

# **Pushing the Boundaries: Factors of Influence to the International Launch Strategy for Healthcare Startups**



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## **Abstract**

This study investigates potential factors of influence to the international launch strategy for startups in healthcare. Increasingly more startups are attempting to launch internationally where new factors of influence arise relative to the domestic launch strategy. In an attempt to answer the research question ‘What factors influence the shape of an international launch strategy of startups in healthcare?’, this study has conducted eight in-depth interviews with six entrepreneurs and employees involved in the international launch for their startup, one internationalisation expert and one speech-engineer expert also experienced in international launches and strategies. The findings showed nine factors of influence for the international launch strategy that were not represented in the domestic launch strategy, being Intensity of Competition, Similarity to the Domestic Market, Perceived Risk-aversion, Bureaucracy of Governmental Institutions, Privacy Legislation, Perceived Privacy sensitivity, Beneficialness of the Remuneration System, a Country’s Innovativeness and the Localisation Necessity. These factors of influence have been applied and summarised into a conceptual model suggesting differences between domestic and international launch strategies.

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## **Chapter 1 - Introduction**

### **1.1 Problem Description**

Health care providers experience constant pressure to innovate in order to increase the quality of health care while decreasing costs. There is a digital transformation of health care which is accelerated by the ongoing COVID-19 pandemic (Al-Anezi, 2022). This digital transformation requires a successful commercialization of the product. Crucial in this commercialization is the launch strategy. The launch strategy embodies the marketing decisions required to offer a product to its target market and generate income through the sales of the product (D. H. Green & Ryans, 1990). These decisions translate to decisions on launch tactics such as penetration prices or skim prices and the type of promotion, which could be risk-based, information-based, awareness-based and user-based (Guiltinan, 1999). The pressure on managers to hurry their launch is increasing (Chiu et al., 2006). Meanwhile, the launch strategy is often considered to be the riskiest and most expensive stage in the New Product Development (NPD) process (Di Benedetto, 1999; Guiltinan, 1999). This puts a lot of pressure on managers to get the launch strategy right. Many factors influence this pressure even more, including the acceleration in the rate of technological developments, enhanced mass communication, fierce competition in maturing markets and globalisation (Ali et al., 1995). Influences like these have made launching new products a more crucial and complex subject problem (Biemans, 2003). Especially since globalisation has led to global markets, resulting in businesses increasingly launching products into international markets (Li & Lin, 2015; Lockrey, 2015). These international markets provide many opportunities for entrepreneurs. SMEs and startups can quickly adapt and internationalise in favourable conditions (Sekliuckiene et al., 2018). However, the international context also brings about a lot of uncertainty. Launching internationally creates a complex institutional international environment where different factors of influence come into play such as government regulations, cultural differences and foreign competition (Kaleka & Katsikeas, 1995). It is becoming increasingly common for companies to launch internationally, yet there is little knowledge on what an international launch strategy exactly entails.

### **1.2 Managerial relevance**

Attendi, a startup residing in the Amsterdam area, is an example of a company facing these issues. Attendi uses speech-to-text technology using artificial intelligence to decrease the documentation burden in Electronic Health Records (EHR) and Electronic Medical Records (EMR). Attendi is at the stage of commercialising its technology in the Netherlands and is

evaluating its options to go abroad and has issues with deciding where and how they should launch internationally. Yet, they have little knowledge of the international factors of influence that affect their international launch strategy. What factors of influence are there and how do they influence the international launch strategy? Moreover, public health organisations, the customers of companies such as Attendi, tempt to be more risk-averse and follow defensive behaviours (Mieczkowska et al., 2004; Saarela et al., 2018), indicating the need for a different approach for healthcare startups compared to more regular startups. The many factors of influence lead to the problem that entrepreneurs are unaware or have insufficient knowledge of the factors crucial for an international launch strategy. The outcomes of this research should therefore help startups such as Attendi shape their international launch by becoming more aware of what an international launch strategy is and what factors of influence are important during the international launch.

### **1.3 Theoretical relevance**

Although literature generally agrees on what a launch strategy is, there is much less consensus on what an international launch strategy entails and how this differs from a regular launch strategy. Literature on launch strategies suggest that there are some forms of contextual factors of influence. To understand what factors of influence are, we must first define it. Factors of influence are the underlying factors that affect the outcome of a process or action (Craig et al., 2009). In the context of international launch strategies, factors of influence are the underlying international factors that affect how international launch decisions will unfold. In their research, Hultink and Robben (1999) include two market characteristics into their launch strategy model: competitive reaction and stage of the Product Life Cycle (PLC). These two characteristics indicate that there are indeed certain external factors of influence to the launch strategy, yet little to no attention is paid to how the international context could influence these factors of influence. This is surprising because in today's rapidly developing and globalising world, international markets are becoming more accessible than ever before. Whereas traditional launch strategy research focuses on internal processes and decision-making (e.g. Chiu et al., 2006; Choffray & Lilien, 1986; Hultink & Robben, 1999), this study contributes to launch strategy theory by exploring the factors that provide support in explaining and understanding the concept of international launch strategies.

Literature on internationalisation could provide insights on these factors of influence. There is plenty of literature available on internationalisation (Bell & Young, 1998; Clark &

Pugh, 2001; Crick & Spence, 2005; Johanson & Vahlne, 1977; Penrose, 1959), yet there is little to no research connecting internationalisation to launch strategies. Theory on internationalisation assumes there has been a working product, already launched in an existing market. However, there is a rising case of so-called ‘born-globals’, challenging existing literature (Knight et al., 2004; Pickernell et al., 2016). Born-globals are firms that have the ability to fulfil global niches from the start (Moen, Sørheim & Erikson, 2008). They are characterised by the ability to overcome the initial barriers associated with entering foreign markets without the establishment of a strong home market share (Ferguson et al., 2021). This study also adds to both launch strategy as well as internationalisation literature by integrating both theoretical approaches. In doing so, it expands and connects two previously largely unconnected fields of research.

#### **1.4 Problem statement**

Internationalisation and launch strategy are broad concepts including many theories. This article builds on and combines these theories to answer the research question:

*What factors influence the shape of an international launch strategy of startups in healthcare?*

To answer this question, this study will have to answer the following subquestions:

- *What main factors of influence of an international launch strategy does the literature suggest?*
- *How can we define an international launch strategy?*
- *What are the effects of the factors of influence on the international launch strategy?*

#### *Research Objective*

The objective of this research is to get a better understanding of how startups’ launch strategies are influenced by current day’s international opportunities by attempting to find connections between literature on launch strategies and internationalisation. In this manner, this study provides attempts to understand, define and research international launch strategies. Thereby creating a starting base for future research on international launch strategies. The outcomes of this study could affect managerial practices by providing entrepreneurs with a better understanding of international launch strategies. Especially how different factors influence the shape of the entrepreneurs’ international launch strategy.

## 1.5 Scope

The context of e-startups in healthcare is interesting to study. Literature often refers to health care technology as electronic health or eHealth. eHealth is commonly described as ‘‘health services and information delivered or enhanced through the Internet and related technologies’’(Eysenbach, 2001). In this definition, Eysenbach invited other researchers to challenge his definition. Subsequently, many definitions and studies on eHealth have followed. In a review, Boogerd, Arts, Engelen and van De Belt (2015) identified dissensus in literature between the definition of eHealth (Oh, Rizo, Enkin, & Jadad, 2005; Pagliari et al., 2005). Boogerd et al. (2015) recognise Eysenbach’s (2001) definition to be adequate. Pagliari et al. (2005), however, add to Eysenbach’s (2001) definition:

eHealth is an emerging field of medical informatics, referring to the organisation and delivery of health services and information using the Internet and related technologies. In a broader sense, the term characterizes not only a technical development, but also a new way of working, an attitude, and a commitment for networked, global thinking, to improve health care locally, regionally, and worldwide by using information and communication technology. (Pagliari et al., 2005, p. 17)

This definition moves beyond mere technology and suggests eHealth is also a development in the way of working, attitude and commitment for networked, global thinking. This development implies that change is needed. Grimson, Grimson and Hasselbring (2000) support the need for change by acknowledging underinvestments in IT, lack of political will, fragmented markets and lack of standards or slow adoption of standards.

eHealth organisations are strongly connected to technology-based products and e-startups (Spil & Kijl, 2009), whose services differ from basic organisations (Saarela et al., 2018). Therefore Saarela et al. (2018) stress the importance of a deeper understanding of the growth process within the context of the organisation. Moreover, the COVID-19 pandemic has most likely shifted the importance of factors of influence since health care organisations were forced to innovate and keep up with rising demands (Al-Anezi, 2022), which could bring new insights. Finally, research on important international factors in eHealth is often scattered and subjective. There is a need for a more direct measure to provide a more objective picture of factors in eHealth. (Ammenwerth et al., 2020).

## **1.6 Outline**

To find an answer to the research question and subquestions, this study starts with a theoretical framework connecting theories on launch strategies, internationalisation and healthcare to form a conceptual framework. Subsequently, the methodology explains how the research has been conducted and what methodological evaluations have been made during this research. After which the results explain the findings of this study. Here, propositions will be formed to find connections between the factors of influence and their influence on international launch strategies. These will then be applied to European countries deemed relevant for healthcare startups. Finally, a conclusion including a discussion, recommendations for future research and limitations of the study will be made.

## Chapter 2 - Theoretical Framework

### 2.1 What is a launch strategy

The launch strategy is the final part of the NPD process. The NPD process is often referred to as a series of stages and activities a new product goes through starting at the idea generation and ending with the product launch (Calantone et al., 1997). The launch is therefore a separate stage, starting at the time of market introduction. D.H. Green and Ryans (1990) were the first to look at integrative entry strategy and defined launch strategy as the marketing decisions required to offer a product to its target market and generate income through the sales of the product (D.H. Green & Ryans, 1990). Calantone and Montoya-Weiss (1993) describe a launch plan as identifying target markets, establishing marketing-mix roles, forecasting financial outcomes and controlling the project (as cited by Hultink et al., 1997). Both definitions are closely related to marketing plans and strategies. This is also reflected in many conceptualisations of launch strategies and decisions. These conceptual models, however, show little consensus in literature. Most literature on launch strategy uses the launch strategy as an independent variable in relation to the product launch success (Choffray & Lilien, 1986; D.H. Green & Ryans, 1990; Hultink & Robben, 1999). These studies regularly attempt to conceptualise a launch strategy in terms of a successful launch but definitions of success differ. Different ideas about product launch success also indicate different launch strategies to achieve the desired outcome. To get a better understanding of launch strategies, we must first know what dimensions there are for a launch strategy after which different types of launch strategies could be identified.

#### *The dimensions of a launch strategy*

Different studies take different dimensions into account. Choffray and Lilien (1984) argue that launch strategy consists of pricing, timing and distribution decisions. Whereas D.H. Green and Ryans (1990) focus on timing, relative product advantage and marketing and R&D expenditures. Hultink and Robben (1999) attempted to conceptualise new product performance in terms of market characteristics and launch strategy. To define and create a conceptual model of launch strategy, Hultink and Robben summarised the state of the literature and conducted interviews with managers to find out what dimensions there are to launch strategy and market characteristics. Table 2.1 shows the three main dimensions Hultink and Robben (1999) used to conceptualise launch decisions and their influence on new product performance. The table provides a useful oversight of the important dimensions

necessary for a successful product launch. In their research, Hultink and Robben (1999) also included two market characteristics: Competitive reaction (Bowman & Gatignon, 1995; Heil & Walters, 1993) and Stage of the Product Life Cycle (PLC) (Biggadike, 1979; Ryans, 1988; Yoon & Lilien, 1985). These market characteristics, however, do not take into account the international context.

Table 2.1 - Hultink and Robben's (1999) summary of launch strategies in literature and interviews

Higher Product Performance when		Study
<i>Strategic Product/Market Decisions</i>		
Introduction of Objectives	are offensive	Biggadike, 1979; Mahajan & Wind, 1992; Urban & Hauser, 1993
Relative Product Innovativeness	is higher	Biggadike, 1979; Kleinschmidt & Cooper, 1991; Soni et al., 1993
<i>Timing-Related Decisions</i>		
Speed to Market	is faster	Choffray & Lilien, 1984, 1986
Timing of Market Entry	is earlier	Biggadike, 1979; Choffray & Lilien, 1984, 1986; D.H. Green et al., 1995; Lambkin, 1988, 1992; Robinson & Fornell, 1985; Ryans, 1988; Urban et al., 1986
<i>Marketing Mix Decisions</i>		
Branding	<i>Inconclusive</i>	Hultink et al., 1997
Communication Channels	are more intensively used	D.H. Green et al., 1995; Robinson & Fornell, 1985
Distribution Channels	are well-known	Cooper, 1979; Cooper & De Brentani, 1991
Pricing	<i>Inconclusive</i>	Biggadike, 1979; Choffray & Lilien, 1984, 1986; Cooper & Kleinschmidt, 1987; Hultink & Schoormans, 1995; Lambkin, 1988, 1992; Robinson & Fornell, 1985
Product Newness	<i>Inconclusive</i>	Biggadike, 1979; Gatignon et al., 1990; D.H. Green et al., 1995; D.H. Green & Ryans, 1990; Lambkin, 1988, 1992; Robinson & Fornell, 1985; Ryans, 1988
Relative Breadth of Product Assortment	is broader	Biggadike, 1979; Lambkin, 1988, 1992; Robinson & Fornell, 1985; Traynor & Traynor, 1989
Relative Distribution Expenditures	are higher	Biggadike, 1979; D.H. Green et al., 1995; D.H. Green & Ryans, 1990; Lambkin, 1988, 1992; Link, 1987; Yoon & Lilien, 1985
Relative Promotion Expenditures	are higher	Biggadike, 1979; Lambkin, 1988, 1992; Link, 1987
Targeting	is broader	Biggadike, 1979; Lambkin, 1988, 1992

Later research has continued to study the relationships between product launch decisions and firm performance (Hitsch, 2006; Klingebiel & Joseph, 2016; Langerak et al., 2004). In this literature, two broad categories for product launch decisions can be recognized: Strategic launch decisions and tactical launch decisions (Di Benedetto, 1999; Langerak et al., 2004; Liu et al., 2018). Strategic launch decisions include decisions on product and market issues and are difficult and expensive to adjust whereas tactical launch decisions refer to marketing mix decisions and are relatively easy to modify throughout the process (Liu et al., 2018).

