

A Work Project, presented as part of the requirements for the Award of a Master's degree in  
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INTERNATIONALIZATION OF *CRIAR RAÍZES*: NA IN-DEPTH ANALYSIS OF THE  
UNITED KINGDOM AND LITERATURE REVIEW ON INTERNATIONAL ENTRY MODE  
SELECTION (EXPORTS VS FDI)

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## **Abstract**

*Criar Raízes* is a Portuguese SME that operates in the Solid Surface Industry, a new-generation raw material used as an architectural and design solution for a variety of residential and commercial applications. Due to the company's interest in expanding its foreign operations abroad, the purpose of the present project is to develop an internationalization plan analysis. This includes an analysis of the industry, firm-specific factors, and an in-depth analysis of the five potential markets (France, Germany, United Kingdom, United States, and Switzerland). Besides, a marketing plan and financial forecasts were projected for the French market, the selected country.

## **Key Words**

International Business, Internationalization, Market Selection, Entry Strategy, Solid Surface, SME, France

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## **1. Executive summary**

Studying several international markets is a challenge for businesses seeking to expand. This study explores the degree to which *Criar Raízes*, a Portuguese solid surface manufacturing company, is prepared to expand abroad and the market and strategies that may be necessary to use.

*CR* is currently seeking to sell standardized bathroom catalog products abroad. Therefore, the paper begins with a firm and market analysis and a global readiness assessment of the company to analyze its internal situation toward internationalization. This analysis showed that although *CR* is capable of expanding, it lacks a sustained financial capacity and needs to invest further in human resources. Considering these results, this study uses two complementary approaches as decision-making tools to evaluate and choose potential markets: country clustering and country ranking. According to the results of a thorough in-depth analysis of the top 5 countries with higher potential, it was concluded that France was the most attractive country. Moreover, to further support the market decision, it was found that direct export would be the best entry mode for *CR*. A detailed marketing plan and financial forecast were created to show how the company may expand its business in the short and long term into France.

Finally, to assess and monitor the plan's success in the country, suggestions were developed, including the marketing and financial goals *CR* should meet.

## **2. Introduction**

To internationalize a business, many factors, internal and external, must be accounted for (Kumar, Stam, and Joachimsthaler 1993). The new market must be analyzed, and results must be forecasted based on information recovered and the creation of some assumptions for the future. Further, the firm's internal analysis can provide insights regarding the best practices and how to develop the project's strategic plan.

The company's size is one of the principal elements that can influence the internationalization process. SMEs feel attracted to going abroad by the possibility of increasing their sales (Buvik et al. 2002). The faster-growing international markets allow the expansion of new industries on which SMEs can focus. By providing valuable, inimitable, rare, and non-substitutable products to a specific target, these firms can obtain an advantage and install their businesses overseas (Westhead, Wright, and Ucbasaran 2002).

*Criar Raízes* is a Portuguese SME that operates in the solid surface Industry, a new-generation raw material used as an architectural and design solution for various residential and commercial applications. Attending the company's interest in expanding its operations abroad, the present report aims to develop an internationalization plan in four main parts. First, the company's internal and external environment will be analyzed, and its motives and readiness to internationalize will be diagnosed. Afterward, with Excel and SPSS, the group will analytically identify the potential countries where *CR* could expand its operations. The five countries with the highest potential fit will then be descriptively analyzed in-depth to select the most suitable country. Once this phase is achieved, we will identify the more convenient entry strategy among the different array of options that will be considered. Finally, an implementation plan will be made, including a marketing plan and financial forecasts for the selected country.

### **3. Research Methods**

To develop the internationalization plan for *CR*, a search was directed to acquire and implement a set of quantitative and qualitative research methods to gather numerical and nonstatistical data, respectively. For the **primary data**, the group gathered information directly from the company by acquiring financial documents and papers to access information regarding in-house products, suppliers, partners, and the overall perspective of the solid surface industry. Additionally, written answers by email and recorded conversations were also beneficial in collecting primary data.

Nevertheless, those documents were negligibly developed, giving us an overview of the company's actual financial situation and compromising our future predictions.

Therefore, we resorted to **secondary data** that was accessed through a comprehensive and meticulous web search. Databases such as *Orbis*, *Statista*, *Trading Economics*, *The World Bank*, and *The Global Economy* were essential sources for gathering information. Moreover, due to the specificity and the fact of being a relatively recent industry, the group faced some difficulties finding data and complementary information regarding the solid surface industry from reliable sources.

During the semester, the group met the *CR's* direction board three times in digital format. The meetings had as objectives the collection of primary data, clarification of uncertainties, and access to information that would complement the documents provided by the company. Beyond this, the comprehension of the direction board's opinions and their respective appreciation of the group's research, as well as their judgment of the establishment of future steps, were always seen as fundamental to the project's development. With this methodology, the group successfully aligned the *CR's* interests with the selection of target countries, the entry mode decisions, and the respective plan for the selected market by applying different methods, such as country clustering and ranking, that will be detailed in the next sections. Besides, on average, the group exchanged emails and realized two phone calls per week with the CEO to clarify small doubts.

#### **4. Strategic Analysis of the company's situation**

##### **4.1. Firm overview and project background**

###### **4.1.1. Profile and management**

*CR* is a B2B solid surface manufacturer founded in 2006 and headquartered in Fafe, Portugal. The company operates in the solid surface Industry, having as its primary activity the production of materials out of this composite, mainly for the building and construction sector. *CR* views this

business as “more than a productive concept, it is a language, a way of expressing ideals and concepts”.

Nowadays, the firm **employs 16 people**, fitting with the classification of a small and medium-sized enterprise (OECD n.d.). *Criar Raízes* is composed of three partners: one financial partner with no direct action in the company, one responsible for administrative and human resources functions, and one sales and production manager, also responsible for Research and Development. Among the employees, there is also a budget designer, a salesperson, a production director, and carpenters.

Concerning the decision-making process, *CR* adopts a **Horizontal approach** since the main decisions are taken by the two managers along with the production and design technicians. Therefore, decision-making is always based on consultation between people from different levels of the company.

Moreover, the administrative parties have been showing some interest in internationalizing for some time now. They have already partnered with foreign companies in Spain, Andorra, and France, representing the beginning of their international expansion.

Until now, *CR* has been adopting a more reactive approach since potential partners are the ones to establish contact first and not the opposite.

#### **4.1.2. Product/business portfolio**

*CR* offers **unique product designs on solid surfaces**, which is a material similar to natural stone. Solid surface is made of two-thirds *Alumina Trihydrate* (ATH), a natural mineral, and 1/3 of acrylic resins. Its unique composition gives solid surface unique properties: it does not have any pores, it is anti-bacterial, easy to clean, and food-grade (that is, it can be in contact with food). Besides, it is highly resistant, easily repairable, and 100% recyclable. The solid surface can be cut in sheets, enabling the connection of them without apparent joints and allowing to use of the

thermoforming technique to create unique curved shapes. This material is offered in a wide range of colors, but the main particularity is that it can achieve an ultra-whiteness level compared with other materials (KRION® Porcelanosa Solid Surface 2022b). A full description of solid surface's exclusive features was performed ([Appendix 1](#)).

Thanks to these features, the solid surface material can be used in a wide range of applications, such as in kitchens, bathrooms, airports, hotels, restaurants, furniture, offices, or even in the marine industry ("Applications of Solid Surface" n.d.). Given this, the company decided to focus mainly on **bathroom** and **kitchen** items. More specifically, the most common products produced are sinks, countertops, bathtubs, shower heads, shower trays, toilets, and a wide range of accessories. Besides manufacturing, the company also provides installation services when necessary.

CR's product portfolio can be organized into two main groups: **standardized products**, available in catalogs, or **personalized products**, where a customer asks for a unique piece. In fact, the versatility of the raw material allows the company to produce a wide range of products adapted to each consumer's tastes.

Each catalog is designed to be associated with a given **collection**, and sometimes the company even commits to make **collaborations** with designers to create those collections. For instance, in 2021, Criar Raízes partnered with the North American designer Mário Romano to create a bath collection called **Alquimia**.

#### **4.1.3. Operations, positioning, and strategy**

**Operations** - CR is a company that develops solutions for decoration in the construction sector. They started with natural stones, and their role was to commercialize natural stones imported from China and India to construction material stores in Portugal. Since the beginning of the project, the company has been undergoing deep transformations and has been expanding its portfolio to new ranges of products and services, firstly to glass mosaics and recently to solid surfaces. Heavy

investments in technology equipment and human resources resulted in their solid surface unit production in 2015. *CR*'s supply chain relies on four solid surface manufacturers, Krypton, Corian, Himacs, and Staron, that assure the quality of its production. In 2018, focused on quality and solutions in production, Mineral Solid Surface Solutions emerged. One year later, to center its business on commercializing its own production, *CR* finished the commercialization of natural stones and increased its production capacity. Currently, the company has an exclusive partnership with Mario Romano, a north American designer. Besides, *CR* R&D Thermoforming Research and Development Center is where they investigate new techniques to produce high-quality and disruptive solutions. After a complex thermoforming process, *CR* disposes its products to four different clients defined by the company: Distribution, composed of building materials houses; Groups, industries that don't have direct commercial action from *CR*; Big Clients, including either companies or particular clients; Exportation, companies outside the domestic market.

**Positioning** - The company's market positioning points out the consumer's perception of its brand compared with other competitors. This perception can be related to diverse factors depending on the positioning strategy used by the company (Corporate Finance Institute 2022).

*CR* is placed in the upscale segment of the market and focuses on providing a high-quality and diverse portfolio of products in the hardware and building material industry. According to Luís Carreira, *CR*'s CEO, the company's particular customers are both Portuguese and foreigners, primarily located in regions such as Quinta do Lago, Vale do Lobo, and Estoril. This can be explained by their higher purchasing power.

**Strategy** - The company's strategy is defined as the set of choices the company will follow to reach its goals (Lewis 2022). *CR* seeks to stand out as more than a creator of a product concept. It wants to be a way of expressing new ideas and concepts. Thus, the *CR* strategy passes through heavy investments in know-how, innovative techniques, and new technologies. This enables the

company to be recognized for its customized and diverse portfolio of high-quality products. Beyond the enormous variety of thermoforming solutions, with more than 100 molds, *CR* offers personalized services to each customer. Concerning the company's diversification strategy, *CR* is already present at some hospitality fairs in Portugal. Besides, regarding *CR*'s global expectations, the company prioritizes expanding to wealthy countries that value and are willing to spend a lot of money on luxury goods. According to Luís Carreira, the *CR*'s CEO, the company's sales and production manager, potential markets for *CR* expansion include England, France, Belgium, and other Northern Europe countries.

#### **4.1.4. End-user product/service to be internationalized**

In an attempt to enter in a faster and easier way to the foreign market, *CR* decided to narrow the products to be internationalized. More specifically two main decisions were made. First, the company preferred to only internationalize the "standard" products, that is, only the products available on the catalogue. In other words, the company, in a first phase prefers to not offer yet products that have a high degree of personalization. Nevertheless, Luís Carreira (one of the founders of the company) specified however that a low level of customization (such as slightly changing sizes of the products) would be accepted, but always with the catalogue as being the base of the foreign business. According to the founder's opinion, this would be an easier path to start with because this way the product offer would be simpler to be understood by new customers and the speed of integration in the country would be quicker.

Moreover, among the various categories of products the company makes, they also decided to focus only on the bathroom sector (excluding, among others, the kitchen, or the outdoor sector). The reasoning of the company is that this sector can be more easily replicated than others, in terms of quantity-wise. The idea is that if a hotel asks *CR* to make bathrooms for hundreds of rooms (that

is, to replicate them), they will reach a higher business volume than if they would make individual kitchens for households, for example.

To conclude, the company decided to internationalize only products that belong to their catalogues (that is, on pre-defined products) and focused only on the bathroom sector.

#### **4.1.5. Financial overview**

As reported by the Income Statement, *CR*'s revenues have remained relatively steady over time, recording values between €0,7 and €0,89 million, except for 2013 when the company reached its peak for operating revenues of around €1,5 million. Concerning the cost structure, *CR* divides costs into three categories namely material costs, other operating items and costs of employees. In fact, the cost of employees has been decreasing over the last few years, starting in € 0,48 million in 2012 and reaching € 0,322 million in 2021, contrasting with the material costs which have significantly decreased from € 0,584 million in 2012 to €0,147 million in 2021. Other operating items have been relatively constant, with no significant increases or decreases ([Appendix 2](#)).

In 2012, shareholders' equity was negative, meaning that the total amount of liabilities was greater than the total value of assets (Clark 2022). The extraordinarily high value of non-current liabilities, which surpassed the value of assets and reached €379 608 in 2012, is what caused the negative value of shareholders' equity in this situation.

From 2015 on, the investment in tangible assets has been notably raising. In that year, the company acquired its own unit of production, which lead to an increase in fixed assets account. In the same year, *CR* reached the peak in intangible assets value (€228 246) ([Appendix 3](#)).

Concerning *CR*'s liquidity position, the company has been able to keep a working capital ratio greater than one, in the past nine years, which means that the company is capable of meeting its short-term obligations. However, if the inventories are considered, it can be concluded that the quick ratio has been significantly lower than one, weakening *CR*'s liquidity position. The debt-to-

equity ratio indicates the amount of debt used to run the business, generally, a too high debt-to-equity ratio is a sign that the business may be in financial distress and having difficulties to pay to its debtors. In the case of greater manufacturing companies, the optimal capital structure is hard to find and depends on business to business, nevertheless, for great manufacturing companies, the debt-to-equity ratio is, commonly, between two and five. *CR*'s ratio has been able to keep it between three to six, from 2019 and 2021, which is acceptable for the company's size (Gallo 2015). Overall, *CR*'s ROE has been fluctuating, going from negative to positive ratios, with ups and downs. Furthermore, the unanticipated COVID-19 scenario can be used to justify *CR*'s ROE decline from 2020 to 2021, expecting future recoveries in this value ([Appendix 4](#)).

## **4.2. Market/Industry analysis**

### **4.2.1. PESTEL**

In this phase, the PESTEL framework is used to analyze and monitor the external and macro-environment in different dimensions in order to develop effective responses that can either secure or improve a company's position in the future.

As for the **political dimension**, the Portuguese political system is defined as a unitary multi-party semi-presidential representative democratic republic. The political stability index of Portugal in 2020 was 1.03, the 23<sup>rd</sup> worldwide (The Global Economy 2020); this indicator has decreased since 2017. The Corruption Perception Index presented a value of 0.62 (the 32<sup>nd</sup> worldwide) (Transparency International 2021a). Also, attending to the Global Democracy Index, Portugal fell in the worldwide ranking from being a “fully democratic country” to return to the category of “democracy with flaws”, a step backward driven by the restrictive measures imposed during the pandemic (Lusa 2021).

Being part of the European Union and the Euro Zone and sharing the same currency allows Portugal to achieve higher economic stability. In 2021, the European Union had around 45 trade

agreements with 77 nations and common markets, such as Mercosul (European Commission 2022). Moreover, SMEs play an important role in Portugal's economy, accounting for 82.8% of the investment in the non-financial business economy and employing 71.8% of the labor force (OECD 2022a). This emphasizes the political priority to make Portuguese SMEs more successful in internationalization and accessing financial instruments.

In regard to **economic factors**, after a deep recession due to the pandemic, the Portuguese economy recovered in 2021, and its GDP exceeded its pre-pandemic level in the first quarter of 2022; real GDP is projected to grow by 5.4% in 2022 (OECD 2022b). In addition to sustaining employment and income growth, a wide range of policy supports contributed to financial stability. Following these factors, each EU member-state designed a package of economic measures to foster economic growth: the Resilience and Recovering Plan.

However, recently, Russian forces have invaded Ukraine. This has resulted in an increase in energy and commodity prices, resulting in a decrease in confidence and purchasing power. Portugal's annual inflation rate achieved 8.9% in August 2022 (SIC Notícias and Lusa 2022).

Regarding the economic agents themselves, Portugal occupies the 39<sup>th</sup> worldwide ranking in the Ease of Doing Business Ranking, and it scored 70.45 points out of 100 on the 2019 Global Competitiveness Report (Trading Economics 2018). In terms of unemployment rate, this value was 5.7% in the second quarter of 2022. Private consumption accounted for 64% of the nominal GDP in June 2022. Also, the home seems to be important for the average consumer, as they spend 4.5% of their income on household furnishings and maintenance. The robust construction industry growth in residential and commercial segments is expected to generate significant revenue for market participants. Portugal is currently building 120 hotels, totaling 14 510 rooms, ranking 4<sup>th</sup> in the EU (Victor Jorge 2021).

With respect to **social elements**, in 2022, the Portuguese population accounts for 10 131 304 inhabitants (a decrease of 0,19% compared to 2020) (Worldometer 2022). Since the last two decades of century XX, there has been a flow of people from rural areas to urban ones. Thus, according to the United Nations, around 64% of the Portuguese population lives in urban areas.

Moreover, Portuguese society is one of the oldest populations worldwide. According to the Census 2021, more than 23% of the Portuguese population was above 65 years old, while the percentage of youngers was 13% (Maria Leite Ferreira 2021). Thus, attending to the low fertility rate (in 2019, it was 1.42 per woman) (The World Bank 2020), Portugal will undoubtedly face several demographic challenges that will affect the value of pensions and financial sustainability.

Besides, in 2021 the GDP per capita accounted for 20 390€ while the Gini Index was 33% (PORDATA 2022b). Nevertheless, since the sovereign debt crisis, the households had increased their expenditure level until these inflationary tendencies were reached.

In what regards to the Portuguese **information and communication technological environment**, the National Portuguese ICT Cluster reports that the sector is considered as a pioneer innovation and highly dynamic, already contributing nearly 10% to the Portuguese GDP. Nevertheless, Portugal has yet to catch up with other EU countries when it comes to digital literacy and the use of the internet (International Trade Administration 2021).

Internet usage has been affected significantly by the current pandemic crisis. Accordingly, Portugal has strengthened and accelerated its efforts to achieve a robust digital transformation. In fact, the RRP includes specific benchmarks that focus on digital skills and the digitalization of businesses and public administration.

Concerning the Portuguese **environmental responsibilities**, the main challenge is to create a resilient economy based on efficiency, low carbon emissions, and environmental protection (European Environment Agency 2015). These plans established an overall goal of reducing

primary energy consumption by 25% by 2020. In fact, Portugal was among the first to ratify the Paris Agreement and commit to achieving carbon neutrality by 2050 (Government of Portugal 2020).

From a **legal point of view**, Portugal obtained an overall score of 0.70 (the 26<sup>th</sup> worldwide) in 2021 regarding the World Justice Project (WJP) Rule of Law Index, which measures a country's rule of law performance (World Justice Project 2021b). In terms of protection of intellectual property, as a member state of the EU, Portugal's intellectual property law has been harmonized with that of the other member states. In the surface materials furniture sector, aesthetic and ornamental innovations may be protected through design registration.

In conclusion, the different spheres of the PESTEL analysis emphasize several predominant features of the Portuguese market. Through this analysis and considering the performance of *CR* on it, PESTEL performs as a basis for finding a promising international market.

#### **4.2.2. Porter's Five Forces**

Porter's five forces is a framework that examines the level of competitiveness in a given industry, ultimately providing awareness to companies on how to position themselves (Michael E. Porter 1979a). In this section, this tool will be used to assess the competitive landscape of the solid surface industry. In order to better assess the different factors' contribution to the degree of competition faced in this industry, each topic was ranked from 1 (represents a low threat to the players) to 5 (represents a high threat to the players). This last analysis is placed in [Appendix 5](#) and [Appendix 6](#).

