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SEVWAYS FIELD LAB ON INTERNATIONALIZATION

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SEVWAYS FIELD LAB ON INTERNATIONALIZATION

Abstract

This work project provides the suggested internationalization strategy for Sevways to expand its ERP software, targeting the ports and shipping industry. The conducted analysis of external factors, domestic environment and company's internal capabilities and operations support the suggested recommendation of the international strategy. The examination leads to Germany as the most suitable location, followed by an appropriate entry path, with a clear marketing strategy. To conclude, a detailed financial analysis is made suggesting that the firm is able to achieve considerable profits in a six-year period, according to the assumptions made throughout the report.

Keywords: ERP Software, Shipping Agencies, Freight Forwarders, 3PLs (Third Party Logistics), Internationalization, Entry Mode, SME Expansion.

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INTRODUCTION

1. **The problem**

In today's fast-paced business world, Small and Medium Enterprises (SME) are often faced with fierce competition, from both home-country companies and international players and forces. While struggling with competition and threats of a shrinking available domestic market potential, SME's are often challenged with one critical decision: to stagnate or to seek international market opportunities in order to recover initial investment. This is the case of *Several Ways – Engenharia de Sistemas de Informação LDA*, hereinafter referred to as Sevways. When faced with a low market potential in Portugal, after having developed a solid ERP (Enteprise Resource Planning) software solution, a vertical based built on Sage X3, for companies in the shipping business, the next clear step was to look for international expansion opportunities. Nevertheless, with the limited amount of resources SME's typically face, planning an expansion is a somewhat intricate road to follow due to the high number of variables to account for. While faced with the need of expanding, an extensive analysis needs to be done, particularly for a SME, since a failed expansion would likely lead to the downfall of the company itself.

2. **The objective**

The goal of this work project is to provide Sevways with some guiding indicators for where and how it can expand to. The analysis is made based on proved methodologies and deployment of known frameworks, along with interpretation from the authors when the situation allows for it. Hence, the proposal should be critically interpreted by Sevways and adapted according to changes in circumstances. As such, it should be viewed as an internationalization proposal with focus on several aspects of the process, such as entry mode methods, marketing approach and financial forecasting, to name a few. After analysing this

proposal, the company should have a better understanding of why the expansion country was chosen and what are the steps to follow in order to ensure success.

3. **Limitations**

During the elaboration of this work project, the authors found several constraints along the way. The biggest concern was the small availability of resources concerning the specific industry where the company operates, which provided the inexistence of financial resources to acquire a more in-depth study. As such, the findings in this document may not establish a fully accurate portrayal of the worldwide industry. Additionally, the analysis was done based on one company only, which entails that the conclusions drawn can only be applicable to this company's reality, and therefore cannot be used for other companies also looking to internationalize. Furthermore,

The ranking formulation to select the expansion country used a weighted ranking approach. These weights were selected by the authors based on their knowledge of the industry and its influencing factors. Nonetheless, changes in these variables could lead to the drawing of different conclusions.

The purpose of the financial forecasting section was to provide possible expectations for financial results assuming the proposed project is conducted. During the elaboration of the financial statements, a set number of new customers was predicted, which may not correspond to what will happen. Additionally, the prices used for revenue forecasting are subject to change by both Sage and Sevways. Changes in these number would lead to a severely different financial scenario. Furthermore, the company does not currently generate financial statements that separate the different business lines. Hence, an estimate for "The Shipping ERP" business unit had to be created, which may not be completely accurate.

Finally, please note the availability of the hyperlinks throughout the report leading the reader to the appropriate appendix.

STRATEGY

1. **External Analysis**

1.1 Ports & Shipping Management Software Industry Analysis

"*The industry environment is composed of strategic groups - groupings of firms that seem to be more similar in certain ways than other members of the larger industry*" (Carpenter and Sanders 2014). In the specific case of Sevways and the service approach of this thesis, the company operates in the ***Ports and Shipping Management Software Industry***. It identifies itself in this group considering that it helps all the actors in the ports and shipping industry by supporting their advancement of the organizing process, and companies in charge of it, through an operating system.

The companies presenting as clients in this industry are mostly shipping agencies, freight forwarders and 3PLs (Third Party Logistics). Shipping agencies act as local experts of the ports and deal with transactions of ships that visit or dock. A shipping agent takes care of all requirements of the crew and any repairments necessary, among others (Marineinsights 2019). A freight forwarder, on the other hand, is a company responsible for organizing the shipment transportation to get goods from the manufacturer to the end consumer/client (Murphy and Daley 1997, 30). Forwarders collaborate with a network of different carriers in order to move goods faster and more efficiently. 3PLs are companies that outsource any activity related to storing and shipping goods. These companies handle the supply chain management and functions. Consequently, even though all three groups have the purpose of improving the shipping operational process, their core activities vary and create different task demands.

Overview, and an evaluation of the industry, benefits in terms of understanding all the factors that can affect its substantial growth. Furthermore, it supports the interpretation of the setting and recommended internationalization strategy for the company to have the strongest possible competitive advantage, while identifying the opportunities and threats it can face.

Besides this, "*the issues or problems identified in a given industry and the efforts made by organizations to handle such issues or solve such problems are learning opportunities*" (Aithal 2017). The following analysis provides familiarity with the industry and possible aspects to be considered for the development of this project.

The conducted research has shown there are two major factors effecting the industry environment:

1) Global shipping
2) 4.0 industry

1.1.1 Effects of the Global Ports and Shipping Industry

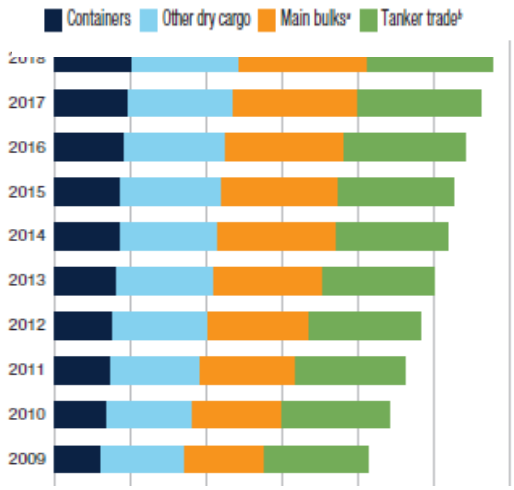
The future of Ports & Shipping Management Software industry is highly correlated and dependent on the overall ports and shipping industry path. The reason is the nature of the management software services and its specific focus on shipping operational processes. Looking from a broad point of view, for a company to export its products from country A to country B, the shipping movement can be very complicated. There are many procedures that are required to be followed in order to guarantee the shipments on-time arrival and without any defaults. The following figure represents the common shipping process a product must participate in.

Figure 1 Process of shipping products internationally

Narrowing down the observation, it can be detected that the maritime transport holds high importance in the comprehensive process. Additionally, it is also the "*engine of globalization with around 80% of world trade by volume carried on vessels that range from container ships to fuel tankers and dry bulk carriers*", according to the United Nations Conference on Trade and Development (UNCTAD 2020). Consequently, it represents the key link in connectivity between exporting and importing in world trade movement. Considering that majority of all the goods in the world being interchanged experience this path increases the significance of the course of action.

The Review of the Maritime Transport of the previous years by United Nations Conference on Trade and Development represents the increase in the industry.

Figure 2 Maritime Transport chart



According to the McKinsey report from 2018, the demand for shipping will also unlikely decline due to the characteristics of its industry. "*This has been fuelled by the expansion of global trade and by the growing share of container transport. Global trade has exploded from 22% of global GDP to 59% in 2015 – at a time when real global GDP has burgeoned from US$17 trillion to US$77 trillion and keeps on rising*" (Fenton et al 2018). In

order to follow the growth in the previous years, the shipping industry took measures by standardizing the boxes and adapting the infrastructures for majority of the companies. "*Containers transformed the economics of shipping: the ability to pack different goods into uniform boxes simplified loading and unloading, as well as transfers to rail, truck, and other modes of trans- port*" (Saxon and Stone 2017). To help the process advance, freight forwarding became valuable for cargo shipping companies and have emerged within the shipping industry.

Despite the historical path, the steady growth has been disrupted due to the unpredictable Covid-19 pandemic and various measures affecting the global industrial activities in 2020. However, according to recent study, during the first six months of the year "*shipping was resilient, and in specific markets it was possible to continue operations, with variations in mobility ranging between −5.62 % and −13.77 % for container ships*" (Millefiori et al 2020). This has proven the strength and critical importance of the overall shipping industry on a worldwide basis. Considering the timely proximity and unpredictability of the current events, the information and analysis available of the future short and long-term impact, are volatile.

Nevertheless, the shipping industry is currently responsible for an extensive value of goods and the containers will not cease to exist for a very long time, as well as the locations of the ports that are connected to other transportation services (Saxon and Stone 2017). The potential innovation for the transporting boxes is limited considering any changes would require extensive investments throughout the whole chain. Besides this, the connectivity throughout the world is becoming tighter and it requires more routes between the countries. However, the growth in global population, as well as continuous improvements in the transportation trying to keep up with consumers expectations, keep the determined path on the rise for the shipping industry. Moreover, even with the disruption, the entire industry is in a need of a change towards automation to help maintain its significance, while improving towards a more sustainable operational process.

Furthermore, the companies are not only subject to achieve positive financial results, but also to be responsible towards the society in their actions. "*During the Sustainable Development Summit in 2015 with the adoption of the 17 Sustainable Development Goals (SDGs) for promoting and developing effective and targeted actions for humanity and the planet within a 15-year horizon, the prioritisation of the sustainable development internationally was reflected in the 2030 Agenda*" (Di Vaio et al 2020). In today's world, customers are expecting the *"on-time" delivery*, as well as the *transparency* of the complete process, and according to a McKinsey report from 2018, it will only lead to a rise of the demand for container transport industry. Additionally, "*In order to be successfully applied, the ambitious and transformative 2030 Agenda requires the development and implementation of effective tools and processes, as well as managerial, accounting and reporting practices.*" (Fenton et al 2018), leading to a higher demand for ERP software in this market. Consequently, the *Ports & Shipping Management Software* industry steps in the moment to support the sustainable shift and assist in the expansion of the overall shipping industry.

1.1.2 Effects of the Industry 4.0.

The shipping industry is significant for the global external freight and the economic and social development. To further support this importance, Industry 4.0 has attracted a lot of attention and interests. The main goal of I4.0 is to *help* the digitalization process, *improve* data management and *fasten* the communication. It is considered the fourth industrial revolution that combines Internet of Things and IOS (Internet Operating System) in the shipping industry. Due to the value I4.0 can bring, many efforts have been taken for the best implementation model to be found. The process of delivering and transferring large amounts of data is the core driver of it, which provides a growing environment for software developments to accommodate these demands.

The ability of controlling and directing large amounts of data throughout the chain can be considered as a great competitive advantage for a shipping company. It has also been predicted that using the I4.0 it will lead towards sensors and processors being installed within the ship's main programs, which would create beneficial information, leading to a more sustainable, efficient and safer way of transportation (Aiello, Giallanza and Mascarella 2020). However, the same research has also identified that the transition towards such infrastructure requires extensive amount of time and innovation, due to the ship being such a complicated structure and involving countless components and various programs for different functions requiring interconnectivity.

Nevertheless, understanding the importance of these interactions and connectivity is the key for shipping companies to improve their business and increase the future value of the ports and shipping management software industry.

1.2 Drivers and Characteristics of the Ports and Shipping Management Software Industry

The shipping process is highly complex and commonly "*A shipping transaction involves not less than 28 bodies including customs, terminals, forwarders and carriers, and a marine intelligence firm among others."* (Whatech 2018). For the process to have a successful outcome, it is essential that a freight forwarder or shipping agent is controlling the entire process, thus, minimising any type of problems that can be encountered in the future with a client. The interactions between the bodies require tremendous amounts of time, as well as paperwork, considering that now a lot of the data is being shared through phone calls and emails, while the input is mostly still in the process of manual data entry. "*Outdated operational practices, like manual data reporting, are still a common industrial practice*" (Aiello, Giallanza and Mascarella 2020). Information that floats through these channels include rates, plans, tracking

the shipments from its origin to the final location and other operations, involving a diverse method of accessing them.

Furthermore, the software market develops from the need of being able to handle all the different supply chains and full operations in the most feasible way with an orchestrated process. Every company has their own specific way of performing activities and requires a software, or multiple, that can adapt to them. Despite the companies upgrading and using various programs for separate business operations, the challenge of efficiently sharing data across organizations continues, and the need for integration remains. The solution to this issue could be "*by linking Web-based technologies to its mainframe computer, an ocean carrier can create a near real-time information-sharing system that is accessible by all its geographically diverse offices*" (Transportation Research Board 2003, 63-68).

Moreover, the culmination in globalization that has been followed by changeable requirements and consumer behaviour, resulted in business struggling to analyse costs and profits of those environments. The faster interactions and smarter management with operations through software help with the previously mentioned issues and increase the profitability, productivity and sustainability of the business. "*The Application of ERP solutions bring many benefits for organizations such as performance improvements, cost reduction, and facilitating interactions between core business processes*" (Amini and Abukari 2020).