Furthermore, there has been an ongoing discussion on timing-related decisions. It is important for organisations to choose the right moment to launch their product. Launching too late forms the risk of facing rooted competitors or missing market opportunities entirely (Kerin et al., 1992), whereas launching too early can cause ill-preparedness in relation to the technology and strategy (R. J. Calantone et al., 1997). D.H. Green and Ryans (1990) argue in their research that the earlier someone enters the market, the stronger the performance. This effect was mostly recognized as an indirect effect through investments and competitive positioning. Early research mostly agrees and argues that the speed to market should be faster (Choffray & Lilien, 1986; Choffray & Lilien, 1984) and timing should be earlier (Biggadike, 1979; Choffray & Lilien, 1984, 1986; D.H. Green et al., 1995; Lambkin, 1988, 1992; Robinson & Fornell, 1985; Ryans, 1988; Urban et al., 1986). Contrary, Golder and Tellis (1993) found that research on pioneers tempts to identify the wrong pioneers. The true pioneers are often omitted, indicating it might not be as beneficial to be a pioneer as previous research suggests. There are many moderators such as Intellectual Property (IP) strength, customer switching costs and the rate of technological change that come into play (Schnaars, 2002). Moreover, Calantone et al. (2012) express the need to take into account the objectives of top management, distributors and customers, making timing-related decisions more complex than the way previous research addresses them. This complexity goes to show that companies do not have the power to influence each dimension. There are external, factors of influence such as timing in the market that can have major influences on the international launch strategy.

In short, this study recognizes three main dimensions to a launch strategy: Strategic launch decisions, tactical launch decisions and timing-related decisions since these dimensions are re-occurring in literature (Di Benedetto, 1999; Hultink & Robben, 1999; Langerak et al., 2004; Liu et al., 2018). Based on these dimensions, different types of launch strategies for different situations and desired outcomes can be identified.

### *The effects of the type of launch strategy*

The different launch strategy decisions can also cause different overall launch strategies to arise which, in turn, can cause different outcomes of the launch strategy. In an attempt to identify generic launch strategies for new products, Hultink, Griffin, Robben and Hart (1998) recognize that many launch decisions are not random and, in fact, interdependent. Moreover, Hultink et al. (1998) identify three main launch strategies that managers seem to apply independent of the industry they operate in. The types of launch strategies have different consequences for the product launch.

First of all, there are Innovative New Product Launches. This launch strategy is most applicable for technology-based launches which are completely new products in an early stage of the product-life cycle to help establish market presence (Hultink et al., 1998). Innovative New Product Launch strategies require the firm to find new-to-the-firm distribution channels, using new brand names, lower distribution expenditures and price-skimming strategies. Innovative New Product Launch strategies mostly facilitate product performance and financial goals with the objective to create a foothold in the new market (Hultink et al., 1998). Secondly, there are Offensive Improvement Launches. This strategy is most applicable for product improvement of an existing product launched to add new competitive barriers in a more mature phase of the product-life cycle when there are fewer competitors. It is both market and technology driven. Distribution can go through the same channels, distribution expenditures increase, the price increases and marketing focuses on customer promotion and TV advertising to maximise success, no matter the operationalisation of success (Hultink et al., 1998). Finally, Hultink et al. (1998) recognize Defensive Addition Launches. Defensive Addition Launch strategies are mainly market-driven and less innovative. They often occur late in the product life cycle when competition is high and are additions to existing product lines. (Hutlink et al., 1998). Defensive Addition Launch strategies often require penetration pricing and have the lowest overall success rate.

In conclusion, there are different types of generic launch strategies. Each being more applicable or less applicable depending on the nature and newness of the innovation and market. Moreover, the degree and definition of product launch success varies across launch strategies. Considering this study focuses on international launch strategies, it is unclear if and how decisions on launch strategy can change throughout the international launch. Literature is yet to research how changes in the launch strategy in the native country of a startup can affect the international launch strategy and contrariwise. Moreover, the launch

strategies show little to no international input. It is unclear what international factors there are for launch strategies and how they affect the international launch strategy.

## **2.2 An international perspective on launch strategies**

Literature on the international influence on launch strategies is limited to non-existent. The main international literature on launch strategies concerns the ways of spreading a product or service. Commonly, organisations take either a sequential or simultaneous launch strategy. A sequential launch strategy allows both customers to observe decisions of prior customers, thereby helping them to value the product or service as well as enable the organisation to experiment with variables such as price and marketing expenses (Bhalla, 2013). Conversely, a simultaneous launch creates immediate revenue from all customers (Bhalla, 2013). This literature stream of sequential and simultaneous launches focus mainly on deciding the price and marketing of a product or service, making it similar to the marketing mix decisions mentioned in tactical launch decisions. Potential factors of influence of an international launch are inexistant in literature. There is, however, literature on internationalisation and what barriers internationalisation might create. Critically evaluating the relevance of this literature on internationalisation for launch strategies provides the opportunity to make connections between internationalisation and launch strategy, thereby creating a clearer image of what international launch strategies entails. A term not common in current literature.

International expansion is based on exploiting the competitive advantages an organisation has domestically, in countries where similar opportunities exist (Fernández & Nieto, 2006). These similar opportunities link back to literature on born-globals. The ability of born-globals to fulfil global niches and overcome initial foreign barriers allows the born-globals to expand internationally quickly. Literature on both born-globals as well as internationalisation underlines the importance of overcoming barriers. Since literature on launch strategy rarely involves international influences, the literature on internationalisation can provide useful insights into potential barriers to an international launch strategy.

Internationalisation can be defined as companies seeking opportunities to expand their horizons, diversify their business and grow internationally (Marín Anglada et al., 2014). Traditionally, there are three theoretical approaches to internationalisation (Bell & Young, 1998; Pickernell et al., 2016). To start off, there is the stages of development approach, where firms incrementally get involved in foreign markets. Moving from no regular international sales, to sales through agents and subsidiaries to similar countries, to foreign manufacturing

(Clark & Pugh, 2001). Then, there is network theory, where internationalisation emerges as a consequence of interaction with networks through which information and trust are developed (Chetty & Holm, 2000). Finally, there are resource-based approaches. Here, internationalisation is a consequence of the context of internal and external resources and environments as part of the strategy (Crick & Spence, 2005). These theories beg the question why firms, especially startups and SMEs, decide to internationalise in the first place (Pickernell et al., 2016). There are several factors influencing this choice, depending on industry-dependent environmental factors and firm-specific factors (Gassmann & Keupp, 2007). The resource-based approach provides the potential to combine these factors and link internationalisation with literature on launch strategy because it accounts for internal and external context. Something which is limited in launch strategy literature.

### *Factors of influence*

Commercialising a new product does not only depend on the firm's own capabilities, but also on a wider range of factors of influence (Spencer, 2003). Kaleka and Katsikeas (1995) recognize both internal and external disadvantages for firms internationalising and competing against local producers. They argue that external foreign-market impediments are created by foreign government regulations, currency issues, the need for external networks, distributors, language/cultural differences, foreign competition, price competitiveness and payment issues. Multiple researchers have continued to study common barriers in internationalisation (Leonidou, 1995, 2004; Tesfom & Lutz, 2006) A highly cited research by Leonidou (2004) studied 32 empirical studies to identify barriers of export for small businesses. Although there were many context-specific barriers, Leonidou (2004) identifies both internal and external barriers at different stages. The external barriers consist of procedural, governmental, task and environmental barriers. The environmental barriers are subdivided into economic, political-legal and sociocultural barriers. Leonidou (2004) also defines the barriers. Table 2.2 shows the external barriers and their explanation. Only case studies published post-2000 and not captured in earlier reviews were included, making the study comprehensive and up-to-date (Kahiya, 2018).

Table 2.2 - External barriers to internationalisation (Leonidou, 2004)

Dimension	Subdimension	Explanation
Procedural		<ul style="list-style-type: none"> <li>- Unfamiliar exporting procedures/paperwork</li> <li>- Problematic communication with overseas customers</li> <li>- Slow collection of payments from abroad</li> </ul>
Governmental		<ul style="list-style-type: none"> <li>- Lack of home government assistance/incentives</li> <li>- Unfavourable home rules and regulations</li> </ul>
Task		<ul style="list-style-type: none"> <li>- Different foreign customer habits/attitudes</li> <li>- Keen competition in overseas markets</li> </ul>
Environmental	Economic	<ul style="list-style-type: none"> <li>- Poor/deteriorating economic conditions abroad</li> <li>- Foreign currency exchange risks</li> </ul>
	Political-Legal	<ul style="list-style-type: none"> <li>- Political instability in foreign markets</li> <li>- Strict foreign rules and regulations</li> <li>- High tariff and nontariff barriers</li> </ul>
	Sociocultural	<ul style="list-style-type: none"> <li>- Unfamiliar foreign business practices</li> <li>- Different sociocultural traits</li> <li>- Verbal/nonverbal language difference</li> </ul>

Leonidou's research focuses on the exportation barriers of small businesses. In terms of launch strategies, however, dimensions could change in relevance. Contrary to Leonidou (2004), an international launch means the product is yet to be settled in a market or product lifecycle, causing even more uncertainty for the entrepreneur. Therefore, international launch strategy must be defined and connected to internationalisation.

#### *What is an international launch strategy*

Leonidou (2004) provides an insightful overview of potential barriers. These barriers could influence decisions on launch strategies. Certain barriers could potentially hinder or enable decisions on launch strategy and have a decisive impact on how and where to internationalise. It is yet to be researched how these barriers relate to the international launch strategy. To be able to do so, however, we must first know what an international launch strategy entails. Currently, the term 'international launch strategy' is not common in literature and has not been defined yet. Therefore, this study will attempt to define 'international launch strategy' based on literature descending from launch strategy and internationalisation.

A launch strategy are the marketing decisions required to offer a product to its target market and generate income through the sales of the product (D.H. Green & Ryans, 1990). In this context, internationalisation are companies seeking opportunities to expand their

horizons, diversify their business and grow internationally (Marín Anglada et al., 2014). Internationalisation brings about contextual, environmental barriers that need to be overcome for a company to successfully internationalise. We can therefore define the international launch strategy as marketing decisions that take into account international factors required to successfully offer a product or service to an international target market, overcome international barriers, generate income through the sales of the product or service and grow internationally.

For this definition, the importance of overcoming international barriers becomes clear. The current state of literature suggests that a company cannot successfully execute their international launch strategy without taking into account and overcoming international barriers. Going into the field to conduct research should provide the opportunity to reflect on and finetune the definition.

### **2.3 The influence of healthcare**

For the purpose of this study, it is important to take into account the complex and advanced context of healthcare. Being active in healthcare could raise specific factors of influence important to a startup having to operate within this context. Similar to internationalisation barriers, these barriers also need to be overcome for a successful launch. Therefore, this subchapter will look at research by Mieczkowska et al. (2004), who researched barriers to eHealth business processes in the UK National Health Service (NHS). In their research, Mieczkowska et al. (2004) performed a case study to find out why the NHS rejected an eHealth administration innovation. Even though Mieczkowska et al. focus on the adoption of a product, it can provide insights on additional factors of influence that specifically relate to the healthcare context. This subchapter will attempt to translate potential factors of influence that startups launching their product internationally in the eHealth context should adjust their international launch strategy to. Throughout the next subchapter, the adoption barriers will be described, after which they will be transformed into potential factors that could influence decisions on international launch strategies.

Three main barriers were identified that prevent greater use of eHealth services. By identifying these barriers, this study can identify potential factors startups should include in their international launch strategy. Namely financial, technological and socio-cultural barriers. These barriers are expressed in four manifestations, based on previous research by Barnes, Hinton and Mieczkowska (2002) and Mieczkowska, Barnes and Hinton (2002).

First of all, e-commerce investments are ‘mainly driven by a fear of being left behind by competitors rather than a desire to improve business process performance’. Mieczkowska et al. (2004) explain this by indicating the difference in interpretation of improving business performance between the government and organisation in question. Moreover, there are often numerous stakeholders within public health structures, causing different views on improvements and achieving those improvements (Beynon-Davies & Lloyd-Williams, 1999). For the international launch strategy, this would most likely mean that the startup has to adjust their launch strategy to the influence of the government and the amount and influence of stakeholders involved in the process.

Second, e-commerce investments tend to ‘automate rather than redesign existing processes’. Organisations should wonder whether they might be over-engineering an old solution and should be looking for a new solution. Even though this manifestation is written for the customer rather than the entrepreneur, it signals a paradox for the entrepreneur. It suggests that the entrepreneur benefits the customer the most by redesigning existing processes wherever necessary while paradoxically, the customer tends to seek automation to their processes. For a startup’s international launch strategy, this means that the launch strategy should be aware of its position: Different innovations and products require different types of launch strategies (Hultink et al., 1998). If we link the types of launch strategies to the research by Mieczkowska et al. (2004), we can see that New Product Launches could benefit the customer, but might be too innovative for most customers in eHealth to be willing to adopt. Conversely, Defensive Product Launches could add too little for the eHealth customer to be willing to adopt. This suggests that, in the context of eHealth, Offensive Improvement Launches will most likely gain the most customer traction.

Thirdly, e-operations are frequently run as ‘discrete sets of processes, with little or no integration between e-operations information systems and the information systems or the staff that support traditional (bricks and mortar) processes’. This barrier begs the question whether a service is able to integrate into the existing way of working without requiring too much trouble or extra attention. Once again supporting the suggestion that Offensive Improvement Launches will have the highest chance of success in the eHealth context. Finally, the ‘legacy systems and a lack of industry standards are major encumbrances to information systems integration’.

In short, in order for new technologies to get adopted, the product or service should be financially achievable, technologically adequate while integrating into the systems and, finally, socially-culturally accepted in an organisation, or even broader, country. This means

the eHealth startup has to involve the potential factors of influence created by financial achievability, technological adequacy and social-cultural acceptance into their international launch strategy.

## **2.4 Conceptual Framework**

To study the most important factors that impact the international launch strategy, this study combines literature on launch strategies with literature on internationalisation. This is because the current literature on launch strategy shows little inclusion of the influence of an international context on launch strategies. This is remarkable because internationalising is becoming an increasingly more achievable and interesting topic for SMEs (Pickernell et al., 2016), let-alone e-startups (Knight et al., 2004).

