

Graduation Thesis

“Sustainable Development in the European Union,,

– Analysis of the Dutch, British and Polish Markets



By
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Preface

The following report 'Sustainable Development in the European Union' has been written as a 4th year graduation thesis. The research is conducted for Rooftop Energy, an energy provider by means of solar systems. This thesis is a recommendation to the company in the field of marketing and sales with the objective to elaborate a long-term strategy that contributes to the current image, concept and company goals.

During the internship period of five months I have been treated as a valuable employee by the company. Hereby I would like to thank my supervisor from Rooftop Energy Hylke van Slooten for his guidance and support during the graduation period. Even at times when things went South, Hylke was there to guide me in the right direction.

The initial supervisor designated by the Hogeschool was Mrs. H. van Amstel-Kuiper. However, due to personal circumstances, Mr. J. Roem had to take over for the last couple of weeks. I would like to thank both of these teachers for their efforts and commitments towards my graduation thesis.

Finally, I would like to express my gratitude towards the personnel of Rooftop Energy and BESTLED Europe. I have enjoyed my time at the office during the internship period and the team has always guided me when I was in need of aid.

Michael Blankert

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Management Summary

Rooftop Energy [RTE] is a company that operates in the field of solar photovoltaic (PV), commonly known as solar panels. Until now, RTE has completed dozens of projects in the Dutch market. This market consists of two main target groups, the small-scale energy users [SMEs] and the large-scale energy users that are known as the industrial segment. For the reason that the Dutch government has decided to stimulate the growth of solar PV in the industrial segment with the help of subsidies [SDE], Rooftop Energy has been making use of a unique 'leasing' concept. With this concept, there is no initial investment for a solar project, instead of that the customer has to invest a large amount of money, and sign a contract for a duration of at least 10 years for a fixed energy price. For the project, RTE takes care of all administrative hazards, the installation and the maintenance.

The reason for this research is that the SDE-segment is still relatively unknown terrain to RTE and therefore needs to be further investigated. Furthermore, the company has become aware of the fact that other countries in Europe might also show potential for solar PV, therefore the market potential of the most interesting countries will be investigated in an international case. The main research question for the research has been stated as follows;

"What would be the most effective way for Rooftop Energy to expand in the SDE-segment in the Netherlands by using their unique value proposition and can this method also be applied to other European countries?"

To answer this question, the research has been divided in two sections; the market analysis for the Dutch market and an analysis to determine the market attractiveness of the international markets.

The Netherlands

Macro- and meso-analysis have shown that the Dutch market for solar PV looks promising. The lack of competition in the industrial segment, political stability and the investments it takes to enter the market all seem to favor the business of RTE. Technological and environmental developments show that RTE has the potential to add some new features to their business portfolio; Thermal PV is a combination of solar panels and tubes that are used to heat air or liquids. This recent development can substantially increase the amount of energy generation. Secondly, LED is a development that has been on the market for a longer time, and it can also be used by RTE to further reduce energy costs of customers. The final development of the market is that companies tend to be more transparent towards their customers. They do this by writing annual reports, commonly known as 'sustainable reporting'. The Dutch 'CO2-prestatieladder' is a framework that is used to measure Corporate Social Responsibility of companies and that accordingly assigns them with a label. The companies use these labels to show their customers and supervisors how sustainable their business is and are rewarded with more clientele and a competitive edge.

An in-depth analysis of the Dutch market has shown that potential customers can be found in the industrial clusters of the urban agglomeration. These industrial clusters seem to consist of many types of businesses. Each of these types has its own wishes and demands, therefore several strategies have been worked out to approach these businesses. Interviews have resulted in the conclusion that three types of businesses show the most potential for RTE; 'service providers', 'cooled storage depots' and 'non-cooled storage depots'. By combining the opinion of the managers and directors of these companies and the earlier mentioned technological developments, multiple strategies can be determined for RTE to further expand in the segment. These are described as options and they are stated as follows;

Option 1: Approaching 'service providers' by adding assistance with sustainable reporting to the current value proposition of RTE.

For the reason that service providers that are working for the local municipalities gain major benefits from using the 'CO2-prestatieladder', the feature of assisting with sustainable reporting should help RTE with obtaining a large market share in this segment.

Option 2: Approaching 'cooled storage depots' by adding Thermal PV and LED to the current marketing mix of RTE.

Regarding the fact that these companies have immense annual energy costs, solar panels alone are not efficient enough to be interesting to these businesses. Therefore, Thermal PV and LED should be added to RTEs marketing mix to convince these companies and to realize more projects in this segment.

Option 3: *Approaching 'non-cooled storage depots' by adding Thermal PV and LED to the current marketing mix of RTE.*

This last business sector requires almost the same strategy as the 'cooled storage depots', except for the fact that not all of these companies use enough energy to make Thermal PV possible. For this reason, the annual energy consumption of these companies should be looked at first, before offering them Thermal PV. Companies with a lower energy bill should only be offered the standard value proposition of solar panels combined with LED technology.

These options all correspond with the opportunities that have been concluded from the external analysis. Furthermore, **RTE should lower the contract duration for all customers**, based on the responses of the interviewed managers and directors. This is the reason why a new type of contract has been created. This concept is based on the contracts for mortgages and contains the possibility to sign for 3, 5 or 7 years. This last recommendation will reduce the feeling of being stuck to a contract for too long and should be implemented for all segments. To further expand in the SDE market, RTE should apply these changes to their current marketing mix and target the three mentioned companies with the adjusted value proposition. The database of RTE should be expanded by attending to several exhibitions and promoting their leasing-concept (USP) and their new concept.

Poland [NO GO]

The international case comparison shows that Poland is a country with a stable economy, with a climate suited for solar energy, but the lack of subsidies make introducing the RTE leasing concept impossible. For the reason that the four largest energy providers of Poland control the whole market and influence the decisions of the government, the market for solar PV has collapsed completely. RTE is advised to wait with entering this market until the subsidies are reintroduced. In the meanwhile the company can start with test projects to observe the energy yields of the country, so that in a couple of years they have the competitive edge.

United Kingdom [GO]

Compared to the Dutch market for solar PV, the United Kingdom is one step ahead. The British subsidies, commonly known as feed-in tariffs, have been introduced in 2008. International and local companies are using these tariffs to offer customers the same leasing concept as RTE. The British market shows potential for RTE, but entering this marketing requires a lot of initial investments and a solid business plan. The company is advised to add Thermal PV and LED to their marketing mix, for the reason that the competitors are already using these as well. With a shorter contract duration and assistance with sustainable reporting in their value proposition, RTE could penetrate the market and obtain market share in the industrial segment of the United Kingdom.

Table of Contents

1.	Introduction	1
1.1	Company Description.....	1
1.2	Reason for research	1
1.3	Problem Definition	2
1.4	Research Objectives	2
1.5	Sub questions.....	2
1.6	Methodology	2
1.7	Liability and reliability	2
2.	Internal Analysis	3
2.1.1	Mission	3
2.1.2	Vision	3
2.1.3	Current Strategy	3
2.1.4	Company objectives.....	3
2.1.5	Segmentation criteria	4
2.1.6	Financial situation.....	5
2.2	Marketing mix.....	6
2.2.1	Product and service.....	6
2.2.2	Price.....	7
2.2.3	Place	7
2.2.4	Promotion	8
2.3	7S-model McKinsey.....	8
2.4	Conclusion Internal Analysis.....	9
3.	External Analysis.....	10
3.1	Macro-analysis	10
3.1.1	Social-cultural criteria	10
3.1.2	Technological criteria	11
3.1.3	Environmental criteria.....	13
3.1.4	Political criteria.....	14
3.1.5	Conclusion macro-analysis.....	15

3.2 Meso-analysis.....	16
3.2.1 Forces of Porter	16
3.2.2 Conclusion MESO-analysis	20
4. SWOT-analysis.....	21
4.1 SWOT model.....	21
4.2 SWOT explanation	21
4.3 Confrontation matrix.....	23
5. In-Depth Interviews.....	24
5.1 Prospect location.....	24
5.1.2 Business Types	27
5.2.1 Interview Objective	29
5.2.2 Respondents.....	29
5.2.3 Interview responses	30
5.2.4 Decision Barriers.....	31
6. Conclusion and Recommendations.....	32
6.1 Conclusion.....	32
6.2 Recommendations	33
7. Implementation.....	34
7.1 Contract Duration	34
7.2 Service providers (Option 1).....	35
7.3 Cooled Storage depots (Option 2).....	35
7.4 Non-Cooled Storage Depots (Option 3).....	36
7.5 Communication.....	36
7.6 Feasibility.....	37
7.7 Goals and objectives.....	39
8. European Markets	39
8.1.1 Plan of Research.....	39
8.1.2 European country filter	39
8.2 Macro-analysis.....	41
8.2.1 Demographic Criteria	41
8.2.2 Economic Criteria.....	41
8.2.3 Social-Cultural Criteria.....	42

8.2.4 Technological Criteria.....	43
8.2.5 Environmental Criteria	43
8.2.6 Political Criteria	43
8.2.7 Conclusion macro-analysis.....	45
8.3 Meso-analysis.....	45
8.3.1 Forces of Porter	45
8.3.2 Market potential.....	47
8.3.3 Conclusion Meso-analysis.....	48
8.4 Conclusion and Recommendations	49
8.4.1 Conclusion	49
8.4.2 Recommendations	50
9. Thesis Reflection.....	51
Bibliography.....	52
Appendix I.....	56
Appendix II	59
Appendix III	62
Appendix IV.....	65
Appendix V	88
Appendix VI.....	110

1. Introduction

1.1 COMPANY DESCRIPTION

Rooftop Energy [RTE] is a company that operates in the field of sustainable energy sources, in the form of solar photovoltaic (PV), commonly known as solar panels. The main office of Rooftop Energy is located in Waddinxveen. RTE offers a proposition of installation, supplying and financing, mainly targeting primary and secondary schools, SMEs and sports facilities. However, the company is currently setting goals to expand, due to recent developments in the Dutch regulations concerning sustainable energy.

Company History

RTE was founded in 2012 and is collaborating with the contracting firm RECO. This company deals with the installation of the solar projects. The owner of RECO is also one of the main shareholders of Rooftop Energy, so the manual labor is outsourced, but not to unknown personnel.

RTE's sales, marketing and administration is completed at the main office by a small team of five employees, one of which is the general manager. Due to the limited size of the team the communication lines are short and consulting is convenient.

The current amount of completed projects lies around 75. The largest percentage of these projects were realized at primary schools. Further information about the target groups, company structure and the processes can be found in paragraphs 2.1.5 and 2.1.6.

1.2 REASON FOR RESEARCH

The amount of developments in the Dutch and European energy markets have resulted in lack of clarity for Rooftop Energy. The main goal of this research is defining the value proposition of RTE, investigating the size of the potential market and determining a fitting, long-term strategy for the next years. This research is divided in two sections; an in-depth market analysis for the Dutch market and an international case comparison. The international analysis describes the current situation of the Polish and British market for solar energy.

The cause of the demand for a new growth strategy is the 'Energy-agreement for Sustainable Growth'. European parties have come to the agreement that the share of renewable energy generation for the Netherlands should be raised to an amount of 14% of the total energy generation by 2020. Currently the amount of renewable energy sources for the Netherlands lies between four and five percent.¹

To stimulate the growth of sustainable energy in the Netherlands the Dutch Ministry of Finance has come up with a special subsidizing mechanism. This "Stimulerend Duurzame Energie" [SDE+] has a budget of 3.5 billion euros for 2015. For solar PV, this fund is put at the disposal of all large-scale consumers if they generate renewable electricity.² The minimal requirement is a connection to the energy grid of 3x 80 Ampère. The SDE+ subsidy is further elaborated in paragraph 4.1.5. Rooftop Energy has already completed several projects in this new segment, but a long-term growth strategy is needed to obtain more market share.

On an international level, the same opportunities and market segments seem to appear. RTE is also interested in the current state of the market of these countries. The company has stated that information about the market attractiveness of other European countries is much desired.

¹ (Energieakkoordser.nl, 2015)

² (Rijksdienst voor Ondernemend Nederland, 2015)

1.3 PROBLEM DEFINITION

The main research questions for the research can be stated as follows:

“What would be the most effective way for Rooftop Energy to expand in the SDE-segment in the Netherlands by using their unique value proposition and can this method also be applied to other European countries?”

Clarification

The SDE-segment is the totality of all companies that are eligible for subsidies by the government when investing in sustainable energy sources. It can be assumed that this segment consists of many types of businesses, that each require their own approach and value proposition.

All European countries are expanding in the business of solar energy and Rooftop Energy has not been able to get a foothold in any other country besides the Netherlands. The international research is conducted by using a general filter to find the countries with the highest market potential, and then zooming in on their markets for solar PV.

1.4 RESEARCH OBJECTIVES

For the reason that RTE is a profit-based organization, growth is the primary objective. The aim of the research is to derive possible strategies to achieve the following objectives:

“To gain insight in the SDE-market with the objective for RTE to implement the new strategy so that a market share of 10% of the entire Dutch solar PV market will be obtained in 2020.”

“To give an overview whether other European countries show market potential for RTE.”

1.5 SUB QUESTIONS

The research has been divided in several sections, each with their own set of sub questions.

A full list of all the sub questions can be found in Appendix I. The research questions of the sections can be stated as follows:

- What internal aspects play a role in the business of RTE?
- What external aspects come into play when expanding in the Dutch market?
- What are the potential target groups for RTE in the new market segments?
- What long-term marketing strategy can be used to expand?
- What value proposition should be used with this marketing strategy?
- What countries show potential for RTE and what opportunities can be used?

1.6 METHODOLOGY

The earlier mentioned research questions will be answered by using different tools and methods of research. To provide more clarity, the entire research process has been divided into phases. These phases, a scheme with an overview of the sections, the research methods and the conceptual models that will be used in the research have been added to Appendix I. Descriptions of with what purpose the conceptual models are used can be found in the paragraphs where they are used.

1.7 LIABILITY AND RELIABILITY

During the research, several conceptual models have been used. These models are well-known marketing models that are proven to be reliable. The conclusion and recommendations are based on these models. Information concerning regulations and developments of the solar PV market will be mostly deduced from governmental websites, these seem like reliable sources with not a lot of ways to be misinterpreted. The interviewed potential customers will be specifically determined based on the desk research. To guarantee the quality of the research, an amount of three respondents per business type will be used. The final recommendations are based on all of the interviews.

2. Internal Analysis

The main goal of the internal analysis is to provide a description of the company, the current strategy and positioning, including a full marketing mix and an elaborated organizational structure. This analysis will also give information about the company objectives and their strengths and weaknesses compared to the competition. All these unique characteristics will eventually be used in a SWOT-analysis, in combination with the opportunities and threats from the external analysis.

2.1.1 MISSION

The mission of Rooftop Energy can be stated as follows:

“Offering a complete package of sustainable and locally generated solar PV energy, without the customer having to worry about any other concerns.”³

This means that Rooftop Energy is responsible of all investments, materials, installation and maintenance. The absence of the initial investment and the lack of administrative are the main selling arguments for RTE. For their business, this innovative strategy seems very rewarding, but it also comes with some long-term risks. RTE is responsible of and dependent on their own products for over 8 years, before they start making profit out of a project. This unique selling proposition is, despite these risks, the main reason for the rapid recent growth of the company.

2.1.2 VISION

Renewable energy has been an upcoming player in the energy market the last decade. With global pollution becoming a major problem, governments are trying to diminish the amount of harmful emissions. According to the new European regulations sustainable energy should play a big role in this process; every country has to contribute by having a percentage of their energy generated in a sustainable way. For the Netherlands, the objective is 14% sustainable energy in 2020. Rooftop Energy promotes this “green” way of thinking by investing for the customer. Their main message towards potential clients is: “An entirely sustainable energy generation, without any investments. Show your clients that you also contribute to a better environment!”⁴

2.1.3 CURRENT STRATEGY

Rooftop Energy is making use of a combination of “Business to Business” and “Direct” marketing. This means that the company is directly trying to reach prospects by mail, phone and visiting. The prospects are mainly other businesses like schools and offices, these target groups will be described in the paragraph 2.1.5. RTE is not involved in the sales to private parties, due to the fact that this market is already being stuffed by dozens of competitors. Projects for private parties are also less lucrative because of RTEs method of approach when it comes to financing. These projects are often smaller and the customers are not eligible for subsidies. Without the use of subsidies, the revenues for projects are much lower.

2.1.4 COMPANY OBJECTIVES

At the moment, the focus of Rooftop Energy is set on growth and expansion, leading to the following long-term objectives:

- Market development in the industrial segment.
- Creating more brand awareness.
- Obtaining a market share of 10% of the total solar energy market in 2020.
- Raising turnover with 300% in 5 years.
- Increasing customer database with 500% over 5 years.
- Expanding in the European Union.

³ (Rooftop Energy, 2015)

⁴ (Rooftop Energy, 2015)

2.1.5 SEGMENTATION CRITERIA

Target groups

The energy market, in which RTE operates, is highly dependent on laws and regulations. In this market, two main target groups can be distinguished for RTE; the small-scale and the large-scale energy users. To clarify, private parties are not a part of these target groups, the two target groups all consist of businesses and organizations. The distinction between large-scale users and small-scale energy users is the connection to the grid. Companies with a connection of lower than 3x 80 Ampère are seen as small-scale energy users, everyone above this number is a large-scale energy user. As a comparison, a normal household has an average connection of 3x 25 Ampère. The laws and regulations of the two groups are different and are further elaborated below. Small-scale businesses are from now on described as the 'SME segment' and large-scale energy consumers are part of the 'industrial' segment.

SME segment

Most of these businesses utilize the largest amount of electricity in the winter, while most solar energy is generated in the summer. For the reason that these amounts do not coincide perfectly, small-scale users are offered a way to 'balance out' their total energy usage. When an overproduction is reached, meaning that when at a moment of time the solar panels generate more energy than can be directly used, the energy is stored on the network and can be used during a different period of time when the solar system produces less energy.⁵ The added electricity data monitor keeps a record of all energy that has been sent back into the net. At the end of the year, the amount of generated power and the amount of withdrawn power are balanced out. Most small-scale users are able to use these regulations to their advantage and clear away a maximum of 98% of their total energy costs.⁶

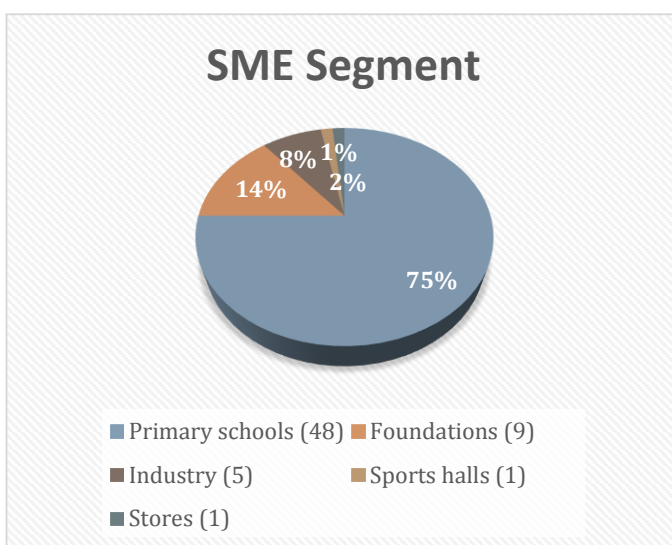
Industrial segment

This group uses multiple times more energy than the small-scale users. In the Netherlands it is not allowed to store the overproduction of solar systems of the industrial segment on the network. This means that energy bills can be greatly diminished in the spring and the summer, but they will only be affected less in the winter, for the reason that less energy is generated by the solar panels.

Examples of large-scale users are public authorities, industries, housing cooperations and high schools. RTE approaches the industrial customers with a leasing concept based on the SDE+ subsidy. The construction of this subsidy will be further elaborated in the political section of the external analysis in paragraph 3.1.5.

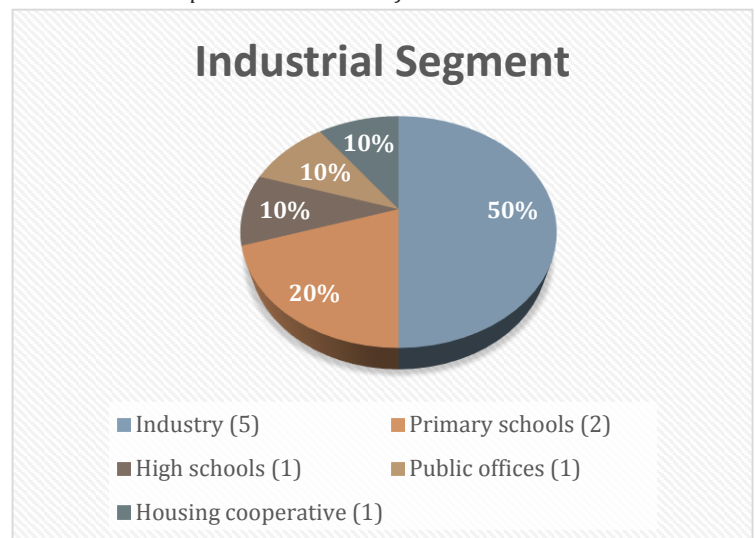
With a total of dozens of completed projects situated all over the Netherlands, clusters and types of companies can be distinguished. The field of operations of RTE and their completed projects are shown in pie charts 2.1 and 2.2.

Pie Chart 2.1 Completed SME Projects



⁶ (Rooftop Energy, 2015)

Pie Chart 2.2 Completed Industrial Projects

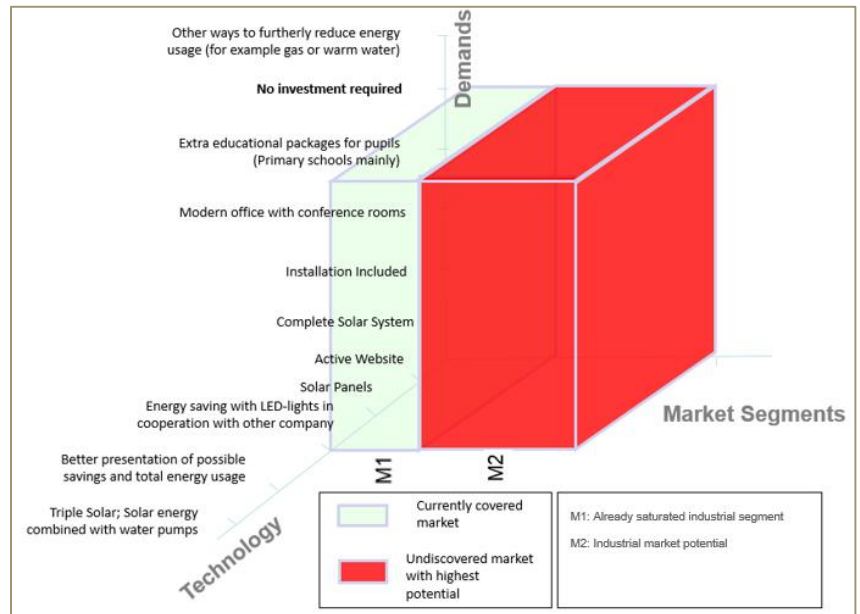


Model of Abell

Now that the field of operations of RTE has been described, the model of Abell can be used to show the 'dimensions' in which RTE could expand. The model describes the market segments, possible demands of customers and the use of technology by RTE. The aspects are then combined into a cube that can be seen as the 'business scope'; everything inside the cube is part of the current business of the company, every aspect outside the cube is not yet part of the current proposition. The goal of using this model is giving a clear overview of the current situation, before further elaboration of these aspects.

Since there are two target segments for RTE, SME and industrial, the model has been applied two times. For the research, the unsaturated market of the industrial segment is most important, while RTE has decided to lower their operations in the SME segment. For this reason the applied model of Abell for the SME segment has been added to Appendix II. The industrial market is yet to be explored and the yields are much greater in this market, expansion in the industrial segment generates the largest 'red cube', as can be seen in graph 2.3. The other directions of technology and customer demands are also opportunities for RTE, these will be looked at in the macro-analysis. As can be noticed in the graph, technology to further reduce energy use and a better product presentation can both be improved to enlarge the business portfolio of RTE.

Graph 2.3 Model of Abell for the industrial (SDE) Segment



2.1.6 FINANCIAL SITUATION

With profit-based businesses the profitability and solvability rates are normally observed to determine the financial situation. Rooftop Energy is currently one of the few companies that offers solar panels to customers without any investment needed (explained in chapter 2.2.2), this requires a well-balanced financial plan. In the case of RTE, every business case has its own financial plan. With the help of loans, the company invests in these projects, not with direct profits, but with long-term cash flows. The financial data of equity capital and loan capital are not to be shared by the company, however, it is possible to further elaborate financial information about how projects are realized.

RTE is able to invest in all these projects with the funding of several parties; private investors, a loan of the 'Triodos' bank, long-term loans by third parties and funding by RTE itself.

Triodos bank

This Dutch bank provides RTE long-term loans, that are partially paid back monthly. The advantage for the bank is obviously the interest rate. Triodos also operates internationally, but RTE has not been involved in international business yet. From all RTEs projects, between 65 and 85% of all the costs are financed by the Triodos bank. Investing in the company is a risk, therefore the bank is demanding minimal requirements for every project. The Debt Coverage Ratio (DCR) is what is used by the bank as a measurement tool to decide whether RTE is capable of producing enough cash to pay back the loan. This ratio is calculated by using the net operating income. With a minimum DCR of 1.2 the Triodos bank will allow RTE the loan. The other amount of the required money has to be equity capital or loaned from smaller investors. The second graph of Appendix II can also be consulted for more information about the growth rate of Rooftop Energy. This data of installed power is also used to convince the bank and other investors.

Private investors

By using their network, RTE has been able to approach entrepreneurs who are willing to invest in solar energy. Investing in renewable energy rewards investors with the energy-investment deduction. Fiscal obligations are therefore lower. The total funding by this party fluctuates around an amount of 10-15% per project.

Long-term loans by third parties

This final method of financing projects is by lending money from third parties like regional funds. These funds have lower interesting rates, making it an interesting option for Rooftop energy. Unfortunately, the loan capacity is fairly low, so only a maximum of 10% of each project can be financed this way.

Own investments

It also occurs that Rooftop Energy invest a small amount of money in a project, depending on the size. Advantages for RTE are that they do not have to pay interest rates for the part that they invest in themselves. Own investments vary between 5 and 15% for a single project. All money that is used comes from RTEs own capital.

Unfortunately, as mentioned before, the company was not willing to share the balance sheet. RTE is a Public Limited Liability Company (B.V. in Dutch), but the financial information is not freely accessible on the internet. Therefore the earning capacity and the solvability rates cannot be calculated, but this does not seem to have a large effect on new strategies. For the Triodos bank, the largest investor of the projects, this data is not important. All information that is needed, even when new products are added to the value proposition or new strategies are chosen, is the DCR; as long as the company is able to prove that the new value proposition is also profitable, any change can be made to the product. For this reason, the company can be seen as financially stable, whilst all the completed projects and their connected contracts that are still running right now are profit-yielding.

2.2 MARKETING MIX

To describe the value proposition of Rooftop Energy and how the customer sees them, a broad marketing mix will be used. Regarding the fact that the provided solar system is a product, but also a service (long-term maintenance) the 4 Ps of product, place, promotion and price will be used, expanded with the aspects of people, process and physical evidence.⁷

2.2.1 PRODUCT AND SERVICE

Actual Product

The main product that Rooftop Energy is offering is a complete set of solar energy technology, to provide customers with their own generated electric energy. The tangible products consist of the solar panels, the inverters, the wiring, the mounting system and the data monitor. The product details like capabilities and brands have been added to appendix II.

Augmented Product

Solar panels have a durability of approximately 25 years. That is why the product is accompanied by a service arrangement; the customer pays a fixed price for energy for a minimum of ten years (depending on the size of the project) and Rooftop Energy takes care of everything else. For example malfunctions, extra costs, but also moving all equipment when the roof needs to be repaired. The fact that customers are able to sign a 'leasing' contract can be seen as RTEs most important USP. The advantage of the leasing concept for the customers is that they do not have to pay the initial investment for the solar panels. With the current value proposition, RTE is able to offer customers a lower price for electricity, while the company collects the subsidies of the government for sustainable energy to gain profit.

Rooftop Energy also monitors the information about a company's energy generation, so that the system keeps functioning perfectly. The data from the displays can also be used to inform others. For example, several schools have a screen with the daily energy generation, as an educational experience for students.

⁷ (Ganzer, R., 2015)

A part of the augmented product is also the fact that solar panels are a “green” product. Sustainable energy and the well-being of the earth are starting to play a bigger role in the world. With people being more aware of global warming and air pollution, renewable energy becomes easier to sell. “Let your company also contribute to a better environment!”⁸

Extra feature

As mentioned in “target groups”, quite a percentage of the completed projects consists of primary schools. To work towards a “greener” planet, Rooftop Energy cooperates with the companies Stichting Technotrend⁹ and Enexis¹⁰ to provide optional educational packages about solar energy to schools. These packages contain several lectures and some short workshops, to make children aware of sustainable energy sources.

2.2.2 PRICE

The interesting part, the already mentioned USP of the company, is that Rooftop Energy has taken away the initial investment for a project. Turnover is generated by becoming the customers’ energy supplier, instead of just being the vendor of solar panels. A project of RTE comes with a ten year (minimal) contract where customers sign for a fixed price of between €0.11/kWh and €0.16/kWh (depending on the size of the project and the total energy usage). This price can be as much as several cents per kWh lower than the old energy price. The advantage therefore lies not only in the absence of the investment, but also in lower energy costs after the completion of the project.

At the moment RTE is the only company in the province that uses this kind of price strategy. Therefore, the company has a huge competitive edge when it comes to pricing. Changing to RTE as an energy supplier is an easy administrative action.

Rooftop Energy, however, does not become the sole provider of all the needed energy; for industrial users, Rooftop Energy determines how many solar panels are needed to decrease this amount to almost zero depending on the yearly energy use. If more energy is produced than used, RTE will have to sell this on the energy market for way lower margins. From a commercial point of view, overproduction should be avoided at all times.

2.2.3 PLACE

Rooftop Energy operates from two places; the front and back office are located in Waddinxveen, and the installation is handled by the company RECO, situated in Koudekerk a/d Rijn.¹¹ This company is owned by one of the main shareholders of RTE, so the manual labor is not fully outsourced. The depot in Koudekerk contains all materials for the projects.

When customers are interested in the product, the most common way to get in contact with Rooftop Energy is by visiting the website. This site contains all information about the company, including the way RTE operates, the completed projects and recent news about renewable energy. There is an option to do a request for a proposal directly, or customers can contact RTE by phone.

The office in Waddinxveen is mainly used for administrative purposes, but also serves as a showroom for visiting customers. The building has a new and modern appearance and is completely powered by renewable energy. This can be noticed by the visible inverter with the daily savings and the LED-lights in the entire office. The location of the office is slightly inconvenient when looking at sales meetings. The city of Utrecht would have been a more central place to operate from.

Even though the office has a great appearance, the salesmen of Rooftop Energy can generally be found at the locations of the prospects. The reason for this is that as mentioned before, prospects are mostly schools, and their principles are often busy with their work. A few advantages of sending out salesmen

⁸ (Rooftop Energy, 2015)

⁹ (Stichting Technotrend, 2015)

¹⁰ (Enexis, 2015)

¹¹ (RECO, 2015)

are that it becomes more personal, it saves the prospects time, and it can also give the salesman a first impression of the rooftop, so that he can estimate how many solar panels will eventually fit.

2.2.4 PROMOTION

With a direct marketing strategy, Rooftop Energy reaches most of their prospects through Public Relations. Word-of-mouth and telephone contact are used to inform customers about RTE. The company has determined the segment in which they would like to operate and this segment is also where they look for new prospects; when an organization looks interesting to do business with, direct mail or the phone are used to try to get in contact with the manager. The current marketing strategy of RTE can be seen as a 'pull'-strategy; through networking potential customers are informed about the company.

Another successful way that has been the cause to dozens of projects is the "Zon zoekt school"-campaign. This campaign, literally translated as "Sun seeks school", has been an initiative from the Dutch foundation 'Natuur & Milieu'. This organization strives for a more sustainable world and also tries to educate children in the process.¹² The target groups for this campaign are therefore schools and other educational institutions with high energy costs.

The final method of promotion are stands at exhibitions and fairs. The last year, Rooftop Energy has attended several exhibitions, like the annual fair for corporate social responsibility and several fairs for school principles. Of all the promotional activities, exhibitions have had the smallest share.

2.3 7S-MODEL MCKINSEY

The 7S-model of McKinsey is used to describe the efficiency and effectiveness of a business with the help of 7 aspects. These factors consist of three crucial aspects; system, strategy and structure. The four others influence the core business, but in a lower degree.

System

The entire process of long-term contracting with customers, placing the solar panels and being able to make use of the solar energy is quite an assembly of functional and administrative steps. To get a better overview of all these steps, a flowchart has been created. This flowchart describes the entire process that customers go through when signing a contract with RTE. The chart has been added to Appendix II.

Strategy

The largest part of the strategy of RTE has already been described in chapter 2.1. The long-term goals of raising turnover and gaining a larger market share that have been determined in the company objectives are carried out by moving to the industrial segment. This market seems promising for RTE, due to the size of the projects, the lack of competitors and the possible success with the leasing concept. Expanding to this segment is also in line with the vision; helping companies with showing off their 'green' way of doing business.

Structure

This aspect of the marketing mix treats the capability and the organizational structure of the staff. RTE's employees are all intent on service. Although there is a big difference in the age segment of the staff members (varying from ± 25 y to ± 55 y), all of them are actively involved in front office tasks. Rooftop Energy tries to create a professional image for the customer, meaning that with every point of contact employees will be properly dressed. To clarify the internal structure of Rooftop energy, a flowchart of the internal structure has been added to Appendix II.

Shared Values

This aspect of the 7S-model is placed in the middle of the model, for the reason that it influences all other aspects. Shared values describe the vision, and how the whole company and the other processes are affected by this. In the case of RTE, growing and making profit is of course the main objective, but spreading a feeling of 'sustainability' is the message. The fact that the main office is shared with another company that is engaged in sustainable energy and that in some cases cooperation is possible, even when

¹² (Natuur en Milieu, 2015)

this leads to less profit, already shows that RTEs commitment towards sustainability is high. The office has been made more energy-efficient by installing solar panels and using LED, not just for visiting customers, but on principle. If RTE changes these shared values of sustainability, the whole foundation of the company will be influenced in a negative way.

Staff

This part of the model overlaps slightly with the aspect 'structure'. The partition of men and women seems to be equally divided in the company. Finances, administration and sales are all divided between the employees. A disadvantage is that all projects that RTE wants to realize have to be approved by an architect. The construction of the building and the weight that the solar panels add to the structure are needed for safety measures. RTE is using an independent architect to look at the construction plans. The lack of knowledge about architecture costs a lot of time and money. Apart from that, weekly meetings cause the departments to co-operate fluently. Important decisions are taken by the general manager and the shareholders and are then explained to the other employees. It can be noticed that RTE has a focus on education; one of the target segments is primary schools, but the company also puts a lot of energy into trainees and interns.

Style

RTE is operating with a 'bottom-up' structure, also known as a team-based management. This means that there is no clear hierarchy and that due to the small team every contribution is appreciated. Even interns can easily communicate with the general manager and question him. There is no competitiveness between employees, causing an informal and 'friendly' atmosphere to work in. Cooperation is needed to realize the projects, because every employee has his/her own share in the project.

Skills

The final aspect of the model is 'skills'. The competences of the staff and their individual tasks have already been described earlier in the model, therefore this part will further elaborate the remaining aspects that influence the company. An aspect that the company utilizes well is using networks. A lot of employees are involved in meetings about sustainability, outside of the normal work. These networks result in more contacts, prospects and eventually in more projects. The business world of sustainable energy is compact, and therefore word-of-mouth advertising plays a big role. That the current leasing concept can also be used for the industrial segment, with some minor changes, shows that the company is able to adapt to achieve their objectives.

2.4 CONCLUSION INTERNAL ANALYSIS

Now that a clear overview has been given of the internal structure of RTE, a conclusion can be written in terms of strengths and weaknesses. These strong and weak aspects of the company can be found below and will later be used in the SWOT-analysis.

Strengths:

- Strong financial position (due to easily obtainable loans)
- Durable, high-tech, standardized products
- Unique business plan relating to required investment
- Short communication lines due to small team
- Clear process structure and agreements
- Smart cooperation with LED-company to further reduce energy costs

Weaknesses:

- Lack of product presentation
- Lack of promotion activities
- Low product & brand awareness
- No central office location
- Long completion time of projects due to safety demands for ballast
- RTE leasing concept for industrial segment is completely dependent on the existence of subsidies

3. External Analysis

The external analysis will take place in two parts; the macro and the meso analysis. The main points that will be looked into in the external analysis are the trends that RTE is affected by, the general competitors of the company and the opportunities that RTE might be able to respond to. Because the company does not have a clear view on the new SDE+ segment yet, the meso-analysis will contain a more detailed analysis of potential customers with their location and identity.

3.1 MACRO-ANALYSIS

The easiest way to review the macro-section of the market is to use the DESTEP-model. This model gives an accurate description of the general information of a country. However, because the general economic data is already known to RTE and for the reason that age segments and facts about the composition of the population are less useful in the business-to business market, the model will be used in its original form: the **STEP-analysis**. The used aspects for the macro-analysis will be Social-cultural, Technological, Environmental and Political.

The main reason for using this more simplified version of the model is because the political and the environmental aspects are specifically interesting for Rooftop Energy. Solar energy is a tumultuous market, in which companies are dependent on governmental decisions. Therefore, these last aspects of the STEP model are elaborated further. The demographic and economic aspects are less important for this part of the research, but the data will be mentioned later and used in the international case to compare The Netherlands with the other European countries.

Naturally, the **financial condition** of the businesses that RTE is trying to reach is very important. These conditions may vary from sector to sector and will therefore be elaborated separately in the meso-analysis; after determining what the involved business sectors are, this analysis can be seen as the 'economic part' of the STEP model, only more specific and detailed. The information of the financial condition of the business sectors will be obtained by interviewing managers and directors of companies that operate in these branches of industry. Furthermore the meso-analysis will use the 5 forces of Porter to describe the competitors, substitute products, ease of entry, etc.

3.1.1 SOCIAL-CULTURAL CRITERIA

This part of the STEP-model treats the cultural aspects of the countries like religion and more importantly, the business environments. Every country has a different style of doing business, therefore a more in-depth analysis should be made of specific business behavior. One of the most important tools to map out the cultural environments is the country comparison tool by Geert Hofstede. This tool is also known as 'the six cultural dimensions'.

Religion

Appendix III contains the partition of religion in The Netherlands. These facts do not necessarily affect the business of Rooftop Energy, but it should be taken into account that the standards and values might differ slightly when doing business with individuals of different religions.

The largest part of the population of the Netherlands is Christian, divided in Roman Catholics and Protestants. The differences between these two divisions of the Christian religion in a business environment are small and almost negligible. Most of the remaining population are atheists. In the business to business sector, religion rarely makes a difference in the decision-making process. In the largest part of the meetings religion is not even mentioned. Therefore, religion should not play a role in the business of RTE.

Business environment

To describe the business environment, the model of Hofstede has been applied. For the reason that the behaviour of the Dutch market participants is already known to RTE, this information does not directly contribute to the research. Therefore, the Hofstede model with the six dimensions has been added to Appendix III.

3.1.2 TECHNOLOGICAL CRITERIA

For the reason that RTE operates in the field of solar PV, the technological aspect will focus primarily on product development and the competition of other (renewable) energy sources. The change of laws and regulations concerning renewable energy sources are seen as trends and will be discussed in the 'political' aspect of the STEP-analysis.

Material developments

The main process behind solar PV can be explained in the following way; photovoltaic cells are formed together into a module, also known as the solar panel. Solar irradiation, consisting of photons, is mostly absorbed or reflected by the solar panel, depending on the wavelength. Only the absorbed energy can be used to generate electricity in direct current (DC). This form of energy cannot be used for most machinery and devices yet. Therefore, the cluster of panels is series connected and sends the electricity to an inverter, where the electricity is converted into alternating current (AC).¹³ The performance of the panel is stated in 'efficiency'; the percentage of sunlight that a single panel can absorb, enquired from several tests under 'optimal' circumstances. These circumstances can be compared to exposing the solar panel to full sunlight on a summer day.

To raise the amount of energy generated per m², several aspects of this process can be improved. The material of the solar panel is an aspect that influences the absorption of solar energy. There are multiple generations of solar panels in use and in development. Rooftop Energy makes use of the most popular and well-known generation of panels. The solar system makes use of silicon wafers, divided in monocrystalline and polycrystalline panels.¹⁴ This last type is frequently used because of the lower production costs. The blueish panels have an efficiency of around 15% and a durability of approximately 25 years. Polycrystalline panels are the type of panels Rooftop Energy is currently using. The black monocrystalline silicon wafers cost more to produce because more heat and time is put into the material to melt it and form it into one layer, raising the efficiency with 5%. The polycrystalline versions consist of more surfaces that form the panel.

Important to know is whether or not other generations of solar panels are going to become more cost-efficient. If this is the case, there is a chance that RTE should consider investing in other generations in a few years, instead of in the polycrystalline panels. The other two, most well-known types of solar panels are 'thin-layer' modules and the 'organic photovoltaics' (OPVs). The general efficiency of the thin-layer panels is lower than the earlier mentioned crystalline panels (around 10%), but the main advantage is that the production costs are remarkably lower. For the reason that the panels are thinner, less material and time has to be used to produce them.¹⁵ The thin-layer generation has a market share of 9.7% when related to the total worldwide PV production¹⁶, but for the upcoming years it cannot be counted as a direct substitute product for panels with silicon wafers, for the reason that the efficiency is still too low and scientists are skeptical about the toxicity of the used products.

Low efficiency rates is the same problem that organic photovoltaics are coping with; efficiency peaks are still under 10% and negative environmental aspects are also predicted when these panels are globally deployed. This last generation is still 'under production' and it will take years before it could have the potential to compete with the silicon and even the thin-layer generations. It can be concluded that RTEs offer will keep consisting of panels with silicon wafers, either with polycrystalline modules or monocrystalline modules when their production costs are decreased.

Product developments

The material is not the only aspect that influences the efficiency of the solar project. The inverter and the placing of the solar panels also play a role in the energy generation process.

At the moment, most solar PV projects make use of large inverters with an average of 97% efficiency. Meaning that this amount of all incoming direct current is successfully converted into alternative current. The size and the capacity of the inverter depend on the amount of solar panels, the layout and their potential. Using one inverter used to have a large downside; when one solar panel is covered by shadow,

¹³ (Silicon Valley Microelectronics, 2015)

¹⁴ (Solarchoice, 2015)

¹⁵ (Grana, Paul, 2010)

¹⁶ (Fraunhofer Institute, 2014)

all panels will be influenced and perform less. With bypass diodes that allow electricity to move one way, but blocking the other, this inefficiency has been solved for most systems.¹⁷ However, there are more innovations that further increase the efficiency of the system, innovations that Rooftop Energy might consider when they yield a much larger energy harvest for the customers.

The main idea of **micro inverters** is that every panel now has his own small inverter, making it a parallel connected, instead of a string inverter system. A small area of shadow will then no longer affect the whole project, raising the efficiency by a few percentages. These micro inverters come with real-time performance data and an application, so that customers can track their daily energy harvest.¹⁸ Of course, performance data is something that normal inverters also offer. Micro inverters are a relatively new product, still under development. Due to the high price of the separate inverters, this product is not yet worth a consideration for RTE.

Another development in the solar PV market is using solar panels in the exterior of a building, also known as **Building-Integrated Photovoltaics** (BIPV). This way of installing solar panels does not require a change in system, because it is only the place of the panels that differs from normal projects. Downsides to BIPV-projects are that an architect is needed and that there are quite a lot of legal and administrative barriers to design buildings with integrated solar panels.¹⁹ The answer to the question whether this way of installing solar systems is worth considering for RTE is no, for the reason that the systems have to be integrated into buildings which costs a lot of money and requires making changes to the existing buildings. Targeting buildings that still have to be built is not a lucrative business, because RTEs subsidy concept cannot be applied in this case.

The final development, an invention that Rooftop Energy is already attempting to utilize, is so called **Photovoltaic Thermal technology**, also known as PV/T or 'hybrid'. The system can provide up to 300% more energy by using the heat that is produced in the solar panels and using it for the HVAC (heat, ventilation & air-conditioning).²⁰ This process will also cool down the panels, increasing their total energy production. The PV/T system can be building-integrated, or just installed as a conventional PV project. The heat that is generated can also be used in combination with liquids; a circuit of fluid travels around the panel and absorbs all the heat, using it inside the building to warm up a hot water tank for example.²¹ This last development is truly interesting for RTE, because it can increase the amount of generated energy with enormous percentages, making it a lucrative product to offer to customers. The product is currently at a point where it could start playing a large role in the solar energy market, so it is definitely something to keep in mind.

Renewable Energy Market

The market of solar energy is rapidly growing. Statistics show that the annual growth rate of PV installations is 44% during the period from 2000 to 2013.²² China and Taiwan have almost taken monopoly on the production of solar panels. In 2013 combination of these countries have produced a staggering amount of 22.5% of all PV installations in the world, followed by Japan with only 4%. Graph 4.2 describes the full distribution of solar PV in the most active countries and can be found in the appendix.

Solar PV is part of a much larger market that is in a general state of development; the renewable energy market. Statistics show that renewable energy sources already have a market share of approximately 13% of the total energy usage in the world. It is currently the fastest growing source of world energy.²³ Graph 3.2 below shows a projection of the developments of all energy sources for the coming 20 years. Sustainable energy sources are growing much faster than coal and liquid energy sources. However, at this pace it will take decades before renewable energy sources are more often used than liquid sources like oil and petrol.

¹⁷ (Solar Facts, 2015)

¹⁸ (Enphase Energy, 2015)

¹⁹ (Solar Server, 2015)

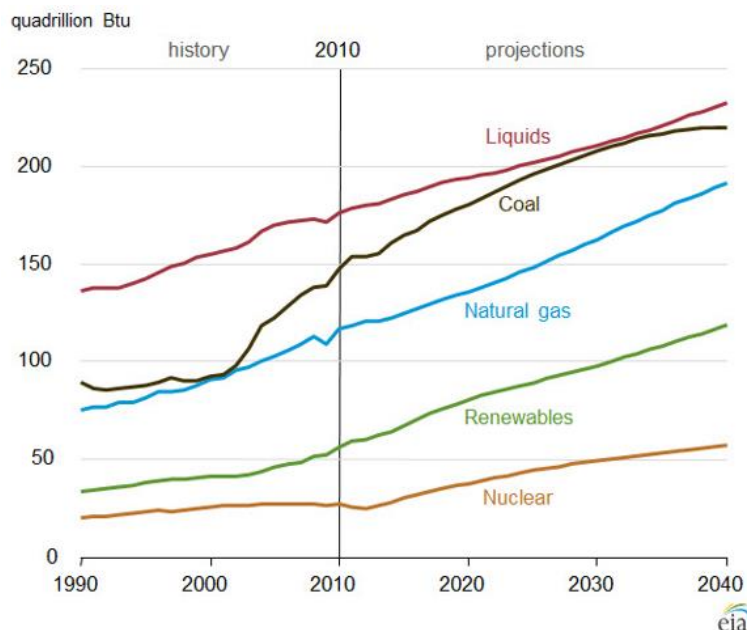
²⁰ (Solarwall, 2015)

²¹ (Northburn Solar, 2015)

²² (Fraunhofer Institute, 2014)

²³ (U.S. Energy Information Administration, 2013)

Graph 3.2 World energy Consumption by fuel type, 1990-2040²⁴



For more information about how the sustainable energy market is divided, Appendix III can be consulted. Renewable energy as a whole is growing, but the market shares are clearly shifting from hydropower towards Solar PV and wind energy; starting to advance from 2004, solar PV projects over the world now start to generate a large percentage of all sustainable energy. This amount is even a few percentages higher than the market share of wind energy, that controls the other part of the market.²⁵ However, it should be said that the total production of these energy sources, measured in gWp, is much higher for hydropower and wind energy sources.

