AN

INTERNATIONAL GROWTH STRATEGY

FOR A

FAST-GROWING LAST MILE DELIVERY PLANNING COMPANY

THESIS

MSc Strategic Product Design

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An international growth strategy for a fast-growing last mile delivery planning company

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| Preface

Dear reader,

In front of you lies the thesis "An international growth strategy for a fast-growing last mile delivery planning company". By handing in this thesis, I have concluded the curriculum of the master's degree in Strategic Product Design (SPD) at the Delft University of Technology and thereby my time as student in Delft. The past six years have flown by. I have had numerous opportunities to learn, explore and laugh. I look back at this time with lots of enjoyment and no regret.

During my time as SPD student I have been able to learn from some of the best, both from the academic world and industry. Seeing how strategic design is applied by different types of companies makes me realize how relevant this discipline actually is. I am grateful for the hands-on experience I gained during my design projects and the internships at SODAQ, Innovation Booster and Plotwise.

I would like to make some acknowledgements, first of all to my supervisory team. Thank you for giving me room to develop my ideas. Rebecca, you are a great source of inspiration. You seem to know my interests well and you always know how trigger my mind for going that extra mile. I have enjoyed our walks and talks. Erik Jan, thank you for your critical view on my thinking, our thorough discussions and the support throughout the last twenty weeks. I think we have succeeded in our fully-digital experiment.

Then, a word for Floor. Thank you for providing me the opportunity to step into the amazing world of sales and last mile delivery planning. You have been a great mentor to me since our first meeting. Offering me a spot in the team is the biggest compliment you could make. I am looking forward to find out together what the coming years hold for Plotwise.

I would also like to thank everybody from Plotwise that has been part of my research. Your insights have been valuable and I hope my findings will be of value for you.

Next, a thank you for Michiel and Pim for our frequent brainstorming and discussions. I think our contact has brought all of our projects to a higher level. I look back at the mostly fun and sometimes stressful times we had in the past years, including our international trips and parties. I am curious to see where we all stand ten years from now.

Thank you mum and dad for giving me mental support and the space for exploring what I like to do in the past years. Thank you for proofreading my thesis and being critical on what I produced.

And finally, Pam. Thank you for your endless happiness energy and valuable advice. You trigger me to get the best results and I enjoy our endless competitions. I find it especially interesting to see how we have the exact same academic background but approach professional challenges in our own, slightly different way.

Enjoy reading this thesis,

Menno de Graaf

| Executive summary

Plotwise is a tech scale-up that offers continuous planning for last mile delivery. By providing data-driven AI planning software as a service, the company strives to improve the delivery planning process of its customers and thereby allowing them to handle the growth in demand for home delivery.

The home delivery market is expanding at an exponential rate. The COVID-19 pandemic has pushed the e-commerce market five years ahead, more packages are delivered every day and this volume is rapidly growing. Online shoppers are reshaping the delivery economy from supply- to demand-driven. They expect their deliveries to be free, fast and convenient.

At the same time, logistics operators and (online) retailers strive to find the optimal balance between costs, operational efficiency and customer experience. Improving environmental performance is getting increasingly important as well. This puts significant stress on their planning and delivery process.

Plotwise seems successful in terms of its product-market fit; it currently serves three large customers in The Netherlands and they are happy. Hence, the management team wants to scale the company rapidly through signing new customers in at least four additional European countries between now and 2022.

For this reason, **the Head of Sales of Plotwise asked the author of this thesis to design a sales strategy that guides the company in entering European countries with its current product.** The author created this sales strategy through performing a literature review, an internal analysis, an external analysis and quantitative market research. Strategic design principles complemented these research methodologies. This thesis presents the results of this research.

During the research, the author was a member of Plotwise's sales team. This allowed him to join weekly team meetings, as well as access to employees across all departments as well as the management team. The Head of Sales and members of the sales team validated findings and design suggestions.

In the literature review, the author discusses theoretic elements of traditional market entry strategy literature. The review synthesises the findings into a model that guided the development of the sales strategy.

An internal analysis on Plotwise's vision, mission, product, business model and culture shows that the company is fit for international expansion. However, the analysis shows that the sales team faces several challenges that possibly slow down this scaling. To tackle the identified challenges, the author presents three sales tools in combination with a roadmap for 2021 and 2022. The expectation is that these tools will improve the lead conversion, thereby increasing the number of signed customers.

The author created a market analysis framework to conduct a quantitative market study. The result of this analysis is a list of most attractive countries to enter; the advice is to enter the UK market first, followed by Sweden, Norway and France. This advice deviates from an initial assumption on entry sequence as made by the management team of Plotwise. Additionally, **the author advises to focus on logistic service providers (LSP), third party logistics (3PL) companies, electronics e-tailers, brands and (online) grocery stores as first customer segments.**

Lastly, **the author advises Plotwise to position as "future-proof planning partner for delivery service optimisation".** This positioning resonates with online shopper behaviour and differs from the competition. Moreover, it leverages the core competencies of Plotwise.

| List of abbreviations

API	Application Programming Interface
CAC	Customer Acquisition Costs
CAGE	Cultural, Administrative, Geographic and Economic
CLV	Customer Lifetime Value
CRM	Customer Relationship Management
EMS	Entry Mode Selection
IMS	International Market Selection
LSP	Logistics Service Provider
3PL	Third Party Logistics

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Appendix

Please note: the appendix contains **confidential parts (B, D, E, K, L, M)** that are only available to the chair, mentor and client of this project.

List of figures and tables

The appendix also contains figures and tables. They are indicated with an 'A'.

All images in this thesis are royalty free.

Reading guide

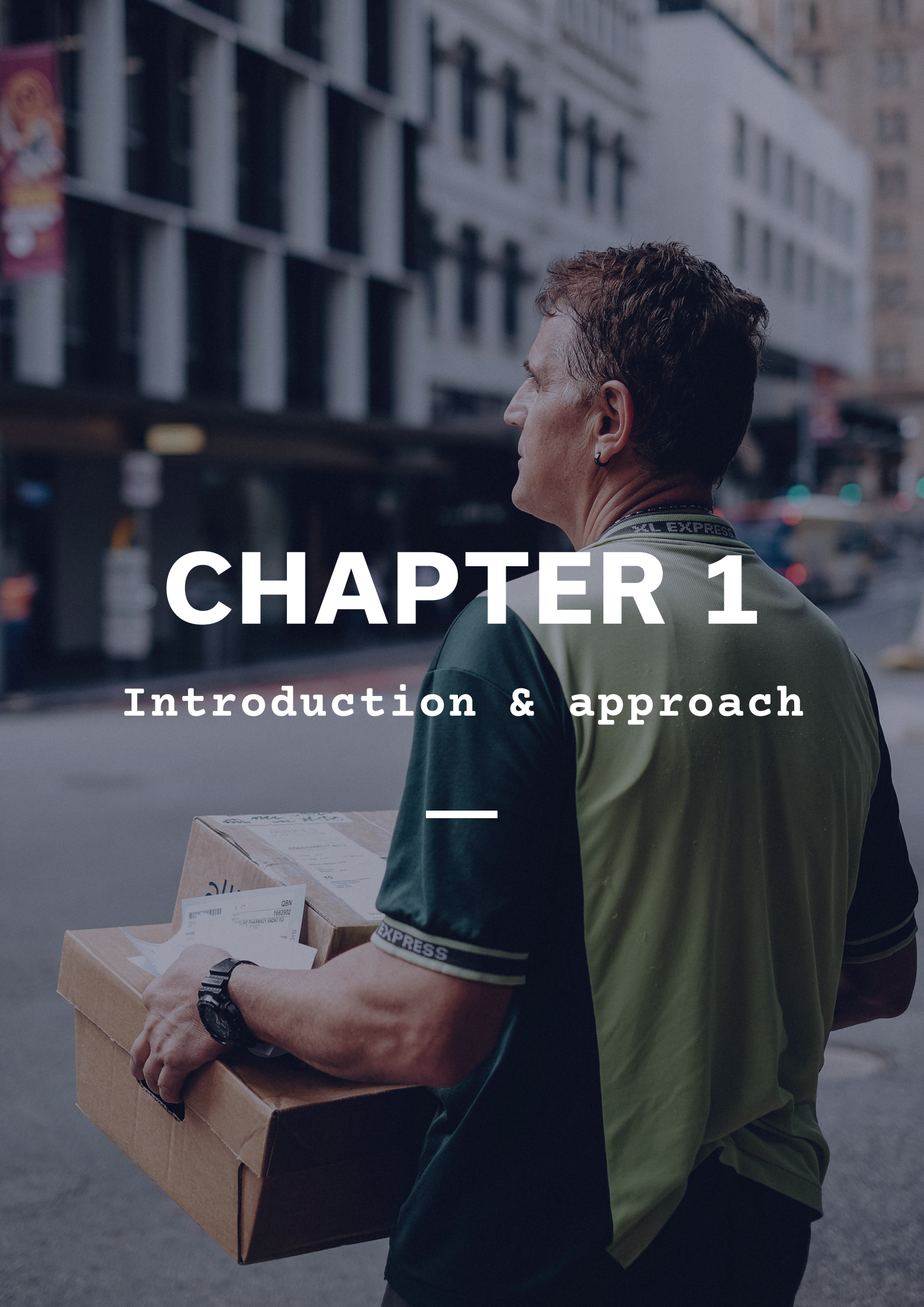
Most chapters start with a paragraph that uses a bold font. This paragraph introduces the topic of the chapter and discusses what to expect while reading the chapter.

This font indicates the main text of this thesis.

This font indicates a reference to a figure, table or chapter within the appendix.

> **These boxes indicate a key finding or conclusion. Reading these boxes only will give a high level summary of this thesis.**

Chapters end with boxes like these; they discuss the most important findings, takeaways and conclusions. These learnings are relevant to take into account when reading subsequent chapters.



CHAPTER 1

Introduction & approach

1.1 | Introduction

Context

Plotwise is a Planning Service Provider that aims to shape the new standard for urban logistics planning through providing continuous planning. More specifically, the company focuses on providing a software solution for last-mile delivery operators. Last-mile delivery is the final leg of the logistics process during which a parcel reaches the end-customer at the doorstep. It is a key step in the fulfilment process as it consumes the most time (Accenture, 2017), accounts for over half of the total cost of shipping and strongly influences customer satisfaction (Dolan, 2018).

Consumers are increasingly ordering goods online and expect those goods to be delivered as fast and convenient as possible. This puts a great stress on delivery operators, pushing them into an operational crisis. An increasing amount of deliveries typically implies more vehicles on the road, resulting in increased emissions and congestion in urban environments.

Problem definition and scope

Plotwise currently has three customers across The Netherlands, Belgium and Germany. Interviews with Plotwise's Head of Sales and COO revealed that sales activities should be expanded into other countries. Increasing revenue and the number of paying customers are both principal objectives for the company in the coming three years.

This thesis presents an international sales strategy for Plotwise to operate within Europe. It advises the commercial team of Plotwise on what countries to enter and presents an updated positioning for the company. Additionally, it presents three tools and a roadmap for the commercial team to scale the sales process.

Following the theory of the Ansoff Growth Matrix (Van Boeijen et al., 2013), the international sales strategy is focused on entering new markets with existing products. During the project briefing, the COO stressed the importance of sticking to the current product portfolio as the company had only recently reduced it to one service - continuous planning. In this research, markets are bounded by their geographic location and context; they are all situated within Europe and are constructed of companies that operate within last mile delivery.

Research questions

The goal of this thesis is twofold; it aims to add academic relevance to the domain of SPD and to present findings and deliverables that are relevant for the client. It answers the following research question:

(RQ-1) "How can Plotwise grow its business within the European last mile delivery space in the coming two years?"

This research question is answered through dividing it into smaller questions and providing answers to each:

(SQ-1) What comprises an international growth strategy?	CHAPTER 2
(SQ-2) Is Plotwise ready to sell internationally?	CHAPTER 3
(SQ-3) What are important developments in last mile delivery and e-commerce?	CHAPTER 4
(SQ-4) What countries should Plotwise enter in the coming two years?	CHAPTER 4
(SQ-5) How should Plotwise position itself when entering new countries?	CHAPTER 5
(SQ-6) What are the first steps towards execution?	CHAPTER 5

1.2 | Approach & thesis structure

Approach

To design an international growth strategy, the approach of this research drew upon an adjusted version of international market entry strategy methodology as presented by Root (1994) in combination with the Design Council's (2015) innovation framework.

At the core of this framework is the renowned Double Diamond design methodology; it includes key principles and design methods that help achieving strategic challenges in a structured way. This framework allowed for converging and diverging within both the analytical (diamond I and II) and creative phases (diamond III) of the research.

Three design diamonds guided the process that resulted in the international sales strategy. The steps of each diamond borrowed from existing market entry strategy methodology. Figure 1 illustrates these three diamonds. Within the first diamond, the author reviews the extant literature on international market entry to design a theoretic framework for international market selection and thereby answering SQ-1. Within the second diamond, the author performs an internal and external analysis to answer SQ-2 and SQ-3. Moreover, by following his theoretic framework to execute quantitative research he answers SQ-4. In the third diamond, the author proposes a strategic roadmap to answer SQ-5 and SQ-6.

The remainder of this chapter presents the research and design methodologies used in each diamond in detail, as well as the thesis structure.

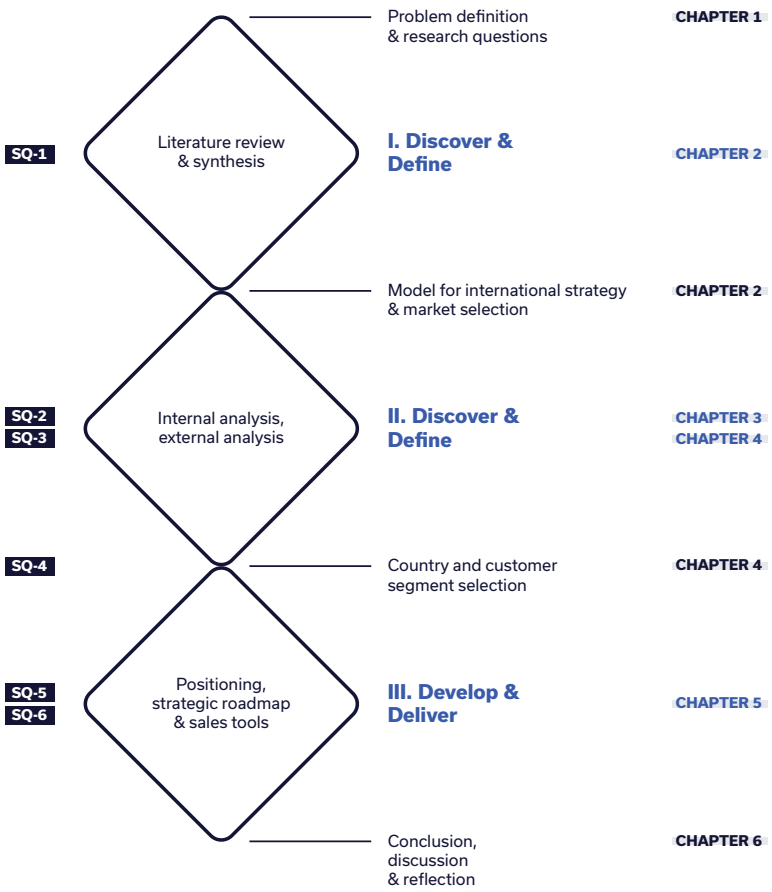


Figure 1. Project approach.

Diamond I - Discover & Define

Qualitative research - literature review and synthesis (country selection model, international strategy, positioning)

A literature review discussed frequently used frameworks for international market selection and entry. It also presented approaches for positioning a product and company. This provided a glimpse of what has already been researched in relation to international market entry and served as a theoretic foundation of this study.

The literature synthesis provided an overview of essential elements in an international sales strategy. Moreover, it presented a common understanding of factors influencing internationalisation of a firm. Additionally, it discussed different models for market selection and presented a theoretic country selection framework. The author used this framework to analyse the European market.

Diamond II - Discover & Define

Qualitative research - unstructured interviews: product, business model

The author conducted online unstructured interviews with Plotwise's CEO, Head of Sales, sales team members and Product Owner to identify the status quo of the company's product and business model. He recorded, transcribed, summarised and analysed these interviews. Most of the interviews took around 30 to 60 minutes. These data provided for a structured overview of strengths and weaknesses of Plotwise; the starting point for designing the international strategy.

Quantitative research - questionnaire: company culture

The author assessed Plotwise's organisational culture through an online questionnaire with 16 questions (see **appendix C**) following the framework of Groysberg et al. (2018). The questionnaire followed a non-probability and voluntary response sampling with 27 participants; all employees of Plotwise. A four-quadrant graph depicts the individuals' scores. These results provided valuable insights in the company's ability for international sales.

Qualitative research - semi-structured interviews: sales process, persona canvases

The author conducted online semi-structured interview to gather data on Plotwise's sales process, target company profiles and buyer personas. He followed a non-probability, purposive sampling to select participants from the sales department. During these interviews, he distributed two canvases via an online collaboration tool; the first canvas (see **appendix I**) guided in crafting buyer personas; the second canvas (see **appendix D**) helped to analyse the sales process. Data from these interviews revealed weak spots in the sales department. The buyer personas were used for designing the new positioning.

Qualitative research - analysis of CRM system and RFPs

An analysis of Plotwise's Customer Relationship Management (CRM) system as well as multiple Requests for Proposal (RFP) supplemented the prior knowledge on the sales process as gathered through the semi-structured interviews and observations. The author analysed 624 entries in Plotwise's CRM system to uncover topics regarding leads within the sales funnel. The RFPs provided insights into real customer challenges and needs. He categorised the data and used them for designing the positioning.

Qualitative research - context analysis

Desk research helped to understand the dynamics of the context in which Plotwise is operating, the industry challenges, alternative solutions and competitors. The author read and summarised reports from consulting firms and research institutes. Additionally, he attended a conference to observe the needs and solutions of key players within the industry. Insights from this conference validated the findings from the desk research. The findings provided a structured overview of opportunities and threats that were relevant for the strategy design.

Quantitative research - market selection

The country analysis framework as developed in the first diamond guided the selection of countries to enter. The author gathered quantitative data on 31 European countries from different online databases and entered them into the framework. 5 steps of analysis resulted in a list of 5 countries to enter and corresponding country characteristics. A cross-check of the list with industry reports validated the findings. The author decided to select one country to focus on in his research to narrow down the scope.

Diamond III - Develop & Deliver

Qualitative research - weekly team meetings for inspiration and validation

Within the third diamond, the author applied design techniques such as brainstorming, service design and UX design to design three sales tools. He tested these tools with members of the sales team and a data analyst.

During his research, the author was part of the sales team of Plotwise, thereby allowing him to join sales team meetings twice a week. In these meetings the author pitched his learnings, ideas and designs and discussed them with the team. These meetings inspired the author to iterate his designs and at the same time served as internal validation.

Structure of this thesis

The first chapter presents the problem definition and lists the research questions that this thesis answers. The author formulated the problem definition after conducting interviews with the Head of Sales of Plotwise. This chapter outlines the research approach.

The second chapter presents a literature review that was performed on international market selection, entry mode selection and go-to-market strategy. The chapter synthesises the findings into a framework that is used for designing the strategy.

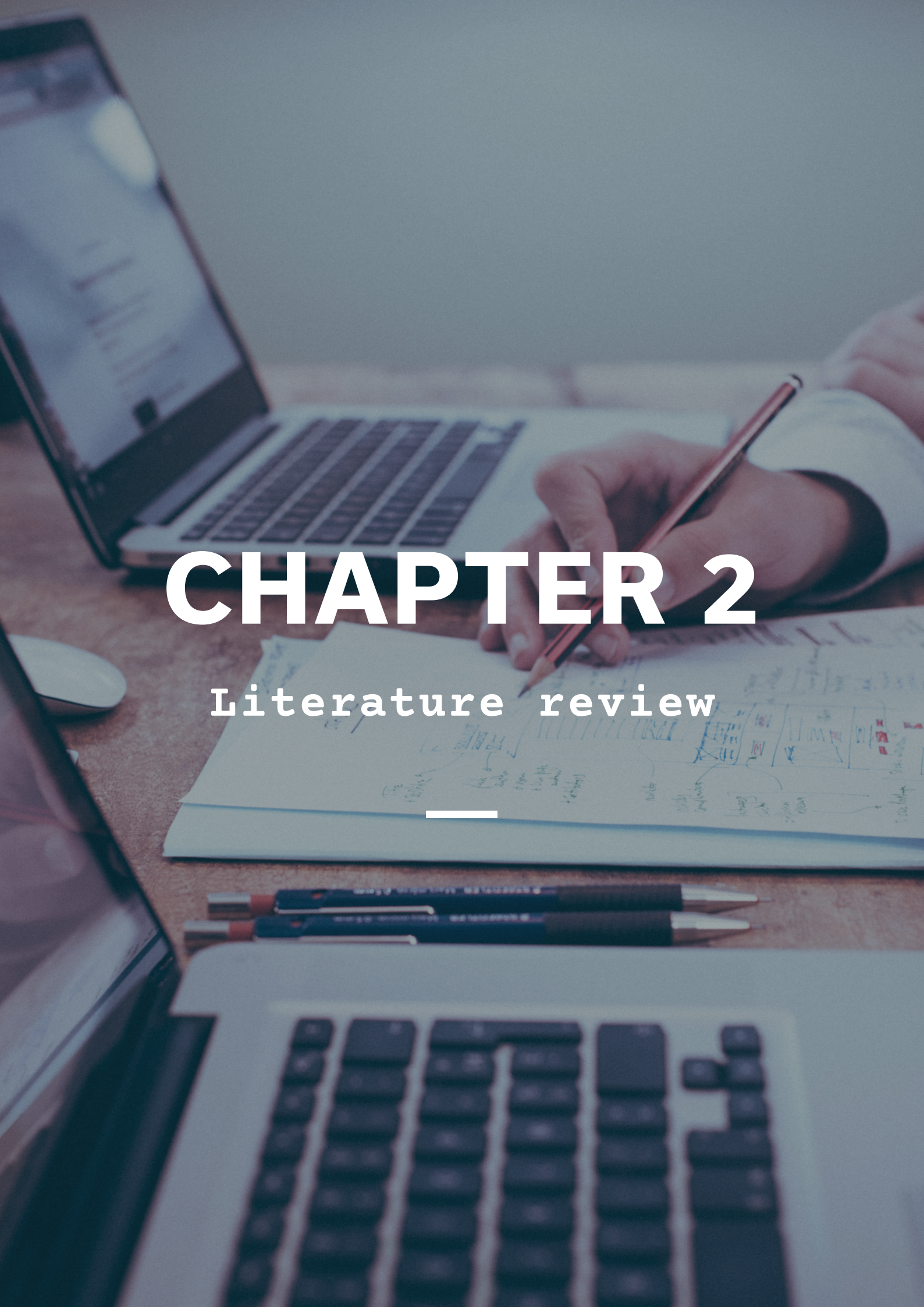
Chapter three presents the results of an internal analysis that included the business model, sales process and company culture. This knowledge is relevant because it influences the design decisions regarding country selection and the sales approach; both elements of the international growth strategy that is designed in this thesis.

Chapter four presents an external analysis and the advice what countries to enter. It also presents a detailed market analysis for the chosen country. The chapter summarizes the most relevant findings in terms of strengths, weaknesses, opportunities and threats.

These principles are the starting point of chapter five, which presents a positioning, three tools and a roadmap for 2021 and 2022 for the sales team of Plotwise to grow international sales.

This thesis ends with an evaluation of the presented strategy, conclusions and a personal reflection in chapter six.

The **appendix** presents additional research results that were intentionally left out by the author. These chapters are for the interested reader seeking for more in-depth information.



CHAPTER 2

Literature review

2.1 | Literature review

(SQ-1) What comprises an international growth strategy?

An international sales strategy will assist Plotwise in growing its number of customers across Europe. To understand what comprises an international sales strategy and how to design one, this chapter presents a literature research that establishes a common understanding about its main elements: international market selection (IMS), entry mode selection (EMS) and go-to-market (GTM) strategy. Decisions on these elements are amongst the most important and critical decisions an internationalising firm has to make (Ahi et al., 2017; Koch, 2001; Marchi et al., 2014; Murray et al., 2020; Musso & Francioni, 2014; Papadopoulos et al., 2011; Surdu & Mellahi, 2016; Suseno & Pinnington, 2018). This chapter synthesises these elements into a framework (figure 5) for strategy design and country selection which the author used for his research.

