How to design a sustainable future in an original equipment manufacturer service market; a case study of a global power management corporation

Author: Koen Siers
Programme: MSc Business Administration
Track: Entrepreneurship, Innovation & Strategy

University of Twente
P.O. Box 217, 7500AE Enschede
The Netherlands

UNIVERSITEIT TWENTE.

Table of Contents

Preface

This research was carried out in commission of an original equipment manufacturer and functions as my master thesis for the (Msc) Business Administration programme, offered by the University of Twente. The research reports findings from the past 3 months, where the aim was to develop a sustainable future for the service market of this original equipment manufacturer. Academic and practical orientation intertwine, as contextual topics received reflection based on theoretical criteria. I also like to believe that this research provided a boost for my own research skills as well as way of thinking and might, hopefully, help me in my future career.

Along these lines, I would like to thank the Original Equipment Manufacturer by providing me full cooperation and enthusiasm that was needed to execute this research, especially my supervisor from the company and direct colleagues, who helped me through the process by creating a comfortable atmosphere. In addition, I would also like to thank my supervisor Katarzyna Zalewska-Kurek from the University of Twente for her guidance throughout the entire process of making this thesis. Furthermore, special thanks go out to my family for their moral support.

In the end, I would like to thank everyone in advance who takes the effort to read, and hopefully enjoy, this research.

Oldenzaal, September 2018

- Koen Siers

Abstract

The original equipment manufacturer (from now on OEM) studied in this research has been confronted with a declining service market, where more and more service activities are done through third parties or by companies themselves. They fear that this will cause them to lose even more service activities in the future. This research has been carried out for them to investigate what an OEM should do in order to design a sustainable future in a service market. A literature review was conducted and the factors that contribute to the implementation of servitization are extracted from various theories and models and will help to design this sustainable future. The reasons for the customers to inquire third parties instead of the OEM is explored through semi-structured interviews, as well as through an online questionnaire. Analysis is done after collecting data from 10 interviews and 17 responses on the questionnaire. The findings show what factors facilitate and constrain the OEM towards the implementation of servitization. In addition, multiple recommendations are made which are predicted to increase revenue in the service market of the OEM. The results of this research are useful for OEM companies in a way that it provides them with tools to increase their service revenue. This study contributes to literature by analyzing previous studies and identifying internal and external factors that contribute to the implementation of servitization and put them in perspective in the power management industry, where few studies are available at this moment. Future research should focus on the organizational consequences, including accounting consequences of the recommendations that are made.

Graduation Committee members:
Dr. K. Zalewska-Kurek
Dr. R.P.A. Loohuis

Keywords
Original equipment manufacturer, Servitization, Power management, Service,

1. Introduction

1.1. Setting the stage

Western economies have started to compete on the basis of value delivering by shifting market share from pure manufacturing to more product-service oriented offerings. Therefore, many OEMs have sought growth by increasing sale of services (Ulaga et al., How to Sell Services More Profitably, 2008). Moving towards a more service-oriented offering incurs problems for companies. Due to the size and way of thinking most OEMs have, they face threats at their customers who desire flexibility and good communication. Customers don't expect products to be perfect, but they do expect manufacturers to fix things quickly when they break down (Morris et al., 2006).

Since this research is one of its kind, with almost no other literature available studying power management firms in the topic of strategic management, present research will contribute to the existing literature by adding information to this gap in literature. In addition, implementation of servitization in a power management firm has not yet enjoyed much research, so present research will contribute to that matter as well.

The globally operating power management company central in this study, provides a wide range of products for power management. These products are protecting against short-circuiting and are very important, since almost all machines in the world rely on the electrical grid. The businesses that rely on all these machines depend on power management companies to solve some of the toughest electrical, hydraulic and mechanical power management challenges on the planet in order to keep running.

Services are increasingly taking the lead in the global economy, in terms of both wealth produced and value added. The service component of Gross domestic product (GDP) in most OECD countries has reached 70% of total gross value added and about 50%–70% of employment (Wölfl, 2005).
The company experienced an unanticipated situation in which the growth of their Installed Base Services, field services & aftermarket life extension, which is almost flat, was regarded to be insufficient, according by the management team. With the increasingly growing number of sub-channels the company has to deal with, the company studied in this research feared it might lose its market share and therefore turnover. This is especially the case at the CIG segment and the utilities. After a preliminary session with some key employees in the company, it is found that the percentage distribution in terms of service lies around 40% for utilities and 45% for CIG, and therefore a gigantic loss in service turnover might be faced. Third-party vendors have become so price competitive that OEMs lose most of the aftermarket the moment the initial warranty period ends (Morris et al., 2006). OEMs lose most of their service activities due to the fact customers do not expect products to be perfect, but they do expect manufacturers to fix things quickly when they break down (Morris et al., 2006). Therefore, OEMs face a problem in decreasing service revenues since they do not, most of the time, have a local footprint in the community.

The problem lies within the service & aftermarket product line, 81% of their turnover is through Field services & aftermarket (as seen in figure 1, the orange frame). Since this is the biggest percentage within the total group, the focus of this study will be on the service & aftermarket segment.

Consultancy is, at this moment, just a small percentage of the total revenue, so the focus will not be on this category. Service is defined as 'assistance or advice given to customers during and after the sale of goods' (Oxford dictionary, sd). The company studied in this research wants to grow 15% in the amount of turnover they have at the moment in the coming three years. Since the company is listed, they require more profit margin and growth than it would do when it is not listed, because they promised their shareholders to make as much return on investment as possible as is stated in their corporate value pamphlet; 'The sole reason of our existence is to act profitable and to get a high Return on Investment for our shareholders'

The systems and services of the power management company are mainly sold in the Europe, Middle East and Africa region to customers in the following segments; utilities (distributors of this power), CIG (commercial, institutional, governmental), data centers, oil & gas and mining.

Type of Services	Install Base Services		Professional Services – From EPC to Consulting Services			
	Field Services	Aftermarket Life Extension	Major Projects	Engineering Services	Renewable Services	Energy Management Solutions
Scope	•Start-up & Commissioning •Maintenance Contracts •24/7 upgrade •Extended Wty •Testing & Gal Field SVC •Small projects •Renewal Spares	•MV Breaker Replacement •LV Breaker Replacement •Equipment Rebuild & reconditioning •Life Extension & modernization	•Turnkey project >$500k •Project mgt •EPC •System integration	•Power system engineering & studies •Arc Flash & Safety studies •Power Chain Audits •Power system Automation •LV/MV equipment Commissioning	•Solar •Feasibility audits •Engineering •Commissioning •Wind •Turnkey substations •Wind Farm Collector Substation	•Energy audits •Consulting •Perf contract. •Turnkey energy saving project •Demand side management •Supply side management

Figure 1: Type of Services available

As the Dutch market is the biggest service & aftermarket 'business' of the OEM central to this study, where almost all service activities are present according to the management team of the firm, the assignment will focus on the Netherlands at first.

See figure 2&3 of Movares (2018) below for the distribution of faults (in Dutch) in the Dutch network for both medium-voltage (MV) as for low-voltage (LV) (Movares, 2018). As can be seen is that over 50% of the failure reasons in the Dutch low/medium voltage distribution network is due to wearing/aging or other service related factors (Movares, 2018). Thus, there seems to be a huge potential and importance to deliver more services in order to maintain the network, especially for maintenance and life time extension solutions.

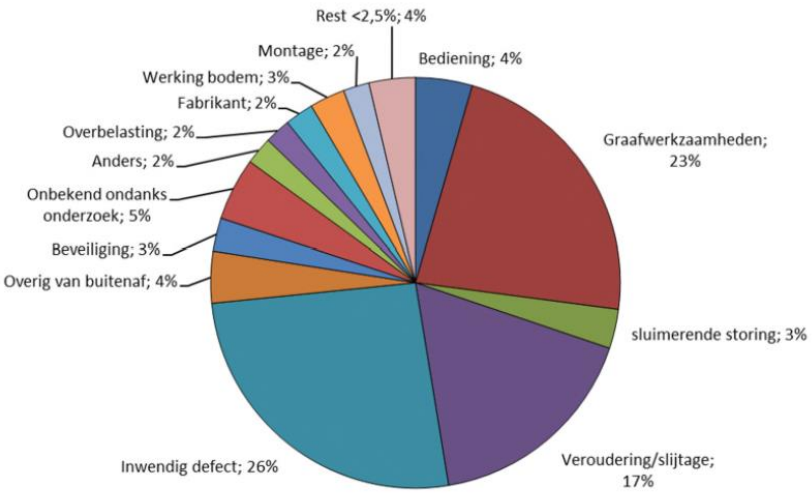

Figure 2: Failure reasons Medium Voltage, 2017

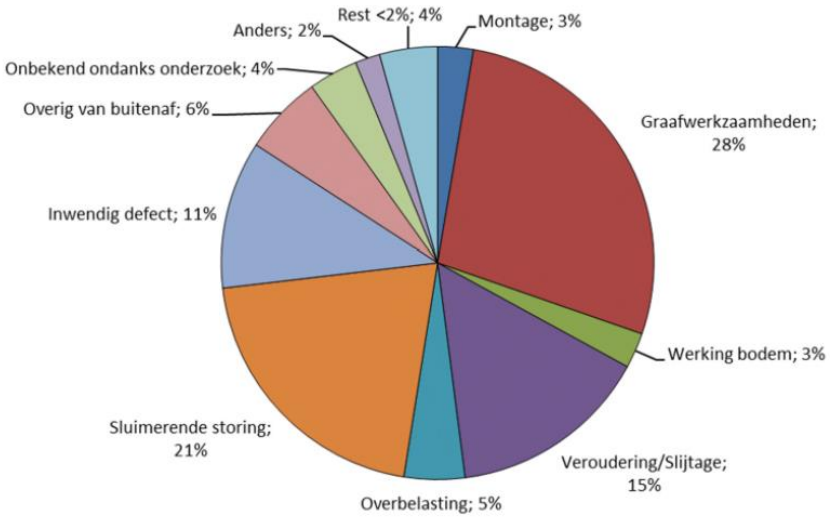

Figure 3: Failure reasons Low Voltage, 2017

When searching for literature that fits this context, not much is found. While there is a lot of literature found in the terms of 'strategic planning' and/or 'strategic change', not much can be found regarding service companies. Although there is a lot of literature about the importance of customer satisfaction and perceived quality of services, none applies to the power management industry. In addition, literature has been found that provides insight in the possibilities of next generation trends in the business like the fourth revolution of industry, (Lee et al, 2014), as well as the use of a platform based business model (Davis, 2016) (Schor, 2016). However, platform based business models are not yet widely adopted into the service segment, while opportunities regarding industry 4.0 can be helpful to look into as well. This research therefore makes several practical and theoretical

contributions. Theoretical contributions are made by adding theories to complement the scientific area of strategic planning, providing recommendations in a Power management Service & Aftermarket segment. In addition, there is not much literature available that refers to how to implement strategic value propositions. At last, theoretical contributions are the identification of internal and external factors that contribute to the implementation of servitization in a company. Practical contributions are the developed guidelines and different strategic options for the company studied in this research in order to fulfill their organizational intentions towards a more sustainable future. In addition, with the help of the outcomes of present research, different options for different segments are recommended, giving more strength towards a future direction. Furthermore, practical contributions also include the potential decrease in failures of the electrical systems.

The aim of this study is to identify the factors that are contributing to the implementation of servitization. Marketers/business developers can, with the results of this study, develop strategies in order to increase the sales of services and therefore increase their market share and/or gross profit.

This leads to the following research questions.

1.2. Research question

I. *Which factors contribute to the implementation of servitization in an original equipment manufacturer?*

1.2.1. Sub-questions

In addition, sub questions were developed to answer the main research question:

- *i. What internal factors contribute to the implementation of servitization in a company?*
  - *a. Which factors facilitate the implementation of servitization?*
  - *b. Which factors constrain the implementation of servitization?*
- *ii. What external factors contribute to the implementation of servitization in a company?*
  - *a. Which factors facilitate the implementation of servitization?*
  - *b. Which factors constrain the implementation of servitization?*
- *iii. What are possible ways for a service company to grow?*
- *iv. What do customers desire in terms of service?*
  - *a. What are possible value propositions for each customer segment?*

In order to identify which factors contribute to the implementation of servitization (RQ), an external analysis need to be done, this includes assessing customer satisfaction. Long waiting times are one of the reasons service is being done more and more by the sub-channels themselves, when possible. Different literature state that for service to be profitable, a high degree of satisfaction is important, if not the most important factor (Heskett et al, 1997). The Servqual and Servitization theories that state what factors are important to successful exploit service and will therefore be investigated with regard to the power management industry (Parasuraman et al., Servqual: A multiple-item scale for measuring consumer perceiving, 1988).

The paper is organized as follows. Section 2 is the theoretical framework and describes the existing literature in the scope of this research. Section 3 will be the methodology part, including data collection and study procedure. Section 4 is the results part, presenting the analytical results of this study. Section 5 will be the discussion. At last, the conclusion is stated in section 6.

2. Literature review

In order to support this research, first, existing literature was analyzed in the scope of present research.

Servitization is a widely adopted terminology, however, not much literature is available that identifies the facilitating and constraining factors of the implementation of servitization. Since multiple factors have an impact on the implementation, both internal as well as external factors, it is important for a company to see what factors they lack and how to improve on it.

Much literature is available of strategic management and planning, which provides an insight into why it is important to think about the future. In addition, literature is being studied to find out how to improve existing services with the help of outsourcing to partners for instance. These studies will help this research with its execution and, with it, provide the company with the necessary information needed to make a decision on where to go with their business. With the help of a literature review these studies will be analyzed.

2.1. Servitization

As products and services are becoming more alike, people base purchase decisions more and more on price (Morris et al., 2006).

Manufacturers need to think carefully about how their markets and their customers' needs are changing and the impact on their offerings. They must identify which segments they see themselves working in, understand their position in the ecosystem to define the route forward and redefine the relationships they have with customers.

The problem identified by the company, and already elaborated above, that is studied in this research can be put under the term 'Servitization'. Servitization can be considered as a shift from just selling products to selling an integrated combination of products and services that deliver value in use (Baines et al., 2009). This concept embraces service-led competitive strategy and will provide increased revenue stream and profit margins. The term first showed up in the paper of Vandermerewe & Rada (1988), and is now widely recognized as the process of creating value by adding services to products (Vandermerwe et al., 1988). Manufacturing companies have been selling services for some time. Traditionally, however, the tendency has been for managers to view services as a necessary evil in the context of marketing strategies ((Gebauer et al., Overcoming the service paradox in manufacturing companies, 2005); (Gebauer et al., Success factors for achieving high service revenues in manufacturing companies, 2006)). Here, the main part of total value creation was considered to stem from physical goods, and services were assumed purely as an add-on to products (Gebauer et al., Overcoming the service paradox in manufacturing companies, 2005). Today, the

value proposition often includes services as fundamental value-added activities and reduces the product to be just a part of the offering (Vandermerwe et al., 1988). While the company already does add services to its products, there is still a lot to gain in this matter.

Referring to categories derived from literature ((Brax et al., 2009) (Goh et al., 2009)), the main factors that are behind servitization strategies are growth, profit, and innovation. Realizing growth with product-related services is often described as the strategic rationale (Gebauer et al., Overcoming the service paradox in manufacturing companies, 2005) which can be achieved by stimulating product sales and by selling additional services. While the product sales are expected to grow, the company investigated in present research wants to increase on their selling of services, adding additional services seems like a possible option.

Services are a way to escape the product commoditization trap: for example, in the elevator industry, companies like Otis™ and Kone™ enjoy maintenance service margins of 25–35% compared with a margin of approximately 10% for new equipment (The Economist, 2013). If successfully deployed, services can become an important source of revenue and profits, ensure customer satisfaction and loyalty, and support firms' growth (Eggert et al., 2014).

An important feature of servitization strategies is a strong customer centricity. Customers are not just provided with products but broader more tailored solutions (Baines et al., 2009). Literature suggests three sets of factors that drive companies to pursue a servitization strategy; namely, financial, strategic (competitive advantage), and marketing ((Gebauer et al., Overcoming the service paradox in manufacturing companies, 2005), (Gebauer et al., Success factors for achieving high service revenues in manufacturing companies, 2006)). Indeed, research from 2017 has shown that from a random sample of 60 top managers in the Netherlands, Great Britain, Sweden, and Germany, less than 30% are making use of a servitization strategy. The Companies that do have such strategy have seen their profit margins increase, sometimes even up to 35% (Consultancy.nl, 2017). In addition, this research has shown that it is possible to organize an existing company towards servitization and that it will pay off to invest time and money into the process.

In order to identify which factors contribute to the implementation of servitization, different theories are looked into and factors are derived from them. A distinction between internal and external factors is being made in order to get a better understanding where the company can improve on. At this moment, no literature states the different impact of internal and external factors on the implementation of servitization.

Internal factors are factors that are company related; from knowing the customer to having a service strategy. External factors are industry related and include environmental uncertainties as well as trends.

2.2. Internal factors

Servitization needs a change in mind-set of a company. Because of this changing mind set, there are multiple, internal, factors that contribute to whether or not servitization is successfully implemented.

Competitive advantage achieved through services are often more sustainable since services are less visible and more labor dependent, therefore more difficult to imitate (Gebauer et al., Success factors for achieving high service revenues in manufacturing companies, 2006). Research from Frambach et al. (1997) point out that the value-add of services can enhance the customer value to the point, where, homogeneous physical products are perceived as customized (Frambach et al., 1997). Gebauer et al. (2006) indicated that 6 key success factors, as shown in figure 4, that need to be in place for a manufacturing company to increase revenues on their service activities (Gebauer et al., Success factors for achieving high service revenues in manufacturing companies, 2006). When implementing those factors, presented below, the company analyzed in present research can increase on their service revenues. These 6 factors, all internal, contribute to implementing servitization in a company by increasing the engagement of both the customers and employees. Therefore, improving on these factors have a facilitating effect on the implementation of servitization.

	Steps to implement these success factors fully
Market-oriented service development and clearly defined service development process	Obtain comprehensive information on customer needs Implement a systematic co-ordinated and transparent procedure for developing new services ...
Service offering focusing of the value proposition to the customer (product related services and services supporting the customer)	Change the focus of value proposition to the customer Develop product-related services and continue with services directly supporting the client Change the way the service is priced (from task-specific to a fixed price over time) ...
Relationship marketing	External marketing: project a specific image which highlights company's service capability Interactive marketing: maintain continuous contact with the customer and communicate services as products in their own right Internal marketing: support employees in explaining benefits of a service ...
Service strategy	Formulate a deliberate service strategy Change the role of services in the corporate strategy (from services as a marketing tool to conscious service offerings) Use a comprehensive information base to create a service strategy Involve all relevant parts of the company Promote participation and acceptance of service strategy ...
Separate service organization	Establish a separate service organization with profit-and-loss responsibility Break down service strategy into quantifiable targets Involve employees in defining goals ...
Service culture	Manage the relationship between manufacturing values and service culture actively Change the service awareness from "non-value added" to "value-added" thinking

Figure 4: Six success factors to increase revenues on service activities, derived from (Gebauer et al., Success factors for achieving high service revenues in manufacturing companies, 2006).