According to the previous observations and mentioned operations, it can be concluded that the main characteristics of the Ports and Shipping Management Software industry are that it is ***niche, fragmented***, ***highly customised*** and depends on the ***needs of the end-users,*** considering each company has its own way of pursuing business. Because of this it is important to understand the positioning The Shiping ERP brand uses and its involvement in the market. Besides this, the Ports and Shipping Management Software industries life cycle stage is the *embryonic* one. Moreover, it is still in the first phase finding solutions with a strong

technological uncertainty where it would be led towards, providing a developed path for an ERP software that unifies majority information.

- **Drivers of the ERP Sofware market**

In order to fully explain the Ports and Shipping software management industry it is important to also understand the market of the core ERP Software. "*ERP software market growth is driven by the increasing need for an affordable and effective solution among organizations to carry out business functionalities in a streamlined way to improve operational efficiency*" (Market Research Future 2020). One of the reasons why it is expected to grow is the flexibility the software provides for the companies and its adaptation. "*The significance of an ERP system is that it can integrate information throughout the supply chain leading to cost reduction, inventory reduction, and improved operating performance*" (Sumner 2014).

Table 1 Sage ERP Market Analysis

Key companies in the ERP software market	→ SYSPRO, → Oracle corporation, → SAP SE, → Acumatica Inc., → Unit4, → QAD Inc., → Rootstock Software, → Epicor Software Corporation, → PLEX SYSTEMS → Microsoft Dynamics

- **Future outlook of the ERP software market**

The value of the ERP Software market stood at **38.15$ billion in 2018 (**Business Insights 2020). The ERP software market is anticipated to raise up to **49.03$ billion** in the next three years, according to *ERP Software Market Research Report - Global Forecast 2023 (*MRFR 2020), which represents an increase of over seven percent of the CAGR (Compound Annual Growth Rate). Another research suggests a growth up to **71.63$ billion** in the next six years. (Business Insights 2020). However, these predictions could be affected by COVID-19. The foreseen growth is uncertain with the limited accessibility to information. Nonetheless, the flexibility of a software and its adaptability characteristics to the virtual environment provide potential assumptions of a smaller negative impact.

Additionally, the cost of purchasing an ERP is higher, compared to a simple software designated to just one type of function (Kenge and Khan 2020, 36). Due to this, it is harder for small and medium enterprises to implement an ERP and it is expected that the large enterprises will hold the market share in the future. However, the software market players might challenge that because they are progressively partnering among themselves and with other organizations in order to come up with the best solutions. Furthermore, "*with the fast development of cloud computing technology and its tremendous benefits for organizations, we see more and more companies shifting their ERP deployment strategy into cloud-based ERP implementation*" (Amini and Abukari 2020).

1.2.1 Potential outlook of the Ports & Shipping Management Software Industry

The strong correlation between the global shipping industry and the industry in which the service operates, provides reassurance that there is a bright perspective of market growth, generating opportunity for business expansion, despite COVID-19 effect. Moreover, the

extension of Industry 4.0. will boost the possibilities of the overall environment, following the role of helping businesses improve the use of advanced technologies, while assisting the market to build a perfect trail of its expansion. The rising need for business automation and competition also supports the development of enlargement in the future market, with the strong drivers leading the growing demand. Particularly observing the cloud segment and the research considered, it can be concluded that there are potential business opportunities in this niche market.

To further develop the strategic approach that Seways should pursue, an analysis of the domestic industry environment was conducted in the following section.

1.3 PESTEL Analysis of Portugal

In order to succeed, the company's strategy should be in line with a thorough analysis of its surroundings and its own competencies. To be able to assess and understand the setting where the company operates, a PESTEL analysis (Carpenter and Sanders 2014) of the country of origin - Portugal is discussed.

The first facet of this framework is the ***political*** nature of the environment. Portugal's political system can be defined as a parliamentary republican democracy since its 1976 revolution. The country operates in a semi-presidential system of government, with the particularity of being a premier-presidential regime. This implies that the president has the power to accept or reject the prime minister and its government but does not have the unilateral power to dismiss them, unless a cabinet dissolution is deployed (Roper 2002). Portugal presents a very high political stability index according to data from the World Bank, being awarded with a 90.95 score out of 100, compared to the 62.51 score attained by the Europe and Central Asia

regions (Kaufmann and Kraay 2019). Nevertheless, the current government relies on a coalition of different parties, which may lead to political standstill and policy clashes.

In recent years, several cases of high scale unethical behaviours and favoring were detected in Portugal. However, the country has maintained its position as the 30th least corrupt country in the world, which fosters a favorable environment to conduct business. In terms of taxation policies, the country presents highly adverse conditions for business, with its corporate income tax being the second highest in Europe, at 31.5%. This represents a heavy toll on companies, even though the government introduced lower rates for SME's (Asen 2020).

According to World Bank's research, Portugal places 39th in the ease of doing business category. This score reflects several shortcomings in areas such as credit acquisition, minority investor protection and barriers to starting a business, which reflects added difficulties for Small and Medium Enterprises such as Sevways. Nevertheless, by belonging to the European Union, the country presents a very big ease for trading across borders (World Bank 2020).

In line with the external environment analysis, the ***economic*** sphere in which the company is inserted had to be probed. In terms of economic growth, Portugal has been severely affected by the pandemic, with an economic contraction of its GDP in the order of -16.3% as of June 2020 (Trading Economics 2020). Nevertheless, since this is created by a once in a lifetime occurrence, the report analyses data from 2019 to provide a better understanding of future expectations for the business environment. With this in mind, pre-pandemic values saw the Portuguese economy attain a GDP annual growth of 2.24% for 2019 (PORDATA 2020), surpassing the 1.5% EU average (Eurostat 2020). In what the exchange rates are concerned, Portugal's currency is the Euro. For pre-pandemic values, the Euro was gaining against the Pound Sterling (GBP) due to uncertainty caused by Brexit in the United Kingdom and the possible exit of several big businesses that were previously based in Britain. Comparatively to

the US Dollar, the Euro has been losing value since the beginning of 2018. Due to the current instability in the Eurozone caused by Brexit and the pandemic, current Portuguese interest rates are historically low interest rates to fuel investment. As of July 2020, the interest rates for loans to non-financial institutions presented by Portuguese banks are situated at around 1.99%, which can be compared with the 2.23% rather offered in the same period of 2019. Even so, Portuguese businesses are still subject to higher inflation rates than the Eurozone average, which may be a barrier for business owners (Banco de Portugal 2020). For 2019, the country's inflation rate was very low, at around 0.3% whereas the European average experienced a value of 1.44% (Statista 2020). The gross disposable income per capita was also very low compared to the European average, 20,257.4 (INE 2020) VS 23,556 (Eurostat 2020). Portugal's unemployment rate in 2019 was situated at a value below the European average, at 6.33% (Statista 2020), which drastically changed due to the pandemic strike, bringing the country to the 8th highest unemployment rate in the European Union of 8.1% (Statista 2020). Nonetheless, Portugal is a very attractive country for international corporations, due to the relatively low salaries in relation to the high quality of Portuguese graduates.

In what ***social*** factors are concerned, Portugal has experienced a decrease in population since 2010, with births being outpaced by the number of deceased people. This reflects the nature of the population, which in recent years has suffered from severe aging, along with most European countries. The country emphasizes safety as one of its biggest concerns, which is reflected in Portugal being considered the 3rd safest country in the world (Institute for Economics and Peace 2020). As one of the main issues for people conducting businesses, the country's placement attracts talent looking for better safety and life conditions, impacting positively the business world. Additionally, Portuguese people tend to have great openness to new cultures. Regarding talent, Portuguese youngsters tend to pursue a university

undergraduate degree. The great quality of engineering graduates is a major asset for the country and is a great positive factor for the future expansion of Sevways when attaining talent.

The following feature that is highly important to analyse, specifically for Sevways, are the ***technological*** factors. Portugal has a relatively good infrastructure system, ranking 10th in the overall development out of the EU countries (Eurostat 2020). The main positive influencers for this indicator are the road quality and connection, ranking 1st and 2nd respectively. In what concerns the shipping related factors, such as the efficiency of seaport services and the timeliness of shipments, Portugal ranks 11th and 10th respectively out of the 28 countries. These factors can be presented by Sevways Ports & Shipping when selling its technology to Portuguese customers, since introducing it may lead to an improvement of these indicators and overall customer satisfaction. Additionally, Portuguese internet and communications infrastructure is excellent. Nonetheless, Portugal's expenditure in R&D is relatively low, and represents 1.3% of the country's total GDP, which is consistent with the European average but greatly outperformed by North American and Asian companies. Approximately 100% of the investment comes from businesses and universities, representing an approximately 50/50 split between these two sources (UNESCO 2020).

Another factor that greatly influences investment decisions, especially in a world that is increasingly concerned with climate change, are ***environmental*** factors. Portugal is known for having some of the best weather conditions in Europe, with sunshine hours per year averaging 2800h. Lisbon is classified as a hot dry subtropical climate location. These factors are specifically appealing to companies in the agricultural and hospitality industries and does not directly affect Sevways Port & Shipping area of operation. In regard to environmental policies, Portugal ranks 18th in Europe (Stiftung 2017), with emphasis on the protection of maritime environments, which may lead to some difficulties for the expansion of the shipping industry

in the country. Additionally, the country is highly supportive of renewable energies, with the country sustaining 71.6% of its energy consumption from renewable sources as of May 2020 (REN 2020).

The final element analysed for the PESTEL framework are the ***legal*** factors affecting businesses and consumers. Worker's rights are very well protected in the Portuguese business environment. The country reached a rating 2 (scale of 1 (best) to 5+ (worst)) on the best regions for worker's rights (International Trade Union Confederation 2018), which looks at factors such as civil liberties and the right to establish unions, collective bargaining and strikes. On the negative side, the country works under highly bureaucratic procedures, and the legal system is very often notoriously slow to handle cases, which leads to some barriers for investment.

Moreover, it is important to proceed by analysing the industry as a whole and understand the current and future trends, as well as the competition of the domestic market.

1.4 Porter's 5 forces of Portugal

Porter's 5 Forces (1979) is a practical tool that allows the analysis of Sevways' position in the industry it is currently operating, with the new provided service. It also analyses competition, supplier's & buyer's power and substitute services in the market. It will aid in determining the attractiveness level and profitability of the industry in Portugal, leading towards an outcome of the reasoning for the following expansion strategy.

Table 2 Porter's 5 Forces of Portugal

Threat of New Entrants - Moderate
• The barriers to entry are relatively high, due to software development costs and licensing agreements representing high capital requirements. • The switching costs to of technology conversion to a different service are also expensive. • There is a substantial amount of powerful software companies that could tailor-make a software for this industry. The use of their cumulative experience could lead to a high-quality service and high access to distribution channels. Nevertheless, the fact that it is a niche market may lead to bigger players being unwilling to invest.
Threat of Substitutes - Strong
• There are several substitute services, even though these present different approaches to the market (an example would be Primavera Software for accounting purposes). • Buyers do not tend to substitute due to the complexity of the software and its integration • The quality of offering tends to be lower and more outdated than the one offered by the Shipping ERP • Software differentiation tends to be low, with the difference based on interface changes.
Bargaining Power of Buyer – Strong
• In Portugal, the number of customers is limited, which is one of the reasons why Sevways wants to internationalize. This, in turn, increases the buyer power. • Switching costs are very high, both due to the licensing agreement fees and due to training time spent on fully integrating a new software for the entire company. The ERP is involved in every aspect of running the business, leading to the switching process being challenging. • The size of each one of the purchases is significant, which increases buyer power. • Price sensitivity is low, since the clients are normally large business groups. • Information availability is moderate for the buyer, due to the fact that it has to contact specific companies with inquiries about their pricing policies and technology.

Bargaining Power of Suppliers - Weak
• Each supplier presents uniqueness in its service offering, which leads to higher differentiation. • Reluctance from the industry to accept new technology and processes leads to low traction in the field. Hence, the technology is hard to sell on a bigger scale without proven track record.
Rivalry Among Existing Competitors – Moderate
• The number of competitors in Portugal is very low. • The industry presents a current growth rate of around 8.4% (Adroit Market Research 2020), with the main offering being based on cloud-based services, such as the technology The Shipping ERP provides. • The exit barriers are quite low, even though switching costs can be both time consuming and lead to the abandonment of high investment sums.

1.5 Competitor analysis in Portugal

Competitive research represents a crucial factor for Sevways to understand its competitors and market position. This helps the company understand the competitors' strengths and weaknesses, and how it can leverage on them. Looking at the Ports & Shipping Management Software Industry, the biggest competitors are *Transporter Systems* and *CANOW*. They are both Portuguese software alternatives for the ports and shipping industry. *Transporter Systems* is a vertical owned by the company MAEIL Information Systems Engineering, LDA. This vertical, in fact, uses a Transport and Logistics ERP that can provide technological solutions in the EDI (electronic data interchange), CRM (customer relationship management) and Business Intelligence area (Transportersystems n.d.).

J.Canão, Lda (Jcanao n.d.) is the company that developed the CANOW Software. The company offers diverse software solutions for many industries, including the Ports and Shipping one. It employs its own CANOW software (Canow n.d.) since 2014, making it one of

the leaders in the Portuguese reality. J.Canão goes one step further and offers specific solutions for different company types, in the industry. For instance, for shipping agencies, CANOW can "*optimize the organizational management of [the] enterprise, with a detailed analysis of profitability by process."* (Canow n.d.).

