



Karelia University of Applied Sciences  
Degree Programme in International Business

# **Market Entry Plan for a Digital Solution in Germany:**

Case company Innotect

Juuso Kymäläinen

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Tikkarinne 9  
80200 JOENSUU  
+358 13 260 600 (switchboard)

Author(s)  
Juuso Kymäläinen

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Market entry plan for a digital solution in Germany: Case company Innotect

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Due to the constant digitalization of the world, more and more solutions appear that require less and less physical contact. One of the technologies to emerge from digitalization is cloud computing. This thesis emphasizes bringing a cloud software service that analyzes field devices, to a new market, namely the German market.

The thesis was commissioned by Innotect for a service named TeleCare. TeleCare is a management and configuration service for field devices used in automation industries. The goal for the thesis was to make a market entry strategy for TeleCare and evaluate the effectiveness of the service compared to the competitors.

The research method for this research is of a qualitative nature. The research was collected using various business literature sources and internet-based resources. A competitor analysis was made. The results showed that Innotect would have significant competitive advantage in the German automation industry if proper connections could be built with the clients. In the future, more aggressive pricing could be utilized when a large number of clients have been accumulated.

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# 1 INTRODUCTION

## 1.1 Background

Due to the constant digitalization of the world, more and more solutions appear that require less and less physical contact. One of the technologies to emerge from digitalization is cloud computing. Cloud computing can offer new digital experiences to customers. This can help reduce risk and increase scalability. (McKinsey & Company 2020, 9.)

This thesis emphasizes bringing a cloud software service that analyzes field devices to a new market, namely the German market. The study consists of doing market research on the German automation market and analyzing the results. The Finnish company Innotect develops the cloud software, and the service's name is TeleCare. Innotect creates various cloud software products and services to specific customer needs. TeleCare was explicitly designed at the request of a company named Endress+Hauser due to field devices' inefficient and costly configuration. Innotect needed support to migrate their service to the German market, which led to this thesis.

Innotect has a partnership with Endress+Hauser on the production of TeleCare. Endress+Hauser is a manufacturer of field devices, and Innotect creates the TeleCare service applicable to the customers of Endress+Hauser who are buying the field devices. A part of the service is performed by Endress+Hauser, who configure the field devices using TeleCare. This thesis is meant for Innotect to use as a tool with Endress+Hauser when creating a market plan for the German market and evaluating the success of the service in Germany.

## 1.2 Aim of the thesis

The topic for specific research needs to be adequately explained and clarified, usually formulated into a set of research questions that the study should answer (Saunders & Lewis & Thornhill 2007, 9). This thesis aims to find a possible

market entry into the German field device management software. Three main research questions will be answered in this thesis:

- Does TeleCare have a significant competitive advantage to succeed on the German automation industrial market?
- What is the nature of the German business environment?
- What would be the market entry strategy for TeleCare?

These research questions will be answered using various frameworks and research methods.

### **1.3 Research method**

The research method used in this thesis is a qualitative research, which aims to examine the possibility of bringing the TeleCare service into the German market. Qualitative research is nonquantitative in nature and contains findings from various sources that can then be interpreted into data. (Saldana 2011, 3.) The research will inspect the German business environment and conduct a competitor analysis. The competitor analysis focuses on different operators that can affect Innotect's chances of marketing the product in the same marketing environment as the competitors.

Due to the modern digitalization of the world, information found online is very vast and variable. Knowing the competitor's strengths is substantial when researching potential markets. "No firm can exist in a vacuum. It is vital to know who your competitors and potential competitors are and what they are doing" (Youngman 1998, 1). The research is collected using various business literature sources and internet-based resources.

### **1.4 Outline of thesis**

The structure of the thesis consists of five major parts. The introduction chapter outlines the overall goal of the thesis and introduces the major topics of the study, which are then covered in a more detailed manner in the later chapters. The theoretical framework chapter will focus on examining and reviewing

theories and frameworks that will be used in the study. The German business environment research consists of a literature study and PESTEL framework to analyze the German culture. The analysis of the digital market consists of exploring the competitive environment of the automation industry and comparing the competitors to the TeleCare service using different models. The next part consists of creating an entry strategy for TeleCare to enter the German automation industry. The final chapter encompasses the conclusive statement of the study.

### **1.5 The effects of COVID-19**

COVID-19 hurt many industries, especially those where physical attendance was essential. Some industries learned to adapt using digital channels to stay on schedule even without physical presence. Meanwhile, others digitally transformed to work from home or any secluded places. For this thesis, the effects of Covid-19 affected positively in the sense that firms are already used to performing online and using different cloud applications, so there is already some familiarity with the cloud-functionality of TeleCare. (Mckinsey & Company 2020, 12.)

## 2 THEORETICAL FRAMEWORK

Various frameworks were used to do this thesis to evaluate the market, environment, and product. SWOT is being used to analyze the service because it is an excellent tool to summarise the assessment stages and provide a strategic focus (Melkman & Simmons 2006, 132-133 ). Porter's Five Forces and generic strategies models are used because of the reliability and the academic accolades of Michael E. Porter (Harvard Business School 2021). The reason for using PESTEL was that it is a simple and memorable model to analyze the business environment (Hewitt 2018, Ch.3). The last framework that is being used is the risk matrix framework for the reason that it offers an effective visualization of the possible risks that might occur in a service. (Imke 2019.)