Marketing opportunities are generally understood as the use of services for selling more products by delivering good services (Gebauer et al., Success factors for achieving high service revenues in manufacturing companies, 2006). The service component is well known to influence the purchasing

decision and especially in B2B or industrial markets where customers are described as increasingly demanding for services (Vandermerwe et al., 1988).

When looking into the term servitization, literature is found that covers the question how manufacturing firms combine goods and services successfully (Ulaga et al., Hybrid offerings: how manufacturing firms combine goods and services successfully, 2011). Ulaga et al. (2011) examine key success factors for designing and delivering combinations of goods and services in business markets. In addition, they developed a resource-capability framework as a basis for research and practice. They found four critical resources: (1) product usage and process data derived from the firm's installed base of physical goods, (2) product development and manufacturing assets, (3) an experienced product sales force and distribution network, and (4) a field service organization. To leverage those resources they build five critical capabilities: (1) service-related data processing and interpretation capability, (2) execution risk assessment and mitigation capability, (3) design-to-service capability, (4) hybrid offering sales capability, and (5) hybrid offering deployment capability (Ulaga et al., Hybrid offerings: how manufacturing firms combine goods and services successfully, 2011). In addition, they made a framework with on the one side the service recipient, and on the other side the nature of the value proposition. This brings up four distinctive industrial services, each needing their own capabilities and resources. They came up with 4 industrial services, namely: product life-cycle services (PLS), process support services (PSS), asset efficiency services (AES) , and process delegation services(PDS), with their respective capabilities and underlying resources. This framework will be taken into account in present research in searching how the company should improve in their value proposition towards their service offering to become successful. In addition, they identify that the installed base of goods represents a unique asset for most manufacturing firms. For example, the manufacturer of printing presses in their study possessed a complete record of products it had sold in the past and in use by its customers. If a firm services its installed base through maintenance and repair agreements, it can collect product usage and customer process data systematically (Ulaga et al., Hybrid offerings: how manufacturing firms combine goods and services successfully, 2011). The critical resources and capabilities are essential for a good implementation of servitization and, in addition, facilitate the opportunity to increase revenues in terms of service.

Furthermore, for identifying how a company can increase the quality of their service offerings and therefore increase their revenue obtained by it, the Servqual theory can be used. This model was developed by Parasuraman et al. (1988) to measure ones perceived service quality (Parasuraman et al., Servqual: A multiple-item scale for measuring consumer perceiving, 1988). While the servqual theory is not completely accurate for this study, it shows the importance of having providing sufficient quality of your service offerings towards the customers. Unlike goods quality, which can be measured objectively by indicators such as durability and number of defects (Crosby, 1980) (Garvin, 1983), service quality is abstract and elusive because of three features unique to services: intangibility, heterogeneity, and inseparability of production and consumption (Parasuraman et al., A conceptual model of service quality and Its implications for future research, 1985). Despite being developed for surveys, aspects of the Servqual model will be used as a guideline for the determination of the quality of service the firm is delivering to its customers. The Servqual model identified 5 main dimensions that are important for a company to deliver quality service. These 5 main dimensions (Tangibles, reliability, responsiveness, assurance, and empathy) will be the main guideline for the questions that will be asked during the interviews.

Tangibles include the physical evidence of the service, like the appearance of personnel, tools or equipment used to provide the service. Reliability involves the consistency of performance and dependability, it means that the firm performs the service right the first time and if the company is delivering the service at the designated time. Responsiveness concerns the willingness or readiness of employees to provide services, including the timeliness of service. Assurance combines the factors communication, credibility, security, competence and courtesy. In this research, it is tested if assurance might be better split into the individual factors, since communication is a bottleneck in many OEMs due to their size (Rickert et al., 2000). Empathy in this context is understanding and knowing the customer with accessibility.

Of course, before coming up new ways for a company to increase their revenues in a service market, one must first look at the service the company is delivering at this moment. If that turns out to be insufficient, simply improving it will gain more revenues. Disconfirmation (the gap between performance and expectations) explains a larger proportion of the variance in service quality than performance. Therefore, checking what the expectations and performance is at the customers is an important aspect of this research.

In addition to the Servqual model, customer satisfaction should be taken into account as well. Customer satisfaction is a part of the customer perspective of the balanced score card framework of Kaplan & Norton (2001) (Norton, 2001). The concept of value proposition is related to the customers' perception of the value of the product or service. In the past, this perception was based on quality and price. Nowadays, the concept of value is broadening to include aspects such as convenience of purchase, after-sale service, and dependability, which makes it impossible for organizations to excel at all these different customer expectations (Cardoso et al., 2009). Treacy and Wiersema (1993) distinguish between three customer value propositions or value disciplines, that is, operational excellence (best total cost), customer intimacy (best solution), and product leadership (most innovative product). Their analysis of companies that took leadership positions in a variety of industries showed that this position is bolstered by a choice to excel in one value discipline, while striving for a minimum level of performance in the other two (Wiersema, 1993). The company central in present research is tested where they stand right now and where they want to be. These three competitive strategies are investigated and after the data is collected in how customers experience the service that is being offered by the company, a value proposition map/strategy map can be made in order to see where the company should improve on and what the requirements should be (Norton, 2001). Balanced scorecards tell you the knowledge, skills, and systems that your employees will need to innovate and build the right strategic capabilities and efficiencies that deliver specific value to the market, which will eventually lead to higher shareholder value. In addition, with the help of this scorecard, an identification can be made of what is missing at this moment. While the company is, at this moment, a bit 'stuck in the middle' regarding their competitive strategy, the vision is to go towards an Operational Excellence strategy. In addition, the assumption is to increase working with 3rd parties, so developing a value proposition towards these 3rd parties in an operational excellence strategy can make the service organization of the company central in this research grow sustainably. The recommendations at the end of this research will include possible offerings with regards to this strategy. While the balanced scorecard strategy map includes more aspects, due to time limit, present research will focus on the customer perspective dimension.

When speaking of customer perspective, one must take into account, like mentioned before, the customer segmentation. Traditional segmentation is based on region, size, and markets. But

servitization demands a new type of segmentation, with a dimension that reflects the maturity level of the potential customer and through the way they buy, in addition to other characteristics (PA consulting technology innovation). Present research will look into the current segmentation (CIG, utilities etc.) and see if this might be a faulty segmentation. It might be the case that it is easier to segment customers in 'end customers' and 'third parties' when thinking of value propositions accordingly. 'How will the value offering/proposition needs to be designed to increase turnover from services to these customers', could be a question to keep in mind.

The balanced scorecard strategy map is presented below:

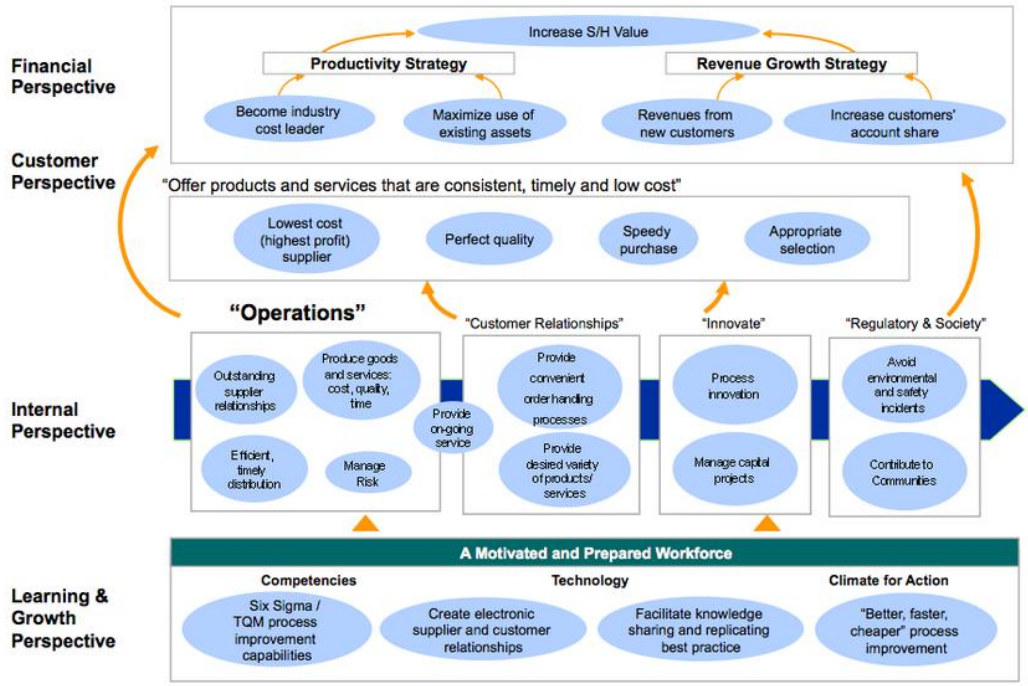

Figure 5: The balanced scorecard strategy map (Norton, 2001).

To further elaborate on the customer perspective, the customer value proposition of the above presented model is being analyzed to get a better understanding where the company can improve on. The categories, seen in figure 6, that make up for a customer value proposition will be tested in the data collection.

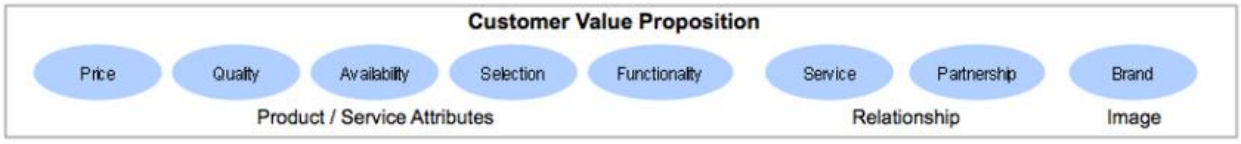

Figure 6: Customer value proposition from the balanced scorecard strategy map (Norton, 2001).

These internal factors are deemed to be the most important enabling or constraining factors for present research, since it fits the challenges of the company as identified by the management.

2.3. External factors

In addition to internal factors, external factors contribute to the implementation as well. External factors, like mentioned before, are industry related factors. From new technologies to new rules and regulations directed by politics, all factors facilitates, or impedes, the implementation.

Lastly, environmental uncertainties are investigated as for what role they can play for the company. These environmental uncertainties or trends need to be investigated in order to know what is possible when thinking of offering a new value proposition to a customer. These environmental uncertainties can accelerate the demand for service related value propositions due to, for instance, new regulations or new laws. When there are new obligatory safety measures that needs to be in place, the company can proactively move towards the customer and offer them their services. Environmental uncertainties can be identified by using a PEST-analysis. This is an analysis of Political, Economic, Social, and Technological forces (Kraaijenbrink et al, 2013). This analysis can be extended when adding Legal to its forces. Trends that will be investigated include: Industry 4.0., Virtual Reality or Augmented reality, self-diagnosing sensors.

Researchers, (Lee et al, 2014), investigated the fourth revolution of the industry (Industry 4.0 from now-on) and in addition, the trends of manufacturing and service transformation in big data environment, as well as the readiness of smart predictive informatics tools to manage big data, thereby achieving transparency and productivity. Under the industry 4.0 concept, Jay Lee et al. (2014) found that the astounding growth in the advancement and adoption of information technology and social media networks has increasingly influenced consumers' perception on product innovation, quality, variety and speed of the delivery (Lee et al, 2014). This means that two types of innovative developments are getting more important, namely service innovation and industrial big data. This industrial big data concept is an interesting one for the company studied in present research. Where most data is human-generated or human-related, there is a shift happening towards a machine generated data. This may include machine controllers, sensors etc. The growing role of such smart technologies also has improved manufacturers' access to strategic customer data (Rijsdijk et al., 2007). (Watson et al., 2002) offer a conceptual foundation for marketing based on ubiquitous networks. In a networked world (i.e. remote control over and data capture by smart technologies), manufacturers thus control a powerful resource in terms of product usage and process data in the installed base. These new trends can be used to facilitate the implementation of servitization by coming up with new solutions to deliver value in use. This could be interesting for present research when not used yet in the company and, thus, will be investigated in present research. Although this will probably be more critical for the plants in developed countries than in not so developed countries, when applied well in the Netherlands, this can be a guideline and stepping stone for other countries to follow.

3. Methodology

The research methodology describes which steps and actions need to be done in order to get an answer to the central research questions. First, a description is provided about how data was collected and why. After that, an identification of the stakeholders will be provided which was used in order to decide who to include. Data collection of this research will be done both in internal as well as external ways. Internal data collection will be done by the means of interviews and through documents. External data collection was done by interviewing customers of each segment, competitors, and investigation of trends. In addition to the interviews, a questionnaire is spread by email to customers. Lastly, data protection and approval of the Ethical Committee will be presented.

3.1. Data collection

To explore the different theories stated in chapter 2, data has been collected from internal employees, competitors and customers while keeping in mind the theories provided in the previous chapter. The theories provide factors that need to be explored in order to know where the company should improve and how. From all segments, input was collected by asking what their needs are and how they deal with these needs. When having more knowledge about the needs of the customers, the better perceived service quality can be met by using the right customer segmentation (change in attitude towards segmentations might be in place). The factors that are derived from the literature is being placed under internal or external factors and tested in relation with the OEM tested in present research.

3.2. Interviews

For the internal data collection as well as customer data, interviews and meetings were held. The qualitative interview is used in qualitative research of all kinds, whether positivist, interpretive or critical. It is used in case studies, in action research, in grounded theory studies, and in ethnographies (Myers et al, 2007).

The stakeholders in the service area of the company were interviewed in order to get the answers needed for this research. With the help of the management, the company helped identifying key customers that were needed to be interviewed. The company wanted to have an account manager present during the interviews, because they could support the researcher when questions were asked that had nothing to do with the cause of this research. Important for interviews is that the quality of the answers greatly depends on the matrix of questions that are being asked. For this research, semi-structured interviews were held. Semi-structured interviews consist of several key questions that help to define the areas to be explored, but also allows the interviewer or interviewee to diverge in order to pursue an idea or response in more detail (Britten, 1995). The qualitative nature of the research also implies that the interviews are not over-prepared, making use of an incomplete script to stimulate openness, flexibility and improvisation (Myers et al, 2007).

An advantage of a qualitative interview approach over other forms of data collection is that the interviewer is able to gather complex, in-depth data that is not as easily obtained through questionnaires or question-and-answer interview approaches (McQuerrey, 2018).

The customers all originated from the in the introduction mentioned customer segments: utilities and CIG (commercial, institutional, governmental), this is because of the reason that Oil & Gas and datacenters are expected to remain to do their services directly with the company. No further exclusions were made in the sample. Of course, more interviews improve the reliability of the outcomes. But due to the time limit of present study, only 10 strategic customers were identified and interviewed.

By retrieving the data from the stakeholders, a value proposition map can be made in order to see where the company should improve and what the requirements should be.

The questions were asked in Dutch, since this research has its focus on the Netherlands and therefore the interviewees were dutch as well.

The complete interviews can be found in appendix A to D.

3.3. Questionnaire

The reason that a questionnaire was spread in addition to the interviews, is that it provides speedy results with a large potential audience, a larger sample group means the data is more generalizable. Another advantage of a questionnaire is the fact that it is relatively easy to fill in and it secures anonymity. Although questionnaires do have their disadvantages like skipping some questions or giving dishonest answers, the before mentioned pros exceed these disadvantages by increasing the amount of data retrieved. In addition, a questionnaire was spread to cover the most important questions, while the interview provided an in-depth data collection. The questionnaire was sent to 117 potential respondents. These 117 potential respondents were selected because of their subscription on the newsfeed of the company or because they were a customer of the company in the last 9 months. The procedure followed the guidelines of the new GDPR (General Data Protection Regulation) law (Europian Union, 2016). The aim of this questionnaire was to get around 15 respondents, since 10-15 % is an acceptable response rate (Fryrear, 2015).

The extensive questionnaire can be found in appendix E.

3.4. Internal factors

For gathering data regarding which factors are internal, how they are in place at this moment, what could be improved and how, interviews were held both internally as well as externally.

For the analysis if the company is following a servitization strategy, meetings with internal stakeholders were held. In addition, externally held interviews with customers identified the demand of new service opportunities that deliver value in-use. Like mentioned above, an advantage of a qualitative interview approach over other forms of data collection is that the interviewer is able to gather complex, in-depth data that is not as easily obtained through questionnaires or question-and-answer interview approaches (McQuerrey, 2018). Because of this, the demands are getting more

tangible. Customer centricity is part of this servitization strategy. Through the means of interviews, it has been explored if this customer centricity is present at the company. Since servitization is more about opinions of the customers and identifying demands, interviews seem appropriate to get this data. Internal data is also collected to get an idea of the strategy the company is trying to follow currently. Investigated is whether the before mentioned operational excellence is achieved or not.

Furthermore, the success factors of Gebauer et al., (2006) were tested by externally held interviews as well as internal meetings (Gebauer et al., Success factors for achieving high service revenues in manufacturing companies, 2006). The individual factors are identified and tested, and recommendations were made accordingly. Interviews will provide data on factors 1,2,3,4,6, while internal data collection is expected to give information on all the factors. The questionnaire is spread because of the power of repetition.

The hybrid offerings theory of Ulaga et al.,(2011) was also tested through both interviews and the SWOT (Ulaga et al., Hybrid offerings: how manufacturing firms combine goods and services successfully, 2011). The four critical resources and five critical capabilities to successfully combine goods and services identified by Ulaga et al.,(2011) were explored to see if they were present at the company, while afterwards analyzing the steps or possibilities to improve on these resources and capabilities afterwards (Ulaga et al., Hybrid offerings: how manufacturing firms combine goods and services successfully, 2011). This includes exploring the demand and possibilities for contracts and sensors, among other things. It is expected that interviews will give insight into whether or not the capabilities to successfully leverage the resources of the OEM are present at this moment, since a qualitative interview approach provides the gathering of complex, in-depth data that is not as easily obtained through questionnaires or question-and-answer interview approaches (McQuerrey, 2018). Internal data is collected to gain insight whether or not the company has sufficient understanding of the customer, as well as a known installed base.

Moreover, The quality of the present service delivery is an important factor to explore, as this brings opportunities for the company to improve and thereby increasing their revenues in the service market. In order to get the data that is needed to answer the research question, the 5 dimensions of the Servqual will be explored. Questions were developed that provide an answer to whether or not the company is responsive, how the performance is etc.. These answers give insight in the service quality the customer is experiencing from the OEM. The interviews and questionnaire will provide this data.

In addition, different customers from different segments were interviewed in order to see if the segmentation of the company at this moment is sufficient and what the demands per group are. By means of interviews, data will be collected that shows if customers from different segments (at this moment) might have similar demands or problems, which will prove if the company must make a switch to newly developed segments. The answers these customers will give will consequently point out detailed demands which can be used for the value propositions accordingly.

At last, for the internal data collection, data is gathered through the means of a SWOT analysis. 11 stakeholders in the service department of the OEM will give their opinion of the Strengths,

Weaknesses, Opportunities, and Threats. If there is a gap between their opinions and the opinions of the customers, this will give the OEM something to think about. This will test the disconfirmation factor of the customer. Also, the 6 success factors to increase revenues on service activities will be explored and analyses will be done to improve on these factors.