The absence of direct competitors for Sevways in Portugal is the outcome from the limited number of potential customers in this industry and narrow possibility for growth. Consequently, the attraction to enter this market was high and Sevways grasping this opportunity is well justified. However, the analysis of the industry has resulted in realization that the profitability in this environment is mostly constrained and other alternatives need to be considered.

Therefore, additional analysis has been conducted in order to examine the possibilities in the overall industry, on a worldwide level, following the characteristics of Sevways. The chosen tool was SWOT (Strength, Weaknesses, Opportunities and Threat) analysis considering one of its goals is to identify possible external elements that can change the industry environment.

1.6 Opportunities

- Recent national lockdowns and security restrictions forced companies to organise virtual business meetings and avoid physical interactions, leading to an online nature of communication. The overall sales process and software installation for Sevways can be done remotely, eliminating the necessity for physical meetings.
- The evolving Ports and Shipping Management Software industry followed by automation becoming fundamental in the overall shipping industry and shipping agencies keeping up with the IT transformation in order not to lose market share.

- The main issue that the Sage X3 Ports & Shipping software aims to solve is the visibility of the shipping process. In fact, transparency is highly valued by clients in the value chain. Minor efforts have been done to fix this issue, as many traditional companies are reluctant to share too much information with clients.
- According to the Third Stage Consulting Group report, companies have been implementing Sage X3 as a low-cost with a low-risk alternative, comparing to other ERP software, like SAP S/4HANA and Oracle ERP Cloud.
- According to OECD (2020), the comparative price level index of Portugal is 73, meaning that Portuguese prices are relatively lower than the average in OECD countries, making the price of the service more competitive internationally.
- In the future, once the ERP software 'Sage X3 Ports & Shipping' becomes highly recognized in the Ports & Shipping Industry, and after the necessary upgrades in the software are made for adjustment, there will be other potential actors in the shipping industry, that the firm will be interested on doing business with, such as: travel agencies for cargo, container freight shipping companies' and Logistics Single Window

1.7 Threats

- The continuous technology improvement facilitates the entrance of new competitors with a different customisation of Sage X3 or with the use of different software. Since these programs are "in the cloud", they are easily accessible not only in the Portuguese market, but also in the global market. So, even if Sage X3 Ports & Shipping service does not have direct competitors in the Portuguese market, it could still suffer competition from other international markets.
- The marine freight is highly regulated (Tan and Khee 2005). In Europe, each country is subject to both European and national regulations, such as the Federal Office for Economic

Affairs and Export Control in Germany. In order to be efficient and reliable, the platform must follow all the different regulation and constantly update on every change.

- The economic implications of lockdowns due to COVID-19 are still difficult to predict, as no one knows the exact future of the pandemic length. This uncertainty can negatively affect customers decision on investing in a new software
- Most of the industries around the world might face a decrease in volume of goods and services offered by the companies (Marketline 2019). This could consequently reduce demand for transportation services and therefore demand for new ERP shipping software

Sevways Field Lab on Internationalization

A Work Project presented as part of the requirements for the Award of a Master's degree in Management from the Nova School of Business and Economics.

SEVWAYS FIELD LAB ON INTERNATIONALIZATION

ERP Software Solutions for the Shipping Industry

LENKA KOSTIC – 40572

Work Project carried out under the supervision of:

Professor João Pedro Pires dos Reis Muralha Delgado

04-01-2021

Sevways Field Lab on Internationalization

ERP Software Solutions for the Shipping Industry

Abstract

This thesis provides the internal analysis of Sevways and its shipping vertical. An investigation on the characteristics and competitive advantages that the company entails is conducted. As a result, it is possible to provide an overview of the company strenghts and weaknesses which confirm the company readiness for the internationationalization strategy. To conclude, the key drivers for the internationalization strategy are identified.

Keywords: ERP Software, SME (small- and medium-sized entreprises), Sage X3, Shipping Agencies, Freight Forwarders, 3PLs (Third Party Logistics), Cloud Software

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2. **Internal Analysis**

Sevways (appendix 1), is a management software company, specialised in ERP (enterprise resource planning) solutions. The company customises and upgrades the pre-existing software from certain partners (Sage, Primavera, Microsoft, Atlassian and Google Cloud) to better fit the need of each client. The company was founded in Lisbon, in 2009, but its main commercial activity so far has been in PALOP (Países Africanos de Língua Oficial Portuguesa - Portuguese speaking African countries), such as Angola and Mozambique. However, due to an increase in unethical behaviours and the emergence of a recession, in 2016 Sevways decided to shift its commercial presence mainly towards the Portuguese customers. Currently, it is employing 14 people in Portugal, 14 in Angola and two in Mozambique. Additionally, they have also developed projects in Spain, England, Netherlands, Kenya and Brazil. The company has entered two distinct industries in recent years, in order to increase its revenue in the long-term:

- Natural Stone Industry
- Ports & Shipping Industry

Evaluating Sevways based on its overall code of activity for computer programming services – 62010 (appendix 2), it was clear that the company had a market share of 0.05% in 2019 in Portugal (Banco de Portugal, 2019). The financial analysis of the company, for the year 2019 is exhibited in the appendix 3.

Table 1 Market Share in Portugal Calculation

Sevways' Sales 2019	595,826.05 €
Industry Sales 2019 (Banco de Portugal 2019)	1,280,285,000.00 €
Market Share 2019	0.05%

2.1 Mission, vision, values

Before the development of the expansion strategy, it is important to identify the mission, vision and values the company pursues. This will benefit in terms of understanding what Sevways has to offer, in order to differentiate itself from competitors, as well as behaviors it follows in its vision and future positioning of the strategy (Pham *et al* 2013, 5). Looking at the overview of the firm, the following was identified:

- ***Mission*** – "*For us it is important to serve effectively, but always with a spirit of help, with the settled realization that systems for being more efficient, if they are not user-friendly and useful, are waste of time."* (Sevways n.d.)
- ***Vision*** – "*It is part of Sevways DNA to seek the answers intended by customers in a positive and operational way. Our focus is to develop and implement solutions as they streamline processes and improve the performance and efficiency of your business*." (Sevways n.d.)
- ***Values*** – "*Technology and expertise in the development of custom solutions synthesizes the performance of Sevways. A company motivated by change and with an entrepreneurial spirit, composed of a team of consultants: experienced and highly motivated computer engineers*." (Sevways n.d.)

2.2 Core competencies, resources & capabilities

As Jeffrey Harrison et al. (2008) suggest, taking a deeper view into the business, and identifying the key resources and main capabilities is fundamental to interpret what a firm does effectively and how it operates. Additionally, using the VRIO Framework (Barney 1991), the core competencies that contribute to a sustainable competitive advantage by satisfying the four components (Value, Rare, Inimitable and Organized) can also be identified.

Table 2 Sevways' Resources, Capabilities & Core Competencies

RESOURCES	CAPABILITIES	CORE COMPETENCIES (VRIO)
• Human Resources • Office • Software (Sage x3) • Networking • Databases • Experience • Communication systems • Computers • Reputation • Trust	• Problem Solving • Flexibility • Adaptability • Communication • Creative thinking	• Human Centric Design Thinking • Cross-Functional Alignment • Software design and development • Logistics software management

3.1 The Shipping ERP' brand

Sevways has invested resources into creating a new brand, 'The Shipping ERP' and its new service is called ***'Sage X3 Ports & Shipping'***. In order to develop 'Sage X3 Ports & Shipping', it has made a licensing agreement with a multinational British company Sage Group PLC, also known as Sage. Currently, "*Sage has 13,000 employees and serves over three million customers in 23 countries across mainland Europe, Africa, Australia, Asia, and Latin America*" (Sage 2020). Its main activity is to provide business management solutions to its clients through software developments. The firm is also one of the largest suppliers of ERP software, following SAP, Microsoft Dynamics and Oracle (Amini and Abukari 2020, 73).

Sevways has been relying on Sage's software for many years and is considered by the company to have the best basic functions for day-to-day management operations of a company (e.g., financial and accounting management). Additionally, the software Sevways focuses on - Sage X3 - is one of Sage business solutions, under the 'Sage Business Cloud' umbrella of services available. It is a comprehensive solution that is particularly designed for medium and large enterprises. In fact, Sage X3 is an ERP software that allows clients to have a clear

transversal vision of their business in order to manage it more effectively and in an international scale if desired. "*An ERP system also provides a central enterprise database by which all business transactions can be recorded, processed, monitored, and reported*" (Amini and Abukari 2020).

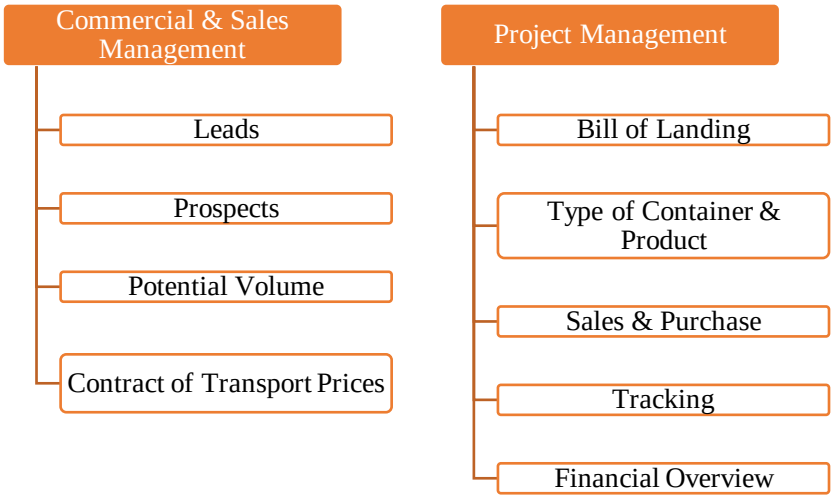
Besides this, the nature of the cloud system eliminates the demand for a full infrastructure and allows access to the system through a regular web browser. Sage X3 decreases the complexity of traditional ERP software and allows clients to effectively manage their finances by being aware of how daily operations of the business are being done (Sage 2020). However, few limitations of Sage X3 were identified in online forums (Itqlick 2020): slow response from support and customer service department, the ability to receive help in the software is not straightforward, as well as the requirement of a lot of custom coding for additional features.

1.6 'Sage X3 Ports & Shipping' service

Moreover, a team of software developers have further internally adapted and developed Sage X3 to meet the specific needs of the shipping industry, which they have been studying and analysing since 2016. For this new service, the company has seven staff members dedicated to working (part or full-time) on it in the Portuguese market: one director/designer (CEO), one engineer (COO), one functional consultant, one marketing employee and three software developers. The revenue stream for this brand is based on implementing and potentially licensing the 'Sage X3 Ports & Shipping' software to coordinators of the shipping process, such as freight forwarding companies, shipping agencies and third-party logistics (3PLs). It is important to note that customers who do not already own a Sage license are required to have one. Hence, the client can buy the license either directly from Sage or through Sevways.

Additionally, considering the industry is extremely complex and traditional, providing a straightforward software process that allows big shipping agencies and freight forwarding companies to run their business smoothly can be a big competitive advantage. 'Sage X3 Ports & Shipping' software gives clients an overview of the commercial, sales and project management side of the business.

Figure 1 Main Business Areas that 'Sage X3 Ports & Shipping' operate



3.2 'Sage X3 Ports & Shipping' software Technology Lifecycle

The software is High Technology, rather than Low Technology, due to the complexity it embeds. The elements it creates within, as well as the capabilities and interconnectivity, generate a complex web that requires a strong and time consuming workstream in order to be implemented in a business environment. Moreover, analysing the Technology Lifecycle and using the TRL (Technology Readiness Level) (NASA 2020), the 'Sage X3 Ports & Shipping' software is ***Level 6 - System/sub-system model or prototype demonstration in an operational environment*** (appendix 4). Sevways has already demonstrated its validity of the ERP technology by working closely with two Portuguese clients - Ibero Linhas and Group ETE, compatible companies' in the Ports & Shipping Industry, corresponding to its related software level.

3.3 Competitive Advantages of Sage X3 Ports & Shipping

As Porter (1985) suggests, for a firm to gain competitive advantage, it should focus on a specific strategy to provide greater value to a customer. In Sevways' case, the company's new brand and service operates in a narrow market and provides a customised service (appendix 5). Because the CEO believed that in order to have good visibility in mature markets, the company had to develop specific solutions for each company. To achieve this process, they are using the *human centered design thinking techniques,* meaning they form the software solutions fully around the customers. Hence, Sevways pursues a ***Differentiation Focus Strategy*** in order to attain competitive advantage through the industry.

Moreover, considering the cloud architecture of the software, it makes it accessible to the different stakeholders, increasing efficiency and productivity, and creating an advantage, while following the company's mission and maintaining user-friendliness. Sevways also minimises one of the limitations Sage has, which is the custom coding for additional features, since they provide the extended features. Furthermore, focusing on the ERP Shipping solutions that the company has been developing, the software Sage X3 has numerous advantages for the client, such as:

- Visibility

Sage X3 provides all data, everywhere and in real-time. Since information is stored on the cloud, data is available on every mobile device, for each employee, wherever and whenever it is required. "*The modern architecture of Sage X3 allows customer organizations to support an open and flexible network of mobile users collaborating on the company data, without compromising the integrity and security of the enterprise information*." (Amini Abukari 2020)

- Task Automation

Machine learning technology allows Sage X3 to analyse client's current tasks and responsibilities, based on their locations and departments. Additionally, it has a tool that

suggests the following required steps. The Sage X3 software also helps in increasing user productivity due to its ability to be convenient for the user.