A framework for international market entry strategy

The international market entry strategy is a plan that "sets forth the objectives, goals, resources and policies that will guide a company's international business operations over a future period long enough to achieve sustainable growth in world markets" (Root, 1994, p. 2). It typically has a time horizon of three to five years and includes a systematic selection of target markets and entry mode. Its dominant objective is to build a permanent market position in a foreign market (Root, 1994). In this research, the strategy has a time horizon of two years.

According to Root (1994), the entry strategy is an iterative, continuing process composed of multiple decisions. The decisions are on (1) the choice of a target market (IMS), (2) the objectives and goals in the target market, (3) the choice of an entry mode to penetrate the target market (EMS), (4) the marketing plan to penetrate the target market, and (5) the control system to monitor performance in the target market.

International marketing management literature (Winer & Dhar, 2013) shows similarities with the international market entry strategy as described by Root (1994). A common marketing strategy framework is composed of (1) objectives, (2) customer targets, (3) competitor targets, (4) core strategy, and (5) implementation and marketing mix. The latter is commonly referred to as the 4Ps of marketing. The author borrows the sequence of steps from Winer and Dhar (2013); objectives and goals in the target market are the first step of designing an international sales strategy.

Drawing upon both theories, **figure 2** presents a framework that contains the elements of an international market entry strategy and their sequence. It also presents an overview of authors that discussed the different parts of the framework. This literature review discusses steps 3, 4 and 5 and synthesises the literature into a comprehensible model that the author uses to design his international sales strategy for Plotwise.

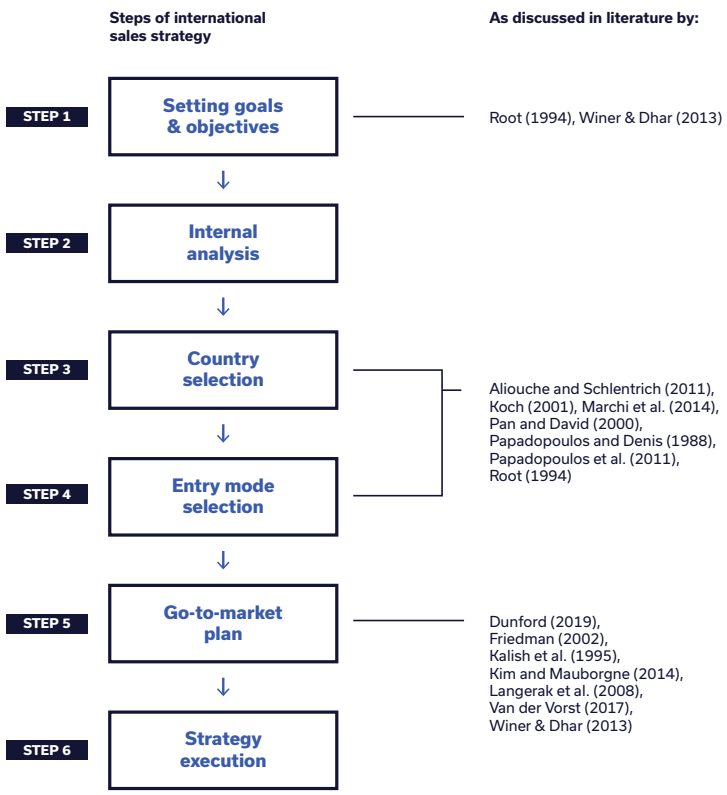


Figure 2. Steps of designing an international sales strategy and their presence in literature.

Country selection

Definition

Identifying the right countries for international business expansion (IMS) is a key decision when designing an international strategy (Papadopoulos & Denis, 1988). The essence of IMS is using an efficient and effective method for selecting foreign markets. Market-based evidence, as well as empirical research, demonstrate a connection between companies using IMS methodologies and improved performance (Samiee & Chirapanda, 2019). It therefore is favourable for a firm to work with systematic methods when selecting foreign markets.

Two distinct strategic approaches are present in IMS methodology: expansive and contractible (Koch, 2001; Root 1994). Expansive methods are associated with companies' preferences to address markets that are physically close to the home market (Koch, 2001). Contractible methods involve systematic screening of countries followed by a more in-depth evaluation of most promising markets. A typical market evaluation process would consist of general market information and risk estimation, an analysis of product-specific market trends, an evaluation of market and sales potentials, an estimation of profitability per entry mode and concludes with a selection or rejection decision (Koch, 2001).

Approaches

The literature presents a variety of models for IMS. These models are in the first place categorised as general or context-specific, the latter being, for example, focused on small businesses, multinational companies, joint ventures, and international strategic alliances (Koch, 2001). Moreover, it presents two categories of approaches for IMS; quantitative and qualitative.

Papadopoulos and Denis (1988) provide an overview and taxonomy of common quantitative IMS models. Using quantitative

methods within IMS brings three main advantages: they decrease subjectivity, they allow firms to consider markets beyond their immediate neighbours and they make it possible to screen a large number of markets. For this reason, these methods are further investigated by the author.

Two categories are present within the quantitative approaches: market grouping methods, which cluster countries based on similarities, and market estimation methods, which aim at differentiating markets based on their market potential. Market grouping methods are most often based on a variety of social, economic and political indicators for a large number of countries. Methods within market grouping are categorised as either macro-segmentation or micro-segmentation. The former category aims at clustering similar countries based on their overall status, without measuring customer demand levels. Methods within the latter category are partially based on situation-specific variables for which secondary data is often unavailable, like choice criteria and decision-making processes (Papadopoulos & Denis, 1988).

Market estimation methods steer towards evaluating foreign markets on the basis of one or several criteria, and those with the highest score are selected. Methods within this approach are subdivided into total demand potential and import demand potential. Common approaches within market estimation include using multiple factor indices, econometric approaches, multiple criteria methods and the shift-share approach (Papadopoulos & Denis, 1988).

The author believes that a quantitative approach for country selection is the most suitable way to answer the research question. He will therefore develop a context-specific selection framework that includes market estimation and market grouping methodologies. The framework encourages fact-based decision making. **Figure 5** shows the framework.

Entry mode selection

Definition

EMS, the step that follows IMS, is presumably the most studied aspect of decisions that form the international market entry strategy (Surdu & Mellahi, 2016). It refers to the selection of modes by which firms choose to enter international markets; the international market entry mode. Root (1994, p. 5) defines the international market entry mode as "an institutional arrangement that makes possible the entry of a company's products, technology, human skills, management, or other resources into a foreign country".

Companies generally follow one of the following two patterns when selecting international market entry modes: selection in absence of any market entry strategy or selection in accordance with an existing market entry strategy (Koch, 2001). Selection in absence of a market entry strategy is characterised by short time horizons, no systematic criteria to decide, few adjustments to the product and no effort to control overseas distribution (Koch, 2001).

Selection in accordance with a market entry strategy include three different categories of decision rules: the naive rule, which uses the same entry mode for all foreign markets, the pragmatic rule, which uses a workable entry mode for each target market, and the strategy rule, which uses the best fitting entry mode for each target market (Root, 1994, p. 159). The author decided to follow the naive rule; he will select one entry mode that is suitable for entering multiple European countries.

Types of entry modes

Literature categorises entry modes as non-equity based, such as export and contractual agreements, and equity-based, such as joint ventures and wholly-owned subsidiaries (Pan & David, 2000; Root, 1994). **Appendix A** presents an overview of common entry modes and their descriptions.

The rationale for distinguishing between non-equity versus equity modes is based on the resource commitment needed

in the foreign market (Pan & David, 2000) and the risk it involves versus the level of control. Equity-based modes demands an actual investment to set up the operation.

When deciding on the mode of entry, companies should assess the degree of control, the level of investment risk and resource commitment, the skill requirements, the dissemination risk, flexibility, ownership, the choice of location, the adaptation to local environments and the strategic fit (Ahi et al., 2017; Bradley, 2004; Koch, 2001; Pan & David, 2000). **Figure 3** shows different types of entry modes with their typical level of risk and commitment versus control. Erramilli and Rao (1990) presented the level of involvement scale to identify the needed level of involvement in a foreign market according to the chosen market entry mode, which is complementary to the decision model as described by Bradley (2004).

To handle the complexity surrounding this decision companies benefit from using analytical, systematic models that aid in comparing entry modes (Root, 1994); much alike the country selection process. The model described by Root (1994), which consists of profit, risk and non-profit objective comparative analysis, is a structured, high-level overview of the decision process to get from all entry modes to the right entry mode. The author included Root's (1994) line of thought in his framework.

Once a firm is operative in the international environment, under normal circumstances it will increasingly choose entry modes that provide greater control over operations. However, as **figure 3** shows, to gain more control, a firm needs to invest more resources, potentially resulting in exposure to higher market and political risks (Root, 1994).

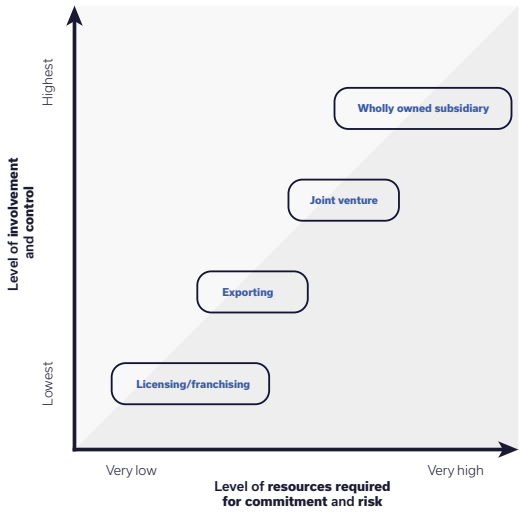


Figure 3. Types of entry modes and their level of involvement vs. resources required and risk.
Adapted from Erramilli and Rao (1990).

Factors influencing entry mode selection

A company's choice for its mode to sell in foreign countries is the net result of several forces. General external factors that together form these forces include target country market factors (e.g. size, competition and marketing infrastructure), target country production factors (e.g. quality, quantity and cost of raw materials or labour and economic infrastructure), target country environmental factors (e.g. political, economic and sociocultural character, geographical distance and governmental policies and regulations) and home country factors (e.g. market, production and environmental factors in the home country). Internal factors include product factors (e.g. level of differentiation and type of good) and company resource and commitment factors (e.g. business and social networks) (Ahi et al., 2017; Root, 1994). Hence, the author included these external and internal factors in his framework.

Go-to-market plan

Definition and elements

Designing the market entry plan is another step in the process of creating an international sales strategy. Literature often refers to this step as the go-to-market (GTM) strategy, which is a "game plan for reaching and serving the right customers in the right markets, through the right channels, with the right products and the right value proposition" (Friedman, 2002, p. 13). The well-known 4Ps of marketing (price, place, promotion and product) are part of the go-to-market plan. The GTM plan also includes entry timing and entry sequence. Figure 4 shows the elements of a GTM plan.

A clear and well-fitting value proposition seems to be a prerequisite for successful market entry. The value proposition defines a product's category and explains the key differentiators of a product or service; the key reason that a customer should buy a certain product rather than a competing offering (Root, 1994). It describes the benefits customers can expect from using a product or service (Osterwalder et al., 2014). A successful value proposition fits well with the customer's most important jobs, pains and gains. The value proposition is operationalised and represented in the customer's minds through product positioning (Winer & Dhar, 2013).

To create a profitable GTM strategy, it is necessary to find out who the target group is and what they want, how the current product portfolio and brand performs, if the pricing fits the customer's perception, how to sell and how to deliver the product in the right way. Hence, the author of this thesis added the step of understanding the target customer and context to his framework.

Figure 4. Elements of a go-to-market plan.

Positioning

Positioning is "the act of deliberately defining how you are the best at something that a defined market cares a lot about" (Dunford, 2019). A weak positioning will result in bad marketing and sales results; bad marketing and sales result in business failure. It therefore is essential to design a positioning that fits well to intended customers. Numerous authors have presented frameworks for designing a positioning; three are reviewed here.

Dunford (2019) challenges the traditional positioning literature by stating that it fails in four ways. Firstly, it assumes that a participant knows the best way to fill in the blanks but gives no indication whether the positioning is good or bad. Secondly, it reinforces status quo thinking. Thirdly, it is often unclear how the positioning statement should be further implemented in operations. Fourthly, the way a positioning is traditionally formulated makes it hard to remember. Therefore, Dunford (2019) introduced six components of effective positioning: competitive alternatives, unique attributes, value and proof, target market characteristics, market category and relevant trends.

A theory complementary to Dunford's (2019) is Blue Ocean Strategy (Kim & Mauborgne, 2014, p. 17). This strategy framework follows a distinct logic when it comes to pricing. Value innovation equally emphasises value and innovation and simultaneously pursuits differentiation and low cost. It can be achieved through aligning innovation with buyer utility, pricing and costs. The framework implies that instead of focusing on beating the competition a company should make its competition irrelevant through unlocking new value for buyers and thereby opening new and uncontested market space.

Van der Vorst (2017, p.64) stated that the most successful brands are those that split the competitive field in two: themselves and the others. The author argues that many successful brands position themselves as liberating outsiders that fight the established order. This view is complementary to Dunford's (2019); both theories try to achieve a market dichotomy.

Through contrarian branding, the main concept as discussed by Van der Vorst (2017), brands can structure their characteristics in a specific way to stand above the competition. There are three forms of contrarian branding that help in camouflaging the competition; absolute polarity, bipolarity and tripolarity. Contrarian brands have a clear indication on their counterpoint, they clearly know what they do not want to be.

Entry timing

A product can only be introduced to the market once development has been finished. But finding out the right time to enter the market is a challenge for most companies. To determine the right moment of market entry, a firm needs to assess and balance the risks of premature entry versus late entry (Langerak et al., 2008).

Langerak et al. (2008) identified a positive link between proficiency in market entry and sales volume. The researchers argue that proficiency in market entry timing is at least as important as selecting the sequence of entry to build market share. Moreover, incorrect timing, i.e. when a product is behind its strategic window, will negatively influence sales volume.

There is the debate of pioneering versus following when it comes to market entry. As Langerak et al. (2008) stated, numerous studies on entry timing reveal that pioneers outsell late movers, however, other authors reveal that late movers outsell pioneers. Pioneers might be too early in market entry, resulting in poor revenue. Late movers might not generate sales because the opportunity window has already passed by. The author of this theses included this consideration in his framework.

Entry sequence

Entry sequence is another decision within the GTM strategy. Generally, firms follow two strategies: starting in the home market and then entering new markets sequentially (known as the waterfall approach), or simultaneously entering several markets at the same time (known as the sprinkler strategy).

According to the waterfall model, innovative products naturally move from the most to the least technologically advanced markets (Kalish et al., 1995). This is caused by firms launching products in technologically advanced markets first rather than their less advanced counterparts. A sprinkler strategy is not always a favourable strategy in response to increased competition. Under some circumstances, a waterfall strategy is favourable. According to Kalish et al. (1995), firms should consider a waterfall strategy when the product has a very long life cycle, the foreign market is small with slow growth, and the foreign markets have weak competitors.

Kalish et al. (1995) stated that multinational firms require a sprinkler strategy for the most optimal product strategy in global markets. The author of this thesis agrees with this approach. Globalisation increased international competition; increased competition is the main determinant for choosing a sprinkler over a waterfall strategy.

Synthesis: country selection framework

To conclude the literature review, the author of this thesis synthesised elements from multiple publications into one framework that he believes is suitable for executing the remainder of the research. Figure 5 shows this country selection framework. This country selection framework borrows from three models; they are briefly discussed here. The author decided to select more than one method for market selection as this is recommended in literature (Papadopoulos et al., 2011). The framework combines quantitative and qualitative research.

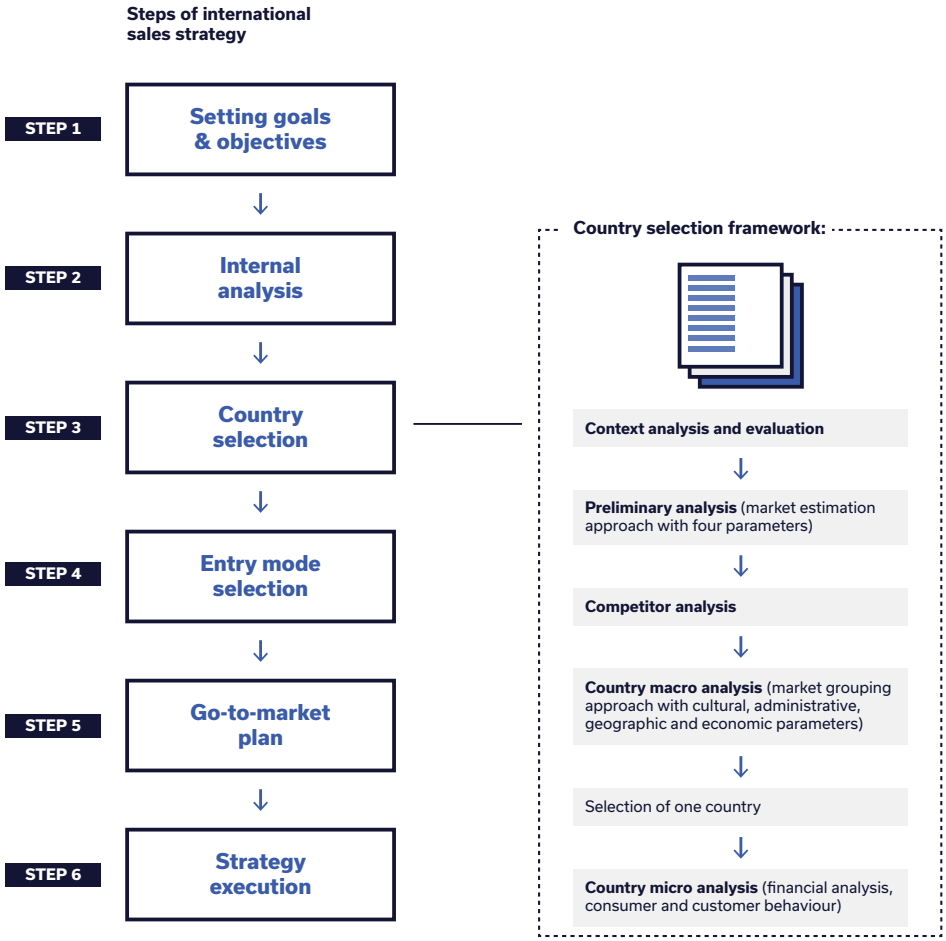


Figure 5. Theoretic country selection framework and its position in the strategy framework.

The first model, that of Papadopoulos et al. (2011), entails a two-stage market selection and segmentation model, which integrates attractiveness and consumer values as general segmentation bases. This IMS model is focused on entering countries only within the European Union. It draws from two statistical data sources; the World Bank Development Indicators and Eurobarometer surveys. The first step in the model of Papadopoulos et al. (2011) is a macro-segmentation screening process based on market attractiveness (size, potential and development), followed by a micro-segmentation process to identify which groups of people are most similar across countries in terms of social and personal values as the second step. The author incorporated the macro and micro way of analysing and comparing in his framework.

The second model, that of Marchi et al. (2014), included an extended quantitative market selection decision process. The authors argue that the ability to select international markets may be enhanced by adopting a behaviour-based decision process. Therefore, they used a three-step screening process combined with a ranking approach to design a fuzzy logic model. Different from the model as presented by Papadopoulos et al. (2011), the crux of the fuzzy logic model is the inclusion of both objective and perceptual input variables. Objective input variables are for example GDP per capita and import penetration; perceptual input variables are for example perceived level of product standardisation, perception of imitation risk and managerial risks. By including perceptual input variables, the model enables firms' decision-makers to preserve gut-feeling in the IMS process. The researchers tested it through a single case study; hence the validity is unknown. The country selection framework allows for the inclusion of both objective and perceptual variables in the country macro analysis.

The third model, as presented by Aliouche and Schlentrich (2011), combines IMS and EMS and has a financial focus. The researchers present a comprehensive model of international expansion to determine the optimal country to be targeted and the optimal entry mode to be used for that country. The model uses a strategic, sequential process consisting of three levels of assessment. In the first level, they performed a macro assessment to identify major external environmental variables to determine risks and opportunities. They continued by conducting a micro assessment where the potential profitability and net present value are estimated based on the market and the firm's characteristics. In the third level, they assessed the optimal market entry mode, based on country characteristics, industry sector characteristics and firm characteristics. The researchers argue that the attractiveness of certain countries may dramatically change over time, making periodic reassessments necessary. The author follows this model by incorporating a financial analysis in the country micro analysis step.

Decisions regarding market and entry mode selection are closely connected (Andersen & Buvik, 2002; Root, 1994), but they are nevertheless separate decisions (Musso & Francioni, 2014). Koch (2001) compared the logic behind both choices and demonstrated that both need to be part of the same decision process, in which the preferred sequence is to start with market selection and then move towards entry mode selection (Musso & Francioni, 2014). The author did not design a theoretic framework for entry mode selection like for the country selection, but he included the step in the international sales strategy framework. He will follow the theories of Root (1994) and Erramilli and Rao (1990) for EMS, by assessing the desired level of control versus the level of resources needed and risk.

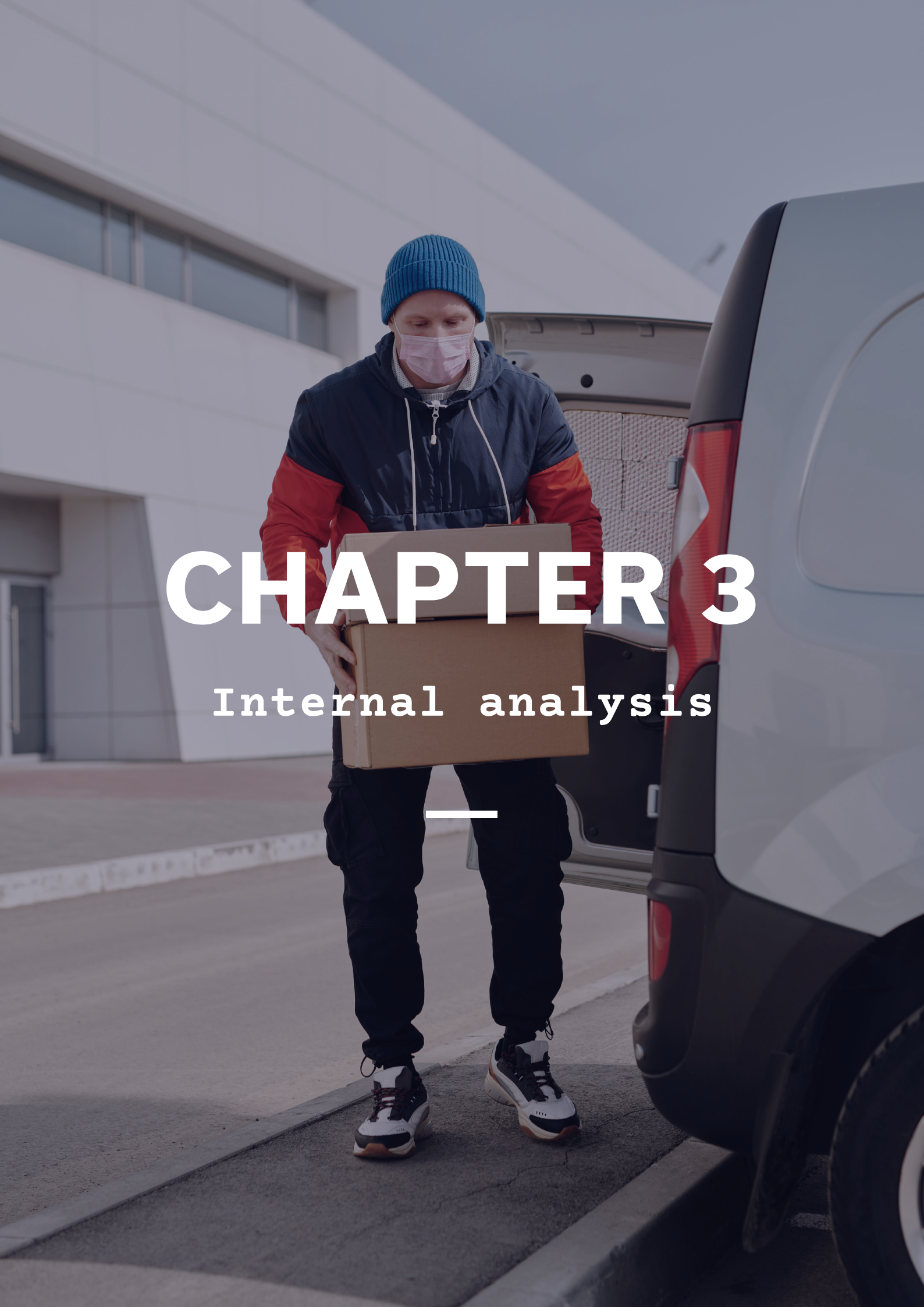
Conclusions and takeaways

This chapter answered SQ-1 (What comprises an international growth strategy?) by means of a literature review and synthesis. The literature review discussed the elements of international market entry strategy and presented a framework with six steps to design one (see **figure 2**). The steps are (1) setting goals and objectives, (2) internal analysis, (3) country selection, (4) entry mode selection, (5) go-to-market plan and (6) strategy execution.