### 2.1 Porter's Five Forces

Competition is about the other competitors in the market, the core industry economics, and the competitive forces beyond just the competitors. The tool used to analyze competition in the automation industry itself is Porter's five forces framework. The framework consists of five forces that state the competition in the industry. According to Porter, these five forces determine how much profit potential the industry ultimately has. (Porter 1979.) Figure 1 displays the five forces in Porter's five forces analysis.

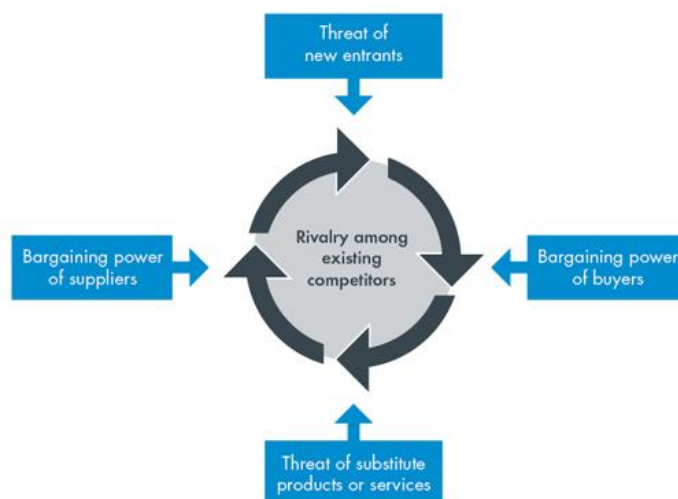


Figure 1. Porter's five forces of competitive position analysis (CGMA 2013).

The framework's five forces are: supplier power, buyer power, the rivalry of the existing competitors, the threat of substitution, and the threat of new entries. It is to be noticed that there is believed to be a sixth force consisting of regulation, taxation and state policies, but those are taken into account in the PESTEL analysis. (CGMA 2013.)

## 2.2 PESTEL

Every cultural environment is different, so environmental factors need to be individually analyzed. PESTEL is used to research macro-environmental factors that affect a company or a specific industry. (Washington State University 2021.) The PESTEL analysis will be done on the German automation factory industry to examine the industry's effects on TeleCare. Figure 2 contains the six macro-environmental factors used in the PESTEL analysis.



Figure 2. Scanning the Environment: PESTEL Analysis (Business to you 2016).

A PESTEL analysis consists of six different external marketing environmental factors: Political, Environmental, Social, Technological, Economical and Legislation. Each of these factors is used to identify the major factors that would be crucial to TeleCare in the automotive industry. PESTEL is also used to



identify the strengths and weaknesses that TeleCare might have on the market, which is then later clarified in the SWOT analysis.(Hewitt 2018, Ch.3.)

### **2.3 SWOT Analysis**

To illustrate the opportunities of TeleCare on the German market, the service itself will need to be analyzed. One way of evaluating the attributes of TeleCare is using a SWOT analysis. SWOT can be used to compare the product favorably against competitors if proper analysis and research are done (Youngman 1998, 143). A SWOT analysis is especially useful in this case because the strengths and weaknesses of TeleCare differ significantly from other products in the market, so by using a SWOT analysis, it is possible to see how TeleCare can distinguish itself in the market.

The SWOT analysis consists of four different components to analyze the service: strengths, weaknesses, opportunities and threats. Compared with competitors, strengths provide advantages to the service. Meanwhile, weaknesses place disadvantages on the service. Opportunities are prospects that the service could use to its advantage. Threats are future elements that can hinder or block the benefit. The strengths of the service make it possible to capitalize on an opportunity. However, weaknesses of the service make it possible for threats to develop. Threats can undermine the service's strengths, and weaknesses can block potential opportunities from developing. (Melkman & Simmons 2006, 132-133.)

When the SWOT analysis is finished, it is possible to discover the possibility of using a strength to capitalize on a customer opportunity. Using the discoveries, it is possible to make an attack strategy that can offer a better value for customers than competitors. Meanwhile, in using the knowledge of threats and weaknesses, it is possible to develop a defensive approach to lessen the impact of those harmful elements in the service. (Melkman & Simmons 2006, 133.)

Figure 3 visualizes the four components of the SWOT analysis and their relationship with each other.

