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# Effects of the Market Change for Helen and its Business Functions

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<p>1.1.2020 gas market opened to competition in Finland and this change offered new business opportunities to Helen. Before the market opened, Helen has had to prepare for it among others by building the right surfaces for IT-systems for controlling stock exchange and predictions.</p> <p>The objective of this thesis was to clarify the effects of the change for Helen and its business functions taking into account the system's functionality and information flow with an emphasis on the customer perspective as well as to draw conclusions for further actions. That means finding theory about good practices that helps to analyze the change in the company's external environment, which is the market change, and analysis of company strategic operating environment.</p> <p>This thesis introduces the gas market change as a whole and from Helen's point of view. As a theory suitable for market change, the PESTLE analysis is appropriate, as it provides a broad picture of the situation before and after the change, taking into account the different topics of the market. The Porter's five force theory gave a clear view of the market change from Helen's point of view, also taking into account other market participants. The resource and capability analysis also identified Helen's resources and through the SWOT analysis, strengths, opportunities, weaknesses and threats, thus reaching an even more detailed perspective on the impact of Helen's own situation and change in operations.</p>	
Keywords	PESTLE, Porter, resources, market change

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## List of Abbreviations

TSO	Transmission System Operator, Gasgrid Finland is assigned to the system responsibility for the natural gas transmission system in Finland.
LNG	Liquified natural gas.
CHP	Combined heat and power. The production of heat and electricity from the same unit.

# 1 Introduction

This thesis focuses on a major change in the gas market that has a significant role in Finnish energy sector. This change offers new ways to operate in the markets compared to the old system. It is also one way to the carbon neutral future, which is important to all Finnish energy companies.

## 1.1 Background and context of the project

Helen Oy is a Finnish company in the energy sector, and its business operations include production of electricity, district heating and cooling, energy distribution and sales as well as solar power systems. The company was founded in 1909 in Helsinki and it is owned by the city of Helsinki. Helen's subsidiaries are Oy Mankala Ab, Helen Sähköverkko Oy, Suomen Energia-Urakointi OY (SEU) and Helsingin Energiatunnelit Oy. Helen's strategic goals are boldness and agility, better returns, strengthening solution business, towards carbon-neutral energy and partner growth. Last year Helen has been creating cleaner, more flexible and smarter energy systems to find new ways for carbon-neutral future. (Helen, 2020)

The concept of an open gas market is not new, and it has been operating in the Balkans before. Finland joined the gas net 1.1.2020 when it was made possible by a legal change by a change in legislation. The change means that Finnish energy companies can now buy and sell gas from who they want and with that choice choose the price. The companies can also import gas to Finland after this change, but it is not as popular with companies as sales on the stock exchange. (Gasum Oy)

Before changing to open gas market, the Finnish company Gasum Oy had a monopoly on operating the market and companies bought energy and capacity from Gasum Oy that was the only importer for gas in Finland. Gasum Oy owned the online service for gas exchange that provided stock exchange for companies. Gasum Oy set the gas price for the market. The change has been a long process as a whole, but the concrete changes have been very rapid, and it is not only Helen's systems that need to work but

also UAB GET Baltics that is the new place for stock exchange. Helen was also depending on UAB GET Baltic to build its new systems on time, so the markets were running at the turn of the year. (Gasgrid Finland Oy)

Helen is interested to join in this new market because it is one possible way towards carbon-neutral future. Helen has used Gasum Oy's gas market before, but the open gas market provides more ways for Helen to operate in the market. It is possible to buy and sell capacity, set a group and control capacity and energy procurement for other companies and it is possible to import gas to Finland if wanted. Gas is one of the most important sources of energy for Helen and it somewhat replaces coal as an energy source.

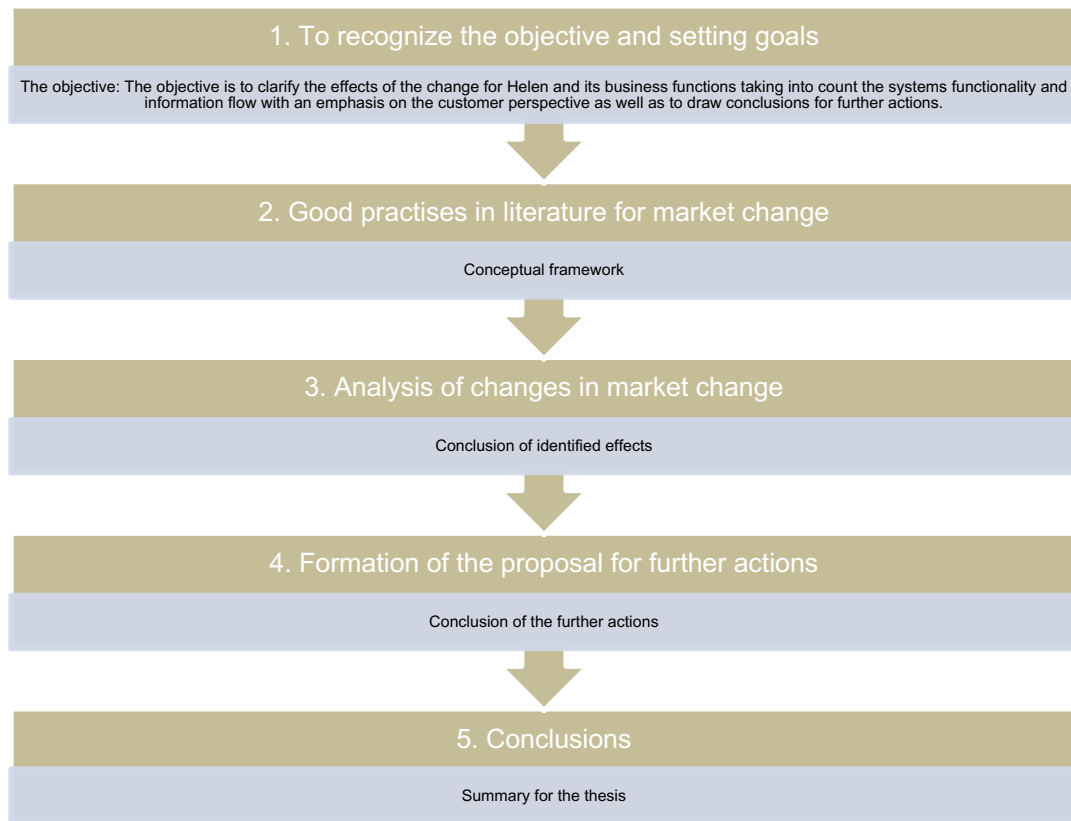
## 1.2 Identifying the development challenge and setting the goal

1.1.2020 gas market opened to competition in Finland and this change offers new business opportunities to Helen. Before the market opened Helen had to prepare for it among other actions by building the right surfaces for IT-systems for controlling stock exchange and predictions.

The objective of this thesis is to clarify the effects of the change for Helen and its business functions taking into account the system's functionality and information flow with an emphasis on the customer perspective as well as to draw conclusions for further actions.

## 1.3 Project plan

The project plan for the thesis starts with introduction and theory and ends with analysis and conclusions as seen in Figure 1.



**Figure 1 Project plan**

The first chapter (1. Introduction) is to clarify the objective of the thesis, give a short introduction to the topic and give a short overview of the thesis. The second chapter (2. Good Practices in Literature for Market Change) is for building the conceptual framework and to introduce the theory for analyzing the change in the market change. The third chapter (3. Analysis of Changes in Market Change) is to summarize the identified effects and it is based on the theory introduced in the previous chapter 2. The fourth chapter (4. Proposal for Further Actions) is to summarize the further actions. The last chapter 5 (Conclusions) is to summarize the whole thesis and have another overview about the thesis and the objective.



Table 1 Field studies

Phase	Content	Information source	Timetable	Results
Field survey 1	Analysis of the change in market	Interviewing the people working with the gas market change	Interviews arranged in March	Recognized the main impacts
Field survey 2	Proposal for further actions	Comments from the same people as in Field survey 1	Comments arranged in March	Conclusion for further actions

Table 1 shows how the information from the field study exploits the theory. The interviews are strongly based on the used theory. Proposals for further actions are based on the interviews, so they also follow the theory.

#### 1.4 Structure of the present project report

First in this report is the introduction about Helen as a company and the reason for this thesis. After the introduction this thesis is continued by the theory about market change and analyzing market changes. Then Helen's view is brought into the theory and it is possible to analyze the impacts of the market change for Helen. In the end there is proposal for further actions as well as all conclusions.

