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B2B SUPPLY CHAIN AND VALUE CREATION AT ROGERS BVBA



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This thesis is commission from Rogers BVBA, EMS Division Scandinavian territory to better understand their distributor network behaviour, possible relationship development needs and Rogers, position as a supplier for industrial raw materials. Focus for research is in customer value creation and supplier management processes.

The ultimate goal of this thesis is related to possibilities to grow the sales revenue in this territory. Value creation analyses are based on the value chain theory from Porter and supplier management and control from several literature sources. In this case collection of reliable information needed deep discussions and qualitative methodology with face to face interviews provide the main source for research data. To better visualize results, also quantitative method was used.

The results of research are directly connected to the author's daily responsibilities and provide very valuable information for future customer relationship management and long-term strategy. Some of the results show need for corrective actions which can be implemented immediately. This research also provides a good view of general distributor behavior and will lead to additional interviews in other Rogers territories.

KEYWORDS:

Value Chain, Supply Chain Management, Porter, supplier management, distributors, qualitative

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ROGERS BVBA:N TOIMITUSKETJUN ARVONMUODOSTUS B2B ASIAKKAILLE

Tämän opinnäytetyön toimeksiantaja on Rogers BVBA:n EMS divisioonan Skandinavian myyntialue. Pää tavoitteena on ymmärtää, miten heidän jakeluverkostonsa yritykset toimivat, mitkä toimet lisäävät arvonmuodostusta ja miten yhteistyötä voidaan kehittää edelleen. Toisena tavoitteena on myös ymmärtää miten jälleenmyyjät hallinnoivat toimitusketjuaan, sekä miten Rogers nähdään materiaalitoimittajana,

Tärkeintä on kuitenkin löytää syyt mitkä estävät myynninkasvun. Arvoketjua on analysoitu käyttäen Porterin jo 80-luvulla julkistamaa, mutta edelleen ajankohtaista, arvoketjumallia. Teoria ja näkökulmat toimittajaketjunhallintaan ja -seurantaan on kerätty useista kirjallisuuslähteistä. Tutkimuksessa käytetty tieto on kerätty henkilökohtaisista haastatteluista, käyttäen kvalitatiivista tutkimusmenetelmää. Esittämisen helpottamiseksi, tuloksia on analysoitu myös kvantitatiivisella tutkimusmenetelmällä.

Suuri osa toimitusketjun hallintaa perustuu henkilökohtaisiin suhteisiin, joita voidaan myös kehittää. Tutkimuksessa huomattiin kuitenkin, että toimittajien hallinta ei ole kovin yleistä, mutta se voisi tuoda lisäarvoa ja hyviä tuloksia. Saadut tulokset ovat suoraan käytettävissä tekijän päivittäisessä työssä ja osa niistä tulee johtamaan välittömiin toimenpiteisiin. Tulokset tullaan esittämään laajemmin Rogersin myyntiryhmälle, joka antaa mahdollisuudet käyttää samaa lähestymistapaa myös muiden myyntialueiden asiakkaidenhallintaa kehitettäessä, sekä pitkäjähtäimen strategiaa luotaessa.

ASIASANAT:

Porter, arvoketju, toimitusketju, toimittajan hallinta, jakeluverkosto, kvalitatiivinen

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LIST OF ABBREVIATIONS (OR) SYMBOLS

BENELUX	Belgium, Netherlands, Luxembourg
Bisco ®	Registered trade mark for Rogers silicone material
BVBA	Besloten Vennootschap met Beperkte Aansprakelijkheid (registered company in Belgium)
B2B	Business to business, business relationship between two companies
EMS	Elastomeric Material Systems
MOQ	Minimum Order Quantity
NDA	Non Disclosure Agreement
OEM	Original Equipment Manufacturer (end customer)
PC	Preferred converter
Poron ®	Registered trade mark for Rogers polyurethane material
SCM	Supply Chain Management

1 INTRODUCTION

Working in a global sales team with high sales targets and investor expectations is mainly interesting, joyfull and enjoyable, however if the team does not reach its yearly sales targets or create expected yearly growth, responsible people start to find out reasons for low sales performance and lost deals. There are many of different business process theories, but understanding customer behaviour, decision making process and the value supplier is able to create to the end customer, could be listed a few of the basic starting points. Naturally, there is need for higher customer loyalty and open information share, but what are the most feasible footsteps to reach them? This thesis is a commision by Rogers BVBA, EMS Division, Scandinavia territory and the purpose of it is to reach for higher sales numbers. Later in this thesis the company is called Rogers.

Rogers's European sales team made excellent results during 2014 and also sales in territory grew by more than 10%. This was mainly based on active work with end customers but there was also generic industrial growth. During this same period, Scandinavian sales was basically flat. Unfortunately 2015 has not been as bright as previous year mainly because of general industrial slow down. Now the European territory is keen to find solutions to improve sales numbers. Rogers long-term sales targets also rely a lot on the growth Europe is able to collect. Thus timing for this study and questionnaire could not be more suitable.

The overall objectives of this thesis are to collect major understanding of Rogers distributor network Preferred Coverters, later called PC's, supplier selection and management process, which provides more understanding how Rogers generally stands in their industry and performs against competitions. *The main aim is to find out how Rogers as supplier should change their behaviour, services and products to increase material sales.*

Another interesting scope is the value creation process. This basically covers all Rogers internal functions as well as PC networks' business processes. This includes too descriptive amount of information and therefore the major focus is

in the value Rogers is able to create to their PC's as well as the common value created further to end customers, later called OEM. Business processes included cover PC's material management, sales process, design process and operations. Together with the above supplier management, value creation should highlight the benefits as well share the weak points of business relationship with Rogers and their PC's.

The research questions that are discussed here are:

- What kind of supplier selection process PC's are following?
- How they manage and control suppliers in daily basis?
- What is the major value Rogers as supplier is able to provide PC's?
- What is the major value Rogers together with PC is able to provide to OEM's?
- How value creation can be influenced to collect higher sales?

The theoretical framework used in this research is based on Porters value chain established already in 1985. The major target is to analyse and understand the profit created from each company function with target to increase profitability and competitive advantage. Even this theory is rather old, several existing professionals still refer that this is a valuable tool for profitability and company functional analyses. Later there is description of Rogers business model in detail and as there are several counterparts, also several value chains are related before the actual end customer will receive their products. The theoretical framework for supply line management related research questions is based mainly on book Iloranta & Pajunen Muhonen, 2008. They provide well structured descriptions of different business processes related to supply line management.

This study does not concentrate on Roges internal value chain or sales process as the major target is to analyse PC value chain, even if there are cases when research might need to be flexible to explain how some Rogers internal processes are related to direct communication with OEM's.

The methodology used is based on Porters value chain theoretical framework and a survey was carried out with qualitative research. Supplier management theories and importance are analysed based on literature.

The first section presents the background, the research questions, and expresses the motivation behind working into topic. The second section of the thesis introduces more background of Rogers business model as it is essential to understand somewhat complicated business processes. The empirical part is built around the value chain and literature related to supplier management.

Consequently, results are discussed and analyzed and linked with the theoretical framework in order to answer the research questions. Finally, conclusions are made with suggestions for changes in relationship management and sales process with PC's. Moreover some additional research topics are also brought up.

2 ROGERS INTRODUCTION AND BUSINESS MODEL

This chapter of thesis provides introduction of Rogers Corporation and their business model in European territory. Efficient sales process is always related to clear communication structure and as this is rather complicated in Rogers, this is opened in more details. This section includes also description of Rogers way to market and sales channel.