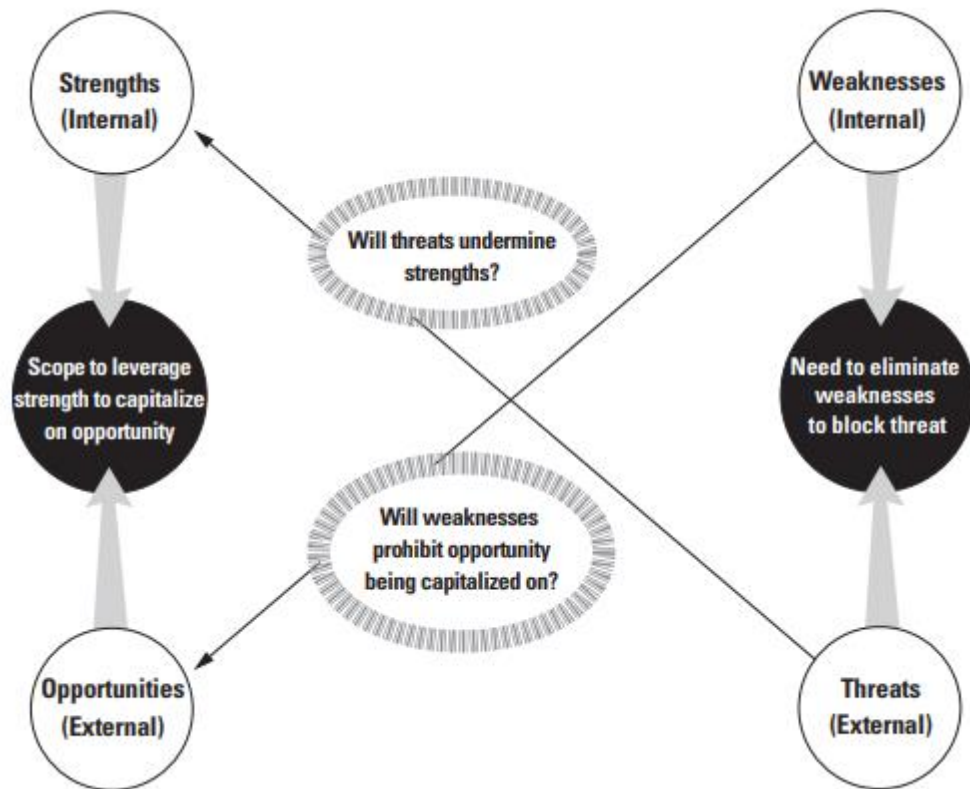


Figure 3. The strategic application of the SWOT analysis (Melkman & Simmons 2006).

## 2.4 Porters Generic Strategy

The framework to analyze strategy is Porters Generic Forces. Porter (1998, 11) made a model that determines long term competitive advantage in the market. There are three types of generic strategies in the model. The three strategies are focus, cost leadership and differentiation. The focus strategy is categorized into two types, cost focus and differentiation focus. (Porter 1998, 11.) The different strategies that provide a competitive advantage are illustrated in Figure 4.

		<b>COMPETITIVE ADVANTAGE</b>	
		Lower Cost	Differentiation
Broad Target	<b>1. Cost Leadership</b>	<b>2. Differentiation</b>	
Narrow Target	<b>3A. Cost Focus</b>	<b>3B. Differentiation Focus</b>	

Figure 4. Three generic strategies (Porter 1998, 12).

The Cost Focus strategy focuses on targeting a specific customer or market segment. This results in high customer satisfaction and loyalty in a narrow market segment because it is focused on securing the best outcomes for a small group. In the Differentiation strategy, the product or service offered will differ from the other competitors to provide a unique solution for the customers that no other company can provide. (O'Meara, Bernard & Petzall 2013, 41-43.)

The cost leadership strategy focuses on gaining large scale cost advantages by using, for example economies of scale to be more cost-efficient in production. By being cost-efficient, it will be possible to gain more profit than the competitors and have the opportunity to undercut the competitors to gain an advantage in the market while keeping the quality of the product or service equal. The differentiation strategy will focus on a small segment, the needs of which the product or service will fulfil. (Bruin 2021.)

## 2.5 Risk Matrix

When analyzing risks that are affecting TeleCare, the risk matrix framework will be used. The model is used for the risk assessment process. To evaluate a risk, the effects coming from its occurrence must be understood. In the model, the nature of risk is described into three elements: the description of the event, the likelihood and the impact (Pritchard 2014, 7). Figure 5 visualizes the risk Matrix model.

			Impact			
			0	1	2	3
			Acceptable	Tolerable	Unacceptable	Intolerable
			Little or No Effect	Effects are Felt but Not Critical	Serious Impact to Course of Action and Outcome	Could Result in Disasters
Likelihood	Improbable	Risk Unlikely to Occur				
	Possible	Risk Will Likely Occur				
	Probable	Risk Will Occur				

Figure 5. How to Develop a Risk Matrix (Imke 2019).

In the risk matrix, the severity of the risk is the combined value of the impact and likelihood. Each risk is based on the matrix while evaluating the impact and probability of every risk. When the matrix is completed, a business can develop risk management and mitigation strategies. (Imke 2019.)

## **3 DEFINITION OF THE SERVICE**

### **3.1 Field devices**

Field devices are used in automation technology to capture data from the automation systems via fieldbuses connected to the system. The fieldbuses, in turn, transfer data to the field devices that store the information as measurement data. Field device management systems capture this data and process the data into readable information. (Item 2021.) Field device management systems allow making different configurations to the field devices. Field devices are designed to reduce energy costs and minimize downtime in a factory. (Valmet 2021; Honeywell 2021.)

The data that a field device can measure are numerous, ranging from liquids to temperature. Field devices are used in all kinds of automation equipment and control systems. (Centraline 2021.) For this thesis, the field devices will be aimed at all the industries that use automation. Therefore these industries as a whole will be referenced as the automation industry. In reality, the field devices may be used in a narrower amount of equipment, as not every automation equipment needs field devices.

