaging in problem solving.
- Joint strategic planning.

Integration

- Sales: repeat buying, high value. Transparent costing system.
- Relationship: two parties come together to operate as a single entity; maintaining their separate legal entities.
- Trust: mutual trust across all departments. Supplier and customer work together in cross-boundary functional or project teams. Boundaries have dissolved.
- Network: a single entity, rather than the two organizations run the business.
- Organization: perfect understanding of each other's way of working.
- Joint strategic planning.

The second figure is a two-by-two matrix which looks at the outcome of the realtionship with an account. The matrix shows to what extent an organization succeeds in capturing value (money, competences, valuable assets for the future) for its own organization, in this case the Research organization, and to what extent it succeeds in creating value for its customer, in this case the internal and external business partners. The four quadrants have a label which metaphorically describes the state where the organization is in. Heaven describes a state where there is little to no value created for both the own organization as the customer. Nightmare is the state where there is a lot of value created for the customer, but the organization does not see a lot value captured in return. Dream is the state where there is sufficient value captured, but there is a lack of value-creating for the customer. Heaven is the state where the organization wants to be in: in this situation, there is a lot of value-capturing and value-creation. It is the account manager's goal to make sure that its account(s) is/are in the top-right quadrant of the matrix.



Appendix C – 10-step approach to (Key) Account Management