- Modern Technology

It allows cost reductions since the implementation of a single system cuts the costs of multiple programs used for the same purpose and diminishes inefficiencies. Additionally, it improves digitalization using a user-friendly software that allows the business to easily shift from traditional to digital.

- Integration

In the past, companies in the coordinators of the shipping industry used different software for separate business departments. Nowadays, Sage X3 alone can cover all the requirements of the process. Furthermore, it is possible to implement it throughout review and implementation of tariffs, together with operational and financial modules in the national and/or international department. Port operations involve several stakeholders, such as regulatory bodies, port authorities, shipping liners, shippers & consignees, and service providers. Additionally, shipping agencies, freight forwarders and others need to efficiently manage thousands of data at the same time. Consequently, Sage X3 must be capable of integrating different IT systems without losing data. As Cloud is becoming the most popular solution thanks to its scalability, Sage X3 can undoubtedly and proactively manage all of that, at a lower cost than other ERP systems. Since it is easily extensible, clients will not run out of capacity. Lastly, among all the characteristics previously mentioned it has the ability to quickly adapt to changing needs.

- Data centralization, agility and security.

By providing an integrated solution, data provided by customers, partners and business suppliers are all available in the same platform. Therefore, this benefit increases both, the speed of the processes and the data security. Firstly, data centralization eliminates inefficiencies as it

provides a single source of truth for the digital transportation company. Secondly, by storing all data in the same platform on the cloud, the chances of data loss diminish. Finally, the system must follow strict security protocols to ensure the safety of data, and it is regularly audited and certified from a third-party.

- Mobility

Mobility is essential to ensure real-time information and communication. The shipping industry is becoming more competitive, and faster deliveries are the key to success. To be able to provide them, Sage X3 platform is available in Windows 10, Android and Apple IOS. Additionally, transactions can be recorded offline and saved later online, resulting in avoiding interference of bad conditions with the operational processes.

The outcome of the identification processes has resulted in the finding of the internal company characteristics, which can further be developed and classified in two segments of the SWOT analysis.

3.4 Company Strengths

- The Shipping ERP design and development team consists of people with an engineering background since the CEO and COO are software engineers. This represents the teams better understanding of the platforms potential and development.
- The participation in the Bluetech Accelerator Program in 2019 has allowed Sevways to increase its networking with potential customers. It was during this Accelerator Program that Sevways and Group ETE partnered up.
- The Atlassian Experts Certification increases the company's validity position. The partnership has given credibility to Sevway in the global market of companies which "*help*

customers implement solutions through consulting, sales, and technical service and power innovation to over 180,000 companies worldwide (eg. Airbnb, Cisco, Ebay)" (Atlassian n.d.).

- 'The Shipping ERP' brand presents itself as a low-cost solution for the ERP market, due to the advantages of Sage X3, widening the scope for more possible targets using this characteristic in their advantage.
- A strong company culture was recognized, with the entrepreneurial spirit and highly motivated leaders. "*Culture is especially important for a growing business: processes are being established every day*" (Sharma 2012).

3.5 Company Weaknesses

- Sevways has an absence of a strong management side. By being a team of software engineers only, they have a shortage of people with diverse backgrounds. This results in a business planning presenting a potential challenge.
- The current business environment requires the company to improve the marketing promotion in order to foster customer acquisition and keep customer affection.
- The company is strongly reliant on capital funding from Portugal 2020, the European funding program. This generates uncertainty about the future and inconstant workflow. As a result, 'The Shipping ERP' brand should work on targeting a specific customer group, in order to get higher profit margin that would add stability to the company.
- The platform requires further development, especially adaptation to the markets with non-Portuguese speaking clients.

CUSTOMERS

Now, Sevways has a focus on targeting the main companies in the industry including shipping agencies, freight forwarders and 3PLs. The CEO followed the strategy of having

mature companies as their clients from the beginning, even though it resulted in higher investments. The reason for this is due to the long-term objective of the opportunity in having larger customers in the future. Since they entered the Ports & Shipping Management Software industry in Portugal, they have acquired 2 customers – ETE Group, in Lisbon, and Ibero-Linhas in Porto and Lisbon.

1. **IBERO - LINHAS**

Ibero-Linhas (appendix 6) is a freight forwarder company with the Sea Transport Business as its core business. The main activity "*lies on the Commercial Sea Shipping, specializing in the transport of containers*" (Ibero-Linhas n.d.). Nonetheless, Ibero-Linhas has support services including Land Transport, Air Transport, Logistics and Storage, Door-to-door Deliveries, Insurance and Customs Clearance, Import / Export, Air and Sea Groupage Services. In the past, it had four different types of management software, suitable for diverse departments. The problem they were encountering was the challenge the industry faces, which is information integration, resulting in delays and bureaucratic situations, causing frustration and decreased productivity. Moreover, tracking a lot of information separately was extremely time consuming.

In order to provide solutions to their issues, Sevways has made a contract with Ibero – Linhas in January 2017. Through this contract, Ibero-Linhas became the primary customer of the service and has helped in the process following its complete development. Since 2017, it has received roughly around 120.000€ through licensing Sage X3 software. Specifically, 40.000€ for the Sage license and 80.000€ for the Sevways' 'Sage X3 Ports & Shipping ERP' license. At Ibero-Linhas, there are 50 daily active users of Sevways software, in the Ports & Shipping industry.

2. ETE GROUP

The ETE Group (appendix 7) mainly operates in the ports and shipping business industry and is a reference in the maritime industry of Portugal. It "*offers immediate, global and integrated value-added services on shipping, ports and inland water transportation to any part of the world*" (ETE Group n.d.). Additionally, it shares the same strategy as Sevways by customising its services to each client through a partnership basis, reaching a high level of customer loyalty and satisfaction. The group is present in five countries (Portugal, Mozambique, Cape Verde, Colombia and Uruguay). The licensing agreement between Sevways and the ETE Group began in March 2020. However, pilot studies have started the year before, in 2019. Currently, 'Sage X3 Ports & Shipping ERP' is on its final testing stage and Sevways has charged 45.000€ for the collaborative service so far.

NAVEX - Empresa Portuguesa de Navegação, S. A, founded in 1967, is a shipping agency owned by the ETE GROUP. The company represents Lisbon's port, and its services range from "*port assemblage to all types of vessels, customs support, fuel supplies, repairs, networking assistance for local businesses",* among others (NAVEX n.d.). Sevways has implemented 'Sage X3 Ports & Shipping ERP' at NAVEX and has analysed closely the effectiveness of its solution to improve the bureaucratic and traditional management style previously employed by its client. In conclusion, in the overall ETE Group, there are 60 daily active users of Sevways' software.

3. POTENTIAL CUSTOMERS

In Portugal, two leading associations exist that have the goal to unite the actors of the shipping industry:

1. ANESUL – Association of Shipping Agents and Port Operators Companies
2. AGEPOR – Association of Shipping Agents of Portugal

The members of these groups (approximately a total of 150 of them) represent the potential customers for Sevways. However, it has already acquired Navex, which is also the "*largest Shipping Agent in Portugal in number of vessel assistances*" (Navex n.d.). Following the nature of the service and vision the company has, it can be concluded that there are not many business opportunities for "The Shipping ERP" brand to expand in the Portuguese market.

READINESS

Many SMEs have difficulties in planning a successful international strategy due to the problem of internal readiness. Lack of vision, risk adverse managers or poor communication within the company are few examples that undermine its success. An ideal starting point is if the whole team is determined to the internationalization plan (Miettinen *et al*, 1998). For this reason, internal and external analysis of the company were conducted to support the assessment of the readiness. According to Vahvaselkä (2009), readiness can be measured by looking at basic readiness, product/service and marketing, and personnel.

Since Sevways has already delivered international projects, it shows that the team is internationally competent and is ready to use this knowledge for the new shipping ERP solution. Moreover, throughout the Bluetech accelerator and past business relationships, the executive team has demonstrated the capacity to build networks. Nevertheless, the company lacks a solid and constant financing. Also, in the past (2015), Sevways received funds to help with internationalization, networking, increase of Sevways' brand awareness, provided by FEDER – European Regional Development Fund, in relation to Portugal 2020. Additionally, the qualities of the service have been illustrated in what gives the company a competitive advantage. The customisation and possible adaptability of the service makes it ideal for international expansion. The cloud architecture of the software further strengthens the readiness

for the future perspective of the market. Sevways' team has the necessary expertise for mastering the use of 'Sage X3 Ports & Shipping' and, even if the firm does not employ a human resource with a managerial background, it has already shown the ability to successfully conclude transactions and lead the business in the past. The employees are well equipped with skills regarding the development of the customised service on the Sage X3 vertical and maintaining the job standard even with fully remote work. However, the branding of 'The Shipping ERP' is not strong enough yet and requires additional promotion.

Lastly, in order to consolidate the external and internal environment and clearly identify the preparedness and advantages the company has, TOWS Matrix (Weihrich 1982, 54) was created, specifically for Sevways. TOWS Matrix (appendix 8) can be interpreted as a framework to assess, create, compare, and finally decide upon the business strategies (Weihrich 1982, 60). by presenting the practical approach solution to the SWOT analysis and demonstrating how the company can use the strength it maintains, while minimizing the weaknesses and threats.

Table 3 Sevways' TOWS analysis

	Strength	**Weaknesses**
Opportunities	**SO** - Expansion - Remote work - Shipping specific solutions - Software supporting automation	**WO** - Expansion - Online marketing - Higher price levels in other countries
Threat	**ST** - Networking - Low-cost ERP solution - Engineer knowledge for technology advancement	**WT** - Expansion - Customer loyalty - Portuguese base

INTERNATIONAL DRIVERS

Internationalization is a key point for ‘The Shipping ERP’ brand. The ports and shipping management industry is by nature an international one and the related software already must adapt to all the international drivers, such as regulations, languages, culture, among others. Therefore, ‘The Shipping ERP’ brand is destined to expand abroad.

The first and most important reason that has led Sevways towards expansion is the drive to increase sales revenues. From the beginning, Sevways has invested heavily (financially, as well as their time) on developing ‘Sage X3 Ports & Shipping’ service and creating the new ‘The Shipping ERP’ brand. Additionally, since there is not enough market potential of increasing profits in Portugal in the long run, due to the limitations of the economy, the decision to pursue an international strategy is based on survival. Currently, Sevways has gained experience and know-how by working with two major clients. Furthermore, the opportunities of ‘The Shipping ERP’ include the fact that the Ports & Shipping Management Software Industry is continuously improving, and companies require the latest technology to be competitive. Lastly, the possibility of charging different, potentially higher prices abroad (especially in developed markets) is a strong motive to internationalize.

All these drivers are good enough reasons for the company to explore new potential international customer targets. Moreover, the internal analysis has shown it obtains the possibility to pursue an internationalization project. The following section will demonstrate how the market entry selection was conducted and will conclude by identifying one market for Sevways to enter.

