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Development of an Innovation Strategy *-based on an example of an electric wholesale trader*

A Master's Thesis submitted for the degree of
"Master of Business Administration"

supervised by
Prof. Dr. Marc Gruber

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Vienna, 13. July 2016



Affidavit

I, **THOMAS KLADENSKY MSC**, hereby declare

1. that I am the sole author of the present Master's Thesis, "DEVELOPMENT OF AN INNOVATION STRATEGY – BASED ON AN EXAMPLE OF AN ELECTRIC WHOLESALE TRADER", 95 pages, bound, and that I have not used any source or tool other than those referenced or any other illicit aid or tool, and
2. that I have not prior to this date submitted this Master's Thesis as an examination paper in any form in Austria or abroad

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Dedicated to my family and closest friends

ABSTRACT

This master thesis describes a typical way of how an innovation strategy can be build up within an organization and mainly on which major cornerstones a chief innovation officer or other relevant people in a company must focus on to increase the competitiveness of an organization. Starting with a basic descriptions of what innovation is and what different kinds are available, the thesis concentrates strongly on different approaches of innovation strategies since this is a core question to each organization. Whether one organization want to focus on a more market oriented strategy, others would like to use a more technological oriented strategy to increase their competitiveness. Nevertheless, all of them can be true and have to be taken into consideration which is a major part of the thesis. After talking about different orientations it goes directly into a comprehensive description of the main steps to develop a strong and sustainable innovation strategy that perfectly fits to the organization. It focuses on a top-down method from defining a vision, followed by setting up the fundamental growth strategy and finally over several other steps to define your future core competencies and setup your implementation plan. To be able to go through all major steps of developing an innovation strategy several tools are needed to analyze your external and internal environment. Tools like Porter's five forces, stakeholder analysis, value chain analysis and finally the resulting SWOT helps to deeper understand each component of a department or the whole organization and how it reacts within their environment. At the very first time of implementing an innovation strategy it is advisable to develop a control management system that helps to get the big picture of all your innovation relevant activities over time and how the strategy is on track. Based on this mass of information everything was applied to a practical example of a wholesaler in the electrical market. Starting from analyzing the whole situation, understand the market, the customers and competitors it was a goal to identify business and technological trends and define the impact to the existing organization. For those trends that had the biggest impact on the organization a compact business opportunity including definition of future core competencies is the result of this comprehensive master thesis.

ABBREVIATIONS

3D	Three Dimension
BSC	Balanced Scorecard
CPU	Central Processing Unit
CRM	Customer Relationship Management
EDI	Electronic Data Interchange
ETC	Electronic Toll Collection
ETIM	Electro Technical Identification Model
HR	Human Resource
HW	Hardware
ICT	Information and Communication Technology
IoT	Internet of Things
IT	Information Technology
KPI	Key Performance Indicator
LaaS	Logistic as a Service
LED	Light Emitting Diode
MRO	Maintenance, Repair, Operations
MTBF	Mean Time Between Failure
NSA	National Security Agency
OCI	Open Communication Interface
OECD	Organization for Economic Co-operation and Development
OEM	Original Equipment Manufacturer
PDF	Portable Document Format
PM	Product Management
SBU	Strategic Business Unit
SOKO	Sonepar Konzept – Sonepar Concept (Service)
SW	Software
TKAM	Technical Key Account Management
UAV	Unmanned aerial vehicles

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1 Introduction

This document describes the way from a more conservative to a more innovative structure that helps to increase the competitiveness and the differentiation to the main competitors. In the case of Sonepar, a worldwide leading wholesaler for electro technical equipment, especially in Austria the success wasn't comparable to other subsidiaries. Within the last decade lot of different managers didn't give a clear strategy and it was clear if you have no stability and continuity it couldn't work for the long perspective of the whole business. So without clear strategy nobody works with the same attitude into the same direction. Lot of misunderstandings happen and especially your cost structure is on a high level. To make matters worse, Sonepar is active in a strong destructive competitive environment and because the market is a very conservative one you need to increase your competitiveness in all the very imaginable directions. To be able to do that on a structured and professional way you need a clear strategy according your innovative activities. This document should show the reader how to setup a clear innovation strategy and how to implement and control it over time. Starting with a theoretical framework which should present the guardrails and the main pillars of a strategy it hands over to a practical example. The practical example should allow to deeper understand the theoretical part.

1.1 Problem formulation

The current position of the company Sonepar is indeed number one worldwide but unfortunately number two in Austria, and to make matters worse, that from a financial perspective the annual results are negative. That means that the company must reduce their internal cost structure significantly, increase margins and do something to increase the competitive advantage against their main opponents. Since two years a new management team is implemented and with setting up internal rules the results becoming better and better. Unfortunately, there is no real concept or strategy available so the majority of employees do their work at their best but it isn't really structured at the moment.

1.2 Objective of the Master Thesis

At the end of the document the reader should be able to understand the key pillars of a strategy, how innovation could increase the competitiveness and help you to sort out the mess again and show how to implement a strategy into the organization.

1.3 Structure of the Master Thesis

The structure of the Master Thesis is build up in two major chapters. The first is the theoretical framework. The purpose in this chapter is to give the reader an overview about the basic terms of innovation and especially for an innovation strategy. Starting with a basic explanation of innovation and the different types it handed over to the different rudiments of an innovation strategy paper. To be able to setup a strategy you need to know your current situation. Therefore, a deep analysis is needed. Which relevant tools are helpful will be explained in the aftermath. Finally, also the topic innovation performance will be discussed. It is a must to define your KPI's as early as possible. Without KPI's you are not able to check the implementation status of your strategy nor your success or fail on the market. If you are able to understand the system, you can gear it early enough if there is a negative shift.

The second chapter, the practical framework, describes firstly the company Sonepar worldwide and in what particular field they are active. Secondly it shows the results of the analysis of the current situation and last but not least it describes the final innovation strategy for a particular market.

2 Development of an Innovation Strategy

There is often the sentence said “we must be more innovative” from the management team but what does that mean in detail or in the “real” world? And especially what do you need to do if you want to have the full control of your ideas and the final innovations. This are the main questions that are answered within this chapter. To be able to define an innovation strategy in a proper way you need to define several important elements surrounding to it. These elements are shown in Figure 1. Additionally, you need to know in which kind of innovations (like product innovation, process innovation, service innovation and many more) the company should focus on. All these things will be described in the following subchapters.

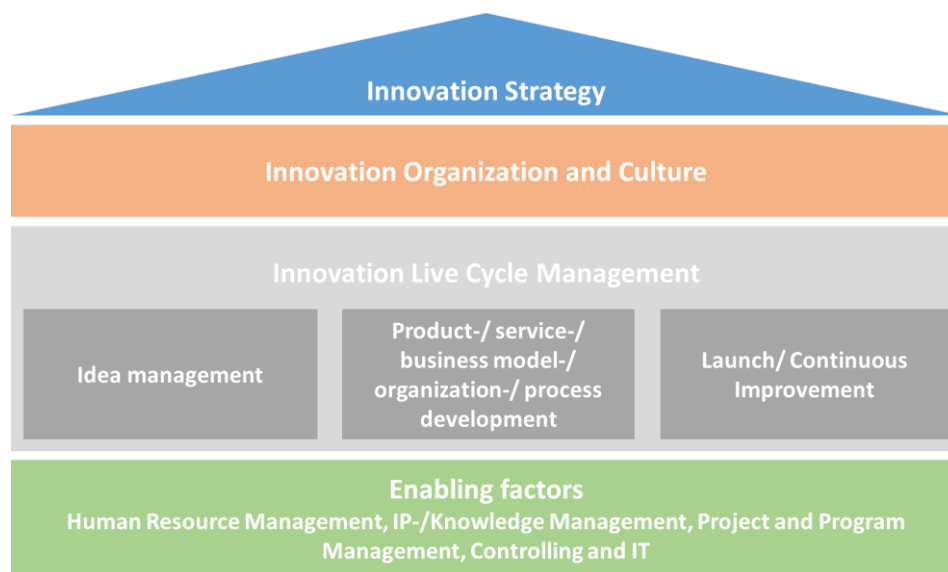


Figure 1: House of Innovation based on A.T. Kearney¹

2.1 Innovation

To understand what different manifestations of innovation are available we need to understand what innovation means. Innovation could be a novel product, service or a new idea that better serve the market needs or just fulfill new requirements. Sensu stricto innovation means the transformation from one or

¹ (A.T. Kearney, 2014), page 4

many ideas into an economic viable product or service that fulfill at least one requirement and penetrates the market. To the contrary of innovation an invention includes “only” one or several ideas combined into a new product or service but only till to the prototype stadium. You can invent a new product but if you are not able to sell it, it will keep an invention and never becomes an innovation.

We differentiate between incremental and radical innovation. Incremental innovations are mostly based on existing products and are more or less enhancements of the existing one. Their main characteristics lies in a lower uncertainty, focuses often on cost reduction or feature improvement and improves the competitiveness in the dedicated market or industry. In the contrary, radical innovations are total new products or services that totally disturb different markets. They often have a revolutionizing character but compared to the incremental innovation they have a higher uncertainty at the beginning. In any case if the innovation is successful it often totally changes existing industries or markets and sometimes it also creates new markets. Table 1 show the differences between radical and incremental innovation to better understand the difference between both.

Incremental Innovation	Radical Innovation
Exploits existing technology	Explores new technology
Low uncertainty	High uncertainty
Focuses on cost or feature improvements in existing products or services, processes, marketing or business model	Focuses on processes, products or services with unprecedented performance features
Improves competitiveness within current markets or industries	Creates a dramatic change that transforms existing markets or industries, or creates new ones

Table 1: Characteristics of Incremental and Radical Innovation (AIC, 2012)

The source of both incremental and radical innovations can be originated from a market-pull or a technology push. Market-pull innovations typically start with a market need while a technology-push innovation creates a need or a new market. The second case often implies a radical innovation, because it is totally new and disturb the current market environment. Table 2 show the characteristics of both sources more detailed.

Market-Pull Innovation	Technology-Push Innovation
Verify Need	identify market applications
Find technological solution to serve the need	Verify the customer needs in the identified markets
Scalability & ramp up of production	Evaluate the product-market combination
Reach customers (distribution)	Decide on commercialization strategy & determine technological embodiment (targeted R&D, specific product)
	Further steps depend on commercialization strategy

Table 2: Principal issues of market-pulled and technology-pushed innovation

2.1.1 Types of Innovation

Innovation could be product, process, organizational, service or market related. This chapter describes the different types and should give an overview in what form and area innovation could happen. Starting with the most important innovations (product and process) I want to show that also new processes, changes in organization or implementing new service concepts could be a kind of innovation. Often companies don't recognize that innovation happens within their organization because of missing awareness to the different characteristics of innovation. This chapter should show explicitly that for a real innovation culture you need to think in every department, business unit or function about innovative things and you need to try new ways in doing business to be successfully recognized as an innovator.

2.1.1.1 Product Innovation

Under product innovations we understand real products or services that fulfill the needs of customers. Among other types of innovation, the product innovation helps the company to increase the competitiveness and helps to increase the market awareness. Depending on the degree of innovation (incremental, radical or disruptive) and the impact into the market it differentiates it against your competitors. In some cases, if you enter in totally new markets it increases the number of competitors. As an example we can use here the Apple iPhone. It totally rewrites the rules of the mobile phone market and apple shifts from a computer and MP3 player producer to a mobile phone producer. For Apple new competitors come up like Nokia, Ericson and many more.

2.1.1.2 *Process Innovation*

Compared to product innovations a process innovation is focusing on the process of for example producing a product. Often a process innovation comes in parallel to a product innovation because the product innovation enables a more efficient process. As an example we can use here the RFID technology which enhances beneath different other markets the handling of parcels in the area of logistics. Additional process innovation often increases the competitiveness of the relevant existing product because production costs are lowered dramatically. Either it increases the gross margin in general or it helps the company to increase chances to win big projects with high volume where the price pressure is extremely high.

Both, product and process innovations, are the most important types of innovations since they directly have an impact on the ventures success. No matter on how one looks at it, without these innovations a long term sustainable market presence isn't possible.

2.1.1.3 *Service Innovation*

Under service innovation all new service concepts like online services, GPS based parcel tracking are only a few examples. It focuses only to the degree of service in interaction between the venture and the customer. These service innovations are often not directly related to product and process innovations but support functions to increase the value for both. It also increases in many cases the customer loyalty because he gets a little extra that makes the difference. In the electro technical industry marking systems for all electrical components are necessary. There are different systems from different producers available. All of them are similar and the quality is not really differentiated since it always will be sold over the pricing level and the conducted volume. Since a few months one of these producers offer one service engineer that helps the customer to install the printing device, doing trainings for the user, assist in trouble shooting and in the worst case he can also repair devices directly on-site which decreases the downtime of the printing system. That are complementary services that helps to increase the competitiveness dramatically and in the same time it increases the customer loyalty for the sales staff and that helps to increase the total sales numbers of the whole volume. Another example is the structure of IKEA stores. Beneath shopping, the customer can also put their kids on a certain playground including a services of babysitting while parents can do relaxed their shopping tasks. Or to get some food in the middle or the end of the store. In

total, a visit of an IKEA store is not only a simple shopping tour. It is the whole experience what makes it special.

2.1.1.4 Organizational Innovation

Under organizational innovation we understand the use of new managerial and working concepts or practices in a company. New structures and ways of doing business, which in the same time have a positive impact of the success of the venture, can be described as organizational innovation. To get a feeling examples of organizational innovations are Kanban, just-in time delivery or lean production. According to Elsevier Ltd., 2008 they define organizational innovation as a mix between structural and procedural organizational innovation. Structural organizational innovation has an impact on responsibilities, command lines, information flows, accountability, the number of hierarchical levels, the divisional structure of functions or the separation between line and support functions. Procedural organizational innovations have an impact on routines, processes and operations of a company which means that an organizational innovation is linked to process innovation very close. Additionally, it can be structured in intra-organizational and inter-organizational innovations. Intra-organizational occur internal and inter-organizational innovations occur external by using new organizational structures beyond the company's boundary.² Figure 2 gives a better understanding of the structure of organizational innovation.

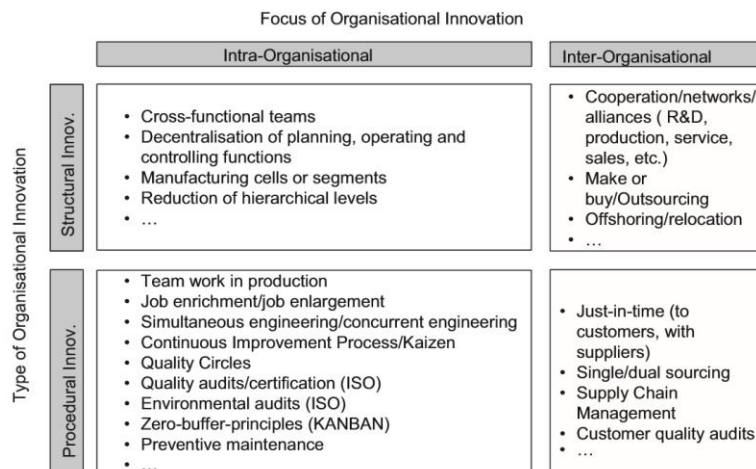


Figure 2: Item-oriented typology of organizational innovation (Elsevier Ltd. , 2008, p. 647)

² Cf. (Elsevier Ltd. , 2008), page 645-646

2.1.1.5 Marketing Innovation

As marketing innovation we understand the implementation of new ways in the context of all marketing tasks (Example: new pricing scheme ...). That can be new for the company but also new to the market. According to OECD the definition of marketing innovation is described as the following phrase:

A marketing innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing (OECD, 2005)

The goal of marketing innovations is to better address customer needs, re-positioning the company in the existing or positioning it into new markets. Of course, only for the purpose to increase the company's sales figures. If the company is using new ways in marketing it must be really new for them. Marketing innovation is not entering with your existing marketing method into new markets. It is a totally new way for the firm itself and often it opens the mindset of the whole organization because nobody knows exactly the outcome and thereby you reach a high learning effect. As an example we can use one of Sonepar. Sonepar recently have created a customer brochure which will be printed only in small batches and will be created personalized for specific customers. The only thing what the sales rep has to do is to inform the marketing department about the company, the webpage and what different text components he wants to change. The rest will be done by the marketing department in a very short time. They search for pictures from customer's market and his own homepage, put the customer's name into the brochure and print it. The result is a brochure where the sales rep can present a personalized solution to the customer. In reality, however, it is a simple form that helps a sales rep to increase the value of their solution.

2.2 Different orientations of innovation strategies

A central origin of the development of an innovation strategy is the core business strategy from the venture. Each innovation must serve to the business strategy for the company because it supports the success of their derived goals. It doesn't make sense for the most companies to invent into a total different direction because it automatically can split the organization, the whole strategy can't be followed by each

member and it generates high potential of conflicts within the team. So the innovation strategy is an important subset of the whole business strategy. Depending on the alignment of the venture an innovation can be market, competition, technology, time or cooperation oriented. A compact and clear formulated innovation strategy allows periodical monitoring and controlling of innovation-related goals and activities. The different orientations of an innovation strategy (see Figure 3) will be discussed in the next subchapters.

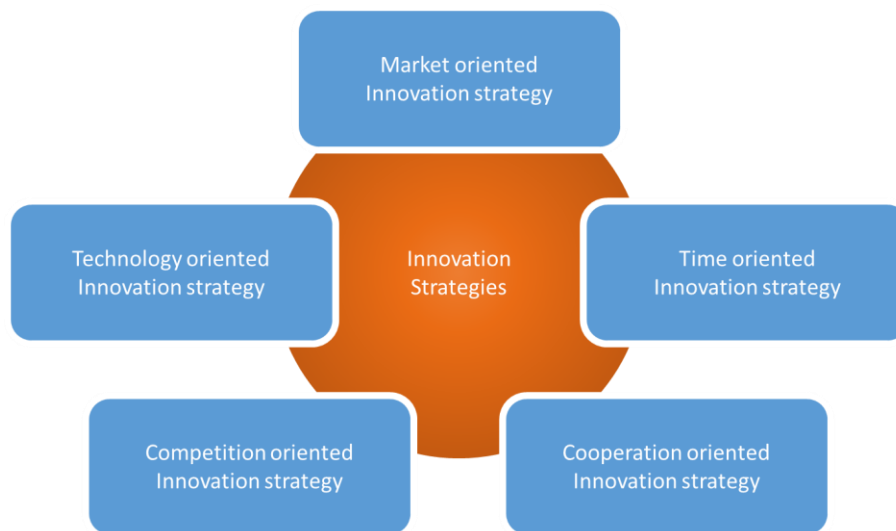


Figure 3: Different orientations creating an innovation strategy

2.2.1 Market oriented innovation strategy

An invention becomes to innovation if you find customers for the invention who are willing to pay for. Thereby we can easily deduce that a market orientation is a crucial part of the strategic innovation management. Customer needs that are not covered by any available product or service on the market generates gaps that must or can be filled with innovations. This kind of innovation is called a market-pull innovation. One of a main criterion for a successful product or service innovation is the orientation towards customer requirements. Beneath classical market research activities it is also conceivable to integrate the customer into the innovation process very early to decrease the risk of developing into the wrong direction. Because of existing markets and the closure of gaps it is common that incremental innovations with a lower risk potential compared to radical innovations. (cf. Piller, 2005)

To place the right products on the right market is a key question for each company and a real challenge. How innovative a company wants to be is a crucial question because it easily states your position to your competitors and innovators. According to H. Igor Ansoff (see Figure 4) we can choose between four alternative directions for the development of an innovation strategy.

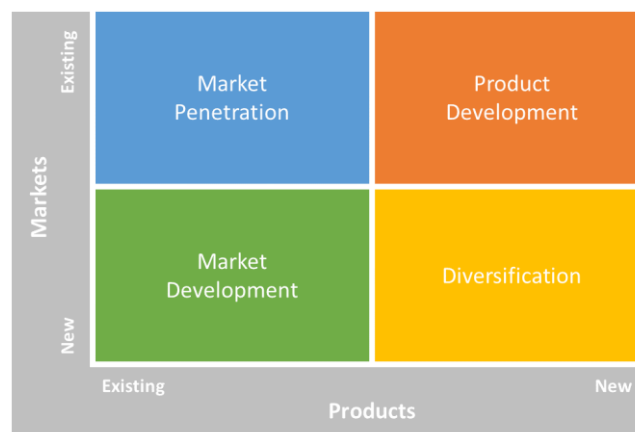


Figure 4: Product-market strategies for business growth alternatives / Ansoff Matrix [own illustration, based on (Ansoff, 1957)]

Market Penetration:

At market penetration companies try to increase their business performance with existing products in existing markets. Either they increase sales with existing products at existing customers or they try to increase sales by finding new customers within the existing market. Ventures with this orientation are often active in a displacement market but also if we focus on the product itself it can run through several orientations.

Product Development:

As its name suggests the product development strategy concentrates strongly on the development of new products but more precisely in existing markets. Both, incremental and radical innovations happen while concentrating according this strategy. Companies try to strongly increase their reputation and performance within the existing markets.

As an Example we can use here the development of Intel’s CPU technology. Since years they clearly stick to their markets but always try to introduce permanently new versions and features in the CPU technology. Figure 5 shows the history of the developments from Intel since 2003.