**Threat of substitutes** - Substitute products may threaten a given industry if they can offer an attractive price-performance trade-off to consumers (Michael E. Porter 1979a). In the case of the solid surface industry, a substitute product is one that can provide similar functionality and aesthetics. Generically, two main types of surface materials can be used: natural materials and man-

made materials (Goody Clairenstein 2018). Natural materials, as the name suggests, are sourced from nature. Granite, marble, quartzite, and sandstone are part of the most common natural stones used for decoration and construction. (“Types of Natural Stone for Your Home” 2020). On the other hand, man-made materials are engineered through human effort. This is the case for example of ceramics or the solid surface and quartz, both mineral composites created by mixing natural minerals with some type of resin (Lee Wallender 2021). All the materials mentioned above differ in their characteristics in terms of maintenance, resistance, durability, and environmental impact (Goody Clairenstein 2018) ([Appendix 7](#)). Although the solid surface material has, as any other material, its own **unique competitive advantages**, there is a relatively **big range of substitutes**. Furthermore, there are **almost no switching costs** since a consumer can easily, quickly and without cost, change for example a countertop made from solid surface to one made of marble. Finally, when comparing price-performance of countertop materials, the solid surface is the fourth better ranked (Lee Wallender 2022) meaning that the **relative price-performance of substitute products** is moderate. Consequently, we can consider that the threat of substitutes is Moderate to High.

**Rivalry among existing competitors** – According to Michael Porter, the level of competitiveness in a given industry is influenced by several factors, which can either raise or diminish it (Michael E. Porter 1979). Thanks to a thermoforming technique which consists in heating the raw material until it becomes malleable, the solid surface is an extremely versatile material that has a wide range of uses in bathrooms, kitchens, flooring, wall surfaces and even sculptural art (‘An Architect’s Guide To: Solid Surfaces’ n.d.). Thus, this technique allows to create highly **differentiated products**, decreasing the intensity of rivalry. On the other hand, when Dupont’s patent for the solid surface material expired, several similar brands began fabricating this material too, **increasing the number of players in the industry** (‘An Architect’s Guide To: Solid

Surfaces' n.d). Also, **brand loyalty** plays an important role in the solid surface industry. In fact, once a customer is loyal to a brand and wants to renew its house, it will instinctively buy all possible products, that is, kitchen and bathroom items from that same brand. The fact that a solid surface company can provide so many types of products, brand loyalty in this case can really have a powerful effect in reducing rivalry among existing competitors. Also, the solid surface industry has moderate to high **barriers to entry** associated to high investments in training and equipment. Finally, as mentioned before, switching costs are low, which reduces the intensity of rivalry. Thus, we can conclude that the rivalry among existing competitors is Moderate.

**Threat of Entry**- one of the challenges that a company may face in a specific industry which can be prevented by barriers to entry. They hamper potential competitors' entry into the market by requiring a cost to new entrants that incumbents don't have to bear (Porter 1979). Concerning the solid surface industry, thermoforming gives the versatility for this industry manufacturer to transform and shape the material into unique creations, allowing a vast scope for **product differentiation**. Thermoforming is a complex process, that requires investment in training and equipment. It can only be used with solid surface material, constraining companies that aim to diversify their portfolio by working with materials like quartz and granite ("How To Thermoform Solid Surface" 2021). Therefore, **significant amounts of capital** are required to start a business in this industry, due to its degree of specialization. In addition to the decreasing unit costs with the quantity of production, specialized carpenters and workers experienced in how to operate the machines are needed to succeed in this industry, turning the learning curve into a key factor in the industry's success. This enables incumbents to benefit from both **economies of scale** and **cost disadvantages independent of scale**. With respect to consequences new entrants may suffer while entering this industry, they can expect **experienced players' retaliation**, as higher profits open space for this practice. However, the forecasted growth of the global solid surface industry for the

next years aligned with the increasing research in this sector and **easy access to distribution channels**, since a new brand can be simply added to distributors' catalogues, is seen as an opportunity for emerging companies (Data Bridge - Market Research 2021a). Overall, the threat of new entrants in this sector is Moderate to Low.

**Bargaining Power of Suppliers-** supplier's influence on either raising prices or reducing the purchased products' quality, conditioning the industry profitability (Porter 1979). Solid surface manufacturers, in Portugal, have access to a **conservative range of suppliers** who can provide them with this raw material. Nevertheless, solid surface it's a versatile material that empowers innovation and high-quality products in the construction sector (Transparency Market Research 2022). Thus, the success of solid surface manufacturers relies, in part, on the **specificity of this raw material** and its unique features. Features such as being highly resistant, 100% recyclable and repairable, among others, that are achieved in a controlled work environment, are the ones that give the solid surface manufacturers, the opportunity to differentiate from their competitors (Aitana Chemicals n.d.). Beyond this, most companies operating in this industry are both suppliers and clients of solid surface manufacturers, implying **significant switching costs** for the company to change from one supplier to another. The **threat of supplier's forward integration**, strengthens supplier's power as many of them are both solid surface suppliers and competitors in the solid surface manufacturing sector, which is the case of Krion Porcelanosa Solid Surface (KRION® Porcelanosa Solid Surface 2022a). However, it's a common practice in this industry to produce both the raw material and the final product, which may be seen as an opportunity for **solid surface manufacturers' backward integration**. Overall, the Bargaining Power of Suppliers is Moderate to High.

**Bargaining Power of Buyers-** buyer's power over the product and the prices practiced by the industry, causing an impact on the industry's profitability (Porter 1979). In terms of buyers,

considering the furniture industry in Portugal, the kitchen furniture market's revenue is expected to be worth 240.2 million dollars by 2025 (Statista Research Department 2021). Despite the increasing number of licensed dwellings in new buildings by 11.2% (Richard D K Turner 2022), resulting in the construction demand growth and affecting positively this industry tendencies, solid surface manufacturers target a niche market, and a **modest number of customers**. Consequently, the **size and amount of each customer order** are, usually, significantly expensive and, it's common to be in bulk. For instance, when individuals are furnishing their homes, frequently purchase multiple items from a single company. Besides, the **wide range of different products** with the same utility to choose between the competitors and the fact there are **no switching costs** linked to change from one supplier to another increase buyer's bargaining power. Nevertheless, high-quality seekers are usually **less price-sensitive** (Kagan 2022) and, since most products required some degree of customization, **information about prices** in this industry it's scarce. Overall, the buyer's influence in this industry decisions is Moderate to High.

#### **4.2.3. Consumer trends and forecasts**

The solid surfaces Industry is already presenting very promising results, breaking barriers, and overcoming landmarks every year. These products are expected to have sustained growth in the following years. Due to continuous investments in R&D for the manufacturing of these products, an increase in the possible uses of solid surface materials in domestic and commercial buildings has been noticed, and it is driving this industry forward ("Solid Surfaces Materials Market" 2022).

The worldwide solid surface materials market was esteemed at \$22,7 billion in 2020. Additionally, it is projected to expand at a CAGR of 5,4% from 2021 to 2031. So, it is expected that this market will surpass the value of \$40,1 billion by the end of 2031 ("Solid Surfaces Materials Market" 2022). This expected market growth is a direct consequence of the expansion of the residential sector. Additionally, the global demand has increased with the increase in the number

of possible applications for solid surface materials in kitchens, bathrooms, diverse types of furniture, exterior designs, and art pieces (Bhisey 2020).

In 2020, Europe held the highest share of the solid surface materials market. This region's expansion is anticipated at a CAGR of more than 5,1% during the forecast period. Moreover, Germany is a key country for this market as it held a significant share of Europe's solid surface materials market in 2020 (Bhisey 2020). Furthermore, Asia Pacific is also a prominent region, as it had over 40% revenue share in 2019 ("Solid Surface Market Report | Global Forecast From 2022 To 2030" n.d.), and in 2020 China led the solid surface materials market for the region (Bhisey 2020).

The solid surface industry trends are currently following the footsteps of architecture, interior design, and the construction industry. Architects and designers research on websites and academic's projects to create their mood boards. They come up with new ideas and models every day to satisfy their customers, which has shown some tendency to a modern and minimalistic style. So, the list of potential influences on emerging trends in this industry is almost limitless and is highly influenced by emotions and the environment style the client wants to live and work (Barden 2022b).

Solid surfaces are majorly used in kitchens and bathrooms. As these surfaces are non-porous, they are very commonly used for countertops. They can mimic the appearance of several stones and come in various colors, including "ultra-white". Beyond this, as they can be crafted in a variety of shapes, they are also very used for sinks, shower pans, and bathtubs. So, their colors and flexibility are key factors in creating present and future trends ("Solid Surfaces Materials Market" 2022).

Sustainability concern is not new for these materials. However, as the world keeps becoming more worried each day regarding climate change, reusing and recycling continue to gain massive popularity (Solid Surface Canada 2022).

#### **4.2.4. Key industry success factors**

The solid surface industry has critical factors contributing to a company's long-term success and competitive advantage.

Solid surface products' properties and unique features open many possibilities for a company to be creative and differentiate itself from the competition by designing unique pieces to answer the most compelling and disruptive consumers' ideas. The principal characteristics influencing the **design** are the fact that sheets are moldable, and the final pieces have seamless joints (KRION® Porcelanosa Solid Surface, 2022). By using thermoforming systems, a company can get out of the paper almost every shape that the designer envisioned to suit the customer. This process requires investment in the most advanced technologies and machines for the thermoforming processes and workers with know-how that can use them and construct the final pieces. So, beyond the financial capacity to invest in technology, a company must develop a training program for employees to constantly adapt and successfully use these innovations. Additionally, it's essential to understand and capture the "consumer identity" and draw the best design for him. So, the prioritization of the development and implementation of a design team to create unique and different molds for new pieces is central to the company, not only establishing its creative identity but also differentiating it from its competitors.

Another initiative to improve and establish a company's position in the market is the development of its operations. The **level of production** can lead to a rift between companies. Hospitality companies are some of the major clients in this industry, corresponding to a significant part of the market share. Their orders represent significant sales volumes due to the quantity

required to satisfy the hotels' needs, among others. With this in mind, companies can differentiate by their production capacity. Having higher leverage in the total amount of output possible to produce per day, a company can become the favorite client choice and become more competitive in the price per unit by spreading the same fixed costs to more units. Additionally, as the pieces will most likely be highly standardized, this will facilitate the company in producing high quantities.

Finally, the **brand** is also one of the most critical factors to differentiate a company. The brand image must pass to the consumer the brand identity, design style, and way of thinking. It needs to express a consistent style and way of life to the consumer to evaluate which better adapts to him. To make this happen, the company needs to have a website with a company description, a catalog, and past projects. Additionally, an ad plan can also reach new consumers. Moreover, being present in fairs and building materials stores with a stand also exposes the brand to possible consumers. Furthermore, partnerships with designers and architects can make them achieve new markets and jump ahead of some competitors due to the proximity of these agents to the final consumer.

#### **4.2.5. Country-specific advantages**

Porter's Diamond framework was developed to help understand a country's competitive advantage. Since the domestic environment provides the dynamics of innovation and upgrading, this framework supports the analysis of a company's ability to compete internationally.

**Demand conditions** - concerned with the national market demand for the products or services in the related industry (Michael E. Porter 1990a). The rise in construction in residential and commercial areas is a crucial factor driving the growth of the solid surface market. Although the Portuguese construction sector was put to the test during the pandemic, it overcame the challenge. In fact, the number of building permits continues to grow, and the construction of buildings and the construction production index increased compared to the same period last year by 3% and 4,3%,

respectively. Furthermore, data from June 2022 show that construction wages are experiencing increases of 8,8% to combat the shortage of workers and increase the speed of construction projects, consequently leading to a greater demand in the solid surface market (Helder C. Martins 2022). Another factor intrinsically connected to the solid surface market is tourism because hotels are sizable clients in this market. In fact, investment in hospitality remains considerable in Europe, and Portugal is no exception. It is not only among the countries with the most projects for the construction of new hotels but is also the fourth European country with the most projects under construction. In fact, in the second quarter of 2022, there were 123 new hotel projects in the country, according to the report by the U.S. consultancy Lodging Econometrics (Idealista News 2022). Another trend growing in Portugal associated with tourism is Luxury Hospitality. More and more, guests prioritize luxury when choosing a place to stay during vacations. Therefore, the hotel industry is compelled to meet client's expectations and to reinvent and renovate the hotel facilities accordingly. Thus, solid surface products are a perfect choice to use as substitutes for outdated materials, delivering the feeling of luxury so much appreciated by customers (Maria Inês Figueiredo 2017).

**Firm Strategy, Structure, and Rivalry** – are the factors at play in the country that determine how businesses are developed, structured, and run, as well as the nature of domestic competition (Michael E. Porter 1990a). The more competition there is in any market, the more firms in that market will innovate and improve quality to sustain competitive advantage. Thus, the more prepared companies are to expand internationally. Accordingly, companies see Portugal as a beneficial business possibility and a fantastic context to invest. Since rivalry in the Portuguese solid surface market has been increasing over the years, in order to compete in this market, *CR* stands out from its competitors through its exceptional know-how and the ability to design and produce unique and customized pieces that other enterprises have difficulties to replicate. Yet, in some

cases, competition is healthy in the sense that some companies refer customers to competitors when they are unable to respond to customers' requests, either because of the size/quantity of the order or the specificity, therefore considering that rivalry in Portugal is moderate, as it is explained in section 4.2.2. *Porter's Five Forces*.

**Related and Supporting Industries** – is the existence or absence in a country of competitive international supplier industries and other connected businesses (Michael E. Porter 1990). The solid surface market has been growing in Portugal, with more and more firms joining it every year. Along with the increase in the number of competitors comes the possibility of existing firms building partnerships and synergies with similar companies. The leading solid surface suppliers in Portugal are Corian, Krypton, and Betacryl. Although Betacryl is an Italian brand, it has representatives in Portugal responsible for establishing direct contact between national firms and the parent company. Corian's logistic center is in Belgium, where the materials for Portugal come from, and Materfut is its Iberian representative. Since Krypton belongs to Porcelanosa group, when companies need raw materials, these can come directly from Porto or Valencia, which in the case of Portugal is a close distance. In addition, these companies also establish partnerships with buyers in order to pass them large orders when they are unable to meet demand. Furthermore, when a client asks for a specific product that is not standardized, big companies ask specialized firms to produce the pieces instead of producing them themselves. Likewise, many carpenters have their core business in the carpentry industry and then look for a partner who can manufacture all the solid surface work for them. Thus, many partnerships between these two industries are being created, increasing synergies for every firm involved.

**Factor Conditions** – is the country's standing in terms of the infrastructure or skilled personnel needed to compete in a particular industry (Michael E. Porter 1990a). With a good geographic location, infrastructure, and logistics, Portugal represents a suitable choice for businesses that want

to expand their activities on the West Coast of Europe and connect with other continents (Work Force in Portugal 2022). In fact, being in Portugal eases the process of sending and receiving products from different countries and continents due to its proximity to the American continent and its direct contact with the ocean. Likewise, the infrastructure in Portugal is about what one would expect from a Western European nation: good and getting better all the time. The country benefits from great highways, railroads, airports, and communications at low prices. Portugal has been leading international rankings of most innovative countries for many years now, proving to be a top target for companies focused on keeping up with the pace of change. Moreover, companies can only offer innovation if their employees are of exceptional quality, which Portugal is proud to offer. In fact, more than 100 000 students graduate each year, and the government invests around 100 million to qualify the present workforce and to direct it to another level of qualifications (Elisa Tarzia 2021). In addition, Portuguese top talented employees are hired for about half of what it would cost in some European cities. Moreover, the made-in-Portugal design exhibits remarkable creativity as a result of the originality and innovation of Portuguese designers, always at the forefront of fashion. These characteristics, aligned with an intelligent defense of the best national traditions, make the design of this small country an international success story (Design Made in Portugal n.d.). Ultimately, high English proficiency, open working culture, time zone compatibility, cost-effective prices, and excellent stability and safety conditions highlight Portugal as an exceptional country to host business.

### **4.3. Firm specific advantages**

#### **4.3.1. Resources and competences (value chain)**

To comprehend the firm-specific advantages, it is crucial to understand which resources and competencies the company holds and uses to differentiate from competitors. Even though these characteristics are applied to the Portuguese market, they are already good indicators of success in

foreign markets. The value chain analysis demonstrates how the firm is able to add value to its customers through the use of resources in its activities and, then, the development of competencies.



Figure 1: CR's Value Chain

First, the **resources** represent the assets used for the processes and activities of the company. CR and its products are certified by either Corian or Krion. In fact, in its **inbound logistics**, CR acquires raw materials through highly qualified players in this sector. This way, each piece produced by the company has its own **certification**, which is used to guarantee the effectiveness of the transformation process and as a quality seal to the raw materials used. Legally, CR can extend this certification up to 10 years, and during this period, the firm has the jurisdiction to fix eventual problems to correct and repair damages.

Nevertheless, one of CR's primary resources is its **production capacity**. To foster its **operations**, CR has one of the largest teams for the solid surface industry in Portugal, according to the firm's CEO. It has 11 carpenters who create the pieces and one operations director overseeing the manufacturing process. This labor force asset makes it possible for the company to have a significant production capability. Additionally, the company has two machines that mix the ATH with resins and thermoforming into the final shape using more than 100 molds.

Furthermore, *CR* also has an **internal designer**, drawing and creating ideas for new products, and has established **a contract with a North American designer** that collaborates in exclusivity with *CR* concerning the Portuguese market. In exchange for a monthly fee, this artist has been increasing the firm's product portfolio and diversifying the catalog, according to the CEO.

On the other hand, **competencies** represent the manner a company deploys and uses its resources. These are the primary source of differentiation, mainly in industries where resources are mostly identical. Notwithstanding, to achieve the extensive production capability stated above, the number of workers is not the only factor to contribute positively to this. The **workforce** ought to be **highly qualified**, which can be verified in the *CR*'s paradigm. These employees have experience with the machines and materials used in the solid surface industry. Finding workers with this knowledge, skill set, and production levels capacity is not straightforward nowadays, making the *CR*'s human capital one of its most significant differentiating factors.

Besides, as *CR* uses this versatile material, the highly qualified workforce can create pieces in many shapes and with various curves. These employees deliver high-quality products and have the flexibility to answer the customers' desires covering a wide variety of expectations leading to a personalized system of **customization** and **design**.

Regarding transportation and application of the pieces produced (**outbound logistics**), as clients are responsible for picking up the most oversized orders, *CR* also has special program conditions, providing discounts for regular customers.

Following the certification process, the **service support** developed by the company when a former client (or an owner of a solid surface product made by a competitor with the same degree of certification) needs assistance works as a guarantee of **quality** and **brand integrity**. According to the CEO, this straightforward process is not a standard procedure across the solid surface

manufacturing sector. This procedure enables the company to increase **the efficacy of the service offered** and consequently the satisfaction of its customers.

### 4.3.2. Firm competitive advantage (VRIO)

To assess the company's resources and capabilities compared to its competitors, the VRIO framework can be used to analyze the business's competitive potential. According to Barney, a firm is assumed to have a competitive advantage "when implementing a value-creating strategy not simultaneously being implemented by any current or potential competitor" (Jay Barney 1991). Additionally, the resources/competencies are divided into two groups. The **threshold capabilities** include the ones essential for the company to operate in an industry and the **distinctive capabilities** which comprehend the resources/competencies critical in distinguishing the company from its competitors.

Below are CR's classified resources and the competencies generated through the application of resources into its activities according to the VRIO framework below. Here, the company's competitive advantages focus on Operations, more specifically, in its partnership with the North American Designer, its capabilities to customize the consumers' orders, and its service support.

		V Is it valuable?	R Is it rare?	I Is it hard to imitate?	O Is the firm organized?	Conclusion
Threshold Capabilities	Product Capacity	YES	YES			Temporary Competitive Advantage
	Workforce Knowledge	YES	YES			Temporary Competitive Advantage
	Customization and Design	YES	YES	YES	YES	Sustainable Competitive Advantage
	In-house Designer	YES				Competitive Parity
Distinctive Capabilities	Outsourced Designer	YES	YES	YES	YES	Sustainable Competitive Advantage
	Certifications	YES	YES			Temporary Competitive Advantage
	Service Support	YES	YES	YES	YES	Sustainable Competitive Advantage
	Special Product Conditions	YES	YES			Temporary Competitive Advantage

Figure 2: CR's VRIO

## 4.4. Diagnosis for internationalization

### 4.4.1. TOWS matrix

Due to the complexity of developing an internationalization plan, we decided to go beyond what was proposed. Instead of doing a SWOT analysis, a **TOWS matrix** was produced ([Appendix 8](#)).