The author added the internal analysis to this framework as he believes this is an important step when designing a strategy for a client.

The chapter synthesised the literature on market selection into a country selection framework (see **figure 5**) that specifically fits to the context of this research. This selection framework is an analytical tool to conduct quantitative and qualitative international market research. The indicators within each step of the country selection framework will be explored and presented in the next chapters.

The following chapters will present the execution of both frameworks, with most focus on steps 2, 3, 5 and 6. Steps 2 and 3 are mainly analytical and inform the creative process in steps 5 and 6. This research draws upon strategic design principles, such as customer-centric design, throughout all steps. Moreover, the author will present solutions that support execution of the proposed strategy. It thereby goes beyond traditional business and market research.



CHAPTER 3

Internal analysis

3.1 | Company general information

(SQ-2) Is Plotwise ready to sell internationally?

This chapter presents the most important findings of the internal analysis, including the core activities of Plotwise, company structure, vision, mission, product, commercial target and business model.

The data as presented in this chapter were derived from both primary and secondary research. Primary research included observation research and informal interviews with employees of Plotwise (CEO, COO, CTO, Head of Sales, Product Manager). Secondary research included the analysis of available internal documents regarding the company, current strategy and product.

Core activities and company structure

Plotwise is a service provider that aims to shape the new standard for urban logistics planning. The company specifically focuses on last-mile delivery. It was founded in 2018 and currently consists of 27 team members that execute software development, service management, sales, finance, HR and management. Plotwise is rapidly growing in terms of new employees and revenue.

The employees at Plotwise focus on four core activities:

- business development, which is about realizing the commercial goals;
- product development, which concerns further development, releasing and maintaining scalable Continuous Planning Services;
- service delivery, which supports customers and keeps them happy while using the planning services;
- business support, which supports the scaling of the company concerning hr, finance, legal, risk and office.

Four departments with three to five teams each execute these core activities. Figure 6 presents an overview of this structure. This thesis focuses on the commercial department. Although there is a management team that leads the four categories, the author observed the company as having a horizontal hierarchy. A horizontal or flat organisational structure supports the

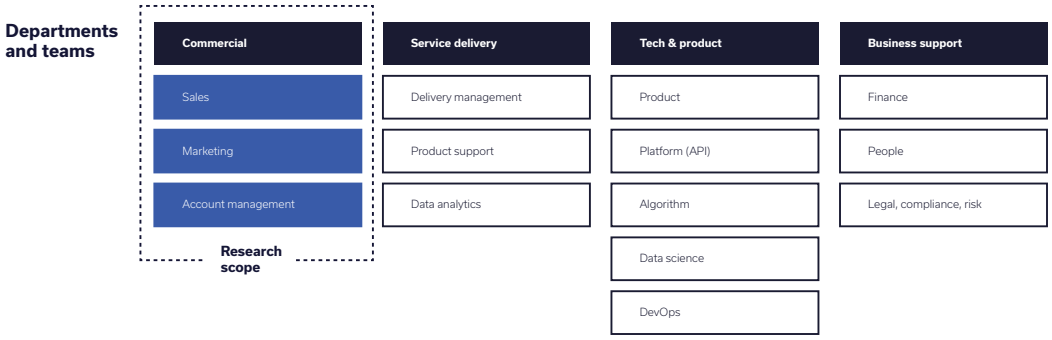


Figure 6. Plotwise company structure. Departments and teams.

development of knowledge management processes that allow for dialogue, interaction and teamwork amongst the entire organisation. This, in combination with room for own initiative, helps employees to take better advantage of their capabilities whilst increasing the value of their contributions (Claver-Cortés et al., 2013). Company culture also plays a role in this; the next chapter presents a research on Plotwise's culture.

Vision

Plotwise believes that "the growth of the e-society can be turned into a major opportunity to design and introduce smarter ecosystems for handling our logistics and mobility on the long term and in a way that is less harmful to the environment and climate. We build a sustainable planning foundation for the future". This vision is straightforward and clear and seems to link well to the current product offering.

Mission

The vision of Plotwise is supported through its mission statement: "Our mission is to solve the delivery crisis by providing continuous planning". This mission elaborates on a specific challenge which the e-society brings for logistics operators: the delivery crisis.

Product

Plotwise offers route and planning optimisation software. The company sells a planning application programming interface (API) directly to delivery operators and e-tailers. This allows them to optimise their last-mile delivery planning. The product flow is explained in **figure 7**. After a consumer orders online, the order goes through Plotwise's engine to result in an optimal plan.

The key differentiator of the API compared to alternatives is ability to adjust the planning at any time of the day and in real time. Continuous planning is best described as a planning service that is dynamic, agile and always improving.

To put it simply, Plotwise helps their customers deal with the increasing amount of online orders and demanding end-customers who want their purchases delivered within one or two days, in a specific time slot, at the location of their choice while also being able to change those requirements last minute.

To deliver and improve this SaaS offering the company creates new optimisation algorithms, develops deep learning models and designs supportive tools. The planning solution is a combination of the following elements:

- Artificial intelligence-based route optimisation adaptive to customer demands and dynamic operations;
- Ultra local and fully tailored, high-density maps;
- Native Cloud API, which can be integrated into any IT landscape.

By integrating the API, delivery operators and e-tailers can have a better grip on delivery planning, pickup and returns, and combined deliveries. This enables them to offer their end-customers, i.e. online shoppers, functionalities like timeslot picking, dynamic suggestions, same-day and instant delivery and alternative fleet solutions. These are USPs of Plotwise.

To test the quality and completeness of Plotwise's solution, the author compared it with a description from literature (Drexl, 2012) that included the features of a state-of-the-art algorithm for vehicle planning and routing. This comparison is presented in **table 1**. This comparison shows that Plotwise's solution complies with Drexl's (2012) description to a high degree. The solution only lacks the inclusion of penalty costs, tariffs and driver rules.

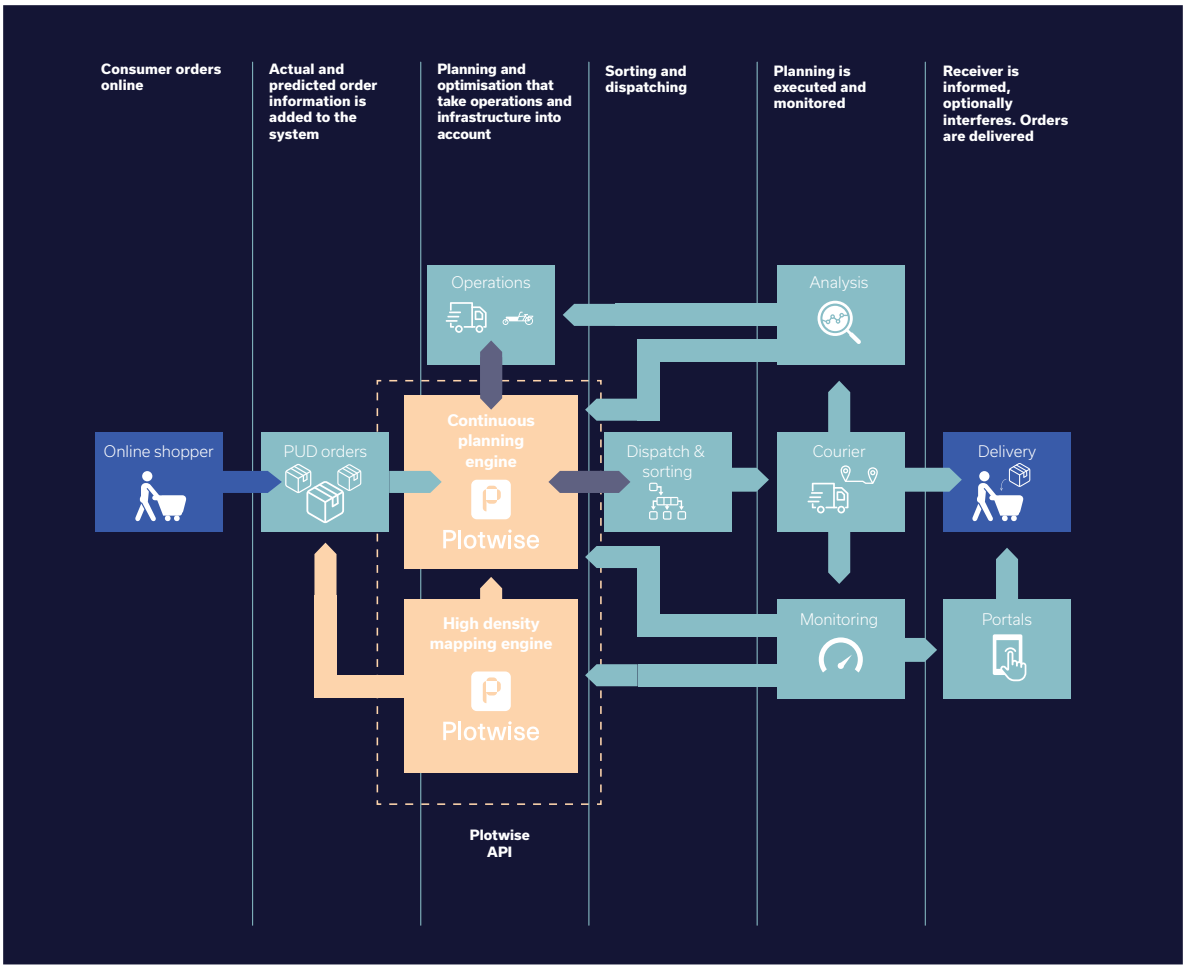


Figure 7. Plotwise's planning engine and its position in the delivery journey.

State-of-the-art algorithm features	In Plotwise's algorithm?
Pick-up and delivery (PUD) requests	✓
Compatibility between locations, requests, vehicles and drivers	✓
Multiple time windows for locations and requests	✓
Consideration of service times	✓
Heterogeneous fleet with respect to cost, capacity, start and end depots	✓
Fixed, distance-, time-, stop-dependent	✓
Multiple capacity constraints	✓
Multiple use of vehicles	✓
Weighted and hierarchical cost functions	✓
Dynamic planning over a one-week planning horizon with event- or time-based rolling horizon planning	✓
Re-optimisation options	✓
Interactive planning	✓
Driver rules	✗
Penalty costs, tarrifs	✗

Table 1. Plotwise's algorithm features vs. state-of-the-art algorithm features. Adapted from Drexl (2012).

3.2 | Business model

This chapter presents the business model of Plotwise. The business model was investigated through an informal interview with the CEO and Head of Sales of Plotwise.

Plotwise sells its software as a service. The service is sold through a pay-per-use/OPEX model. Customers pay for each order that is planned through the Plotwise engine. The company handles tiered pricing; the price per order is determined by the total volume within a year.

Figure 8 is a theoretic representation of Plotwise's business model. The customer acquisition costs (CAC), the net profit margin and the lifetime value (CLV) or net profit are the three key variables that together represent the business model over a set period of time.

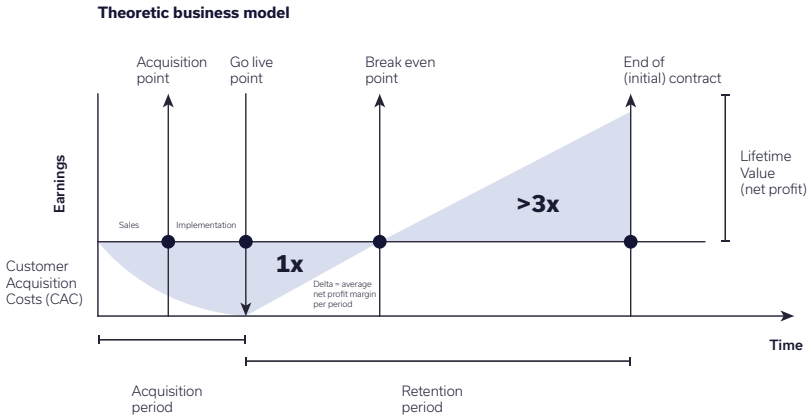


Figure 8. Conceptual representation of Plotwise's business model.

There are four important points in time: the acquisition point, the go live point, the break-even point and the point where a set CLV/CAC ratio has been reached. The acquisition point is the point at which a prospect has been converted into a customer, the go live point describes the moment the API of Plotwise has been fully integrated into the clients operations and the break even point depicts when a positive net profit has been achieved.

The marketing, sales and implementation processes, together also known as the acquisition period, determine the value of the CAC. The longer and costlier a marketing campaign or sales cycle is, the higher the CAC. The same goes for the implementation process: the longer it takes, the more expensive it gets (because of the required man-hours) and thus the higher the CAC. Hence, a higher CAC results in an extended payback period.

The share of net profit margin to the total price strongly influences the time it takes to get to the break-even point (the CAC payback period) and then to the point when the desired CLV/CAC ratio is reached. Portfolio innovation, product differentiation and cost reductions can increase the net profit margin.

Another variable is the length of the initial contract. A more extended contract can result in a higher CLV or net profit, provided that the net profit margin is high enough. However, if customers have reasons not to extend the contract, the desired CLV might never be reached. A value proposition that is well-fitted to the customers' needs is expected to return higher net profits than its worse-fitting counterpart. Therefore, the value proposition is an essential determinant for the CLV.

More details about the business model as well as a decision rule for selecting potential customers are discussed in appendix B.

3.3 | Company culture

This chapter presents the methodology, results and implications of an analysis on the organisational culture of Plotwise.

Culture is best described as the tacit social order of a company. It shapes the attitudes and behaviour of employees and defines what is encouraged, discouraged, accepted or rejected on the work floor (Groysberg et al., 2018). Whereas strategy is traditionally determined by the C-level, corporate culture is a result of knowledge and experiences of employees across the entire company. A well-articulated culture that is aligned with strategy and leadership can be a powerful differentiator that drives positive organisational performance (Groysberg et al., 2018).

The right culture can unleash high amounts of energy and nurtures an organisation's potential to succeed. Of course, it should be noted that what worked in the past is no guarantee for the future and what works for other companies might not work for any other company (Groysberg et al., 2018).

The author assumed that corporate culture will strongly influence the way in which Plotwise will identify, address and serve future international customers. Therefore investigating the extant corporate culture was necessary.

Questionnaire setup

To predict if the current culture fits with the strategic objectives, the author researched it through performing an online questionnaire following the methodology of Groysberg et al. (2018). This allowed for a quick method to pinpoint Plotwise's culture style as well as the convergence amongst employees regarding this culture.

The questionnaire contained 16 closed rating questions. The questions as provided by Groysberg et al. (2018) were slightly adjusted to increase comprehensibility. A pilot with the Head of Sales improved clarity and practicality.

The author distributed the online questionnaire amongst all 27 employees of Plotwise through the company's main communication channel. Participants answered to what extent they believe a statement describes Plotwise's culture, by selecting the best fitting rating as constructed through a Likert scale. The participants picked a rating between 1 ("not at all well") and 5 ("extremely well"). Each question represented one of eight possible culture styles as presented by Groysberg et al. (2018): "caring", "purpose", "learning", "enjoyment", "results", "authority", "safety" and "order". To enrich the data, the questionnaire also asked for the participants' roles and working experience at Plotwise. **Appendix C** presents the list of questions and describes the calculation of the coordinates.

Results

Members of all four departments and the COO, CFO, CTO and Head of Sales completed the questionnaire, which means participants represented a cross-section of the company. A total of 12 employees completed the questionnaire, resulting in a response rate of 44%. The level of working experience at Plotwise per employee was equally distributed amongst the four categories: "less than 6 months", between "6 and 12 months", between "12 and 24 months" and "more than 24 months". Moreover, employees came from eight different countries from around the world.

A two-dimensional graph (**figure 9**) presents the results of this study. Each dot represents the score of an employee. The X-axis represents "people interactions", which describes the company's vision toward the way people interact. The lower and upper bounds of this axis are respectively "independence" and "interdependence". The Y-axis represents "response to change", which stands for the attitude towards change within a company. The lower bound of this axis is "stability"; the upper bound "flexibility".

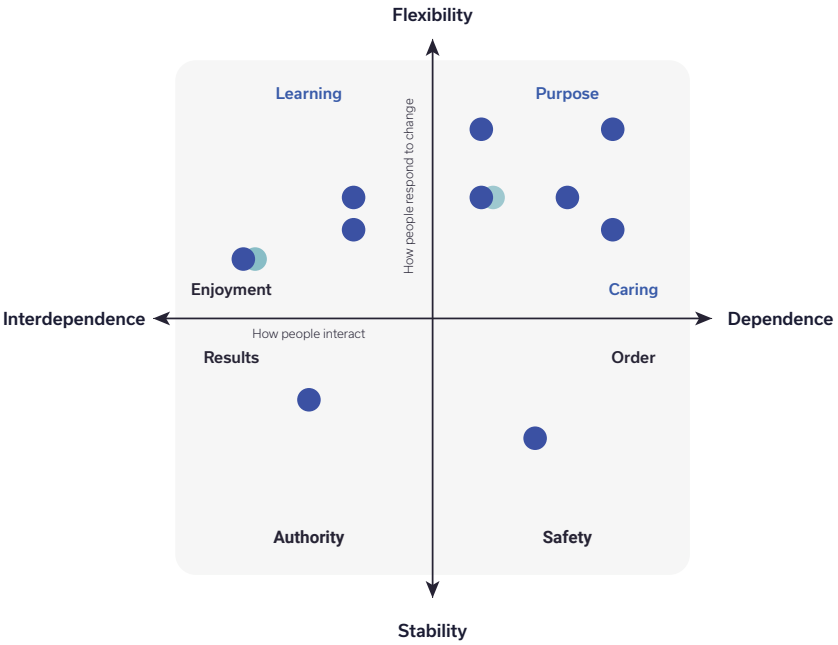


Figure 9. Plotwise's organisational culture. Framework adapted from Groysberg et al. (2018).

Insights

Figure 9 shows that every quadrant is represented, thereby implying a lower level of convergence across the company. One quadrant is strongly represented; in total 7 employees scored in the upper right quadrant. This quadrant represents a flexible culture that advocates for interdependence amongst employees. It depicts a cultural style that is mainly focused on "purpose" and "caring". Another cultural style that ranks high is "learning".

Table 2 describes these three highest scoring cultural styles and discusses the advantages and disadvantages of each. The table presents the average score per cultural style as based on the data of all respondents. The descriptions were adapted from Groysberg et al. (2018).

Culture style	Average score	Characteristics	Advantages	Disadvantages
Learning	3.5	Open-minded, inventive, exploring, creativity	Improved innovation agility and organisational learning	Overemphasis on exploration may lead to a lack of focus and the inability to exploit existing advantages
Caring	3.4	Warm, sincere, relational, supportive	Improved teamwork, engagement, communication, mutual trust, and sense of belonging	Overemphasis on consensus building may reduce exploration of options, stifle competitiveness and slow decision making
Purpose	3.3	Purpose-driven, idealistic, tolerant, altruistic	Improved appreciation for diversity, environmental sustainability, and social responsibility	Overemphasis on a long-term purpose and ideals may get in the way of practical and immediate concerns

Table 2. Top three Plotwise culture styles. Descriptions adapted from Groysberg et al. (2018).

Applicability for strategy

The author concludes that Plotwise's culture is, amongst others, open-minded, exploring, supportive and purpose-driven. These attributes could positively contribute to the international growth strategy, as they result in improved innovation agility, employee engagement, teamwork, and improved appreciation for diversity.

Negative consequences could arise in the form of a lack in focus, slow decision making and overemphasising the long-term purpose, thereby losing the ability to perform as an ambidextrous organisation. Hence, these factors should be taken into account when designing a new strategy.

A recent reorganisation within the company might have influenced the outcome of the questionnaire. Employees across all teams left the company, possibly resulting in lower scores for some of the cultural attributes. This effect remains yet uncertain.

Moreover, the COVID-19 pandemic strongly influenced the working environment and habits. All employees have been forced to work from home for at least 6 months at the moment of this research. Those participants with less than 6 months of working experience at Plotwise probably experience another culture than employees that have been at the firm for a longer period.

When looking at the individual results, however, the results of only one of the new employees deviate from the shared outcome. Therefore the impact of COVID-19 on the organisation's culture remains unknown. This could be investigated in a longitudinal study.

3.4 | Sales department

This chapter outlines the most important findings on the extant sales process in terms of strengths and weaknesses. It discusses the results of interviews with the sales team and the analysis of internal sales presentations and the CRM system of Plotwise. It presents two design objectives that are addressed in the international sales strategy.

Sales team and process

Since the arrival of a new Head of Sales in the second quarter of 2020, the commercial department within Plotwise is maturing. Adding two new sales representatives to the team, using a structured sales process, using a CRM system, improving inbound sales and outbound sales are all indicators that reveal an increasing level of maturity.

The sales department of Plotwise is structured straightforward. Sales development is executed through an inbound sales representative and an outbound sales representative, respectively a junior and a senior salesperson. These sales representatives identify and qualify leads; the latter in collaboration with the Head of Sales. Qualified opportunities or leads are then closed by the Head of Sales. Once a customer has been signed, the Service Delivery team will take over to ensure a successful implementation.

The sales process at Plotwise, also known as the deal funnel, comprises six phases: lead generation, lead qualification, opportunity scoping, opportunity validation, term sheet negotiation and closed. Figure 10 shows this funnel. Appendix D holds a detailed description of this funnel and the sales process.

Figure 10. The current sales process at Plotwise.

Commercial goal

Confidential

Challenges identified and design objectives

The author conducted semi-structured online interviews with the Head of Sales to validate the initial findings and observations as presented previously. From these interviews, the author concluded three key findings. Appendix E presents highlights of the conversations between the author and the Head of Sales that led to these conclusions.

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The author discussed the third key finding with the CEO of Plotwise and he validated it. Moreover he asked for an improvement of the positioning. The positioning is part of the GTM plan, which is the final step of the international sales strategy.

Based on the conversations with the Head of Sales and CEO and the internal analysis of the sales process, the author selected the following two design objectives: redesigning the product positioning for Europe and facilitating the improvement of the lead qualification, opportunity scoping and opportunity validation steps with respect to knowledge management and lead conversion.

