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Gaining competitive advantage when a business is expanding their maintenance service

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ABSTRACT:
Gaining competitive advantage is something that every company should do at some point. There are multiple different ways to do so, and in this thesis, some ways are introduced. An anonymous machine manufacturer is planning to expand its maintenance service. Today it is still just some small operation with a few people employed. The goal is to grow into a successful maintenance service business.

This thesis consists of a competitor analysis, where other companies in the industry are benchmarked, implementing the Porter's 5 forces, planning a pricing strategy, and conducting an online survey to Finnish customers, about the quality of their current maintenance service. The SERVQUAL model is applied to measure the level of satisfaction towards the current maintenance service. 16 people took part in the survey.

Based on the results of the benchmarking and the online survey, some themes were raised. To gain competitive advantage in the maintenance service business, the service must be efficient, flexible and professional. Furthermore, implementing features like a mobile application for the customer can increase transparent communication. Some businesses are more active in social media than others. Around the case company's industry social media, there is a lot of room for new companies.

KEYWORDS: Huolto, Hinnoittelustrategia, Kilpailija-analyysi, SERVQUAL, Verkkokysely, Kilpailuetu, VRIN, S.PSS

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TIIVISTELMÄ:
Jokaisen yrityksen kannattaa pohtia, mitä kilpailuetuja heillä on. Kilpailuetua voi tavoitella useilla eri tavoilla. Tässä opinnäytetyössä esitellään jotain tapoja, joilla nimetön kohdeyritys voisi saada kilpailuetua omalle laajenevalle huoltopalvelulleen. Tämänhetkinen huoltotoiminta on pientä ja huoltohenkilökuntaa on vain muutama henkilö. Yrityksen tavoitteena olisi laajentaa huoltopalvelusta menestyvä bisnes.

Tämä pro gradu -tutkielma koostuu kilpailija-analyysista, missä muita alan yrityksiä benchmarkataan ja yrityksen ominaisuuksia sovelletaan Porterin viiteen kilpailutekijään. Lisäksi huollolle suunnitellaan askeleita hinnoittelustrategiaan ja viimeisenä yrityksen asiakkaille järjestettiin verkkokysely ostettujen huoltopalveluiden laadusta. Kyselyssä käytettiin SERVQUAL menetelmää palvelun laadun kartoittamiseen. Kyselyyn osallistui 16 henkilöä.

Benchmarkkauksen ja verkkokyselyn tulosten perusteella, esiin nostettiin muutamia teemoja. Yritys voisi saavuttaa kilpailuetua tarjoamalla joustavaa, tehokasta ja ammattitaitoista huoltopalvelua. Lisäksi esimerkiksi mobiilisovelluksen käyttöönotto helpottaa yrityksen ja asiakkaan välistä viestintää ja tuo palvelun nykyaikaiselle tasolle. Benchmarkkauksesta selvisi, että harvempi kohdeyrityksen kilpailija on todella aktiivinen sosiaalisessa mediassa. Näkyvyys siellä saattaisi tuoda huoltopalvelulle enemmän asiakkaita.

AVAINSANAT: Huolto, Hinnoittelustrategia, Kilpailija-analyysi, SERVQUAL, Verkkokysely, Kilpailuetu, VRIN, S.PSS

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Abbreviations

VRIN	Valuable (V), rare (R), imperfectly imitable (I) and non-substitutable (N)
OE	Operational effectiveness
SERVQUAL	22-item scale, which examines the level of quality and satisfaction towards a service
SME	Small and Medium-Sized Enterprise
E	Expectation
O	Outcome

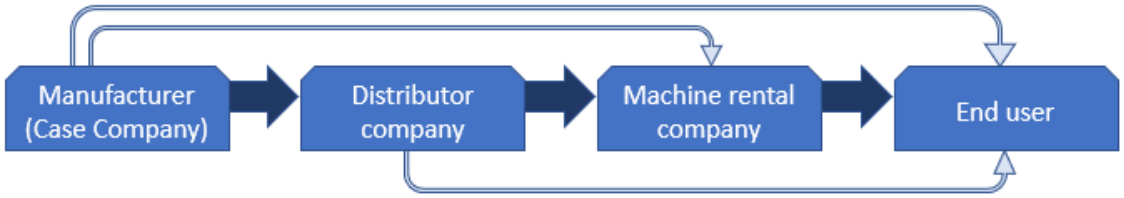
1 INTRODUCTION

This thesis presents a multifaceted case with a company, that is expanding its maintenance services. The aim is not to create a plan to expand the business itself but to give the company tools and information that will help with the future expansion. In this thesis, the case company will be either called the 'case company' or 'the manufacturer' as it remains anonymous. This paper consists of a literature review, a competitor analysis, a theoretical pricing strategy and an online survey among the case company's key-customers.

The thesis is conducted in cooperation with a case company. There will be no compensation and the thesis are done mostly independently. There is no need for visiting the company regularly and communication happens via phone, e-mails, or online meetings. I am working closely with the case company's representative, who is also writing their master's thesis, and we will partly cooperate in terms of getting information about the company.

1.1 Background and the Case Company

The case company in this thesis is a firm in Southwest Finland, that manufactures heavy machinery used in construction. The business includes manufacturing, sales, maintenance, export, import, procurement and financing. A majority of the business is exporting, and the company is present in over 40 countries. The simplified product path (Picture 1) starts from the case company's factory. The machine is then sold to a distributor company. Distributor then sells it to rental companies or end-customers. In some cases, the case company can also sell the machine straight to the rental. The product path is further explained in the following chapter.



Picture 1. Simplified product path of the case company's product

The case company's maintenance handles mostly damage repairs and thorough periodic inspections. In addition, they offer periodic maintenance and warranty repair for machines. Other maintenance such as domiciliary visits and commercial maintenance are handled by the distributor company. In the future, the case company wants to grow its maintenance service side. The case company wants to ensure profitability throughout the year. By growing the service sector, the demand cyclicity levels and basic turnover is secured. By increasing the maintenance service, the company can also get closer to the customer and receive first-hand information about product flaws, which educates the staff about the machines and their durability.

When a business is easily affected by the fluctuations of economic activities called Business Cycles, it can be called a Cyclical Industry (Kenton, 2020). This case company has a cyclical business. The periodic inspections are focused on the winter and the damage repairs focuses on the early summer. Only some small maintenance and damage repair is done during the early summer and late autumn. Furthermore, the new equipment is usually only bought in the spring time. The cyclicity forms because the business is slow in the summer and early autumn.

1.1.1 Case company's sales processes

The case company has two common sales processes. The basic simplified product path can be seen in Picture 1. A sales process to the distributor happens as follows. The client needs a machine that the case company is manufacturing. Either the distributor or the case company's area manager negotiates with the client about the machine they need. When the client buys the machine, they order it from the distributor. An order is then placed by the distributor to the manufacturer (case company). The sales process

happens through the distributor company. The final product is delivered either via the distributor or straight to the client.

The sales process to a key customer (e.g., a rental company) happens as follows. First, a key customer needs a machine that the case company is manufacturing. Then, the case company's area manager negotiates with the key customer about the machine they need. The key customer orders the machine straight from the manufacturer. Finally, the machine is delivered straight to the key customer.

1.1.2 Case company's maintenance services

The case company has a maintenance hall where they offer damage repairs, periodic inspections, warranty repairs and thorough periodic inspections. There are two service mechanics at the maintenance side.

Damage repair means repairing a damage that has been caused by an external factor. For example, if a tree falls on the machine. Machines coming for damage repair come from a large area (central Finland, western Finland, and southern Finland). Warranty repair means that the defect occurs during the warranty period of the device and cannot be repaired by an authorized service partner / dealer due to lack of resources or lack of expertise, so it is brought to the case company's own maintenance.

Periodic inspection means a yearly maintenance and inspection so that the machine meets the required SFS standard. SFS ry is the central organization for standardization in Finland and responsible for standardization, excluding the electricity and telecommunications sectors (SFS ry, 2020). The machines that come for periodic inspections as well as minor maintenance and repairs are mainly from nearby end users and small rental companies.

Thorough periodic inspection means an inspection that requires the complete dismantling of the machinery. Depending on the machine model, the device is practically completely dismantled. The weld distortions are checked, and the material intensities are

ultrasonically measured. The necessary components are then replaced, and the device is assembled back together. This also comes from the SFS standard (SFS ry, 2020).

Basically, the case company's current maintenance services are not advertised at all. The case company does not have the equipment to do domiciliary repairs, since for example, they do not have a car for maintenance purposes. The maintenance is cyclical because the business has two peaks in their cycle. First peak appears when the rental companies buy new equipment for the summer. Before the old machines are taken to use again, they must be checked and maintained. This is usually in the early spring before the summer season starts. The second peak appears when customers' old machines require maintenance after the summer season. This peak happens in the autumn when the machines are inspected before putting them away.

1.2 Research Questions and Scope

Research gap: As a machine manufacturer, the case company is not specialized in maintenance. The research gap is formed from the need to learn more about the machine maintenance processes. The subject is approached by benchmarking similar companies and companies which have successful maintenance. The focus will be in their social media and website appearance. A pricing strategy will be created based on the customer analysis. Furthermore, an online customer survey will tell more about the current level of service satisfaction and whether there is a demand for new maintenance services that would be provided by the manufacturer.

Research problem: How to gain competitive advantage with a new service?

Research question: What processes and features could the case company implement into their maintenance to gain competitive advantage?

From a theoretical point of view, the literature review covers maintenance as a service, creating a competitor analysis, and the pricing strategy development. The scope is limited to the case company's end customers in Finland. The online survey determines the

demand for maintenance, the current level of satisfaction and the number of their products in Finland.

1.3 Methodology and Objectives

There are three focus areas in this thesis. First one is creating a competitor analysis by benchmarking the competitors and other businesses in the industry. The framework Porter's 5 Forces will be used as analysis tools. Second focus is the pricing strategy part, which introduces strategic decisions and steps that the case company can later utilize in order to create a functioning pricing strategy for themselves. Thirdly, empirical part includes a qualitative, online customer survey. It will be created by using the SERVQUAL model, which is created to measure the level of service quality and a Webropol platform is used in the execution. The collected results will then be analyzed.

The objective is to identify the competitive advantages the case company's own maintenance service has and possibly could have in the future. Competitor analysis, pricing strategy and the survey will all bring a perspective to this objective. Another objective is to better understand the competitive market in the industry.

1.4 Research Structure

This thesis is divided into five main chapters. Chapter 1 introduces the thesis, the case company and the research question. Chapter 2 is the literature review. It addresses previous studies of the related themes such as maintenance service, Sustainable Product-Service System, competitive advantage and the SERVQUAL model. Chapter 2.7 introduces the competitor analysis, benchmarking and Porter's 5 Forces. Chapter 3 introduces the method of the online customer survey and its evaluation and justification.

Chapter 4 focuses on the results. Chapter 4.1 goes deeper into the competitor analysis and businesses are benchmarked from the case company's point-of-view. Afterwards, the case company's business is reflected to Porter's 5 forces. Chapter 4.2 introduces the theory of creating a pricing strategy. In the end there are steps that the case company can use to develop their own pricing strategy. Chapter 4.3 goes through the online survey that was executed in the spring of 2021.

Finally, in Chapter 5, the conclusion from the competitor analysis, pricing strategy and online customer survey are presented.

I chose this topic after long discussions with the case company's representative. We both agreed that this work would give tools and guidance for building a successful maintenance service in the future.

2 LITERATURE REVIEW

In this chapter, earlier works related to this thesis subject are presented. Furthermore, the latest approaches and advancements are introduced. The books and journal articles are mostly from the year 2000 or later but the oldest theories trace back to the year 1979. All the terms are explained, and different perspectives are observed. All the theory in this thesis aims to answer the research problem: How to gain competitive advantage with a new service?

The key terms and concepts for this thesis are the following: maintenance, Sustainable Product-Service System (S.PSS), competitive advantage, the SERVQUAL model, social media and competitor analysis. In the following chapters, these terms and concepts are explained, and relevant theories are introduced.

2.1 Maintenance Service

Maintenance is defined as “the work to keep a -- machine etc. in good condition” (Cambridge University Press, 2020). The case company of this thesis manufactures and sells heavy machinery. The company has some maintenance services such as repair and warranty maintenance, and they plan to expand the maintenance side in the future. In this chapter, different maintenance types, processes and requirements are introduced.

In their article, Kuo & Wang (2012) divide maintenance types in two: **Remote maintenance** and **Physical maintenance**. Remote maintenance includes network maintenance such as online technical support and telephone maintenance, where the customer can discuss with the maintenance personnel. As physical maintenance Kuo & Wang (2012) name Door-to-door maintenance, retail stores and physical repair shops.

Wu & Clements-Croome (2005) have divided maintenance policies into two categories; **corrective maintenance** and **preventive maintenance**. Corrective maintenance is done when something breaks and preventive maintenance is upkeep which ensures that the machine works reliably.

Gits (1992) defines maintenance as “the total of activities required to retain the systems in or restore them to the state necessary for fulfilment of the production function.” Following Gits’ footsteps Irajpour; Fallahian-Najafabadi; Mahbod; & Karimi (2014) identified three types of maintenance: **reactive maintenance**, **breakdown maintenance**, and **corrective maintenance**.

From the case company’s perspective, the maintenance services are all **physical**. Unlike the distributor company, they cannot provide a house call service where the maintenance is done at site. The distributor company offers more preventive maintenance and reactive maintenance whereas the case company focuses now more on the corrective, breakdown maintenance and corrective maintenance.

2.2 Sustainable Product-Service System (S.PSS)

Global warming and other environmental issues are taken into consideration more than ever before. According to Roy (2000), the pressure to reduce environmental impacts in production and consumption of goods and services is very important. However, there are many trade-offs, with creating “Green Design”. For example, an eco-friendly plastic bag cannot be reused as a garbage bag, because the material is so weak that it breaks easily (Åström-Kupsanen, 2008). Tesla’s electric cars that do not pollute by burning fuel, but are equipped with lithium batteries, magnets and rare metals that come from environmentally destructive mines (Wade, 2016). Product-service systems (PSS) aim to minimise the impact of material consumption. With it, a company can enter new market opportunities, change market trends, and remain competitive longer than others (Mont, 2002).