### **3.2 TeleCare**

TeleCare is a part of the Supersense product family, but we will call the service by the TeleCare name for the purpose of thesis. Telecare is a service where a particular case with a factory PC inside is sent to a factory. The PC is plugged into a Field device, which transfers the data collected into the cloud. The PC can be connected to a variable of ports available in the field device. The device is configurable from the cloud without any engineer being physically present in the factory. When the device is in the cloud, engineers familiar with the specific field devices from Endress+Hauser take care of the configuration. It is also

possible to do flow and radiometric measurements with TeleCare, but for this thesis, the whole process will be called the configuration process. (Keltikangas 2021.)

Endress+Hauser takes care of the promotion, so when a contract is made with a client, they transfer the order to Innotect. Innotect then delivers the service to the client using a courier service. When the device is provided, innotect notifies this information to Endress+Hauser, who then takes control of the configuration process. After the procedure is done at the factory, the case is sent back to Innotect. (Keltikangas 2021.) The steps in the service are visualized in Figure 6.

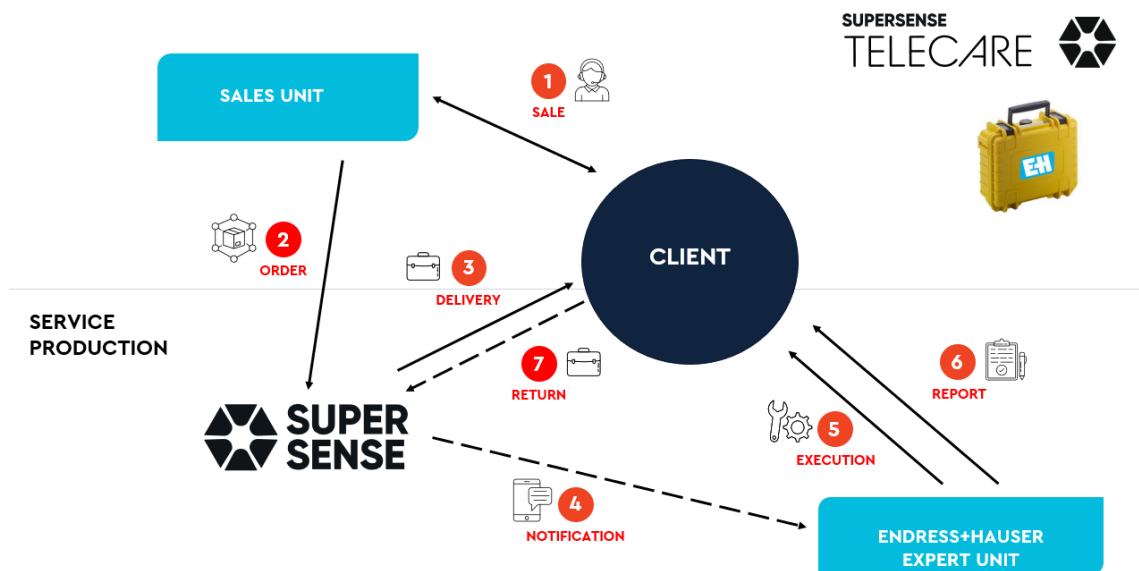


Figure 6. Visualisation of TeleCare (Innotect 2021).

In short, the parts that Innotect does in the service are delivering the case and making sure that the cloud service and the PC are working correctly. Endress+Hauser manages all other phases, so they are the primary communicator with the client. (Keltikangas 2021.)

The cloud service was developed in-house completely by Innotect, so Innotect is in charge of the software itself and the inner workings of the case. Microsoft Azure cloud services provide the cloud servers themselves. The factories may request this service when they have problems with the field device, or they may

also use the service for scheduled maintenance checkups. The case is shockproof and designed to be used in various conditions. (Keltikangas 2021.)

The field device manager systems are necessary to guarantee an efficient use of the field devices that are being sold. So if field devices are used more in the factories and more factories are being constructed, it means that field device manager systems demand also goes up.

## **4 THE BUSINESS ENVIRONMENT OF GERMANY**

### **4.1 Economical environment**

The German market is an economic powerhouse with the biggest economy in Europe and the 4th biggest economy globally (The Balance 2021). Germany's Gross domestic product growth has been steadily rising following the first outbreak and has yet to get to the highs of the year 2019. The German Government reduced the GDP forecast to 2.5% from 3.5% in autumn 2021, but by 2022, the Government expects a GDP rise of 4.1%. These forecasts signal that the GDP growth will stabilize in the upcoming years. (Germany Trade & Invest 2021.)

The turnover for the German automation industry was 12 Billion € in 2020 and for 2021 it is predicted to be over 13 billion € (Statista 2021). In Germany, four different sectors dominate the industry: automotive, mechanical engineering, chemical and electrical industries (Business Finland 2020, 3). All of these sectors use automation technology which in turn use field devices (Wasmund 2019).

### **4.2 Social environment**

German people are very masculine, and high performance is to be expected. They strongly believe in individualism and self-actualization. Communication is straightforward in German business, and they give criticism very openly. German companies prefer planning and data, presentations are expected, and uncertainty is avoided. German people are pragmatic and can adapt quickly to different situations. Figure 7 visualizes the different social types of Germany compared to Finland, using the Hofstede 6d model. (Hofstede Insights 2021.)