This study understands launch strategies as decisions on strategic launch decisions, tactical launch decisions and timing-related decisions. Through the combination of literature on launch strategies with literature on internationalisation, this study aims to form a conceptualisation of what an international launch strategy is and what factors of influence there are for the international launch strategy. First, there is the domestic launch strategy, which will likely either be classified as a New Product Launch, Offensive Improvement Launch or Defensive Addition Launch. For the domestic launch strategy to become an international launch strategy, there are certain international factors of influence that cause the international launch strategy to be adjusted. This study focuses on the barriers to internationalisation as researched by Leonidou (2004). This is because Leonidou (2004) has researched many different studies to find common and relevant contextual barriers for small businesses that want to internationalise, making the research relevant for startups. Finally, to add context and scope, this study looks into the context of eHealth and other e-startups. Here, this study mainly relies upon Mieczkowska et al. (2004). There is little research on barriers of implementation for eHealth to be found in literature and Mieczkowska et al. (2004) provide a useful insight into the context of eHealth startups.

The conceptual framework can be seen below in figure 2.4. There is a Domestic Launch Strategy and an International Launch Strategy. As demonstrated throughout the theoretical framework, there are different choices and different types of launch strategies. This study will research if and how the national launch strategy is related to, and differs from, the international launch strategy. Minor decisions on the international launch strategy can be adjusted from the national launch strategy but customers and other businesses are likely to notice major differences such as pricing strategy, where a growing interdependence and

standardisation occurs in developed countries (Theodosiou & Katsikeas, 2001). Especially in the context of e-startups/eHealth, where it is relatively easy to see what launch decisions a company has made in other countries.

The conceptual framework is far from complete. Although parts of the model are known, such as what a launch strategy entails and what potential barriers internationalisation and eHealth bring about, it is unknown in literature how the concepts relate and influence each other. The framework attempts to bring the concepts together into a conceptual framework but research in the field is still necessary to research the connections and factors of influence to the international launch strategy.

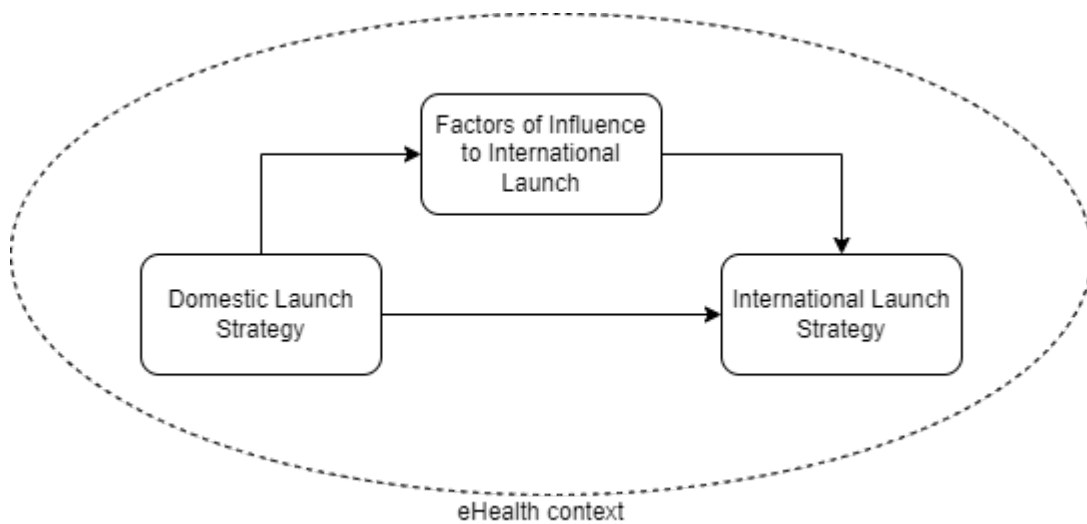


Figure 2.4 - Conceptual Model on the International Launch Strategy of e-Startups

## **Chapter 3 - Methodology**

### **3.1 Research Method**

There were still many unknowns for this study. The theoretical framework provides an insight into potential factors of influence and how they might influence an international launch strategy. Yet the combination of, and thereby also relation between, these fields was still unknown. This study therefore still had to research what factors of influence are actually represented in practice for startups in healthcare and also how these factors relate to and have an influence on the international launch strategy. Therefore, this study has been explorative in nature. Because of the explorative nature, in-depth interviews have been conducted. In-depth interviews allow the researcher to get a holistic understanding of the interviewee's situation and decisions as well as allow new research directions to emerge (Berry, 1999). In-depth interviews therefore provide the opportunity for the interviewee to speak their mind and thereby provide a deeper understanding of phenomena such as decisions on international launch strategies compared to more confirmatory research methods such as controlled experiments or surveys (Hollway & Jefferson, 1997). The qualitative approach helps the researcher identify and understand new phenomena as well as assess their academic relevance (Doz, 2011). This meant that the researcher was able to look for potential factors of influence suggested by literature on internationalisation while identifying and understanding new factors of influence. Additionally, qualitative research can be essential to find contextual dimension, such as differences between countries (Cheng, 2007), which turned out to be important for the international launch strategy.

### **3.2 Operationalisation**

The operationalisation aims to measure the concepts and relations discussed in the theoretical framework (Vennix, 2019). Table 3.2 below shows the operationalisation and the sources for the dimensions. Moreover, Appendix I shows the questions list used for the interviews.

The operationalisation started by attempting to measure the launch strategy of the company. The launch strategy was measured by following the three dimensions of a launch strategy found in literature: Strategic Launch Decisions, Tactical Launch Decisions and Timing-related decisions. The questions on Strategic Launch Decisions focused mostly on product and market issues whereas the Tactical Launch Decisions focus on the marketing choices made in the launch strategy. For both the Strategic and Tactical Launch Decisions,

the adjustments enable this study to research the difference between the domestic and international launch strategies.

Liu et al. (2018) indicate the clear distinction between Strategic and Tactical Launch Decisions. The Strategic Launch Decisions have been measured following the ideas of Hultink and Robben (1999), Liu et al. (2018) and Mahajan and Wind (1992). They have been measured by the main objectives set by the entrepreneur (Hultink & Robben, 1999; Mahajan & Wind, 1992), the relative innovativeness of the product/service (Hultink & Robben, 1999) and how the entrepreneur prioritised these dimensions. Moreover, an international addition was made to measure how the international Strategic Launch Decisions differ from the Dutch launch strategy. The Tactical Launch Decisions were measured based on Liu et al. (2018) and Hultink and Robben (1999). As described by Liu et al. (2018), they are the marketing-mix decisions in a product launch. Contrary to Hultink and Robben (1999) the marketing-mix decisions were narrowed down to marketing to potential customers, approaching and familiarising with distributors and the pricing strategy. For many startups, distributors are a key part of going international and connecting to potential customers. Therefore, the questions are slightly more elaborate. Moreover, an international perspective to measure international differences has been added. Finally, the Timing-Related Decisions have been adjusted to not only see how the timing of a launch compares to competitors, but also if the startup itself is ready for an international launch. This adjustment has been made because international launches could be considered to be too early for a startup and only become relevant in later stages of maturity. The timing-related decisions started by measuring the domestic timing. As expressed by Bhalla (2013), international launch strategies are often sequential processes, starting at the domestic market and eventually spreading to international markets. Therefore, it is interesting to first measure how the domestic launch was timed and how this influences decisions on the international launch strategy. As explained in the theoretical framework, the type of launch strategy is measured by what strategic, tactical and timing-related decisions have been made.

Based on the strategic, tactical and timing related-decisions, the type of launch strategy has been measured following Hultink et al.'s (1998) three types of launch strategies: Innovative New Product Launches, Offensive Addition Launches and Defensive Addition Launches.

Then, potential factors of influence to the international launch strategy have been measured following Leonidou's research. Leonidou (2004) provides clear dimensions of external barriers to internationalisation. Important, however, is that this study aims to

research how they relate to the launch strategy. Therefore, questions have been adjusted to find the connections of internationalisation to the international launch strategy. The adjustments made throughout the questions list were based on what has been found in the theoretical framework as well as on multiple pilot interviews with Attendi's employees. Procedural barriers were measured by focusing the questioning on international communication, exporting procedures and their influence on the international launch strategy. Governmental barriers were measured by studying what governmental barriers there are for startups in eHealth and how they cope with these barriers in their international launch strategy. The task barriers were measured by the difference in international customer habits and needs. Finally, environmental barriers were measured following Leonidou's (2004) three sub-dimensions: economic, political-legal and sociocultural. These were adjusted to increase their relevance for international launch strategies. Economic barriers focus on the influence of differences in the economic welfare of countries rather than Leonidou's exchange and economical risks. Legal barriers were adjusted to legal differences between the Netherlands and other countries and socio-cultural barriers have been changed to connect to legal barriers. Some things might be allowed in certain countries but generally frowned upon in a nation's culture.

Finally, the context of eHealth has been included into the research. This is because the specific and complex context of healthcare could lead to specific factors of influence not common for other industries. Especially considering the results of this study will be used by Attendi, a startup in eHealth, the context has been included to prevent potential omission of important variables for startups such as Attendi. This should also increase the reliability of the study. The measurements have been derived and transformed from Mieczkowska et al.'s (2004) research. This study differs from Mieczkowska et al. (2004) by aiming to research how the eHealth context affects the international launch strategy. This means that rather than confirming Mieczkowska et al.'s findings, this study mainly included and transformed this research to look for potential additional factors of influence. Moreover, some questions relevant for a dimension, such as pricing for financially achievable, have already been asked in previous questions and were therefore not repeated. The financially achievable dimension was transformed to stakeholder influence which was originally part of financial achievability. The technologically adequate dimension combines Mieczkowska et al. (2004) and Hultink et al. (1998) to research how the innovativeness of a product or service influences the type of launch strategy and acceptance in different countries. Lastly, social-cultural acceptance was included by looking at the international fit of a new product or service in the society.

Table 3.2 - Operationalisation table

Construct	Dimensions	Measure	Source
Launch Strategy	Strategic Launch Decisions	Main objectives Product newness Competitive landscape	Based on Hultink & Robben, 1999; Liu et al., 2018 and Mahajan & Wind, 1992
	Tactical Launch Decisions	Marketing Cooperation with distributors Pricing strategy	Based on Hultink & Robben, 1999 and Liu et al., 2018
	Timing-Related Decisions	Domestic Timing Pressure from competitors International Timing	Calantone et al., 2012
	Type of Launch Strategy	Innovative New Product Launch Offensive Improvement Launch Defensive Addition Launch	Hultink et al. 1998
Potential Factors of Influence	Procedural	Communication barriers Exporting barriers	Based on Leonidou, 2004
	Governmental	Actions or inactions by government Unfavourable rules and regulations	Based on Leonidou, 2004
	Task	Different customer habits and attitudes	Idem
	Environmental	Economic welfare	Idem
		Political-Legal differences	Idem
		Difference in cultural attitude with respect to regulation	Idem
Potential Factors of Influence from Healthcare context	Financially achievable	Stakeholder influence	Based on Mieczkowska et al., 2004
	Technologically adequate	Degree of innovativeness	Based on Hultink et al., 1998 and Mieczkowska et al., 2004
	Socially-culturally accepted	International fit of product or service	Based on Mieczkowska et al., 2004

### 3.4 Case selection

The focus of this study lies around eHealth startups, MedTech startups and Pharma startups. Therefore, the data was mainly collected through informants of healthcare-related startups that have gone through an international launch in the past. Within the organisation, the interviewee must have had relevant experiences in international launch strategies for the

startup. These were all sorts of functions (Manager/CEO, Business Developer, Strategy Operator), as long as they were directly involved in the international launch strategy.

Moreover, it is interesting to interview experts in international launches. An expert is someone with specialised knowledge, skills and/or ability in a distinct field. They are considered to be experts by the professional community or by the public. Moreover, they have a distinguished authority acquired from their expertise (Broekema et al., 2018; Ericsson et al., 2018; Hoffman, 1998; Jasanoff, 2009; Mengis, 2007). For international launches, experts were found through recommendations from the professional community. They have experienced multiple international launches.

In total, eight people have been interviewed, meaning six carefully selected respondents have been interviewed with two additional expert interviews. The cases along with the number of employees, economical sector, countries of launch and the position of the interviewees can be found in table 3.4.

Table 3.4 - Case selection

<b>Case/Name (Anonymised)</b>	<b>Number of people in organisation</b>	<b>Sector/industry</b>	<b>Product/service launched in</b>	<b>Role interviewee</b>
Toilet Scanner / <u>R</u>	14	Medical Device Manufacturing	Netherlands, Belgium, Germany	Co-founder/ Managing Director
Pharma Research / <u>As</u>	10	Drug R&D	Worldwide, mainly US	Business Developer
3D Brains / <u>Ab</u>	10	Biotechnological Research	Worldwide, focus on Europe, Americas and Asia	Managing Director
Medical eSolutions / <u>O</u>	200+	Medical Software Development	Worldwide, mainly EU and US	Strategy & Growth Ops
Healthcare platformer / <u>W</u>	48	IT Services and IT Consulting	Netherlands, UK, US	Co-Founder
Ultrasound Scanners / <u>V</u>	5-10	Producer of Medical Devices	Europe, Canada, US, several Asian countries	CEO

<b>Case/Name (Anonymised)</b>	<b>Number of people in organisation</b>	<b>Sector/industry</b>	<b>Product/service launched in</b>	<b>Role interviewee</b>
Speech- Engineer expert / <u>P</u>	-	Consultancy for International Product launches	Worldwide, specialized in Latin-America, Scandinavia, Germany	Consultant/ Entrepreneur
Internationalisati on expert / <u>J</u>	-	IT Services and IT Consulting	Worldwide	Speech Engineer

### 3.3 Data collection

This study has conducted eight in-depth interviews. Interviews provide the ability to understand the process and exploration of a phenomenon not yet well described (Rowley, 2012). It makes sense to perform interviews because, as shown in the theoretical framework, the term international launch strategy is still hardly described in literature. Interviews can provide a more in-depth exploration of what key decisions e-startups make in their international launch strategy.