Conclusions and takeaways

This chapter presented the data to answer to SQ-2: Is Plotwise ready to sell internationally? The author believes that Plotwise is ready and thereby answers this research questions. The following indicators support this verdict:

- The company structure allows for scaling. The sales team has the right people to start international sales;
- Plotwise sells a high-tech product with product attributes that clearly differentiate from the offering by competitors;
- The sales team has a feasible commercial target for international sales;
- The company has no clear-cut culture, but most employees mentioned that they prefer flexibility and dependence
- The business model allows for scaling, however, a decrease in CAC will drive more profitable results;

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The author identified five opportunities with respect to the sales process. They are as follows:

- Increase engagement with market;

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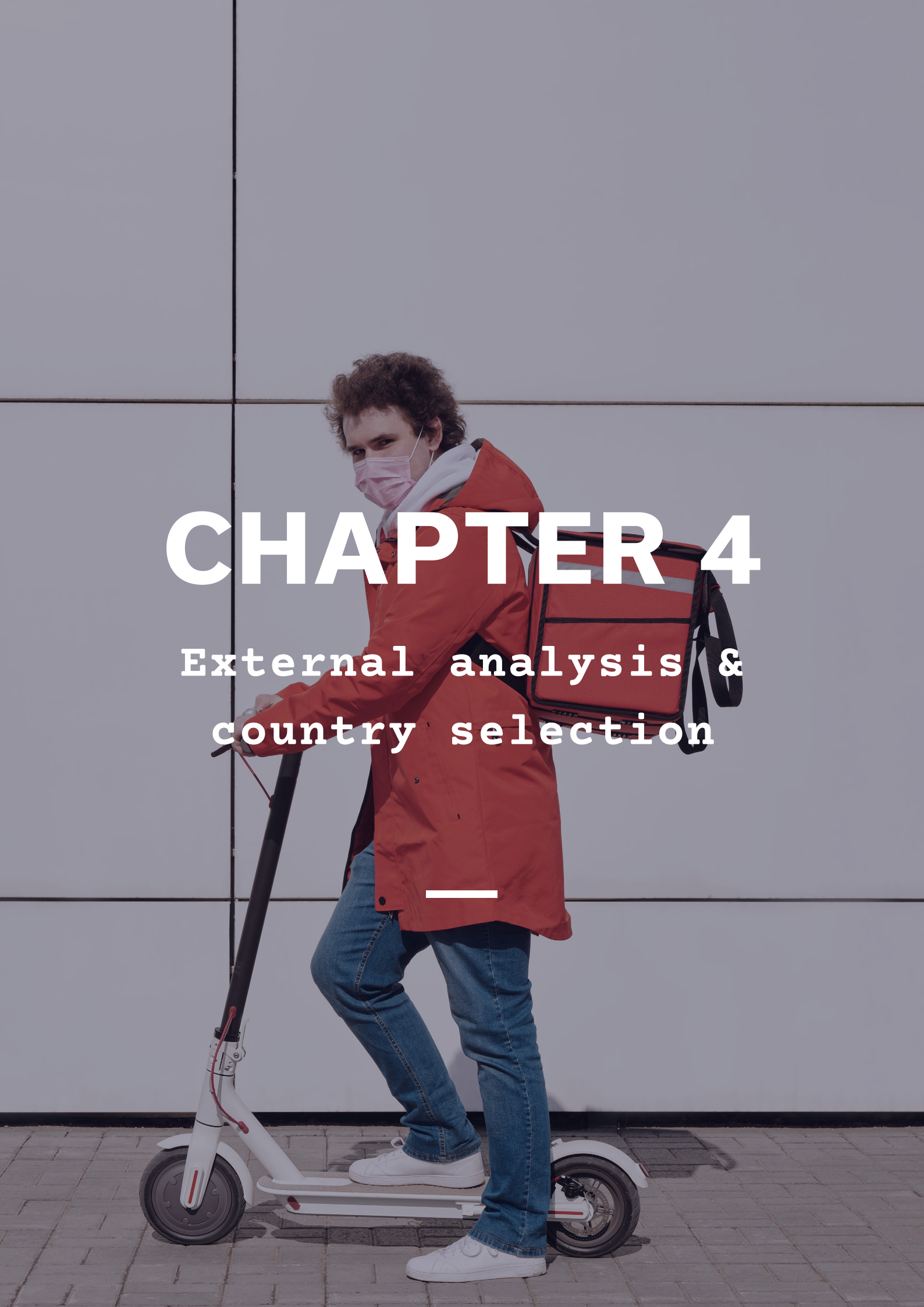
- Improve product explanation and demonstration;

Moreover, the author proposes to update the positioning to fit to new and international customers.

The author observed that the sales process is customer-centric to a high degree; it takes time to adjust the basic sales steps to fit a specific customer. This process is acceptable for the current company size, but as the number of customers grows in the future, adjustments are favourable. This presents an opportunity for strategic design and design research to play a role. Applying design research techniques in combination with creative methodologies will allow for a new direction for the sales team that makes sense, has purpose and fits with the needs and thoughts of a variety of stakeholders.

The next chapter presents a context and market analysis to select feasible countries to enter in the next two years. It also presents a list of countries to enter based on these analyses.



CHAPTER 4

External analysis & country selection

4.1 | Last mile delivery context analysis

(SQ-3) What are important developments in last mile delivery and e-commerce?

This chapter outlines the dynamics and developments of last mile delivery through seven context drivers. Moreover, it translates these drivers to opportunities and threats for Plotwise. The chapter discusses the implications for the international sales strategy that are taken into account in the following chapters. Figure 15 presents a summary of the findings as discussed in this chapter.

What is last mile delivery?

The domestic movement of parcels can be categorised into three broad areas: long-haul movements, regional distribution and urban or last-mile delivery. Last-mile delivery is the final leg of the delivery process when a parcel typically reaches the end-customer at the doorstep. It describes the movement of people and goods between a transportation hub to a final destination through different modes of transport (Cherrett & Allen, 2019). Modes include for example small electric vehicles, vans and bikes.

It is the most costly and time-consuming step of the fulfilment process (Accenture, 2017) as its costs account for over 40% of the total cost of shipping (Jacobs et al., 2019). At the same time it is a key to improved customer satisfaction (Dolan, 2018). A well-performed last mile can be rewarding; over 60% of consumers across Europe and the U.S. say a positive delivery experience is an incentive to shop with an e-tailer again (Metapack, 2018).

The rapid growth and complex demands of e-commerce parties and consumers are pushing logistic operators and e-tailers into an operational crisis; the delivery challenge. Especially, ensuring a smooth and satisfactory last-mile has become a fundamental goal for online retailers worldwide (Jacobs et al., 2019). According to the World Economic Forum (2020), the demand for last-mile delivery will grow 78% globally by 2020.

Reading and analysing multiple industry and consultancy reports resulted in the identification of seven drivers that influence the development of last-mile delivery (figure 11). These drivers are growing cities, changing consumer demands, growth of e-commerce, new delivery models, governmental regulations, technology and the COVID-19 pandemic. The following paragraphs summarize the characteristics of all drivers, present key figures and examples and discuss the relevance per driver.

Driver 1: growing cities

Cities around the world are facing rapid urbanisation. The global population is expected to grow to 8.5 billion in 2030, with 60% of all people living in cities (World Economic Forum, 2020). Higher urban density results in more road congestion and increasing global emissions - where delivery vans and trucks add a disproportionately higher share than passenger cars.

EU citizens are increasingly concerned about environmental problems. The share of people that perceive these problems is highest in urban areas. Amongst the most reported problems people experience in their neighbourhood, heavy traffic

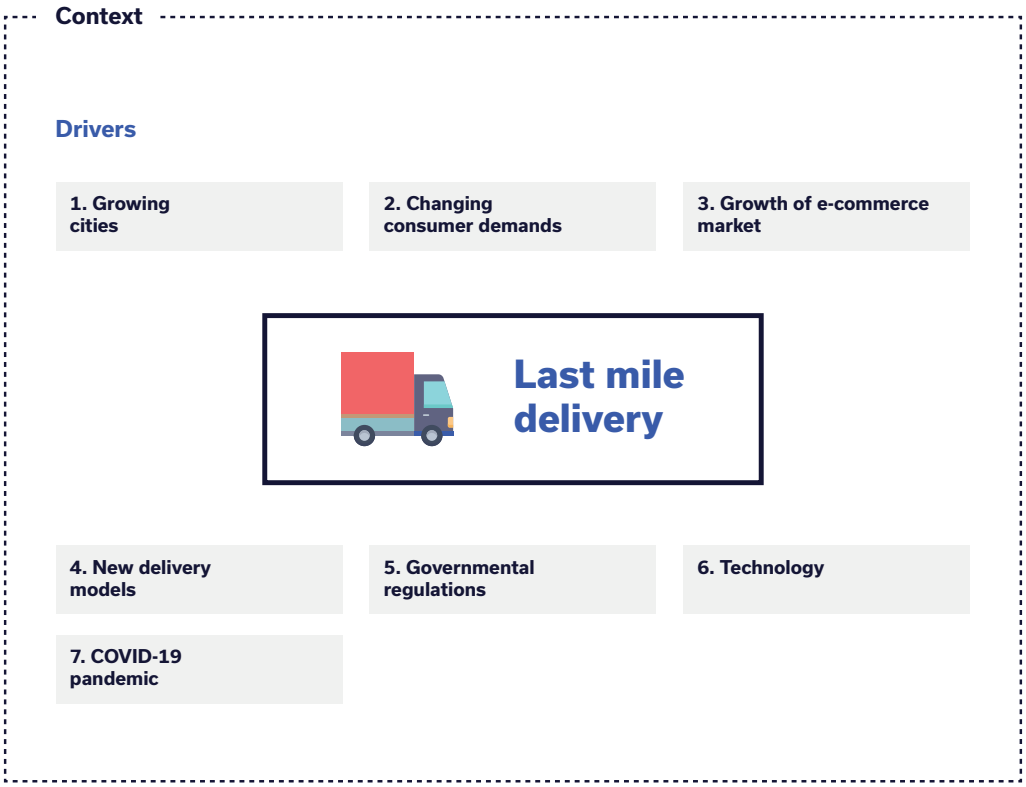


Figure 11. Seven context drivers within last mile delivery.

in the immediate vicinity was stated as the most common problem. Noise, rubbish on the street and air quality are three highly ranked problems (European Environment Agency, 2019). To illustrate, in Amsterdam, currently one in eight vehicles is a delivery truck or van - often double-parking and blocking lanes. Moreover, a vast number of scooters and bikes rush through city centres to deliver food in ever decreasing time windows (World Economic Forum, 2020). In other words, cities are getting crowded and noisy.

Congestion is another negative effect of urbanisation. The global traffic scorecard (INRIX, 2019) illustrates mobility analyses within the world's most congested cities and presents a mobility impact rank. The metrics of the scorecard entail the average time lost in traffic due to congestion as well as the average last mile speed. European cities score relatively low; in Rome, Paris and Dublin, commuters respectively lose 166, 165 and 154 hours per year due to congestion. There are big differences in average last mile speed within European cities. Telde (Spain) has the highest average speed at 35 miles per hour; Palermo (Italy) scores worst with only 8 miles per hour on average.

Growing cities is an important driver as it poses challenges that Plotwise's planning solution can solve. Congestion and increasing population density will drive the demand for operational efficiency and sustainable solutions that lower the number of miles driven to deliver goods. However, decreasing allowance for certain types of delivery vehicles in city centres might reduce the need for a planning solution like Plotwise's.

In the process of selecting new countries to expand the sales activities, geographic indicators like population density, congestion and average last mile speed will be taken into account. They indicate market attractiveness.

Driver 2: changing consumer demands

Consumers nowadays shop on an as-needed basis. They are online for large parts of the day, meaning they have unlimited access to product and service information as well as an increased level of knowledge when it comes to delivery options. They increasingly shop in so-called micro-moments, which occur in the background of doing something else at any given time (Haller et al., 2020).

Moreover, online shoppers increasingly demand that they want their order right now (Accenture, 2017) - often referred to as the Amazon effect (Seth, 2020). Faster, cheaper deliveries and greater control over their experience are becoming standard expectations (Accenture, 2017, 2020). Consumer expectations are becoming liquid expectations (Shah & Greene, 2015), meaning that they are no longer limited to a given product category but instead extend across unrelated industries. Customers frequently compare user experiences from born-digital companies like Uber, Amazon and Deliveroo, with their more-traditional, often less fluent, counterparts.

When ordering online, consumers demand value-added services like selecting and modifying delivery windows, tracking of deliveries in real-time and direct communication with drivers (Accenture, 2020), on top of increased speed and lower prices. 68% of customers from across the globe prioritise cost over speed, whilst 72% ranked fast shipping as a top-three determinant when purchasing online. Making changes to deliveries that are already en route is another critical consideration for younger consumers and consumers who receive multiple parcels per week (Accenture, 2020) - 29% of online buyers have changed a delivery time or location and an additional 50% would do so if available (Joerss et al., 2016).

A study from Haller et al. (2020) revealed that a large share of online shoppers see sustainability as an important priority when shopping. Sustainability priorities differ amongst countries and age groups; a phenomenon called sustainability sophistication. When consumers plan to buy from a brand they also consider environmental and personal wellness as important attributes. Fortunately, the results for companies embracing environmental awareness are promising; a study by Finextra (2019) revealed that companies experiencing positive sustainability press saw share outperformance by 26% when compared to 1600 MSCI companies worldwide.

The study of Haller et al. (2020) presented four distinct consumer segments: "value-driven consumers", "purpose-driven consumers", "brand-driven consumers" and "product-driven consumers" (**figure 12**). By far the largest share of consumers fall into the first two groups. Value-driven consumers tend to base their buying decisions primarily on the value and convenience they get for their money when buying from a specific brand. They are mostly consumers with a middle- or below middle-income. Purpose-driven consumers seek products and brands that align well with their lifestyle and values and have on average a middle or above middle-income. The former group is mostly found in Northern Europe, the latter is found across all of Europe.

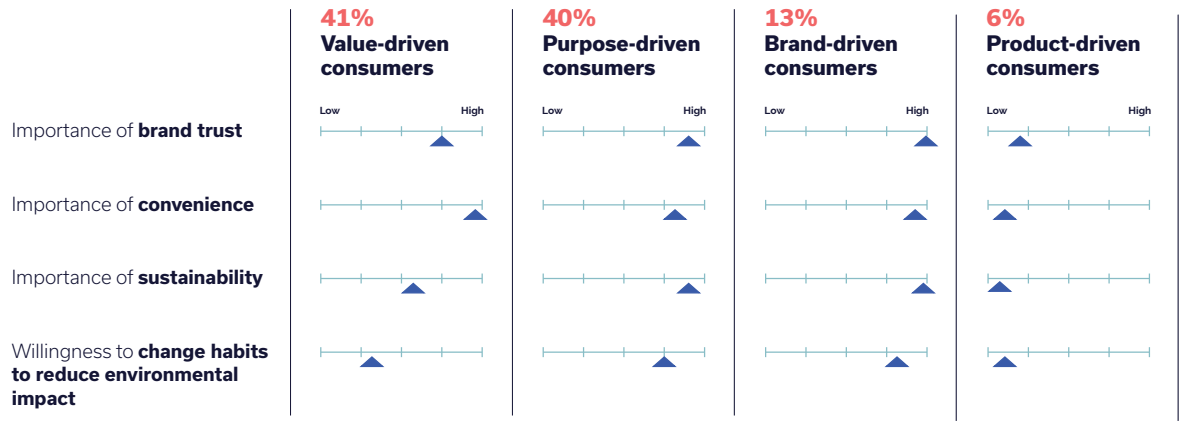


Figure 12. Types of consumer segments. Adapted from Haller et al. (2020)

Changing consumer demands drive the need for efficient planning solutions. Faster and more personalised deliveries that have a reduced carbon footprint increase the complexity of the delivery challenge. At the same time consumers expect to pay less for their deliveries thereby influencing the pricing strategy of Plotwise's customers.

When analysing new countries to enter, consumer values are taken into account because they indicate a market's accessibility and attractiveness. These cultural indicators help comparing and ranking countries. As online shoppers drive the number of deliveries needed they influence the demand from potential customers of Plotwise. Therefore, these customer values are included in the design of a new positioning of Plotwise.

Driver 3: growth of e-commerce

E-commerce has evolved into a $4.2 trillion global market (Lipsman, 2019). Globally, 82% of all consumers have shopped online in the last three months (World Economic Forum, 2020). Whilst the offline retail market expects a CAGR of 4% between 2019 and 2023; its online counterpart is expected to grow from 17% into a 20% share of global retail by 2023 (World Economic Forum, 2020) (figure 13). As an example, in The Netherlands, the number of parcel deliveries per inhabitant per year nearly doubled from 11 in 2013 to 20 in 2018 (European Commission, 2020).

New product categories have entered the online space, next to the traditional online categories such as books, clothing, electronics, luxury goods and toys. Although exact percentages of sales vary across countries, large appliances, furniture, pet supplies and car parts are increasingly purchased online (World Economic Forum, 2020). Online groceries is amongst the fastest growing e-commerce categories within both Europe and the US - doubling its number of purchases between 2015 and 2019 (Eurostat, 2019).

More online shoppers and new product categories moving into the online space results in more potential customers for Plotwise. However, a growing market will probably also result in more competitors and increased offerings of alternative solutions. As the types and numbers of goods bought online impact the delivery models needed for the last-mile, it is important for Plotwise to have insights on these figures per country. They are key economic indicators for selecting new countries. Moreover, it is important to understand the maturity of online shopping in a country as it explains what solutions are needed and what potential they have.

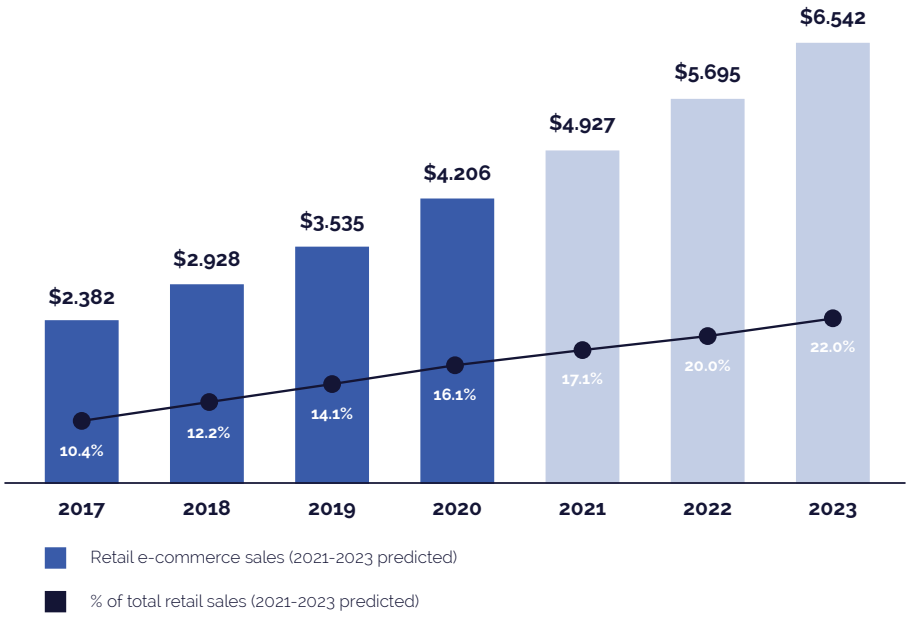


Figure 13. E-commerce market growth and share of total retail sales (2017-2023). Adapted from Lipsman (2019).

Driver 4: new delivery models

E-tailers and delivery operators face the challenge of providing a differentiated delivery experience while remaining profitable at the same time (Accenture, 2017). The high cost of transporting goods, margin pressure from global competition and the demand for increased transparency in supply chains (Accenture, 2017) all add up to this tension. In order to stay profitable and improve the customer experience, e-tailers and delivery operators are searching for new delivery models, networks and modes beyond the traditional ones.

Seven different delivery segments are identified within last-mile delivery. **Figure 14** shows this overview and provides some illustrative use cases. Parcel and small package deliveries were segmented based on the moment of delivery. Possible moments of delivery are deferred delivery, where an order will arrive someday, time-definite delivery, where an order will arrive at the next or any specific day or time, same-day delivery, where an order will arrive the same day, and instant delivery, where an order is delivered right away - on average in less than two hours.

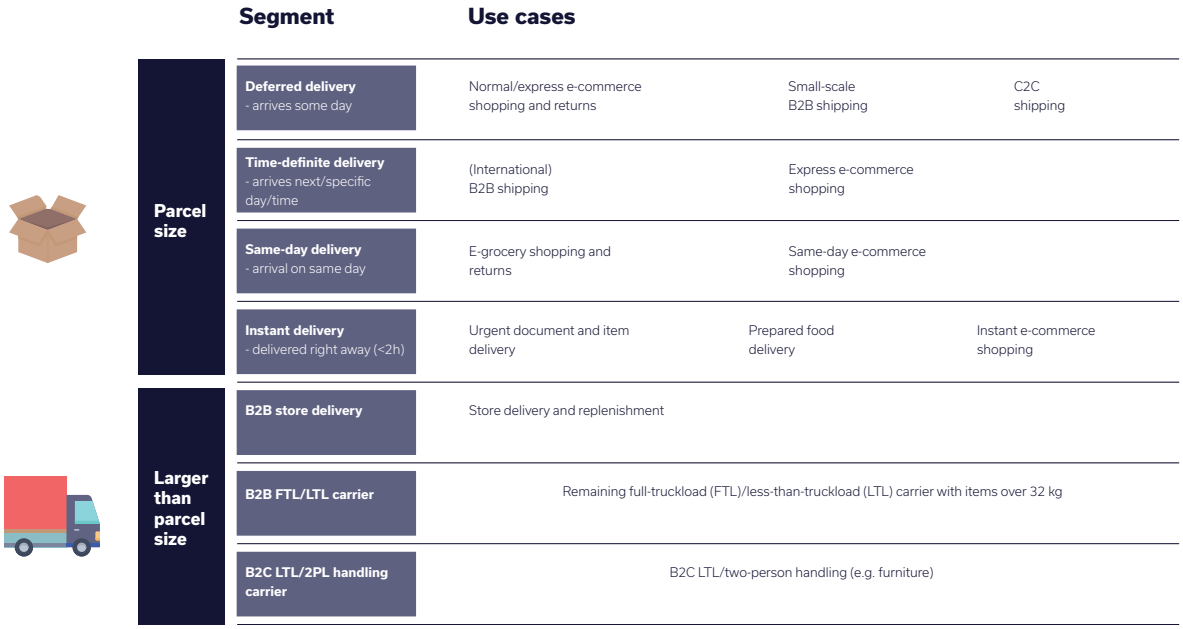


Figure 14. Categorisation of delivery segments, Adapted from World Economic Forum (2020).

Freight deliveries - items above 32 kg such as white goods - were categorised based on recipient (B2C or B2B) and purpose of transportation. The delivery segments for freight deliveries are B2B store delivery, B2B remaining full-truckload/ less-than-truckload carrier and B2C less-than-truckload/two-person handling carrier (World Economic Forum, 2020). Parcel and freight both follow their own logistics approach and use diverse delivery networks.

Deferred delivery is and will continue to be the largest delivery segment worldwide. However, same-day and instant delivery are gaining popularity mainly in large cities, resulting in a growth of 36% and 17% annually (World Economic Forum, 2020). Combined they currently make up more than 5% of overall parcel deliveries in Europe. China is the fastest-growing market in which the two delivery modes combined already make up for 10% of all parcel deliveries (World Economic Forum, 2020). When selecting supply chain partners, 82% of SMEs prioritise carriers that offer a range of delivery times, including same-day, overnight, two-day and deferred shipping (Accenture, 2020).

Currently, delivery networks for parcels include electric vehicles (EVs), efficient gasoline/diesel vehicles and (electric) bikes in combination with dedicated delivery people (Joerss et al., 2016; World Economic Forum, 2020). New concepts like parcel boxes, parcel lockers and office deliveries are gaining momentum (World Economic Forum, 2020), decreasing the need

for a customer to be at home for a delivery and hence increasing the number of successful deliveries - a common KPI for logistics operators and retailers.

The traditional delivery model in which retailers partnered with established carriers like UPS, FedEx and DHL is losing its effectiveness. A shift from supply-driven to demand-driven delivery is taking place. E-tailers often use the carriers' national delivery infrastructures and vast sortation centres for last-mile delivery. Although these networks are capable of completing many delivery stops with small delivery quantities, they are not flexible and quick enough for same-day deliveries (Accenture, 2017). Moreover, they add to the increasing urban congestion problems. Therefore, innovative delivery modes and business models are required to keep up with the rapid growth of e-commerce.

Around the world, companies are introducing new business models to deliver their products to the end-customer. Moreover, they are moving up in the value chain to control their delivery operations and experience. As an example, Picnic, a Dutch online supermarket, disrupted the market of online groceries by offering free deliveries with fixed time slots based on the customers' address. By using this so-called "milkman" model, the company can cut delivery costs, decrease the number of vehicles on the road and increase operational efficiency (KVK, 2020).