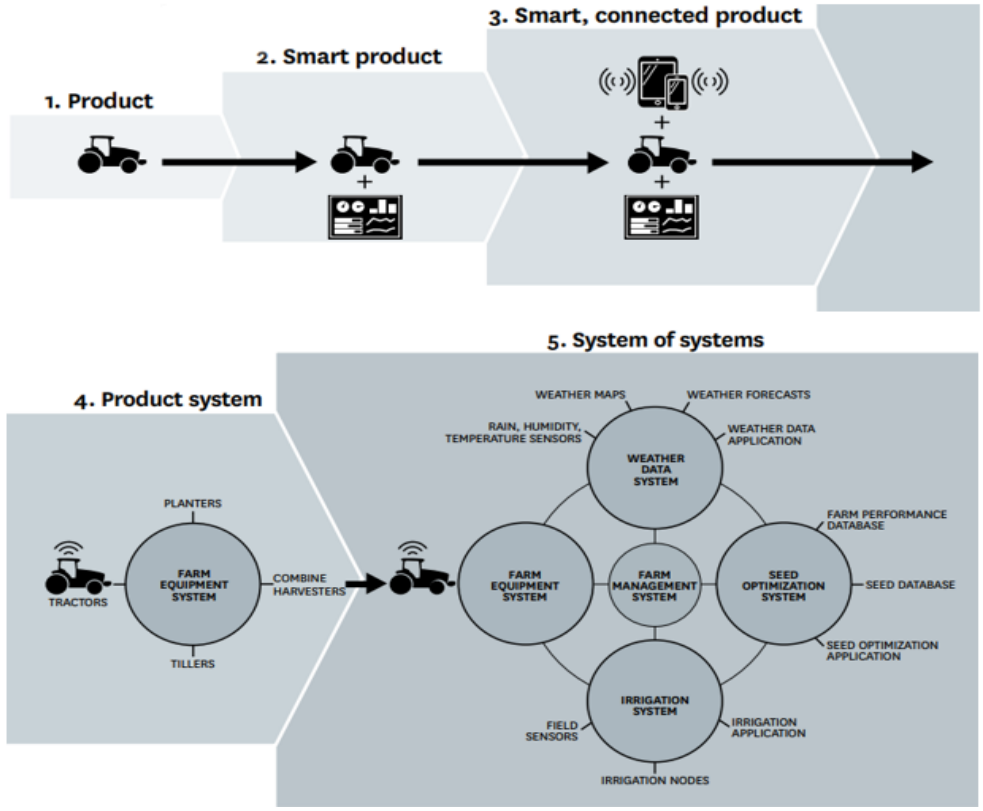
The evolution of products and services has shifted in the past decades. When earlier we had cinemas, we now have TVs, or when before everyone used public transportation, and now many of us have cars of our own (Roy, 2000). The production and product costs have declined so much that people can afford their own self-service products instead of purchasing a service itself. Now, the evolution has shifted again (Roy, 2000). This time, instead of buying a product or a service, we rent a product in order to get the service

with it. This is called the product-service system (PSS). A PSS is a business model, that delivers products as services and consequently are more environmentally friendly, because the product can be reused by multiple people (Piscicelli, Cooper, & Fisher, 2014). Examples of PSSs are Netflix and Voi Scooters (Adler, 2021). Instead of buying an electric scooter, a bicycle or a bus ticket, a person living in a city can rent a Voi Scooter from the side of the road and only pay for the transportation service according to the time that the Scooter was used.

The case company's machine can be seen as a PSS. It is possible to rent these machines and use them for a certain time. Then when the machine is returned, the customer will pay for the time they had used it.

With PSS, it is possible to close material cycles or give options for product use (Mont, 2002). When a company uses a PSS, its services can be extended and diversified. It is possible to have a better customer relationship between the client and the manufacturer thanks to increased contact created by the technology in the machines. Now, when a new upgrade or version of a product is released, it can mean that the physical product remains unchanged and only the functions and services change. This is how the same product can endure in the competitive markets longer and no physical waste is created (Mont, 2002).

However, according to Vezzoli, Ceschin, Diehl & Kohtala (2015), Sustainable product-service system has many barriers which makes the implementation very difficult. Companies and service providers must manage the adaptation of a PSS strategy and it is expensive: training and hiring personnel and getting everyone to internalize the new way of working. From the customer point-of-view, the challenge is that people do not understand the PSS concept. According to Vezzoli et al. (2015), even if one major benefit of the PSS is the cost saving and eco-friendliness, they are not always detectable straight out from a brochure, so it looks more expensive than it actually is.



Picture 2. Smart, Connected Products are Product-Service Systems (Porter & Heppelmann, How Smart, Connected Product Are Transforming Competition, 2014).

In the following chapters, smart, connected products by Porter & Heppelmann (2014; 2015) are introduced (Picture 2). Product-service systems can be smart, connected products. The thing that combines these two concepts is that smart, connected products are used as product-service systems. These products challenge people, manufacturers, industries and the whole world to redefine a product and a service and rethink the design of everything that exists (Porter & Heppelmann 2015; Vezzoli et al., 2015).

2.3 Competitive Advantage

Competitive advantage is a factor that every company needs in order to survive in the competitive markets. It can be anything that differentiates the business from others. For example, cheaper prices, better quality, professional customer service or an innovation that is a new substitute for an old product. Today, with advanced technology, company's strategic decisions play a bigger role than ever in gaining competitive advantage (Porter

& Heppelmann, 2014). This means, that when products are much more than the physical product, because it is smart and connected, it opens doors to countless possibilities. Smart, connected products change the nature of competition and how value is created (Porter & Heppelmann, 2014).

According to Smith (2016), if a company has a unique resource (e.g. product) that enables the firm to deliver more value and benefits to the customer with a smaller cost, or lower the price without lowering the benefits with it or do both, they then have competitive advantage. Every company must find their own unique competitive advantage. Human capital is said to be one of the competitive advantages a company can have (Hitt, Bierman, Shimizu, & Kochhar, 2001). By investing to know-how and other intangible resources, a company can gain major competitive advantage. Human capital brings advantages such as intellectual ability, social contacts and cachet (Hitt et al., 2001). In their research McGuinness & Hutchinson (2013) proved that the human capital is utilized in the product strategy, which then creates competitive advantage. However, according to Melati, Janissek-Muniz, & Curado (2021), knowledge is something that must be constantly revised and well managed in order to get return and competitive advantage.

Resource-based view (RBV) is a theoretical perspective which concentrates on the internal resources of a firm. Internal resources are for example, knowledge, capability, processes, or information (Kull, Mena, & Korschun, 2016). If the organization wants to utilize their resources to gain competitive advantage, they must be combined with each other and applied correctly (Lockett, Thompson, & Morgenstern, 2009).

In their article How Smart, Connected Product Are Transforming Competition, Porter & Heppelmann (2014) talk about how products today have computers inside them and everything is connected to the internet (Internet of Things). These products have physical components, connectivity components and “smart” components. For example, Volvo CE (Construction Equipment) has smart technology in their machines (See Picture 3). Thanks to 5G, they will start to introduce technology which enables machines to “talk” to each other, making the work more efficient and smart (Volvo CE, 2018).

Picture 3. Volvo Construction Equipment Have Smart Connected Machinery (Volvo CE, 2018).

When gaining competitive advantage with smart, connected products a company should have operational effectiveness (OE) (Porter & Heppelmann, 2014). To achieve OE, a company must be up-to-date with its IT solutions, equipment, technology and supply chain management approaches. When a company stops aiming at OE, it loses its place in the markets Porter & Heppelmann (2014). Benchmarking is one of the important tools keeping up with the latest advancements. Another solution to gain competitive advantage, is defining a distinctive strategic positioning. This means doing things differently than your competitors.

According to Porter & Heppelmann (2014, introduce ways to gain competitive advantage with smart, connected products. Creating a new design that enables functions such as predictive or remote services. Learning about the customer through usage data in order to find new ways to market and create value. Gathering skilled software developers, system engineers and big data analytics to have the state-of-the-art know-how (Porter & Heppelmann, 2014).

In the following Chapter about competitor analysis, where the case company's competitors are benchmarked, the goal is to find their competitive advantages. It is also important to identify the case company's own competitive advantage and compare it in relation to the other firms. Firms resources are basically all the assets, know-how,

processes, physical capital and information (Barney, 1991). From the resource-based view, the desired competitive advantage should be valuable (V), rare (R), imperfectly imitable (I) and non-substitutable (N). This is called the VRIN framework (McGuinness & Hutchinson, 2013; Barney, 1991; Hoopes, Madsen & Walker, 2003). The VRIN framework helps the managers to decide, whether the possible competitive advantage is valuable or not (Barney, 1991). The VRIN theory is addressed from the case company's point of view in Chapter 4.1.

2.4 Social Media

Alkula (2020), introduces a research about Journalism in the digital era which was published in the spring of 2020. From the research it was concluded that the most important sources of information for journalists are previous articles, companies' webpages and institutional sources of information. The fourth most important source of information, past the telephone and print sources, for example, was social media. The least important sources were online dictionaries, print media and the phone (Alkula, 2020). 13,7 percent of Finnish journalists said, that they use social media as their primary source of information. The most used social media platforms for journalists according to Alkula (2020) are Facebook, Twitter, Instagram and LinkedIn.

Social media helps businesses to build awareness, communicate, show authenticity and provide support to customers. According to Marketing Insider Group (2018), this means better communication with the customers, increasing awarenedd to the business' brand and boost sales. According to Newberry (2018), social media makes it possible to visualise the business more. Pictures, videos and person introductions humanize the company and may show to the potential customers all the possibilities that the firm has to offer (Newberry, 2018). For example, it the company name or logo does not explain the core idea of the business, advertisement in social media with pictures and information strikes can help.

2.5 The VRIN theory

The VRIN-theory is a four-letter tool which offers a way for companies to look into their value proposition and reflect it on the existing competitive market (Marketing Adviser, 2019). According to Barney (1991), when a company wants to gain sustained competitive advantage, it should have potential resources for this. Barney argues that if a company's resource has the following four attributes, it can be defined as a sustainable competitive advantage

- It must have value, that seizes opportunities and/or neutralizes threats
- It is so rare that the current and future competitors should not have anything like it
- It cannot be perfectly copied by others
- There cannot be any similar substitutes for this resource. At least not ones that are also valuable, rare, or imperfectly imitable.

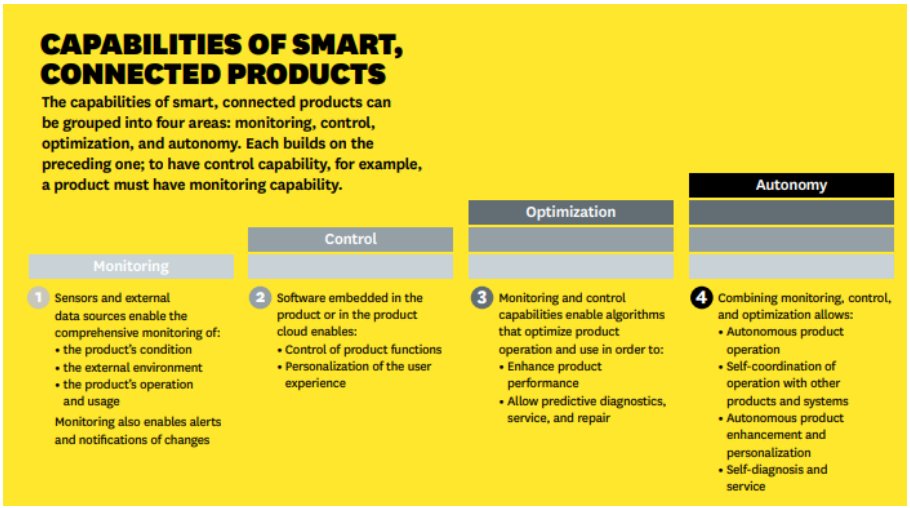
Valuable resources are something that helps a firm to become more efficient or effective (Barney, 1991). Resource that invocates opportunities or diminish threats within the organization's internal environment are valuable resources. These can be found simply by looking at the firm's financial services and compiling a list of all the resources (Marketing Adviser, 2019).

Rare resources are valuable resources that the competitors do not have, for example managerial talent. If multiple firms have the same valuable resource, it is not then a competitive advantage (Barney, 1991).

Imperfectly imitable resources can come from unique historical conditions, like location, individual human capital of e.g., a scientist, or organizational culture. A resource cannot be replicated if the relation between the resource and the competitive advantage is unclear. This is called the *causal ambiguity* (Barney, 1991). Causal ambiguity can only happen if also the company that owns this resource does not understand the link between it and the competitive advantage. Once the link is understood, it is imitable again. Furthermore, resources can be imperfectly imitable if they are *socially complex.* This means

that the competitive advantage comes from some social phenomena and cannot not be replicated by another firm because it is not dependent on the firm's actions but the actions of the people. Advantages like networks, firm's culture, or reputation. This can be seen in the efficiency, when for example there are two similar companies with the same machinery. However, the other firm has a better working culture and communication. So, they are more efficient even if they have the same potential.

Non-substitutable resources are something that cannot be substituted. A substitute is a product, service or a process that delivers a similar result, or it can be used similarly (Nicholson & Snyder, 2008). In the case of competitive advantage, this non-substitutability is important from the strategic point of view. Barney (1991) gives an example of two different strategic substitutions. The first one is that a firm has a good team of professional managers. For the other firm to gain similar competitive advantage, it has to be able to gather a group of professional managers too. His second example for strategic substitutes is when one firm has a very characteristic and charismatic leader, they receive great results. However, the other firm has an excellent strategic planning system, so even without that charismatic leader, they receive as good results as the other firm.



Picture 4. Capabilities of Smart Connected Products (Porter & Heppelmann, 2014).

Thanks to the new "wave" of IT-driven competition (Picture 7), there is a new point-of-view to the competitive market environment. Products are getting smarter and connected and this has offered businesses a new way to create value (Porter & Heppelmann, 2014). By removing the element of human error and adding computers and connections, machines monitor themselves, they can be remotely controlled, the product performance can be optimized, and machines can become fully automated (Porter & Heppelmann, 2014). This makes it possible for human only to supervise the performance.

2.6 The SERVQUAL model

The empirical part of this thesis is an online survey for the key-customers. The method that is used to gather the service quality data, will be the SERVQUAL model.

In 1988, Parasuraman, Zeithaml & Berry introduced the SERVQUAL model. SERVQUAL is a 22-item scale, which examines the level of quality and satisfaction towards a certain service. The aim is to measure customers' expectations and perceptions of quality. The idea is to ask the customer to imagine the perfect service quality and then to compare it to the service they are receiving (Parasuraman, Zeithaml & Berry, 1988). According to Souca (2011), service quality is an equivocal concept, which also makes it hard for the customers to describe and the interviewers to measure.

"service quality is defined as the degree and direction of the discrepancy or gap that exists between the customer's expectations and perceptions, in terms of different dimensions of the service quality, discrepancy that can affect the customer's future behaviour" (Parasuraman et al., 1988).

In the SERVQUAL model, the customer's opinion is the most important (Souca, 2011). The SERVQUAL model is sometimes referred to as the RATER model, and the letters come from the five dimensions (Souca, 2011). This is because in the original SERVQUAL model there were all together 10 dimensions and 97 items and RATER is in a sense, the evolved, compressed version (Parasuraman, Zeithaml, & Berry, 1988). However, in this thesis, this

empirical study will be conducted using the name SERVQUAL, with five dimensions and 22 items.

What the customer expects to get from a perfect service provider is called the expectation (E). The service the customer has then received from the target company is the outcome (O). The gap between E and O then tells the situation, of where there is room to improve and which aspects are at an acceptable level (Parasuraman et al., 1988). The answers are given on a scale 1-5 or 1-10. The lowest (1) is strongly disagreed, the highest (5 or 10) is strongly agreed.

Table 1. SERVQUAL example question, scale 1-5 (Samen;Akroush;& Abu-Lail, 2013).

	The perfect company (E)		**Our company (O)**	
Reliability Q1	When the maintenance service promises to do be ready at a certain time, it is.	5	Our company delivers their services as they have promised to their customers at a certain time.	4

In Table 1, we can see that the expectation is rated to the highest possible, number 5, but "our company" delivers services only at the level of 4. This means that there is a gap between E and O. The SERVQUAL questionnaire consists of 22 expectations (E) and 22 outcomes (O). According to Souca (2011), Parasuraman et al., (1988) organized the questions in five dimensions:

> **Tangibles** — the appearance of the physical facilities, equipment, personnel, and communication materials
>
> **Reliability** — the ability to perform the promised service dependably and accurately
>
> **Assurance** — the knowledge and courtesy of employees and their ability to convey trust and confidence
>
> **Empathy** — the provision of caring, individualized attention to customers
>
> **Responsiveness** — the willingness to help customers and to provide prompt service. (Souca, 2011)

The survey questions for the empirical part are formed with the help of the question formulation from Fripp (SERVQUAL's 22 Questions, 2021), Fripp (Understanding the SERVQUAL Model, 2021) and Samen, Akroush & Abu-Lail (2013). The survey questions can be found in Appendix 1.