3.5. External factors

At last, a PEST analysis is done with the help of secondary sources and reports. This was done to see what opportunities, as well as which threats are arising in the future. In the results (chapter 4), these topics will be further elaborated.

This PEST analysis is included in each theory, and is performed in order to prove that opportunities or threats indeed are possible to implement. Through the means of internet reports it is identified that, for instance, new innovations are possible and can help in the flaws of the OEM at this moment. This will strengthen the recommendations.

3.6. Study procedures

At first, all potential participants were informed by the study either by word or by electronic mail. This mail consisted of information and purpose of the research and interview. In addition, an appointment is made to meet the potential participants and to carry out the interviews. Participants were asked for their function, and were assured that their name will be completely anonymized in this research in order to protect the privacy of the participants. The questions were asked in order to see why customers value or do not value the present service offering and to identify potential opportunities.

First, general questions were asked. To begin with, the function and company segment. After that, they were asked for their experiences towards service quality and their satisfaction. Questions that can be thought of with regards to this matter are: ‘are there negative experiences, how satisfied are you with the service delivered’, etc. In addition, it was asked what they think of the service offerings of the company and if there is missing anything. At last, the customer is asked what their opinion is on new technological innovations, that will help services done by the company.

The questions will be based on the servitization theories elaborated on in chapter 2, including customer service satisfaction, customer segmentation, service offerings.

3.7. Ethical committee

Performing research which includes human beings requires permission of the Ethical Committee of the faculty of Behaviour, Management, and Social Sciences (BMS) of the University of Twente. Approval has been given under file number BCE18448.

3.8. Data processing:

Since interviews become better understandable when summarized while keeping only the relevant information, it is chosen to summarize them instead of writing them down as a whole. It is expected that the summarized interviews will also provide the necessary results for present research.

A sample of the interviewees is given in the table presented below. This table shows the distribution between the segments as well as the occupation of the interviewees. Since the focus of this research is on the segments utility and CIG, all of the respondents are originating from these segments.

Interviewee number	**Date**	**Location**	**Duration**	**Occupation at company**	**Segment**
1	28-05	Hengelo (OV)	54 minutes	Team leader logistics	Utility
2	04-06	Tilburg	58 minutes	Senior technical advisor electrical engineering	CIG / end-user
3	06-06	Groningen	33 minutes	Head Installation manager	CIG
4	07-06	Oldenzaal	46 minutes	Director	CIG / service provider
5	13-06	Zwolle	89 minutes	Policy expert maintenance systems	Utility
6	14-06	Rosmalen	31 minutes	Commercial manager system integration & engineering	CIG / service provider
7	20-06	Ijmuiden	36 minutes	Manager Maintenance policy	CIG / end-user
8	26-06	Almelo	90 minutes	Asset manager	Utility
9	27-06	Zoeterwoude	54 minutes	Manager Maintenance policy	CIG / end-user
10	02-07	Hengelo (OV)	48 minutes	Business development manager	CIG / service provider

Table 1: Interviewee sample

The interviews provided sufficient data, which has been analyzed and used for this research. Similar points are being merged for the sake of simplicity and understandability.

4. Findings

This chapter explains the findings obtained in this research. First, the findings of the interviews are presented. After that the results of the questionnaire is shown. Next, the findings concerning the environmental uncertainties are presented with the help of a PEST analysis. To conclude this chapter, a reflection of the findings is given.

4.1. Internal factors

As mentioned before, an important feature of servitization strategies is a strong customer centricity. Customers are not just provided with products but broader more tailored solutions (Baines et al., 2009). However, after conducting the interviews, it is clear that there is a lot to gain in terms of customer centricity. All the interviewees told that communication is a difficult factor for them. The communication is difficult when not knowing the right person, interviewee 4 mentioned. While others said that the OEM is not flexible anymore due to its size and attitude (1,3,4,6,7). This attitude is being seen as arrogant, and is working against the OEM in new service possibilities. In addition, the manufacturer has no fixed price for their work, meaning the service provider has a lot of entrepreneurial risk when making a tender, interviewee (6) mentioned. Almost all service budgets are translated into percentages from purchase budgets, so when the relationship is improved and no irritations are present, the end-customer will most likely stick with its present supplier of systems, and services in addition. As servitization is about adding services to the products, another possibility for the company, which was indeed confirmed by the interviewees, is to offer more comprehensive contracts and to start offering lease-constructions. Through this way, the company will start selling services attached onto its products.

Another critical point is the fact the OEM does not want to share any knowledge about their products, while there is a desire from the customers to have this (interviewees 3,4,5,6,7,8,9,10). This does not comply with the first two success factors of Gebauer et al., 2006 presented below in figure 4 (Gebauer et al., Success factors for achieving high service revenues in manufacturing companies, 2006). In addition, when there is a fault in the systems the OEM is selling, the customers do not get timely updated on this matter, sometimes not even at all. Interviewee 3 said it was aware of a defect in the system, heard from another company, yet it took a year for the OEM to finally sent an update regarding this matter. However, this company had multiple different names in the computer system of the OEM, so it received also multiple letters, all containing the same information (interviewee 3) . This is not beneficial for the relationship between the companies. In addition, one interviewee (6) said that the terms and conditions were not always good, that the credit conditions (solvency and liquidity) were too high for them to cope with and that they are choosing the competitor instead because of this. This has consequences for the factors: Market oriented service development and clearly defined service development process, Service offering focusing of the value proposition to the customer and Relationship marketing.

In addition, after the interviews, it became clear that the OEM does not store data about failure rates or reasons; according to a service engineer, no data is kept with regard to how often and in which systems faults occur. This is a critical resource of a manufacturing firm which it can derive through its installed base. However, it is also clear that the installed base is not mapped at all, they do have

some estimates, but these do not concur with the estimates of the different product managers. This is one of the findings that show that the OEM is still mainly focusing as a manufacturing firm instead of having hybrid offerings. The sales persons and service engineers are facing each other because of different interests, since the sales persons are reviewed for their sales and therefore putting new systems above service on older systems..

Furthermore, participants all agree on the point that the service the OEM is delivering, with some companies satisfaction being higher than others, is of high quality and they are satisfied, except for interviewee 5 who is not satisfied. However, when specifically looking at the 5 dimensions of the Servqual model (Tangibles, reliability, responsiveness, assurance, and empathy), that 3 of the 5 are not perceived as good. Responsiveness takes a long time according to the customers, while empathy is to be named low in the way that the company does not understand and know the customer well in terms of demands and needs. Assurance is a found to be a mixed dimension. Assurance combines the factors communication, credibility, security, competence and courtesy. Like mentioned before, when there is a fault in the systems the OEM is selling, the customers do not get timely updated on this matter, sometimes not even at all. This is an example of poor communication and provides a lack of credibility for the customers. In addition, some interviewees (1,5,8) said that they are paying researchers to find out why a fault is happening so that they can prevent it the next time. Credibility suffers because of this as well, since they should know everything about the faults of their products as OEM. Also mentioned earlier, is the attitude of the company which is not perceived as good, meaning that the courtesy factor cannot be named as good either. Despite of this, the competence and security of the OEM is found to be sufficient, or even good.

Moreover, after having spoken to a stakeholder in service offering, it is clear that the service contracts that are offered by the company studied in present research are not clear in what they offer and how they differ between them. In addition, one would expect a discount when engaging a contract, this is not the case however. At this point, contracts are not sold often. But there are interviewees (1,4,5,8) that say the OEM is too expensive in their service offering. Selling them a contract might be best for both in such a situation. To increase sales of contracts, the company should redefine their offering in this matter. The OEM is active in disclosing contracts, but at this moment it is hard to get an agreement due to before mentioned reasons. One organization (interviewee #7) says it cannot reach agreement due to the inflexibility of the OEM (knowledge sharing can be the solution, since they do not have capacity problems).

Also, interviewee 10 identified that the OEM had no data on the systems in use by this company. He told the researcher during the interview that he would appreciate, and would pay for, inspecting all the systems on the business site of the company so that the OEM could let him know what to do with the particular systems. A better insight of the installed base would be a good thing he said, since the OEM can then, proactively, give advice concerning newly developments/innovations in the electrical world what is useful for that particular customer.

Lastly, every company interviewed faces a shortage of technical schooled personnel. This is seen as a problem by all of the companies. There is too much work, which cannot be completed with the current people, and new employees are hard to find due to the competitions between companies.

4.2. External factors

In order to come up with a deliberate strategy, one must first assess both the internal and external factors that are of influence on the company.

One way for firms to assess exposure to external forces within its industry is through a PEST analysis. This is an analysis of Political, Economic, Social, and Technological forces (Kraaijenbrink et al, 2013). This analysis can be extended when adding Legal to its forces. PEST analysis can be useful when judging which trends are existing in the market and how to deal with them. In this research it is used as a framework to assess which trends are existing in the industry of power management.

Political: government regulations and legal factors are always an important factor to keep in mind when working in the power management industry. Safety, environmental damages, and privacy are the biggest trends in this matter. The company can use these trends to, proactively, inform their customers about the newest innovations in their systems which will improve safety for example. When combining regulatory and technical feasibility, the customer will be most likely persuaded to buy a new product or to update/upgrade their older systems. In addition, all of the Government´s growth drivers-infrastructure, smart cities, etc. will lead to increased demand for electrical energy, and hence the segment will grow accordingly (Batra, 2015). This will have an impact on the company studied in present research.

Economic: While growth has peaked in 2017, the outlook for 2018 and 2019 remains very positive with growth rates well above potential. Wage growth is expected to pick up as the labour market tightens and unemployment falls to historically low levels (European Commision, 2018). With the economic growth, more switchgear is expected, and with (most likely) more products being sold, there is an opportunity for more service activity. Also, with more work to be done, companies tend to focus more and more on their core business, meaning that companies want to decrease their capital expenditures as much as possible. This gives multiple opportunities, from more maintenance so that the systems will last longer, to offering a lease-construction where the system is paid for through a fee. In addition, the rise of Uber, Airbnb and other 'platforms' can be seen as a trend in business models. Research of Davis (2016) states that this 'sharing economy' is going to transform the nature and location of markets for capital, labor, products, and services, as well as the institutions that regulate and build on them (Davis, 2016). One of the four categories Juliet Schor (2016) described is the exchange of services (TaskRabbit, time-sharing banks) (Schor, 2016). This exchange of services through the means of platforms can be seen as some sort of outsourcing, but with more control by the company self.

Moreover, Chakravorti and Roson (2005) constructed a model to study competing payment networks in their pricing methods (Chakravorti et al, 2005). This could prove to be helpful when the outcome will be to develop a platform, since the way this platform is designed can be similar to that of the service world.

Social: With the expectation that the population in the Netherlands will keep increasing in the coming years, more demand for energy is also likely to happen (Statista, 2018). In addition, there is an increasingly shortage of technical schooled personnel according to the Dutch Central Bureau for

statistics (CBS) (CBS, 2017). Because all companies face this trend, including the company studied in present research, this will cause both threats as well as opportunities in the way that the company can act on this fact by coming up with a solution.

Technological: Like mentioned before, technological factors will positively influence the growth of the switchgear industry, since these technological factors rely on energy. Also, new technology can influence service operations by identifying problems much faster with the help of data. Furthermore, reports say that self-diagnosing machines/systems will be more and more available and applied in businesses (Smith, 2018). However, when searching for such a 'self-diagnosing' system in the literature search engine 'Google Scholar™', there is almost no literature found in this area. This will be an important trend to verify in present research because of the way it can impact the service market drastically. By making use of machine learning and artificial intelligence, where a machine will learn by itself and can identify potentially faults long before it will have an impact, customers can value the service more and at the same time there is the possibility that they will be bond to the company for a long time without doing the maintenance themselves. An example of this is the business model of Rolls-Royce. When looking at the value proposition Rolls-Royce is delivering to its customers in the civil air industry, one can easily see how it influence the power management industry as well (Rolls-Royce, sd).

According to trends identified by Deloitte™, utilities will likely enhance their relationship and knowledge of their customers by implementing advanced customer self-service, mobile applications, data analytics, communication, and energy management solutions in the future (Smith, 2018). The utility companies will be a digitally enabled shared services organization that will provide fully automated and integrated corporate services, predictive analytics, and forecasting, and will use robotics to minimize manual intervention and optimize headcount (Smith, 2018). To prevent the OEM to be put off-side because of these trends, the need for change is urgent.

4.3. Internal data collection

For the internal data collection, 11 stakeholders in the service business of the company were asked to give their opinion on the current service business.

After asking these 11 internal stakeholders in the service process about the strengths, weaknesses, opportunities and threats, the following SWOT is made:

Strengths	Weaknesses	Opportunities	Threats
1. Being product specialist/ OEM, we own the spare parts 2. Longer product lifetime cycle compared to competition 3. Huge installed base 4. Strong image related to aftermarket products 5. We can offer complementary contracts	1. Unknown installed base 2. Limited (field, internal processes) service capacity, and knowledge, delivery times 3. Current pricing structure 4. Losing expertise on the longer run 5. Growth with present organisation and available resources is difficult to realise and slow 6. Service organisation not mature yet, no clear strategy 7. Lack of 3rd party product knowledge	1. Access to larger part of our IB market, access to retrofit market 2. Ability to gain knowledge/ experience with "renting/ leasing" business model 3. Ability to grow total service business due to increasing population 4. Specialization can grow our high-end service business, automation services 5. Bigger scale, bigger scope	1. Competition increases due to separation (private segment) 2. Customer-competitor will increase expertise on the involved systems and become competitors 3. Use of contracted pricing for private market 4. Lower price level in general 5. Rise of new business models (e.g. lease) 6. Demand for one-stop-shop provider

Table 2: SWOT analysis

The biggest problem when analyzing this table is that they see a lack of knowledge about their customers as their biggest weakness. The company does not have a clear idea what their installed base is and how to serve them. Without having the knowledge about the customer, making specific value offerings is hard. In addition, the stakeholders identified more weaknesses and threats than strengths and opportunities, that is a risk as well. What is clear from the above table, is that there is an opportunity in increasing the service operations, and that the most probable way of achieving it in the

eyes of the stakeholders is by the means of teaming up with partners. So, this will be regarded as an option and will therefore be investigated.

In addition, the internal stakeholders of the OEM made a comparison with their biggest OEM competitors in terms of service. This shows not only that the results mentioned in chapter 2.1. are valid, but also that the competition is doing much better in this regard.

Elements	OEM	Competitor 1	Competitor 2	Competitor 3
Services and aftermarket support, knowledge Product knowledge & 24/7 support	4	4	5	4
Availability locality services	2	5	5	5
Sales and communication tools clarity of website, brochures etc.	2	4	5	4
Availability of service solutions contracts, trainings, different levels of maintenance	2	4	5	4
Image & reputation customer support	3	4	4	4
Selling & relationship with distributors and customers	3	4	4	4
Total	**16**	**26**	**29**	**26**

Table 3: Comparison between competitors ; Ratings: 1 (very negative), 2 (negative), 3 (neutral), 4 (positive), 5 (very positive)

4.4. Questionnaire

The questionnaire was made with participation of the company. Of the 117 potential respondents, 17 filled it out in the end. This seems like a small response rate, but 14.5% is solid for an external sent questionnaire (Fryrear, 2015).

The distribution of the questionnaire was not as hoped beforehand, with 15 respondents originating from the CIG segment, 1 from the utility, and not 1 from the oil & gas and datacenters (the last respondent is retired).

Of all the respondents, none make use of the studies or trainings provided by the OEM as well as contracts. Overall, the respondents are quite satisfied with the services provided by the OEM, with only 3 not satisfied due to long delivery times or high prices.

In addition, when asking what respondents want to see added to the service portfolio of the OEM, the only thing replied was: be more flexible in pricing of maintenance and repairs. Hence, flexibility proves to be, being consistent with the interviews, an issue.

5. Discussion

The aim of this study was to identify the factors, both internal and external, that contribute to the implementation of servitization and, hence, make it possible for the company to sustainably grow revenues in their service operations.

When looking at the results mentioned above, there are multiple challenges to overcome. After analyzing the interviews and the data from the questionnaire, it is clear that the biggest challenges the company studied in present research is facing is the lack of communication (including not willing to share knowledge), not being flexible and having a negative (arrogant) attitude. These challenges emerged during most interviews, while there are multiple differences among the detailed description of these challenges.

The impact of these challenges is at some cases (interviewees 4,6,10) one of the reasons that the company has lost service opportunities in the past, while others (interviewees 3,5,7,9) are getting irritated because of bad communication, not being flexible and having a negative attitude.

The trends of the PEST analysis are presented throughout the discussion to support the other findings.

5.1. Internal factors

When analyzing the results, it is clear that the biggest opportunity is to position the company as the asset 'specialist' that supports third parties with sharing knowledge of the products. To do this, the company can invest in technical solutions that will help with remote monitoring, predictive maintenance and training.

Improving the contract offering will also prove to be helpful, since this will keep the customer sticking to the OEM. This will increase the customer value proposition in the areas of price, selection and functionality, as seen in figure 6: customer value proposition.

When looking at the trends, the most important one is adding connectivity to the products. With the so called 'smart grids', companies can reduce downtime and gain greater efficiency, increase safety, improve monitoring capabilities, monitor power connections condition, monitor circuit breaker performance as well as monitor environmental status (Icandri, 2018). These smart grids are part of the before mentioned 'industry 4.0.' concept.

From the interviews it is clear that there is an opportunity for the OEM to start collecting data from their installed base in order to exploit this knowledge. Internet of things for predictive maintenance is a trend which can be used in order to get this understanding. Those sensors can help in predicting failures through the means of warmth detection, humidity detection among others. While privacy is of big importance due to the recently introduced GDPR legislation, it will not cause any problems for the sensors in the way that the OEM may not gather data which can be redirected towards a unique user (Europian Union, 2016). When taking this into account, there are no further boundaries for implementing sensors into the systems of the OEM.

When applying connectivity devices on the current and future switchgear solutions, a lot of data can be gathered. This so called 'big data' can be useful for the OEM in a way that the OEM can be more flexible, while keeping the customer more up-to-date. There are a lot of advantages to be investigated when using big data, as McKinsey Global Institute stated (Manyika et al., 2011). As well as using this data on newly developed systems, it can prove to be helpful for the service and aftermarket segment as well (as can be seen in figure 7). Because the costs of operation are driven by service costs (e.g., maintenance, repair) and machine downtimes (e.g., due to unexpected incidents), offering solutions to decrease these to the customer can open up further value potential. One example to decrease this is remote monitoring. The OEM can offer software solutions that allow technicians to carry out a diagnosis without visiting the site (Manyika et al., 2011). As well as decreasing maintenance costs, there is also an increase in productivity and a reduction in time to market (Manyika et al., 2011). When the company decides to add connectivity to its systems with additional services attached to it, they will be following a servitization strategy.