APPENDICES

Appendix 1. Company Overview

Company Details			
Fiscal Number	509133380	**Social Denomination**	Several Ways – Engenharia de Sistemas de Informação, LDA
Address	Rua das Azenhas 22B, Urbanização da Fábrica da Pólvora	**Postal Code**	2730-270
District	Lisbon		
Contact Number	351 963 124 191	**E-mail**	Sevways@sevways.com
Constitution Date	11/09/09	**Start of Activity Date**	11/09/09
Legal Nature	Private Limited Company	**Social Capital**	5 000,00 €
Activity Code	62010 – Computer Programming Activities		

Type	Name	Participation %
Shareholder / Partner	Rui Pedro Mendonça Alves Martins de Almeida	90%
Shareholder / Partner	Ludmila Carvalho Alves Martins de Almeida	10%

Appendix 2. 2019 Financial Data on Sevway's main Industry based on Code of Activity (62010)

BANCO DE PORTUGAL
EUROSISTEMA

Quadros do Setor

Ano: 2019
Setor da Atividade Económica: 62010 - Atividades de programação informática
Classe de Dimensão: Todas as dimensões

Caracterização do Agregado

Indicadores Síntese	
Ativo (Milhares de euros)	1 485 651
Vendas e serviços prestados (Milhares de euros)	1 280 285
Número de pessoas ao serviço	18 639
Número de empresas	3 149
Entradas de empresas (natalidade) (nº)	521
Saídas de empresas (mortalidade) (nº)	220

Ativo e vendas e serviços prestados das 20% maiores empresas (em percentagem)	
Concentração do agregado (ativo)	92.81
Concentração do agregado (vendas e serviços prestados)	92.42

Distribuição por idade das empresas	Número de empresas	Número de pessoas ao serviço	Vendas e serviços prestados (Milhares de euros)
Todas as Empresas	3 149	18 639	1 280 285
Até 5 anos	1 888	6 923	385 058
De 6 a 10 anos	570	3 016	162 634
De 11 a 20 anos	511	5 682	540 294
Mais de 20 anos	180	3 018	192 298

Appendix 3. Summarized financial information about the company

Financial Information	Data 2019
Sales	595,826.05 €
Net Income	3,346.91€
Labor Costs	302,653.91 €
EBIT	14,068.19 €

Appendix 4. Technology Readiness Level Definition by NASA

Technology Readiness Level Definitions

TRL	Definition	Hardware Description	Software Description	Exit Criteria
1	Basic principles observed and reported.	Scientific knowledge generated underpinning hardware technology concepts/applications.	Scientific knowledge generated underpinning basic properties of software architecture and mathematical formulation.	Peer reviewed publication of research underlying the proposed concept/application.
2	Technology concept and/or application formulated.	Invention begins, practical application is identified but is speculative, no experimental proof or detailed analysis is available to support the conjecture.	Practical application is identified but is speculative, no experimental proof or detailed analysis is available to support the conjecture. Basic properties of algorithms, representations and concepts defined. Basic principles coded. Experiments performed with synthetic data.	Documented description of the application/concept that addresses feasibility and benefit.
3	Analytical and experimental critical function and/or characteristic proof of concept.	Analytical studies place the technology in an appropriate context and laboratory demonstrations, modeling and simulation validate analytical prediction.	Development of limited functionality to validate critical properties and predictions using non-integrated software components.	Documented analytical/experi-mental results validating predictions of key parameters.
4	Component and/or breadboard validation in laboratory environment.	A low fidelity system/component breadboard is built and operated to demonstrate basic functionality and critical test environments, and associated performance predictions are defined relative to the final operating environment.	Key, functionally critical, software components are integrated, and functionally validated, to establish interoperability and begin architecture development. Relevant Environments defined and performance in this environment predicted.	Documented test performance demonstrating agreement with analytical predictions. Documented definition of relevant environment.
5	Component and/or breadboard validation in relevant environment.	A medium fidelity system/component brassboard is built and operated to demonstrate overall performance in a simulated operational environment with realistic support elements that demonstrates overall performance in critical areas. Performance predictions are made for subsequent development phases.	End-to-end software elements implemented and interfaced with existing systems/simulations conforming to target environment. End-to-end software system, tested in relevant environment, meeting predicted performance. Operational environment performance predicted. Prototype implementations developed.	Documented test performance demonstrating agreement with analytical predictions. Documented definition of scaling requirements.
6	System/sub-system model or prototype demonstration in an operational environment.	A high fidelity system/component prototype that adequately addresses all critical scaling issues is built and operated in a relevant environment to demonstrate operations under critical environmental conditions.	Prototype implementations of the software demonstrated on full-scale realistic problems. Partially integrate with existing hardware/software systems. Limited documentation available. Engineering feasibility fully demonstrated.	Documented test performance demonstrating agreement with analytical predictions.
7	System prototype demonstration in an operational environment.	A high fidelity engineering unit that adequately addresses all critical scaling issues is built and operated in a relevant environment to demonstrate performance in the actual operational environment and platform (ground, airborne, or space).	Prototype software exists having all key functionality available for demonstration and test. Well integrated with operational hardware/software systems demonstrating operational feasibility. Most software bugs removed. Limited documentation available.	Documented test performance demonstrating agreement with analytical predictions.
8	Actual system completed and "flight qualified" through test and demonstration.	The final product in its final configuration is successfully demonstrated through test and analysis for its intended operational environment and platform (ground, airborne, or space).	All software has been thoroughly debugged and fully integrated with all operational hardware and software systems. All user documentation, training documentation, and maintenance documentation completed. All functionality successfully demonstrated in simulated operational scenarios. Verification and Validation (V&V) completed.	Documented test performance verifying analytical predictions.
9	Actual system flight proven through successful mission operations.	The final product is successfully operated in an actual mission.	All software has been thoroughly debugged and fully integrated with all operational hardware/software systems. All documentation has been completed. Sustaining software engineering support is in place. System has been successfully operated in the operational environment.	Documented mission operational results.

Appendix 5. Porter's Generic Competitive Strategies (1985)

		COMPETITIVE ADVANTAGE	
		Lower Cost	Differentiation
COMPETITIVE SCOPE	Broad Market	Cost Leadership	Differentiation
	Narrow Market	Cost Focus	sevways Differentiation Focus

Appendix 6. Summarized information about IBERO LINHAS

Logo	IBERO LINHAS Transportes
Fiscal Number	502757515
Location	Lisbon and Porto, Portugal
Date of Constitution	24/02/1992
Legal Nature	Private Limited Company
Email	geral@porto.iberolinhas.pt
Activity Code	52291 - Organization of Transport 5229 – Other activities of transportation support
Sales 2018	11,486,815.00 €

Appendix 7. Summarized information about the ETE Group

Logo	GRUPO ETE
Fiscal Number	508500982
Location	Lisbon, Portugal
Date of Constitution	10/11/2008
Legal Nature	Private Limited Company
Email	lisboa@ete-logistica.pt
Activity Code	52292 - Customs agents and similar to support transport
Sales 2018	24,798,143.00€

Appendix 8. TOWS Matrix, (Weihrich, 1982)

	Internal Strengths (S)	**Internal Weaknesses (W)**
External Opportunities (O)	**SO:** *"Maxi-Maxi" Strategy* Strategies that **use strengths** to **maximize opportunities**	**WO:** *"Mini-Maxi" Strategy* Strategies that **minimize weaknesses** by **taking advantage of opportunities**
External Threats (T)	**ST:** *"Maxi-Mini" Strategy* Strategies that **use strengths** to **minimize threats**	**WT:** *"Mini-Mini" Strategy* Strategies that **minimize weaknesses** and **avoid threats**

SCHEDULE AND CONTROL

SCHEDULE

It is strongly advised for Sevways to follow a scheduling plan for the duration of the project. Scheduling activities allows teams to work with more clarity, in an organized environment and encourages individuals to become more productive, since they have daily goals to achieve. According to Clough, Sears and Sears (2000), schedules should be established both in a hierarchy and individual level.

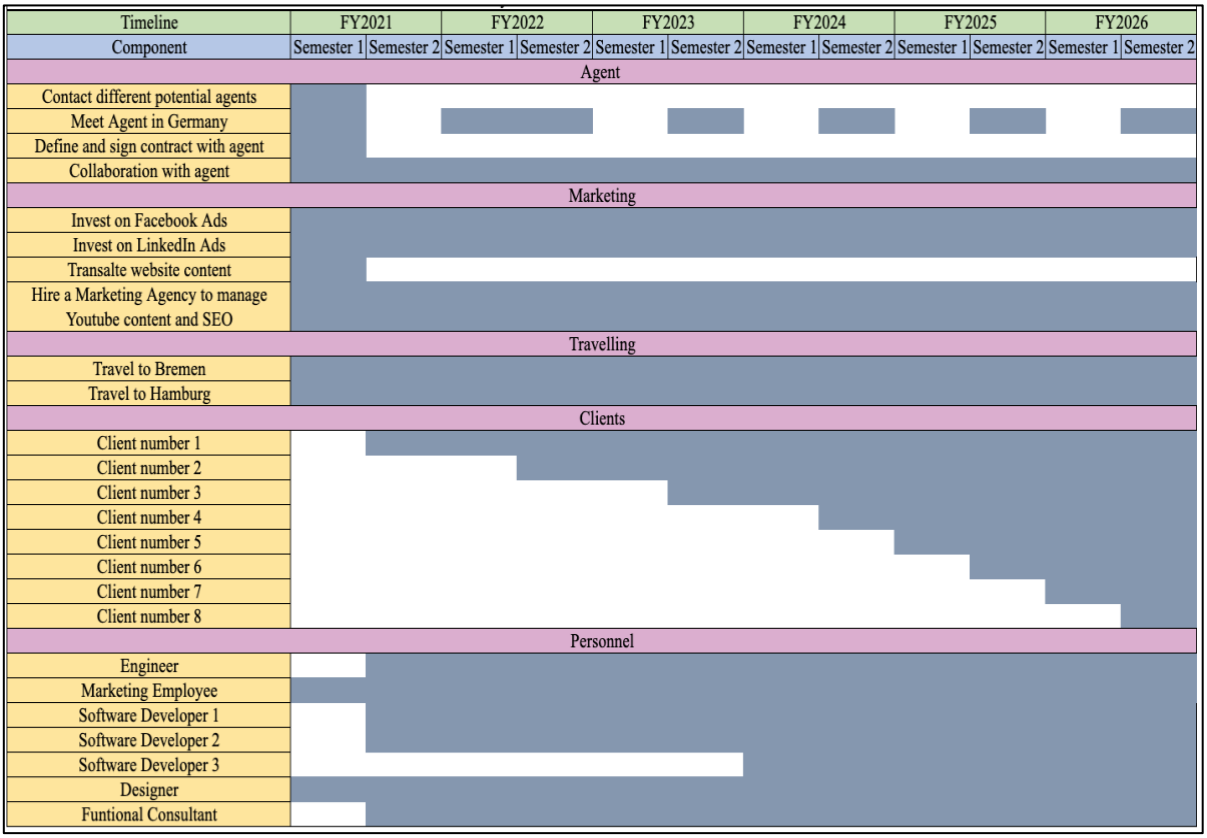
It is recommended to have an assigned project leader, potentially Sevways' CEO, whose scheduling would allow him to follow the progress of each individual and their time distribution throughout the duration of the project. Additionally, it provides clarity to the agent hired in Germany, since he will also be aware of how many clients the company should obtain per year. Through scheduling and time management, Sevways' CEO is able to obtain valuable information in order to plan for the future and create estimations when required.

Moreover, scheduling is extremely useful since it can be used as a guideline by everyone involved in the attainment of the deliverables proposed. It is fundamental for controlling and evaluating each phase of the project. A well-structured implementation schedule clarifies what the project should deliver in specific time frames. Hence, by following the proposed schedule, Sevways should be able to achieve the goals imposed on time, within the set budget and according to the set expectations. It is important to underline that all the components are strictly linked to one another, therefore, the completion of one is mandatory for the success of another.

In addition, the assignment and responsibility of each task must be clearly allocated and delivered by the CEO or the COO. This should avoid any possible confusion and redundance among the completion of each designated deliverable.

The figure below illustrates a general bar chart. "*Bar charts are easily understandable and generally utilized for communication on-site at the worker level*" (Jun-yan 2012). The chart will be available to the whole Sevways' team since it presents the different components of the project, as well as their time frame, during the 6-year period. Nevertheless, scheduling should be devised even after the duration of this project. Minor activities necessary for the success of each milestone (example: acquisition of client number 1) should also be previously assessed and clearly stated and communicated among the whole team. As well as this, each updated schedule should be communicated to the whole team so that everyone involved is aware of new timeframes and new objectives.

Figure 3 Project Schedule Bar Chart



Overall, scheduling should not be taken for granted, especially for an internationalization strategy, not only because of the team commitment but also because of the of financial resources required.

CONTROL

Following the implementation of the suggested internationalization strategy, the CEO and/or COO should control its effectiveness in the short, medium and long-term time frame of the project duration. The data gathered will provide the firm with insightful information about whether the internationalization of 'The shipping ERP' brand is on the successful path. It is important to consider that there is a high risk of delay in the scheduling, as well as the challenge of regulating the budget, which are found common in the implementation of the ERP software (Baig, Shah and Sajjad 2017). These can result from a continuous change of requirements from the customers or due to unintended miscommunication. In order to decrease the possibilities of these issues, as well as help in the processes, companies are adapting control methods to follow the assigned work. Control methods can vary from traditional techniques to more innovative ones, leading to the following methods to be pursued in order to ensure the highest quality of service possible

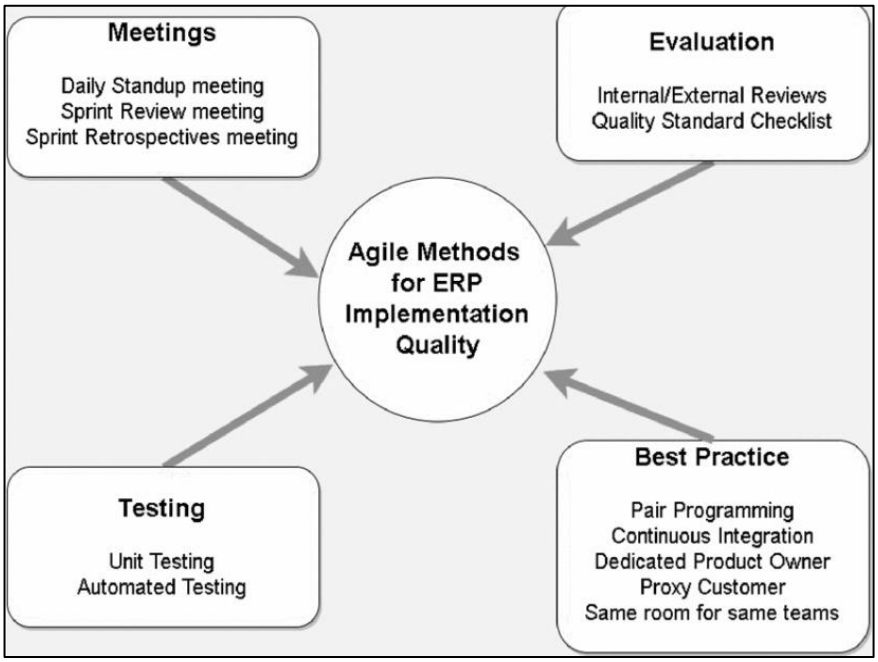
1. **Agile Management**

Agile management is "*based on agile principles that sharply contract to traditional command-and-control management methods*" (Kropp et al 2014). These techniques have attracted attention from software developers, due to the benefits they create, which are rising agility and visibility progress of the process, while helping build a steady stream of communication with increased collaboration. The agile method is recommended for small teams like the one Sevways has. Research has shown that in the ERP software sector 95% of

the interviewed people found the agile method helpful to ensure high quality control and affirmation of the software implementation (Baig, Shah and Sajjad 2017). Furthermore, by adapting and providing a selective agile method, the control becomes customised to the company and subjective to the team, leading to better results.