## 2 Good practice in the field of literature on the analysis of market change

This chapter is based on the theory of market change and it gives a strong base for the consequent field surveys carried out later in the study. This chapter describes the theories used to explain the markets effects to the company and company's capability and resources. PESTLE analysis explains how company's environment influences on its actions. Porter's five forces explains how company's straight connections effect on its actions. Resource and capability analysis explain how company can identify its resources and SWOT analysis enables mapping strengths, weaknesses, opportunities and threats.

### 2.1 PESTLE analysis

Analysis of impact of market change with PESTLE analysis will cover the areas of political, economic, social, technological, legal and environmental aspects. This analysis must be limited to market change because there is no need for further analysis considering this thesis. (Johnson 2017)

The political element points out the role of the government, state and other political factors in the country's macro-environment. The role of the government and state is slightly different from the civil society organizations. The first two are often important as a direct economic actor such as a customer, supplier, owner or regulator of business, and the latter one is focusing on comparing a whole range of organizations that are liable to raise political issues in political campaigns, social media and traditional media. It is possible to present the political environment as a matrix of political exposure and direct state involvement, where industries have four different position options. If political exposure and direct state involvement are both high it usually means that these companies have high direct government involvement and are often highly exposed to groups from civil society and their resistance campaigns. (Johnson 2017)

If political exposure is high but direct state involvement is low, it means that the political environment is still important because the companies are usually exposed to pressures from civil society for example in the form of fair-trade campaigners and labor rights organizations. If political exposure is low and direct state involvement is high these companies are typically state owned and not highly exposed to political pressures from civil society organizations. If both indicators are low the companies are quite free from political pressure and the government is not that involved in the company's business. (Johnson 2017)

Economic factors in the macro-environment are currency, exchange rates, interest rates and fluctuating economic growth rates around the world. Company's markets are affected by the prosperity of the economy as a whole. It is important that companies understand how changing exchange rates may affect viability in export markets and vulnerability to imports. It means that companies should be aware of changing interest rates over time and have understanding for rising and falling economic growth rates. The key concept for analyzing macro-economic trends is the economic cycle. The cycles in economic growth are made up of three principal sub-cycles that are the Kitchin stock cycle, which is the shortest cycle with 3-4 years, the Juglar investment cycle, that is a medium cycle with 7-11 years and the Kuznetz infrastructure cycle, that is the longest cycle with 15-25 years. All these cycles add up together to determine overall cycles of economic growth. (Johnson 2017)

The social elements of the macro-environment have at least two impacts upon organizations. The first impact is that companies can influence the specific nature of demand and supply within the overall economic growth rate. Demand and supply can be shaped by a number of key aspects of the social environment. To analyze these there are two different aspects where the first one introduces four that are demographics, distribution, geography and culture. The second aspect is organizational network, also known as organizational field, with significant implications for innovativeness, power and effectiveness of organizations. Organizational field is a community of organizations that interact more frequently with one another than with those outside the field. These fields are partly economic but also emphasizing social interactions. Competitive organizations within the industry belong to the economical aspect and organizations that exercise an influence

on the focal organization belong to social interactions. These networks and organizational fields can be analyzed by means of sociograms that are maps of interconnections between members in the network map. The three concepts to understand effectiveness, power and innovativeness are network density, central hub positions and broker positions. (Johnson 2017)

The impacts of technologies are spread widely across industries because they include things like internet, nanotechnology and new composite materials. These technologies can open up new opportunities to other companies in the industry, but they can also challenge others. The five primary indicators of innovative activity for technological analysis are research and development budgets, patenting activity, citation analysis, new product announcements, and media coverage. These indicators generally help to identify areas of rapid technological change. Another very used method is to publish technology roadmaps of projects to meet the demands in the future, select the most promising alternatives and offer a timeline for the development. (Johnson 2017)

The ecological point of view considers environmental regulations. There are three types of challenges that organizations may need to meet, namely direct pollution obligations, product stewardship and sustainable development. The direct pollution obligations are a challenge of minimizing the production pollutants, the product stewardship refers to managing ecological issues through the organization's entire value chain and the whole life cycle of the company's products. The extent to which these ecological criteria are important to the organizations relies on three contextual sources of pressure. Which are ecological and organizational field, that are arising directly from the macro-environment, and internal organization. Contextual pressure can satisfy a variety of moves, which can be a sense of ecological responsibility, legitimacy or competitiveness. (Johnson 2017)

The legal aspects can cover a wide range of topics about different regulations, taxation and reporting requirements, rules of ownership, competition and corporate governance. Legal issues form an important part of the institutional environment of organizations. They are not just about laws and regulations but also more informal norms and patterns of behavior. These formal and informal rules vary between the countries, but three broad varieties of capitalism have been identified that change the way of doing business. The first one is liberal market economies that is institutional environments where formal and

informal rules favor competition between companies, aggressive acquisitions of one company to another and free bargaining between management and labor. The second one is coordinated market economics that encourages more coordination between companies and are often supported by industry associations or similar framework. The last one is developmental market economies that tend to have strong roles for the state and government, which will own or heavily influence companies that are important for national economic development. (Johnson 2017)

## 2.2 Porter's five forces

To start mapping the business landscape it is important first to have a framework and to recognize the five forces. These forces form together the structure of the industry that typically is fairly stable. If the forces are high and strong the industry's attractiveness is lower. This framework is relevant because it can provide a useful starting point for strategic analysis where profit criteria may not apply. It is not as broad as the PESTLE analysis, thus offering a more detailed vision about the industry and the sector. (Ghemawat 2006)

The first force is the degree of rivalry, which is the most obvious because all companies have competition. (Ghemawat 2006). Five factors define the extent of rivalry in an industry or market. Those factors are competitor concentration and balance, industry growth rate, high fixed costs, high exit barriers, and low differentiation. The competitor concentration considers the number of competitors or the relative size of the competitors or power when competitors are trying to gain dominance over others.

Industry growth rate is focused on industry's growth. When there is strong growth the industry can grow within the market but low growth or decline typically mean price competition and low profitability. Industries with high fixed costs tend to be more rivalrous. The companies try to spread their costs by increasing their volumes. This can be achieved by cutting prices and prompting competitors to cut prices leading to a situation called price wars, which is unprofitable to all. Low differentiation is typical in a commodity market, where rivalry is increased due the low customer loyalty towards only one company.

Customers tend to switch between competitors by choosing the price they want to pay. (Johnson 2017). If the industry is concentrated it is possible that competitors recognize their mutual independences so there is not as much rivalry in the industry. But on the other hand, when the industry has many small companies it is more likely that its effect on others will go unnoticed and so may be tempted to grab additional market share, thereby disrupting the market. When there is only one company that has no competition, it can also lessen rivalry when it has the power as dominant competitor to set the industry prices and discipline defectors at the same time when equally sized competitors try to outdo one another to gain advantage. (Ghemawat 2006)

The basic conditions in the industry are influenced by the second set of structural attributes. The degree of rivalry is increased by high fixed costs, excess capacity, slow growth, and lack of product differentiation. (Ghemawat 2006) It also has behavioral determinants, when competitors are diverse, attaching high strategic value to their positions in an industry, or face high exit barriers, they tend to compete more aggressively. If the industry has domestic oligopolistic consensus, it might shatter if diversity is added. (Ghemawat 2006)

The threat of entry is the second force in the Porter's five force theory. The degree of rivalry influences to the industrial market entries. When the threat of entry is high, the worse it is for incumbents in an industry. When the barriers to entry are high in an attractive industry, the threat of new competitors is reduced. There are five barriers to entry that are scale and experience, access to supply or distribution channels, expected retaliation, legislation or government action, and incumbency advantages. The first barrier scale and experience are very important to some industries, where incumbents have reached large-scale production. For the new companies in the market it will be hard to reach the same level as the other competitors when it comes to volume and the unit costs will be higher for the company until the company reaches that level. When there are high capital investment requirements for entering the market, the scale effect is increased.

Barriers to entry also comes from experience curve effects that give incumbents a cost advantage because they have learned how to do things more efficiently than an inexperienced new entrant could possibly do. The company that has just entered to the markets

tends to produce at higher cost until the company has built up equivalent experience over time. In some industries there are 'demand or buyer side' economies of scale or network effects as buyers' value being in a 'network' of a large number of other customers. Access to supply or distribution channels are important for manufacturing industries that has control over them. Sometimes this has been through vertical integration which means direct ownership and sometimes just through loyalty of customers or suppliers.