The other energy sources might also offer the opportunity in the future for RTE to further reduce energy costs by combining solar PV with other renewable energy sources. The earlier mentioned heat generation devices can also be placed on rooftops in combination with solar PV. This development seems to be the most promising for the near future.

3.1.3 ENVIRONMENTAL CRITERIA

Solar PV is already a product that is being promoted to decrease the effect of global warming on its own, reducing CO₂ emissions by replacing energy sources that are polluting the atmosphere. Seeing that this pollution is resulting in global warming, a process that everyone is well aware of, this part of the macro-analysis will describe the environmental trends that affect businesses; trends that might be opportunities or threats to Rooftop Energy.

Corporate Social Responsibility

A trend for businesses is to start taking initiatives when it comes to improving society. Corporate Social Responsibility (CSR) uses what is called a triple-P approach, where businesses focus on 'people, planet and profit'. The measurements taken depend on the sector and the type of the business. 'People' stands for the social aspects of a company; the minimum to achieve this is by living up to labor laws and providing a comfortable working environment, where employees are given their own responsibilities, extra features to improve this aspect are working at home, extra days off and organized company events. The environmental part 'Planet' is where businesses try to show that they keep an eye on their emissions and their sustainability. This includes full transparency towards customers, suppliers and stakeholders when it comes to production processes. The last dimension 'Profit' is directed at the business itself. All businesses are profit-based and have the intention to grow. One aspect enhances the other, and all of them should be integrated in the organization to bring out the specific strengths most effectively.²⁶ Therefore, companies are advised to look into CSR when making long-term policies; what to do to stimulate innovation, how to invest in infrastructure and how to make policies that will positively affect next generations. This is a part where RTE thrives; with their CSR-approach and their view on sustainability, other companies could be persuaded more easily. Especially when this approach can also be implemented in their core business.

²⁴ (U.S. Energy Information Administration, 2013)

²⁵ (Fraunhofer Institute, 2014)

²⁶ (MVO Termen, 2015)

Sustainable Reporting

Another way in which companies are trying to create a better corporate image of themselves is by publishing sustainability reports. These documents are also based on the three Ps and are written according to several guidelines. The Global Reporting Initiative (GRI) is an American NGO that was founded to encourage the writing of sustainability reports and to improve the quality of these reports all over the world. GRI has come up with a general framework, the so called GRI-guidelines, for making sustainability reports. These reports cover all objectives of the company concerning strategies to improve on economic, social and environmental scales. Every company can decide to what level they want to live up to these guidelines and are then compared with the performances of other organizations.²⁷ In the Netherlands, reporting on sustainability is encouraged by the 'CO2 Prestatieladder', where companies share information about their total energy usage and the 'green' role they play. The GRI-guidelines are rarely used by national companies. When an organization wants to climb the CO2-ladder, they should participate in and plan sustainable activities.²⁸ This tool has the objective to increase the sales of companies that are higher on the ladder with the argument that they 'deserve' more revenue. For RTE, helping companies with their CO2-prestatieladder as an extra feature for their sales proposition could be a great way to persuade potential customers. With a QuickScan to determine all sources of energy consumption of a company and a plan to make them more sustainable, RTE can already get these companies two steps up the ladder.

3.1.4 POLITICAL CRITERIA

As mentioned before, the Dutch government is highly encouraging companies to lower CO2 emissions and make more use of sustainable energy sources. The long-term policy that was created to achieve these goals is the "Energieakkoord voor duurzame groei". This agreement contains all the standards that the Netherlands should meet before 2020. The objectives are based on a total of ten pillars. A short summary of this declaration has been added to Appendix III, with the most important aspects of the agreement in a bold font. The reason for this is that the most important political aspect that directly affects the business of RTE is the SDE+ subsidy.

SDE+ Subsidy

For the reason that there is quite a difference between the prices of solar energy and the 'grey', basic price of energy, the Dutch government has decided to stimulate renewable energy sources with the SDE+ subsidy. With this subsidy they refund the difference between the two, to make the generation of renewable energy more fair. The Solar PV basic price is hereby determined in rounds by the 'Energie Onderzoekscentrum Nederland' [ECN], to prevent the funds from running out in the first months of the year. In November, this basic price is set at 14,7 eurocents/kWh. This is where solar energy providers usually apply for the SDE+ subsidy. When making use of an equation, the SDE+ subsidy could be explaining as follows:

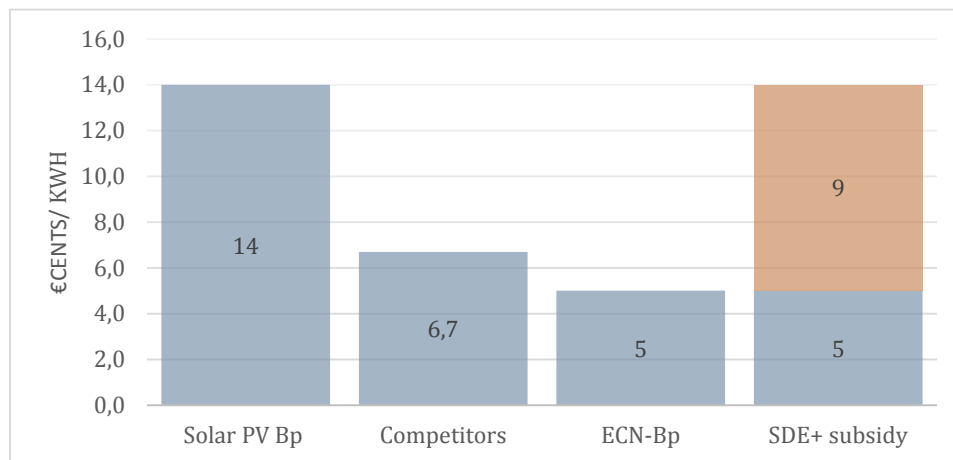
$$\text{SDE-subsidy received} = \text{Solar PV Bp} - \text{ECN Bp}$$

In this equation 'Solar PV Bp' stands for the basic price for solar energy at that moment of time (depending on the round) and 'ECN Bp' represents the 'grey' basic energy price that is determined every year by the ECN.

Graph 3.3 shows the difference between the cost-price of Solar PV and the ECN-Bp. The red bar represents the received SDE+ subsidy. As to be noticed from the graph, the SDE+ subsidy places Rooftop Energy in a competitive position, because other energy suppliers put an extra profit margin on top of the 'grey' energy price (competitors offers fluctuate around 6,7 eurocents/kWh).

²⁷ (Global Reporting)

²⁸ (CO2 Prestatieladder, 2015)

Graph 3.3 Explanation of the SDE subsidy

In 2014 and 2015 a budget of 3,5 billion euros has been made available for this financial aid. With this subsidy they refund the difference between the basic prices of 'grey' and solar energy, to make the generation of renewable energy more fair. The Solar PV basic price is hereby determined in rounds, to prevent the fund from running out in the first months of the year. In the last months of the year, the basic price is has been higher than 14 cents/kWh. This is where solar energy providers and RTE have usually applied for the SDE+ subsidy. The SDE+ incentive is crucial for the business of RTE, but so far the government has still planned to maintain it.

3.1.5 CONCLUSION MACRO-ANALYSIS

Now that the general information about the macro-environment is known, this section will summarize all trends and developments that will influence the business of Rooftop energy.

The first aspect is **religion and culture**, where religion seems to play no role in decision-making processes in the business to business market. Christians and atheists are the most practiced beliefs and are practitioners are treated as equals. The Dutch business culture is especially known for teamwork and informality. There is very little difference between employees and their managers, resulting in better, more informal communication. A feeling of importance is created for every employee, instead of stimulating a constant battle of standing out from the crowd. Dutch citizens have an average score when it comes to being punctual and being creative. Lastly, the Netherlands are known for being able to plan further ahead and making smart use of time and money.

The second aspect is **technology**, divided into the 'material' part and the 'product development' part. For the reason that solar panels are a comparatively new product, the production process and the efficiency are still improving. Multiple generations of panels are currently available, of which the silicon modules are the most used types. The blueish polycrystalline and the black monocrystalline panels have a durability of approximately 25 years and an efficiency of around 15%. 'Thin-layer' solar PV have the lowest production costs of all panels, but are just not efficient enough to be successful yet. These thin-layered panels have the smallest carbon footprint, lowest water use and shortest energy payback ratio, but are still questioned by researchers due to the use of the toxic material cadmium. Organic PVs and are still under construction. The efficiency rates of these organic panels are still under 10% and due to negative environmental aspects it will take years before this generation can compete with silicon and thin-layers panels. At this point of developments, Rooftop Energy does not have to keep an eye on the efficiency of the panels; polycrystalline panels will stay the most cost efficient modules for a couple of years.

When looking at the product development, there are several features that have the potential to become successful. The first product is a replacement for the large inverter of a solar project; micro-inverters. These small devices are separately connected to the solar panels, making the system parallel connected. With this way of installing, underperforming panels due to shadow for example will no longer affect the whole project, raising the efficiency by a few percent. A downside to this approach is that the entire

project becomes more expensive, and thereby also raises the payback ratio. Another invention is the multifunctional use of solar panels, known as 'Building Integrated PV'. Solar panels are then also used as shading devices, windows, walls, etc. The negative side of this invention is that close contact with an architect is needed and that the most cost-efficient way of using BIPV is to install the panels during the construction process of the building. Therefore, it is not that interesting for RTE to consider this as an option. The final development, PV Thermal technology, shows the most potential; with this product solar panels will also be used to heat electricity or air at the same time, that can then be used for the ventilation and water for a building. Rooftop Energy should keep an eye on the thermal technology, because this can help generate more energy, especially with the size of the industrial projects.

The **environmental** aspect comes down to several trends; companies are trying to take more initiatives when it comes to improving society. Transparent companies seem to become more successful than fixed organizations, therefore transparency is stimulated with reporting. With Corporate Social Responsibility organizations realize reports concerning their approach towards comfortable working environments, eco-efficient production processes and long-term strategies for innovation. The European 'GRI-framework' and the Dutch 'CO2 prestatieladder' are based on sustainable reporting; participating in 'green' activities and making plans to reduce CO2 emissions are rewarded with 'steps' on the ladder. Customers should choose companies that are higher on the ladder over competitors, because they meet the sustainable conditions and 'deserve' more revenue.

The final aspect is **politics**. The concept of Rooftop Energy is based on subsidies and political regulations and was therefore also explained earlier in the internal analysis. The most important policy that has been created as an objective for sustainable energy is the "Energieakkoord voor Duurzame Groei." This policy is based on several pillars, of whom the most important are; general energy savings by companies that will then be eligible for several grants, scaling up sustainable energy sources with wind and solar energy, a better cooperation and transportation of energy (while generating energy in a cluster is stimulated) and finally the program should also lead to more innovation in the field of sustainable energy sources and available products. Installing the projects, developing products and all administrative tasks will result in more employment. The SDE+ subsidy is still crucial to the business of RTE. The budget of this incentive has been set on 3,5 billion euros for 2015, divided in several phases. The main objective of the policy for all European countries is stated as realizing 14% sustainable energy of all generated energy in 2020.

3.2 MESO-ANALYSIS

The meso-environment is described best with the 5 forces of Porter; in this concept the buyers, new entrants, suppliers, substitutes and industry competitors are explained, until it becomes clear what the total competition in the market is. The reason why this model is used is because it can give a clear overview of the market rivalry. When combining this with the macro-analysis, all opportunities and threats of the market can be determined, that will then be used in the SWOT-model and the confrontation matrix.

3.2.1 FORCES OF PORTER

Threat of new entrants

The market for solar energy is profitable for businesses that offer solar systems and is expanding rapidly. Because of the earlier mentioned stimulation of the government, solar energy is seen as an 'hot topic' to invest in. Dozens of small companies are already trying to gain market share by reaching private individuals and realizing projects on their houses.

Private market

There are several barriers to enter the private market; starting companies have to invest time and energy in building up a brand name for themselves. Customers are more easily persuaded by large, well-known companies, because these are the 'safe' choices. Financing the imported products and the employees is the second barrier; the solar panels and inverters are costly and need to be stored somewhere, until sales are achieved. Just like any other commercial company, solar energy businesses need a sales/marketing department and administration, but they also have to find a way to install the products. This activity can be outsourced, resulting in more costs, or completed by the company itself, with the risk that the installation crew runs out of work when no new projects are obtained. This problem mainly occurs in the

private segment of the solar energy market, where a large amount of small companies try to obtain a market share.

Due to the chosen way of installation, location also starts to play a role in the business of a company. The installers are bound to an area in which they can easily operate; letting the installation crew travel more than 100 kilometers every day to reach the project site is not cost-efficient. If the area in which a company operates is a red ocean of competitors, the company will soon be involved in a pricing war that lessens the revenues and profits of projects.

Industrial market

To avoid the constant pricing wars and the large amount of competition of the private markets, a company can also choose to enter the industrial market. This market contains less suppliers and projects tend to be more lucrative, due to the larger amount of solar panels. These amounts require more storage room, but costs of import are slightly lower, due to the size of the orders. Entering this market requires a larger sum of invested money and also more employees to realize a project in a structured way. An advantage of operating in this segment that RTE has been using is the governmental subsidy to stimulate the growth of sustainable energy. Although, one must also be aware of the additional administration; to be allowed to install solar panels on rooftops of industrial buildings the installer should have obtained, apart from the normal certificates, the declaration of 'Advice in Building Quality', justifying all additional ballast of the solar panels on the roof. This declaration concerning safety measures can take up to several months in case of missing data of the roof structure of the building. Even when the installation is outsourced, the company still has to obtain the declaration.

All by all, the government is stimulating solar energy, but being successful in the market as a starting company requires a good financial plan and a brand name. Larger projects include a lot of time-consuming administrative activities. Companies can consider outsourcing projects, but this will influence the eventual revenues due to the cost of the external installation crew and the extra administration.

Competitors

Competition is the total of companies or organizations that have selected the same target group and try to offer the most favorable offer to realize business with this group. This section will give an overview of the largest competitors that are also active in the industrial segment. The companies that operate in the private market are numerous, but not a real threat to the business of Rooftop Energy because most of them do not operate in the same area as RTE.

KiesZon²⁹

A company that is located in 's Hertogenbosch and that operates nationally in the industrial segment since 2009. Their approach and sales concept can be compared to that of RTE; KiesZon has completed projects on rooftops of SMEs, schools and local authorities with the same 'non-investment' method. Their mission and vision can be stated as 'being a transparent company that focuses on reducing CO2 emissions by providing complete solar systems.' Sharing knowledge and working together during the contract are the boundary conditions. Not having to invest for a project by using the SDE+ subsidy is elaborated as the 'operational lease' concept; no risks, no investment, a free display that shows the amount of generated energy and a more sustainable image for the company. To fund the projects, Kieszon makes use of crowdfunding, banks and the subsidies.

As a promotional campaign the company has come up with the 'KiesZon op school', where schools that choose to transfer to solar energy are sponsored. The most important parties that are mentioned as sponsors are 'Stichting Doen', 'Greenchoice' and lastly the company 'Enexis', the organization that has also developed the educational packages that RTE is using for the Zon Zoekt School campaign.³⁰ The used products are not mentioned on the website, but judging from the images KiesZon is also using solar panels with silicon wafers, just like RTE.

The appeal of the KiesZon website is less developed than the website of RTE, because of the lack of videos and images. However, the layout is well-organized and easily accessible. The company makes use of three types of social media; Twitter, Facebook and Linked In.

²⁹ (KiesZon, 2015)

³⁰ (KiesZon Op School, 2015)

*Greenspread*³¹

This large organization operates in the field of solar, wind and thermal energy. Target segments are mainly local authorities in the east of the Netherlands. The website is mainly used to inform the authorities of the steps that are needed to start using sustainable energy; Greenspread uses an 'energy potential chart'. This chart is a geographical map of the area, showing what kind of sustainable energy can be placed where. A digital energy office that inhabitants of the area can use to stay up-to-date and to follow the current events is then provided. This is accompanied by local meetings for questions and a service line for all questions and demands. The local communities can then subscribe to the 'energyservice'; e-coins with a value of €500,- can be bought in exchange for a telephonic help desks, a digital work space for all documents or a feasibility study of the entire territory. The inhabitant can choose to invest in a local corporation for sustainable energy, yielding a discount on their total energy costs. This is known as the CoopDeZon initiative, based on the 'postcoderoos' concept, where locals choose to participate in large sustainable energy projects.

For SMEs and other organizations, Greenspread also offers to provide insight in CO2 emissions and the reduction of these outputs with the help of the CO2 footprint. Depending on the known data, the company makes a plan of action and an overview of all the results. The investments for the projects are financed by crowdfunding and bank loans, but the SDE+ subsidy is not mentioned on the website.

Quite recently Greenspread has started a cooperation with the organization 'Zonnig Onderwijs Nederland', a party that uses investments from the Triodos bank (same financier as RTE) and that has realized some projects at primary schools in the south-east of the Netherlands. This seems to be the southern alternative of the 'Zon Zoekt School' campaign.³² According to Greenspread, the financial plan has been worked out to complete projects at 150 schools in the province of Gelderland. The same non-investment method is used.

Greenspread is a company with a very professional website. When describing the process, the numerous amount of graphs and charts become overwhelming. Also, lots of terms are used that might be unclear for the customer. Overall, the website becomes indistinct for customers due to the lack of tooltips that could distinguish the types of target segments the pages are meant for.

Twitter, Linked In and Facebook are used as the social media to promote the company.

*Tautus*³³

This organization combines operations in the private market with housing cooperatives in the province of Limburg. With these partners, the company has managed to drag in an amount of 3,000 projects on rented apartments. The occupants of the apartments are given a discount that can increase up to 20% of the total rent. For private investors Tautus offers the complete package of isolation, solar panels, sustainable boilers, etc. These projects can be achieved with full investment of the customers, or by financing of Tautus, depending on the wishes and demands of the clients.

The website that Tautus is using looks aged and out-of-date and does not contain a lot of information about the total process of the projects. Also, no social media tools are used to promote the company. All by all, Tautus does not seem to be a direct competitor to Rooftop Energy, because of the fact that they operate in the province of Limburg and are more focused on private investors than companies in the SDE+ segment.

De Vrije Energie Producent (DVEP)

DVEP is a large organization operating in the industrial segment; schools, communities, greenhouse industries and associations. The company is also a supplier of energy with their own trading desk on stock exchanges. The website offers information about the offered products in the field of bio, wind and solar energy. The greenhouse segment has their own tab, with the opinions of current customers and information about events.

From their main website, customers are referred to other websites, meant for the particular segments. Schools are linked towards the 'Zon voor Scholen' page, where principles can find all the information

³¹ (Greenspread, 2015)

³² (Zonnig Onderwijs Nederland, 2015)

³³ (Tautus, 2015)

they need about solar projects. DVEP also offers schools the option for not having to invest.³⁴ Local authorities are redirected to the 'Zon voor Gemeentes' webpage. This small website does not contain a lot of information, but offers clients the facility to sign-up to see what the possibilities for the area are.³⁵

The way in which clients are distinguished and redirected towards other pages is a professional feature that outclasses the website of Rooftop Energy. However, the pages do not contain a lot of information, making DVEP lose their momentum of professionalism. Also, the company lacks transparency about employees, size and the field of operation. It can be concluded that this company is clearly a competitor because it operates in the same target segments. But judging from their website, the greenhouse cultivation is the largest priority for DVEP at the moment.

Own investment

This cannot be seen as a tangible supplier, but companies that import and install the solar panels themselves also decrease the amount of potential targets. Self-installment is rarely seen, for the reason that the construction safety certificate is hard to obtain and the process of connecting the system also requires several certificates.

Substitute Products

In the macro-analysis, the developments of sustainable technology have been thoroughly described. Direct substitute or additive products of solar energy/systems are not advanced enough yet to compete with the efficiency of solar panels. Upcoming thermal energy sources, like the tubes that are heated while using solar panels, are more seen as an addition to the product. If the demand for thermal energy sources and their efficiency rate rises, Rooftop Energy could become the forerunner with this technology. The same goes for the micro-inverters as substitutes for the large general inverters; when the demand get higher, the cost and the efficiency will determine whether RTE will start using these products. Eventually, most of the customers are only interested in the reduction of their energy costs and thereby their total annual savings, not specifically in the product that is installed on their rooftops.

A 'product' that could soon become a substitute is mass-generation of solar and wind energy on fallow areas.³⁶ Large fields of for example pastures are used for hundreds of solar panels or dozens of wind mills. Potential customers can choose to participate in these projects, instead of investing in their own solar system. A downside to these projects is that the return on investment, the costs of installation and maintenance are often a lot higher than expected. Not only the expenses of the solar panels and the frames come into play, but risks of demolition, theft and exposure to the elements make security and extra ballast sleds necessary. Adding that the terrain has to be flat and stable to place the solar systems, resulting in extra labor if this is not the case. Solar systems on rooftops have the advantage that most buildings already have the required electrical installation to cope with the amount of generated energy, but in the field, this electric connection has to be built first. Also, these fallow areas are mainly owned by local authorities, each with their own ideas on sustainable energy. Not all authorities agree on investing in solar energy by using these pastures. Plans are still being fine-tuned to make the concept more appealing to customers, but indications point out that the field-projects will also start gaining participants from the same target group as RTE is focusing at the moment.

Buyer Power

The fixed energy prices of the RTE leasing concept are fine-tuned to the current energy prices. Customers price sensitivity for this matter is quite high; with an higher or equal energy price, customers would not take any actions to change to sustainable energy. This is also the main reason that making use of subsidies is so important to RTE. Without subsidies, it will be near impossible to get under the price for 'grey' energy. For buyers, it is hard to obtain all the information about the subsidies, the concepts and the installations. Due to this lack of knowledge, the largest part of potential buyers are unaware of how they can lower their energy costs. Buyer power and their influence on the business of RTE is therefore small.

³⁴ (Zon Voor Scholen, 2015)

³⁵ (Zon voor Gemeenten, 2015)

³⁶ (Kleinegris, Lucia, 2015)

3.2.2 CONCLUSION MESO-ANALYSIS

The market that Rooftop Energy is operating in can be stated as the industrial segment of the solar energy market. The **market attractiveness** of the industrial segment can overall be seen as high. **Entering** this market as a start-up company is harder than starting up a company in the private segment, for the reason that the customers in the industrial segment are major companies with enormous available rooftop surfaces and large energy consumptions. Realizing projects on these rooftops requires more invested money, because systems and panels have to be in stock to provide the customer with a rapid installation time. The additional administration in the industrial segment is also a fact that should not be easily put aside; apart from normal building and installation certificates, projects need a declaration of 'Advice in Building Quality', proving that the building is capable to hold the ballast of the solar panels. The process of obtaining this declaration can take up to several months.

While the private market for solar energy is a red ocean of small companies trying to obtain small shares of the market, the industrial segment counts less **competitors**. Large competing companies are scattered throughout the Netherlands. The three main competitors of RTE are: KiesZon, Greenspread and 'De Vrije Energie Producent'. All of these have been using campaigns to approach primary schools for solar projects. These campaigns can be compared to the 'Zon Zoekt School' campaign that RTE has been using. The areas in which these companies operate differ from each other; Greenspread fixates their business on the east of the Netherlands, DVEP targets the greenhouse cultivation and local authorities. From all the competition, KiesZon is probably the main contestant for the reason that their target groups are exactly the same as those of RTE. The company has realized projects on schools, SMEs and is cooperating with local authorities on a national scale. The location of Kieszons' main office is 's Hertogenbosch. Tautus, a company that operates mainly in the province of Limburg, cannot yet be seen as a direct competitor, for the reason that they have mainly been targeting private investors on a very large scale. However, with the capital they have probably gained and the housing cooperatives they are targeting, the stepping stone to the industrial segment is nearby.

The final way for customers to realize a solar project is by self-sufficiency. This is not a tangible supplier, but companies that import the solar panels and decide to install them themselves are also a reason for the decrease of potential target groups. However, this does not occur very often, because the ABQ-declaration for installing the solar system is hard to obtain and requires contact with an architect. This and all the other administrative requirements make it often too hard for a company to go through the process alone.

Since the product developments of solar energy have already been mentioned in the macro-analysis, this part of the research has zoomed in on **substitute products** of the RTE concept. Plans are being made to use fallow areas for hundreds of solar panels. Companies and nearby inhabitants can choose to participate in these projects by investing. At the moment, there are quite some risks related to these projects, in the form of theft, demolition and exposure to the elements. These aspects make security and extra ballast sleds necessary. Adding the facts that the fallow areas are often owned by local authorities and that the generated energy has to be transported several kilometers, makes the projects hard to achieve. When this is further worked out however, it could become a threat to the Rooftop Energy concept and cost them potential customers. Overall, the threat of substitute products taking over is still small.

The four forces of Porter together form the '**intensity of the rivalry**'. To sketch the current situation, Rooftop Energy is maneuvering in a market with several competitors. Compared to the private market, the costs of entering the market are high, but the amount of direct competitors is lower. Every large supplier that is competing with RTE is trying to find new ways to obtain a larger market share. Substitute products like installations on fallow areas are still being developed, so this does not seem to become a direct threat so far. With a focus on companies that are suitable for the SDE+ subsidy, RTE has the opportunity to pull in more customers. The case is in what way should the current value proposition, the leasing concept, be adapted to become appealing to different types of companies. The power of buyers is low, due to their lack of knowledge about subsidies and the available concepts. Overall, the industrial market seems to be very attractive for RTE to expand in.

4. SWOT-analysis

After analyzing the internal and external environments, the SWOT model will be used to summary and highlight all aspects that affect the company. As mentioned before in chapter 3.4, the SWOT model contains the characteristics of the company itself (negative and positive features that can be changed) and the external influences on the company; opportunities that can be utilized and threats that should be avoided and responded to.

4.1 SWOT MODEL

Positive		Negative	
I N T E R N A L	Strengths	Weaknesses	
	➤ Strong financial position (Leasing concept USP)	➤ Low product & brand awareness	
	➤ Durable, high-tech, standardized products	➤ No central office location	
	➤ Unique business plan relating to required investment	➤ Long completion time of projects due to safety demands for ballast	
	➤ Short communication lines due to small team	➤ RTE leasing concept for industrial segment is completely dependent on the existence of subsidies	
	➤ Clear process structure and agreements	➤ Lack of promotional activities	
	➤ Successful campaign targeting primary schools	➤ Lack of product presentation	
E X T E R N A L	Opportunities	Threats	
	➤ Technologies develop rapidly	➤ Subsidies ceasing to exist	
	➤ Political support	➤ Funds running out faster due to higher demand	
	➤ CSR and sustainable reporting	➤ Upcoming competition	
	➤ Unexplored market of SDE+ segment	➤ Substitute products in the form of large solar projects on fallow areas	
	➤ Smart cooperation with LED-company to further reduce energy costs		

4.2 SWOT EXPLANATION

Strengths

Rooftop Energy is a growing company with a unique business plan. The concept of signing a long-term contract for solar energy without having to invest, install or doing the administrative mess is one of the most important selling arguments. This process is completed by a small, but efficient team with a clear structure and short communication lines. With an approach that is based on subsidies of the Dutch government, Rooftop Energy has managed to realize several projects in the industrial segment already. The campaign 'Zon Zoekt School' has proven to be a successful marketing strategy to realize dozens of solar projects at primary schools.

Weaknesses

There are several downsides of the company that are difficult to improve that can be stated as 'weaknesses'. When looking at the industrial segment, governmental subsidies are crucial to maintain the RTE leasing concept. If the subsidies cease to exist for some reason, this will heavily affect the business of RTE. The industrial market Rooftop Energy is operating in also uses direct marketing where customers and prospect are primarily reached by Public Relations and word-to-mouth marketing. The industrial market has not yet fully opened up to RTE, making it hard to take advantage of this way of direct communication between companies.

The RTE leasing concept also involves taking care of all administrative aspects. This proposition is time-consuming due to the process of obtaining an ABQ-declaration. Close contact with an architect concerning the construction of the building is needed. The process can take up to several months and even after the completion of multiple projects, it has not become more fluent.

The final point that can be seen as a weakness is the location of the RTE office. The RTE-office in Waddinxveen is not the most accessible location for customers. Also due to the fact that the office is shared with BESTLED, also a growing company, the amount of workspaces is becoming an issue. An advantage so far has been that sales meetings are mainly held at the company of the prospect.

The quantity of promotional activities are not used to improve awareness. At the moment, RTE is lacking marketing and a good product presentation; the website and propositions do not refer to the products that RTE is using for the projects yet. Obviously customers are mainly interested in their annual savings, but the products that will be used to achieve these savings might also count as useful information. Promoting the display that shows the energy generated is also a possibility, for the reason that customers can use this tool on their websites and in their businesses.

Opportunities

Due to the rapid developments of the market for sustainable energy, there are loads of opportunities to invest in. The ones that Rooftop Energy can benefit from the most are divided in the fields of 'product development', 'sustainable reporting' and 'politics'. The product with the most potential to increase energy savings is Thermal PV. Solar panels are then also used to heat water or air, a method that can increase energy generation by up to 300%. Rooftop Energy should keep an eye on this development. Combining the RTE concept with LED can also help to further reduce annual energy costs of companies. Rooftop Energy is known in specific circles of companies, but to achieve more sales, the amount of 'aware' companies should be higher. Furthermore, companies tend to be more transparent to customers when it comes to information about production, employees and policies. They carry out this information with annual sustainability reports, also known as Corporate Social Responsibility reports. Offering a way to help customers with making a draft version of a sustainable report could be another selling argument.

Reliant on how strictly the government wishes to achieve the objective of 14% sustainable energy in 2020 funds like the SDE+ subsidy will be determined. This can be seen as an opportunity, since RTE will be able to maintain higher margins with more available subsidies, but also as a threat, for the reason that more available subsidies will also aid the competition. An increase of subsidies to stimulate sustainable energy might even result in more direct competitors.

Threats

Compared to the private market for solar energy, the industrial segment is less of a red ocean full of competitors. Rooftop Energy has a handful of direct competitors, that has barely been increasing, due to the costs of entering the industrial market. The subsidies are a constant threat, for the reason that the RTE concept for the industrial market is entirely based on the SDE+ subsidy. RTE cannot control the yearly estimated budget for sustainable and is therefore dependent on the government.

4.3 CONFRONTATION MATRIX

The information gained from the internal and external analysis, concluded in the SWOT, can now be merged into a confrontation matrix to see how all features interfere with each other.

The used numbers and colors can be explained as follows; the table shows how strengths and weaknesses on the left influence the way RTE can respond to opportunities and threats. Bright green-colored squares with the number '2' indicate strong positive influences that can be utilized for the eventual marketing strategy. Red-colored squares with the number '-2' point out combinations of factors that could endanger the strategy.

Table 5.3 Confrontation Matrix RTE

		Opportunities					Threats				
		Technologies develop rapidly	Political Support	CSR and sustainable reporting	Unexplored market of SDE+ segment	Cooperation with LED-company to further reduce costs	Subsidies ceasing to exist	Funds running out faster due to higher demand	Upcoming competition	Substitute products in the form of large solar projects on fallow areas	
Strengths	Strong financial position (leasing USP)	2	0	1	1	2	0	-1	1	0	6
	Durable, high-tech, standardized products	2	0	2	2	2	-2	-1	-1	-1	2
	Unique 'leasing' business concept	2	2	1	2	1	-2	-2	0	0	4
	Short communication lines due to small team	1	0	2	1	1	-1	0	0	0	4
	Clear process structure and agreements	1	1	2	1	1	-1	0	1	0	5
	Successful campaign targeting primary schools	0	0	0	1	0	0	0	0	0	1
Weaknesses	Low product & brand awareness	1	0	1	-2	0	-1	0	-2	-1	-4
	No central office location	0	0	0	-1	0	0	0	-1	0	-2
	Long completion time of projects	-1	0	0	-2	-1	0	0	-2	-1	-7
	RTE leasing concept depends on the existence of subsidies	-2	1	-1	-2	-1	-2	-1	-1	-1	-12
	Lack of promotional activities	1	0	1	-1	0	0	0	-1	-1	-1
	Lack of product presentation	1	0	1	-1	0	0	0	-1	-2	-2
		8	4	10	-1	5	-9	-5	-7	-7	

The graph clearly shows that several strengths and weaknesses have more influence on potential strategies than others. Strong aspects of the company like the feasibility, the unique concept and the short communication lines should always be used at their fullest to approach customers and to improve the system. The fact that the whole company relies on governmental subsidies is an overall weakness, but for

the reason that the European Parliament and the Dutch government are highly stimulating renewable energy sources with new laws and declarations is a signal that the subsidies are not in danger.

Opportunities that seem the most lucrative at the moment are the developing technologies, mainly in the form of thermal energy, and sustainable reporting. Even the weakness of low brand awareness could be improved by involving these two features in the concept. Due to the possible cooperation with a company specialized in LED, energy costs can be reduced even further. Question is whether customers feel the same about these recent developments. The unexplored SDE+ market does not seem to be an opportunity, according to the graph, but this is mainly dragged down because of the dependence on subsidies. Subsidies ceasing to exist is a threat, but not an imminent one that could occur in the following two years.

5. In-Depth Interviews

Research from the external analysis and the SWOT-analysis have proven that there are opportunities for RTE to grow in the industrial segment. It can be assumed that the leasing concept does not appeal to every potential customer and that every type of business has their own wishes and demands concerning the value proposition. After several in-depth interviews it should be possible to conclude how the concept can be improved and specified on the different types of businesses in the industrial sector. To produce a marketing strategy for Rooftop Energy, there should be a clear overview of where the potential customers in the industrial segment can be found. These customers have to meet several requirements to fall in the SDE+ category. The easiest way to determine where most customers are located is by finding out where the largest financial business hubs are in the Netherlands. Therefore, this buyer analysis is split into the sections 'location' and 'business types'; After determining where all the financial clusters are found with the help of Google Maps, an overview will be given of the types of companies that are found in the 4 largest clusters.

It can be assumed that different types of companies all have their own special, ideal way of approach. For that reason, the interviews that are eventually organized with the companies are separated among the most present types of companies. For a full image of what the customers opinion is, all types of organizations should be interviewed, but unfortunately, the time for the research is scarce and therefore the interviews will be limited to the most represented business types.

5.1 PROSPECT LOCATION

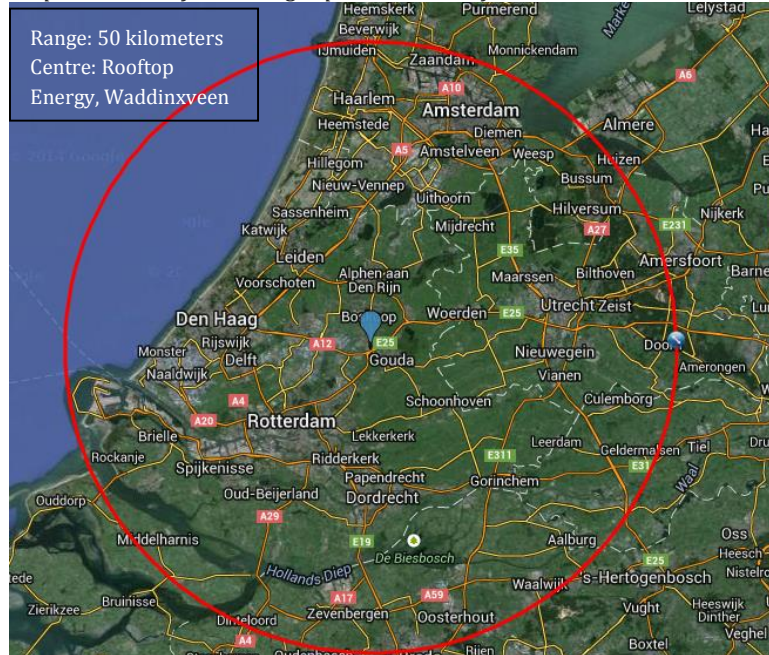
As mentioned before, RTE is only interested in doing business with corporate companies, for the reason that private solar PV projects are less profitable. Because of this fact it is only interesting to investigate the amount of rooftop surface that is available on non-residential buildings. Finding and contacting every company with a large suitable rooftop in the Netherlands is almost impossible. Therefore, the research will be specified to clusters of non-residential buildings in urbanized terrain in a range of 50 kilometers of Rooftop Energy with their industrial clusters.

The maps below give an overview of these clusters, based on the information gathered with more closely examined maps. The full research and all maps can be found in Appendix IV.

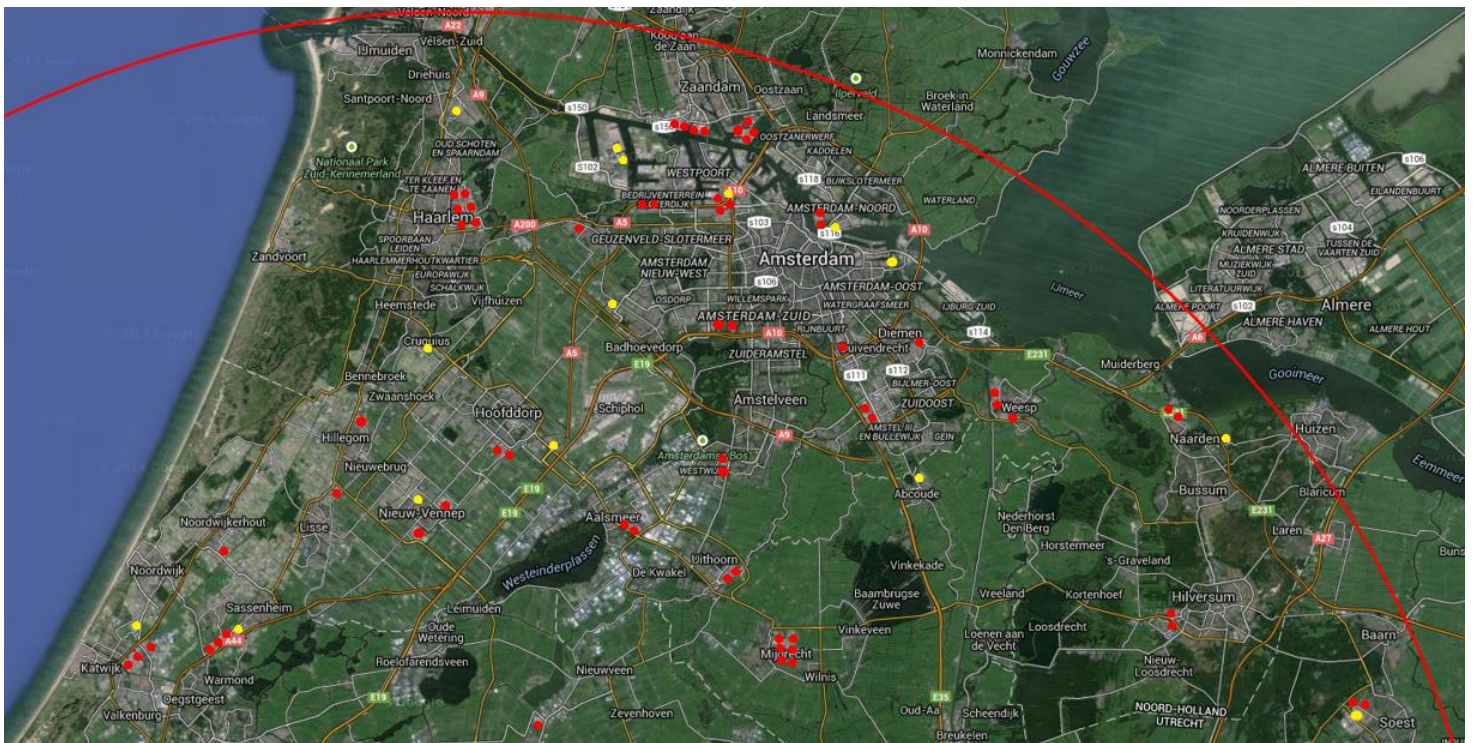
The dots on the map represent areas of 25 hectares; 500m by 500m. **Yellow** dots indicate medium clusters where $15 < X < 25$ buildings. **Red** dots indicate large clusters where $X > 25$ industrial buildings. Natural areas and small villages have been left out of the research do to their lack of urbanized terrain. **Green** circles that were used on the maps of the Appendix have been left out of the demographic analysis, because they represented clusters of $10 < X < 15$ industrial buildings with an average flat roof surface of 500 m², which would not be interesting enough compared to the abundance of 'red clusters'.

The radius around Rooftop Energy will include the provinces of Utrecht, Zuid- and Noord-Holland, Zeeland and Gelderland. A prospect or non-residential building has to meet the following requirement; **a minimal roof surface of 500 m²**. The map beneath will show the radius, the following maps the most important industrial clusters. For the reason that the Northern, Western and Eastern clusters had the most clusters and therefore showed the most potential during the analysis, these maps are shown below. The other segments and the complete, detailed maps have been added to Appendix IV.

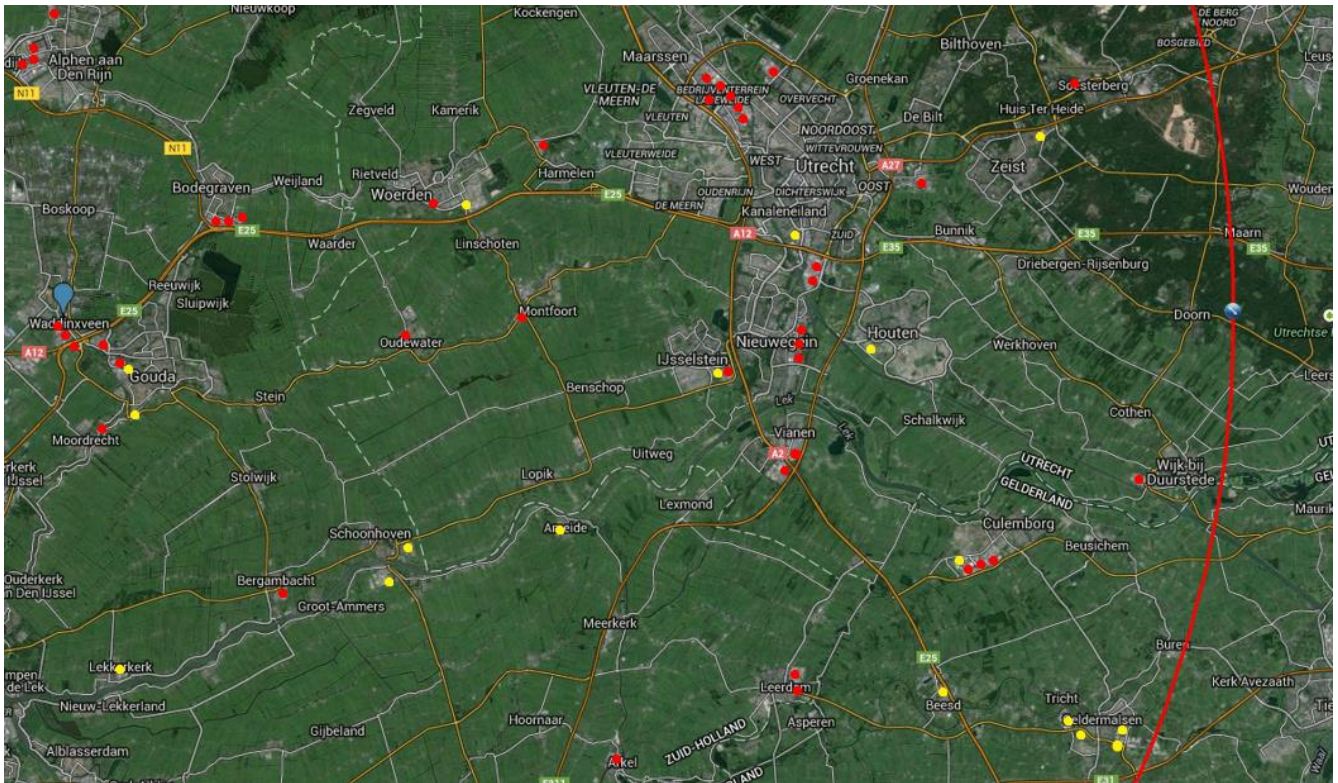
Map 5.1 Radius for Demographic Research for Business Hubs



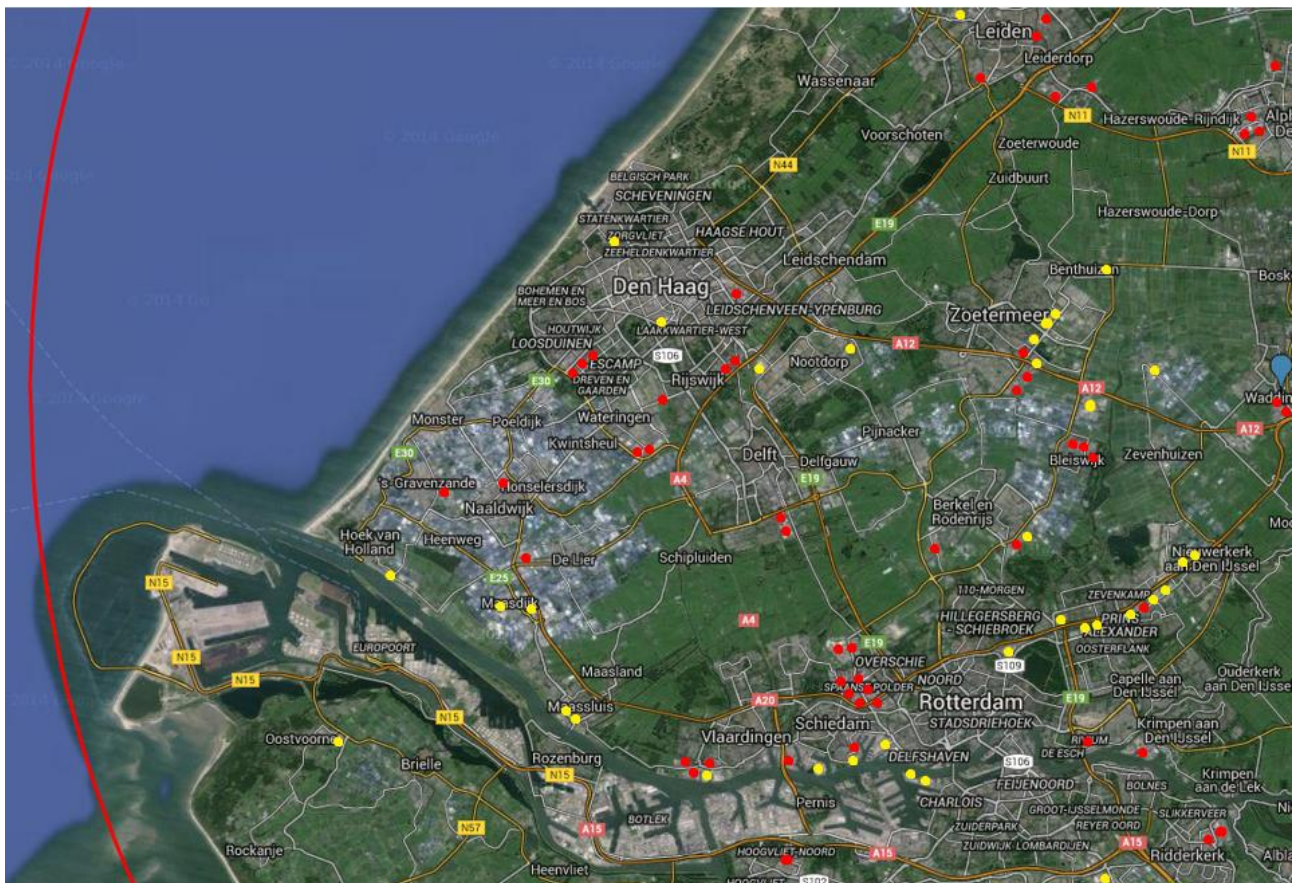
Map 5.2 Industrial Clusters Northern Segment



Map 5.3 Industrial Clusters Eastern Segment



Map 5.4 Industrial Clusters Western Segment



As can be concluded from the research for business hubs, the urban agglomeration of the Netherlands is full of clusters of companies with large rooftops. Especially the cities of Rotterdam, Amsterdam, Utrecht and Waalwijk have enormous areas with non-residential buildings. The four biggest clusters in the determined radius with all more than or with six circles in three km² are; the harbor of Waalwijk, Rotterdam North-West/'Spaanse Polder', industrial terrain 'Lageweide' in Utrecht and the 'Waarderpolder' in Haarlem.