2.7 Competitor Analysis

Competition in the markets is something that no company can avoid. Regardless of the niche or size, a business always has competitors of some kind (Adom, Nyarko, & Kumi Som, 2016). For a company to find its competitors and their strengths and weaknesses

In this chapter, the concept of competitor analysis is explained and the steps for creating one are introduced. The case company's competitors are businesses in Finland, majority in southern Finland. The competitors sell and maintain heavy machinery.

According to White (2018), a competitive analysis is a strategy where a company determines the strengths and weaknesses of its major competitors by analysing their operations, marketing, products, and services. It is a tool that a company can use to understand the actions of their competitor's (Adom, Nyarko, & Kumi Som, 2016). The goal is to enhance the company's own strategy and find a competitive advantage for them. From their empirical study, Subramanian & IsHak (1998) discovered that companies that have really invested in the competitor analysis have bigger profitability than firms that did not bother.

The first thing to contemplate, when forming a competitor analysis, Wilson (1994) proposes to think about the following: Who is it that we are truly competing against. Competition occurs with companies that have products of the same kind. For example, the case company in this thesis wants to start providing maintenance services to heavy equipment and therefore its competitors are other firms that provide heavy machine maintenance. Indirect competitors are those companies that manufacture something or provide a service that can replace the product (Wilson, 1994). A company that sells snow scoops has indirect competition with a snowplough service business for example. Any business that delivers the same outcome is basically a competitor. In his article, Wilson

(1994) has an example of Harley Davidson, the motorcycle manufacturer. Instead of competing with other motorcycle manufacturers, they compete with products of the same “spending power”, so in this case, a conservatory or a boat. The case company has multiple competitors in Finland but not so many indirect competitors. This is because this machine performs a more unique function that it would be very difficult to get to the same result in some other way.

The second step creating a competitor analysis according to White (2018) is to define the products or services the competitor is offering. This includes factors such as the product line, product quality, the price and the market share. What are the competitors’ objectives? Do they want to be market leaders, have the biggest market share or service leadership? According to Wilson (1994), by identifying the objectives of the competitor, a company can forecast how they are going to react on competitive actions. If the case company lowers their product prices, is the competitor going to lower their prices too, or focus on more aggressive marketing?

The third step is to ask: What are the competitors’ strenghts and weaknesses? How are the products marketed? Do they have material online such as blogs, e-books, podcasts or a FAQ-section? This information can be searched from the competitor’s web page, in-house sources, trade sources, governmental and other published sources and other third parties. (White, 2018). When analysing the competitors’ information found in their web-site and other sources, there are some points that should be considered (White, 2018). Is the information on the website regularly updated, are there grammar mistakes, is the text reader-friendly and how detailed information can there be found?

According to Kotler, Armstrong, & Parment (Balancing Customer and Competitor Orientations, 2016), in order to maintain the competitive advantage and survive in the competitive markets, a company must adapt its competitive strategy according to the changing competitive environment. However, too much competition can distract the company from the most important aspect: the customer. Maintaining the competitive advantage comes from thorough understanding of the customer, balanced with competitor focus Kotler et al. (Balancing Customer and Competitor Orientations, 2016).

2.1.1 Benchmarking

In his book Camp (1989) talks about the first definition probably ever given to benchmarking in academic writing (Cassell, Nadin, & Older Gray, 2001). A copier company Xerox implemented the benchmarking program in order to compete against its rivals in Japan in the 1970's. By comparing what their competitors were doing in Japan, they found their own best practices (Cassell et al., 2001). Camp (1989)*: "*Xerox's definition is as follows: Benchmarking is the search for industry best practices that lead to superior performance*"*.

Benchmarking can be defined as the measuring process, where the company's own products, services and practices are compared with those of the recognized industry leaders in order to identify areas for improvement (Tomas, 1993). Management can use benchmarking as a tool by learning from the best possible practices and by understanding how to achieve them and then use them to achieve performance goals (Anand & Kodali, 2008).

Benchmarking allows a company to observe beyond the daily operations and find new ideas and targets of development (Bogan & Callahan, 2001). According to Anand & Kodali (2008), a company that wants to have competitive advantage should have the following:

- *"quality beyond the competition;*
- *technology before the competition; and*
- *costs below the competition"*

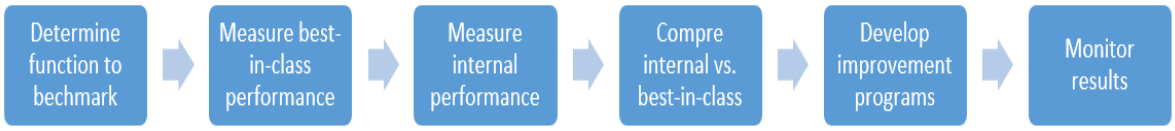
In their articles Tomas (1993) and Spendolini (1992) introduce different steps towards successful benchmarking. The steps start from identifying the company's own resources and practices and those then will be compared with the benchmarking target companies. The information is then gathered from the target companies. After gathering sufficient amount of data, it is then compared. Tomas (1993) emphasizes the importance of

understanding the process that is benchmarked. In this thesis, the process is the maintenance service.

Tomas (1993) suggests further actions for completing the benchmarking process by getting the manager-level up to date with the information gathered from the benchmarking. A set of goals should be set to enhance the competitive advantage. The enhancements can be new resource distribution, setting new standards for performance or implementing milestones to achieving these goals. The progress should be audited regularly until the objectives are met (Spendolini, 1992).

A thorough benchmarking process described by Tomas (1993) and Spendolini (1992) usually takes from three to six months to run through. As this thesis process all in all lasts about only six months and the time reserved for the benchmarking process for this paper is only a few weeks, the process must be faster. In their article Bogan & Callahan (2001) introduce a benchmarking process created by their company, the Best Practices LLC.

As seen in Picture 4, the rapid benchmarking process (Bogan & Callahan, 2001) consists of six steps. (1) “Determine which function to benchmark” (2) “Measure best-in-class performance” from the competitors, (3) “Measure internal performance” in own company, (4) “Compare internal vs. best-in-class” by creating a table or other tool for comparison, (5) “Develop improvement programs”, (6) “Monitor results.”



Picture 5. Rapid Benchmarking (Bogan & Callahan, 2001)

Bogan & Callahan (2001) also discuss the possibilities of internet. Even if the article was written 20 years ago, the same points are still important. Bogan & Callahan (2001) emphasize the importance of critical thinking while gathering data. It is also important to

make sure that the benchmark data is rather new. Dated data does not offer truthful results.

According to Pataki, Németh, Bárkányi, & Koczka (1998) there are different types of benchmarking, which are introduced in this chapter.

External benchmarking means gathering benchmarking data from sources outside your own company (Pataki, Németh, Bárkányi, & Koczka, 1998).

Co-operative and collaborative (trans-industrial) benchmarking is a term that is used when companies from different industries are taken as benchmarking targets (Harrington, 1996; Pataki et al., 1998).

Compatible (industrial) benchmarking means that the target of comparison is in the same *industry* but in a different *market segment,* so they have different customers (Pataki et al., 1998). For example a company that produces tractors compares itself with another company which manufactures tractor accessories.

Competitive benchmarking means that the target of the benchmarking are the company's direct competitors (Pataki et al., 1998).

Reverse engineering (or competitive product analysis) and its extensions are not always considered as benchmarking types by some (Pataki et al., 1998). It is the process of analysing and comparing the competitor's products or services.

Functional benchmarking means comparing the results of a particular function across companies in different industries (Pataki et al., 1998). Functions like customer service quality, gross margin, or brand recognition (Spacey, 2017).

Process benchmarking, rather than trying to benchmark an entire business, focuses on a selected production process (Pataki et al., 1998). By observing other companies' processes, a company can improve their own sub-systems and enhance the overall performance (IBNET, 2021).

Strategic benchmarking compares business models, business approaches and business strategies across companies but in similar industries (Pataki et al., 1998; Marr, 2020). The goal is to strengthen the company's own strategic planning and determine the strategic priorities (Marr, 2020).

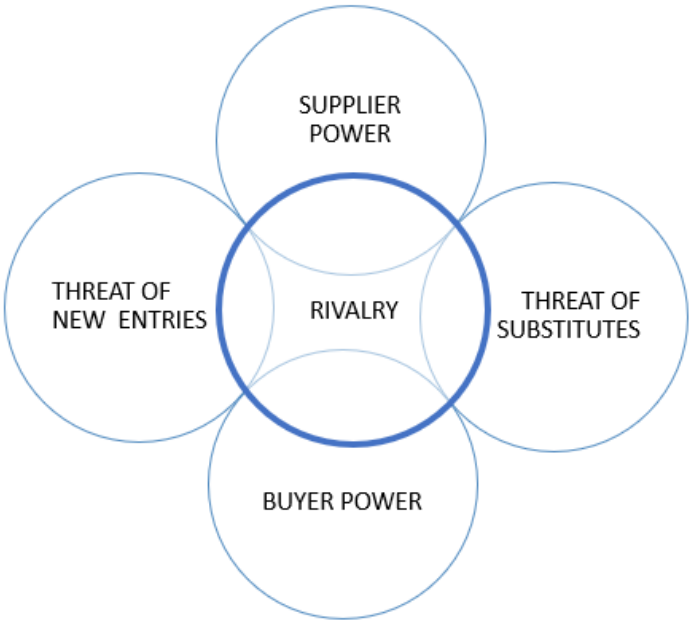
In Chapter 4.1 'Benchmarking for the case company', an actual benchmarking process will be conducted for the case company. The case company wants to grow and improve their maintenance services. The goal is to benchmark information about services, functions, websites and social media.

2.1.2 Porter's 5 Forces

In his original article, Porter (1979) introduces five basic forces, which determine the state of competition in an industry. They are:

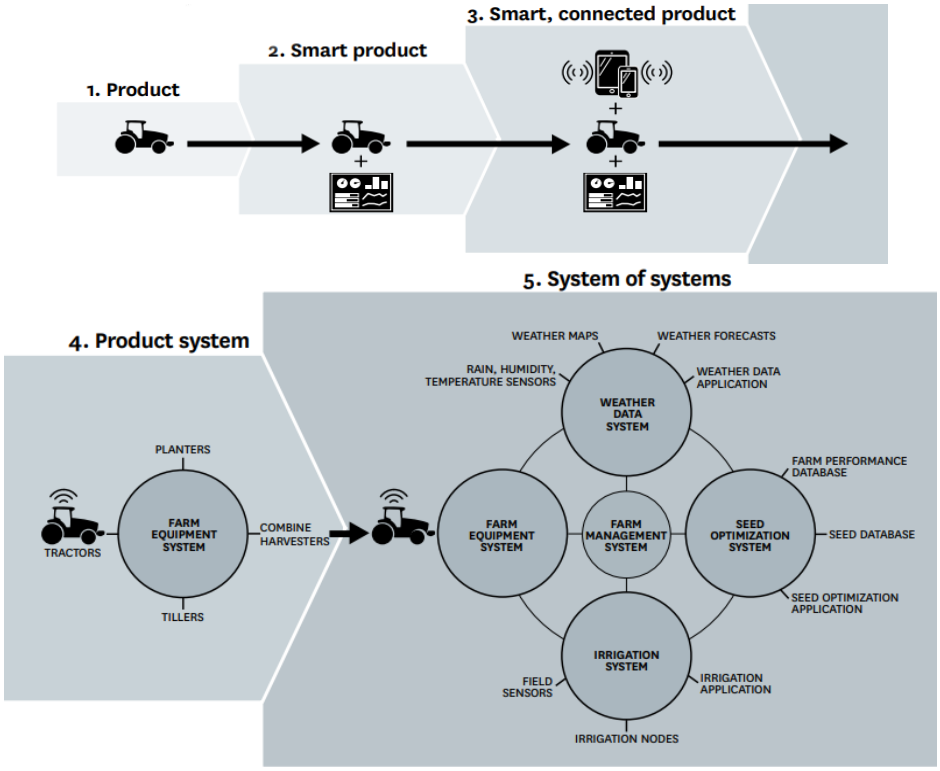
1. Threat of New Entries,
2. Bargaining Power of Customers,
3. Threat of Substitute Products or Services,
4. Bargaining Power of Suppliers and
5. The Industry: Jockeying for position among current competitors (See Picture 5).

The more powerful these forces are, the better potential of profit an industry has (Porter M., 1979). If these five forces are affected by factors such as new technology or changing customer needs, the structure of the industry changes. This happens due to the new wave of "internet-enabled IT" (Porter & Heppelmann, How Smart, Connected Product Are Transforming Competition, 2014).



Picture 6. Porter's 5 Forces overview (Porter M. , How Competitive Forces Shape Strategy, 1979)

According to Porter & Heppelmann (2014), the new “wave” of IT brings a growing number of different smart connected products to the markets, which reshape competition and expand industry boundaries. Picture 6 illustrates that the traditional view of a product has evolved gradually. Today, products are often viewed as an entity of smart, connected features.



Picture 7. Smart, Connected Products Redefining Industry Boundaries (Porter & Heppelmann, How Smart, Connected Product Are Transforming Competition, 2014).

The aim of the five forces analysis is to identify the factors that affect the market, or industry, in the economic and technological environment. Once these factors have been identified, the company can compare its own strengths and weaknesses in relation to the industry, for example with a SWOT analysis. The five forces (Picture 5) are explained next.

1. **Competitive rivalry** can be defined as the competitive situation at the competitive markets (Martin, 2019). The rivalry force is high or low, depending on the number of competitors and their competitive advantages. The higher the rivalry force is, the more resources must be spent on advertising and pricing strategy, which can be financially harmful (Martin, 2019). According to Porter & Heppelmann (How Smart, Connected Product Are Transforming Competition, 2014), new, smarter products can be differentiated so much further than before, which can change the nature of the rivalry. As an example, Porter & Heppelmann (2014)

give the new market of “connected homes”. Where before lighting manufacturers, entertainment technology and air conditioning manufacturers had their separate competitive markets, they are now all rivals is the connected home markets.

2. **Bargaining Power of Customers** means the power that the customer’s decisions have on what they buy and from whom (Luenendonk, Buyer Power, 2019). With the new “wave” of technology, it is now easier to lower the customer’s bargaining power (Porter & Heppelmann, 2014). Thanks to new smart, connected products, it is now a lot easier to differentiate products, so the competition goes further away from just comparing prices. With customer usage data, it is possible for companies to divide customers into segments, customize products and add value in new ways. This also allows the companies to come closer to the customer (Porter & Heppelmann, 2014). However, the customer’s now have all the possible information available through the internet. In minutes, you can make extensive comparisons between different products. This again increases the customer’s bargaining power (Porter & Heppelmann, 2014).

3. **Bargaining Power of Suppliers.** The bargaining power of the supplier of a business derives from the power of changing the prices of the supplied materials. The supplier is also more powerful if there are fewer suppliers of their material (Martin, 2019). However, according to Porter & Heppelmann (2014), the more products develop and become smarter, the less the supplier has bargaining power. This is, because the physical objects start to lose their value, because technology brings new ways to customize products. These modifications are not always physical, therefore the importance of the supplied material decreases (Porter & Heppelmann, 2014).

4. **Threat of New Entries.** According to Luenendonk (Threat of New Entrants, 2019), every company operates in a specific competitive environment. New entries mean other companies entering the environment with their own product or service. The more profitable the industry is, the more competitors (new entries) it attracts. To limit the amount of new entries, there can be entry barriers such as

strict regulations, need for specialized know-how or high investment requirements (Luenendonk, Threat of New Entrants, 2019). According to Porter & Heppelmann (2014), when product technology develops, it makes it even more difficult to enter new markets. Barriers to new entries rise due to higher fixed costs of products, and the broadening product definitions. Furthermore, the first entrants in a new market environment get advantages of getting all the product data first, so they get a head start (Porter & Heppelmann, 2014).