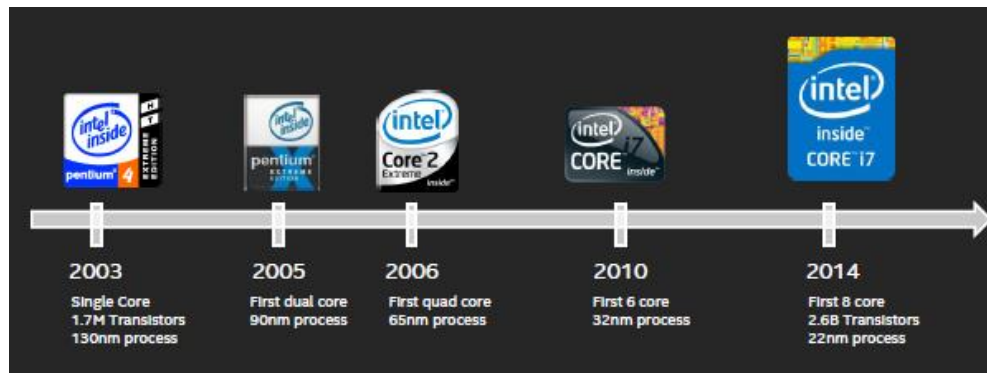


Figure 5: CPU developments of Intel since 2003, (Shahid, 2014)

Market Development:

Under the market development strategy, a company tries to enlarge the coverage of their existing products. The focus here is to find new markets with existing products from the company. Often it is needed to modify the product or the whole product line to fit according the relevant requirements. For example, a firm that produces for example ladder rack cable support systems wants to enter into the food and beverage industry. A standard system made out of sheet metal but it isn't allowed in that industry. Due to the material characteristic only products made by stainless steel are approved. So with some modification the firm can easily enlarge their coverage of their products by entering new markets.

Diversification:

The last alternative is called diversification. Here a company tries to enter in new markets with totally new products. This alternative is very risky because you have no experience in the market and also no real knowledge about the success of the product. Firms often try to decrease this risk by "purchasing" the knowledge while acquisition of companies or hiring experts from that particular market. As an example we can use Amazon. Amazon was entering with "Amazon Prime" into the streaming industry of music and

movies. Therefore, new products like the amazon fire TV stick has been developed and the content of movies and music enlarged.

2.2.2 Competition oriented innovation strategy

One of the most important requirement for a company's success is a clear strategic positioning against your main competitors. The more you can differentiate according the strategy and furthermore the customer value the more you may be successful. It must be clear if the company want to have products with a sufficient quality level and a low price strategy or high quality products including consequent higher prices. Therefore, we distinguish between quality leadership and cost leadership strategies.

Quality leadership strategy:

High quality products or products with the highest customer benefit often clearly differentiate the company from the rest of the competitors.

Therefore, differentiation against competitors means:

- Provide products or services with higher or the best available quality
- Position of the brand, for example during long term high quality product strategies. Means the level of prestige
- Uniqueness of products or services

Companies with such clear strategies fulfil customer requirements at the best. With quality leadership companies create for the remained competitors a kind of barrier that is hardly to overcome and requires high effort in financials and resources to reach the same level. From a market share perspective this strategy often is accompanied by not being the number one because in the same time you can't reach all of the different price sensitive customers. Price sensitive customers are often the bigger stake of the whole market. But compared to the market share a quality leadership strategy creates better margins. A much higher customer loyalty compensates it not to be the number one from a market share perspective.

Cost leadership strategy:

Compared to the quality leadership strategy, a cost leadership strategy is focusing on process innovations. Here the company isn't focusing on the best quality of a product, it tries to decrease the production costs at a defined quality level that isn't allowed to fall below.

A significant reason for the choice for one of both strategies is the field of activity. If the company is active for example in the automotive or the pharma market it would be advisable to choose the quality leadership. In contrast for example to a producer of wood pellets or cemetery it doesn't make sense to focus on product innovation. It would be much better that they have higher focus on process innovation to decrease their production costs to increase again the competitiveness or their total margin. Of course, there must be also a certain focus on product innovation but this kind of companies are often just copy from others.

2.2.3 Technology oriented innovation strategy

Technology oriented innovation strategies are beneath market and competition oriented innovation strategies another significant strategies within the innovation management. It's not seldom that newly developed technologies are the base or the trigger for future innovations. This kind of strategy is in a very close relationship to market and competition oriented strategies. The decision of the product-market strategy or the company is focusing on a quality or a cost leadership is crucial for the consequently used new technology.

2.2.4 Time oriented innovation strategy

Time is one of a major unit within the innovation management. Time is often a critical factor for the success of the product on the market. Therefore, the main tasks within a time oriented innovation strategy are:

- Determination of the optimal time for market entrance
- Strict observance of milestones within the innovation management
- Definition of the duration of the innovation process

Within the timing strategy we are talking about three different main strategies which will be discussed in the following paragraph and are shown in Figure 6.

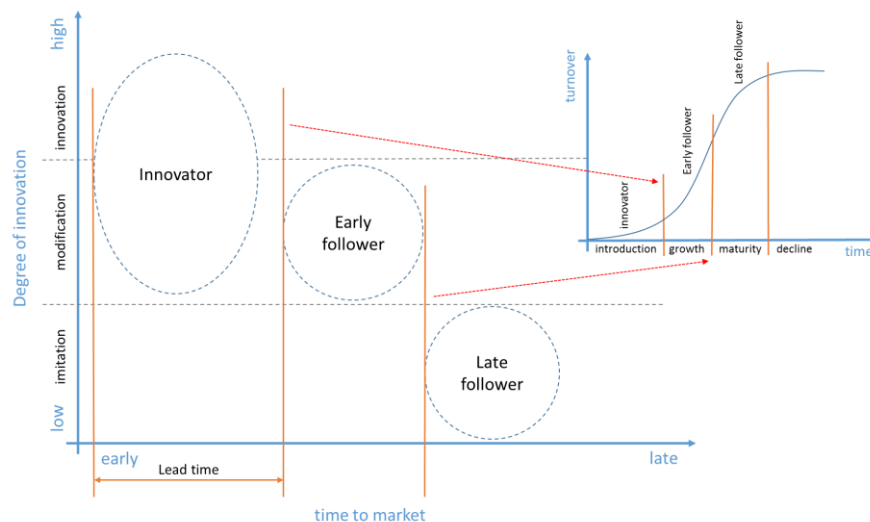


Figure 6: timing strategies

We compare between innovators (also called pioneers), early follower and later follower. An innovator is the first who provide new products and services and often open totally new markets. With their technological lead they create entry barriers for their adopters. The more complicated the product or technology is the higher the entry barrier and therefore the lead time will be bigger. The longer it takes till early followers exists, the higher the market share will be at the end of the day. Early followers instead, as their name suggest, are the next followers of the innovators. They have less uncertainty and often modify the innovators product or service according the identified points of criticism from the market. It is hard for them to overcome the entry barriers of the innovator but as soon as they can enter to the market they are often in a strong position. A late follower is the last who totally imitate the established products with all the modifications and often at a lower price level. Late follower have a much lower risk than innovators but are also vulnerable according new technologies. In some cases, late follower overlooks the technological progress of other firms and instead of a vast amount of sold goods they limp behind the expectations. Table 3 shows the chances and risks of all three categories. All of them have their right to exist and, of course, a company can follow more than one strategy. Based on the business unit and the purpose of a new product for them it can happen that a technological leader imitates products from a different technology to either widening their product portfolio (example one stop shopping) or to use it for developing

a new product for them. As an example we can use here the blade server technology introduced by RLX³ in 2000 which was followed by some small companies. Late followers in that case was companies like HP, Sun microsystems, IBM and many more. This companies are definitely technological leader in their specific field of activity but were a late follower with the blade server technology in the IT market.

	Innovator (Pioneer)	Early Follower	Late Follower
characteristics	introduces firstly the new product to the market	introduction of products next to innovator	strengths and weaknesses from product/technology are known
	unique market position	Learning from mistakes from innovator	risks are relative small
	market entry barriers can be build up	decreasing risk	competition shifts to price battle and cost reduction
	absorption of first buyer	improvement of product quality	market entry barriers can block the late follower
	leading knowledge compared to follower / competition	improvement of product features	low market share expected
	fast and easy improvement of the market position and image	competitive advantage against late follower	less image gain
chances	early implementation of market position	reduced expenses on research and development activities	low risks and expenses in research and development activities
	implementation of a progressive technological image	improved performance and features due to innovative imitation	targeted attack against weaknesses of innovator and early follower
	ability to assert industry standards	needs-oriented problem solving competence	learning from the competitive behavior of existing provider
	early development of cooperation's with partner	technological improvement	value on differentiation and specialization
	early development of market knowledge	better market orientation	
	ability to define entry barriers for competition	take advantage of weaknesses of innovator	

³ https://en.wikipedia.org/wiki/RLX_Technologies

risks	high costs for market access	risk of potential new competition	high market entry barriers due to the innovators strategy
	high uncertainty regarding product/technology success	high market entry barriers due to the innovators strategy	vulnerability against technological change
	uncertain development of demand		inability to catch up market performance
	high degree in lack of information		
	early copycats if no protection is possible		

Table 3: Characteristic's, chances and risks of different timing strategies, cf. (Hassel, Amprosy, & Philipp, 2010)

2.2.5 Cooperation oriented innovation strategy

Cooperation's play in the area of innovation management an increasingly important role. Especially small and medium sized companies can realize innovation projects in cooperation's, networks and special formed clusters. Without that possibility they often can't get such a complex and almost big projects done. They simply have not the resources available to follow the speed of the market leaders. Technological Innovations are often related to high costs and risks that can be easily shared over their network and therefore for each single member it reduces it significantly.

Cooperation oriented innovation strategies are distinguished between three different types⁴:

- **Horizontal cooperation's:** If companies work together at the same stages of value creation. Both companies are in competition with one another but they try to increase their competitiveness against others. This happens often if a huge number of different competitors are available in the market. Typical example is "Star Alliance". This cooperation was founded because particularly the big airlines suffer with the rising price pressure and in parallel the need of flexibility. Sharing re-

⁴ Cf. (Trilling & Dr. Blaeser-Benfer, 2014)

sources like flight check-in and concentrate it to one standardized process can significantly decrease the operational costs for all participants. Without this alliance it wouldn't be possible for some airlines to survive.

- **Vertical cooperation's:** Here are stages of value creation implemented in front and/or after the own value creation. Background of this cooperation is that in some business cases it is advisable to have a partner on your main interfaces. If this partnership is strong it is mostly easier to increase the productivity of the respective process. A good example is "Toll Collect". Toll Collect⁵ is a consortium of companies like Daimler Chrysler, T-Systems and Cofiroute. The main purpose is the development and implementation of electronic toll collect systems for trucks. All of them have different competencies that, if they are linked together, complete the requirements to implement such ETC.
- **Lateral cooperation's:** Here we are talking about a real cooperation with no direct relationship in value creation of the existing business and/or they are not in a competitive situation.

Table 4 shows the morphological box of all three forms of cooperation's.

characteristic	expression		
direction of cooperation	vertical	horizontal	lateral
time horizon	long-term	mid-term	short-term
time restriction	unlimited (permanent)		limited
factual limitation	unlimited		limited
function link			
fixation of agreements	contracts	playing rules	verbal agreement
min. number of partner	2		3
max. number of partner	up to 5	up to 10	more than 10

Table 4: morphological box for forms of cooperation's (Trilling & Dr. Blaeser-Benfer, 2014)

⁵ <https://www.toll-collect.de/en>

2.3 Main Steps of developing an innovation strategy

Very important for an innovation strategy is that the strategy is build up holistically. The process to develop and adjust the innovation strategy on a regular basis can be split into eleven different steps. Figure 7 shows a rough development process of an innovation strategy. In general, an innovation strategy follows according to an existing corporate strategy and must be coordinated with the defined market and/or technology strategies. Basically an innovation strategy pursues the following aspects (Hutterer, 2012, p. 68):

- **Result-oriented aspects:** These aspects include the boundaries of the relevant field and subject of innovation as well as basic statements according types of innovation and timing strategy
- **Potential-oriented aspects:** This aspects of an innovation strategy will be defined by identifying and determination of the core competencies as well as development and sourcing of a knowledge and technology portfolio.
- **Process-related aspects:** This aspects of an innovation strategy will be defined by identification of relevant sources of information or the acquisition of technology and/or knowledge for the specific market.

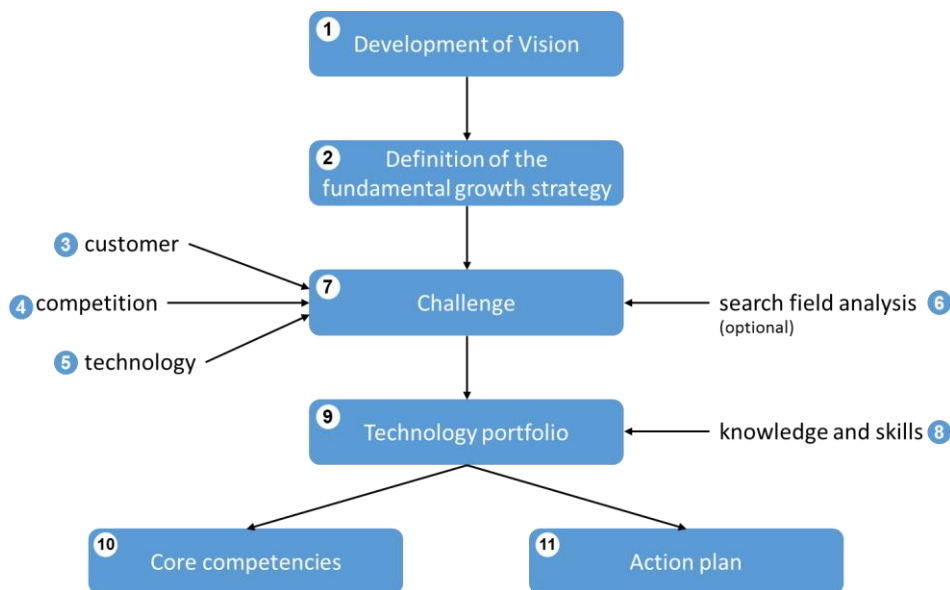


Figure 7: 11 development steps for an innovation strategy [own illustration, based on (Gassmann & Granig, Innovationsmanagement - 12 Erfolgsstrategien für KMU, 2013)]

2.3.1 Development of Vision

The first step is to develop a vision. The definition of a vision is a dream with expiration date. A vision shows what should be reached within a certain time period and is specific and feasible for a company. A vision can have a positive as well as negative impact on the corporate culture. If the vision totally points into another direction and doesn't fit to the core values and the trained corporate culture it can have negative impact in all kind of units within the corporate structure. A vision should bundle the available resources (employees) in one direction. A perfect and clearly defined vision can be the half of the job since if the majority of employees understand the purpose and the direction it steers the team without any big planning effort. With ambitious visions and the resulting innovations lot of companies are very successful. Without a vision a company isn't following the overall big picture and this kind of firms often only react according innovative activities of their competitors.

2.3.2 Definition of the fundamental growth strategy

The strategic innovation strategy must follow the fundamental corporate growth strategy. Therefore, the main thrusts will be pointed out without strong limitation of room for innovation. A strategic or fundamental growth strategy can be described by using the product/market matrix from Ansoff as already explained in chapter 2.2.1.

2.3.3 Customers

Based on market information's and/or workshops or interviews with existing and potential new customers you need to analyze customer requirements. In addition to the data from your market analysis it is helpful to use the data won out from the interviews or workshops to simply refine your analysis. Often it is much more essential to get information direct from your customer as from a deep analysis with mass data. But you need to know exactly which person of a company you want to choose. If you are talking to the head of purchasing, you may get not the same answers or results as you will receive it from an employee of the R&D department.

To extract the most out of your customer workshops the so called **lead-user-method** is recommended. We can envisage that it is not very easy to find willing customers that perfectly fits in your requirements.

With this method selected customers will be connected with the firm’s developer of products and services. These customers are often prepared to work with other companies and are mostly innovative and real strong trendsetter. Often these customers see a positive impact on their own business processes and in some cases these companies are your first customers who use the new product or service since they can easier identify by themselves with the resulting invention. It creates a much stronger partnership between them since they work as a team and have not only a standard supplier-customer relationship. As shown in Figure 8 a lead-user-workshop is defined in four phases. Phase 1 to Phase 2 is the firm’s internal analysis and is based on external market information. Beginning with Phase 3 customers or so called lead users are involved into the process and should finally develop together with the firm’s own team (mostly developer) new innovative concepts.

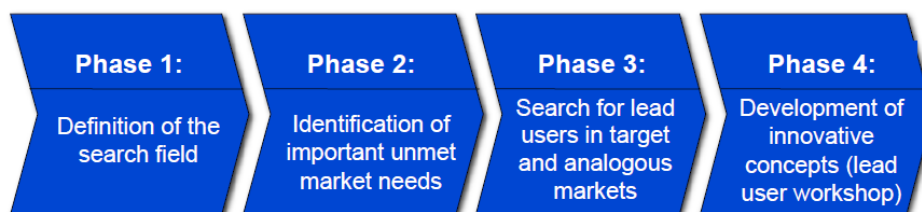


Figure 8: Main steps in Lead-User-Method (Pötz, 2015)

2.3.4 Competition

Knowledge about your competition is one of a major element in a strong innovation strategy. It describes detailed in which situation you are and where the firm is positioned within the current market. Unfortunately, it isn’t sufficient enough to have only the best products or services available compared to your direct competitors. Only if the firm is able to create a convincing price-performance ratio that is noticeable better than your competition the firm is able to place the products or services on the market successfully. It is every time the same situation. To be permanent successful on the market you need to be always better than your competitors and very important be aware of potential new entrants (see chapter 2.4.1.1). The more you know about your potential new entrants the better you can react if they really enter. And the older the market is the lower the entry barriers. Often young ventures have redefined the market rules like “Uber” the taxi market or “Airbnb” the hotel industry. But not only young ventures hit the market with new product or service concepts. Also established and big firms always try to expand their market position

with intelligent and smart technologies to enter in new markets. As an example we can use Apple that redefine the state of the art technology in mobile phones with their iPhone. Tools and processes to understand how competitors can be identified and analyzed are described in chapter 2.4

2.3.5 Technology

At this point an analysis will be done based to the ongoing technological trends. According to Gassmann & Sutter, 2013 the degree of concretization can reach from megatrends to more specific technology trends within the existing market. To get a feeling for both types of trends the following table show some examples:

Megatrends*	Technology trends
minituration	big data
digitalization	internet of things
urbanization	3D printing
globalization 2.0	augmented reality
mobility	digital mesh
demographic change	smart machines
climate change	

*according to Z_Punkt gmbH, 2014

Figure 9: Examples of Megatrends and Technology trends

An analysis on technological trends or megatrends is also very important for service oriented companies as for example wholesaler like Sonepar. They need to find synergies to be able to keep their market attractiveness and secure their future existence. More details and results of the trend analyze is shown in chapter 3.3.5.

2.3.6 Search field analysis

An optional step in developing a strong innovation strategy is to attach to the former steps a so called search field analysis. The goal of a search field analysis is to capture, out of the results of the technology analysis, the market and technological trends for the relevant fundamental growth strategy and other superior strategies. Both kinds of trends will be portrayed in a matrix to identify on their interfaces existing

innovation potential that have a promising future. With a search field analysis, it is often simply not possible to deduce ideas. They only identify areas where the firm need to focus and enhance the use of resources. To identify other promising new markets, it is also possible to scrutinize the underlying assumptions. This also includes the analysis of stranger markets and alternative industries. Example: A wholesaler for electro technical products analyzes the logistic concept from a wholesaler out of the business area of sanitary. Additionally, it is possible to enhance the analysis by integrating customers to cover the whole potential of complementary product and service offers as a comprehensive solution.

2.3.7 Challenge

Based on the results of the analysis according to customers, market, competition and trends the firm must extract the challenges for the particular organization out of it. In some cases, a search field analysis is also conducted but not essential for the challenging phase. Trends have a very uncertain character but are often a good rough direction for the development of new products and services according long term strategies and expansion into new markets. To reduce the risk of uncertainty, trends can be challenged by deploying methods like scenario analysis. The results from this kind of analysis provide a good basement for developing an innovation strategy. Beneath a search field analysis or trends conducted with scenario analysis the most important factors are customers, competition and technology. Main question for the company or a department is how relevant this competencies or activities are for themselves. It is exactly those technological or business related challenges that must be discussed with all relevant departments like marketing, R&D, production etc.

At this point all relevant analysis according to external influences are done to be able to develop an innovation strategy. Point 8 to 11 are discussing internal capabilities and focusing on detect gaps that have to be filled in all possible ways (internal or external) to be able to fulfill several, often basic, requirements.

2.3.8 Knowledge and skills

Whereas challenging the organization according to customer, competition and technology describes the external perspective, knowledge and skills are pointing to internal perspectives. A common way to keep the status available is to setup lists with relevant information to knowledge, skills and experience. This helps to identify gaps for the specific strategy. Beneath a gap-analysis the goal of these lists are also to build up backups and redundancies. Redundancies are needed if there are critical functions for example a high risk product development or a critical process. If a company isn't prepared according to unplanned activities like sick leave, dismissal or accidents it can have a crucial impact on the health of the business or a particular project.

2.3.9 Technology portfolio

In this step all competencies will be identified that are necessary to fulfill new challenges which were extracted by all the former analysis to develop an innovation strategy. According to Gassmann & Sutter, 2013 this arrangement serves in further consequence new analysis and visualization according to strategic positioning and additional fundamental growth strategies.