Instead of interviewing multiple interviewees per company, the researcher chose to perform a single interview for six companies to increase the number of settings in which the international launches have been executed. This way, the reliability of the results increased. To ensure validity, two experts were also interviewed: An expert in international launch strategies and an expert in speech engineering. These experts were closely involved in important topics for this study and therefore enabled the researcher to ensure content and construct validity. To allow for elaborations on the subject or provide additional information, the interviews were semi-structured. They were of open-nature, enabling the respondent and interviewee to have an open conversation and delve deeper into subjects that were deemed more relevant. To maintain validity, all interviewees were asked approximately the same questions, facilitating easier comparisons between answers (Gillham, 2005). When allowed, the interviews were recorded to ensure correct transcriptions. Finally, the interview started by asking open-ended questions about the launch strategy in general, allowing the interviewee to introduce their ideas about launch strategies without being steered towards certain dimensions expressed in literature.

To find interviewees and cases to study, the researcher has made use of Attendi's network of eHealth and e-startups, the researcher's own network and has visited healthcare events. Moreover, Attendi has been used as a pilot case study, to develop relevant lines of questioning. Attendi is facing the challenge of shaping their international launch strategy and

has therefore put a lot of thought into what they do not know yet and what they would like to know while shaping an international launch strategy.

### **3.5 Data analysis method**

This study has analysed how eHealth/e-startups have shaped and executed their international launch strategy. The interviews were fully transcribed manually. The coding was facilitated by the use of computer aided qualitative data analysis software (CAQDAS), namely Atlas.ti in combination with Excel. As defined, the factors of influence are the underlying international factors that affect how international launch decisions will unfold. Therefore, the international launch strategy has been studied first, after which the factors of influence have been researched and linked to the international launch strategy. Thereupon, the factors of influence have been applied to European countries through a combination of interview findings and desk research. The selected countries were chosen because they were deemed relevant by Attendi and/or by the interviews.

The data analysis was performed using the constant comparative method, where constant comparison of the data, patterns or relationships was performed to move from data to theory (Corbin & Strauss, 2008; Straus, 1987; Strauss & Corbin, 1998). Codes consisted of both predetermined codes found in literature as well as more specific codes that were developed inductively based on the data. The aim of the analysis was to develop propositions for further research. The constant comparison consisted of multiple stages: Open coding, axial coding and selective coding. First, open coding was applied to the interviews. The open codes were mostly in-vivo codes, limiting interpretation problems to occur. The codes attempted to find potential themes and patterns in the experiences during the international launch. To narrow down the open codes and find categories and concepts, axial coding, also known as thematic coding, has been applied. Axial coding aims to assemble the large amount of codes from open coding and move to more abstract, conceptual categories. The open codes that were connected were placed in overarching axial codes. Finally, selective coding, or pattern matching, was applied. Selective coding allowed the researcher to look for patterns and relations between the overarching concepts found during the axial coding. These patterns were then used to propose factors of influence to the international launch strategy and study how they interact.

### 3.6 Research integrity

In order to uphold ethical standards of integrity and professionalism, the researcher has several duties to fulfil. This research follows the principles laid down in the Netherlands Code of Conduct on Scientific Practice (*Nederlandse Gedragscode Wetenschapsbeoefening*). All innocent errors and mistakes resulting in unacceptable research practices have been disclosed transparently and quickly along with an appropriate remedy. This includes the decision of moving and deleting the research document from OneDrive to a more secure source, namely Stack from TransIp.

For transparency and the prevention of fabrication and manipulation of data, interviews were recorded and fully transcribed, but only after the permission of the interviewee. Furthermore, the interviews have been anonymised and the interviewed companies cannot be traced back. Unfortunately, the interview recording with the speech engineer expert was corrupted and cannot be listened back. Therefore, the researcher has immediately summarised the interview and sent the summary to the interviewee for additions. This was all performed within 40 minutes after the interview had taken place.

To maintain transparency, the researcher has been aware of its position in the study. There is an obvious conflict in interest between being a researcher and being an intern at Attendi. To combat this, the researcher has kept close contact with the academic supervisor, Robert Kok, and the internship supervisor, Maarten Broekema. As a result, the outcomes of the study should not only be applicable for Attendi, but also for other companies and academics.

## Chapter 4 - Results

In the following section, the findings are discussed. First, short case descriptions will describe the types of launch strategies for the startups, after which the way in which startups shape their international launch strategy will be studied using three dimensions found in literature: Strategic launch decisions, tactical launch decisions and timing-related decisions. Once this is clear, the findings will identify factors of influence and, after applying factors of influence to relevant European countries, form propositions for future research, thereby also enabling this study to refine the conceptual model of international launch strategies.

### 4.1 Case descriptions

A short overview of the case, interviewees and the number of employees can be found in table 3.4. Each case followed its own specific type of launch strategy. In the theoretical framework, three main types of launch strategies have been identified, i.e. Innovative New Product Launches, Offensive Improvement Launches and Defensive Addition Launches. Different types of launch strategies also tend to have different goals and measures of success. The following subchapter will analyse what types of launch strategies have been executed per case.

#### *Toilet Scanner*

For Toilet Scanner, the product can be considered to be more innovative than what's already available on the market: "It is new and also unique. You can see that because we have applied for patents. But it is not a new technology because the technology is already known, but it is a new application of that technology." (R, Manager Director of Toilet Scanner). Toilet Scanner's innovation is an improvement to what's already available on the market, the moisture alarm. This indicates that according to Hultink et al. (1998), Toilet Scanner is most likely to apply the Offensive Improvement Launch. In accordance with this launch, Toilet Scanner's distribution goes through the same channels and marketing focuses on customer promotion as illustrated by the quotes below.

"So we often connect to the channels we have on the target groups that are available in that market."

R, Manager Director of Toilet Scanner

“The goals were to create exposure in the market and learn from that.”

R, Manager Director of Toilet Scanner

For the international launch, the launch strategy continued to be an Offensive Improvement Launch. The nature of the innovation and did not seem to change, though the market did change, mostly due to the remuneration system, which subchapter 4.4.5 will analyse more extensively.

### *Pharma Research*

Pharma Research’s solution can be considered to be very innovative: “Because we are developing new drugs, so it is supposed to be the first drug in the world so then it is supposed to be worldwide.” (As, Business Developer for Pharma Research). Their solution is completely new and technology driven. Their objective to create foothold in the market has quickly driven Pharma Research to seek success internationally. Launching internationally can support Pharma Research in reaching their financial goals: “So it’s really just basically chasing the money where the money is.” (As, Business Developer for Pharma Research). Therefore, both the domestic and international product launch can be considered to be Innovative New Product Launches.

### *3D Brains*

3D Brains provides a replacement product for an already existing component of a larger research-related product. Contrary to their competitors, their product is reusable and less fragile. It is an addition to the line of a matured market and, because of the reusability, should lower costs and enable 3D Brains to capitalize on the existing market. For the international launch, product newness and market did not change. Especially because the product was meant for scientific research, where everything is international from the get go: “ [...] so in a way everything you do as a scientist is international from the get go.” (Ab, Managing Director of 3D Brains). Overall, both the domestic and international product launch can be considered to be a Defensive Addition Launch.

### *Medical eSolutions*

Medical eSolutions provide a more innovative product than previously available on the market. It is, however, not completely new but rather an improvement on the already mature product-life cycle:

“If you look at the core platforms being incorporated for clinical trials, they exist for a long time, 20, 25 years. What makes Medical eSolutions unique is that the experience is much easier to create and much faster to make.” [...] “So we innovate on that aspect from the core platform but what you also see is that we create much newer in-house technology much faster on top of the platform.”

O, Strategy & Growth Ops of Medical eSolutions

Their solution is both market and technology driven and creating brand awareness is considered to be an important part of the launch strategy. For the international launch, little changed: “I just know, we have five, six competitors in every segment we compete. That does vary per segment but they all operate rather internationally.” (O, Strategy & Growth Ops of Medical eSolutions).

#### *Healthcare platformer*

For Healthcare platformer, the product newness and market changed for the international launch: “For the Netherlands it was completely new” [...] “In America, you do have a few competitors doing the same thing” (W, Co-founder of Healthcare platformer). This illustrates how domestically, Healthcare platformer launched a completely new product while for the international launch, the market was already more mature and therefore required adjustments, changing the type of launch strategy. This also meant branding changed, the objective transformed from market acceptance in Europe to commercialisation in the US: “In America, it is much flatter, it is much more commercial. Okay how much profit can we make with this innovation?” (W, Co-Founder of Healthcare platformer). The quote illustrates how the launch strategy has changed from an Innovative New Product Launch in Europe to an Offensive Improvement Launch in the US, where there were already several competitors and the product was considered to be more of an additional competitive barrier. Remarkably, Hultink et al. (1998) suggest that an Innovative New Product Launches mostly facilitate product performance and financial goals. However for Healthcare Platformer, this did not seem to be the case. Likely due to geographical and cultural differences.

#### *Ultrasound Scanners*

Ultrasound Scanners launched a product extension on existing ultrasound equipment specifically for sports doctors and physiotherapists. Although the ultrasound technique has

already matured, Ultrasound Scanners’ extension is completely new: “In that sense, we have a unique product worldwide and there is no difference between the Netherlands and internationally.” (V, CEO of Ultrasound Scanners). Ultrasound Scanners applied a skimming pricing technique and for the domestic launch, the main objective was gaining foothold in the new market by achieving financial goals: “You have to earn money to be able to breathe and think forward [...] Now we are in less of a hurry to do sales and we focus much more on building an international name.” (V, CEO of Ultrasound Scanners). Altogether, Ultrasound Scanners’ innovative product and market nature makes Ultrasound Scanners follow an Innovative New Product Launch

Table 4.1 below shows the changes in launch strategy between the domestic launch strategy and the international launch strategy for the cases. Out of the six cases, only Healthcare Platformer changed their type of launch strategy for the international launch. Most startups tend to shape their launch strategy based on their product and market newness. For the international launch, this might change, thereby also altering the type of launch strategy. Since only one startup changed their type of launch strategy, it seems most startups do not make major changes in their international launch strategy compared to their domestic launch strategy. Nevertheless, this does not mean there are no factors of influence created by the nature of international launches that alter strategic, tactical or timing-related launch decisions.

*Table 4.1 – Changes in type of product launch*

<b>Case</b>	<b>Type of domestic launch</b>	<b>Type of international launch</b>
Toilet Scanner	Offensive Improvement Launch	Offensive Improvement Launch
Pharma Research	Innovative New Product Launch	Innovative New Product Launch
3D Brains	Defensive Addition Launch	Defensive Addition Launch
Medical eSolutions	Offensive Improvement Launch	Offensive Improvement Launch
Healthcare Platformer	Innovative New Product Launch	Offensive Improvement Launch
Ultrasound Scanners	Innovative New Product Launch	Innovative New Product Launch

## **4.2 How startups shape their international launch strategy**

Before going into the field to factors of influence that influence the international launch strategies of startups in healthcare, we must understand how startups shape their international launch strategy. By analysing the process of how startups shape their launch strategy, measures of the launch strategy can be distilled.

#### *4.2.1 Strategic Launch Decisions*

Although the strategic launch decisions were specific to circumstances and context, they were based on the same fundamental evaluations: The startups all start by evaluating the potential market and competitive landscape. Before a startup is able to make strategic decisions, they gather the knowledge required to make those decisions: “So you usually start with market research. Just a bit of desk research like okay how big is the market? What is going on there? What big programs do they have?” (W, Co-Founder of Healthcare Platformer). Logically, the market size was deemed very important here. Especially the IT budget spent in a country: “It is for example very important in healthcare how much IT, or how much budget goes to IT. For example, 60% of the worldwide IT budget is being spent in America, so that is very important.” (W, Co-Founder of Healthcare Platformer). Internationalisation expert, P argued that startups should go further than only evaluating the competitive landscape and should instead use stakeholder mapping: “What I think you should always look at is what parties could possibly be disadvantaged by your product and that could be completely different parties in the Netherlands than abroad”. In healthcare, stakeholders can play an especially important role. Stakeholder involvement can help startups assess and modify their strategic launch decisions. The quotes below illustrate how early stakeholder involvement has helped startups shape their strategic launch decisions.

“When we didn’t have a product-market fit we started with just visiting all sorts of hospital boards. Not just boards, all stakeholders. So we also talked to doctors, IT managers, compliance officers on the one side and on the other side we approached applications with ‘Guys this is the plan, what do you think?’.”

W, Co-founder of Healthcare Platformers

“We also receive some feedback that if we really talk to different clinicians or patients than we can already see what kind of products they are expected to use. So we can actually help them to treat this disease or to actually help them to help us to design a clinical trial. Because somehow, sometimes clinical trials go really slow because of the patient behaviours or because it is relatively difficult to recruit patients. So we also talk to different stakeholders earlier to also help us but I think for MedTech and eHealth this accounts much more.”

As, Business Developer for Pharma Research

Thus, it seems the advantageousness of the market is an important measure for the strategic launch decisions. Startups evaluate this advantageousness by market research and stakeholder mapping and involvement.

Once the fundamentals are researched, product newness comes into play. Based on the evaluation product newness, the respondents had to decide whether their strategic launch decisions should be adjusted or not. For international product launches, the product newness could change, as previously explained at the case descriptions, this meant that W, Co-founder from Healthcare platformer had to adjust their strategic launch decisions from an Innovative New Product Launch to an Offensive Improvement Launch. The relative product newness therefore also seems to be an important measure for the strategic launch decisions. Throughout the case descriptions, the type of innovation is closely related to product newness. Innovative New Product launches are mostly completely new products whereas Offensive Improvement Launches are more innovative improvements and Defensive Addition Launches are line additions.

Finally, main objectives are set. Main objectives can be broad and context-specific. Contrary to expectations, main objectives were not solely based on 'hard', measurable objectives. Although startups have to survive, meaning they will eventually have to see returns, a recurring subject was gaining experience in the domestic market before launching internationally. The experience does not only help getting to know potential customers, know how the market reacts to a product, but also helps with product development and create a good track record for international markets. This way, the respondents could evaluate if their product was ready for a larger international launch. It is at this stage, the international launch, that startups mostly moved from these softer, less measurable objectives to more hard, measurable objectives. Chapter 4.3 will delve deeper into this subject.

“In the beginning the main goals were actually gaining experience in the market”

R, Manager Director of Toilet Scanner

“But that wasn't the most important thing, the most important thing was to get a few customers in the Netherlands where we could get, well, feedback.” [...] “So that was definitely important, to get, in the first instance, a few customers, collaborations, development partners in the Netherlands before we launched the product into the world.”