The TOWS matrix focuses on matching the Threats and Opportunities with the company's Weaknesses and Strengths in order to develop a strategic plan to increase the company's value in the future (Weinrich 1982).

Regarding **Threats**, one major concern for *CR* is the lack of available qualified workers in the labor market. Previously, we have demonstrated that the workforce represents a significant asset for the firm. However, it becomes a challenging duty for *CR* to hire new employees with the appropriate cluster of skills. Two reasons can explain this. One is based on the fact that working with solid surface materials is still a niche in Portugal, so there are not many workers used to dealing with this raw material. Also, the number of people pursuing a higher college degree has increased, diminishing the spread of this knowledge and people interested in manufacturing positions (PORDATA 2022a). Nevertheless, another critical threat is related to inflationary tendencies worldwide. This increase in the level of prices will increase the cost of internationalization for *CR*. In fact, on one side, the transportation and raw material costs will rise, impacting *CR* directly. On the other side, either the support industries or eventual investors in a foreign market will be slightly receptive to engaging with the internationalization process due to the higher level of risk, which reflects in higher interest rates (Jorge Liboreiro 2022).

For **Opportunities**, there has been a growth in investment in R&D across this industry worldwide. As stated before, this investment has uncovered new manners to use and apply solid surface materials. Besides, R&D aims to make this material a sustainable substance to overcome the use of ceramics and to meet the customers' new preferences. Given its capabilities, *CR* should leverage these industry trends to improve its market share. Also, after surpassing the Covid-19

pandemic, events like showrooms and fairs have risen in the last months. This represents a chance for *CR* to reach unexplored and more significant markets to expand its activities; it is also possible to discover new suppliers (reducing the high bargaining power of the current ones) and arrange new clients. Also, environmental concerns are gaining importance, so *CR* should comply with consumers' exigences to increase its customer base.

After analyzing the external factors, it is important to examine the internal factors. Regarding **Weaknesses**, *CR* has some areas that need to be improved to make the company competitive and make it possible to perform at its optimal level. For instance, *CR* feels a clear disadvantage regarding its brand recognition compared to its peers. *CR*'s brand is less known, and the lack of investment in a website, as the nonexistence of a marketing strategy, contributes negatively to the brand image's spread. This leads to an unhealthy dependency on *WoM*, which for internationalization will most certainly not be enough for its success. Additionally, the lack of capital can also be a problem due to the high levels of investment needed for going abroad.

Finally, the company has some **Strengths** that help *CR* differentiate itself from its competitors. The production capacity is high compared to the other manufacturing warehouses in Portugal. Until now, it has been able to answer all the customers' needs. Due to its dimension, the company can even have the flexibility to produce more complex and demanding pieces without decreasing the production of cataloged pieces too much. Moreover, the value added of the final product is relatively high. The quality of the raw materials and the manufacturing certifications, along with the warranty provided after the application of the product, make *CR*'s products and services of high quality and, in consequence, increase consumer satisfaction.

Therefore, the TOWS matrix allows crossing the previous elements to find new strategies for *CR*. Through strengths and opportunities, it is possible to obtain "**maxi-maxi**" **strategies** where the company leverages its strengths by using its resources to benefit from

opportunities. Thus, *CR* should use conferences, fairs, and similar events to exemplify its production capacity and the quality level of its products. This would be possible by exhibiting the machinery utilized by the firm through institutional videos and reports of past projects.

On the other hand, the "**mini-maxi**" strategy provides solutions to fight the company's weaknesses by taking advantage of its opportunities. The missing brand recognition, which is a direct consequence of poor marketing planning, can be improved by developing a website and increasing its presence on social media. Further, the company could also expose its past projects, giving clients an idea of its catalog pieces and its capacity to innovate beyond its catalog and develop unique, stylish products.

Also, "**maxi-mini**" strategies aim to maximize the company's strengths while minimizing threats. Likewise, to overtake the risks from inflationary tendencies, *CR* should take advantage of its production capacity to increase the efficiency of its assembly line and reduce production costs. Additionally, given the shortage of available skilled workers, *CR* should develop a training/mentoring program (using the current and highly qualified staffers) to improve the skills of newly hired employees.

Finally, if necessary, the "**mini-mini**" strategy aims to minimize weaknesses and threats and boil down to a pessimistic scenario. To do this, *CR* could look for a peer with an international market presence to exchange quality and know-how and get higher financial flexibility in return through an agreement/partnership. Moreover, this solution would improve *CR*'s brand recognition internationally by being correlated with this new partner. The other company would also strengthen its international presence by gaining access to the Portuguese market.

#### **4.4.2. FSA-CSA Matrix and Porter's Generic**

Undoubtedly, international competitiveness depends on the interactions between a firm's unique capabilities and its home country's capabilities. The firm-specific advantages are the basis

for overcoming drawbacks of foreignness when a corporation seeks to extend its operations to a foreign market. Thus, the FSA-CSA matrix helps a firm organize and manage itself in its internationalization strategy efficiently (Hillemann and Gestrin 2016).

Previously, it was shown that *CR* could yield a sustainable competitive advantage given its network relationships and operations. Firstly, through an exclusive agreement with Mário Romano, a professional designer, *CR* enhances its originality and the styles of models created. On the other hand, *CR* can differentiate itself from its competitors, given its ability to customize and design innovative products based on customers' preferences. Given this, *CR*'s firm-specific advantages can be considered between medium and high.

In addition, through Porter's Diamond Model, it was concluded that *CR* could use Portugal as a platform to conduct business. Portugal is among the countries with higher potential regarding the construction sector (mainly due to the hospitality sector), expanding the solid surface industry's customer base. However, even with a growing salary tendency, the shortage of workers is still an issue in the Portuguese market. Thus, *CR*'s country-specific advantages can be considered between medium and high.

All in all, the country-specific and firm-specific advantages can be summarized in the following matrix.

According to Porter and following the FSA-CSA Matrix, a firm should yield one out of three



Figure 3: FSA-CSA Matrix

possible generic strategies (Porter's Generic) to sustain its competitive advantages across the sector where it operates: cost leadership, differentiation, and focus (subdivided into cost leadership and differentiation focus). Thus, effectively implementing these strategies requires total commitment by the corporation (Michael E. Porter 1990b).

Notwithstanding, one should analyze how the firm uses an integrated and coordinated set of commitments to gain a competitive advantage by exploiting core competencies (interpreted via the VRIO model) in a specific product market. Previously, it was explained that *CR* focuses on a particular niche of customers (either companies or individuals) with a high purchasing power, implying a narrower target. At the same time, *CR* aims to produce goods at an acceptable cost that buyers perceive as being distinct in ways that are relevant to them. In fact, its sources of competitive advantage entitle *CR* to manufacture high-quality products attending to customers' preferences.

The above breakdown infers *CR* follows a "**differentiation focus**" strategy due to its narrow competitive scope and differentiated competitive positioning. Moreover, it is essential to consider this approach implies some risks. On one side, this positioning by *CR* can result from an eventual shortage of resources, making it impossible to target more significant markets. Also, based on the previous economic and scenario analysis, the cost differential between low-cost competitors and the differentiated firm becomes too great for differentiation to hold brand loyalty.

#### **4.4.3. Motives for internationalization**

Resource-seeking, market-seeking, and efficiency-seeking are the three main motives for internationalization (Kudina and Jakubiak 2008). *CR* wants to internationalize mainly due to market-seeking motives. Indeed, although the Portuguese market is significant, many customers buying the companies' products are foreigners holding properties in the country. Therefore, following these customers to their home market is a strategy that *CR* wants to pursue. In addition, *CR* recognizes its exceptional talent and ability to manufacture pieces that are at the level of the top European solid surface producers. Thus, it makes sense to expand horizons and compete in the same market as the best sellers.

All in all, *CR* intends to have additional sales abroad to complement national ones by taking advantage of overseas business opportunities.

#### 4.4.4. Global readiness

When expanding abroad, *CR* will meet similar markets and target the same end user as in the domestic market while selling the same products, positively contributing to global readiness. In Portugal, *CR* has been selling its products to many wealthy foreigners that already know and appreciate the brand. Thus, although *CR*'s products are not unique compared to competitors' products, the company possesses the know-how and ability to design and manufacture exclusive and unusual pieces specially ordered by clients, representing an asset the firm owns. Regarding the after-sales service, *CR* already provides it in the home market, which it intends to maintain with expansion. In addition, if the company decides to export, this choice will not hurt domestic sales. On the contrary, it will increase them because many foreign customers may have properties in Algarve, for example. By recognizing a national brand, they will also want to buy it in Portugal.

Further, *CR*'s main weakness when expanding outside is the lack of a sustained financial capacity and human resources. In order to grow successfully, *CR* needs first to create a secure financial net to allow it to move comfortably and invest heavily: "*go big or go home!*". Concerning the shortage of back-office personnel, so far there are just three people responsible for this area but going abroad necessarily implies an increase in this number to respond to the rise in business volume. Nonetheless, all the previous analyses of the company, such as the SWOT analysis and the motives for internationalization, aligned with the differentiation focus strategy, suggest *CR* is ready to internationalize.

Indeed, by answering 22 questions related to expansion ([Appendix 9](#)), *CR* has reached a score of 80 points out of 110 (73%), indicating the company is only partially prepared to internationalize. Although E-Commerce, Indirect Export, Contractual Agreements and Direct Exporting are other ways to internationalize, they will be covered in more detail in a later chapter. In conclusion, its scoring implies that Foreign Marketing Presence is the best entry strategy ([Appendix 10](#)).

## 5. International market selection – Phase 1

Considering the firm's readiness to internationalize, the following chapter will identify the more suitable countries for *CR*'s foreign expansion. International market selection is a process that follows several steps. The first phase of this process aims to identify the five countries with the highest potential through two main methods: country ranking and country clustering analysis.

### 5.1. Country selection criteria

In order to run the two methods mentioned above, data collection about possible candidates from foreign countries was required. We started with **all countries** and **39 variables** organized into **8 main groups**: market receptivity, market size, market growth rate, industry-specific factors and indicators, the standard of living, ease of doing business, sustainability and ethics, and, finally, cultural distance. All variables' names, its sources, and date are detailed in [Appendix 11](#).

To start narrowing down, we focused on the possible elimination of countries. To do so, we defined that **all countries with 20 or more missing variables should be deleted** since we considered a too large number of missing data to be reasonable to apply the imputation of missing data through SPSS. Because we believed there were too much missing data, it can be reasonable to use the imputation of missing data through SPSS. **We ended up with 166 eligible countries.**

Afterwards, we **deleted all variables with 83 or more missing countries values** because we considered a too large number of missing data to be reasonable to apply the imputation of missing data through SPSS. We ended up with **34 eligible variables.**

To assess the reliability of our variables, we computed the **Pearson correlation** among all variables through SPSS. The objective of this analysis was to identify possible duplications that could bias both the country ranking and the country clustering results. With a 0,05-significance level, we decided to look deeply for variables having a Person Value superior to the absolute value of 0,8 since Evans (1996) defines it as the threshold for variables being considered highly correlated

(Piter Bambang Loeneto Hariswan Putra Jaya 2018). All pairs of correlated variables were identified and carefully analyzed to decide which ones to keep and which ones to remove from the data set so that no more correlations would exist between variables. The whole reasoning behind this selection is carefully explained in [Appendix 12](#). Given this, we deleted 5 variables, ending up with **28 variables**. The usefulness of these variables is detailed in the [Appendix 13](#). To finalize the data, we standardized all variables to compute either the ranking or the clustering analysis.

## 5.2. Country Clustering

During the previous stage, the variables were inverted when needed, and the correlations were analyzed and dealt with. This resulted in 28 variables from 8 distinctive areas. After this, we felt that the conditions were gathered to proceed successfully to the country clustering. To perform the country clustering, we used SPSS functions. Additionally, based on the variables previously established, we selected the most relevant for the industry, accordingly to the suggestions and demands of the company's CEO and following a rule of 1 variable per 10 countries. As there were using 166 countries, we chose **16 variables** and standardized them ([Appendix 14](#)). Following this, the "**k-means cluster analysis**" was used to group similar data points and discover underlying patterns, creating clusters with similar countries to latter choose the one that best adapts to the envisioned future of the company. The best result was when only 3 iterations happened, and all the variables were, in the ANOVA table, for the F value above 2.5 and significance levels below 0.05. This materialized in **3 clusters** ([Appendix 15](#), [16](#) and [17](#)).

The first cluster was composed of only 2 countries: Australia and Brazil. The fact that these two specific countries got put together in the same set is justified by their values for the variable "**Mineral Imports**". This variable assumes higher values for these two countries than the others. Additionally, there are some more variables worth looking at. "**Imports of Goods and Services**" assume the lowest value for all the clusters, meaning that the countries don't match the company's

needs. On the positive side, the **"Time Required to Start a Business"**, **"Ease of Doing Business"**, and the **"Country Risk"** assume negative values; from what can be concluded that the internationalization processes and the establishment of business in these countries can be done in a reasonable time and with some security over the risks. This cluster presents the best value for **"Stone and Glass Imports"**, which is fundamental to the company's development of its activity.

The second cluster was formed by 43 countries: developed countries such as European, North American and powerful Asian countries. Variables such as **"People using safely managed sanitation services"** and **"Consumer spending per capita on furnishings, household equipment, and routine maintenance of the house"** assume a higher value in this cluster, which represents a point in favour of this set of countries since these two variables are specific to the industry and will dictate the company's success. Moreover, in this cluster, **"Country Risk"**, **"Cost to import"**, and **"Unemployment rate"** assume their lowest value, further enhancing the countries in this cluster. Also, **"Imports of goods and services"** is only positive for countries in this cluster as well as the **"Gini Index"** is only negative in this set, making these countries more attractive for expansion than the others. Lastly, the variable **"Ease of doing business"** assumes its lowest value in this cluster, meaning that the regulatory environment is conducive to business operations in these countries.

The third cluster comprised 121 underdeveloped countries such as African, South American and needy Asian countries. This set is the only cluster where **"Country Risk"** is upbeat and **"People using safely managed sanitation services"** as well as **"Consumer spending per capita on furnishings, household equipment, and routine maintenance of the house"** are negatives. These results represent a significant drawback for the company to expand to any country in the cluster. Yet, **"Time required to start a business"** is the smallest of all clusters. However, this is not enough to put these countries at the top of the *CR*'s preferences since this is the only cluster

where the variables "**Stone and Glass Imports**", "**R&D Expenditure**", and "**Economic Freedom**" reach negative values and where "**High Tech Manufacturing Value Added**" reaches its lowest value.




















### **5.3. Country Ranking**

After doing the country clustering, it is time to rank the countries to reduce the number of prospective target markets and choose the top five nations. In order to compare, add up, and calculate a final score, all variables were standardized for this purpose by changing all values to a scale from 1 to 100. It was essential to invert the variables whose higher scores imply lower performance in order to evaluate all the variables properly. This held for the variables Cost to Import, Lending Interest Rates, Inflation, Lead time to Import, Time required to Start a Business, Total Tax and Contribution Rate, Unemployment Rate, Gini Coefficient, Country Risk and Cultural Distance to Portugal.

To arrive at a conclusion, a three-step procedure was followed. The 28 variables were first picked to examine all countries, as described in section 5.4. *Country Selection Criteria*. The interview with the management shareholders of the company was used to establish the variables. In a subsequent phase, each variable was given a weight ranging from 2% to 8% to emphasize the variations in each one's (relative) relevance and to facilitate a better comparison ([Appendix 18](#)). Therefore, the higher weight of 8% was attributed to the variables that have the most significant and direct impact on the industry: People using safely managed sanitation services, Stone and Glass Imports, Mineral Imports and Gini Coefficient. Having this, the countries were ranked in a third phase based on the scores and weights assigned.

#### 5.4. Combination between cluster and ranking analysis

Likewise, to combine the cluster and ranking analysis, [Appendix 19](#) presents for each country, the cluster that it belongs to and its respective ranking. Among the 3 sets of countries identified through the cluster analysis (section 5.5. *Country Clustering*), **Cluster 2** groups the developed countries, being the most adequate for *CR*'s internationalization strategy. In fact, these are primarily European and North American countries, presenting safe and secure conditions and having regulations designed to facilitate business. Besides, these countries have a high level of imports, showing their openness to foreign enterprises. Thus, selecting the five highest potential markets had to come from this cluster. However, since this cluster 2 included 43 countries, the country ranking analysis is a valuable tool to reduce the number of potential target markets to a manageable few. From the country ranking analysis, the following 20 countries appear to be the potential target markets:

	United States	1		Korea, Rep,	11
	Switzerland	2		Netherlands	12
	Australia	3		United Arab Emirates	13
	Singapore	4		Belgium	14
	China	5		Italy	15
	Germany	6		Malta	16
	Luxembourg	7		France	17
	United Kingdom	8		Denmark	18
	Israel	9		Canada	19
	Chile	10		Austria	20

*Figure 4: Ranking of the top 20 countries*

Accordingly, it is possible to conclude that they all share some similarities as these are all developed countries with significant economies and powerful markets and currencies.

Thus, to combine the ranking with the clustering analysis, the selection of the potential target markets had to belong simultaneously in cluster 2 and the top 20 countries of the ranking. Crossing these two criteria, we ended up with the same number of potential countries as all the countries in the top 20 countries of the ranking belonged to the cluster, except Australia. Although combining

both analyses didn't allow to significantly reduce the number of eligible countries, it confirmed that both analyses were aligned.

### **5.5 Selection of highest potential markets**

To narrow down from the eligible countries to the final five potential countries, we asked *CR's* founder's opinion, as this was a crucial decision in the internationalization process. Luís Carreira showed its preference and interest for the European countries due to proximity reasons and high purchasing power, but also for the US due to some already established contacts in the country. Consequently, combining the two analyses and the *CR's* founders' opinions, we ended up with the following five final potential countries: the United States, Switzerland, Germany, the United Kingdom and France.

## **6. International market selection – Phase 2**

After reducing the long list of countries to the top five, an in-depth analysis will be conducted for each country to identify possible advantages and challenges for *CR's* internationalization. Afterwards, based on the research done, the top country for the company's expansion will be chosen, and an internationalization plan will be developed.

### **6.1. In-depth market analysis**

#### **6.1.1. United Kingdom**

To better understand the external and macro-conditionings that influence the UK, a PESTEL analysis was performed ([Appendix 20](#)). This analysis would work as the first step of a deeper in-depth analysis. The UK comprises the sovereign territories of Great Britain (England, Wales and Scotland) and Northern Ireland. Overall, the UK is an open and competitive economy, and international businesses view its political and economic institutions favourably (Statista 2022). Nevertheless, instability is disrupting the United Kingdom's political scene, while perceptions of

corruption erode public confidence in the Government (Transparency International 2021). Extremely high inflation will negatively impact the economy in the short term through lower consumer spending, while Brexit remains a problematic issue (World Bank Group n.d.). Further, the population has readily embraced upcoming technologies, while improving innovation is a focus for the Government (financed by the private sector also) (International Trade Administration 2020).

#### **a) Contacts**

Belso-Martinez (2006) proved that the networking capability of a firm positively affects its ability to internationalize at an early stage and at high speed through creating alliances and smoothing the overall process (Belso-Martínez 2006). Considering this, a list of five categories of contacts was compiled ([Appendix 21](#)).

When it comes to **Distribution Channels**, several firms play different roles. Firstly, *CR* should leverage current network connections with firms operating in Portugal that already have business operations in the United Kingdom, such as Corian, Krion Porcelanosa, and Hi-Macs. On the other hand, smaller local firms like James Lathan, CDUK and International Decorative Surface, primarily responsible for distributing solid surface materials across the British market, will also enable *CR* to create an extensive network of points of sale and exchange knowledge to create complex pieces. Finally, hotels are another vital revenue source. Hotels chains such as Hilton and Marriott are both present in Portugal, so it would be easier to extend business connections to the UK through these hotel groups (Dobson 2022; Statista 2022).