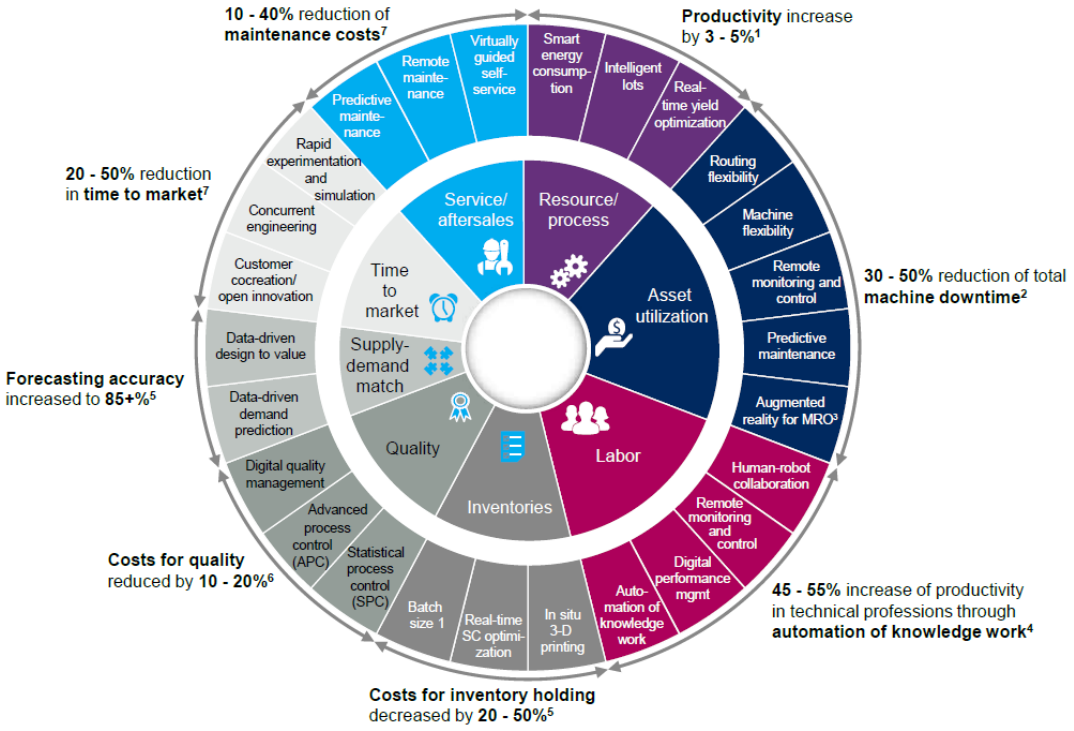

Figure 7: Big data: the next frontier for innovation, competition, and productivity (Manyika et al., 2011).

With the economic growth, companies tend to focus more and more on their core business since they can increase business operations accordingly, meaning that companies want to decrease their capital expenditures as much as possible. This gives multiple opportunities, from more maintenance so that the systems will last longer, to offering a lease-construction where the system is paid for

through a fee. The interviewees made clear that there is a lot of demand in the market for leasing such systems. This has huge potential for the OEM, since they can, through this way, bind the customer to their service department. Since most of the materials of the systems sold are recyclable (copper, steel, aluminum), the company can start thinking about the circular economy terminology (designing with the idea that the raw materials can be recycled). When the company decide to start leasing their systems to the end customers, they will be assured to service that system throughout their life-time and will be able to save cost when it is the end of their life-cycle by recycling most of it. This will be good for the reputation ('thinking green'), will save costs for purchasing raw materials and communication will increase. Rolls-Royce is doing it with their airplane engines at this time, which can be a perfect example for the OEM when implementing a leasing-construction. A drawback of this construction will be the change of the balance statement of the company, since leasing means the system will cause it to stay with the company as an asset. This has an impact on the equity of the company.

Increasing the knowledge about their customers (which system, where) and share knowledge (how to repair or service a system) to the customers will increase revenues on service activities, as mentioned by Gebauer et al., (2006) (Gebauer et al., Success factors for achieving high service revenues in manufacturing companies, 2006). This will increase at least 4 of the internal success factors and will therefore have a giant impact on the organization.

End customers complained about the communication, this problem can be resolved by developing a database wherein all installed base is known and which type of system. In order to do this, sensors can be included in newly sold products, as well as giving them at the next service/maintenance activity. Whereas this industry is rather conservative, but necessary, customers desire an OEM that thinks in solutions for the customer and whom proactively warns them if there might be some problem occurring.

To fully implement the internal success factors, the OEM must obtain comprehensive information on customer needs. Through the way of interviews some of these needs are identified. Therefore, more communication will be needed between the customers and the OEM to keep obtaining this information. It becomes clear that the focus of the value proposition to the customer must be changed, since at this moment there are a lot of negative things to be heard. Also, the service strategy, being operational excellence, is not yet achieved, meaning that the OEM is a bit 'stuck in the middle'. To be successful and get more revenues in the service market, the role of services in the corporate strategy must be changed to a conscious service offering.

Ulaga et al., (2011) identify that the installed base of goods represents a unique asset for most manufacturing firms (Ulaga et al., Hybrid offerings: how manufacturing firms combine goods and services successfully, 2011). The fact that the OEM has no knowledge about their installed base is a shortcoming, since this would give them a lot of information. In addition, according to a service engineer, no data is kept with regard to how often and in which systems faults occur. This causes them to miss out on one of critical resources of a manufacturing firm, as identified by Ulaga et al., (2011) (Ulaga et al., Hybrid offerings: how manufacturing firms combine goods and services successfully, 2011). To collect this critical resource, the capability to process service-related data

must be in place. This can be achieved by mapping the installed base and install sensors into the systems to capture the data.

In addition, like mentioned in the results part, the sales persons and service engineers have different interests. This means that the sales persons are purely focused on selling the systems, meaning they will make sure there is no need for service on this system if that will cause them to end the deal. When this is happening, it will become hard to convince the customer that, in comparison to what the sales person said, service is important after all. Not knowing the installed base is therefore a major constraining internal factor, that needs to be overcome.

End customers complained about the communication, this problem can be resolved by developing a database wherein all installed base is known and which type of system. In order to do this, sensors can be included in newly sold products, as well as giving them at the next service/maintenance activity. Whereas this industry is rather conservative but necessary, customers desire an OEM that thinks in solutions for the customer and whom proactively warns them if there might be some problem occurring.

Assurance is a dimension of the Servqual model. Communication is one of the combined factors that is included in the assurance dimension. While the other parts of 'assurance' are all sufficient, communication is the biggest impeding factor for the OEM in their service business.

Therefore, this research recommends to decompose the 'communication' from the 'assurance' dimension of the Servqual model, therefore contributing to the literature.

Moreover, when analyzing the results, it is clear that the biggest opportunity is to position the company as the asset 'specialist' that supports third parties with sharing knowledge of the products. To do this, the company can invest in technical solutions that will help with remote monitoring, predictive maintenance and training.

Improving the contract offering will also prove to be helpful, since this will keep the customer sticking to the OEM. The types of contracts the company is offering at this moment are not clear in the way they differ and what to expect when encountered. Also, there is no clear reason why one should upgrade a contract to a higher level, there is no discount or no clear additional activities included. When improved, this will increase the customer value proposition in the areas of price, selection and functionality, as seen in figure 6: customer value proposition.

Furthermore, the lack of knowledge sharing and communication is indicated to be an opportunity for future service activities at some companies . These companies identified the demand for more communication or knowledge in return for some sort of fee. While at one company it was all about studies wherein the systems' life cycle will be investigated, another company told that they would like to function as a service provider; with the knowledge of the OEM, they would service and maintain the systems at their customers, and are willing to paying a fee in return.

Lastly, when looking at these challenges, there are still improvements to be made in order for the OEM to achieve operational excellence. There are multiple success factors (as shown in figure 4) that

align with the operational excellence strategy, however, the OEM is not completely aligned with those factors. For instance, communication is a big success factor, but the OEM can really improve on this matter, according to the interviewees. When looking at the six success factors of Gebauer et al., (2006) one can see that the company studied in present research is not yet at a sufficient level (Gebauer et al., Success factors for achieving high service revenues in manufacturing companies, 2006). While they have a separate service organization, their service strategy of operational excellence is not yet consistent and there is not a real service culture present throughout the company.

The table presented below summarizes the before mentioned factors and whether they facilitate or constrain the implementation of servitization in the company studied in present research.

	Success factors	**Facilitating / constraining at the company**
Internal factors	Customer centricity	Constraining
	Market oriented service development and clearly defined service development process	Constraining
	Service offering focusing of the value proposition to the customer	Constraining
	Relationship marketing	Constraining
	Service strategy	Constraining
	Separate service organization	Facilitating
	Service culture	Constraining
	Product usage and process data from installed base	Constraining
	Product development and manufacturing assets	Facilitating
	An experienced product sales force and distribution network	Facilitating
	Field service organization	Facilitating
	Service-related data processing and interpretation capability	Constraining
	Execution risk assessment and mitigation capability	Constraining
	Design-to-service capability	Constraining
	Hybrid offering sales capability	Constraining
	Hybrid offering deployment capability	Constraining
	Sufficient quality of service	Facilitating
	Good segmentation	Constraining
	Value proposition towards segments	Constraining
	Disconfirmation	Facilitating
External factors	Political factors	Facilitating
	Economic factors	Facilitating
	Social factors	Facilitating
	Technological factors	Facilitating

Table 4: summarized factors contributing to the implementation of servitization

5.2. Strengths and limitations

5.2.1. Strengths

Present research has multiple strengths. One strength is the data collection; the interviews were held with the persons responsible for maintaining the systems at the customer. Also, since the companies that were interviewed come from all kinds of industries, a representative view of the present situation can be made. Another strength is that the interviewees were consequent in their answers, with multiple challenges being identified by multiple interviewees, increasing the reliability and validity of the answers.
Another strength is the fact that the interviews were semi-structured, given more opportunities to get the underlying information from the participants.

In addition, the interviews were all sent, after being summarized, to the interviewees and the account managers of the company whom was also present during the interviews, giving them the chance to see if the researcher has understood them and correct if this was not the case.

Furthermore, a strength is that present research has been confirmed by another internally organized research, coming with same conclusions. This research will strengthen the other study even more, and vice versa.

With almost no literature available of internal and external factors that contribute to the implementation of servitization, present research is one of its kind by identifying these factors and presenting them.

At last, the recommendations can be seen as a strength, given the company some practical contributions from this research, given them the opportunity to design a sustainable future in a service market.

5.2.2. Limitations

Like every research, present research does have its limitations. The biggest limitation is the risk of socially desired answers, both at the interviews and the questionnaire. This limitation is reduced by explaining that even though there was an account manager present during the interviews, the interviewees should not hesitate to give their honest opinion, even when it would hurt the account manager or the company. At the questionnaire it is explained that the results will be completely anonymized, and the data will be used to improve the service offering to them. Due to explaining the respondents this fact, the bias of socially desired answers is reduced.

Another limitation is the fact that with conducting qualitative research, there is always going to be bias to some extent, since there is always a form of subjectivity to the answers being made by the researchers. In addition, since the interviewees all have a buyer-seller relationship with the company, there might be a bias due to the fact of commercial answers.

Regardless of the effort made to search comprehensive studies to include in the theoretical framework, some may not be included. The same goes for the identified factors, while effort has been made to identify the most important factors that contribute to the implementation of servitization, some may not be included.

Furthermore, this study lacks generality due to only being conducted in the Netherlands, different customers in different countries may have other demands.

Lastly, the number of interviews can be seen as a limitation, 10 interviews are not that many, and it is always better for the validity and reliability of a study to include more interviews, however, due to time limit this way not possible in present research.

5.3. Future research

This research focused mainly on the challenges present at this moment with regards to the service business, what impact it has and how to improve on it. It has been primarily been exploratory, therefore, future research is needed how to implement industry 4.0. exactly in the organization and what kind of consequences this will have. It should be studied how the service organization will look like and what is needed in the algorithms in order to get understandable knowledge out of the data gathered from the sensors. Future research needs to include what information the sensors should measure, what type of predictors are necessary to measure potential faults.

Now the factors are identified that contribute to the implementation of servitization, future research should focus on which factors must be given the highest priority.

In addition, potential in financial terms when adding leasing in the portfolio of the organization, as well as industry 4.0. should be examined in future research.

Future research is also needed to investigate which partners to include in sharing knowledge, in order to get maximum revenues. Also, more interviews might be needed to get a more reliable answer to what are the different demands of the customers.

Furthermore, not one of the theories mentioned in chapter 2 included the possibility of partnering or knowledge sharing, giving opportunities for further elaborations through future research.

At last, this research has been conducted with the Netherlands as operating country. However, since this OEM is globally active, similar research should be conducted to get a clearer picture as how to grow revenues in a service market in other countries.

6. Conclusions & recommendations

6.1. Conclusions

The goal of this research was to identify the factors that contribute to the implementation of servitization and, thus, contribute to growing the service business

A research question and multiple sub questions were developed to reach this goal, which will be answered, and reflected on, below.

What internal factors contribute to the implementation of servitization in a company?

When looking for internal factors that contribute the implementation of servitization, multiple studies have been used for the deriving of these factors. The derived factors have been tested with regards to the current service business the OEM is operating at this moment and it was determined if these factors either facilitate or constrain the implementation of servitization. From table 4 it can be seen that most of the internal factors are not yet in place at the company or not at a high enough standard. At this moment, it can be concluded that most internal factors, being 14 out of 20, are constraining the company in the implementation of servitization, and there is a huge potential in improving or innovating in that matter.

In addition, when looking at the results mentioned in previous chapter, there are multiple challenges to overcome. After analyzing the interviews and the data from the questionnaire, it is clear that the biggest challenges the company studied in present research is facing is the lack of communication (including not willing to share knowledge), not being flexible and having a negative (arrogant) attitude, according to the interviewees. These challenges emerged during most interviews, while there are multiple differences among the detailed description of these challenges. Lack of communication is seen as the most critical challenge, as this is a big reason the company is losing service activities to third parties and service providers. Because of losing service activities to these service providers, the company is trying to compete with them where cooperating seems like the better option.

The impact of these challenges is in some cases (interviewees 4,6,10) one of the reasons that the company has lost service opportunities in the past, while others (interviewees 3,5,7,9) are getting irritated because of bad communication, not being flexible and having a negative attitude. If the company will not change these things, more service activities might be lost.

What external factors contribute to the implementation of servitization in a company?

When looking at the external factors (derived from the PEST analysis), one can conclude that they all have a facilitating effect on the implementation of servitization in the OEM studied in present research. While all the factors facilitate the implementation of servitization, the company is not yet using these factors in its benefit, as can be seen in table 4.

Trends are not yet really looked into at the company, whereas some trends can give the OEM the increase in revenue they seek. People need a good reason to change, and the external factors can be used to pursue the customers.
When looking at the trends, the most important trend is adding connectivity to the products. With the so called ‘smart grids’, companies can reduce downtime and gain greater efficiency, increase safety, improve monitoring capabilities, monitor power connections condition, monitor circuit breaker performance as well as monitor environmental status (Icandri, 2018). These smart grids are part of the before mentioned ‘industry 4.0.’ concept.

Also there are some environmental trends that needs to be taken into account. Political forces mean that the systems the company is selling need to become safer, while the industry is growing because of initiatives of developing smart -cities and infrastructures . In addition, the economy is still growing to this day (European Commision, 2018), and with a growing economy, more switchgear is expected to be needed. Furthermore, since the population in the Netherlands continues to grow in the coming years, there will be more demand for energy. However, another social trend is the shortage of technical employees, which could be resolved by innovations in the service area, innovations such as VR/AR, sensors, new business models, among others.

What are possible ways for a service company to grow?

A potential way for a service company is embracing the servitization concept, including the integration of sensors into the systems. There is a lot of information to be found about industry 4.0. with terms such as internet of things, machine learning and artificial intelligence. When applying these concepts in the systems the OEM is selling, they can sell service with a contract. Through the means of sensors, big data is gathered and predictive maintenance is possible, as well as remote monitoring and maintenance. McKinsey found that when applying predictive maintenance and remote maintenance, there is a 10-40% reduction of maintenance costs. While augmented reality for maintenance, repair and operations means a 30-50% reduction of machine downtime.

In addition, another way to increase service revenues is through leasing out the systems instead of selling them. In return for a monthly leasing charge, the OEM supplies, installs, and maintains the system. Through the interviews it is clear that there is a demand for leasing the systems. Nowadays, old systems will go to the scrapyard when replaced. If the OEM can recycle raw materials and use them in new systems, it will have less purchase costs, while gaining more service activities at those customers and even gain more revenue, since monthly fees should be more than one-time sale.

What do customers desire in terms of service?

The interviews made clear that the CIG industry and the utility industry were particular interested in more knowledge sharing between them and the OEM, as well as better communication between them. In addition, it became clear that there is demand in the market for leasing systems. Also, there is demand for more flexibility from the OEM's side.

A possible value proposition for the CIG segment is through the means of contract selling in combination with leasing. When adding connectivity to the systems by implementing sensors, data is gathered which can be used for predictive maintenance, improving the communication, attitude while at the same time decreasing the importance of flexibility (due to more predictability). Service providers say that they hear a lot of demand towards leasing from their customers and can function as a partner company for the OEM.

Possible value proposition for the utility segment is more difficult. They also have the demand for better communication and more knowledge sharing, but they are not demanding lease contracts. They do, however, desire more studies as for why certain faults happen and they are willing to, with the means of knowledge sharing, help in discovering the underlying problem. To gain revenues in this segment means making a value proposition which is based on knowledge sharing or access to a database of the OEM.

Which factors contribute to the implementation of servitization in an original equipment manufacturer?

In order to sustainably grow revenues in a service market, servitization seemed the right option. After performing a literature review to derive factors that contribute to the implementation of servitization, 24 factors are identified and tested in relation with the company. The biggest improvement the company can make is increasing the knowledge about their customers (which system, where, what they demand) and share knowledge (how to repair or service a system) (Gebauer et al., Success factors for achieving high service revenues in manufacturing companies, 2006). This will increase revenues on service activities, as mentioned by Gebauer et al., (2006) (Gebauer et al., Success factors for achieving high service revenues in manufacturing companies, 2006). Because of this, the company will move towards a strategy of operational excellence, which they want to pursue. At least 4 of the 6 success factors will improve due to this and will therefore have a giant impact on the organization. This should be achievable for the company.

What is more difficult, is starting up a possibility to lease systems instead of selling them. This will cause a shift in organizational scope in addition to other changes within the financial statements of the company. Leasing a product instead of selling means the company will increase their balance sheet due to an increase in fixed assets. Opposite to this means more service activity and more income streams.

New technologies such as VR/AR can help in improving the flaws the company is experiencing at the moment and therefore increase their value proposition. The demand is present at the customers, according to the interviews, but the lack of it is not causing the decline in service activities at present times.

Improving communication is of importance in order to stop the decline in service activities the company is facing at this moment, as well as growing revenues in a service market by keeping the customers satisfied and know their needs.

To conclude on this part, when improving on the constraining factors while exploiting the facilitating factors, servitization is implementable for the company and an increase in service revenue is expected to be a result of it.

Marketers business developers can, with the results of this study, develop strategies in order to increase the sales of services and therefore increase their market share and/or gross profit.

In the recommendations the different options will be elaborated further on.

The detailed factors that contribute towards the implementation of servitization can be found in table 4.

6.2. Recommendations

The following recommendations were presented throughout this research in order to increase revenues in the service market for the OEM. A *high* or *low* priority has been added to the recommendations, based on the findings. A *high* priority reflects a relatively big improvement

opportunity to increase revenues, while a *low* priority is worth improving on, but with fewer customers desiring that matter.