The barrier can also be defeated by overtaking retail distributions and selling directly to consumers through e-commerce by new entrants in some industries. One barrier is also when a new entrant is considering of entering the industry, but they believe that the already existing company has major retaliations that prevents the entry because the costs would go up. This is also called expected retaliation. In this kind of situation retaliation can take a form of a price war or a marketing blitz.

Sometimes it is enough that the barrier is discouraging as the retaliation is when it is coming from the incumbents. Legislation or government action means that legal restraints on new entry vary from patent protection to regulation of markets through to direct government action. Organizations are vulnerable to new entrants including access to proprietary technology, raw material sources and geographical locations or an established brand industry. (Johnson 2017).

The second force is the threat of entry where an average industry's profitability is influenced by a company that is not yet in the market and existing competitors. The key concept is to analyze the entry barriers, which prevent an influx on firms into an industry whenever profits, adjusted for the cost of capital, rise above zero. These barriers exist whenever it is difficult or not economically feasible for an outsider to replicate the incumbents' positions. Entry barriers usually rest on irreversible resource commitments. Some of the entry barriers are reflecting intrinsic physical or legal obstacles, but the most common ones are the scale and the investment required to enter an industry as an efficient competitor. This can lead to a company not willing present its products efficiently enough when there are already very strong and well-known brands in the industry. (Ghemawat 2006)

The third force is the threat of substitutes that are products or services that offer the same or similar benefit to an industry's products or services but are not exactly the same or are very similar but a different brand, so they have a different nature. Managers often focus on their competitors in their own industry and do not pay attention to the threat posed by competitors that produce substitute products of the company's products. Substitutes can reduce demand of a certain type of product by replacing it with an alternative one that customers switch to. Customers sometimes switch to alternatives that will become expired but the change rate between competitors' products does not need to be plenty for the substitute threat to have an effect. The simple risk of substitution sets the price range that can be charged in an industry. Even though there are no direct competitors in the industry, as it is a monopoly, there can be strong alternatives that offers substitutes that sets an extremely limited price range even to monopolistic industries. There are two important points about substitutes. The price/performance ratio is critical to substitution threats. A substitute can be more expensive if customers value its advantage in performance for certain use, so it will still be an effective threat to other companies. The price is not the strongest factor but the ratio of price to performance matters often more. Extra-industry effects are the core of the substitution concept. The difference between substitutes and competitor's threats are that substitutes are threats outside the incumbent's industry and competitors are threats inside the incumbent's industry. Companies should look much further than just inside its own industry to notice possible threats and constrains in other industries. If the buyers' switching costs for the substitute are low the threat increases and the higher the threat, the less attractive the industry is likely to be. (Johnson 2017).

The fourth force is buyer power that refers to direct customers of the company and not necessarily the ultimate consumers. Powerful buyers can set the price, if they demand lower prices, as well as demand improvements or more valuable products. Buyer power is likely to be high when some of these four conditions prevail: concentrated buyers, low switching costs, buyer competition threat, and low buyer profits and impact on quality. Concentrated buyers mean that there are only few companies that dominate the market.

Buyer power is increased in some industries because there are only few large customer accounts for the majority of sales. Buyer power is increased if a product or service accounts for a high percentage of total purchases of the buyer. This is because buyers are



looking for the best price they can get and therefore 'squeeze' suppliers more than they would for more trivial purchases. Low switching costs mean that buyers can easily switch from one supplier to other suppliers' products because they can squeeze suppliers who are desperate for their business with their strong negotiating position. Typically, low switching costs are for products that are standardized and undifferentiated or when buyers are well informed about prices and product performance.

Buyer competition threat means that the buyer is powerful in negotiation with its suppliers when the buyer has the capability itself or a possibility to acquire the capability so it can do suppliers jobs and therefore has no more need for the supplier. This is called backward vertical integration, moving back to sources of supply, and might occur if satisfactory prices or quality from suppliers cannot be obtained. Low buyer profits and impact on quality has two factors that makes buyers price sensitive and thereby increase their threat. The first factor is associated with a situation where the buyer group is unprofitable and pressured to reduce purchasing costs. The second one is with a situation where the quality of the buyers' product or services is little affected by the purchased product. The buyers must be distinguished from ultimate consumers even though sometimes buyers' retailers are not ordinary consumers and have much more negotiating power than an ordinary consumer. Strategic customers are buyers who have power towards whom the strategy should be primarily orientated, this is useful to distinguish. In the public sector, the strategic customer is typically the provider of funds, rather than the consumer or services. (Johnson 2017).

The fifth force is supplier power and it is a mirror image of buyer power. The factors increasing supplier power are the converse to those for buyer power. Supplier power tends to be high where there are concentrated suppliers, high switching costs, supplier competition threat or differentiated products. Concentrated suppliers are suppliers that have more power over buyers when there are only a few producers who dominates the supply. In some industries there are only three strong companies in charge leaving other relatively fragmented companies in a weak negotiating position. (Johnson G2017)

High switching costs can be seen in situations when the buyer is relatively dependent on one supplier and correspondingly weak because switching from one supplier to another

is expensive or disruptive. Supplier competition threat means that suppliers have increased power where they are able to enter the industry themselves or cut out buyers who are acting as intermediaries. Forward vertical integration means moving up closer to the ultimate customer when in some industries it is possible to negotiate tough contracts with other companies. (Johnson 2017)

Differentiated products make suppliers powerful as well as give more negotiating power to strong brands. The suppliers will be even more powerful when there are no substitutes at all or there are just a few. Most organizations have many suppliers, so it is necessary to concentrate the analysis on the most important ones or types. When suppliers are powerful, they can capture all their buyers' own potential profits by raising their prices. (Johnson 2017).

### 2.3 Resource and capability analysis

Resource and capability analysis is based on a company's strategy when it comes to internal environment. These two factors are a part of shifts from the interface between strategy and the external environment towards the interface between strategy and the internal environment. It is more possible that internal resources and capability will provide a secure foundation for long-term strategy when there is a great rate of change in the company's external environment. When the major concern for strategy was to choose which industry to focus and about positioning, companies adopted similar strategies disregarding the company's resources and capability. It was not a well thought process because the companies tended to adopt similar strategies instead of exploiting differences and focusing on the company's unique strengths. (Grant 2010: 122-125)

Resources can be tangible as financial or physical, intangible as technology, reputation and culture as well as human as skills, capacity for communication and collaboration and motivation. Tangible resources are financial resources and physical assets that are valued in the company's financial statement. These resources are stated as numbers when intangible and human resources are much harder to show as numbers. Intangible resources might be more valuable than tangible resources, depending on the company, but it stays invisible than tangible resources. Human resources comprise the expertise and effort offered by the employees. The reason why human resources are important for

the firm is its stability, when in practice most employment contracts are long term. (Grant 2010.)

Resources are not productive on their own. Therefore, organizational capability is important. Using resources, the most productive way can drive the company to better results, and it can mean global distribution in the future. Core competences are those that make a disproportionate contribution to ultimate customer value, or to the efficiency with which that value is delivered and also provide a basis for entering new markets. (Grant 2010.)

### 2.3.1 Evaluation of resources and capabilities

After identified resources, capabilities and how they can provide a long-term focus on the company's strategy and how they can be identified it is possible to evaluate resources and capabilities. Since the emphasis is on a profit-making strategy, the next step in the analysis is to assess the potential of resources and capabilities to earn a profit for the company.

The profits of the company from resources and capabilities are based on three factors that are the ability of the undertaking to create a competitive advantage, maintain this competitive advantage and apply returns to the competitive advantage. All of these depend on many properties of resources. In order to create a competitive advantage with resources or capabilities there is two conditions, which are scarcity and relevance. The most important focus on scarcity is the availability of resources and capabilities on the market. If a resource or capability is widely available in industry, it may be necessary to manage it in order to compete, but it is not a sufficient basis for a competitive advantage. In relevance, the most important observation is that a resource or capability must be essential to key market factors. The profits earned from resources and capabilities does not only depend on the ability to gain a competitive advantage, but also on how long this advantage can be maintained. This depends on the sustainability of resources and capabilities and on the ability of competitors to replicate the competitive advantages they offer. (Grant 2010.)

Resources and capabilities are limited if they are transferable or reproductive. Some resources are more sustainable than others and are therefore a more secure basis for competitive advantage. The increasing pace of technological change shortens the life span of most resources, including capital equipment and patent release, unlike brands that can show considerable sustainability over time. (Grant 2010.)