The following figure illustrates the detailed agile method framework for an effective ERP implementation quality, subject to changes and adaptation for the purposes of the company (Baig, Shah and Sajjad 2017).

Figure 4 Agile methods (Baig, Shan and Sajjad 2017)



Within the agile management, it is proposed the adoption of Scrum initiative. The Scrum approach, developed by Takeuchi and Nonaka (1986), to Sevways' team working for the German market. The framework was based on the comparison between rugby players and developers. According to Hossain, Paik and Babar (2009), "*scrum is an iterative and incremental project management approach that provides a simple "inspect and adapt" framework*". Usually, with scrum, projects, such as software developments, are delivered in "sprints", which means increments. With each sprint, there is a planning and review phase.

Hence, Sevways could introduce *Daily Scrum* on a day-to-day basis, which "*is a quick daily meeting that gathers all team members to define which will be the daily tasks and to know the results of the previous day's tasks*" (Rising and Janoff 2000). The meeting should last up to 15 meetings per day.

Finally, in order to gather effective reviews from clients in the ports and shipping industry in Germany, surveys should be designed in such a way that Sevways is able to understand what stages of the implementation process should be improved, whether communication has been effective throughout, among other factors. This method is discussed in the following section.

2. **Survey**

Finally, Sevways should become used to track and improve customer satisfaction. Conducting a customer satisfaction survey is a way to generate customer loyalty. According to B2B International (2020), telephone interviews are the most used method to receive answers of B2B customer surveys. In fact, they are easier to answer in case of ratings and give a higher control to the interviewer. In addition, it is strongly advised to send by e-mail a written version of the survey to the customer one day prior to the call. In this way the customer feels more involved in the process and can have a clear visualization of all the questions.

Hence, in the following page are the proposed ten questions, in a survey format, that are advised to be sent to the newly acquired customers after a period of 6 months. Nevertheless, this survey can also be conduceted via telephone, if desired by the client. These questions will be useful to rate the efficiency and effectiveness of the 'Sage X3 Ports and Shipping ERP' software on the customers' day-to-day activities. Additionally, they will provide information to

help determine if any changes, or improvements, are necessary to evaluate the quality of Sevways' remote support and ensure high standard of Sevways' service

For this survey, a scale from one until five has been used, where the lowest number shows total dissatisfaction and the highest indicates total satisfaction. Out of the ten questions, five are quantitative and proposed in a ranking format. The remaining five questions are used for the qualitative side of the analysis. They persist open-ended, meaning that they do not give the interviewee a predetermined set of answers, providing the respondent with freedom of detailly expressing the experience.

The questions are the following:

Quantitative Questions

Question 1: From a scale of 1 (totally satisfied) to 5 (totally dissatisfied), how satisfied are you with the quality of our service?

1 2 3 4 5

Question 2: From a scale of 1 (totally satisfied) to 5 (totally dissatisfied), how satisfied are you with our team?

1 2 3 4 5

Question 3: From a scale of 1 (totally satisfied) to 5 (totally dissatisfied), how satisfied are you with our response time?

1 2 3 4 5

Question 4: From a scale of 1 (totally satisfied) to 5 (totally dissatisfied), how happy are your employees with the new ERP software?

1 2 3 4 5

Question 5: From a scale of 1 (totally satisfied) to 5 (totally dissatisfied), how satisfied are you with the payment policies and procedures?

1 2 3 4 5

Qualitative Questions

Question 1: In your opinion, what should we improve?

Question 2: Would you say that your organization has improved thanks to our ERP software?

Question 3: Do you have any comments regarding the actual customer remote support?

Question 4: How satisfied are you of the transactional relationship with the agent?

Question 5: Are you happy with the ease of doing business with the company?

Overall, surveys are very straightforward to design and are useful when utilized with different methods, such as agile management and KPI adoption.

3. **Key Performing Indicators**

Traditional methods, such as KPIs, are also suggested to be implemented in the company in order to establish an even stronger control. KPIs are metrics which allow Sevways to measure whether the company is making any progress against the strategy implemented to achieve the overall objective of the company, which in this case is to increase profit and increase brand recognition in the German market. KPIs will also be useful to help the project team reduce uncertainty by avoiding risks, since warning signs are identified earlier in the implementation process. Each year, Sevway's project team should analyse each indicator and improve the ones that have identified weak results.

Sevways' culture is organic, where communication is vertical and horizontal between the organization, and the commitments and loyalty by employees are to the company and the attainment of its goals. So, when setting control systems, Sevways should create a collaborative style throughout the project time frame, where each employee involved in the internationalization project is willing to impact the KPIs in a positive way. Each employee is highly qualified in different skills; hence, the CEO should make sure that throughout the project all employees are encouraged to identify problems, suggest effective solutions and celebrate success as a team. KPIs for different company areas have been suggested for the following reasons:

→ Customer KPIs are useful to track the company performance with each new client gained in the German market. They imply customer satisfaction, a 100% customer loyalty and an efficient customer response time.

→ Promotion KPIs are essential to track whether the firm is promoting its brand in an effective and reliable way in the German market. Following the marketing plan, these KPIs trace incremental brand awareness throughout social media and websites.

→ People KPIs are proposed for Sevways' CEO to analyse throughout the years whether the hired staff is productive and efficient in working remotely in Portugal for the German clients. Even if the absenteeism rate is forecasted to increase, it should remain at a low level to guarantee the accordance with these KPIs

→ Financial KPIs will be used to compare whether the future financial situation of the project is in line with the financial expectations. Financial KPIs are strongly correlated to the other classes of KPIs as personnel costs depend on people KPIs, and revenues depend on the number of clients acquired, which is also subject to the success of the Promotion KPIs.

Table 3 – Customer KPIs

Customer KPIs	
Short-Term	Gain 1 customer by the end of the year 2h response time to customer enquiries 100% customer satisfaction in survey conducted by the company to clients 100% Customer Loyalty
Medium-Term	Gain 3 cumulative customers by the end of the 3 years. 4h response time to customer enquiries 95% customer satisfaction in survey per client 100% Customer Loyalty per client
Long-Term	Gain 8 cumulative customers by the end of the 6 years. 6h response time to customer enquiries 95% customer satisfaction in survey per client 100% Customer Loyalty per client

Table 4 – Promotion KPIs

Promotion KPIs	
Short-Term	Organic search increased by 10% 3 daily active users on website
Medium-Term	10 daily active users on website Followers on LinkedIn page increased by 45% Followers on Facebook page increased by 45%
Long-Term	20 daily active users on website Marketing Return on Investment of 70% Increased brand awareness from the Cluth.co platform by 30%

Table 5 People KPIs

People KPIs	
Short-Term **1 Year**	0% absenteeism rate 0% employee turnover
Medium-Term **3 years**	10% absenteeism rate 1% employee turnover 30 companies contacted by the agent in Bremen and Hamburg, independently
Long-Term **6 years**	15% absenteeism rate 2% employee turnover

Table 6 – Financial KPIs

Financial KPIs	
Short-Term	Achieve sales revenue of 132.200,00 € by the end of the first year Personnel costs maximum of 25.297,90€ by the end of the first year Achieve an EBITDA of 8.484,05€ by the end of the first year
Medium-Term	Achieve cumulative sales revenue of 406.557,60€ by the end of the 3rd year Personnel costs remain constant (25.297,90€) by the end of the 3rd year
Long-Term	Achieve cumulative sales revenue of 715.608,16€ by the end of the 6th year Achieve an NPV of 266.044,72€ by the end of the 6th year Maintain a 20% commission to agent each year for the 6-year period Total Costs of maximum 650.000,00€ by the end of the 6th year

Overall, for the strategy proposed to be successful, Sevways team should implement the cited different control systems to effectively analyse internally if employees have achieved their targets on a daily basis and to comprehend whether clients were enjoying their experience usng the innovative ‘Sage X3 Ports ans Shipping ERP’ software.

FINAL RECOMMENDATIONS

The thesis aimed to identify a target country for international expansion, with consequent effective marketing strategies and project valuation for "The Shipping ERP" brand of *Several Ways LDA*. Based on a quantitative and qualitative analysis of data collected, it can be concluded that cultural characteristics, concentration of maritime actors and marketing strategies are important factors to consider in the projection of an internationalization plan. Since this process requires a strong assessment of the main motivators in the expansion, an intensive research has been conducted. In the last years, the 'Sage X3 Ports & Shipping ERP' software in Portugal has proven that it has a huge potential in the Ports and Shipping management sector. However, the low availability of capital for investments in Portugal resulted in Sevways seeking for other opportunities in an international environment. As previously mentioned throughout the research, internationalization is key in the shipping industry, and consequently for the shipping ERP software.

In 2024 the European marine freight is forecasted to have an increase in value of 37.5% since 2019 (Marketline 2020). This represents that marine freight actors most likely will have the capital needed for investing in new ERP software, increasing the possibility for Sevways of acquiring new clients. Understanding the global industry of the service that Sevways provides has shown that there is a strong potential for its growth, due to multiple factors affecting it. The demand towards automation of the shipping processes that has been led by the globalization, has proven the extensive potential for this service in the future.

Consequently, a detailed analysis has been done in this report, to effectively select the most promising and viable destination for the company's future endeavours. The process of analysis was done using several techniques, which allowed for a more precise choice of Germany as the target country. When analysing deeper the corporate tissue of this industry in the country, a large concentration of target companies was identified in Hamburg and

Bremen. For this reason, it is recommended that Sevways starts by targeting companies in these geographical areas. Interpreting the current competence and competitive advantages, while understanding the capabilities of Sevways, has shown the degree of readiness for expansion of the business segment. The low capital availability was reflected in the evaluation of the entry mode, and the proposal for the expansion through an agent is considered as the most viable solution in the situation.

Due to the higher purchasing power of German companies and higher price levels, the chosen pricing strategy has recommended that Sevways establishes a higher universal price point for its solution before entering the German market. On top of this price, discounts might be put in place to meet the different expectations and keep the company competitive in future markets where funds are less available like in Portugal, Sevways' home country. This will ensure the company keeps a transparent and homogeneous approach on pricing, creating a universal image in the international market without leaving space for pricing arbitrage. On the other hand, the research has shown a strong need of extensive marketing investments for the expansion into Germany. Considering the introduction to the German customers and their loyalty towards the brands they already know, investing capital and time is strongly advised in order to gain market recognition right from the start. The recommendation is to think ahead of time and take advantage of the rise of the importance of digital marketing. Even if in the forecasted income statement these investments have a strong impact on the net cash flow in 2021, it will be vital to acquire more clients in the following years.

This strategy shows, as a result, a steady forecasted growth of the project. By 2026, according to this forecast, Sevways will have acquired eight more clients, with different sizes and challenges. Having such a strong initial presence will make Sevways a truly international company with a good brand recognition in Germany. This will make it easier for

the company to acquire new German clients, and future marketing expenses for customer acquisition could be lowered as less necessary. On the other hand, marketing expenses could be more focused on customer retention, so, areas such as customer relationship management (CRM) should be improved.

For the future, Sevways should consider whether to continue using the German agent as intermediary or consider other alternatives, such as setting up a subsidiary indefinitely. This will increase the expenses on property, plant and equipment (PPE) but also strengthen the relationship with the German clients. The consideration of alternatives should be made only if the capital availability of the company (through profit, investments or subsidies) is higher than the one now and the pool of clients is consistent. Thus, it is highly recommended for Sevways to continue applying for government subsidies for innovation and internationalization of small and medium companies. As well as this, Sevways should consider whether it is necessary to hire more employees to the current team, as clients increase and become more demanding over the years. In addition, Sevways could subsequently decide to expand in other countries with a similar strategy to the one applied for Germany. A possible future country could be one out of the three other highly ranked countries in the evaluation process, so the Netherlands, China or United States. It comes without saying that each country's specific culture, competition and way of doing business should be considered when adapting the internationalization plan.

Nonetheless, if after the 6-year period Sevways determines that the expected returns are not met and the international expansion is not profitable, it may decide to exit the German market and either continue focusing only on the Portuguese market or internationalize to a different one. Given the scarcity of new opportunities in the Portuguese market, it is still recommended to move towards another country. As previously mentioned, the nature of the

software allows for a remote implementation, thus the expenses for a new international expansion would not be excessive.