5.1.2 BUSINESS TYPES

These four large industrial areas will be zoomed in on to find out what kind of companies are represented and what field of business they operate in. The full list of summed-up companies can be found in the appendix. Due to the limited amount of time for the research, zooming in on all clusters is not possible, therefore the earlier mentioned **four** clusters will be used. These clusters all have 6 or more red circles on a surface of 3 km². For the clusters closest to the office of Rooftop Energy, the ones that will be visited for further research, tables with most present business types have been added and described on the next pages. For the other two clusters, these tables have been added to appendix IV.

Table 5.7 Most present business types Lageweide Utrecht

Company Type ³⁷	Amount
#1 Service Provider	192
#2 Storage Depots/wholesalers	190
#3 Technical installation (housing & SME)	55
#4 Retail Business (also online)	54
#5 General Production of user goods (mainly ICT)	44
#6 Constructions and Architecture	43
#7 Logistics	37
#8 Garage accomodation (car & lease)	34
#9 Production (machinery & constructions)	20

'Service providers' consist of all kinds of companies that are specialized in the field of (consulting) services. Their buildings are only used as offices for administration, sales and meetings. Company types vary from consultants to travel agencies.

Storage depots are large buildings that are used by organizations to store their materials and products. Some storage depots have a sales team on location for direct sales on a large scale to visiting customers. Energy use varies, depending on the type of product that is stored. Storages with large cooling installations that are used as refrigerators for food products constantly use a large amount of energy. Depots with non-food articles use less energy throughout the day.

'Technical installation', this sector represents all companies that are operating in the maintenance and furnishing of houses and non-residential buildings. Activities consist of installations in the field of interior, exterior and the placement of devices in buildings. The companies use their workplace for offices, vehicles and as storage for materials/equipment. Energy use consists mainly of lights and electricity for the offices.

Compared to the harbor of Waalwijk the industrial area of Utrecht is more often used for storage and for organizations that offer services to customers. Frequently seen company types are mediators for trading affaires, advertising companies and security organizations. Other types of businesses in Utrecht are mainly focused on ICT, development of products, sales and monitoring computer systems.

³⁷ (Oozo.nl, 2015)

Table 5.8 Most present business types Rotterdam Spaanse Polder

Company Type ³⁸	Amount
#1 Storage Depots/wholesalers	227
#2 Service Provider	157
#3 Garage accomodation (car & lease)	72
#4 Technical installation (housing & SME)	65
#5 General Production of user goods (mainly ICT)	55
#6 Retail Business (also online)	51
#7 Logistics	40
#8 Constructions and Architecture	17
#9 Production (machinery & constructions)	10

As can be concluded from the table above, the industrial area of Rotterdam North-West is also filled with storage depots. Different from the other industrial terrains, a third of these warehouses are used for the storage of vegetables and fruit. Most of the others are used as depots for machinery. Service providers are again operating in the field of guidance in company management and in the real estate business. Furthermore, the ‘Spaanse Polder’ is known for its abundance of car garages and car repair services.

Market Potential among company types

With the specific business model of Rooftop Energy, not all of the present company types in the clusters are seen as potential customers. Organizations that lack energy consumption on a large scale will not be able to obtain the SDE+ subsidy and will therefore not be able to fully profit from the RTE value proposition. Some types of companies were substantially affected by the economic crisis and are not financially capable of investing or are not even sure of keeping their heads above water. The energy use, opinion about the RTE concept and financial feasibility of the companies are all data that are crucial for creating a long-term strategy for RTE. This information will be gathered by doing personal interviews with managers and directors of the most represented company types. For the reason that the time for doing research is too short to determine the potential of all the companies mentioned above, it can be assumed that the tables of the four largest clusters and their business types also represent the other ‘red’ clusters in the urban agglomeration of the Netherlands. Therefore, the market potential of the SDE+ segment contains several hundreds of companies, most of which are storage depots and service providers.

Conclusion prospects

With a clear overview of all the company types present in the largest industrial clusters of the urban agglomeration of the West of Holland, it can be concluded that most of the buildings in these areas are used for storage. The products that are stored in these warehouses differ, depending on the location of the industrial area; North-West Rotterdam has a lot of fruit/vegetable storages, Haarlem stores mainly furniture, wood and computer software and Utrecht has warehouses full of consumer goods that are also sold directly from the storage. A remarkable fact is that none of the industrial areas are used for the mass processing of raw materials. The buildings are used for producing general goods, but only Waalwijk has a few companies that work with raw materials.

Other types of companies that are well represented in the chosen clusters are service providers. These large, office-like buildings are mainly used for administration and use less energy than the earlier

³⁸ (Oozo.nl, 2015)

mentioned storage depots. The main costs for energy are spent on lighting, electricity for computers and ventilation. Examples of service providers are accountants, tax offices and administrative companies.

Technical installers are part of the third party that is represented the most in the clusters. These companies operate in the field of furnishing houses and non-residential buildings. Activities consist of installations in the field of interior, exterior and the placement of devices in buildings. The workplace is used as an office, vehicles storage and as a depot for materials/equipment. This is also the reason why the energy use of these companies can be compared to that of service providers. It might be a possibility that these two types of companies react the same when introduced to the concept of RTE, judging from the fact that their energy use and available rooftop space is comparable.

5.2.1 INTERVIEW OBJECTIVE

The main goal of doing in-depth interviews is getting insight in the customer's opinion on sustainable energy, and more specifically, the general opinion of the value proposition of Rooftop Energy. Analyzing the data from the respondents will be used to determine the most effective aspects of the RTE concept for doing sales. This information will then be used in the strategic plan to further elaborate the most lucrative strategy for the company.

The chosen approach for these face-to-face interviews is 'in-depth', in which the interview touches the main topic and due to the open-ended questions can still turn into a small discussion. Because respondents are mainly directors and managers, with short amounts of available time, not all determined questions will be open-ended. The script for the interview can be found in the appendix, it has been written in Dutch, because all interviews will also be carried out in Dutch. The reason for in-depth interviews is that detailed information about the customer is needed. Other types of research like focusing on groups would be impractical. The objective of the interviews is to find out if the respondents and the type of company they represent are truly targets for Rooftop Energy. The interviews should result in useful information about barriers that keep customers from investing in solar energy and about incentives that could be used by RTE to convince them. The totality of sub questions that should be answered by these interviews can be found in the appendix.

5.2.2 RESPONDENTS

Respondents are determined by using the research of the industrial clusters. The four largest clusters in a radius of 50 kilometers of Waddinxveen show an abundance of several types of businesses. Storage depots of food and non-food products, service providers, transport companies and businesses that operate in the field of construction are all active in the areas and show potential for the RTE leasing concept. As mentioned before, for a full research on the opinion of every single type of business, more time would be needed.

For the in-depth interviews, the clusters of Rotterdam Spaanse Polder and Utrecht Lageweide can easily be reached from the main office of RTE and these areas are also suited for doing multiple interviews in a short amount of time. For the reason that travelling is time-consuming and the interviews only take up to 30 minutes, the other interviews are carried out with nearby companies that fall within the types of companies that have been mentioned earlier.

Respondents are directors/owners, managers or other employees with the influence to make decisions in the field of investments. Companies are randomly selected, but the minimal requirements can be stated as follows; the building has to have available rooftop surface to realize a solar project. This can easily be checked on forehand by using Google Earth. Furthermore, interviewing one kind of company type would not yield enough information to represent the total target market and to form a diverse strategy for Rooftop Energy. That is why a maximum of three companies per business type is maintained.

Before and during the time of the interview, emphasis will be put on the educational purpose of the interview, instead of giving the conversation a commercial aspect. Therefore, the company name RTE will rarely be mentioned. The value proposition of RTE in general is discussed without the name of the company. This approach allows the respondent to judge the concept with an objective view.

5.2.3 INTERVIEW RESPONSES

Reactions of respondents show a great variety. To sort the obtained information in a logical order, a summary of the in-depth interviews will be given for every business type. The full interviews have been added in Appendix V. This appendix also contains the full research plan and scripted version of the interviews.

Cooled Storage depots

Companies that specialize in food storage use large warehouses that constantly have to be cooled. These large refrigerators and freezing installations are the reason for an immense amount of energy use. The buildings are used as locations for storage, from where products are transported to market places or retail stores like greengrocers, or as the location for direct sales. Products are imported from other European countries, but some are also grown in the Netherlands by local farmers. None of the respondents claims to be involved in some form of sustainable entrepreneurship. The option that each of the respondents have considered is making use of electrical trucks. Only one interviewee has been approached and informed about solar panels. Busy working days with a lack of remaining time are the reason that this has not taken place yet.

When asked about subsidies, sustainable energy in the Netherlands and leasing concepts for solar systems, respondents do not seem to be informed. After explaining the Rooftop Energy concept, respondents react skeptical, especially because of the length of the contract. With the prices of energy fluctuating so heavily, the RTE concept of signing a contract for several years seems more like a risk and a gamble than a well-considered decision to them. The generated amount of energy is also too small compared to the total energy use of the companies, in the eyes of the respondents.

Clients do not seem to be interested in the corporate social responsibility of the company, this means that except for the green label on several products, no other actions are taken to demonstrate sustainability. This is the reason that the respondents do not seem eager to participate in using renewable energy sources; clients are uninterested and the profitability and return on investments are still too low.

Quite some diversity in the response to questions about desired communication can be concluded. Brochures seem to appeal to all respondents, but the rate in which these are read can be doubted. The majority of the interviewed managers do not wish to be contacted directly by companies.

Non-cooled storage depots

These large warehouses have around the same size as the cooled storage depots, but are mainly used to store non-food articles, for example furniture, vehicles and machinery. Customers of these companies vary, depending on company type. Examples of clients are local buyers, restaurants, but even international companies. The reason that these different kind of storage depots have been placed in the same category is the fact that they all use the same devices for their largest energy consumption; lights, ventilation systems and machines, depending on the company type.

Two out of three respondents claim that their company is active in the field of sustainability. One company owns several energy neutral establishments and suspects that this also influences the clients' opinion in a positive way. The other company shows Corporate Social Responsibility by writing annual sustainability reports, mainly about the production process of furniture. Only one of the interviewees has been informed about the Dutch regulations for renewable energy sources and has knowledge about the SDE+ subsidy. What concerns the change to renewable energy sources, most companies are informed about LED. A combination of LED and solar panels is also worth considering, according to the respondents.

The information about the RTE concept is received with enthusiasm, especially the fact that RTE takes care of all administrative aspects. Respondents are less intrigued by the contract part of the offer, mainly because most of the buildings are not owned by the companies but rented. With the option to bind the contract to the building instead of to the company, these barriers are taken away, but what remains is the length of the contract. Owners have to sell the contract to new tenants, which is mostly interesting for companies that require a sustainable image.

Concerning communication channels, most respondents can be easily approached by telephone, but they claim that the most successful way to sell a project is a personal business meeting, face-to-face. This way the managers can easily judge whether they trust the company/salesman.

Transport companies

The interviewed directors of these companies are mainly responsible for managing transportation between warehouses of organizations. Deliveries are picked up and transported in the Netherlands, but also throughout the north-west of France. The building in which the companies are situated are self-owned and used for storage and offices. Several products have to be kept cool, that explains the presence of freezing installations. Energy consumption is mainly divided in the electricity for the offices and the small amount of cooling cells.

Most of the invested capital of these companies is included in the trucks. Each of the organizations own several trucks that form the foundation of the business. Neither of the managers is willing to invest in renewable energy sources anytime soon. The reason for this is that sustainability means nothing to their clients and most of the costs and investments are the trucks. Therefore, electrical/sustainable trucks would be an option, if the offer is lucrative enough. Competition with other transport companies is based on price, not on the shown social responsibilities of the companies.

The RTE leasing concept is not received with a lot of interest. The contract is criticized because of the long duration and the managers have the feeling it would be more lucrative to invest themselves, instead of letting RTE take care of the project. Respondents add the fact that transport companies are constantly busy and do not have a lot of time to carefully consider offers for renewable energy sources. This is also the opinion about possible communication; when the time is there, the companies will take the initiative, not the other way round.

Service providers

A crucial point of service providers situated at industrial clusters is that the building might have enough rooftop surface available, but with more companies operating in one building the chances that all companies agree to change to renewable energy sources is quite small. For that reason the interviewed managers are all working at a company that occupies the largest part of a building and thereby also have the most meaningful say in the matter.

The buildings of the interviewed managers are used as offices, where energy is used to power computers, lights and ventilation. Depending on the field of business, some respondents claim to already be active in sustainable entrepreneurship. The company that is often hired by the government to give advice on suburban flora can obtain major advantages in sales with help of the CO₂ prestatieladder. The higher the company gets on the ladder, the more fictive discounts are handed out to them. For the reason that the building has a different owner, a solar project has not yet been realized.

Respondents all seem to be receptive when it comes to the RTE leasing concept. Especially the administrative argument seem to be a positive factor. Yet, the concept might be improved by lowering the contract duration and adding a part for sustainable reporting. Service providers are not bound to buildings for a decade, that is why a contract of that duration also seems odd in the eye of the respondents. Interviewed managers place great value on personal sales meetings and telephonic contact. Due to a great amount of spam, approach by email is not appreciated.

5.2.4 DECISION BARRIERS

Each type of business seems to experience different kinds of barriers when considering solar energy. This chapter is a short summary of these barriers.

Cooled storage depots

Overall, these companies do not consider solar energy an option for the future. Reasons vary, but the overall reaction seems to be that the yearly savings with this renewable energy source are too small, in terms of the percentage of total energy used. Electrical trucks are considered to be first in line when it comes to investing in sustainability. CSR and a 'green' image are not important to clients, and therefore no argument for the companies to consider the concept. The length of the contract is seen as a long commitment, too long for most of the interviewees.

Non-cooled storages

The percentage of energy savings does not seem to be a problem and the concept is even received with enthusiasm, mainly because of the lack of administration. Interviewees have the feeling that the solar energy can best be combined with LED to get the most out of it. However, most buildings are not owned by the company and the fact that the contract can be signed for the building is not convincing enough. Sustainable reporting could help these companies, because clients seem to pay attention to this aspect, but combining the RTE proposition with LED seems to be more convincing.

Transport companies

This type of business does not seem to be a target group that is worth investing time in. The buildings are used as offices and sometimes for temporal storage of products, but overall the amount of energy use is low. Companies are more interested in the improvement of their vehicles, for example by purchasing electrical trucks. Clients are not affected by CSR and with the sustainable products that are available now, transport companies are almost impossible to approach.

Service providers

The type of business that shows the most potential for making profit are companies that are operating for the government. Fictitious advantages are gained by these companies when they show their CSR and their position on the CO₂-prestatieladder. For these companies, some help in the field of sustainable reporting can aid them to gain an edge on the competition that could yield them ten thousands of euros. This approach could be very effective, but interviewees also state that not all office buildings are owned by the companies and that the length of the contract interferes with the decision.

6. Conclusion and Recommendations

6.1 CONCLUSION

The starting point of the research for the Dutch market for solar PV was finding an answer to the main question, stated as follows;

“What would be the most effective way for Rooftop Energy to expand in the SDE-segment in the Netherlands by using their unique value proposition?”

Taking a look at all the acquired facts of the desk research, Rooftop Energy is at the brink of tapping from a new, promising market. Solar energy is one of the fastest growing energy sources in the world and according to all the decisions of the European parliament, this growth is likely to continue and be stimulated. With the SDE+ subsidy of the Dutch government, RTE is able to offer a leasing concept for solar projects, where customers sign a contract for a fixed energy price with a duration of between 10 and 15 years. This proposition also states that all administrative actions that are needed to realize the project are dealt with by RTE; the customers are not involved in this process. The company has a small team and is able to work effectively. A downside to the business of solar energy is that large projects require safety declarations, these can only be obtained with the approval of an architect. The main weakness of RTE itself is that the whole leasing concept is entirely based on the existence of subsidies. However, judging from all the stimulations of the European government and their objectives for 2020, ceasing subsidies do not seem to be a major threat for the coming years.

One of RTE's main objectives is obtaining a market share of 10% of the total solar PV in 2020. Because of the stimulations of the Dutch government in the form of subsidies, the industrial market shows the most potential for expansion. The RTE leasing concept can be fully applied in this market segment, but research showed that potential customers have some barriers when it comes to changing to solar energy. With the help of the information gathered from the in-depth interviews, it can be concluded that the SDE+ segment consists of many types of businesses, each with their own barriers and opinions when it comes to being interested in the RTE leasing concept. The target groups that seem to be the most lucrative for RTE are the ‘service providers’, ‘cooled storage depots’ and ‘non-cooled storage depots’. The main obstacle of the managers of these companies seems to be the length of the contract, followed by the fact that cost reductions are not high enough. The macro-analysis has shown that improving technologies and sustainable reporting are opportunities for RTE, and this has also been confirmed by several of the interviewed managers and directors of the companies.

For this reason, it can be concluded that RTE can reach their objectives by expanding in the SDE-segment. The lack of active competitors, buyer power and substitute products shows that the industrial market has a high level of attractiveness. However, this industrial market consists of several types of businesses. Only a few of these seem truly interesting to RTE. Research has shown that the most present business types in the industrial clusters of the Netherlands with the most potential for RTE are 'service providers', 'cooled storage depots' and 'non-cooled storage depots'. By looking at their decision barriers, it can be said that each of these company types require separate marketing strategies to be approached by RTE. The interviewed managers and directors of the companies highlighted different aspects that could be improved. In paragraph 6.2 and chapter 7, these opinions are used to adjust the current concept.

6.2 RECOMMENDATIONS

The recommendations mainly concern the current leasing concept. To gain a strong foothold in the industrial market, there are several types of business that look promising; service providers, cooled and non-cooled storage depots. The barriers that these companies have against solar energy can be taken away by adding extra features to the concept. These extra features can be seen as *options*.

The Ansoff matrix, shown in diagram 6.1, describes the four types of strategies that companies can choose to expand their business. 'Market penetration' implies taking customers from the competition or raising the production. 'Market development' insinuates selling the same product in a different market. The growth strategy 'product development' means improving your current products or selling new products to the same target group. The final strategy 'diversification' includes a risky action of entering a new market with a new product.

To start expanding in the SDE+ segment, RTE should start with the implementation of the three strategies that are described below. These options can all be applied **at the same time**.

Diagram 6.1 Ansoff Matrix



Option 1: *Approaching 'service providers' by adding assistance with sustainable reporting to the current value proposition of RTE.*

Service providers, especially the ones that work for the government and local municipalities, can gain a lot of advantages with sustainable reporting. To approach this target group, RTE should emphasize the fact that they can help companies with their reports. Making a QuickScan of all energy use and writing a plan on how to contribute to sustainability with solar energy is not a time-consuming activity for RTE, but it can help the companies a few steps on the CO₂-prestatieladder, giving them a competitive edge. Therefore, this approach could make the concept very attractive to service providers. The market potential for service providers can be derived from the analysis and the tables of paragraph 5.1.2. For the four largest clusters, the amount of service providers was estimated at a number of 489. These are just the potential targets in the largest clusters, so it can be concluded that with the amount of 'red' clusters in the agglomeration of the Netherlands the market potential for service providers is estimated at multiple hundreds of companies. RTE will not be able to contract all of these businesses, because some will not be eligible for the SDE+ subsidy, or have a lack of rooftop space. These aspects should be looked at before contacting the managers and directors of the companies. When looking at the Ansoff matrix, this strategy can be described as market penetration, whereas the product and the SDE market stay the same, growth is achieved by raising the market share with an extra feature; sustainable reporting.

Option 2: *Approaching 'cooled storage depots' by adding Thermal PV and LED to the current marketing mix of RTE.*

Due to the large energy consumption of the cooled storage depots, the current system does not generate enough energy to make it worth considering for these companies. With the upcoming development Thermal PV a solar system will be able to produce much more energy, increasing the annual savings. RTE should add this to the concept and combine it with the possibility of LED, then the heightened cost

reductions should be enough to convince the majority of the cooled storage depots. This strategy is a combination of product development and market penetration, according to Ansoff; introducing a new product, Thermal PV, to an existing market and adding an already known product, LED, to the marketing mix of the company. The market potential of this target group can also be concluded by the cluster analysis of paragraph 5.1.2; the four largest clusters consisted of 643 large storage depots. These buildings are non-cooled and cooled, implying that the market potential for these two target groups is shared. In the urban agglomeration of the Netherlands thousands of these storage depots can be found and they can all be a part of the market potential. For RTE, it is necessary to observe the rooftops and the energy use of the potential customers first, before making a proposal.

Option 3: Approaching 'non-cooled storage depots' by adding Thermal PV and LED to the current marketing mix of RTE.

For non-cooled storages the concept requires less changes. Depending on the energy use, LED and thermal PV can also be used for these companies. More energy savings seem to be the key to success. It can be assumed that because these companies have a lower energy consumption than cooled storage depots, thermal PV might not always be an option. Storages do not seem to experience any benefits from sustainable reporting and a QuickScan for energy use to get them on the CO₂-prestatieladder is therefore not needed. When looking at the Ansoff matrix, this strategy is also a combination of product development and market penetration. The market potential of this target group is shared with 'cooled storage depots' and is explained in option 2.

For the reason that transport company are more interested in improvements of their vehicles, RTE should not interact with these companies yet. Electrical vehicles are a whole different market than the one RTE is operating in, and it will require other skills to switch to this product.

Contract

Overall, the length of the contract is an obstacle for the majority of the companies. For that reason, RTE should change this aspect. Contracts of 3, 5 or 7 years tend to be more attractive to companies than signing for 10+ years. All options and their implementations have been further elaborated in chapter 7. With a correct approach, the new proposals could be beneficial for all parties. If RTE stick to these recommendations, it should be possible to obtain a large market share and achieve all the objectives.

7. Implementation

This chapter will describe how RTE has to adapt to match the concept to the companies. From the four interviewed types, three show potential for RTE, each of these require a different approach and therefore multiple propositions will be worked out. The length of the contract will be improved and implemented for every type of business. All of the strategies can be applied at the same time. The way to approach the target groups is by increasing the amount of promotional activities.

7.1 CONTRACT DURATION

Almost every interviewed individual has stated that the contract period of 10-15 years is too long and that this would hold them back from changing to solar energy. The 'leasing' concept, especially the administrative 'caretaking' by RTE is seen as a positive feature and will therefore remain unchanged. The goal for RTE is to offer an accessible concept. This can be done by giving customers several options and offering the product to them in a form that is also often seen with mortgages.

The best way for RTE to make use of this 'mortgage'-form is by offering clients the option of signing a contract for a length of their choice. The fixed energy price is then dependent on the length of the contract; a longer period results in more benefits, a lower energy price. Of course the difference between the price is only a few cents, but on a yearly basis this will mean hundreds of euros. An example of what the options of the new contract might look like can be found in table 7.1. As can be seen, the customer has the option to choose between three, five or seven years. These contract times come with their own fixed energy price per kWh.

Table 7.1 RTE Renewed Proposition

Mark your choice	Duration of contract	Fixed energy price/kWh	Estimated energy production (kWh/year)	Monthly payment to RTE*	Percentage of annual savings
<input type="checkbox"/>	3 years	€0.072	68,850	€413.1	7%
<input type="checkbox"/>	5 years	€0.07	68,850	€401.6	8%
<input type="checkbox"/>	7 years	€0.065	68,850	€372.9	10%

*Monthly amount of energy generated by solar system x price per kWh

This proposition is based on a fictitious solar project with 300 solar panels. Each panel provides approximately 255 Watt peak (Wp), resulting in 76.5 kWp. With an average efficiency of 90% the project will generate up to 68,850 kWh/year. The phase in which the request for the SDE+ subsidy is applied determines the amount of subsidy, and therefore also what fixed price RTE can offer. A 7-year contract should offer the customer the maximum amount of discount that RTE is able to provide. Longer contract periods result in a higher percentage of annual savings. At the end of the contract, clients have to choose to renew their contract, or to purchase the project from RTE. This new form can be used for every SDE+ target group. The offered products in the remaining part of the proposal differ for each type and are mentioned below.

7.2 SERVICE PROVIDERS (OPTION 1)

This target group, especially service providers that operate for the government and local municipalities, show the most potential for RTE. Chapter 4.1.4 with the environmental part of the macro-analysis has shown that companies are trying to be more transparent towards their customers. They do this by writing annual reports about sustainability. For the government, sustainable reporting is a reason to reward companies. A business that is higher on the 'CO2 prestatieladder' applying for a project will have a competitive edge. Solar energy can contribute to a company's sustainability, but it does not directly help companies with their position on the ladder. This is the reason that RTE should add a feature to the concept to assist with this aspect. It is possible to make use of a QuickScan to map out all energy consumption of a building. Combined with a plan to improve sustainability in the company, the solar energy, the company will have the majority of the information to get to step 3 on the ladder. The next steps are interacting with other companies in a sustainable way, unfortunately helping with these steps will take too much time and effort for RTE. Because RTE has already completed several projects at governmental buildings, their network should be enough to find companies that are interested. The largest part of the respondents have stated that personal contact and business meetings would be the most effective way of communicating. For this reason, RTE can stick to the approach that they are already using at the moment for their original target groups. With the 'mortgage'-contract and the assistance with sustainable reporting feature, RTE should be able to obtain a large market share in this target segment.

7.3 COOLED STORAGE DEPOTS (OPTION 2)

As stated in the macro-analysis about technology in chapter 4.1.4, Thermal PV is a recent development that has the potential to increase energy savings by an enormous amount. Tubes are installed under the solar panels to transport air or liquids. The temperature of the solar panels causes the substances to heat up, making them useful for ventilation or as hot water. Another advantage is that the solar panels are cooled by the process and they perform slightly better at cooler temperatures. This product is an ideal addition for companies with large amounts of energy use, like the cooled storage depots. Rooftop Energy

will therefore have to start including Thermal PV in their proposition for this type of business. Thermal PV is a new, expensive product, that is the reason that the new proposition for cooled storages should also include a comparison between energy generation with and without Thermal PV. Product presentation and emphasizing the effectivity of this new development is crucial to ensure success. LED is also an option to further increase the savings, but it is more suited for non-cooled storages and will therefore be explained in the next paragraph. With Thermal PV added to their portfolio, RTE will become interesting to this type of companies. The best way of communicating with this target group is described in paragraph 7.5

7.4 NON-COOLED STORAGE DEPOTS (OPTION 3)

The earlier mentioned Thermal PV can also be used with several of these companies, depending on the energy use. A source of sustainable energy that is more known to this target group that can also decrease the yearly energy costs is LED. Because the company BESTLED is located in the same office as RTE, a smart cooperation and merging of the contracts should be a possibility. LED contracts tend to be of shorter duration than the ones RTE is using, but with the new contract form, a combination should be possible. With both kinds of technologies in one project, the cost reduction should be sufficient enough to convince potential customers in this branch. For the financial possibilities of the options, paragraph 7.6 can be consulted.

7.5 COMMUNICATION

RTEs current way of finding new customers comes down to using their network and their customer database. Cold leads are shared by contacts or former customers. When looking at the SDE+ segment, RTE has not yet established the necessary database to continue this strategy. Therefore, the company has to increase its amount of promotional activities. Exhibitions and fairs are recommended to improve the brand reputation. For the reason that the target groups consist of different kinds of companies, multiple exhibitions will have to be attended to. These exhibitions will also contribute to increasing the brand awareness of the company.

To approach storage depots (cooled and non-cooled) RTE should arrange a stand at the 'BouwVisie' exhibition in Venray.³⁹ The main stand holders at this exhibition are construction manufacturers, service providers and installers. The last few years, the BouwVisie has organized a special area for sustainable energy sources on buildings. For RTE, it will be easy to approach large companies that are looking for new buildings or installations. The managers of these companies are already planning to make a large investment, the new value proposition of RTE should be a great addition to their purchase. According to the website, the audience seems to include wholesalers and owners of large storage depots and therefore this is the best event to approach these target groups.

The second exhibition that is recommended is 'Duurzaam 2016', held in Zaanstad.⁴⁰ This event is organized to inform visitors about the possibilities of sustainable energy and Corporate Social Responsibility. The setting is aimed towards managers and directors of companies. Parties that are interested in sustainable reporting will definitely show up at this event. RTEs objective after acquiring a stand is to promote the leasing concept, with the emphasis on the help they can offer with sustainable reporting. Managers and directors that are interested should be convinced to share their contact details to make an appointment.

The prospects that derive from these two promotional activities should be contacted and offered a QuickScan. After determining their energy use, need for sustainable reporting and rooftop space, a proposition can be made. When keeping contact about the offer and the possibilities of solar PV, the prospects can eventually turn into hot leads, ready for signing the contract. The main advantage of acquiring stands at the exhibitions is not just direct sales, it is also promoting the company and making potential customers aware of the new value proposition. The leasing concept is still RTEs USP, so this should definitely be emphasized during the exhibition.

³⁹ (BouwVisie, 2015)

⁴⁰ (Branchecontact, 2015)

7.6 FEASIBILITY

Organization capability

Promoting RTE at the exhibitions is an event that requires all the employees. To give further information about LED and the possibilities of combining this technology with Thermal PV and solar panels several employees of BESTLED can be used. Looking at the fact that the organization is a daughter company, this should not be hard to achieve.

The main question is whether RTE can handle the administrative hazards of a large amount of SDE projects. The already mentioned weakness of these projects is that making an ABQ-declaration for the safety of the projects takes a lot of time. An architect was contacted to look at the construction plans, but the communication between these two parties has been far but fluent. When more contracts are signed, RTE is advised to hire an architect that can take care of these hazards. For the sustainable reporting and setting up the report, a standard format has to be developed. An extra employee will have to be trained to investigate and fill in this format for every customer that is interested in CSR. Further administration can be handled by the current department of RTE. The organization is already looking for a larger, more accessible office location. With a new office, customers will be able to easily visit RTE and the sales team will also be able to approach customers more effectively when the location is more central.

Energy yields

Expanding to the SDE segment by using the growth strategy and the three options also includes making extra costs. For RTE, these extra costs are peculiar, because they are not entirely based on their budget. Because of their leasing concept and their arrangement with the Triodos Bank, extra added products do not necessarily require a larger investment. Table 7.2 has been created to show the estimated energy production of each type of project and their annual savings.

Table 7.2 Feasibility new products

Project Type	Duration of contract	Fixed energy price/kWh	Estimated energy production (kWh/year)	Monthly payment to RTE*	Percentage of annual savings
Solar PV	7 years	€0.072	68,850	€413.1	7%
Solar PV + LED	7 years	€0.072	79,178	€475.07	8.1%
Solar PV + Thermal	7 years	€0.072	206,550 (partial)	€1,239.3	21%

This scheme is based on the same fictitious solar project with 300 solar panels as used in the renewed contract. Each panel provides approximately 255 Watt peak (Wp), resulting in 76.5 kWp when using solar panels. With an average efficiency of 90% the project will generate up to 68,850 kWh/year. Adding LED to the value proposition will mean an estimated production increase of 15% (Hamoen, 2015), bringing the total to 79.178 kWh/year. As mentioned in chapter 3.1.2, Thermal PV has the potential to raise the energy production by 300%. This amount consists of 115% solar energy, since the performance of the panels will rise approximately 15% when their temperature is lower. The other 190% comes from the air and water that is heated and then used, this is the reason why the table describes the energy production as “partial”. Thermal PV is still a very recent development and long-term observations have not been published. To determine whether these products are financially an option for RTE the estimation of 300% will be used. The exact amount of energy generation should be calculated when RTE is willing to add Thermal PV to their marketing mix.

Costs and finances

With the estimated energy production from table 7.2, it is now possible to calculate a Break-even Point (BEP). The variable costs are not mentioned in this equation, because these only come into play when the system malfunctions during the contract time. The fixed costs consist of the costs of installation and the investment for the Thermal PV system. When being at the BEP, the outcome of the equation should be "1". The costs of the installation can be estimated by looking at the time that is needed and the hourly payment of the installers. For the average project of 20 solar panels, the average labor time is 25 man-hours. With the example project of 300 solar panels, the labor time then comes down to 375 hours. The sum of what a company has to pay for an installer per hour can be estimated at €50. Therefore, the total costs for installation are approximately $375 \times €50 = €18,750$. With these numbers, the maximum investment for the Thermal PV system to achieve break-even can be calculated. The total revenue in the equation equals the amount of energy generated during the contract time times the fixed energy price.

$$\text{Total Revenue} = (206,550 \times 7 \text{ years}) \times €0.072 = €104,101$$

$$\text{Breakeven} = \frac{\text{Investment} + \text{Installation Costs}}{\text{Revenue} - \text{Variable Costs}} \quad 1 = \frac{? + €18,750}{€104,101 - 0}$$

As can be concluded from the equations, the maximum purchase costs for the system is estimated at €85,351 to gain break-even. However, RTE has the arrangement with the Triodos Bank that the profitability of a project should be 20%. This implies that the outcome of the equation should no longer be "1", but a ratio of $1/1.2 = 0.83$.

$$0.83 = \frac{? + €18,750}{€104,101 - 0} \quad ? + €18,750 = (€104,101 - 0) \times 0.83 \quad ? = €67,654$$

Because the revenue has already been determined and the installation costs cannot be lowered, the maximum purchase costs should decrease. This can be calculated as shown in the second and third equation. The outcome shows that the purchase costs for the Thermal PV system cannot exceed €67,654 when pursuing a 20% profit ratio. The average costs of the current solar PV projects for RTE lie around €180 per panel⁴¹. This means that a project of 300 panels costs around €54,000. Thermal PV projects are approximately 20% more expensive⁴² due to the extra material for the tubes and the boilers, bringing the total to €64,800. With a margin of €2,854, RTE will be able to obtain the loan for the project. This example proves that the leasing concept is **financially possible** for Thermal PV.

Compared to adding Thermal PV and LED to the marketing mix, sustainable reporting is a feature that mainly requires extra labor, instead of costs. An employee is needed to determine the current situation of the energy use of the customer and to write the report/fill in the format. Per project, this is estimated to take up to 6 hours, not counting the time it takes to create the first format for the report. The report writing can be completed by one of RTE's employees, since it requires no special knowledge. Creating the original format requires online research about CSR and the standards of the 'CO2 Prestatieladder'.

As mentioned in the organization capability, an architect has to be hired to take care of all the ABQ safety-declarations for the SDE projects. When completely outsourcing this or hiring an architect, the extra costs for administration only contain the payment of the architect. The amount of time per project to create this declaration is approximately 10 hours, including the time it takes to visit the buildings and to observe the construction plans. Compared to the salary of the architect that is currently working with RTE, estimated at €50/hour, the expenses for outsourcing the entire declaration will come down to approximately €500 per project.

⁴¹ (Rooftop Energy, 2015)

⁴² (Solarwall, 2015)

The exhibitions are the only additional promotional activities that have to be done, the costs for these event consist of the price for using the area and the price for banners and promotional materials. Since the material can be reused, the total expenses can be estimated at a maximum of €10,000.⁴³

7.7 GOALS AND OBJECTIVES

With the strategy described in the earlier paragraphs, RTE has the opportunity to increase their market share in the industrial segment. The margins in this market are larger than those of the private market and as the research has shown, hundreds of companies are potential customers for RTE when they use their new value proposition. Therefore, RTE will be able to work on their long-term goals (elaborated in 2.1.4), while following the growth strategy of. Obtaining several large projects will cause a great increase in turnover and word-of-mouth marketing will help RTE to increase their customer database. For further expansion RTE should keep an eye out for other developments in the Solar PV market, because the technology and its effectivity are constantly improving. The final goal, expanding in the European Union, is an objective that requires a stand-alone research. This analysis is further elaborated in chapter 8.

8. European Markets

RTE is still a start-up company in the Netherlands and there is a lot of market potential in this country, for this reason RTE is not yet operating internationally. The objective of this short country comparison is getting an indication what the European market looks like, and whether the RTE leasing concept can be introduced in any of these countries. Due to the lack of time for the thesis, the company has chosen Poland and the United Kingdom as the countries to investigate. These countries will be investigated on a macro- and meso-level.

8.1.1 PLAN OF RESEARCH

The recommendations on international level will be based on a general analysis of two countries, chosen by a self-designed filter. One of the main objection for the thesis has been stated as follows:

“What would be the most effective way for Rooftop Energy to expand in the SDE-segment in the Netherlands by using their unique value proposition and can this method also be applied to other European countries?”

For the reason that the internal analysis of the company has already been described in the thesis, this international case will only contain a macro- and meso-analysis for the two countries, closed by a conclusion and recommendations to RTE.

8.1.2 EUROPEAN COUNTRY FILTER

For choosing two countries to further investigate, a custom country selection filter will be used. To add some diversification to the research, two completely different markets will be chosen; an unexplored market with a lot of potential and the market with the highest government support or kWh price.

High potential unexplored market

To determine the unexplored market with the highest potential, chart 8.1 will be used. The orange circles of the map indicate the amount of solar PV that is installed per country. As can be noted, Germany and Italy contribute by far the most to the totality of European solar energy. The markets west of these countries clearly seem to have more installed solar PV than the east of Europe. Therefore, the economic state of these countries after the crisis will be looked at. According to several sources, Poland has shown the most rapid recovery with an average growth percentage of 3.0% in 2014 and 2015.⁴⁴

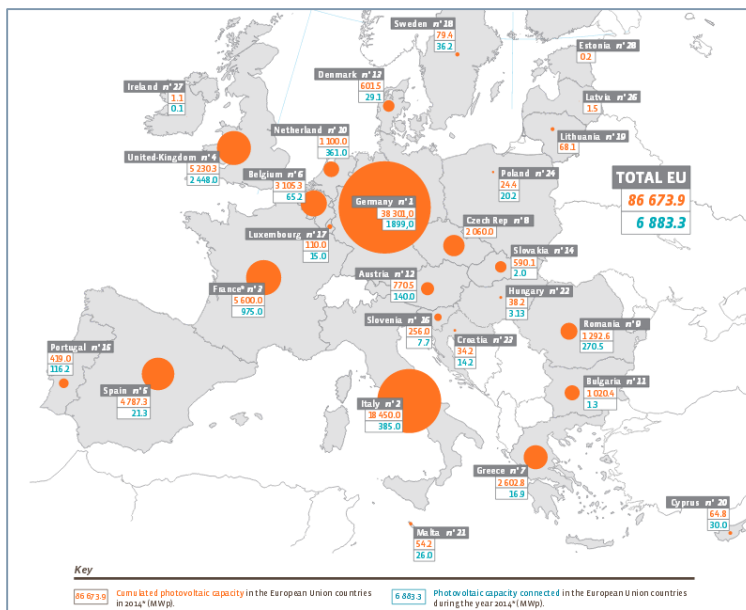
The circle of Poland is barely visible on the map, because the realized PV capacity is 50 times as small as that of the Netherlands. An advantage is that the largest part of these Polish projects have been installed in 2014. This insinuates that the market might start to grow in the next couple of years. When looking at the other eastern countries, Lithuania, Estonia and Latvia also seem to have high growth rates.

⁴³ (Expo Display Service, 2014)

⁴⁴ (Bloomberg Business, 2014)

Unfortunately, these countries are negligible compared to Poland when it comes to industry. For the fact that the research consist of whether it is possible for RTE to implement the same strategy in a foreign European country, the lack of industry makes these small countries fall off. The Czech Republic and other east European countries still seem to lag behind due to the crisis and the underdeveloped markets. Because **Poland** leads the economic recovery in the east and the country is adjacent to Germany, one of the world leader when it comes to solar PV, this country seems to show the most potential.

Chart 8.1 Photovoltaic capacity connected per European country 2014⁴⁵



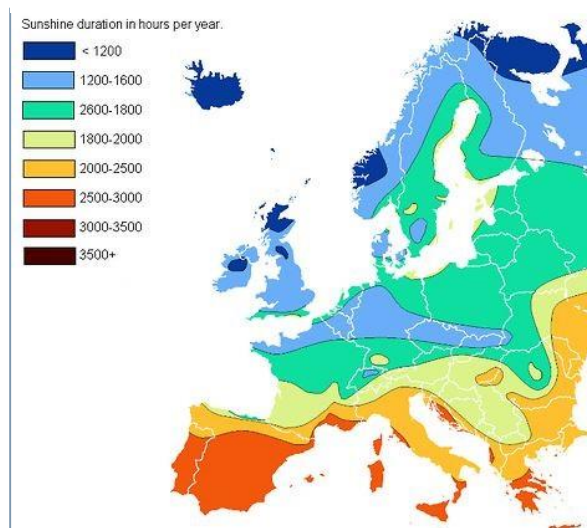
8.2 MACRO-ANALYSIS

For the macro-analysis, the full DESTEP-model will be used. In the macro-analysis of the analysis for the Dutch market, RTE was aware of the economic situation of the Netherlands, therefore it need not be investigated. For the reason that the economic situation of the United Kingdom and Poland are almost unknown to RTE, it will be added to this case comparison. A demographic overview of the countries will also be given, for the reason that some factors influence the solar systems.

8.2.1 DEMOGRAPHIC CRITERIA

The demographic criteria that are important in the business of solar PV differ slightly from the 'standard' criteria. An aspect that plays a role for solar energy is the climate, especially the amount of solar hours per year. This quantity is one of the factors that determines the amount of energy generated, and therefore the revenue of a solar system. Because no information is known about the British and Polish markets, the general demographic information will be added to Appendix VI. This information contains data about the international markets and a comparison to the Dutch market, mainly about the population and age segments. All three countries seem stable when it comes to population growth and the unemployment level. However, the United Kingdom scores higher when it comes to poverty level. The amount of solar hours are comparable. There do not seem to be any extremely negative demographic conditions that would prevent Rooftop Energy from doing business in any of these countries. For more demographic information, Appendix VI can be consulted.

Chart 8.3 Average Annual Solar Hours Europe⁵²



An aspect that directly contributes to the profitability of a project is the amount of solar hours in an area. The performance of the solar system mainly depends on the quantity of solar energy that is absorbed by the surface of the panels. A system that is placed in southern Europe will generate more energy due to the climate, the lack of clouds and therefore the higher amount of solar hours. Mapped out in chart 8.3 is the average amount of solar hours for Europe, divided in areas. It can be concluded that the United Kingdom and the largest part of the Netherlands each have just about the same yearly sunshine duration. Poland shows slightly more potential for solar energy, with between 1800 and 2600 solar hours a year.

8.2.2 ECONOMIC CRITERIA

Apart from the general economic criteria of the countries, price per kilowatt hour can majorly affect the business of RTE. The higher the price of 'grey' energy, the more advantages the leasing concept has to offer, for the reason that getting under an already low price results in lower margins. As can be concluded from the already shown graph 8.2, the energy prices that energy providers from the Netherlands and Poland offer fluctuate around 0,08 eurocents per kilowatt hour. The United Kingdom is more expensive, with an average of 0,13 eurocents/kWh.⁴⁷ Depending on the availability of subsidies for solar energy, RTE might be able to offer sustainable energy for a much lower price in the United Kingdom.

To get a general image of the three countries when it comes to GDP and the current economic states, table 8.4 has been created. This table shows the inflations, purchasing power, income level and GDP per country.

⁴⁷ (Eurostat.com, 2015)

Table 8.4 Economic segmentation

Country	GDP per capita ⁴⁸	GDP growth	Inflation ⁴⁹	Purchasing power parity% ⁵⁰	Income level ⁵¹
Netherlands	\$43,300	0.8% -	2.50% +	236% +	High income
United Kingdom	\$37,300	1.80% +	2.60% +	197% +	High income
Poland	\$21,200	1.30% +	1.00% +	127% +	High income

The UK is currently recovering from 2011 and 2012, in which economic growth rates were low, due to the aftershocks of the economic crisis. London and the South East are now the fastest growing areas of the country. The UK is mainly dependent on the services sector.⁵² The country has trading contracts all over the world and import rates lie 25% higher than export rates. The main import products for the UK are oil and industrial machinery. The country is placed first with a percentage of global export of 32.30% when it comes to exporting collectibles like gold- and silverware.⁵³

Poland has been the only country in the EU that was not severely affected by the economic crisis of 2008. After a five year period of constant expansion the growth rates have now become stable and as mentioned before, the country is even showing the most rapid economic growth of all countries in Eastern Europe. The main import and export partner is Germany; 24,91% of all produced products are moved to the neighboring country. Poland's main export products are industrial machinery and motor vehicle parts.⁵⁴

The Netherlands have always been known for their trading connections all over the world. The country has a 10% higher global export than import and the largest amount of money is gained by exporting oil, plastics and machinery. With the tulip export, the Netherlands have a market share of 52.95% when it comes to exporting live plants.⁵⁵

It can be concluded that all three countries are financially stable. Basic prices of electricity of the Netherlands and Poland are comparable, while the United Kingdom has a much higher price per kWh. Depending on the availability of subsidies, RTE might be able to offer sustainable energy for a relatively lower price in this country.

8.2.3 SOCIAL-CULTURAL CRITERIA

In the research for the Dutch market, it has already been concluded that religion and cultural aspects do not play a very large role when it comes to doing business. However, the model of Hofstede has still been applied to look at all different aspects of the cultures. This analysis can be found in Appendix VI. A short conclusion is given in the next paragraph.

For the reason that the most practiced believe in all three countries is Christianity, it is not to be expected that religion will influence the business of RTE in these countries. However, on a cultural level Poland and the Netherlands seem to be quite different. Approaching managers and directors that are higher in rank might be harder, since the Polish businesses are mostly hierarchies. The demand for innovation is also lower, that might also be the case when it comes to solar energy. Individualism does not directly

⁴⁸ (IndexMundi, 2014)

⁴⁹ (The World Bank, 2015)

⁵⁰ (Trading Economics, 2015)

⁵¹ (The World Bank, 2015)

⁵² (PriceWaterhouseCoopers, 2015)

⁵³ (Global Edge, 2012)

⁵⁴ (Global Edge, 2012)

⁵⁵ (Global Edge, 2012)

affect the field of operations, but it can be expected that especially companies in the United Kingdom are only interested in the concept when they see clear advantages.

8.2.4 TECHNOLOGICAL CRITERIA

For the reason that product developments can be imported and exported to countries, there is no real difference between the Netherlands and the chosen countries. On an architectural level, buildings in Poland are less developed outside the major cities. The earlier mentioned building integrated PV, where solar panels are used in the architecture of a building, is therefore only an option in the larger cities, where architects pay attention to design and functionality. Products like micro-inverters and thermal PV can all be exported to Poland and the UK and used in solar projects. On a technological level there do not seem to be any obstacles for RTE. For details on upcoming technological developments, paragraph 3.1.2 can be consulted.

8.2.5 ENVIRONMENTAL CRITERIA

As mentioned before, sustainable reporting is an upcoming trend in the west of Europe. The Global Reporting Initiative is the European framework for these reports. This organization is active in the UK, but Poland seems to be led by a different system for CSR. The European Sustainability Reporting Association states that CSR reporting is not mandatory in Poland and that the Polish ministries have only just begun to develop the policies.⁵⁶ The GRI standards will be included in these policies. In the United Kingdom, sustainable reporting is even further developed than in the Netherlands; mandatory carbon reporting has already been introduced for the largest of companies. Based on these facts, the sustainable reporting feature that has been added in RTE concept for service providers in the Netherlands could also be used in the UK. Doing a QuickScan and writing a plan of action for the customers in the field of sustainable entrepreneurship could be an USP and therefore an opportunity for RTE. In Poland, sustainable reporting is still under construction, so adding this feature in that country will not be lucrative.

8.2.6 POLITICAL CRITERIA

This part of the market analysis is crucial for the leasing concept of RTE. Each of these countries are regulated by different laws and policies when it comes to renewable energy. If there are no laws or subsidies for renewable energy, the whole leasing concept cannot be realized in the country. The political aspects of the macro-analysis are elaborated per country.