5. **Threat of Substitute Products or Services.** The threat of substitutes is measured by how easy it is to switch from one company's product to the competitor's product. The number of competitors, product price and quality are key factors upon which the buyers make the decisions. The threat is high, if there are competitive products that deliver a similar outcome and it can be affected by managing for example, productions costs (Martin, 2019). According to Porter & Heppelmann (2014), by customising the product's smart, connected features, the threat of substitutes decreases, because the others cannot deliver the same results.

The five forces model has also received some criticism. According to Grundy (2006), the model focuses too heavily on macro-environment and does not take into consideration any specific areas of business. This can have a major impact in competitiveness and profitability of a company. Grundy (2006) also argues that there is no advice given to managers on how to cope with high or low force threats, just stating that these threats exist. Furthermore, Grundy notices that Porter (1979) has oversimplified industry value chains, and that the language used is too complicated, so modern managers might not understand it perfectly. Following this, Grundy proposes alternative, refined models and new areas of research. Instead of just criticizing Porter's 5 forces model, Grundy elaborates, how the model can be further developed.

3 METHOD

The questions used in the online customer survey can be found in Appendix 1. The version attached to this thesis is in English and there is no company-related information or words that might reveal the company's industry. In the version that was used for the target companies was in Finnish and the diction reflected the industry better. This ensured that the answerers had full understanding of the questions while answering. However, even if this version in this thesis had been used, the answers would have been the same.

The online survey questions were created with the SERVQUAL model. The survey's agenda was created around the research problem: How to gain competitive advantage with a new service? According to the case company's wishes, the survey was conducted in Finnish for Finnish businesses which rent and sell the case company's machines.

The information for the competitor analysis and the pricing strategy was secondary data gathered from the internet and from the discussions with the case company's representative and the data gathered from the survey was primary data straight from the key-customers.

The method of the empirical part data collection was an online survey. It would have been conducted face-to-face, as an interview but due to the COVID-19 situation and the complexity of the questions, it was changed into an online form in Webropol. The other option would have been telephone interviews, but there were so many businesses and a tight schedule, so the online survey was seen as a faster way to get answers. The method of this study was a mix of qualitative and quantitative methods.

First, the target companies were identified with the help of the case company's contact registers. The number of companies all together was 23. I received a list of contact information of the companies' product managers. All the Product managers were contacted first by phone and the circumstances were underlaid. During the phone call it was

requested that the product managers send the online survey link further to other company employees who have experiences with the purchased maintenance services.

22 company representatives were eventually reached by phone. The telephone conversations were very positive, and people seemed optimistic and motivated to answer. The E-mail containing the link to the Webropol survey was sent to all 23 companies. In the E-mail, the idea of the study was further explained. The goal was to get people who have experience in buying maintenance services for industrial machines from another company, to answer the survey.

The survey included a SERVQUAL questionnaire part. The participants were first asked to rate on a scale from 1 to 10, how much did they agree with the said claim. There were together 22 claim pairs. The first claim was always about picturing the perfect service provider, the expectation (E), for example “The ideal maintenance service provider sincerely strives to resolve customer requests and issues”. The second claim of the claim pair represented the outcome (O) or the experience that the answerer had with their actual maintenance service provider. For example, “Your current maintenance service provider will always make a sincere effort to resolve your service requests and service issues”. In the end there were 11 open questions where the participants could tell with their own words about experiences and wishes. The whole survey can be found from Appendix 1.

Altogether, people had 27 days to answer the questions. The phone calls were made between the 16th and 18th of March and the link was shut on April 11th, 2021. Two weeks before the link closing, the case company’s representative contacted the companies again himself by phone to maximise the number of answerers. He knew most of these product managers, so he could be more convincing. The aim of the response rate was to have 70 percent of the 23 companies to answer and hopefully more than one person per company. However, the number of answers was 16.

After the online link closed, the SERVQUAL results were driven to an Excel sheet and the averages of all the answers per claim were calculated. The average number of a claim

was then compared to its pair. As said before, the claims were in pairs, first Expectation (E) and then Outcome (O). The target of analysis was the gap between E and O. The one question in a drop-down form about the location was transferred into a bar chart to represent the dispersion of participants geographically. The questions with Yes and No options were also illustrated in a bar chart.

All the open answers were read through. Due to the similarity of the answers, it was possible to form figures of some of the answers. For some, only a verbal explanation of the answers was enough. Some comments were taken straight and placed as quotes in the presentation.

All the answers, conclusions and future suggestions were gathered in a PowerPoint presentation in Finnish. It was presented to the case company. For this thesis, I will go through some of the answers and the main conclusions that were drawn from the answers.

3.1 Evaluation and justification of methodological choices

The methods chosen were impacted by the case company's wishes. The request was to create a study, where good and bad experiences, wishes, needs and general attitudes about purchased maintenance services could be examined. This would help the case company to develop a thriving maintenance service in the future. It was accentuated that the level of satisfaction of the companies' current service is the key question that the case company wanted to know. This is why the SERVQUAL-model was applied to discover the level of satisfaction to the current service provider of the key-customers.

An online survey was chosen because it would be a simple way to gather data from many companies. From 23 customer companies, I managed to get 16 answers from ca. 7 companies. The 23 companies cover the case company's customer base in Finland and 16 answers was an ok number.

3.2 The online survey target companies

The companies that were asked to participate in the survey were all Finnish companies, most located in Southern Finland. From the 23 companies most were SMEs, but there were a few bigger companies with turnover going clearly over 50 million euro annually. 46 percent of the companies are in the Uusimaa area.

All these companies either rent or sell (or both) the same machine that the case company manufactures. Some of these companies have some maintenance operations, but most have outsourced the maintenance to other companies. The companies were chosen, because they could be potential future customers of the case company's maintenance service. Furthermore, they have experiences of purchasing maintenance services, which makes them optimal to share these experiences and giving their opinions on what actually matters in maintenance service.

16 people answered the online survey. It was not obligatory to tell, in which company the answerer worked, nevertheless, most people answered. Apart from two answerers working in a large company, the others worked in small or medium-sized enterprises. There were answers from at least seven different companies. 69 percent of the participants worked in Uusimaa area in Finland. Others in Varsinais-Suomi, Pirkanmaa and Lapland.

4 RESULTS

In this Chapter, I will represent results of the benchmarking, Porter's 5 forces, pricing strategy and the case study.

4.1 Competitor Analysis for the Case Company

In this Chapter, I am going to formulate a competitor analysis for the case company. First, the case company's direct competitors and other businesses are benchmarked. The information is then further analysed with Porter's 5 Forces model.

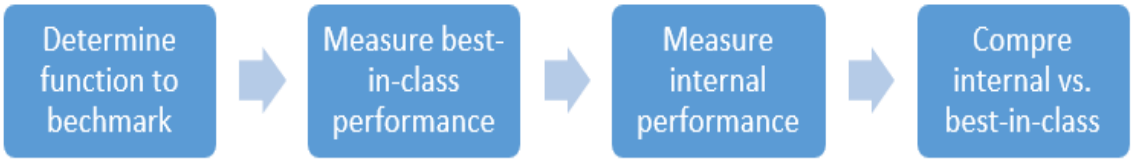
In this competitor analysis, the competitors operate in the industrial heavy machine industry. All the following companies either sell, rent, or offer maintenance services for heavy machinery. The focus is on one specific product that will not be named in order to sustain the anonymity of the case company. If a specific product would be identified, it might unveil the case company.

This product can be used by construction businesses as well as private individuals. The cost of a new machine differs between 20 000 and 70 000 euro, depending on the size and functions. Some businesses in this analysis do not sell or rent machines, but they offer maintenance services for other heavy machinery. As the aim of this thesis is to give tools to create a functioning maintenance service business for the case company for the future, also the maintenance operations in other businesses are of great interest.

4.1.1 Benchmarking for the Case Company

This benchmarking process happens without contacting the benchmarking target companies. The process is solely based on the information found on the internet. From Picture 8, we can see the rapid benchmarking process by Bogan & Callahan (2001) that was earlier introduced in Chapter 2.7.1 Benchmarking. In this chapter the steps 1 – 4 are done (determine functions to benchmark, measure best-in-class performance, measure internal performance and compare internal vs. best-in-class). The last two steps are left

for the case company to develop in the future. However, some development suggestions are given in the final chapters.



Picture 8. Rapid Benchmarking, steps 1 – 4 (Bogan & Callahan, 2001)

The benchmarking process for the case company started by identifying the factors that will be benchmarked:

- Turnover and growth during the years 2016-2019 (and in some cases 2020).
- Provided services
- Social media presence and number of followers
- Website content
- Maintenance prices (which usually are hard to find, since the prices are determined through offer requests)

The process continued by gathering potential companies for benchmarking. All together 11 companies were selected. The criteria for selection were the following:

- Businesses in the same industry as the case company or have heavy machinery maintenance, or heavy machinery rental
- Location in southwest Finland or can have Finland-wide operations
- A sufficient amount of information can be found in web sources
- Financial information such as turnover for past years can be found online
- Using any of the following social media platforms: Facebook, Instagram, YouTube, Twitter

In the benchmarking, the companies are organised according to the level of competition. The first company is the biggest competitor and the last one the smallest. All the following Figures can be found in a larger size from Appendices 2,3 and 4.

The case company (which will be referred to as company A) sells and maintains their own products. Their websites are modern and easy to navigate. They have an active blog, LinkedIn, and Facebook pages. In addition, there are video introductions of their machines in YouTube. There is no mentioning on their website or in the social media platforms about the maintenance services, because the operation is so small. Company A has an online store that is meant only for the distributor companies. All the products are introduced thoroughly in their website.

4.1.1.1 Presenting the benchmarking companies

The companies are named with letters A — K. As mentioned before, A is the case company of this thesis and B — K are the benchmarking companies. Starting from B, the biggest competitor is first, and the smallest is last (See Table 2). The reasoning behind the order of competition is my own perception after looking at the gathered data. The factors that affected the order were:

- whether the company has maintenance service or not
- whether the company has the case company's products in their catalogue
- how active or 'popular' the company is in different social media platforms
- if the company had some unique idea, special feature or other unique selling proposition.

As seen in Table 2, the companies B — G have maintenance service and the case company's products in their catalogue. Companies H — K do not have the case company's products in their catalogue but have other similar products for sale and rent and/or maintenance services for other heavy machinery. Nearly all these companies provide maintenance service. In this chapter, I will analyse what each of them are doing differently, and what stands them out from the others, what is their competitive advantage.

Table 2. Services provided by the companies that are compared in the benchmarking process. Order from the biggest competitor to the "smallest threat".

	Case company's products	Rental	Sales	Mainte-nance	Online store
A	**Yes**	**-**	**x**	**x**	**-**
B	Yes	x	x	x	-
C	Yes	x	-	x	-
D	Yes	-	x	x	x
E	Yes	x	x	x	-
F	Yes	x	x	x	-
G	Yes	x	-	-	-
H	No	x	x	x	-
I	No	-	-	x	-
J	No	-	-	x	-
K	No	-	-	x	-

Table 3. Companies A — K in the order of turnover size. Order from the biggest turnover to the smallest.

Rank	Company	Turnover 2019
1	**G**	Over 100 MEUR
2	**F**	50 – 100 MEUR
3	**B**	
4	I	
5	**C**	
6	J	
7	**A**	10 – 50 MEUR
8	D	
9	E	1 – 10 MEUR
10	K	
11	H	Less than 1 MEUR

In Table 3, the companies are listed according to the size of their turnover in 2019. The size of the turnover of the businesses varies from less than a million euros to over 100 million euro. The case company, company A, is the 7th in this comparison. The turnover information was retrieved from www.finder.fi.

In Figure 1, we can see a bar chart of the percentual growth of each company from the year 2016 until the year 2019. Company C had undoubtedly the greatest growth between the years 2016 and 2019 with 1506 percent. Here, we have to consider the fact that the company was founded in 2016 and their growth is based on the rapid growth of the first years. To make Figure 1 clearer, company C was excluded and is mentioned

separately in brackets. The second biggest growth in the past years was company D, with 287 percentage growth. Company A has the smallest growth in turnover between 2016 – 2019.

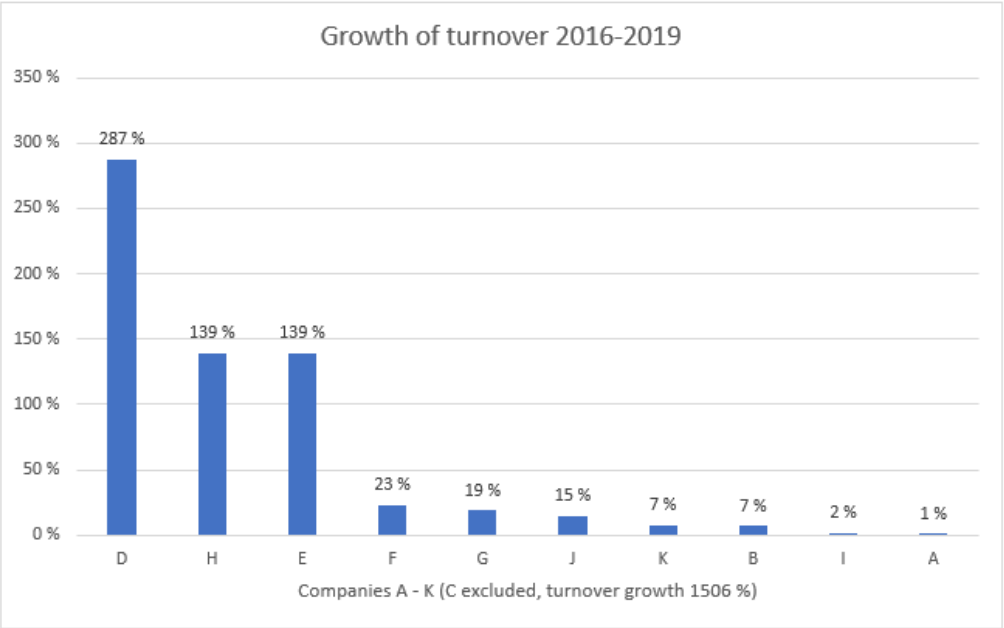


Figure 1. Growth of turnover 2016-2019 (*2020)

Comparing Table 2 and 3 we can see that companies B, C, F and G, all have bigger turnover than company A, and they are also larger companies when looking at their turnover. From this, we can conclude that with the information this far, companies B, C, F and G are the case company A's biggest competitors. In addition, when looking at Figure 1, we must consider the fast growth of companies C and D. The company that has stood up from both tables and Figure 1, is company C. A conclusion can be made that company C has been succeeding well in the past three years compared to its competitors.

4.1.1.2 Benchmarking companies' websites

The case company's website is clear and easy to navigate. In the start page, some employees and their job descriptions are introduced. This helps to see the people behind the business and the visitor immediately gets an idea of different operations that the company has to offer. The front page contains topical news, product descriptions and

stories about the employees. For someone who needs a specific information fast, there is a chat with a robot, that can answer or direct the searcher to the needed information. For someone planning to buy their products, it is very easy to find detailed information of all the products from the product catalogues.

During the company benchmarking, I listed some good ideas from the web pages of businesses. In the below Table 4, there are notes of all the benchmarking companies that had something worth mentioning.

From Table 4, it can be seen that all these companies have some good ideas on their web sites. All positive and neutral observations are in green colour and negative points are coloured red. From these, the case company could, for example, implement the following:

- online store and spare parts' sales (the company is already working on this)
- advertising discounts
- mobile application.

It is also important that a website functions fast and error free, and the content should be updated regularly. With that said, there was no apparent website lagging or lack of updating in the case company A's website.