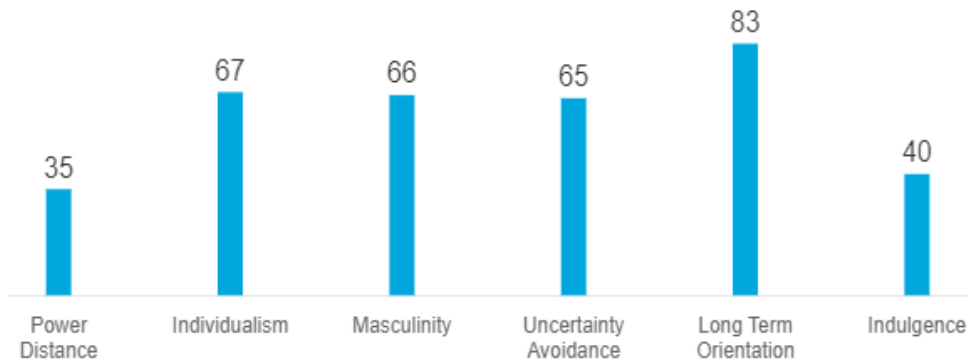


Figure 7. Country Comparison: Germany (Hofstede Insights 2021).

German culture is highly hierarchal, so high quality of its products and services is expected. German firms very highly appreciate the ease of doing business. The solutions to their problems need to be well explained and concrete, so they are easy to understand without extra clarifications. (Business Finland 2020, 5.)

### 4.3 Legal environment

The German Government and European Commission have been issuing various legal requirements for factories on waste issues and the different chemicals they use. These requirements require no more than a regulated amount of specific liquids and other harmful substances. (European Commission 2021a.) Due to the field devices being a big part of monitoring these harmful substances, they are mandatory for factories in these restricted areas.

As a part of the EU, Germany has a data protection law, GDPR. In 2021 they harmonized with GDPR a new law named Bundesdatenschutzgesetz. Bundesdatenschutzgesetz has stricter data protection officer clauses than GDPR. (OneTrust DataGuidance 2021; Zrinski 2021.) A new German IT-security law was applied in May 2021. It amends or complements a number of IT-security laws. If these laws are not complied, there can be a fine of up to 20 million €. (German Federal Office For Information Security 2021; ICGL 2021.)

### 4.4 Political environment

EU politics also affect Germany. All EU member states are committed to being a part of the EU Green Deal. Part of the Green Deal is to use cleaner energy in industries and to support eco-friendly technological innovation. The goal of the Green Deal is to see the EU as a climate-neutral continent by 2050. (European Commission 2021b.)

#### **4.5 Technological environment**

Germany is a highly technological country with the Global innovation index ranking it tenth in 2021. New technology is being adopted quickly, and ICT technology is heavily accessible. (World Intellectual Property Organization 2021.)

The majority of German companies are for digitalization. However, German firms see the data protection and IT-security requirements as a roadblock in digitalization. Cloud computing is being heavily used by 76% of German companies, and in the future, the percentage of firms using cloud technologies is predicted to rise even higher. (Tata Consultancy Services & Bitkom Research 2019, 11, 24.)

#### **4.6 Environmental environment**

The German Government updated its climate change act to achieve climate neutrality from 2050 to 2045. In the same climate act, the Cabinet of Germany lowered its future climate targets for 2030. (Cabinet of Germany 2021.) The objective is technologically possible if more substantial financial incentives are made in the country (Reuters 2021).

The German industry focuses heavily on environmentally friendly products, which is projected to account for around 20% of their GDP in 2025 (Germany Trade & Invest 2021). Automation technology plays a forward role in the environmental responsibility of businesses. It produces minimal waste heat and use the minimum power required to make the technology more eco-friendly,

therefore heavily reducing the negative environmental impacts. (Industry Today 2020.) Due to Germany's resource-efficient and green products, German's green tech sector accounts for 14% of the sector's global market (Roland Berger 2021).

## **5 ANALYSIS AND RESULTS**

### **5.1 Analysis of direct competitors**

TeleCare has very clear advantages compared to the competitors. In the German market there is not currently available any product with the same cloud capability that TeleCare has, meaning none of the competitors are capable of field device configuration online.

The non cloud field device management software requires the client to have an engineer that knows the field devices and an engineer that is willing to travel to the factory to configure the field devices. The competitors may use multiple different solutions to create a package that is usable in the factories. The competitor i.safe MOBILE offers a solution where their Android tablets are used in conjunction with Softing's mobiLink and ProComSol's DevComDroid App. (i.safe.MOBILE 2020.)

Some competitors like Valmet and Honeywell only provide the field device management software. Some other solutions like Softing's mobiLink is going to be needed to input the data from the field devices to these management systems. (Valmet 2021; Honeywell 2021; ProComSol 2021.) The engineer is usually sent from the field device manufacturer, who has the knowledge of the device's workings, which also raises the cost of the configuration. The field device manufacturer in this case is Endress+Hauser. (Keltikangas 2021.)

### **5.2 Analysis of TeleCare**

The analysis of the TeleCare service is going to be done with a SWOT analysis framework. The framework will be used to evaluate the strengths, weaknesses, opportunities and threats of the service. At the end of the chapter a table is made to visualize the analysis.