The commissioner of this thesis is Rogers BVBA (Besloten Vennootschap met Beperkte Aansprakelijkheid), Belgian private limited liability company, located in Gent. Referring to Rogers Corporation web pages it is daughter company for Rogers Corporation, listed in New York Stock Exchange with name ROG. Rogers Corporation is among world's technology leaders in innovative solutions for power electronics (Power Electronics Division), advanced foams for cushioning and protective sealing (Elastomeric Material Solutions Division, later EMS), and high-frequency printed circuit materials (Advanced Connectivity Solutions Division) . When reliability, efficiency and performance are critical, design engineers partner with Rogers to develop and deliver the material technologies they require. Headquartered in Rogers, Connecticut, USA, they serve customers and partners around the globe, and manufacture products in the U.S., China, Japan, Korea, Germany, Hungary and Belgium.

Rogers BVBA also acts as European headquarters for all above mentioned divisions, but this thesis is concentrates only on reviewing EMS division activities and sales channels. In Europe they have six sales people, each of them responsible of nominated sales territory:

1. UK, Israel and the Far East
2. BENELUX
3. Germany, Austria, Hungary, Poland
4. Spain, France and Portugal
5. Italy, Greece and Turkey
6. Finland, Sweden, Norway, Denmark, Baltics.

This study is only looks into territory number 6 without connection to Baltics.

The scandinavian territory is led by the author Taina Vainio, Key Account Manager. Her responsibilities are described later to create better understanding of her role in the sales process.

2.1 Sales channels

Confidential

2.2 Challenging PC and OEM communication channels

The earlier described material sales process may look rather simple, but before the material is in the OEM specification, there have to be several calls and emails either from PC sales personnel or from Rogers EMS territory responsible.

Communcation process can be illustrated as follows:

Rogers EMS ↔ Preferred converter sales ↔ OEM technology team

OR

Rogers EMS ↔ OEM technology team ↔ Preferred converter sales ↔
Rogers EMS

Difference from these two channels is directed by OEM product development team or designer who will first contact either Rogers sales person or PC sales person. If Rogers sales person has visited OEM, has good personal relationship with them and they are used Poron® or Bisco® materials, it is common that they will continue earlier started dialog. Other way OEM might have good relationship with PC sales person and want to solve problem just with some material which leads to situation where first material decision, either use Rogers materials or not, is done by PC. Two way arrows mean that there are several emails,

discussions and information share before design work and material selection is finalized.

Territories like Scandinavia has a large number of potential end customers as large as ABB, Ericsson, Volvo, Ecco etc., with several local design locations. PC's sales force and their close local contacts and language skills are effective added value to locate the material decision making or design specification locations. However these global large-scale companies stands to move their operations to low-cost countries, which provides another interesting challenge to sales process and outbound logistics. All cases described below are based on Rogers company practices and procedures.

Specification and design are done still by OEM European design teams with service from Rogers local territory person and local PC serving this particular customer with samples. This communication can be presented as follows:

Rogers EMS Eu \leftrightarrow PC Eu \leftrightarrow OEM Eu

When OEM production location is moved to low cost country and there is request about local supply chain then responsibilities are moved from PC's European location to PC's local location. Then outbound logistics can be illustrated as follows:

Rogers EMS Global \rightarrow PC Global \rightarrow OEM Global

The major challenge for Rogers in this situation is normally information flow as they need to prepare themselves for higher demand and increase local inventory values to support these transferred volumes. There is always also risk that even OEM specification lists Rogers as approved material supplier, the cost reduction targets force local PC to lower performing and cheaper materials without informing all counterparts.

In addition to earlier there is trend where OEM's start to outsource part of their manufacturing and then they use sub-assembly partner with partial or full production service. This adds one additional step to logistics process, even that is

not effecting Rogers direct deliveries to PC's. Outbound logistics can be illustrated as follows :

Rogers EMS Global → PC Global → ODM Global → OEM Global

Anyhow there is one additional end customer in supply chain who will use Rogers materials which are modified by PC's, in their assembly lines. Information need to still cover all parties and this will be described as follows:

Rogers EMS Eu ↔ Rogers Global ↔ PC Global (↔ OEM technology team) ↔ ODM Global ↔ OEM Global

As mentioned above the major challenge in these multilevel operations is information share. Rogers is encouraging PC network to share more details of OEM programs and design activities which helps Rogers production and demand planning. Direct discussions with OEM R&D departments as well as sales and marketing organizations provides more tools for Rogers general industry understanding and R&D functions. Sales and decision making processes can be complicated, but sales decisions are based on relationships and to the additional value suppliers are able to provide to their end customers. One target for this thesis is to understand major value Rogers is able to provide to their Preferred Converter network and to get signed in OEM specifications. An other topic is the supplier value created to PC business process and how these customers are able to manage their supply lines.

3 VALUE CHAIN APPROACH

Porter's value chain was selected as base theory for this thesis as it is still valid to provide simple and visual tool to company functions and business processes. Even it was first established in year 1985, several competitive analytics and education providers are still referring to this theory. This chapter describes Porter's theory in details with connection to Rogers and their distribution network functions.

Correct value creation leads to pleased customers which is always the basic target for each enterprise with possibility to collect additional profit to its' shareholders. The major marketing task is to create greater and sustainable value than competition (Keegan 2014, 28) and referring to Innovation Management eXchange: "The value chain framework can be used as powerful analysis tool for the strategic planning and to build the organizational model ensuring an effective leadership model. The value chain concept can be applied also in the individual business unit and can be extended to the whole supply chains and distribution networks." The analyzes based on value chain approach will provide possibilities to improve all business functions (Porter 1985, 43) with lower cost structure (Porter 1985, 51).

3.1 Porter value chain

Rather than looking at departments or accounting cost types, Porter started to focus on systems, and how inputs are changed into the outputs, better understood as products or services, purchased by consumers. Porter described a chain of activities which are common to all businesses, and then divided them into primary and support activities, as shown below. Major target for this view is that each function creates additional value and exceeds dedicated costs so improves margins, and in the end it creates competitive advantage (Porter 1985, 43).

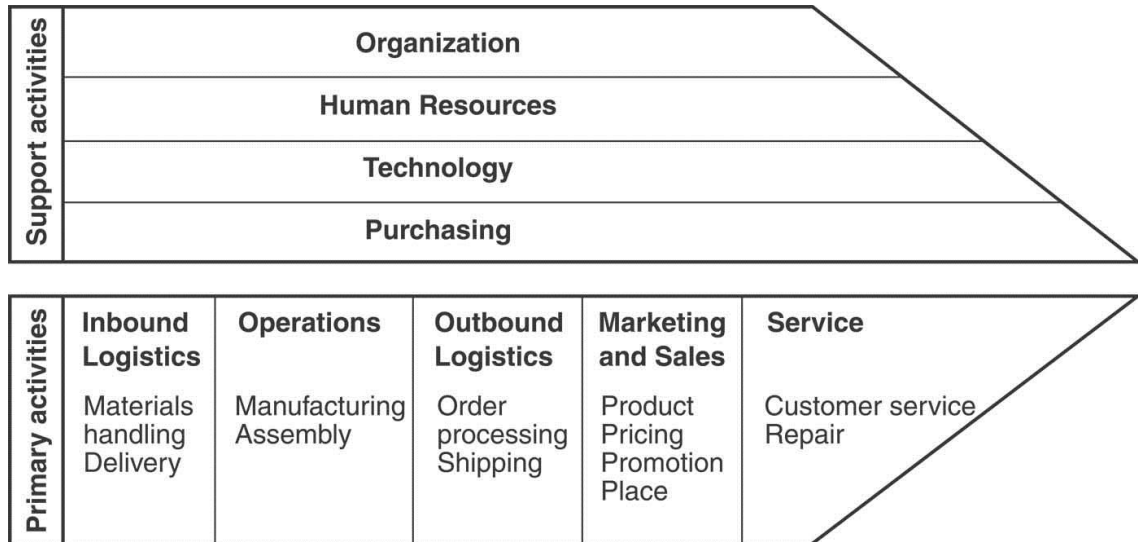


Figure 1. Porter's Value Chain Diagram (Porter 1985, 55).