Factors that make it difficult to raise the resources of companies include natural resources, large capital equipment and the geographical immobility of certain types of workers, which would potentially require the company to change its location in order to achieve these resources and capabilities. A company must build the resources and capabilities itself if it is unable to buy them. Capabilities that are based on complex organizational routines are more difficult to reproduce. Incumbents will benefit from the fact that long-accumulated resources and capabilities can only be replicated at disproportionate costs by future imitating operators. (Grant 2010.)

Three steps will enable the analysis of resources and capabilities to be carried out by understanding the main concepts and frameworks, allowing the company to evaluate its resources and capabilities and then use the assessment to guide the design of the strategy. The first step is to identify the most important resources and capabilities in order to make a list of the company's resources and capabilities, it is possible to start from outside or from the inside. Starting from the outside will focus on key factors, namely what factors determine why some companies in the sector are more successful than others, and what resources and capabilities these success factors are based on. Starting from the inside, the focus will be on value chains. The second step is the assessment of resources and capabilities, which must be assessed on the basis of two key criteria. The first thing to do is to take into account the priorities of resources and capabilities in order to achieve a sustainable competitive advantage. Secondly, the location of strengths and weaknesses compared to competitors must be taken into account.

It is difficult to objectively assess the comparative strengths and weaknesses of a company's resources and capabilities in relation to competitors. When assessing their own expertise, organizations often fall victim to the tributes, hopes of the future and their own wishful thinking. The tendency among companies and their senior management to be able to set traps that can later drive the company down. The evaluation of resources and

capabilities is not only about data, it also means insights and understanding. Every organization has some kind of activity where it succeeds or has the potential to succeed, but it is important for the company to recognize it and base its strategy on its own strengths.

The problem for low-performing companies is usually the inability to identify and effectively implement their own opportunities, rather than the ability to distinguish between successful activities. As a third step, it is possible to develop strategic impacts by first identifying the company's skills, weaknesses, possible strengths and things that are insignificant. Key strengths and weaknesses are an important part, with the focus of the identification on more efficient use of strengths and the reduction or correction of weaknesses. Inconsistent strengths also play an important role, as it is possible to find ways in which they can be used effectively. After identifying resources and capabilities that are important to the company, it is important to formulate a strategy to ensure efficient use of resources.

Managing key weaknesses is to take into account the resources and capabilities of companies to update or repair existing resources. Converting weaknesses to strengths is a long-term task for most companies. In the short and medium term, the company is likely to be stuck in the resources and capabilities it has inherited from the previous period. Companies may have specific strengths that do not appear to be important sources of sustainable competition. One of the reasons for this may be to reduction investment from these resources and capabilities. However, in the same way that companies can turn obvious weaknesses into the strengths of competition, it is possible to develop innovative strategies that transform apparently irrelevant strengths into strategic separators. Resources can be analyzed using SWOT analysis, making it simple to identify the strengths, weaknesses, opportunities and threats of resources and organization. (Grant 2010.)

## 2.4 Conceptual framework

The conceptual framework is shown in Table 2, where all theories are seen as well as how this thesis will use them.

Table 2. Conceptual framework

## PESTLE analysis

(PESTLE=political, economic, social, technological, legal and environmental)

- Recognized the main impacts in a big scale
- Forming conclusions in a big scale and proposals for further actions
- Johnson G. 2017

## Porter's five forces

(Forces: 1. The threat of new entrants 2. Threat of substitutes 3. Bargaining power of customers 4. Bargaining power of suppliers 5. Competitive rivalry)

- Recognized the main impacts focusing the customer view and competitors
- Forming conclusions and proposals for further actions focusing on competitors and customers
- Johnson G. 2017
- Ghemawat P. 2006

## Resource and capability analysis

- Recognized the main impacts for resources and capabilities
- Forming conclusions and proposals for further actions focusing on Helen's resources and capabilities
- Grant R. 2010

## SWOT analysis

- Is a part of resource and capability analysis
- Recognized the strengths, weaknesses, threats and opportunities for Helen
- Forming conclusions and proposals for further actions focusing on SWOT analysis
- Grant R. 2010

As seen in Table 2, the Conceptual Framework contains four parts. The PESTLE analysis identifies the main effects in the big picture and allows a big picture of conclusions and proposals for further actions. Porter's five forces can be used to identify the customer perspective and the relationships between competitors and to form related conclusions, as well as proposals for further actions, focusing on customers and competitors. Resource and capabilities analysis can be used to identify changes caused by resources and capabilities that can be used to draw conclusions and proposals for further actions, focusing on Helen's own resources and capabilities. With a SWOT analysis it is possible to identify Helen's strengths, weaknesses, threats and opportunities and draw conclusions and proposals for further actions based on them.

The next chapter is to analyze the theories in Helen's point of view. It is based on interviews that follows the same structure with the theory. It was introduced to Helen's employees and the questions considered only Helen's actions in the gas markets.

### 3 Analysis of market change

This chapter examines the three theories of the previous chapter through interviews. Ari Joona, Production Planning Manager, and Lauri Pirvola, a leading expert on the gas market from Helen were interviewed. The purpose of the interviews was to identify the effects of the market change from the perspective of the different theories in order to create proposals for further actions. The aim is first to focus on PESTLE analysis, followed by an analysis of Porter's five forces and, lastly, an analysis of resources and capabilities. In the interviews the theory structure was same as in this thesis. First thing was to cover PESTLE effects in Helen's point of view and after that move to Porter's five forces also keeping in mind Helen's point of view. Resource and capability analysis as well as SWOT analysis that is considered a part of resource and capability analysis, was closer look into Helen's operations and activities. The market change was a new thing but considering the interviews Helen already has a vision how it works and what are the opportunities in it.

#### 3.1 PESTLE analysis

From the point of view of PESTLE analysis, the political, economic, social, technological, economic and legal impacts of market change were identified. Each aspect is discussed separately and at the end Helen's situation is summarized in the perspective of PESTLE analysis.

##### 3.1.1 Political perspective

From a political point of view, the state has been the owner of the natural gas transmission monopoly and the sales monopoly before the market change. The state does not directly participate in the post-market that it has created, but it continues to be the owner of the natural gas transmission monopoly. There are commercial operators on the sales side that are not state-owned, with a reduction in the overall state participation in the change in the gas market. Some energy operators are companies owned by other countries and some private operators, but the Finnish state's participation has decreased in terms of the direct market. However, the state is involved in a significant part of TSO,

which is a state instance and through the role of the state-owned Energy authority. The role of the Energy authority has increased through market change in the supervision of the new transfer company and the adaptation of its rules. It may therefore be envisaged that, as regards the interest in control, the state's participation has changes, possibility as a result of other market participants.

The market change has taken place the basis of political decisions and the state is of great importance as a user of various instruments, such as the taxation of fossil fuels and the ban on coal by 2029. The political exposure of the market has been high in the past and since market change it has not changed, but political interest has fallen since the change in the market.

### 3.1.2 Economic perspective

The economic growth perspective is most linked to the gas market, with electricity generation, electricity prices and economic activity. Weather conditions have significant impact on the market, for example, the long-term low pressure of winter drops the value of commodities and is reflected in Helen's operations and therefore in the price and demand of gas. Taxation also has its own indirect significance for Helen's operations, which does not directly affect the change in the gas market but are linked to gas.

### 3.1.3 Social perspective

In a social situation, Helen has many contacts with different actors, for example competitors and government bodies. The role of the part has changed as a result of market change, but there have been not many significant changes. Energy operators are one clear group in which Gasum Oy is one of the players. Gasgrid Finland Oy is another clear influencer in Helen's operations as a social operator, as it acts as system manager for the gas transmission system in Finland. Security of supply is an important factor in Helen's social network, as it guarantees energy supply especially in the Helsinki metropolitan area. The responsibility has not increased in the social position, but has guided the choices, as the market has not been associated with the assumption that everyone is acting on a supposed level, but Helen has wanted to ensure the availability of fuel. The conclusion of cheaper contracts is not relevant if gas is not available. Helen no



longer has direct customers, as direct gas accounts ended when the distribution business was sold out. Customers who use indirect gas-produced goods are electricity and heat customers. The gas exchange is also one of the parties between gas suppliers, as it enables anonymous market dialogue between suppliers. The gas exchange is at the heart of the gas market, although its role as a social factor is less significant.