United Kingdom

The emission objectives of the UK can be compared with those of the Netherlands; their energy generated from renewable sources was 3% of the total energy consumption in 2009 and it should become 15% in 2020.⁵⁷ All target goals and estimated numbers have been included in the National Renewable Energy Action plan.⁵⁸

To meet the target, there will have to be a much greater level of deployment. To stimulate an increase of solar energy, the UK government has introduced two main systems;

Renewable Obligation Certificates (ROCs) are aimed at energy suppliers; renewable energy generators report the amount of renewable energy that has been produced to the Office of Gas and Electricity Markets (Ofgem).⁵⁹ Based on the amount of renewable energy they are rewarded with ROCs, that they can sell to energy suppliers. For this, they are also allowed a premium, on top of the wholesale price of the energy. Suppliers would want to buy ROCs, because it is mandatory to present a minimum amount of these obligations. When this minimum is not reached, a penalty needs to be paid. The monthly variation in ROCs issued for different kinds of renewable energy sources are also fluctuating; landfill gas

⁵⁶ (Sustainable Reporting, 2015)

⁵⁷ (United Kingdom Government, 2015)

⁵⁸ (United Kingdom Government, 2015)

⁵⁹ (United Kingdom Government, 2015)

and hydro energy are still the reason for most applications, solar energy has started to grow rapidly since January 2014.⁶⁰

Renewable energy incentives for energy users like SMEs, communities and individuals are known as **feed-in tariffs (FITs)**. These tariffs are available to owners of renewable energy sources producing up to 5 MW power and are based on the type of renewable energy and the size of the project. When looking at solar PV, the tariffs depend on how the system is configured and used. Lower rates are given out to systems that provide electricity to buildings and higher rates to for example 'stand-alone' projects, where the system is not attached to a building. When comparing FITs to the Dutch SDE-subsidies, it turns out that the repayment for Solar PV is a few cents higher in the United Kingdom; RTE is rewarded with a subsidy of 14 eurocents/kWh. With an average size of 30 KW per project (around 120 solar panels), RTE would be given a feed-in tariff of 11-12 pence for each generated kWh, which equals 15-17 eurocents.⁶¹ However, the building on which the solar panels are installed should provide a certificate with its energy efficiency, otherwise it will be placed in the 'lower' FIT-rates, which will only be rewarded with 9 eurocents/kWh.⁶²

Poland

Like the UK and the Netherlands, Poland is also included in the National Renewable Energy Action Plan. From the expected amount of 70 thousand ktoe in 2020 (1 ktoe equals ± 11.5 million kWh), 15% should be generated by renewable energy sources. The market share of renewable energy sources in the electricity sector is set at 19%. The realized electricity projects generated around 900 ktoe in 2010, which is a mere 6.7% of the total market.⁶³ Table 9.2.8 in the appendix shows that the main source of this amount is generated by solid biomass and onshore wind power. Solar PV sites generate only a marginal, almost negligible amount of energy in Poland. The reason for this absence of solar PV is mainly because of the political system of the country and the influence that large companies have on this system; the electricity market of Poland is run by four large companies, namely Enea, Energa, Tauron and Polska Grupa Energetyczna (PGE). At first Green Certificates were introduced by the government, but the energy providers calculated that this would greatly reduce their revenues, so they influenced the government and invested in biomass energy. Without the grants, feed-in tariffs and with an undervalued wholesale price, a solar PV system now has an average pay-back time of 22.5 years in Poland. Generators that have gone bankrupt because of the situation are forced to sell their assets to the big four for bottom prices.⁶⁴ For a summary of the history of the Polish market for sustainable energy, Appendix VI can be consulted.

Conclusion Political Criteria

The United Kingdom shows potential for RTE, for the reason that feed-in tariffs are put at the disposal of users of solar energy. From a first point of view, these tariffs can be used to realize just about the same leasing concept for the industrial segment in the UK. The requirements for these tariffs differ slightly from the Dutch SDE subsidy, because the buildings need an energy efficiency certificate to receive the highest tariff. Buildings without this declaration are offered a much lower payment.

The market for renewable energy in Poland is completely shut down because of several large energy suppliers. These companies are in full control of the market and can also influence the decision-making of the Polish government. The pay-back time of a solar system in Poland is now estimated at 22.5 years, because of the energy prices and the lack of subsidies. It will take years and a large political change before Poland becomes an interesting market for Rooftop Energy.

⁶⁰ (United Kingdom Government, 2015)

⁶¹ (Feed-in Tariffs, 2015)

⁶² (Ofgem E-Serve, 2015)

⁶³ (Renewable Energy Progress Report, 2013)

⁶⁴ (Bacia, 2014)

8.2.7 CONCLUSION MACRO-ANALYSIS

As a summary of the macro-analysis of the Polish and English market, it can be concluded that the United Kingdom shows potential for RTE, but Poland is not an option for the upcoming years.

United Kingdom

The market attractiveness of the UK derives from the comparability with the Dutch market for solar energy; governmental subsidies in the form of feed-in tariffs are put at the disposal of companies that make use of renewable energy sources, the climate and yearly solar hours are just about the same as in the Netherlands and there do not seem to be any cultural differences in the field of businesses that could hinder RTE. Depending on the conclusion of the meso-analysis, the United Kingdom could be an opportunity for RTE to expand to.

Poland

The reason that Poland is not an option for RTE is the fact that there are no available subsidies for renewable energy sources and no incentives from the government whatsoever. The energy market is in complete control of the main energy providers, companies that also influence the Polish government and their decisions. According to the model of Hofstede, Poland is a country that is not aimed at innovation and developments. It will take years before the governmental system is prepared for solar energy. Therefore, the RTE leasing concept cannot be introduced in this country yet. The company should keep an eye on the political developments.

8.3 MESO-ANALYSIS

Even though Poland has already been determined to be a 'No Go' for RTE, the goal of the meso-analysis is to conclude whether the Polish and English market are attractive enough for RTE in the field of potential customers, threat of competitors, difficulty of entry and substitute products. There might still be options for RTE to set something up in Poland, for future business. The 5 forces of Porter will be used once more to describe the most of these aspects. The conclusion of the meso-analysis will be combined with the macro-analysis to determine the total attractiveness of the markets.

8.3.1 FORCES OF PORTER

Threat of new entrants

For RTE it would be most convenient to introduce the same leasing concept that they are already using in the Netherlands when expanding to another European country. Comparing the foreign markets to the Dutch market, the same investments as mentioned in chapter 4.1.2 seem to apply. As a start-up in the industrial segment, a lot of capital is needed. Other factors that come into play are the contacts that are needed to find customers, building a brand reputation and finding out how the administrative hazards can be overcome.

Poland

From RTE's point of view there are more obstacles that need to be surmounted in Poland than in the UK. Language is the first barrier in this process; meetings with clients, taking care of administration, fine-tuning the contract with the current energy provider, every part of the process requires mastery of the Polish language. RTE could work with interpreters, or hire Polish employees as a solution to this problem. The second requirement is an office to work and a warehouse to store the solar systems. If the installation process is outsourced, like in the Netherlands, a storage depot might not be necessary. The current state of incentives by the government for solar PV is still unclear, but RTE might already take a look at possible energy yields of solar systems by placing test projects.

United Kingdom

All employees of RTE seem to be able to speak English, so language should not be an obstacle if the company decides to expand to the British market. Professional formulations in contracts and on the website could be taken care of by a native speaker to avoid grammar mistakes. Just like in Poland, capital is needed to invest in an office and also in a warehouse, if the installation process is not outsourced. Prior to doing business in the industrial segment, RTE has to find out what energy prices they can use with the current feed-in tariffs.

Competitors

The objective of this section is to give a short overview of the intensity of the competition. In the Netherlands the amount of competition for the private market is high. Because of the ease of entry a lot of small, local companies try to obtain market share. For the industrial segment, the amount of competitors is lower and there seems to be a clear division in regions. Start-ups in this segment require capital, contacts and a well-organized business plan. For Poland and the UK this situation might be the same. The analysis of these countries is specified on competition in the industrial segment.

Poland

Judging from the fact that the Polish market for solar energy has completely collapsed, a small number of competitors can be expected. Sources show that most companies that offer solar panels are international companies.⁶⁵ The solar panels seem to be a by-product of these organizations, because the business in wind energy and biomass is more lucrative in Poland.

The KRD Global Group is a subsidiary company of the international organization GreenPowerMonitor [GPM], a company that operates globally in solar PV and manually monitors renewable energy plants.⁶⁶ At the moment, KRD is setting up small test projects in Poland to observe energy yields and to check with what kind of financing model they can enter the market. They are also already recruiting investors, for the moment that feed-in tariffs or subsidies are reintroduced.⁶⁷

When looking at the current energy providers, the earlier mentioned 'Big Four' control the largest part of the market. Unfortunately, all the websites of Enea, Energa, Tauron and PGE are in Polish. Judging from the website of Tauron⁶⁸, Poland is divided in multiple regions. The energy prices that are used are comparable to the average price stated in the economic part of the DESTEP-analysis; between €0,07 and €0,08. The companies each have over twenty thousand employees and also operate in the fields of wind and biomass energy. To gain a positive image, annual CSR reports and their contributions can be found on the websites.

It can be concluded that when the Polish market opens up with subsidies and feed-in tariffs for solar PV, the brand image of the Big Four can be an obstacle for obtaining market share. These companies have been the largest energy providers for the last decades, each with their own brand reputation and region. For the reason that the Polish population is familiar with the companies, convincing them to invest in solar energy could be a tough objective. The test projects of KRD Global Group show that international solar companies are also waiting for the right time to enter the market.

United Kingdom

The market of the UK shows potential, due to the presence of feed-in tariffs. This development has not been introduced unnoticed. Several large international companies have had their eyes on the British market for solar energy for a couple of years, and as of March 2015 the U.S. solar company SunEdison has come up with a concept for leasing solar panels.⁶⁹ They state to be the first company in the UK to make use of the 'zero-cost' concept. A contract with fixed energy costs for 20 years with a predictable performance.⁷⁰ For now, SunEdison seems to be operating in the market for private customers, but they have also participated in a giant project of 33,6 Megawatts in Stonehenge, in collaboration with Terraform Power⁷¹. Other companies have copied the concept, several of whom are also operating in the industrial market. Gas and electricity provider British Gas has realized several large products and is also sharing case studies with thermal energy on their website.⁷² If RTE is to enter the British market, the largest direct competitor seems to be EvoEnergy. This company has been doing business in the UK since UK and specializes on solar PV and LED. With over 8,000 completed projects for private customers and hundreds of commercial clients the company shows a lot of expertise and experience. Their recent

⁶⁵ (Solar Energy Businesses Poland, 2015)

⁶⁶ (GreenPowerMonitor, 2015)

⁶⁷ (KRD Global Group, 2015)

⁶⁸ (Tauron Poland, 2015)

⁶⁹ (PV Magazine, 2015)

⁷⁰ (SunEdison, 2015)

⁷¹ (Terraform Power, 2015)

⁷² (British Gas, 2015)

strategy includes the 'Power Purchase Agreement', a leasing concept that can be applied to projects with a minimum of 200 solar panels.⁷³

It can be concluded that the British market shows a lot of potential for solar PV, but this can also be noticed when looking at the competition. Large international companies have introduced leasing concepts for private investors, and enormous fields with solar panels are also used for energy generation. The main competition seems to be EvoEnergy, an experienced company that has been operating in the UK for over 8 years.

Substitute products

The British market can be compared to the Dutch market for solar energy. As stated in chapter 4.2, substitute products for solar PV are solar projects on fallow areas and in a smaller degree also wind energy. The UK is world leader in offshore wind, these projects generate enormous amounts of terawatt-hours; as much as the rest of the world combined.⁷⁴ These forms of renewable energy are mostly offered by energy providers. However, the discount for using them is marginal. That is why a leasing concept still offers more advantages than this approach.

Furthermore, thermal PV, building integrated PV and LED are also additional products that are being offered to customers in the UK. These developments have been explained in chapter 4.1.4. Poland seems to be at an earlier market stage, substitute products mainly consist of biomass and offshore wind energy. The process is mainly the same; energy providers offer the generated energy to customers with just about the same prices as the normal energy price.

Buyer power

Solar PV and the whole administrative process that is needed to finalize a project is comparable in each of the three countries. For individuals, this process can take up to several months. This lack of knowledge is the reason that the buyer power is small. However, the benefits of changing to solar energy should be made clear in terms of price, since customers are not eager to take actions when the difference between solar energy and the price of their current provider is too small.

8.3.2 MARKET POTENTIAL

The objective of this section is to determine the potential customers of the markets. For the reason that the exact number of potential customers of the industrial market are unknown, the current installed amount of solar PV and the growth rates should give more clarity on the market potential. Chart 8.1 describes the installed solar PV.

Poland

Poland is trying to achieve the European objectives for renewable energy by investing in biomass energy. This is the main reason why the installed solar PV is low. Compared to the Netherlands and to the UK, Poland has only realized a negligible amount of solar PV projects. By looking at the fact that there are no subsidies, the leasing concept won't be feasible. RTE will not be able to set up any profitable projects, therefore the market potential can be seen as 0 at the moment. When the Polish government changes their strategy and laws for sustainable energy, the industrial segment of the largest Polish cities should be looked at to determine the market potential.

United Kingdom

Graph 8.8 also describes the current deployment of solar PV in the United Kingdom. For RTE, the capacity that has been installed with the help of feed-in tariffs is the most interesting. Currently, that amount has passed 3.000 megawatts in total, after a growth period of almost 1.000 megawatts in 2014. The laws and regulations for feed-in tariffs do not seem to change anytime soon, so the growth should continue in the next years. Of the total electricity consumption, only 1.3% was generated by solar PV in 2014.⁷⁵ Looking at the fact that this amount was only half of that in 2013, more growth can be expected in the upcoming years. The British market looks promising to RTE when looking at the proportional growth and the increase of use of the feed-in tariffs. Which means that there is a lot of market potential

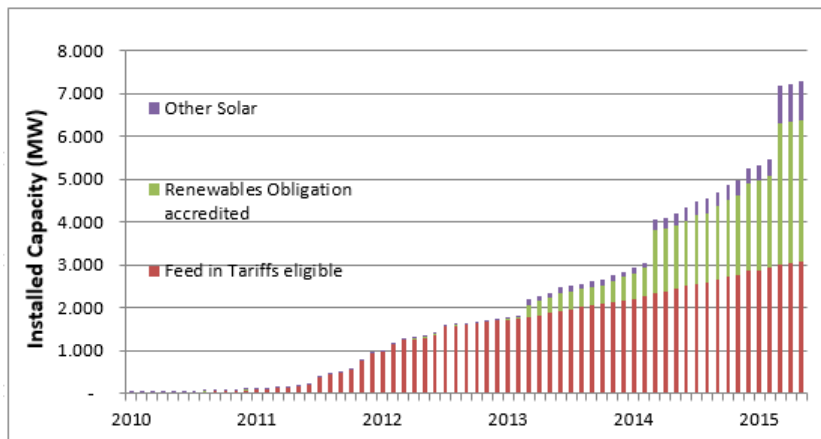
⁷³ (Evo Energy, 2015)

⁷⁴ (Renewable UK, 2015)

⁷⁵ (UK Government, 2015)

in the UK. In power the potential lies around 1.000 MW. If installed on rooftops of industrial businesses, this would mean thousands of potential companies each year, since the average project in the industrial segment consists of approximately 0.5 MW.

Graph 8.8 Monthly cumulative solar PV deployment UK⁷⁶



8.3.3 CONCLUSION MESO-ANALYSIS

Research has shown that the markets of Poland and the United Kingdom cannot be compared. The British market seems to be one step ahead of the Dutch market for solar PV. Poland, on the other hand, is put back to a pioneer phase because of the removal of all subsidies by the Polish government. The

model of Porter indicates that entering these markets as a start-up is a costly undertaking; investments have to be made for offices and warehouses. It takes time to gain brand awareness and decide whether to outsource installation of the projects. The specific conclusions for both countries are further elaborated below.

Poland

When looking at the market rivalry, it can be concluded that the energy market is mainly in control of the 'Big Four'. These energy providers have divided Poland in regions, leaving a small amount of space for small providers. International companies are slowly drawn to Poland, setting up test projects to observe the energy yield. The KRD Global Group is the company that is ahead of the curve, by already recruiting private customers and large investors for solar energy projects. Buyer power and substitute products do not seem to be an obstacle in Poland. Due to the fact that solar panels and the installation process are difficult in the eyes of customers, the lack of knowledge is the reason for low buyer power. Customers are only price-sensitive and that is why their decisions are mainly based on the height of the energy price. Other sources of renewable energy in Poland are biomass and wind energy, these are being stimulated more by the government than solar energy.

The market potential of Poland is small, but growing. At the moment, the amount of installed solar PV is 50 times less than that of the Netherlands. Poland is positioned in the top 10 of European countries with the lowest amount of solar PV. However, the largest part of this installed capacity has been realized in the last years. This might insinuate upcoming growth for the next couple of years.

United Kingdom

As can be concluded from the market potential, the British market for solar PV is already a few steps ahead. With an installed capacity of over 3.000 megawatts with feed-in tariffs, solar PV still only takes up to 1.3% of the total electricity consumption of the UK. Judging by the fact that the growth rate has doubled in 2013, it can be assumed that the market potential of the UK is high.

Based on the market rivalry, research shows that the level of competition is high. Large international companies have introduced the leasing concept in the UK for private customers. At the moment, the more experienced company EvoEnergy has also copied this concept. This organization has already completed over 8.000 projects for private customers and hundreds of commercial projects. Together with the current energy providers, this company can be seen as the main competitor if RTE wishes to approach the industrial market. The UK is world leader in the field of offshore wind energy, but this form of renewable energy does not seem to be a direct competing product to solar systems, for the fact that the energy is offered to customers for just about the same price as the 'standard' energy price. All by

⁷⁶ (UK Government, 2015)

all, the British market for solar PV seems to be promising, even with the already high amount of competition.

8.4 CONCLUSION AND RECOMMENDATIONS

The conclusion of the international analysis should give an answer to the question *“What would be the most effective way for Rooftop Energy to expand in the SDE-segment in the Netherlands by using their unique value proposition and can this method also be applied to other European countries?”* With the data from the macro- and meso-analysis the total market attractiveness was determined for each market and the question can now be answered.

8.4.1 CONCLUSION

Poland [NO GO]

Analysis has shown that Poland is a country with a stable economy, with a suited climate for solar energy. The model of Hofstede shows that the business culture is different, compared to the Netherlands. These differences mainly lie in the fact that Polish population is less interested in innovations and companies show a more hierarchical structure. This means that every company has a clear structure with supervisors and subordinates, a fact that makes communication harder and processes slower. Developments like sustainable reporting only play a role in the larger. International companies in Poland.

From the research, it can be concluded that Poland does not show a lot of potential for RTE, for the reason that the whole market for solar PV has collapsed several years ago. The largest energy providers, also known as the ‘Big Four’, are in full control of the energy market and are also able to influence governmental decisions. This is the main reason why subsidies and feed-in tariffs have been dispensed in Poland. The markets for biomass and wind energy are still receiving incentives from the government, but for solar PV it has become a waiting game. Private solar PV projects now have a pay-back time of 22.5 years in Poland, making it more lucrative to invest in wind or biomass energy sources. This fact can also be noticed in the market growth for solar PV in Poland; the country is at the moment one of the European countries with the lowest amount of installed solar PV. There are barely any companies that offer the product, and if so, solar PV is added as a side-product next to LED, wind and biomass energy.

Currently international companies are installing and observing test projects to look at the energy yield. When feed-in tariffs or similar incentives are reintroduced, Poland has all the requirements to make solar PV a lucrative business.

United Kingdom [GO]

The British market for solar PV is more developed than the Polish one. This can be noticed by the amount of competition and the offered products. Sustainable reporting, Thermal PV and LED have all been integrated in the business models of the large energy providers. The climate and the business culture can roughly be compared to those of the Netherlands. The economy is stable and slightly growing. For the reason that the British market for solar PV is also on a rise and the government is using feed-in tariffs to stimulate this even more, there are a lot of companies that already use the same business concept as RTE. Most of these companies are international organizations with a lot of capital and experience in the field of solar PV. Local companies with more knowledge about the industrial market have also added the leasing concept to their portfolios and realized hundreds of projects. However, judging by the fact that the amount of solar PV generated energy of the total electric consumption of the British population is still negligible, there is still more than enough market potential in the UK.

It can be concluded that the United Kingdom shows a lot of potential for RTE, as well as on macro-, but also on meso-level. The level of competition for the industrial segment is much higher than in the Netherlands, this can be noticed by the amount of competitors and their value propositions. Substitute products are solar projects on fallow areas and offshore wind energy. These types of sustainable energy are mainly offered by energy providers, for a much higher price than what RTE could offer with a leasing concept. Therefore, substitute products should not be a danger when expanding to the British market. The amount of competition and the initial investment are the reason why RTE should make a solid plan of approach when entering the British market.

8.4.2 RECOMMENDATIONS

Poland [NO GO]

Unfortunately, Poland is not yet an option for RTE to expand to. The country shows a lot of potential when it comes to the economy, the climate and the lack of competition, but the lack of subsidies and feed-in tariffs for solar PV make it impossible for companies to make solar PV a lucrative business. For the moment, RTE should not take any actions for the Polish market.

However, they can set up several test projects, like the international competition is already doing. It can be assumed that these companies do not want to share their business cases online, this is the reason why RTE should obtain their own information. With the gained data, RTE would know the exact annual energy yields for Poland, giving them a foothold to work with. If the government decides to reintroduce subsidies for solar PV, RTE already has all the necessary information to make detailed proposition, based on the data of the test projects. It can be expected that the European Union is also aware of the current situation in Poland and that they will also try to stimulate the country to invest in solar PV. RTE should keep an eye on these developments, because in several years, Poland might become interesting to do business in.

United Kingdom [GO]

Although the market rivalry is high for solar PV in the UK, RTE should be advised to take actions to expand to this market. The climate, business culture and other macro aspects are all positive. Especially the presence of feed-in tariffs that make leasing concepts a possibility are the main reason to enter the market. Downsides to the market are the competition that has already gained market share by using leasing concepts, Thermal PV and LED.

As a recommendation for entering the market, RTE should emphasize the fact that they are an international company, with a lot of experience in the Dutch market. This fact should be pointed out on the website and in sales meetings. The internet is full of case comparisons for energy generation in the United Kingdom, so RTE is not obliged to obtain their own data.

Referring to the Ansoff matrix from paragraph 7.1, RTE is entering a new market with an already known product. This implies a strategy of market penetration. For the reason that competing on price is not an option with the leasing concept, RTE should compete on marketing and products. The company could obtain a large competitive edge in the field of contract duration. The companies that have introduced the leasing concept in the United Kingdom have contract durations of over 15 years. With the shorter contracts that have been introduced in paragraph 7.1, customers are only bound to a fixed energy price for a maximum of 7 years. This will be seen as less risky, making the RTE contract more attractive than the concepts of competitors.

A feature that has also not yet been added by any of the companies is sustainable reporting. The United Kingdom uses the GRI framework for sustainable reports, a model that also has different kinds of levels. RTE should take a closer look on how to assist companies with gaining levels and should then find target groups that benefit from the framework. Examples of these organizations are businesses that are operating for local municipalities, like in the Netherlands. The British industrial segment shows a lot of potential, but Thermal PV and LED should definitely be included in the marketing mix of RTE for the reason that all large competitors are also using these features.

The first step for RTE is making a value proposition and evaluating what they are able to charge for energy with the current feed-in tariffs. Then the company should find a suitable, central place for an office. RTE is advised to hire an employee with sales experience to make the website and write the proposals. Then the company needs a bank that is willing to invest in the project. For the reason that RTE has already proven to be successful in the Dutch market, they should be able to obtain the required loans. Eventually, the value proposition should contain thermal PV, LED, assistance with sustainable reporting and short contract. The LED-part can be taken over by the daughter company BESTLED Europe. With all these steps and the value proposition combined, it can be assumed that RTE is able to obtain a market share in the industrial segment of the British market.

9. Thesis-Reflection

Now being at the end of the internship period, I am able to conclude that I am pleased with the finished thesis. The management of Rooftop Energy has stated that they are content with the information of the Dutch and international markets and that several of the recommendations for the Dutch market are something that they can truly use for future business. Especially the suggestion of shortening the contract time and presenting their product to customers in a 'mortgage' format is an option that will most likely be implemented in the near future.

In my own opinion, the overall research has eventually yielded what I had in mind, but the process could have been completed more fluently. With a rapid start, I managed to complete the plan of action and the internal analysis in several weeks. Due to the fact that all information in the internal analysis has been provided by the company, it can be seen as extremely reliable information. The external analysis, macro and meso, have been conducted with online research. For the reason that well-known websites are used the information is accurate, but these sources are less reliable than the database of RTE. The internal and external research have led to the SWOT analysis and the confrontation matrix. The opportunities that have eventually been concluded from these models seemed to be truly useful to the management of RTE. This is also the reason why all of these options have been added in the in-depth interviews. The fact that in these interviews multiple managers of the same company type have been interviewed makes the outcome of the research more reliable. Both the macro-analysis and the interviews have shown that sustainable reporting and thermal PV are the future when it comes to sustainable energy, making the options and strategies credible.

Determining the market potential was one of the hardest tasks of the research; after concluding the amount of business types and the quantity of these companies in the clusters, it can still not be assured that all these companies are in fact part of the eventual target group. Solar energy is a market with multiple aspects; the eligibility for the SDE subsidy, rooftop space for solar panels, being the owner of the building, etc. These aspects could not be measured during my research, due to the lack of time, but for that reason the analysis for the industrial clusters has been designed. This analysis gives a flawless overview of where the areas with large companies are and I consider this to be the best and fastest way to survey the market potential of the industrial segment. The business types in the four largest clusters has been crucial to decide what companies to visit for the interviews. For further research and when implementing the advised strategy, it is definitely necessary to research the other aspects before approaching the potential customer.

For the reason that Thermal PV is still a relatively new product, a lot of information about this development is still unknown. The purchase costs of the system and its performances have all been estimated, but because a lot of margin has been used, the outcome of the research can still be seen as reliable. Something that has not been taken into consideration is whether different safety measurements are needed when installing Thermal PV. The systems are heavier than the ordinary solar panels, and might therefore have to meet different standards. These aspects should all be further investigated when RTE decides to add this product to the value proposition. Further research about the subject of the thesis can be conducted in many directions; the market potential of other European countries, the upcoming technological developments and their effectiveness and the rest of the industrial segment in the Netherlands. When the urban agglomeration in the West of the Netherlands has been saturated, the other areas can be observed in the same way as used in the thesis to determine the market potential.

Bibliography

- ABB Global Site. (2015, February 18). Retrieved from <http://new.abb.com/about>
- Bacia, M. (2014, May 2). *Cleantechnica*. Retrieved from Poland's Renewable Energy Story: <http://cleantechnica.com/2014/05/02/renewable-energy-legislation-poland-april-2014-proven-methods-killing-renewable-energy/>
- Bloomberg Business. (2014, February 25). Retrieved from <http://www.bloomberg.com/news/articles/2014-02-25/poland-leads-economic-recovery-among-largest-eu-eastern-nations>
- BouwVisie. (2015, September 15). *BouwVisie Venray*. Retrieved from <http://booking.evenementenhal.nl/nl/bouwvisie/venray>
- Braas, C. (2006). *Rapporteren*. Groningen: Noordhoff.
- Branchecontact. (2015, September 15). *Duurzaam 2016*. Retrieved from <http://www.branchecontact.nl/duurzaam>
- British Gas. (2015, June 17). Retrieved from <https://www.britishgas.co.uk/content/dam/bgbusiness/documents/Oxford-Business-Park.pdf>
- Canadian Solar. (2015, February 18). Retrieved from <http://www.canadiansolar.com/>
- CleanTechnica. (2013, September 30). *CleanTechnica*. Retrieved from <http://cleantechnica.com/2013/09/30/pv-better-thermal-solar-water-heating/>
- CO2 Prestatieladder. (2015, February 27). *co2-prestatieladder.nl*. Retrieved from http://www.co2-prestatieladder.nl/images/cms/20140404_Handboek_CO_2_Prestatieladder_2_2.pdf
- Energieleveranciers.nl. (2015, February 18). Retrieved from <http://www.energieleveranciers.nl/zonnepanelen/salderen-energie-terugleveren>
- Energies-Renouvelables. (2015, June 17). Retrieved from http://www.energies-renouvelables.org/observ-er/stat_baro/observ/EurObserver-barojdpv13-Photovoltaic-Barometer-2015-EN.pdf
- Energy Informative. (2014, March 14). Retrieved from <http://energyinformative.org/solar-panels-installation-time>
- Enexis. (2015, February 2015). *Energie in goede banen*. Retrieved from <https://www.enexis.nl/consument/home>
- Enphase Energy. (2015, February 26). Retrieved from <http://enphase.com/residential-solution/advantages/>
- Eurostat. (2015, June 25). Retrieved from http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Electricity_prices.png
- Eurostat.com. (2015, June 16). Retrieved from http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Electricity_prices_for_industrial_consumers_2014s2.png
- Evo Energy. (2015, June 17). Retrieved from <http://www.evoenergy.co.uk/finance/power-purchase-agreement/>

- Expo Display Service. (2014, September 8). Retrieved from <http://www.expodisplayservice.nl/beursdeelname-tips/wat-kost-een-beursdeelname/>
- Feed-in Tariffs. (2015, March 9). Retrieved from <http://www.fitariffs.co.uk/eligible/levels/>
- Fraunhofer Institute. (2014, October 24). *Executive summary Fraunhofer Institute for Solar Energy Systems*. Retrieved from By Phillips, S. & Warmuth, W.: <http://www.ise.fraunhofer.de/en/downloads-englisch/pdf-files-englisch/photovoltaics-report-slides.pdf>
- Ganzer, R. (2015, February 18). *Entrepreneurial Insights*. Retrieved from <http://www.entrepreneurial-insights.com/7ps-additional-aspects-marketing-mix/>
- Global Edge. (2012, June). *From UNC Comtrade*. Retrieved from <http://globaledge.msu.edu/countries/poland/tradestats>
- Global Reporting. (n.d.). *Sustainability Reporting Guidelines*. Retrieved from <https://www.globalreporting.org/resource/library/G3.1-Guidelines-Incl-Technical-Protocol.pdf>
- Grana, Paul. (2010, November 16). *Renewable Energy World*. Retrieved from <http://www.renewableenergyworld.com/rea/blog/post/2010/11/the-efficiency-race-how-to-cdte-and-cigs-stack-up>
- Grand Thornton. (2015, June 16). Retrieved from <http://www.grant-thornton.co.uk/en/Thinking/FD-Intelligence/Issues/Mandatory-carbon-reporting-brings-sustainability-into-corporate-reporting/>
- GreenPowerMonitor. (2015, June 17). Retrieved from <http://www.greenpowermonitor.com/gpm-pv-scada/>
- Hamoen, N. (2015, 15 September). BESTLED Employee. (M. Blankert, Interviewer)
- Index of economic freedom. (2015, February 24). Retrieved from <http://www.heritage.org/index/country/unitedkingdom>
- IndexMundi. (2014, August 23). Retrieved from CIA World Factbook: http://www.indexmundi.com/netherlands/age_structure.html
- Kotler, P. (2009). Ansoff Matrix. In P. Kotler, *Principles of Marketing* (pp. 125-126). Amsterdam: Pearson Education Benelux.
- Kotler, P. (2009). Marketing Mix. In *Principles of Marketing* (pp. 433-851). Amsterdam: Pearson Education Benelux.
- Kotler, P. (2009). Model of Porter. In P. Kotler, *Principles of Marketing* (pp. 416-423). Amsterdam: Pearson Education Benelux.
- KRD Global Group. (2015, June 17). Retrieved from <http://www.krdglobalgroup.com/solar.html>
- LAPP group. (2015, February 18). Retrieved from <http://www.lappgroup.com/unternehmensgruppe/wir-ueber-uns.html>
- MVO Termen. (2015, February 27). *Matschappelijk Verantwoord Ondernemen*. Retrieved from <https://mvotermen.wordpress.com/2012/01/08/people-planet-profit/>

- Natuur en Milieu. (2015, February 19). Retrieved from <http://www.natuurenmilieu.nl/diversen/landingspagina-zon-zoekt-school>
- Northburn Solar. (2015, 26 February). Retrieved from <http://www.northburnsolar.co.uk/solarpanels/hybridpvt/solarhybrid.html>
- Office for national statistics. (2014, June 5). Retrieved from <http://www.ons.gov.uk/ons/guide-method/compendiums/compendium-of-uk-statistics/population-and-migration/index.html>
- Ofgem E-Serve. (2015, February). *Renewable Obligation Annual Report*. Retrieved from <https://www.ofgem.gov.uk/ofgem-publications/93414/roannualreport2013-14.pdf>
- Postmes, P., Oteman, M., & van der Linde, T. (2011). *Inleiding Organisatieprocessen*. Utrecht: Ijzer.
- Presentation Process. (2015, June 28). Retrieved from <http://www.presentation-process.com/powerpoint-ansoff-matrix-video.html>
- PriceWaterhouseCoopers. (2015, February 25). Retrieved from <http://www.pwc.co.uk/the-economy/publications/uk-economic-outlook/ukeo-summary-march-14.jhtml>
- PV Magazine. (2015, June 17). Retrieved from <http://www.pv-magazine.com/news/details/beitrag/sunedison-introduces-zero-cost-solar-plan-to-uk>
- RECO. (2015, February 18). *Partner in materieel*. Retrieved from <http://reco.eu/nl/over-reco/>
- Renewable Energy Progress Report. (2013, December 17). *Energy Progress 2009-2010*. Retrieved from <https://www.ecn.nl/docs/library/report/2013/e13076.pdf>
- Renewable UK. (2015, June 17). Retrieved from <http://www.renewableuk.com/en/renewable-energy/wind-energy/uk-wind-energy-database/index.cfm>
- Rijksdienst voor Ondernemend Nederland. (2015, March 2). *Energielijst 2015*. Retrieved from <http://www.rvo.nl/subsidies-regelingen/energie-investeringsaftrek-eia>
- Rijksdienst voor Ondernemend Nederland. (2015, February 17). *www.rvo.nl*. Retrieved from <http://www.rvo.nl/subsidies-regelingen/stimulering-duurzame-energieproductie-sde?wssl=1>
- Rooftop Energy. (2015, February 16). Retrieved from <http://www.rooftopenergy.nl/>
- Sigma Aldrich. (2015, February 26). Retrieved from <http://www.sigmaaldrich.com/materials-science/organic-electronics/opv-tutorial.html>
- Silicon Valley Microelectronics. (2015, February 26). Retrieved from <http://www.svmi.com/silicon-wafer-manufacturing-solar-process/>
- Sociaal-Economische Raad. (2015, March 2). *Energieakkoord Duurzame Groei*. Retrieved from http://www.ser.nl/~media/files/internet/publicaties/overige/2010_2019/2013/energieakkoord-duurzame-groei/energieakkoord-duurzame-groei-samenvatting.ashx
- Solar Energy Businesses Poland. (2015, June 17). Retrieved from <http://energy.sourceguides.com/businesses/byGeo/byC/Poland/byP/solar/solar.shtml>
- Solar Facts. (2015, April 15). Retrieved from <http://www.solar-facts.com/panels/panel-diodes.php>

- Solar Server. (2015, February 26). *Global Solar Industry Website*. Retrieved from <http://www.solarserver.com/solar-magazine/solar-report/solar-report/building-integrated-photovoltaics-an-emerging-market.html>
- Solarchoice. (2015, February 26). Retrieved from <http://www.solarchoice.net.au/blog/monocrystalline-vs-polycrystalline-solar-panels-busting-myths/>
- Solarwall. (2015, February 26). *by Conserva Engineering Inc*. Retrieved from <http://solarwall.com/en/products/pvthermal/how-pvt-works.php>
- Stichting Technotrend. (2015, February 18). Retrieved from <http://www.stichtingtechnotrend.nl/stichting-technotrend/>
- Sunbeam Montagesystemen. (2015, February 18). Retrieved from <http://www.sunbeam-pv.com/nl/index.html>
- SunEdison. (2015, June 17). Retrieved from <http://www.sunedison.com/business>
- Sustainable Reporting. (2015, June 16). Retrieved from <http://www.sustainablereporting.eu/poland>
- Tauron Poland. (2015, June 17). Retrieved from <http://www.tauron.pl/Strony/start.aspx>
- Terraform Power. (2015, June 17). Retrieved from <http://www.terraform.com/phoenix.zhtml?c=253464&p=irol-projects>
- The Hofstede Centre. (2015, February 25). Retrieved from <http://geert-hofstede.com/>
- The World Bank. (2015, February 25). Retrieved from <http://www.worldbank.org/en/country>
- Trabish, K. H. (2012, March 19). *Greentech Solar*. Retrieved from <http://www.greentechmedia.com/articles/read/how-safe-is-first-solars-cdte-thin-film>
- Trading Economics. (2015, February 25). Retrieved from <http://www.tradingeconomics.com/netherlands/gdp-per-capita-ppp>
- U.S. Energy Information Administration. (2013, July 25). *International Energy outlook 2013*. Retrieved from http://www.eia.gov/forecasts/archive/ieo13/more_highlights.cfm
- UK Government. (2015, June 26). Retrieved from <https://www.gov.uk/government/statistics/solar>
- United Kingdom Government. (2015, March 3). *National Renewable Energy Action Plan*. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/47871/25-nat-ren-energy-action-plan.pdf
- Vexen. (2012, December 12). Retrieved from <http://www.vexen.co.uk/UK/religion.html>
- Whole Building Design Guide. (2011, December 27). *National Institute of Building Sciences*. Retrieved from By Steven Strong: <http://www.wbdg.org/resources/bipv.php>
- Worldfirst.com. (2015, June 12). Retrieved from <http://www.worldfirst.com/us/blog/on-the-lighter-side/shines-brightest/>
- WorldpopulationReview. (2014, July). Retrieved from <http://worldpopulationreview.com/countries/netherlands-population/>

Appendix I

This appendix contains additional information on research methods and research questions. The elaborated sections of the research with their sub questions can be found below.

Internal aspects

- What are the mission and vision of Rooftop Energy?
- What is the value proposition of the company?
- What are RTE's capabilities when it comes to financial aspects?
- What market segments is RTE currently operating in?
- What are the strengths and weaknesses of the organization?
- Which business models are currently being used?
- What are the USPs of the company?

External aspects

- What are the potential market segments for RTE?
- Who are the current (inter)national competitors?
- Which of these competitors use the same business model?
- What are the opportunities and threats of the organization?
- Who are the participants in the distribution channels in this market?
- In what way do political regulations have an effect on the business of RTE?
- Which laws and regulations concerning solar PV are currently established in the Netherlands?

Target groups

- Who are the main customers in the earlier distinguished market segments?
- Demographically speaking, where can these prospects be found?
- In what way can these customers be described?
- What are the wishes and demands of these potential clients?
- Why would these prospects choose RTE to do business with?

Marketing Strategy

- What marketing strategy should RTE use to grow in the new SDE segment?
- How can this strategy be compared with the strategies of competitors?
- What value proposition should be offered to the customer?
- Is this strategy financially feasible for RTE to carry out?
- Is the strategy in line with the wishes and demands of the prospects?
- How can this marketing strategy be communicated to customers?

International aspects (Poland and the United Kingdom)

- Can the strategic marketing plan be implemented in a different country?
- Which country has the best potential for Solar PV?
- What international opportunities are there for RTE in these countries?
- What are the laws and regulations concerning solar PV??
- In terms of demography, corruption and other external criteria, how suitable would the country be for RTE to do business in ?
- Do target groups have the same demands and wishes, internationally speaking?

Research Phases

In the first phase, an internal analysis of the company Rooftop Energy will be made by consulting the company's database and by interviewing the employees. These will be informal, conversational interviews. There is no time limit, so the interview does not have to be structured or scripted. The obtained information can easily be formulated by using the basic conceptual models of McKinsey and

Abell and a flowchart for the organizational structure. After an overview of the mission, vision and field of operations of RTE, a marketing mix with the 7 Ps will be used to explain the business proposition of the company.

The second phase is external part of the research, divided in the macro- and meso-analysis. In the macro-analysis the STEP model will be used to determine the opportunities and threats of the Dutch market for solar energy. Most of this required information to answer the sub questions can be found on websites of governments and other authorities, therefore the macro-analysis is conducted by doing desk research on the internet. The meso-part of the external analysis uses the 'Five Forces of Porter', for the reason that this is the ideal conceptual model to describe the market rivalry with direct and indirect competitors, substitute products and the ease of entry. The goal of the meso-analysis is getting a clear overview of the Dutch solar PV market and all the players that operate in it.

The third phase is giving a clear overview of the strengths and weaknesses of RTE, combined with the opportunities and threats of the Dutch market. The SWOT-model will be used to combine the internal and external data. The information from the model can then be added to a confrontation matrix with the goal to determine the most promising options for RTE.

To find out what options are the most effective, they should be presented to potential customers. In this fourth phase, the potential customers of the SDE segment will be located and interviewed. The search for potential customers will be completed in several steps. First the industrial clusters in a range of 50 kilometers are found. These clusters are selected on the criteria of available rooftop surface and the totality of companies in an area. The four largest clusters will then be zoomed in upon, determining the types of companies that are present. After deriving the most common types of companies in the clusters, appointments for qualitative interviews will be made with several of the managers of these organizations. The goal of these interviews is to find out the demand for solar PV of these companies and their demands and wishes for doing business. The most effective way is to make use of standardized, open-ended questions so that the variability in answers can be minimalized. The open-ended part makes sure that individual differences are also captured. To guarantee the quality of the research, a sufficient amount of interviews should be completed. This number will be defined as soon as the amount of 'industrial clusters' is known. The interviews will then be further analyzed and converted into a conclusion about the demands for Solar PV.

The final phase is turning the conclusion of the interviews into a viable market strategy. All demands and important values for the potential customers are obtained in the qualitative interviews. With this information, the implementation of the market strategy will be further elaborated.

The international analysis is a stand-alone research where the Dutch market is compared to two markets of other countries. This analysis will be completed with online desk research, using secondary sources on the internet and in magazines. The goal of the country comparison is to find out what country has the most potential for Solar PV and whether it is possible for Rooftop Energy to enter this market. As mentioned before, a general filter will be used to find two countries with potential.

Conceptual Models

The scheme below gives an overview of the research sections, the research methods and the conceptual models that are used during the analysis.

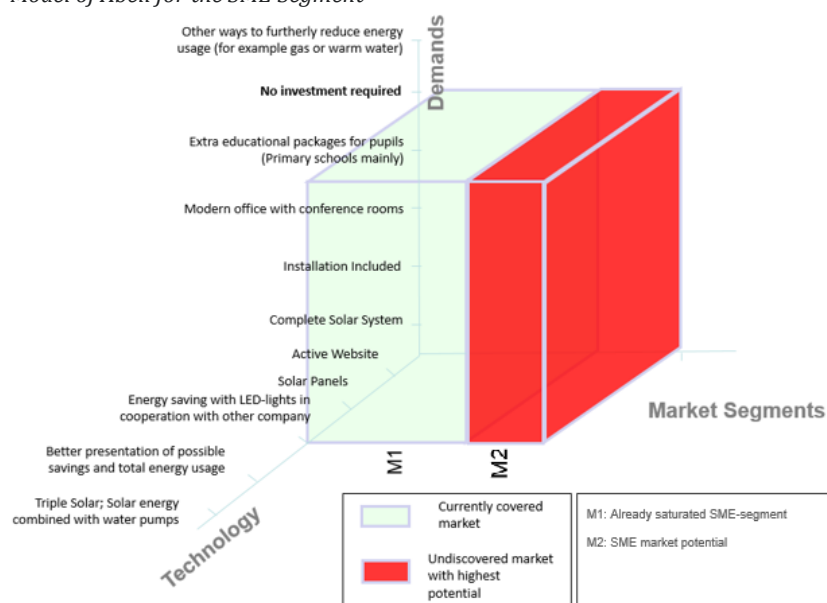
SECTIONS	RESEARCH METHOD	CONCEPTUAL MODELS
INTERNAL ASPECTS	Internal Desk Research – by consulting the company database and internal interviews	Flowcharts organizational structure and process, Model of Abell, 7S-model McKinsey
EXTERNAL ASPECTS	Macro-analysis – by online desk research and consulting government published data	STEP-analysis
	Meso-analysis – online desk research for direct and indirect competitors, substitute products, ease of entry and market rivalry	5 forces of Porter
	Conclusion of External and Internal Analysis	SWOT analysis
TARGET GROUPS	Online desk research – Sorting out the industrial clusters and picking targets for interviews	Online research for company descriptions
	Field Research with qualitative interviews (standardized, open-ended questions)	Feedback and surveys from prospect customers; Telephonic for international and interviews for national research General wishes and demands of prospects by interviews.
MARKET STRATEGY	Processing the obtained data.	Ansoff Matrix
INTERNATIONAL CASE	Online Desk Research	Country comparison with an international case

Appendix II

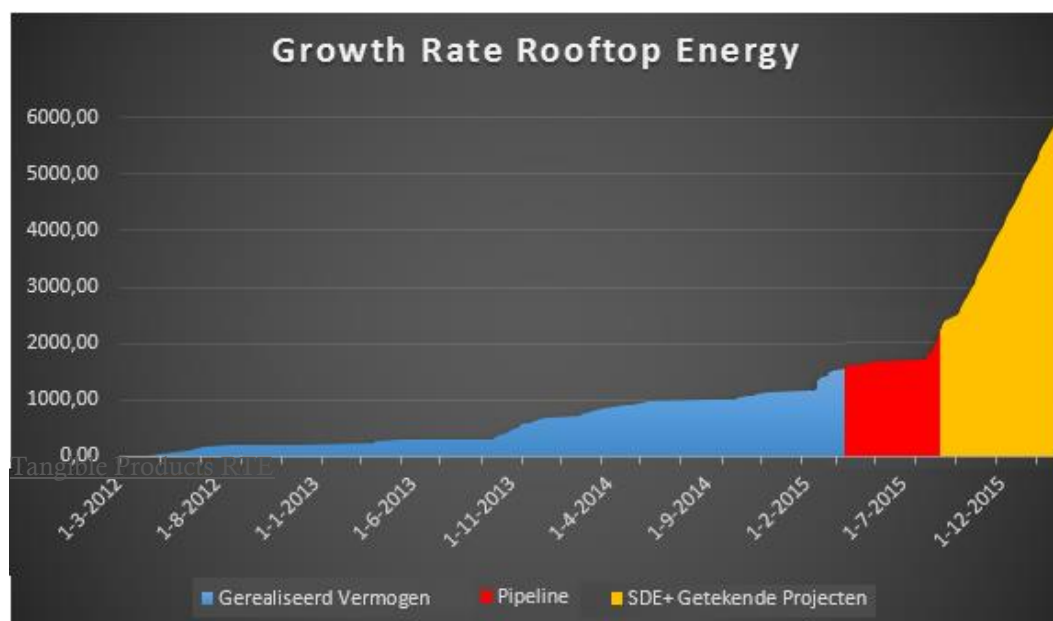
This appendix contains all the information of the internal analysis that has not been found directly related to the research question of the thesis. Most of the graphs are used to further elaborate the general information from the main research.

The graph beneath shows the model of Abell in three dimensions. As can be noticed, the demands and technology in this segment are both the same as in the industrial segment, but a large part of the SME market has already been saturated (M1), therefore the potential in this market segment (M2) is smaller than that of the industrial (SDE) segment. An extra aspect is that the yields per project are much higher in the industrial segment, for the reason that more solar panels are used.

Model of Abell for the SME Segment



The second graph of this appendix shows the predicted growth rate of the company, measured in installed power (KwH). The main reason for the rapid growth of the company at the end of 2015 is tapping from the SDE market, where the projects and the installed KwH are much larger.