Furthermore, **Government Institutions** are also crucial for obtaining internal assistance for the settlement of operations. Starting with the embassies, the Portuguese embassy in the UK can help get information about the market. Also, the British embassy in Portugal is a valuable resource for *CR* regarding the necessary documentation to expand into the UK. Furthermore, national agencies like Business Support Line and Innovate UK can also help businesses obtain financial help from

government-backed schemes (GOV.UK 2021; UK Research and Innovation 2022). Besides, there are new requirements due to Brexit. As a result, *CR* must be aware of these changing conditions and get information from either the British Government or the Portuguese Tax Authority (UPS - Portugal 2021).

*CR* would also gain from establishing a connection with **Associations and Organizations** such as the Business Service Association or the Federation of Small Businesses (Federation of Small Businesses 2021; Business Service Association 2022). As *CR* grows, these associations can help recruit and train new workers, improve efficiency, flexibility, and cost-effectiveness, and bring new sources of investments.

Concerning **Banks**, the company should leverage its contacts with Portuguese banks already operating, such as Millenium BCP or Santander Totta in the UK. Their British operation includes the International Desk and Local Banking services dedicated to foreign clients (Santander Totta 2021). Also, banks like Barclays and HSBC would provide crucial loans for business expansion.

Finally, concerning the *CR's* reputation, another important category of contacts to analyze is **Fairs and Events**. Not only to increase its brand awareness, Fairs and Events also represent a crucial point of contact between buyers and distributors and the acknowledgement of new production techniques or models to be produced. One can highlight the Surface Design Show in London or the KBB in Birmingham.

All in all, *CR* has an extensive network of contacts that can be utilized for additional synergies in the expansion process. Although this is not an exhaustive list, the number of contacts will grow as partners and clients increase. As a matter of fact, *CR* has already received some orders from the UK but was unable to fulfil the requests due to a shortage of production capacity.

## **b) Competition**

Solid surfaces are becoming popular for homes and commercial premises across the UK due to their seamless surface and hygienic properties (Barden 2022a). Nevertheless, the solid surface industry in the United Kingdom is still an emerging niche market, making it difficult to find financial data to properly conduct a competitor's analysis. Besides, many firms that use this raw material as the primary revenue source are sub-branded from an influential group dealing with various raw materials ([Appendix 22](#) and [23](#)).

Therefore, the variable **Hardware & Building Materials** (H&B materials) was used as a proxy for the solid surface industry ([Appendix 24](#) and [25](#)). According to *Assumption 1*, to end up with the UK's contribution to worldwide revenues and the British market's contribution to the competitors' returns, we assumed that the distribution of solid surface revenues across countries would match the distribution of H&B materials for each year. To estimate the amount of sales generated by the solid surface sub-brands, *Assumptions 2* and *3* have been created. Thus, based on the conducted assumptions, the UK accounted only for 1,01% (\$ 243M) of the international solid surface market share in 2021 ([Appendix 26](#) and [27](#)).

In 2021, there were several (sub)brands in the UK, including **Corian**, **Hi-Macs**, **Staron**, **Hanex**, **Avonite**, **Meganite**, **Krion**, and **Kerrock**. The three main operating competitors in the UK market's competitive landscape were **Corian**, **Hi-Macs**, and **Staron** ([Appendix 28](#)). One can also highlight some more smallish players in the solid surface industry in the UK, such as **Solid Surfacing Company**, **Ideal Surfaces**, **Interfab**, **CDUK**, and **Venesta** ([Appendix 29](#)).

According to the CEO of *CR*, small solid surface companies tend to focus more on highly customized products. Meanwhile, larger companies prefer products with a higher degree of standardization, such as catalogue products. Our internationalization strategy is based on standardization to simplify production, so the big companies are our primary competitors

Starting by **Corian** (a sub-brand of DuPont de Nemours Group), it was the first to produce goods using solid surface materials. Corian's operating revenues ascended to \$ 3 Billion in 2021 (representing 14% of the worldwide market share). Similarly, **Hi-Macs** belongs to the Southern Korean firm Lx Hausys, a manufacturer and marketer of building and decorative materials. Hi-Macs revenues level achieved almost \$ 1 billion, the second biggest player in terms of worldwide solid surface material revenues. Finally, **Staron** is Lotte Chemical's reliable surface material brand. This company earned almost \$ 500 Million in 2021. It is essential to mention that these three players accounted for more than 20% of all solid surface materials' revenues across the British market in 2021 ([Appendix 30](#)).

When we compare these players, there are several differences among them (and *CR*) regarding the services offered or the business model ([Appendix 31](#) and [32](#)). Starting with **the range of applications**, a diversified portfolio could leverage a brand's awareness, leading the consumers to achieve more heightened brand loyalty (Wayne D. Hoyer, Deborah J. MacInnis, and Rik Pieters 2018). Thus, through a better portfolio, the companies know consumers will demonstrate a higher resistance to competitive efforts and have a lower probability of switching to another brand. Corian works with 17 applications, distinguished by high flexibility for product installation and the possibility of customized shapes where the customers can create their colour plaque. Hi-Macs and Staron have a range of 14 types of applications.

Regarding **variety**, even though Hi-Macs has the most extensive colour collection (more than 100 different colours available), in terms of the **degree of personalization**, Corian offers greater personalization and ampler flexibility for product installation. Hi-Macs and Staron' highest personal customization level is only reached in significant projects. Concerning **distribution channels**, Hi-Macs focuses on indirect sales, as it only uses distributors. In the same way, Staron operates through a distribution network, although it does have some manufacturers, as does Corian.

In regards to the marketing **strategy**, the three firms wager on a solid social media presence. Nevertheless, Corian and Hi-Macs use more advanced techniques resorting to virtual showrooms (Hi-Macs), and Design Visualizer Augmented Reality App (Corian), allowing the customers to have a more immersive shopping experience. Finally, Corian and Hi-Macs present a notable **certification registration**, enhancing their quality and reputation; Staron also has some diplomas, although in a lower number. Corian was awarded the BREEAM International certificate, a leading British sustainability assessment method.

To conclude, the **rivalry** is **intense**. There are several players in the solid surface materials industry in the UK, including the most prominent global firms. Additionally, smaller companies in different stages of the solid surface supply chain increase the difficulty for *CR* to succeed in the UK market.

### **c) Overall Market Sales Potential and Company Sales Potential**

Companies should evaluate new opportunities consistent with their strategic objectives in order to achieve growth (Natarajarathinam et al. 2012). As a result, it is necessary to analyze the market and the company's sales potential to properly access the UK market as *CR*'s final destination for its internationalization plan. Following the reasoning assumed in section 6.1.3. *d) Competition*, H&B Material was still used as a proxy for the countries' market sales ([Appendix 33](#)). Globally, the solid surface industry was valued at \$22.7 billion in 2020 and is expected to grow from 2021 to 2031 at a CAGR of 5,4%, achieving a value of \$32.8 billion ([Appendix 34](#)) (Data Bridge - Market Research 2021b). Considering that the UK contributed 1.01% of the global H&B Materials industry in 2021, we estimated the UK's international solid surface contribution using this percentage. Our analysis concluded that the solid surface market in the UK reached \$241.92 million in 2021 with a CAGR of 3,7%.

In 2021, the Portuguese market accounted for \$33.33 million in solid surface revenues. Thus, *CR*'s market share was 1,66% (\$0,553 million in revenues). The home market CAGR was 4,6%, higher than the British's ([Appendix 35](#)). When internationalizing, a company is expected to initially not achieve the same market share in its home country. To handle this, a scenario analysis was conducted where the UK's CAGR reflected the *CR*'s market share growth in the host country (10% annually) ([Appendix 36](#)). The pessimistic scenario considers the increase in trade barriers and other restrictions after Brexit; *CR*'s market share would be 0,025%. In the expected scenario, *CR* would achieve \$214 000 in revenues during its first year of operations in the UK, representing 5% of the market share in Portugal. In the optimistic scenario, *CR* is expected to achieve \$756 000 in sales in 2027 (0,24% of the UK's market share). The existence of already established contacts, prospective customers, and the larger market dimension makes it possible for *CR* to enter the country with some small but achievable market share that fulfils the company's aims ([Appendix 37](#) and [38](#)). To conclude, the market and company sales potential can be **moderately attractive**.

#### **d) Market Entry Conditions**

A country's selection is also influenced by market entry conditions ([Appendix 39](#)). There is a substantial difference between the EU and UK tariff schedules regarding **trade barriers** for certain commodities. It should be noted, however, that non-tariff barriers are also costly. Due to the UK's exit from the EU's single market and customs union, it is likely that the trade of goods will experience increased border delays, given the new product standards, documents and inspection requirements. Even with a recently signed bilateral cooperation agreement between the two countries, trading with the UK will become harder (Tom Edgington 2022).

The UK follows the **standards and regulations** for the solid surface Industry set by the International Surface Fabricators Association (ISFA), intended for either manufacturers or installers. Yet, the Building Regulations were amended after the Grenfell Tower fire (BBC News

2019), which affected British solid surface standards, prescribing fire resistance levels (ISFA 2013).

Solid surface resale stores and hotels represent the company's **distribution channels**. It is estimated that there are almost 10 000 hotels in the UK at present. According to The Telegraph, 60% of British adults claim to possess DIY skills. Thus, in 2021, only Screwfix and B&Q had more than 1 000 Home Improvement Stores (DIY) across the United Kingdom (Statista 2022c; Telegraph Reporters 2017; Office for National Statistics 2021c). In terms of **financing methods**, various measures are in place to assist SMEs in accessing financings, such as the Enterprise Capital Funds program and lending commitments with RBS and Lloyds Banking Group. Also, SMEs' most commonly used **payment methods** are BACS and Fast Payments (a real-time payment system). However, *CR* would need a bank account in the UK to use these channels (Department for Business Innovation & Skills 2021a).

In the UK, **registering a new business** only takes 8 to 10 days. It is necessary to prepare a memorandum and articles of association, as well as choose a business structure (the UK ranks 8<sup>th</sup> in the ease of doing business ranking) (Trading Economics 2022). Portugal's firms aiming to conduct business in the UK must have an Economic Operator Registration and Identification (EORI), a Common Transit Convention, to be enrolled in the REX system, and act in accordance with the Autoridade Tributária e Aduaneira (GOV.UK 2021b; AICEP Portugal Global 2022).

According to the CEO, oversized and heavy goods such as *CR*'s products should be **transported** by sea. Therefore, the company should rely on shipping companies such as Maersk Line, Mediterranean Shipping Company, or Ocean Network Express. Within the host country, companies such as FedEx (and its sub-brand TNT Express), Yodel Shipping Company, UPS, and Hermes Logistics Company may be able to assist *CR* in expanding its distribution network (Witham

2022; Clutch 2022; Click Post 2022). Based on the 2019 World Economic Forum report, the UK ranked 11<sup>th</sup> globally in terms of infrastructure quality (Keep 2021).

## 6.2. Selection of Target Market

After conducting an in-depth analysis of each potential market for *CR* to internationalize, a comparison between the foreign markets must be made to find the best opportunity.

This comparison will focus on assigning weights to the 4 topics previously analyzed, according to the level of impact that each has upon the firm's internationalization process. Additionally, in each subject for each country, a score between 1 and 5 will be attributed to evaluate and differentiate the country's performance in the topic. Then, a final score will be computed for each country, and the highest score should provide **the best potential market for *CR*** to expand its operations. The results can be found in the *figure* below.

RANK	COUNTRIES	CONTACTS	COMPETITION	SALES POTENTIAL	ENTRY CONDITIONS	WEIGHTED AVERAGE
	WEIGHTS	35%	15%	30%	20%	100%
1	 FRANCE	5	4	3	5	4.25
2	 GERMANY	3	3	5	5	4
3	 UNITED STATES	4	1	4	3	3.35
4	 SWITZERLAND	4	4	1	3	2.90
5	 UNITED KINGDOM	3	3	2	2	2.50

*Figure 5: CR's best potential markets*

Firstly, the **contacts** have attributed a weight of 35%. Due to the poor performance of the marketing plan and its execution by *CR*, the existing and potential contacts in the country can address this problem. As has been happening in Portugal, using the positive result of its contacts' services, to create a positive *WoM*, will attract and reach new clients in the host country and improve its overall brand awareness. In this area, France stands out, getting the maximum score, as it is the country where the firm has already operated and has the most contacts and experience.

Secondly, the **competitors** have 15% since solid surfaces are an emerging industry, having a moderate number of active players, and so have lower impact and significance than the other areas. In this field, since having many competitors is non-positive for the firm, the higher the score is, the lower the number of competitors in the market. Here, France and Switzerland are the less competitive countries. The major firms are still present in the country, but there are fewer small ones.

Thirdly, the **sales potentials** account for 30% of the final score. This results from the fact that *CR* wants a market with a large size and high growth rate so that the firm can have significant results already in the first year and increase its revenues over time. Additionally, due to the lack of information and the high number of assumptions, these results should be carefully analyzed as they may be incorrect, which must be accounted for when weighing the importance of the variable. Based on each country's computations, the U.S. is a clear winner. This country has one of the world's most powerful economies, which is expected to be also reflected in the solid surface industry. Even a minimal market share in this country leads to very relevant new revenues for *CR*.

Further, as expected, Germany is the most robust European market, followed by France. Switzerland is the weakest due to its market dimension, and the UK is being affected by Brexit. Regarding the company's sales potential in each country, it sticks with the market's potential order. However, the geographic distances between the U.S., Germany, and Portugal may affect future revenues and the success of internationalization.

Finally, the **entry conditions** correspond to 20%. As this industry is very recent, the first to enter the markets will have a clear advantage. So, the ease of coming from abroad and starting a business in each country will be crucial for *CR*. In this field, the two countries that belong to the European Union, France and Germany, registered the highest scores. Due to the remaining

countries' political environments and regulations, *CR* would take more time and effort to start its commercial activity in the countries.

After these analyses and scoring all countries in the different topics, **France stands out as the best potential market for *CR* to internationalize**, with a final score of 4,25. The government was followed by Germany and the US, who remained very close to one another in the final score. In fourth place, Switzerland achieved 2,9, significantly harmed by the potential sales. Finally, in the last place, the UK reached only 2,5 out of 5.

## **7. International entry strategy**

### **7.1. Selection criteria**

#### **7.1.1. Selection criteria – Application**

In the previous section, France was the selected country. The next phase of the internationalization plan requires the identification of the adequate entry mode ([Appendix 40](#)). Such a decision will be assessed through four factors that will select in the first stage, the potential entry modes: Internal, External, Transaction-Specific and Desired Mode-Characteristics. Each aspect will be analyzed, and the appropriate international expansion mode, internalization, externalization, or intermediate level, will be identified. Overall, each entry mode varies in terms of characteristics. Concerning the two extremes, the internalization expansion is recognized by higher costs, risk and control, with lower flexibility. In contrast, externalization implies low costs, risk and control but higher flexibility.

First, regarding **internal factors**, the **company size** is a crucial aspect to consider. *CR* is an SME with annual revenues of €592 000 in 2021 and 16 employees. The company is experiencing a robust expected growth of 57,6% this year, achieving €933 000 yearly revenues. Although this represents a promising future, the company does not have the solid financial stability to support significant investments. Thus, it would be preferable to select an externalization expansion where

*CR* would not have to make considerable investments nor require paying for an additional labour force in the beginning. The company's **international experience** can also be an essential advantage as it can facilitate entry into new foreign markets thanks to collected know-how, experience and contacts from previous countries. *CR* has already started their international expansion in four countries (Spain, Andorra, France, and England). Although the first steps towards global expansion are already made, it is essential to recall that these are only four countries. Besides, their entry mode for all these countries is through exportation, meaning that the learnings they can extract to apply to other countries are pretty low since, through this method, *CR* doesn't need to create a close link with the country and the local consumers. In this sense, it would be adequate if *CR* chooses an intermediate entry mode level. Moreover, when it comes to **product complexity**, it is moderate to high. Thanks to the thermoforming technique, companies such as *CR* can create highly differentiated products with unique curves, shapes, and patterns. This material flexibility makes it more difficult for other players to replicate. Therefore, for this particular factor, it would be more advisable for *CR* to choose an intermediate entry mode to absorb some know-how of local partners while still having more control over the foreign operations than if *CR* selects an externalization entry mode. Finally, looking at the international **competitive strategy**, *CR* focuses on providing standardized products in the first phase, intending to achieve economies of scale. In this case, finding the right potential clients is a crucial success factor for the company's internationalization expansion. Consequently, it would be more advisable for *CR* to opt for an intermediate entry mode (as opposed to an externalization expansion). Through this mode, the company could benefit from the know-how and contacts of local partners that are already established and developed a network in France.

The specific characteristics of a foreign market are essential for market entry mode (Morschett et al. 2010). Thus, it becomes equally important to analyze **External Factors**. They are split into

Sociocultural Distance, Demand Uncertainty (measured through market size and its growth), Trade Barriers, Intensity of Competition, and Relevant Intermediaries. Starting with **Sociocultural Distance**, several studies have pointed out that cultural distance influences investments, diversification, and future outcomes (Ginsburgh & Throsby, n.d.). Among the five analyzed countries, France is the nearest to Portugal geographically.

Moreover, the geographical proximity echoed in the values of Hofstede Indicators reveals a substantial cultural similarity. Regarding "Individualism" and "Long term orientation", France presents relatively higher values which depict this society as pragmatic and emotionally self-dependent. Nevertheless, it would be preferable for *CR* to select an internationalization expansion in its expansion plan (Hofstede Insights n.d.). Concerning the **Market Size and Growth**, as we formerly concluded, in terms of market potential, the French solid surface industry is the one that exhibits more attractive values considering future operating revenues and market share. The optimistic market outlook would allow managers to maintain the project under control during the internationalization process. However, it is difficult to evaluate how the market tendencies will develop, attending to the increased inflation rates and energy crisis occurring in France, increasing the demand uncertainties. Thus, *CR* should look for the intermediate type of expansion. Regarding **Trade Barriers**, as France is a member of the EU, there are no customs duties to be paid when goods are transported to this market (European Union 2020). From *CR*'s point of view, this leads to a costless and more straightforward process than a host country outside the Euro Area. Besides, the Portuguese firm has to register its business with the *Chambre de Commerce* to trade in France. Thus, *CR* should look to an intermediary to internationalize the entry mode strategy. Regarding the **Intensity of Competition**, from a strategic management perspective, Harrigan suggests that firms tend not to engage in markets where competitive intensity is high because such demands are less profitable (Wong 2013). Consequently, *CR* would be advised to

choose exportation and licensing in a competitive market like the French, instead of adopting an equity entry strategy. Likewise, as *CR* is also focused on expanding its portfolio of standardized products, the intensity of rivalry would be moderate to high, suggesting an externalization plan is more appropriate to adopt. Lastly, another critical point to consider is the presence of **Relevant Intermediaries**. These intermediaries can extend to transportation firms, distributors, or other organizations. As the French solid surface industry is more developed than the Portuguese market, multiple relevant intermediaries make it easier to operate without a physical presence, enhancing an internalized strategy. Hence, the external factors suggest an intermediate entry mode strategy.

Notwithstanding, another factor to examine is the **Transaction Specific Factor**. Firstly, about the **tacit nature of know-how**, we previously concluded that the primary source of a sustainable competitive advantage that can complement the expansion plan is related to its outsourced designer. The after-sales service or the degree of customization cannot be extended to *CR*'s host country since the Portuguese will not operate physically in the foreign market and because the internationalized portfolio will be composed of standardized products. Therefore, considering the transferability of knowledge, it would be more advisable for *CR* to opt for an externalized entry mode. Regarding **Opportunistic Behavior**, some competitors may replicate the Portuguese *CR*'s strategy in France through an exclusive contract with Mario Romano for the French market. So, an external approach is preferable. In conclusion, the transaction-specific factor advises an externalization entry mode strategy.