Amazon, which in the past was known mainly for its online retail platform, is growing its logistics operation as well (Galea-Pace, 2020). The company has launched its own logistics company; a move of vertical integration, Amazon Logistics, to provide US customers with free one-day shipping through Amazon Prime (Statt, 2019). Amazon now owns the entire operation from the arrival of a product at an Amazon warehouse to the customer's doorstep. In the US, Amazon has already delivered half of its packages through its own network in 2019 and it is expected to pass FedEx and UPS shortly in terms of parcel volumes (Statt, 2019).

Innovation in the last mile is driven by large investments. Start-ups that focus on the last-mile category have received by far the biggest share of funding over the last years when compared to their traditional counterparts that focus on markets like transport, storage and physical supply chain solutions. Additionally, the funding volume growth in logistics start-ups has outpaced overall venture funding growth between 2014 and 2019. In this period, start-ups have experienced an increase in funding volume of 17 times, whereas the venture funding volume has only been doubled (Hausmann, 2020). This indicates an increased interest from investors in last-mile delivery companies.

New delivery models will bring new planning challenges that Plotwise can solve. Big investments are done in this market and new companies appear. New companies mean new potential customers but also potential competitors. It must be noted that continuous planning is not advantageous for all types of delivery models. Therefore, it is important for Plotwise to understand the advancements in delivery models. Additionally, the delivery model serves as a key indicator during the sales process when qualifying any prospect into a potential lead.

Driver 5: governmental regulations

Governmental regulations too rise the complexity of last-mile delivery. Zero-emission zones, car-free zones and CO_2 taxes demand new solutions. Transport emissions account for nearly 25% of the total EU-28 greenhouse gas emissions; vans account for nearly 12% of these emissions. Moreover, it is estimated that over 23% of transport emissions occur in cities (European Environment Agency, 2019). Therefore, logistic operators and retailers need to embrace the usage of emission-free vehicles and delivery models to comply with the regulations.

At EU level, policies and funding programmes have been developed to stimulate sustainable urban logistics solutions and innovation. The agenda of the EU focuses on the regulation, funding and knowledge aspects of urban policy (European Environment Agency, 2019). An analysis of the overview of EU policy developments in urban mobility resulted in the following policies, objectives and developments regarding urban logistics and last-mile delivery.

Firstly, Europe's total greenhouse gas emissions are to be reduced by 80 to 95% by 2050 compared to 1990 levels. The transport sector should achieve a reduction of 60% by that same year. Secondly, the goal is to achieve essentially CO2-free city logistics in major urban centres by 2030. Thirdly, coordinated action between all levels of government and between the public and private sector is recommended in the following four fields: urban logistics, urban access regulations, urban intelligence transport systems and urban road safety. The implementation of the EU transport policy is progressing well: in 2016, over 64% of the initiatives were either completed or well advanced. Finally, transport in and to or from cities is also affected by other, more general, EU transport policies and strategies, including the Eurovignette, the greenhouse gas emission standards for vehicles and the environmental noise directive (European Environment Agency, 2019).

Retailers are currently working on more sustainable delivery networks. For example, Coolblue, a large Dutch electronics e-tailer, delivers small parcels in major Dutch cities through their own bike network (Coolblue, 2020b). The company placed solar panels on the rooftop of their building and uses the generated energy to power the office and to charge the electric delivery bikes (Coolblue, 2020a). They also swapped traditional cardboard boxes for paper bags to reduce waste.

Governments seem to be aware of the challenges that lay in last-mile delivery. Companies that work towards sustainable supply chains might receive subsidies to do so. Taxes and regulations for e-tailers and delivery operators might decrease the expenditure on planning solutions. New, sustainable delivery models, like on-demand bike deliveries, might reduce the need for Plotwise's solution as they have different planning challenges. Governmental regulations and structures - administrative indicators - are taken into account when analysing new countries for Plotwise.

Driver 6: technology

Numerous new technologies appear that could assist in solving the delivery challenge. Two categories of technological developments are relevant for the context of last-mile delivery; the Internet of Things (IoT) and Artificial Intelligence (AI).

The IoT has already made a significant impact on the entire logistics value chain. The IoT, which can be defined as "the network of physical objects that contain embedded technology to communicate and sense or interact with their internal states or the external environment" (Gartner, n.d.-a), is expected to play an even bigger role in the coming decade as prices for sensors are falling, faster wireless networks are appearing and analysing big data is becoming easier.

Logistics operators can already monitor the status and performance of assets, parcels and people at any time. Furthermore, business and operational processes can now be automated resulting in less manual work, improved quality and predictability and lower costs (DHL, n.d.).

Although not a new phenomenon, AI creates many opportunities for improving logistics operations. AI "applies advanced analysis and logic-based techniques, including machine learning, to interpret events, support and automate decisions, and take actions" (source Gartner, n.d.-b). As of 2018, about 60% of companies in the Forbes Global 2000 are either assessing AI or making productive use of it by improving and extending proven AI solutions to fit their business (Gesing et al., 2018). AI, like IoT, is becoming more accessible and affordable every day allowing logistics companies and retailers to implement it in everyday operations increasingly.

There are numerous opportunities for AI to be applied within logistics and especially last-mile delivery. For example, financial anomaly detection helps logistics operators analysing vast amounts of financial data coming from third-party vendors. Predictive demand and capacity planning supports retailers in facing unexpected demand spikes. Voice agents can improve the interaction between end-customer, retailer and logistics provider. Customers can simply ask their smart speaker for current shipment status or suggest last-minute changes to the delivery of a parcel. Finally, intelligent route optimisation assists (last-mile) logistic operators to efficiently pick up, transport and deliver parcels and freight (Gesing et al., 2018).

The combination of IoT and AI promises even more opportunities for logistics operators and retailers. AI can quickly analyse data generated by IoT devices using technologies like machine learning, to detect patterns and anomalies automatically. Other AI technologies, like speech recognition and computer vision help to analyse data that previously required human intervention (Schatsky et al., 2017).

New delivery modes appear that thrive on IoT and AI advancements. For instance, trunk delivery, urban consolidation centres, load-pooling, micro-hubs, night-time delivery, express lanes, delivery parking zones and multi-brand parcel shops are expected to be introduced to the mass market in the next 1 to 3 years (Joerss et al., 2016; World Economic Forum, 2020). More bold delivery modes, those that will take at least 3 years from now to accepted at scale, include autonomous vehicles in combination with runners, delivery drones, automated guided vehicle lockers (on the street), droids (on the pavement) and hydrogen vehicles (Joerss et al., 2016; World Economic Forum, 2020).

One of the biggest challenges of the future last mile is to understand how these delivery modes and technologies can work together to create a positive result for all stakeholders. According to Joerss et al. (2016), most economic prerequisites are already in place for these technologies to be adapted. However, the speed of adoption will differ per country based on opportunity cost, legislation and public acceptance.

Plotwise's solution drives on AI principles like machine learning and high density mapping. New technologies, like the combination of IoT and AI pose opportunities for Plotwise to improve its service. It is relevant to explore to what extent these technologies should be present in marketing activities. This will be explored through analysing to what extent countries and potential customers are tech savvy, both cultural indicators.

Driver 7: COVID-19 pandemic

The COVID-19 pandemic has created explosive growth in demand for last-mile deliveries (Deloitte Digital, 2020). According to data from IBM's U.S. Retail Index (Perez, 2020), the pandemic has accelerated the shift from shopping in physical stores to digital shopping by nearly five years. This was also mentioned by important industry players during an online conference, The Home Delivery World Europe 2020 event. Moreover, as stated during this conference, the pandemic resulted in a lower share of B2B deliveries. A significant reduction in B2B deliveries is expected due to the closing of offices and governmental policies to work from home.

The pandemic influences the categories of products consumers buy online. People intend to spend less on clothing, footwear, electronics, furnishings and restaurants/take-outs, and more on groceries, household goods and medicines (Moncrief & Marshall, 2005; Perez 2020). Electronics, clothing/footwear and furnishings are still the product categories mostly bought online and delivered at home. Over half of the respondents are still choosing name brands over private labels/store brands, because they believe brands deliver higher quality, they trust brands and it is what they have always done (Moncrief & Marshall, 2005).

Consumers are now increasingly concerned about safety, but their new behaviour might just be expressing older needs that were already existent pre-pandemic (Deloitte Digital, 2020). It must be noted that, although the study of Moncrief and Mashall (2005) includes countries from all over the world, exact expenditures on goods as well as attitudes differ per country. Time will only learn the lasting effects of the pandemic, but it can be assumed that the last-mile will not go back to its pre-pandemic state.

Understanding changing consumer needs due to COVID-19 are important to take into account when selecting new markets and identifying customers. COVID-19 poses the opportunity for Plotwise to leverage the advantages that home deliveries bring when selling its service.

Figure 15 presents an overview of the discussed value drivers and their potential impact on Plotwise in terms of opportunities, threats and implications for the strategy. The SWOT analysis in the next chapter includes these findings as well. The next chapter presents also the country decision for the international sales strategy. The author of this thesis designed a quantitative framework that includes indicators to assess market accessibility and attractiveness. These indicators were selected by the author based on their relevance within the context of last mile delivery; hence this context was explored in this chapter.

Figure 15. Impact of the seven context drivers on Plotwise.

4.2 | Country selection

(SQ-4) What countries should Plotwise enter in the coming two years?

The first step of the international sales strategy entailed the country analysis and selection. This chapter outlines the research process as part of the analysis. It resulted in a list of ten countries advised to enter, as well as their characteristics and the advised sequence. The United Kingdom is selected as initial focus; its consumer preferences are discussed in detail. Lastly, the chapter presents a target customer segment and customer profile.

Starting point

Plotwise serves customers in The Netherlands (its home country), Belgium and Germany. The Belgium and German market are both served through expansion activities of a current customer. This allowed Plotwise to start activities in these foreign markets, but no new customers based in those two countries have been signed yet. The management team asked to include both in the analysis.

The management team of Plotwise hypothesised that the best countries to approach complementary to Belgium and Germany would be the United Kingdom, Norway, Sweden, Denmark and France and in that specific order. They based this assumption on the analysis of total volume of parcel deliveries per country and the E-commerce market size and growth rate in those countries. However, as presented in the problem definition, the management team desired a more thorough country analysis to test their assumptions.

The author gathered data from freely accessible statistical databases, including Eurostat, Worldbank and the World Economic Forum, and used these in his country selection framework. The analysis included the latest data available from these sources for each indicator. Figure 16 presents this framework; the steps are discussed here. More detailed information is discussed in Appendix F.

Step I: preliminary analysis

The first step reduced the list of 31 European countries to a top 10 through an assessment using a market estimation approach with four indicators. These four indicators, that determined the market attractiveness score of each country, were as follows: "percentage of the total population using the internet in the last year", "percentage of the total population that are online shoppers", "percentage of online shoppers that encountered a longer time of delivery than indicated" and "number of online shoppers in the last year". These four parameters fitted best to the context of this research as they were all about online shopping and the delivery of goods.

Table 3 **presents the results from this preliminary analysis. The table shows the score per indicator for each country and the rank of each country. It implies that the best five countries to enter are the United Kingdom, The Netherlands, Sweden, Norway and France. As stated before, The Netherlands is already a market served by Plotwise, and therefore served as benchmark in the remainder of the research.**

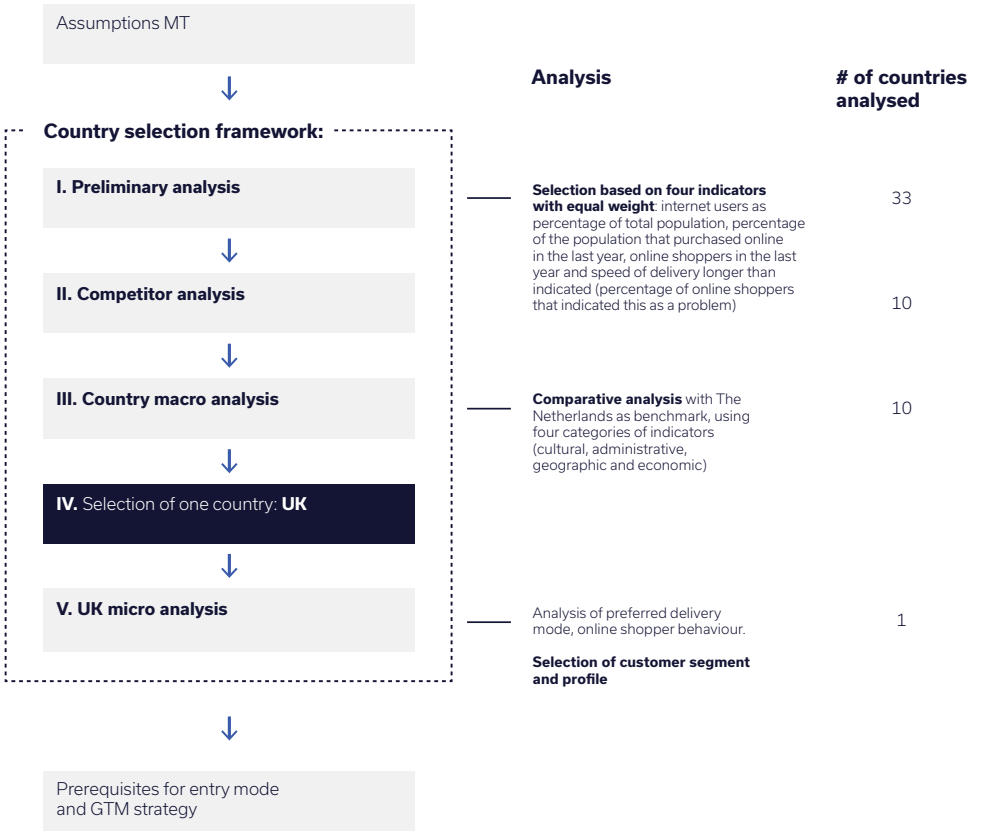


Figure 16. Country selection framework. Description of steps.

As the table shows, the management team was not completely right in their assumption. Belgium ranked ninth; they assumed it would be the first country to enter. However, their thoughts on entering the Nordics first followed by France were in line with the results. Notably, in this research, Germany ranked outside the top five countries; the management team assumed it would be the second best country to enter.

The list of countries was compared to an industry report (Eshopworld, 2018) to cross-check its validity. The five countries scored respectively 3rd, 14th, 11th, 17th and 6th. Eshopworld's (2018) ranking scored and weighted countries along the following key metrics: logistics ranking, average revenue per shopper, total market revenue, percentage of population shopping online, number of online shoppers, percentage of cross-border shoppers, number of cross-border shoppers and CAGR 2018-2022.

From this analysis it follows that the potential market size for home delivery planning of goods in the United Kingdom is roughly

Confidential

Appendix G presents a full overview of data for all 31 countries as well as a ranking.

Rank	Country	Internet users, as % of total population in last 12 months	% of individuals that purchased online in the last year	Online shoppers in the last year (thousands)	Speed of delivery longer than indicated (% indicated it as a problem)
1	United Kingdom	96	91	58387	32
2	The Netherlands	96	84	13977	35
3	Sweden	98	84	8467	30
4	Norway	99	83	4394	36
5	France	91	77	27418	28
6	Germany	94	84	65642	10
7	Denmark	97	86	4038	15
8	Iceland	99	80	286	33
9	Belgium	91	72	7524	23
10	Switzerland	97	83	6904	6

Table 3. Top ten of countries to enter after step I of analysis.

Step II: competitor analysis

The second step included a competitor analysis. The author composed a list of 27 companies that are active on the European logistics planning software market. He based this list on market reports, internal documents and through attending a three-day industry conference. Not all companies are direct competitors; hence the author distinguished between three levels of competition. Figure 17 shows the overview of competitor categories and the importance to watch them. Appendix H presents the list of competitors, their categories and solution descriptions. It also contains a value curve that visualises the differences between competitor categories in terms of functionalities and benefits.

Companies that offer schedule and route optimisation software (API or traditional) are the most important ones to watch as their product is very similar to that of Plotwise. Nearly half of the competitors within this analysis fall into this category. However, the author found only three companies that offer their software as API-only, like Plotwise. These companies are Veeroute, Workwave and Routific. Other companies offer their optimisation software in combination with a UI.

The other half of companies within this analysis fall into the category of delivery management platform; these are often bigger companies in terms of revenue and number of employees. Examples of companies are Bringg, Onfleet and Urbantz. A delivery management platform differs from the first category in the sense that it offers a full-suite software solution in which the delivery planning is only one functionality. Hence, the author assumes that these platforms perform worse in terms of speed, customisability and performance.

Software companies are usually not bound by their geographic location; they can sell their solution around the world. They often do have multiple offices to serve smaller regions. The same goes for Plotwise's product category; large competitors usually have offices in several countries.

Level of competition	Category of solutions	Importance to watch
Product form	Schedule and route optimisation software (API only)	+++
	Schedule and route optimisation software	+++
Product category	Delivery management platform	++
	Transportation management system	+
General	Manual planning	-
	Spreadsheet planning	-

Figure 17. Level of competition, category of solutions and importance to watch.

The author concludes from his analysis that the market space is contested but definitely not saturated; there is room for Plotwise to obtain market share. Plotwise's solution differs from most competitors in terms of product form (API-only), pricing (pay-per-order) and functionality (time slot picking, which seems unique to the company). A country-specific competitor analysis was not performed as the author assumes that software companies can easily sell their products cross-country. The author advises to closely watch developments of companies that develop schedule and route optimisation software as well as delivery management platforms.

Step III: country macro characteristics

Selecting indicators

The third step included a macro analysis that focused on country characteristics using the CAGE framework (Ghemawat, 2007) as basis. The indicators provided a way to compare and contrast these ten countries to a baseline country; The Netherlands. The differences in cultural, administrative, geographic and economic aspects of a country revealed insights that are used in market entry as well as the design of a new positioning. This research drew upon the definitions for each category as presented in the research of Ghemawat (2007). These descriptions informed the search for indicators and helped place them in the correct spot in the framework. Appendix F describes this CAGE framework in more detail. It presents the indicators that the author selected, as well as a list of indicators as presented in the reviewed literature.

Figure 18 **presents the indicators that the author selected to use in the country macro analysis. He picked these indicators based on the relevance with the company and consumer context. The data sources for these parameters are receivable upon further request to the author.**

Country macro analysis indicators

Cultural indicators

Per capita CO2 emissions for transport
Number of ATMs
Ease of doing business index
Attitudes towards entrepreneurial risk
Companies embracing disruptive ideas
Multi-stakeholder collaboration
Buyer sophistication
Ratio iOS to Android
Productivity per hour worked
Per capita energy consumption from solar
Share of primary energy from solar
Share of energy from wind
Percentage of young people engaging in social media
Daily time spent on the internet by young people
Share of people that trust their national government
Estimates of altruism
Estimates of positive reciprocity
Estimates of patience
Environmental perfomance index

Administrative indicators

Country risk rating
Green climate fund pledges per capita

Geographic indicators

Logistics performance index
Urban population as share of total population
Share of total population living in the largest city
Share of total population living in urban agglomerations of more than 1 million
Distance between Delft and capital city
Proficiency in English
Average speed of last mile
Hours lost in congestion per year

Economic indicators

Competition in services
GDP
GDP per capita
10-year average annual GDP growth rate
Household net adjusted disposable income
Total volume of parcel deliveries
Economic complexity index
Growth of innovative companies
New business density

Indicators from:

Our World in Data
World Economic Forum
World Bank
Eurostat

All sources available upon request

Figure 18. CAGE model including country macro indicators.

Step IV: Country selection: United Kingdom

After reviewing the outcomes of the country characteristics analysis, the author decided to focus on one country for the remainder of this research. This to narrow down the research and to achieve more in-depth results. This does not mean that Plotwise should not focus on other countries too. The advise is to explore and enter multiple countries at the same time.

The United Kingdom was chosen to focus on for the remainder of this research as it ranked highest in the first analysis. Moreover, the United Kingdom is the fourth largest e-commerce market in the world (EcommerceDB, 2019).

CAGE characteristics of the United Kingdom

Table 4 and table 5 present the CAGE country characteristics of the United Kingdom, compared to The Netherlands and the best scoring country per indicator. Appendix F discusses the advantages of expanding to the United Kingdom, as well as the disadvantages and the similarities between both the United Kingdom and The Netherlands.

Category	Indicator	Unit	Best score	UK Score	Difference, compared to best / Difference, compared to NL
CULTURAL	Per capita CO2 emissions for transport	Tonnes CO2 per capita	1,8	1,8	3% / 3%
	Number of ATMs	ATMs per 100.000 adults	32,6	129,5	297% / 188%
	Ease of doing business index	Score (1-10 best)	8,5	8,4	-1% / 11%
	Attitudes towards entrepreneurial risk	Score (1-10 best)	7,1	7,0	-1% / -1%
	Companies embracing disruptive ideas	Score (1-10 best)	7,0	6,6	-6% / 10%
	Multi-stakeholder collaboration	Score (1-10 best)	7,7	7,0	-9% / -9%
	Buyer sophistication	Score (1-10 best)	6,9	6,7	-3% / -3%
	Ratio iOS to Android	Ratio	1,09	0,86	-21% / 48%
	Productivity per hour worked	US$ per hour	99,7	46,9	-53% / -24%
	Per capita energy consumption from solar	KWh per capita	1409	465	-67% / -38%
	Share of primary energy from solar	%	1,4	1,4	0% / 9%
	Share of energy from wind	%	20,7	7,3	-65% / 151%
	Percentage of young people engaging in social media	%	97,2	92,7	-5% / 0%
	Daily time spent on the internet by young people	Hours	6,0	5,2	-15% / -15%
	Share of people that trust their national government	%	89,1	51,0	-43% / -11%
	Estimates of altruism	Deviation from global distribution	0,03	0,03	0% / -116%
	Estimates of positive reciprocity	Deviation from global distribution	0,09	-0,04	-144% / -73%
	Estimates of patience	Deviation from global distribution	1,07	0,54	-50% / -43%
	Environmental performance index	Score (1-100 best)	82,5	81,3	-2% / 8%

Table 4. Cultural characteristics of the United Kingdom.

Category	Indicator	Unit	Best score	UK Score	Difference, compared to best / Difference, compared to NL
ADMINISTRATIVE	Country risk rating	Rating (E-A1 best)	A2	A4	
	Green climate fund pledges per capita	US$ per capita	59,3	18,8	-68% / 136%
GEOGRAPHIC	Logistics performance index	Score (1-10 best)	8,4	7,8	-7% / 3%
	Urban population as share of total population	%	98,0	83,7	-15% / -9%
	Share of total population living in the largest city	%	27,4	16,4	-40% / 129%
	Share of total population living in urban agglomerations of > 1M	%	27	27	0% / 118%
	Distance between Delft and capital city	km	130	314	142% / 0%
	Proficiency in English	Score	Very high	Very high	
	Average speed of last mile (in capital city)	Average mph	18	10	-44% / -44%
	Hours lost in congestion per year (in capital city)	Hours	28	149	432% / 432%
ECONOMIC	Competition in services	Score (1-10 best)	5,9	5,4	-8% / -8%
	GDP (current US$)	Billion US$	3845,6	2827,1	-26% / 211%
	GDP per capita (current US$)	US$	75419,6	42300,3	-44% / -19%
	10-year average annual GDP growth	%	2,6	1,7	-35% / 31%
	Household net adjusted disposable income	US%	35725	28715	-20% / -2%
	Total volume of parcel deliveries	Thousands per year	2.646.598	1.923.000	-27% / 450%
	Economic complexity index	Index	2,1	1,5	-26% / 18%
	Growth of innovative companies	Score (1-10 best)	7,9	7,0	-11% / -8%
	New business density	Registrations per 1000 adults	15,7	15,7	0% / 159%

Table 5. Administrative, geographic and economic characteristics of the United Kingdom.

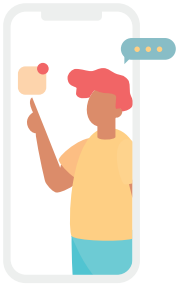
Step V: UK micro characteristics

British online consumers have a significant impact on Plotwise's potential customers, because their needs and behaviour shape the way companies market, sell and deliver goods. Hence, the author analysed the e-commerce and delivery market in the United Kingdom in more detail in order define a target customer segment for Plotwise. The results also inform the new positioning.