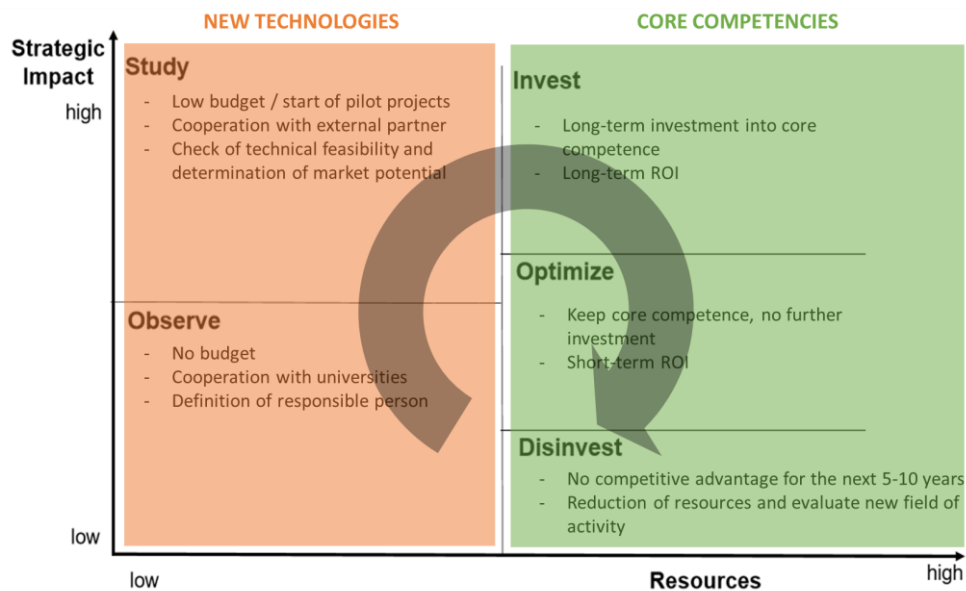


Figure 10: St. Galler technology and innovation portfolio [own illustration, based on (Boutellier, Gassmann, & von Zedtwitz, 2008)]

Figure 10 shows the St. Galler technology and innovation portfolio. In the graph the strategic impact is stated on the vertical axis. The higher the strategic impact is for the firm the more effort and resources need to be provided and used. Here are also meant the long-term importance of the related technology or competency and their conducted challenges for the firm.

The horizontal axis shows the impact on the firm's internal resources. With internal resources technology-based capabilities like employees, know-how, patents and infrastructure are meant which are always be related according to their main competitors in the specific market. This effectively means that the dimension resource represents the availability of technology as well as their own internal strengths to fulfill the requirements.

The technology and innovation portfolio is divided by five different areas that are called observe-study-invest-optimize-disinvest. As shown with the drawn arrow, technologies run through all stages over time and represent a typical life cycle. The several stages can be compared with typical s-curves as shown in Figure 11, but compared to s-curves the technology and innovation portfolio shows the impact on a firm's strategy and resources better.

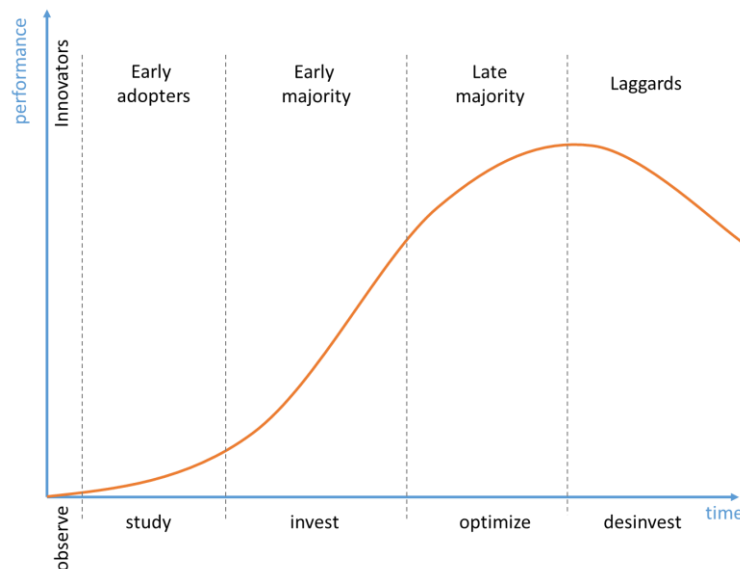


Figure 11: S-curves - The relation to technology/innovation portfolio + adopter categories [aligned to (Schilling, 2013, p. 57)]

2.3.10 Core Competencies

The definition of core competencies is one of the most critical and time intensive steps within the development of an innovation strategy. They create competitive advantage and will be build-up on a long period. Core competencies are based on internal knowledge and must be saved as well as possible (tacit knowledge or resource). It is for this reason essential for the delimitation against other market-relevant competitors and define your position in the market. One thing, though, must be clear. A clear differentiation between what are my core competencies and what competencies would come from external analysis helps to concentrate on the particular strategic direction. From a risk and cost view it is definitely not necessary to keep all competencies in-house. The better a company understand where their boundaries are the more efficient it will be at the end of the day.

As shown in Figure 12, a firm can define their core competencies based on product and business level. But to be able to state that a particular skill is a core competence it must fulfill the following criteria:

- Is the core competence generating a value for the customer?
- Is the core competence hard to imitate by your main competitors?
- Does the core competence enable potential for developing new products?

Back to Figure 10, core competencies are located in the field “invest”. As long as the competence is generating value in whatever way you need to invest to keep it. This invest happens due to high degree of internal resource input and a high importance on strategic level.

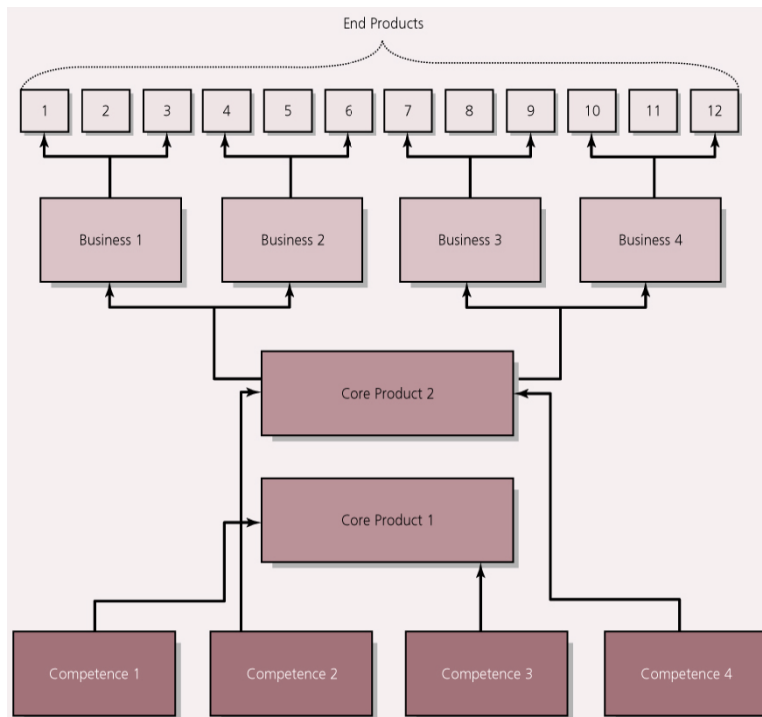


Figure 12: Identification of core competencies and their impact on business and product level (Schilling, 2013, p. 119)

2.3.11 Action Plan

Without any milestones and roughly described steps of how to reach the overall goal, a strategy is nothing worth. Therefore, it is essential to setup a clearly arranged roadmap that helps to focus and to define points where a company or department can set their key performance indicators (KPI's). Based on identified gaps between existing and in future needed core competencies a plan of action must be implemented. This plan shows what things has to be done to develop competencies according to technology, processes, skills and/or knowledge. This have direct impact on existing roadmaps, investment budgets, competence development, resource allocation, make-or-buy decisions and human resource development programs. As soon as a core competence is developed it is necessary to adjust and improve it over time. According to the St. Galler technology and innovation portfolio (see Figure 10) it is essential to permanent question the core competence because from time to time and changing environment it could become obsolete. Therefore, a new core competence come into place.

2.4 Tools for analyzing the external and internal perspective

Regarding the main steps of development an innovation strategy (see former chapter 0) it is necessary to do deep analysis on internal and external environment of an organization. In the next two subchapters main and most important tools will be described. Table 5 shows a batch of possible tools. For the current master thesis only the described tools are used for the empirical section (detailed information see chapter 3.2).

- Navigation system	- Portfolio analysis
- 5BQ - five basic questions	- Experience curve
- Analysis of market position	- Porter five forces
- Competitor analysis	- SWOT analysis
- Benchmarking	- Stakeholder analysis
- Value chain analysis	

Table 5: Overview of tools to analyse external and internal perspective of a firm

2.4.1 External Analysis

To analyze the external environment of a company, tools like “porter five forces” and “stakeholder analysis” are commonly used.

2.4.1.1 Porter five forces

The model “Porter five forces” is used to assess the company’s current external environment and tries to identify opportunities and threats for the firm. As its name implies and shown in Figure 13 it is described by five forces:

- Rivalry among existing competitors
- Threat of potential new entrants
- Threat of substitute products or services
- Bargaining power of suppliers
- Bargaining power of buyers

Recently Porter also has acknowledged the power of complements as the sixth force. This force is in direct relationship to the bargaining power of buyers and can have positive as well as negative impact on profit for the firm. The power of complements describes the impact of related products or services at the available product portfolio on the market. To understand the power of complements we can use an example from public transport. If petrol costs are rising it could happen that it has also negative impact on the profitability for this firms. Why? Because complementary services like car sharing or the usage of bicycles can avoid potential customers to use the public transport system. Complementary products or services fulfill the same purpose but are often not recognized because they are active in total different markets.

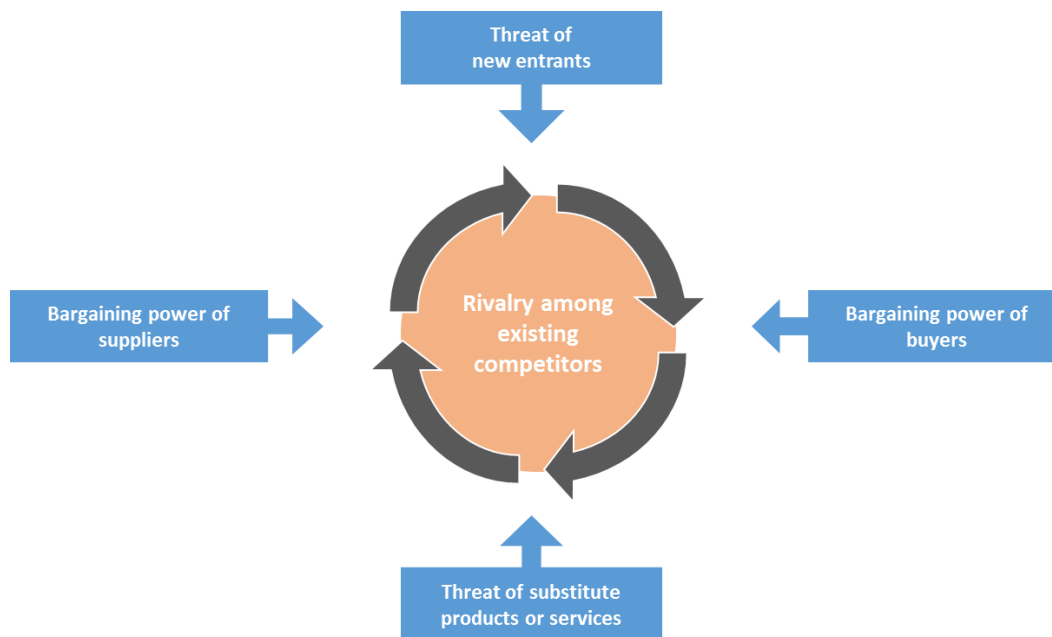


Figure 13: Porter's Five Force Model [own illustration, based on (Porter, *Competitive Strategy: Techniques for Analyzing Industries and Competitors*, 2004)]

Rivalry among existing competitors:

This force describes the competitive situation for the whole company or a particular SBU in a particular market. As described in chapter 2.2 there are several orientations available for a firm of how, when or where to position in the market. After a competitor analysis you may find rivals that have different positions and force strategies that are listed below:

- Innovation strategy = introduction of new services/products
- Cost leadership strategy = low price or best price strategy
- Quality leadership strategy = high to mid-price strategy, quality is in focus.
- etc.

In general, we can say that the higher the competitive situation the lower the industry's profitability. The intensity of the competitive situation can be influenced by the following points:

- **Low degree of differentiation** in the market. The higher the competition is differentiated the lower the risk of price wars exists, because it is hard for the customers to compare several suppliers and therefore the company has less price discussions.
- **Low growth rates in the industry.** Typical displacement market and therefore again a very price sensible environment because of the attempt to gain market share.
- **High exit barriers.** Exit barriers like emotional bond to the industry or high investments hinder companies to exit of the particular field.

Threat of new entrants:

New entrants are as every other existing competitor interested to gain their market share. The disadvantage of a new entrant is often the fact that they are more diversified and often they rewrite the rules of the particular industry (Example: UBER, AirBnB ...). It is also common that new entrants handle with price advantages to push the growth which mostly have an impact on the profitability of existing solutions. Barriers can lower the risk of new entrants. There are six major barriers according to Porter which are listed below⁶:

⁶ Cf. (Porter, Harvard Business Review - The Five Competitive Forces That Shape Strategy, 2008)

- Supply-side and demand-side economic of scale
- Capital requirements
- Restricted government policies
- Access to distribution channels
- Incumbency advantages

Threat of substitute products or services:

This force describes the availability of alternatives that can substitute your product or service. Alternatives fulfill the basic requirements and in many cases it happens that all the USPs are irrelevant. For example, the usage of skype can substitute a travel for a meeting. Therefore, the product or service of an airline is in danger to be substituted because the purpose to travel would be the meeting or to talk to other people which can easily be done over skype. We are talking about high threats of substitute if:

- The switching costs are low = customers don't lose anything if they use the alternative
- Price performance of alternative is better than the existing.
- Substitute producer is more aggressive and profitable

Bargaining power of suppliers:

The power of suppliers can have high impact on the profitability. The lower the number of suppliers the higher the bargaining power. With less competitors for the suppliers they can easier set higher prices to increase their margin. But not only prices also the risk of limited service or bad delivery performance can hinder the firm to increase their profitability. Typical characteristics are listed below:

- Number of suppliers
- Availability of alternatives for supplier's product
- Switching costs of supplier
- Total industry cost contributed by suppliers
- Suppliers contribution to quality or service of the industry products

Bargaining power of buyers:

The last force describes the bargaining power of customers. The more powerful several customers are the better they can play with their available suppliers and pull prices down and in parallel demand high quality in product and service. The bargaining power of buyers are high if:

- Limited number of customers are available. There are view customers that have the biggest share in the relevant industry.
- Low product uniqueness. Products can be easily compared and substituted. Service is also comparable.
- Buyer’s profitability, looking for high quality or more to low priced products?
- Low switching costs

2.4.1.2 Stakeholder Analysis

As the name suggests the stakeholder analysis analyze all relevant stakeholders of a certain topic, or a kind of relationship to that topic. This analysis can be conducted against the whole company, a small project till to an idea that could have positive impact on the firm’s success. Typical stakeholder are suppliers, customers, employees, management, firm owner, competition, government and many more. The list could be long on a case by case basis. Sense of this task is firstly to identify possible stakeholder and more important to categorize them regarding influence or power and the interest of every single stakeholder. Resulting in following types of stakeholder (see Figure 14) they need to be managed differently.

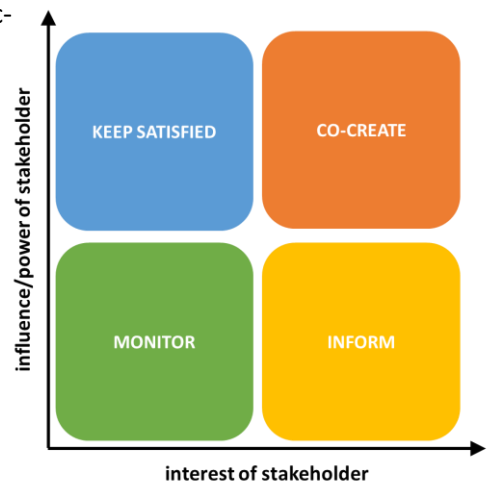


Figure 14: Stakeholder map

Stakeholder that are located in the area “**Monitor**” have both low interest and low power or influence on the topic for what the analysis is conducted. Those are mostly not relevant and just need to be informed on an irregularly basis. But of course over time they need to be monitored because each stakeholder can shift within the duration of a project. The next category “**Inform**” describes stakeholders with high interest but with relevant low

power. Compared to the first area they need to be informed on regular basis. In contrast to the area “Inform”, stakeholder from the area “**Keep Satisfied**” as the name suggest need to be satisfied over time. They have relevant high power for example within an organization associated with a relative low interest on the particular project. Sometimes these type of stakeholder need to be handled with kid gloves and increase the risk. The last and most important area is called “**Co-Create**”. Stakeholder that are located here have to be totally integrated into the project and more important they are real decision maker and can push the progress and finally the success. Stakeholder out of the “Co-Create” area have a relevant high power and high interest of the relevant project etc.

2.4.2 Internal Analysis

After analyzing the external environment, it is also necessary to do the same for the internal environment. An internal analysis begins often by identifying the firm’s strengths and weaknesses. This is done by examining all relevant activities within the firm’s value chain. Finally, the identified weaknesses and strengths are source for a conducted SWOT analysis which allows to identify relationships between external and internal factors.

2.4.2.1 Value chain analysis

According to Michael E. Porter a firm’s value chain is differentiated into primary and support activities. As shown in Figure 15 **primary activities** include inbound logistics (activities required to receive, to store and to distribute inputs), operations (activities to convert inputs into relevant outputs), outbound operations (activities to collect, to store, and to distribute outputs), marketing and sales (activities to inform and convince your customers about your products and services) and services (activities to handle the firms after-sales tasks like complaint management). Beneath primary the following **support activities** are needed to bolster the core activities. This includes the firm infrastructure (accounting, finance, public affairs, legal counsel ...), HR management (activities like hiring, recruiting, training, payment of wages), technology development (developing and managing equipment, software, hardware, procedures and very important the knowledge to be able to transform inputs into outputs) and finally procurement (purchasing process excl. the transfer process). Based on the purpose of a company it is also possible that support activities are primary activities for them and of course there could be also additional primary and secondary activities.

After listing each activity, all of them will be assessed regarding their weaknesses and strengths which are used in the SWOT analysis (see chapter 2.4.2.2) to plot in an objective manner. One of the big advantage is if a firm has identified their strengths and weaknesses they also can identify potential competitive advantage which helps them to allocate their resources to leverage it for the future strategic direction. According to J. Barney (cf. (Barney, 1991)) resources must be rare, valuable, durable and inimitable to be able to be categorized as a sustainable competitive advantage. *For example, a positive brand image can be a rare and valuable resource, but it requires ongoing investment to sustain* (Schilling, 2013, p. 115). Since resources or activities are marketed as sustainable competitive advantage they can easily be defined as core competencies (see chapter 2.3.10).

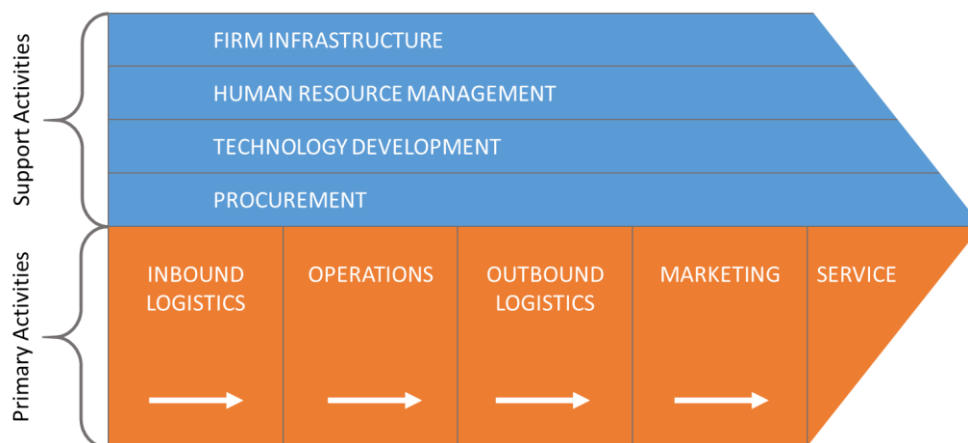


Figure 15: Michael E. Porter's value chain [own illustration, based on (Porter, *Competitive Advantage: Creating and Sustaining Superior Performance*, 1998)]

2.4.2.2 SWOT

The frame of reference constituted by the SWOT analysis represents the basic analytical framework for strategy research (Kotler, Berger, & Bickhoff, 2008, p. 30). The mentioned frame enables an overview of available strengths, weaknesses, opportunities and threats (short SWOT) and helps the practitioner to categorize all the findings according to several internal and external analysis. At the SWOT analysis we differentiate between internal and external factors (see Figure 16). After final categorization we come to the significant task. This is the attempt to increase the benefit from strengths and opportunities and decrease the losses or risks from weaknesses and threats. Therefore, a targeted search by combining different categories will be done to derive initiatives and put measures in place. cf. (Kotler, Berger, & Bickhoff, 2008)

- **Combination of strengths and opportunities:** Which strengths fit to which opportunities? How can several strengths be used to engage the realization of opportunities?
- **Combination of strengths and threats:** Which threats can come across to strengths? Which strengths can be used to lower the probability of occurrence of threats?
- **Combination of weaknesses and opportunities:** Is it possible that opportunities can arise out of weaknesses? How can weaknesses be developed into strengths?
- **Combination of weaknesses and threats:** which weaknesses are in a close relationship to threats? What can be done to defend oneself towards the identified threats?