In conclusion, this work project provides the milestones necessary for a successful and profitable internationalization project of the analysed ERP software provider company. Further research is required throughout the years to update the economic conditions of the target country, the market value of the shipping industry and its innovation level.

BIBLIOGRAPHY

- AEO Directory. 2020. “Authorised Export Operators.” Accessed November 20. http://www.aeodirectory.com/aeo/search/?company=.
- Aiello, Giuseppe, Antonio Giallanza and Giuseppe Mascarella. "Towards Shipping 4.0. A preliminary gap analysis." *Procedia Manufacturing* 42 (2020): 24-29.
- Aithal, Shubhrajyotsna. 2017. “Industry Analysis – the First Step in Business Management Scholarly Research”. *International Journal of Case Studies in Business*, IT and Education (IJCSBE), 1(1), 1-13. https://ssrn.com/abstract=2988412
- Amini, Mohammad, and Abukari, Arnold. 2020. “ERP Systems Architecture for the modern age: A review of the state of the art Technologies”, *Journal of Applied Intelligent Systems and Information Sciences*, 1(2), pp. 70-90. doi: 10.22034/jaisis.2020.232506.1009
- Apren. 2020. " Electricity Generation by Energy Sources in Mainland Portugal (January to October 2020)". Accessed October 10, 2020. https://www.apren.pt/en/renewable-energies/production.
- Armstrong, Gary, and Kotler, Philip. 2007. *Marketing: An Introduction*. Pearson Education.
- Asen, Elke. 2020. “*Corporate Income Tax Rates In Europe - Tax Foundation*. Accessed September 10, 2020. https://taxfoundation.org/2020-corporate-tax-rates-in-europe/.
- Baig, Jawad, Shah, Atif and Sajjad, Faisal. 2017. "Evaluation Of Agile Methods For Quality Assurance And Quality Control In ERP Implementation". Accessed December 13, 2020. https://ieeexplore.ieee.org/abstract/document/8260055?casa_token=SE6TUarGT1EAAAAA:LdXaP0eUIMDnyDcpbGxb9EEQ58uNWKeg-9dKnl2YEzpQuXRwksZSQoN-Ze1W8wx22FEHePGR0FM.

- Banco Central Europeu. 2020. “Taxas De Juro Bancárias - Empréstimos E Depósitos”, Accessed September 18, 2020. https://www.bportugal.pt/sites/default/files/anexos/10-taxas_juro_bancarias.pdf.
- Banco de Portugal. 2019. “Quadros do Setor (2019) - 62010 - Atividades de Programação Informática”. Accessed September 28, 2020. https://www.bportugal.pt/QS/qsweb/Dashboards
- Barney, Jay. 1991 “Firm Resources and Sustained Competitive Advantage”. *Journal of Management*. 17. 99-120.
- Bell, Jim. 1995. “The Internationalization of Small Computer Software Firms: A Further Challenge to ‘Stage’ Theories.” European Journal of Marketing. August 1. https://doi.org/10.1108/03090569510097556.
- Booms, Bernard H. 1981. “Marketing strategies and organization structures for service firms”, in *Marketing of Services, American Marketing Association*, Chicago, IL, pp. 47-51.
- Brotspies, Herbert and Weinstein, Art. 2017. “Rethinking business segmentation: a conceptual model and strategic insights”. *Journal of Strategic Marketing*. 164-176.
- Business Insights. 2020. “ERP Software Market to Hit USD 71.63 Bn by 2026; Growing Focus on Improving Operational Efficiency to Favor the Market”. Accessed November 10, 2020. https://www.globenewswire.com/news-release/2020/06/04/2043603/0/en/ERP-Software-Market-to-Hit-USD-71-63-Bn-by-2026-Growing-Focus-on-Improving-Operational-Efficiency-to-Favor-the-Market-Fortune-Business-Insights.html
- Canow. 2020. “Canow.Co.” Accessed September 26 http://www.canow.co/index.php/pt/.
- Carpenter, Mason A., and William Gerard Sanders. 2014. *Strategic management: a dynamic perspective, concepts and cases.* New York: Pearson College Div.
- Chambers, Matthew and Liu, Mindy. 2020. "Maritime Trade And Transportation By The Numbers". Bureau Of Transportation Statistics. Accessed December 22, 2020.

https://www.bts.gov/archive/publications/by_the_numbers/maritime_trade_and_transportation/index.

- Clough, Richard, and Sears, Glenn and Sears, Keoki. 2000. *Construction Project Management*. Fourth Edition. New York: John Wiley & Sons.

- Clutch. n.d . “Find Top Firms for Your next Big Project. Accessed November 21. https://clutch.co/.

- Deltawerken. n.d. “Water and Transport : Port of Rotterdam”. Accessed November 08, 2020.http://www.deltawerken.com/ports/1454.html#:~:text=A%20harbor%20is%20a%20natural,Zeeland%20Seaports%2C%20and%20Groningen%20Seaports

- DevriX. 2019. “The Most Effective Digital Marketing Strategies for Software and Tech SMEs.” Accessed November 15. https://devrix.com/tutorial/digital-marketing-strategies-for-software-and-tech-smes/.

- Di Vaio, Assunta *et al*. 2020. "Cruise And Container Shipping Companies: A Comparative Analysis Of Sustainable Development Goals Through Environmental Sustainability Disclosure". *Taylor & Francis*. Accessed September 28, 2020. https://imarest.tandfonline.com/doi/full/10.1080/03088839.2020.1754480?casa_token=jICff-GRWAsAAAAA%3Afjhcf3gL1UO9X7_iwWxP9DIaHFEVRNvvEP-GXuVpxpGy_IkYSMcGnT2xBjwfUlGWQUaF5hLhQ_BerURx#.X-MyWumwlQJ.
- Directories. n.d. "Lloyd's List Directories". Directories.Lloydslist.Com. Accessed October 21, 2020. https://directories.lloydslist.com/var/recordset/66893/pos/81.
- E.T.E Grupo. 2020. "ETE Group | Grupo E.T.E.". *Ete.Pt*. Accessed September 16, 2020. https://www.ete.pt/en/ete-group/.

- Eurostat Europe. 2020. “Real GDP Growth Rate – Volume”, *EUROSTAT: Regional statistics: reference guide.* Accessed September 18, 2020. https://ec.europa.eu/eurostat/databrowser/view/tec00115/default/table?lang=en
- Eurostat. 2020. “Adjusted Gross Disposable Income Of Households Per Capita In PPS”. *EUROSTAT: Regional statistics.: reference guide*. Accessed October 14, 2020. https://ec.europa.eu/eurostat/tgm/table.do?tab=table&language=en&pcode=tec00113.
- Eurostat. 2020. “Comparative price levels for investment”. Accessed December 02, 2020.https://ec.europa.eu/eurostat/statistics-explained/index.php/Comparative_price_levels_for_investment#Overview
- Facebook for business. n.d. “Cost per click”. Accessed November 10, 2020. https://www.facebook.com/business/help/683065845109838
- Federal Ministry For Economic Affairs And Energy. 2019. “The German SME Strategy”. Accessed October 29, 2020. https://www.bmwi.de/Redaktion/EN/Publikationen/Mittelstand/german-sme-strategy.pdf?__blob=publicationFile&v=3
- Federal Ministry For Economic Affairs And Energy. n.d. "The Maritime Industry". Accessed October 21, 2020. https://www.bmwi.de/Redaktion/EN/Dossier/maritime-industry.html.
- Fenton, Charles, et al. 2018. “Brave New World: Container Transport in 2043” *McKinsey Report.*
- Financial Times. 2020. "Shipping Industry Warns Of Trade Logjam As Crews Remain Stranded". Accessed November 10, 2020. https://www.ft.com/content/4f2e33a6-e1f7-407f-b2af-8aac31e0d8ee.
- Flexport. n.d. “Flexport - Ultimate Maritime Logistics.” Accessed October 21, 2020. https://ultimatemaritimelogistics.com/flex-port/.

- Fortune Business Insights. 2020. "ERP (Enterprise Resource Planning) Software Market Size, Growth | Report, 2026". Accessed October 03, 2020. https://www.fortunebusinessinsights.com/enterprise-resource-planning-erp-software-market-102498.
- Fortune Business Insights. 2020. "ERP (Enterprise Resource Planning) Software Market Size, Growth: Report, 2026". Accessed October 03, 2020. https://www.fortunebusinessinsights.com/enterprise-resource-planning-erp-software-market-102498.
- Fortune Business Insights. 2020. "ERP (Enterprise Resource Planning) Software Market Size, Growth: Report, 2026". Accessed October 03, 2020https://www.fortunebusinessinsights.com/enterprise-resource-planning-erp-software-market-102498.

- Georgiu, Michael. “The Difference between Link Building & Outreach (and How They Work Together).” Search Engine People Blog. Accessed November 15, 2020. https://www.searchenginepeople.com/blog/16032-link-building-vs-outreach.html.

- GetApp. 2020. *Sistemas De Gestão De Fretes*. Accessed 20, September 2020. https://www.getapp.pt/directory/218/freight-management/software
- Globenewswire. 2019. “Shipping Software Market To Grow At 8.4% CAGR During Forecast Period – Analysis By Size, Share, Application, Deployment Type, SWOT Analysis And Future Outlook: Adroit Market Research”. Accessed September 16, 2020. https://www.globenewswire.com/news-release/2019/07/23/1886161/0/en/Shipping-Software-Market-to-grow-at-8-4-CAGR-during-forecast-period-Analysis-by-Size-Share-Application-Deployment-Type-SWOT-Analysis-and-Future-Outlook-Adroit-Market-Research.html.

- Goldsmith, Ronald. 1999. "The personalized marketplace: beyond the 4Ps ". Marketing Intelligence & Planning. Vol. 17. No. 4. 178-185.
- Google Ads. n.d. “Google Ads: SEO vs. PPC?”. Accessed November 12, 2020. https://ads.google.com/home/resources/seo-vs-ppc/
- Google. 2018. “3 insights that will help you serve today’s B2B buyer”. Accessed November 10, 2020. https://www.thinkwithgoogle.com/consumer-insights/consumer-trends/b2b-buyers-online-and-offline/
- Górecka, Dorota and Szalucka, Malgorzata. 2013. “Country market selection in international expansion using multicriteria decision aiding methods. Multiple Criteria Decision Making”. 8. 31-55.
- Government of Netherlands. 2015. “The Dutch Maritime Strategy 2015-2025”. Accessed October 21, 2020. https://www.government.nl/documents/reports/2015/07/07/the-dutch-maritime-strategy-2015-2025.
- Gupta, Sunil. 2014. "Marketing Reading: Segmentation and Targeting." *In Core Curriculum Readings Series.* Boston: Harvard Business Publishing.
- Hague, Nick, and Paul Ague. 2020. “Customer Satisfaction Survey Questions: How to Measure Satisfaction.”. Accessed December 29, 2020. https://www.b2binternational.com/publications/customer-satisfaction-survey/.
- Hambrick, Donald, and James Fredrickson. 2005. "Are You Sure You Have A Strategy?” *Academy Of Management Perspectives* 19(4): 51-62. doi: 10.5465/ame.2005.19417907
- Hernández, José Guadalupe Vargas, and Francia Contreras Garcia. "The link between a firm s internal characteristics and performance: GPTW & VRIO dimension analysis." *Revista de Administração IMED*. 8, 2 (2018): 222-235.
- Hofstede Insights. n.d. “Hofstede Insights Country Comparison China”. Accessed October 21, 2020. https://www.hofstede-insights.com/country-comparison/china/.

- Hooley, Graham, Saunders, John and Piercy, Nigel. 1998. Marketing Strategy & Competitive Positioning. 2nd edition. Prentice Hall.
- https://advantage-marketline-com.eu1.proxy.openathens.net/Analysis/ViewasPDF/china-marine-freight-101411
- Hossain, Emam, Babar, Muhammad A., Paik, Hye, and June Verner. (2009). Risk Identification and Mitigation Processes for Using Scrum in Global Software Development: A Conceptual Framework. In 2009 16th Asia-Pacific Software Engineering Conference. doi:10.1109/apsec.2009.56
- Hubspot. 2020. *Not Another State Of Marketing Report*. HubSpot. https://www.hubspot.com/state-of-marketing
- Iberolinhas. n.d."Iberolinhas". *Iberolinhas.Pt.* Accessed September 16, 2020. http://www.iberolinhas.pt/index.php/language/en/.
- IFS Global Enterprise Software Company. n.d. "IFS". Accessed October 21, 2020. https://www.ifs.com/corp/.
- Ituc. 2018. 2018 *Global Rights Index*. Accessed September 16, 2020. https://www.ituc-csi.org/IMG/pdf/ituc-global-rights-index-2018-en-final-2.pdf.
- Jcanão. n.d. "J Canao". Accessed October 1, 2020. http://www.jcanao.com.
- Jeffrey Harrison, Michael Hitt, Robert Hoskisson, and Duane Ireland. "Competing for Advantage." *Thomson South-Western, United States* (2008).
- Jun-yan, Liu. 2012. "Schedule Uncertainty Control: A Literature Review". *Physics Procedia*. 33: 1842-1848.
- Kaufmann, Daniel and Kraay, Aart. 2019. "Worldwide Governance Indicators", The World Bank Group. Accessed September 12, 2020. https://info.worldbank.org/governance/wgi/.