Preferred delivery mode online shoppers

Preferred modes of delivery differ strongly across Europe. Table 6 shows the preferred mode of delivery in terms for online shoppers in the United Kingdom as result of a survey with over 1000 respondents from the United Kingdom (Postnord, 2020). Home delivery during daytime is by far the most preferred mode of delivery within the country (stated by 64% of participants). In general, consumers from the United Kingdom seem to have the second strongest preference for this mode after Italy. This is an important finding, as it probably implies that most UK delivery companies are focused on home delivery; the type of delivery for which Plotwise offers optimisation.

When I order online, I prefer...



	UK	NL	SE	NO	FR	DE
Home delivery in daytime	64%	51%	4%	6%	25%	41%
Delivery to mailbox or shared mailbox by mail carrier	11%	17%	39%	52%	42%	36%
Collecting the product from a distribution point	2%	12%	37%	14%	19%	2%
Home delivery in the evening	11%	14%	4%	6%	5%	8%
Collecting the product from a parcel machine	1%	0%	2%	1%	2%	5%
Delivery to workplace	3%	2%	0%	0%	1%	2%
Pick-up at online store's physical store	1%	2%	2%	1%	1%	1%

Table 6. Online shopper delivery preferences in the United Kingdom. Adapted from Postnord (2020).

According to Sendcloud (2020), 47% of online UK retailers offer standard home delivery, 31% offer service point delivery and 24% offer collection at a physical store. Notably, when it comes to home delivery options, nominated day delivery is only offered by 0,31% of online retailers. Plotwise's engine allows for time slot picking; hence this insight poses an opportunity for the strategy.

UK consumer preferences

Sendcloud (2020) investigated UK consumer behaviour through conducting a longitudinal survey with over 2000 respondents from the UK. Table 7 and table 8 show the most relevant findings from this study. Delivery costs, speed of delivery and flexibility with delivery options are the top three determinants for selecting a reseller when shopping online. Appendix F describes the consumer behaviour of UK online shoppers in more detail.

When I shop online, these are the most important factors to me

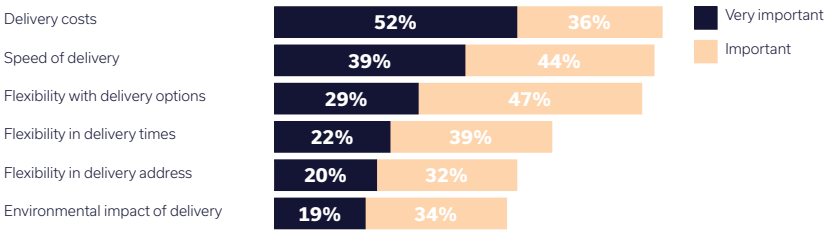


Table 7. Important factors to online shoppers in the United Kingdom. Adapted from Sendcloud (2020).

Table 8. Willingness to pay extra and reasons to pick a specific carrier (UK shoppers). Adapted from Sendcloud (2020).

Implications of Brexit

A recent development that can not be ignored is the UK leaving the EU, which is also known as Brexit. The UK has officially left the EU in January 2020 and at the end of that year both parties agreed on a deal. This Brexit deal contains new rules how the UK and EU will work, live and trade together (BBC, 2020). Moreover, the UK can now set its own trade policies. The deal will likely affect cross-country e-commerce and business practices; therefore the most important changes are summarised in the next section.

Importers do not need to pay tariffs on goods at the border, however, they need to complete new paperwork concerning safety and customs declarations. This means that goods will not get more expensive, but longer shipping times caused by large delays are expected (Edgington, 2020).

Short-term business travellers will not need to hold work permits. Managers and specialists are allowed to stay up to three years in the UK and trainees up to one year. People visiting the UK to set up business are allowed to stay for 90 days in any six-month period (Bloomberg, 2020).

The agreement includes the commitment to open and fair markets in delivery services and promotes trade in delivery services. Both the UK and the EU must prevent national suppliers from distorting the markets (U.K. Prime Minister's Office, 2020). Moreover, the agreement gives online consumers strong protections when buying from businesses within the UK and the EU (U.K. Prime Minister's Office, 2020).

The agreement also defines the standards to which logistic operators must adhere when undertaking logistic activities between the UK and the EU, for example vehicle dimension restrictions and maximum driver hours. Domestic market rules are unchanged and therefore will not affect last mile delivery (U.K. Prime Minister's Office, 2020).

All in all, the biggest impact Brexit could have on the e-commerce market is a lower CAGR, thereby potentially decreasing the market attractiveness.

4.3 | Target customer

Customer segment for positioning

The author advises to select LSP/3PL companies, electronics e-tailers, retailers and brands, and (online) grocery stores as customer segments to focus on in the international strategy. The reason to go for these customer segments is as follows.

Parcel delivery comprises business-to-consumer (B2C), business-to-business (B2B) and consumer-to-all-parties (C2X). Research suggests that B2C and C2X parcel deliveries together account for almost two-thirds of UK parcel volume (Cherret & Allen, 2019). These categories also grow faster than business-to-business (B2B) delivery. This will be compounded even further because of the COVID-19 pandemic. This increase in demand will result in the need for improved parcel handling capacity and delivery and requires logistic providers to expand their delivery networks, depot infrastructure, fleet and supporting technologies (Cherret & Allen, 2019).

B2C deliveries occur when consumers order online at retailers, e-tailers and brands. When looking at the delivery operations of these company categories, it becomes evident that logistic service providers (LSP) or third party logistic (3PL) play an important role. According to Reuters Events (2020), 61% of retailers, e-tailers and brands stated that LSPs are responsible for planning. Only 12% of these companies are managing home delivery through their own services, as this is costly and most companies lack the scale and capital to execute satisfactory delivery. Therefore, over 37% of all retailers, e-tailers and brands globally rely upon LSPs. But, over two-thirds stated that there is room for improvement when it comes to customer experience during last mile delivery.

Company profile within customer segment

The sales team can benefit from using a clear company profile when searching for and qualifying leads. The author of this thesis advises to use the following company profile.

The ideal customer has growth ambitions and is competitive because of its delivery service and customer experience. It wants to keep operational costs under control and sees barriers in current technologies. It has an evident delivery challenge and cares about sustainability. Key words for its DNA are entrepreneurial and agile.

Buyer personas within company profile

To assist the sales team in targeting the right people within the selected customer segments, three buyer personas were researched by the author of this thesis. These personas are archetypal representations of intended buyers, describing their pains, gains, jobs to be done, reality and context. The aim of these personas is to provide a consistent and shared understanding of intended buyers. Figure 19 presents the three buyer personas, that are the Head of Logistics/Operations, Head of E-commerce and Head of IT/Digital Transformation.

The Head of Logistics/Operations is mainly interested in executing delivery services in a cost efficient manner while ensuring customer delivery satisfaction; he is mainly company-oriented. The head of E-commerce is more customer-oriented and wants to ensure a positive customer journey from order to delivery. The Head of IT/Digital Transformation is constantly looking for new IT solutions to support and improve processes with respect to home delivery and e-commerce. All three personas would benefit from improved logistics planning.

The buyer personas were created in collaboration with a senior sales representative from Plotwise. Appendix I presents the methodology used to derive these personas.

Figure 19. Target market, customer segment, company profile and sales personas.

4.4 | SWOT overview

This chapter summarizes the most important and relevant findings based on the external and internal analyses through using the SWOT methodology (Van Boeijen et al., 2013, p. 73). Strengths and weaknesses comprise of findings that follow from the company analysis; opportunities and threats follow from context and competition. The author selected this tool to research the status quo of Plotwise that served as starting point during the design of the international sales strategy. It guided the positioning design as well as the creation of new tools for the sales team. Figure 20 presents this overview.

Figure 20. SWOT overview including most relevant findings from research.

Conclusions and takeaways

This chapter presented the data to answer SQ-3 (What are important developments in last mile delivery and e-commerce?) and SQ-4 (What countries should Plotwise enter in the coming two years?). Both answers drew from an external analysis.

The author presented the most important developments in last mile delivery and e-commerce through seven context drivers. These are the developments to watch as they will influence Plotwise's marketing, sales and product innovation strategy. The context drivers are as follows: growing cities, changing consumer demands, growth of e-commerce, new delivery models, governmental regulations, technology and the COVID-19 pandemic. The author discussed the effects of these developments in details. **Figure 20** presents an overview of these findings.

Additionally, the author performed a multi-step quantitative analysis to advise the Head of Sales on what countries to enter next. **Figure 21** shows the advised sequence. The United Kingdom was chosen as first country, followed by Sweden, Norway, France and Germany. The author drew upon his framework as presented in the literature review that allowed for analysis and comparison of countries. This model can be re-used in later studies. The analysis of UK online shopper behaviour shows that the demand for Plotwise's solution oughts to be high.

The author advises to focus on obtaining one launching mid-market customer per country before aiming to sign an incumbent. At the beginning, international sales can be executed from the office in The Netherlands as the sales process is fully digital. Opening new sales offices abroad is advised in the future.

The author advises to focus on LSP/3PL companies, electronics e-tailers, retailers and brands, and (online) grocery stores as customer segments. Sales activities should be oriented towards three personas: Head of Logistics/ Operations, Head of E-commerce and Head of IT/Digital Transformation.

The next chapter builds upon the analysis of the preceding chapters. It presents a new positioning for Plotwise, as well as tools that will assist the sales team in growing the number of (international) customers.

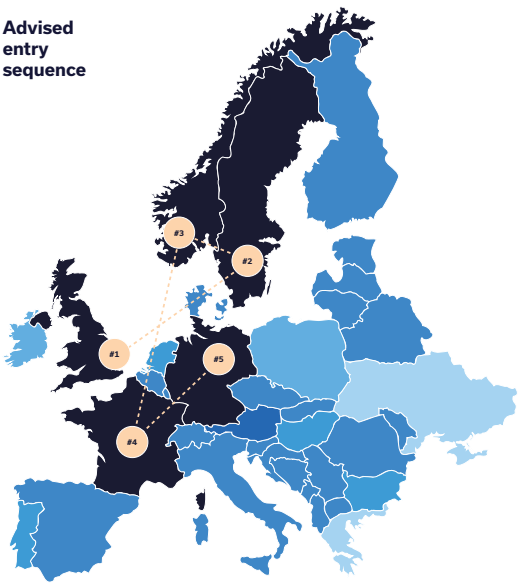
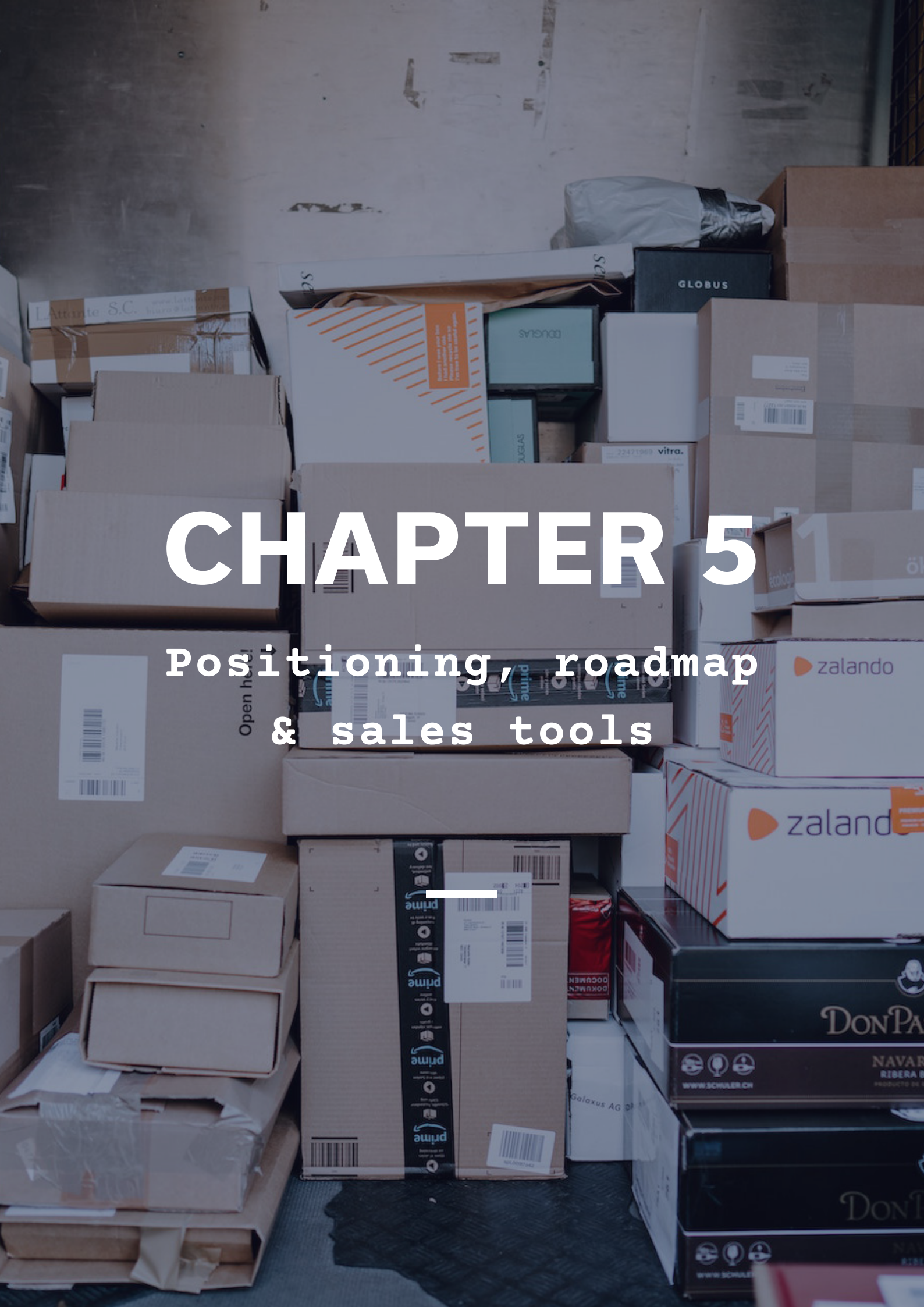


Figure 21. Advised sequence of countries to enter.



CHAPTER 5

Positioning, roadmap & sales tools

5.1 | Positioning research & advice

(SQ-5) How should Plotwise position itself when entering new countries?

The author of this thesis researched and designed a new way to position Plotwise both within The Netherlands and internationally. This chapter presents four hypothesised value drivers of potential customers and tests to what extent these are leveraged by direct competitors of Plotwise. The author discovered a gap in the competitive landscape that can be filled in with the new positioning. This new positioning fits to Plotwise's current product offering; a prerequisite of the client.

Four value drivers within industry

Multiple industry reports (e.g. Accenture 2017; Deloitte Digital 2020; World Economic Forum 2019) argue that cost reductions, operational efficiency, customer experience and sustainability are the key objectives of last-mile delivery operators and e-tailers.

The academic literature also discusses this. For example, according to Drexl (2012) the main reasons for using vehicle routing solutions are to reduce planning and execution costs and to increase efficiency. Following Reuters Events (2020), the three key objectives for delivery in 2020 are "faster, cheaper and greener". The challenge within industry is to find a balance between rapidly changing customer needs and operational costs (Reuters Events, 2020).

Findings resulting from an analysis of sales presentations between Plotwise and potential customers are also in line with these reports. For example, a logistics service provider stated that they want "more efficient and cost optimal routing, providing end customers a more precise time frame of delivery". A Dutch e-tailer stated they want to be able to "offer time slots without having to compromise on delivery costs or customer satisfaction".

The exploding e-commerce market further compounds the costs and inefficiencies of last mile delivery (Dolan, 2018). Research with 314 industry players by Reuters Events (2020) suggests that the biggest challenge in last mile delivery is reducing logistics costs (stated by 35% of participants), followed by on-time delivery (21%) and responding to last-minute changes (16%).

As the market of last mile delivery matures, consumer behaviour is increasingly shaped by factors like cost, speed and the environment. It is assumed that consumer behaviour in its turn strongly influences the decisions that delivery operators, e-tailers, retailers and brands face. Choice of delivery slots, free delivery and real-time updates on delivery are amongst the most important consumer wishes (Reuters Events, 2020). According to the research of Reuters Events (2020), nearly half of its respondents stated that being able to pick a time slot is a top need. However, a quick search on the web shows there are practically no planning companies that offer this solution; Plotwise, however, does.

Moreover, more than half of the industry players as interviewed by Reuters Events (2020) stated that sustainability is a key area to improve for in the coming three years. More important, 27% stated that the environmental impact of logistics is one of the company's top three priorities; 29% of companies have internal targets to reduce their environmental

impact and 10% aim to gain market share by distinguishing themselves as being the greenest alternative. Therefore, the author hypothesised that direct competitors of Plotwise mainly leverage cost reduction, operational efficiency, customer experience and sustainability in their marketing and sales efforts and their products.

Competitor activities

To understand to what extent Plotwise's competitors leverage the four value drivers (cost reduction, operational efficiency, customer experience and sustainability), the content of their web pages was analysed. This analysis included 27 companies.

The analysis consisted of browsing through home and product pages, and using search strings like "customer experience", "customer", "sustainability", "mileage", "emissions", "efficiency", "operational efficiency" and "costs" to quickly find the number of hits per page. Table 9 shows the results of this analysis.

	Value drivers	Mentioned on home page	Not mentioned on home page
	Cost reductions	**79%**	**21%**
	Operational efficiency	**97%**	**3%**
	Customer experience	**79%**	**21%**
	**Sustainability**	**17%**	**83%**

Table 9. Value drivers and their frequency of appearance on competitor websites.

The results show that 97% of competitors mentioned operational efficiency on their web pages cost savings and customer experience were both mentioned by 79% of competitors. However, only 17% of competitors mentioned sustainability and environmental impact. The author advises two adjustments to the positioning based on this analysis; he discusses them hereafter.

Advice 1: Plotwise as planning partner

A first opportunity followed from the analysis of Plotwise's product features: leverage the role as planning expert and knowledge partner. Because the product is completely digital and data-driven, creating objective knowledge and advice based on historical and predictive data are both possible. The Head of Sales was enthusiastic about this advice.

This is a novel way to position the company in the market as no competitors position in such a way. This move demands change in the sales processes with respect to knowledge creation and management, hence a roadmap is presented in the next chapter to facilitate this change. Moreover, the move demands a change in branding and communication. Therefore, the next chapter presents a visual manifestation.

Advice 2: Focus on sustainability and timeslot picking

Operational efficiency, cost savings and customer experience seem to be the default characteristics of solutions in the industry; they have become generic characteristics. When the same features are offered by a large proportion of suppliers, these features face the risk of fading away. This might ultimately result in negative consequences, like decreased sales.

Over half of potential customers state that sustainability is a key improvement area (Reuters Events, 2020) but only a fifth of the competition currently targets the market in that way. Additionally, over half of consumers want to pick time slots when opting for home delivery but no competitors were identified that offer this solution.

Two opportunities for Plotwise in terms of a new positioning are: leverage sustainability and leverage customer experience through time slot picking. The Head of Sales approved to continue working on them.

In order to understand how to exactly use sustainability in the positioning, two more subjects needed to be researched: the definition of sustainability in last mile delivery and the extent to which Plotwise's solution helps in achieving sustainable practices. Both subjects indicate the feasibility of this advice. The remainder of this chapter presents the research on this topics.

Sustainability in last mile delivery

As last mile delivery accounts for around 25% of greenhouse gas (GHG) emissions from all transportation, increasing the energy efficiency of transportation has a potentially high impact on improving sustainable practices in logistics operations (Halldórsson & Wehner, 2020). This is also one of the six top strategic priorities as presented in the Transport Decarbonisation Plan by the UK government (U.K. Department for Transport, 2020).

Energy efficiency is defined as "the ratio of output of performance, service, goods or energy, to input of energy," and energy efficiency improvement is defined as "an increase in energy efficiency as a result of technological, behavioural and/or economic changes." (Halldórsson & Wehner, 2020). It is often seen as an objective, just like cost efficiency. One approach to improving sustainability is by increasing the energy efficiency for last mile delivery.

Factors that comprise the energy usage for home deliveries are the drop densities, the distance and nature of the delivery round, the type of vehicle used, and the treatment of failed deliveries and returns (Edwards et al., 2010). Plotwise's solution allows for managing the first two.

According to the conceptual framework of Halldórsson and Wehner (2020) as shown in **figure 22**, improving energy efficiency and thereby sustainability practices within last mile fulfilment can be achieved through adjusting three components: distribution structure, transportation execution and household logistics capability.

The author believes that Plotwise can improve transportation execution and household logistics capability; his rationale is presented in appendix J. Moreover, improving on delivery accuracy and thereby decreasing the number of failed first-time deliveries seems a logical, feasible and viable manner to improve sustainability practices next to improving delivery efficiency.

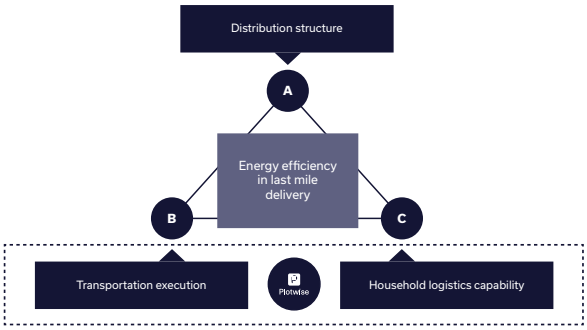


Figure 22. Energy efficiency in last mile delivery, theoretic framework, Adapted from Halldórsson and Wehner (2020).

Plotwise's ability to improve sustainability

Confidential

This is a clear indication that Plotwise can live up to the expectations of improving sustainability.

Savings on KPIs based on Plotwise experience and case studies

Cost reductions	Confidential
Operational efficiency	
Customer experience	
Sustainability	

Table 10. Plotwise's average savings on customer KPIs. Own figure.

5.2 | Positioning manifestation

Positioning statement

Changing markets Plotwise to evaluate and update its positioning and marketing message. This is crucial before entering new international markets to acquire new customers. The positioning as presented in this chapter will differentiate Plotwise in the market, helps to explain the solution in an easier way, and leverages the core strengths of its product. It resonates with industry and consumer demand and gives direction to future developments.

The author proposes the following positioning statement for Plotwise, following the format of Dunford (2019). The figures on the next pages summarise the below steps.

What is the solution?

> **Plotwise offers delivery service optimisation through the combination of unique AI software and a team of smart people.**

Target segment?

Plotwise focuses on two segments. Segment one includes innovative mid-market companies with an entrepreneurial DNA. These are LSP/3PL companies, electronics e-tailers, retailers and brands, and (online) grocery stores. The second segment includes incumbents on the parcel delivery market that are struggling with the explosive growth of home delivery.

Market category

Plotwise's planning API is categorised as vehicle routing and scheduling applications.

Competitive alternatives

Plotwise has little direct competitors. The categories of competitive alternatives are as follows: schedule and route optimisation software (API), schedule and route optimisation software, delivery management software and manual tools (e.g. spreadsheets). Most players on the market offer full-suite delivery management software.

Primary differentiation

The primary point of differentiation is the combination between API only and a OPEX pricing model; the analysis identified no other companies on the market that offer a planning solution in this way.

Key benefits

Delivery service optimisation unlocks growth in last mile urban delivery. It supports in achieving operational excellence, allows for working with fluctuating demand, delights customers and employees. **Plotwise is a future-proof planning partner that uses a data-driven approach to enable clean and fair delivery of parcels; a novel combination in the market.** A **data-driven** approach allows for a continuously agile approach that automates and streamlines the planning and delivery process. **Clean delivery** entails the reduction of CO_2 emissions through smarter routes that result in less mileage and an increased first time right performance. A higher rate of first time right delivery eliminates the need for unnecessary trips.

Moreover, the platform is ready for the transition towards electric and other green vehicles and supports new distribution

networks. This allows customers to adhere to present and future governmental regulations. Lastly, **fair delivery** is all about deliver as promised for consumers (through providing validated time slot picking), and a realistic work balance for dispatchers and drivers. Plotwise results in happy delivery companies, happy drivers, happy customers and a reduced carbon footprint.

The next pages present a visual manifestation of this positioning statement.