V, CEO of Ultrasound Scanners

“Especially in healthcare, you see that a lot of young parties do not survive. After five years they might not be around, only 20 to 25 percent remains so that could be a reason for a lot of parties to not want to work with a company. They first want to see you survive for a couple of years, to create a good track record in your own country.”

P, Internationalisation expert

Moreover, creating trust is an important objective, especially in the healthcare context: “The first step was to validate the product with a partner. Somebody who, like an early adopter, can use it and give us data and photos and testimonies if necessary that says, you know, because the biggest obstacle in our field is really trust.” (Ab, Managing Director of 3D Brains). Trust is required both domestically as well as internationally and also supports the communication of the product newness. Finally, brand awareness is an important main objective. Brand awareness is important on both a national as well as an international scale.

“We quickly committed to really good marketing because we had to generate brand awareness. We wanted to convey what we are going to do, how we want to change the market and we also wanted to make sure that people know about our existence and also manage to find us when they are seeking for a solution.”

W, Co-founder of Healthcare Platformer

“We really believe that the American market is going to be the biggest and most important market by far in the upcoming years for clinical trial technologies and therefore also for Medical eSolutions. So that’s why we really put our efforts into that market.” [...] “So yes, branding is definitely, definitely an aspect but you will see it is mostly focused on the US market.”

O, Strategy & Growth Ops of Medical eSolutions

Objective setting is therefore also an important measure of the strategic launch decisions. Important objectives include gaining experience, creating trust and creating brand awareness. Objective setting has a major influence on the type of launch strategy. As became evident for the case descriptions, Innovative New Product Launches tend to have product performance and financial objectives to create foothold in a new market whereas Offensive Improvement Launches tend to focus on product improvement to add barriers for competition. For the 3D

Brains case, the sole Defensive Addition Launch, the objective was to capitalize on an existing market.

#### *4.2.2 Tactical Launch Decisions*

##### *Marketing*

The tactical launch decisions are the marketing-mix decisions made to execute the strategic launch decisions. Therefore, the tactical launch decisions are closely related to the strategic launch decisions. The tactical launch decisions are an extension to the strategic launch decisions and aim to realise the strategic launch decisions. This is also reflected in the marketing decisions in a product launch. The findings of the marketing decisions will be based on the main objectives identified in the strategic launch decisions, namely creating trust and creating brand awareness. Gaining experience in the home market pertains little with marketing decisions and will therefore not be included.

There are different ways in which startups in healthcare attempt to create trust, namely making the product open-source, scientific publications, and through strategic collaborations.

“Other ways of gaining trust is to publish the work with peer review, publish it open source so you make a design and you can share in an open source way, also with some kind of review and people being able to check it out and potentially use it themselves”

Ab, Managing Director of 3D Brains

“Other ways of gaining trust is to publish the work with peer review”

Ab, Managing Director of 3D Brains

“And we partnered up with a US University that came up with a really cool, like product, or rather like a design that we worked with them to make it into a product. And so we're basically we also use collaboration strategically to gain trust because in that case the, this partner is very prestigious.”

Ab, Managing Director of 3D Brains

Another way trust respondents attempted to create trust, especially in an international context, is by working with local partners. Either through distributors or by simply hiring local

employees, as explained by internationalisation expert P: “Even if you were in the Netherlands and do not have a distributor yet and you might not even be planning to have one, it would still be smart to at least make sure that you have a local address to hire a chef, someone local, someone pushed forward locally so if someone calls your number, he is answered in German. Also connected to the Netherlands. All those things matter whereas for the Dutch, it doesn’t matter too much.” Chapter 4.2.5 continues on the different customer habits and needs and their impact. The other main objective, creating brand awareness, is closely related to the generation of trust. Making products open-source, publishing scientific papers and strategic collaborations all contribute to creating brand awareness. Moreover, making use of free publicity opportunities and visiting events and conventions add to creating brand awareness. In fact, V, CEO of Ultrasound Scanners, expressed that visiting conventions might be the most important part of marketing: “We have been to a lot of general MedTech conferences, exhibitions and events and at one point I think the most important things are exhibitions and conferences.”

In short, marketing capability is an important measure for the tactical launch decisions. This way, startups attempt to create trust and brand awareness.

#### *Cooperating with distributors*

For launch strategies, respondents had to make the decisions whether working with distributors would be beneficial for their startup or not. Distributors are a common way of dealing with tactical launch decisions. A distributor can help the entrepreneur with their international launch strategy: “Generally said, you could say that internationalising through local partners is often the way to go.” (P, Internationalisation expert). Cooperating with distributors remains a choice, however, and some respondents chose not to cooperate because they preferred to put in the work themselves or simply decided they do not need distributors. Throughout the interviews, it became apparent that cooperating with distributors can alleviate troubles with customer support and, as previously mentioned, creating trust. Moreover, distributors can help with deal with more complex issues such as cultural and procedural barriers.

“And then I found out they do because do not want to do support customer support. Right, because it’s very expensive to do customer support and it’s also very boring if you are a creative entrepreneur so that’s what they pay 50% revenue for. It’s to not

get on the phone with people that have no clue what they are doing and need help.”

Ab, Managing Director of 3D Brains

“Yes that is another reason for having a distributor. That they know the culture. Exactly those points you named, they have a feeling for that while we are there from a distance. So they also know what companies they should approach to get that approval. We won’t find out or only after a lot of effort.”

R, Managing Director of Toilet Scanner

“The market, we focus on the medical field, of hospitals, healthcare institutions and the compensations that are part of that. That is different than how it works here in the Netherlands. Every country has its own structure, its own criteria” [...] “And therefore we have moved the problem to the distributor. We have said: It is too complex, we can’t fix it by ourselves.”

R, Managing Director of Toilet Scanner

Working with distributors can also cause new problems to arise. Finding the right distributor can be difficult and subtle mismatches can cause problems: “In hindsight, our selection was for about 90 percent correct, except in the end, we found out that our distributor does not know our real customers. So we thought: ‘well the distributor sells to hospitals with very similar products’, but in the end they were mainly used to sell to the radiology department whereas our product is meant to go to the cardiology department. This turned out to be a major difference.” (V, CEO of Ultrasound Scanners). There are multiple ways in which respondents attempted to find the right distributor: Through embassies, competitors or very similar companies, customers, Dutch Business Support Offices (NBSO) or, most commonly, through their own network. Although distributors can alleviate pressure and problems, the process of finding the right distributor can be a burden. Moreover, they are difficult to supervise and it can be difficult to align visions: “We have a distributor in Taiwan for example and it can be pretty difficult because we have never seen these people in real life so it takes a lot of video calling. WhatsApp and just trying.” (V, CEO of Ultrasound Scanners).

Finally, some respondents chose not to work with distributors. When this is the case, they tend to hire people locally instead. Similar to distributors, hiring locally requires time and effort but their network, knowledge and experience can help the startup execute their international launch, as illustrated by W, Co-founder of Healthcare Platformers: “We hired a few good people there and they immediately had a good entrance to an important hospital and

now we are integrating there.’’ The decision on working with partners or distributors seems largely dependent on the amount of capital the startup has. The startups hiring people locally had more capital whereas the startups working with distributors often did not have enough budget to set up a team abroad.

‘‘Now that we are part of a bigger enterprise we are also looking what our own sales organisations of different countries know about this.’’

R, Managing Director of Toilet Scanner

‘‘It also depends on how big your company is. If you have a pretty big regulatory sales team you can deal with the difficult markets. But if you are just starting off, I wouldn’t do that too soon. Then I would go, or at least consider, going to countries where you can make steps more easily.’’

P, Internationalisation expert

No matter if startups choose to cooperate with distributors or hire people locally, it stresses the need for local knowledge. This local knowledge can then be used for a broad number of reasons such as finding leads, and ways of distribution. This can therefore also be considered to be a measure for the tactical launch decisions.

### *Pricing strategy*

The pricing strategy showed little results. Adjusting prices for different countries or regions showed inconclusive results. Noticeably, however, penetration pricing was mostly avoided. This is most likely because penetration pricing is a common pricing strategy for Defensive Addition Launch strategies (Hultink et al., 1998), which are less innovative. The case selection, however, focused on startups in healthcare and pharma which were mostly innovative cases that can be categorised under Innovative New Product Launches or Offensive Product Launches.

### *4.2.3 Timing-Related Decisions*

The timing of a launch strategy can have a large impact on the success of the launch. The timing-related decisions have been operationalised into the Dutch timing, the pressure from competitors and the international timing. Throughout the interviews, the timing of an international launch showed to main dimensions: Internal timing and external timing. Internally, the startup has to be ready to execute an international launch and externally, the

international market has to be ready for the international launch. Externally, the market needs to be ready for the product or service to launch, as explained by O, Strategy & Growth Ops of Medical eSolutions: “So it has quite a lot to do with the state of the region, of the country, in terms of maturity of the market and how it suits your own strategy.”. Finding the right market with the right maturity has proven to be a real challenge. The quotes below illustrate how timing plays a role in the launch strategy.

“I think especially when you have something relatively new it could be smart to not be the first in the market, but the second or third so you can benefit from the marketing efforts of the first party.”

P, Internationalisation expert

“You want to be settled in time in a market before it becomes normal and free everywhere to use speech technology. It is really a race against time.”

J, Speech-Engineer expert

Startups preferably avoid being a pioneer since educating the market is time consuming. On the contrary, there is a pressure to reach markets before it is too late. Startups can either be pioneers, early entrants or followers and have to adjust their launch strategy accordingly.

### **4.3 Why do startups in healthcare launch internationally?**

Naturally, the decision as to why startups launch internationally differs per case. The exact reasons have been summarised in table 4.3. Throughout the interviews, however, patterns can be identified as to why startups want to go international. First of all, the context in which the startups operate heavily influence the decision to launch internationally. In the healthcare context, medical solutions are often solutions to worldwide problems, encouraging firms to launch internationally. O, Strategy & Growth Ops of Medical eSolutions explains why it was natural for Medical eSolutions to expand internationally: “Well actually that is quite a natural move for us as a company and I think especially for healthcare entrepreneurs in the Netherlands. You’ll eventually want to expand internationally if you want to expand your clientbase and simply create more revenue”. The healthcare context, however, is a constant. More interestingly, there were also variables influencing the decision to launch internationally.

A re-occurring reason as to why startups chose to launch internationally was due to attracting investment funds. It is crucial for startups to maintain enough funding to survive, which often goes hand-in-hand with investors and financing rounds. These financing rounds require clear strategies and approaches to reach certain goals and, ultimately, provide an attractive Return On Investment (ROI) for the investor. As previously explained by W, the international market provides a greater revenue perspective which can be interesting for investors. The way J, Speech-Engineer expert put it: “The Dutch market ends rather quickly while the international market is very big and provides new opportunities. There was the strategy to simply offer in as many languages as possible. Attract as many active users a month as possible, also because this is what investors consider.” This example indicates that international expansion is often included into a startup’s launch strategy. Startups therefore also include international expansion in their promises to investors: “We have raised a big investment round with the promise that we are an international solution. So you would like to show your investors that that truly is the case.” [...] “Of course, we have to raise a next round of investments. Then you will have to be able to show that you can also be successful abroad, that your organisation is qualified, that you are able to make that step. That is partly driven by investors that say: Well show us then, the potential of your platform.” (W, Co-founder of Healthcare Platformers). As shown by the case descriptions, the products and services are innovative in nature, meaning most of the respondents considered launching internationally in their launch strategy from the get-go and therefore also included these plans in their proposals to potential investors.

Finally, startups can move their product or service to markets where they can more easily fit in and gain traction. This is illustrated by As, Business Developer for Pharma Research: “The biotech landscape in the United States or in, for example, in China are really promising. They have a lot of capital and they, also the investors from US are more, they are more easy going with risks. So they are more used to really invest in more early phase companies. So it’s really just basically chasing the money where the money is.” This example shows how international markets can have different, more beneficial, views to the uncertainty of startups. Some countries or regions can therefore be more willing to take a risk on a startup, meaning countries with a lower risk-aversion could convince startups to expand their market. This hints towards factors of influence that could either enable or hinder international launch strategies for startups to different countries and will be followed upon in the rest of the results section.

Table 4.3 – Reasons for interviewees to launch internationally

Case	Why did they go international?
Toilet Scanner	Expand to large yet familiar market and learn from experiences for future internationalisation attempts
Pharma Research	International nature of pharma research and finding investments in places where there is more risk tolerance
3D Brains	International nature of the product and market
Medical eSolutions	Create additional revenue and because of gathered financing round
Healthcare platformer	Opportunity for product improvement if the service is used internationally and gathered financing round
Ultrasound Scanners	Early opportunity with large investor and distributor
Speech-Engineer expert	Large potential of international market and impress potential investors
Internationalisation expert	The situation points to going international: Market opportunity, product suits international market and the startup is ready and prepared to go international

#### 4.4 What factors of influence to the international launch strategy are there?

Throughout the interviews, certain factors of influence on the international launch strategy have surfaced. This subchapter aims to identify these factors of influence and form propositions on how these factors relate and influence the international launch strategy. To support propositions, table 4.5.1 shows how the factors of influence differ across different European Countries.

##### 4.4.1 Perceived Risk-aversion

Intercontinental differences are larger than intracontinental differences. The quotes below express intercontinental differences between Europe and the United States. Moreover, they form an argument that might be easier to sell in less risk-averse countries, leading to the idea that the risk-aversion of a country forms a factor of influence for the international launch strategy.

“In Europe they would spend two hours talking before ordering something while in the US they spend five minutes, they order it and test it and if it is of no use they will just not use and toss it aside but in Europe there’s more thinking involved in the decision and more risk-aversion, right. That’s kind of the main difference I would

say.”

Ab, Managing Director of 3D Brains

“Americans want you to get to the point right away. They can decide within 15 minutes if something is interesting or not, if they want to continue talking or not. Meanwhile in European countries you can be talking for one and a half hour after which it turns out there is nothing to be gained.”

W, Co-founder of Healthcare Platformers

For the International Launch Strategy, this means that startups have to adjust their approach depending on the risk-aversity of the country they launch to: “give them more data-points, all the things to kind of reassure them. So we are a bit more proactive in a way, we kind of go more into their face with the information while with the US customer you just answer the questions because if you answer the questions the way they want they will order it from you.” (Ab, Managing Director of 3D Brains). This indicates how startups change their marketing capabilities for an international launch strategy.

**Proposition 1.** A country’s perceived risk-aversion has a negative effect on the changes for the international launch strategy, causing the marketing capabilities to change.