#### 3.1.4 Technological perspective

Technologically, no significant leaps have been made, as gas is the same gas used in the past, although the gas comes in a slightly different way as a result of market change than before. Technological development is not directly related to opening up of the gas market to Helen, but it can open up the possibility of building, for example, a balance sheet service concept that could take advantage of the technologies of the new market.

#### 3.1.5 Ecological perspective

With regard to the ecological aspect, the whole idea has been that the competitiveness of gas can be taken care of and improved by Helen's own actions, which the market may be able to use. The reform of the gas market has created opportunities in which gas plays an important role, but it is likely to play a decreasing role in Helen's overall production palette. While coal can still be used and the Salmisaari power plant is involved in production, gas could replace part of the coal use even before 2029, when the use of coal as fuel should be discontinued. This plays a major role in reducing environmental impacts and reducing emissions, as Helen has the opportunity and the will to use gas instead of coal and oil. Of course, this requires the new market structure to work and gas to be competitive, which unfortunately is not true. However, there are mechanisms for being competitive at price level. We can already see a drop in the price level of gas, but the price has fallen for all other fuels as well, the way in which it is not yet realized. The aim is to use gas, as it is a transitional fuel, although the previous price level was leading to a gas fall as a fuel, so the market change has allowed it to remain with it for at least a little longer. Product management is more difficult to see, as there are no actual gas products, nor are there products that are not based solely on gas. Heat renewable district heat such as heat pumps, is used. Gas plays a major role in Helen's sustainable development goals as well as biogas, if its availability is relevant to Helen. During the 2020s,

gas allows the transition away from coal and shrinks the gap it left in Helen's production palette.

### 3.1.6 Legal perspective

The legal basis for the change in the gas market is the underlying legislation which opened up the applicable market rules created by TSO. From the point of view the gas user, competition law is not directly restrictive for Helen, but for dominant sellers. From the point of view of the buyer, also known as the gas user, it is not necessarily restrictive towards customers, since the gas is only indirectly involved. There are normal competition law cases for pricing issues in the market, such as district heating pricing issues, but gas is only one part of this pricing structure. In the case of contracts, framework agreements have also changed as the market change changed the field from the Finnish internal market to the international market, in which case international agreements and international acquisition were also included. Previously, a single supplier model was used, and Helen was a customer. As the market changed, Helen will continue to be supplier's customer, even though the old-fashioned tariff structure has been removed from the market change. Before the market change, gas batches were purchased using gas tariffs, but after the change, each gas batch will be purchased under its own contracts. The market change has therefore shifted from the general gas pricing structure to the supplier-specific pricing structure.

### 3.1.7 Summary of PESTLE analysis

Helen is influenced by PESTLE analysis factors for each aspect, in which case Helen's activities involve political, economic, social, technological, ecological and legal factors in different relationships. The political, social and ecological aspects are the broadest for Helen, leaving the technological and economic perspective on the change in the natural gas market smaller, as technological developments have not been much progress in market change and taxation is not directly related to market change, but to the energy sector in general.

- Political aspect is broad due to taxation and carbon decision

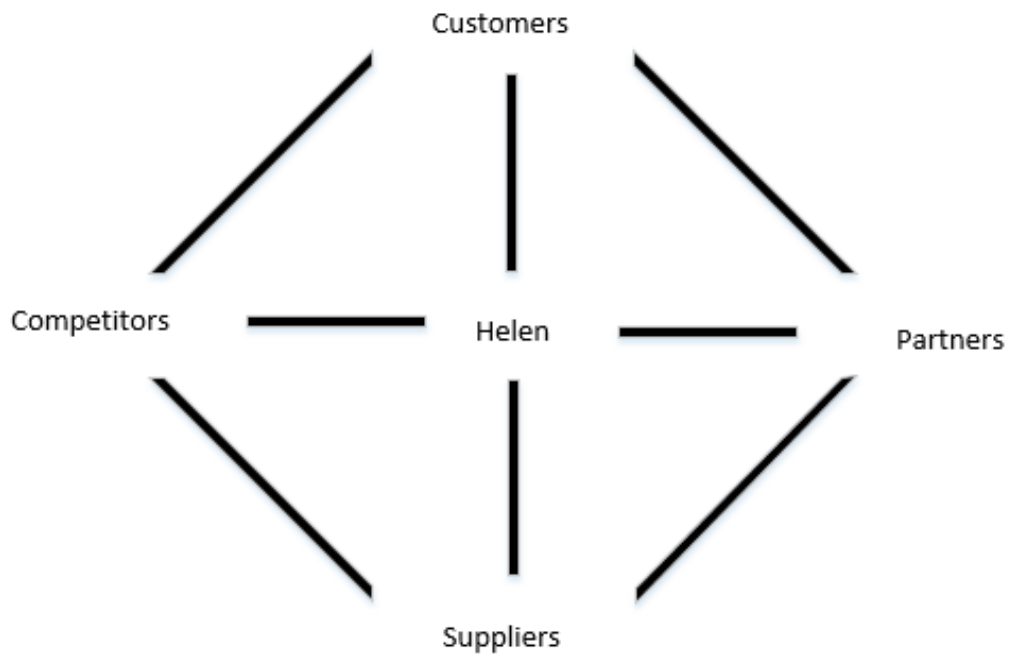
- Economic aspect is linked to the gas market, with electricity generation, electricity prices and economic activity
- Social aspect is broad due to Helen's wide social network in the market with competitors, suppliers, customers and gas exchange
- Technological aspect is quite small because there has not really been any technological development
- Ecological aspect is important because gas allows the transition away from coal
- Legal aspect is the base for the whole market change and so it provided the market change

Helen is politically influenced by the state that is the originator of the change and the Energy Authority in the supervision of the transfer company and in the adoption of the rules. Taxation and the carbon ban by 2029 have taken place through political decisions, although taxation is also part of the economic aspect. On the other hand, the perspective of economic growth is mostly linked to the gas market, with electricity generation, electricity prices and economic activity. Socially, Helen has many contacts with different actors through competitors, suppliers, customers and the gas exchange operator. Technological development would enable the construction of a balance sheet service concept in the future if Helen feels it is necessary for itself and it fits Helen's strategy. The ecological aspect is important for Helen, as gas allows the transition away from coal, shrinking the gap it has left in Helen's production palette. The legal aspect brings the legality of the law and the legality of contracts to changes in the market, and the conclusion of agreements is also based on legislation.

### 3.2 Porter's five force analysis

In Porter's five force model it is needed to identify competitors, customers, suppliers, partners and Helen's own role. Figure 2 shows Helen's relationships with customers,

partners, suppliers and competitors while Helen is anchored in the middle.

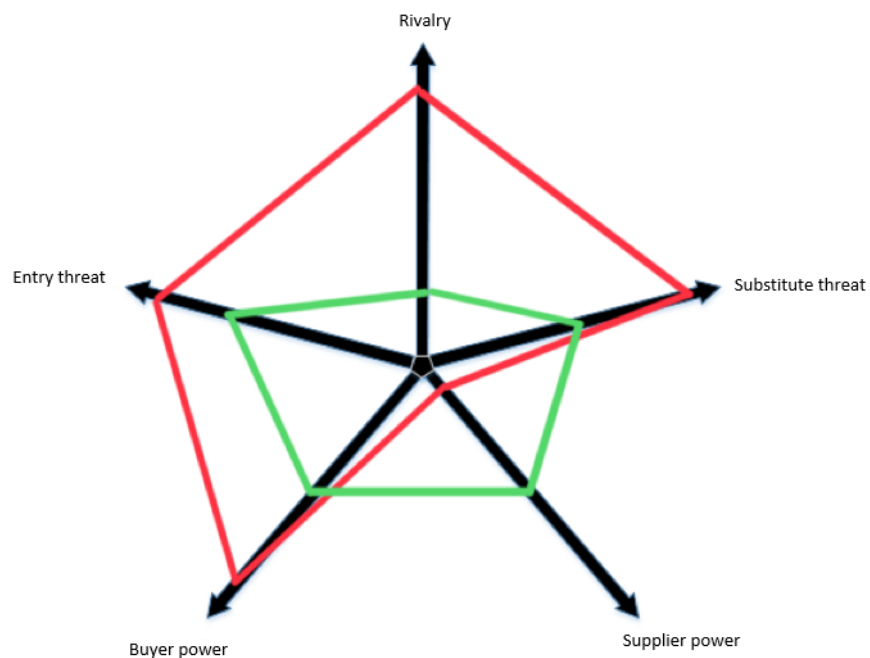


**Figure 2 Porter's five forces-Relationships**

In competition between companies, the biggest change has taken place with regard to Gasum Oy, which has previously been a monopoly operator, but has changed its role as an energy supplier and as a strong competitor, although today it is on a different side than in the past. Gasum Oy's role changed shortly before the gas market change, as Gasum Oy was already involved in the electricity market even before the market change, although now its involvement is much stronger as Gasum Oy's role changed from gas supplier to energy house. Gasum Oy has the opportunity to provide Helen with services other than to only act as a gas energy supplier. Helen does not actually have a partner company that would add value to Helen's product portfolio, but they are highly involved in the construction of the product side. However, the structure of cooperation and the visibility of legislation are not clear, so that this area is not sufficiently identified in terms of visibility. Gas contributes to final products, which are practically the same as before. The amendment to the gas market act is unlikely to be reflected in the terms of sale of

electricity and heat but has taken place in Helen's sourcing portfolio and is not directly linked to customer contracts. Other operators are competitors or gas end users both before and after the market change.