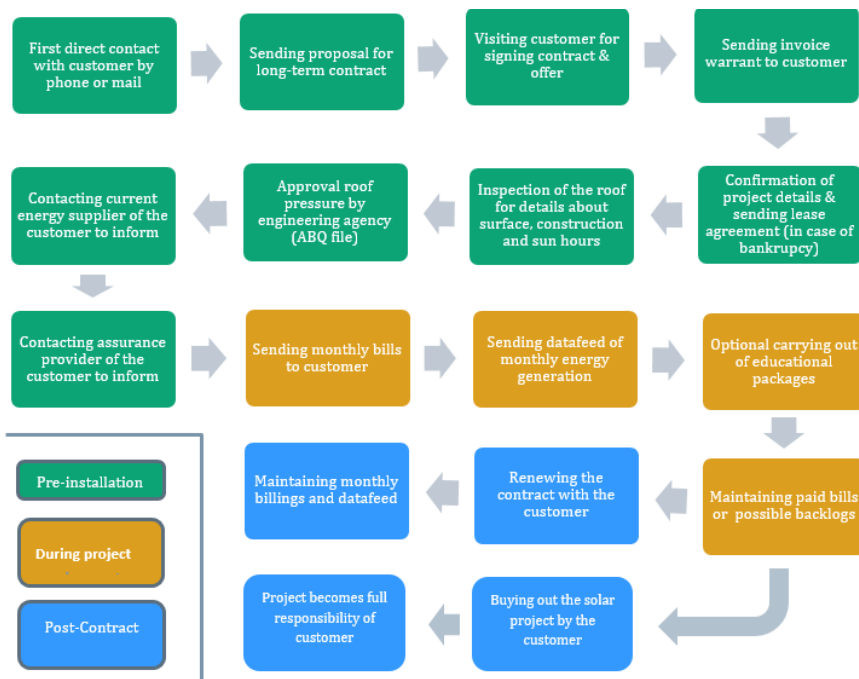


- Solar panels; the crystalline surface of the panels absorbs sunlight, causing a flow of electrons; electricity. Rooftop Energy uses panels of the brand CanadianSolar with a maximum power of 255W⁷⁷.
- Inverters; these large devices convert the electricity generated from the solar panels to mains current. Because RTE mainly has large projects, inverters with a capability of 20kW or 27.6kW of the brand ABB are being used⁷⁸.
- Wiring; to lead the electricity to the point where it can actually be used, solar wires are needed. The diameter of these wires varies from 4 to 16 mm. They are produced by the company LAPP Group⁷⁹.
- Mounting system; the solar panels are attached to carrying beams that are placed on flat rooftops. These beams are triangular shaped systems that are easily installed and lift the solar panels of the ground slightly. The panels are therefore protected against water or sharp objects that stick out of the roof. The brand that Rooftop Energy uses is SUNBEAM, a Dutch distributor of mounting systems.⁸⁰
- Data monitor; the system contains a display that shows the amount of energy generated, this feature can also be connected to a Wi-Fi network.

Overview project RTE

The following flowchart describes the entire process that customers go through when signing a contract with RTE. The colors in the chart show the timeline in which the steps take place; before the installation of the solar panels, during the contract time and after the contract has ended.

Flowchart 2.5 RTE project process



⁷⁷ (Canadian Solar, 2015)

⁷⁸ (ABB Global Site, 2015)

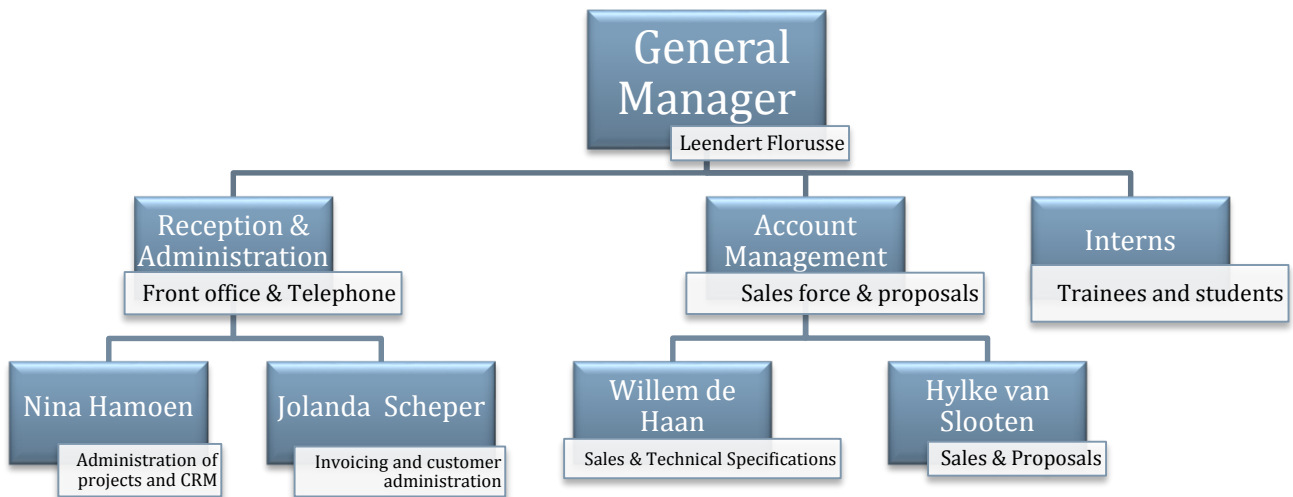
⁷⁹ (LAPP group, 2015)

⁸⁰ (Sunbeam Montagesystemen, 2015)

Internal structure RTE

The following flowchart describes the way in which the RTE employees operate. As can be noticed, apart from the general manager, the company has two 'sides'; the administrative employees and the account managers. Depending on their level of education, interns are used to aid in both areas.

Graph 2.6 Flow Chart of Internal structure RTE



Appendix III

The table below shows the division in religion of the Dutch population. As can be concluded, Christianity, even though it is divided between Protestants and Roman Catholics, is the largest practised belief in the Netherlands. Almost the other half of the population is atheist.

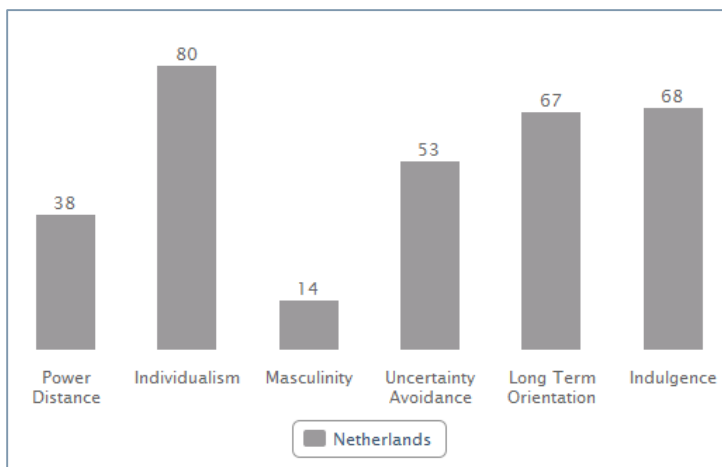
Overview religion

Country	Christianity (Roman catholics)	Islam	Christianity (Protestant)	No religion	Other religions
Netherlands⁸¹	28.0%	5.2%	19.0%	42%	5.8%

Model of Hofstede

The graph below shows the score of the Netherlands on the cultural dimensions of Hofstede, giving an indication of what the business environment looks like. The description contains information about the relationship between employees and managers, punctuality, division between male and female workers and teamwork. The average score for all countries is set on 50, for the reason that a negative score could be confusing for the reader.

Graph 3.1 The six cultural dimensions of Geert Hofstede⁸²



According to the model of Hofstede, it can be noticed that compared to all the European countries, the Netherlands score fairly low on the 'power distance', meaning that employees of companies are treated equally and are allowed to act more informal when having contact with their superiors. The effect on the business of RTE consists mainly of the fact that formalities are only required when meeting a client or colleague for the first time. These formalities are dropped after the 'small talk', resulting in an easier way of doing business.

The 'masculinity' aspect is mainly found in countries with dominant corporate cultures; the Netherlands score really low on this dimension, meaning that teamwork and enjoying the work activities play a bigger role than being better than colleagues. More dominant business cultures encourage obtaining achievements and standing out from the crowd, causing a highly competitive business environment. The effect of this aspect on business is that with the lack of competitiveness, RTE will be less involved in 'showing off' and price wars, but rather in working together with clients to achieve benefits for both parties.

The 'indulgence' aspect in of the Hofstede model shows how inhabitants of cultures react to desires and impulses; Mostly depending on the governmental system and the well-known standards, countries with a history of suppression tend to see things in a negative perspective and are used to an habit of restraint.

⁸¹ (IndexMundi, 2014)

⁸² (The Hofstede Centre, 2015)

More developed countries tend to be more optimistic and inhabitants spare time for leisure and realizing their desires, instead of constantly committing themselves for greater causes such as the government.

The Netherlands score high on 'individualism'. This means that the inhabitants show a high degree of independence and being able to take responsibility. In the business environment, this means giving direct criticism can damage the relation between the employee and the management. Creating a feeling of importance for every employee is a critical aspect for a manager to keep the business running smoothly.

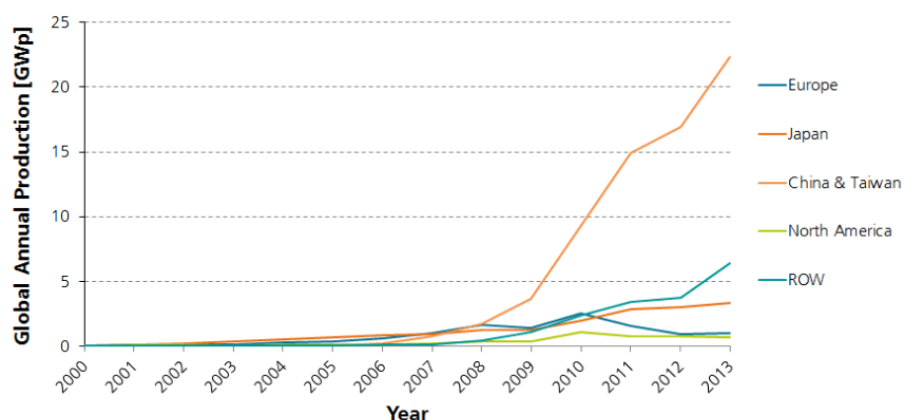
When looking at business meetings and the trustworthiness of personnel when it comes to making appointments, we should observe the 'uncertainty avoidance' dimension; countries that score extremely high make an absurd amount of rules and try to regulate everything, even if these rules do not seem to work. Time is seen as money and according to the Hofstede model, these business countries show a great aversion towards innovation and change. The Netherlands are in a center point, while countries with a lower score show less discipline and punctuality when it comes to appointments and business meeting.. Creativity is encouraged and the way in which goals are reached are not important. As long as the end goal is clear. For RTE it should be clear that the Dutch business environment works with a lot of rules and processes, but there is still a certain open-mindedness towards innovation and changes.

The last dimension of the Hofstede model of graph 4.2 is 'long-term orientation'. This dimension shows how cultures are affected by their history and how they use this knowledge to evolve. Some countries attach a lot of value to history and culture, meaning that they have a short-term orientated lifestyle where traditions and religion still play a large role. The mentality of 'living in the now' causes inhabitants of these countries to plan less ahead. Dutch inhabitants have the mentality to plan further ahead, saving money to invest in the future and sticking less to history and culture. RTE could use these facts to their advantage, by giving a clear overview of their long-term contracts and explaining the non-investment concept.

Solar PV Market

The graph 'PV Industry Production by Region' shows the growth of the Solar PV market. As can be concluded, China and Taiwan are the countries that have been growing rapidly since 2008. Together they hold almost 25% of the total market for solar energy.

PV Industry Production by Region (2000-2013)

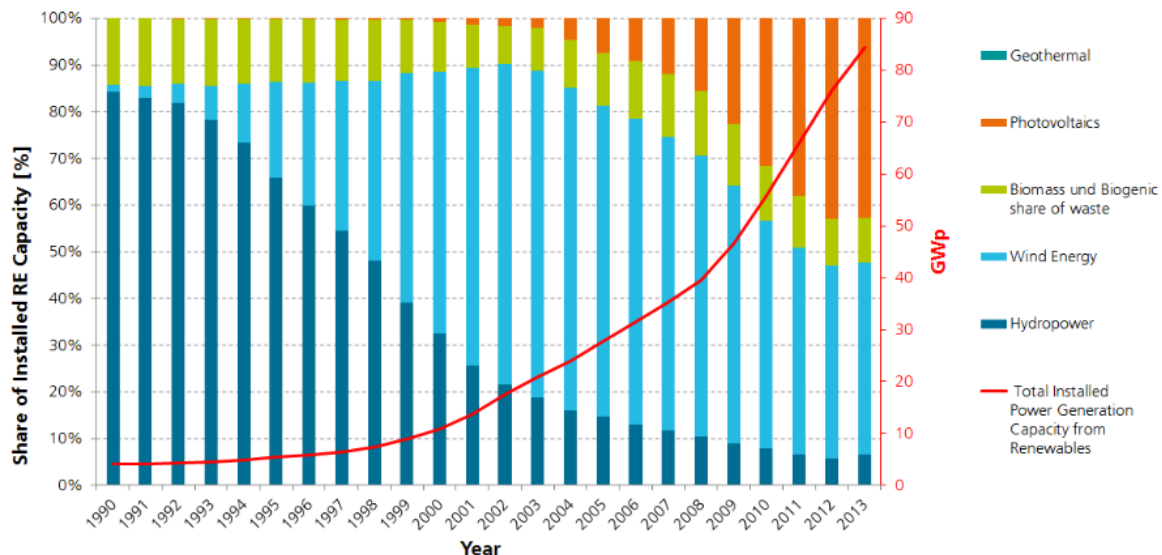


From: Fraunhofer Institute for Solar Energy Systems, October 2014⁸³

⁸³ (Fraunhofer Institute, 2014)

The graph 'Electrical Capacity of Renewable Energy Sources' is a description of the growth of the market for renewable energy sources. When looking closely, the total market is growing rapidly in terms of installed gWp. Solar PV is starting to get a larger share of the total market for renewable energy sources, while hydropower is growing less rapidly.

Electrical Capacity of Renewable Energy Sources



From: *Ofgem E-Serve, Renewables Obligation Annual Report, February 2015*⁸⁴

Summary 'Energieakkoord Duurzame Groei'

General energy saving is the fundamental guideline of the agreement; making companies in different sectors more aware of their energy inefficiency and supporting them to become more competitive by lowering yearly energy usage by 1.5%. Organizations that invest into sustainable energy are eligible for several governmental grants. The 'energie-investeringsaftrek' (EIA) allows organizations to subtract a percentage of all investments in company assets that meet the energy saving standards from the accounting profit. The net benefit is eventually 10% of the total invested sum. The annual budget for this grant is estimated at a total of 106 million euros for 2015. Unfortunately, the rules for coming into consideration are not based on solar energy, but on other technologies. For RTE, this budget is as good as unusable to realize projects.⁸⁵ **Scaling up sustainable energy** is the second pillar, divided in the segments wind energy on land and sea, solar energy and biomass energy. The largest part of the solar energy generation will be achieved in the industrial segment, that is why the government has put 3.5 billion euros at the disposal of organization that help generate this energy in the SDE+ subsidy. In 2016, there will be a temporary evaluation concerning the 14% sustainable energy objective for 2020. The other pillars are mainly based on **Cooperation** and **transportation**; generating energy in a cluster of unions and associations will be encouraged by a tax discount of 7.5 cents/kWh. Cooperation with other parties in Brussels will have to result in a more efficient European Emissions Trading System (ETS), that has the main objective to reduce CO₂ emissions by at least 80% in 2050. The transportation pillars are long-term policies that should make the transportation of energy more efficient by satisfying supply and demand. The program should also lead to innovation and **more employment**.⁸⁶ These last pillars do not have a large effect on the business of RTE, but it is however a positive fact that the government in encouraging sustainable energy sources. Stimulating businesses to think about sustainable energy and raising their awareness of CO₂ emissions will also result in more interest for solar energy, making it easier for RTE to introduce their concept.

⁸⁴ (Ofgem E-Serve, 2015)

⁸⁵ (Rijksdienst voor Ondernemend Nederland, 2015)

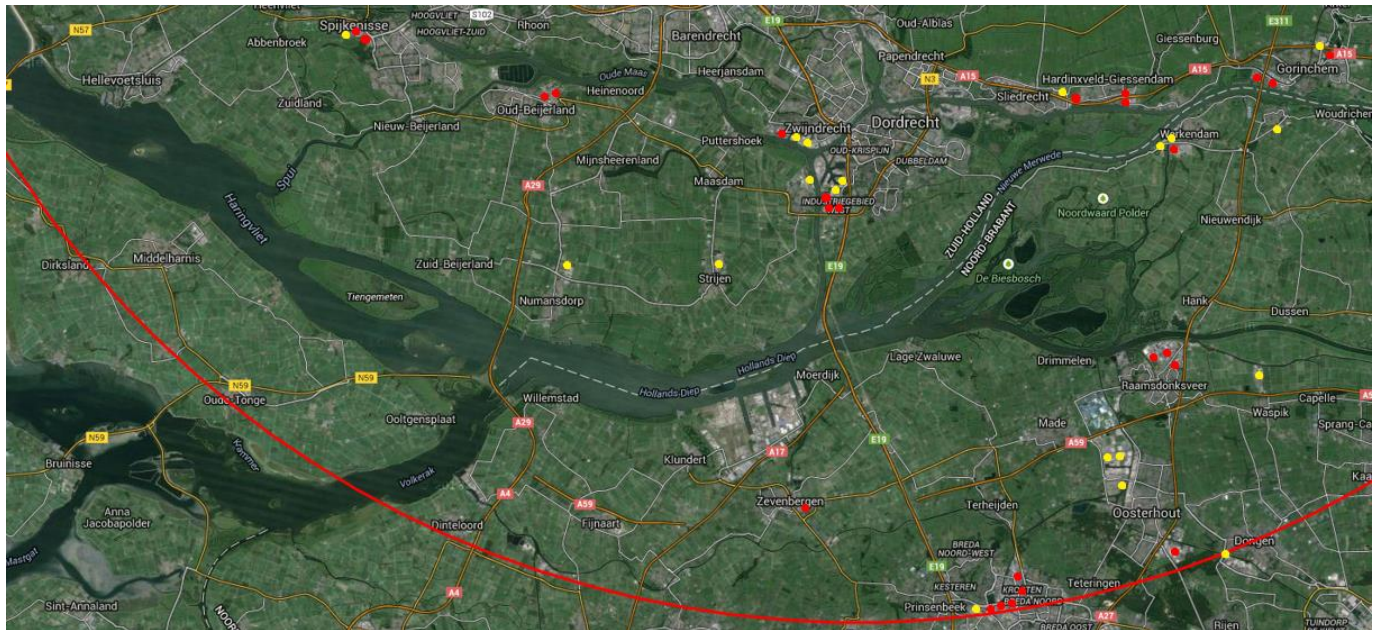
⁸⁶ (Sociaal-Economische Raad, 2015)

Appendix IV

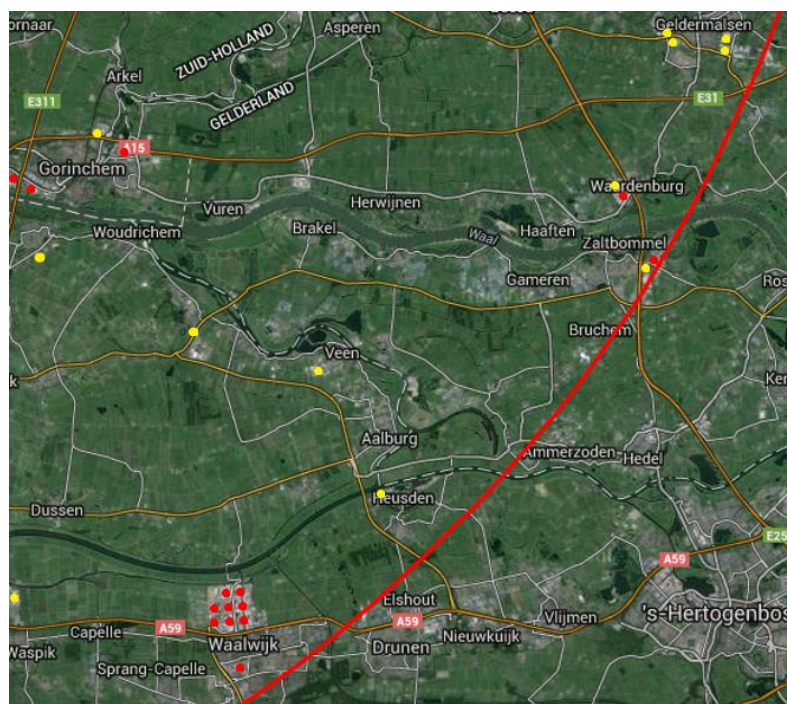
Location Industrial Clusters

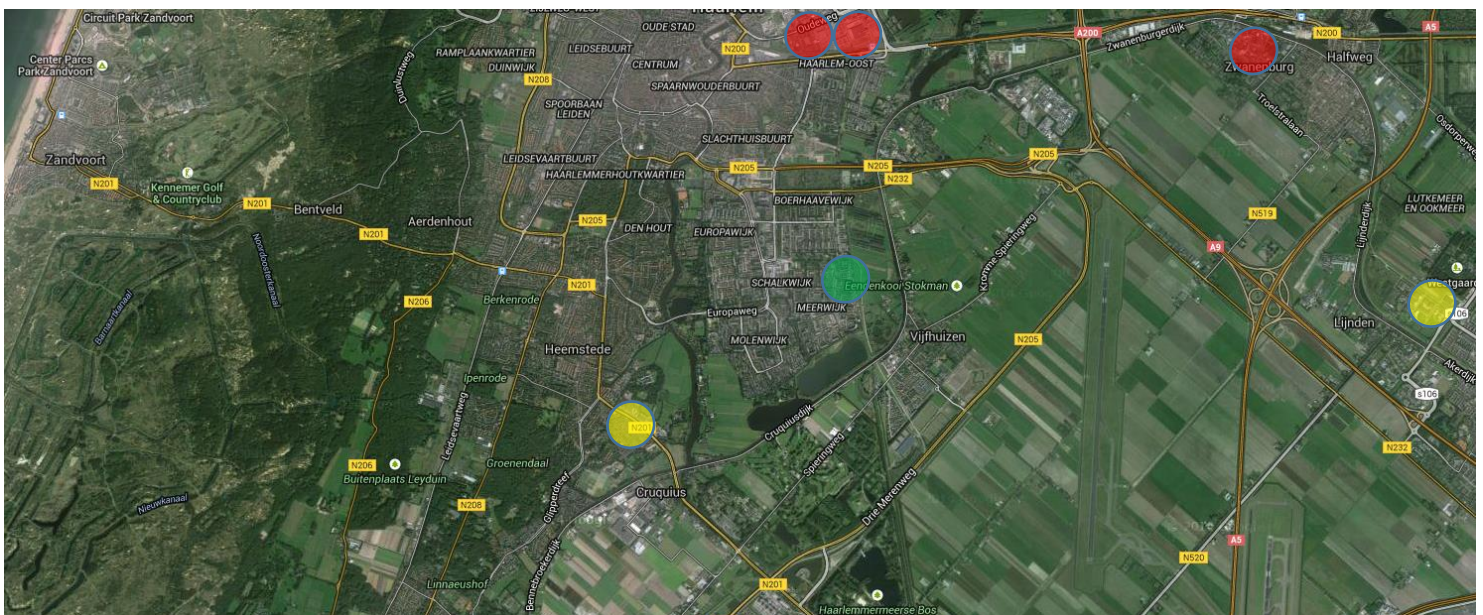
This appendix contains maps of urbanized terrain in a range of 50 kilometres of Rooftop Energy with their industrial clusters. Circles represent areas of 25 hectares, 500m x 500m. **Green** circles indicate a cluster of $10 < X < 15$ industrial buildings with an average flat roof surface of 500 m². **Yellow** circles indicate medium clusters where $15 < X < 25$ buildings. **Red** circles indicate large clusters where $X > 25$ industrial buildings. Natural areas and small villages have been left out of the research do to their lack of urbanized terrain. The largest four clusters are used in further research, to determine the most present business types.

Industrial clusters Southern Segment

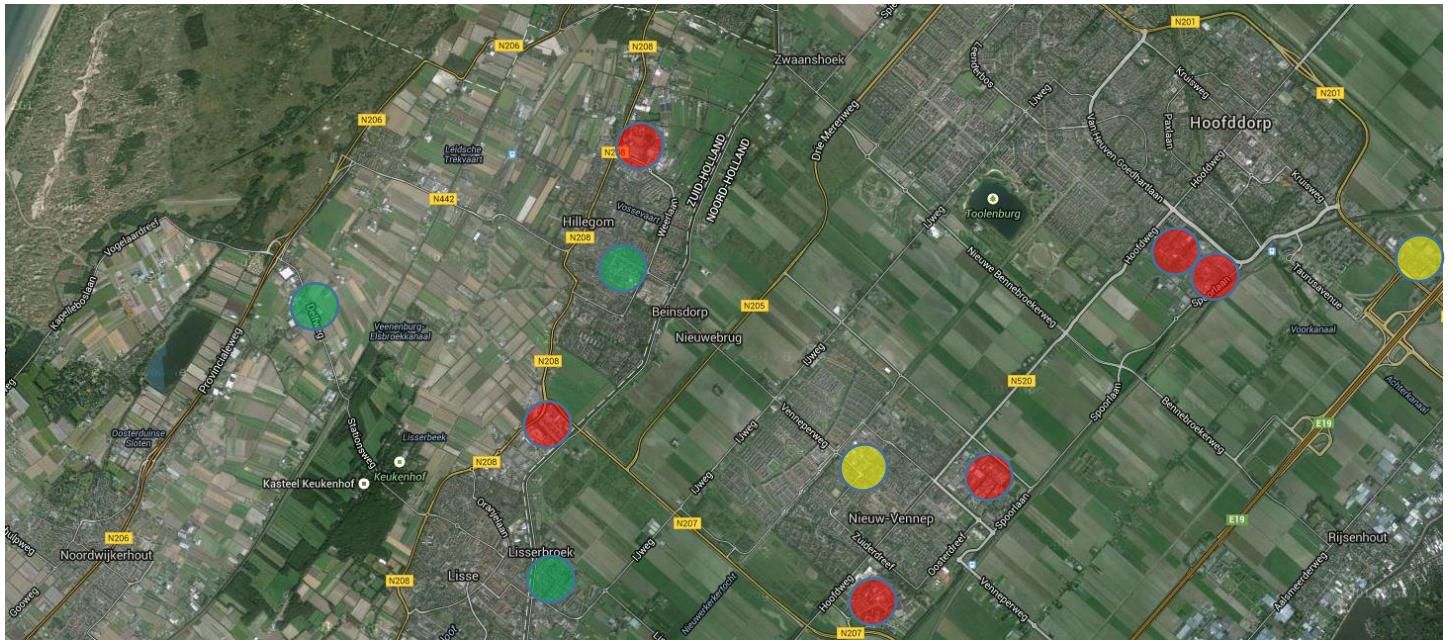


Industrial Clusters South-Eastern Segment



Map 1: IJmuiden, Velsebroek, North of Haarlem*Map 2: South of Haarlem, Zwanenburg*

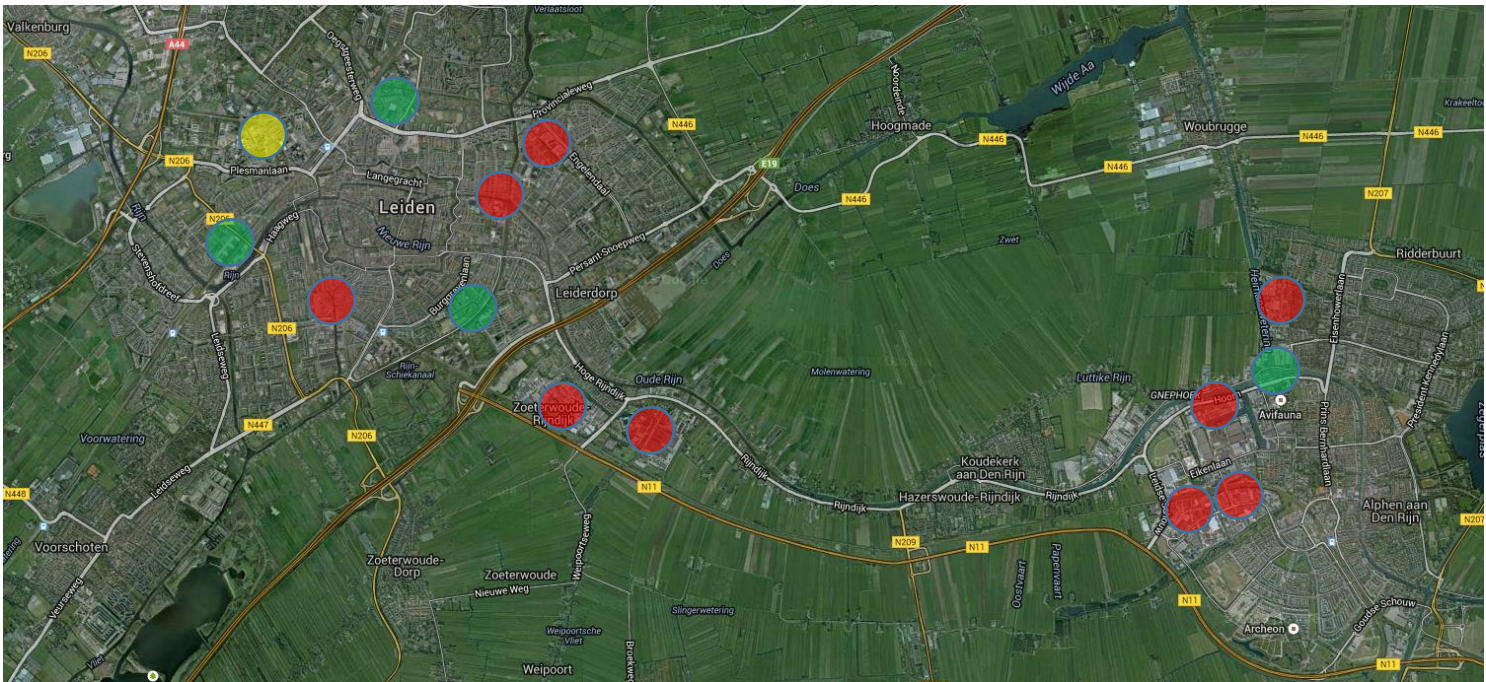
Map 3: Hillegom, Hoofddorp, Nieuw-Vennep, Noordwijkerhout



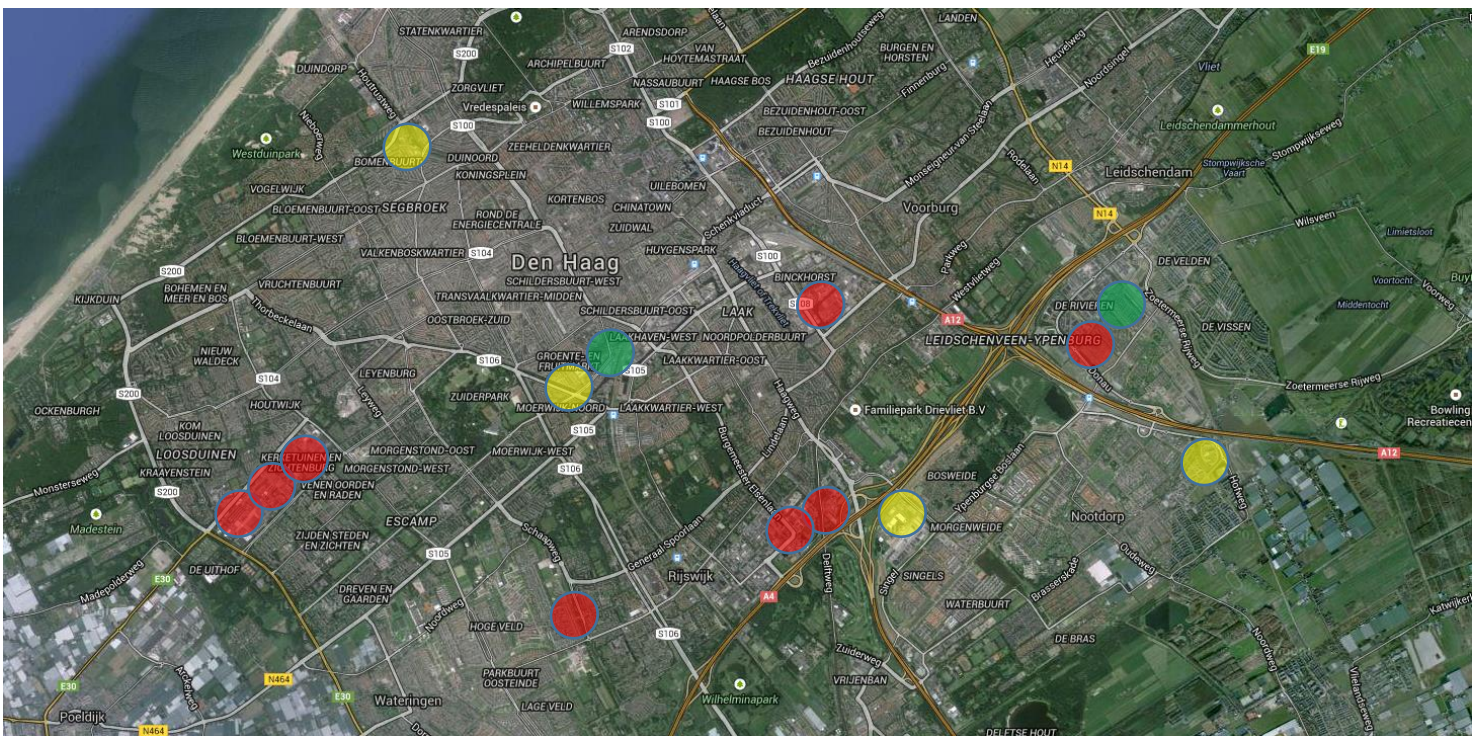
Map 4: Sassenheim, Roelofarendsveen, Oegstgeest, Noordwijk



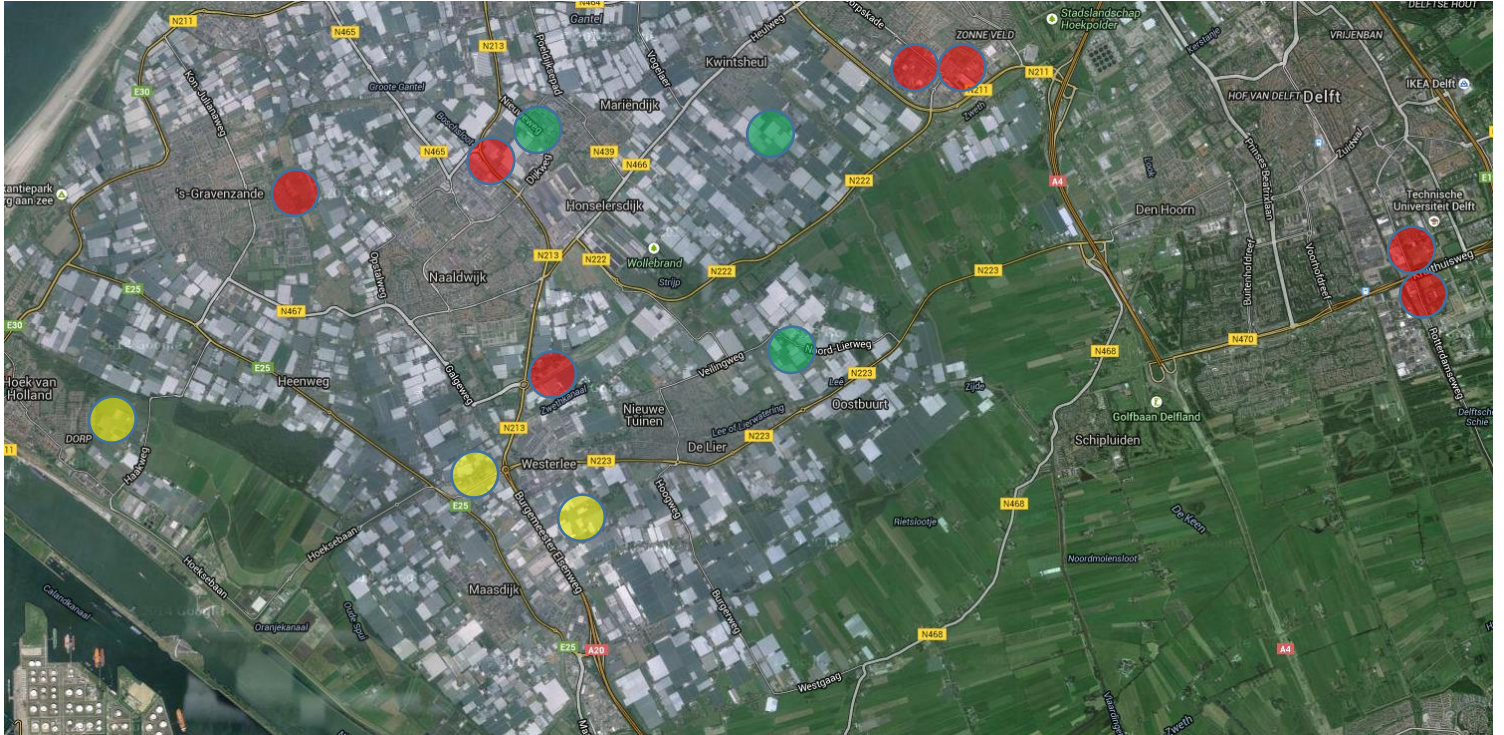
Map 5: Leiden, Voorschoten, Alphen aan de Rijn, Koudekerk



Map 6: Den Haag, Voorburg, Nootdorp



Map 7: Naaldwijk, 'S-Gravenzande, Maasdijk, Delft



Map 8: Maasvlakte, Europoort, Maasdijk, Oostvoorne



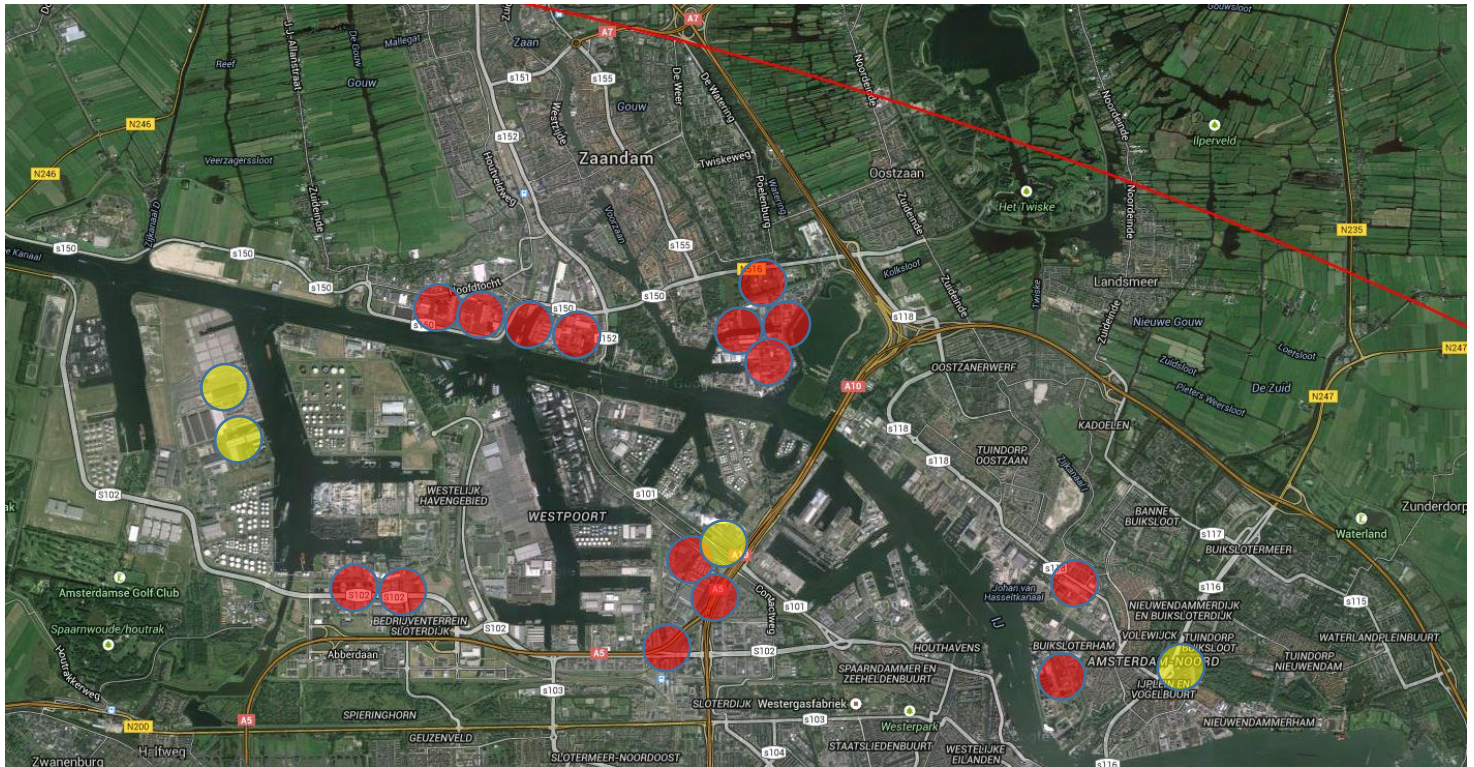
Map 9: Rockanje, Hellevoetsluis, Zuidland



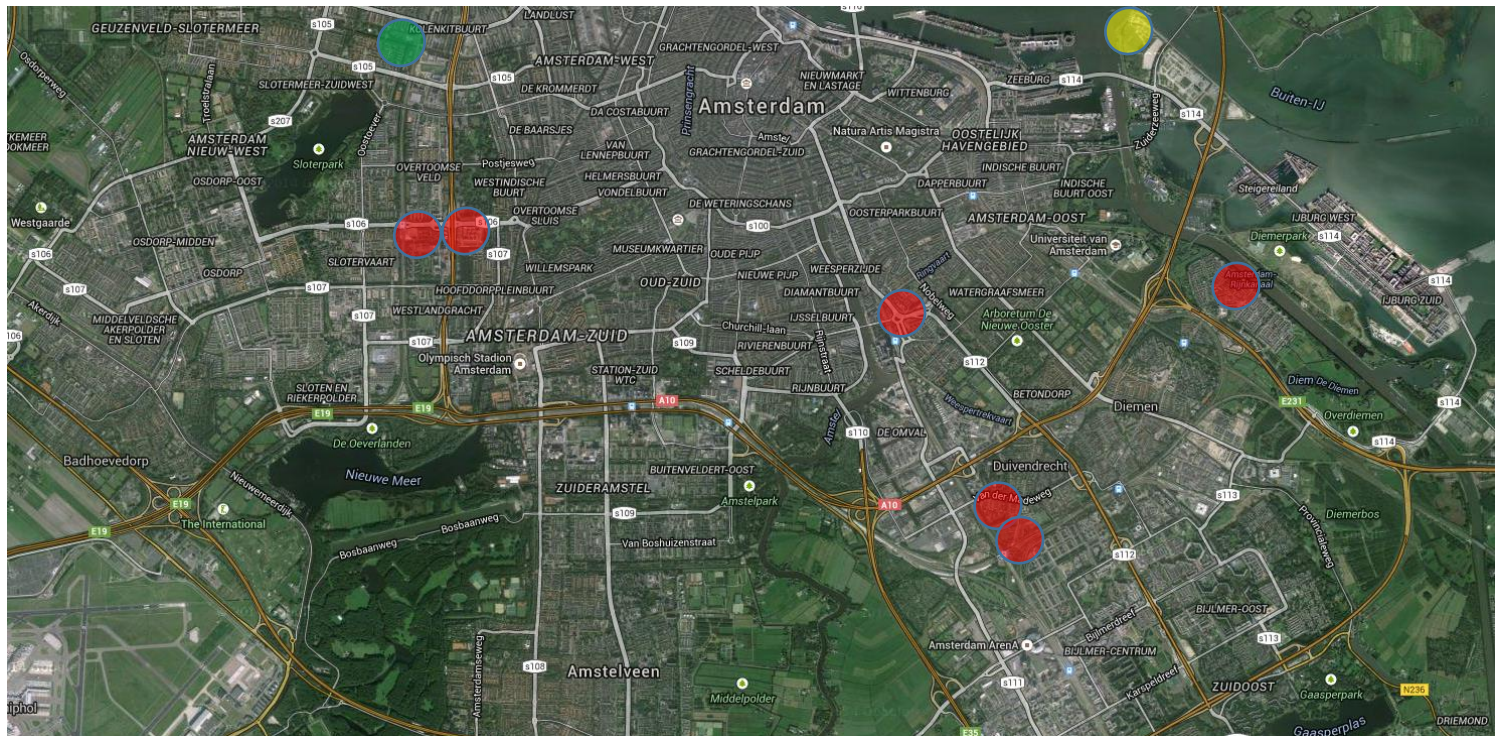
Map 10: Middelharnis, Oud-Tonge, Den Bommel



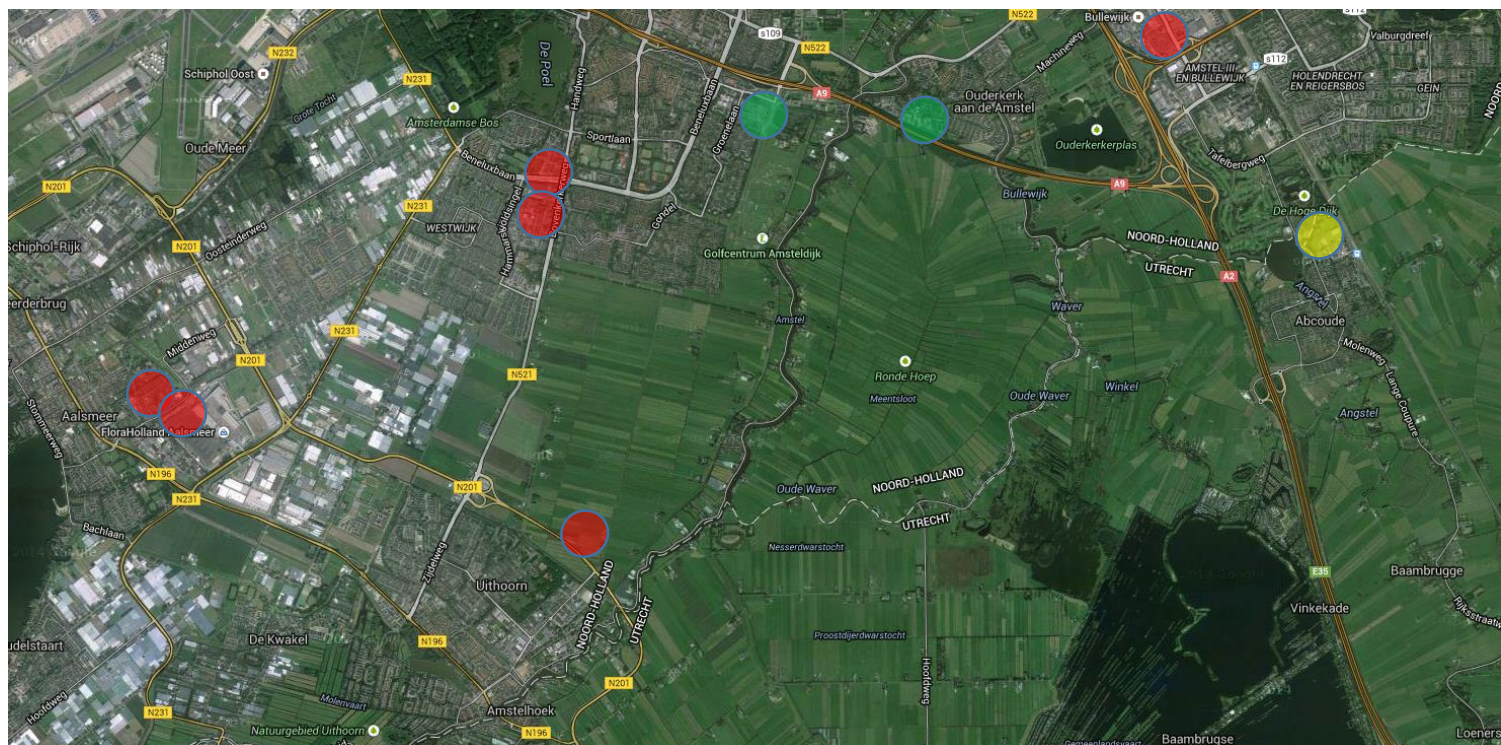
Map 11: Zaandam, North of Amsterdam, Zwanenburg