Primary activities relate directly to the physical creation, sale, maintenance and support of a product or service. They consist of the following:

Inbound logistics – These functions include all the processes related to receiving, storing, and distributing inputs internally. Supplier relationships are a key factor in creating value here, which is also one of the major research topics in this thesis.

Operations – These include activities that change inputs into outputs that are then sold to customers. They can be either physical products or services.

Outbound logistics – Delivers te product or service to end customer. These are functions like collection, storage, and distribution systems, and they may be internal or external to organization.

Marketing and sales – Includes functions which companies use to persuade clients to purchase from them instead of competitors are included to this box. The benefits companies offer, and how they you communicate with customers, are sources of value here.

Service – Includes activities related to maintaining the value of product or service to end customers, once it's been purchased.

Support Activities support the primary functions above. Each support, or secondary, activity can play a role in each primary activity. For example, procurement supports operations with certain activities, but it also supports marketing and sales with other activities. These include functions like:

Procurement (purchasing) – This is what the organization does to get the resources it needs to operate. This includes finding vendors and negotiating the best prices. This also includes supplier relationship management which is major topic for this research.

Human resource management – Refers how well a company recruits, hires, trains, motivates, rewards, and retains its employees. People are a significant source of value, so businesses can create a clear advantage with good HR practices.

Technological development – Activities relate to managing and processing information, as well as protecting a company's knowledge base. Minimizing information technology costs, staying current with technological advances, and maintaining technical excellence are sources of value creation.

Infrastructure – Covers the company's support systems, and the functions that allow it to maintain daily operations. Accounting, legal, administrative, and general management are examples of necessary infrastructure that businesses can use to their advantage.

Each above mentioned processes can be crucial and are somehow connected to competitive landscape or when creating advantage against competition (Porter 2006, 58). None of value functions are independent as together with internal connections those all are creating full value chain. These connections and costs related to all above functions are creating the company's full cost map and are also base for competitive advantage. This thesis looks more the fundamental value Rogers is able to provide, not analyzing costs related to different business process steps.

Seems also that connections between primary and support activities are as important than specific function itself and with optimization and coordination of those connections, additional benefits will be reached. To optimize value chain analyzes it is anyhow very important to understand these internal connections and how to collect information to develop internal systems and tools (Porter 1985, 67-69.). The major target also for Rogers customer questionnaires is to map all connections which relate to OEM specification work and how supplier relationship management could provide more value to actual sales process. Also Porter highlights that there are vertical connections between sourcing and distributor network, which might effect to companys internal cost structure. There are also ways to optimize functions in this direction (Porter 2006, 81.) to improve competitive advantage, which is one major focus in this thesis.

3.2 Value chain importance in Rogers EMS Division and converter relationship

Considering primary activities there is need to first focus on Rogers' internal primary processes: outbound logistics, marketing and sales. Questions such as: Are customers happy about delivery times and methods? Would they need for example more materials stored in European locations instead of shipping those directly from USA? Does Sales and Marketing function provide them all information and support needed to win deals with Poron® or Bisco® materials? Do they need more training?, can be asked. These topics are part of this research from PC point of view.

At the same time internal, support activities, especially technology, has an important role. It is extremely important to develop new materials based on real end customer needs, but does Rogers receive OEM requirements back from converters or does OEM receive clear and loud messages about Rogers new material experiments through PC network sales organization? Additional question is are PC's blocking information and selling competitor materials instead of Rogers?

External – converter – primary processes to be focused would be more inbound logistics and operations. Rogers material packages has to be suitable for efficient storing and roll sizes have to support efficient inventory cycle times. Also operations have remarkable role. If Rogers makes technically excellent materials which are difficult to process and has low production yields, will definitely lead decrease for total sales. Understanding of converter manufacturing capabilities and their requirements for suppliers will provide additional competitive advantage also for Rogers.

As mentioned above, the marketing channel is through PC sales personnel and their discussions with OEM's. If these people are not highly trained for technology or material benefits, it does not create value for converter, Rogers or further to OEM. If all OEM technology requirements were openly communicated through full business process by PC's, also Rogers possibilities to create more value is higher.

From external supportive functions, the main role is coming from purchasing. OEM sourcing likes to act like gate keepers (Sakki 2009, 188) and want to block too detailed discussion with converter sales team, with the target to control the possible changes in supply line. PC sourcing understands value creation quite often with price reductions or shorter lead times and lower inventory value. Sourcing will definitely provide savings to their own organization, not probably the full value to OEM's. Sourcing is also responsible for supplier selection and relationship management (Iloranta ym, 2008. 61-62).

Finally there is converter technology function which should communicate directly with Rogers technology department to develop together the materials which fulfill OEM's needs with high production efficiency.

This thesis will review value creation process benefits from PC point of view, not targeting to provide Rogers development proposals for their above mentioned internal functions. Rogers uses PC's as their distribution channel and each business process step which leads closer to actual deal with OEM is also connected to Rogers internal value chain. Main target for interviews is to find the

relation between PC's internal value chain to Rogers value chain. Ultimate target is to provide improvement proposals to increase Rogers competitive advantage as supplier in their PC network and OEM relationships.

4 SUPPLY CHAIN MANAGEMENT PROVIDES EFFICIENCY

Supply Chain Management (later SCM) is normally seen as network of several companies which has common target. Companies attending to order – delivery process is seen as large enterprise, where supply line needs wider management (Sakki 2009, 25). But if company is making business with actual products, supply line do exist and that is normally a daily running process. Therefore understanding of SCM is one of business basic skills and majority of companies run this function without specific strategic planning or control. Referring to Egan supplier – customer relationship is always determined by different amount of motivational investment that parties are prepared to commit to the relationship (2001, 33).

This chapter provides more understanding of SCM as business process with description of its' functions and responsibilities. Theory is based on references to several different literature sources and provides additional understanding for supplier management. It was interesting to realize that availability of books written about SCM is rather limited and old. That function does not seem to create same kind of interest as for example sales process development. Below information is also base for interviews with Rogers PC's and their SCM related processes.

4.1 Supply Line Management

Companies are not able to run production and serve customers without logistics processes which includes both incoming and outgoing supply. Companies are willing to focus to core business and need active supportive chains and the decision either to make or to buy has to come from company strategy. Tight cost targets have forced also manufacturing further to low cost countries, which also mean much wider partner networks (Sakki 2009, 12-13). The trend shows that supply lines and network chains are getting much longer than earlier

(Logistiikan Maailma 2011, 186). SCM means planning, guiding and management of company's material flows including relevant information and money transfers (Logistiikan Maailma 2011, 23). This function is not only number of separate actions, but smoothly working machine which has transparent visibility for each separate step and common understanding of targets and benefits for each actively attending partner.

SCM actual target is to create value to end customer for example with better order processes and quicker deliveries. It will also improve company profitability with better supplier quality and lower inventory values. More efficient logistic partners and for example make to order approach will also save costs. SCM will improve company's general market position when customers are satisfied for full service they have received and management is able to control the company cost structure better (Logistiikan Maailma 2011, 23). If there are only three active parties: supplier, manufacturer and end customer, already this includes 2 order – delivery processes. First process is between supplier and manufacturer, second between manufacturer and end customer. But it is very common that nowadays there are supply networks and this multiplies the number of SCM activities (Sakki 2009, 22), which definitely needs management.

Rogers EMS selling process to PC's and further to OEM's, sometimes through subcontracting partners, is really an describing example of international partner networks with multiple supply lines and difficulty to monitor. Then does Rogers create value, how this can be calculated, who are the partners who should recognize this and how can it be improved, are the questions which are discussed and analysed in detail in the research part.

4.2 Procurement and sourcing

Organizations and processes responsible for procurement and sourcing includes several different activities and responsibilities. Differences of tasks and roles are normally related to time available for actual action. Sourcing takes care of long term supplier selection and measurement, supplier relationship de-

velopment and long term forecasting. Sourcing is then responsible for more tactical and strategic activities which in other words are called proactive functions. Buyers though normally concentrate more in reactive operative functions like ordering process, delivery performance and invoicing activities (Logistiikan Maailma 2011, 31). Value creation in these teams concentrates more in Sourcing functions because of its longterm visibility and also possibilities to develop well coordinated information flows.