Porter's five-force model aims to identify the effects of competitors, buyers and suppliers negotiating forces, the threat of new products and the threat of new entrants. Figure 3 shows Helen's former situation on the gas market on the red line and the green line of the post-market change situation.



**Figure 3 Porter's five forces-Change**

The closer the line is to the intersection of the arrows, the stronger the force, and the further away the line is from the intersection, the weaker it is.

### 3.2.1 Competition between companies

Competition between companies has been very small in the past and has increased significantly as a result of the opening up of the gas market. In the past, due to the tariff structure of the gas market, there was only a moderate competition on the gas exchange

but since the change competition has increased. In terms of market view, increased competition between companies is a positive thing from the market perspective. From the point of view of gas end-users, competition between companies preceded the market change, so naturally it will also be after change. All market participants have had to rebuild their gas supply process, but the change has not affected the relationship between gas-fired companies operating on the gas market.

### 3.2.2 Threats of new entrants

The threat of new entrants may be more likely if competition were to increase even more from the current situation as the number of operators increase. The threat of new entrants from a competitive point of view can also enable Helen's roles as a gas user as the market changes. It is possible to think that there are more competitors when the field of competition has become international as market integration grows on the gas side and new entrants may not be located in Finland but can rise to compete from the Baltics.

### 3.2.3 Bargaining power of buyers

The buyers' bargaining power is always attached to the market, as well as the suppliers' bargaining power, which are the opposite force of each other. Compared to the old tariff structure, the buyer has more power after the market change, but it is always balancing between supply and demand, namely in times when scarcity is sold, bargaining power is on the gas supplier's side. However, when considering Gasum Oy and the previous tariff structure, purchasing power has potentially shifted more from the suppliers' side to buyers. The bargaining power of buyers in the monopoly situation was quite poor, but in an open market the buyer has confidence in the increase in its own bargaining power.

### 3.2.4 Bargaining power of suppliers

The supplier's bargaining power, on the other hand, has found a balance with the buyer's bargaining power, since in an earlier monopoly position the supplier, as a powerful party, has been able to dictate the terms of the transaction. Attempts are being made to find a compromise between both sides on critical issues in a changed market. When the buyer has all its own terms and conditions, its impact will be reflected in the price of the market,

in which case the terms and negotiations aim to find the best situation for both parties as a result of the terms and the pricing they allow. In other words, the change in the market has allowed the buyer to dictate more of his own terms than the previous situation, in which case the buyer can change suppliers if it is unable to meet the buyer's terms, since the transaction arises only when the terms are agreed.

### 3.2.5 The threat of substitute products

The threat of substitute products has so far been seen as low, as the only replacement product at the moment is LNG and it also keeps the price on the market under control. The introduction of LNG into the system has not been previously possible, which brings the possibility to the market instead of the threat. The threat of substitute products is CHP production, as the role of gas changes and has increasingly gone to a more regulated and peak part of basic power production. The first replacement product is wind power, which is already visible today, but the Nordic system has more wind power, when the entire electricity generation capacity in Finland is combined.

The role of gas will change for substitute products, but the change in the market has slowed down with the market change. On the other hand, the entire energy market is undergoing a major transformation, for example, in the past winter, which has been quite exceptional for the electricity market, because it has changed as wind and hydropower supply has increased and gas is trying to adapt to the situation through a new market. In energy production, fuels are chain-linked, which means that the change in the gas market can also influence the production of electricity in longer chain. On the electricity side, which is one of the main gas products, has never been before seen in such a market situation in the event of a total collapse in wind and good water conditions at the price level of the electricity market, which does not support the production of gas-produced electricity.

There are many forces of change at the same time, so it is difficult to distinguish the impact of the gas market change and the impact of increase in wind power production, fluctuations in demand or warm winter from a whole that is unprecedented and which the new gas market is facing in the challenge adapting. It has not yet been possible to see the situation that was expected to normally appear on the gas market in the winter that

there is at least some scarcity in gas, namely the market has not yet been properly tested when demand is low due to warm conditions and cheap electricity. When thinking about the threat widely, considering Helen's operations as a whole, heat delivery and local solutions are constantly increasing the threat throughout the system.

### 3.2.6 Summary of Porter's five force analysis

Porter's five forces is concentrated on the market itself as well as the parties in it. The scale is not as wide as in the PESTLE analysis and it is possible to focus more on Helen and its business. This theory offered a wide view of the relationships between Helen and its competitors, suppliers, customers and partners. In terms of Porter's five forces, Helen has a relatively good position on the market.

- The threat of new entrants is not seen as a threat but an opportunity
- Balance between buyers and suppliers negotiating power
- Competition between companies is considered to be an opportunity for the market rather than a threat
- Substitute products are LNG and CHP production

The threat of new entrants is not considered a threat but is seen as a similar opportunity to increase competition once the market has opened up. When there are more suppliers and buyers there might be more differentiation in the prices as well. This is because the market change has found a balance between the buyer and the suppliers' negotiating forces. The old tariff structure kept the negotiating power on the supplier's side but after the change the buyers have a stronger feeling that now they also have that power. Competition between companies is seen as an opportunity to increase genuine competition on the market.

The old structure did not give a chance to open competition, but the new market supports it, which means an opportunity to Helen and to the market itself. The threat of substitute products is not seen as a major threat since there is the only replacement that is LNG.



It also keeps the price on the market under control. The threat of substitute products also includes CHP production, as the role of gas changes and has increasingly gone to a more regulated and peak part of basic power production. Any of the current substitutes are not a threat for the gas market.

### 3.3 Resource and capability analysis

Helen's resources and capabilities can be analyzed from the point of view of market change and through SWOT analysis. This analysis provides the most accurate description of the three theories of Helen's own functions and activities. The SWOT analysis provides a clear picture of Helen's current situation in terms of resources and organization.

#### 3.3.1 Helen's resources and capabilities

Helen has limited but moderately efficient resources in place, the remnant of which has expanded through the transformation of the gas market. Resourcing has been done at Helen long before the opening of the gas market and there has been a large group involved in working to make the change mandatory arrangements such as IT arrangements and contracts. There have been enough resources to get the change through, but Helen's new type of work would need a new type of organization around gas procurement. Helen is currently doing and resources this and will continue to influence the resources needed to supply gas. However, competitiveness is seen as a momentary improvement due to market change. Helen, like other operators, has played a relatively natural role in the market.

Helen must take into account the opportunities to participate in a competition in situations where resources do not work as expected or when increased competition offers new different opportunities. In theory, Helen has the option of switching back to an old-fashioned tariff model and continuing under the balance sheet of a supplier but simplifying operations does not necessarily guarantee the availability of gas. When the gas market prices itself out, it means moving to other fuels and other energy production methods for Helen, which is not a quick way to go. But with a wood chips project, for example, Helen

will be able to use a new fuel. The low availability of gas, on the other hand, may shift Helen's different supply structure, and the change in the competitive situation is likely to be reflected in the price of electricity and heat. Some of the costs can be transferred and acquired from elsewhere, which is Helen's everyday activities. Helen constantly controls procurement of what and when to do where and with fuel, for example, production will not stop altogether, but so far natural gas is a significant fuel for production.