6.2.1. Improving Communication

Priority: High

Improving communication will need to have a high priority for the company, since this was a point of criticism by all interviewed customers. Some customers said that they, due to weak communication, got fed up by the company. In the service business, a relationship with the customers is important, especially when following an operational excellence strategy. Improving on the communication with customers is part of the success factors identified by Gebauer et al., (2006) (Gebauer et al., Success factors for achieving high service revenues in manufacturing companies, 2006). Steps such as deleting 'double' names in the systems is a relative simple option to improve the relationship between the company and the customer which will result in less risk of irritating the customer.

6.2.2. Improving customer product knowledge

Priority: High

Improving customer knowledge means knowing which systems are present at the customer, as well as knowing what they desire in terms of service. At this point, the installed base is not known, this is a very critical point to improve on. To proactively sell services and therefore be of value to the customers, the company requires a known installed base to target them. Researches, (Ulaga et al., Hybrid offerings: how manufacturing firms combine goods and services successfully, 2011), have identified that product usage and process data derived from the firm's installed base of physical goods is one of four critical resources to successfully combine goods and services. In addition, they identify that the installed base of goods represents a unique asset for most manufacturing firms. Increasing customer knowledge is therefore a high priority for the company. This can be achieved through sensors which captures the most important reasons for a system to fail. This will cause the OEM to have the possibility to proactively sell services accordingly. A possibility is to assign future research to look into how the installed base can be known and execute this.

6.2.3. Invest in the possibility to lease systems.

Priority: High

Word from the customers is that there is a demand or desire for the possibility to lease the systems from the OEM. For the customer this means that they will decrease their capital expenditures (CAPEX). Hence, they will have more resources for their core business, while the OEM will have more income flows from the monthly fee, increasing their service revenues likewise. This recommendation certainly establishes new foundation for further research. The interviewees (4 & 10), who act as a service provider on the OEM systems, mentioned that there is a lot of demand in the market for leasing such systems. This has huge potential for the OEM, since they can, through this way, bind the customer to their service department. Since most of the materials of the systems sold are recyclable (copper, steel, aluminum), the company can start thinking about the circular economy terminology (designing with the idea that the raw materials can be recycled). When the company decides to start leasing their systems to the end customers, they will be assured to service that system throughout their life-time and will be able to save costs when it is the end of their life-cycle by recycling most of

it. This will be good for the reputation ('thinking green'), will save costs for purchasing raw materials and communication will increase. Future research should be executed for this matter.

6.2.4. Redesigning contract offerings

Priority: High

The contract offering of the company should be improved; the types of contracts the company is offering at this moment are not clear in the way they differ and what to expect when encountered. Also, there is no clear reason why one should upgrade a contract, there is no discount or no clear additional activities included. When redesigning the contract offerings, the customer value proposition should be taken into account. The price, selection and functionality in special should be improved in the future contract offering.

6.2.5. Change segmentation

Priority: High

At this moment the company is making use of the four segments mentioned in the introduction. However, after this research, it becomes clear that the segmentation should be based on the demands of the customers rather than the industry the customers are operating in. A better subdivision in the current CIG segment might be to speak about 'third-parties or sub-channel and end-customers (maybe even further distinguishing this category) '. Because this subdivision the company will have a better understanding of the demands of the customers, therefore, targeting them with the appropriate offers is simpler. Sub-channel value proposition will be more about supporting them, which at this point is not being done, while targeting end-customers will be mainly about good communication.

Since utilities and some CIG customers are alike in their demands, the current segmentation might not be the best suitable, updating it may cause an increase in revenues as a consequence.

CIG customers can be big, but small as well. These two different customers might demand another type of value proposition. It could be that the big customer does the service on the systems themselves or via a third party, while the small customer wants the OEM to do all the service. In this case putting them both under the CIG segment might be faulty and a better segmentation might be end-customer and third party (target the service provider of this customer).

Contracts need to be fine-tuned for the appropriate segment, for instance, the company should not offer training to an end-customer that does not want to service or maintain the systems themselves.

6.2.6. Use the PEST-factors in the company's advantage

Priority: High

All the PEST factors / external factors are facilitating for the implementation of servitization, however, they are not yet exploited. Technological trends, for instance, are giving the possibility to start with condition based maintenance and pay-per-use, but this is not yet looked into. Rules and regulations can be used in their advantage too in the way customers can experience a decrease in electrical use and failures when maintaining the systems perfectly, this will cause a decrease in CO2 emissions and therefore decrease the carbon footprint of the company.

6.2.7. Start sharing knowledge with customers

Priority: Low

in addition to weak communication, customers also desire sharing knowledge between them and the OEM. In this way, theoretical data (from the OEM) would be combined with practical data (experiences from the customer), and both companies would gather information through this. Through this recommendation, the OEM will gather information which it can use to further develop their systems and services accordingly.

6.2.8. Invest in VR and AR to help

Priority: Low

Investing in VR and AR to help carrying out repairs, trainings or maintenance has a low priority in the way that multiple customers see the helpfulness of these innovations, but there are more critical points to improve on at this moment. VR and AR can prove to be helpful in the future in the way that it can resolve the shortage of technical schooled personnel present at this moment, and it can help with remote monitoring or even remote maintenance. Start making investments at this moment will help to save costs in the future.

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Appendices

Appendix A

Interview voor **eindklant die service zelf doet**: (interviewees 1,5,8)

1) **Algemeen**

- Welke functie heeft u in uw bedrijf? (+ email adres voor terugkoppeling)
- Welke producten van de fabrikant heeft u?
- Hoe worden servicebudgeten bepaald / berekend en wie is hiervoor verantwoordelijk (zit dit in een algemeen potje of is dit een aparte post) ?
- Maakt u uw eigen onderhoudsbeleid (wie is hiervoor verantwoordelijk?) of volgt u de fabrikant zijn advies (wat in de handleiding staat) ?
    - Indien u een eigen onderhoudsbeleid heeft is deze dan pro- of reactief van aard……? (voor dat het stuk gaat of na?)

2) **Welke service-activiteiten maakt u gebruik van?**

- Wat nemen jullie op dit moment af van fabrikant m.b.t. services (installatie & commissie, spare parts, onderhoud, retrofits, upgrades, reparatie (storing), studies, training)?
- Maakt u naast de bij fabrikant afgenomen service nog gebruik van andere services (aan systemen)?
    - Welke services betreft dit?
    - Wie verzorgd deze? Indien zelf, hoe vergaart u deze kennis?
    - Waarom zelf / deze partij(en)?
    - Zou fabrikant u deze services ook kunnen leveren?
- Verandert u wel eens van partij welke service levert? Wat is de reden van switch?
- Heeft u wel eens een service bij fabrikant aangevraagd en uiteindelijk niet afgenomen? Wat is hiervan de reden (prijs, levertijd, technische oplossing,…..)?

3) **Service kwaliteit/tevredenheid/ervaring:**

- Bent u tevreden over de door fabrikant geleverde services op locatie? Indien nee, waarom niet en welke service betreft dit?
- Bent u tevreden over de service support van fabrikant (offerte, order, planning, betaling)? Indien nee, waarom niet en welke support betreft dit?

4) **Welke toekomstige service-activiteiten zou u gebruik van willen maken en waarom?**

- Welke activiteiten zou u gebruik van willen maken in de toekomst, wat mist u en waarom?
- Voorziet u problemen in de toekomst in het onderhouden van systemen?
    - Waardoor komt dit?
    - Tekort aan technisch personeel?

Appendix B

Interview voor **eindklant die service afneemt bij fabrikant**: (interviewees 3,7)

5) Algemeen

- Welke functie heeft u in uw bedrijf? (+ email adres voor terugkoppeling)
- Welke producten van fabrikant heeft u?
    - Heeft u een dubbele voeding / noodaggregaat?
- Hoe worden servicebudgeten bepaald / berekend en wie is hiervoor verantwoordelijk (zit dit in een algemeen potje of is dit een aparte post) ?
- Maakt u uw eigen onderhoudsbeleid (wie is hiervoor verantwoordelijk?) of volgt u de fabrikant zijn advies (wat in de handleiding staat) ?
    - Indien u een eigen onderhoudsbeleid heeft is deze dan pro- of reactief van aard……?

6) Welke service-activiteiten maakt u gebruik van?

- Wat nemen jullie op dit moment af van fabrikant m.b.t. services (installatie & commissie, spare parts, onderhoud, retrofits, upgrades, reparatie (storing), studies, training)?
- Maakt u naast de bij fabrikant afgenomen service nog gebruik van andere services (aan systemen)?
    - Welke services betreft dit?
    - Wie verzorgd deze? Indien zelf, hoe vergaart u deze kennis?
    - Waarom zelf / deze partij(en)?
    - Zou fabrikant u deze services ook kunnen leveren?
- Verandert u wel eens van partij welke service levert? Wat is de reden van switch?
- Heeft u wel eens een service bij fabrikant aangevraagd en uiteindelijk niet afgenomen? Wat is hiervan de reden (prijs, levertijd, technische oplossing,…..)?

7) Service kwaliteit/tevredenheid/ervaring:

- Bent u tevreden over de door fabrikant geleverde services op locatie? Indien nee, waarom niet en welke service betreft dit?
- Bent u tevreden over de service support van fabrikant (offerte, order, planning, betaling)? Indien nee, waarom niet en welke support betreft dit?
- Vindt u dat fabrikant zich bezighoud met de wensen van u, de klant?
    - Vindt u dat fabrikant nadenkt over totaal oplossingen voor de klant?
    - Zou u fabrikant services aanraden aan collega's / kennissen in uw industrie?
        - Waarom wel/ niet

8) Waar is extra behoefte naar en waarom?

- Welke activiteiten zou u gebruik van willen maken in de toekomst, wat mist u en waarom?

Appendix C

Interview voor **eindklant die service afneemt bij derde partij**: (interviewees 2,9)

9) Algemeen

- Welke functie heeft u in uw bedrijf? (+ email adres voor terugkoppeling)
- Welke producten van fabrikant heeft u?
    - Heeft u een dubbele voeding / noodaggregaat?
- Hoe worden servicebudgeten bepaald / berekend en wie is hiervoor verantwoordelijk (zit dit in een algemeen potje of is dit een aparte post) ?
- Maakt u uw eigen onderhoudsbeleid (wie is hiervoor verantwoordelijk?) of volgt u de fabrikant zijn advies (wat in de handleiding staat) ?
    - Indien u een eigen onderhoudsbeleid heeft is deze dan pro- of reactief van aard……?

10) Welke service-activiteiten maakt u gebruik van?

- Wat nemen jullie op dit moment af van fabrikantfabrikant m.b.t. services (installatie & commissie, spare parts, onderhoud, retrofits, upgrades, reparatie (storing), studies, training)?
- Maakt u naast de bij fabrikant afgenomen service nog gebruik van andere services (aan systemen)?
    - Welke services betreft dit?
    - Wie verzorgd deze? Indien zelf, hoe vergaart u deze kennis?
    - Waarom zelf / deze partij(en)?
    - Zou fabrikant u deze services ook kunnen leveren?
- Verandert u wel eens van partij welke service levert? Wat is de reden van switch?
- Heeft u wel eens een service bij fabrikant aangevraagd en uiteindelijk niet afgenomen? Wat is hiervan de reden (prijs, levertijd, technische oplossing,…..)?

11) Service kwaliteit/tevredenheid/ervaring:

- Bent u tevreden over de door fabrikant geleverde services op locatie? Indien nee, waarom niet en welke service betreft dit?
- Bent u tevreden over de service support van fabrikant (offerte, order, planning, betaling)? Indien nee, waarom niet en welke support betreft dit?

12) Waar is extra behoefte aan en waarom?

- Welke activiteiten zou u gebruik van willen maken in de toekomst, wat mist u en waarom?

Appendix D

Interview voor **service provider**: (interviewees 4,6,10)

13) Algemeen

- Welke functie heeft u in uw bedrijf? (+ email adres voor terugkoppeling)
- Welke producten van fabrikant gebruikt u?
    - Verkoopt u het systeem door of verleast u het?
        - Indien er een lease-afspraak is, hoe is de service geregeld?? En voor hoeveel jaar?
- Maakt u uw eigen onderhoudsbeleid (wie is hiervoor verantwoordelijk?) of volgt u de fabrikant zijn advies (wat in de handleiding staat) ?
    - Indien u een eigen onderhoudsbeleid heeft is deze dan pro- of reactief van aard……?

14) Welke service-activiteiten maakt u gebruik van?

- Wat nemen jullie op dit moment af vanfabrikantm.b.t. services (installatie & commissie, spare parts, onderhoud, retrofits, upgrades, reparatie (storing), studies, training)?
- Hebben jullie wel eens iets moeten servicen/onderhouden waar de kennis/expertise van fabrikant bij nodig was?
    - Zo ja, wat was dit?
- Maakt u naast de bij fabrikant afgenomen service nog gebruik van andere services (aan systemen)?
    - Welke services betreft dit?
    - Wie verzorgd deze? Indien zelf, hoe vergaart u deze kennis?
    - Waarom zelf / deze partij(en)?
    - Zou fabrikant u deze services ook kunnen leveren?
- Heeft u wel eens een service bij fabrikant aangevraagd en uiteindelijk niet afgenomen? Wat is hiervan de reden (prijs, levertijd, technische oplossing,…..)?

15) Service kwaliteit/tevredenheid/ervaring:

- Bent u tevreden over de door fabrikant geleverde services op locatie? Indien nee, waarom niet en welke service betreft dit?
- Bent u tevreden over de service support van fabrikant (offerte, order, planning, betaling)? Indien nee, waarom niet en welke support betreft dit?

16) Waar is extra behoefte aan en waarom?

- Hoe proberen jullie de klant in hun behoeften te voorzien?
    - Verwachten jullie daar in de toekomst veranderingen in? Zo ja, welke?
- Welke activiteiten zou u gebruik van willen maken in de toekomst, wat mist u en waarom?
- Voorziet u problemen in de toekomst in het onderhouden van systemen bij klanten?
    - Waardoor komt dit? (misschien tekort technisch personeel?)

Appendix E

Questionnaire

1) **In welk markt segment opereert u?**
    i. CIG
    ii. Utilities
    iii. Data center
    iv. Oil & Gas
    v. Anders, namelijk:
2) **Welke producten van de fabrikant heeft u aangeschaft en/of doorverkocht?**
    i. Xiria / Xiria E
    ii. SVS
    iii. Coq
    iv. Magnefix
    v. Capitole 20
    vi. Capitole 40
    vii. High Voltage Capitole
    viii. FMX
    ix. UX
    x. MMS
    xi. Power Xpert CX
    xii. xEnergy
    xiii. Unitole
    xiv. Anders, namelijk
3) **Wat is uw rol ten aanzien van Eaton?**
    i. Eindklant
    ii. Consultant
    iii. Service provider / installateur
    iv. Paneel bouwer
    v. Overige
4) **Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen**
    i. Studies
    ii. Vlamboog risico analyses
    iii. Predictive diagnostics
    iv. Consultantie
    v. Onderdelen
    vi. Project management
    vii. Installatie services
    viii. Service desk
    ix. Emergency response
    x. Trainingen
    xi. Documentatie services

xii. Visuele inspectie (van de systemen)
xiii. Gezondsheids check (van de systemen)
xiv. Preventief onderhoud
xv. Revisie
xvi. Reparatie
xvii. Update/retrofit
xviii. Upgrades
xix. Contracten
xx. Geen
xxi. Anders, namelijk

5) Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?

i. Studies
ii. Vlamboog risico analyses
iii. Predictive diagnostics
iv. Consultantie
v. Onderdelen
vi. Project management
vii. Installatie services
viii. Service desk
ix. Emergency response
x. Trainingen
xi. Documentatie services
xii. Visuele inspectie (van de systemen)
xiii. Gezondsheids check (van de systemen)
xiv. Preventief onderhoud
xv. Revisie
xvi. Reparatie
xvii. Update/retrofit
xviii. Upgrades
xix. Contracten
xx. Nee
xxi. Anders, namelijk

6) Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?

7) Heeft u wel eens een service bij Eaton aangevraagd, maar uiteindelijk niet afgenomen?

i. Ja
ii. Nee

8) Waarom heeft u deze service uiteindelijk niet afgenomen?

i. Prijs
ii. Levertijd
iii. Technische oplossing

iv. Anders, namelijk:

9) Bent u tevreden over de door Eaton geleverde services op locatie?

i. Ja
ii. Nee

10) Over welke service bent u niet tevreden?

11) Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)

i. Ja
ii. Nee

12) Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?

13) Wat zou u graag toegevoegd zien worden aan de services activiteiten van Eaton?

14) Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren

Appendix F elaborated interviews

Alliander Rens Gepkens 28-05-2018

‘Het grootste probleem is het tekort aan technisch personeel, op dit moment ¾ mensen die werken in leeuwarden aan het reviseren van oude Xiria’s en SVS’en. Willen graag terugsturen naar de OEM’er, we hebben er op dit moment ongeveer 10 in opslag, verwachting is dat dit later nog meer wordt. Wel heel veel magnefixen, ongeveer 10 per maand terug.

Beleidsbepaler bij alliander is Theo van Rijn, asset manager. Voor het reviseren van de oude producten willen wij het liefst een vaste prijs betalen, indien mogelijk. Ook al hebben wij het liefst dat de product-garantie weer na het reviseren wordt verlengd met 10 jaar, vinden wij een verwachting ook goed, aangezien Eaton dat het liefste heeft.

Het onderhoudsbeleid is proactief te noemen, en doen we d.m.v. digitaal bijhouden van data in combinatie met ervaring. Wij zijn op zoek naar steeds meer ontzorging. Wij als Alliander vinden dat de samenwerking beter moet/kan. Wij leiden de mensen zelf op in ons trainingscentrum.

Mogelijke nieuwe service: opslag bij Eaton verhuren voor de opslag van de gereviseerde magnefixen, xiria’s en SVS’en. 10 per maand opsturen, bewaren bij Eaton, op aanvraag van Alliander terugsturen, en indien binnen paar maand niet teruggevraagd, misschien Re-export naar Afrika?

Meer Logistieke service/Dienst service ipv producten-serivce.

Er wordt goed meegedacht door Eaton, echter kan het digitaal communiceren wel beter. Alles duurt zo lang bij Eaton, vergadering, daarna 2 weken later weer, actiepunten meenemen uit vergadering, weer wachten. Oplossing is misschien meer Agile werken, meer Sprints doen.

Rijksvastgoedbedrijf Gerard Trommelen 04-06-2018

Functie: Senior technisch adviseur elektrotechniek

Producten Eaton: hoogspannings capitol, SVS, magnefix, xiria, cap20, halyester, cap 3/5, planitol, Xenergy, UPS, MY

NSA: Wel een stroomaggregraat

Servicebudgetten worden berekend/bepaalt op basis van financiele volumes. % van financiele planning. Het is een aparte post wat al jaren van te voren wordt bepaald (10 ongeveer), potjes kunnen naar voren worden gehaald.

Onderhoudsbeleid: het onderhoudsbeleid wordt grotendeels bepaald door wettelijke verplichtingen, 5 jarige cyclus. NEN3140,NEN3840 voor ondehoud gebouwen. Ook kijken ze naar de handleiding van de fabrikant (Eaton). Alles nemen ze in overweging, ook ervaring van voorgaande jaren m.b.t. de systemen.