Considering Rogers EMS converter network partners size, the number of available resources and teams differ a lot. Some of them have multitasking managing directors, who take care of sourcing, selling and planning, some have enough employees and revenues to have both sourcing and procurement functions. Rogers daily contacts are divided to two layers; Sales Engineers normally communicate with PC's sourcing personnel as customer service has more direct active cooperation with PC's procurement or in other words buyers.

In the case when OEM makes material specification decision and is willing to cooperate directly with base material supplier like Rogers, above mentioned communication order is not valid. In these cases there are multiple information channels. Sales Engineers talk directly with OEM designers and sourcing, but at the same time they forward lead to some of Rogers PC's and discussions will continue with PC sales team and OEM sourcing. This was already described in more details in chapter 2.2.

4.3 Supplier selection

In different industries the supplier selection criteria differs a lot. It is obvious that selection by pricing is attractive, simple and effective, but it is only arithmetic function (Iloranta & Pajunen 2008, 252). For deeper analyses which are based on supplier market understanding, there are the following options: Price centric (competition or price dynamics), Efficiency centric, Capability centric and Technology centric (Iloranta & Pajunen 2008, 252). Price centric supplier selection is used mainly in markets or industries where products suppliers are offering are

very similar and value of the products is low. Efficiency centric supplier selection expects that technologies suppliers are able to provide are equal, but decision is based supplier process efficiency which provides total cost benefits. If customer is buying services they intent to use the capability centric selection, which expects that supplier performance has large capability differences. The last method, technology centric, assumes that supplier long term technology development capability will provide competitive advantage (Iloranta & Pajunen 2008, 253-255)

Sourcing organization needs to have detailed market understanding in order to be able to select which above mentioned criteria are relevant in this particular market and more detailed in this technology supplier selection. It is also clear that the more valuable the sourced material is, more time should be used for supplier analyzes (Iloranta & Pajunen-Muhonen 2008, 261). When referring to Rogers and their way to market through PC sales team and OEM specification work, there is need to be listed in two approved supplier and material lists: PC's and OEM 's.

4.4 Supplier Management and Control

It is still quite rare that customers would build supplier strategies or invest a lot on supplier relationship management even that was for the first time highlighted by Mr. Leenders in year 1988 (Iloranta & Pajunen-Muhonen 2008, 267). Traditionally, sourcing strategy is based on production strategy which lists long term targets and for example sets measurement tools for supplier performance (Jahnukainen & Lahti & Virtanen 1997, 26). Still only very large companies have found out that it is possible to also help, guide, motivate, develop and even lead suppliers (Iloranta & Pajunen-Muhonen 2008, 314). Somehow it seems to be still difficult to build trust and commitment with suppliers and believe that time spend for relationship building is paying back with better supplier performance. This kind of new working method implementation needs clear attitude change with shared values, communication and opportunistic behaviour from both cus-

customer and supplier (Egan 2001, 94). The final target isn't anymore value creation to one of the parties, but for full supply chain.

There is understanding that supplier performance has to be measured, but quite often it is related to financially measured facts like pricing, payment terms, delivery performance and quality claims. In case suppliers are not guided well enough about strategic customer requirements, these numbers give wrong view of their performance. When thinking deeper about supplier relationship development, also measurements related to problem solving, improved service processes, common technology project or finally development programs which target to both parties efficiency and resource growth, should be implemented.

Supply chain integration is a growing trend and this clearly means that sourcing mode is changing from passive to very active and cooperative. It needs close supplier relationships and strategic understanding of the value which could be created together, with efficient cooperation. Japanese and especially automotive industry has been road openers in this sector (Iloranta & Pajunen-Muhonen 2008, 74-75, 324, 337).

Suppliers can be guided and managed. It is obvious that there is interest to develop delivery processes and reduce leadtimes, which create immediate savings, but suppliers can also be trained. So far it is still quite rare that OEM's would train their suppliers about their strategy, long term requirements, coming technology trends and market related laws and restrictions.

4.5 Sales support to buyers

Traditional sales process starts from the idea that seller has to be able to solve customer problem, but how many sellers really listen to their end customers and try to understand what they really need? Several voice of customer tools and interviews are used, but what do the seller do with this information? Customers ask for changes, but companies stick to their own processes and inflexible attitude makes buying really difficult.

Especially in technical solution sales as in Rogers, there is always customer problem which needs to be solved and quite often that is strongly related to some of end-products major functions. As mentioned above, sometimes this requires serious testing cycles and passing industry standards. Competitors are also very active and use same sales channel through PC's, which increases the risk to loose the deal, which increses supplier need to differentiate themselves from competition and really focus to end customer value creation (Keegan 2014, 29). Active sales personnel has to continuously share their product knowledge, build more trust as reliable supplier and be available when customer is ready to make their buying decision. This includes pre-functions, like material samples, which plays important role also in Rogers EMS sales performance.

Suppliers are part of company's make - order process and are very important collaborators in the daily business processes. They can either create risk of provide additional benefits to end customer value chain. Anyhow it is still quite rare that companies would have specific supplier management programs, but there are examples which show clear benefits from vision shares and closer relationships with suppliers. Efficient SCM should provide cost savings, reliable delivery performance, lower quality claim scores, better technology offerings and in the end very satisfied end customers. Suppliers need to provide flexible, efficient and responsive service chain to meet market needs (Keegan 2014, 405).

Supply line development needs lot of resources and skillful personnel, but definitely also strategic interest and decision from company management. Rogers PC network supplier management and control was discussed in interviews, which results are available in next chapter. Relationships are anyhow not unilatelar activity of the seller. Only way for effective SCM is that supplier and customer have an idea how important the relationship is for them and what they expect of it (Ford etc. 2009, 67).

5 METHODOLOGY

This chapter will provide background about methods selected as base for interviews to collect the most useful and reliable information. Also research questions and thesis targets will be explained in more details. The connection of major theories, Porter value chain and SCM, and how those connect to research questions is also described below. As there was possibility to use very wide number of interview sources, but not all of them were selected, below chapter describes also focus group selection process and criterias.

5.1 Choice of methods

Target group and interest topics for this research were very wide, but they are still related to daily business activities and behaviour, which is a normal starting point for qualitative research (Hirsjärvi & Remes & Sajavaara 2009, 164). The major target was to better understand PC business processes and behaviour in their supplier and OEM relations. The outcome from discussions is more important than quantity, data is collected from individual persons and each PC has different working models which make them unique (Hirsjärvi & Remes & Sajavaara 2009, 164), which supports selection of this method. Flick also reminds that to be able to collect qualitative data in interviews, researcher and target persons has to get deeper involved. Rogers sales people have also a well functioning relationship with target group sales and sourcing teams, which are selected for interviews, which provides good base for open discussions.

In order to create open information channel, relaxed feeling and let PC voice to be better heard, semi-structured interviews were used. The selection of target group expected that personal relationship is in such level that reflection could be created and value of the data could be reliable (Hirsjärvi & Remes & Sajavaara 2009, 164). Research process can be described also in circular model (Flick 1998, 45) which is based on pre-assumptions and after collection and comparison of data the results are implemented to earlier decided theory. In this

thesis the questionnaire results can be connected to Porter's value chain and literature related to sourcing functions, which helps analysis and further action proposals. Qualitative research is also trying to locate trends, like sales team behaviour, missing service or supplier management, which will help when providing proposals for improvement actions.

Even how carefully the author tried to narrow research question, it was also clear that interviews led discussions to other related important topics, which also modified analyses of research slightly. Usage of qualitative research intends to do this and therefore research plan has to be flexible (Hirsjärvi & Remes & Sajavaara 2009, 164).