Lastly, the **Desired Mode Characteristics** of *CR* also impact the decision of the most suitable type of entry mode. Regarding **risk**, *CR* presents a medium to low level of risk aversion. The company delivers a debt-to-equity ratio between three and six (from 2019 to 2021), suggesting that although the company has an acceptable ratio given its size, it is an overall high value. Consequently, internationalizing should be cautious as a too-risky entry mode could increase this

ratio. Thus, it would be more advisable to undertake an externalization expansion. In terms of the desired level of **control**, the company seems very clear that they want to have the highest possible appropriation of its operations, not being very open to sharing its core business with other players. In this sense, internalizing would be the most suitable entry mode. Finally, regarding **flexibility**, *CR* prefers a type of entry mode that allows the company to quickly terminate its foreign operations, implying a high level of flexibility. In this sense, externalizing is the appropriate type of expansion as it requires shallow resource commitments.

Therefore, attending to all factors described above ([Appendix 41](#)), *CR* should follow an intermediate entry strategy to expand to the French market. As we previously concluded in section 4.4.4. *Global Readiness*, *CR* is only partially prepared to internationalize through Foreign Marketing Presence. Therefore, plausible entry modes from the intermediate category and Exports will be examined, considering the firm's knowledge and past experiences ([Appendix 42](#)).

## **7.2. Analysis of alternative entry modes**

### **7.2.1. Literature review – International Entry Mode Selection (Exports vs FDI)**

At present, the strategic environment of companies is changing faster than ever. Reasons for this are the rapid technological development, the saturation of existing markets, and the emergence of new business models, among others (He et al. 2020a). As globalization and the integration of global value chains progress, international expansion becomes increasingly important (Vendrell-Herrero et al. 2017).

Therefore, the entry mode (EM) into the target market ought to be carefully analyzed and selected, given the global competition (L Hill, Hwang, and Chan Kim 1990a). Among the extensive array of alternatives, this literature review will focus on the distinction between non-equity contractual modes (Exports) and equity-based cooperative ventures (Foreign Direct Investments).

Note that another constituent of market-entry strategies related to contractual relationships (such as strategic alliances and licensing, among others) will not be considered (Sternad D 2020).

Thus, the two branches of internationalization's modes contrast either in the level of resource commitment, the level of control each firm exercises over the foreign operations, or the risk associated with the expansion (L Hill, Hwang, and Chan Kim 1990b). The main differences are stated in [Appendix 43](#).

Regarding non-equity modes, **Exports** are usually the primary market-entry method (small) firms use (Whitelock 2002). This approach involves assembling goods and services in one country and trading them in another. It points out that firms tend to specialize in producing products where they are relatively more efficient (Kola D 2001). In fact, after a period where the corporation acquires knowledge in the home country, exports permit the firm to expand to a foreign market without a significant investment despite a relatively lower profit return (Helpman, Melitz, and Yeaple 2004a).

Notwithstanding, Export internationalization can be done by direct or indirect methods. Starting by **Direct Exports**, they involve a firm that sells products directly to a customer in a foreign market. Theoretically, direct exports tend to be more rewarding, which implies a higher resource commitment and risk (Elango and Pangarkar 2021a).

Through **Indirect Exports**, a firm sells goods to an intermediary in its home country; then, the partner trades the products to the international market. The location of an intermediary (based in the home country) enables small-sized companies to expand their operation. Compared with direct exports, indirect exports are characterized by higher variable costs and lower fixed costs. This can be explained since the partnership would have an associated fee and because the exporter would not need to integrate into its operations the service the intermediary will provide (Elango and Pangarkar 2021b).

Furthermore, considering equity-based entry modes, **Foreign Direct Investment (FDI)** presupposes a higher resource or control commitment. According to Farrell, FDI can be defined as a bundle of capital and knowledge which allows a firm to expand its operations into a foreign market to produce and sell goods and services (Almfraji and Almsafir 2014). FDI can be seen as an investment involving a long-term relationship between a company from one country in another, reflecting an enduring interest and control (R. D. Smith 2004). One can also note that FDI can be divided into two categories: vertical and horizontal (where the firm reproduces the entire process abroad). There are also three essential preconditions to engage in international activity: ownership advantage (regarding resources and know-how), exploiting this advantage instead of trading or renting it, and the firm must combine the ownership and internationalization advantages with a proper location (Ali, Fiess, and MacDonald 2010).

Starting with the **Foreign Branch** option, this entry mode strategy concentrates on setting the production capacity of a firm in another market to decrease the expenditure level. A foreign branch is another firm's location that operates entirely in another country (Duce 2003).

Another way a firm internationalizes itself is through **Foreign Acquisitions**, meaning the acquisition of all or a noteworthy portion of a foreign firm's assets (or capital stock). With this purchase, the acquirer gains access to a new customer base and incorporates the incumbent facilities as the production system (Conyon et al. 2002).

Besides, a **Subsidiary** entry mode is a strategy that involves a higher commitment from the parent company, which offers specific synergies, such as improved tax benefits or diversified risk. However, subsidiaries remain independent legal persons from their parent company. Nevertheless, a subsidiary can take the form of a **wholly-owned subsidiary** if the parent company's ownership stake is 100%. Also, responsibilities over regular tasks and some strategic choices may be allocated

to the foreign subsidiary in the event of a wholly-owned subsidiary. However, leading control always rests with the home country's corporate headquarters (He et al. 2020).

Lastly, **Joint Ventures** are cooperative partnerships aiming to develop outstanding entrepreneurial skills. Partners frequently discharge firm-specific competitive advantages by pooling their assets. Joint ventures are partial resource combinations between partners instead of mergers and tender offerings, establishing fixed portfolio positions. When idiosyncratic and unique assets are involved, joint ventures can prevent market inefficiency by establishing a common governance framework through ownership sharing (Gomes, Cohen, and Mellahi 2011; Park and Kim 1997).

To conclude, one should note that the strategic flexibility of choosing an entry mode is influenced by factors such as resource commitment (acting as an exit barrier), the desired level of control, the control and flexibility, the speed of implementation and the associated risk (L Hill et al., 1990e). Therefore, the trade-off between Exports or FDI depends on if the gains from sidestepping trade costs "outweigh the costs of maintaining capacity in multiple markets," known as the proximity-concentration trade-off (Helpman, Melitz, and Yeaple 2004a).

### **7.2.2. Analysis of alternative entry modes – Application**

Regarding the **intermediate** type of EM, we found the need to filter the options as some didn't fit with *CR*'s internationalization strategy. These include licensing, franchising, management contracting and joint venture. The detailed reasoning for excluding those EM can be found in [Appendix 44](#).

As stated at the end of the previous section, the entry modes plausible to be adopted by *CR* can be divided into externalized to intermediate entry mode market strategies. Therefore, both groups will be analyzed concerning control, risk, flexibility, resource commitment, financial costs, net gains, and speed of implementation ([Appendix 45](#)).

Starting with non-equity strategies, specifically externalized entry modes, (small) firms mainly use **Exports** as their primary marketing strategy (Elango and Pangarkar 2021b). This approach assembles goods and services in one country and trades in another. As a result, firms specialize in producing products where they are more efficient. When a corporation develops knowledge in its home country, exports enable it to expand abroad without substantial investment despite a relatively low-profit return (Helpman, Melitz, and Yeaple 2004b).

The process of export internationalization can be achieved either directly or indirectly. Exports by direct means that *CR* will sell its products directly to a foreign market, specifically to the French market. Theoretically, **Direct Exports** tend to be more rewarding, which implies a higher resource commitment and risk (Elango and Pangarkar 2021b). On the other hand, the **Indirect Exports** process involves utilizing third parties to market products and services to end users. There are numerous forms of indirect sales, including affiliate networks, re-sellers, independent salespeople, and various retail formats. It is pertinent to note that indirect exports have higher variable costs and lower fixed costs when compared to direct exports (Elango and Pangarkar 2021b). Although through indirect sales, *CR* would be more dependent on its partners' commitment, it would have a more significant opportunity to learn about the market and reach out to distributors more easily.

Likewise, following an expansion plan based on Exportations, *CR* would follow an entry mode with associated lower risk and lower financial cost as there is no investment in France to contract workers or increase new production capacity. In addition, since there is no physical presence in the host market, there is a correspondingly lower resource commitment, resulting in a lower degree of control over international operations (on the field agents' performance and willingness).

Regarding the **intermediate** type of EM, entering the French market through **contract manufacturing** is another suitable entry mode. Compared to exporting, an incremental resource commitment is required since the local manufacturer will need organized and detailed information

to reproduce the desired *CR*'s products. This approach presents some risk since the partner may behave opportunistically, appropriating *CR*'s intellectual property (the uniqueness of the designs), which is a substantial competitive advantage for *CR*. Contract manufacturing allows for easy and fast market entry and exit (if necessary) due to the relatively low resource commitments. The company's limited capacity of production in Portugal and having a local manufacturer would guarantee that *CR* can meet all new French local demands. Therefore, in terms of net gains, revenues are expected to compensate for costs (of paying for manufacturing the products). Although this strategy has all these advantages, the main drawback is the lack of control as the company will have to depend on the manufacturer's delivery time and the quality & finishing of the products.

Alternatively, **Strategic Alliances** are a final suggestion of EM. It is a *voluntary relationship between two or more firms, which is intended to achieve both their individual and mutual strategic objectives* (He et al. 2020, 2). This interfirm relationship can generate meaningful benefits for *CR*. One of the main advantages of the strategic alliance compared to the previous entry modes is the gain of tacit knowledge, local knowledge of international customers and cultures, access to better distribution & marketing networks, resources & competencies to overcome the weaknesses SMEs have in terms of resources and capabilities (Dunning & Lundan, 2008; Laufs & Schwens 2014). On the other hand, this entry mode has some associated risks, namely, through the loss of control, that may lead to opportunistic behaviour and lack of commitment.

### **7.3. Entry mode selection**

According to the analysis conducted earlier and after consulting with the CEO of *CR*, we concluded that **Exports** would be the most appropriate entry-mode strategy for *CR* to pursue in France. As a matter of fact, the company is already familiar with exporting to foreign markets, including French markets. Besides this experience, the company lacks the necessary resources and

tools to pursue a strategy that requires a substantial commitment of resources and physical presence. In this way, *CR* could reduce the risk of failure and streamline the entry process through Exportations.

Moreover, **Direct Exports** are more efficient and result in better outcomes as the company does not have to spend time and resources exploring the host market since this will be our agent's responsibility. Consequently, we recommend adopting Direct Exports as the appropriate mode of entry. In the short term, it may be possible for *CR* to improve their competitiveness through direct exports, mainly because this entry-mode strategy provides additional volume and may result in better prices. Since the resource and skill requirements are lower, even firms with limited resources may find this feasible (Elango & Pangarkar 2021b). As a result, *CR* is able to enter France more rapidly and at a lower cost.

Thus, choosing direct exportation as the EM, *CR* should follow several steps to formalize the process. When an initial relationship with a client is established, it will be the responsibility of *CR's* commercial agent or the distributor to **draft a contract** that should be negotiated with the client afterwards. This contract should include the following content: (1) **payment methods** – both parties should agree on the payment method. There are three options available, namely, cash in advance (the safest option for exporters because the importer pays the full or a significant amount of the payment before the goods are shipped), an open account (the safest option for importers because the delivery is made before the payment is due) or something in between (Allianz n.d.); (2) **terms of sale** – typically, to set the terms of sale, companies select one of the incoterms 2020 rules. The Incoterms are a set of 11 internationally recognized regulations issued by the International Chamber of Commerce (ICC) that clarify the responsibilities of sellers and buyers in transactions. Its tasks, costs and risks for buyers and sellers in international and domestic contracts for the delivery of goods are included in these regulations ([Appendix 46](#)) (trade.gov n.d.). On one

extreme, the EXW (Ex Works) incoterm places full responsibility on the buyer since the seller makes the goods available at their factory or warehouse, and the buyer will have to arrange all the processes. On the other extreme, DDP (Delivery Duty Paid) indicates the seller will assume all the risk and transportation costs for delivering the goods to the defined destination (Deni Internacional n.d.). Among all the options, *CR* should opt for the FOB (Free on Board), an intermediate incoterm where *CR* is only in charge of delivering the products to the port of shipping in Portugal. From this point, until the product arrives at the final destination, it will be the buyer's responsibility; (3) **installation service** – *CR* should also make clear if they pretend only to allow their trusted technicians to complete the installation service or if on the contrary, they don't want to be responsible for that.

As a final point, it is essential to note that *CR* may be able to improve its international strategy in the long run. To improve the expansion strategy, in the future, *CR* can implement an intermediate or FDI strategy; depending on the circumstances, this may be undertaken as a joint venture or as a greenfield investment. While these options may be feasible in the long term, they are unlikely to be viable in the medium term due to a lack of financial resources for the required investment. Therefore, the internationalization plan will be essential to develop a solid financial position to finance these potential future investments. They may be achievable if the value-added and advantages of an export-based strategy outweigh the benefits.

## **8. Marketing plan**

### **8.1. Marketing objectives**

According to past research, marketing objectives involve what the company wants from each market segment and what it wants to give customers in return (Malcolm McDonald, Martin Christopher, and Margrit Bass 2003; Doran 1981). Therefore, to set and define the marketing plan

direction, it is crucial to establish marketing objectives. Clear objectives will make it easier for *CR* to determine which marketing strategies are most effective for achieving the company's goals and whether those actions are effective.

Thus, since *CR's* resources and strategic focus may be burdened by entering a new market, to guarantee that the suggested marketing strategy builds on operational efficiency and is aligned with the firm's best interests, primary goals and objectives must be established. Moreover, it is stated that marketing objectives need to be SMART, meaning Specific, Measurable, Achievable, Realistic, and Time-bound (Doran 1981) ([Appendix 47](#)). In addition, according to previous research, the objectives of a marketing plan are either short-term or long-term focused (Frank Withey and Geoff Lancaster 2007).

In broader terms, every objective needs to support two main goals: increase profitability and market share while, at the same time, guiding *CR's* brand establishment in France to grow its position as a trustworthy company. Therefore, together with *CR*, four SMART marketing objectives and the respective key performance indicators were defined, two for the short term and two for the long term.

Brand recognition is crucial in a world where 71% of customers prefer to purchase goods from companies they are familiar with (“Global Ranking and Finance Review” n.d.). Therefore, the first short-term goal is to increase *CR's* brand awareness online to encourage at least 300 potential order requests over the first year and boost credibility and trust. The target seems realistic considering the time *CR* has available to improve its online presence before expanding to France. To measure the success of this goal, performance indicators such as the change in the number of followers, comments and shares on social media, website visitors, number of proposals, number of contacts by other companies and meetings with other companies can be used.

Because satisfied customers are more likely to spread the word about a company to their social networks, marketing teams frequently build relationships with their clients. Thus, *CR* may set a goal to assess customer engagement and foster loyalty. Therefore, the second short-term objective is to increase the rate of client referrals by 12% in the second year compared to the first one of exporting to France. To measure this objective, *CR* can analyze data to learn that client referrals increase directly after their products receive a positive national rating, such as the average referral count, the rate of participation, and the conversion rate of referrals. Moreover, in order to identify which strategies would be more successful in increasing customer engagement, *CR* might also look at prior marketing strategies it has done on social media or online campaigns. By reflecting on customer service practices, *CR* can find new ways to personalize advertisements and conduct more successful campaigns.

Concerning the long-term goals, *CR* aims to increase total profit by 30% in the first two years and 40% from the third year, 2025, onwards. To measure this objective, KPIs such as gross profit margin and net profit margin can be used. This goal is realistic based on the previous predictions regarding the company's sales potential and the fact that economies of scale are expected when production to France begins, resulting in an increase in revenues and a decrease in costs.

Finally, by the fourth year of operating in France, *CR* seeks to attract and target a new customer type with a greater willingness to pay than the one targeted at the entry-level. *CR* will serve the new target by developing three new products that meet his needs (one sink, one bathtub, and one shower tray). This goal is realistic because *CR* is constantly innovating and designing unique pieces. Besides, brand recognition will increase as time goes by, so more customers will feel encouraged to buy the company's products. This goal will be achieved if the number of new targeted buyers reaches 10% of the overall sales for that year and if the money spent to attract these new customers is paid off by the increase in sales.

## 8.2. Segmentation

The STP process will be crucial to define *CR's* strategy in the new market. The three-step approach will be beneficial to identify the most valuable types of customers and determine the most compelling value proposition the company should present to its target market (Mind Tools Content Team n.d.).

Through **market segmentation** is possible to differentiate customers and define distinct homogenous customer groups with similar product needs and characteristics, considering various factors. Therefore, four variables will be considered, Geographic, Demographic, Psychographic, and Behavioural segmentation (Market Segmentation Study Guide n.d.).

Firstly, **geographic** segmentation is connected with the customer's physical location (E. Smith 2022a). Thus, the groups will be divided considering three distinct environments: urban, suburban, and rural. Regarding the **demographic** variable, the market will be divided into segments depending on their average annual income. France's average yearly income was €40 115 in 2021(Statista Research Department 2022). Therefore, the groups being considered are 0-40 000 (below average); 40 000-80 000 (average); 80 000-120 000 (above average); more than 120 000 (outlier). **Psychographic** segmentation is related to the psychological traits that impact consumer habits, reflected by the consumer's lifestyle and interests (E. Smith 2022b). In this case, the groups will be defined by socioeconomic status, according to THEADX pre-defined groups: Social elite; Under Superior; Above the Middle Bottom of the Centre; Above Gold and Under Gold (THEADX n.d.). Finally, **behavioural** segmentation is associated with customers' behaviour while interacting with a particular business or product (Yieldify 2020). Among the various types of behaviour segmentation, will be considered the benefits sought criteria, which rely on the unique value proposition the customer expects from the product: Prime consumers (value high quality, luxury products ignoring product price); Engaged consumers (informed consumers, in which, quality

plays an essential role in their decision, needs to offset price); Utilitarians (relatively price-sensitive, above all, valuing product's utility, look for the best price-performance in the market); Low-cost buyers (look for the best low-cost offer in the market) ([Appendix 48](#)).

Additionally, **Personas** help give a face to the target (Vieira 2019). Thus, to meet customers' needs and interests more effectively, four different personas, Françoise, Jean Louis, Marie, and Michel, were developed through the prior customer segmentation ([Appendix 49](#)). Since *CR* is focused on serving upscale consumer segments, only consumers with an average income more significant than 80 000 € were considered. Françoise comes from a wealthy family of doctors. As a prime consumer, Françoise is willing to pay higher prices for prestige and luxury brands. Jean Louis got rich through his hard work as a successful entrepreneur. He is an informed consumer, willing to pay higher prices for products he recognizes are worthwhile the price. Marie is a university professor living nearby Lyon. Despite being capable of paying for more expensive goods, she is price sensitive and looks for the most outstanding price performance on the market. Finally, Michel, who works in a reputable French Bank, constantly seeks out the most prestigious goods. He isn't concerned with the cost of the items he often purchases. Besides, high prices may be a positive aspect for him, who is looking for his peer's recognition.

### **8.3. Targeting**

Targeting the right customer segment provides the company with the necessary tools to establish a successful marketing plan and serve its customers effectively (The Investopedia Team 2022). Concerning the geographic criteria, since France's urban population represents approximately 81% of the population, *CR*'s potential distribution channels in France should cover both urban and suburban environments (World Bank n.d.). Regarding the average annual income, since *CR* is positioned in the upscale segment of the market, only customer segments with an average annual income more considerable than €40 000 will be considered, particularly the ones

positioned between €80 000 and €120 000. Due to their more extensive purchasing power, this segment can consume upscale products while also finding it more challenging to purchase luxury goods at higher prices compared with *CR*'s offer. Customers were also divided by socioeconomic status. In this case, the company should pay more attention to Under Superior customers, a new rich group, enhanced by its working capabilities, composed of private and public sector executives and medium-large tradesmen (THEADX n.d.). Lastly, concerning behavioural segmentation, the targeted group are engaged consumers who value the product's quality and are willing to pay higher prices for it. Overall, *CR* shouldn't exclude the customer segments that haven't been mentioned above, as most of them are potential customers. Nevertheless, the focus should be on the highlighted customer segments.

Among the developed personas, the one that best describes *CR*'s target is **Jean Louis**. His interest in the product's qualities and features will make him value *CR*'s product attributes. At the same time, his work success allows him to purchase more expensive products such as *CR*'s offering.

Overall, *CR*'s expansion strategy is directed at big hotel chains in the upscale market and specialized distributors in the construction sector.