Map 12: Amsterdam, Amstelveen, Amsterdam-Bijlmer



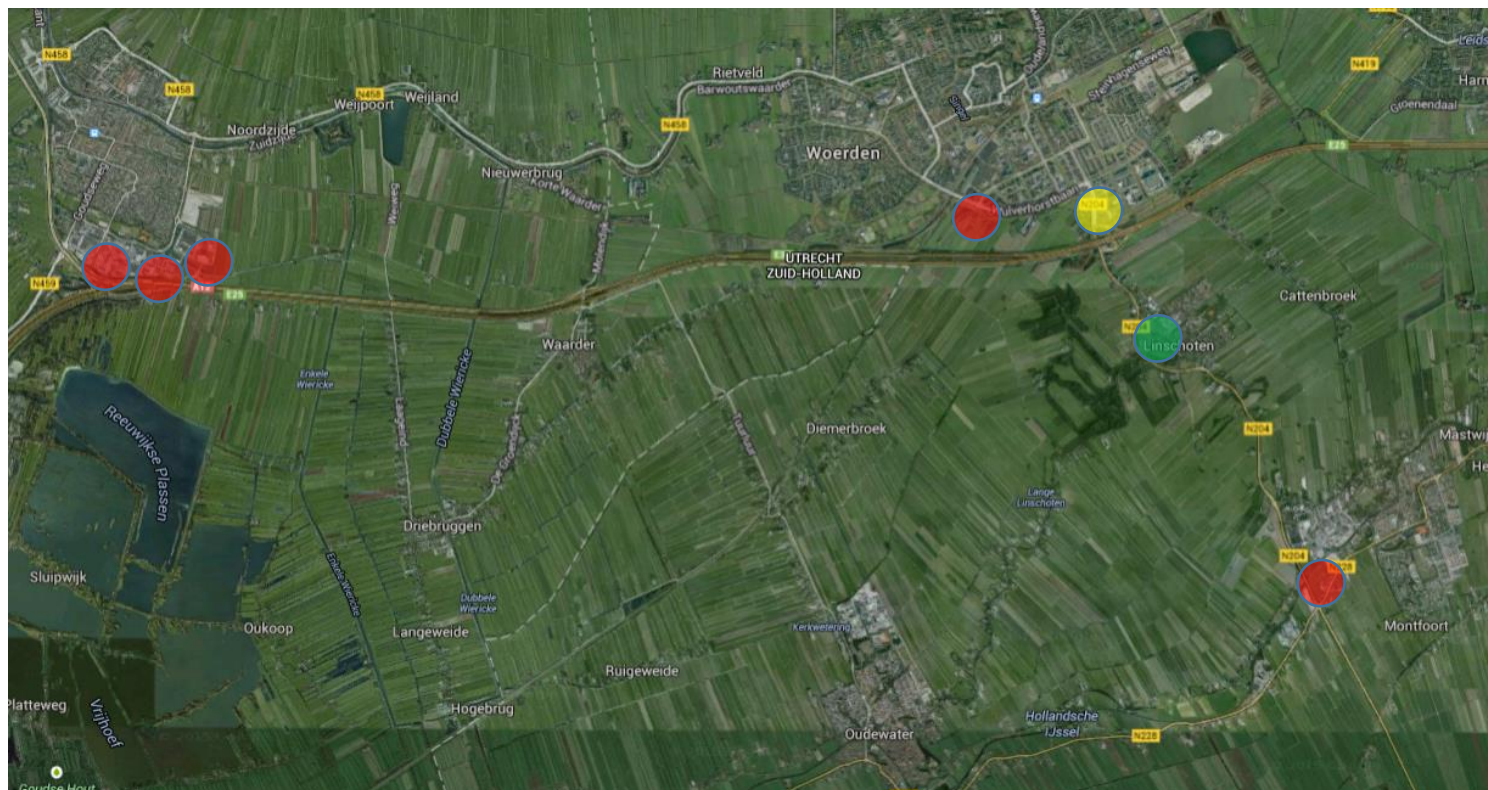
Map 13: South of Amsterdam, Uithoorn, Aalsmeer, Abcoude



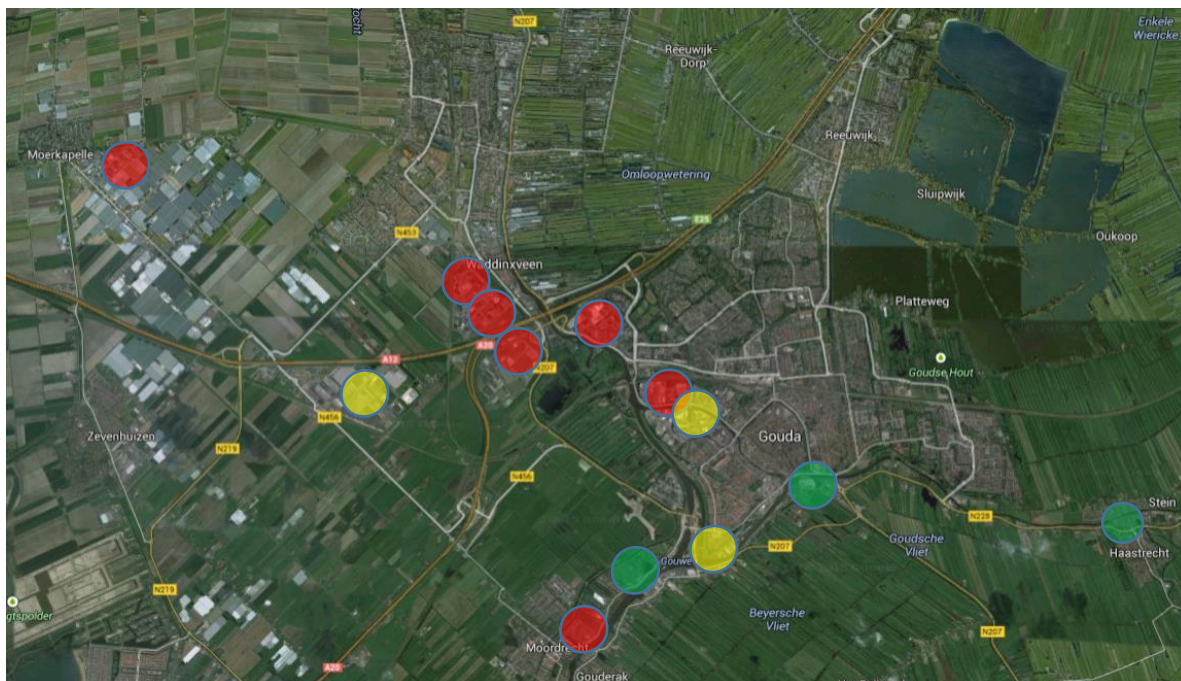
Map 14: Roelofarendsveen, Mijdrecht, Ter Aar



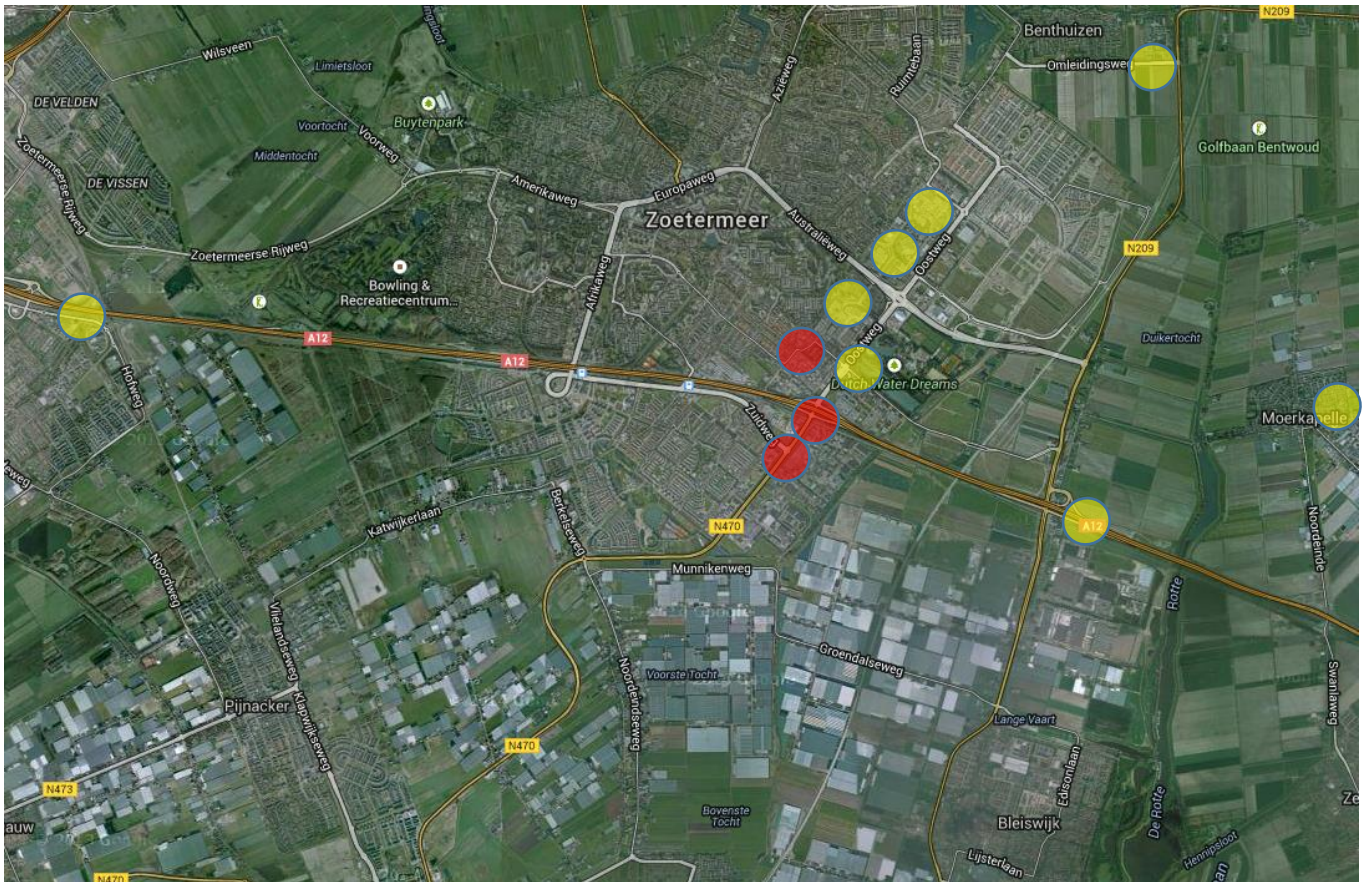
Map 15: Bodegraven, Woerden, Oudewater, Montfoort



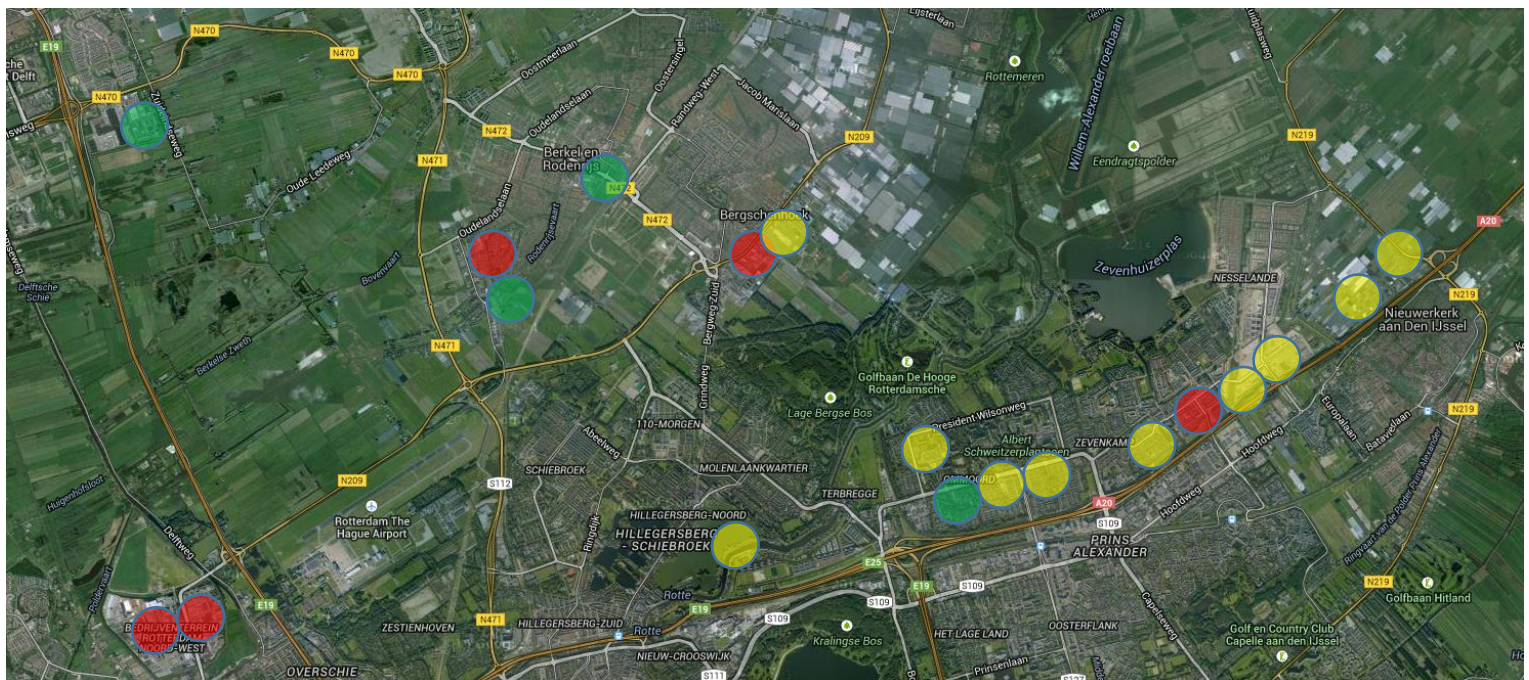
Map 16: Gouda, Moerkapelle, Moordrecht, Waddinxveen, Haastrecht



Map 17: Zoetermeer, Pijnacker, Bleiswijk



Map 18: Berschenhoek, Nieuwekerk aan den IJssel, Rotterdam Alexander

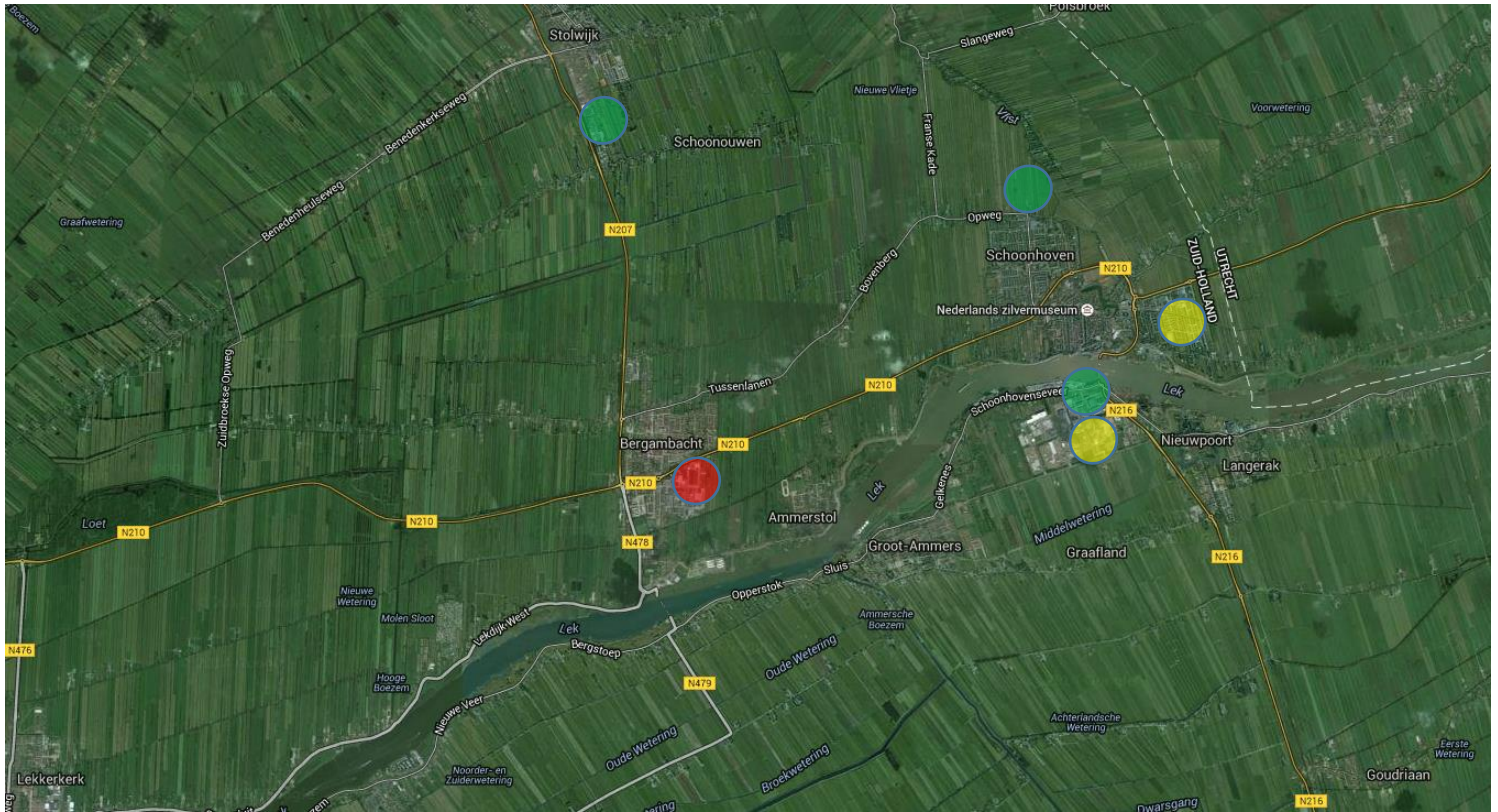
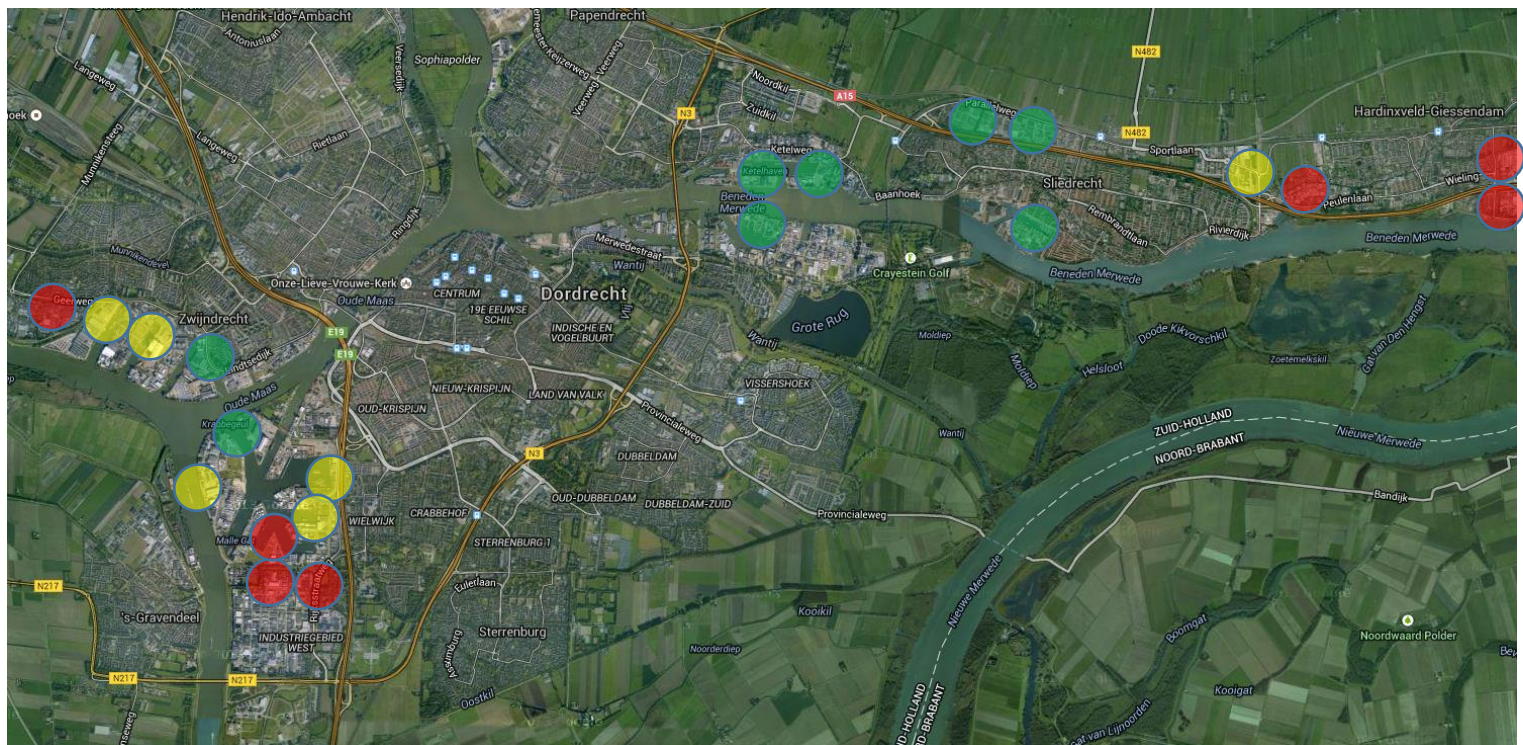


Map 19: Maassluis, Rotterdam, Vlaardingen, Schiedam



Map 20: Rotterdam, Barendrecht, Ridderkerk, Lekkerkerk

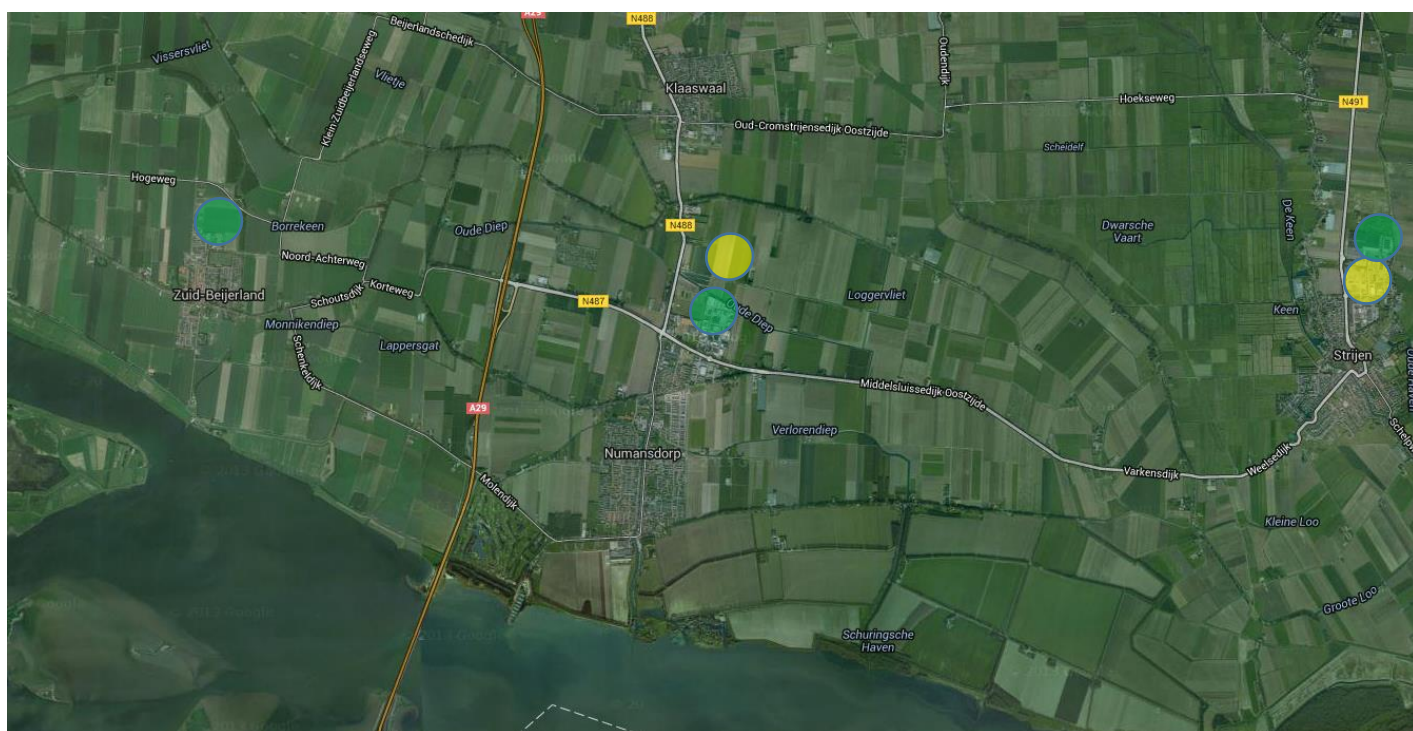


Map 21: Stolwijk, Schoonhoven, Bergambacht*Map 22: Zwijndrecht, Dordrecht, Sliedrecht*

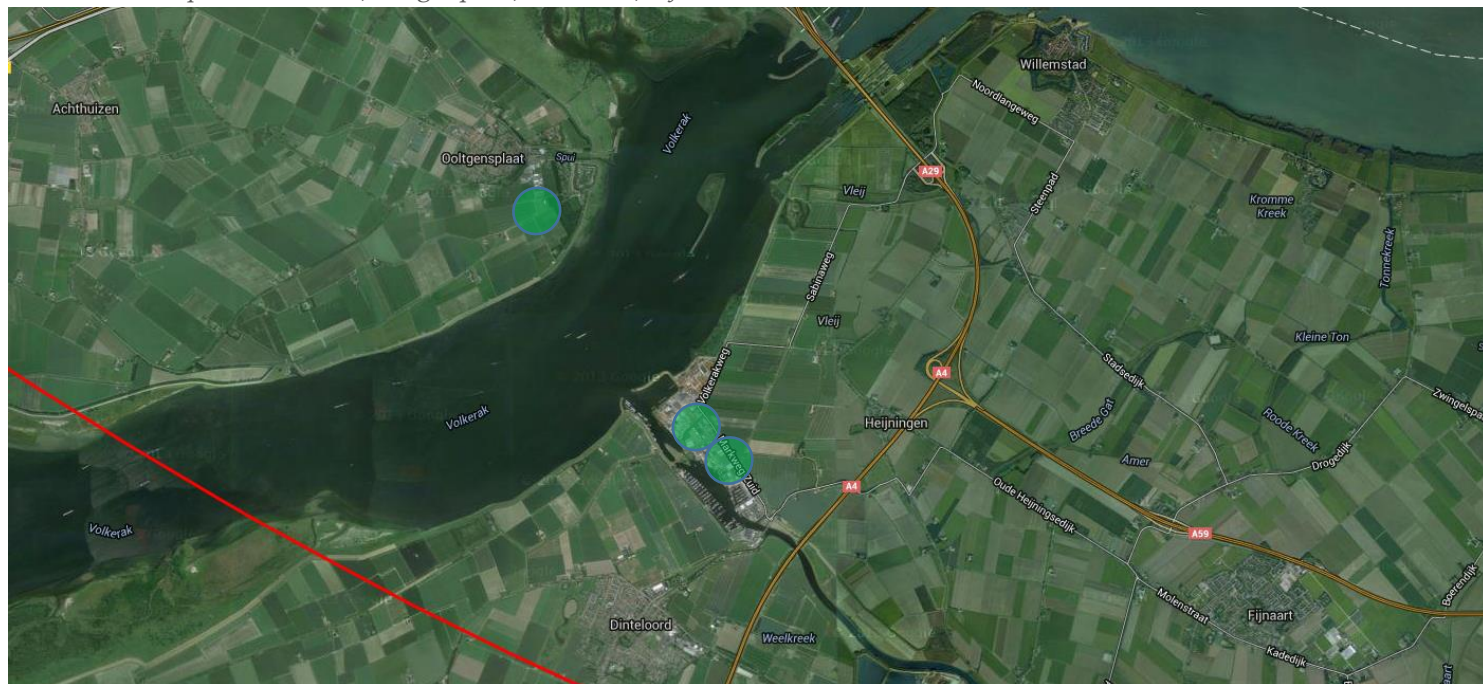
Map 23: Spijkenisse, Hoogvliet, Oud-Beijerland



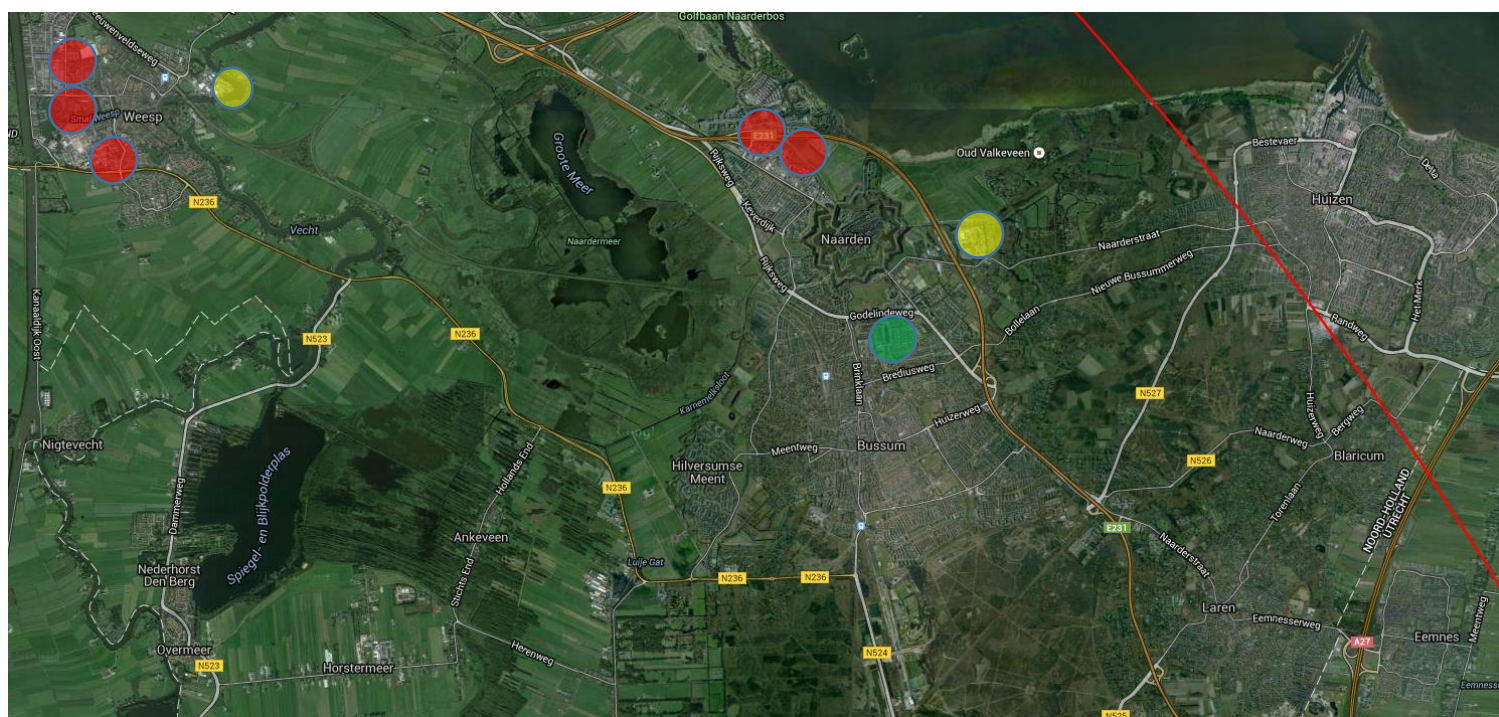
Map 24: Klaaswaal, Numansdorp, Strijen

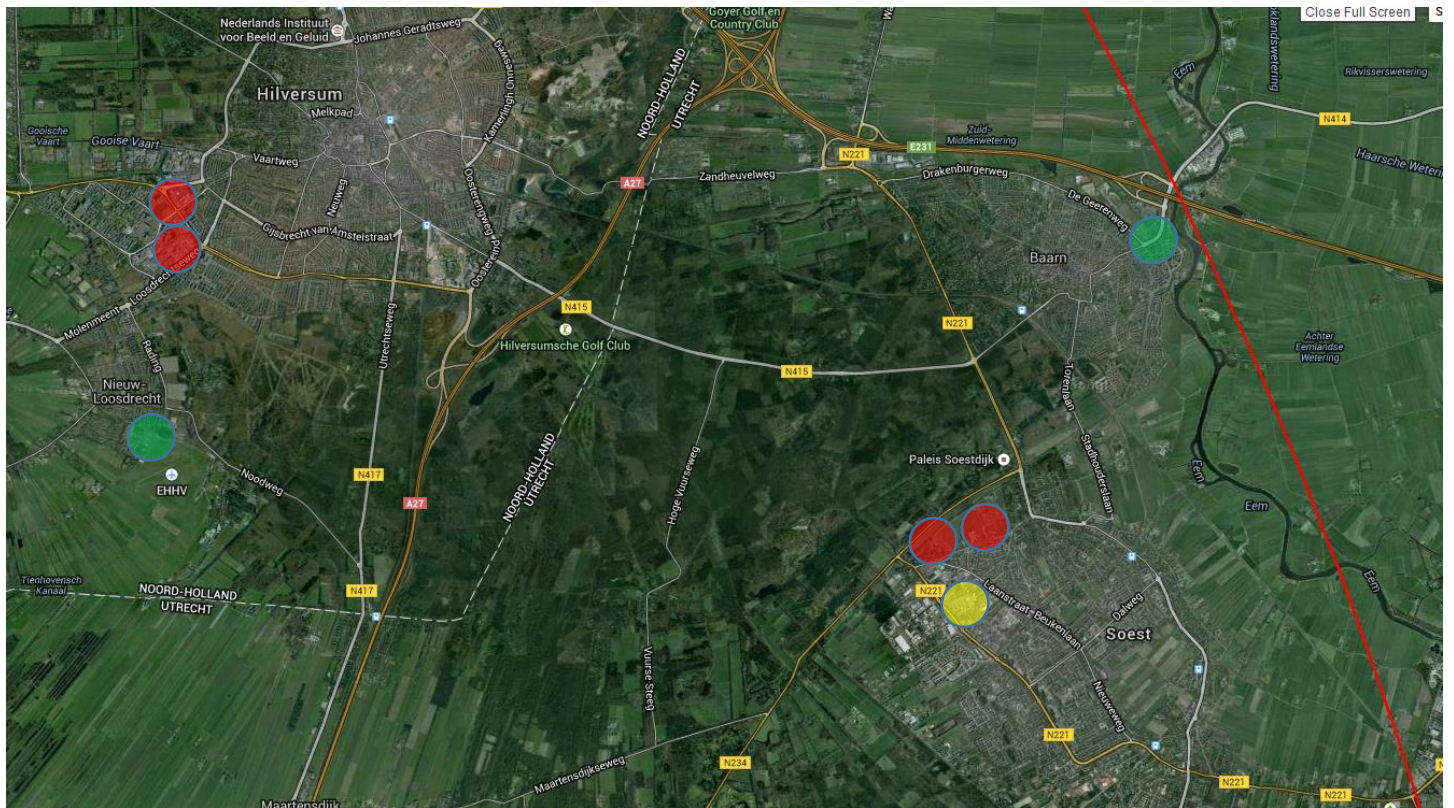
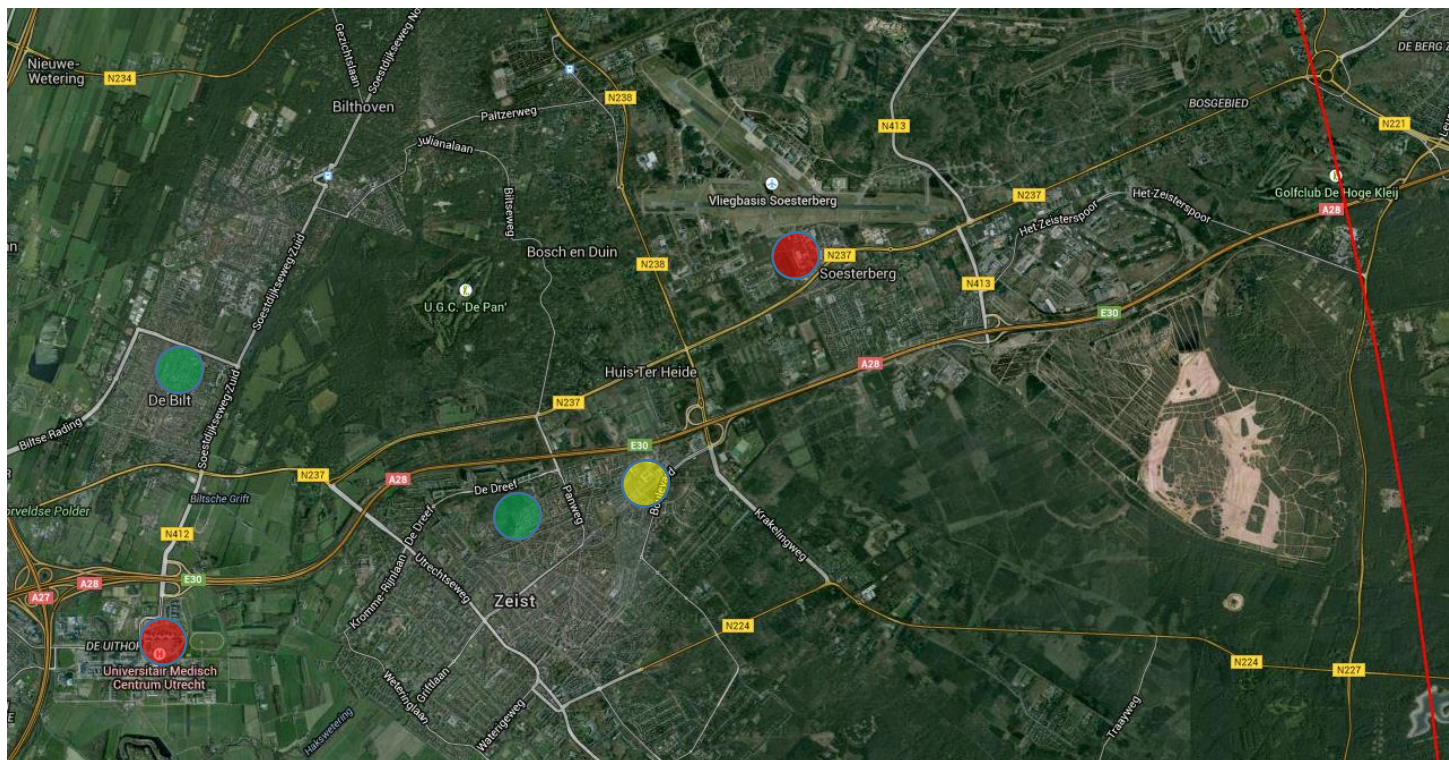


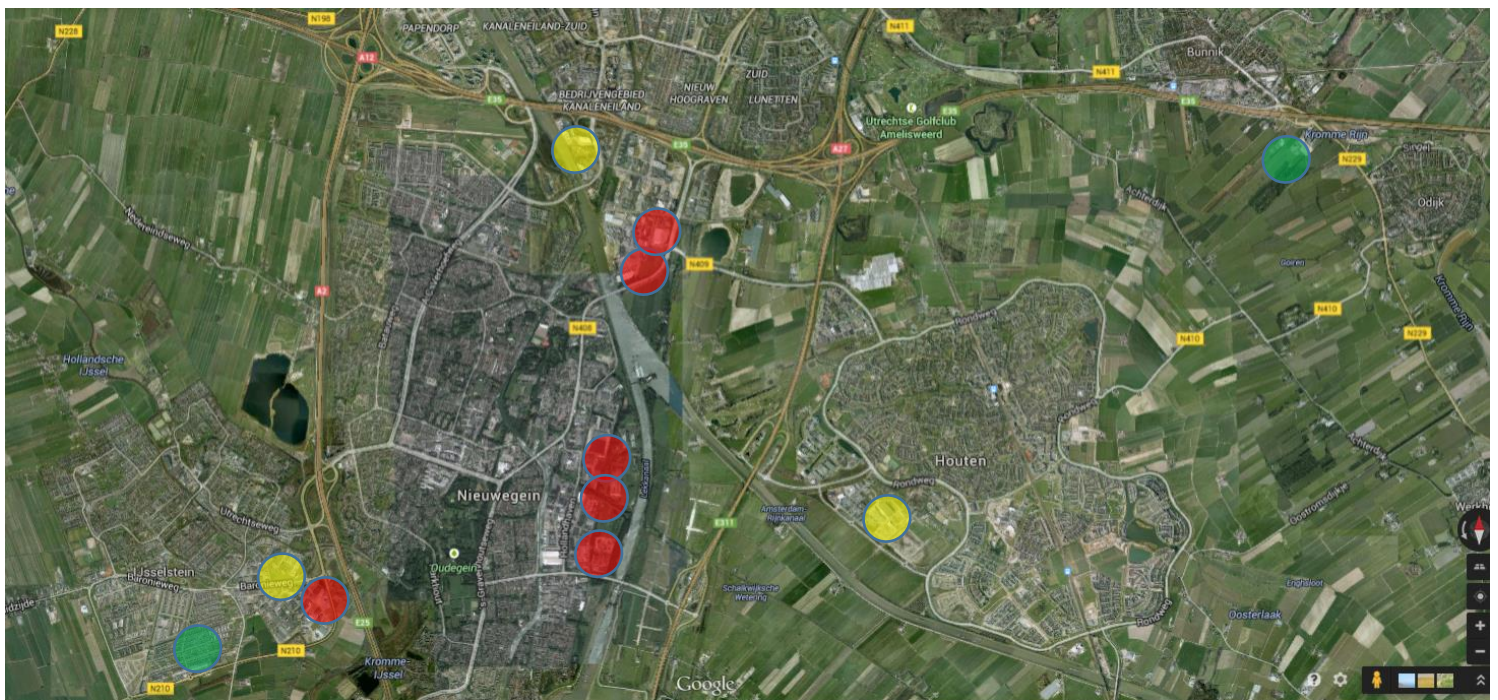
Map 25: Achthuizen, Ooltgensplaat, Dinteloord, Fijnaart

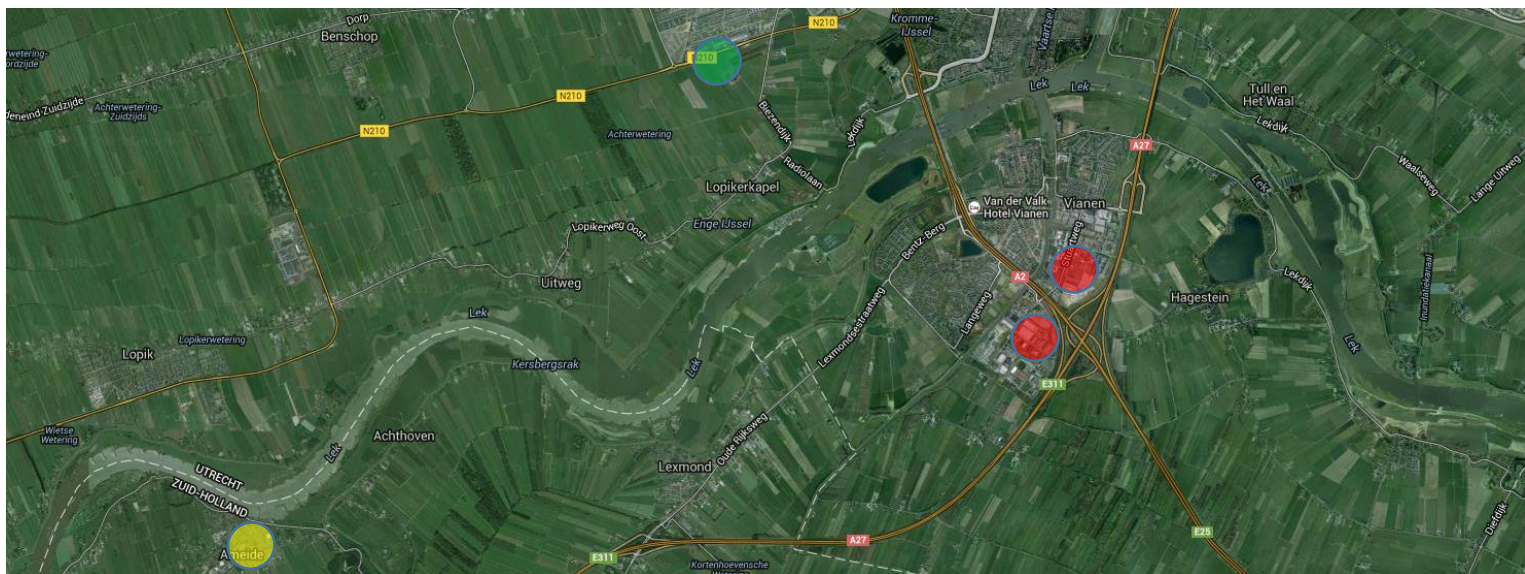
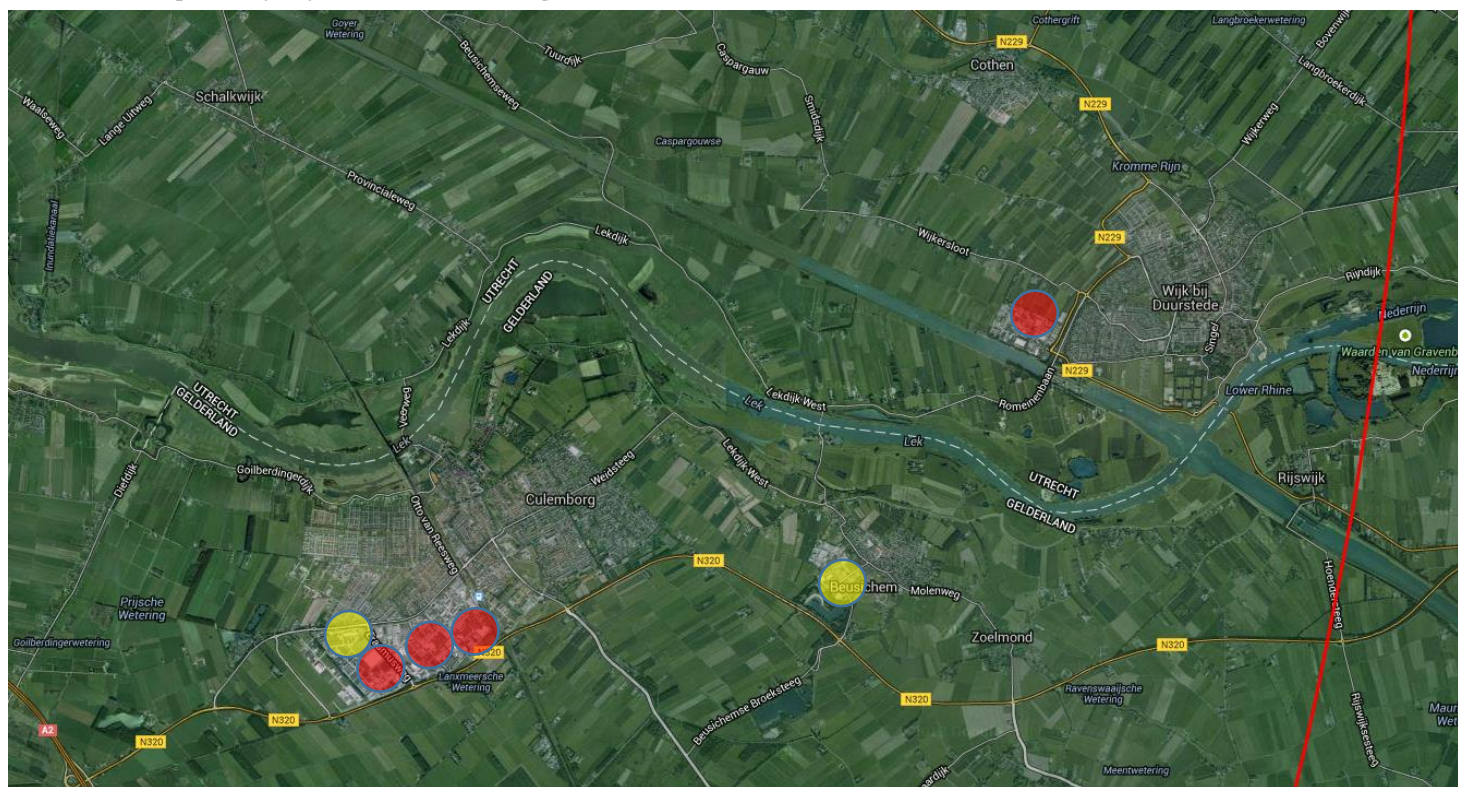