5.2 Research target and questions

The base for this thesis is value creation process, but because of quite complex business process, there was some difficulty to decide on either concentrate to the value Rogers is creating to PC or include also some of OEM value creation to this research. As ultimate target for both PC's and Rogers is to get materials to OEM specification, also understanding of this value was collected. There are three major topics:

1. PC's material supplier selection and management process, which is part of purchasing / support activities. This was selected to better understand relationship between PC and Rogers as supplier, as well as value which this activity provides for whole process and both parties.
2. The value Rogers is able to create to PC's primary activities: Inbound logistics, operations, outbound logistics, marketing & sales and service. If Rogers serves these functions better, this leads to general sales increase and better customer loyalty.
3. The value Rogers is able to create through PC's to OEM's. This is key for everything and if the value Rogers and PC creates is high, there is definitely more program wins than losses.

Research questions do not come from nowhere. There has to be a personal interest of the topic and each researcher will create the questions with a bit different social content (Flick 1998, 49). Basic knowledge of the theory, business process and also history, influence what kind of questions are written. Relevant topics are brought up and less important are discarded.

Questions should provide as wide as possible spectrum, but the other hand there is problem which aspects are really relevant to support selected theory (Flick 1998, 50). This was also one of challenges in this questionnaire creation process.

To highlight once more the real target for this research, below Porter's value chain and which topics of that are reviewed.

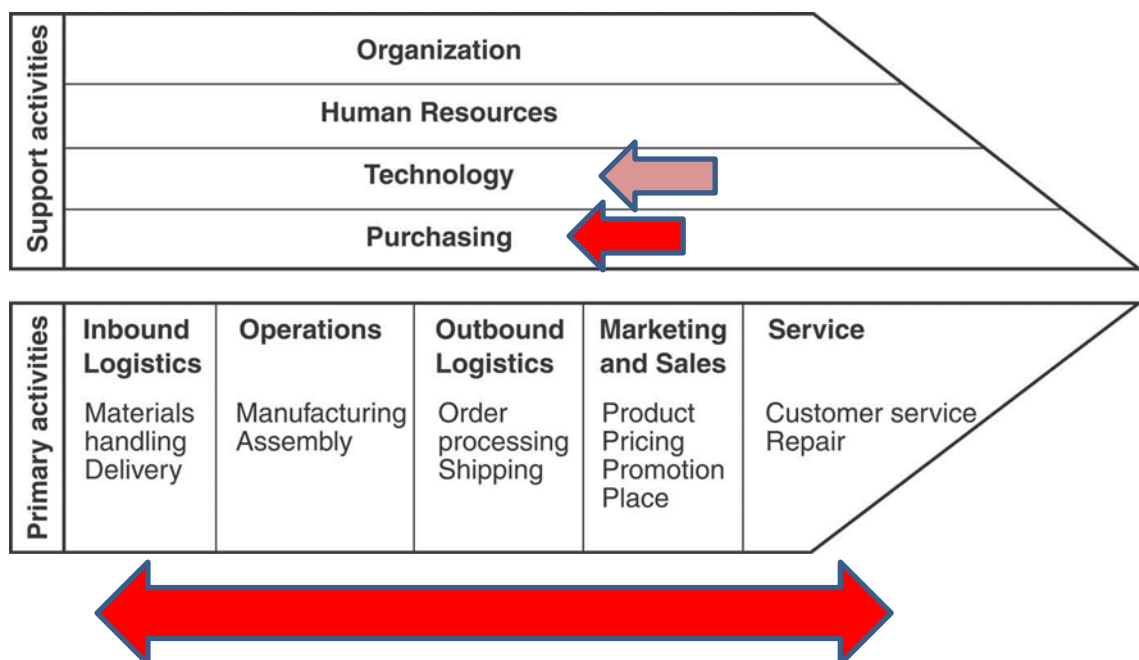


Figure 2. Modified Porter's values chain with research topics highlighted (Porter 1985, 55)

Questions do not target to calculate actual financial value of these processes, but try to understand possible financial effect caused by lack of activity in any of these functions. The calculations should be part of each PC internal process control and profit analyses. Rogers BVBA needs just understanding which pro-

cess steps are valuable to get Poron® or Bisco® materials written to OEM technical specification in blue print and increase sales value to each PC.

Answers of each question used can be connected to value chain as follows:

Purchasing: Describe your supplier selection process?

Purchasing: How are you measuring your suppliers and how do you use the results?

Inbound logistis, Operations, Marketing and Sales: What are the three major guidelines when selecting material for OEM application?

Marketing and Sales: What are your proposals to grow Poron® and Bisco® material content in OEM designs?

Inbound Logistis, Operations: What do you think Rogers competitors are doing much better than they are?

All related topics: What are the major values Rogers is creating to you?

Marketing and Sales, Service, Technology: What is the major value you together with Rogers could create to OEM's?

In above figure technology is marked with different colour in the value creation chain and the reason for that is that even questions and interviews were not concentrating on real technology service and actual content of this process, it came out as one major topic in the discussions and interviews with PC's. This forced the author to include also this function to analyses of results.

5.3 Selecting right focus group

As mentioned above, Rogers EMS has nine Converters in Scandinavian territory. It was also highlighted that 80% of sales come from one of them and 20% from rest of the players. Since the major target is to provide deeper understanding for possibilities to grow sales, the interviews were booked with four converters from those eight creating 20% of sales.

Rogers sales organization has encouraged PC's to share information about their sales and specification work with OEM's to be able to collect general understanding of industry for further business growth. With common targets it is much easier to win deals. Anyhow, in Scandinavia and generally in Europe, all PC's are very sealed lips with their business activity. Even with NDA's, covering confidential information, they worry if Rogers BVBA shares their business or opportunity related secrets to competitors. This all is clearly related to relationship building and trust creation. The longer and better relationship Rogers sales staff has been able to create, the deeper information is available.

Having this in mind, the target companies for interviews were selected based on working relationship and belief in open enough discussion. Before booking interview sessions there has already been increasing openness about several OEM opportunities. These are signs which increase belief to receive very valuable information about PC's business processes which Rogers serves. Two of target companies are located in Finland and two in Sweden. Two of them are clearly specialists for silicone material Bisco® processing and 2 of them also has wider technical knowledge about Poron® polyurethanes.

Interview sessions were not only targeted to PC purchasing organization, but also including sales teams who are actively working with OEM design teams and request for quotations. As majority of these PC's are rather small, internal information share is open and no barriers between sales and sourcing organizations are built. The whole team understands its role to reach the best possible revenue growth.

6 RESULTS

Major notes and conclusions from the PC interview's and meetings are included to this chapter. More detailed analyses and findings are available from second paragraph onwards. In the end of the chapter there are also visual figures which highlight the major topics providing base for proposals to commissioner.

6.1 Preferred Converter Interviews

PC number 1 (later PC1), Finland

This Rogers customer is located in Finland and is mainly buying and marketing further Bisco® silicones. This business relationship has long history, but there has been downturn during last three years because of business transition from Finland to Asia locations. Interview was made for team including one person from sourcing and three people from sales. The major daily connections between Rogers and PC1 happens through sourcing and those are normally related either to quotation request or some specific material technology issue. Their sales team is not really active towards Rogers and sourcing likes to act a bit like the gatekeeper.

As being one specific unit inside a much larger organization with, very different capabilities and end customer focus than rest of their company, their set-up compared to other PC's interviewed is somewhat different. For supplier selection they use mother company's own supplier selection process which normally starts from locating relevant suppliers in exhibitions, by internal sales or sourcing organization or by customer reference. They have global purchasing team located in Asia which helps sourcing from suppliers located in this territory and shipping over to Europe. They have very detailed and specific supplier qualification process which starts from RFQ. If quotation is acceptable they ask for internal finance team to review financial background. As the company is large, they sometimes use internal references and recommendations. They have also code of conduct commitments and check implemented. If all of these above are

passed, they proceed to sampling and then for supplier approval. If value and importance of sourced material is remarkable, then also auditing by sourcing and quality team is requested.