#### *4.4.2 Bureaucracy of Governmental Institutions*

Throughout the interviews, the bureaucracy of governmental institutions played an important role. We can identify the bureaucracy of governmental institutions as a factor of influence, as exemplified by the quotes below.

“Bureaucracy is a thing of course that also comes into play. How long do things take. sometimes market launces can take incredibly long due to the bureaucratic mill and that could be a reason not to do it.”

P, Internationalisation expert

“England is a super innovative, prosperous country, so that is a nice one. However, in the hospital sector with the NHS, where large hospitals and trusts are affiliated with is very bureaucratic, very political, very complex.”

V, CEO of Ultrasound Scanners

“We were already talking about Germany which is actually a very complex, old-fashioned actually.”

V, CEO of Ultrasound Scanners

As exemplified by the quotes, bureaucracy can cause the domestic launch strategy to require changes for the international launch strategy or even influence the decision on whether to launch to a country or not. A highly bureaucratic country can change the stakeholder map and thereby change the advantageousness of a market and strategic launch decisions.

**Proposition 2.** The bureaucracy of governmental institutions negatively affects market advantageousness.

#### *4.4.3 Privacy Legislation*

Political-legal differences have proven to be an important part of international launch strategies. Legally, countries in the European Union rely mostly on the CE marking and GDPR legislation for processing of personal data. Whereas the United States require FDA marking. Some countries, however, have even stricter privacy laws than the universal EU legislation. Privacy legislation can therefore be seen as a factor of influence. Startups deal with privacy legislation by making simple evaluations: “Otherwise it is purely an evaluation. How much time, energy, effort does it cost to arrange legislation for an X amount of customers.” (V, CEO of Ultrasound Scanners). An important sidenote, however, is that strict privacy legislation can also be turned into a competitive advantage when dealt with correctly, as explained by W, Co-founder of Healthcare Platformers: “Sometimes they make it harder and sometimes easier and you just have to deal with that. That is also the added value for a party that is very well set up for that. So if you can take that into account you are one step ahead of other parties. So sometimes those barriers aren’t that bad, it can slow your competitors down.”

#### *4.4.4 Perceived Privacy Sensitivity*

Similar to privacy legislation, there is also privacy-sensitivity. Here, not just privacy legislation is important, but also inhabitants’ sensitivity to privacy, which is often inherent to a countries’ culture and can even create trust. W, Co-founder of Healthcare Platformers gave an example for Sweden: “I have lived in Sweden for two years, in Sweden you can request

someone’s income. In the Netherlands, that is unthinkable, but in Sweden you can find anyone’s income. That person does get a call that someone requested your income so it is not a common thing to do, but the funny thing is that it creates some kind of trust.” Table 4.4.4 summarises the perceived privacy sensitivity in different countries with their respective quotes.

Table 4.4.4 – Perceived privacy sensitivity in different countries

Country	Privacy-sensitivity	Quote
Germany	High	“Yes for sure because they indeed allow more but they don’t dare to yet. So that is very important in Germany, France as well. So you see the cultural differences in: How do they think about data exchange?” W, Co-founder of Healthcare Platformers
Scandinavia	Low	“They are reasonably open. They are easier going in sharing data and there are also more national initiatives.” W, Co-founder of Healthcare Platformers
France	High	“Yes for sure because they indeed allow more but they don’t dare to yet. So that is very important in Germany, France as well. So you see the cultural differences in: How do they think about data exchange?” W, Co-founder of Healthcare Platformers
Japan	High	“Countries like Japan aren’t very eager to share everything.” P, Internationalisation expert
Switzerland	High	“Switzerland is also very strict. Yes Switzerland is also pretty strict, also no EU, though they often follow the EU, but sometimes they can be very strict.” P, Internationalisation expert
United States	Low	“Yes in the US it is not that bad.” P, Internationalisation expert

Privacy regulation and privacy sensitivity are two similar, yet different factors of influence. However, as illustrated by table 5.4.1, countries that are highly privacy sensitive, also tend to

have stricter privacy regulation. The underlying culture of privacy sensitivity seems to lead to stricter privacy regulations. Whenever there is a perceived strict privacy sensitivity, the advantageousness of a market decreases. This effects gets mediated by strict privacy regulation. Highly privacy-sensitive countries could be avoided by startups for their international launch since it decreases market advantageousness.

**Proposition 3a and 6b.** Perceived privacy sensitivity has a negative effect on the change in the advantageousness of the market (3a). This effect is mediated through privacy legislation, which also shows a negative effect (3b).

#### *4.4.5 Beneficialness of Remuneration System*

Other than the legal environment, there is also the political environment. The political environment decides how healthcare systems are arranged and therefore also how reimbursements are allocated. Reimbursements can be crucial for healthcare startups. If the client has to pay directly for a product or service, they might be less likely to use a product or service. The beneficialness of a remuneration system can hinder or accelerate growth for startups. The quotes below exemplify the importance of reimbursements.

“And there are barriers because the medical field almost always has to do with compensations. If you are included in a remuneration system.”

R, Managing Director of Toilet Scanner

“And it is also very important that you take care of that well because the product will, hopefully, also be reimbursed in a market. It is also always of importance who is to pay for it. For the product.”

R, Managing Director of Toilet Scanner

“The only big factor where it differs is, that is the difficult thing in Digital Health and we don't really have to deal with it, but is that a country is completely differently set up in terms of healthcare, in terms of legislation, in terms of the way systems interact with each other. Also for example how the first line of care communicates with the second line. Everything is different throughout the entirety of Europe. So you have to adjust your business strategy on that but, once again, we have a little less of a burden by that.”

## O, Strategy & Growth Ops of Medical eSolutions

As indicated by O, the remuneration system might not be as applicable for all healthcare startups. Some startups have less to do with individual healthcare systems. This is most likely because companies such as Medical eSolutions deal less with individual countries and instead have a more global focus.

Startups analyse the beneficialness of the remuneration system in different countries and adjust their international launch strategy accordingly. R, Managing Director of Toilet Scanner, for instance, explains how remuneration systems cost time and resources, which had to be accounted for in the international launch strategy: “And that is mostly with reimbursements. Is it included in a DBC, a Diagnose Behandel Combinatie in the Netherlands. In Germany it is called different. We have to know that.”. If the remuneration system is beneficial, the market becomes more advantageous to the startup.

**Proposition 4.** The beneficialness of a remuneration system has a positive effect on market advantageousness.

### *4.4.6 Localisation Necessity*

An important in which startups attempt to achieve social-cultural acceptance that has surfaced throughout the interviews is through the concept of localisation. First, localisation starts with the localisation of language, as illustrated by the quotes below.

“And sometimes that requires looking at language and that does have to happen professionally so by a professional translator or a native speaker.”

R, Managing Director of Toilet Scanner

“Think of using interns in Nordic countries to translate commercials to be available in the right language.”

J, Speech engineer expert

“Look in the first instance we are busy with Germany but if we want to continue that we should have German speaking people and also a German website.”

W, Co-founder of Healthcare Platformers

“Even between the UK and the US it is very different. So now we are also busy making sure we have different websites for European English and American English and Dutch.”

W, Co-founder of Healthcare Platformers

Localisation can go even further still. Localisation does not only require simple translations, but also adjustments to marketing approaches and even the product or service itself.

“At [previous company] we really placed the product by emphasizing the local expertise. Indicate that the service has and knows the local language as much as possible.”

J, Speech engineer expert

“We type other messages and, to give an example, in Europe there is much more focus on patient security and improved healthcare for the patient. In America it is much flatter, it is just more commercial. Okay how many profit can you generate with this innovation? So it is a different dynamic.”

W, Co-founder of Healthcare Platformers

“I think localisation in trials is important. You notice that some companies really demanded from us, our technologies mainly for patients is localised. That that is possible. That it is available in German, Spanish or French and that is truly a requirement to perform the service, but it is not the case everywhere in Europe.”

O, Strategy & Growth Ops of Medical eSolutions

Some countries have higher localisation needs than others. Higher localisation needs require more resources and knowledge from the startup. As explained by internationalisation expert P, the necessity of localisation can even influence a startup’s decision to launch to a country or not. Whenever a country has a high localisation necessity, the startup is required to attain more local knowledge in order to adjust the product or launch strategy to local needs. High localisation needs have a negative effect on local knowledge since the startup will have to put in more time and resources to get familiar with local ways of working. As explained in subchapter 4.2.2, interviewees attempted to include local distributors or employees into their tactical launch decisions to adjust their international launch strategy accordingly.

**Proposition 5.** Localisation necessity has a negative effect on the local knowledge of the startup.

#### *4.4.7 Intensity of Competition*

Competition plays an important role in any launch strategy. For the international launch strategy, the intensity of competition could change depending in which country a startup decides to launch. The quotes below illustrate how the competitive landscape can change for an international launch.

“Are there already other solutions? So you also look at what competitors there are or what whom you compete.”

W, Co-founder of Healthcare Platformers

“Look at what the competitive landscape looks like. Incredibly important.”

P, Internationalisation expert

Startups evaluate the intensity of competition in a market to assess the relative product newness and adjust their international launch strategy accordingly. As explained and shown at the case descriptions, a change in product newness can trigger a change in type of launch strategy, meaning main objectives are also likely to change.

**Proposition 6.** The intensity of competition negatively affects relative product newness.

#### *4.4.8 Country's Innovativeness*

As previously explained, most of the cases were considered to be Innovative New Product launches or Offensive Improvement Launches, making the technological adequacy of a country an engaging subject. Technological adequacy refers to how the innovativeness of a product or service and the innovativeness of a country should match for a product launch to succeed. Startups seemed to deal with innovativeness issues by simply choosing to launch in markets that were deemed open enough for their product or service to launch, as demonstrated by the quotes below.

“The right balance, well you can of course be really innovative but then England might just not be the right market for you. That is something you should adjust your market to and also see: Where are they advanced?”

P, Internationalisation expert

“Well we mostly look: Where is the need? Both for hospitals as well as the application side.”

W, Co-founder of Healthcare Platformers

There are different ways for startups to evaluate the innovativeness of a market. Commonly through both qualitative as well as quantitative data: “So partly by talking to potential clients, talking to our network where we simply get those signals. Partly we look at publications, scientific publications in our sector. So you see the number of scientific publications in this field increase. So those are a few signals that allow us to make estimations.” (V, CEO of Ultrasound Scanners). A country’s innovativeness plays an important role in the timing of an international launch strategy. More innovative countries are more open to innovation, making the country more appealing to launch to. Less innovative countries will need more time to innovate and integrate an innovation. The innovativeness of a country could therefore be identified as a factor of influence. Logically, this effect is stronger for more innovative product launches since Offensive Improvement Launches and especially Innovative New Product Launches require the market to be innovative for their innovation to gain traction.

**Proposition 7.** The innovativeness of a country has a positive effect on the external timing of an international launch.

#### *4.4.9 Similarity to Domestic Market*

Communication procedures are not necessarily a barrier but do require a different approach, as illustrated by the quotes below.

“Well communication, problems is a big word but you do have to take into account that every country has a different way of doing business and they are very sensitive to different sorts of arguments.”

W, Co-founder of Healthcare Platformers

“So you do deal differently with stakeholders in America than in China, so there are differences. With partners, customers, technology partners, distribution partners, you

deal with all those local parties differently. I think that within Europe, for us at least, it is not that bad.”

O, Strategy & Growth Ops of Medical eSolutions

O, Strategy & Growth Ops of Medical eSolutions explains how intracontinental differences are not as big as the intercontinental differences. The United States is much more revenue-focused compared to Europe, which is more client-focused, as explained by W, Co-founder of Healthcare Platformers: “in Europe you shouldn’t start about money right away.” [...] “In Europe, it is much more patient focused, in America more revenue focused. So you see it in the communication you have to use.”. Startups adjust their marketing and communication approaches depending on the country in which they decide to launch. Similar markets require less adaptations between the domestic launch strategy and the international launch strategy, making the product launch relatively easier: “ Further I think that culture plays a big role. The closer to your own culture, the easier or more difficult it is.” (P, Internationalisation expert).

In short, different markets will also require different marketing and communication approaches. Startups have to adjust their international launch strategy accordingly, thereby affecting the marketing capabilities of the international launch. The similarity in markets can be measured in terms of all of the contextual factors named above combined. The closer the factors score compared to the domestic score, the more similar the market is relative to the domestic market and the less adjustments in marketing capabilities are necessary. They therefore have a positive effect on marketing capabilities.

**Proposition 8.** The similarity of the market has a positive effect on the marketing capabilities for an international launch.

Figure 4.4 below shows the proposed conceptual model based on the identified factors of influence and propositions.