New positioning for Plotwise

Delivery service optimisation

Plotwise

Future-proof planning partner

=

Satisfy (future) consumer needs

What consumers care about:

Environmental awareness
Flexibility of delivery selection
Improved delivery experience
Customisation and personalisation of delivery
Faster delivery
Cheaper delivery
Home delivery
Liquid delivery expectations
Ordering more online

=

Leverage common industry value drivers

What customers care about:

Cost reductions
Operational efficiency
Customer experience

=

Leverage Plotwise's unique product attributes

What Plotwise can offer:

Sustainability
Time slot picking
Planning partner

The future-proof planning partner for last mile delivery

That offers:

Data-driven operations

Clean delivery

Fair delivery

Powered by:

Smart technology

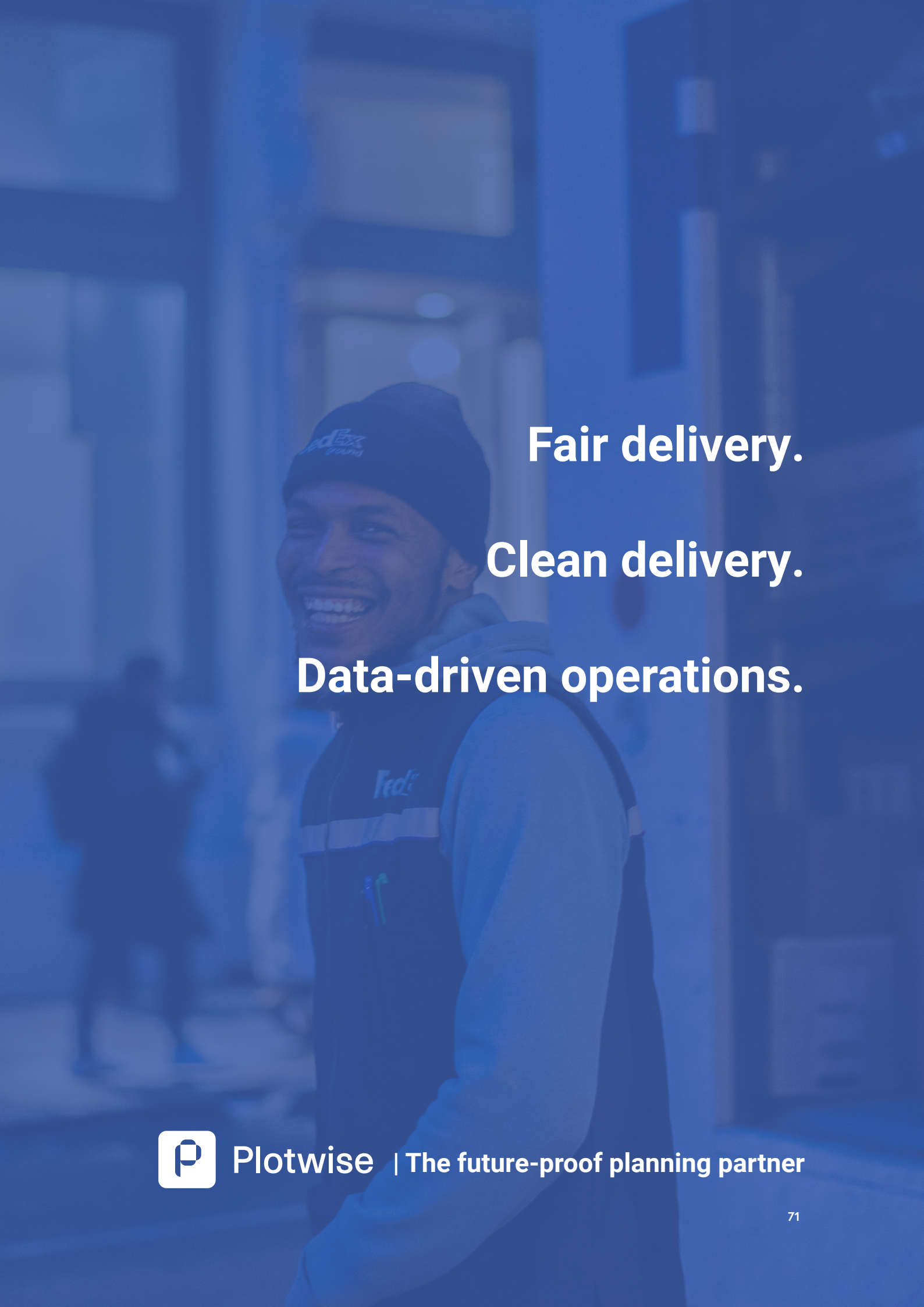
A team of experts

Achieve operational excellence.

Comfort your customers.

Be ready for the future.

Plotwise | Delivery service optimisation


Fair delivery.
Clean delivery.
Data-driven operations.
Plotwise | The future-proof planning partner

5.3 | Strategic roadmap

(SQ-6) What are the first steps towards execution?

The author expects that the new positioning will positively influence international sales and has validated this internally with the Head of Sales. However, improvements across the organisation are necessary to arrive to this new positioning. These improvements respect the three pillars of delivery service optimisation; data-driven operations, clean delivery and fair delivery. To successfully carry out these pillars towards customers, improving the sales process is preferable. This is an extensive process that will take time and needs guidance. This chapter presents a short-term strategic roadmap to facilitate the first steps of this transition.

Strategic roadmap

The roadmap includes six domains: customer and entry strategy, customer segments, strategic objectives, sales approach, product focus and supportive tools. The rationale for selecting a short time period (2021-2022) is based on the maturity of the company; as Plotwise is currently in the scale-up phase, three years in the future is already a long time. The company is continuously evolving and its strategy changes more frequently than at established companies. Figure 23 presents the roadmap.

Figure 23. Strategic roadmap for Plotwise.

Customer and entry strategy

Confidential

A launching customer should fit to the customer profile and customer segment as presented earlier.

This advice is based on the current size of the sales department; if more salespeople join the team, the focus could be extended to more countries simultaneously. The sales team is already capable of doing direct sales to international customers, at Plotwise does not need to open a new sales office abroad. The author expects that the customer strategy will have a positive effect on the first strategic objective, which is increasing lead conversion, as signing a launching customer will increase knowledge about market dynamics in a country. More knowledge ultimately results in better strategy.

Supportive deliverables: **A. COUNTRY SELECTION FRAMEWORK**

Strategic objective 1: increase lead conversion

Increasing the lead to customer conversion is an ongoing objective for the commercial team that continuously demands improvement. A higher conversion rate results in more revenue when resources stay equal. Entering new countries entails identifying, qualifying, validating and signing new leads. As discussed before, current weaknesses of the sales department are the level of knowledge management within these steps and the challenge to successfully demonstrate the solution's features.

Hence, the advice is to increase the lead conversion through a more structured sales process that focuses on inbound and outbound leads. For this, the author has designed three tools: the urban delivery maturity scan, the data diagnostics tool and the sales validation canvas. The author assumes that these tools will positively influence the awareness, consideration and decision stage of the buyer's journey which in turn results in more paying customers. Moreover they help in structuring and shortening sales cycles.

Supportive deliverables: **B. URBAN DELIVERY MATURITY SCAN** **C. SALES CANVAS** **D. DATA DIAGNOSTICS TOOL**

Data-driven sales process

Currently the commercial team uses a CRM to store customer information and track the deal funnel. However, to increase market information, shorten sales cycles and decrease the CAC, the author of this thesis suggests to move to a more data-driven sales approach. Data-driven means that the sales department gathers and stores relevant data within all sales stages and uses this when selling Plotwise's solution. Extending the customer database will help in targeting the right leads easier, having tailor made meetings and proposing fitting solutions at the right moment within a sales cycle. Moreover, as it matures the sales process, it allows the sales team to scale in terms of employees and improves the learning capability of the team. More data means a more effective sales approach in the long term.

The first step in becoming more data-driven is extracting data from the market in a smart and automated way. The urban delivery maturity scan is a way to improve the lead generation and qualification process. Storing data from meetings is also important; hence the sales validation canvas to structure and standardise the lead qualification step. More data means easier opportunity scoping and opportunity validation for the Head of Sales.

Figure 24 presents an updated sales process that shows the link between steps of the buyer journey and the sales funnel. Moreover, it shows how the sales tools fit to activities of the sales team.

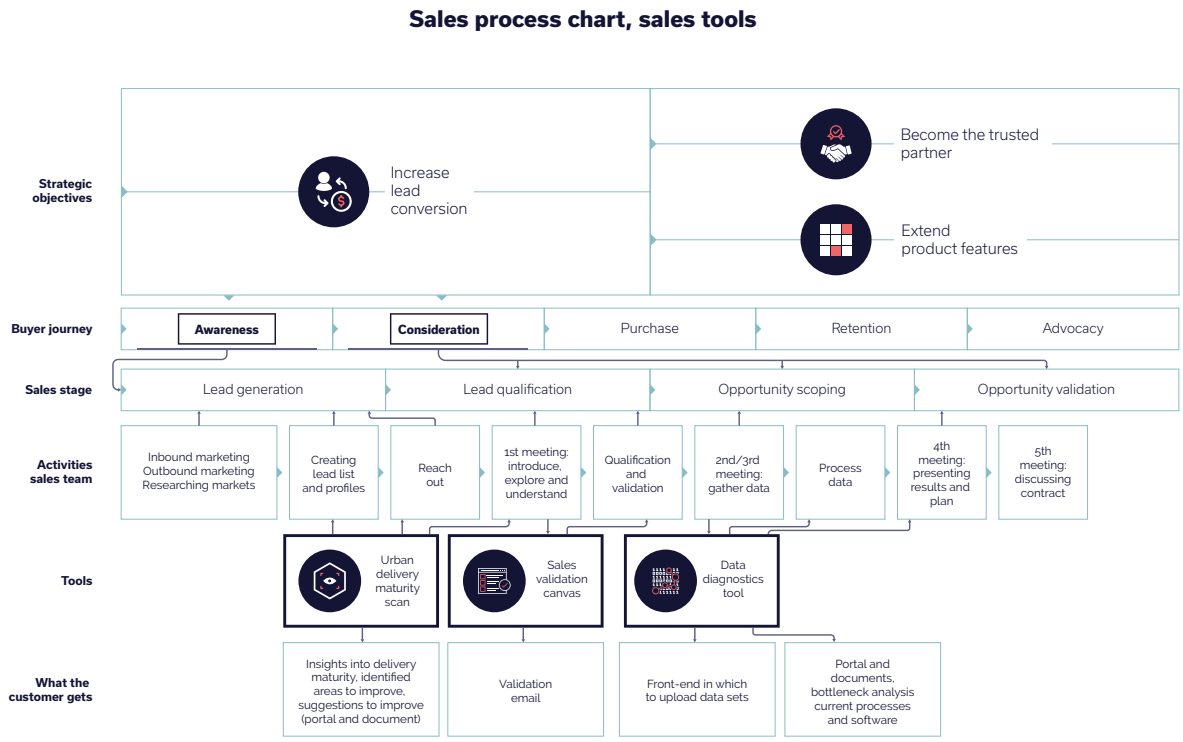


Figure 24. Updates sales process chart. Position of new sales tools in sales process.

Strategic objective 2: become a trusted partner

The second strategic objective entails Plotwise becoming the trusted partner for last mile delivery planning. Strong and positive brand equity as result of successful positioning ought to result in more paying customers. To become a trusted partner, Plotwise should take several steps, of which the first is updating the positioning as presented in the previous chapter.

Being a partner means that Plotwise goes beyond being solely a product company or a consultancy company. As a planning partner, Plotwise not only analyses a customer's situation but also delivers a continuously improving solution and provides objective advice derived from real data. Plotwise takes ownership of the customer's problems and challenges. In other words, it is all about turning the right knobs together with a customer. The data diagnostics tool supports this.

The data diagnostics tool is a new way to provide a tailor-made customer analysis. It is a tool that Plotwise can show on their website and use during the sales process as well. It will help Plotwise in their transition towards becoming a planning partner; based on an analysis of customer delivery data this tool will suggest improvements and show how Plotwise's solution could impact the customer's operations. As Plotwise gathers more data, it will become more sufficient at detecting deviations from industry benchmarks within the provided customer data sets. This in turn results in more objective analyses.

Supportive deliverables **E. UPDATED POSITIONING** **D. DATA DIAGNOSTICS TOOL**

Strategic objective 3: New product features

The third strategic objective is to extend Plotwise's product features. As this thesis is within the domain of strategic design, the author cannot neglect the information he has gathered from the analysis phase. Hence, the author suggests to develop a driver app and a digital twin proposition. These suggestions are both in line with the current product portfolio strategy;

they allow Plotwise to remain a provider of an API service specialised in delivery planning. These adjustments will also help Plotwise to further develop the concepts of clean and fair delivery. Designing these product features are out of scope of this thesis; they are a starting point for future design research. **Appendix K** presents the author's main suggestions. These serve as starting point for future research.

Shifting product focus

The product focus as presented in the roadmap the result of the advised strategic objectives and the improved sales approach. It is in line with the extension of the product features. The product focus draws upon the conceptual sustainability framework as introduced by Halldórsson and Wehner (2020). In order to successfully offer clean delivery, Plotwise should allow their customers to improve their transportation execution and distribution strategy as well as improving the households logistics capability.

Improving transportation execution is the current focus of Plotwise; marketing time slot picking and further developing it will increase household logistics capability. A next iteration for time slot picking could be eco time slot picking, where a customer can choose the most sustainable time of delivery instead of the fastest or cheapest option.

As Plotwise's business grows so will its industry knowledge. In the role of a planning partner, Plotwise can start to offer advice on distribution strategy. For example, Plotwise could analyse city centres and combine data streams of several companies to suggest the most optimal delivery network, i.e. providing advice on placement of new hubs and electric vehicle charging points. This is a move towards becoming a trustworthy and essential player within future urban ecosystems.

The next chapters present the description, validation and implementation of the urban delivery maturity scan, sales validation canvas and data diagnostics tool.

5.4 | Urban delivery maturity scan

Description

The urban delivery maturity scan is a new tool for the sales team to increase market engagement and thereby the number of inbound leads. The tool is aimed to attract new visitors to the website and to convert them to leads; more leads should result in more closed deals. The goal of the tool is twofold; it should spark interest in Plotwise's solution space in a positive and neutral way and it should feed the sales team relevant market data.

Figure 25 shows how the tool works. A visitor lands on either Plotwise's homepage or directly the landing page of the scan. Investing in (digital) marketing campaigns and search engine optimisation should increase this number of visitors. On the web page the visitor sees an introductory text and explanation of the tool. The visitor also sees an example report that serves as indicator of what to expect. From there, the visitor can start the scan. Through answering a list of questions, as presented in appendix L and figure 26, the visitor receives a total score that indicates its delivery maturity. These questions are based on the market and context analysis from this research.

Upon completion and after leaving contact details, the visitor receives a download link via email to download the full report (figure 27 and figure 28). This report contains a detailed score per domain (delivery strategy, planning, resources, data utilisation, fair delivery and clean delivery) and explanation. It also presents advice for the visitor on how to move to a higher level of maturity; this is indirectly linked to Plotwise's solution. Once the customer has completed its contact details, he will automatically receive two follow-up emails over a set period of time. The descriptions as shown in figure 28 are indicative and should be adjusted according to Plotwise's vision.

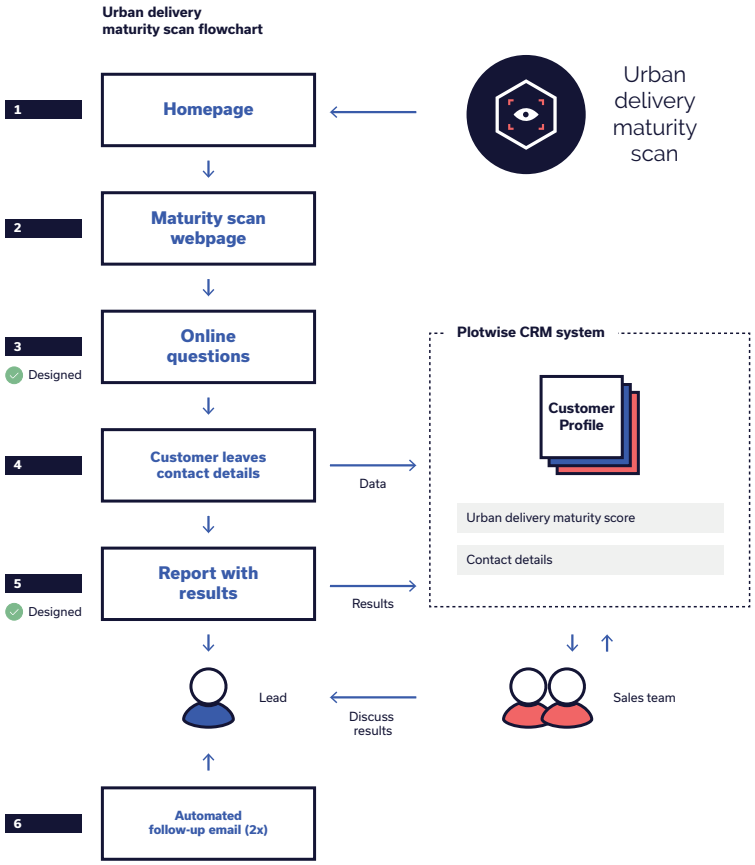


Figure 25. Proposed flowchart for urban delivery maturity scan.

The answers as provided by the visitors are also forwarded to Plotwise's CRM system; this allows for building detailed extensive customer profiles. These profiles indicate how Plotwise can best help a potential lead. This knowledge is relevant to the sales team as it allows for a relevant conversation starter within outreach activities and sales meetings.

Validation

The author has validated the tool internally. He pitched his ideas and designs to the sales team, Head of Sales and COO; they all believed the tool would add value to the company. External validation in terms of user testing should still be conducted. To test the usability, the author proposes to design the scan in an online survey application (e.g. Google Forms or Typeform) and link the data to a simple database. The first version can be tested internally with Plotwise employees; once the user flow is designed it should be tested with real visitors. By spending a small budget on a digital campaign, Plotwise can attract visitors. The scan should contain a feedback step in which the user can share his experience with the tool and the report. Internally, the sales team should provide feedback on the applicability of the results.

Implementation

The author advises to hand over the development, testing and implementation of this tool to a team of three people. This team consists of a project lead, a front-end developer and a back-end developer that work on this project for several hours per week. During the testing stage, the front-end developer and project lead should design the minimum viable version of the tool as discussed above. If the tool gains traction, the team can decide to develop a second version that is more customised and integrated on the website. The back-end developer should integrate and automate the data with Plotwise's CRM. Additionally, a member from the sales team should be in contact with the project lead to follow the development. A sales or marketing employee could also take the role as project lead.

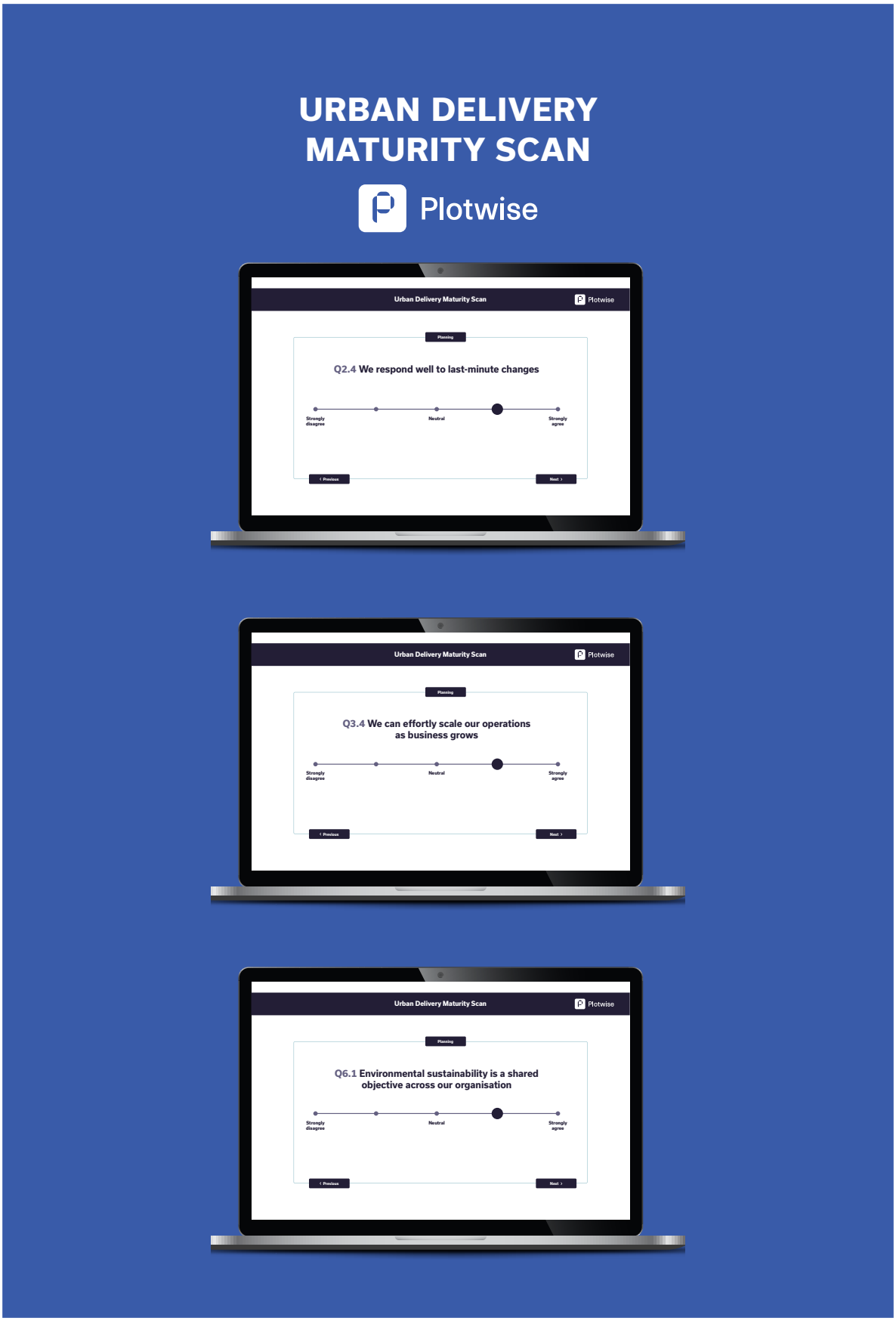


Figure 26. Entry screens of urban delivery maturity scan.

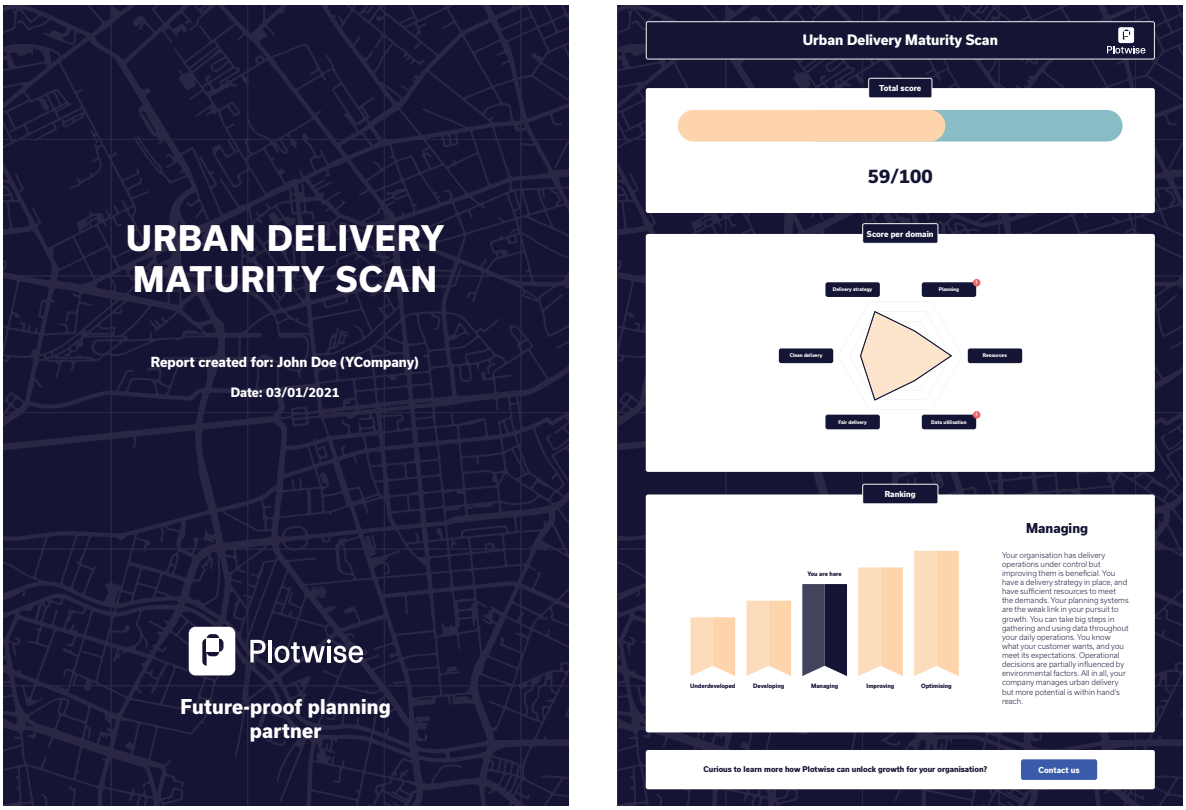


Figure 27. Screens of downloadable report from urban delivery maturity scan.