Table 4. Company website comparison

A	The Case Company for Comparison
B	- Pictures have a zooming animation when you put the mouse on them - "*Why you should use us*:" short simple reasons and small pictures - 1–5-year payment plans are advertised - Finnish-wide service points, contract service providers and service agreements - 24/7 damage repair
C	- Mobile Application (service orders, rental equipment management, order refuelling service etc.) - They promise to bring doughnuts to the free mobile application training - Chat robot that helps with visitor's questions - If, on a computer display you change from full screen to half screen, the texts pack on top of each other
D	- Video introducing the company's operations and products in the home page - 24/7 maintenance - maintenance and spare parts' manuals online - "We are Company D" articles about the employees and company's operations - Spare Parts Online store for registered customers

	- Possibility to book a machine operating certification training - Leasing and part payment possibilities - Site for “campaigns”, with only two products from 5-6 years ago, not updated
E	- 24/7 Finland wide maintenance - Website is somewhat simple
F	- Training service for operating the machines - Spare parts sale - 24/7 service on call
G	- Bonus club where members receive benefits and discounts - Training service for operating the machines - 24/7 after-hours service - Virtual models with 360 photo material and laser scanning data - Mobile Application, a work site portal: managing rental equipment, user manuals etc.
H	- Products displayed in a “slide show” on the front page - Campaign offers of multiple products - Product pictures look clearer and more professional than with other companies
I	- Special night-time damage repair service for transportation vehicles - Discount deals for maintenance services - Artistic and fun videos in YouTube - Chat robot on the home page - Home page looks like a yellow press home page with small news boxes with big headers - Campaign page with different offers on products and services
J	- They offer replacement equipment for the time of the maintenance - Round-the-clock on-call maintenance - Special “Care-package” which includes an invitation for annual maintenance and all repairs - vehicle wash line - Because they maintain transportation equipment, all the maintenance service points are located along the main roads in Finland
K	- There is a clear list of all the machines and brands that can be maintained there - Used spare parts and other equipment are sold. Last posts are however from four years ago - The website is old-fashioned, and it is clearly not updated (none of the links in the *Topical* -section work) - The search function does not work. If you write “tractor” it does not give any results even if there are pictures of tractors on every page

4.1.1.3 Benchmarking companies and their social media

In this Chapter, the benchmarking process was targeted to the social media accounts of the companies A — K. Figure 2 gives and overview of all the social media and followers of each company. Going further, Figures 3 and 4 studies each platform separately.

Figure 2 presents a bar chart of the social media followers of each company in different social media platforms. All the following pictures can be found in a bigger size from Appendix 2, 3 and 4. The platforms that were chosen for this benchmarking were Facebook, LinkedIn, Instagram, Twitter, and YouTube.

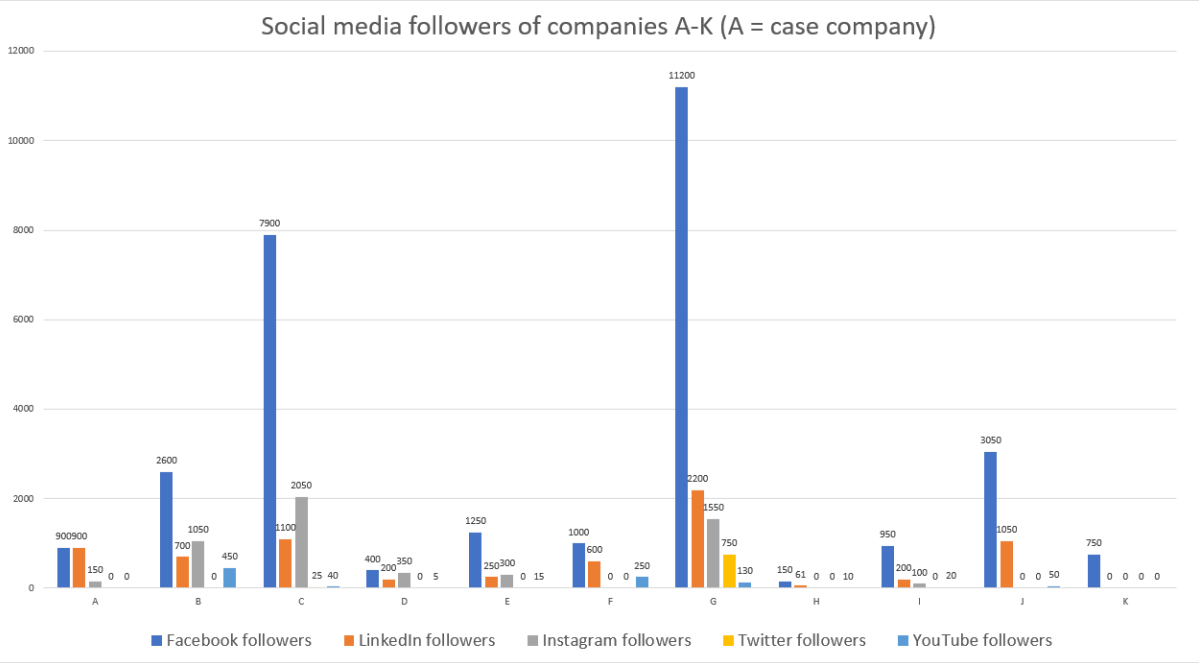


Figure 2. Social media followers of companies A – K

Looking at Figure 2, companies C and G have the biggest follower numbers in all the five platforms. They are also the only companies with a Twitter account. The number of followers is 0 when the company does not have an account on that platform. For example, company A does not ha a Twitter or YouTube account. Compared to all the companies, company A is doing relatively well with LinkedIn and Facebook followers with approximately 900 followers on each.

Next, I am going to look at each platform separately. Platform specific follower number are presented in Figure 3. A figure for YouTube is presented separately in Figure 4, because there also the views of the videos are compared. The numbers were gathered in February 2021 and rounded to the nearest 50. The follower numbers naturally change all the time when people follow and unfollow companies.

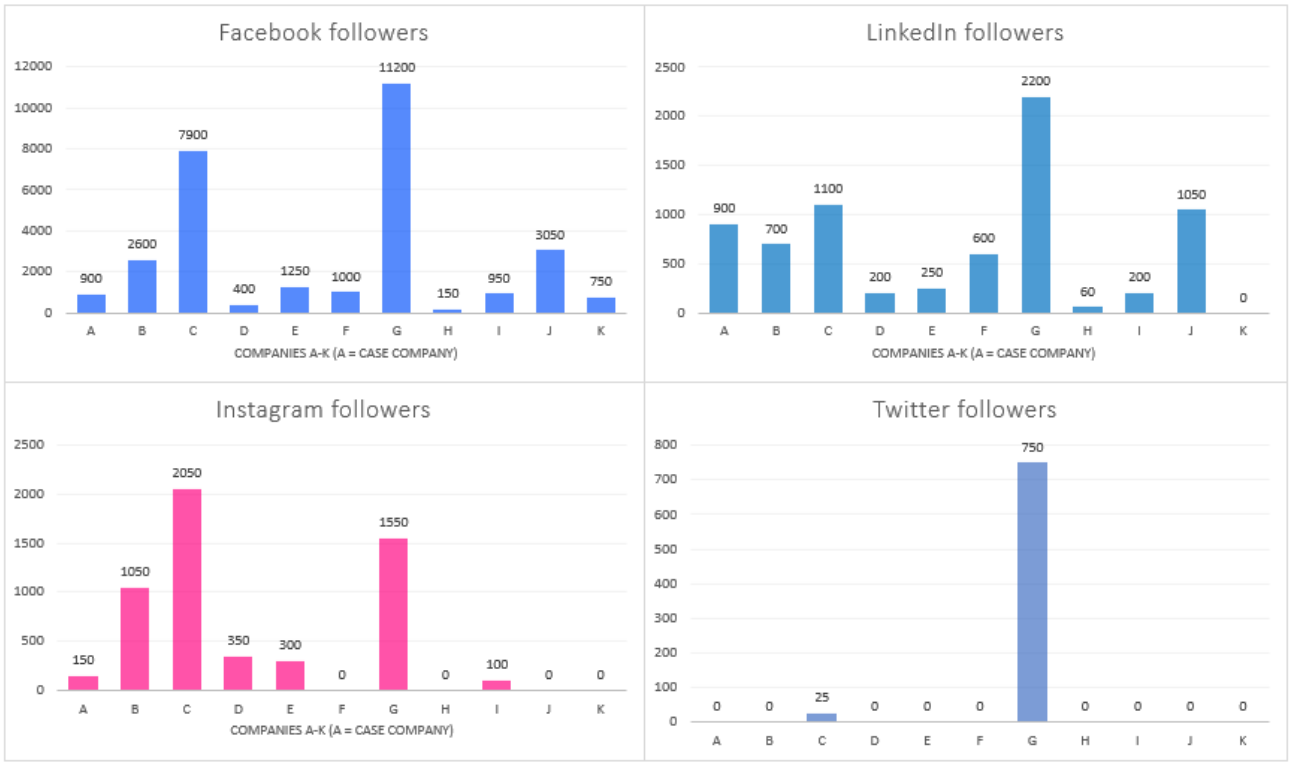


Figure 3. Social media followers of companies A — K more precisely

Facebook followers in the upper left corner in Figure 3 vary between ca. 150 to 11200. If we ignore the two most followed companies, C and G, we can see that the other companies have relatively similar number of followers, and half of the companies have less than 1000 followers. Like pointed out in Figure 2, looking at any company and any platform, Facebook has the biggest number of followers.

The number of followers of companies' LinkedIn pages (upper right corner) is much more balanced compared to Facebook. The number of followers varies between 60 and 2200. Company A has the third biggest number of followers. Company K is the only company that does not have a LinkedIn profile.

Instagram (lower left corner) has a similar scale of follower numbers as LinkedIn, from 100 to 2050. However, the differences are bigger: companies B, C and G have the biggest numbers of followers between 1000 and 2000. Four companies, A, D, E, and I have only 100-300 follower and four companies F, H, J and K do not have an account at all.

Apart from companies C and G the other companies do not have Twitter accounts. Furthermore, company C only has approximately 25 followers. So, it can be said that there is a lot of room for other businesses from heavy machinery rental and maintenance industry.

Considering all these different platforms, the numbers of followers vary a lot. However, even if these companies do not have an account on some platform, it must be noted that company H is the only one that does not have a hashtag (#). (Company H is the smallest company with less than a million € turnover (see Table 3)). All the other firms have been hashtagged to posts on either Instagram, Facebook, Twitter, or LinkedIn. For example, even if company A does not have a twitter account, their company has been hashtagged to dozens of posts on Twitter by people and other companies around the world.

Figure 4 presents the follower number and the views of videos published by the companies on YouTube. Both charts are in the order from the company with the biggest number of YouTube channel followers. The number of views on videos are in thousands.

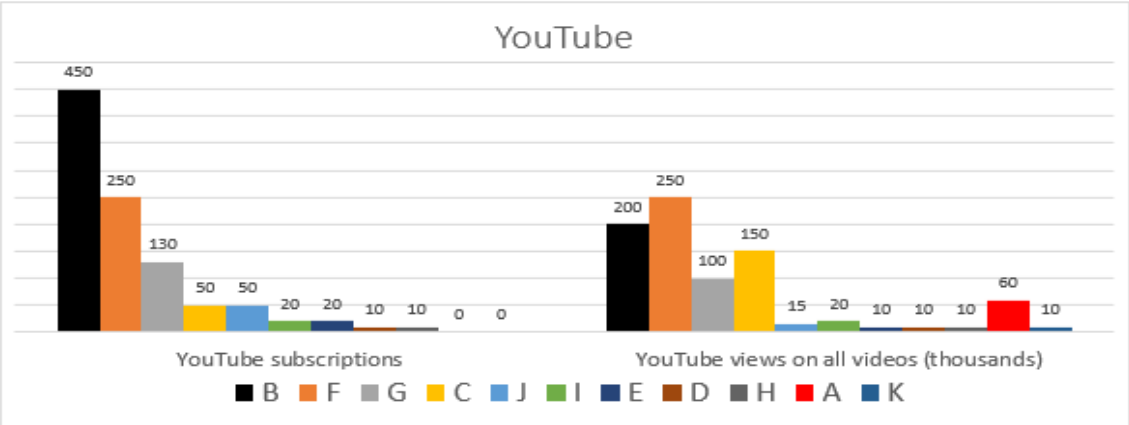


Figure 4. YouTube subscriptions and video views per company A — K

Figure 4 shows that the companies that have the biggest number of subscriptions are companies B, F and G. The views vary between 10 000 and 200 000 views. The companies with the most views are F, B, C and G. Company A has an active YouTube account with multiple videos, but their account does not show the number of their subscribers. Apparently, it is possible to hide the subscription count from page visitors. Nevertheless,

the company A has ca. 60 000 views on their videos, making it the 5th most viewed company.

The platforms that seemed to be the most used and therefore seemed to have the biggest number of posts by the companies were Facebook, YouTube, and Instagram. However, most companies had more LinkedIn followers than Instagram followers.

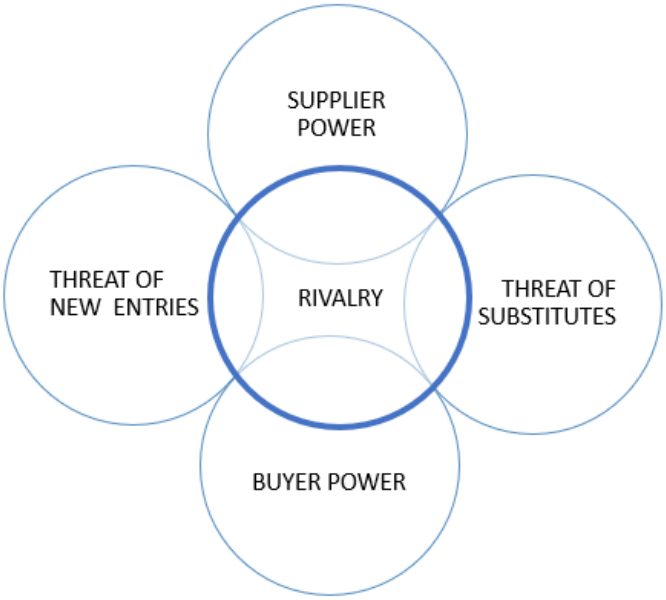
From all the benchmarking companies, G had the biggest turnover in 2019. It also had the biggest number of followers in all the social media platforms except YouTube, where B and F had more subscribers and views. Companies B, G and F are all very large companies which might give the wrong picture when comparing with company A. When looking at the turnover of 2019, companies D and J had similar turnovers with company A.

When comparing company A with companies D and J, we can see that D is the only company with an online store. Company J is specialized in maintenance and it is the only service it provides, while A and D also sell heavy machines. D has the second biggest growth in turnover of all the 11 companies with almost 300 percent, J's growth was 15 percent and A's only 1 percent between the years 2016 and 2019. Company J has only Facebook and LinkedIn accounts but there it has over 3000 (FB) and 1000 (LinkedIn) followers. As a comparison, A has 900 followers on Facebook and LinkedIn. Company D has only 400 Facebook and 200 LinkedIn followers. Both, A and D have around 100 followers on Instagram and none of these three companies have a Twitter account. In YouTube, J has the most subscribers, but company A has the most views on its videos. However, it should be noted that the number of subscriptions of company A's account is unknown, so it can be bigger than D's and J's.

In conclusion, company A is active in social media and compared to the other benchmarking companies, it is laying in the middle ground. Areas for improvement could be for example, creating a Twitter account. Enhancing the material on Facebook and Instagram could attract more followers. LinkedIn is working well as it is, and YouTube views are very good when thinking about the size of the company. Furthermore, owning their

hashtag and advertising it in the homepage could increase visibility. Case company A could consider creating a twitter account and start using their hashtag. In addition, there is room to grow in all the five platforms.