- Kenge, Rohit, and Zafar Khan. 2020. "A Research Study on the ERP System Implementation and Current Trends in ERP." *Shanlax International Journal of Management*. 8. 34-39.

- Kotler, Philip. 2003. Marketing Management. 11th edition. Englewood Cliffs. NJ: Prentice-Hall.

- Kotler, Philip. *Marketing Management: Analysis, Planning, Implementation, and Control*. 8th ed. Prentice Hall, 1994.

- Kropp, Martin, et al. 2014. "Teaching And Learning Agile Collaboration". Accessed December 13, 2020. https://ieeexplore.ieee.org/abstract/document/6816791?casa_token=Vx0YF1w8Y2wAAAAA:ne5OYH_oW1rdiQXkq6O2FCAgLnLSkYxi0VLHksEXCXtPZifyltxb2O5bXMHlD1AxgTtdrr54nDk.
- Lauriat, George. 2019. "AJOT'S Top 100 Containerports A To Z". Accessed November 29. https://www.ajot.com/premium/ajot-ajots-top-100-containerports-a-to-z/P0.
- Linkedin. 2020. "Investimento De Mídia No LinkedIn." Accessed November 20. https://business.linkedin.com/pt-br/marketing solutions/ads/pricing?trk=sem_lms_gaw.

- Marineinsights. 2019. "Who is a shipping agent?". Accessed September 14, 2020. https://www.marineinsight.com/careers-2/who-is-a-shipping-agent/
- Maritime Trimergo. n.d. "Trimergo". Accessed October 21, 2020. https://www.trimergo.com/industries/maritime/.
- Market Research Future. 2020. "Global ERP software Market research report". Accessed October 17, 2020https://www.marketresearchfuture.com/reports/erp-software-market-1412

- Market Research Reports, Industry Research Firm, Consulting Services - Transparency Market Research. 2021. Accessed October 1, 2020. https://www.transparencymarketresearch.com/shipping-software-market.html.
- Marketline. 2019. “MarketLine Industry Profile Marine Freight in Europe. April 2019” Accesed September 13, 2020. http://advantage.marketline.com.eu1.proxy.openathens.net/Analysis/ViewasPDF/europe-marine-freight-77911
- Marketline. 2019. “MarketLine Industry Profile Transportation services in Portugal. July 2020.” Accessed September 13, 2020. http://advantage.marketline.com.eu1.proxy.openathens.net/Analysis/ViewasPDF/portugal-transportation-services-104799
- Miettinen, Aki. 1998. *Pk-yrittäjän menestystekijät*. Finland: Pohjois-Savon Ammattikorkeakoulu.
- Millefiori, Leonardo, *et al*. 2020. "COVID-19 Impact On Global Maritime Mobility". Accessed September 13, 2020. *Arxiv.Org*. https://arxiv.org/abs/2009.06960.
- Moen, Øystein, and Morten Gavlen, and Iver Endresen. 2004. “Internationalization of Small, Computer Software Firms: Entry Forms and Market Selection.” *European Journal of Marketing* 38: 1236-1251.
- Murphy, Paul, and James, Daley. 1997. "Investigating selection criteria for international freight forwarders." *Transportation Journal* 37. 1. 29-36.
- NASA. 2020. “Technology readiness level definitions”. Accessed November 13, 2020. https://www.nasa.gov/pdf/458490main_TRL_Definitions.pdf
- NAVEX. 2020. “Navex: Our Services” Accessed October 10 https://www.navex.pt/en/

- Navitrans. n.d. “Navitrans.Eu*”*. Accessed October 1, 2020. https://www.navitrans.eu/en/cases.
- Netherlands Maritime Technology. n.d. “Home - Netherlands Maritime Technology”. Accessed November 9, 2020. https://maritimetechnology.nl/en//
- OECD. 2020. “Price level indices (indicator).” Retrieved from OECD database. Accessed November 29. https://data.oecd.org/price/price-level-indices.htm
- Offshore Energy. 2017. “Value Of Marine Freight Industry To Reach USD 210 Bn By 2021”. Accessed December 22, 2020. https://www.offshore-energy.biz/value-of-marine-freight-industry-to-reach-usd-210-bn-by-2021/.
- Oliveira, Manuel, Barandas, Hortensia and Barros, Antonio. 2007. “What do innovators do to succeed? A case study of Sage plc”. *14th International Product Development Management Conference*, EIASM-The European Institute for Advanced Studies in Management. Faculdade de Engenharia do Porto, Universidade do Porto (FEUP, UP).
- Patel, Neil. “The Ultimate Guide to Guest Blogging.”. Accessed November 24, 2020. https://neilpatel.com/blog/guide-to-guest-blogging/.
- Pham, Tiffany, *et al*. 2013. *From Business Strategy to Information Technology Roadmap: A Practical Guide for Executives and Board Members*. 1. Routledge. https://doi.org/10.4324/9781315373195
- Pordata. 2020. PORDATA - *Gross National Income And Gross Disposable Income Per Capita*, Accessed September 14, 2020. https://www.pordata.pt/en/Portugal/Gross+national+income+and+gross+disposable+income+per+capita-2830.
- Porter, Michael. 1979. *How competitive forces shape strategy*. Harvard Business Review. 57. 2. 137–45

- Porter, Michael. 1985. “Competitive Advantage, Creating and Sustaining Superior Performance”. *The Free Press.*
- Portugal 2020. 2019. “Portugal 2020”. Accessed September 27,2020. http://www.portugal2020.pt/.
- Prodware Maritime. n.d. “Prodware Maritime Group”. Accessed October 21, 2020. https://www.prodwaregroup.com/de-de/loesungen/prodware-business-solutions/maritime/
- Rajala, Risto, Rossi, Matti and Tuunainen, Virpi K. 2003. “A framework for analyzing software business models.” *European Conference on Information Systems*. 1-13.
- "Review Of Maritime Transport 2019 | UNCTAD". 2020. *Unctad.Org*. https://unctad.org/webflyer/review-maritime-transport-2019.
- Rising, Linda and Janoff, Norman. 2000. “The Scrum Software Development Process For Small Teams”. *Ieee Software*, 17.4. 26-32.
- Roeding, Cyriac, *et al*. 1999. *Secrets of Software Success: Management Insights from 100 Software Firms Around the World*. 1St editioned. Boston, USA: Harvard Business Review Press.
- Root, Franklin. 1994. *Entry Strategies for International Markets*. San Francisco: Jossey-Bass.
- Roper, Stephen. 2002. “Are All Semipresidential Regimes the Same? A Comparison of Premier-Presidential Regimes*”. Comparative Politics*, 34(3), 253-272. doi:10.2307/4146953
- Rotterdam Navigate. n.d. "All Shipping Routes Via Rotterdam". Navigate Rotterdam Shipping Routes - Get A Complete Overview Of The Best Connections. Accessed October 21, 2020. https://rotterdam.navigate-connections.com/companies.

- S&P Global Platts. 2020. “Changing tack: from floating storage to experimental fuels, the global shipping markets look for new opportunities under drastically changed economic conditions. S&P Global Platts Shipping looks at what’s in store for Q4 2020 and beyond”. Accessed November 08, 2020. https://www.csis.org/analysis/hidden-harbors-chinas-state-backed-shipping-industry
- Sage X3. 2017. *Technology and Architecture Overview.* https://partnerportal.sagex3.com/sites/default/files/sage_x3_partner/storage/sage_x3_technology_and_architecture_0.pdf
- Saxon, Steve, and Matt Stone. "Container shipping: The next 50 years." *Travel, Transport & Logistics* (2017).
- Sevways. n.d. "SEVWAYS | Software Development And It Managed Services". Accessed September 12, 2020. https://sevways.cloud/?lang=en.
- Sharma, Gauri. 2012. "Culture: Organic Or Established?". *Forbes*. Accessed November 10, 2020. https://www.forbes.com/sites/gaurisharma/2012/09/11/culture-organic-or-established/.
- Shipbuilder. n.d. “Shipbuilder – Software”. Accessed October 21, 2020. https://shipbuilder.nl/software/.
- Shipnet. n.d. “Shipnet Maritime ERP Software Solutions”. Accessed October 21, 2020. https://www.shipnet.no/.
- ShippingAndFreightResource. 2020. “ERP Software and its utilisation in the Ports & Shipping Industry. Accessed October 20. https://www.shippingandfreightresource.com/erp-software-in-the-ports-shipping-industry-and-its-utilisation/.
- Shipthis. n.d. “Shipthis”. Accessed October 25, 2020. https://shipthis.co/freight-forwarding-software

- Slintel. 2020. "Sage ERP Tool: Top Customers And Competitor Details 2020". Accessed October 15, 2020. https://www.slintel.com/tech/erp/sage-erp-market-share.
- Softpak. n.d. “Softpak”. Accessed October 21. https://www.softpak.nl/softpak/
- Softship. n.d. “Softship”. Accessed October 21, 2020. https://www.softship.com/the-company/clients/locations/index.html#worldmap
- Softship. n.d. “Softship”. Accessed October 21, 2020. https://www.softship.com/the-company/clients/locations/index.html#worldmap
- Statista. 2017. “Share of the enterprise resource planning (ERP) software solutions market worldwide, as of November 2016, by vendor”. Accessed November 10,2020. https://www.statista.com/statistics/558784/worldwide-erp-market-share-distribution-by-vendor/
- Statista. 2019. “Leading Enterprise Resource Planning (ERP) vendors in the Netherlands in 2018 and 2019”. Accessed November 08, 2020. https://www.statista.com/statistics/641158/top-10-erp-vendors-in-the-netherlands/
- Statista. 2020. “EU: Unemployment Rate 2019 By Country.” Retrieved from Statista database. Accessed October 02, 2020. https://www.statista.com/statistics/268830/unemployment-rate-in-eu-countries.
- Statista. 2020. “European Union Inflation Rate” Retrieved from Statista database. Accessed October 14, 2020. https://www.statista.com/statistics/267908/inflation-rate-in-eu-and-euro-area/.
- Statista. 2020. “Portugal - Unemployment Rate 2019.” Retrieved from Statista database. Accessed October 02, 2020. https://www.statista.com/statistics/372325/unemployment-rate-in-portugal/.

- Stiftung, Bertelsmann. 2020. "SGI 2017 | Portugal | Environmental Policies". *Sgi-Network.Org*. Accessed October 19, 2020. https://www.sgi-network.org/2017/Portugal/Environmental_Policies.

- Sumner, Mary. 2014. *Enterprise resource planning*. New York: Pearson Education.

- Takeuchi, Hirotaka and Nonaka, Ikujiro.1986. "The New New Product Development Game*". Harvard Business Review*. 137-183. Yonyou. n.d. "World-Class ERP And Cloud Services". Accessed November 09, 2020. https://www.yonyou.com.hk/

- Tan, Alan, and Khee-Jin. 2005. *Vessel-source marine pollution: the law and politics of international regulation*. Vol. 45. Cambridge: Cambridge University Press.

- Trading Economics 2020. "GDP Annual Growth Rate - Countries - List | Europe", Accessed September 15, 2020. https://tradingeconomics.com/country-list/gdp-annual-growth-rate?continent=europe.

- Transportation Research Board. 2003. *Cybersecurity Of Freight Information Systems: A Scoping Study*. Washington, D.C. The National Academics of Science Engineering Medicine.

- Transporter Systems. n.d. "Software CRM Logística E Software CRM Transportes". n.d. *Transportersystems.Com*. Accessed October 1, 2020. https://transportersystems.com/crm-logistica-transportes.html.

- Unesco. 2020. "How Much Does Your Country Invest In R&D?." Accessed October 1, 2020. ://uis.unesco.org/apps/visualisations/research-and-development-spending/.

- Vahvaselkä,Irma.2009. *Kansainvälinen liiketoiminta ja markkinointi*. Helsinki: Edita Publishing.

- Vision of Humanity. 2020. "The World Is Less Peaceful Today Than At Any Time In The Last Decade. - Vision Of Humanity". Accessed October 02, 2020. http://visionofhumanity.org/indexes/global-peace-index/.
- Weihrich, Heinz. "The TOWS matrix—A tool for situational analysis." *Long range planning* 15, no. 2 (1982): 54-66.
- Wells, William and Prensky, David. 1996. Consumer behavior. New York Wiley. 275.
- Whatech. 2020. “Shipping software market report”. Accessed November 10, 2020. https://www.whatech.com/markets-research/it/archive/521083-new-study-shipping-software-market-report
- Williamson, Oliver E. 1979. "Transaction-cost economics: the governance of contractual relations." *The journal of Law and Economics* 22.2: 233-261. Doi:10.1086/466942
- World Bank. 2020. “Doing Business in Portugal 2020.” The World Bank Group. Accessed September 12, 2020. https://www.doingbusiness.org/content/dam/doingBusiness/country/p/portugal/PRT.pdf.
- World Shipping Council. 2018. “Top 50 World Container Ports”. Accessed November 08, 2020. https://www.worldshipping.org/about-the-industry/global-trade/top-50-world-container-ports
- Worldshipping.Org. n.d. "Top 50 World Container Ports". Accessed October 21, 2020. https://www.worldshipping.org/about-the-industry/global-trade/top-50-world-container-ports.