Het onderhoud is daardoor proactief te noemen.

Service Activiteiten:

Op dit moment nemen ze niet veel direct af bij Eaton, SVS willen ze wel een contract voor spareparts, echter hebben ze hier na 05-2017 niks meer over gehoord. Op dit moment is er bij de laagspanningssystemen, in tegenstelling tot middenspanning, geen of weinig persoonsbeveiliging ingebouwd. Bij vervanging wordt hier veel naar gekeken, oude retrofitten of een nieuwe kopen. RVB gebruikt 3^{e} partijen voor de service, Eaton wordt als minder flexibel gezien, weinig service monteurs met een relatief hoog tarief.

Veranderen van partij komt zeker voor, alles gaat in concurrentiebeding, dus wordt per keer bekeken. Het aanvragen en niet afnemen wordt eigenlijk niet gedaan aangezien het vrijwel altijd door een 3^{e} partij wordt verricht. Wel zijn ze tevreden over de service support van Eaton, er kan gesproken worden over een goede band. Wel hebben ze soms problemen, bij de eerste SVS'en kwam spontaan een sluiting waarmee ze terug zijn gegaan naar Eaton. Dit duurde echter heel lang en ze hebben er niks over weer gehoord. Uiteindelijk moesten deze vervangen worden, het ging om ongeveer 100 installaties. Siemens was in deze aanbesteding financieel beter, waardoor Eaton de klus heeft misgelopen.

Eaton heeft contactpersoon uitgenodigd voor een rondleiding voor deze vervanging, en daar werd het proces van SVS en Xiria getoond, echter, na deze rondleiding gingen ze om tafel zitten om te bespreken hoe en wat en daar werd verteld dat, ondanks de goede voorlichting omtrent SVS, deze niet meer verkocht gingen worden. Het bedrijf had dit graag eerder gehoord, dit is dan ook een van de grotere problemen : communicatie. Het bezochte bedrijf vind dat Eaton eerder/beter/opener moet communiceren met de eindklant. Veelal wordt gekocht/gegund via goodwill of vertrouwen, daarvoor is goede communicatie een 'must'.

Het bedrijf gaf aan dat bedrijfsbezoeken gewaardeerd worden, vroeger kwam er 1 a 2 keer per jaar iemand langs, nu is dat veel minder. Vroeger waren er ook meer beurzen, waardoor de eindgebruikers warm werden gemaakt voor de producten.

UMCG Eduard Hoppen 06-06-2018

Functie: Hoofd installatie verantwoordelijke

Producten: cap 3,20,40, power Xpert cx, oderverdelers, holyester, SVS, xiria, hoogspannings capitol, magnefix md4, FMX.

4 dubbele voedingen, 2 NSA diesel, 5 gas NSA. Er 'mogen' er altijd 2 uitvallen. Als dit gebeurt worden de meest Kritische apparaten van stroom voorzien (IC, OK) door de diesel NSA binnen 2 seconden. Als er heel lang een stroomstoring is dan voorzien de gas NSA het ziekenhuis van stroom (10 MW, terwijl 'maar' 9 MW nodig is), gas NSA duurt 30 minuten om op te starten.

Voor het bepalen van service budgetten wordt een tool gebruikt, elk jaar een X percentage, wordt gekeken naar de handleiding van Eaton en in overleg met, wordt ook gekeken op basis van ervaring. Wordt heel grof uitgelijnd, Eaton wordt gevraagd. Reservatie wordt gemaakt en daarna gekeken op basis van nacalculatie. Dit doet de afdeling bouw & facilitair, en moet akkoord worden gegeven door het raad van bestuur. Onderhoud is een vaste post en omvat ook onvoorziene gebeurtenissen. Ze vragen eerst om advies van de fabrikant waarna ze d.m.v. ervaring het budget/plan bijstellen om zo het risico te minimaliseren.

Het UMCG traint zelf de mensen, en studies gebruiken ze eigenlijk niet. Onderhoud en retrofits nemen ze wel af. Als er een schakelaar vervangen moet worden doet het UMCG dit zelf, bij onderhoud en reparatie wordt Eaton gevraagd, altijd.

Het UMCG is tevreden over de services geleverd door Eaton. Ze begrijpen dat door het steeds moeilijker te vinden en te binden van technisch personeel het plannen van onderhoud en het uitvoeren ook langer duurt, ook is voor de planning van onderhoud soms andere partijen nodig, hierdoor kan de planning ook uitlopen. De klant merkt ook dat door het met pensioen gaan/ziek worden van mensen er ontzettend veel kennis weggaat bij de fabrikant en dit niet of niet voldoende wordt opgevangen.

Soms duurt het maken van een offerte te lang, dit heeft dan te maken met het product, wat dan weer op z'n plaats te maken heeft met het verloren gaan van kennis. Bovendien worden de offertes niet altijd goed vertaald, waardoor dit soms leidt tot een miscalculatie bij de eindklant. De planning wordt meegenomen in de offerte en is redelijk goed.

Eaton denkt wel mee met het UMCG, ze zijn goed voor de klant vandaar dat de service ook gedaan wordt door Eaton. Het specialisme van Eaton speelt hier ook een grote rol in, de expertise van Eaton door het zijn van de OEM zorgt er bovendien voor dat ze Eaton zouden aanbevelen bij collega's/kennissen.

Waar behoefte aan is: het meer uitwisselen van informatie. Als er een probleem is met een systeem bijvoorbeeld. Veiligheid staat voorop. Als voorbeeld wordt het QSA 250 A genoemd, daar zijn problemen mee, maar officieel is er nog geen reactie van Eaton, Eaton zegt dat dit een incident kan zijn. Communicatie is verder stug te noemen, april 2018 is er een bericht gekomen van een ander systeem, terwijl het probleem al meer dan een jaar speelt. Eaton is het aan het onderzoeken, maar het is misschien beter om eerst te melden dat er iets mee aan de hand is.

Ook mag de communicatie m.b.t. de naam van het bedrijf beter, uiteindelijk is er een brief gestuurd naar het UMCG over het bovenstaande probleem, maar omdat het UMCG met meerdere namen in het systeem staat krijgt het UMCG opeens 6 keer dezelfde brief met uitleg. De volgende namen worden onder andere gebruikt.

UMCG
Academisch Ziekenhuis Groningen
University Medical Center Groningen
Logistiek centrum eemspoort - UMCG

Allen gericht aan Hanzeplein 1, of Jeverweg 3.

Een onderhouds contract loopt op dit moment, maar tot heden is er geen vervolg uit gekomen. Qua activiteiten mist het UMCG niks, ze hebben zelf ook veel kennis en zijn bovendien Selfsupporting.

Het is lastig om goede, technische mensen/ kennis te houden, in de toekomst kom je mensen te kort.

Het UMCG vind dat 1 of 2 keer per jaar er contact nodig is met de fabrikant, anders verwaterd het contact. Service organisatie moet een goede binding hebben met de klant, dit moet gezien worden. Veranderingen in de organisatie hoor je het best bij vertegenwoordigers die langskomen i.p.v. via de mail, terwijl dit wel belangrijk is.

Het UMCG wil het liefst bij 1 partij het onderhoud doen.

Privatis 07-06-2018 Peter Telgenkamp

- Moeilijke communicatie
- Bert van droffelaar is snel en goed
- Als je geen contacten binnen Eaton hebt, heb je een probleem
- Veel vraag naar informatie, ellke week belt er wel iemand van privatis/of ander bedrijf om informatie. → business model?

Functie: Directeur privatis

Producten: xiria, svs, magnefix etc, voornamelijk MS, maar ook wel LS af en toe.

Het bedrijf koopt delen van Eaton en bouwt het systeem in elkaar, daarna installeren ze het bij de eindklant. Het bedrijf doet eveneens storingswacht diensten. Graag zouden ze een leasemaatschappij achter ze willen hebben. Privatis is te klein om dit zelf te doen. Maar met Eaton achter zich zou het eventueel wel kunnen. GE capital doet dit wel. Producten van Eaton worden dan gekocht en door verhuurd/geleased.

Voor het onderhoudsbeleid wordt de eigen ervaring evenals de handleiding van de fabrikant gebruikt. Waar het systeem staat is ook een belangrijke factor. Dit beleid is bovendien proactief te noemen.

Privatis is gericht op de klant tevreden te stellen, ze hebben eerst een gesprek, soms nemen ze de taak als installatieverantwoordelijke over als de eindklant te klein is. Dit doen ze dan op basis van een soort abonnement. Ze schakelen Eaton in als het werk te specialistisch wordt, dit komt echter niet heel vaak voor. Het ‘gemakkelijke’ kunnen ze zelf. Ook voor netwerkstudies gaat Privatis naar Eaton.

Onderhoud en defecten regelt Privatis zelf. De basishandelingen. Geen demontage van schakelaars bijvoorbeeld, dit is te specialistisch (alleen bij Coq, door ervaring).Bij de oude systemen doet Eaton nog wel wat onderhoud, d.m.v. contracten meestal, dit is heel af en toe.

Privatis neemt ook service af bij Schneider, die hebben vrijwel dezelfde diensten, onderhoud doen ze ook aan Schneider apparatuur. 1^{e} en 2^{e} lijns onderhoud doet Privatis, Schneider vindt dit geen probleem, want Privatis is een flexibele schil voor ze, als ze zelf het onderhoud niet kunnen uitvoeren binnen de tijd o.i.d. dan kan Privatis ze helpen.

Een groot verschil met Schneider is dat Schneider de kennis wel wil delen, terwijl Eaton heel erg gefocust is op hun kennis behouden en deze ‘nooit’ weg te willen geven. Schneider is veel opener, willen samenwerken. Eaton is veel stugger in de ogen van Privatis. In de ogen van Privatis zou Eaton hier meer mee kunnen doen, kennis delen in ruil voor een fee bijvoorbeeld, dan ben je beide beter af. Dit heeft Privatis niet alleen zelf ervaren, maar horen ze ook verder in de markt. Men stoort zich aan het (arrogante) gedrag van Eaton.

Privatis heeft wel eens een offerte aangevraagd bij Eaton en niet afgenomen, dit komt dan door de prijs. De klant wil graag een systeem, privatis kijkt naar de verschillende aanbieders (Eaton, Schneider en Siemens bijvoorbeeld) en kijkt dan naar de beste (soms goedkoopst, soms snelst) oplossing.

De service die Privatis afneemt bij Eaton is goed, zijn ze tevreden mee. Vooral Bert van Droffelaar is fijn om mee te werken. Bert helpt de klant echt, heeft een goed inlevingsvermogen. Nooit geen problemen gehad met de service support van Eaton verder. Als Eaton een kleiner deel krijgt dan de ander bij een samenwerking, dan wordt het moeilijk, soms kun je maar beter wat aannemen met kleinere marges en eventueel uitbesteden bijvoorbeeld, anders mis je het complete bedrag.

Behoefte:

Klant vragen, wat willen ze, ontzorgen als ze dat willen. Soms is aansluiten alleen ook genoeg. De behoefte neemt toe met de energie transitie.

Ook Privatis merkt het tekort aan handjes in de toekomst, technisch personeel wordt moeilijker te vinden, hier moet misschien een innovatie voor gevonden worden.

Toekomstige behoefte is om een lease constructie te bedenken (huur niet, want dit komt op de balans en gaat met faillissement mee als onroerend goed, en dan is het systeem dus geen eigendom meer van Privatis), klant legt vraag bij Privatis, Privatis vraagt Eaton om een systeem, en ze verleasen het door aan de klant. Hier is zeer veel vraag naar in de markt! Hierdoor kunnen meer klanten geholpen worden, krijgen Privatis en Eaton samen meer orders/omzet, en kunnen ze samen een partnerdeal aangaan. Klanten willen graag een abonnement, zodat ze geen grote uitgaven moeten doen wat drukt op hun werkkapitaal.

Enexis 13-06-2018 Arie de ruijter.

Functie: Beleidsexpert instandhouding systemen, service kant. Vooral in de middenspanning kant. Arie is verantwoordelijk voor het komen tot een service strategie. Hoe ga je onderhouden? Dit bepalen ze onder andere door de kans, risico en faalvormen tegen elkaar af te zetten om zo tot een risicomatrix te komen. Dit valt te als 'risk based asset management' te noemen. Ze kijken naar de kosten die komen als het systeem faalt en hoeveel het kost om het op te lossen. Alliander doet het op basis van risico, enexis voegt hier ook de kans aan toe, risico wil hier zeggen kosten.

Enexis heeft een onderhoudsbeleid, zoveel risico wordt bespaard, dan mag je zoveel uitgeven. Hiervoor willen ze hun installed base weten en de risico's, maar dit blijkt toch erg lastig. De service budgeten worden door deze voorgenoemde matrix bepaalt. Onderhoud is moeilijk te kwantificeren, hoeveel win je er precies mee?, maar als het aantoonbaar is dan krijg je er wel geld voor. Vaak worden er aan de kant van Eaton te snel conclusies getrokken naar mijn mening, iets wordt afgedaan als zijnde 'een probleem door het vet', terwijl er niet wordt aangegeven hoe dit probleem kan ontstaan en hoe de volgende keer het kan voorkomen. Hierdoor doet Enexis soms zelf onderzoek, op dit moment bijvoorbeeld om te kijken hoe vet precies vast loopt.

Dit jaar een x bedrag voor onderhoud, kijkend naar ratios volgend jaar aanpassen.

De producten die enexis heeft zijn o.a.: SVS, MMS, magnefix, xiria, coq, capitol, unitol. Inspecties hieraan zijn voorspelbaar, onderhoud is reactief te noemen. Pas als er iets stuk gaat grijpt Enexis in (bijvoorbeeld bij het vet probleem).

Oude producten onderhoudt Enexis zelf, de kennis die ze hiervoor nodig hebben, hebben ze in het verleden d.m.v. ervaring verworven. Alle faalvormen zijn bekend bij Enexis, en ze willen de levensduur zo lang mogelijk verlengen. Nieuwe ontwikkelingen zoals windmolens betekent nieuwe producten of nieuwe upgrades, puur door specificaties gedreven. Als de kennis van de oudere producten weggaat, door bijvoorbeeld mensen die met pensioen gaan o.i.d., dan gaan deze producten zelf ook weg.

Eaton gebruiken als brandweerservice zou kunnen, maar is wel heel prijzig.

Zodra iets kapot gaat terwijl het probleem niet bekend is, is er een groot probleem. Laatst waren er 3 van de 50 schakelaars kapot gegaan en de reden was niet bekend. Hierdoor werden de andere van de 50 ook niet gebruikt omdat ze bang waren geworden.

Wat gewaardeerd zou worden is een studie doen hoelang een product meegaat, maar dan tijdens de life-cycle i.p.v. vooraf bepalen. Dit onderzoek doet Enexis samen met alliander. Hier zou Eaton kunnen helpen door de OEM expertise te bundelen met de ervaringen/producten van Enexis.

Enexis heeft verder een eigen opleidingscentrum, ze doen zelf de revisies, periodiek doen ze inspecties. Ze willen liever geen contract met de fabrikant i.v.m. de kennis die ze hierdoor gaan verliezen. Echter, het zou handig zijn als de fabrikant en Enexis hun krachten/kennis zouden

bundelen. 2 populaties en 2 keer de kennis. Deze kennis bundelen betekent dat beide partijen transparant moeten zijn, vertrouwen in elkaar hebben en een goede communicatie!

Een ‘droom’ van Arie is een afsprakensamenwerking. Kennis bundelen, en meer luisteren naar de klant. Training op kennis en systemen. Inspecties kan Enexis dan zelf doen en dan de specifieke dingen weer terug sturen.

Onderdelen, bijvoorbeeld NVC00 schakelaar, indien nodig bij de fabrikant. Enexis heeft ook problemen met technisch personeel. Indien transparante samenwerking, ligt de verantwoordelijkheid ook niet bij Enexis zelf. Garanties is heel lastig in de praktijk.

Het schijnt, door verhalen uit de markt/collega’s, dat de tevredenheid niet top is. Het is voorgekomen dat Eaton erbij werd gevraagd maar iets niet kon repareren, toen Enexis het probeerde lukte het echter wel. In het verleden werden ze soms slecht geholpen door de fabrikant, dit heeft gezorgd dat ze het nu zelf willen leren.

Er is wel eens service aangevraagd maar niet afgenomen, dit komt omdat de prijs van Eaton is opgebouwd uit een fee kennisbeheer, onderdelen en het sleutelen van Eaton. Echter, Enexis wil het sleutelen zelf doen, en daardoor wordt er niks afgenomen op het eind.

Enexis houdt zelf een rapportage bij, svs en coq zijn bekend met wat voorn zwakke punten ze hebben, door ervaring en door Eaton zelf.

Conclusie: samenwerking door transparant te zijn, elkaar versterken. Goede communicatie en meer meedenken aan de klant. Meer onderzoeken zou kunnen helpen, aangezien ze dit nu zelf doen. Minder snel conclusies trekken. Misschien een idee om de kennis van de oudere producten ergens online te bewaren/te programmeren.

Heijmans 14-06-2018 Leo Karremans

Functie: Commercieel manager Systeemintegratie & techniek

Algemeen manager service in de business unit energie voorziening

Klanten veelal in industrieën, service en onderhoud doen wij voor ze. Installatie verantwoordelijke zijn wij, en dit groeit alleen maar. Groeit zelfs harder dan de projecten. fabrikant kan opdrachtnemer zijn dan kunnen wij het installeren + onderhouden. Klant heeft de systemen nodig, en als die eenmaal geleverd zijn doen zij zelf het onderhoud.

Middenspannings verdelers hebben ze vooral, xiria, FMX is al zeldzamer, magnefix. Ze verkopen altijd door, nooit leasen → kan wel maar afweging gemaakt om dit niet te doen. Voor het onderhoudsbeleid volgen ze de fabrikant, maar het ligt ook aan de eindgebruiker, ook de eindgebruiker wil soms onderhoud door de eindgebruiker, dan zorgen zij ervoor dat dit gebeurt.

De service groep van de klant aan systemen is een kleinere groep. Nooit service bij de fabrikant aangevraagd maar niet aangenomen, wel andersom. Fabrikant levert soms niet aan klant omdat hun kredietwaardigheid minder is door een paar slechte jaren, concurrent doet hier minder moeilijk om. Offertes zijn helder, voorwaarden zijn soms wel vaag. Contracten over meerdere jaren is lastig bij fabrikant, omdat hun tarieven niet vast liggen. Plannen is ook lastig, fabrikant is als grote organisatie minder flexibel. Een van de weinige **goede** service organisaties, maar dit weten ze zelf ook en hebben daardoor een 'arrogante' houding. Dit komt minder flexibel over.

Klant is als tussenpartij niet systeem gebonden, ze kijken naar wat het beste is voor de klant en dus onafhankelijk.

Een puntje van kritiek is als de klant een systeem aanvraagt bij fabrikant. Zij kiezen een systeem, en krijgen dan meteen een offerte van dat systeem, op zich prima, alleen zou het fijn zijn om wat feedback te krijgen, aldus de klant. Meer nadenken met de klant om zo tot slimmere oplossingen te komen. Dit zou goede service zijn. Fabrikant zou mee kunnen denken met bijvoorbeeld: dit systeem zou ik zo en zo aanpassen voor de beste oplossing.