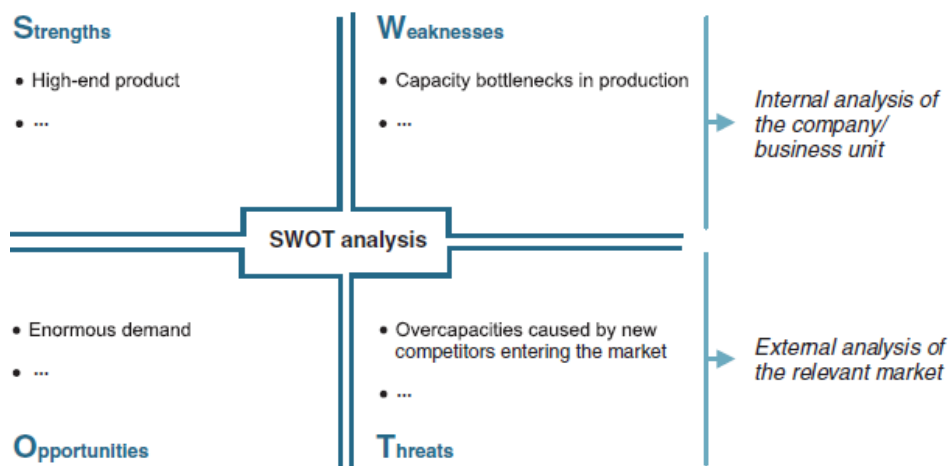


Figure 16: Sample SWOT Analysis (Kotler, Berger, & Bickhoff, 2008, p. 32)

2.5 Innovation Performance and Controlling

Each strategy is worthless without any managing control process because as a manager you will never be able if the derived goals can be reached and further more if your activities fit to your overall strategic direction. This chapter describes how a setup of an innovation management control system by implementing a balanced score card can look like and how to implement several KPI's to measure the status to be able to react early enough if you see that the objectives be in danger.

2.5.1 Measurement of Innovation Performance

There are objectives that are easier to measure than others. It is relative easy to measure an improvement of the revenue rather than the progress of a strategy or the progress of built up knowledge according to the relevant core competence. Therefore, also innovation is more difficult to measure. In general, we can say that each strategic objective has positive impact to all perspective like financial, internal processes, customers, cooperate culture and many more.

Common used KPI's according innovation are:

- Number of reported ideas
- Number of introduced new products per year
- Innovation ratio – Ratio between turnover with existing products and new products. How long a product or service is new depends on the industry dynamics.
- RoPDE⁷ Return on Product Development Expense (Balanced Scorecard Institute, 2011),
- Market share in a particular area
- Etc.

But those KPI's are focusing “only” on the financial or the internal business process perspective. Performance like the degree of knowledge on a typical new competence or how much the corporate culture is aligned to innovation can't be measured. But it is necessary to build a kind of system that allows the

⁷ RoPDE [%] = (Gross Margin – Product Development Expense) / Product Development Expense

management board to get a feeling about status in innovation of the process, the strategy and the financials. To measure the culture according innovation, KPI's like number of reported ideas or number of innovations compared to reported ideas can be used to get a feeling about how a culture is changing and focusing more on innovation. Sometimes also the fluctuation rate of employees can indicate a healthy culture which is often conducted by the number of innovations since more people begin to try to enhance internal as also external performance. A suitable system can help to plot all the status of innovation performance which will be described in the next chapter.

2.5.2 Management Control Systems for Innovation Performance

There are many different concepts for a management control system that can be used to control innovation and more important to increase the innovation performance which are listed below:

- Innovation Scorecard
- Stage-Gate-Process-Control
- Innovation value chain
- Balanced Scorecard

Each of them have their own characteristics and need to be chosen very carefully and must fit to the firm's environment. Since this Master Thesis is talking about an innovation strategy for a wholesaler and we can expect more service and process innovation rather than product innovation the balanced scorecard is the best model. For this reason, only this model is described below.

Balanced Scorecard (BSC):

The BSC was developed by Robert S. Kaplan and David P. Norton and is a concept to measure, record and control relevant activities of a company or an organization according to their vision and strategy. Kaplan and Norton showed that it is not sufficient only to look on financial numbers. The control mechanism must be integrated in the management process and therefore several perspectives must be considered. The following Table 6 shows for each perspective examples of possible goals and associated measurements. In detail each objective has a detailed description of the KPI, a target value (limited in time), detailed description of steps to reach that target value, how often it will be measured and to whom it will be reported.

Perspective	Objective	Measurement
Financial	decrease costs by 20% within next 5 years	return on capital
	annual growth rate of 15%	revenue growth
Internal business	increase customer intimacy	average turnover per sales force
	increase share of eBusiness up to 50%	turnover eBusiness / total turnover
Innovation and learning	doubling annual number of reported ideas in 2 years	number of reported ideas
	increase knowhow in department sales according technology x	Total days training per employee / expenditure for training per employee
Customer	increase client satisfaction	overall degree of customer satisfaction
	Decreasing response time at complaints by 25%	average response time of complaints

Table 6: Balanced Scorecard with examples (goals and measurement)

3 Innovation Strategy at Sonepar Austria

Based on the former chapter 2 “Development of an Innovation Strategy” described steps and main criteria’s and different kind of innovation strategies, this chapter reflect the content on a practical way. Goal of this chapter is to link the theoretical part to the real world. In this case it is the world of a wholesaler within the electro technical industry which is the basement of the final chapter. Starting with a short description of the company it enters directly in the main steps of developing an innovation strategy.

3.1 Sonepar worldwide at a glance

The company is called Sonepar and is the biggest and from a market share perspective the world’s number one within their specific field of activity. Sonepar is a wholesaler within the electro technical industry and concentrates beneath the right customer care much stronger on their ability to manage different procurement processes to lower the total cost of ownership (TCO) for their customers. So the main products or

the main focus are not real physical products. It is the service behind that differentiates them from other competitors. The main purpose is to make it possible that the customer can place their particular orders at the latest time of the day and deliver the products as early as possible on the following day. To keep one step ahead against your competitors you need from time to time new solutions. So a clear innovation strategy (see chapter 3.3) and a compound management control system, short MCS (see chapter 3.4), definitely makes sense in this company.

Sonepar is a family-owned company with the HQ located in France, Paris and has a presence in 44 countries. In total, more than 43.000 people are employed which generate a total turnover of € 20.2 billion in year 2015. As shown in Figure 17, the company is focusing on seven main areas which are residential, commercial, industrial and utilities. Within these four markets, customers are served by several product groups (overview see Figure 18). From the customer point of view, the total turnover is divided by 53% installers (residential + commercial), 28% industrial, 9% services and utilities and the rest are done with other customers which cannot be associated according the last three groups.

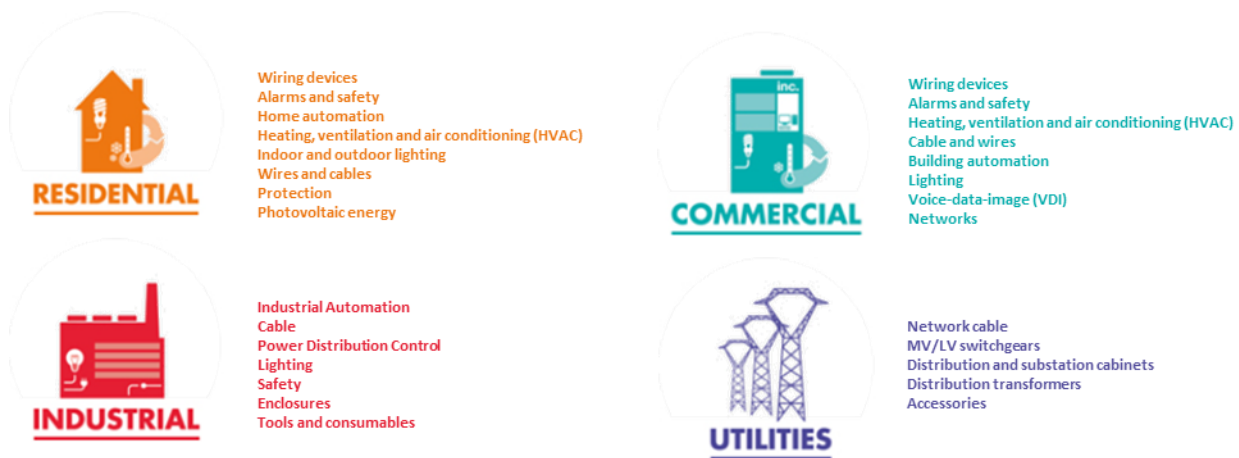


Figure 17: Main markets of Sonepar (Sonepar, 2014)



Figure 18: Product groups at Sonepar (Sonepar, 2014)

As already mentioned, Sonepar is active in 44 countries respectively has a worldwide footprint.

The worldwide footprint is divided into four different operating regions:

- **Northern Europe, 31% of sales**
 - ... 503 branches, 45 satellites (Austria, Czech Republic, Estonia, Finland, Germany, Hungary, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Sweden, Switzerland)
- **North America, 37% of sales**
 - ... 934 branches (Canada, Columbia, Costa Rica, Dominican Republic, Panama, USA, Puerto Rico, Trinidad and Tobago)
- **Southern Europe, 22% of sales**
 - ... 822 branches (Belgium, Brazil, France, Italy, Monaco, Romania, Spain)
- **Asia-Pacific, 10% of sales**
 - ... 341 branches (Australia, China, India, Indonesia, Malaysia, New Zealand, Singapore, South Korea, Thailand, Vietnam)

3.1.1 Sonepar Austria

As mentioned in the previous chapter Sonepar Austria is member of the cluster “Northern Europe”. Within their market the subsidiary is placed as number two in the market. In total 334 people work for Sonepar and generate in total € 140 million of sales in 2015. Compared to other members from the cluster “Northern Europe” they have a relative small share of 2,24 %. As shown in Table 7 Sonepar Austria is divided into three different zones that are defined by the type of customers. Since of different purpose and requirements it is necessary to serve them with different knowledge and skills regarding the sales force.

Type	Sales		Number of sales people
	in €	in %	
Electrician	101 500 000,00 €	73%	40
Industry	33 600 000,00 €	24%	9
Puplic sector	4 900 000,00 €	4%	1
Sonepar Total	140 000 000,00 €		50

Table 7: Total Sales per market of Sonepar Austria in 2015

In 2008, Sonepar acquire the Austrian share of at that time seriously damaged company Hagemeyer. Hagemeyer had in Austria two branches which are still in use. In total Sonepar Austria operates ten branches located in each federal province. Because of the acquisition of Hagemeyer cities like Vienna and Graz have two branches. Internally all these branches share centralized operating departments like logistics, HR and many more (see Figure 19). But to the outside world they present each other as two different brands.

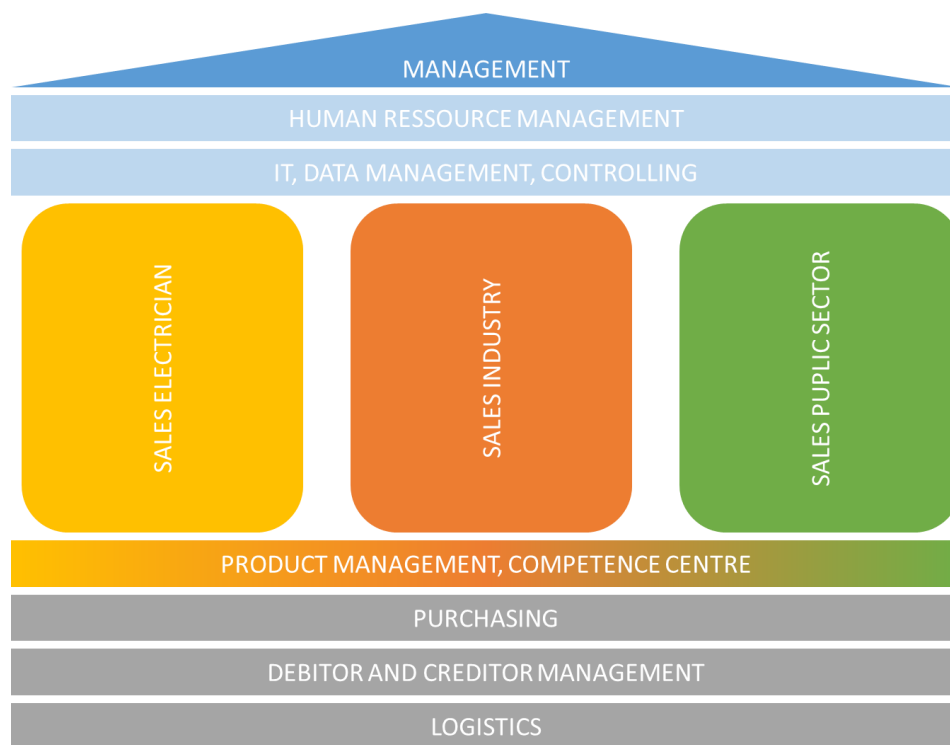


Figure 19: Organizational structure of Sonepar Austria

3.1.2 Description of market industry

As mentioned in the previous chapter the market is divided into three different areas. One of them is the market regarding industrial purpose. The industry market can be divided into MRO and OEM sector. A typical OEM customer, Sonepar defines those companies that use the electro-technical components for their own serial manufacturing of machines, switch cabinets or any other products that will be resold to third parties. On the other hand, MRO customers are those who have no intention to resell electro technical components. As the name suggest they use the material for maintenance, repair an operation related

purposes. Both types of customers have different requirements and need to be handled totally different. Since for an MRO customer electro technical components are so called C-Parts they strongly focus on the purchasing procedure and their related costs. C-Parts have relative low value for the customer and have mostly low prices but the purchasing cost can be several factors higher than the material itself (see Figure 20).

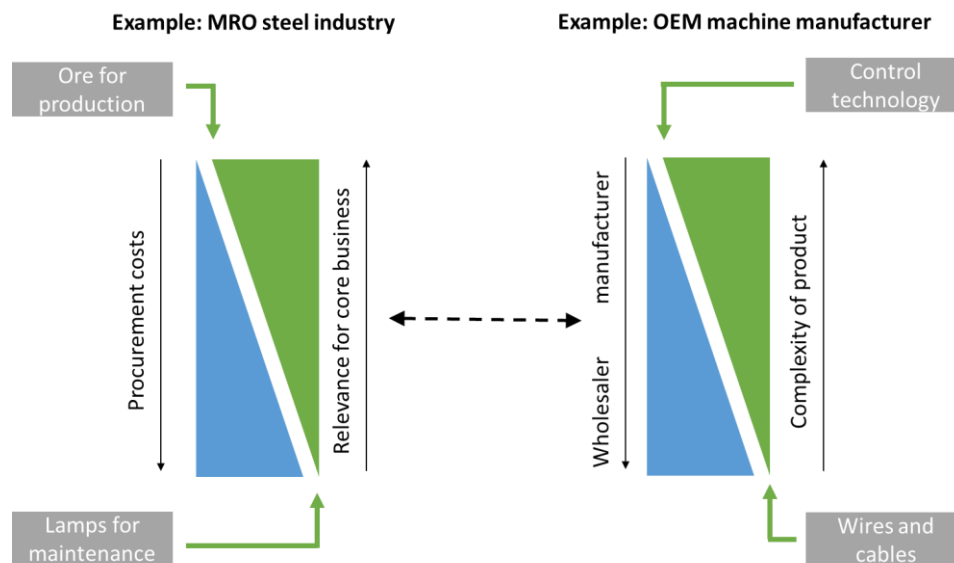


Figure 20: Procurement costs vs. relevance to core business, Kind of supplier vs. complexity of product

So this customer's focus strongly on the service what a supplier can offer. Mostly wholesaler fulfill this needs and direct sales is unusual for this type of customers. Compared to MRO, OEM customers focus more to buy at manufacturer itself. Many OEM customers need very often the knowledge of these supplier and therefore it is natural that they also buy from this source. Additionally, since for example a big switch cabinet builder sees electro technical components not as C-Parts but more as highly valuable materials for his activities, it is also a price sensitive area. It often makes no sense anymore to link an additional channel between those two, otherwise margins are low for both parties. In general, we can say that this fact counts more to complex products. The more complex a product will be the higher the probability that the wholesaler is not integrated (see Figure 20). This does not mean automatically that the wholesaler doesn't deliver anything to the specific customer. Of course if a big switch cabinet builder is aware of their procurement costs he also split different parts that are delivered by a wholesaler.

INDUSTRY MRO RELEVANCE				Turnover 2015
Segment	Subsegment	Name of Segment	Examples	18 480 000,00 €
400	4010	Chemistry / Pharma / Medicine	Pfizer, Air Liquide, Donauchemie, Lenzing	830 000,00 €
400	4020	Automotive	BMW, Magna,	2 300 000,00 €
400	4030	Food and Beverage	Kellys, Mars, Molkereien	750 000,00 €
400	4040	Steel and Metal	Voest Alpine, Böhler	6 400 000,00 €
400	4050	Wood, Paper, Packaging	Mayr-Melnhof, Frischeis, Mondl, Kaindl, ELK, manufacturer of furniture ...	2 900 000,00 €
400	4060	Building Materials	Wienerberger, Lavarge, Cemex	450 000,00 €
400	4070	Construction	Strabag, Porr, Swietelsky, mainly big construction companies	1 300 000,00 €
400	4080	Mining	Mining Industry, Eisenerz, Hallein	250 000,00 €
400	4090	Facility Management	SSI, Wisag,	1 700 000,00 €
400	4100	Industry MRO, miscellaneous	miscellaneous, unable to define to rest	1 600 000,00 €

INDUSTRY OEM RELEVANCE				Turnover 2015
Segment	Subsegment	Name of Segment	Examples	15 120 000,00 €
500	5010	Switch cabinet construction	SPS, ERA, Mehler, ...	7 200 000,00 €
500	5020	machinery and plant engineering	Engel, Haas Food, Andritz	4 800 000,00 €
500	5030	Puplic Utility Companies	EVN, Energie Steiermark, VKW, ÖBB, Verbund,	2 400 000,00 €
500	5040	Transportation	Liebherr Transportation, Stadler,	220 000,00 €
500	5100	Industry OEM, miscellaneous	miscellaneous, unable to define to rest	500 000,00 €

Total Turnover Industry 2015 33 600 000,00 €

Table 8: Internal industry segmentation for Sonepar incl. turnover 2015

As shown in Table 8, Sonepar has a relative good distribution between MRO and OEM customers. In total the industry sales department generates a revenue of € 33.6 MM in year 2015. The size of the MRO market is estimated by roughly € 150 MM per year. Compared to the revenue of 2015, Sonepar holds with this consideration a market share of about 12.5%. Compared to the MRO demand, the OEM market is much bigger. As already mentioned it is mostly served by direct sales channels. So therefore the market shares of Sonepar and other competitors is relative small. The estimated OEM market (as defined by Sonepar internally) is roughly € 1.3 billion. More than 80% of this volume is done by manufacturer itself and therefore the market share of 1.1 % is relative small. Figure 21 and Figure 22 gives an overview of relevant competitors. This numbers are related to the total turnover 2015

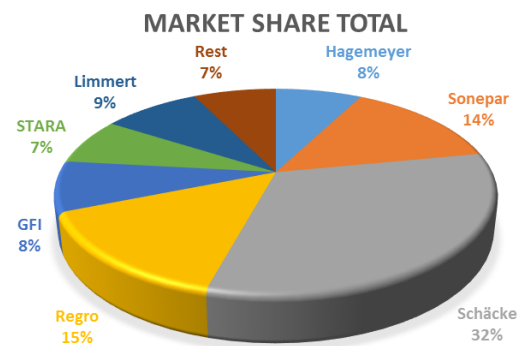


Figure 21: Market share total

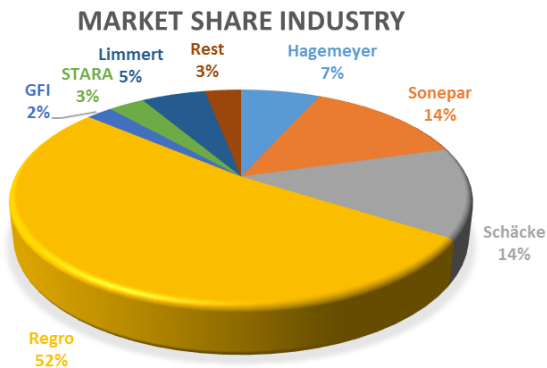


Figure 22: Wholesaler market share Industry sales

DISTRIBUTION WHOLESALER TO DIRECT

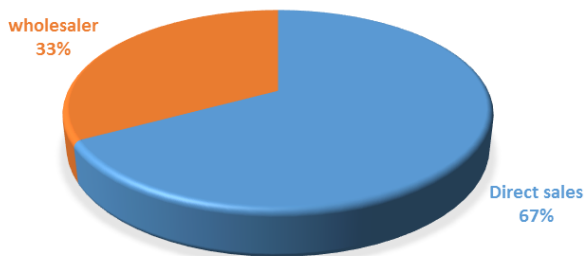


Figure 23: Distribution direct sales to sales generated by wholesaler

and is obtained from credit reports⁸. Figure 23 shows the distribution of direct sales and sales over wholesaler which means that we as a wholesaler have a much higher potential to grow without taking shares from our direct competitors. General trends of these customers and how they may change from a buying directly at the manufacturer into one supplier strategy over the wholesaler is described in chapter 3.3.3. In addition, several trends were identified to increase the competitiveness against our competitors and to increase the awareness of manufacturer that Sonepar is a good choice to lower their internal costs by using only one supplier for their small to middle sized customers.