Suppliers are split to different categories with 80/20 rule based on sourcing value. They follow supplier performance for yearly price development, delivery times and quality. Price development is not a relevant factor for supplier relationship, but sourcing follows yearly trends. There is no real supplier management process which would communicate future strategies or expectations further to suppliers. PC1 do not even deliver results of earlier mentioned supplier performance data to major suppliers. However it is available by request when needed.

When talking about material selection to specific OEM application, it is mainly based on available OEM technical specification. PC1's sales people seems to very rarely propose anything different as they are just try to find material which meets specs. If the end customer does not specify any material, sales personnel collects all possible details of technical requirements and base material proposals for this information. Sharing application knowledge would help Rogers to develop their materials or prepare themselves for the coming demand, but PC1 does not share this information very openly. Signing the NDA would probably help in this particular case. The third, but not as important factor for material selection is pricing. Obviously if this is an important factor, then OEM specification has to be flexible as main target is to solve the problem with as low as possible cost.

PC1 business model is based on their own plastic product manufacturing so they have own product lines, so called catalogue products, which they are sell-to distribution houses. This is major work for their sales personnel. Rogers materials just provide extra value with sealing or gasketing PC1's standard products. For discussion how Rogers material content and sales could be increased PC1 just highlighted that their sales team would need more time and training to be able to concentrate to OEM applications and needs. This requires sales team with higher head count and frequent (twice/year) training sessions for

Rogers BVBA Poron® and Bisco® materials. The question here is, what are their long term strategy targets and growth plans with additional OEM sales? Material samples and brochures are seen as feasible tools sales team is able to utilize when introducing solutions for OEM's.

Competition is always related to Rogers sales growth, but in this case PC1 do not use a lot direct Rogers competitors, which would provide massive possibility to grow business if the growth strategy mentioned above allows that.

Considering the real value Rogers BVBA brings to PC1, they mentioned only good quality. By this they meant that with the solution they design and provide to OEM with Rogers materials, they can be sure that it will work in long term. This quality also means that materials are easy to process without die-cutting failures or field failures from OEM's.

Good personal contacts with wide professional experience and local language was one of the values PC1 listed as one of their strenghts towards end customers. They also feel that their own company brand with reliable history together with Bisco® brand provides good sales results. Their excellent track record from shipment and quality are values which are difficult to overcome. They feel that they are small enough to be flexible, but long delivery time of Bisco® can sometimes decrease this value.

PC number 2 (later PC2), Finland

This PC is located in Finland and has long experience of processing Bisco® silicone foams. Also their past invoiced sales in Rogers was higher, but as Rogers closed of one their European production locations, this effected business relationship negatively. It was not possible to get sales team view for this interview, so the following comments are directly from sourcing perspective. This was a pity as author sees PC's sales team one of the potential sales growth provides as they are very eager to understand additional OEM opportunities and learn more about Rogers materials.

This distributor has totally about 150 suppliers and lately it has been increasing the number based on the willingness to refresh supplierbase. Now there is target to reduce the ones which they do not see competitive enough anymore. They scan market material availability in exhibitions, but have also used consultants which search suppliers for specific markets. They use generally mainly European suppliers, but recently talked also with Asian and Indian sources. Those were mainly related to metal materials used in other kind of gasket applications than Rogers foams. They do not have specific supplier selection process as the company is rather small. The need for additional sources normally comes from discussions between management, sales and sourcing persons.

Referring to supplier performance control they said that suppliers are split to A and B suppliers, from which the A category makes about 85% of sourcing value. In gasketing and sealing material suppliers the category A supplier delivers about 600sqm / yr. They use supplier scoring where points are collected from different organization parts: Sourcing is scoring buying value, reclamations, sqm value and pricing generally. Rogers is category B supplier and the latest score received was 10. Sales organization is scoring: pricing, delivery time, MOQ and strategic importance for business. Last scoring Rogers received from here is 11.

When they look for material for OEM application the starting point is to check what kind of options they have in their own supplier base to replace customer material selection. If they have specified material available, they do not challenge customer decision much and history also plays a role here. Sometimes materials are used just because those have always been used. If PC2 propose material change to OEM specification, one or several from the following decision criterias are used: delivery time, pricing, technical performance and MOQ.

They seem to be happy with quality they receive from Rogers and if that were the only reason to win business, it would happen. To win more deals with Poron they would need shorter lead times. They have to be able to act quicker and supply samples earlier than it is possible with Poron®. Author's comment: PC2 strategy supports small number of Poron® rolls in stock which provides low inventory value. If they are ready to increase value slightly, that would definitely

also increase their flexibility and sales. They feel that their sales personnel is well trained, but updates are always welcome.

It was clearly mentioned that competition has much shorter leadtimes and for e.g. PVC is less expensive and easy to get from an Italian supplier. MOQ seems to be also an issue sometimes.

Talking about the major value Rogers provides to PC2, they mentioned that the ability of working without quality claims during almost the whole history is absolute the major value. They can be sure that solution provided to OEM gives very high solution reliability.

The value what this particular PC is able to provide further to OEM is definitely more reliable solutions than competition. In order to spread footprint to a wider market, definitely needs more flexibility in delivery times and order quantities. There is a lot of need for silicone profiles and stripes, which this partner bought through Bremen facility. That business is anyhow now lost and is difficult to replace or win back.

PC number 3 (later PC3), Sweden

PC3 is Swedish rather small converter specialised to Bisco® silicone materials. Their general business model supports mainly silicone material processing, even there has been some growing interest also for Poron® applications. Year 2014 was financially not a good one for PC3 and they review options for aggressive business growth. This interview was made only to a sales team as this company does not have separate sourcing personnel available. Sales team members try to use their knowledge as widely as possible, but not having additional organization to take care of supplier selection or management.

Their major target is to find suppliers who provide high quality products, which quite often means that these are not the most affordable ones. Supplier base has a long history and there is not a plan to change majority of them. If the performance is acceptable, changes are not made, but they do not have organi-

zation or a specific person following supplier performance in details. This is also a reason why they are not actively looking for new ones. Some of the used suppliers came through OEM requests and specifications, which was mentioned also as most common process to approve new suppliers.

As for supplier control there are measurements for quality, which is seen to provide the highest influence to PC2's end customer product performance. Second criteria which they follow is delivery leadtimes. They also highlighted that shorter delivery times will positively effect their position against competition. This PC is not willing to keep high inventory levels and they appreciate quick deliveries. PC3 sees that relationships also play an important role and they would like to have close cooperation with their suppliers. The final factor measured is pricing but in the end, it does not play a major role for supplier selection. They are not ready to pay premium, so pricing has to be competitive.

When selecting material for OEM application they follow customer guidance. There is normally some specific performance requirement which has to be fulfilled. There are also cases when OEM specifies exact material and type.

Concerning questions about possibilities to grow Rogers business, the major wish was for detailed and frequent material trainings for their sales team. The more salespersons know about Poron® and Bisco® materials, the better they can recommend these further to OEM designs. There are several channels to provide training sessions, but instead of web training, brochures or just presentations through email, they would prefer face to face meetings. New product introductions could take place also through emails, web launch or online trainings.

About competitive landscape and their strengths, this PC mentioned that they do not use many competitive products. This means Rogers is quite secured in categories where Bisco® silicones are used.

Rogers major value creation to this customer is very high quality and long lifetime reliability. PC3 feels comfortable to use Rogers materials for OEM designs as they know those provide solution which works.

If thinking further about the value created further to OEM, it follows the same trend. Quality and reliability are for sure the best values created. This positive performance makes it easy for them to approve same materials also for future products.

PC number 4 (later PC4), Sweden

This Swedish converter has also quite long history with Rogers, but this specific location was acquired under larger enterprise in year 2013. As this PC does not have separate sourcing personnel available, this interview was also targeted and made with their sales team, totally three persons. Sales team experience supports more Poron® sales and they have also knowledge of smaller devices, like smart phones and other electronics.