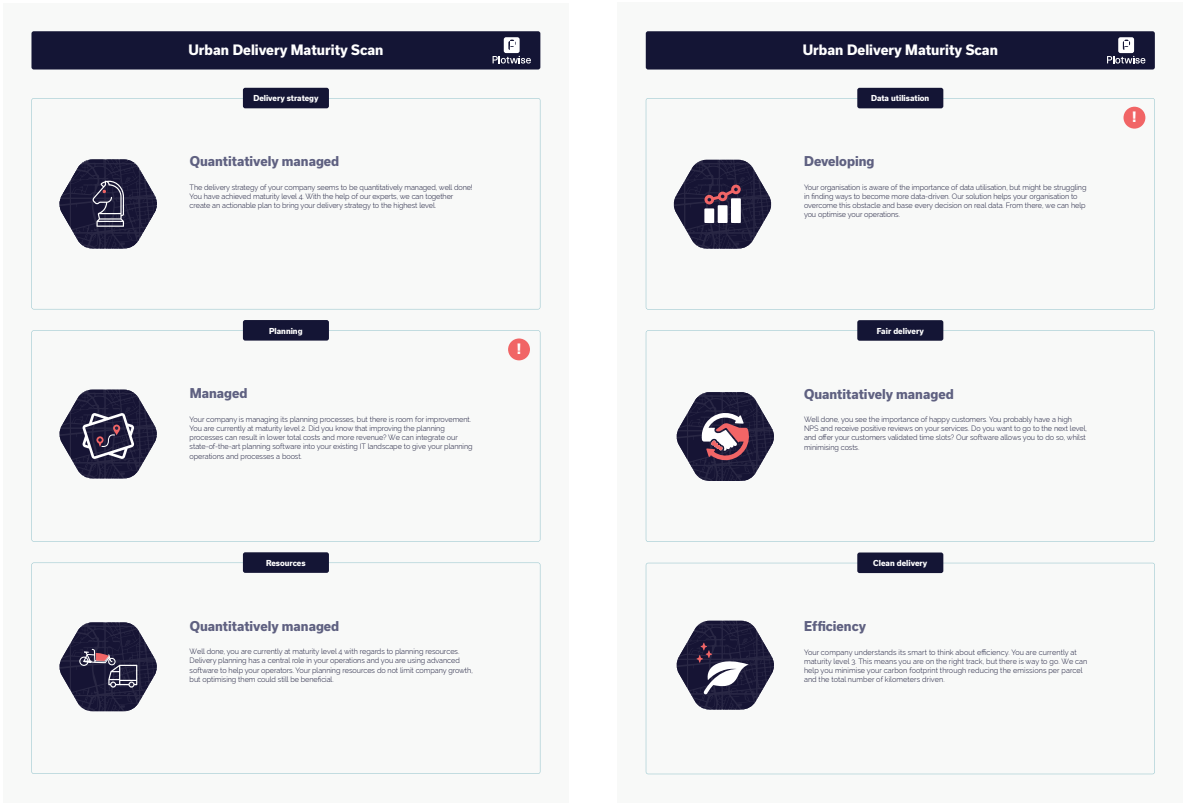


Figure 28. Detailed explanation of score and advice per domain. Focus areas (in this case planning and data utilisation) are highlighted.

5.5 | Sales validation canvas

The sales validation canvas as presented in this chapter is a tool designed for the sales representatives of Plotwise. This validation canvas helps to structure and standardise the gathering, validation and storing of knowledge during the sales process. The tool can be used for lead qualification.

Description

The validation canvas is structured around key information that is needed from a lead before it can be qualified. It includes boxes to fill in information about a lead, its challenges, its ambition for the next three years and its perceived hurdles to get there. Knowing this information is important as it helps to pitch Plotwise's solution in a tailor made way. Figure 29 shows the canvas.

The canvas helps the sales representative to validate four important categories of assumptions: desirability (is the company looking for a new solution), viability (can the company buy Plotwise's solution in a profitable way), feasibility (is it technically possible for the company to integrate Plotwise's solution) and accessibility (are we talking to the right person).

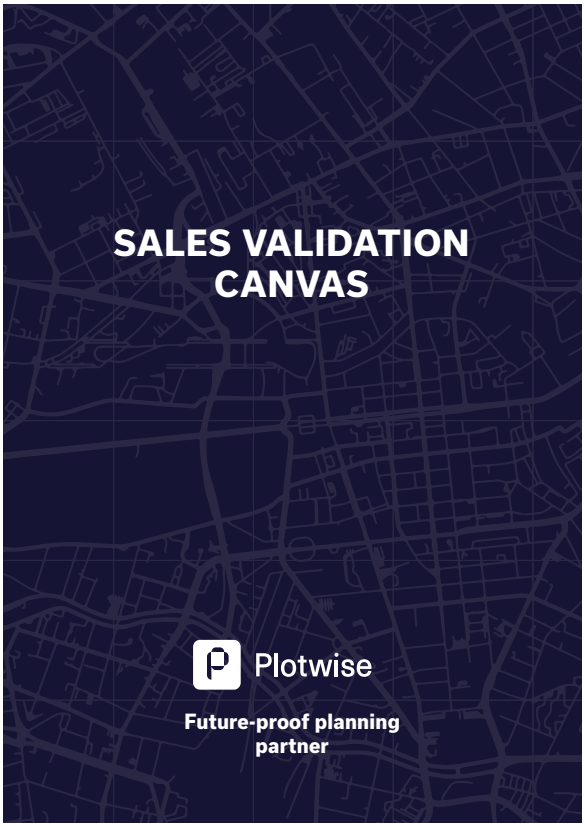


Figure 29. Sales validation canvas.

Ticking the boxes shows to what extent assumptions have been validated with the lead. Once all boxes have been ticked, so all assumptions have been (in)validated, the sales representative discusses the result with the Head of Sales. The Head of Sales receives this overview of insights that helps him to decide whether to pursue the opportunity and move into the opportunity scoping phase. Using the canvas helps the sales representative to discuss an opportunity.

No questions were provided to structure the sales conversation, as the author of the thesis believes that it would not bring these conversations to a higher level. It is the challenge for a sales representative to be creative within any meeting, so there needs to be enough room to do so. The canvas does however make sure that in the end all conversations will lead to the same insights. This will allow for better follow-ups, decision making and analytics.

Validation

The sales canvas as presented here was tested with one sales representative. He used it during one of his meetings and found the steps very useful to use: "it is a good way to structure information about a lead or account". He mentioned that the format is not very user-friendly, as it takes some time to edit the PDF. This can be challenging during a call. It was therefore discussed to implement the canvas within the CRM system of Plotwise. Moreover, he finds the tool "very useful and helpful".

The canvas was also pitched to the Head of Sales; he fully agreed this would be a good step towards structuring and sharing knowledge within the team.

Implementation

Implementing the sales validation canvas is simple; it demands a short explanation to the sales team that can be done via an online meeting. Additionally, it is advised to integrate the canvas in the CRM system of Plotwise. This allows for easier access during meetings and makes data analytics easier. The canvas should be transformed into a clickable and editable worksheet that saves into a database.

It is advised for the sales representative to discuss the validation canvas with the lead once completed, to make sure everything is understood well. This ensures no resources and time are wasted on wrong initiatives.

5.6 | Data diagnostics tool

This chapter presents the data diagnostics tool, the third design deliverable of the author. The thesis provides little information about this tool, as the client requested to keep its contents confidential. Appendix M discusses this tool in detail.

Description

The data diagnostics tool is a quantitative tool that can be used by the sales team within the opportunity validation phase. The tool allows for a more visually appealing and convincing manner to explain the unique benefits of Plotwise's software and the potential impact the software makes on a lead's delivery planning and operations. The tool moreover streamlines the data transfer between the sales and delivery team. Data analytics are currently performed in spreadsheets, but a front-end and commercial aspects are missing. Figure 30 shows the flowchart of the tool.

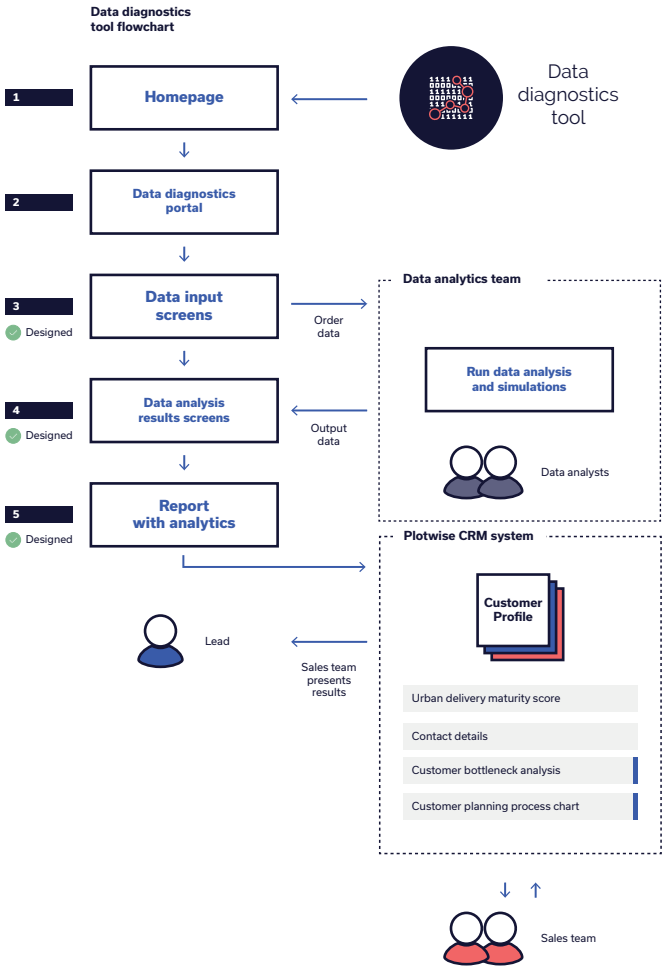


Figure 30. Proposed flowchart of the data diagnostics tool.

The intended use of the tool is as follows. Within the opportunity validation phase, the sales team asks the lead to upload several sets of specific planning data. These data are then analysed by algorithms and a data analyst. The output is an interactive report with results that includes a bottleneck analysis. These data are saved in Plotwise's CRM system to extend the customer profile. A sales employee can then present the results to the lead. A next version of this tool includes an online environment in which the lead can play with several parameters and see how that influences his planning and operations.

The author suggested to increase lead conversion through a more data-driven approach to sales cycles; this data diagnostics tool allows Plotwise to do so. As more leads share their data, the tool will enable the company to build a large market database that can be used for benchmarking and research.

Appendix M shows the front-end and back-end of this tool. The back-end was validated with the Head of Sales, COO and a data analyst from the delivery team. The COO and Head of Sales see the value in this tool and aim for an internal project to further develop, test and integrate this tool. The front-end will be tested in upcoming sales cycles.

Conclusions and takeaways

This chapter first answered SQ-5 (How should Plotwise position itself when entering new countries?) through presenting a company positioning aimed at obtaining mid-market customers across Europe. **The author suggests Plotwise to become a planning partner that offers delivery service optimisation**. This enables clean, fair and data-driven delivery that unlocks growth for its customers.

The research presented four value drivers that are important across the industry: cost reductions, operational efficiency, customer experience and sustainability. A competitor analysis showed that leveraging sustainability is uncommon yet desired by customers and online shoppers; this links to clean delivery. Plotwise's engine allows for 20% reduction in CO_2 emissions per parcel, as well as over 10% of distance reduction.

A unique product feature that the author suggests to highlight more in sales and marketing efforts is validated time slot picking; it allows for fair delivery that results in happy deliverers and satisfied customers. It also has a positive cross-over effect on sustainability; a higher first-time-right rate will lower the emissions per parcel.

The chapter also answered SQ-6 (What are the first steps towards execution?) through presenting a strategic roadmap (figure 23) that summarises and visualises the strategy for Plotwise to grow international sales. The roadmap introduced three objectives for the sales team as suggested by the author: increase lead conversion, become the trusted partner and extend product features. These objectives are to be carried out by the sales team in collaboration with the service delivery and tech/product departments.

The chapter presented three sales tools as designed by the author. The aim of these tools was to increase lead conversion through structuring the sales process, improving knowledge management within the sales team and providing an easier explanation of Plotwise's solution. The author validated and tested the tools internally; steps for external validation, testing and implementation are suggested by the author as well.

CHAPTER 6

Conclusion & reflection

6.1 | Conclusion

Answering the research question

This thesis explored the ever growing world of e-commerce and last mile delivery. Both industries have never been as relevant as they are today. The already expanding market of online shopping has seen unprecedented growth rates due to the COVID-19 pandemic. Consumers are redefining the way they shop as lockdowns force them to stay at home, resulting in more parcels that demand delivery every day.

Plotwise is in the unique position to ride this wave of growth. As its potential customers increasingly struggle to handle the persistent growth of orders, Plotwise's solution seems to be a lifesaver. The author was asked by Plotwise's COO and Head of Sales to think of a way for the company to make use of this opportunity to acquire more customers across Europe.

To provide relevant advice to his client, the author defined the following research question: (RQ-1) **"How can Plotwise grow its business within the European last mile delivery space in the coming two years?"**. The author argues that obtaining more customers will be the result of better understanding the context in which the company operates, selecting the right markets, creating a fitting product positioning and designing a suitable sales strategy. For this, he applied quantitative and qualitative design research methodologies as well as strategic design techniques. **The sales strategy as presented by the author aims to increase knowledge creation and improve sales process management that in turn results in higher lead conversion**.

To ensure a valid research result that Plotwise can implement, the author frequently presented his findings to Plotwise's employees. The Head of Sales and COO, amongst others, indicated multiple times that they see high value in the results, thereby serving as proof points for internal validation of this research. In a way, this thesis is the result of many informal and ad hoc co-creation sessions.

Contributions to strategic design practice and industry

While answering the research question, this thesis contributes new knowledge to strategic design practice and industry. By means of a literature review and synthesis, the author explored the extant literature on international market entry strategies. He translated his findings into a project-specific framework that guided the creation of an international strategy.

The author also created a theoretic quantitative framework that guided the analysis and selection of countries to enter. Both frameworks can be reused in future strategic design projects or within Plotwise. The spreadsheet models that the author created for the market research allow for updates with newer data points.

This thesis moreover demonstrated how to execute a data-informed design project. It was the goal of this author to execute an extensive market analysis that went beyond the standard external analysis as performed in a standard design project. The research borrows principles and models from business studies and integrates them into strategic design.

Lastly, the author designed three sales tools that allow the sales team to carry out the new sales strategy. The sales validation canvas is company-specific but can be adjusted for use within other companies across industry. The data diagnostics tool is a novel way to acquire new customers.

All three sales tools demonstrate what role strategic design can take in a domain that is often overlooked by designers; that of sales. To successfully push innovations to the market, the processes behind that are maybe as important as the innovation itself.

Limitations and future research

The nature of this research limits the applicability of its findings for other researchers and practitioners, as a large proportion of the study regards company-specific topics. The approach and way of thinking however could be of interest for other designers.

The author could have investigated the entry mode selection in more detail. Time constraints and the decision to narrow down the research made it difficult to do so. At some point, the author experienced that his findings and advice were too broad; therefore he scoped down his research. This leaves parts open to future research.

Future research with regards to the presented strategy could include external validation of the tools and positioning with potential customers. Due to the context of this research, and the COVID-19 pandemic, it was difficult to perform external validation. An option is to set up a group of current customers that are willing to co-create with Plotwise.

Future research could also include longitudinal tracking of assumptions and designs that the author presented. It could be of interest for the company to understand how this strategy affects company growth and overall market performance.

Finally, this research took the product-market fit of Plotwise for granted. The author did not focus on making adjustments to the client's product even though strategic designers often do so. Future research could build upon the proposed strategy and investigate new product features that enable sustainable company growth in different ways.

6.2 | Personal reflection

Prior to the start of this project, I wrote down a list of competencies to prove, learn and improve. Together, these formed my personal learning objectives. They included multi-stakeholder management and communication, combining quantitative methods in combination with creative design techniques, synthesising acquired data, conducting primary research, executing creative techniques in a professional setting and growing my business sense whilst combining it with my knowledge on strategic design. I will briefly discuss here to what extent I proved and improved these competencies.

First of all, **multi-stakeholder project management and communication**. I believe this is amongst the most important skills in professional life, so I put a lot of effort into this. I applied some tricks that I learned from my previous internship at a consultancy firm: I started the project by setting up a rhythm with most important stakeholders and joined the team that I would be researching as an observant, researcher and sparring partner. Being an active part of the sales team allowed me to create better results and gave me a sense of belonging within the company. I believe that I have made some big improvements regarding this competency. As a bonus, my company mentor gave me a look into the world of enterprise software sales.

I believe that strategic designers should put even more effort into the business side of design than they think and already do. As designers, we are very proficient at researching desirability, but in the end that is only one part of the equation that companies care about. I combined **strategic design with business analytics and administration principles** to provide answers to the client that make sense. However, this is also one of my pitfalls; focusing too much on what seems to be true and logical rather than following very creative thoughts and processes. I still believe this research ended with a good balance between primary and secondary research techniques and creative methodologies.

One of the biggest challenges of this research was to combine the enormous amounts of data I gathered from internal and external analyses. I find it easy to analyse and summarise data, but **it is challenging to decide what to do with that data, what decisions to make and how to keep a proper scope**. In the first half of this research, I lacked the narrow scope that I in the end needed to deliver this thesis. I am happy that I shared this issue with my supervisory team and that they felt the same; a healthy discussion followed and resulted in clear action points to focus on.

In the past, I used to spend a lot of time preparing meetings by means of very detailed slide design. This time, **I decided to allocate less time to designing slides and instead followed a structured approach to prepare every meeting**. I learned that by doing so, I could spend more time on my project and leave every meeting with better results.

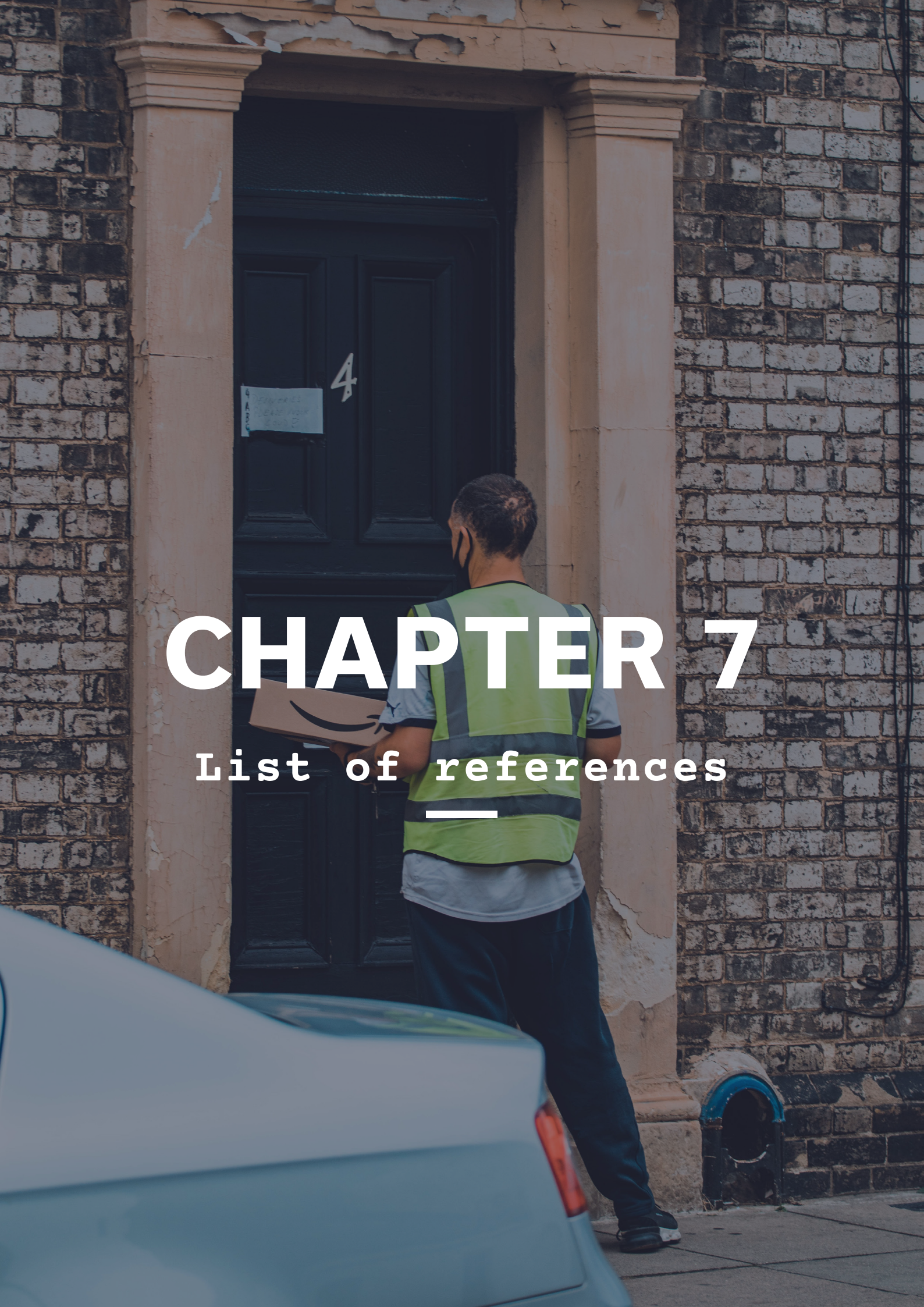
Another big test throughout this project has been **the COVID-19 pandemic**. At the time I was writing my project brief, I expected that I would be able to work at the client's office at least some days per week and be in frequent contact with the employees. I mainly picked a company to graduate at because of the working experience it would gain me and the social aspect of working with people. However, the pandemic forced me to conduct my entire research online and, for the largest part, in my bedroom. For me, this resulted in less creativity and at sometimes less motivation.

Moreover, I initially expected to do more primary research in the form of co-creation workshops. Instead, most of my research included online interviews and meetings. **I enjoy working with people in real-life**; I get the most energy from managing a team. So, moving online was a bit of a challenge for me. Nevertheless, it has taught me how to be more resilient in such an exceptional and immutable situation.

Another interesting challenge was to **find a proper balance between the wishes of the faculty and those of the client**. I believe I have presented a result that is relevant for both the field of strategic design and the client. The key here again was clear communication and expectations management.

A big positive of this project was the ability to spend more time on reading books and articles. This is something I enjoy but usually do not allocate enough time for. Going offline often results in valuable insights.

Most important are **the personal takeaways from this project** that I will take to my professional career. Firstly, working full-time on only one project is not the best thing to do, as it resulted in tunnel vision and a lack of energy. I prefer to **work on several projects at the same time**. Secondly, always try to **be in touch with a mentor** that is a few years ahead of you. He will have valuable knowledge and will help you achieve better results. Thirdly, **talk with as many people as possible**, especially those that are outsiders to your project. Pitching ideas will force you to think more thoroughly and make them more concise; the discussions that follow will often result in better ideas. Do not try to reinvent the wheel, but rather find the right instructions to build it by extracting and combining knowledge from what has been said and written.



CHAPTER 7

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