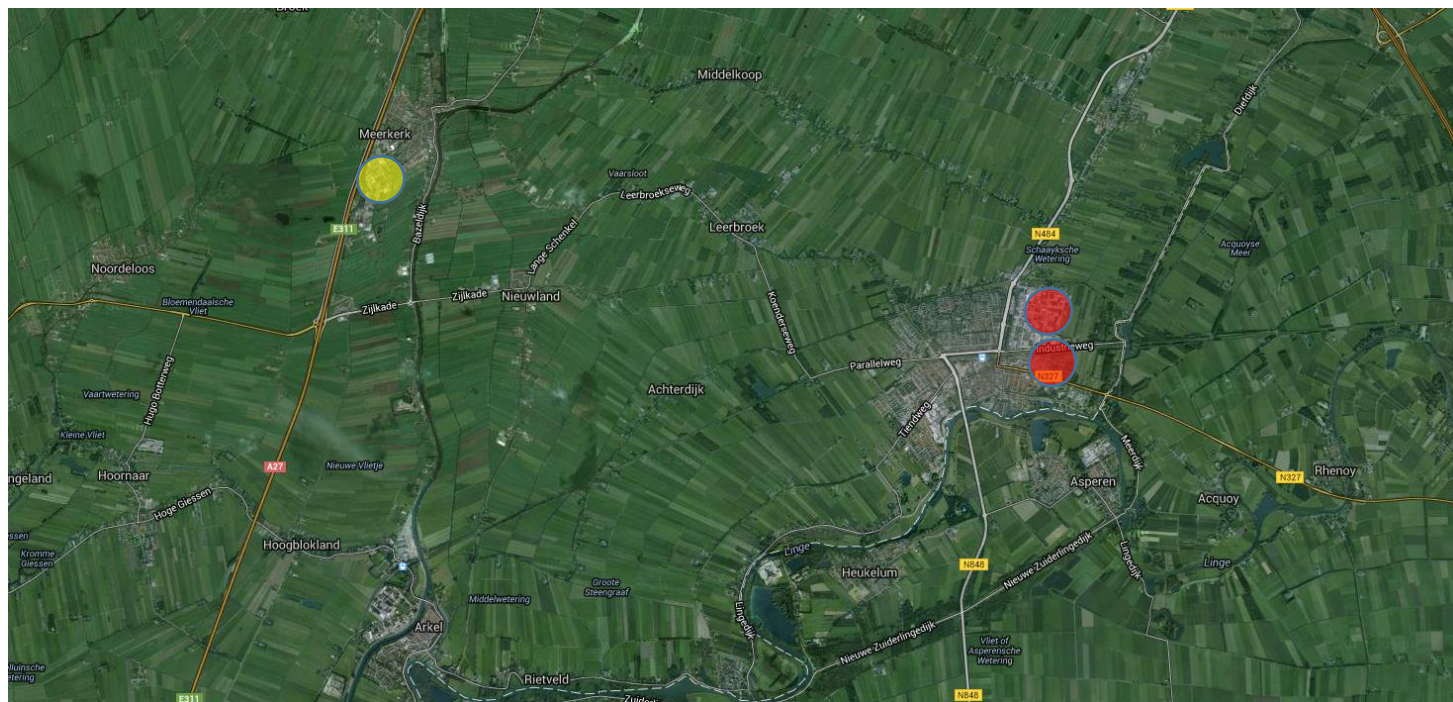
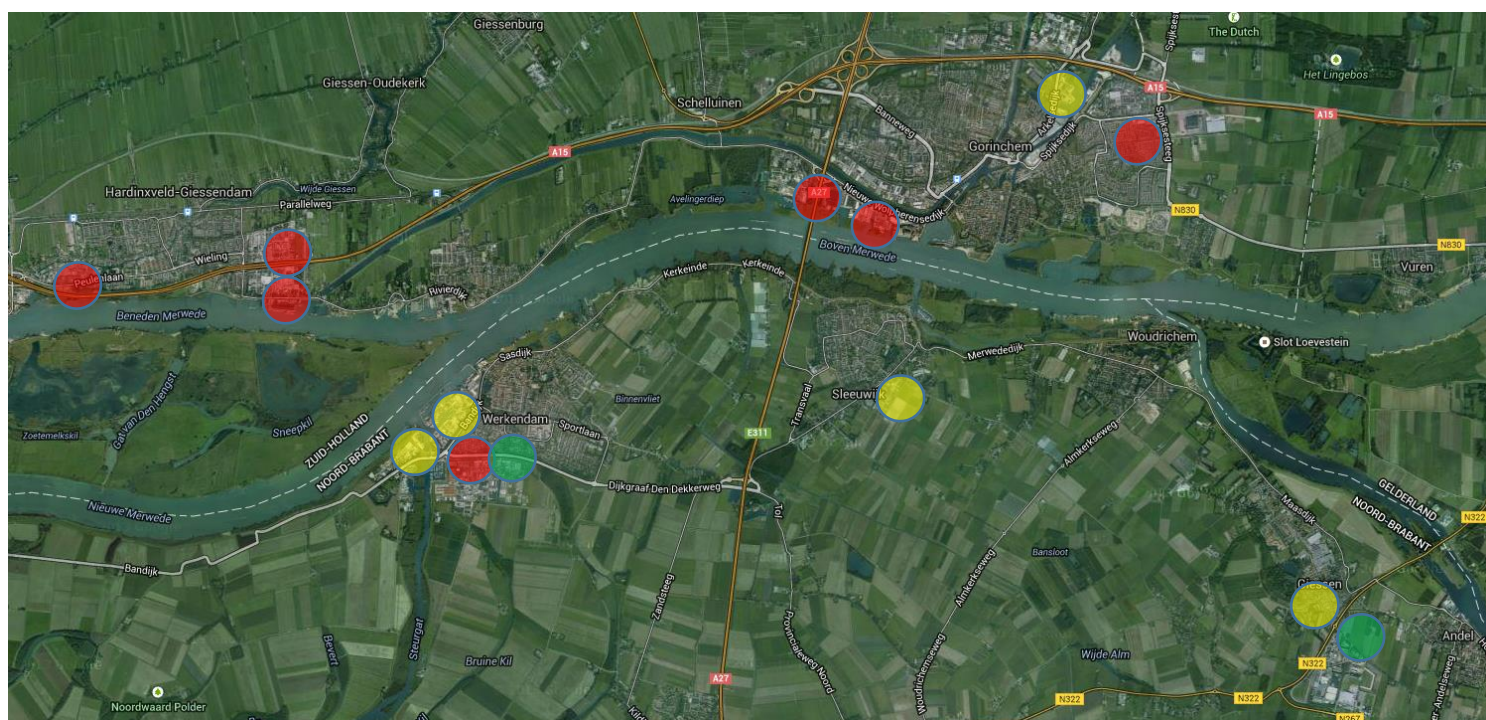
Map 26: Weesp, Naarden, Bussum, Muidersberg, Laren, Eemnes

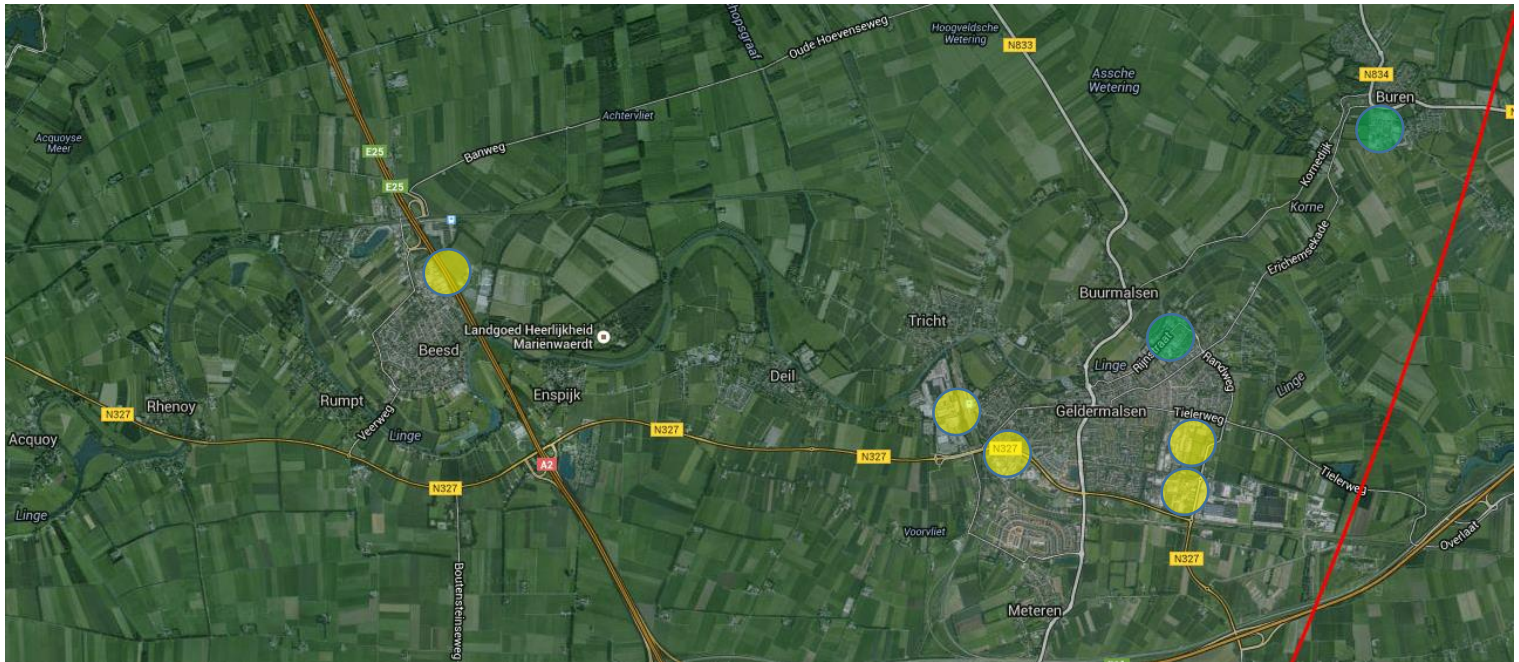


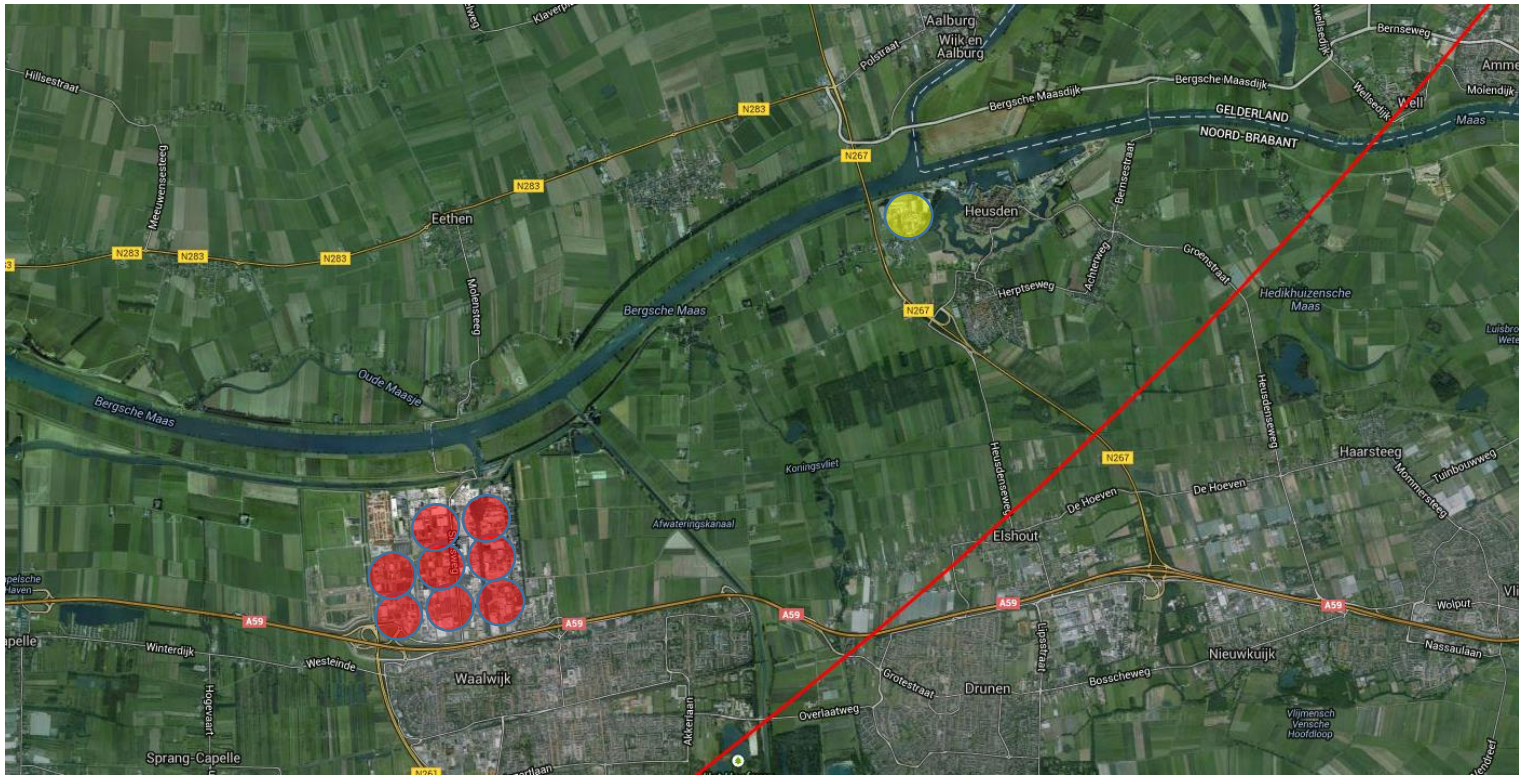
Map 27: Hilversum, Soest, Baarn*Map 28: Zeist, Soesterberg, De Bilt*

Map 29: Harmelen, Maarssen, North of Utrecht*Map 30: IJsselstein, Nieuwegein, Houten, Odijk, South of Utrecht*

Map 31: Lopik, Lexmond, Vianen*Map 32: Wijk bij Duurstede, Culemborg, Beusichem*

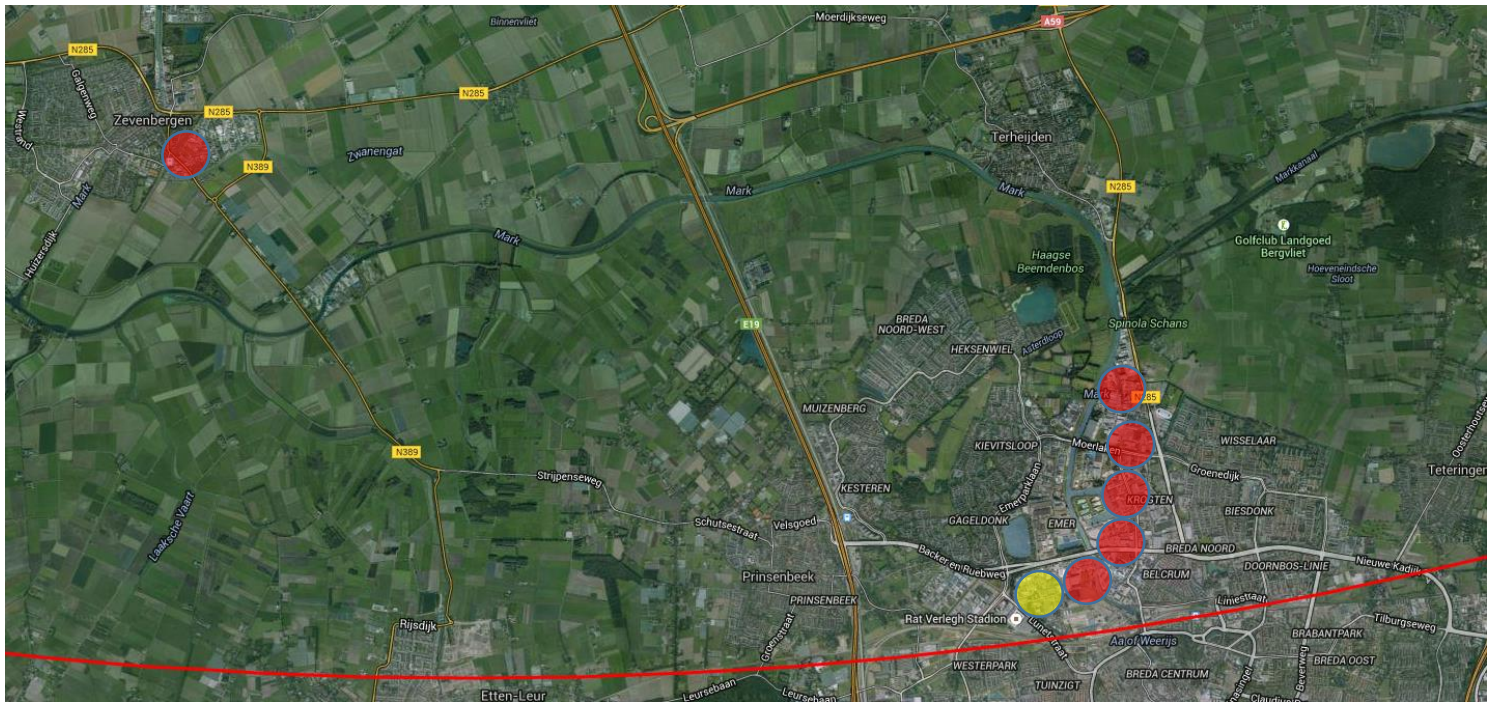
Map 33: Meerkerk, Asperen, Leerdam, Arkel*Map 34: Werkendam, Gorinchem, Giessen, Sleeuwijk*

Map 35: Beesd, Geldermalsen, Buren*Map 36: Zuilichem, Haften, Waardenburg, Zaltbommel, Nederhemert*

Map 37: Heusden, Aalburg, Waalwijk*Map 38: Waalwijk, Kaatsheuvel*

Map 39: Raamsdonksveer, Dussen, Waspik, Made*Map 40: Oosterhout, Dongen*

Map 41: North of Breda, Zevenbergen, Terheijden

Business types largest clusters

The tables underneath describe the most present business types of the largest clusters.

Most present business types Harbor of Waalwijk

Company Type ⁸⁷	Amount
#1 Technical installation (housing & SME)	26
#2 Service Provider	21
#3 Storage Depots/wholesalers	15
#4 Production (nutrition & food packaging)	15
#5 Raw Materials Working	12
#6 Production (machinery & constructions)	11
#7 Logistics	10
#8 General Production	9
#9 Garage accomodation (car)	4

The most common type of business in Waalwijk is 'Technical installation', this sector represents all companies that are operating in the maintenance and furnishing of houses and non-residential buildings. Activities consist of installations in the field of interior, exterior and the placement of devices in buildings. The companies use their workplace for offices, vehicles and as storage for

⁸⁷ (Parkmanagement Bedrijvenpark Haven, 2015)

materials/equipment. Energy use consists mainly of lights and electricity for the offices.

'Service providers' consist of all kinds of companies that are specialized in the field of (consulting) services. Their buildings are only used as offices for administration, sales and meetings. Company types vary from consultants to travel agencies.

Storage depots are large buildings that are used by organizations to store their materials and products. Some storage depots have a sales team on location for direct sales on a large scale to visiting customers. Energy use varies, depending on the type of product that is stored. Storages with large cooling installations that are used as refrigerators for food products constantly use a large amount of energy. Depots with non-food articles use less energy throughout the day.

It catches the eye that a lot of companies in the industrial cluster of Waalwijk operate in the field of food and nutrition; fifteen buildings specialize in producing food packaging or the production of food itself. The buildings are stacked with machinery for the production and also have cooling installations that use an immense amount of energy every day.

Places #5 and #6 include companies that work with raw materials and that produce large machinery by using raw materials. Examples of these companies are steel workers, metal workers and wood workers.

Most present business types Haarlem Waarderpolder

Company Type ⁸⁸	Amount
#1 Storage Depots/wholesalers	211
#2 Service Provider	119
#3 Technical installation (housing & SME)	94
#4 General Production of user goods	73
#5 Retail Business (also online)	73
#6 Financial Holdings	52
#7 Garage accomodation (car & lease)	48
#8 Constructions and Architecture	43
#9 Logistics	13

Storage depots and warehouses for large companies fill most of the industrial area in east of Haarlem. Wood, furniture and computer software warehouses have the largest share in this amount. Service providers in Haarlem are mostly accountants and companies that give advice in the field of management. Plumbers and other technical installers represent the other majority of the buildings in the area. Other buildings that are present in the area are production companies that consist of wood and metal workers, retail businesses responsible for the production/sales of user products and finally private companies in the field of finances.

⁸⁸ (Oozo.nl, 2015)

Appendix V

Plan of action in-depth interviews

The main goal of doing in-depth interviews is getting insight in the customer's opinion on sustainable energy, and more specifically, the general opinion of the value proposition of Rooftop Energy. This information can be gathered by doing interviews with potential customers and current customers of Rooftop Energy. Analyzing the data from both groups of respondents will be used to compare and determine the most effective arguments of Rooftop Energy for doing sales. This information will then be used in the thesis to further elaborate the most lucrative strategy for the company.

The chosen approach for these face-to-face interviews is 'in-depth', in which the interview touches the main topic and due to the open-ended questions can still turn into a small discussion. However, because of the short amount of available time, not all determined questions will be open-ended. The fixed questions that can be found on the next page result in the basic facts that need to be obtained in every interview. This way of approach was chosen for the reason that detailed information about the customer is needed. Other types of research like focusing on groups would be impractical. The objective for the thesis is to find out if the respondents and the type of company they represent are truly targets for Rooftop Energy. The interviews should result in useful information about barriers that keep customers from changing to solar energy and about incentives that can be used to convince them.

The needed respondents are all people with similar characteristics and are professionals in the field they represent. These persons can be described as 'customers' with no real knowledge about solar energy. They do however have to have insight in their own feasibility and long-term orientation concerning sustainable energy.

The respondent will have to be a director, manager or other employee with the influence to make decisions in the field of investments. Respondents are randomly selected out of the company types most present in the business clusters. To save time, most interviews will be completed near the main office of Rooftop Energy.

The specific sub questions of the thesis that will be answered with the gathered information from the interviews are:

- Who are the main customers in the earlier distinguished market segments?
- In what way can these customers be described?
- What are the wishes and demands of these potential clients?
- Why would these prospects choose RTE to do business with?
- What marketing strategy should RTE use to grow in the new SDE segment?
- Would this marketing also be effective for other segments?
- Which communication channels should be used to reach the new customers?
- What image and message should be communicated to the target group?

To answer these sub questions, a total number of 9-12 interviews should be sufficient.

The companies have to meet several requirements to be useful for the research. First of all the company types of the respondents should be different; interviewing one kind of organization would not yield enough information to represent the total target market. Secondly, when contacting the interviewees by phone before the interview takes place, it should become clear whether or not the company has already been provided with a solar energy system. When making a conclusion after the interviews, a comparison might be made between the companies that have bought a solar PV system and the ones that have not.

The second requirement is that the company has to have a grid connection larger than 3x80 Ampère. (If this is not the case, the organization is not eligible for the SDE+ subsidy and therefore not a prospect to RTE. During the time of interviewing, emphasis will be put on the educational purpose, instead of with a commercial approach from a company. Therefore, the company name RTE will rarely be mentioned. The value proposition of RTE in general will be discussed without the name of the company.

Before the interview

Prepare a summary of the company name, location, business involved in and function of the interviewee. The aim is to keep the interview time to around 25 minutes and it will mainly be open-ended questions. The several fixed questions below should result in the basic information that is needed for the thesis. The structure of the interview will be developed in English, but the conversation itself will be recorded in Dutch.

Research Questions

The interviews should result in information that is useful for the subject and subsequent research questions of the thesis. The main fields of sub questions which the respondents will clarify are 'target groups', 'positioning' and 'marketing communication', for example the wishes and demands of the customer, the potential strategy and best way of communicating.

The main questions that should be answered with the interviews to provide this information can be stated as follows;

General

- What is the general information of the company? (Size, employees, type of organization)
- In what way is the company already informed about or participating in sustainable energy?
- What is the customer's opinion on solar PV?
- Is the customer aware of the governmental objectives concerning the 14% sustainable energy of all energy generated in 2020?
- How much are they aware of or know about the SDE+ subsidy?
- Is the company the owner of the building, or is it a rental building?
- What is the duration of the rental contract on the building?
- Would the duration of the contract in any way affect the decision-making process of the customer?
- What kind of criteria come into play when changing to solar energy? (Rate the criteria)

Concerning Rooftop Energy

- What providers of solar PV are known to the customer?
- After having explained the total concept of solar panel 'leasing', what is the customer's opinion on a proposition for a solar PV project without any investment required?
- What parts of the RTE value proposition would be appreciated the most? (Service, extra database, no investments required)

Concerning potential strategy

- Are the CO2 footprint and the 'prestatieladder' effective tools to help to start participating in sustainable energy?
- If RTE would offer these tools, would this be a valuable addition? (Product development, new services, existing market)

Concerning Market Communication

- In what way does the customer wishes to be informed? (Telephone, email, social media, advertising)

Scripted Approach by phone (Dutch)

Goedemorgen/middag mijnheer/mevrouw. Spreek ik met ...(naam bedrijf)?

Bedrijf: Ja.

U spreekt met Michael Blankert, een stagiair van de Hogeschool Utrecht en ik vroeg mij af of u mij kan doorverbinden naar iemand van de sales/marketing afdeling. Het gaat om een kort onderzoek naar duurzame energie in het bedrijf.

Bedrijf: Daar spreekt u mee/ ik zal u doorverbinden met

Bedrijf: U spreekt met ...(te interviewen persoon)

Goedemorgen/middag mijnheer mevrouw. U spreekt met Michael Blankert, ik ben momenteel stagiair bij het bedrijf Rooftop Energy en ben bezig met mijn afstudeerscriptie op het gebied van duurzame energie, en dan met name zonne-energie. Voor mijn onderzoek ben ik op het moment bezig met het inplannen van korte interviews om de interesse te peilen voor het in gebruik nemen van een zonne-systeem en de barrières die dit tegenhouden. Ik vroeg mij af of u toevallig binnenkort 25 minuten vrij kan maken voor een korte vragenlijst?

Bedrijf: Interesse of geen interesse.

In geval van geen interesse:

Ik wil trouwens graag even vermelden dat het interview geen verkoopgesprek is, maar dat dit puur in het belang is van het afstudeeronderzoek, wat uiteindelijk hopelijk gaat resulteren in betere service en een betere benadering in de duurzame energie branche.

In geval van interesse:

Dat is erg fijn om te horen. Dan zou ik graag met u een afspraak maken voor het interview. Mag ik u trouwens nog wel vragen of u al in bezit bent van een zonne-installatie?

Bedrijf: Ja/nee

Hartelijk dank voor uw tijd en dan zie ik u op ..(datum) om ...(tijdstip).

Scripted Interview

Goedemorgen/middag mijnheer/mevrouw. (Voorstellen, handdruk) Hartelijk dank dat u tijd heeft kunnen vrijmaken om mij even te woord te staan. Zoals ik aan de telefoon al even kort heb toegelicht ben ik momenteel bezig met mijn afstudeerscriptie op het gebied van duurzame energie. Voor dit onderzoek kijk ik vanuit marketingperspectief naar de markt voor zonne-energie en dan met name de besluitvorming van de klant.

Voordat we met het interview beginnen zou ik u graag even willen vragen of ik het interview op zou kunnen nemen, zodat ik het later rustig terug kan luisteren en makkelijker uit kan werken?

Geïnterviewde: Ja/Nee

Algemene informatie

Zou u mij iets kunnen vertellen over het bedrijf? Ik begrijp dat u zich voornamelijk bezig houdt met (...type bedrijf).

En de klanten die u hiermee aanspreekt zijn dan vooral lokale klanten, of ook regionaal?

Uit hoeveel werknemers bestaat het bedrijf?

Duurzame energie

Graag zou ik willen openen met de vraag wat u precies weet over duurzame energie, is uw bedrijf bijvoorbeeld op het moment bezig met duurzaam ondernemen?

Geïnterviewde: Ja, namelijk...(uitleg) /Nee

In geval van instemming verder doorvragen naar project/duurzame activiteiten

Wat voor activiteiten onderneemt het bedrijf dan precies?

Bent u dan ook op de hoogte van het Energieakkoord Duurzame Energie met de doelstelling dat van alle energie 15% in 2020 duurzaam moet worden?

Wat is uw mening over deze doelstelling?

Zonne-energie

In hoeverre heeft u al overwogen om over te stappen op zonne-energie of andere vormen van duurzame energie?

Geïnterviewde: Veel activiteiten / weinig interesse

Nu probeer ik bij mijn onderzoek te achterhalen wat voor bedrijven de belangrijkste redenen zijn om over te stappen op zonne-energie, of de grootste barrières die dit tegengaan.

Bent u op de hoogte van de SDE subsidieregeling? (Verder uitleggen in geval van ontkenning)

Wat is uw mening over deze subsidieregeling? Is dit een belangrijke stimulans geweest om over te stappen/zou dit een belangrijke stimulans zijn?

Hoe zou uw bedrijf een zonnestelsel financieren?

RTE aanbod

Nu is er tegenwoordig een nieuwe soort aanpak om over te stappen op zonne-energie. Namelijk het aangaan van een contract, in plaats van het volledige project in één keer te investeren. (Uitleg RTE concept) Nadruk op contract van 10-15 jaar. Volledige ontzorging, alles wordt geregeld door de aanbieder.

Zou dit concept u meer aanspreken dan het kopen van een project?

Is dit dan vooral het ontzorgen of het gebrek aan investering wat u aanspreekt?

Is uw bedrijf zelf eigenaar van het pand, of wordt dit gehuurd? In hoeverre speelt dit meer in de besluitvorming omtrent het contract?

MVO

Tegenwoordig is maatschappelijk verantwoord ondernemen ook heel erg in opkomst. Bedrijven laten bijvoorbeeld met de CO2 footprint en de CO2 prestatieladder zien dat ze duurzaam ondernemen en hopen daarmee meer goodwill te kweken bij klanten.

Bent u op de hoogte van deze middelen? (Zo niet, verder uitleggen CO2 reductie, etc.)

Denkt u dat klanten, als ze hiervan op de hoogte gebracht worden, eerder gebruik zullen maken van de services van een bedrijf?

Als bij het zonne-energie project de eerste stappen en administratie voor de CO2 footprint/prestatieladder ook door het bedrijf geregeld zouden worden, zou dit dan een extra argument zijn om in te stemmen met het contract?

Wat denkt u zelf nog dat meetelt in de besluitvorming van een bedrijf?

Communicatie

Als afronding van het interview zou ik u graag nog even een vraag stellen over communicatiemiddelen. Als een bedrijf u zou willen bereiken, wat zou dan voor u de prettigste manier zijn om op de hoogte gebracht te worden. Is dit doormiddel van een brochure, telefonisch, een email of reclamevoering?

Bedankt voor uw tijd en moeite, hopelijk is er de mogelijkheid dat ik bij onduidelijk nog telefonisch contact op kan nemen.

Interview 1:

Ben van der Waal Zuidvruchten B.V.

Geïnterviewde(n): Arnaud Klootwijk, Directeur
Arie van der Vorm, Sales Manager

Locatie: Groothandelaarsmarkt 176 Rotterdam

Datum: 27-05-2015

Algemene informatie

Zou u mij iets kunnen vertellen over het bedrijf? Ik begrijp dat u zich voornamelijk bezig houdt met de verkoop en opslag van groente en fruit?

Dat klopt, Ben van der Waal is een grootimporteur van groenten en fruit, met een speciale rijperij voor bananen. Het bedrijf bestaat al zo'n 50 jaar en opereert voornamelijk in de Benelux.

En de klanten die u in de Benelux aanspreekt, wat zijn dit voor bedrijven?

Het grootste gedeelte van de klanten bestaat uit groenteboeren, detailhandel voor groente zoals in de markthal van Rotterdam en horecabedrijven.

Uit hoeveel werknemers bestaat het bedrijf?

Ben van der Waal heeft op het moment 15 werknemers. Gemiddeld bevindt 5 tot 10 man zich in het magazijn en de overige werknemers houden zich bezig met het transport. Producten worden bij andere Europese grootimporteurs ingekocht en naar deze locatie vervoerd. Dit magazijn bevat een grote hoeveelheid koelinstallaties en apart de bananenrijperij.

Duurzame energie

Graag zou ik willen openen met de vraag wat u precies weet over duurzame energie, is uw bedrijf bijvoorbeeld op het moment bezig met duurzaam ondernemen?

We zijn op het moment nog helemaal niet betrokken bij duurzaam ondernemen. Eigenlijk zijn alleen elektrische vrachtwagens, of vrachtwagens met minder uitstoot ooit ter sprake gekomen. Uiteindelijk bleek dat deze nog teveel in ontwikkeling zijn en dat het teveel gedoe was om ze aan te schaffen.

Bent u dan wel op de hoogte van het Energieakkoord Duurzame Energie met de doelstelling dat van alle energie 15% in 2020 duurzaam moet worden?

Dat duurzaamheid een steeds belangrijker onderwerp zijn we van op de hoogte, maar dat er ook daadwerkelijk richtlijnen voor zijn uitgeschreven wisten we niet.

Wat is uw mening over deze doelstelling, met het oog op het feit dat we ons nu op 4,5% bevinden?

4,5% pas? Dan lijkt het niet alsof we dat gaan halen. In dat geval zal de regering extra maatregelen moeten gaan nemen om alsnog de doelstelling te kunnen verwezenlijken.

Zonne-energie

In hoeverre heeft u al overwogen om over te stappen op zonne-energie of andere vormen van duurzame energie?

Behalve de elektrische vrachtwagens is er bij ons nooit gekeken naar zonne-energie. Met name omdat de investering vaak te groot is, en de terugverdientijd hiervan te laag. De prijzen van groente en fruit worden voornamelijk gebaseerd op die van de concurrentie, waardoor we niet competitief meer zijn als er veel geld in een investering moet worden gestoken.

Nu probeer ik bij mijn onderzoek te achterhalen wat voor bedrijven de belangrijkste redenen zijn om over te stappen op zonne-energie, of de grootste barrières die dit tegengaan. Bent u op de hoogte van de SDE subsidieregeling?

Niet op de hoogte, verder uitgelegd.

Wat is uw mening over deze subsidieregeling? Zou dit een belangrijke stimulans zijn?

Een subsidiëring zou de investeringskosten zeker omlaag brengen, maar dan alsnog zou de terugverdientijd boven de 7 jaar uitkomen.

RTE aanbod

Nu is er tegenwoordig een nieuwe soort aanpak om over te stappen op zonne-energie. Namelijk het aangaan van een contract, in plaats van het volledige project in één keer te investeren. (Uitleg RTE concept) Nadruk op contract van 10-15 jaar. Volledige ontzorging, alles wordt geregeld door de aanbieder.

Zou dit concept u meer aanspreken dan het kopen van een project?

Een constant lagere prijs voor de energie is natuurlijk altijd prettig, maar de lengte van de contractduur is wel erg lang. De energieprijzen schommelen zo erg de laatste jaren, wie beweert dat de vaste prijs van het contract over een aantal jaar nog gunstig is?

Zeker waar, maar het contract kan ook worden gebonden aan het pand, i.p.v. aan de persoon die het als bedrijfspand gebruikt. Zou deze optie het makkelijker maken?

Aangezien wij de eigenaar van het pand zijn komt dit ongeveer op hetzelfde neer. Door de koelingsinstallaties en de locatie is het ook onwaarschijnlijk dat we van pand wisselen in de komende jaren.

In het concept, is het vooral het ontzorgen of het gebrek aan investering wat u aanspreekt?

Dat het makkelijk te realiseren is, zonder verdere rompslomp, is natuurlijk een groot pluspunt. Maar het is vooral het gebrek aan investering waar de voordelen voor ons liggen. Echter, een nadeel aan dit pand is dat met zonne-energie maar een beperkt gedeelte van de energiekosten weggewerkt kunnen worden.

Dus zonne-energie is eigenlijk geen optie, tenzij het een groter percentage van de totale energie op kan wekken?

Dat klopt, een aantal honderd euro besparing per jaar is helaas niet genoeg om ons te overtuigen.

MVO

Tegenwoordig is maatschappelijk verantwoord ondernemen ook heel erg in opkomst. Bedrijven laten bijvoorbeeld met de CO2 footprint en de CO2 prestatieladder zien dat ze duurzaam ondernemen en hopen daarmee meer goodwill te kweken bij klanten.

Bent u op de hoogte van deze middelen en maakt u hier gebruik van?

Behalve het groene label op sommige producten maken we geen gebruik van extra middelen om ons maatschappelijk verantwoord ondernemen te laten zien.

Denkt u dat klanten, als ze hiervan op de hoogte gebracht worden, eerder gebruik zullen maken van de services van uw bedrijf?

We denken dat consumenten zeker kijken naar het duurzame label, maar dat de klanten die wij aanspreken (Groenteboeren, leveranciers) hier veel minder in geïnteresseerd zijn. De AGF-markt komt voornamelijk neer op een grootschalige prijsconcurrentie.

Als bij het zonne-energie project de eerste stappen en administratie voor de CO2 footprint/prestatieladder ook door het bedrijf geregeld zouden worden, zou dit dan een extra argument zijn om in te stemmen met het contract?

We hebben zelf het gevoel dat dit niet zo heel veel invloed zou hebben op onze business. Maar misschien dat dit bij bedrijven die worden aangestuurd door gemeentes wel het geval is.

Wat denkt u zelf nog dat meetelt in de besluitvorming van een bedrijf?

De verkoper moet een persoon zijn om in te vertrouwen, iemand bij wie je het gevoel krijgt dat het project in goede handen is.

Communicatie

Als afronding van het interview zou ik u graag nog even een vraag stellen over communicatiemiddelen. Als een bedrijf u zou willen bereiken, wat zou dan voor u de prettigste manier zijn om op de hoogte gebracht te worden. Is dit doormiddel van een brochure, telefonisch, een email of reclamevoering?

Direct contact werkt eigenlijk averechts. Verkopers zijn vaak zeer opdringerig en dit geeft een gevoel van 'moeten'. Brochures en flyers zijn in dat geval de beste manier om contact op te nemen.

Bedankt voor uw tijd en moeite, hopelijk is er de mogelijkheid dat ik bij onduidelijk nog telefonisch contact op kan nemen.

Interview 2:

Sligro

Geïnterviewde(n): Ruud Kien, Sales Manager

Locatie: Groothandelaarsmarkt 181 Rotterdam

Datum: 27-05-2015

Algemene informatie

Zou u mij iets kunnen vertellen over het bedrijf? De Sligro is natuurlijk een erg grote keten, maar wat zijn voornamelijk de klanten?

Deze vestiging is voornamelijk bedoeld als groothandel voor food-gerelateerde artikelen. Vlees, vis, gevogelte, AGF, eigenlijk alle koel en diepvriesartikelen zijn in bulk aanwezig. Klanten zijn vooral horeca ondernemers, maar ook bijvoorbeeld restaurants van bedrijven die hier inkopen doen.

En de klanten die u aanspreekt bevinden zich dan voornamelijk in Rotterdam en omgeving?

Het grootste gedeelte van de klanten is inderdaad gevestigd in Rotterdam, en dan voornamelijk de kant van Schiedam en Vlaardingen. De Sligro heeft nog twee vestigingen, in Berkel en Rodenrijs en in de buurt van de Kop van Zuid.

Uit hoeveel werknemers bestaat het bedrijf?

In deze vestiging werken rond de 45 medewerkers. Ook meegeteld is dan het personeel uit het restaurant.

Duurzame energie

Graag zou ik willen openen met de vraag wat u precies weet over duurzame energie, is uw bedrijf bijvoorbeeld op het moment bezig met duurzaam ondernemen?

Eigenlijk verlopen alle beslissingen via het hoofdkantoor van de Sligro. Mening van aparte vestigingen worden wel meegenomen, maar uiteindelijk wordt op het hoofdkantoor de definitieve beslissing gemaakt. De Sligro heeft op dit moment twee stations die volledig energie neutraal zijn, waaronder die in Berkel en Rodenrijs. Naar mijn weten is dit niet gedaan met zonne-energie, maar met bijvoorbeeld LED-verlichting.

Bent u op de hoogte van het Energieakkoord Duurzame Energie met de doelstelling dat van alle energie 15% in 2020 duurzaam moet worden?

15% is wel een groot aantal, vandaar dus dat het zo goed gaat met duurzame energie en alle subsidies die hiervoor worden opengesteld.

Dat klopt inderdaad, en met het oog op de energiemarkt voor grootverbruikers waar u zich in bevindt is vooral de SDE+ interessant, heeft u hiervan gehoord?

SDE+, subsidie duurzame energie waarschijnlijk, wel iets van vernomen inderdaad. Kan je hier iets meer over vertellen?

De Stimulering Duurzame Energie is eigenlijk een potje dat beschikbaar is gesteld voor grootverbruikers die willen investeren in duurzame energie. Denkt u dat dat zou helpen om ook deze vestiging energie neutraal te krijgen?

Dat maakt het zeker interessanter, maar zoals ik al eerder heb gezegd, alle beslissingen lopen via het hoofdkantoor; zelf denk ik dat die subsidie zeker zou helpen.

RTE aanbod

Nu is er tegenwoordig een nieuwe soort aanpak om over te stappen op zonne-energie. Namelijk het aangaan van een contract, in plaats van het volledige project in één keer te investeren. (Uitleg RTE concept) Nadruk op contract van 10-15 jaar. Volledige ontzorging, alles wordt geregeld door de aanbieder.

Ik begrijp dat dit uiteindelijk niet uw beslissing is, maar zou u met dit concept in uw achterhoofd sneller naar het hoofdkantoor stappen dan met een plan om in zonne-energie te investeren?

Dat klinkt zeker aantrekkelijk voor deze vestiging, en op dit moment zie ik er weinig nadelen aan om alles te laten regelen. Het lijkt me dat je zelf met de SDE+ op zak meer voordeel kan behalen, maar dan komt natuurlijk de hele papierhandel erbij kijken. Een probleem voor andere vestigingen lijkt me wel dat Sligro vaak geen eigenaar is van het pand. In dit geval heb je toevallig een pand gekozen dat wel beheerd wordt door de Sligro.

Het contract kan ook worden gebonden aan het pand, i.p.v. aan de persoon die het als bedrijfspand gebruikt. Zou deze optie het makkelijker maken?

Als ik het goed begrijp neemt dan de nieuwe huurder het contract over zoals het is opgesteld, met diezelfde prijs voor energie?

Dat klopt.

Afhankelijk van wat de energieprijzen doen, lijkt het me geen probleem voor de eigenaar om het contract mee te verkopen bij het pand. Voornamelijk aan bedrijven die op zoek zijn naar een duurzaam imago.

Ziet u nog andere punten om de verkoop van zonne-systemen makkelijker te maken, of punten die het lastig maken?

Eigenlijk lijkt een probleempunt mij wel de dakconstructie. Het is weliswaar een plat dak, maar omdat al deze fabriekshallen zou goedkoop mogelijk moesten worden gebouwd in de tijd, is het dak niet extreem stevig. Misschien dat het er niet op is gebouwd om een zonne-systeem te kunnen dragen. Ook vraag ik me af hoeveel een zonne-systeem kan wegwerken aan energiekosten.

Met uw dakoppervlak, als het gebruikt kan worden, is in vergelijkbare situaties rond de 10% van de energiekosten weggewerkt. Tegenwoordig is er ook nog de optie om het te combineren met LED-verlichting en in opkomst is ook Thermal Energy, waarbij de hitte van de zonnepanelen wordt gebruikt om vloeistoffen of lucht te verhitten, dat vervolgens gebruikt kan worden in het bedrijf. Zou 1 van deze opties het aantrekkelijker maken?

Met dezelfde contractvoorwaarden en een lagere energieprijs zijn zulke opties ook zeker welkom. In de magazijnen van andere vestigingen wordt al gebruik gemaakt van LED, maar thermal heb ik nog niet voorbij horen komen. Het punt is dat het wel een prijsvoordeel moet bieden, of een korte terugverdientijd moet hebben, wil het lucratief zijn.

MVO

Tegenwoordig is maatschappelijk verantwoord ondernemen ook heel erg in opkomst. Bedrijven laten bijvoorbeeld met de CO2 footprint en de CO2 prestatieladder zien dat ze duurzaam ondernemen en hopen daarmee meer goodwill te kweken bij klanten.

Bent u op de hoogte van deze middelen en maakt u hier gebruik van?

Ik ben op de hoogte van beide middelen, maar meer vanuit eigen interesse dan vanuit het bedrijf. Het energie neutrale aspect en de LED-lampen in de magazijnen wordt meer gebruikt om bij te dragen aan de duurzaamheid van de producten.

En denkt u dat dit echt helpt om klanten te overtuigen?

Zeker, zeker. Duurzame producten worden steeds belangrijker, en er is ook steeds meer vraag naar.

Als bij het zonne-energie project de eerste stappen en administratie voor de CO2 footprint/prestatieladder ook door het bedrijf geregeld zouden worden, zou dit dan een extra argument zijn om in te stemmen met het contract?

Een extra argument is het zeker, maar hier durf ik helaas niks over te zeggen. Het is aan het hoofdkantoor om te beslissen welk imago ze willen aannemen.

Wat denkt u zelf nog dat meetelt in de besluitvorming van een bedrijf?

Zoals eerder gezegd, het prijsplaatje moet kloppen, er moet een duidelijk voordeel aan zitten.

Communicatie

Als afronding van het interview zou ik u graag nog even een vraag stellen over communicatiemiddelen. Als een bedrijf u zou willen bereiken, wat zou dan voor u de prettigste manier zijn om op de hoogte gebracht te worden. Is dit doormiddel van een brochure, telefonisch, een email of reclamevoering?

Contact opnemen met het hoofdkantoor werkt het beste, via de telefoon als eerste contact, maar zelf heb ik het gevoel dat iemand overtuigender kan zijn in een face-to-face gesprek.

Bedankt voor uw tijd en moeite, hopelijk is er de mogelijkheid dat ik bij onduidelijk nog telefonisch contact op kan nemen.

Interview 3:

Nickoot B.V. Internationale Koel- en Vriestransporten

Geïnterviewde(n): Bob Koot, Directeur/financiën

Locatie: Groothandelaarsmarkt 198 Rotterdam

Datum: 27-05-2015

Algemene informatie

Zou u mij iets kunnen vertellen over het bedrijf? Ik begrijp dat u zich voornamelijk bezig houdt met transport?