### 3.4 SWOT analysis

SWOT analysis can be used to identify Helen's strengths, weaknesses, threats and opportunities, so that in the future it is possible to focus on the weaknesses and threats identified, turning them into strengths or opportunities. SWOT analysis can be presented as a matrix, as shown in Figure 4

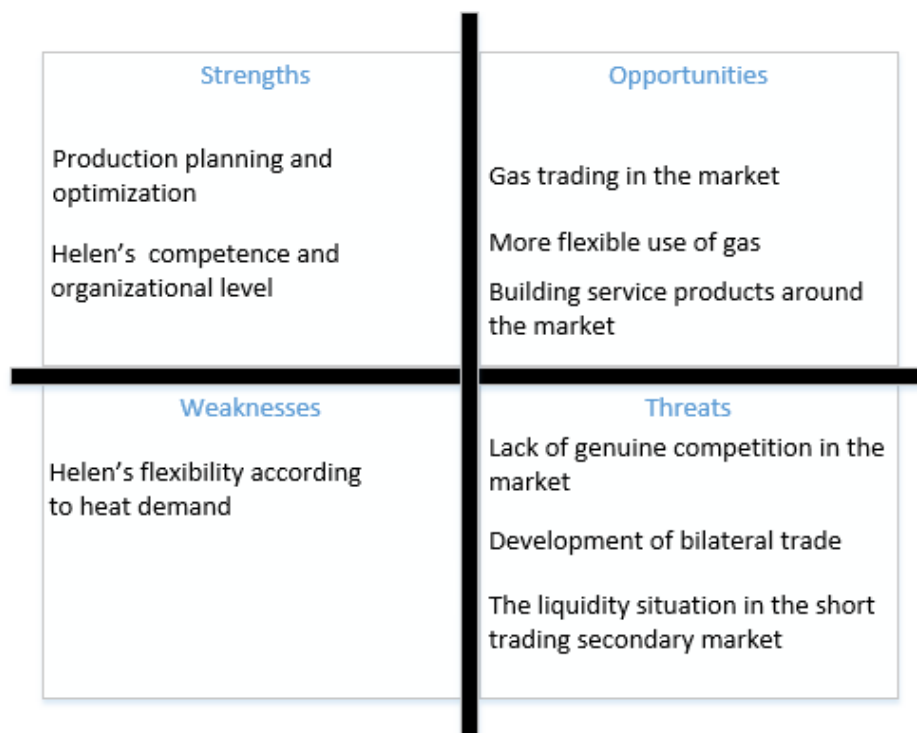


Figure 4 SWOT analysis

Helen sees its own strengths in terms of gas market change as being on the side of production planning and optimization of production, which aims to find the best possible alternatives for Helen. Another strength is Helen's expertise and the good level of the organization compared to its competitors, as well as Helen's investment in operating in the Finnish gas market. Helen is likely to invest the most in this compared to other operators, so there are good conditions for operating in the market in this context. The weakness is Helen's flexibility, which goes largely according to the need of heat. There are monthly products and quarterly products on the market, but uncertainty about access to gas on the market, the need for gas use and preparedness are still weaknesses in the management uncertainty. These are partly from the system and partly from basic forecasting.

If the price of electricity falls and the need for heat falls, there should be a place to use the gas, which Helen does not yet have. On the other hand, there is a risk that more gas market will be put to work, so that it can be exploited commercially, if the market becomes real. The threat is more linked to political, systematic and genuine lack of competition, especially on the supplier's side. In addition, the threat can also be divided into two parts, namely the development of bilateral trade and the lack of liquidity in short-market secondary markets. The development of bilateral trade refers to the future development of trade with gas suppliers. There is a risk that the Baltic Connector Oy will not meet the technical expectations set for it and currently operate at a very limited capacity, which places large restrictions on bilateral activity with gas suppliers. Secondly, the threat of short trade on the secondary market due to a lack of liquidity poses a threat, as there is not always an alternative or is one sided, which is a legacy of the old market. The after-market does not support the gas market as it was expected before the market change. The increase in choice in procurement has made planning more challenging when there are many more variables.

In the current market, all operators have the three variables that are price, quantity and availability, whereas in the past the only variable was only quantity. Helen's potential, on the other hand, is the trading of gas in the market and as one possibility that the market will enable more flexible gas use, which has already been reflected in Helen's gas supply and gas use. Another possibility is that now it is possible to build service products around the market, so it is not just the purchase and use of gas, but also the sale of know-how

outwards. They may be of different scales, but it fits in Helen's strategy, which Helen can productise and export to the market cost-effectively, namely when Helen already does what it can sell outside the house.

#### 3.4.1 Helen's resources and capabilities activities

Helen's primary activities for the gas market are key factors in gas sourcing, capacity acquisition, service generation and derivatives markets. Gas procurement is about the acquisition of gas energy and the production of forecasts against production planning and energy procurement. Capacity acquisition takes place through TSO, where transmission capacity for energy forecasting is the most important factor in terms of cost. The market change has had an impact on the supply of services outwards and on the protection of gas prices as a result of market changes, as gas pricing structures have diversified while the principles remain quite similar as in the past.

#### 3.5 Summary of resource and capability analysis

Capability and resource analysis offer a smaller scale view compared to PESTLE analysis or Porter's five force analysis. With SWOT analysis it is possible to have an even more limited view to Helen's operations.

- Resources are limited but efficient
- Helen has recognized its strengths and opportunities
- Helen is still learning about its weaknesses so it can turn them into strengths and opportunities
- Threats are linked to the market itself and the lack of genuine competition, the development of bilateral trade and the liquidity situation of the secondary market

Helen's resources are limited, but moderately efficient, as the market change has been brought through and operations have continued smoothly in the new market. Helen recognizes its own strengths in adapting its own operations to external changes and in the planning and optimization production. The amount of resources has not been affected, although resourcing is still pending in terms of gas procurement. The market role is gracefully distributed to Helen and Helen has no desire to return to the old-fashioned market model. As an opportunity, Helen sees gas trading, flexible gas use and the construction of service products around the market. However, the weakness, i.e. the flexibility according to the need for heat, is still on the learning curve for Helen. The threats include a lack of genuine competition, the development of bilateral trade and the liquidity situation of the secondary market, which can affect how long the gas will be included in Helen's total product palette. Overall, however, the situation is good for Helen and the new market offers much more opportunities for Helen than the previous market situation.

## 4 Proposals for further actions

This chapter presents proposals for further actions based on the theory used in the work and the interviews carried out based on it. The entities to be viewed are PESTLE analysis, Porter's five force analysis as well as resource and capability analysis. These following proposals for further actions are following the same theory structure as before in this thesis. These proposals are based on the interviews and strive to present realistic proposals rather than proposing something that is against Helen's strategy or what would give a negative outcome compared to the situation now. These proposals do not cover all parts of the theory because it is not functional considering the idea of this thesis, but it covers and considers the major aspects from the interviews.

### 4.1 Proposals for further actions at the level of PESTLE analysis

When looking at the PESTLE analysis as a whole, Helen has a clear picture of the market change and its own position as a whole. Helen should monitor the political situation as well as other market players and take into account legal changes in order to anticipate organizational changes in time, as well as possible taxation and contract changes. In the case of industry, Helen should not start directly developing its own technology, but actively exploit and experiment with the technologies offered by others. Helen has adapted well to the change in derivatives trading, but Helen could demand more transparency from suppliers so that it does not find itself in a situation where temporary solutions should be quickly developed due to the supplier's precarious situation. Part of the conclusion can be made by using automation, which means reducing the amount of manually entered data and eliminating human errors in systems. From an ecological point of view, Helen has the potential to use different combinations of fuels, which means reducing coal pollution by finding new more ecological fuels. Helen should continue to pay attention to the future situation of gas, as well as to the situation of coal and its replacement. Constantly looking for new sustainable energy sources, Helen has the ability to use gas to replace coal production.

#### 4.2 Proposals for further actions at the level of Porter's five forces

The changes in the gas market resulting from Porter's five force model are able to identify and take into account the roles of each and any conflicts, once the roles of all those involved in the market have been identified. The existence of partners with added value for Helen's products could not be identified and it was not known whether they even existed. As a proposal for further actions, Helen could try to identify the roles of different partners, so that someone's absence does not leave a gap in Helen's activities. The forces of the Porter's five force model have all changed since the market change. Competition between companies and the threat of new entrants are seen more as an opportunity for Helen than a threat, as new entrants increase competition and a lack of competition would mean a collapse of the gas position and a fall from the fuel market. Helen is not trying to make it difficult for new entrants to enter the market by creating barriers or trying to make it more difficult in other ways to enter the market. When new entrants have no fear that they will not be able to enter the market, it can enable genuine competition through market access to new competitors. Buyers and suppliers' bargaining power has found the middle space at the extremes, allowing buyers and suppliers to set their own terms equally. The competitiveness of gas can suffer because of overly demanding conditions and it is not appropriate for Helen if gas is to be considered as a transitional alternative to coal.