3.2 External and Internal Analysis of Sonepar Austria

This chapter describes the results of the external and internal environment of Sonepar in Austria. Using tools like Porter’s five forces, Stakeholder Analysis and value chain analysis it shows in detail the current situation and are basement for identifying future business opportunities according to technological and/or social and business trends.

⁸ KSV1870 – Kreditschutzverband, <https://www.ksv.at>

3.2.1 External environment according Porter five forces

For creating a picture of the external environment of Sonepar the model of Porter's five forces has been applied. Therefore, as in Appendix 5 shown, for each element several typical determinants were rated according all five forces. Each determinant of every single force has the same weighting. So afterwards the average value was built to get an indicator how strong the force is in the environment for Sonepar. Each factor was rated between one and five while one represents weak and five strong. More important is that additional to the current situation a rough assessment for each force in five years was done. The reason was to identify a trend of how the market could change. As shown in Figure 24 all forces charting a rising trend which means that the environment become more difficult for Sonepar than it is right now. Of course it is a slight increase and nobody knows if this would really happen over time since it is only a rough assessment. But as in most of different industries it is very rare that it becomes easier for someone.

- **Bargaining Power Supplier:** Currently all suppliers have also the chance to go directly to the market without selling their products over any wholesaler. This happens very often in customer segments like OEM because they are faced with high price pressure. On the other hand, many manufacturer of components are dependent on a wholesaler because they are still not able to handle their logistics directly because of the high number of different customers and the costs involved.
- **Bargaining Power Buyer:** Depending on the kind of customer (electrician, industry or public) it is totally different of the bargaining power. Some products are dominant in price at electrician whether some products don't. It really depends when a customer need the product. For example, a standard ground fault circuit interrupter is a low price item and is available in thousands of pieces. Whereas for example, a special power switch used in the industrial context have a relative high price. The technology behind is similar than the circuit interrupter, but if the industry needs such a component they need it often very fast and therefore price doesn't matter. In total we see a moderate bargaining power at our customers.
- **Power of New Entrants:** The wholesaler market is of course a relative low complex market. But since a lot of business is done over personal contacts and the long-term relationship to established big players like Sonepar it isn't that easy to enter to the market. Since there are many logistic services for free it is for new entrants also connected with high initial costs to be able to fulfil the

requirement of the customers. Nevertheless, since online business becomes more and more important the force become also stronger over time. Online shops are definitely potential new entrants and can redefine some rules of the market. Especially since they have a low cost organization they can work with a much lower margin than Sonepar can and this reflects the fact of a drop in prices.

- **Power of Substitutes:** The wholesales market in Austria is driven by a few big players. These players are easily comparable and since all of them are trading with goods you can easily be substituted with one of our supplier. This counts to all of the market players. Therefore, the force is relative high. Related to new topics like Industry 4.0 it is unlikely that this will change. It rather become stronger than weaker.
- **Power of Rivalry:** The power of rivalry is very homogeneous over the total electrical wholesaler market in Austria. Therefore, also the power is relative small. There are several companies active. Only two of them differentiate against other competitors. These two are the biggest and are from a service perspective identical. Rexel and Sonepar will concentrate in the future on new services and that will increase the rivalry. The market itself will stay saturated and each of them will try to differentiate according the rest.

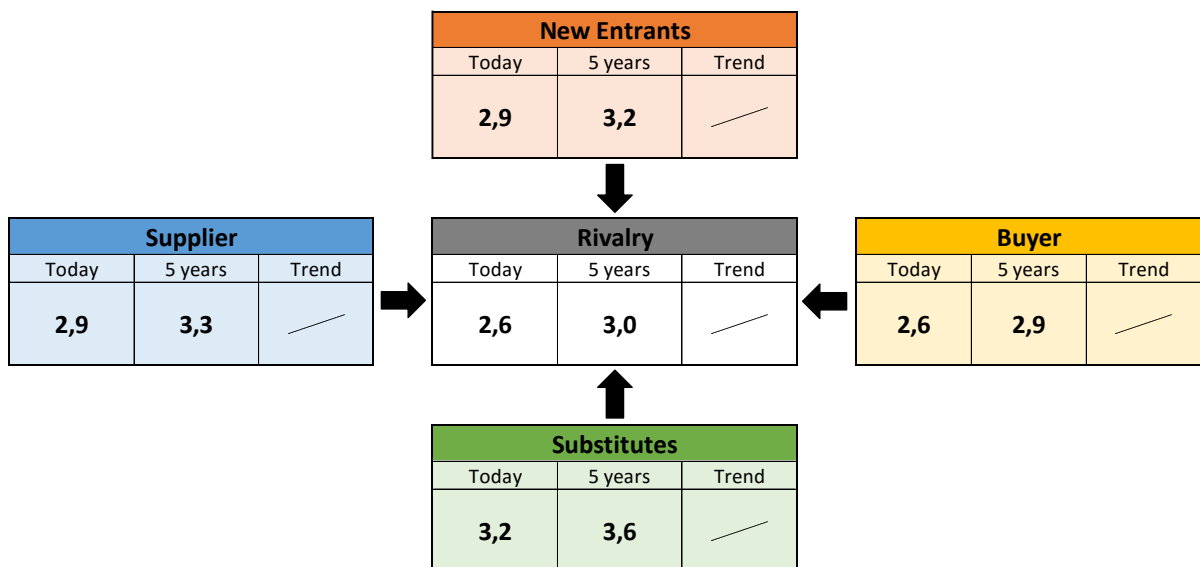


Figure 24: Results from the analysis according to Porter's five forces for the electrical wholesaler market

3.2.2 Stakeholder Analysis

Eight different stakeholder were identified for this analysis. As shown in Figure 25 all of them were classified according to the structure described in chapter 2.4.1.2. Three of them are classified “manage closely” or as shown in the description of this analysis as “co-create”. General management, other business units and employees are within that area. Since they stay in the closest relationship to the industrial sales team it is no surprise that it is necessary to occupy oneself with this group. Customers and suppliers or manufactures need to be kept satisfied during time. Direct competitors and logistic companies outside industry need to be monitored from time to time. These stakeholders are hard to manage since they play their own game which Sonepar can only influence by providing better solutions. Last but not least the stakeholder “business consultants” need to be kept informed since they can help but also hinder Sonepar to be better integrated into new customers from the OEM and MRO business. Details are shown in Appendix 6.

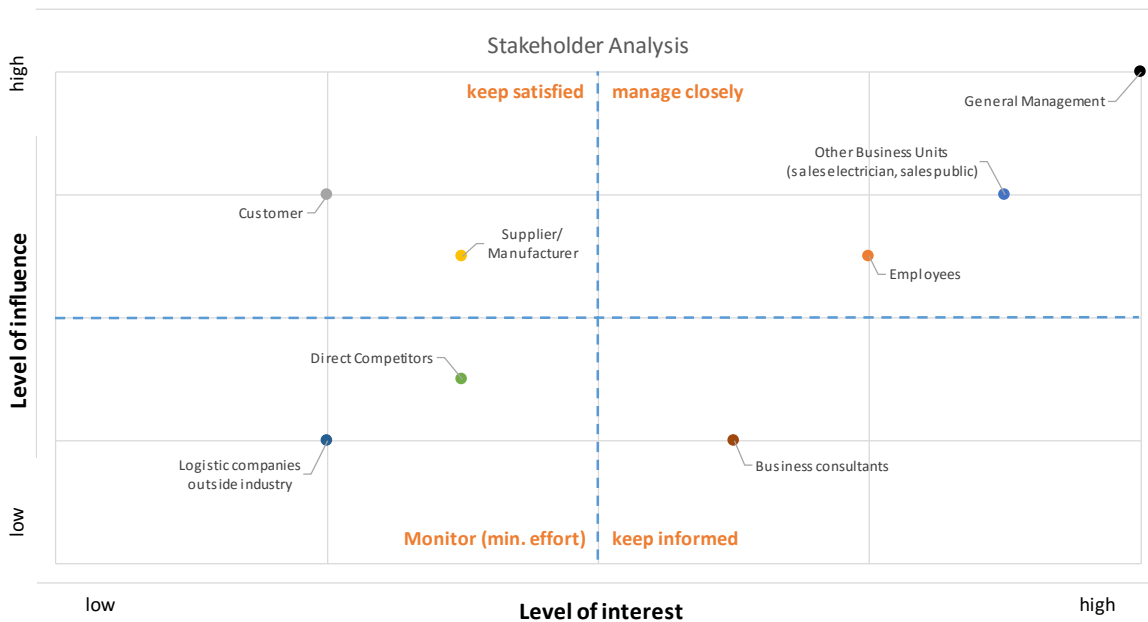


Figure 25: Results from the Stakeholder Analysis

3.2.3 Value Chain of Sonepar

According to Porter the value chain of Sonepar is shown in Figure 26. To create value and margin several primary but also support activities are necessary. Operations is divided into three different areas. First are all activities related to purchasing like the design of material range on stock, the order management and finally the inventory management. In parallel all sales processes come in place. The main steps for sales are beginning with the customer relationship management, then the sales of goods and services and in the end managing customer feedback and integrate this information into other relevant departments or individuals to fulfill customer requirements. Last but not least the operational part of Sonepar’s value chain is warehousing. This process is related to logistics and is a relevant process step between inbound and outbound logistic. Appendix 7 shows details of the value chain analysis and list weaknesses and strengths of the complete value chain.

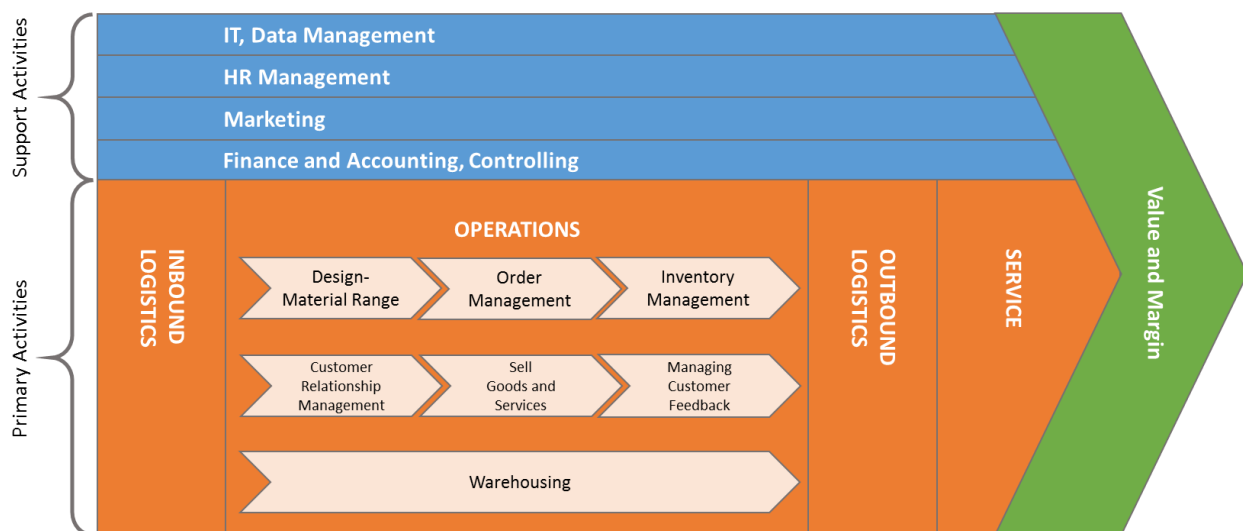


Figure 26: Value chain of Sonepar Austria

3.3 Innovation Strategy for Sonepar Austria

The innovation strategy for Sonepar Austria is related to the machine building industry. Since the topic Industry 4.0 and the development of digitalization becomes more and more important it is necessary to focus on that particular market too. The topic industry 4.0 is focusing on production of batch size one, total demand-oriented production and many other things. Precisely because of the fact that everything gets connected and production is done by batch size one it is a high risk for the wholesaler market. Just to imagine if an MRO demand is recognized early enough before the case arise and the interconnection between this companies is exchanging this information in a proper way it totally excludes the service of a wholesaler. Services like ordering till 18 o'clock and get the product next day morning is in that case obsolete. Nevertheless, a wholesaler can contribute to this future perspective since, in the example of Sonepar, they have strong competencies according to data management, automated billing systems and high performance logistics. This chapter describes within the next subchapters a recommendation of the future development of Sonepar within the specific market machine building.

3.3.1 Vision of the company

Until 2020, Sonepar becomes a significant supplier within the total machine building industry including both MRO and OEM customer segments by providing innovative solutions according to future requirements of our suppliers and customers. They are recognized as cross-functional knowhow leader according to electro-technical components and solutions.

3.3.2 General growth strategy of company

The general growth strategy for the company is defined yearly by top management and is part of an overall strategy. This year the strategy is called 1-3-5 and is defined as following:

- Minimum 1 % increase of margin
- 3 million € turnover with new customers⁹

⁹ New customers at Sonepar are defined as companies that have generated in the previous year less than € 3.000 and have exceed that value in the present year. Disadvantage: Customers that buys sporadically are included but the number of this customers are on a low level

- E-Business¹⁰ level at 50% minimum (web shop, app, EDI, EASYpro¹¹)

In general, the long term growth strategy should be conducted with an ongoing increase of margin respectively at a level of at least 20%. Now the total gross margin on product level is about 18%. Since costs are mostly not lowering it is necessary to keep this indicator under control. The next value is conducted to a significant growth with new customers. Within a saturated market it is hardly possible to increase revenue organically. Without concentrating on new customers it isn't possible to increase this value since existing customers will not bring that capacity. Of course new customers can be gained by providing new products and services which is related to the whole innovation strategy. The last value, called e-Business level, is needed since firstly costs can be decreased dramatically and therefore the total margin will increase. Secondly it is securing several processes and avoid failures while entering orders manually. The e-Business value is also conducted to technological trends like big data and the megatrend digitalization. The better the company understand the challenges of e-Business the better they can react and participate on future requirements in that area which makes them highly competitive.

3.3.3 Customers

In the beginning of this chapter we have talked about our main focus on the machine building industry. Since of my experience, coming from my previous job, I know this group of customers very well. At least the OEM customers coming from this market. We divide these group into two major but in their requirements totally different types. First is the MRO machine builder. This customer category is using our offered products only for their own and as the name suggest for their maintenance, repair and operation purpose. In that case these products have lower relevance for their real core business and are often managed marginal. However, lot of these products generate high procurement cost (see Figure 27). Services of a wholesaler count directly to this costs to reduce it significant for the customer. For example, if you need to order a simple LED bulb it must run through all the steps mentioned in the figure. A simple LED bulb costs about 7 € but including all the associated procurement costs of € 140 don't be incommensurate with.

¹⁰ E-Business level: rate between turnover generated on e-business level and total turnover

¹¹ Own e-procurement solution from Sonepar

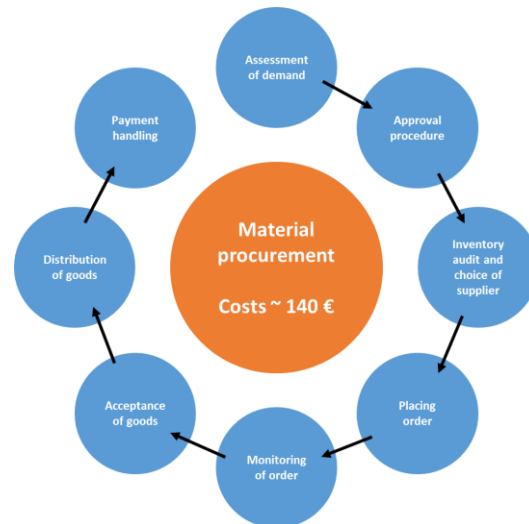


Figure 27: Material procurement process

Compared to the MRO customers an OEM customer has total different requirements. Of course to keep the procurement costs low is important but since they need these products for their own machines they mostly have bigger quantities to feed their serial production permanently. OEM customers are those who need the material for their own machines which are sold again. So here are other services much more important like Kanban¹²

Appendix 1 and 2 shows the identified customer requirements of both MRO and OEM customer types and focused on the new target market machine building and plant engineering industry. By fulfillment of the identified gaps covers current requirements and are basement for future success. Future requirements according to relevant megatrends, technological or business and social related trends are described in chapter 3.3.5.

3.3.4 Competition

As described in chapter 3.1.2 we fight against several national, regional and local wholesalers from small to medium size. Since we have identified the market potential of about two billion euro we need to add

¹² Kanban is a special kind of delivery process. At a Kanban system the customer defines with the wholesaler their high runner articles and a certain minimum amount that have to be on stock (special assigned shelves). The wholesaler is delivering automatically the products on a regular way.

from that point of view also our suppliers as competitors. However, since we have more than 1000 different brands on stock it is rather impossible for this paper and purpose to analyze also this group in detail. Therefore, they are excluded. This chapter describes only the situation between our direct competitors which also have the same purpose on the market and that is to reduce the costs while increasing the performance of customers processes and increase the market coverage of most of the suppliers.

Within the next two figures Sonepar will be compared with seventeen different factors to the major competitors called Rexel, Stara, GFI and Limmert¹³. Data is based on analysis of market share, questioning employees and using external sources like forums, credit information institutes or platforms (example: www.kununu.com to rate employee satisfaction). Figure 33 in Appendix 3 shows the direct comparison of Sonepar against the mentioned competitors. Figure 34 in Appendix 4 shows the gaps to best in class and average. This figure is more important to identify fields where Sonepar must increase their resources. In general, the Rexel group with both brands Schäcke¹⁴ and Regro¹⁵ is best in class in the wholesaler market of electro technical products. Of course there are several points where Sonepar is better but overall they are the benchmark of the industry. Therefore, the following areas are identified where Sonepar must focus on in the future.

- Increase of market share
- Revenue per employee → with available data Rexel is more efficient
- Financial health → Sonepar is in the rehabilitation procedure. High Risk
- Product availability → Product mix on stock, in the system.
- Supplier management
- Purchasing processes
- Employee satisfaction → bad because of years of changing management annually

¹³ Rexel ... www.rexel.at ; Stara ... www.stara.at ; GFI ... www.gfi-elektro.at ; Limmert ... www.limmert.com

¹⁴ Schäcke Elektro-Grosshandel GmbH ... www.schaecke.at

¹⁵ Regro Elektro-Grosshandel GmbH ... www.regro.at

3.3.5 Identification of Trends

Sonepar identifies three different types of trends that are crucial for future business and hence main sources for new business models. Compared to the theoretical description of how an innovation strategy have to be set up, the point “technological trends” is therefore enhanced by two additional views. As shown in Figure 28 Sonepar divide these trends into social/business- and technology related trends and megatrends which are described in detail as follows. For Sonepar it is crucial to identify trends according these three types on an ongoing way since the speed of changes in different markets are accelerating. Early recognition of changes helps organizations not to lose the connection to the markets progress and allows to be always one step ahead. Each described trend is always linked to our core markets and are aligned to the vision of the company or department. The identification of trends has different sources. This sources can be megatrends from future institutes, macroeconomic data, new technologies and business models coming from start-ups, our customers, competitors, suppliers and companies that are active in different industries but have the same purpose (example sanitation wholesaler).

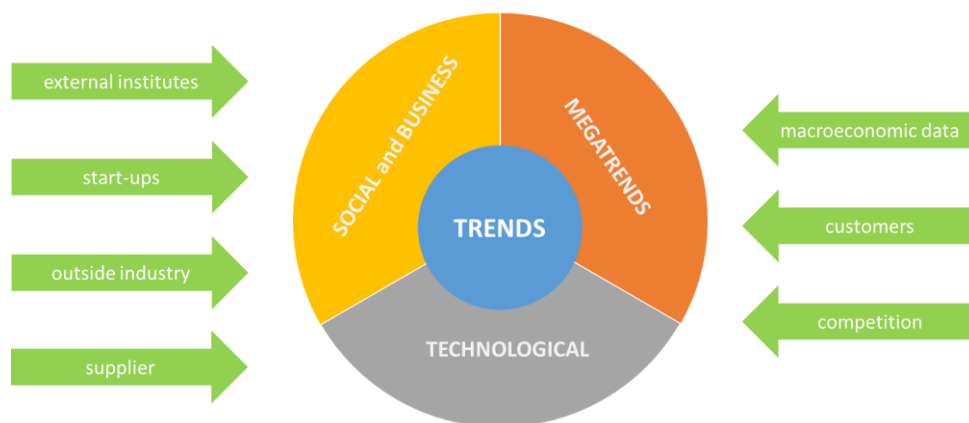


Figure 28: Sonepar relevant trends for future business development and type of sources

Method of clustering and impact on resources:

After identification of trends they must be clustered and assigned to future resources. How intensive a resource will be used to these trends is shown in Figure 29. Therefore, medium to high impact and within a timeframe of less than five years' resources are used to heavily invest on it to create new services or

products. Medium to high impact and within a timeframe of more than 5 years are in the cluster “study”. Here “only” data collection is done. It is the preparation time for cluster “invest”. All other identified trends are in the observation cluster. There will be little to no resources wasted. In general, all trends can change over time and can have increasingly impact on the organization. Therefore, all of them will be monitored over time.