Wij vervoeren de hele week door koel- en vriesproducten, voornamelijk naar het noorden van Frankrijk, met opgepikte retourvrachten vanuit België.

Dus dit pand wordt voornamelijk gebruikt als tussenhaven, of ook voor grootschalige opslag?

Op deze locatie hebben wij 1 koeling en 1 vriesinstallatie, de rest van het pand is kantoor om de logistiek aan te sturen. We werken hier in totaal met rond de 15 man. Verder zijn er nog een dozijn op pad met de vrachtwagens.

Duurzame energie

Graag zou ik willen openen met de vraag wat u precies weet over duurzame energie, is uw bedrijf bijvoorbeeld op het moment bezig met duurzaam ondernemen?

We hebben nog helemaal geen interactie met duurzame energie.

En wat is hier de voornaamste reden van, als ik vragen mag?

Vooral omdat er weinig informatie over binnenkomt en omdat het transport en het bedrijf vooral gericht is op de vrachtwagens.

Bent u dan wel op de hoogte van het Energieakkoord Duurzame Energie met de doelstelling dat van alle energie 15% in 2020 duurzaam moet worden?

Eigenlijk zijn we daar helemaal niet mee bezig.

Zonne-energie

Maar als er nog geen enkele informatie binnen is gekomen om over te stappen naar duurzame energie, moet er toch een manier zijn om jullie te overtuigen. Wat zou dit kunnen zijn?

Je ziet bij de transportsector wel steeds vaker duurzame vrachtwagens, dat is waarschijnlijk het eerste waar we naar zouden kijken. Verder lijken de besparingen voor het pand me niet dusdanig groot om iets te ondernemen.

En op het moment dat u subsidie krijgt van de overheid om hiermee te beginnen?

Hangt af van de hoogte van de subsidie, maar alsnog zit er dan natuurlijk de investering aan vast, en dat vereist altijd veel wikken en wegen. Ik denk dat zelf investeringen nog altijd meer voordelen biedt, als we er eenmaal aan toe zijn.

RTE aanbod

Eigenlijk is zelfs een investering niet echt nodig, met lease contracten voor een aantal jaar spreek je een vaste energieprijs af, die lager is dan de huidige prijs. Sommige bedrijven regelen zelfs de subsidie en al het papierwerk.

Dat klinkt beter dan investeren, maar dan moet het concept en de voordelen wel duidelijk op papier staan.

U bent wel zelf eigenaar van het pand?

Zeker, alle installaties en het pand zijn in beheer van Nickoot.

In het concept, is het vooral het ontzorgen of het gebrek aan investering wat u aanspreekt?

Het klinkt zeker makkelijker dan investeren, maar hier zijn wij nog niet echt aan toe. Het hele kantoor is druk, en er is eigenlijk vrijwel geen vraag naar vanuit de klant.

MVO

Dus Maatschappelijk Verantwoord Ondernemen, lagere CO2 uitstoot bijvoorbeeld, zou niet helpen om meer klanten te winnen?

Eigenlijk hebben we al meerdere jaren dezelfde klanten, en die hebben we er nooit over gehoord. Concurrentie gebeurt op prijs, niet op duurzaamheid.

Wat denkt u zelf nog dat meetelt in de besluitvorming van een bedrijf?

Voor ons moet er een heel goed concept staan, wil het interessant zijn, maar we nemen liever zelf het initiatief, als de tijd daar is.

Communicatie

Als afronding van het interview zou ik u graag nog even een vraag stellen over communicatiemiddelen. Als een bedrijf u zou willen bereiken, wat zou dan voor u de prettigste manier zijn om op de hoogte gebracht te worden. Is dit doormiddel van een brochure, telefonisch, een email of reclamevoering?

Direct contact hebben we liever niet, als we iets met duurzaamheid willen doen, komen we daar zelf wel mee.

Bedankt voor uw tijd en moeite.

Interview 4:

Bomenwacht Nederland

Geïnterviewde(n): Leon Spek, Directeur

Locatie: Ligusterbaan 12, Capelle a/d IJssel

Datum: 28-05-2015

Algemene informatie

Zou u mij iets kunnen vertellen over het bedrijf? Ik begrijp dat Bomenwacht eigenlijk een adviesbureau is?

We zijn begonnen als bomenwacht Zuid-Holland, maar uiteindelijk groeide het bedrijf zo hard dat we over zijn gegaan naar Bomenwacht Nederland. We zitten nu op 43 medewerkers en onze focus ligt op technisch advies, we zijn specialisten op bomengebied.

En dat zijn dan voornamelijk mensen op kantoor, of ook in het veld?

Het is ongeveer 50/50 verdeeld, adviseurs in het veld die echt het onderzoek doen. Mensen op kantoor doen projectvoorbereiding en regelen alle financiële zaken.

En de klanten die jullie hiermee aanspreken?

Onze doelgroep is eigenlijk de gemeentelijke overheid, daarnaast nog een aantal provincies en waterschappen. De particuliere markt neemt eigenlijk maar een paar procent in van alle projecten. Klanten bevinden zich voornamelijk hier in de regio. Met onze nieuwe vestiging in Barneveld proberen we ook midden-Nederland aan te spreken.

Duurzame energie

Bomenwacht komt op mij al over als een duurzaam bedrijf, houden jullie je ook al bezig met duurzame energie?

Klopt inderdaad, bomenwacht heeft natuurlijk al een groen imago, omdat we ons bezig houden met bomen en natuur. Waar mogelijk is proberen we daar rekening mee te houden, aanplant van bomen, etc.

En dat zie je ook terug in reacties van klanten?

Steeds meer ja, vooral bij gemeentelijke aanbestedingen. Sinds kort zijn we ook al bezig met de CO2 prestatieladder, omdat gemeentes hebben aangegeven dat als je een stukje duurzaamheid laat zien, je korting kan krijgen op je inschrijfsom. Een voordeel ten opzichte van de competitie.

Dus het komt er op neer dat degene die het hoogste op de ladder staat, ook daadwerkelijk het project krijgt?

Je krijgt een soort fictieve korting. Dus stel je biedt een project aan voor 750,000 euro, maar de competitie biedt het aan voor 680,000, maar door de CO2 ladder krijg je 10% fictieve korting, krijg je met de berekende 675,000 nog steeds het project toegewezen.

Dit is dan zeker een grote stimulans om aan zoiets deel te nemen?

Zeker, de CO2 prestatieladder gaat een steeds grotere rol spelen bij gemeentelijke aanbestedingen.

En doen jullie verder nog iets met duurzame energie, bijvoorbeeld LED-verlichting of andere vormen?

Wij huren het pand, dus we zijn iets meer afhankelijk van wat de eigenaar zou willen. Op zich hebben we daar wel veel inspraak in. Als voorwaarde verwacht hij dan wel dat we een paar jaar in het pand zitten. Op dit moment groeien we zo hard, dat het nog onduidelijk is of we zo'n lange tijd in het pand blijven. Met het beleid zijn we bezig met het A-label en zelfs elektrische auto's. Deze auto's zouden echt goed in het beleid van Bomenwacht passen, omdat de meeste activiteiten in en rondom Rotterdam plaatsvinden. Een oplaadpaal behoort dus zeker tot de opties.

Bent u dan wel op de hoogte van het Energieakkoord Duurzame Energie met de doelstelling dat van alle energie 15% in 2020 duurzaam moet worden?

Ik heb er wel van gehoord, maar de details ben ik niet van op de hoogte. Op hoeveel procent zitten we nu?

Nu bevinden we ons op 4,5%.

Zo, dan moeten we nog flink aan de bak om op die 15% uit te komen.

Nu probeer ik bij mijn onderzoek te achterhalen wat voor bedrijven de belangrijkste redenen zijn om over te stappen op zonne-energie, of de grootste barrières die dit tegengaan. Bent u op de hoogte van de SDE+ subsidieregeling?

Niet op de hoogte, verder uitgelegd.

Wat is uw mening over deze subsidieregeling? Zou dit een belangrijke stimulans zijn?

Wat wordt de terugverdientijd dan?

Rond de 8-9 jaar, dus dan moet je er wel zeker van zijn dat je in het pand blijft.

Met een koop pand is het dan makkelijker te realiseren lijkt me. Is er ook een andere manier waarop het dan toch kan worden toegepast, bijvoorbeeld voor ons als huurders?

RTE aanbod

Nu is er tegenwoordig een nieuwe soort aanpak om over te stappen op zonne-energie. Namelijk het aangaan van een contract, in plaats van het volledige project in één keer te investeren. (Uitleg RTE concept) Nadruk op contract van 10-15 jaar. Volledige ontzorging, alles wordt geregeld door de aanbieder.

Zou dit concept u meer aanspreken dan het kopen van een project?

Dus leasing is inderdaad mogelijk. Wat ik me voor kan stellen is dat dit ook kan helpen om hoger op de prestatieladder te komen. Als het op zo'n constructie neerkomt klinkt dat zeker interessant en is het ook iets waar we de huisbaas van kunnen overtuigen.

Zeker waar, maar het contract kan ook worden gebonden aan het pand, i.p.v. aan de persoon die het als bedrijfspand gebruikt. Zou deze optie het makkelijker maken?

Aangezien wij de eigenaar van het pand zijn komt dit ongeveer op hetzelfde neer. Door de koelingsinstallaties en de locatie is het ook onwaarschijnlijk dat we van pand wisselen in de komende jaren.

In het concept, is het vooral het ontzorgen of het gebrek aan investering wat u aanspreekt?

Dat hangt eigenlijk vooral van de eigenaar af. Het pand en het dak zijn ideaal in ieder geval, en een gebrek aan investering klinkt heel aantrekkelijk.

En zou u andere vormen van duurzame energie overwegen, bijvoorbeeld LED of thermal (uitleg)?

Als dat verder ontwikkeld wordt klinkt dat ook interessant, maar het lijkt me dat dit niet met de SDE subsidie alleen weggewerkt kan worden. Dat er nog een investering bij komt kijken. In combinatie met LED wordt dit naar mijn inzicht zeker de toekomst.

MVO

U vertelde al dat u bezig bent met de prestatieladder, op welke niveau bevindt u zich nu?

We zitten nu op niveau 3, inzicht krijgen in je verbruik. Eigenlijk willen we eind oktober verder hiermee door. Stap 5 lijkt lastig te bereiken, omdat je dan echt actief bezig moet zijn met duurzame projecten.

Denkt u dat klanten, als ze hiervan op de hoogte gebracht worden, eerder gebruik zullen maken van de services van uw bedrijf?

Het is een interessante gedachte om hiermee bezig te zijn en vooral om iemand hiermee aan mee te laten werken. Voor ons zitten er meer kortingen aan verbonden, bedrijven zoals de wegenbouw die worden aangestuurd door gemeentes zijn hier heel erg bij gebaat.

Als bij het zonne-energie project de eerste stappen en administratie voor de CO2 footprint/prestatieladder ook door het bedrijf geregeld zouden worden, zou dit dan een extra argument zijn om in te stemmen met het contract?

Zo'n aanbod slaan we zeker niet af. Het is dat we ons nu al op stap 3 bevinden, anders zou het zeker aantrekkelijk zijn om op weg geholpen te worden.

Denkt u dat er nog meer bij de besluitvorming komt kijken?

Mensen zijn altijd gevoelig voor besparing, bij ons is ook duurzaamheid in het beleid opgenomen, dus we zijn al bezig met social return en MVO. Dat soort bedrijven zouden naar mijn mening sneller kijken naar een leasing concept voor zonne-systemen.

Communicatie

Als afronding van het interview zou ik u graag nog even een vraag stellen over communicatiemiddelen. Als een bedrijf u zou willen bereiken, wat zou dan voor u de prettigste manier zijn om op de hoogte gebracht te worden. Is dit doormiddel van een brochure, telefonisch, een email of reclamevoering?

Voor mijzelf is een afspraak prettiger, iemand met een goed verhaal aan tafel hebben om een beetje een beeld te krijgen. Per mail komt er al heel veel binnen, dus dat heeft minder prioriteit.

Bedankt voor uw tijd en moeite, hopelijk is er de mogelijkheid dat ik bij onduidelijk nog telefonisch contact op kan nemen.

Graag gedaan, en dat mag natuurlijk altijd.

Interview 5:

Wijnand de Mooij B.V/Mooijquality, groothandel groente en fruit

Geïnterviewde(n): Wijnand de Mooij, Directeur/Eigenaar

Locatie: Groothandelaarsmarkt 170 Rotterdam

Datum: 01-06-2015

Algemene informatie

Zou u mij iets kunnen vertellen over het bedrijf? Ik begrijp dat u zich voornamelijk bezig houdt met de verkoop en opslag van groente en fruit?

De loods wordt gebruikt als opslag en als verkoopruimte, 1400 m² gekoelde ruimte.

Dat moet wel een enorm energieverbruik betekenen?

Zeker, niet alleen de energie van de koelinstallaties, maar ook het afvoeren van ontstane warmte, verlichting, etc.

En de klanten die hier komen om in te kopen, wie zijn dat precies?

Voornamelijk de standaard groenteman. Eigenlijk proberen wij alle winkels die groenten en fruit aanbieden te bedienen.

En de inkoop van de producten, is dit voornamelijk import, of teelt uit Nederland?

We importeren wel producten uit Italië, maar het grootste gedeelte van wat je hier ziet wordt met de vrachtwagens binnengehaald bij tuinders uit Nederland.

Uit hoeveel werknemers bestaat het bedrijf?

We staan hier met gemiddeld 10 man op de werkvloer. De andere werknemers zijn vrachtwagenchauffeurs.

Duurzame energie

Graag zou ik willen openen met de vraag wat u precies weet over duurzame energie, is uw bedrijf bijvoorbeeld op het moment bezig met duurzaam ondernemen?

Een tijdje geleden heeft mijn vader zich al laten informeren over zonne-energie. Dat leek ons best een aantrekkelijke optie, voor een duurzaam imago en de kostenbesparing.

En is dit ook om bij te dragen aan de doelstelling dat van alle energie 15% in 2020 duurzaam moet worden?

Oh, er is dus een bepaalde doelstelling voor bepaald? Eigenlijk is het stiekem vooral eigenbelang, omdat het meer klanten kan aanspreken en een bepaald gedeelte van de energiekosten omlaag kan brengen.

Zonne-energie

Nu probeer ik bij mijn onderzoek te achterhalen wat voor bedrijven de belangrijkste redenen zijn om over te stappen op zonne-energie, of de grootste barrières die dit tegengaan. Aangezien u hier al een beetje naar hebt gekeken kunnen we hier misschien iets dieper op ingaan. Bent u op de hoogte van de SDE subsidieregeling?

Dat is de subsidie die je krijgt bij het overstappen op duurzame energie? Daar zijn we ook over geïnformeerd, en we zijn al bezig aan de eerste stappen om deze aan te vragen.

Heeft dit meegeteld in het proces om over zonne-energie te beslissen?

We waren sowieso al aan het kijken naar opties voor een zonnestelsel, maar deze subsidie maakt het natuurlijk nog aantrekkelijker.

RTE aanbod

Nu is er tegenwoordig een nieuwe soort aanpak om over te stappen op zonne-energie. Namelijk het aangaan van een contract, in plaats van het volledige project in één keer te investeren. (Uitleg RTE concept) Volledige ontzorging door RTE, alles wordt geregeld door de aanbieder.

Zou dit concept u meer aanspreken dan het kopen van een project?

Van zulk soort concept en van het bedrijf heb ik nog nooit gehoord. En hoe groot zijn dan de voordelen als je dit bekijkt op kosten voor stroom?

Bij soortgelijke gebouwen levert het voor de klant vaak een korting op van tussen de 1 of 2 cent per kWh, met een contractduur van rond de 10 jaar.

Dat klinkt zeker interessant, de vraag is alleen of dit het dan goedkoper maakt dan zelf een investering doen in zonne-energie. In dat geval zouden we het aanbod van andere leveranciers gaan vergelijken met dit concept. Het kapitaal om te investeren is aanwezig, maar over de terugverdientijd was nog geen duidelijke informatie verschaft.

En staat u ook open voor het combineren van een zonnestelsel met bijvoorbeeld LED-verlichting of thermal energy (uitleg)?

Met LED-verlichting zijn we bekend en ik heb me ook laten vertellen dat de terugverdientijd veel lager is, dus dat is zeker interessant. Ik wist niet dat vloerstof en lucht ook verhit konden worden met zonnepanelen, maar als dit onwijs scheelt in energiekosten, waarom niet?

MVO

Tegenwoordig is maatschappelijk verantwoord ondernemen ook heel erg in opkomst. Bedrijven laten bijvoorbeeld met de CO2 footprint en de CO2 prestatieladder zien dat ze duurzaam ondernemen en hopen daarmee meer goodwill te kweken bij klanten.

Bent u op de hoogte van deze middelen en maakt u hier gebruik van?

Je merkt aan inkopers dat het groene label wel een rol speelt in het aankoopproces, maar vaak is de prijs toch het doorslaggevende argument. Nu ga ik er wel vanuit dat zulk soort labels en duurzaam ondernemen in de toekomst iets gaan betekenen, maar we maken hier nog geen gebruik van.

Als bij het zonne-energie project de eerste stappen en administratie voor de CO2 footprint/prestatieladder ook door het bedrijf geregeld zouden worden, zou dit dan een extra argument zijn om in te stemmen met het contract?

Als dit zonder extra kosten wordt toegevoegd en een ander bedrijf biedt het niet aan, dan is dat zeker een overtuigend argument. Een extra label op het bedrijf en de website kan nooit kwaad.

Wat denkt u zelf nog dat meetelt in de besluitvorming van een bedrijf?

Het belangrijkste feit lijkt me het type bedrijf. Transportbedrijven zoals veel burens hier in de Spaanse polder hebben denk ik niks aan zonne-systemen. Maar groothandelaren in de AGF-markt zouden hier waarschijnlijk wel voor open staan, als de besparing groot genoeg is.

Communicatie

Als afronding van het interview zou ik u graag nog even een vraag stellen over communicatiemiddelen. Als een bedrijf u zou willen bereiken, wat zou dan voor u de prettigste manier zijn om op de hoogte gebracht te worden. Is dit doormiddel van een brochure, telefonisch, een email of reclamevoering?

Omdat we ons al een beetje interesseren in zonne-energie zijn alle manieren eigenlijk prima. Respons per mail kan langer duren, dus in dat geval zou telefonisch contact toch het beste zijn.

Bedankt voor uw tijd en moeite, hopelijk is er de mogelijkheid dat ik bij onduidelijk nog telefonisch contact op kan nemen.

Graag gedaan, dat kan zeker.

Interview 6:

Icamat B.V., Metaalbewerking

Geïnterviewde(n): Luuk Huizer, Floor Manager/Sales

Locatie: Grote Esch 501, Moordrecht

Datum: 03-06-2015

Algemene informatie

Zou u mij iets kunnen vertellen over het bedrijf? Ik begrijp dat u zich voornamelijk bezig houdt met metaalbewerking?

Icamat heeft 1 vestiging, dezeloods, waarin we met een 25-tal constant draaiende machines metaal bewerken. We hebben hier zoals je ziet ook een kantoor, voor alle administratie en sales. De teams bestaan eigenlijk uit het kantoorpersoneel en de metaalbewerkers zelf.

En het grootste gedeelte van het personeel bestaat dus zo te zien uit de medewerkers die de machines bedienen?

Zeker, er werken dagelijks ongeveer 40 mensen op de werkvloer en we hebben precies 5 mensen op het kantoor. Zelf stuur ik de mensen bij de machines aan, en help ik op kantoor bij de verkoop.

En de klanten aan wie jullie de machines en producten verkopen, wie zijn dat precies?

Icamat levert eigenlijk alleen aan bedrijven, maar de klanten zijn eigenlijk heel verschillend. Het kan gaan om machines voor slagerijen, maar ook producten voor supermarkketens.

En deze klanten zijn dan voornamelijk Nederlandse bedrijven?

Nee hoor, we hebben er ook wel vaak internationale bij zitten. Sommige bedrijven kopen ook onze machines in vanuit Duitsland of Engeland.

Duurzame energie

En qua energieverbruik? Dat gaat dus vooral op aan de machines?

We zijn een middelklein bedrijf, dus de machines draaien niet altijd allemaal, maar dit zijn wel de grootste elektriciteit verbruikers. Het kantoor stelt hierbij eigenlijk weinig voor.

Graag zou ik willen openen met de vraag wat u precies weet over duurzame energie, is uw bedrijf bijvoorbeeld op het moment bezig met duurzaam ondernemen?

We hebben wel gehoord dat sommige metaalbewerkingsbedrijven bezig zijn met zonne-energie, dus dat is iets waar we eigenlijk wel iets meer over moeten weten. Ik begreep dat je dit ook als onderzoek doet, toch?

Zonne-energie

Dat klopt, ik ben onderzoek aan het doen om een langetermijnstrategie te ontwikkelen voor een bedrijf dat zich bezig houdt met zonne-energie. Het bedrijf doet het nu best wel goed, ook door alle stimulans van de overheid. Weet u iets van de doelstelling dat van alle energie 15% in 2020 duurzaam moet worden?

Oh, nee, daar was ik niet van op de hoogte. En het zijn dus die subsidies waarmee ze dit proberen te bereiken?

Jazeker, en vooral de SDE+ subsidie, Stimulering Duurzame Energie, is heel interessant voor grootverbruikers op energiegebied. Zegt u dit iets?

Dat is dus het jaarlijkse bedrag dat je krijgt als je zonnepanelen neemt?

Ja, het is ingedeeld in een fases, gebaseerd op de vorm van duurzame energie waar je gebruik van maakt. Dat jaarlijkse bedrag ligt eraan in welke fase je bent ingeschreven; later betekent meer subsidie, maar een groter risico dat de subsidiepot leeg is.

Doet Icamat verder al iets op het gebied van duurzaamheid?

We hebben wel op een aantal plekken in de loods al LED-verlichting hangen, dat schijnt ook wel te schelen in het totale verbruik.

RTE aanbod

Nu is er tegenwoordig een nieuwe soort aanpak om over te stappen op zonne-energie. Namelijk het aangaan van een contract, in plaats van het volledige project in één keer te investeren. (Uitleg RTE concept) Volledige ontzorging door RTE, alles wordt geregeld door de aanbieder.

Zou dit concept u meer aanspreken dan het kopen van een project?

Ik denk dat we met het platte dak hier sowieso wel een groot aantal panelen kwijt kunnen, maar of er budget voor is om daarin te investeren lijkt me niet. Dan zou leasen wel een betere optie zijn.

De voordelen aan leasen zijn meestal tussen de 1 of 2 cent per kWh, met een contractduur van rond de 10 jaar.

Dat klinkt als heel weinig, maar als je dat op jaarbasis bekijkt en met al deze machines zou dat toch wel aardige bedragen op kunnen leveren. Hoeveel heeft het gescheeld bij andere bedrijven?

Ligt er natuurlijk aan wat voor bedrijf en wat het energieverbruik per jaar is, maar de besparing bij autogarages en dergelijke is wel een paar honderd euro per jaar.

En wij verbruiken zeker meer dan een garage, maar de panelen wekken dan niet meer op dan dat ze daar doen?

Nou, tegenwoordig kan zonne-energie dus ook gecombineerd worden met zogenaamde thermal energy (uitleg). Dat zou dan misschien interessanter zijn?

Als de besparing dan nog groter is en het kost niks, natuurlijk!

En dan natuurlijk nog de LED-verlichting, die jullie al hier en daar gebruiken. Dat levert wel een duurzaam plaatje op. Heeft u het gevoel dat meerdere metaalbewerkers gebruiken maken van LED?

Ik denk alle loodsen wel baat hebben bij LED, vooral omdat die lichten constant branden. Als je een wat fellere kleur LED gebruik worden de loodsen nog netter en overzichtelijker ook.

MVO

Tegenwoordig is maatschappelijk verantwoord ondernemen ook heel erg in opkomst. Bedrijven laten bijvoorbeeld met de CO2 footprint en de CO2 prestatieladder zien dat ze duurzaam ondernemen en hopen daarmee meer goodwill te kweken bij klanten.

Bent u op de hoogte van deze middelen en maakt u hier gebruik van?

Bij onze klanten wordt eigenlijk nooit naar duurzaamheid gevraagd. Ik denk niet dat we daar iets aan hebben eerlijk gezegd.

Als bij het zonne-energie project de eerste stappen en administratie voor de CO2 footprint/prestatieladder ook door het bedrijf geregeld zouden worden, zou dit dan een extra argument zijn om in te stemmen met het contract?

Misschien dat het leuk staat op de website, maar echt invloed op onze business heeft het niet.

Communicatie

Als afronding van het interview zou ik u graag nog even een vraag stellen over communicatiemiddelen. Als een bedrijf u zou willen bereiken, wat zou dan voor u de prettigste manier zijn om op de hoogte gebracht te worden. Is dit doormiddel van een brochure, telefonisch, een email of reclamevoering?

Bellen met het kantoor om een afspraak te maken werkt zeker het best. Daarna langskomen voor een gesprek is denk ik het handigste.

Bedankt voor uw tijd en moeite, hopelijk is er de mogelijkheid dat ik bij onduidelijk nog telefonisch contact op kan nemen.

Graag gedaan!

Interview 7:

Buro E550 B.V.

Geïnterviewde(n): Eduardo de Sousa, Directeur/Eigenaar

Locatie: Coenecoop 21, Waddinxveen

Datum: 03-06-2015

Algemene informatie

Zou u mij iets kunnen vertellen over het bedrijf? Ik begrijp dat u zich voornamelijk bezig houdt met de verkoop en opslag van meubilair?

Eigenlijk verzorgen wij zelfs complete interieurs van onder andere restaurants en particulieren. We gebruiken deze loods om meubels en accessoires een industriële en vintage look te geven en als opslagruimte.

En ook als kantoor zo te zien?

Er is een klein kantoor, met name voor administratieve werkzaamheden. De verkoop gebeurt voornamelijk in onze winkel, in Gouda.

En de klanten die u aanspreekt, wie zijn dat precies, met name restaurants?

De industriële, vintage look is weer helemaal aan het terugkomen, vooral in restaurants inderdaad. In de winkel verkopen we losse producten aan de alledaagse passant, we hebben gemerkt dat de doelgroep voornamelijk 30+ is. Verder doen we nog het complete design voor woningen met ons klusteam.

En de inkoop van de producten waaruit jullie het meubilair vervaardigen, komt dit uit Nederland?

Zoals je kunt zien zijn de meubels opgebouwd uit heel veel verschillende aparte onderdelen. Deze delen komen over en nergens vandaan. Autosloperijen waar we wieldoppen opkopen om tafels van te maken, online verkoopsites voor glazen deuren, noem het maar op.

Uit hoeveel werknemers bestaat het bedrijf?

We zijn met een vrij klein team, 5 mannen voor de inkoop en installatie. 4 parttimers in de winkel, en vaak hebben we nog wel 2 of 3 stagiaires die overal en nergens meehelpen.

Duurzame energie

Graag zou ik willen openen met de vraag wat u precies weet over duurzame energie, is uw bedrijf bijvoorbeeld op het moment bezig met duurzaam ondernemen?

Wij doen op het moment helemaal niks aan duurzaamheid.

Van alle energie moet volgens de Europese wet- en regelgeving 15% in 2020 duurzaam zijn. Wist u dit?

Hier was ik me niet van bewust. Eigenlijk zijn we helemaal niet op de hoogte van wat er allemaal speelt op het gebied van duurzame energie.

Zonne-energie

Ik probeer bij mijn onderzoek te achterhalen wat voor bedrijven de belangrijkste redenen zijn om over te stappen op zonne-energie, of de grootste barrières die dit tegengaan. Heeft u al eens nagedacht om op deze energiebron over te stappen?

Het dak van deze loods kan er wel voor worden gebruikt. Maar het probleem is eigenlijk dat ik niet weet hoe lang we doorgaan op deze locatie. Klanten wonen rond Rotterdam, dus de locatie zou zeker centraler kunnen.

Maar u bent wel eigenaar van de loods?

Dit pand huren we van een eigenaar, maar het volgende pand zal waarschijnlijk op mijn naam komen.

En op dat pand zouden dan wel zonnepanelen kunnen komen?

Zonnepanelen is niet echt iets waar ik op zou selecteren, maar als het genoeg besparing oplevert, dan zou ik het zeker overwegen.

RTE aanbod

Nu is er tegenwoordig een nieuwe soort aanpak om over te stappen op zonne-energie. Namelijk het aangaan van een contract, in plaats van het volledige project in één keer te investeren. (Uitleg RTE concept) Volledige ontzorging door RTE, alles wordt geregeld door de aanbieder.

Zou dit concept u meer aanspreken dan het kopen van een project?

Investeringskosten zijn behoorlijk hoog voor zonnesystemen heb ik gehoord, misschien dat leasen dan wel een uitkomst biedt. En dat contract heeft dan een minimum van?

Een minimale contractduur van 10 jaar.

Maar stel dat ik over 5 jaar weer wil gaan verplaatsen, dan zit ik aan het contract vast? Dat zou wel een reden zijn om het niet te doen.

Het contract kan ook aan het pand worden gekoppeld, maar dan zou u het contract moeten doorverkopen.

Dat lijkt me lastig. Ik zou dan eerder kiezen voor een investering met een lening.

En een combinatie van LED-verlichting of thermal energy (uitleg)?

Ik denk niet dat met de hoeveelheid energie die we verbruiken we meerdere duurzame oplossingen nodig hebben. Energieverbruik komt van de apparaten die we gebruiken om de meubels te bewerken, maar die draaien niet constant.

MVO

Tegenwoordig is maatschappelijk verantwoord ondernemen ook heel erg in opkomst. Bedrijven laten bijvoorbeeld met de CO2 footprint en de CO2 prestatieladder zien dat ze duurzaam ondernemen en hopen daarmee meer goodwill te kweken bij klanten.

Bent u op de hoogte van deze middelen en maakt u hier gebruik van?

We gebruiken geen duurzame labels, vooral omdat een duurzaam productieproces bij ons niet mogelijk is. We halen de onderdelen overal en nergens vandaan.

Dus als bij het zonne-energie project de eerste stappen en administratie voor de CO2 footprint/prestatieladder ook door het bedrijf geregeld zouden worden, zou dit geen argument zijn om in te stemmen met het contract?

Dit zou voor ons helemaal niks toevoegen inderdaad.

Communicatie

Als afronding van het interview zou ik u graag nog even een vraag stellen over communicatiemiddelen. Als een bedrijf u zou willen bereiken, wat zou dan voor u de prettigste manier zijn om op de hoogte gebracht te worden. Is dit doormiddel van een brochure, telefonisch, een email of reclamevoering?

Vaak ben ik zelf op pad, dus contact per e-mail. Langskomen in de winkel kan natuurlijk ook, maar de kans is kleiner dat ik daar aanwezig ben.

Bedankt voor uw tijd en moeite, hopelijk is er de mogelijkheid dat ik bij onduidelijk nog telefonisch contact op kan nemen.

Graag gedaan, dat kan zeker.

Interview 8:

Wim Jansen Bloemen en Planten.

Geïnterviewde(n): Wim Jansen, Directeur/Eigenaar

Locatie: Grote Esch 1180, Moordrecht (Wim Jansen XL)

Datum: 04-06-2015

Algemene informatie

Zou u mij iets kunnen vertellen over het bedrijf? Als Gouwenaar ken ik uw bloemenzaken natuurlijk al een beetje, maar zou u een omschrijving kunnen geven van wat u allemaal onderneemt?

Het bedrijf bestaat uit twee delen, drie bloemenwinkels in Gouda en deze XL winkel, meer bedoelt voor zakelijke klanten. We leveren bloemen en planten, waarbij we natuurlijk vooral letten op de kwaliteit.

En met zakelijke klanten bedoelt u?

Bijvoorbeeld restaurants en bedrijven, maar we leveren ook voor minder leuke dingen, zoals begrafenissen.

En dit gebouw wordt alleen gebruikt voor verkoop aan zakelijke klanten?

Alle soorten bloemen en planten zijn hier uitgestald, en tegelijkertijd is dit ook een opslag waar wat jonge mensen de bloemen inbinden. Dit gebruiken we ook als hoofdkantoor, maar zelf ben ik meer op pad om zaken te regelen.

Waar haalt u de bloemen vandaan, is dit vanuit een groothandel?

De grootste hoeveelheid van de inkoop loopt via de bloemenveiling in Aalsmeer, de grootste bloemenveiling van de hele wereld.

Duurzame energie

Graag zou ik willen openen met de vraag wat u precies weet over duurzame energie, is uw bedrijf bijvoorbeeld op het moment bezig met duurzaam ondernemen?

Als je Fair Trade als duurzaam ondernemen kan zien, dan ja. Bij alle producten die we verkopen kijken we of ze Fair Trade gekweekt zijn en of ze aan de milieu-eisen voldoen.

En weet u iets van de Europese wet- en regelgevingen voor duurzame energie, of iets over de Nederlandse subsidies hiervoor?

Als wat oudere rot in het vak, 72 onderhand, houd ik mij daar niet zo mee bezig. Wellicht dat mijn zoons er meer vanaf weten.

Zonne-energie

Ik probeer bij mijn onderzoek te achterhalen wat voor bedrijven de belangrijkste redenen zijn om over te stappen op zonne-energie, of de grootste barrières die dit tegengaan. Heeft u al eens nagedacht om op deze energiebron over te stappen?

Zonnepanelen zie je wel steeds vaker, maar het lijkt me allemaal zo'n gedoe met uitzoeken.

RTE aanbod

Eigenlijk doe ik dit onderzoek vanuit een bedrijf dat probeert het proces zo makkelijk mogelijk te maken voor de klant. Namelijk het aangaan van een contract, in plaats van het volledige project in één keer te investeren. Hier komt bij volledige ontzorging, waarbij alles wordt geregeld door de aanbieder. Dus ook al het administratieve gedoe en de subsidies.

Maarja, als je dat uit handen geeft, zitten er ook wel extra kosten aan verbonden natuurlijk?

U tekent eigenlijk een contract met een minimum van 10 jaar, voor een vaste energieprijs, die lager is dan wat u nu heeft.

10 jaar, *lacht*, dan ben ik er hopelijk al een tijdje mee gestopt. Maar misschien dat mijn zoons dit beter kunnen overwegen dan. Maar voor de winkels is dat geen optie, het moet per se hier?

De winkels hebben denk ik te weinig dakoppervlak en een te klein energieverbruik om subsidies te krijgen, dus dan werkt het concept niet. Verder is een combinatie van LED hier misschien ook mogelijk?

LED lijkt me makkelijk te regelen in dit pand, is ook iets makkelijker te behappen.

MVO

Tegenwoordig is maatschappelijk verantwoord ondernemen ook heel erg in opkomst. Bedrijven laten bijvoorbeeld met de CO2 footprint en de CO2 prestatieladder zien dat ze duurzaam ondernemen en hopen daarmee meer goodwill te kweken bij klanten.

Bent u op de hoogte van deze middelen en maakt u hier gebruik van?

Nouja, zoals ik al zei, we gebruiken Fair Trade, een beetje voor het milieu, maar toch ook als verkoopargument.

En als de eerste stappen en administratie voor de CO2 footprint/prestatieladder ook door het bedrijf geregeld zouden worden, zou dit geen argument zijn om in te stemmen met het contract?

Ik denk dat we al wel laten zien dat we genoeg bijdragen aan het milieu.

Communicatie

Als afronding van het interview zou ik u graag nog even een vraag stellen over communicatiemiddelen. Als een bedrijf u zou willen bereiken, wat zou dan voor u de prettigste manier zijn om op de hoogte gebracht te worden. Is dit doormiddel van een brochure, telefonisch, een email of reclamevoering?

Mobiel ben ik altijd bereikbaar, dat is de beste manier om contact op te nemen.

Bedankt voor uw tijd en moeite, hopelijk is er de mogelijkheid dat ik bij onduidelijk nog telefonisch contact op kan nemen.

Interview 9:

Bouwbedrijf de Vries en Verburg.

Geïnterviewde(n): Jan Boer, Algemeen directeur

Locatie: 't Vaartland 8, Stolwijk

Datum: 05-06-2015

Algemene informatie

Zou u mij iets kunnen vertellen over het bedrijf?

We zijn een bouwbedrijf met ongeveer 175 medewerkers en de projecten die wij afleveren zijn heel uiteenlopend. Zo zorgen wij voor bedrijfsgebouwen, ziekenhuizen, woningbouw, eigenlijk alle grote sectoren. Vervolgens zorgen wij ook nog eens voor service en onderhoud van de gebouwen met langlopende contracten.

En die projecten zijn allemaal gerealiseerd in Nederland?

We hebben meer dan tweehonderd projecten afgerond in de randstad, en nog een aantal projecten in het zuiden van Nederland.

En u wordt dus ook regelmatig door gemeentes gevraagd om een project op u te nemen?

Net als andere bedrijven brengen wij een offerte uit met de prijs waarvoor wij het kunnen bouwen, meestal krijgt de goedkoopste, of degene met de kortste bouwduur het project toegewezen. Als ik het goed zeg hebben we al projecten afgerond voor gemeente Nieuwegein, Rotterdam en Zoetermeer.

Duurzame energie

Ik begrijp dat u niet heel veel tijd heeft door uw drukke schema, graag zou ik het even kort willen hebben over duurzame energie, is uw bedrijf bijvoorbeeld op het moment bezig met duurzaam ondernemen?

En of wij ons daar mee bezig houden. Maatschappelijk Verantwoord Ondernemen is onderhand een must in de bouwwereld. Het materiaal moet gekeurd worden, processen, en ook de Prestatieladder telt mee voor projecten.

De CO2 prestatieladder?

Nee, wij bevinden ons op stap 3 van de MVO prestatieladder, ongeveer hetzelfde principe, we laten zien dat we duurzaam bezig zijn.

Zonne-energie

En is zonne-energie ook iets waar daarin mee zou kunnen spelen?

Eerlijk gezegd heb ik geen idee wat ervoor nodig is om stappen hoger te komen op de ladder.

RTE aanbod

Dit onderzoek gebruik ik om een strategie te bedenken voor een bedrijf met een uniek concept. Bij dit concept huren bedrijven de zonnepanelen, in plaats van het volledige project in één keer te investeren. Dus een soort contract voor langere tijd, waarbij het bedrijf de energieleverancier wordt. Het grote voordeel is de volledige ontzorging, waarbij al de administratie uit handen van de klant wordt genomen.

Klinkt als een erg goed concept. Maar wat gebeurt er dan met de huidige energieleverancier?

Daar blijft u nog gewoon bij aangesloten, voor de overige energie die niet door de zonnepanelen wordt opgewekt. De besparing is dan 1 of 2 cent per kWh.

Zonnepanelen huren klinkt als een bekend concept, volgens mij heb ik 1 van onze klanten hier ook al over gehoord.

He bedrijf waar ik stage loop is momenteel de enige in de regio die hiervan gebruik maakt, Rooftop Energy, dus dat zou het moeten zijn?

Dat zou zeker goed kunnen.

MVO

Maar de prestatieladder waar u het eerder over had, als iemand dat voor u zou regelen, stel dat u het nog niet had, zou dat u dan overhalen om over te stappen op zonne-energie?

Bij bouwbedrijven is duurzaamheid onderhand bijna verplicht. Gemeentes geven fictieve kortingen aan bedrijven met de prestatieladders, waardoor er een voordeel ontstaat als je hieraan mee doet. Dus ik denk dat bouwbedrijven er zeker baat bij hebben als dit wordt geregeld.

En denkt u dat dit meer een drijfveer zou zijn dan het regelen van alle administratie?

Een makkelijke bijdrage aan duurzaamheid en daardoor gelijk meer winst maken op projecten is ideaal. Met een alles in 1 pakket denk ik wel dat je stagebedrijf veel bedrijven kan aanspreken.

Communicatie

Als afronding van het interview zou ik u graag nog even een vraag stellen over communicatiemiddelen. Als een bedrijf u zou willen bereiken, wat zou dan voor u de prettigste manier zijn om op de hoogte gebracht te worden. Is dit doormiddel van een brochure, telefonisch, een email of reclamevoering?

Persoonlijk contact gaat altijd voor, bellen, langskomen. Reclames en brochures zien we al meer dan genoeg van.

Bedankt dat u nog even tijd voor mij heeft weten vrij te maken.

Graag gedaan.

Appendix VI

Demographic analysis Poland and the United Kingdom

The United Kingdom is seen as one of the most densely populated countries in Europe. With approximately 413 inhabitants per km² the country is also placed 27th on the world list of highest density in July 2014.⁸⁹ The Netherlands are one place lower with an average of 404 inhabitants per km².⁹⁰

Poland has only a third of that amount living on a square kilometer, for the reason that only the several large cities are densely populated. The next chart gives an overview of the total population, the growth, unemployment rates, average education years before getting a full-time job and the amount of inhabitants with an income lower than the poverty rate of all the three countries.

Demographic aspects countries

	Population ⁹¹	Population growth %	Unemployment %	Education years	Population below poverty %
The Netherlands	16.877.351	0.42 +	8.1	18	9.1
United Kingdom	64.732.407	0.54 +	7.2	16	16.2
Poland	38.346.279	0.11 -	10.3	15	10.6

As can be concluded from the table, the United Kingdom has the largest population, coinciding with the earlier mentioned density of the population. However, the country also show the largest percentage of poverty. The chart below shows the classification of the age segments of the population for all three countries. We can conclude that the United Kingdom and the Netherlands seem almost similar when it comes to the demographic criteria. Poland has a lower percentage of youth, but a higher percentage of the working class.

Age segmentation countries⁹²

Age structure in years	The Netherlands %	United Kingdom %	Poland %
0-14	16.9	17.3	14.6
15-24	12.2	12.6	11.9
25-54	40.4	41.0	43.8
55-64	12.9	11.5	14.7
65 +	17.6	17.5	15

Social-cultural aspects Poland and the UK

In a business environment, social and cultural aspects might influence the ease in which a company can do business. In the Netherlands, religion does not play a role in this environment, but a large difference between beliefs and behaviour can result in miscommunication.

Therefore, the table below has been added to give a clear overview of the division of the religions.

Currently, Christianity is still the most practised belief in all three countries. However, the Netherlands are clearly less focused on religion than the UK and Poland.

⁸⁹ (Office for national statistics, 2014)

⁹⁰ (WorldpopulationReview, 2014)

⁹¹ (WorldpopulationReview, 2014)

⁹² (IndexMundi, 2014)

Graph 8.5 Overview religion countries

Country	Christianity (Anglican and Roman catholics)	Islam	Protestant	No religion	Other religions
Netherlands⁹³	28.0%	5.2%	19.0%	42%	5.8%
United Kingdom⁹⁴	50.8%	4.8%	8.5%	25.7%	10.2%
Poland	89.8%	0.1%	0.3%	5.0%	4.8%

To compare the business cultures of the companies, the model of Geert Hofstede will be used once more. In this tool the average score for all countries is set on 50, for the reason that a negative score could be confusing for the reader. Judging from graph 8.6 on the next page, the Netherlands and the UK show more comparability than Poland. Both countries score almost the same on the element 'power distance', meaning that employees of companies are treated equally and are allowed to act more informal when having contact with their superiors. Poland is an hierarchical society where employees work in a more dominant corporate culture; every company has a clear structure with supervisors and subordinates. This dominant culture can also be noticed in the 'masculinity' aspect; Poland and the UK both encourage obtaining achievements and standing out from the crowd, causing a highly competitive business environment. The Netherlands scores really low on this dimension, meaning that teamwork and liking the work play a bigger role than being better than other employees.

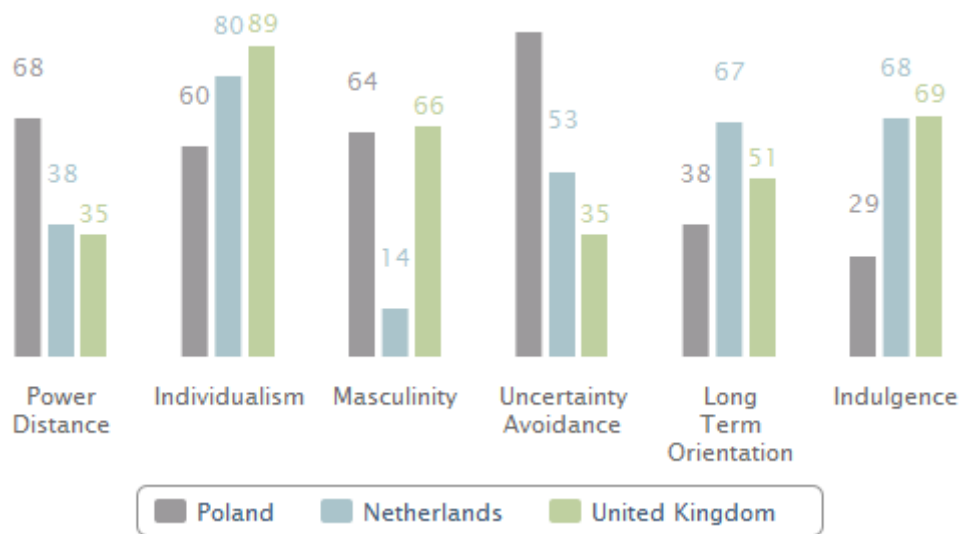
The 'indulgence' aspect shows how a culture reacts to desires and impulses; Polish inhabitants have more tendency to seeing things in a negative perspective and are used to a culture of restraint. The western cultures of the UK and the Netherlands tend to be more optimistic and inhabitants spare time for leisure and realizing their desires, instead of constant commitments.

All three countries have high scores for individualism. This means that there is a high degree of independence. In the business environment, this means giving direct criticism can damage the relation between the employee and the management. Creating a feeling of importance for every employee is a critical aspect for a manager to keep the business running smoothly.

⁹³ (IndexMundi, 2014)

⁹⁴ (Vexen, 2012)

Graph 8.6 Comparison of the six cultural dimensions of Geert Hofstede¹



When looking at business meetings and the trustworthiness of personnel when it comes to making appointments, we should observe the dimension of ‘uncertainty avoidance’; Poland scores extremely high, meaning that it is aimed at making rules and regulations for everything, even if these rules do not seem to work. Time is seen as money and there is a great aversion towards innovation and change. While the Netherlands steer in a middle course, the UK is less punctual concerning appointments and business meetings. Creativity is encouraged and the way in which goals are reached are not important. As long as the end goal is clear.

The last dimension is ‘long-term orientation’. This dimension shows how cultures are affected by their history and how they use these knowledge to evolve. Poland attaches a lot of value to its history and culture, meaning that they have a short-term orientated lifestyle where they do not plan far ahead. The UK and especially the inhabitants of the Netherlands plan further ahead, saving money to invest in the future.

History Polish Sustainable Energy Market

When renewable energy sources started growing in Europe and when Poland was also included in the NREAP, the government introduced the Green Certificates scheme. These GCs can be compared to the ROCs of the United Kingdom, where energy generators are rewarded with obligations that they can sell to suppliers to gain premium. Suppliers need these certificates to meet a standard of 10% of their total energy sold to consumers, otherwise they are punished with a fine. The GCs were a success, resulting in quite a lot of wind power projects. The big four also invested heavily in wind power, but they came up with a different way to obtain an immense amount of GCs; the process of ‘co-firing’, where imported wood and straw were burned together with coal, counted as renewable energy generation out of biomass, thus rewarding the companies with GCs.⁹⁵

The EU commission and the Minister of Economy of Poland began to discuss the biomass energy production and the renewable energy legislation. They decided to introduce the same feed-in tariffs that were already in use in the UK and other European countries, with attractive tariffs for solar PV, but almost no support for co-firing. After research by a consulting company, the big four found out that the new legislation would decrease their market value by a total of 3.5 billion euros. After complaints of the companies that no parties should suffer that heavily from the new system, the Minister refused to reconsider the plans, but he was fired a year later. The new ministry overruled the legislations for renewable energy and decided to pay the fine for not meeting the RNEAP standards. Investments in solar PV and other sustainable energy sources fell, resulting in GCs decreasing to a third of their original value.

⁹⁵ (Bacia, 2014)