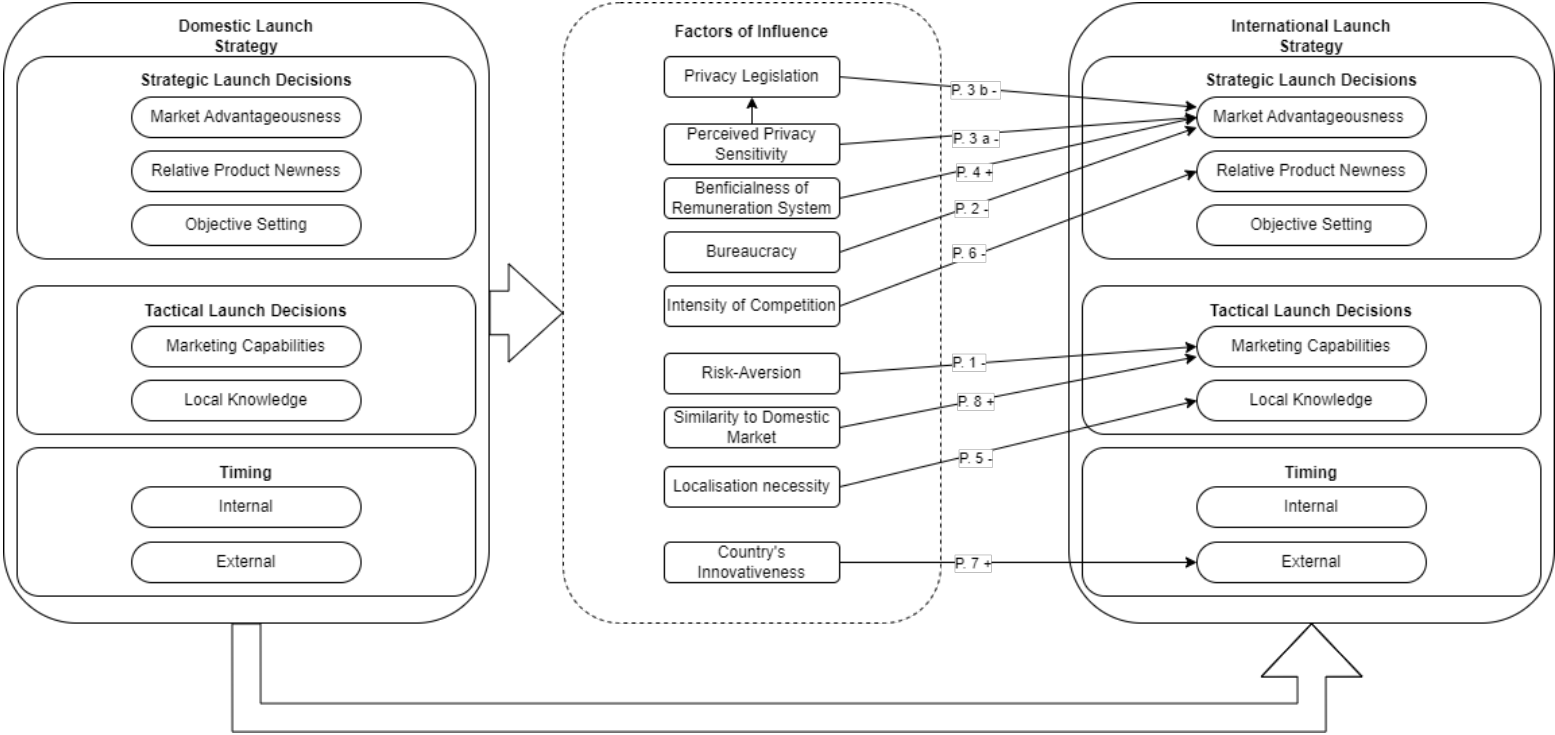


Figure 4.4 – Proposed conceptual model based on identified propositions

**4.5 How are the factors of influence represented around Europe?**

The proposed conceptual model provides a better understanding of international launch strategies and their factors of influence. However, it is still interesting to analyse how the factors of influence are present in the real-world. Therefore, they have been applied to relevant countries throughout Europe by means of desk research and interview findings. This way, propositions can be supported and differences between countries can be analysed. Moreover, it provides an insight into what countries might be beneficial for eHealth and MedTech startups start in international launch. The scores have been colour-coded based on a 5-point Likert scale ranging from red to green. for the purpose of comparison and insightfulness. The outcomes of chapter 4.5 have been used to support statements made in chapter 4.4.

During the interview with speech engineer expert J, J pointed out some relevant countries for eHealth startups such as Attendi: “In countries such as the Netherlands, Belgium, Germany, the United Kingdom, the Scandinavian countries and Germany the system seems comparable. They could be logical first steps for Attendi.”. Moreover, France and Spain were included into the analysis as they had often been put forward throughout the interviews. Although the United States was also mentioned regularly, it became apparent

during the pilot interviews that the United States was not deemed as a relevant option for Attendi and the main focus lies within Europe.

#### *4.5.1 Factors of influence applied across Europe*

Applying the factors of influence to the selected countries presents the outcomes as presented in table 4.5.1. Subchapter 4.5.1 describes how scores for table 4.5.1 have been decided.

The intensity of competition has been based on internal documents provided by D. de Rave (personal communication, February 15, 2022). If languages were not localised to specific countries, for example Flemish for Belgium rather than Dutch, they were not included into the analysis. Appendix III shows how the intensity of competition has been analysed.

The countries' perceived risk-aversion was based on interview findings. The respective quotes can be found in appendix IV. When views were contradictory, both quotes are mentioned and the opinions are balanced out. Moreover, the interviews did not go into detail on the risk-aversion of the Netherlands. The Netherlands did, however, often form the basis of the evaluation of the risk-aversion of other countries. It has therefore been rated as 'Medium'.

The bureaucracy of governmental can hinder or enable the international launch strategy. Germany and the UK are known to be bureaucratic countries. Moreover, more southern countries tempt to be more bureaucratic, as explained by V, CEO of Ultrasound Scanners: "I feel like the more southern you get, the more they would like to innovate but the less fast it goes. So really bureaucratic paperwork etcetera. What you see is that in Spain, Italy, they really want to innovate but even ordering a product can already take half a year." Additionally, U.S. News collaborated with BAV Group and the University of Pennsylvania (2021a) to set out a survey to a total of 17326 individuals from 36 countries of which 10068 were informed elites, 4919 business decision-makers and 5817 were part of the general public to rank the world's countries on multiple levels including the least bureaucratic countries of the world. Here, Scandinavia scored well (Finland 1st, Sweden 2nd, Norway 5th, Denmark 10th). Moreover, the Netherlands was placed 7th, Belgium 13th, Spain 15th, France 23rd, Germany 42nd and the UK 51st. Based on these findings, scores were handed out.

In terms of privacy legislation, members of the European Union follow the GDPR regulations. An exact evaluation of the privacy legislation often requires specialists or departments and exact estimations are therefore unfeasible for this research. Some desk research can help make more precise assumptions. The UK has, though the withdrawal from

the EU, a broadly similar GDPR to the EU (DataGuidance, 2022d). France, the Netherlands and Belgium also seem to mostly follow European GDPR (DataGuidance, 2022a; DLA Piper, 2021; DLA Piper 2022b). Meanwhile, Germany follows the European GDPR, but also Federal Data Protection Act (BDSG) (DataGuidance, 2022f). Similarly, Spain introduced the Protection of Personal Data and Guarantee of Digital Rights (LOPDGDD) and some other additional privacy regulations (DataGuidance, 2022b). For the Nordics, Sweden and Denmark follow the GDPR, both Norway and Finland have some small additions to the GDPR (DataGuidance, 2022c; DataGuidance, 2022e; DLA Piper, 2022a; DLA Piper, 2022b)

The privacy sensitivity of Germany, the Nordics and France has already been evaluated in chapter 4.4.4. Moreover, Internationalisation expert P described the Netherlands as “easier going in a lot of things than foreigners, especially compared to Germany.” For Belgium, the United Kingdom and Spain, medium privacy sensitivity is assumed, considering desk research has not provided results on this topic.

Remuneration systems are often complex national landscapes that are difficult to understand and map. For both remuneration systems as well as privacy legislation, it could therefore also be argued that cooperating with distributors could help startups deal with these complex circumstances. For this study, it was not feasible to completely capture remuneration systems and its beneficialness. Therefore, no data has been used for the assumptions.

The importance of the innovativeness of a countries has been mentioned multiple times throughout the interviews. The research by U.S. News et al. (2021b) also measured the innovativeness of countries. Out of the selected countries, Germany was rated the highest (6th), followed by Sweden (8th), the UK (10th), Norway (13th), Finland (14th), France (16th), the Netherlands (17th), Denmark (18th), Belgium (24th) and Spain (25th). More specifically, the innovativeness of a country also refers to the technological state of healthcare in Europe. Although this is generally considered to be good in Europe, there are considerable differences in Attendi’s specific market. In Germany, there are large incentives stimulating digitalisation in healthcare, however, the German technological state of healthcare is not as far as people might expect: “On the other hand it turned out that the German hospitals are a little bit later in their digitalisation. So some hospitals still work with paper files, although they are the last ones. What you see is that the next three years all hospitals must have a patient portal.”(W, Co-founder of Healthcare Platformers). Since the use of EMRs and EHRs are crucial for the implementation of services such as Attendi’s and many other eHealth startups, the state of EMR and EHR usage has been analysed more in-depth. Since these results are only applicable to healthcare startups active in the EMR and

EHR market, this analysis can be found in Appendix V and is marked with double asterisks in table 4.5.1.

The localisation necessity of the countries has already been discussed slightly. W, O and P expressed the need for localisation in Germany with German speaking people and a German website, indicating high localisation needs. Moreover, W, Co-founder of Healthcare Platformers explained how the UK requires European English rather than American English and O, Strategy & Growth Ops of Medical eSolutions explained how Spain and France require translated services. However, since a service such as Attendi's will require translations anyhow, the localisation necessity for most countries will most likely be medium at the very least. Websites and services will need translations. What stands out, however, is the example of Germany, where the localisation necessity requires more than just translations. Moreover, it could be argued that countries where relatively little people speak English, people that speak the local language will need to be recruited in order to conduct business. Either by hiring locals or cooperating with distributors. In the Nordics, the English language is mastered relatively well. In Denmark, 86% of the population is able to have a conversation in English whereas the average lays around 38% in Europe. For Sweden, the percentage lays on 86%, Finland 70%. Germany 56% Belgium scores 52%, France 39% and Spain 22% (European Commission, 2012). Belgium is a special case since over half of Belgium's population speaks Flemish, closely related to Dutch. Though the data is a little dated, it can help make assumptions about the localisation needs of different countries. In combination with the qualitative data from the interviews, localisation needs can be estimated.

Finally, the similarity to the Dutch market can be estimated by comparing the scores of the Netherlands to the other countries. As shown in table 4.5.1, the Belgium market is very similar to the Dutch market. Moreover, the Nordics have a similar market relative to the Dutch market.

Table 4.5.1 –Factors of influence applied

	Netherlands	Belgium	Germany	United Kingdom	Nordics	France	Spain
Intensity of competition	High	Medium	High	Very High	Medium	High	Low
Similarity to domestic market	n/a	Very High	Low	High	High	Low	Medium
Perceived Risk-aversion	Medium	High	Very High	Medium	Low	High	Medium
Bureaucracy of governmental institutions	Low	Medium	Very High	Very High	Very Low	High	Medium
Privacy legislation	Medium	Medium	Strict	Medium	Medium	Medium	Strict
Privacy sensitivity	Medium	Medium*	High	Medium*	Low	High	Medium*
Beneficialness of remuneration system	Medium*	Medium*	Medium*	Medium*	Medium*	Medium*	Medium*
Innovativeness of country	Medium	Low	Very High	High	High	Medium	Low
Localisation necessity	n/a	Very Low	Very High	Medium	Medium	High	High
State of EMR and EHR usage**	High	High	Low	Low	High	High	Medium

\*Assumptions not based on data

\*\*Only relevant for startups active in EMR and EHR market

Although the data is ordinal, it does provide some sense of what European countries seem to be attractive markets for startups in healthcare. The Nordics seem particularly attractive for startups to launch to. Furthermore, Belgium, though a relatively small market, could be an interesting opportunity for Dutch startups in healthcare looking to launch internationally. Contrary to popular belief, the German market might not be as opportune as expected. The risk-averse and bureaucratic culture as well as the very high localisation necessity make a launch in Germany a demanding launch. Similarly, the very high bureaucracy in the UK combined with their very high intensity of competition, most likely due to the widespread use of the English language, could potentially hinder attempts to launch in the UK.

## **Chapter 5 - Conclusion and discussion**

The aim of this study was to get a better understanding of how today's healthcare startups' launch strategies are shaped and what factors influence the international launch strategy. Through theory, launch strategies were found to consist out of strategic, tactical and timing-related launch decisions. By means of the analysis of eight in-depth interviews, dimensions for strategic launch decisions were considered to include market advantageousness, relative product newness and objective setting. Additionally, measures for tactical launch decisions included marketing capabilities and local knowledge. Finally, timing-related decisions concerned internal and external timing.

Out of the six cases, merely one case adjusted their type of launch strategy between the domestic and international launch. This change in type of launch strategy was mostly due to the change in product newness on the international market and went on to demonstrate how launch decisions might change for the international launch strategy vis-à-vis the domestic launch strategy. Overall, the little changes in types of launch strategy led to the idea that international launch strategies are largely similar to domestic launch strategies. However, nine factors of influence created by the nature of international launches were identified. These factors of influence had to be evaluated and included into the international launch strategy relative to the domestic launch strategy. They consisted of Intensity of Competition, Similarity to the Domestic Market, Perceived Risk-aversion, Bureaucracy of Governmental Institutions, Privacy Legislation, Perceived Privacy sensitivity, the Beneficialness of the Remuneration System, the Innovativeness of a Country and the Localisation Necessity.

Between the domestic-and international launch, tactical launch decisions were affected through potential changes in market advantageousness and relative product newness. Market advantageousness can be negatively affected by the perceived privacy sensitivity, which effect is mediated through privacy legislation, also showing a negative effect. Furthermore, market advantageousness can positively affected by a beneficial remuneration system and negatively affected by highly bureaucratic countries. Relative product newness was negatively affected by the intensity of competition.

Tactical launch decisions were affected through marketing capabilities and local knowledge. Marketing capabilities can be negatively affected by a country's perceived risk-aversion and positively affected by the similarity to the domestic market. Finally, timing-related decisions were affected through external timing. A country's innovativeness can have a positive effect on the external timing of an international launch strategy.

Altogether, these nine factors of influence were analysed as to how startups manage these factors of influence after which they were applied to the Netherlands, Belgium, Germany, the United Kingdom, the Nordics (Denmark, Norway, Sweden, Finland), France and Spain. Consequently, this allowed for a clear comparison and analysis of the factors of influence. For startups in healthcare, Belgium and especially the Nordics were considered to be an opportune market.

Remarkably, partnerships and distributors played an important role in launch strategies. Either through cooperations with distributors or local partners entrepreneurs alleviate factors of influence such as privacy legislation, privacy sensitivity and the localisation necessity. The startup's capital mediates the decision to work with distributors or not. Startups with more capital have the ability to hire people locally and avoid the difficult process of finding a distributor and run into a potential mismatch.

### **5.1 Theoretical implications**

The insights from this study add to the very limited knowledge about international launch strategies. Previous research rarely identified differences between domestic launch strategies and international launch strategies. Internationalisation literature has researched barriers to internationalisation including multiple meta-analyses, but little to no research was conducted on how these barriers influenced the international launch strategy. Although this study agrees both domestic and international launch strategies are largely based on the three known dimensions in literature, i.e. strategic launch decisions, tactical launch decisions and timing-related decisions, this study suggests that there actually is a reasonable difference between domestic launch strategies and international launch strategies. Consequently, this study provides a refined conceptual model suggesting nine additional factors of influence unveiling the difference international launch strategies and domestic launch strategies.