There is quite large organization behind PC4, but the production capabilities they have are unique in the whole company. This provides a challenge to use any supplier management tools, which could be available to rest of the organization. Real supplier selection process is however not available.

Sales department has a responsibility to select suppliers and there is no limitation about supplier location, brand or technology. Different materials used are mostly based on history and some of them have been used for a very long time. Quite often OEM shares their design problem with PC4, but they do not specify the material itself. Instead they rely on PC sales team knowledge. If manufacturing goes further to tier 1 or 2, they have to be careful to find out if they really follow the specification OEM has created and tested.

For very general applications they PC4 uses PE materials, but select materials based on end customer design requirements. This unit is the only one which has die-cutting capability and lot of knowledge on materials, which especially the sales team feels should be shared more internally to provide total view of PC4 capabilities.

Even the mother company is a large one, they do not have supplier performance review tools. This company has grown through acquisitions which created several different specific divisions, with different requirements and systems. Therefore supplier performance is followed very locally and then the major issues are: Delivery performance, Material quality, Leadtime, Price (not important).

It was earlier mentioned that OEMs rely on sales personnel experience and they share the requirement of functionality they want to reach. The problem should be solved without over-engineering, which could increase the cost unacceptable level. Other major criteria which are followed when selecting material to OEM designs are basic technical performance, convertability and pricing. As helpful tool sales persons use list of different requirement and ask questions about OEM requirements. The more ticks in the boxes, the more reliant they can be that Rogers materials can solve the case.

Also here is it was obvious that the more sales personnel is trained, the more they are able to cover OEM designs with Rogers materials and increase sales. This PC also mentioned joint visits with Rogers sales people to OEM in cases when potential is very high and customer relationship allows this.

EPDM as major competitive material has much attractive pricing and quality level is continuously increasing. Technical facts which support the selection of Poron® or Bisco® instead of EPDM, should be better explained to the PC4 sales team by Rogers.

When talking about competition and the strengths, the leading criteria mentioned was pricing, which is lower and also the material performance satisfies OEM without need to over-engineer solution. Could there be also “low performance” Poron®? This is an idea which has been brought up by several PC’s during years, but as Poron® is considered as premium and high quality material, there is possibility to lose this good reputation without fully understanding the product offering. One option could be totally different product brand which is targeted to lower end solutions.

The major values Rogers provides to PC4 was listed as follows:

- Availability of technical data and design tools which helps sales personnel work in problem solving and design process.
- Material samples where performance is easily visualized, like compression set screw ring, helps sales personnel to back up their decision and also lead OEM to select Poron® or Bisco® materials.
- General product performance is so remarkable that it provides OEM long lifetime solution.
- Easy to process in production process which leads to high manufacturing yield.

One additional value further to OEM is to complete and reliable solution. With good design, material and adhesives, the component works . PC4 has lot of internal tape knowledge and is willing to build full value chain for cushion, gasket or sealing materials. They have capability of connecting this adhesive knowledge to die-cut knowledge of this location.

They also feel that there are still lot of screws and nuts, which could be replaced with good bonding adhesives, sometimes with cushion performance included. That knowledge needs to be shared more open internally, but also further to material suppliers to create most reliable material solutions together.

6.2 Result analyses

In qualitative analyses results should be reviewed objectively which is quite often limited by large number of available information (Tuomi, Sarajärvi, page 105). This case there are lot of opinions, even feelings related to answers. Some trends were anyhow seen which are visualized with quantified tables below. Results are ranked based on research questions and visualized under earlier mentioned theories: Supply Chain Management and Porter value chain.

6.2.1 Supplier management and performance reviews

Deep supplier relationship management needs high enough buying volume and value as well as long relationship. This came clearly visible also during the interviews. Two of four companies have responsible sourcing personnel, all others managed the buying activities through general administrative personnel. To build deep enough understanding of supply line needs commitment, interest and resources from both supplier and customer (Jahnukainen, Lahti, Virtanen, page 68, 76). Understanding of supplier strategical position in this particular supply line was only reviewed by one PC.

PC's follow supplier performance with the following criteria:

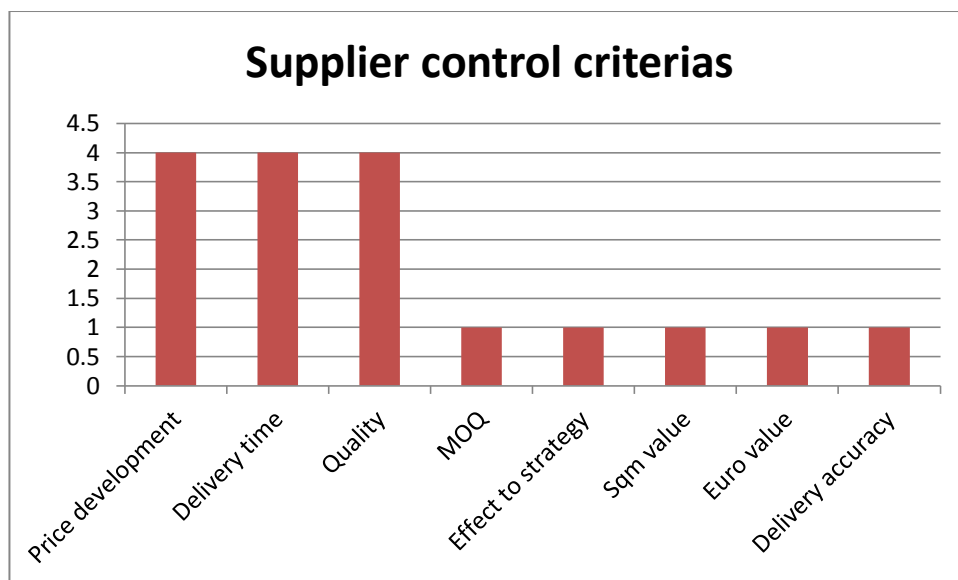


Figure 3. Supplier control criterias.

Majority of suppliers highlighted that even they follow price performance, that is not the major criteria effecting the increase or decrease of OEM sales. The most important criteria was delivery time, which provides the needed flexibility for these quite small companies.

6.2.2 Value creation

Sourcing function will utilize supplier network strength and professional knowledge to fulfill OEM needs in order to create the highest possible general value for company (Iloranta, Pajunen-Muhonen, 2008 page 67). Each company also in this research is targeting at the best possible service and application to their end customer, but how suppliers could be more involved, is very rarely discussed.

These research interviews made sourcing and sales teams think about the value supplier is able to provide for them. Rogers has always branded Poron® and Bisco® as high value and quality, premium materials and based on these discussions, this really is the major value which is also clearly visible in figure number four below.

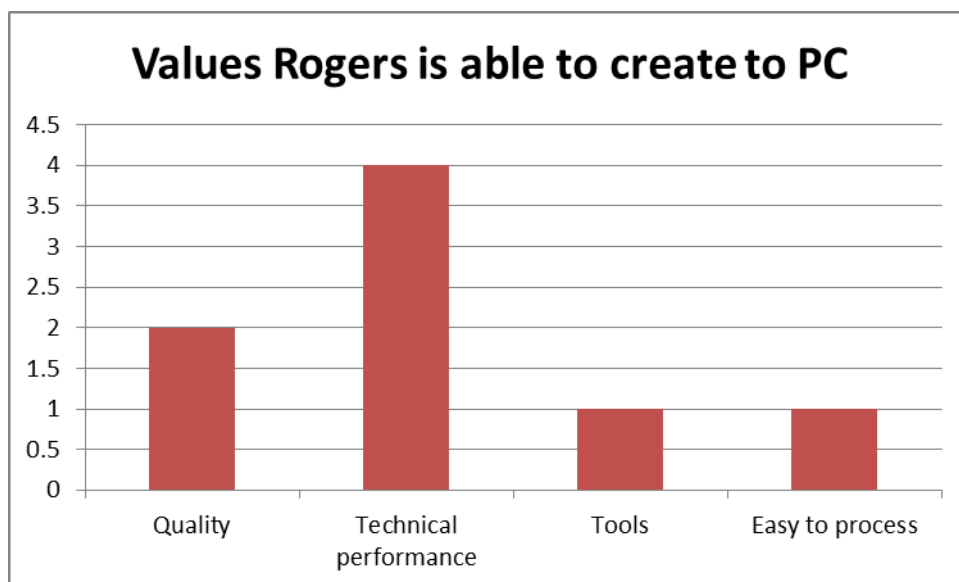


Figure 4. The value Rogers creates to PC's.