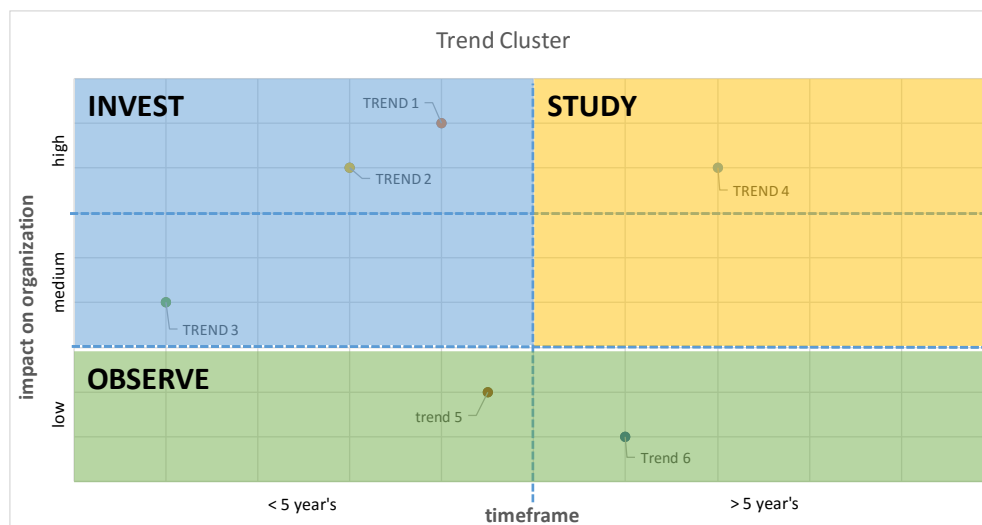


Figure 29: clustering of identified trends and their impact on resources

Megatrends:

As megatrends we understand long term and overlapping transformation processes that influence slightly every sector in business but also private. Megatrends must be scope of any work for the future since they really can have both positive and negative impact on existing business model and allow to identify new opportunities for the firm. Megatrends give rise to several social / business and technological trends which are shown in the next subchapters. All identified megatrends are shown in Appendix 8.

Social/business trends:

Social and business related trends occupies according to changing behaviors and attitude of people and changes in doing business. Since start-ups often create disruptive technologies or business models that fight against the existing and often very old fashioned ways to market they can be a huge risk for settled and long established organizations like Sonepar. According to the impact analysis (see Appendix 9) five

different social and business trends have a medium to high impact on the organization within the next five years and are therefore relevant to future business models for Sonepar. As shown in Figure 30 the following social and business trends are clustered to the field “invest”:

- Anticipatory logistics (high impact)
- On demand delivery (high impact)
- Omni-channel logistics (medium impact)
- Smart energy logistics (medium impact)
- Convenience logistics (medium impact)

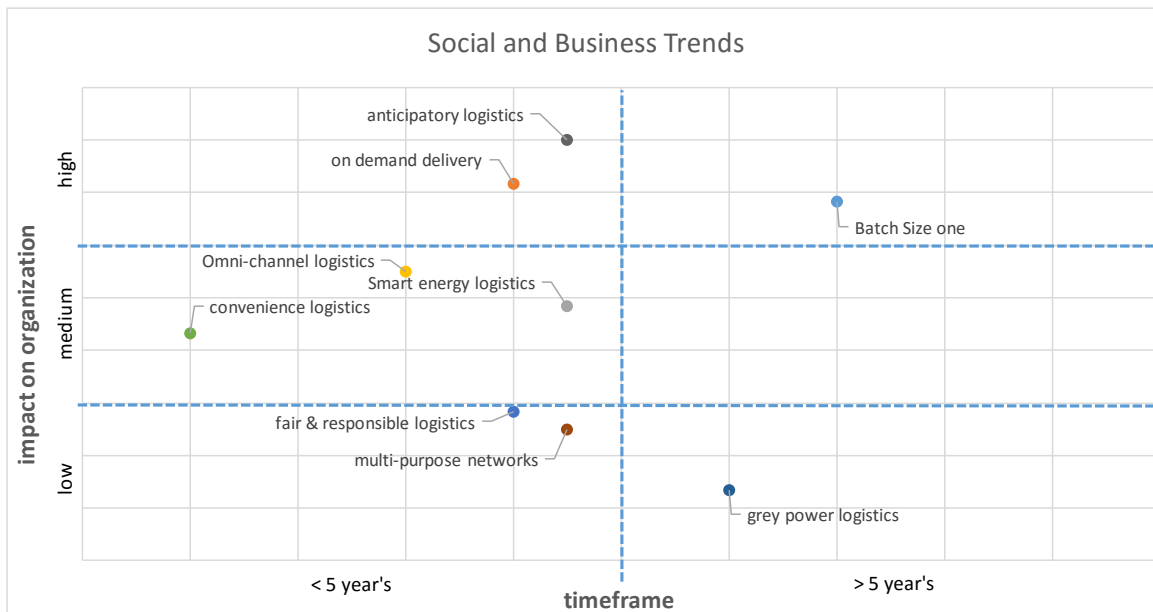


Figure 30: Clustering of Social and Business trends for Sonepar Austria

Technological trends:

Technological trends are the third pillar for the identification of new business models. It focusses on technologies like 3D-printing or RFID to mention some examples which can create high risks for the whole business model or can help to decrease costs or to increase useful information's. According to the impact analysis (see Appendix 10) eight different technological trends have a medium to high impact on the organization within the next five years and are therefore relevant to future business models for Sonepar. As shown in Figure 30 the following technological trends are clustered to the field “invest”:

- Industry 4.0 (high impact)
- 3D Printing Materials (high impact)
- Cloud computing / logistics (high impact)
- Big data (high impact)
- Information of everything (high impact)
- Robotics and automation (medium impact)
- Low cost sensor technology (medium impact)
- Augmented reality (medium impact)

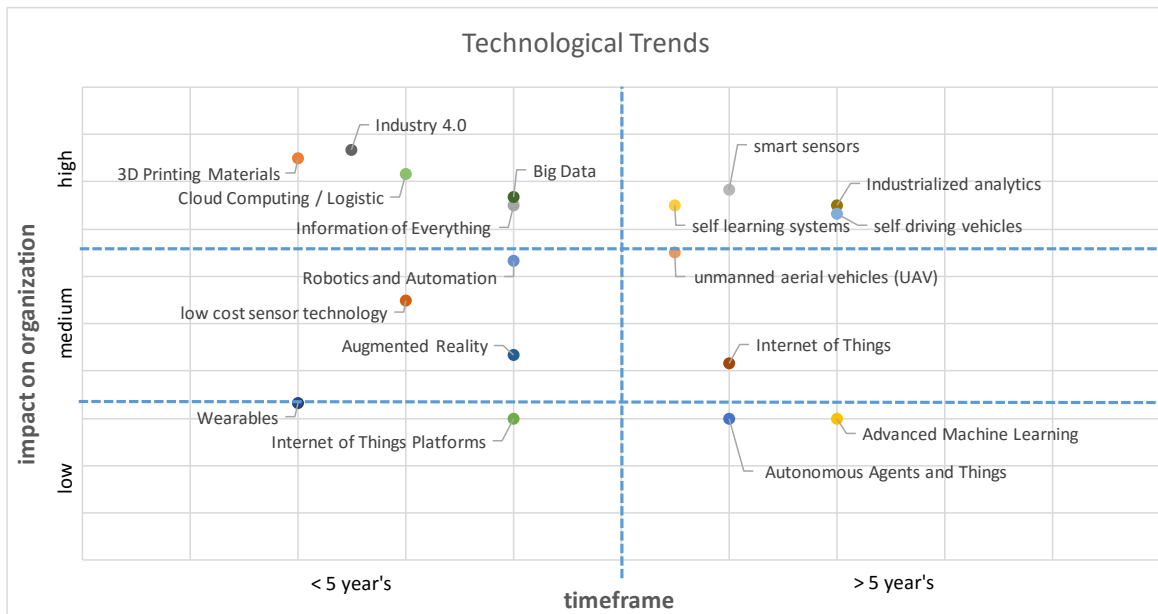


Figure 31: Clustering of technological trends for Sonepar Austria

3.3.6 Identified future business opportunities and related core competencies

As shown in Figure 30 and Figure 31 there were several new social/business related trends and technological trends identified that have high to middle impact for the organization. Since it goes beyond the scope of this document only the strongest per type are selected and described in detail. Table 9 shows a detailed description of a future business opportunity according to a technological trend “industry 4.0”. Table 10 shows the same but only based on the social and business trend “anticipatory logistics”. Both of them are in close relationship and perfectly counts on the topics of the machine building industry.

TREND:	INDUSTRY 4.0		TYPE: TECHNOLOGICAL
Description:	Industry 4.0 is the fourth industrial revolution and is defined as the total interconnection of the whole value chain. Main parts of this trends are the mechanization, electrification and automation. The change will happen on all steps of a production process. Therefore, up- and downstream participants of the value chain like suppliers, wholesaler and logistic companies become totally integrated. Beneath production other processes like purchase, sales or maintenance become more relevant for companies. Goal of Industry 4.0 is that the whole chain become more efficient and flexible to fulfil the future needs of the industry. cf. (Dr. Hofstätter & Mag. Karepova, 2016)		
Key Developments / Implications: Industry 4.0 is very close related to other business trends like anticipatory logistics, on demand delivery and many more. It focuses strongly to integrate each possible source into the value chain of a machine builder or at least the operator of the total production line. Therefore, it is needed to be prepared early enough and get ready to understand the requirements of the industry. Integration of Machines in IT: Machines get totally integrated in ICT applications. Therefore, interfaces will be defined	Key Opportunities: <ul style="list-style-type: none"> - deep integration into the supply chain of the customers. (outsourcing supply chain) - customers of machine builder define requirements to integrate wholesaler means better position at these OEM customers - wholesaler have strong knowledge in handling material data --> Cooperation's - increase competitiveness - increase customer satisfaction - secure wholesaler market 	Key Challenges: <ul style="list-style-type: none"> - Totally new business model for Sonepar. 	

<p>that enables a proper communication with machines and the internal ERP system of an operator and external systems. This makes it unsecure against attacks from outside. So cybersecurity for manufacturer of goods become more relevant. Especially wholesaler can become more relevant for the whole process since they have a certain know how of electrical components in combination with the knowhow of logistic services and IT.</p>	<p>From wholesaler to business consultant of customer's processes and data management</p> <ul style="list-style-type: none"> - New competitors outside industry like DHL with same purpose can easily overtake this new requirements and decrease chances for wholesaler - too little opportunities to get integrated into the supply chain because of low level of awareness regarding the competence in IT of a wholesaler. 										
<p>Automatic order placement: Orders will be placed automatically by machines and or internal IT systems of customers. Industry 4.0 will also occur in other industries like switch cabinet building. If the engineer has finished the construction plan it automatically generates part lists and these are sent to the supplier early enough to have the items early enough in place to start production. Reporting of these automatically placed orders will become more relevant.</p>	<p>Core Competencies:</p> <table border="1"> <tr> <td data-bbox="756 831 1276 947">- data management, handling material data</td> <td data-bbox="1276 831 1461 947">existing</td> </tr> <tr> <td data-bbox="756 947 1276 1020">- handling customers electronically and fully automated</td> <td data-bbox="1276 947 1461 1020">existing</td> </tr> <tr> <td data-bbox="756 1020 1276 1094">- total integration of logistic services into customer's ERP system</td> <td data-bbox="1276 1020 1461 1094">build up</td> </tr> <tr> <td data-bbox="756 1094 1276 1167">- knowledge on cybersecurity applications</td> <td data-bbox="1276 1094 1461 1167">build up</td> </tr> </table>	- data management, handling material data	existing	- handling customers electronically and fully automated	existing	- total integration of logistic services into customer's ERP system	build up	- knowledge on cybersecurity applications	build up		
- data management, handling material data	existing										
- handling customers electronically and fully automated	existing										
- total integration of logistic services into customer's ERP system	build up										
- knowledge on cybersecurity applications	build up										
<p>Impact Rating</p> <table border="1"> <tr> <td data-bbox="196 1409 570 1451">General</td> <td data-bbox="570 1409 740 1451">high</td> </tr> <tr> <td data-bbox="196 1451 570 1493">Machine building</td> <td data-bbox="570 1451 740 1493">high</td> </tr> </table>	General	high	Machine building	high	<p>Relevance to business units</p> <table border="1"> <tr> <td data-bbox="756 1409 1260 1451">Sales electrician</td> <td data-bbox="1260 1409 1461 1451">10%</td> </tr> <tr> <td data-bbox="756 1451 1260 1493">Sales industry</td> <td data-bbox="1260 1451 1461 1493">100%</td> </tr> <tr> <td data-bbox="756 1493 1260 1526">Sales public sector</td> <td data-bbox="1260 1493 1461 1526">0%</td> </tr> </table>	Sales electrician	10%	Sales industry	100%	Sales public sector	0%
General	high										
Machine building	high										
Sales electrician	10%										
Sales industry	100%										
Sales public sector	0%										

Table 9: Future business opportunity according to technological trend "Industry 4.0"

TREND:	Anticipatory logistics (big data)		TYPE: SOCIAL / BUSINESS		
Description:					
<p>Powered by big data-based predictive algorithms, anticipatory logistics enables logistics providers to significantly boost process efficiency and service quality by predicting demand before it occurs, to achieve faster delivery times and enhanced capacity and network utilization. (Heutger, 2016)</p>					
<p>Key Developments / Implications:</p> <p>Anticipatory logistics can be used by analyzing the customer behavior for predicting income orders. That helps to increase the availability of products on stock and decreases the related costs of stock units which are low performing.</p> <p>From the industrial context it helps the industry and especially customers from the MRO and the OEM machine building business to handle the maintenance process of machines much more efficient than today. Customers from machine building industry require low down times of their operation. By collecting all the data from supplier, customer behavior, MTBF of manufacturer items, planned maintenance phases and many other sources (from machines, vehicles ...) it is possible to predict the need of spare parts and the best time for maintenance. It is a must to have direct connection to all of this technologies and have the competency of artificial data analytics.</p> <p>As already mentioned it can also decrease our logistic costs. While having the right items on stock it can reduce the space and</p>	<p>Key Opportunities:</p> <ul style="list-style-type: none"> - Increase customer satisfaction - Increase competitive advantage - Increase awareness for manufacturer as an important supplier - Decreasing internal costs - Efficient usage of resources - Increase cross margin 	<p>Key Challenges:</p> <ul style="list-style-type: none"> - Get the access to internal data from suppliers and customers - restrictions according to security reasons or privacy regulations in Austria - Not enough skills or resources to understand the requirements in the field data analytics methods - High project costs to implement such a prediction system 			
<p>Core Competencies:</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 70%; vertical-align: top;"> <ul style="list-style-type: none"> - Knowledge of material data - implementing of artificial algorithms that allows prediction of customer behavior </td> <td style="width: 30%; vertical-align: top; border-left: 1px solid black;"> <p>existing build up</p> </td> </tr> </table>				<ul style="list-style-type: none"> - Knowledge of material data - implementing of artificial algorithms that allows prediction of customer behavior 	<p>existing build up</p>
<ul style="list-style-type: none"> - Knowledge of material data - implementing of artificial algorithms that allows prediction of customer behavior 	<p>existing build up</p>				

therefore decrease rents. To be prepared for high peaks on sales would also save resources.	- Knowledge of connecting suppliers and customers to internal ERP system	existing										
<p>Impact Rating</p> <table data-bbox="219 604 714 682"> <tr> <td>General</td> <td>high</td> </tr> <tr> <td>Machine building</td> <td>Medium to high</td> </tr> </table>	General	high	Machine building	Medium to high	<p>Relevance to business units</p> <table data-bbox="885 604 1364 724"> <tr> <td>Sales electrician</td> <td>50%</td> </tr> <tr> <td>Sales industry</td> <td>100%</td> </tr> <tr> <td>Sales public sector</td> <td>20%</td> </tr> </table>		Sales electrician	50%	Sales industry	100%	Sales public sector	20%
General	high											
Machine building	Medium to high											
Sales electrician	50%											
Sales industry	100%											
Sales public sector	20%											

Table 10: Future business opportunity according to social and business trend "anticipatory logistics"

3.4 Controlling of Innovation

To catch all possible cornerstones of an organization and since Sonepar has a very old fashioned one, a comprehensive balanced scorecard as a control management system need to be created. Figure 32 gives a possible picture of all defined objectives according to increasing innovativeness for all four perspectives like financial, customers, internal and innovation. A detailed description of each objective including KPI, target value, major steps and to whom it should be reported, is shown starting by chapter 3.4.1.

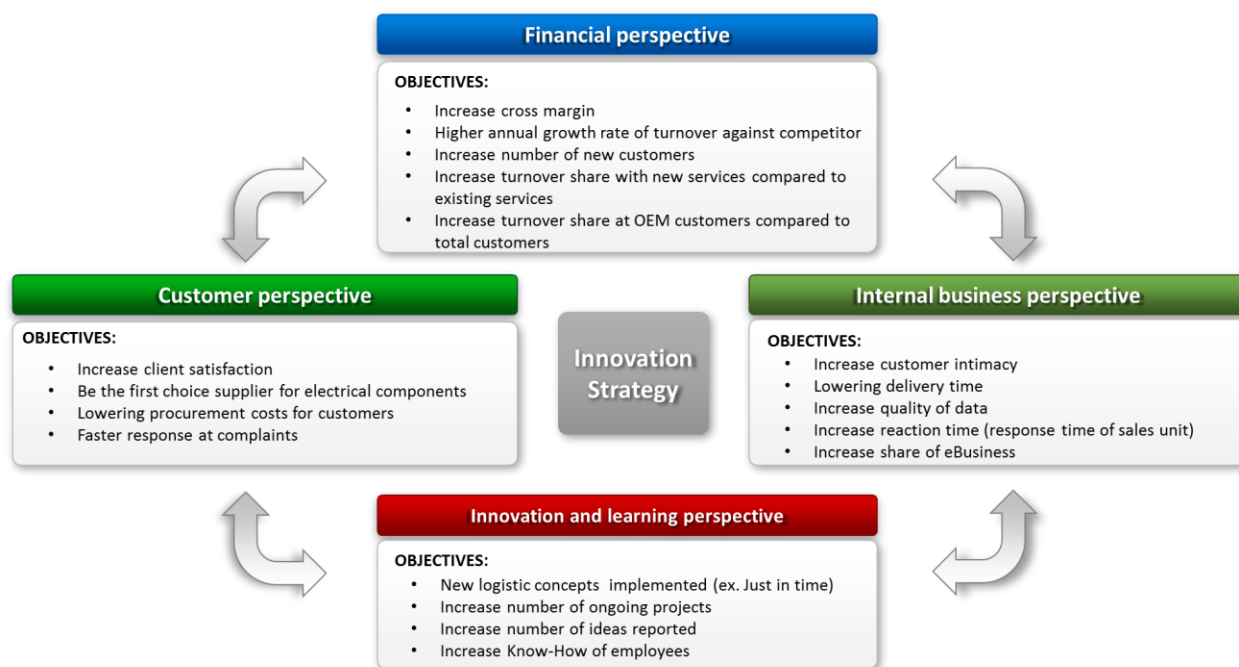


Figure 32: Balanced Scorecard – Objectives

3.4.1 Financial perspective:

Objective	Increase cross margin per customer
Key performance indicators	cross margin per customer per branch
Target value	Increase margin of 5% till end of 2020
Steps	Setup control mechanism per order, decrease purchasing prices, setup min. value per order. Setup approval workflow for offers bigger than 10.000, 50.000 € and 100.000 €.
Reporting	branch manager, CEO, sales

Objective	Higher annual turnover growth rate against competitor
Key performance indicators	Annual turnover
Target value	10% over the growth of our main competitor
Steps	Benchmarking on a regular basis, establish an exact market analysis process, doing exact analysis of our competitors
Reporting	CEO, sales and marketing, controlling
Objective	Increase number of new customers
Key performance indicators	Turnover with new customers, number of new customers
Target value	3 million € with new customers, min. 100 new customers per year
Steps	Definition of what is a new customer! Implementation in personal goals of sales force, development of new logistic concepts. Presentation of new concepts at customer
Reporting	Sales leader, COO, Head of logistic, IT
Objective	Increase turnover share with new services compared to existing services
Key performance indicators	Turnover new service / total turnover
Target value	30% of total turnover are done with new services
Steps	Definition what is a new service? Implementation of new services, publishing new services, ...
Reporting	sales leader, branch manager, marketing manager
Objective	Increase turnover share at OEM customers compared to total customers
Key performance indicators	Turnover OEM / total turnover
Target value	15% of total turnover are done with OEM customers until 2020
Steps	Definition who are the OEM customers? Working together with business consultants. Increase knowhow on product and application level. Setup of new services according to trends “anticipatory logistics” and “industry 4.0”
Reporting	sales leader, branch manager

Table 11: KPI's - financial perspective

3.4.2 Internal business perspective

Objective	Increase customer intimacy
Key performance indicators	Average turnover per sales force
Target value	Increase from 2,8 to 5 million €
Steps	Develop sales activity plan per quarter and sales force. Implement regular benchmarking between branches to increase awareness. Change bad performing sales rep. Focusing on big projects.
Reporting	branch manager, sales leader
Objective	Lowering delivery time
Key performance indicators	Time from order income to print date of delivery note
Target value	under one day