## **8.4. Positioning**

### **8.4.1. Value proposition and positioning statement**

When defining a strategy, the **company's positioning** in the market is fundamental to clarifying and exposing the desired brand meaning to the consumer. Positioning is the act of defining the company's offer and image so that it occupies a unique and valued place in the target's mind. It must be unique to make it easier for the consumer to distinguish the brand from competitors and explain why its products are the ideal choice (Fernandes et al. 2020).

As previously defined, the target will be the group represented by Jean Louis. However, it must also be clear what is the competitive set. The question "related to whom?" must be answered by

defining the **frame of reference**. This topic refers to the category in the market that *CR* wants to address (Koontz and Rockwood 2001). For *CR*'s entry into the French market, bathroom hardware is the best category as the firm wants only to internationalize, at least in the beginning, the bathroom collection. It is also worth mentioning that the bathroom's solid surface should not be the frame of reference as it is a niche and would lead to marketing myopia which the firm should avoid.

Following this, the **Unique Value Proposition (UVP)** must clarify the question, "what is the value?". It is composed of the union of the Points of Parity (PoP) and the Points of Difference (PoD), which will produce a statement that clarifies how the consumers' problems and needs will be addressed and what makes it different from competitors' products (Fernandes et al. 2020). First, the **Points of Parity (PoP)** correspond to vertical differentiation. This topic claims to determine why the product is superior in the frame of reference (Anderson, Narus, and van Rossum 2006). For *CR*, the fact that a thermoforming technique is used with solid surface materials to produce the bathroom hardware can provide superiority to the firm's products in the established category. Second, the **Points of Difference (PoD)** correspond to horizontal differentiation, focusing on attributes the competitors do not possess. *CR* can use it to increase and solidify its position in the market (Anderson, Narus, and van Rossum 2006). For the company, the level of complexity of design achieved by the highly skilled labour and experience confers an advantage over competitors.

Finally, the **position statement** can be developed based on the analysis of the unique value proposition. To *CR* attract the target represented by Jean Louis and differentiate its products for bathroom hardware, the position statement could be "*CR* is a specialist in the creation of innovative designs for the most upscale bathrooms. Through solid surface materials, perfect pieces without apparent joints are developed to ensure the safety and cleaning in your life. Through a unique vision and the best quality, your satisfaction is guaranteed". A slogan can also be used to keep the brand in the consumers' minds: "the best moments are created when we are home".

### 8.4.2. Positioning map

To fulfill its strategic objectives and achieve the desired operational performance, *CR* must clarify its positioning in the competitive landscape beyond defining its segments and target audience. **The mapping of the positioning** will allow *CR* to find its place in the market, deduce its main competitors and rethink the best actions to create a positive impact on its target (Signal and Jain 2014).

By using the in-depth analysis developed for France, the 3 significant competitors, Corian, Hi-Macs, and Staron, along with the 3 local small competitors, Solid Surface Concept, Solid Surface *Spécialiste salle de bains et cuisine*, and Alibert Creation Solid Surface, were distributed across the map by their upscale focus and level of complexity in the final design.

In this map, due to its focus on upscale, high capacity, and skill to produce complexly designed products, ***CR* fits in the first quadrant**. The company is relatively alone in that space having only Corian and Solid Surface Concept relatively close. This is a good indicator for *CR* as it means that the firm is differentiated from its competitors and can almost answer consumers' demand in that quadrant.

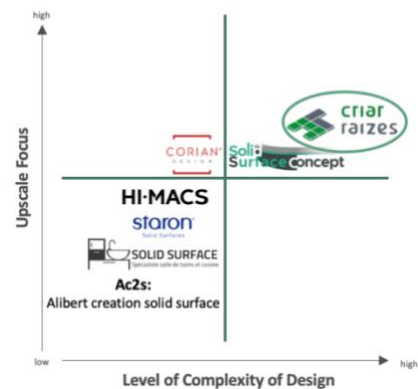


Figure 6: *CR*'s positioning map

### 8.5. Marketing Mix

The marketing mix is the interpretation and expression of the STP into something tangible. If the STP is the plan, the marketing mix is the implementation. Thus, once the target is identified and the positioning created, we now will translate this theoretical direction into something actionable. To do so, an analysis of the 4Ps and an additional element (People), will be performed.

*CR* decided to narrow the **products' portfolio** to the French market, making available standardized products from the bathroom sector only. Thanks to the malleability of the solid surface

material and its unique characteristics, the range of products in the bathroom sector is vast. In fact, *CR*'s products in this sector can include sinks, countertops, bathtubs, shower heads, shower trays, toilets, walls, and a wide range of accessories. Although the product variety will be lower than the one available in Portugal due to the low degree of personalization, customers will still find some diversity as they can choose from different design options, colors, patterns, and sizes. Customers will also be entitled to warranties. In other words, in case of a problem, and it is proved that it was a problem either from the manufacturing process or the quality of the raw material, customers will have a warranty. The only difference between those two types of situations is who will be responsible for that warranty: if it is *CR*'s fault, that is, there was a problem in the manufacturing of the product, the company will take responsibility and repair it. On the other hand, if the problem is a defect of the stone itself, *CR*'s supplier will take responsibility. Besides, it is essential to mention that *CR* is usually not responsible for the installation service. In this case, if a complaint arises, the company will not give any type of warranty. On the other hand, if the client requests the company to do this service, the company will request local technicians to manage the installation, and in this case, *CR* will be more involved in case of a complaint.

The **prices** vary according to the bathroom product type. In fact, a solid surface countertop or bathtub will certainly not have the same price as a solid surface laundry basket. Besides, as the products will all be from the catalog, the prices will be standardized. In terms of pricing strategies, the company should set competitive pricing to give credibility. In the first phase, the company will be relatively unknown to French consumers, so asking for a high price would create barriers for them to discover the company. Thus, in the short and medium terms, it is advisable that *CR* set prices based on what the competition charges or even slightly low. Besides, since the company's focus is to target large clients to achieve economies of scale, it would be wise if *CR* gave discounts to consumers who ask for bulk orders. This would be particularly the case of hotels requesting *CR*

to replicate dozens or hundreds of bathrooms. Regarding the payment terms, *CR* should use one that protects the consumer and the company equally, asking for either a letter of credit or a documentary collection. In fact, if *CR* opts for cash-in-advance, this will drive away some customers that do not want to take such risks.

Regarding the **place** where customers can make a purchase, *CR* should make two distinct options available for its clients. On the one hand, customers could use *CR*'s mobile phone, social media, website, and email to send order requests directly to the company. On the other hand, clients should have the opportunity to physically buy directly from the French home improvement stores that partner with the company. However, since any *CR* product requires technical support for installation and is not a do-it-yourself project, the French stores will have no inventory. In fact, clients can go to the stores to see, choose, and order the products, but it is *CR* who will send the products directly to the customer's house after the French stores contact *CR* about the orders. Essentially, the client places the order with the French store, which is an intermediary between the final consumer and *CR*.

To effectively communicate with customers and **promote** the brand, *CR* should build a powerful website by partnering with an exceptional marketing agency and a professional photographer. The website should not only focus on displaying the products' characteristics, quality, and advantages but also validate the benefits the products will bring to clients. It should also show examples of past projects and have a detailed list of all the French home improvement stores partnering with the company. In fact, the company can use the website to generate awareness, interest, desire, and even action while reaching new audiences and building brand reputation. Moreover, since the company will not heavily invest in local marketing, exclusive to the French market, it should reinforce social networks such as Facebook, Instagram, and LinkedIn with more regular and original posts, as these are the platforms that can attract all *CR*'s customers. A simple

measure would be to always include the French language on the website and in all social media posts to make French clients feel closer to the brand.

Furthermore, *CR* should participate in local fairs and events and promote its products in decoration and construction French magazines to make the brand known to new potential customers. At a more advanced expansion stage, the company could partner with a local designer to create an exclusive collection to further connect customers with the brand. All the suggested strategies are explained in more detail in [Appendix 50](#).

Concerning **people**, although the production will be entirely made in Portugal, *CR* could provide training to the home improvement store's employees so that they feel comfortable explaining the product's specificities and prices to clients when confronted with technical questions. Also, *CR* should train the people dedicated to the installation service if customers ask *CR* to be responsible for that extra service. Since *CR* is advised to use indirect export, a local commercial agent will be required, as it will be the intermediary that facilitates transactions between *CR* and the clients. The commercial agent should be responsible for negotiating the prices and the contracts with clients and vendors on behalf of the company. Also, the commercial agent should coordinate the logistics regarding deliveries and installations of products (it is important to note that these are extra services, meaning that the partner will only have to be responsible for that if the client requests and pays a fee for these services). The commercial agent is also entitled to develop marketing plans to promote the products in France. Consequently, this will require intensive training for the retail partners to know in detail the product portfolio, its characteristics, the prices, the application types, how to proceed with the installations, and the options in terms of shapes, colors, patterns, and sizes.

## 9. Financial forecast

### 9.1. Assumptions

To be able to drive some insights regarding the success of internationalization in the future, the financial plan must be detailed ahead of time. Some assumptions need to be made because of a need for more information regarding the market or the company. A series of assumptions were created to derive the financial forecast for CR's entry plan in France. Additionally, the assumptions will be presented and explained in each financial plan chapter to enhance the explanation of these forecasts. Further, all are grouped in the appendix ([Appendix 51](#)) to be more visual.

### 9.2. Market size and market share estimation

First of all, the market size of the French solid surface industry was computed as was previously mentioned in the country's in-depth analysis. The values in thousands of US\$ are precisely the same. However, as the group will now start using the company's values and create more realistic predictions and a detailed plan for the future, it was a logical decision to start using euros (€).

Additionally, as is expectable, CR's entry market share in France will be relatively lower than the one already achieved in Portugal. To start, the market share will be based on the values provided by the company that reflect its exportation achievements. From 2023 onwards, it will be assumed that the company will focus its exportation strategy only in France, having all its international

revenues coming from that country. Further, as the company has a maximum capacity, it will continuously

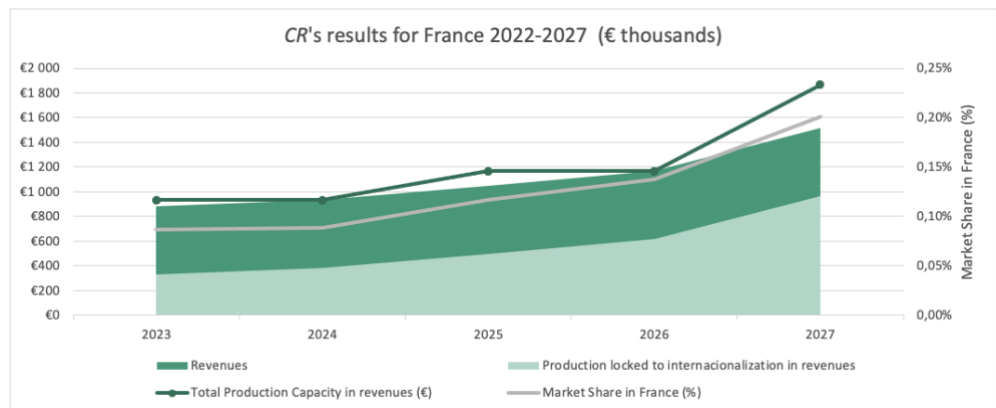


Figure 7: CR's results for France 2023-2027

increase its revenues until achieving it, which is estimated to first happen in 2024. After that, investments will occur to increase capacity. These moments of investments are clearly reflected in the market share and in its growth increases throughout the years (*Figure 7*). CR will end 2023 with a market share of 0,087%, and by 2027 it will be 0,2012%, more than double.

### **9.3.Operational plan**

#### **9.3.1. Revenue estimation**

By following the estimations already presented in the market size and market share estimations, we can see a positive revenue increase over the next five years ([Appendix 52](#)). All this is based on the company's values in 2022, making the group believe that following the growing solid surface market trend and the operational and investment plan will improve its results.

The revenue estimation is done by focusing on gradually improving the year's total production so that the company reaches its maximum production capacity, €933 476, according to the CEO. When this happens, the company should invest in machinery in the same year to continuously improve its capacity and revenues. In 2024 and 2025, we will see this happening.

Additionally, the revenue growth rate will also increase in the following years. With more capacity and experience in the country, the revenues are expected to reach higher growth rates compared to the present. In 2027, the company's results will surpass the value of revenues achieved in 2022, by more than the triple. With the flexibility provided by the contacts and new machinery, the growth rate will reach 57% in 2027.

#### **9.3.2. Cost Estimation**

Starting with **Material Cost**, we determined that until 2024 the value the company disburses on raw materials in each year will correspond to 20% of that year's revenues. This percentage was computed assuming the proportion of the material cost and sales level in 2021. We thought this percentage would remain constant given the firm's experience in exportation and the know-how of

dealing with the machinery installed. From then on, we assumed *CR* would take advantage of economies of scale and improve productivity (given the investment in workforce and technology). Thus, during 2025 and 2026, the cost estimation of materials used will correspond to 17% of annual sales and 15% in 2027 ([Appendix 53](#)).

In what regards the **cost of employees**, since the beginning of the internationalization plan, there will be the requirement to allocate some of the existing employees to operate exclusively to the French orders; nevertheless, these incremental expenses will be offset by the decline in the cost of workers assigned to the Portuguese market. This portion of the labor force will correspond to 33% of the total staffers matching the production locked to internationalization in 2021. During this period, *CR*'s full human capacity will be exhaustively utilized; therefore, the company won't incur extra costs with employees ([Appendix 54](#)).

Moreover, in 2025 and 2027, we stipulated that *CR* should hire six new workers (divided equally by both years) to manage the increasing expected demand and the recently installed machinery. We will assume that each worker will earn an annual salary base of €14 000 plus food allowance; the company will need to pay the social security contribution and the accident insurance. The Portuguese enterprise will spend roughly €78 000 in 2025 and 2026 and €156 000 in 2027 (a detailed analysis of the costs of employees can be seen in [Appendix 55](#)). Besides, a **commercial agent** will help *CR* establish potential clients and consolidate logistics and contracts. The cost of this employee is based on the average wage of commercial agents in France, so it is expected that the firm spends around €24 000 annually.

As mentioned, a remodel and trustworthy **marketing** strategy is a primary pillar of *CR*'s internationalization plan. Firstly, to increase the number of potential customers. *CR* should invest in google ads. The company will begin with a minor target, 10 additional customers per month (until 2024), raising it according to the effectiveness of this new advertisement tool (20 additional

customers per month from 2025 to 2027 and 50 onwards). A detailed analysis of costs with Google Ads can be found in [Appendix 51](#); note that the firm will spend €1 171 in google ads in 2023, a value that will progressively rise to €1 275 in 2027.

Moreover, to create stunning Google Ads (as well as the company's catalogs), *CR* should aim to partner with a professional photographer to develop these campaigns. It will be assumed that the photographer will work 30 days throughout the year, 8h per day, at an hourly cost of €25, totaling a cost of €6 000 per year.

Another essential aspect to consider is the **partnerships with local designers**. These agreements will help create new pieces in Portugal, attending to the French market tendencies. It will be assumed that the number of partnerships will grow from one in 2023 to 9 in 2027. Each partnership will cost €250 for an initial consultation, where *CR* discusses ideas and the scope of work; €3 000 to redesign the bathroom layout, and €2 500 for a high-end interior designer to design and specify the bathroom. A detailed analysis can be found in [Appendix 51](#).

Regarding the **fairs and events expenditure**, the cost of *CR*'s presence in events and fairs is based on the average price of the Netherlands and neighboring countries, divided by rental (25% of total cost), construction (40%), and staff costs (15%) summed with promotion costs (20% of total costs). *CR* is expected to be present in 2 fairs annually until 2025. From 2026, the company will increase its presence to 3 annual fairs ([Appendix 51](#)).

Further, for collaborations with **marketing agencies**, we will assume the same number of projects as the partnerships with local designers, costing €3 000 per marketing project. These marketing agencies will maintain the website by creating new features, namely, dynamic and interactive options for consumers to visualize *CR*'s products.

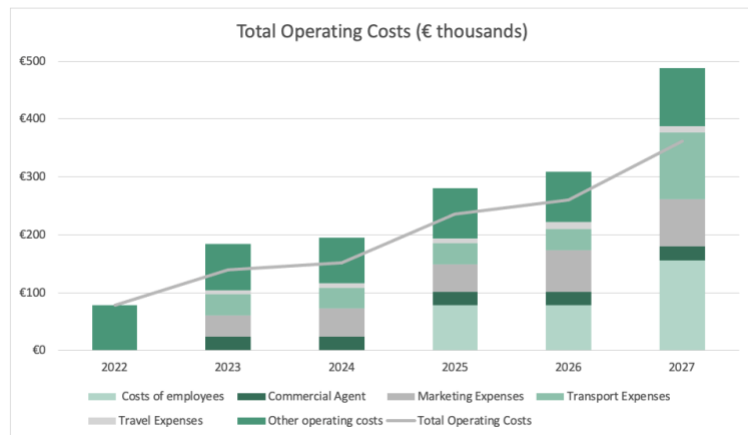
The last point of the marketing strategy is interconnected with publicizing *CR*'s products in well-known French **magazines specializing in bathroom furniture**, such as *Concept Bain* or *AD*,

bi-monthly magazines costing €100 every two months. Until 2025, CR will use one magazine to show its products; from 2025 onwards, it will use two.

This way, while in 2023, the firm will spend €37 000 in **marketing**, this value will grow 123% until 2027, where it is expected to spend €82 616 ([Appendix 56](#)).

Nonetheless, considering either **travel expenses** or **transportation costs**, firstly, we will assume that the board of CR will travel to France during each fair. We will also consider that the price per person will be 1 000€ and during each visit, four employees will represent the Portuguese company. Concerning the transportation costs, we will assume that CR will rent a 20 feet shipping container per month until 2026 with a fee of €3 000 per month; from 2027 onwards, the firm will use 60 feet shipping containers with a price of €6 500 monthly. The firm will also need to deal with other operating expenses, such as

possible transportation and installation costs that customers demand. The *Figure 8* and [Appendix 57](#) demonstrates the total operating costs related to the internationalization plan and the [Appendix 58](#) shows the project's Operating Cash-Flows.



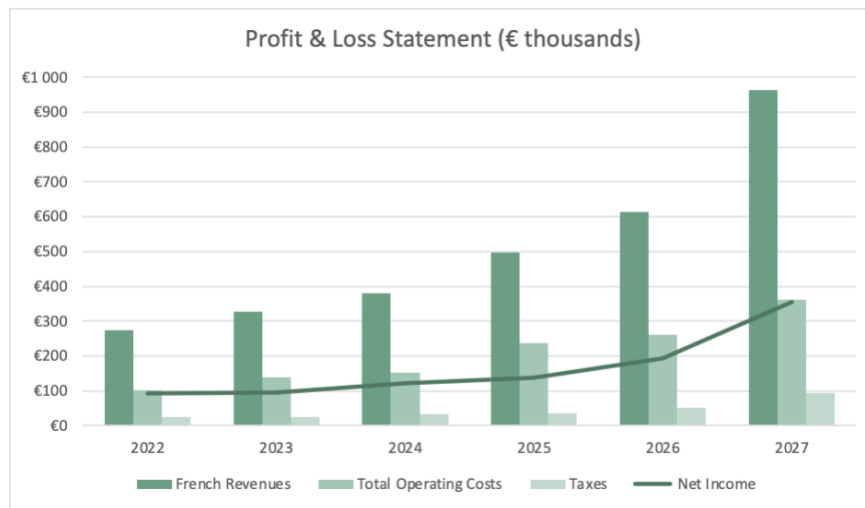
*Figure 7: Total Operating Costs*

### 9.3.3. P&L Statement

The P&L statement can be seen in *figure* below. Here it is possible to confirm, as was stated before, that the Revenues are increasing exponentially until 2027. The Operational Costs follow this trend. The difference between the revenues and the operational costs is growing too, which is reflected in the yearly EBITDA. Consequently, the EBIT increases too, and the taxes resulting

from the exercise follow the trend. As a result of the positive management of internationalization, *CR* will be obligated to pay taxes. As *CR* is an SME, the tax rate applicable for the first €25 000 will be 17%. Beyond this value, the results will be taxed at 21%, following Portuguese law (PWC Portugal, 2022).