## **Strengths**

The service's strengths are unique and different compared to the rest of the competition in the market. The TeleCare service has a cloud functionality that allows the field device to be configured from anywhere and anytime, as long as the briefcase is connected to the field device. This is the main selling point of the TeleCare service, as it reduces costs by a significant amount compared to the other competitors. The cloud solution also introduces adaptability to the configuration software.

The whole solution of TeleCare is being developed entirely by Innotect. Unlike with some competitors, there are no third-party software inconsistencies if something goes wrong or assistance is needed on the software. Other competitors in the market may only offer the management software itself and not the required hardware to process the data from the field devices (Schneider Electric 2021; Valmet 2021; Honeywell 2021). The solution is also simple, not requiring modems or anything else to connect to the cloud. Needing only to use one adapter means that any worker will be able to connect the PC to the field device without the need of an expert.

## **Weaknesses**

The weakness of TeleCare stems from the fact that the time of delivery for the case is relatively slow, depending on the courier service. If a premium courier service is used, the case will arrive the following day at the factory (UPS 2021). The consequence is that the service cannot be used for anything that requires immediate attention or any emergency that needs to be solved as fast as possible. The service is also dependant on Microsoft cloud service and the delivery service.

## **Opportunities**

Because of the unique properties, there are many chances for the service to expand. The first opportunity is for TeleCare to have a distribution center directly in Germany, so the package is able to arrive significantly faster and would respond to emergencies a great deal easier. This would, of course, require that Innotect would have an employee in Germany who would be able to supervise the service and send the PC to the customer. However, that employee would only need to invest a small amount of time in sending and overseeing the service, so would be capable of doing other tasks.

A further ample opportunity is for the case to be loaned for a specific amount of time. If factories find the need to use the case for multiple field devices or multiple factories close to each other, they could rent the case from Innotect. This would provide additional profits for Innotect, which would solve TeleCare's weaknesses regarding the travelling time of the PC. The fact that field devices are directly connected to TeleCare means that the more field devices are used, the more demand the TeleCare service has.

## **Threats**

The threats of the service are other companies' abilities to adapt. Suppose other companies manage to create similar software with cloud functioning capabilities. This may prove a serious threat to TeleCare, especially if the company that develops the software already has a foothold in the German field device management software market. Another threat is that because of TeleCare service's remote nature, other companies may get better trust from German factories if they are physically more present in the field device configuration process. This is particularly so in the German market, where physical involvement is significantly appreciated. Cybersecurity concerns are also a big threat due to the amount of critical information in the factories.

TeleCare has obvious strengths and opportunities when compared to the rest of the market. The advantages in cost and adaptability are significant, which makes the service lucrative to a potential client. The SWOT analysis is visualized in Table 1.

<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>• Cloud functionality</li> <li>• Reduced costs</li> <li>• A simple, complete solution</li> </ul>	<p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>• Delivery times may be long</li> <li>• Dependant on cloud service and delivery service</li> </ul>
<p><b>Opportunities:</b></p> <ul style="list-style-type: none"> <li>• Leasing opportunity for long term relationships</li> <li>• Ability to create a distribution center closer in Germany.</li> </ul>	<p><b>Threats:</b></p> <ul style="list-style-type: none"> <li>• Cloud functionality can be replicated by competitors</li> <li>• Physical connection more prevalent with competitors</li> <li>• Cybersecurity threat.</li> </ul>

Table 1. Visualization of the SWOT analysis.

### 5.3 Competitive situation in the German automation industry

For this thesis, the automation industry consists of all the different sectors where automation technology is used.

#### **Threat of new entrants**

The field device manufacturers have a lot of knowledge on what would be necessary for a field device management software. If the field device manufacturers would start developing field device management software, they could prove to be major threats on the market. Some companies such as Endress+Hauser have made some field device management software (Endress+Hauser 2021). However, these softwares turned out to be insufficient

for their needs, so they have turned to other companies like Innotect to build a more sufficient service.

The action it takes for companies to get into cloud computing are immense and require an orchestrated effort from the top of the company. The major decision makers in the company need to be starting the companywide move to cloud computing. (McKinsey 2020, 9.) Therefore, in terms of the cloud computing features it is quite challenging to make a presence in the market, unless the company is already specialized in cloud technology, as is the case for Innotect. However, the big German firms are already heavily invested in using cloud computing, so there is a possibility for a company to create a rival product to Innotect in Germany.(Tata Consultancy Services & Bitkom Research 2019, 25.)

### **Rivalry among existing competitors**

The rivalry between the field device management software is separate from the devices that process the data themselves. Due to field device management software working from any hardware that can process the data, they are not directly competing against the hardware (Honeywell 2021). Only the companies that provide full configuration packages, like Innotect and i.safe.MOBILE are competing with all the other competitors. The rivalry for device management software is relatively intense as the different software do not differ significantly, and there is quite an abundance of software available in the market.

### **Bargaining power of Buyers**

If a company owns a field device it is a must to own a field device management system to be able to configure and interpretate the data that is inputted out of the field device. If some problem arises it is a must for a company to be able to analyze the data that is coming out from these field devices. The buyers have only the power of choosing what applications they have, but for TeleCare's case, if they need the benefits of cloud computing they need to purchase it. If



the buyers can afford multiple solutions they may have more bargaining power when choosing the solution.