4.1.2 Porter's 5 Forces for the Case Company



Picture 9. Porter's 5 Forces overview (Porter M. , How Competitive Forces Shape Strategy, 1979)

As shown in Picture 9, there are 5 different forces and together they determine the ultimate profit potential of an industry. Next, this is implemented in the case company. In implementing the Porter's 5 Forces into this thesis, I am going to use the benchmarking process and the same companies. A is the case company and B — K are the other companies. They were initially chosen for the benchmarking because they operate in the same industry and offer same services, which makes them also the competitors. The companies are introduced in Table 5.

Table 5. Case company's possible competitors

Company	Case company's products	Rental	Sales	Mainte-nance	Online store
A	**Yes**	**-**	**x**	**x**	**-**
B	Yes	x	x	x	-
C	Yes	x	-	x	-
D	Yes	-	x	x	x
E	Yes	x	x	x	-
F	Yes	x	x	x	-
G	Yes	x	-	-	-
H	No	x	x	x	-
I	No	-	-	x	-
J	No	-	-	x	-
K	No	-	-	x	-

4.1.2.1 Competitive Rivalry

Table 5 represents the companies that were included in the benchmarking. The ones that are competing directly with company A of the maintenance of this certain industrial machine, are B, C, D, E, F, H. They all offer maintenance services for this machine. From these, B, C, D, E and F also rent the case company's products. All these companies can serve customers in southwest Finland. These companies form the bulk of existing competitive rivals.

Arguably, the number of the case company rivals is high. Therefore, the case company must allocate resources to marketing and pricing strategy, to gain competitive advantage. For example, as can be seen from Table 5, only one company has an online store. If the case company develops an online store, they will differentiate themselves from most other competitors.

4.1.2.2 Bargaining Power of Suppliers

The bargaining power of suppliers to the case company is relatively low because the case company manufactures their products by themselves from raw materials which can be procured from many different sources. However, the case company cannot produce some of the parts themselves and if they perceive to implement a wider maintenance service, the bargaining power of the supplier might simultaneously increase.

4.1.2.3 Bargaining Power of Buyers

The bargaining power of buyers is relatively high because there is a lot of competition in the case company's industry in southwest Finland. However, if the case company manages to create a wholesome system where the products are purchased and maintained by the same company, the buyers are less likely to consider buying from a rivalling company.

4.1.2.4 Threat of Substitutes

Due to the anonymity of the case company, the products or their substitutes cannot be named in this thesis. However, there are some substitute products that the case company must acknowledge. Nevertheless, there are no substitute products that could completely replace the need for the current products on the market.

4.1.2.5 Threat of New Entrants

There is an existing threat of new entrants hovering in the machine maintenance industry. In the recent years, some new businesses have emerged and increased the competition. However, the barriers to enter the industry are not non-existent, as there is a need for educated staff, capital, required certificates, gaining trust, and building physical facilities for the maintenance service. Some of these entry barriers are easier to cross, but the case company already has all these features in their operations, which gives it a headstart. If the case company manages to considerably improve their maintenance service, their profit potential will strengthen and hence the business will be harder to replicate by new entrants. This is because it would then be possible for the customers to buy and maintain the machines professionally at the same location.

4.2 Pricing Strategy for the case company

Businesses create value – pricing captures it.

- Mark Stiving, 2010

Kotler; Armstrong & Parment (Price strategy mix, 2016), define price firstly as an amount of money paid to get something, but looking further, it is actually a combination of all the values that customer gives away in order to get the product or service. Price is very easy to increase and decrease when wanted. For example, lowering the price usually helps to increase the sales of that wanted item. Even the smallest change in the price can grow profits tremendously (Kotler, Armstrong, & Parment, Price strategy mix, 2016).

Four factors of the marketing mix include: product, price, place, and promotion. From these four, price is the only factor that actually creates money, and is therefore revenue (Kotler et al., Price strategy mix, 2016; Kienzler & Kowalkowski, 2017). Kotler et al. continues by stating that in order to find the perfect price for the product, it has to cover the costs and simultaneosly, it cannot be more expensive than what the customer perceives as its value. The company must know its products value perfectly in order to set a price that captures that value.

However, according to Kotler et al. (Price Strategy mix, 2016) there are different factors, both internal and external that affect the customer perception of the product. For example, if you lower the price of a market shampoo, its sales will most probably grow. But, if the price of a really expensive wrist watch, that usually makes a status statement, is lowered, it makes people think that it is not as impressive anymore and the sales might even decrease. Furthermore, competition, raw material and other costs and nature of the markets play a role in the pricing. This is why creating a good pricing strategy helps to get the optimal value that captures the value and covers the costs (Smith 2016).

In his book, Smith (2016) describes the **pricing strategy** as the procedure of choosing, how the products or services of the company will be priced. Smith continues that the pricing strategy consists of four areas: "price positioning plan, price segmentation plan, competitive price reaction strategy, and its pricing capability" (Smith, 2016). These plans, together with a functioning business strategy create competitive advantage to the firm.

The challenge in creating a pricing strategy based on previous theory is that there are so many different strategy variations. Just by looking at Kotler et al. (Price strategy mix, 2016) book section about pricing strategy mix, they introduce six strategies and in addition, three strategy groups including together 14 strategy options. These areas are New-product pricing strategies, Product mix pricing strategies and Price-adjustment strategies. On the other hand, Smith (2016) names only a few of Kotler et al.'s strategies and instead focuses on the four areas of pricing strategy mentioned earlier in this chapter. Like Smith, also Spann; Fischer & Tellis (2014) are not covering all these different strategies but rather focus on Skimming and Penetration pricing strategies. They also focus on New-product pricing in their article.

According to HIMA-project (2005), every product and service have a different price elasticity. Price elasticity represents the relationship between the change in demand and price change. For example, if a product price is increased and it results in the demand decreasing by one percent, it means that the price elasticity is -1. In this case, therefore, the demand decreases in the same relation as the price rises.

According to Kurvinen (2018), a product or a service can be priced either based on costs, the price on the markets or based on the value. In cost-based pricing, the price is set according to the production costs and its coefficients with a reasonable margin. Pricing based on the markets means that the markets define the price, and a company sets its price to be somewhat similar to its competitors. Value-based pricing means that a company prices its product or service according to the value perceived by the customer. If value-based pricing is done right, one product can generate more value and therefore increase the price (Kurvinen, 2018).

Based on the article by Rahman & Chattopadhyay (2008) maintenance service providers should have the following assets in order to provide maintenance: Specialized maintenance facilities, staff with maintenance expertise, preventive maintenance and check-up plans and corrective maintenance plans. Rahman & Chattopadhyay (2008) created a list of costs that will occur if the maintenance is outsourced to a third party. The total cost of maintenance service over time (Ct) comes from the cost of maintenance (Cm), the cost of inspections (Ci), the cost of risk associated with accidents (Cr) and Penalty costs (p) for not maintaining to meet the standards. This is from the point of view of the purchaser of the maintenance package. In mathematical form for the cost of maintenance over time (Ct) is $Ct = Cm + Ci + Cr + p$.

Rahman & Chattopadhyay (2008) state that due to the complexity of the machine, the equipment should be maintained by the manufacturer or specialized third party. From this, we can conclude that $Ct = Cm + Ci + Cr + p$ is actually the source of profit for this thesis' case company because they are not going to outsource but to increase their own maintenance services. These costs are those costs that case company's customers have to take into consideration when they make a deal with the case company.

4.1.3 The four decisions of pricing strategy

In his book *Pricing Done Right* (2016), Smith introduces four issues that are faced when creating a pricing strategy:

1. Price positioning
2. Price segmentation
3. Competitive price reaction strategy
4. Pricing capability

The first pricing decision is called the **(1) price positioning**. According to Smith (2016) there are three options available. The prices can be set to skimming, neutral or penetration position. The positioning decisions should already be considered in the business strategy development phase (Smith, 2016).

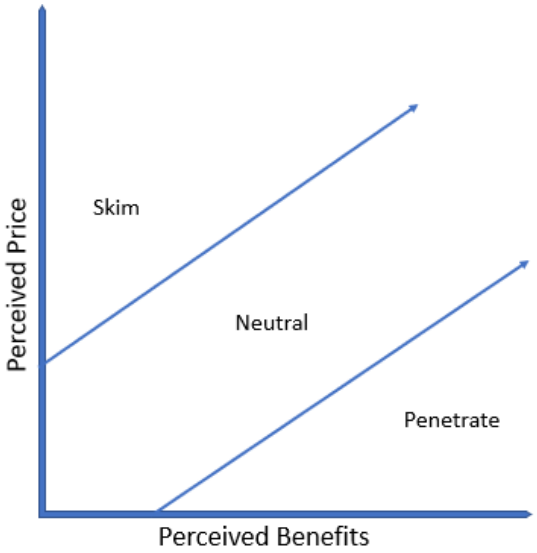


Figure 5. Price Positioning: Skim, Neutral, Penetrate

In Figure 5, we can see a graphic presentation of the three positioning options. The vertical axis shows the perceived price, and in the horizontal axis the perceived benefits from the customer's point-of-view.

When the price is set to the **skimming position**, it means that a product or service is first priced so that a customer perceives it to be too high in relation to competitors' options. In Figure 5 it can be seen that even if the price is very high, the perceived benefit is still very low. This is when only wealthy people and customers who are truly interested in the product purchase it. Later on, the price can be lowered to attract the larger markets (Smith, 2016). Some prices are in the skimming positioning throughout the product's life cycle. The price might even get higher. This usually happens with products that are profiled as high quality or luxury items and can create for example status.

Neutral position means that the price level is at the normal level compared to the other competitors. A company can compete by adding for example more benefits or functions with the product or service and also raise the price simultaneously (Smith, 2016). This is a basic, good, safe pricing strategy that can be used when a business has not created a more fitting pricing strategy (Smith, 2016).

Lastly, Smith (2016) introduces the **price penetration position**. With price penetration, a product can have a lower price than its alternatives in order to get a foothold in the market and grab market share. In Figure 5, we can see that the price is very low, and the perceived benefit is higher, so it creates a temptation for the customer to purchase. There, a product, or service is priced very low or even sold at a loss if it is believed that the product or service or related additional work will be of great benefit in the future. Price penetration is a commonly used strategy when reaching a new market and wanting to grow the customer base (Kotler, Armstrong, & Parment, Price strategy mix, 2016).

However, Kotler et al. (2016) note that the company should ensure that the use of this strategy does not cause financial or cash flow problems if the strategy does not work as expected. The strategy can be used in a situation where you want to increase sales at the expense of margin at the end of the product's life cycle. If successful, the strategy will help the company improve its brand visibility, competitive advantage and sales of by-products and services (Kotler et al., 2016).

In **(2) price segmentation**, a company can charge different customers different prices (Smith, 2016). This is based on the customers' "willingness to pay". Price segmentation is based on the idea that it is possible to charge higher prices from people who perceive a higher value of the same (or similar) product or service than other people. Price segmentation enables the firm to serve a larger number of customers which itself creates a bigger overall societal value (Smith, 2016). Everyday examples of price segmentation are student and senior discounts (Stiving, 2020). The only challenge here is to figure out a way to separate different groups. Asking for student or senior ID is one way (Stiving, 2010). Smith (2016) offers other examples of price segmentation such as unit pricing, tying arrangement, bundled pricing and subscription pricing.

According to Smith (2016) a **(3) Competitive Price Reaction Strategy** means the way a firm plans to act when its competitors do any pricing actions. For example, does the firm lower its prices every time its competitor lowers theirs? The aim is to know the competitors' past behaviour so well that their moves can be predicted, and they can be outsmarted (Coyne & Horn, 2009). So how to study the competitors moves and predict them?

According to Coyne & Horn (2009), one way is to find out if the competitor uses the basic analytic techniques such as descriptive, diagnostic, predictive, or prescriptive data analysis techniques (which most companies do) and then you know what how they normally react.

According to Smith (2016) a firm can do four things when the competitor changes its prices: **ignore/attack, defend, mitigate,** or **accommodate**. This depends on whether the firm has higher **pricing power** and higher **competitive advantage**. If the firm has both advantages, it either can ignore and enjoy the situation or attack and create even richer value proposition. If it only has the competitive advantage, but no pricing power, it can defend itself by restraining their price reduction actions and signalling that they want out of the price war. If the firm has a higher pricing power but no competitive advantage, it can mitigate. This means hold on to its customer base by marketing the product with all its benefits. And if the firm has neither benefit all it can do is to accommodate: Accepts its losses and try to develop its value proposal for the future (Smith, 2016).

(4) Pricing capability according to Smith (2016) means the ability to manage these four pricing decisions that are introduced in this Chapter. Pricing decisions should not be made lightly, and a good manager is informed, knowing all the facts about customer and competitor factors. When a manager is aware of the products' price positioning, price segmentation and competitive price reaction strategy, the pricing can be done properly. Smith (2016) points out that "Although the price itself is not a competitive advantage, pricing may be."

4.1.4 Creating a pricing strategy

In the following Chapter, I am going to create a pricing strategy for the case company's future maintenance operation. During the discussions with the representative of the company, some guidelines were pointed out. In theory, possible new factors could include *a lease agreement* option, new maintenance *staff*, new *facilities* for maintenance

operation and *a mobile application*. Since the case company wishes to remain anonymous, this pricing strategy will remain in a theoretical form.

The price elasticity of the demand of the case company's maintenance service is inelastic. This means that even if the prices might fluctuate, the demand will remain stable. This is because no matter how the prices change, the machines need to be maintained regularly in order to meet the safety standards. There is however the risk, that if the price increases, the customer might find another company to perform the same service. Price elasticity can be further determined with the calculation:

$$\text{price elasticity of demand} = \frac{\%\ \text{change in quantity demanded}}{\%\ \text{change in price.}}$$

Value-based pricing means that the service is priced according to the value that it generates to the customer (Kurvinen, 2018). The case company should use value-based pricing because in the future they will not only offer maintenance. They will be able to offer a whole package from buying the machine, to all the upkeep and synchronized online services that the customer will ever need. All the machines, spare parts and ancillary services will be available from one place. Here, the key is to find out, what is a fair price of good quality service from the case company's customer's perspective.

As stated earlier in this chapter, if a customer buys all maintenance services from one company, their costs come from

- Maintenance costs (Cm)
- Inspection costs (Ci)
- Costs of possible risk of an accident (Cr)
- Penalty costs (p) if the equipment is not properly maintained.

In mathematical form: $Ct = Cm + Ci + Cr + p,$ where Ct is costs over time (Rahman & Chattopadhyay, 2008).

Observing from the case company's point of view, these costs are actually sources of income. The case company receives income from maintenance, inspections, accidents

and when the customer has not maintained its equipment properly and needs more repairing.

The case company's maintenance service's cost structure comes from **fixed costs** such as spare parts, labour costs, maintenance equipment, facility costs, insurance, depreciation of fixed assets etc. Then there are **variable costs** that can vary and be more diverse. Variable costs include staff's wages, bonuses, tax deductions, travel costs and entertainment costs.

In the previous chapter, four decisions of pricing strategy were determined. A company can either put the price in skimming, neutral or penetrating position. For the case company's maintenance service, it would be best to use the **neutral positioning**. This is because the nature of industrial maintenance service does not support skimming, where starting off with very high prices would not attract any customers. On the other hand, penetration might be too risky. If the service is first marketed as cheaper than the competitors' maintenance, the question could arise: What did they leave out so that it is that cheap? Naturally, penetration pricing could attract more customers, but there is also a risk of starting price wars and losing market share. Neutral positioning does not compete with the price per se, but rather enables companies to differentiate with service quality, brand awareness and skills.