Finally, as the Net Income results from these computations, it will also reflect the exponential increase over the years. From 2025 onwards, it is notable that this increase is far more relevant, reaching in 2027 the triple of 2022's result. This reflects the increase in revenues resulting from the increase in the maximum capacity of production. The investment made in CAPEX will be explained ahead, and the expected market demand growth is the main reason for this increase over time.



*Figure 8: CR's Profit & Loss Statement*

### 9.3.4. Operational risk analysis

Risk is a condition that people are used to feeling, but it can also be applied to companies. Risk is the exposition to a situation or moment where exists uncertainty(s). It can happen due to human error or mechanical failure. It can be internal to the organization or come from external sources that are out of control. *CR* will experience risks in going abroad (Holton 2004). It can come from

5 different areas/agents: people, processes, systems, external events, and legal conditions ([Appendix 59](#)).

**People's risk** refers to the possibility of human error. Due to the complexity of design and the skilled needed by the employees, this risk will be significant and have the highest weight among the 5 different sections. Additionally, when escalating the staff, the possibility of not finding the needed amount of skilled labor will decrease production and affect the firm's long-term growth.

Secondly, the **process risk** reflects the possibility of malfunctions and errors regarding the machinery locked to transforming the solid surface materials. Beyond this, the conservation and safekeeping of the materials in the warehouse must also be included. So, this is less likely than human errors, but due to the incapacity of transforming the materials by hand, this risk is the most impactful in the project's results.

Thirdly, the **system risk** reflects errors in the information of orders, inventory management, client info, and any other informatic problem that may occur. Nowadays, it is more and more unlikely that these problems will occur. Additionally, due to the low dependence on the systems and the easy and relatively fast capacity to identify the issues, the impact of this risk will be low.

Regarding the risks of the external event, these include any issues outside of the company's control. A delay in delivering the materials or problems after shipping the order to the consumer are dependent on the distributors, and they can create problems in meeting deadlines for *CR*. Additionally, any extreme events from natural or human causes are also included.

Finally, **legal risk** refers to the possibility of upcoming problems and restrictions based on regulations that will affect *CR*'s capacity to produce and export to France.

Overall, the internationalization project will have a **total operating risk of 7,68%**.

## **9.4. Investment plan**

### **9.4.1. Capital expenditure**

The company will be forced to improve its production capacity to proceed with the internationalization plan and achieve the expected market share and revenues. However, because right now the company is not entirely achieving its total production capacity, the investments in machinery investments will only be made years after the project starts; this is when it is expected to *CR* achieve its maximum production.

According to the CEO, to improve the capacity, the firm needs a new Oven and a CNC Machine to be able to thermoform the solid surface materials and create the most demanding and complex shapes. As the Oven is the company's bottleneck right now, this will be the first one to be bought for €50 000. This will allow the company to grow 12,5% and 11,1% of the revenues for 2025 and 2026, respectively. The new Oven will enable the company to improve its total production capacity to €1 166 845, €233 369 more than the current capacity.

Further, as this new maximum capacity is achieved in 2026, the company is then ready to acquire the CNC Machine. According to the CEO, this will cost €60 000, and with the new Oven, the total production capacity would double that of *CR*, reaching €1 866 953.

Additionally, to follow the marketing strategy previously presented, the Website will be another CAPEX investment made by the company. It is believed that it will cost €1 000 to be operational and will be acquired in the second semester of 2023 ([Appendix 60](#) and [61](#)).

### **9.4.2. Investment in net working capital**

Regarding the working capital, the inventories, payables, and receivables must be analyzed so it would be possible to assess the net working capital.

*CR* must preserve some inventories to decrease the risks of a lack of solid surface materials to initiate the manufacturing of its products. This would preferably be 10% of the estimated materials needed for the next year, accounted for in the “materials costs”.

Beyond this, as the production will all be done in Portugal, the suppliers will remain the same. This allows the company to work upon the experience and contact that already possesses with these entities and negotiate an average payable day of 60 days to keep some liquidity to process the operational and investment plan.

Moreover, the company’s average collection period politics will be completely different. As *CR* is selling abroad, the risk of clients not meeting payment deadlines or even not paying at all increases compared to Portugal. So, for the first years, the firm should apply a 0-day policy for clients to process the payment. However, after getting some experience and regular clients in France, *CR* can, from 2026 onwards, use a 30-day collection period policy ([Appendix 62](#)).

#### **9.4.3. Salvage value**

Regarding the two new tangible assets acquired, the Oven and the CNC Machine, their Salvage Value must be assessed to ensure the computations of the investment plan and the depreciations.

Due to the lack of information is assumed that, for both assets, the Salvage Value will represent 5% of the initial buying price. Additionally, both will have a lifetime of 15 years. With this in mind and as the project is to be continued for a long time in the future, the Salvage Values will only be accounted for after the group’s financial forecasts. So, until 2027, the project’s salvage value will be 0.

#### **9.5. Financing plan**

To decide if subscribing to new debt is needed for the execution of the internationalization project, the analysis of the free cash flows without the financing cash flows must be done ([Appendix 63](#)).

By looking at the operational and investment cash flows, we can see that *CR* achieves a yearly positive result. Additionally, as was mentioned before, the heaviest investments are only projected to happen from 2024 onwards, which means that the initial need for liquidity is low. So, the group sees no need to subscribe to more debt, meaning that the company has the capacity through its internal financing to finance the expansion ([Appendix 64](#)).

## **9.6. Financial viability**

To analyze the project's financial viability, some computations must be done based on the values forecasted in the financial planning. Profitability ratios, NPV, and IRR, as the Payback period too, can present some fascinating insights and pros regarding the success of *CR* entry and exploration of the French market in the following years ([Appendix 65](#)).

### **9.6.1. Profitability ratios**

To assess the capacity of the company to obtain positive profits, the Gross Margin (%), Operating Margin, Return on Sales (ROS), and Net Profit Margin were computed and analyzed ([Appendix 66](#)). These so-called profitability ratios will be used to assess if *CR* appears to be able to generate positive results based on its revenues, operational costs, depreciation, and net income.

In all these ratios, it is possible to verify that *CR*'s results are improving overall between 2023 and 2027. The Return on Sales increased by almost 10% over these 5 years. Additionally, the net profit margin is expected to reach approximately 37% by 2027, representing a promising result for the company, which will help it fund internal improvements, and, if that ends up being the case, other international expansions.

### **9.6.2. NPV**

To evaluate the net present value of this internationalization project beyond the free cash flows, a discount rate is needed to reflect the overtime risk of the project.

Due to the specificity of the solid surface industry, there was a lack of information to arrive at the **discount rate**. So, the group assumed that this rate would include the operational risk previously computed (7,68%) and the mean inflation predicted for the following years, which according to Statista, will be 2,40% (“France: Inflation Rate 1987-2027 | Statista”, 2022). Considering this, the group arrived at a discount rate of 10,08%.

Additionally, even though the computations only go as far as 2027, the project is expected to continue. To arrive at the most real NPV, the group computed it with **growing perpetuity** after 2027. The growth rate was assumed to be equal to the industry’s CAGR of 5,4%.

Finally, the **NPV for this project is €4 670,07**, which is a very promising result for *CR* ([Appendix 66](#)).

### **9.6.3. IRR**

The Internal Rate of Return (IRR) represents the rate at which the project will provide the return upon its initial investments. In *CR*’s case, as the exportation project is expected to generate positive returns every year, the IRR will not exist ([Appendix 66](#)).

### **9.6.4. Payback period**

Finally, the payback period reflects the period needed to achieve the project's break-even point relative to the initial investment. As also happens with the IRR, as there is no negative result in the initial periods, the payback period will not exist as the projects already provide profits in the first years ([Appendix 66](#)).

## **9.7.Sensitivity and scenario analysis**

The estimated valuation of the project relies on different assumptions, leading to some uncertainty in different scenarios. Therefore, to mitigate this risk and cover the company’s performance in distinct circumstances, a sensitivity and scenario analysis will be performed (CFI Team 2022).

Scenario analysis is the method of evaluating the expected value of a project following a specific change in the values of key aspects (Adam Hayes, 2022). Firstly, it will be considered a **pessimistic scenario** due to the worldwide economic recession. The worsening of the Russian-Ukrainian war increase uncertainty, which, aligned with climate conditions, will aggravate the increase in domestic industrial producer prices for energy in the EU, which reached its peak in 2022 (European Council of the European Union 2022). The overall price increase and uncertain environment will decrease the market demand in this sector. The economy's slowdown will impact *CR*'s other operating costs and material costs by 10% higher than the ones estimated in the base case; besides, the revenue growth rate is forecasted to be 15% lower than the one estimated in the base case. Despite reaching a negative value in 2026, the project's free cash flows turn positive in 2027, with an overall NPV of €1 630,72.

In the second place, a more **optimistic scenario** will be analyzed. France's economy rapidly recovers from the Covid-19 crisis and the end of the Russian-Ukrainian war, giving higher purchasing power to France consumers, leading to a successful market penetration rate by *CR*. Additionally, the end of the war will decrease energy costs in Europe. In this favorable environment, *CR*'s revenue growth rate is expected to be 15% higher than the one forecasted in the base case. Besides, material and other operating costs will be 10% lower than those in the base case. The positive overall economic outlook will result in a significantly greater NPV of €6 087,34.

Lastly, it is discussed a more **competitive scenario**. *CR* would face more difficulties entering the French market. Therefore, the revenue growth will be considered 7% lower than in the base case scenario. Additionally, the cost of raw materials is expected to increase by 7% higher than forecasted for the standard paradigm due to its increasing demand. In this case, the NPV is slightly lower than the one estimated in the base case. Nevertheless, the company can still achieve an NPV of €3 098,52 ([Appendix 67](#)).

Finally, a sensitivity analysis is performed (*Figure 10*). The study examines, under certain assumptions, how different values of an independent variable impact a specific dependent variable (Will Kenton, 2022). This analysis studies the effects of changes in the industry's CAGR, taken as the growth rate, on the NPV calculations. The impact of different discount rates is also analyzed. Despite the observed variations in NPV caused by changes in these variables, even in the worst-case scenario, with a growth rate of 3% and a discount rate of 12%, *CR* can achieve a positive NPV.

		Average Industry growth rate (%)				
		3%	4%	5%	6%	7%
Discount rate (%)	3 980,81 €					
	8%	€3 765,48	€5 031,87	€6 579,69	€9 675,32	€18 962,21
	9%	€3 107,40	€3 926,04	€4 812,91	€6 291,01	€9 247,22
	10%	€2 628,53	€3 193,38	€3 758,23	€4 605,51	€6 017,64
	11%	€2 265,40	€2 673,70	€3 059,32	€3 599,18	€4 408,98
	12%	€1 981,29	€2 286,93	€2 563,46	€2 932,17	€3 448,35

*Figure 9: Sensitivity Analysis*

As a result, after subjecting the project to several hypothetical scenarios, it's clear that *CR* can handle distinct circumstances, with a stable NPV, consistently above zero.

## 10. Overall conclusions, recommendations and limitations

**Conclusions and recommendations** - The underlying research revealed that *CR* is a solid surface manufacturing company that distinguishes itself from its rivals in Portugal by providing highly customized products and having one of the largest teams in the solid surface industry in Portugal. Due to its market-seeking motives and differentiation focus strategy, *CR* is prepared to expand, as proven by the SWOT analysis and by the 22 questions exclusively developed to assess global readiness. Nevertheless, there are significant challenges to consider, such as the firm reliance on WOM and *CR* still underutilizing digital and social networking platforms. After conducting a cluster and ranking analysis, the US, France, Switzerland, Germany, and the UK were identified as the top 5 countries with the highest potential for *CR* to expand. An in-depth analysis of each

country determined that the company should expand to France, mainly due to its contacts in the country and entry conditions.

Moreover, by analyzing the different **entry mode** strategies, it was concluded that direct export would be the best entry mode considering *CR*'s position. Concerning the **marketing plan**, the market was divided into segments, and target customers were identified by developing and examining four personas. As a result, it became clear that *CR* should target upscale consumers, in particular informed clients, willing to pay higher prices for products they recognize are worthwhile the price. In addition, it was determined that *CR* should, in the first phase, promote its products in French decoration and construction magazines and invest in social and digital marketing to raise its international brand awareness. Regarding the **financial results**, the operational, investment, and financing cash-flows were computed, and the resultant NPV reached promising results. The French internationalization project is expected to improve the company's results and lead to its internal development and growth. Even when multiple scenarios were computed, in all of them, the impact of *CR* going abroad was always positive. So, based on researched market values, *CR* insights, and some assumptions, the financial forecasts lead to believe that going to France is feasible and the best next move for this company.

Based on the findings presented above, we believe that the main **recommendations** for *CR*, in addition to implementing every suggestion we have made throughout this paper, are to create a powerful website, reduce its reliance on word-of-mouth marketing, and have a more organized internal structure because it is hard to implement an internationalization strategy without consolidating and formalizing documents and financial statements.

**Limitations** - We encountered difficulties that led to the identification of some limitations.

**Lack of detailed information about *CR*** – *CR*'s website is not yet operational, meaning that in order to have information about the company, we were only able to rely on conversations we

had with the CEO, which were by far the most used source of information and a few documents that *CR* gave us access to. These documents were two catalogs, a one-page presentation of the company, and an excel sheet with the company's revenues in 2021 and its forecasts for 2022. This was a limitation not only in positioning the company compared adequately to competitors but also limited the accuracy of our projections about the company. In fact, the financial results *CR* provided to us are only from 2021 and 2022, making it difficult to estimate the company's growth correctly in the coming years. One reason for the lack of information about previous years is that the company is relatively recent, having been founded in 2006, only created the Mineral Solid Surface Solutions in 2018, and only started focusing exclusively on solid surface in 2019. The project would have been more prosperous if more information had been provided to us, such as a more detailed portfolio of products, prices, details about their levels of personalization of products, information about their organizational structure, description of past projects, and a structured list of contacts such as suppliers, installation technicians, shipping companies, and other partners.

**Lack of data about competitors** – All analyzed competitors never displayed their complete portfolio on the website, nor the prices, making it difficult to make accurate comparisons between the companies. The main reason for that is because due to the versatility of the solid surface material, companies in this industry tend to allow always some degree of personalization, thus deviating from the catalog options and the pre-defined prices.

**Analysis based on estimations and assumptions** – To estimate values about the solid surface industry, we used several assumptions and proxy variables. Consequently, the revenues of the solid surface companies and the market sales potential for each country, as well as the financial forecasts, represent rough estimates. Thus, they must be interpreted with caution since, with so many necessary manipulations, the final results may be distorted from the real values we could not access.

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## 12. Appendices

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## Appendix 1 - Characteristics of the solid surface material

Design	
Pure white	With a high luminosity given by the high refractive index, it reaches a white level superior to 99%.
No apparent joints	Due to their composition, mineral composites allow the construction of parts with several elements through imperceptible unions, creating a product with no apparent joints.
Three dimensional designs	Developing a curved three-dimensional design and making it real is a unique possibility that mineral composites allow through thermocurvature.
Wide range of colours and patterns	In addition to pure white, mineral composites have the possibility of numerous colors and patterns.
Performance	
Low weight	The density of mineral composites allows the weight of constructed products to be reduced when compared to others, such as ceramics or natural stones.
Non porous	Mineral composites have zero porosity, making the absorption of water or fat less than 0.1%.
Anti-bacterial	With no need for antibacterial additives, its composition has a permanent effect that does not allow the proliferation or growth of bacteria and fungi on its surface.
100% recyclable	Ecological and 100% recyclable, it allows the products built to be reused.
Easy to clean	With the recommended maintenance, any situation of exceptional dirt, superficial burn or paint is easily removed, returning the initial appearance to the mineral composite.
Resistant to chemicals	High resistance to chemicals that makes it easy to use any cleaning product.
Resistant to fire	The material remains unchanged when exposed to high temperatures and does not allow fire to spread.
Resistant to extreme environments	The material remains unchanged over time and when exposed to extreme environments (e.g. marine environments, steam exposure, cold environments).
Resistant to bending, compression and impact	Allows greater durability of products built when subjected to intense wear or aggression.
Resistant to solar radiation	Due to its high resistance to UV rays, it can be used outdoors.
Food-grade	The material can be in contact with food.
Turnkey	Parts made of mineral composites allow them to be built in sections and later to be placed on site, making the dimensional limit for transporting large parts to be reduced or practically null.

## Appendix 2 - Income Statement

	31/12/2021	31/12/2020	31/12/2019	31/12/2018	31/12/2017	31/12/2016	31/12/2015	31/12/2014	31/12/2013	31/12/2012
L. Operating revenue (Turnover)	734 703	726 242	791 938	834 704	842 801	890 556	698 076	887 242	1 495 411	784 478
L. Material costs	147 724	217 320	300 330	332 967	376 791	508 237	364 966	600 520	1 131 382	584 171
L. Other operating items	238 984	137 662	168 498	200 318	184 813	163 993	126 362	132 804	170 178	101 497
L. Costs of employees	322 670	271 900	226 355	319 752	277 718	197 134	176 057	124 861	107 700	48 367
L. EBITDA	25 325	99 360	96 755	-18 333	3 480	21 191	30 692	29 057	86 152	50 443
L. Depreciation & Amortization	30 481	32 075	13 197	17 916	13 689	8 861	15 605	13 913	9 698	14 090
L. EBIT	-5 156	67 286	83 558	-36 249	-10 209	12 330	15 087	15 144	76 454	36 353
L. Financial P/L	-26 610	-3 923	-13 507	-13 525	-11 395	-6 689	-8 495	-11 712	-6 054	-11 203
L. EBT	-31 766	63 363	70 051	-49 773	-21 604	5 642	6 591	3 432	70 400	25 150
L. Taxes	3 691	9 281	5 804	6 723	5 324	1 616	2 539	2 959	8 746	3 010
L. Net income	-35 457	54 082	64 247	-56 497	-26 929	4 026	4 052	473	61 654	22 140

L. Cash flow	-4 865	86 313	77 583	-38 434	-13 240	12 887	19 402	14 259	71 352	36 230
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## Appendix 3 - Balance Sheet

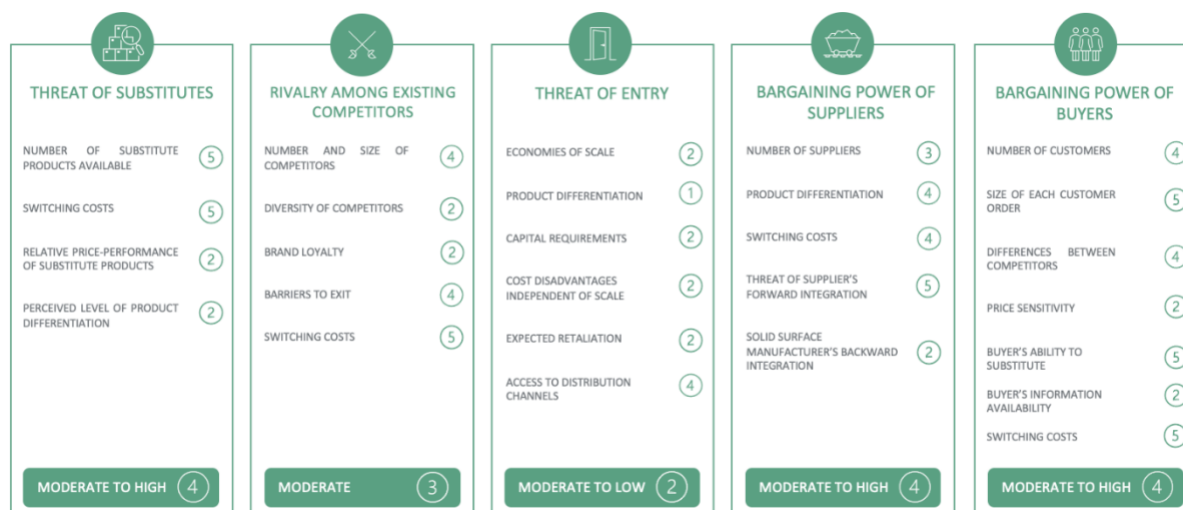
Assets	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Fixed assets	137 740	134 363	90 805	111 040	99 390	62 763	55 418	33 833	15 763	17 354
L. Intangible fixed assets	0	0	0	22	50	68	2 947	709	0	0
L. Tangible fixed assets	132 416	130 065	87 318	108 202	97 161	61 555	51 687	32 464	15 054	17 354
L. Other fixed assets	5 324	4 297	3 487	2 816	2 179	1 140	784	661	708	0
Current assets	567 411	627 357	477 759	467 368	531 144	402 372	367 291	413 906	447 712	495 952
L. Stock	442 222	412 508	348 284	354 659	363 142	298 064	254 287	233 881	283 088	251 757
L. Debtors	94 677	77 183	82 780	80 833	65 609	69 808	69 179	119 285	120 593	158 158
L. Other current assets	30 512	137 666	46 695	31 876	102 392	34 500	43 825	60 740	44 031	86 037
L. Cash & cash equivalent	3 791	44 988	9 205	6 096	85 614	24 032	9 824	35 895	37 536	71 675
<b>Total assets</b>	<b>705 151</b>	<b>761 719</b>	<b>568 564</b>	<b>578 408</b>	<b>630 534</b>	<b>465 135</b>	<b>422 709</b>	<b>447 739</b>	<b>463 474</b>	<b>513 306</b>