### **Bargaining power of Suppliers**

The supplier in the case of TeleCare is Microsoft Azure cloud service. The price of the cloud software depends on Microsoft's cost and what their contract is with Innotect. Due to Innotect specializing in Microsoft cloud technologies and the fact that TeleCare is built on Microsoft services, no other substitute is possible at the moment, so Microsoft has a lot of power as a supplier. Naturally, the price of high-speed couriers affects TeleCare too, as the case is sent from Finland to Germany as quickly as possible.

### **Threat of new substitutes**

Due to the fact that field devices need to be configured and analyzed there is no substitutes for field device management softwares. The field devices themselves are necessary with more and more regulations coming in to the industrial environments due to environmental reasons(European Commission 2021a). Unless if field devices themselves are going to be replaced, there is no threat of substitutes for the field device management softwares.

## **5.4 Strategical focus of TeleCare**

The strategy that Innotect chooses should focus on the advantages that their cloud software gives compared to the other competitors in the industry. Their cloud software is a heavily unique service that, at the moment, no other company has in the German industry. They should focus on the differentiation strategy due to the uniqueness of TeleCare and the cloud capability being the biggest strength of TeleCare.

Due to the cloud software being a lot cheaper than bringing the engineers into the factory, the cost differentiation strategy is also valid when looking at TeleCare. They did an affordable service due to the cloud capability and it is unique in its availability, giving TeleCare its advantage. The fact that the factory PC in TeleCare can be connected to all field devices means that TeleCare does not need to focus on a particular field device.

## **6 MARKET ENTRY STRATEGY**

### **6.1 Market potential in the German market for Innotect**

The long term potential in the German automation industry is enormous, due to Germany having great economic growth and being a technologic powerhouse. The first goal for TeleCare should be to have three to five long term customer relationships. When these goals have been achieved, it gives Innotect experience in the industry, and from there is a good starting point to expand the service more. The profits are not the short term goal for Innotect. Building relationships and getting experience on the market should be the short term goal. If the German industrial market can be penetrated, the long term profit will be significantly higher than the short term profit strategy.

### **6.2 Marketing mix**

The marketing mix consists of the 7 P strategy which are: Product, Price, Place, promotion, People, Process and Physical evidence. Due to physical evidence being a very small part of the service, it is covered in the product strategy. The people that are part of the process are covered in the process strategy.

#### **Price**

The recurring cost for the service are the cloud service costs and the delivery costs. Those are the only recurring costs for the service from Innotect, the engineers that Endress+Hauser supplies while taking a portion of the profits of TeleCare. Initially, the pricing model should focus on market penetration for the first customers. The point is to build long term relationships and trust between the customers, so the price should be low enough to pique the interest of the potential customers. As the service is unique and necessary for long-range configuration, some leverage can be had in pricing. However, this leverage should be used only when proper relationships are built and more than a few customers use TeleCare. As the significant advantage of TeleCare is the

heavily reduced cost compared to competitors, the service still has to be an affordable solution, so the strength doesn't diminish or disappear altogether.

In leasing the case, there should be a monthly or weekly price of a specific sum. The cost for leasing should be significantly higher than just one delivery but inexpensive enough so that leasing could be an affordable opportunity in the long term. The leasing cost should only be for the PC case, as the price for engineers should still be on a use basis.

### **Place**

A delivery company is doing distribution for the factory PC case. Due to the speed of the delivery being a major weakness of TeleCare, it would be suggested to prioritize the speed of the delivery service rather than the cost. Depending on the demand, there need to be enough cases in Innotect to take into account multiple customers needing the case simultaneously. Due to the service being very time-intensive, there should not be a situation where a case could not be sent to the client.

### **Product**

The TeleCare service consists of the factory PC and the cloud service where the data is inputted from the factory PC. The factory PC is in a shockproof case to be used in several different factory conditions. The physical part of TeleCare which is the case should have some identification, so people at the factory would be aware that the case is the correct one. Due to the fact that people at Innotect are the only ones who know the technical information of TeleCare, they still need to be in communication with the customer if required, either directly or through Endress+Hauser.

It would be possible to lease the case to the client if the demand for the service is great enough. A long term relationship could be enhanced with the customer through leasing, where the case is loaned for a contracted time. It would still

require communication between Endress+Hauser and the customer, for the engineers are still needed for the configuration process.

## **Promotion**

Endress + Hauser promotes the service, and due to the partnership between Endress+Hauser and Innotect, the TeleCare service can be purchased only with their field devices. Their marketing team will sell their field devices and then instruct them to the TeleCare service when necessary. The main focus on promoting TeleCare should be cloud functionality to reduce costs. However, Innotect needs to present the service to potential customers. They have the most technical knowledge of the product and its inner workings. Of course, if a situation arises for Innotect to advertise the service it is suitable to do so, as long as the Endress+Hauser field devices are advertised also, due to their partnership with Innotect.

## **Process**

The service works by the effort of multiple organizations Endress+Hauser does most of the marketing, handles communication with the customer, and provides the engineers that possess the know-how for configuring and managing the field devices. First, the customer buys a field device through Endress+Hauser and then the TeleCare service is offered to them for configuring purposes. When the customer feels the need for field device configuration, they contact Endress+Hauser, who contact Innotect. The communication between Innotect and Endress+Hauser should be swift to ensure as little downtime as possible. The courier company does the delivery. The delivery needs to be confirmed during the evening hours, as at the moment, it is not possible with the current courier services to send the case after evening hours(UPS 2021). Microsoft provides the cloud service environment, and Innotect should have regular checkups to ensure the service works properly.