All topics from above figure four increase PC loyalty and make them return Rogers for further orders, with customers who need high technical performance and quality. However as OEM often asks PC to solve their problems, also value of PC's needs to be highlighted. Above mentioned web tools increase sales

team general material knowledge and decreases problem solving lead times. Below figure six has all of values seen as additional benefits to win deals together from OEM's.

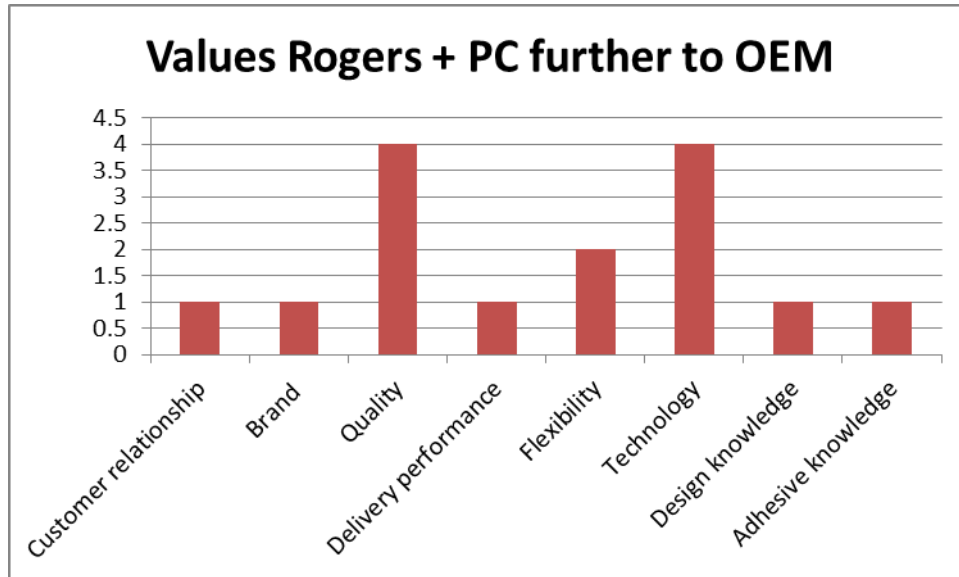


Figure 5. The value PC and Rogers together provides to OEM's.

Some of above mentioned criterias are also valid in figure five, but in addition there are relationship and service related functions. PC's were also encouraged to think about additional skills or tools needed to increase common sales value and mostly they highlighted sales personnel training. That is clearly seen as a value adder with increased design and technology knowledge which will lead to deeper customer relationship. Good PC reputation and company brand were also listed as positive value for additional sales. Material brand was not mentioned as value creator and sometimes it is even replaced with PC own material coding, which does not increase Poron or Bisco brand knowledge and OEM loyalty.

7 DISCUSSION AND PROPOSALS

The commissioner of this thesis is Rogers BVBA, EMS division, located in Belgium, but with the aim to review Scandinavian sales territory where the author acts as sales lead. They are industrial material manufacturer who base sales to OEM specification work. Channel to market is through Preferred Converter network who process Rogers materials based on the OEM specifications. Communication and sales process in global customer base is also somehow complicated.

Rogers products are described as premium materials which provide long lifetime and technical performance to OEM application with some additional value creation. PC's provide additional sales force with high technology knowledge and end customer contacts. Their production process capabilities also meet several different industry requirements.

The main goal for this thesis was to understand how to best serve PC's as customers and how they manage their supply base, to improve general supplier – customer relationship and in the end to reach higher sales numbers . In the beginning it was very difficult to narrow the research topic to areas which would provide the most useful results for future improvements. As Porter's value chain still provides accurate description about enterprises business processes, the author saw that as feasible theory for the basis. Value creation process from Rogers through PC all the way to OEM's includes several value chains, but only PC's value chain was selected as target. The second theory topic used was Supply Chain Management as Rogers acts as supplier and especially supplier selection and management was of interest, with ability to improve the general relationship.

Qualitative research method was selected to interviews as it allows possibility to lead discussion to right direction and collect also data which is based more on feelings. There are nine PC's in Scandinavia and four of them were selected to interviews. Two of them are located in Finland and two in Sweden. PC target

group was selected based on the available relationship and ability for open enough discussions. For analyses the material was also slightly quantified to provide more visual figures and results. This worked well and the author thinks that she was able to collect more data than expected in the plans.

Main results show that the historical values which Rogers has used as base for their marketing strategy already for years, are still valid. PC's saw that major values Rogers is able to provide are of good quality, high technical performance and processing with high production yield. PC's felt that they are able to provide additional value to OEM's majority with the same arguments, but adding their own technology knowledge, customer relationship management, design knowledge and adhesive knowledge. It was a little surprising and interesting to find out that PC's did not highlight more their problem solving or creativity skills for OEM design problems. It was also clearly mentioned in all interviews that additional sales team training would definitely improve their position in market with Rogers materials.

From the supplier management side the activities are rather minor. PC's use very few tools for supplier selection and approved suppliers are based on history and past experience. Half of the companies interviewed have active sourcing person, others take care of purchasing activities by their general administrative personnel. All customers follow supplier delivery times and quality performance. Also price trends are collected even they do not list that as a major criteria for supplier ranking. In the addition to above they all saw that Rogers shorter delivery leadtimes would increase PC flexibility and that would be remarkable additional value.

During the process author has learned how to combine theoretical framework with research questions and further to results. As there is a direct need to improve sales performance, the results are used for customer relationship management and improvement actions immediately. Obviously there was also author's personal interest to develop her own work methods and territory performance. This thesis began by reading the required theory and before that was fully connected to research questions, took a while. After the interviews were

done, there was another slow season, before the final analyses and writing out the results started. Targets were set really high to provide possibilities for additional future education plans.

As recommendation and suggestions for Rogers to increase their value creation towards PC's, three major topics can be listed. Clearly all sales are related to relationship skills and especially in this case, OEM problem solving. This is maximised with effective and skillful sales personnel. All PC's asked for more frequent sales personnel training and visits. The preferred frequency mentioned was twice per year. The second competitive advantage PC's mentioned was flexibility and as Rogers has long material delivery times, this limits their response times to OEM requests. Based on Rogers company procedure and future plans there are already some activities ongoing, but this request should be reviewed in more details with monetary value of opportunities listed. PC's Supply Chain Management activities were very minor and they did not really have long term supplier strategies. Wider understanding of how Rogers is positioning as supplier and creating value to full OEM supply line, could be one long term target for Rogers. Rogers has a clear need for more accurate forecast data and if they encourage PC's to share more strategic plans and long-term vision also investor message could be more reliable. Therefore the author recommends that Rogers starts even a wider SCM development study to understand if the accuracy of data available through PC's could be increased.

Compared to authors daily customer contacts, somewhat deeper discussions from a different viewpoints provided very interesting information and understanding of Rogers sales channel. Due to this the author encourages other territory leads to open value chain discussion with their PC's. More than that, Rogers should analyze its own business processes and look into what kind of monetary value each of them provide. None of the internal functions can work independently, as there is always some relation to the following step, which brings Rogers materials closer to OEM's.

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