Below, are the pricing strategy steps recommended for the case company in order to define the right prices. Guidelines from Commonwealth of Australia (2021).

1. **Determine the costs**: The costs determine the lowest possible price that can be charged from the maintenance service.

2. **Objectives of the pricing**: In addition to making profit, what other objectives does the company have? By knowing the pricing objectives in the long run, it is easy to implement the pricing strategy in the marketing strategy. For example:

    a. Setting a position in the market (Does the maintenance service complement the business brand?)

   b. Remaining competitive (How will the competitors react to the new maintenance service?)

   c. Gaining the ability to supply to or increase demand (Should the prices be lower in the beginning to increase demand? Should there be a big marketing campaign?)

3. **The pricing strategy decision**: The pricing strategy should be synchronized with the marketing strategy. Value-based pricing would be the recommended pricing strategy of this thesis' case company. This is because the value of the maintenance service is a lot more than the hourly pay of the maintenance staff. The perceived value comes from the whole package that is received when a customer first purchases a product from the case company and then remains a loyal customer throughout the years thanks to the great maintenance services.

4. **Legislation and regulations**: The Act on the Provision of Services (1166/2009) (Finlex, 2009) states that a service provider has the right to do business in Finland. The service provider ensures the safety of their staff and customers and be able to inform either the price or an estimation of the price of the service. A pre-determined price of a service should be visible in the physical office, the website, and any brochures. The service provider must update their contact information regularly, have VAT-information mentioned, and the key contents of the service available upon request.

5. **Market testing**: it is wise to test or at least consider what customers are usually paying for a similar service. During the benchmarking process, some prices were found.

   a. One competitor company charged 70 euros plus VAT per one hour of repair services. In addition, there is a 0,60 euro per kilometer charge if the repair is done somewhere else than at the repair shop.

b. Another competitor had pricing examples for last winter's repair and maintenance campaign. The service included a maintenance and a condition report. The cost of the service was 100-200 euros depending on the machine.

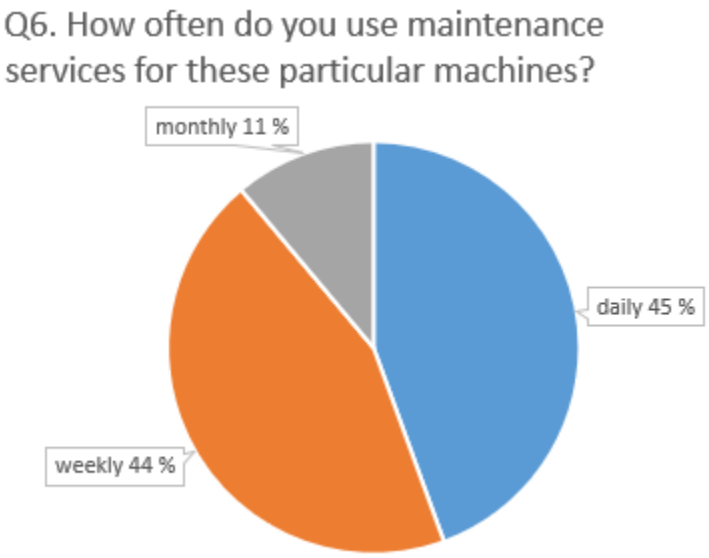
Market testing could also include finding out, what other features the customers value. In this case, valuable features could be volume discount, a replacement machine for the duration of the maintenance, or a comfortable waiting lounge.

6. **Competitors**: In the Benchmarking -chapter we saw that the case company was doing well compared to its competitors, but for example some social media visibility in e.g., Twitter could be good.

4.3 THE CASE STUDY: Online company survey

23 Finnish companies were contacted and eventually 16 answers from ca. 7 different companies were gathered. They were asked to compare the SERVQUAL model's 22 claim pairs and in addition there were 11 questions further.

When asked about the number of the case company's products that the participants had in their companies, the answers varied between 5 and 450. 93 percent of the companies also had other manufacturers' machines in their catalogue. Altogether 27 other brands were named. The number of new product purchases during the past five years varied between 10 and 1500 machines. As seen in Picture 10, most of the companies use maintenance services if not daily, at least weekly, so demand is very big.

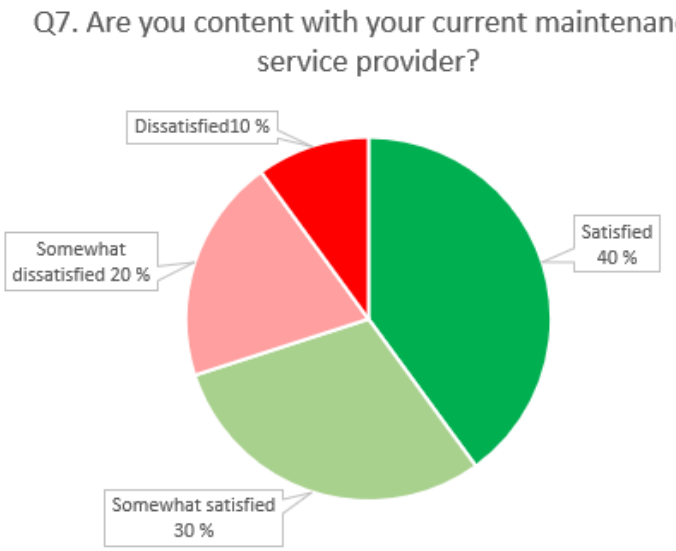


Picture 10. Frequency of using maintenance services

After the survey link closed, the data was stored in the Webropol system. With the help of Excel, I created a PowerPoint presentation in Finnish for the case company. The presentation included all the answers anonymously. Furthermore, there were conclusions drawn from the results. These results and conclusions are listed in the following chapters and in the final Chapter 5 Conclusions.

4.1.5 Experiences and opinions of the current maintenance services

In Picture 11, we can see an estimation of the satisfaction towards the current maintenance service provider. This pie chart was formed based on open end answers. About 70 percent of the answerers are satisfied or somewhat satisfied with the service. It was made clear also in these answers that some of the companies have more than one maintenance service provider. This is a direct quote, translated into English from one of the participants: “I’m very satisfied with a couple of businesses. To some, I am somewhat satisfied and to a few I am somewhat dissatisfied.”



Picture 11. Estimated satisfaction towards the current maintenance service provider.

Something the case company wanted to know, was how fast and in what way are the companies contacted in case a problem merges during the maintenance. All the answerers (100 %) answered that the problem notification is given immediately and mostly with a phone call or an e-mail.

As it can be seen in Table 6, a majority of 81 percent of the participants thought that they could consider changing their maintenance service provider in the future. Naturally, this is a good thing for new entries to the maintenance market. However, it can be seen that a sort of loyalty is missing from the relationship between the maintenance service provider and the company. This can either be a threat or an opportunity. An opportunity arises when it would be easy to gain customers with attractive marketing and pricing. Furthermore, if there would be a way to gain the customer's loyalty, it would be a major competitive advantage which the other maintenance service providers do not have.

Table 6. Majority of the answerers have considered changing their maintenance service provider in the future.

Q11. Would you consider ever changing your maintenance service provider?	answers	%
Yes	13	81,3%
No	0	0%
I Cannot Say	3	18,7%

4.1.6 Findings from SERVQUAL

The idea behind the SERVQUAL model is to find gaps between the expectation (E) and outcome (O). The gap could be anywhere between -9,9 to +9,9. Zero (0) means that E and the O match.

The gaps between E and O varied from -1,7 to +2,2. If the gap was positive (+), it means that the expectations were exceeded, if the gaps were negative (-), it means that the outcome fell short of expectations. The results are in the following page. The gap mean is the average of all the answers given. The gap median is the gap between the most answered number. For example, if a majority answered 8 in the expectation and 7 in the outcome, then the gap median is -1.

Table 7. SERVQUAL results

	Service provider…	Mean	Median
1	...will implement maintenance service so that the planned costs are correct	-1	-1,5
2	...will always make a sincere effort to resolve your service request and service issues.	-0,5	0
3	...is reliable and the service is performed correctly the first time	**-1,5**	-1,5
4	...will perform its services at the duly agreed time, e.g., the branch is not closed exceptionally or unannounced	-1,1	-1
5	...will provide you with error-free information, report on the progress of the work and, for example, the information on the website is correct.	-0,1	0
6	...employs professional staff that will inspire confidence in you	**-1,7**	-1
7	...fully understands the customer's needs and wishes, and provides quality service	-1,1	-1
8	...offers exactly the service you have ordered. You always know what you are getting, and expectations can even be exceeded	-1	-1,5
9	...trains its employees well so that they have the necessary know-how to answer customer's questions	-0,9	-1
10	...uses appropriate and modern hardware and technology	-0,2	0
11	…has physical facilities that are visually appealing and easy to access	**1,8**	1,5
12	...will make sure that your employees wear the necessary safety equipment professionally.	0,7	0
13	…has ads and brochures that are relevant, visually pleasing, and informative	**2,2**	1,5
14	...considers the needs of each customer individually and e.g., sends a reminder when the annual service is approaching	**-1,5**	-1
15	…has motivated and staff who treat customers individually	0,5	-0,5
16	…has opening hours that are convenient for you	-1,2	-1
17	...will work in your best interests. Customer requests and complaints are handled professionally	0	-1
18	...always understands the needs of your business and is able to exceed your expectations from time to time	**-1,5**	-1
19	…can always give you the exact time when the service will be provided	-0,9	-0,5
20	...will always provide a fast and efficient service according to your needs	**-1,7**	-1
21	...serves its customers at any time (e.g., 24/7 service on call)	**-1,6**	-0,5
22	…is never too busy to answer the customer's question	-0,5	-0,5

In Table 7, the results of the SERVQUAL part can be seen. The limit of a significant gap was drawn to -1,4 — +1,4 of the mean number. This means that the gap is significant if it is smaller than -1,4 and bigger than +1,4. The customer expectations were not met in six claims: 3, 6, 14, 18, 20 and 21. These claims were about trustworthy and professional employees, service performance, and fast and flexible service. The theme here was that the customers have not got the service as professionally, efficiently, and fast as they had expected.

The customer expectations were lower than the outcome in two cases: 11 and 13. Both claims were about visual attractiveness. According to the answers, the visual appearance of the facilities, brochures or advertisement had a higher outcome than the expectation. A theme here is that these elements are something that are more irrelevant when it comes to customer satisfaction.

Looking at the big picture, the means of answers that the participants answered were very good. On a scale from 1 to 10, the average of all the expectations was 8,1. The average of the outcomes was 7,5. So even if O was slightly less than E on average, both numbers are very high and having the outcome in 7,5 means that the level of maintenance service is of good quality.

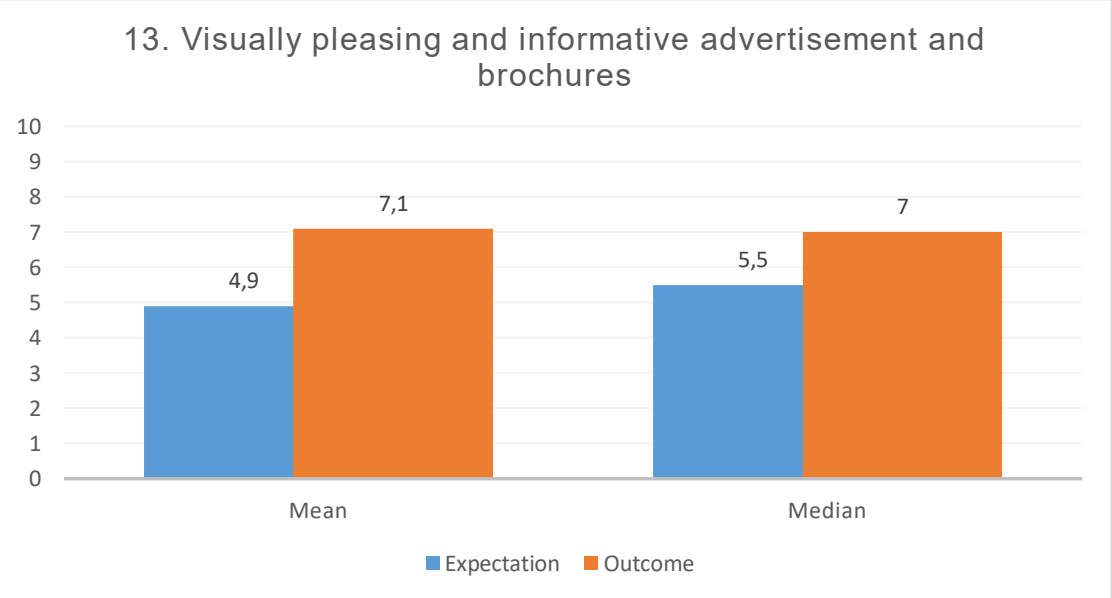


Figure 6. The gap between E and O of claim number 13 is 2,2.

Figure 6 represents the claim, that had the biggest gap of all the SERVQUAL claims with + 2,2. The expectation of the ads and brochures appearance was only 4,9, which was also the lowest rated expectation of all the claims. The outcome was on average with the other outcomes with the 7,1. This tells us, that the key customers do not consider the appearance of advertisement or brochures at all important.

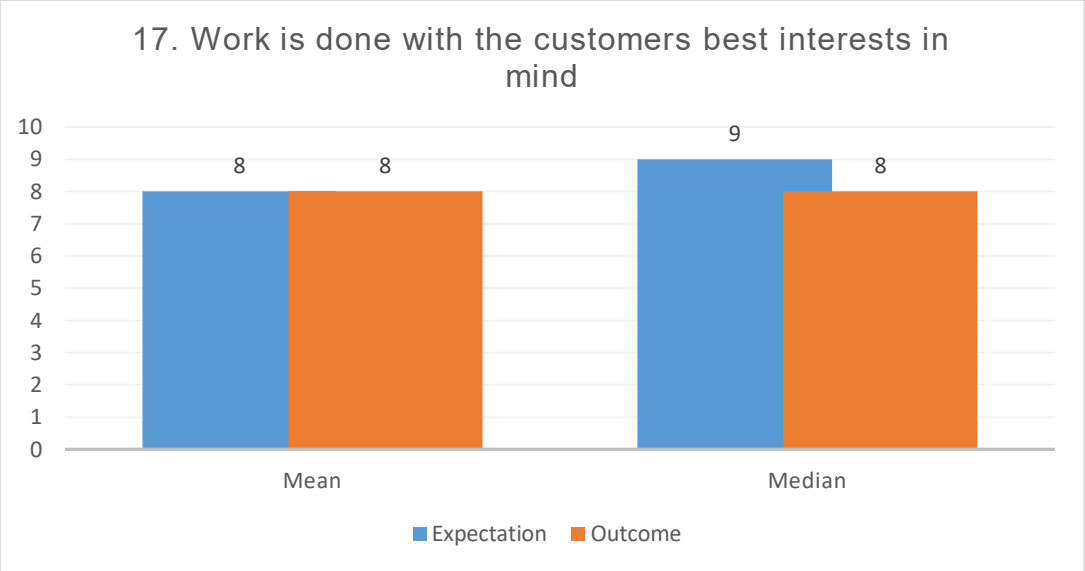


Figure 7. The gap between E and O of claim number 17 is 0.

Figure 7, on the other hand, represents the smallest gap of the SERVQUAL claims. Claim number 17 was the only claim, where the average expectation met with the average outcome. Both are rated at number 8, which means that their current maintenance service provider is expected to work and does work with the customer's best interest in mind.

4.4 Limitations

The company benchmarking in Chapter 4.1.1 was only online. There was no contact with the competitors. This was due to the fact that time was limited, and this thesis had so many other areas, that a more thorough benchmarking process would have made the process too long and complicated. Information about this particular machine maintenance's price was really hard to find. The prices are determined according to the offer

request and acceptance or counter offering. The pricing strategy was done without any actual data from the company's current costs or prices.