Even though Endress+Hauser does the communication, the software is being developed by Innotect. Therefore it is a large part of the service. The first meetings with the German customers are the most important to build a closer link with the German automation Industry. Later sessions can be done annually with the client.

Innotect's task is to send the delivery to the customer and ensure that the cloud software and PC are working as intended. There should be an employee at Innotect who does the communication between Endress+Hauser and the customer. The same person must do all the communication to reduce the risk of misinformation. In the case of technical information needed or support directly related to the cloud technology, another employee who has the technological know-how can handle that communication. In the beginning, the workload should be very minimal because of the small role of Innotect when the service is ongoing. In the future, if the customer count is large, then an employee could be trained to focus on the TeleCare service.

### **6.3 Risks**

The service is heavily dependent on Microsoft cloud services, so if there is a disconnect on the servers, the cloud functionality of TeleCare is unusable. However, having a data breach or connectivity problems on the Microsoft services is highly unlikely, due to the large amounts of effort on Microsoft's part in cybersecurity. (Microsoft 2020) Due to the fact that critical information being leaked may be very catastrophic to the factory, special care needs to be taken care of when dealing with cybersecurity. In addition to properly securing the cloud services, the data that is being transferred needs to be according to the data security laws in Germany.(German Federal Office For Information Security 2021.)

Due to the delivery service being an integral part of TeleCare, problems with the delivery service could prove to be a major risk. Small technical problems

could occur frequently, but they would be fixable quite easily either by sending the case back or just resolving the problem online. The relationship between the customer and the contact person is fairly important to TeleCare functioning with ease. If the contact person is replaced or something other hinders the involvement with the contact person, that can present itself as a risk. These possible risks can be evaluated and compared in the risk matrix(Figure 8).

		IMPACT			
		Acceptable	Tolerable	Unacceptable	Intolerable
LIKELIHOOD	IMPROBABLE		Delivery service interruptions	Cloud service interruptions	Cybersecurity breach
	POSSIBLE		Losing communication with the contact person		
	PROBABLE	Minor Technical Issues			

Figure 8. The TeleCare risk matrix.

Technical problems would be a minor risk to TeleCare, but they could be fairly frequent due to the highly technical nature of the service. The risk of losing contact with the contact person is possible. This would impact moderately the working of TeleCare. Delivery services stopping working would greatly affect the workings of the service as nothing could not be sent to the client. However this would be highly unlikely due to the variety of delivery services available. The delivery services would only prevent from sending the case. However, if the cloud services would have connection issues, it would make the whole service unusable for the time of the disconnection. The most catastrophic risk for TeleCare would be a cybersecurity data breach in their systems; this would mean that the critical client information would be lost or leaked to possibly maleficent users. This data breach would have a very negative impact

for client relationships, and trust could be completely lost to clients. The data breach is highly unlikely due to the high level cybersecurity of TeleCare, and the high level of cybersecurity in Microsoft cloud services (Microsoft 2020; Keltikangas 2021).

Focus should be put on those risks that Innotect can actively affect. For technical issues, periodical contact should be had with the client, so it can be possible to develop the software in the future to prevent these issues from happening. Cybersecurity should be to current standards. Therefore, annual cybersecurity checks should be done on the service. When having meetings with the assigned contact person, notes and recordings should be kept so it is easier to make the communication efficient with the new contact person.



## 7 CONCLUSION

At the start of the thesis, three major research questions were determined. The research questions were as follows:

- Does TeleCare have significant competitive advantages to succeed on the German automation industrial market?
- What is the nature of the German business environment?
- What would be the market entry strategy for TeleCare?

The answers to these questions were researched by using the various analytic tools used in the thesis. Competitive advantage was researched using the SWOT model, and the competitive situation was analyzed by using Porter's five forces analysis. The German business environment was done with the PESTEL analysis framework. The market entry strategy was built using a marketing mix and risk matrix.

TeleCare has a significant advantage in the German automation market because of the major advantages that the cloud functionality brings. Not one competitor has the same functionality, so they have the need of bringing the engineers physically to the factories. The cost that accumulates, as the engineer that travels costs significantly higher than TeleCare. Therefore TeleCare has a significant advantage which enables the service to be successful in the German automation industry.

The business environment of Germany is a very lucrative opportunity, especially in the industrial factories where field devices are heavily used. The culture of Germany is very hierarchical, and Germans appreciate physical involvement between their business partners. Technologically Germany is very inventive, and digitalization is a current and evolving opportunity for companies.

The market entry strategy for TeleCare should focus on getting three to five long term customers. It would be important to build these client relationships

carefully while using a penetration pricing strategy to make TeleCare a more attractive opportunity for clients. Physical contact needs to be made at first to build trust with the clients. Later meetings can be held annually or when it feels important to do so.

The future for Innotect should be focused on maintaining relationships and broadening the client base. When the company has a bigger hold on the market it can start to switch its pricing strategy to be more aggressive in order to increase profits. If other potential customers notice the benefits of TeleCare due to the cloud technology, it can be possible to overthrow other competitors from the market and gain relationships with a new client base.

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