Klant gebruikt eigenlijk geen services van fabrikant. Bij uitbereidingen wel, onderhoud alleen als de eindgebruiker dat wil. Onderdelen waar nodig van de oudere systemen. Ze hebben wel de expertise van fabrikant soms nodig, maar dit is puur alleen als de eindgebruiker dit wil met hun beleid. In basis doen ze alles zelf, ze hebben zelf ook de expertise in huis, dit hebben ze d.m.v. jaren ervaring verworven.

Er is natuurlijk een spanningsveld tussen fabrikant en klant, want de fabrikant is naast de fabrikant ook nog een installateur, en bevind zich dus in het vaarwater van klant. De fabrikant staat er op dit moment niet zo goed op, heeft alles te maken met de strenge krediet eisen, waardoor de fabrikant niet altijd wil leveren. Hierdoor heerst er nu een gevoel bij de klant dat ze maar direct naar een concurrent gaan, zonder de fabrikant überhaupt in overweging te nemen.

De fabrikant had minder stroperig kunnen zijn met hun goede service organisatie, deels door hun houding. De Inzet mensen, de monteurs zijn minder makkelijk te bereiken.

Voorwaarden bij de fabrikant zijn vaag, de fabrikant geeft geen index aan die de tarieven volgt, waardoor er een enorm aannemersrisico komt bij de aannemer. Die neemt een opdracht aan voor een paar jaar voor een X bedrag, als dan dit bedrag anders kan worden doordat de fabrikant bijvoorbeeld zijn tarieven omhoog doet, is dit dus heel lastig en kunnen ze verlies hierop lijden.

Hoofdpunt van de klant is het gebrek aan flexibiliteit en communicatie. Ook de ‘arrogante’ houding wordt als negatief ervaren.

Tata steel 20-06-2018 Jan Oskam

Functie: Onderhoudsmanager Hoogspanningsbeleid – Energy department

Hij heeft de verantwoordelijkheid voor het onderhoud van de systemen en het beleid hiervan.

MS, SVS, MMS, 1 magnefix, UMX, FMX, Xiria, oudere HF conel, coq, reyrolle (1000 stuks, voorloper van conel) , IC schakelaars.

Wij hebben 9 inkomende velden van Tennet (dubbele voeding), uitgaand hebben we minder dubbele voeding. 1700 aansluitingen + schakelaars.

Service budgetten worden bepaalt als afgeleide van productiebudget en wordt bepaald door de desbetreffende onderhoudsmanager. Elk jaar 2% efficiënter wordt er bijvoorbeeld gezegd in het jaarplan, dan kan de onderhoudsmanager een eigen budget opstellen om dit te halen. In totaal zijn er tussen de 35-50 onderhoudsmanager.

Wat betreft het onderhoudsbeleid wordt er eerst gekeken naar de handleiding van de fabrikant, om daarna d.m.v. eigen ervaring/data een aanpassing te maken. FMECA wordt hiervoor gebruikt. FMECA staat voor "Failure Mode Effect & Criticality Analysis''. Eerst worden er van de assets alle faalmechanismes die bekend zijn in kaart gebracht, dan wordt er bepaald wat het risico is (bijvoorbeeld geen productie in het beste geval, gevaar voor omgeving/mensen is het meest kritiek).

Het zou gewaardeerd worden als de fabrikant opener was, op dit moment zitten we in landelijke groepen waar we onze ervaringen delen met elkaar delen. We hadden liever gezien als de fabrikant proactief was geweest, maar dit gebeurt helaas niet vaak. Komt in mijn ogen doordat de fabrikant waarschijnlijk niet de ‘vuile was buiten wil hangen’.

Voor nieuwe installaties wordt de fabrikant altijd gevraagd, service wordt in mindere mate afgenomen. Het controleren van de installaties doen we zelf, deze kennis hebben we verkregen door ervaring en opleidingen. Van de fabrikant uit wordt er wel soms training afgenomen en ook voor 2^{e} lijns (ingewikkelde dingen) wordt de fabrikant ingezet.

Voor de oude installaties, zoals coq en reyrolle, loopt er contractonderhandelingen (deze zijn nog niet rond). Dit duurt lang door de lange reistijd o.a., dit is een lastig puntje ook omdat er bij een crisis (iets ploft o.i.d.) de emergency response tijd ook lang is.

Soms worden de onderdelen van de fabrikant nagemaakt door andere partijen, meestal door de andere fabrikant (sommige systemen zijn een doorontwikkeling van een gecombineerde samenwerking). Meeste onderhoud wordt, zoals gezegd, door ons zelf gedaan. Soms wordt er door ons ‘geshopt’ op de markt, dit is anders bij laagspanning. Dit wordt gedaan bij de oude systemen die niet meer ondersteunt worden bij de fabrikant, die wilden/konden dit niet.

De service die wordt gedaan door de fabrikant zijn we wel tevreden over, geen problemen zijn er uit gekomen.

Waar we ons wel aan storen is het feit dat als de fabrikant onderhoud pleegt, we liever hadden gezien dat ze eerst de situatie uitleggen en daarna vragen om toestemming om te repareren. Echter, de fabrikant begon vaak al met reparatie terwijl ze de klant de optie niet gaven, om daarna de factuur te sturen. Het is al een tijd niet voorgekomen, maar omdat in die tijd ook geen service/onderhoud is afgenomen kan er niet gezegd worden of het ook verholpen is. (bij APK van een auto wordt ook altijd gevraagd of ze iets mogen repareren als ze iets vinden, kun je hiermee vergelijken)

Wel denken ze voor de rest goed mee met de klant, bij onderhoud is er een probleem opgetreden dat verholpen moet worden, dus is hier minder aan de orde.

2e lijns onderhoud wordt het liefst altijd bij de desbetreffende OEM'er gedaan.

De behoefte is aan flexibiliteit, met het contract (wat loopt) moet de fabrikant flexibel zijn met de wensen van de klant. Nu bellen betekent nu oplossen. In de toekomst worden AR/VR wel interessant, mits het goed werkt. Hierdoor is er de mogelijkheid om de klant en fabrikant samen hun kennis te laten delen en hun krachten te bundelen. Handjes hebben wij geen problemen mee, kennis meer. In dit kennisdelen is nog het meest verbetering mogelijk, de communicatie is verder prima te noemen.

26-06-2018 Cogas/Coteq Gerard Geist

Als asset manager/owner bepaalt het beleid/strategie als het om het onderhoud van systemen gaat. Van begin tot eind is hij verantwoordelijk. De 'gemakkelijkere' keuzes liggen ook wel bij de uitvoering.

De producten zijn: IC9/12, SVS, Magnefix, Xiria (e), FMX, en LS huisaansluitkasten. Coteq is verantwoordelijk voor het onderhoudsbeleid en budget, specifieker, de asset manager.

SVS en magnefix worden 1 x in de 10 jaar onderhouden, op dit moment door er fysiek heen te gaan en TAO (toestand afhankelijk onderhoud) uit te voeren. Kijken hoe het eruit ziet. Dit komt mede doordat ze ISO9001 gecertificeerd zijn dat ze dit moeten doen.

Aan de magnefix doen ze zelf het groot onderhoud, als het te complex wordt dan vragen ze de fabrikant. Specialistisch onderhoud wordt uitbesteed aan de fabrikant. Kennis behouden is ook lastig, ze kunnen 1^{e} lijns onderhoud zelf doen d.m.v. jaren lange ervaring met de producten.

Op basis van risico analyses wordt er een 10 jarenplan gemaakt. 'Je hebt zoveel velden, en het kost zoveel tijd, dan doen we er dus zoveel per jaar tegen dit budget'. Klein % onderhoud, niet veel mensen door de omvang.

Ze hebben hun eigen onderhoudsbeleid (TAO), en dit is proactief te noemen, ze hebben dezelfde risicomatrix als andere netbeheerders waar ze de onderhoudsplannen op plotten (als voorbeeld wordt het op afstand schakelen genoemd).

Upgrades worden gedaan om de uitval en veiligheid te verbeteren, zolang er een goede reden is valt er budget aan te besteden, de reden moet gebaseerd worden op feiten. Hiervoor is data nodig, dit wordt beter bijgehouden dan vroeger, maar dit kan nog beter.

Ze hebben een instandhoudingscontract bij HScapitole, voor de rest wordt de fabrikant gevraagd bij installatie, onderhoud (specifieke dingen, of bij de oudere systemen alles), onderdelen en trainingen, studies worden niet afgenomen bij de fabrikant. Alleen hoelang kabels nog meegaan, d.m.v. root cause studie.

Schakeltrainingen worden gedaan bij inrush, dit zou fabrikant ook kunnen doen, ook veiligheidstrainingen worden hier gedaan (wat het Damstra lab vroeger deed).

Soms zijn de prijzen niet te begrijpen, offerte voor een tas met 3 aardingskappen + nog een klein ding = 700 euro. Uurlonen zijn hoog en het moet helemaal door het hele logistieke proces bij de fabrikant. Onderdelen worden heel duur bevonden, krijg je intern discussies van, aldus de klant. Vooral de techneuten kunnen het zich niet voorstellen. Ook werd er soms een order geweigerd doordat de orderwaarde onder een bepaald bedrag was.

De uitstraling van de fabrikant is niet altijd goed. Ze zeggen tegen de ene klant dat bijvoorbeeld de kappen niet meer leverbaar zijn, terwijl die klant dan via via hoort dat ze wel leverbaar zijn bij een andere klant. Het verhaal klopt soms niet, geeft een dubbele uitstraling.

o.a. daarom hebben de klant en fabrikant een instandhouding contract, als de fabrikant er mee zou stoppen, zullen anderen het wel overnemen.

Voor de rest is de klant wel tevreden over de geleverde services van de fabrikant.

Qua offerte snelheid is er nog wel ruimte voor verbetering, de offerte snelheid is erg traag. Het duurt heel lang of terugkoppeling (ook van andere dingen) komt zelfs helemaal niet.

Voorbeeld: tekening van een geupdate xiria zou binnen 2 weken er zijn, dit is al meerdere weken geleden. En als er ene fout op komt is er geen communicatie, ook beantwoord de service afdeling niet snel/niet goed. Ze zijn niet erg flexibel.

Soms fungeert de klant als tussenpartij, verhuren van systemen doen ze wel eens. Dan leveren ze ook het onderhoud bij deze groep.

Er is wel behoefte aan kennis delen van de theorie (fabrikant) en praktijk (klant). Om tafel zitten met de fabrikant en opener worden. Kennisbehoud was altijd heel erg bij de fabrikant, wilde niks delen en dit was/is frustrerend.

Trainingen met AR/VR zullen in de toekomst steeds meer gevraagd worden, remote support is wel de toekomst, aldus de klant. Dit kan weer een extra persoon schelen, en dus goed voor de flexibiliteit. D.m.v. het centraal regelen met behulp van een backoffice zou ook het tekort aan personeel kunnen oplossen.

Ook bestaan er al sensors voor de magnefix, flinter heeft dit. Er zijn dus al andere bedrijven die eaton materiaal aan het ‘pimpen’ zijn!!

Heineken 27-06-2018 Wim Arkensteijn

Teamleider engineeringsafdeling + installatieverantwoordelijke .

De klant gebruikt xiria,SVS, magnefix, HScapitole, cap20/40, M2L, CX.

Back-up aansluiting op het openbare net heeft de klant, ze hebben dus een dubbele voeding. Ook hebben ze meerdere UPS'en en 3 NSA, deze NSA voedt het UPS park

Op basis van verleden plegen ze onderhoud, ervaring dus. Afdelingen zijn zelf verantwoordelijk voor het budget. Als er iets kritisch staat in de handleiding/gezegd wordt door de fabrikant dan luisteren ze hier altijd naar. Het is een aparte post.

Deel van het onderhoud wordt door een tussenpartij, een huisinstallateur wordt hiervoor gevraagd. Die zijn altijd aanwezig op het complex en weten wat ze moeten doen zolang het niet te specialistisch wordt. Deze huisinstallateur is totaal verantwoordelijk, ook voor andere systemen.

Bij nieuwe installaties moet gezegd worden wat nodig is om het draaiende te houden, leverancier die meedenkt wordt gewaardeerd. Dit doet de fabrikant echter ook.

De klant heeft een eigen onderhouds beleid, volgen eerst de fabrikant, als die wat zeggen volgt de klant wel. Vroeger waren er meer technische mensen aanwezig op het complex, nu minder dus volgen ze klant des te meer. Ze hebben een eigen onderhoudssysteem waar ze data uit het verleden verzamelen voor onderhoud.

Ze vragen de fabrikant voor het installeren en voor specifieke dingen, de rest kunnen ze zelf (via huisinstallateur).

Bij het inspecteren van de installaties is er al een verwachting dat er iets nodig is. Onderdelen via de huisinstallateur, echter blijft de klant wel zelf de controle houden. Bij specifieke dingen gebruiken ze ook wel training van de fabrikant.

Voor onderhoud van vermogensschakelaars wordt de huisinstallateur gevraagd, aangezien deze meerdere systemen van meerdere fabrikanten kan onderhouden, ook zijn ze onafhankelijk.

Liefst zo min mogelijk switchen van huisinstallateur, maar het kan gebeuren als hij 'te eigen' wordt. Ze moeten wel scherp blijven, ze moeten flexibel blijven en markt conforme prijs hanteren.

De klant heeft nooit service aangevraagd maar niet afgenomen. Wel wordt het soms niet aangevraagd i.v.m. reistijd.

De klant is tevreden met de service van de fabrikant, en ook de service support is goed. Duurt niet lang om dingen voor elkaar te krijgen. De klant denkt dat het niet de makkelijkste klant is om mee om te gaan, echter gaat de fabrikant hier wel goed mee om.

De communicatie is ook goed, al kan de klant niet spreken over eventuele slechtere communicatie bij andere mensen/functies.

Ook al is de planning soms heilig, het belangrijkste is het eindresultaat. Zolang er bij voorhand niet al problemen ontstaan is er geen probleem.

Wat wel anders had gekund in de ogen van de klant is het aantal bezoeken van de fabrikant bij de klant.

Er is behoefte aan meer communicatie/ fysiek advies geven. Op de koffie komen en dan samen langs de systemen lopen en advies geven, dit zou de klant graag willen. Dit hoeft niet jaarlijks.

Een andere behoefte is dat de fabrikant weet wat er allemaal voor systemen op het complex staan en wat op welke systemen vervangen moet worden. Advies geven van wat niet meer leverbaar is of wordt, en of iets kan blijven staan of wel vervangen moet worden. Hier krijgt de klant een betere lange termijn visie van, waardoor er ook makkelijker budget vrij komt.

Behoefte aan informatie wordt door de fabrikant nooit waargemaakt, aldus de klant. Kan ook komen omdat de informatie wel gegeven wordt maar door omstandigheden (drukte o.i.d.) gemist wordt.

Een voorbeeld: vlamboogveiligheid geniet steeds meer interesse in Europa, het zou fijn zijn als de ontwikkelingen bij de fabrikant doorgegeven zouden worden.

Er gebeurt teveel in de elektrowereld om alles mee te krijgen. De fabrikant zou moeten weten wat er precies aanwezig is bij de klant, en de ontwikkelingen op dat gebied doorgeven aan de klant. i.p.v. een mailtje of op een andere manier tussen neus en lippen door genoemd worden, heeft de klant liever dat het concreet benoemd wordt.

Flexibel onderhoud is niet te doen bij de fabrikant, o.a. door de reistijd. Misschien handig om de huisinstallateur wel op te leiden en kennis te geven. Ook is het goed om aan te geven wat absoluut niet te onderhouden valt door de huisinstallateur. In de ogen van de klant kan dit nog beter.

De grootste behoefte is, zoals gezegd, dat de fabrikant als een soort ‘waakhond / achterwacht’ acteert. Dat de fabrikant weet wat er speelt bij de klant, een actueel overzicht heeft van wat er geïnstalleerd is en dat ze aangeven: als dit kapot gaat kunnen wij het niet meer maken! Monitoren zou goed zijn.

SPIE 02-07-2018 Peter Grispen

Functie: Business development energie

Vrijwel elk product van de fabrikant hebben ze. Ze kopen de systemen, installeren het bij de eindklant en onderhouden ze ook bij deze eindklant. Ze zijn een tussenpartij voor de fabrikant. Europese Unie is heel conservatief, ze houden niet veranderen. Als iets het altijd heeft gedaan, willen de netbeheerders dit graag houden.

Daarom is het ook raar als de fabrikant uit het niets zegt dat een product obsolete gaat raken en daarom geen spullen meer leverbaar zijn. Duitse concurrenten zorgen ervoor dat de producten een heel leven leverbaar blijven. De systemen zijn in de markt gezet als zijnde dat ze een leven lang meegaan, dan is het gek dat onderdelen opeens niet meer leverbaar zijn.

De kennis van de producten wordt steeds vaker bij de leveranciers gelegd. De eindklanten verliezen steeds meer kennis van de systemen (ook door het verdwijnen van technisch personeel) en het focussen op hun core business.

De tussenpartij zegt het lastig te vinden dat de fabrikant zijn kennis afschermt. De tussenpartij heeft geen toegang tot spullen/kennis. Tussenpartij wilde in het verleden de fabrikant helpen door service te doen voor hun, echter was er heel erg weerstand van de fabrikant. De tussenpartij is van mening dat leverancier en fabrikant meer moeten samenwerken om het beste voor beide partijen te bereiken.

De leverancier krijgt heel vaak de vraag of ze de systemen ook willen verleasen, dit doen ze alleen niet omdat ze liever geen assets op de balans willen hebben. Hierom verkopen ze altijd de systemen door.

Voor het onderhoudsbeleid kijken ze altijd eerst naar de handleiding van de fabrikant, deze gebruiken ze voor het maken van hun eigen beleid. In het verleden begonnen tussenpartijen steeds meer onderhoud zelf te doen doordat de fabrikanten niet volledig onderhoud deden in hun ogen. De fabrikant had een lijstje met punten voor onderhoud, maar er werd niet ter plekke gekeken naar de andere dingen. Zo begon het idee dat de fabrikanten ook niet goed meedachten met de klant (dit is een voorbeeld van een concurrent van de fabrikant in dit onderzoek).

Beleid van de tussenpartij is proactief te noemen, van te voren met de klant praten wat zinvol is qua onderhoud (volgens de tussenpartij), tussenpartij brengt z'n eigen ervaring hierin mee.

Op dit moment neemt de tussenpartij niet veel service af bij de fabrikant. De kennis hebben ze zelf, bij specialistisch onderhoud zou training wel tot de mogelijkheden behoren. Voor de rest gaat het buiten de fabrikant om (ook zo bij de concurrenten). Ze hebben zelf de kennis en ervaring.

Contact met de fabrikant is over het algemeen goed te noemen.

Het ligt aan de klanten wat de leverancier allemaal doet. Soms neemt de leverancier de klant mee in de ontwikkelingen als ze wat horen, dit helpt met het verhaal om iets te vervangen, dit doen ze dan

gratis (gratis advies). Ook helpen ze dan mee met het opzetten van de begroting. Soms nodigt de leverancier zich ook proactief uit, om met een klant over vervanging/onderhoud te praten.