#### 4.3 Proposals for further actions at the level of resource and capability analysis

In terms of resources and organizational capacity, Helen has had small but efficient resources in the reform of the gas market, which has brought about the change in the market on time, but the resources have been heavily burdened. Resources could be focused on managing flexibility and organizing in the future, so that the weaknesses identified by Helen could be turned into strengths or opportunities. Helen recognizes its own resource needs also in terms of organization, so that in the future, the reorganization of the gas market and learning new activities will be motivated. It also enables the learning of efficiency for other changes affecting the organization.

#### 4.4 Summary of proposals for further actions

The proposals listed below for further actions should fit in Helen's strategy and offer other options than to go back to the situation that was with the old tariff structure.

- Monitor and being aware of the situation in the markets and outside the markets
- Actively exploit and experiment technologies in the markets rather than start to develop it
- Identify all market parties and their roles
- Focus more resources on the gas market activities

The proposals for further actions in the level of PESTLE analysis in large scale is to monitor the situation in the markets as well as outside. Helen should keep monitoring the political situation and the market players so it can anticipate the changes in time. Helen should not start to develop its own technology but actively exploit and experiment on the technologies in the markets. Helen has an opportunity to ask for more transparency with its suppliers since the market change and also automate some of its activities. From an ecological point of view, Helen has the potential to use different combinations of fuels, but it should also continue to pay attention to the future situation of gas and to the situation of coal and its replacement.

The proposals for further actions in the level of Porter's five forces are to identify the parties and their roles in the market. Helen sees the new markets as an opportunity when the market allows competition and new entrants. The competitiveness of gas can suffer because of overly demanding conditions and it is not appropriate for Helen if gas is to be considered as a transitional alternative to coal. That is why Helen should actively follow the situation as whole. Regarding the proposals for further action in the level of resource and capability analysis Helen could focus more resources for maintaining good level in flexibility and organizational activities. Helen is aware of its resource needs and is motivated to keep the efficiency also after the market change.



#### 4.5 Feedback on proposed further action measures

Feedback was asked from the people interviewed but it was also collected from others working at Helen. Helen sees the proposals for further actions proposed above as realistic and as actions that are sought through making and learning. Helen would not see as an opportunity to return to the old market model by operating under the supplier's balance sheet or to change its activities due to weak competition in the early stages of the market change. Helen wants to remain an independent player in the market, so the above options would not have been suitable for further action. As a company and competitor, Helen has a good position in the new markets, so the proposals for further actions could not be contrary to Helen's strategy or those that would weaken Helen's current position. This thesis was necessary, and it was also well received in Helen. The market change affects the whole company, this means that everyone in Helen has some kind of role, big or small, in these markets.

The work and documentation before this thesis were necessary and this thesis gives Helen an overall picture of the markets and its effects on Helen, so it complements other documentations. This thesis also offers large scale and small-scale views on the effects, so it can help the employees to understand the market change itself and its effects on Helen as well as other market parties. The thesis reached the intent that Helen had in mind when assigning the topic and business challenge. Overall, the proposals for further action measures are seen as good guidelines for action.

## 5 Conclusions

This chapter presents a summary of the thesis, which assesses the relevance of the theory to the subject, the analysis of the theory, and the proposals for further actions and their likelihood. The aim of the thesis was to investigate the impact of the change in the gas market for Helen and its businesses, taking into account the functionality and flow of information of the systems, focusing on the customer perspective and drawing conclusions from the proposals for further actions to these relationships.

### 5.1 Summary of the thesis

For Helen, the change in the gas market has been an opportunity for the use of gas and the development of its own operations, as the alternative to the market change was not to be excluded from it. The PESTLE analysis identified the most important impacts of the gas market at the social level, where Helen's activities involve political, economic, social, technological, ecological and legal factors in different relations.

In the case of the broader view of Helen, the factors that have wider impact are the political, social and ecological aspects, while the technological, economic and legal aspects are smaller in terms of the effects of market change. Porter's five forces make it possible to identify the effects of the change from the company's point of view, with the factors affecting competition between companies, the threat of new competitors, the negotiating powers between the buyer and the supplier, and the threat of substitute products.

Competition between companies and the entry of new entrants to the market are seen as a positive thing, as it can increase genuine competition in the market. The bargaining power of buyers and suppliers has found a balance at the two extremes, allowing the market to dictate their own conditions. The threat of substitute products is not seen as significant, as there are no substitutes for gas. Resource and capability analysis can provide an even more accurate picture of the company's activities and, in this case, Helen's resources and organization.

The SWOT analysis, on the other hand, provided the identification of resources and capabilities in the current state of life, in which Helen's strengths, weaknesses, opportunities and threats could be identified. Based on the analyses, it was possible to make proposals for further actions to a different level of action, in which the PESTLE analysis provided a broader overall picture, Porter's five force analysis focused on the relationship between Helen and other players in the market, and lastly, resource and capability analysis made it possible to explore Helen's internal resource needs and capabilities in a more detailed way.

Helen is very aware of its activities and is strongly following the strategy in its operations, when it was not profitable to put major proposals that are different from the strategy or the transition the old market model, even if it was theoretically possible. Helen's operations could be developed in terms of identifying market roles, concentrating resources an organizing external change, which would give Helen even more strength and learning in its operations at many different levels.

## 5.2 Self-assessment of the credibility of the project

The thesis addresses a relevant business challenge and it reached Helen's intent considering the results. The findings were relevant as they delivered the wanted outcome. Considering the literature, it suited the topic and it also supported the thesis. The theory was wide, but it was difficult to find theories about market change itself. As a theory suitable for market change, the PESTLE analysis is appropriate, as it provides a broad picture of the situation before and after the change, taking into account the different topics of the market. In the analysis of the market change, the PESTLE analysis gave an overall picture of Helen's position in society and the factors affecting market change.

Porter's five forces is another market focused theory that focuses on competitors, new entrants, buyer-supplier negotiation forces and the threat of substitute products. The theory gave a clear view of the market change from Helen's point of view, also taking into account other market participants. The resource and capability analysis also identified Helen's resources and through the SWOT analysis, strengths, opportunities, weaknesses and threats, thus reaching an even more detailed perspective on the impact of

Helen's own situation and change in operations. The way around it was to consider the markets and then thinking what has changed. The developed solution is relevant to the case company because it was made based on the interviews of Helen's employees and it considered Helen's strategy as well. The outcome of the researched and development meets its objective following the suitable theory, so it also matches with the research design, objective and outcome.

The thesis follows the same structure throughout the thesis and every section is based on previous sections, so it is interlinked, and it also shows where everything is based on. The choices made throughout the thesis are based on the theory and it was chosen because it supports the objective. Documentation is transparent and it is possible to follow and repeat in a different case company by just following the theory. This thesis considers only two of Helen's employees, so it is a bit limited but these two have been closely involved in the gas market change since the beginning of it, so they have a lot of knowledge about the subject. The literature is also slightly limited, but it covers the theories well so considering the used theories they are well presented in the thesis.

All in all, this thesis introduces the gas market change as a whole and from Helen's point of view. This thesis has been seen as necessary for Helen, but it can also be practical for others. The thesis also offers the opportunity to continue from Helen's point of view or to compare it with other actors, but also to apply the same theory to other market changes.

## References

Ghemawat Pankaj E. (2006). *Strategy and the business landscape*. 2nd ed. Upper Saddle River, N.J.: Prentice Hall corp.

Grant Robert M. (2010). *Contemporary strategy analysis*. 7th ed. Chichester: Wiley corp.

Johnson G. (2017). *Exploring strategy: text and cases*. 11th ed. Harlow, United Kingdom: Pearson Education Limited

Helen (2020), *About us, Helen Oy*. <https://www.helen.fi/en/company/helen-ltd/about-us/about-helen>. Read on 15 April 2020,

Gasgrid Finland Oy (2020), *Preparations for open gas market, Gasgrid Finland Oy*, <https://kaasumarkkina.fi/in-english/>. Read on 15 April 2020,

Gasum (2020), *Finnish pipeline gas market is open, and Gasgrid Finland Oy has begun operations, Gasum Oy*. <https://www.gasum.com/en/About-gasum/for-the-media/News/2020/finnish-pipeline-gas-market-is-open-and-gasgrid-finland-oy-has-begun-operations>. Read on 15 April 2020,