Steps	Analyze total process in detail, setup several measurement points to locate bottlenecks, increase automatism within the system. Increase share of eBusiness
Reporting	COO, IT, sales, eBusiness
Objective	Increase data quality
Key performance indicators	Share of implemented classified products and total products
Target value	95% of all products are classified.
Steps	Increase resources in data management. Sell resources to our suppliers to increase the classification (2% extra bonus on annual purchased volume), Claim classified product data from customers, decrease suppliers with no classified data
Reporting	COO, data management, purchasing department, product management
Objective	Increase share of eBusiness
Key performance indicators	Turnover eBusiness / total turnover
Target value	60% of total turnover are done with new services
Steps	Implement new resources in IT to manage eBusiness inquires. Implement new functions to be able to provide EDI, WebEDI, OCI interfaces etc., Show customers new functions of our web shop. Define incentives for customers to order over web shop or mobile app. Implement eProcurement system "EASYpro" at customer site
Reporting	sales leader, eBusiness, IT

Table 12: KPI's - internal business perspective

3.4.3 Innovation and learning perspective

Objective	New logistic concepts implemented
Key performance indicators	Number of implemented logistic concepts per year
Target value	Two new concepts per year.
Steps	Analyze current concepts, analyze customer needs, find lead user, start lead user projects, involve good customers in development and pilot phase. Present new concepts to customers to increase number of new customers, define a budget for new projects
Reporting	CEO, sales leader, logistics
Objective	Increase number of ongoing projects
Key performance indicators	Active projects per quarter
Target value	2-3 projects active per quarter
Steps	Implementation of project management, analyze current concept, increase number of ideas reported, define a budget for new projects
Reporting	CEO, sales and marketing, controlling
Objective	Increase number of ideas reported

Key performance indicators	Total number of ideas reported per month and branch
Target value	Each branch is reporting at least 5 ideas per month
Steps	Implement a continuous implementation process, setup an incentive system for every single idea, communicate the incentive system, setup a committee for rating the ideas, define a budget for new projects
Reporting	Everybody
Objective	Increase Know-How of employees
Key performance indicators	Total days training per employee / expenditure for training per employee
Target value	1,5 days / 2.000 €
Steps	Setup a training concept for each department, identify missing skills and try to fill this with training (be aware of the strengths of every single employee), define a budget per branch and department for annual training expenditures
Reporting	Department manager

Table 13: KPI's - Innovation and learning perspective

3.4.4 Customer perspective

Objective	Increase client satisfaction
Key performance indicators	Overall degree of customer satisfaction
Target value	95% of our customers are satisfied with our solutions
Steps	Training of employees form customer service, doing customer surveys on a regular basis, faster response time, faster delivery time, new solutions to the market ...
Reporting	Everybody
Objective	Lowering procurement costs for customers
Key performance indicators	Share of eBusiness, number of implemented eProcurement solutions, Kanban
Target value	60% eBusiness, at least two new eProcurement users per sales area until 2020
Steps	eBusiness activities see objective – increase share of eBusiness, each sales representative from the industrial sales group presents the eProcurement solution and their advantages, setup a taskforce to decrease implementation time at customer.
Reporting	IT, eBusiness, Industrial Sales
Objective	Faster response at complaints
Key performance indicators	time from customer complaint to first response to customer, time from customer complaint to final handling of the complaint
Target value	Reaction time within 2 hours' / solution time within 3 days.
Steps	Training in customer care center, implement link to suppliers for customer care (at least one contact person)
Reporting	Customer care, sales, back office

Table 14: KPI's - customer perspective

4 Conclusion and Discussion

Innovation strategies can have different characteristics. It isn't possible to define the best orientation of innovation strategies since each of them has its right to exist. They can also be used in parallel to implement a strong and competitive strategy for future success. Nevertheless, a company must be prepared for innovation since others are surely focusing on implementing new services or developing new products. If one department of the whole organization isn't playing the game, it could be hard to encourage an innovative culture. Also, a too hierarchical organization can hinder top performance in implementing new products or services and, more important, to open totally new markets for the firm. Taking the example of Sonepar and the situation nowadays they have definitely not an innovative culture and organization. There must be a strong commitment according to innovation coming from management to foster activities that encourage employees to think out of the box and try to increase their creativity to increase the innovativeness of the whole organization.

Coming to the steps of implementing an innovation strategy I have to say that for each organization it must be aligned to the purpose of the company, the culture and the main market itself where the company is active. So starting from a top-down method from implementing a vision to setting up the following fundamental growth strategy, it could switch very fast to a personalized way to come to a result that perfectly fits to the particular organization. It isn't obligatory to analyze technological trends because in totally service oriented companies they often do not need technology to be successful on the market. As seen in the practical part with the example of Sonepar the technological trend analysis wasn't enough. Other trends come into place like megatrends and business and social related trends. Megatrends often provoke several technological or business and social trends. But nobody knows if they really come true over time. If we compare changes of trend reports from year to year some of them are subsequently not available. That means not each identified trend can be relevant for the next decade for a firm. So there is always a certain risk available. Therefore, a strong internal process in identifying trends and better said in updating innovation is a must for the whole purpose. However, it is indispensable to check each identified trend according to each organizational element of the company and all managers must rate new future strategies to their own department. Nowadays, there is nothing similar implemented at Sonepar according to

the mentioned requirement until now. It isn't needed to implement it into the local organizations of Sonepar, but it would be recommended that at least for the whole cluster North (Germany, Austria, Nordic states of Europe and many more) one centralized department that encourage activities according to innovation. Therefore, it is much cheaper for the countries to implement innovation management since only a fraction of resources are needed.

After creating a sustainable process related to innovation it is needed to implement a management control system very early since it provides the management a picture about changes in culture according to innovation and in general the progress of several goals defined by setting up the core innovation strategy. Again here it could be one centralized system located at the headquarter in Germany were all countries are connected and are members of a total interlaced innovation management system.

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Appendix 1 – customer requirements MRO

Customer requirements			
MRO ... Maintenance, Repair and Operation			
Description of requirement	Service / competence that fulfill the requirement	Degree of fulfillment	Identified gaps
lowering procurement costs	Implementation of Sonepar procurement Software EASYpro	100,00%	no improvement required
fast delivery of products in emergency case	<p>Since customer need components because of a repair case it is necessary to have fast delivery time. The Sonepar services SOKO 6x6, SOKO 0630 and SOKO Night are perfectly serving this need.</p> <p>SOKO 6x6 ... Place order at latest 6 o'clock at 6 day's in the week and receive the material on the next working day</p> <p>SOKO 0630 ... Have the possibility to receive your order by picking up at one of the available shops free of choice</p> <p>SOKO Night ... Place an order by using SOKO 6x6 and receive it overnight freight without any surcharge latest at 4 o'clock in the morning</p>	100,00%	no improvement required
availability of different products	The Sonepar service SOKO 50k enhances the product availability by 100% compared to standard. We source the products additionally over Germany which have a bigger space. Availability of this additional 25.000 products is 48 hours	90,00%	needs to be improved ongoing. Old material has to be substituted. 100k products have Germany available which is the yardstick
price stability over one year	Since prices for customers from the industrial market require price stability it is normal to define a price over one year. At least for that products which are ongoing needed.	100,00%	no improvement required
fast procurement in emergency case	With access to the webshop the customer can use our app for Android and Apple iOS. All available products can be found by entering the product code or just easily scan the barcode and place the order. Master/Slave functionality is available (n slaves can place orders and the master receives an email for confirmation. It is also possible to set limits for order positions or total value of order)	100,00%	no improvement required
application knowledge for decreasing operational costs	Knowledge is only for PM Team (data & network technologies and lightning) available. No core knowledge about automation products. No knowledge based on applications within several industries like food & beverage, pulp & paper, ... But the overall knowledge can help a MRO customer significant to decrease costs.	60,00%	Implementation of TKAM for Austria within biggest industries steel, textile and pulp & paper#
Energy Management	Today the competence of analyzing the energy consumption of an operations site and the conducted interpretation to decrease energy is not available.	0,00%	implementation of one expert that can fulfill this requirement
Data management of bill of material	using ETIM, @class certified article the customer can easily use this information to increase the transparency in their procurement system	80,00%	No 1:1 translation of language
reporting on product level	reporting according to ETIM and @class certified articles allows customers to have an overview how MRO demand is changing.	100,00%	no improvement required

Table 15: Customer requirements - MRO Customer

Appendix 2 – customer requirements OEM

Customer requirements			
OEM ... Original Equipment Manufacturer			
Description of requirement	Service / competence that fulfill the requirement	Degree of fulfillment	Identified gaps
Knowledge for design-in	Knowledge is only for PM Team (data & network technologies and lightning) available. No core knowledge about automation products. No knowledge based on applications within several industries like food & beverage, pulp & paper, ...	20,00%	Implementation of TKAM for Austria for biggest industries steel, textile and pulp & paper
low prices	Since less knowledge on products OEM customers are mostly handled over manufacturer. Therefore wholesaler have in last instance not the best prices and are in some areas significant expensive	20,00%	Deeper cooperation with supplier. Implement knowledge leader in several topics and implement first level support for automation products
individual packing of materials	kitting is already installed	100,00%	no improvement required
Just in Time delivery	Just in Time deliver possible. No clear data interface between customer and wholesaler available. Therefore Just In Time delivery can only be possible if customer is used to inform suppliers about forecasts	20,00%	Since it is only "manually" possible we need a defined electronic interface that insert order information from customer to the wholesaler. SW modules for SAP, NAV, ORACLE are minimum required
data management of bill of material	using ETIM, @class certified article the customer can easily use this information to increase the transparency in their procurement system	80,00%	No 1:1 translation of language
reporting on product level	reporting according to ETIM and @class certified articles allows customers to have an overview how MRO demand is changing.	100,00%	no improvement required
permanent and automatic delivery	Identification of high runner article over sales rep possible. Automated delivery over Kanban possible.	100,00%	no improvement required
electronic settlement and transactions	Order, order confirmation, delivery status, invoice can be transmitted by using EDI. Kanban is done over Webshop orders and therefore electronically invoiced. If customer has no resources to implement EDI it is also possible to setup PDF to EDI	90,00%	own IT consultant need to be implemented to enhance the quality of execution of electronic settlement projects.
clear complaint management to inform early according bad quality or serial failures	Complain management is done manually, because of number of different suppliers with existing system the complaint management isn't able to handle it proper.	20,00%	Implementation of complaint management and central contact point for customers
lowering procurement costs for C-Parts	With the Service Kanban it is easily possible to fulfill this requirement.	100,00%	no improvement required

Table 16: Customer requirements - OEM Customer

Appendix 3 – Competitive situation – direct comparison

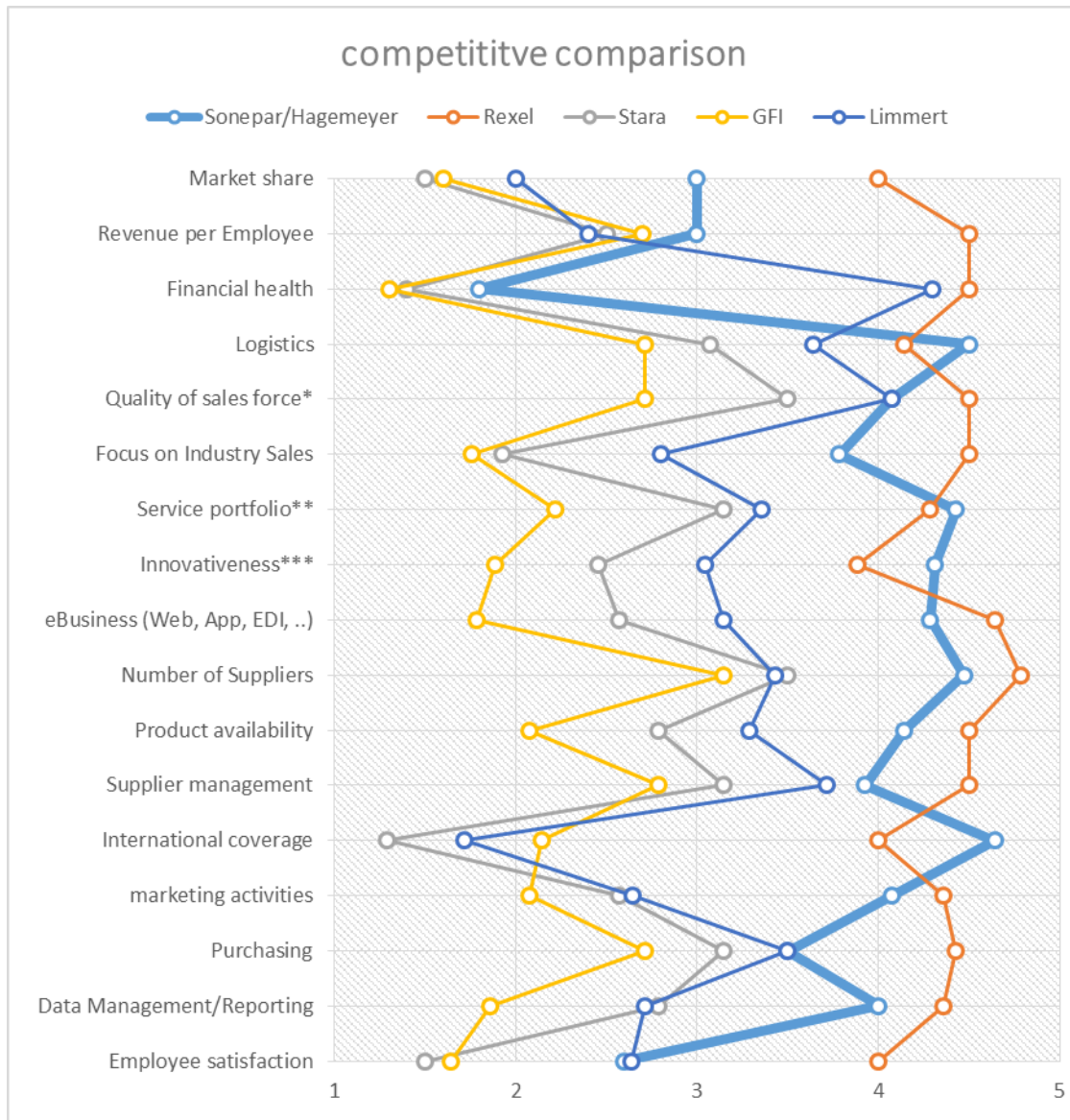


Figure 33: Competitive situation - direct comparison¹⁶

¹⁶ *time to customer, knowledge on products and services, time to offer; **Number of different services provided; ***number of new implemented services within last 3 years; 1... lowest score / 5... highest score

Appendix 4 – Competitive situation – comparison to best in class and average

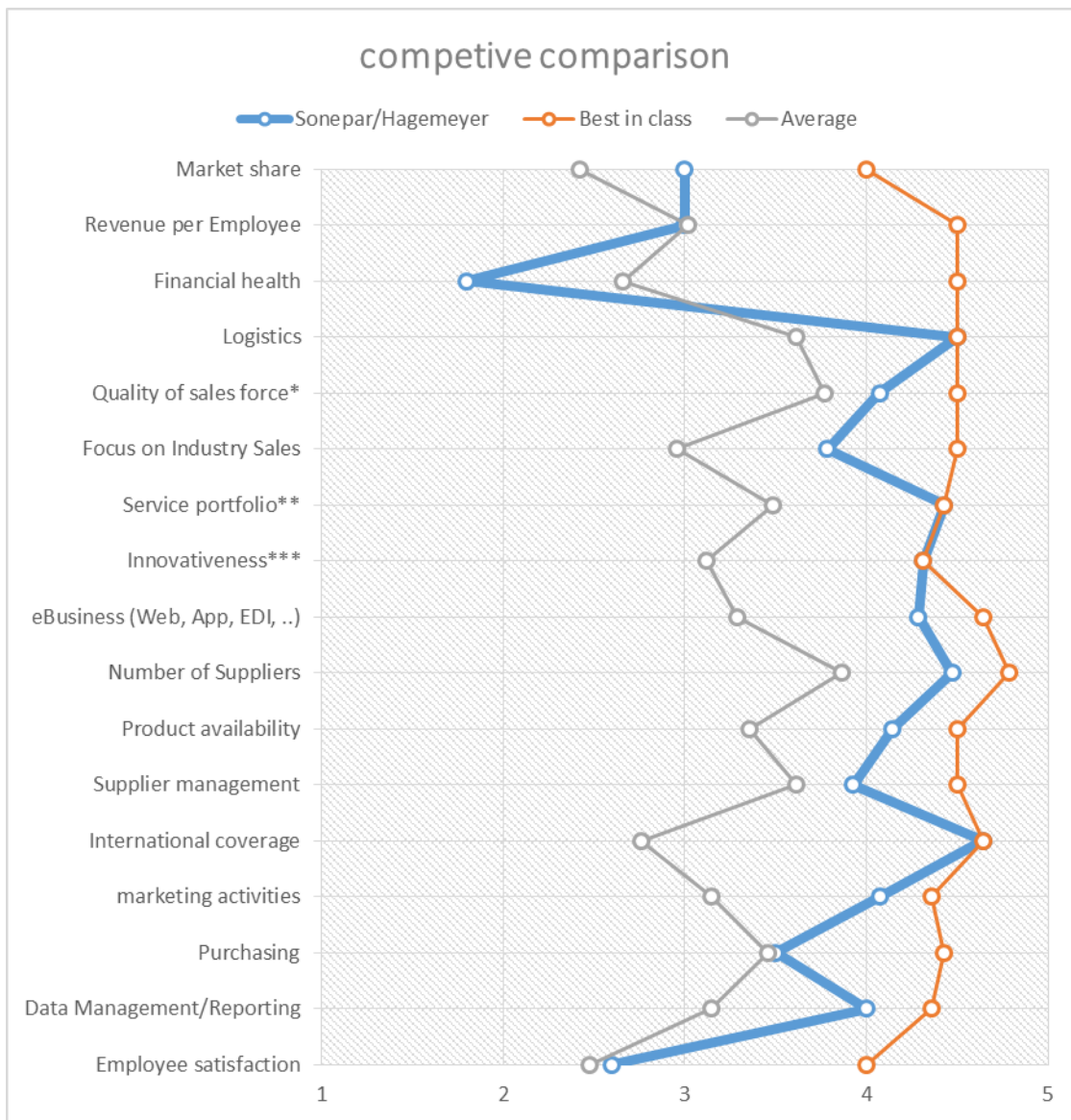


Figure 34: Competitive situation - comparison with best in class and average¹⁷

¹⁷ *time to customer, knowledge on products and services, time to offer; **Number of different services provided; ***number of new implemented services within last 3 years; 1... lowest score / 5... highest score

Appendix 5 – Results from the industry structure analysis leaned to Porter’s five forces

Determinants of supplier power	characteristic (1... weak; 5... strong)	
	today	5 years
Number of important suppliers	5	5
Availability of substitutes for the suppliers’ products	4	5
Differentiation or switching cost of suppliers’ products	2	3
Suppliers’ threat of forward integration	1	1
Industry threat of backward integration	1	1
Suppliers’ contribution to quality or service of the industry products	4	5
Total industry cost contributed by suppliers	3	3
Average Score	2,9	3,3

Table 17: Analysis of the bargaining power of supplier

Determinants of buyer power	characteristic (1... weak; 5... strong)	
	today	5 years
number of important buyers	4	4
Availability of substitutes for the industry products	5	5
Buyers’ switching costs	2	1
Buyers’ threat of backward integration	1	1
Industry threat of forward integration	1	1
Contribution to quality or service of buyers’ products	1	3
Total buyers’ cost contributed by industry	3	3
Buyers’ profitability	4	5
Average Score	2,6	2,9

Table 18: Analysis of the bargaining power of buyers

Determinants of new entrant's power	characteristic (1... weak; 5... strong)	
	today	5 years
economies of scale	1	1
proprietary product differences	4	5
brand identity	3	4
switching costs for customers	2	2
capital requirements	4	3
access to distribution channels	4	5
experience and learning effects	4	5
government policy	3	3
expected retaliation	1	1
Average Score	2,9	3,2

Table 19: Analysis of the power new entrants

Determinants of substitutes power	characteristic (1... weak; 5... strong)	
	today	5 years
relative price performance of substitutes	4	5
User's switching costs	2	1
buyer propensity	3	4
Substitute producer's profitability and aggressiveness	3	5
Availability of close substitutes	4	3
Average Score	3,2	3,6

Table 20: Analysis of the power substitutes

Determinants of rivalry power	characteristic (1... weak; 5... strong)	
	today	5 years
concentration and balance among competitors	3	4
industry growth	2	2
fixed costs / value added	3	4
intermittent overcapacity	3	3
product differences	2	3
brand identity	4	2
switching costs	2	2
informational complexity	2	4
diversity of competitors	2	3
exit barriers	3	3
Average Score	2,6	3,0

Table 21: Analysis of the power rivalry

Appendix 6 – Details Stakeholder Analysis

Stakeholder	Unique facts	internal/ external	level of interest (1-5) *	level of influence (1-5) *	Suggestion on managing relationship
General Management	General management always have the final decision. Is eager to increase turnover and competitiveness. Since we are in a restructuring phase their main goal is to bring the organization back on track. There will be less room for new ideas and developments on services if they don't create fast success.	internal	5	5	Must be informed permanently according to all activities regarding the business unit "industrial sales". Future business models must be presented comprehensive. Try to integrate them in regular meetings.
Employees	Since the company is in a restructuring phase the employees feeling uncertain of any change. Employees are the backbone of the company and need to be informed	internal	4	3,5	keep employees informed, try to increase communication try to integrate them into all new business models early enough. Present them each change early enough to decrease uncertainty
Customer	customers are interested to receive their goods as soon and as reliable as possible. New services to decrease their internal cost structure is definitive a topic. They can help us to increase the position at different supplier/manufacturer.	external	2,5	4	Increase the frequency of the customer visits. Try to integrate them into our development processes to create 100% new customer related services. Decrease customer's internal costs by implementing our services to be first choice supplier.
Supplier/ Manufacturer	Supplier have the interest to sell as much as they can directly and or indirectly over the wholesaler. New business models that can increase their margin always are relevant for them. Some manufacturer has low interest to sell over wholesales channel since it reduces significant gross margin. If they see that customers insist to by over the wholesales channel it could be an opportunity and also a risk.	external	2	3,5	Inform them over new services for customers to increase the awareness of the skills and competences from a wholesaler. If a customer pursues a manufacturer to provide their products over the wholesales channel, try to integrate them rather than push him. It is a chance for a wholesaler to increase his standard product portfolio

Other Business Units (sales electrician, sales public)	Same facts like stakeholder "employees". Since we are in a restructuring phase budget always plays a significant role. Managers of this business units will always have an eye on the activities of the team "sales industrial". This business units are the biggest one and have a certain power in the organization.	internal	4,5	4	Try to find similarities to increase parallel activities. All new services according to "sales industry" can have impact on their success. So integrate them in the research and development phase of new services. Maybe there is a possibility to leverage synergies.
Direct Competitors	Our direct competitors are strong in the market and will do everything to hinder our future success. They will also implement new services or just copy them.	external	2,5	2,5	There must be a check implemented if service innovations from Sonepar are patentable. If so rate them according to the expected turnover and if signs show positive result file, the patent early enough. Monitor the activities of direct competitors.
Logistic companies outside industry	Logistic companies are always a risk for Sonepar. They don't have skills on the electrical market but are mostly better in logistics than we are. Companies like DHL, Amazon and many more can easily enter in our market. They can offer their logistic services to manufacturers and kick us out of the game.	external	2	2	Monitor activities of these kind of companies. Try to increase the activities with manufactures to increase the relationship. Therefore, it is more difficult for these logistic companies to totally enter into our market.
Business consultants	Business consultants in supply chain management try to sell their knowledge to decrease customers supply costs. If we as Sonepar also offer such services, we are in direct competition to them. They can easily foster a relationship to our competitors. Therefore, the position of our competitors is being strengthened.	external	3,5	2	If Sonepar try to implement supply chain management related business consulting it would be better to work together with different consulting firms. That decrease the probability that this companies begin to fight against us. Try to integrate them in our business consulting activities. Monitor their activities.