De tussenpartij is van mening dat soms minder omzet goed is, als dat betekent dat de relatie tussen bedrijven beter wordt.

In de toekomst ziet de tussenpartij geen activiteiten waar de fabrikant meer mee kan helpen, alleen bij hoge deskundigheid. Voor de rest alleen leveren en meedenken bij spare parts. Meedenken in het voortraject, meedenken met de klant is wel een mogelijkheid. (en alleen engineering bij capaciteit problemen).

De tussenpartij ziet geen problemen in de toekomst, alleen technisch personeel. D.m.v. sensoren zou het ontzorgt kunnen worden tot zekere hoogte, ook omdat er steeds minder kennis bij klanten is (vooral op technisch gebied). Veel installatie verantwoordelijken van een bedrijf zijn alleen, die hebben geen mensen met wie ze kunnen sparren. Dit is niet goed, hier proberen ze op in te spelen.

Appendix G survey monkey data

#1

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Monday, June 25, 2018 10:05:04 AM
Last Modified:	Monday, June 25, 2018 10:07:22 AM
Time Spent:	00:02:17
IP Address:	216.172.67.230

Page 1: Gegevens

Q1 In welk markt segment opereert u?	**Commercieel, Institutioneel, Overheid, of Industrie**
Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?	Anders, nl.: Geen
Q3 Wat is uw rol ten aanzien van Eaton?	Overige (geef nadere toelichting): Partner

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?	**Geen**
Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?	**Nee**

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?	**Respondent skipped this question**
Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?	**Nee**

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Respondent skipped this question**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie?	**Nee**

Page 6

Q10 Over welke service bent u niet tevreden?

xx

Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Ja**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?

?

Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.

?

#2

INCOMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Monday, June 25, 2018 10:05:12 AM
Last Modified:	Monday, June 25, 2018 10:07:36 AM
Time Spent:	00:02:23
IP Address:	212.108.4.213

Page 1: Gegevens

Q1 In welk markt segment opereert u?	**Commercieel, Institutioneel, Overheid, of Industrie**
Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?	Anders, nl.: Ombouw van een IC12 schakelaar
Q3 Wat is uw rol ten aanzien van Eaton?	**Eindklant**

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?	**Geen**
Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?	**Preventief onderhoud**

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?	**Respondent skipped this question**
Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?	**Nee**

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Respondent skipped this question**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie?	**Respondent skipped this question**

Page 6

Q10 Over welke service bent u niet tevreden?	**Respondent skipped this question**
Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?	**Respondent skipped this question**
Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.	**Respondent skipped this question**

#3

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Monday, June 25, 2018 10:03:58 AM
Last Modified:	Monday, June 25, 2018 10:07:54 AM
Time Spent:	00:03:55
IP Address:	185.46.213.76

Page 1: Gegevens

Q1 In welk markt segment opereert u?	Anders, nl.: Luchtvaart
Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?	Anders, nl.: Aircraft components
Q3 Wat is uw rol ten aanzien van Eaton?	**Eindklant**

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?	**Onderdelen,** **Documentatie services,** **Reparatie**
Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?	**Nee**

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?	**Respondent skipped this question**
Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?	**Ja**

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Levertijd**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie?	**Ja**

Page 6

Q10 Over welke service bent u niet tevreden?	**Respondent skipped this question**
Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Ja**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?

Repair capability list

Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.	**Respondent skipped this question**

#4

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Monday, June 25, 2018 10:06:11 AM
Last Modified:	Monday, June 25, 2018 10:09:43 AM
Time Spent:	00:03:32
IP Address:	134.188.4.9

Page 1: Gegevens

Q1 In welk markt segment opereert u?	**Commercieel, Institutioneel, Overheid, of Industrie**
Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?	**Xiria / Xiria E**
Q3 Wat is uw rol ten aanzien van Eaton?	**Eindklant**

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?	**Upgrades**
Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?	**Nee**

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?	**Respondent skipped this question**
Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?	**Nee**

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Respondent skipped this question**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie?	**Ja**

Page 6

Q10 Over welke service bent u niet tevreden?	**Respondent skipped this question**
Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Ja**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?	**Respondent skipped this question**
Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.	**Respondent skipped this question**

#5

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Monday, June 25, 2018 10:17:33 AM
Last Modified:	Monday, June 25, 2018 10:20:44 AM
Time Spent:	00:03:10
IP Address:	195.169.20.249

Page 1: Gegevens

Q1 In welk markt segment opereert u?	Anders, nl.: ziekenhuis (zorg)
Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?	Anders, nl.: vermogensschakelaars en nieuw QTOnet
Q3 Wat is uw rol ten aanzien van Eaton?	**Eindklant**

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?	**Visuele inspectie (van de systemen)** , **Gezondsheids check (van de systemen)** , **Preventief onderhoud**
Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?	**Nee**

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?	**Respondent skipped this question**
Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?	**Nee**

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Respondent skipped this question**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie?	**Ja**

Page 6

Q10 Over welke service bent u niet tevreden?	**Respondent skipped this question**
Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Ja**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?

n.vt

Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.	**Respondent skipped this question**

#6

INCOMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Monday, June 25, 2018 10:25:33 AM
Last Modified:	Monday, June 25, 2018 10:26:30 AM
Time Spent:	00:00:57
IP Address:	213.132.171.90

Page 1: Gegevens

Q1 In welk markt segment opereert u?	Anders, nl.: Paneelbouwer
Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?	**Capitole ,** **20** **xEnergy**
Q3 Wat is uw rol ten aanzien van Eaton?	**Paneel bouwer**

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?	**Respondent skipped this question**
Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?	**Respondent skipped this question**

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?	**Respondent skipped this question**
Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?	**Respondent skipped this question**

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Respondent skipped this question**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie?	**Respondent skipped this question**

Page 6

Q10 Over welke service bent u niet tevreden?	**Respondent skipped this question**
Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?	**Respondent skipped this question**
Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.	**Respondent skipped this question**

#7

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Monday, June 25, 2018 10:49:47 AM
Last Modified:	Monday, June 25, 2018 10:54:35 AM
Time Spent:	00:04:48
IP Address:	185.6.204.228

Page 1: Gegevens

Q1 In welk markt segment opereert u?	**Commercieel, Institutioneel, Overheid, of Industrie**
Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?	Anders, nl.: Bijna hele pakket
Q3 Wat is uw rol ten aanzien van Eaton?	Overige (geef nadere toelichting): Groothandel

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?	**Geen**
Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?	**Nee**

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?	**Respondent skipped this question**
Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?	**Nee**

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Respondent skipped this question**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie?	**Nee**

Page 6

Q10 Over welke service bent u niet tevreden?

zie voorgaande invullingen

Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Nee**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?

Levertijden zeer onbetrouwbaar

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?

duidelijke betrouwbare levertijden

Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.	**Respondent skipped this question**

#8

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Monday, June 25, 2018 10:54:38 AM
Last Modified:	Monday, June 25, 2018 10:57:25 AM
Time Spent:	00:02:46
IP Address:	5.102.138.134

Page 1: Gegevens

Q1 In welk markt segment opereert u?	**Commercieel, Institutioneel, Overheid, of Industrie**
Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?	**xEnergy**
Q3 Wat is uw rol ten aanzien van Eaton?	Overige (geef nadere toelichting): groothandel

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?	**Onderdelen,** **Documentatie services**
Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?	**Onderdelen,** **Service Desk,** **Emergency Response ,** **Documentatie services**

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?	**Respondent skipped this question**
Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?	**Ja**

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Prijs**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie?	**Ja**

Page 6

Q10 Over welke service bent u niet tevreden?	**Respondent skipped this question**
Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Ja**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?	**Respondent skipped this question**
Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.	**Respondent skipped this question**

#9

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Monday, June 25, 2018 11:08:31 AM
Last Modified:	Monday, June 25, 2018 11:22:44 AM
Time Spent:	00:14:13
IP Address:	213.125.136.77

Page 1: Gegevens

Q1 In welk markt segment opereert u?	**Commercieel, Institutioneel, Overheid, of Industrie**
Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?	Anders, nl.: eaton ups
Q3 Wat is uw rol ten aanzien van Eaton?	**Eindklant**

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?	**Installatie** **Services**
Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?	**Nee**

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?	**Respondent skipped this question**
Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?	**Nee**

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Respondent skipped this question**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie?	**Ja**

Page 6

Q10 Over welke service bent u niet tevreden?	**Respondent skipped this question**
Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Ja**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?

geen idee

Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.	**Respondent skipped this question**

#10

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Monday, June 25, 2018 4:39:02 PM
Last Modified:	Monday, June 25, 2018 4:47:20 PM
Time Spent:	00:08:18
IP Address:	31.201.16.2

Page 1: Gegevens

Q1 In welk markt segment opereert u?	Anders, nl.: Geluidsstudio
Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?	Anders, nl.: (nog) niets, wil gewoon op de hoogte blijven van wat ze mij kunnen bieden
Q3 Wat is uw rol ten aanzien van Eaton?	**Eindklant**

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?	**Geen**
Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?	**Nee**

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?	**Respondent skipped this question**
Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?	**Nee**

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Respondent skipped this question**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie? **Nee**

Page 6

Q10 Over welke service bent u niet tevreden?

De optie dat er (nog) geen service is afgenomen staat er in de vragenlijst niet bij, vind dat een gemis dus. Daar we (nog) geen service hebben afgenomen, kunnen wij geen bevredigend antwoord geven op deze vraag.

Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)? **Nee**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?

De optie dat er (nog) geen service is afgenomen staat er in de vragenlijst niet bij, vind dat een gemis dus. Daar we (nog) geen service hebben afgenomen, kunnen wij geen bevredigend antwoord geven op deze vraag.

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?

Geen

Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.

Vragenlijst niet geheel compleet, zie eerdere opmerkingen bij o.a. vragen 8 & 9.

#11

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Tuesday, June 26, 2018 9:32:07 AM
Last Modified:	Tuesday, June 26, 2018 9:35:08 AM
Time Spent:	00:03:00
IP Address:	109.109.107.226

Page 1: Gegevens

Q1 In welk markt segment opereert u?	Anders, nl.: tuinbouw
Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?	Anders, nl.: geen
Q3 Wat is uw rol ten aanzien van Eaton?	**Paneel bouwer**

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?	**Geen**
Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?	**Nee**

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?	**Respondent skipped this question**
Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?	**Nee**

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Respondent skipped this question**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie?	**Ja**

Page 6

Q10 Over welke service bent u niet tevreden?	**Respondent skipped this question**
Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Ja**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?

geen

Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.

geen

#12

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Thursday, June 28, 2018 2:54:39 PM
Last Modified:	Thursday, June 28, 2018 2:57:36 PM
Time Spent:	00:02:57
IP Address:	5.57.251.13

Page 1: Gegevens

Q1 In welk markt segment opereert u?	**Commercieel, Institutioneel, Overheid, of Industrie**
Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?	**Capitole , 20** **Capitole 40**
Q3 Wat is uw rol ten aanzien van Eaton?	**Eindklant**

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?	**Consultantie,** **Project Management ,** **Installatie Services ,** **Emergency Response ,** **Preventief onderhoud,** **Reparatie**
Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?	**Nee**

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?	**Respondent skipped this question**

Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?	**Ja**

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Prijs**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie?	**Ja**

Page 6

Q10 Over welke service bent u niet tevreden?	**Respondent skipped this question**
Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Ja**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?

meer flexibiliteit in prijsopbouw reparatie en onderhoud

Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.	**Respondent skipped this question**

#13

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Tuesday, July 03, 2018 8:17:13 AM
Last Modified:	Tuesday, July 03, 2018 8:19:39 AM
Time Spent:	00:02:26
IP Address:	87.249.104.191

Page 1: Gegevens

Q1 In welk markt segment opereert u?	Anders, nl.: Utiliteit
Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?	**Magnefix,** **xEnergy,** **Capitole** **40**
Q3 Wat is uw rol ten aanzien van Eaton?	Overige (geef nadere toelichting): Adviseur

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?	**Documentatie services**
Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?	**Nee**

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?	**Respondent skipped this question**
Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?	**Nee**

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Respondent skipped this question**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie?	**Ja**

Page 6

Q10 Over welke service bent u niet tevreden?	**Respondent skipped this question**
Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Ja**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?	**Respondent skipped this question**
Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.	**Respondent skipped this question**

#14

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Tuesday, July 03, 2018 8:55:22 AM
Last Modified:	Tuesday, July 03, 2018 8:59:02 AM
Time Spent:	00:03:39
IP Address:	5.102.138.134

Page 1: Gegevens

Q1 In welk markt segment opereert u?	**Commercieel, Institutioneel, Overheid, of Industrie**
Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?	**xEnergy**
Q3 Wat is uw rol ten aanzien van Eaton?	Overige (geef nadere toelichting): distributeur

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?	**Onderdelen**
Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?	**Nee**

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?	**Respondent skipped this question**
Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?	**Nee**

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Respondent skipped this question**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie?	**Ja**

Page 6

Q10 Over welke service bent u niet tevreden?	**Respondent skipped this question**
Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Ja**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?	**Respondent skipped this question**
Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.	**Respondent skipped this question**

#15

INCOMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Monday, June 25, 2018 2:56:38 PM
Last Modified:	Tuesday, July 03, 2018 3:21:42 PM
Time Spent:	Over a week
IP Address:	62.195.113.248

Page 1: Gegevens

Q1 In welk markt segment opereert u?	Anders, nl.: Ik ben gepensioneerd
Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?	Anders, nl.: pure belangstelling
Q3 Wat is uw rol ten aanzien van Eaton?	Overige (geef nadere toelichting): ik adviseer nog wel eens

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?	Anders, nl.: ik zelf geen
Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?	Anders, nl.: geen

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?

BAM Techniek Grote Projecten

Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?	**Nee**

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Respondent skipped this question**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie?	**Ja**

Page 6

Q10 Over welke service bent u niet tevreden?	**Respondent skipped this question**
Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Ja**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?

Geen

Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.

Geen

#16

INCOMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Tuesday, July 03, 2018 4:20:37 PM
Last Modified:	Tuesday, July 03, 2018 4:24:24 PM
Time Spent:	00:03:46
IP Address:	94.208.237.254

Page 1: Gegevens

Q1 In welk markt segment opereert u?	Anders, nl.: installatietechniek elektro
Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?	Anders, nl.: i.oo style en systeem 55 componenten
Q3 Wat is uw rol ten aanzien van Eaton?	**Service provider / installateur**

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?	**Installatie , Services** **Documentatie services,** **Upgrades**
Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?	**Upgrades**

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?	**Respondent skipped this question**
Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?	**Nee**

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Respondent skipped this question**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie?	**Respondent skipped this question**

Page 6

Q10 Over welke service bent u niet tevreden?	**Respondent skipped this question**
Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?	**Respondent skipped this question**
Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.	**Respondent skipped this question**

#17

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Wednesday, July 04, 2018 11:45:33 AM
Last Modified:	Wednesday, July 04, 2018 11:52:47 AM
Time Spent:	00:07:14
IP Address:	89.20.174.130

Page 1: Gegevens

Q1 In welk markt segment opereert u?	Anders, nl.: zorg (ziekenhuis)
Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?	**Capitole** **20**
Q3 Wat is uw rol ten aanzien van Eaton?	**Eindklant**

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?	**Preventief onderhoud**
Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?	**Nee**

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?	**Respondent skipped this question**
Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?	**Nee**

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Respondent skipped this question**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie?	**Ja**

Page 6

Q10 Over welke service bent u niet tevreden?	**Respondent skipped this question**
Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Ja**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?

geen

Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.	**Respondent skipped this question**

#18

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Friday, July 06, 2018 4:01:05 PM
Last Modified:	Friday, July 06, 2018 4:09:19 PM
Time Spent:	00:08:14
IP Address:	185.46.212.61

Page 1: Gegevens

Q1 In welk markt segment opereert u?	**Commercieel, Institutioneel, Overheid, of Industrie**
Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?	**Xiria / Xiria , E** **SVS,** **FMX,** **Capitole 40**
Q3 Wat is uw rol ten aanzien van Eaton?	**Eindklant**

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?	**Onderdelen,** **Installatie Services ,** **Revisie,** **Reparatie**
Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?	**Nee**

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?	**Respondent skipped this question**

Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?	**Nee**

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Respondent skipped this question**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie?	**Ja**

Page 6

Q10 Over welke service bent u niet tevreden?	**Respondent skipped this question**
Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Ja**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?

Totaalpakket tekeningen bij wijzigingen

Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.

Misschien betere samenwerking tussen verkoop en afgifte levertijden.

#19

INCOMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Monday, July 09, 2018 4:13:13 PM
Last Modified:	Monday, July 09, 2018 4:14:42 PM
Time Spent:	00:01:29
IP Address:	213.125.171.82

Page 1: Gegevens

Q1 In welk markt segment opereert u?

Anders, nl.:

Industrie papier karton fabriek

Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?

SVS, Coq,

Magnefix,

Capitole

40

Q3 Wat is uw rol ten aanzien van Eaton?

Eindklant

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?

Respondent skipped this question

Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?

Respondent skipped this question

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?

Respondent skipped this question

Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?

Respondent skipped this question

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Respondent skipped this question**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie?	**Respondent skipped this question**

Page 6

Q10 Over welke service bent u niet tevreden?	**Respondent skipped this question**
Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?	**Respondent skipped this question**
Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.	**Respondent skipped this question**

#20

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Monday, July 09, 2018 8:03:56 PM
Last Modified:	Monday, July 09, 2018 8:08:40 PM
Time Spent:	00:04:44
IP Address:	84.84.7.254

Page 1: Gegevens

Q1 In welk markt segment opereert u?	**Commercieel, Institutioneel, Overheid, of Industrie**
Q2 Welke producten van Eaton heeft u aangeschaft en/of doorverkocht?	**Capitole ,** **20** **xEnergy**
Q3 Wat is uw rol ten aanzien van Eaton?	**Service provider / installateur**

Page 2: Service activiteiten

Q4 Welke Eaton services nemen jullie op dit moment af voor de in gebruik genomen (of aangeschafte) Eaton systemen?	**Onderdelen,** **Installatie ,** **Services** **Documentatie services**
Q5 Maakt u naast de bij Eaton afgenomen services nog gebruik van services voor Eaton systemen door andere partijen?	**Consultantie**

Page 3

Q6 Wilt u aangeven wie deze services aan Eaton systemen verzorgt? Indien ja, kunt u dit hieronder aangeven?

-

Q7 Heeft u wel eens een service aangevraagd bij Eaton, maar uiteindelijk niet afgenomen?	**Nee**

Page 4

Q8 Waarom heeft u deze service uiteindelijk niet afgenomen?	**Respondent skipped this question**

Page 5: Service Kwaliteit

Q9 Bent u tevreden over de door Eaton geleverde services op locatie?	**Ja**

Page 6

Q10 Over welke service bent u niet tevreden?	**Respondent skipped this question**
Q11 Bent u tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Ja**

Page 7

Q12 Waarom bent u niet tevreden over de service support van Eaton (offerte, order, planning, betaling)?	**Respondent skipped this question**

Page 8: Behoeftes

Q13 Wat zou u graag toegevoegd zien worden aan de service activiteiten van Eaton?	**Respondent skipped this question**
Q14 Hieronder is er ruimte om eventuele opmerkingen die u ons graag wilt meegeven te noteren.	**Respondent skipped this question**