Only about 30 percent of the requested companies actually answered the online survey. Even though 16 answers is a good result, the number was still disappointing. The goal was to get at least one answerer from all 23 companies that were contacted twice by phone calls beforehand. Once by me and once by the representative of the case company.

5 CONCLUSIONS

In this conclusion chapter, the main points of every part are addressed. First, I go through the deduction of the competitor analysis. Second, the pricing strategy and thirdly, the online customer surveys. Finally, I will answer the research question based on this thesis.

5.1 Competitor Analysis and Pricing strategy

The competitor analysis was done by first benchmarking other businesses in the maintenance industry and afterwards, implementing the gathered knowledge into Porter's 5 Forces. In the benchmarking process, some ideas emerged: online store, advertising discounts online or creating a mobile application for the customer's use. It was also highlighted that a clear, well-functioning website is very important and sends a professional image to the customer. In addition, a more active social media boosts the visibility of the company. This can be done for example by creating a twitter account and starting to spread their hashtag more.

From Porter's 5 Forces it was concluded that the more parts the case company is able to manufacture themselves and the more functions (manufacturing, selling, maintenance…) they are able to offer, the lower the bargaining power of suppliers and buyers is. This also affects the threat of new entrants, since for a young firm it is hard to have all the different functions available from the very beginning. Another positive thing is that there is only a slow threat of substitutes that could do the same as this machine does. The threat of new entrants is fairly low since there is already so much competition and the entrance barriers are high due to the needed intellectual property.

From the pricing strategy, it is left for the case company to do the following steps.

- Determine all the costs
- Determine the objectives for the pricing
- Determine the pricing strategy decision (recommended value-based pricing)
- Make sure to follow the legislation and regulations
- Test the markets

- Determine the competitors

After these steps, it is possible to determine the perfect prices for the maintenance service.

5.2 Online company survey conclusions

All in all, the online survey participants and their companies are fairly satisfied with their current maintenance service provider. This being said, most agreed that they could imagine buying their maintenance service from some other company in the future.

Some answerers mentioned that they use multiple maintenance service companies simultaneously for different needs. Many companies have also other manufacturers' machines, so it would be an advantage for the case company in the long run, if the personnel could be able to offer maintenance services for many different brands.

Below are listed some areas, where having excellent service could give competitive advantage to the case company:

- having flexible or 24/7 maintenance services available
- having experienced personnel, who can meet and exceed the customer's expectations
- paying attention to single customers' demands, for example by inviting for annual maintenance

From the open-end questions, some themes and needs could be recognized:

- they want precise, efficient, and flexible maintenance service
- there should be immediate reaction to customer's calls or messages
- bidirectional, transparent communication
- increased remote monitoring

Finally, some areas where the outcome had exceeded the expectations. This might indicate that these areas are not that important in the eyes of the customer:

- the appearance and attractiveness of advertisement and brochures
- the visual attractiveness of the physical premises, such as the office

5.3 Research question: What processes and features could the case company implement into their maintenance to gain competitive advantage?

Gaining competitive advantage can be done is various ways. In this thesis I introduced different areas where competitive advantage can be harnessed. The benchmarking process brought out the importance of social media. By gaining followers in different social media, the case company can ultimately increase their brand. Opening an online store and introducing the customers with a mobile app, the company can get closer to the customer and build stronger relationships. From the view of Porter's 5 forces, the situation in the case company is good. The five forces naturally affect every existing business, but in this industry and with this machine type, the threats are not alarming.

By adding the maintenance service to the maintenance and sales operations, it is possible for the customer to do all their business in one company and know that they get the most professional service from professional personnel. Pricing the maintenance service well, can also increase the customer base and customer loyalty.

The future maintenance service customers value efficiency, flexibility, and accuracy. They want to be able to communicate with the staff and be aware of any changes or problems. The personnel should be so well-trained, that in time, they are able to recognize the customers' need further than what is asked for, in order to exceed the customer's expectations.

Further areas of research for this case company are developing an actual pricing strategy with actual prices and creating a sort of roadmap for the service implementation. Furthermore, the customer loyalty in heavy machinery maintenance could be further addressed.

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APPENDICES

Appendix 1. The online survey: SERVQUAL and open questions

SERVQUAL Questionnaire

Due to the COVID-19 pandemic, the interview was conducted as a Webropol questionnaire via e-mail link.
The 'service' in these questions refer to maintenance service.

1 = strongly disagree, 5 = strongly agree

SERVQUAL		IDEAL SERVICE (expectation)						MAINTENANCE RECEIVED (outcome)					
Main Factor	No	The ideal maintenance service provider...	1	2	3	4	5	Your current maintenance service provider...	1	2	3	4	5
Reliability	1	... implements the service so that the planned costs are correct						...will implement maintenance service so that the planned costs are correct					
	2	...sincerely strives to resolve customer requests and issues						...will always make a sincere effort to resolve your service request and service issues.					
	3	...is reliable and the service is performed correctly the first time						...is reliable and the service is performed correctly the first time					
	4	...always stays on schedule						...will perform its services at the duly agreed time, e.g. the branch is not closed exceptionally or unannounced					
	5	...provides error-free information and accurately reports on work progress						...will provide you with error-free information, report on the progress of the work and, for example, the information on the website is correct.					
Assurance	6	...employs professional staff that inspires customer confidence						...employs professional staff that will inspire confidence in you					
	7	...fully understands the customer's needs and wishes, and provides quality service						...fully understands the customer's needs and wishes, and provides quality service					
	8	...delivers exactly the service you have ordered and is able to exceed customer expectations						...offers exactly the service you have ordered. You always know what you are getting and expectations can even be exceeded					
	9	...provides adequate support to its employees and develops employee skills						...trains its employees well so that they have the necessary know-how to answer customer's questions					
Tangibles	10	...uses appropriate and modern equipment and technology						...uses appropriate and modern hardware and technology					
	11	...should have physical facilities that are visually appealing and easy to access						...has physical facilities that are visually appealing and easy to access					
	12	...ensures that employees wear the necessary safety equipment professionally						...will make sure that your employees wear the necessary safety equipment professionally.					
	13	...has ads and brochures that are visually appealing and relevant						...has ads and brochures that are relevant, visually pleasing, and informative					
Empathy	14	...considers the customer's needs individually						...considers the needs of each customer individually and, e.g. sends a reminder when the annual service is approaching					
	15	...pays personal attention to each customer						...has motivated and staff who treat customers individually					
	16	...has operating hours that are convenient for their clientel						...has opening hours that are convenient for you					
	17	...has the customers' best interest at heart						...will work in your best interests. Customer requests and complaints are handled professionally					
	18	...understands the individual needs of its customers and is able to exceed customer expectations from time to time						...always understands your business' needs and is able to exceed your expectations from time to time					
Responsiveness	19	...should tell customers exactly when the service will be provided						...can always give you the exact time when the service will be provided					
	20	...should offer customers prompt service						...will always provide a fast and efficient service according to your needs					
	21	...should always be willing to help the customers						...serves its customers at any time (e.g. 24/7 service on call)					
	22	...should never be too busy to answer the customer's question						...is never be too busy to answer the customer's question					

Sources: (Fripp, SERVQUAL's 22 Questions, 2021) and (Samen;Akroush;& Abu-Lail, 2013)

Open Questions:

1. Business Location

2. Basic information: Name, company, the number of the case company's machines in your selection (Will not be handled in the analysis)

3. Does your company rent out other suppliers' machines too?
- Yes or No

4. If yes, which companies are these?

5. How many new machines have you purchased in the past 5 years?

6. How often do you use maintenance services for these particular machines?

7. Are you content with your current maintenance service provider?

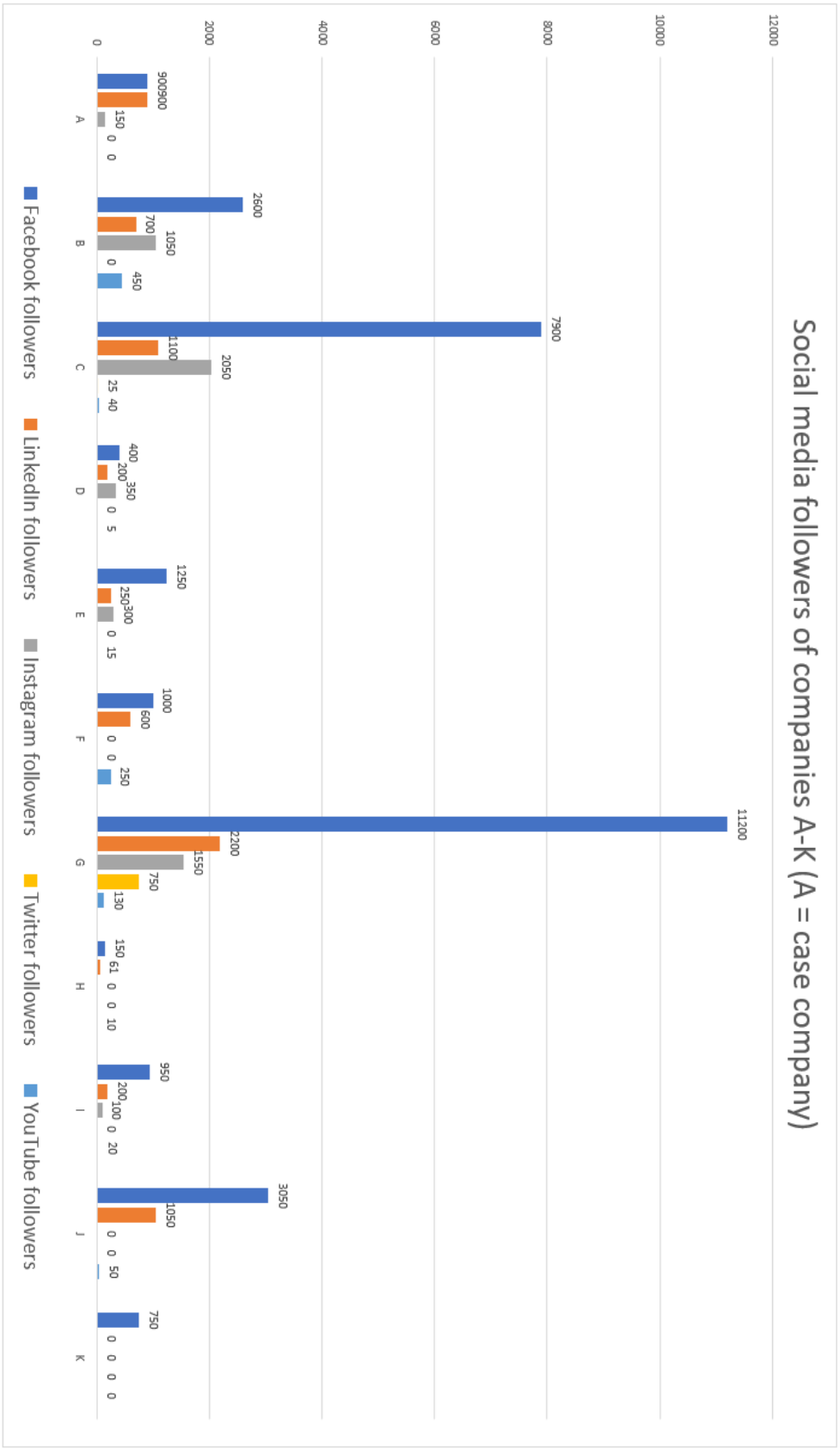
8. What would you like from a purchased maintenance service that you may not currently receive?

9. Do you remember any incidences, where your maintenance service provider has performed either extremely well or extremely bad?

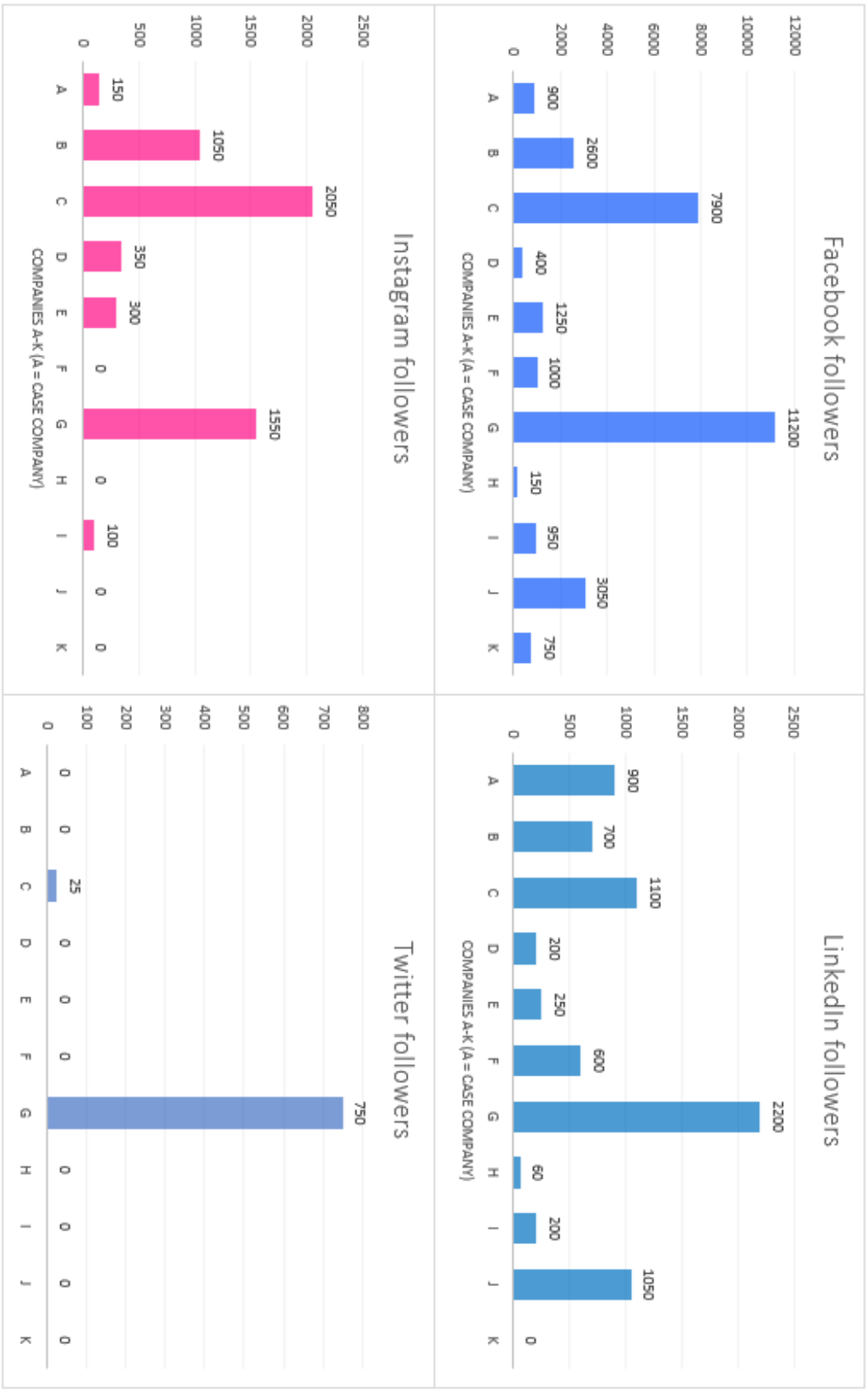
10. If there have ever been any problems during the maintenance, how rapidly and in which way have you been informed about it?

11. Would you consider ever changing your maintenance service provider?
- Yes, No, or I Cannot Say

Appendix 2. Social media followers of companies A – K



Appendix 3. Followers in each social media, companies A – K



Appendix 4. YouTube followers and number of views, companies A —K