* 1 = low, 5 = high

Table 22: Details - Stakeholder Analysis

Appendix 7 – Value Chain Analysis

Value Chain Activity	Type	Strengths	Weaknesses
Inbound Logistics	<i>primary</i>		
Inbound logistics is handled as standard process. No real distinctive feature to mention.		no distinctive feature	No quality control mechanism implemented.
Operations - Purchasing	<i>primary</i>		
Sonepar as wholesaler focuses to buy in big patches and sell it in small patches. Therefore, purchasing process as a part of operations is essential. To increase margin in the background by permanent negotiation with supplier. Responsible to define the range of materials on stock, handle order management and inventory management		Big experience in purchasing processes knowledge in handling big projects (new lead buyer).	each price increase by supplier will be accepted Lack of experience in new fields like work safety ... no real focus on industrial customer's articles. Only standard will be handled. No experience in automatic handled purchase activities.
Operations - Sales	<i>primary</i>		
all activities according sales. Building customer relationships, sell goods and services, handling customer requirements.		splitting of sales into three groups (electrician, industry, public) strong focus on relevant industries structured processing in sales by focusing on particular industries. International help over Sonepar international Key account management	lack of knowledge on some products lack of industry knowledge in some cases lack of skills according new customer acquisition No CRM-System is available to monitor customer behavior and relations to other relevant groups or individuals
Outbound Logistics	<i>primary</i>		
All services according to delivery to customer SOKO services. Managing warehouses		high delivery accuracy of 99,6% fast delivery within 24 hours as standard. Delivery overnight in seven federal states	No experience in totally automated logistics New transportation possibilities like UAV or unmanned vehicles not in scope.
Service	<i>primary</i>		
All services like technical support, return processing, commercial support		implemented center of expertise for lightning, automation, consumer electronics and telecommunication vender independent consulting	No quality control mechanism implemented No returns processing incl. complete tracking of errors and appropriate communication to the customers (8D-Reports ...)

<p>IT, Data Management <i>support</i></p> <p>All relevant IT tasks like infrastructure, phone system, connection to infrastructure from outside the company. Business Consulting in handling customer electronically Data management of all available supplier items. Keep a clear master data structure and content. Assist sales to implement customer specific prices</p>	<p>very stable IT infrastructure strong knowledge on master data and integrating suppliers into our system.</p>	<p>less experience in handling customer electronically No program management available. Data Management have now shadow article data base. They only work with items that are in the system.</p>
<p>HR Management <i>support</i></p> <p>hiring and retaining employees for all departments. Company has more than 330 employees.</p>	<p>skills on hiring people on their own. Professional usage of several online platform's and external contacts to increase the chance to find the right people. Employee bonus program is very attractive.</p>	<p>low reputation on the job market. It's not very attractive for new people to work in a wholesaler. Manufacturer are more interested in general. No real implementation program for new employees</p>
<p>Marketing <i>support</i></p> <p>Build customer awareness of services, responsible for brand image, content on website, advertisement, fairs, organize own events.</p>	<p>Skills to design brochures in-house. Strong assist of sales team by providing customer data. Very creative in presenting the company over web.</p>	<p>two fast publication of brochures no cooperate identity (each brochure looks different) low experience on industry. Rather reactive than active behavior</p>
<p>Finance and Accounting, Controlling <i>support</i></p> <p>Every action related to finance, accounting and controlling Providing customer payment behavior permanently Assisting management in providing them a management cockpit</p>	<p>Fair processing in particular in the event of a payment delay with sales representative Providing KPI's on a daily basis. Handling of support prices with supplier after the negotiation from sales representative Customer-oriented action</p>	<p>late request of payment according to support prices. Sometimes late processing of dunning lists --> lack of liquidity</p>

Table 23: value chain analysis of Sonepar Austria

Appendix 8 – Megatrends

Name	Description	Source
Globalization	The distribution of the world’s prosperity from the west to other developing countries will change dramatically until 2030. As shown in China the same process happens right now in Africa. Africa is the new china for several investors. Parts of China have jumped over several development steps and increase the speed to overtake the position of the strong western world.	(Horx, 2016)
Climate change	The complexity and uncertainty associated with climate change often paralyzes government action at the national and international levels. However, combating climate change will require unprecedented levels of multilateral cooperation to prevent the worst effects of rising CO2 levels in the next century. This will also require immediate efforts to ‘climate-proof’ communities for the effects of climate change that are already locked-in	(KPMG, 2014)
Digitalization, Connectivity	The modern communication technologies enable new connections and a highly networked world. Everything is communicating automatically. Beginning from Smartphones to high complex machines over cloud services. Therefore, new types of collaboration will be created and as a result new systems in business and culture will occur.	cf. (Horx, 2016)
Urbanization	Almost two-thirds of the world’s population will reside in cities by 2030. Urbanization is creating significant opportunities for social and economic development and more sustainable living, but is also exerting pressure on infrastructure and resources, particularly energy.	(KPMG, 2014)
Security	This trend is related to the megatrend digitalization and connectivity since with rising electronic communication the risk for undesired disclosure of data is growing dramatically. Recent bugging scandals of NSA increasing the awareness of this risk and therefore we can register a rising demand of security. If someday the total supplier chain of any particular product is connected and works automatically it is a must to secure this chain against hackers or other dangerous attacks.	cf. (Zukunftsinstitut, 2016)
New Work	The traditional work shifts from its existing processes. In a few years it won't be usual to work for almost the total time of your life at one company. Easy operations will be getting cheaper but on the other hand complex task along with high knowledge will increase their value.	(Horx, 2016)
Individualization	Advances in global education and technology have helped empower individuals like never before, leading to increased demands for transparency and participation in government and public decision-making. These changes will continue, and are ushering in a new era in human history in which, by 2022, more people will be middle class than poor. Middle class is defined as earning between 10 United States dollars (USD) to USD100 a day	(KPMG, 2014)
Gender Shift	Within the last 30 years nearly in every OECD country woman have increased their level of education. Therefore, it is clear that the number of women in managing positions grow. For example, in Germany the number of female students rise from 19% to 52%. Emancipation is on the daily agenda. Therefore, also social tensions and conflicts will emergence	cf. (Horx, 2016) cf. (KPMG, 2014)
demographic change	By 2030, the number of people aged 65 and older will double to 1 billion globally, causing concerns with overall labor market productivity and the ability of existing fiscal systems to withstand the pressures of aging. In contrast, many developing countries are simultaneously experiencing a youth explosion, creating opportunities for ‘demographic dividends’ for governments that can overcome the challenges of successfully integrating younger citizens into the workforce.	(KPMG, 2014)

Table 24: Megatrends

Appendix 9 – Analyze of impact of social and business trends

Name	Description	Impact on Organization							timeframe	Source
		overall impact	Marketing and Sales	Purchasing	Logistics	e-Business	IT, Data MGMT	Human Resources		
Batch Size one	Increasing consumer demand for personalization could lead to the mass production of highly customized goods tailored to the individual, resulting in decentralized 'batch size one' production. This will require supply chains to adapt rapidly to changes in time and place of production.	6,8	6,0	10,0	10,0	3,0	10,0	2,0	7,0	(Heutger, 2016)
on demand delivery	Delivery is no longer owned by larger players who set limitations on delivery times and locations. New on-demand last-mile delivery concepts utilize the power of the crowd and flexible courier workforces to enable customers to have their purchase delivered when they need it, where they need it.	7,2	8,0	10,0	10,0	3,0	10,0	2,0	4,0	(Heutger, 2016)
Smart energy logistics	The increasing shift towards renewable energy sources is propelling the adoption of electric mobility solutions in logistics. It also provides opportunities for logistics solutions that facilitate new energy supply chains. Innovative energy harvesting, storage and distribution concepts can also be leveraged to reduce reliance on the grid.	4,8	4,0	1,0	10,0	2,0	10,0	2,0	4,5	(Heutger, 2016)
Omni-channel logistics	The next generation of retail requires logistics networks tailored to the needs of each single channel. This will require logistics providers to maintain an integrated view of all customer channels and inventory, along with dynamic delivery and fulfillment options and seamless customer service interactions.	5,5	5,0	3,0	8,0	7,0	8,0	2,0	3,0	(Heutger, 2016)
fair & responsible logistics	The intersection between the need to remain competitive and the need to increase sustainability has given way to a new strategy called fair and responsible logistics. Logistics providers can meet these demands by providing new services that generate revenue while also improving the welfare of society and the environment.	2,8	3,0	3,0	4,0	1,0	3,0	3,0	4,0	(Heutger, 2016)
convenience logistics	Online shoppers enjoy not just the price advantage of purchasing online, but also 24/7 availability and convenience. With increasing consumer trust in purchasing groceries and pharmaceuticals online, there is high demand for new cold-chain packaging and delivery solutions.	4,3	6,0	2,0	7,0	8,0	1,0	2,0	1,0	(Heutger, 2016)
grey power logistics	In five or more years' time, the first wave of digital natives will enter the aged population segment. Grey power logistics – the logistics for an aging society – will offer new services (e.g., home delivery of medicines) to answer the resulting challenges of this demographic development	1,3	0,0	2,0	2,0	1,0	1,0	2,0	6,0	(Heutger, 2016)

multi-purpose networks	Multi-purpose networks refer to the utilization of standard, existing networks and city infrastructure to transport and store goods, especially those that are temperature-sensitive. This is enabled by innovations in transportation, packaging, and real-time supply chain monitoring.	2,5	1,0	1,0	7,0	2,0	3,0	1,0	4,5	(Heutger, 2016)
anticipatory logistics	Powered by big data-based predictive algorithms, anticipatory logistics enables logistics providers to significantly boost process efficiency and service quality by predicting demand before it occurs, to achieve faster delivery times and enhanced capacity and network utilization.	8,0	8,0	8,0	10,0	10,0	9,0	3,0	4,5	(Heutger, 2016)

Table 25: Results of the impact analysis of relevant social and business trends

Appendix 10 – Analyze of impact of technological trends

Name	Description	Impact on Organization							timeframe	Source
		overall impact	Marketing and Sales	Purchasing	Logistics	e-Business	IT, Data MGMT	Human Resources		
3D Printing Materials	Advances in 3D printing have already enabled 3D printing to use a wide range of materials, including advanced nickel alloys, carbon fiber, glass, conductive ink, electronics, pharmaceuticals and biological materials. These innovations are driving user demand, as the practical applications for 3D printers expand to more sectors, including aerospace, medical, automotive, energy and the military. The growing range of 3D-printable materials will drive a compound annual growth rate of 64.1 percent for enterprise 3D-printer shipments through 2019. These advances will necessitate a rethinking of assembly line and supply chain processes to exploit 3D printing	8,5	10,0	10,0	10,0	6,0	8,0	7,0	2,0	(QuinStreet Inc., 2016) cf. (Gartner Inc., 2016)
Information of Everything	Everything in the digital mesh produces, uses and transmits information. This information goes beyond textual, audio and video information to include sensory and contextual information. Information of everything addresses this influx with strategies and technologies to link data from all these different data sources. Information has always existed everywhere but has often been isolated, incomplete, unavailable or unintelligible. Advances in semantic tools such as graph databases as well as other emerging data classification and information analysis techniques will bring meaning to the often chaotic deluge of information.	7,5	5,0	7,0	7,0	10,0	10,0	6,0	4,0	(QuinStreet Inc., 2016) cf. (Gartner Inc., 2016)

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Advanced Machine Learning	In advanced machine learning, deep neural nets (DNNs) move beyond classic computing and information management to create systems that can autonomously learn to perceive the world, on their own. The explosion of data sources and complexity of information makes manual classification and analysis infeasible and uneconomic. DNNs automate these tasks and make it possible to address key challenges related to the information of everything trend	3,0	1,0	1,0	7,0	3,0	5,0	1,0	7,0	(QuinStreet Inc., 2016) cf. (Gartner Inc., 2016)
Autonomous Agents and Things	Machine learning gives rise to a spectrum of smart machine implementations — including robots, autonomous vehicles, virtual personal assistants (VPAs) and smart advisors — that act in an autonomous (or at least semiautonomous) manner. While advances in physical smart machines such as robots get a great deal of attention, the software-based smart machines have a more near-term and broader impact. VPAs such as Google Now, Microsoft's Cortana and Apple's Siri are becoming smarter and are precursors to autonomous agents. The emerging notion of assistance feeds into the ambient user experience in which an autonomous agent becomes the main user interface. Instead of interacting with menus, forms and buttons on a smartphone, the user speaks to an app, which is really an intelligent agent.	3,0	1,0	1,0	7,0	3,0	5,0	1,0	6,0	(QuinStreet Inc., 2016) cf. (Gartner Inc., 2016)
Internet of Things Platforms	IoT platforms complement the mesh app and service architecture. The management, security, integration and other technologies and standards of the IoT platform are the base set of capabilities for building, managing and securing elements in the IoT. IoT platforms constitute the work IT does behind the scenes from an architectural and a technology standpoint to make the IoT a reality. The IoT is an integral part of the digital mesh and ambient user experience and the emerging and dynamic world of IoT platforms is what makes them possible.	3,0	1,0	1,0	7,0	3,0	5,0	1,0	4,0	(QuinStreet Inc., 2016) cf. (Gartner Inc., 2016)
Augmented Reality	The future of mobile is tilting increasingly toward wearables, especially as augmented reality and virtual reality solutions hit the market. Long the objects of sci-fi fascination, the looming potential of AR and VR technologies lies in the enterprise with capabilities that could potentially reshape how work gets done, or fundamentally recast customer experiences. While the customer world waits for the dominant AR and VR players to emerge, the enterprise can fast track adoption – and begin the process of fundamentally reimagining how work gets done	4,3	1,0	1,0	8,0	8,0	7,0	1,0	4,0	cf. (Deloitte, 2016) cf. (Heutger, 2016)
Internet of Things	Increasingly, forward-thinking organizations are focusing their Internet of Things initiatives less on underlying sensors, devices, and “smart” things and more on developing bold approaches for managing data, orchestrating events, and extending IT systems and processes beyond traditional limits. In shifting IoT's strategic focus this way – beyond mere sensing and passive reporting, to actually doing – companies are identifying new opportunities in automation, signal analysis, and robotics, among other areas	4,2	1,0	3,0	6,0	7,0	7,0	1,0	6,0	(Deloitte, 2016)
Industrialized analytics	Data is a foundational component of digital transformation. Yet few organizations have invested in the dedicated talent, platforms, and processes needed to turn information into insights. To realize data's full potential, some businesses are adopting new governance approaches, multi-tiered data usage and management models, and innovative delivery methods to enable repeatable results and scale. Indeed, they are treating data analysis as a strategic discipline and investing in industrial-grade analytics.	7,5	6,0	7,0	9,0	10,0	10,0	3,0	7,0	(Deloitte, 2016)

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Wearables	IDC predicts that manufacturers will ship 111.1 million wearable devices in 2016, a 44.4% increase from the 80 million units shipped in 2015. In the past, the most common types of wearables have been smartwatches, like the Apple Watch, or fitness trackers like those from Fitbit. That could change this year as rumors suggest Google will launch an enterprise version of its Glass wearable this year. For businesses, wearables represent a new opportunity for interacting with consumers, as well as new ways to provide information to employees. If the technology takes off, organizations may soon be at work creating a new generation of mobile apps designed for wearables.	3,3	1,0	1,0	4,0	1,0	5,0	8,0	2,0	(UBM LLC, 2016)
Big Data	Logistics is being transformed through the power of data-driven insights. Unprecedented amounts of data can now be captured from various sources along the supply chain. Capitalizing on the value of big data offers massive potential to optimize capacity utilization, improve customer experience, reduce risk, and create new business models.	7,7	5,0	5,0	9,0	10,0	10,0	7,0	4,0	(Heutger, 2016)
self-driving vehicles	Breakthroughs in sensor and imaging technologies have resulted in a new generation of self-driving vehicles that are more flexible and reliable than ever before. From autonomous forklifts to driverless trucks, self-driving vehicles will transform logistics by unlocking new levels of safety, efficiency, and quality.	7,3	5,0	5,0	10,0	4,0	10,0	10,0	7,0	(Heutger, 2016)
unmanned aerial vehicles (UAV)	Unmanned aerial vehicles (UAVs) or 'drones' could change tomorrow's logistics by adding a new form of express delivery via carefully coordinated air networks. While UAVs won't replace traditional ground-based transportation, they will provide value in areas of high traffic congestion and in remote locations.	6,5	3,0	3,0	10,0	3,0	10,0	10,0	5,5	(Heutger, 2016)
smart sensors	Smart sensors tag's and biometrics are pushing logistics processing towards a new level of granularity; this evolution means that single units, components and even individuals can be securely identified through unique, digital codes.	7,8	7,0	5,0	10,0	10,0	10,0	5,0	6,0	(Heutger, 2016)
self-learning systems	Strong advancements in algorithms, computational power, and hardware are enabling new forms of machine learning applications in logistics. This offers immense potential for autonomous data-driven decision making and process optimization in logistics.	7,5	5,0	6,0	6,0	10,0	10,0	8,0	5,5	(Heutger, 2016)
Robotics and Automation	Robotics and automation technologies support zero-defect logistics processes and enable new levels of productivity. The new generation of collaborative robots and automated solutions with significantly improved performance and enhanced sensing capabilities offers a genuine alternative to manual handling	6,3	3,0	4,0	10,0	5,0	8,0	8,0	4,0	(Heutger, 2016)
Cloud Computing / Logistic	Ideal for complex, volatile environments, cloud computing enables new 'logistics-as-a-service' (LaaS)-based business models. Logistics providers can activate and deactivate customizable, modular cloud services on demand using a pay-per-use approach.	8,2	5,0	6,0	10,0	10,0	10,0	8,0	3,0	(UBM LLC, 2016) cf. (Heutger, 2016)
low cost sensor technology	Established consumer sensor technologies enable new applications within the logistics industry. With access to low-cost sensors, logistics is likely to increase the use of sensors, creating smart infrastructures for monitoring, inspecting, and volume scanning in the supply chain.	5,5	3,0	1,0	7,0	10,0	10,0	2,0	3,0	(Heutger, 2016)
Industry 4.0	Industry 4.0 is the fourth industrial revolution and is defined as the total interconnection of the whole value chain. Main parts of this trends are the mechanization, electrification and automation. The change will happen on all steps of a production process. Therefore, up- and downstream participants of the value chain like suppliers, wholesaler and logistic companies	8,7	7,0	8,0	10,0	10,0	10,0	7,0	2,5	cf. (Dr.Hofstätter & Mag. Karepova, 2016)


	<p>become totally integrated. Beneath production other processes like purchase, sales or maintenance become more relevant for companies. Goal of Industry 4.0 is that the whole chain become more efficient and flexible to fulfil the future needs of the industry.</p>	
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Table 26: Results of the impact analysis of relevant technological trends