This study contributes to the field of launch strategies and New Product Launches. Although many research has already been conducted on the dimensions of launch strategies (e.g. Biggadike, 1979; Hultink & Robben, 1999; Mahadjan & Wind 1992), these studies did not look at additional factors of influence for international launch strategies. This study suggests there is a difference between this domestic launch strategy and the international launch strategy and startups have to adjust their strategy accordingly. Possibly, the concept of international launch strategies is not common because the launch strategy commonly refers to a stage of the new product launch. Settled companies therefore relate more to the barriers as described by the internationalisation literature. For startups, however, the international launch

can follow closely after, or even during, the domestic launch strategy, promoting the concept of international launch strategies.

Secondly, this study adds to the body of knowledge on internationalisation. With the perspective of international launch strategies, the results deviate from meta-analyses on internationalisation. More specifically, Leonidou (2004) suggests the external barriers to internationalisation consist of procedural, governmental, task and environmental barriers. The findings showed that, though these barriers were applicable at times, none were directly translatable into factors of influence. The procedural barriers, which included exporting barriers, proved to be troublesome and required extra work, but was generally not found to be country or region specific. Instead, exporting procedures throughout Europe are similar and other countries might require a bit of work but exporting procedures should not create too many problems and was not deemed relevant for decisions on international launch strategies. Furthermore, economic welfare, part of the environmental barriers, showed little impact for the international launch strategy of startups. This was because startups focus their international launch strategy on economically relatively similar countries. Even for countries that were not economically similar, the innovativeness of a country played a bigger role. The technologically advanced healthcare startups focus their international launch strategy on countries where the innovativeness of the country is deemed advanced enough.

Finally, this study was also set in the complex context of healthcare. Because of this complex setting, the context of healthcare was included into the theoretical framework to prevent a potential omission of important variables. This has proven to be useful. The operationalisation and transformation of measures based on Mieczkowska et al. (2004), were reflected in the findings. Stakeholder involvement was considered to be especially important for the context of healthcare. Additionally, the degree of innovativeness has also proven to be important to the international launch strategy, as previously explained, even more important than Leonidou's (2004) economic welfare. Finally, the international fit of the product or service did not show significant results and was therefore not further included into the findings.

## **5.2 Practical implications**

The results show a concise conceptual model which people involved in international launches for startups can use as a guide to their international launch strategy. It should be noted that the research was very explorative in nature and is therefore unlikely to completely and correctly capture the differences between domestic and international launch strategies and its

relations. It can, however, provide entrepreneurs with a basic guideline of factors of influence. Entrepreneurs can use this conceptual model to start thinking about shaping their own international launch strategy and what factors they might encounter during this process.

Furthermore, the desk-research where the factors of influence have been applied to relevant countries across Europe can support entrepreneur in their decision of countries to launch to. The very clear table provides entrepreneurs in healthcare with an easy overview of up-and downsides of different countries for their international launch strategy. However, entrepreneurs should be aware the desk-research was performed by a single researcher and mostly based on internet sources. Despite, it still provides entrepreneurs with a clear indication of the factors of influence across Europe.

The managerial relevance has already proven itself for Attendi. Since this study was part of an internship, the results have been shared with internship supervisor Maarten Broekema and Attendi. The results have received enthusiastic feedback for its practical relevance and clear, colour-coded advice.

### **5.3 Limitations and directions for future research**

Although the study has attempted to define and operationalise the concept of an international launch strategy, it is uncommon in today's literature. Therefore, future research should continue to debate about the definition of exactly what an international launch strategy entails. A change in definition could already change potential outcomes of this study. It is therefore also this newness of the topic that provides opportunities for future research. The concept of international launch strategies was based on an attempt of finding the connection between two separate fields of research: Launch strategies and internationalisation. Future research could benefit from a more in-depth analysis on the crossover between the two fields.

This study has found nine factors of influence for an international launch strategy. Though they were all deemed relevant, no relative weight has been assigned to the factors of influence. Some factors of influence might be more important to the international launch strategy than others. Therefore, future research could attempt to quantitatively research the relative importance of the factors of influence and thereby provide a more-detailed insight into what matters most for the international launch strategy vis-à-vis domestic launch strategies. This way, both the theoretical as well as managerial relevance of the factors of influence could increase. Furthermore, quantitatively measuring the factors of influence could give an insight into the explanation power of the factors of influence, thereby discovering

whether there might be any potential factors of influence that were omitted throughout the study.

Another implication lies in the fact that the desk-research for this study was conducted by a single researcher and mostly based on internet sources. In the real world, some outcomes might differ. Especially the moderating effect between privacy sensitivity and privacy legislation requires further research. As shown in table 4.5.1, the privacy sensitivity involves three assumptions not based on data. Therefore, the mediating effect, which was based on the comparison in the table, might not be present or as strong as expected. Intuitively, however, the effect makes sense and could therefore still be relevant for future research. Additionally, the research was conducted in a healthcare context. This particular context adds specific factors of influence that might not be as important for regular startups, decreasing its generalizability. Startups often operate in a highly dynamic and slightly messy environment where rapid changes can occur regularly. The importance of certain factors of influence such as the beneficialness of the remuneration system and privacy regulation could switch rather rapidly.

Finally, the impact of the Covid-19 pandemic has been mentioned multiple times throughout the study. Al-Anezi (2022) suggests it has sped up the adoption of eHealth solutions. Future research could analyse how this has affected the factors of influence of the international launch strategy as multiple interviewees in eHealth indicated it allowed them to grow faster than previously anticipated.

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## Appendices

### Appendix I - Questions list

#### *Introduction*

To start off, I would like to thank you for willing to cooperate in this study. My name is Stef van Hulst and I am currently studying Innovation & Entrepreneurship at Radboud University. As you might know I am trying to study how startups shape their international launch strategy and mainly what factors of influence they run into and how they dealt with those. The interview will take about 30 to 45 minutes. Your answers will be anonymised and dealt with, with high care. I would like to ask your permission to record the interview so I can transcribe your answers and delete the recording afterwards.

Do you have any questions before we start? To start off, I would like to ask some introductory questions about you and the company you work for.

#### *Introductory questions*

- Can you introduce yourself? What company do you work for and what is your role?
- In what countries is the product/service of your company currently being sold?
- Can you summarise why your company chose to launch in those countries?

#### *Launch Strategy*

I would like to start with your launch strategy. A launch strategy are the marketing decisions required to offer a product to its target market and generate income through the sales of the product. It is divided in three dimensions: Strategic launch decisions, tactical launch decisions and timing-related decisions. For every dimension, I will first ask how you executed your strategy both in the Netherlands, as well as internationally.

Let's start with the launch strategy in general.

- Why did your company decide it was time for an international launch?
- How did your company shape their international launch strategy?
- Who was involved in the decisions?
- What were the main factors included in the launch strategy?
- How did your company prioritise the importance of those factors?

Strategic launch decisions are the long-term product and market decisions made for the launch strategy.

- Were main objectives set before the product launch in the Netherlands? Think of creating brand awareness, sales targets and marketing targets.
- If so; What main objectives were set for the new product launch?
- How were these objectives decided/prioritised?
- How were the objectives adjusted for international markets?
- What about the priorities of those objectives?
- How new would you argue the product was compared to the products already on the market in the Netherlands? How do you differ?
- How do you communicate this newness to the customer in the launch strategy of your company?
- How did the competitive landscape change when going international?
- What additional factors of competition did you notice on the international market?

Other than strategic launch decisions, there are also tactical launch decisions. Tactical launch decisions are the marketing-mix decisions made in the launch strategy.

- How was the product/service marketed to potential customers in the Netherlands?
- What did you change when going internationally?
- How did you approach and familiarise with your main distributors?
- How did you include them into your launch strategy?
- How did you find and connect with the right distributors internationally?
- How was the pricing strategy decided?
- How did the pricing strategy differ internationally?

Finally, decisions on the timing of the product also form the launch strategy. Timing-related decisions concern the relative timing to the competitors.

- How did you time your market entry in the Netherlands?
- How did the competitors play a role in the timing-related decisions of the launch?
- How do you decide if it is the right moment to execute your international launch strategy?
- How did you know if your company was ready to go international?

### *International barriers*

I would now like to talk about the international context. Going international often includes walking into all sorts of barriers. I would like to know what contextual barriers there were and how they influenced your decisions on your international launch strategy.

- How was the international launch strategy adjusted to deal with international communication?
- How was the international launch strategy adjusted to deal with exporting procedures?
- How big of an influence did these factors have on your international launch?
- Did you notice other major procedural barriers internationally? Procedural barriers are the operating barriers in the exportation process such as unfamiliarity with export procedures, problematic customer communication and payment collection issues.
- What governmental issues did your company run into and how did you overcome them in your launch strategy? Governmental issues pertain to actions or inactions by a government for the exporters.
- How did they influence your decisions on your international launch? How big was their impact?
- How did customer habits and attitudes differ internationally?
- How did those customer habits and attitudes lead to an adjusted and different launch strategy compared to the Dutch launch strategy?
- How did differences in economic welfare affect your decisions to internationalise somewhere?
- What legal differences between the Netherlands and internationally did you run into?
- How was the international launch strategy changed accordingly?
- What about cultural differences? Some things might be allowed legally, but not generally accepted culturally.
- How important were these legal and cultural differences for the choices in the international launch strategy?

### *Context of eHealth*

Finally, I would like to learn more about the context of eHealth. Being in healthcare often brings about a lot of different demands. For example, healthcare organisations are often much more risk-averse compared to regular organisations.

- How was the Dutch launch strategy adjusted for the influence of the government?
- How does the influence of stakeholders change per country?

- How did this impact your international launch strategy?
- How did you find the balance between being too innovative and disruptive and showing too little innovativeness?
- How did this have an impact and vary between different countries? Some countries might not be as innovative as other countries?
- How did the international launch strategy ensure that the innovation fits within the ways of working in the international country?

### *Finalisation*

Those were all the questions I had. Thank you for cooperating!

[repeat confidentiality]

## Appendix II- Case selection

<b>Real Company Name/ Informant Name (Confidential)</b>	<b>Fictive Company Name/ Informant Name</b>	<b>Employees</b>	<b>Economical sector</b>	<b>Product/service launched in</b>	<b>Role interviewee</b>
Novioscan / Rob Tweehuyzen	Toilet Scanner	14	Medical Device Manufacturing	Netherlands, Belgium, Germany	Co-founder/ Managing Director
Protinhi Therapeutics / Ashley Shih	Pharma Research	10	Drug R&D	Worldwide, mainly US	Business Developer
3D Neuro / Abdel Nemri	3D Brains	10	Biotechnological Research	Worldwide, focus on Europe, Americas and Asia	Managing Director
Castor EDC / Olivier Magnin	Medical eSolutions	200+	Medical Software Development	Worldwide, mainly EU and US	Strategy & Growth Ops
Founda / Wilco Schuttelaar	Healthcare platformer	48	IT Services and IT Consulting	Netherlands, UK, US	Co-Founder
Usono / Victor Donker	Ultrasound Scanners	5-10	Producer of Medical Devices	Europe, Canada, US, several Asian countries	CEO
Expert / Petra Benes	Speech-Engineer expert	-	Consultancy for International Product launches	Worldwide, specialized in Latin-America, Scandinavia, Germany	Consultant/ Entrepreneur
Expert / Jan-Willem van Leussen	Internationalisation expert	-	IT Services and IT Consulting	Worldwide	Speech Engineer

### Appendix III - Intensity of competition analysis

	Netherlands	Belgium	Germany	United Kingdom	Scandinavia	France	Spain
Names of competitors	G2Speech Nuance Trendskout Care to translate	G2Speech Nuance Trendskout	Nuance Spitch Trendskout Care to translate	G2Speech Nuance Spitch Trendskout Care to translate	Mirsk Digital Nuance Care to translate	G2Speech Nuance Spitch Care to translate	Nuance Care to translate
Number of competitors	4	3	4	5	3	4	2
Intensity of competition	High	Medium	High	Very High	Medium	High	Low

#### Scandinavia:

- Denmark
  - Nuance
  - Mirsk Digital
  - Care to translate
- Norway
  - Nuance
  - Mirsk Digital
  - Care to translate
- Sweden
  - Nuance
  - Mirsk Digital
  - Care to translate
- Finland
  - Nuance
  - Mirsk Digital
  - Care to translate

#### Appendix IV - Risk-Aversion analysis

Country/ Region	Risk- Aversion	Quote
Germany	Very high	“Countries such as Germany, they are very risk-averse” P, Internationalisation expert
Belgium	High	“but also Belgium, they are more conservative and you simply need more time.” P, Internationalisation expert
Scandinavia	Low	“With Scandinavia you can make steps more easily, they are open to new things and more efficiency and especially if it wins more time for patients or whatever, they would be really open to that.” P, Internationalisation expert
England	Medium	“Yes England and Germany for sure, France as well, Spain” P, Internationalisation expert “England is a super innovative, prosperous country, so that is a nice one. However, in the hospital sector with the NHS, where large hospitals and trusts are affiliated with is very bureaucratic, very political, very complex.” V, CEO of Ultrasound Scanners
France	High	“Yes England and Germany for sure, France as well, Spain” P, Internationalisation expert
Spain	Medium	“Yes England and Germany for sure, France as well, Spain” P, Internationalisation expert “What you notice is that Spain, Italy they are really willing but just ordering can take up to one and a half years.” V, CEO of Ultrasound Scanners

## **Appendix V – State of EMR and EHR usage**

In France, EMR systems are broadly used (Burnel, 2018; Dourgnon, 2018) and a law introduced in 2016 enabled interoperability between systems (Dourgnon, 2018). The Nordics also perform well, in Denmark there is a widespread EMR and EHR use where centralised purchasing is performed in the five regions and interoperability efforts have increased (A. Green, 2019). Finland also uses EMR solutions, but the many different EMR providers create limitations on its interoperability (A. Green, 2019). Norway and Sweden are also advanced in its EMR use (A. Green, 2019). In 2017 merely 45.3% of hospitals used EMR systems and 26.4% was planning to implement EMR systems within two years (Lim & Shahid, 2017), showing growth. The results are relatively low compared to Spain, where in 2013 already 75% of the hospitals used some form of EHR systems (Marca et al., 2013), though there were still issues with interoperability (De La Torre-Díez, González, & López-Coronado, 2013). Belgium already allows nation-wide interoperability of EHRs (Brussels Health Network, 2022).