Liabilities & Equity	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Shareholders equity	108 906	156 288	93 425	29 597	90 023	50 087	55 453	57 606	39 529	-21 168
L. Capital	28 315	30 677	28 085	28 625	29 982	26 352	27 217	30 353	34 477	32 985
L. Other shareholders funds	80 591	125 610	65 340	972	60 040	23 735	28 235	27 254	5 051	-54 153
Non-current liabilities	128 109	185 289	3 546	224 378	89 101	10 994	50 784	9 703	91 986	379 608
L. Long term debt	128 109	185 289	3 546	224 378	89 101	10 994	50 784	9 703	91 986	151 362
L. Other non-current liabilities	0	0	0	0	0	0	0	0	0	228 246
L. Provisions	0	0	0	0	0	0	0	0	0	n.a.
Current liabilities	468 136	420 143	471 592	324 432	451 410	404 054	316 472	380 430	331 960	154 866
L. Loans	266 754	244 164	235 908	62 737	213 995	196 284	146 748	138 685	0	0
L. Creditors	123 342	81 662	137 378	134 799	144 875	102 039	59 747	45 485	150 938	135 673
L. Other current liabilities	78 040	94 317	98 306	126 897	92 539	105 731	109 977	196 260	181 022	19 193
<b>Total Liabilities</b>	<b>596 245</b>	<b>605 432</b>	<b>475 139</b>	<b>548 810</b>	<b>540 511</b>	<b>415 048</b>	<b>367 256</b>	<b>390 133</b>	<b>423 945</b>	<b>534 474</b>
<b>Total shareh. funds &amp; liab.</b>	<b>705 151</b>	<b>761 719</b>	<b>568 564</b>	<b>578 408</b>	<b>630 534</b>	<b>465 135</b>	<b>422 709</b>	<b>447 739</b>	<b>463 474</b>	<b>513 306</b>

## Appendix 4 - Global Ratios

Global Ratios	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
L ROE using Net income (%)	-32,56%	34,60%	68,77%	-190,88%	-29,91%	8,04%	7,31%	0,82%	155,97%	-104,59%
L ROA using Net income (%)	-5,03%	7,10%	11,30%	-9,77%	-4,27%	0,87%	0,96%	0,11%	13,30%	4,31%
L EBIT Margin (%)	-0,69%	9,29%	10,57%	-4,33%	-1,21%	1,38%	2,12%	1,69%	5,11%	4,63%
L Current ratio (x)	1,21	1,49	1,01	1,44	1,18	1,00	1,16	1,09	1,35	3,20
L Liquidity ratio (x)	0,27	0,51	0,28	0,35	0,37	0,26	0,36	0,47	0,50	1,58
L Debt to Equity Ratio	5,47	3,87	5,09	18,54	6,00	8,29	6,62	6,77	10,72	-25,25

## Appendix 5 - Five forces – calculation



## Appendix 6 - Five forces – overall picture



## Appendix 7 - Comparing Solid surface to other products

	Solid surface	Granite	Laminate	Marble	Stainless Steel	Quartz	Wood
Colors	5	5	5	4	2	4	3
One piece appearance	5	2	2	2	5	3	3
Scratch resistant	3	5	3	3	2	5	2
Heat Resistant	3	5	3	4	5	4	1
Easy to Maintain	4	4	4	2	4	5	2
Repairability	5	1	1	1	5	3	3
Renewable surface	5	2	1	2	3	3	5

Legend: 1 – Poor; 5 - Outstanding

## Appendix 8 - TOWS Matrix

		Internal Factors	
		Strengths (S)	Weaknesses (W)
External Factors	Opportunities (O)	<ul style="list-style-type: none"> <li>Production Capacity</li> <li>Final Products' Quality</li> <li>Warranty to consumers</li> </ul>	<ul style="list-style-type: none"> <li>Brand Image/ Recognition</li> <li>Highly dependent of <u>WoM</u></li> <li>Funding/ Financial Capability</li> </ul>
	Threats (T)	<p><b>S-O</b></p> <p><b>“maxi-maxi” strategy</b></p> <ul style="list-style-type: none"> <li>Take advantage of fairs, conferences, and events to expose its production capacity and level of quality.</li> </ul>	<p><b>W-O</b></p> <p><b>“mini-maxi” strategy</b></p> <ul style="list-style-type: none"> <li>Develop a website and increase presence on social media by showing the catalog and other unique stylish products.</li> </ul>
	Threats (T)	<p><b>S-T</b></p> <p><b>“maxi-mini” strategy</b></p> <ul style="list-style-type: none"> <li>Develop a training program to teach the new hirers, maintaining quality and improving efficiency overall.</li> </ul>	<p><b>W-T</b></p> <p><b>“mini-mini” strategy</b></p> <ul style="list-style-type: none"> <li>Look for an international peer to exchange quality and know-how for funding and brand image.</li> </ul>

## Appendix 9 - Global readiness - questionnaire and associated score

Question	Score (0-5)	Question	Score (0-5)
1. Is the foreign market similar to the domestic market?	5	12. Would export orders hurt domestic sales?	5
2. Is the End User of the product in the foreign market the same as in the domestic market?	5	13. Does the company have the financial resources necessary for export?	1
3. Is the product successful in the domestic market?	4	14. Does the company have in-house personnel with export related knowledge/experience?	2
4. Is the product unique?	3	15. Is international/global participation part of the Mission Statement of your company?	2
5. Does the product perform the same function in the foreign market as it does in the domestic market?	5	16. Is international expansion a part of the strategic business plan of the company?	4
6. Are the product use conditions the same in the foreign market as they are in the domestic market?	5	17. Would the company be willing to investigate export market opportunities?	5
7. Does the product need modifications to meet the needs of the customers in the foreign market?	4	18. Would the company be willing to attend and/or participate in Trade Shows abroad?	5
8. What is the stage of the product's life cycle in the home market?	2	19. Is the company willing to translate company literature into one or more foreign languages?	4
9. What is the stage of the product's life cycle in the international market?	1	20. Are the company's top competitors involved internationally?	1
10. Does the product require after-sales service?	3	21. Is the industry highly regulated?	3
11. Is the company in a position to provide after sales-service to its customers in the foreign market?	3	22. Is the company certified- ISO 9000 or other certification?	5

## Appendix 10 - Global readiness - suggested entry mode by score type

Score	Suggested Entry Mode
0 - 20%	Not ready to Export
20 – 30%	E - Commerce
30 – 40%	Indirect Export
40 – 50%	Contractual Arrangements
50 – 70%	Direct Exporting
70 – 90%	Foreign Marketing Presence
90 – 100%	Foreign Manufacturing

## Appendix 11 - List of initial variables for the country selection criteria

Market Size					
Code	Name	Unit	Year	Source	
1	Population ages above 15 years old	Number	2021	Self computed with 2 sources from the World Bank	
2	Ecommerce demand	Million US\$	2020	Statista	
3	GDP	US\$	2021	Data World Bank	
4	GDP per capita PPP	US\$	2021	Data World Bank	
Market Growth rate					
Code	Name	Unit	Year	Source	
5	Population growth rate	Annual percentage	2021	Data World Bank	
6	GDP per capita growth	Annual percentage	2021	Data World Bank	
Market receptivity					
Code	Name	Unit	Year	Source	
7	Cost to import, border compliance	US\$	2019	Data World Bank	
8	Imports of goods and services	US\$	2021	Data World Bank	
9	Imports of goods and services (%)	Percentage of GPA	2021	Data World Bank	
10	Container port traffic	TEU: 20 foot equivalent units	2020	Data World Bank	
11	Lending Interest Rates	Percentage	2021	Data World Bank	
12	Inflation, Consumer prices	Annual percentage	2021	Data World Bank	
13	Domestic Credit to Private Sector	Percentage of GDP	2020	Data World Bank	
14	New Businesses Registered	Number	2020	Data World Bank	
15	Firms using banks to finance working capital	Percentage of firms	2021	Data World Bank	
16	High-Technology Exports	US\$	2021	Data World Bank	
17	Lead Time to Import	Number (median days)	2018	Data World Bank	
18	Patent applications, nonresidents	Number	2020	Data World Bank	
19	Total Tax and Contribution Rate	Percentage of profit	2019	Data World Bank	
20	Individuals using the internet	Percentage of population	2020	Data World Bank	
21	Transport services	Percentage of commercial services imports	2020	Data World Bank	
22	Labour Force	Number	2021	Data World Bank	
23	Unemployment rate	Percentage of total labour	2021	Data World Bank	
Industry specific factors and indicators					
Code	Name	Unit	Year	Source	
24	People using safely managed sanitation services	Percentage of population	2020	Data World Bank	
25	High Tech Manufacturing Value Added	Percentage of manufacturing value added	2020	Data World Bank	
26	Stone and glass imports	US\$	2020	World Integrated Trade solution	
27	Mineral imports	US\$	2020	World Integrated Trade solution	
28	R&D expenditure	Percentage of GDP	2020	Data World Bank	
29	Researchers in R&D	Number per 1 million people	2020	Data World Bank	
30	Consumer spending per capita on furnishings, household equipment and routine maintenance of the house	US\$	2020	Statista	
Standard of living					
Code	Name	Unit	Year	Source	
31	Gini coefficient	scale 0 (= perfect equality) to 100 (= perfect inequality)	2019	Data World Bank	
Ease of doing business					
Code	Name	Unit	Year	Source	
32	Country risk	Number from 1 to 7	2022	Credendo	
33	Economic Freedom Index	Scale 0 to 100	2022	The Heritage Foundation	
34	Firms experiencing losses due to theft and vandalism	Percentage of firms	2020	Data World Bank	
35	Ease of doing business index	Scale 0 to 100	2019	Data World Bank	
36	Time required to start a business	Number	2019	Data World Bank	
37	Time spent dealing with the requirements of government regulations	Percentage of Senior Management Time	2020	Data World Bank	
Sustainability & Ethics					
Code	Name	Unit	Year	Source	
38	Sustainability & Ethics Index	Scale 0 to 100	2022	Sustainable development report 2022	
Cultural distance					
Code	Name	Unit	Year	Source	
39	Cultural distance	Scale 0 to 100	2022	Self computed with sources from Hofstede	

## Appendix 12 - Correlated variables & Reasoning for the elimination of the correlated variables

Variable 1	Pearson Correlation	Variable 2
Population	<b>0.982</b>	Labour Force
GDP	<b>0.924</b>	Imports of Goods and Services (US\$)
GDP	<b>0.957</b>	Patents Applications, non-resident
GDP per capita	<b>0.872</b>	Consumer spending per capita on furnishings, household equipment and routine maintenance of the house
Imports of Goods and Services (US\$)	<b>0.817</b>	Containers Ports Traffic
Imports of Goods and Services (US\$)	<b>0.891</b>	High-Tech Exports
Imports of Goods and Services (US\$)	<b>0.823</b>	Patents Applications, non-resident
High-Tech Exports	<b>0.968</b>	Containers Ports Traffic
High-Tech Exports	<b>0.807</b>	Labour Force
Individuals using the Internet	<b>0.841</b>	Sustainability and Ethics Index
Justification for Exclusion		
Labour Force	Labour force will be eliminated, since the variable is strongly correlated with more than one variable and more relevant variables providing similar information are being considered.	
Imports of Goods and Services (USD)	Imports of Goods and Services (USD) will be eliminated, since the variable is strongly correlated with more than one variable and more relevant variables providing similar information are being considered.	
Patents Applications, non-residents	Patents Applications, non-residents will be eliminated, since the variable is strongly correlated with more than one variable and more relevant variables providing similar information are being considered.	
GDP per capita PPP	GDP per capita PPP will be eliminated, since GDP and GDP per capita growth are being considered.	
High-Tech Exports	High-Tech Exports will be eliminated, since the variable is strongly correlated with more than one variable and more relevant variables providing similar information are being considered.	
Individuals using the Internet	Individuals using the Internet is being eliminated, since Sustainability & Ethics Index is more relevant to our industry.	

## Appendix 13 - Usefulness of the chosen variables

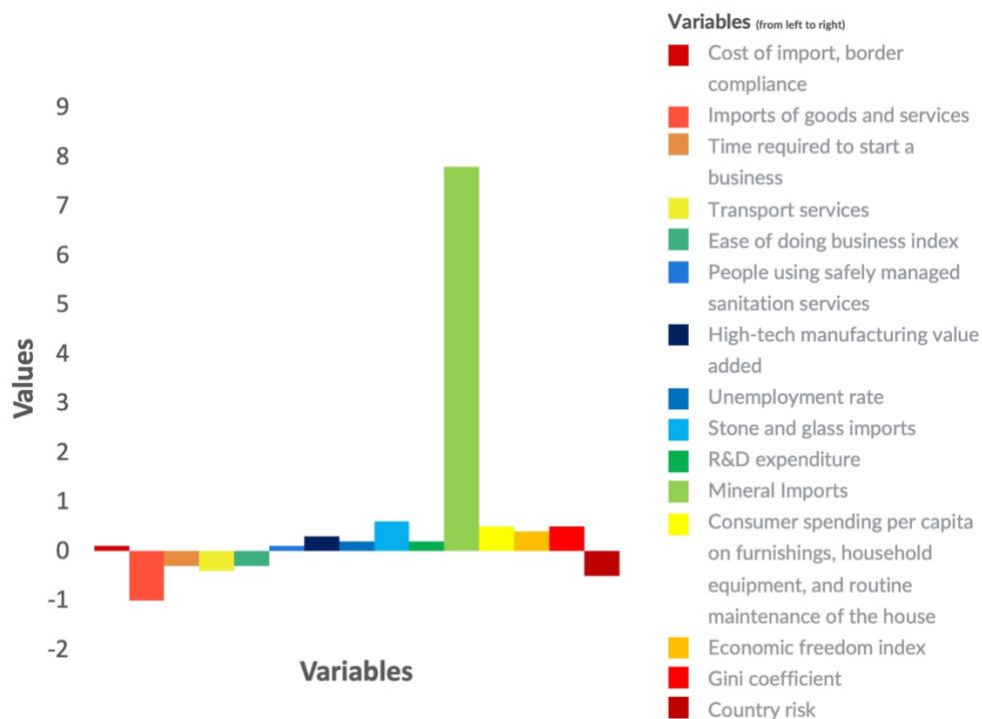
Market Size				
Code	Name	Definition	Usefulness of the variable	Weights
1	Population ages above 15 years old	Population that is already aware of household equipments and has developed some opinions and tastes for it	Evaluate how dense is the population that could be a client (aware of kitchen and bathroom equipments) in the country	2%
3	GDP	Measures the value of the final products and services produced in the country	Confere which countries have the most developed industries and in consequence, have the most powerfull markets	2%
Market Growth rate				
Code	Name	Definition	Usefulness of the variable	Weights
5	Population growth rate	Rate at which the population is growing in the country	Evaluate at which rate the population is growing to concluded if in the future, the country will continue to represent a big market for the company	2%
6	GDP per capita growth	Measures the growth rate at which annually the value of the final products and services produced in country increases	Evaluate how the GDP will grow per capita to evaluate if the country has a high economic power per person. So, the countries with the highest values represent the ones with higher buying power and richer population	2%
Market receptivity				
Code	Name	Definition	Usefulness of the variable	Weights
7	Cost to import, border compliance	Border compliance captures the time and cost associated with compliance with the economy's customs regulations and with regulations relating to other inspections that are mandatory in order for the shipment to cross the economy's border, as well as the time and cost for handling that takes place at its port or border	Evaluate at which extente the country is competitive to import. Low costs will make the country competitive and will ease the company's processes and decrease its costs.	4%
9	Imports of goods and services (%)	Represent the value of all goods and other market services received from the rest of the world	As the company will need to import materials or its on products produced in portugal, this variable shows how attractive is the country to import	3%
10	Container port traffic	Measures the flow of containers from land to sea transport modes, and vice versa, in twenty-foot equivalent units (TEUs), a standard-size container	To understand how easy is to import and export products in contaires, this variable will show to the if that already happens in the country and if it is a viable possibility for the company	2%
11	Lending Interest Rates	Lending rate is the bank rate that usually meets the short- and medium-term financing needs of the private sector	As the company will need to obtain funding, is important to evaluate if the leading rate of the country is attractive to the company	2%
12	Inflation, Consumer prices	Measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly	Depending on the value of inflation, the prices of the goods in the country will be higher or lower, attracting less or more customers, respectively. So, with this variable the company can evaluate in which countries the population will have na higher buying power and more open to new investments	2%
13	Domestic Credit to Private Sector	Refers to financial resources provided to the private sector by financial corporations, such as through loans, purchases of nonequity securities, and trade credits and other accounts receivable, that establish a claim for repayment	As the company will need to obtain funding, is important to evaluate if the level of domestic credit of the country is attractive to the company	2%
14	New Businesses Registered	The number of new limited liability corporations (or its equivalent) registered in the calendar year	By evaluating the number of new business registered, we can confer that if this value is high many companies enter in the country, which means that CR can enter to and will mostlikely be attractive too	2%
17	Lead Time to Import	Is the median time from port of discharge to arrival at the consignee	By knowing the lead time to import, the company can see in which country it can do its processes faster and so, receive faster too	2%
19	Total Tax and Contribution Rate	Measures the amount of taxes and mandatory contributions payable by businesses after accounting for allowable deductions and exemptions as a share of commercial profits	Evaluate if the taxes in the country will capture a big part of the revenues of the company, decreasing its profit	2%
21	Transport services	Covers all transport services performed by residents of one economy for those of another and involving the carriage of passengers, movement of goods (freight), rental of carriers with crew, and related support and auxiliary services	Evaluate if the transport services are used and have a good performance in the country, which if happens, makes the country a good option as the company will need to recover to imports and transportation inside the country too	3%
23	Unemployment rate	Refers to the share of the labor force that is without work but available for and seeking employment	Has higher the level of unemployment is, the fewer people are with buying power for the company, leading to a underperformance in sales. So, as lower this value is, the more appleing it is for CR	6%

Industry specific factors and indicators				
Code	Name	Definition	Usefulness of the variable	Weights
24	People using safely managed sanitation services	The percentage of people using improved sanitation facilities that are not shared with other households and where excreta are safely disposed of in situ or transported and treated offsite	As the company is interested in internationalize its bathroom catalog, the amount of people using its products correctly and with hygiene indicates if its market is powerful	6%
25	High Tech Manufacturing Value Added	Products with high R&D intensity, such as in aerospace, computers, pharmaceuticals, scientific instruments, and electrical machinery	Due to the level of technology needed for the company to produce its unique design pieces, the high tech manufacturing level in the country should be higher for the company be interested in internationalize	4%
26	Stone and glass imports	The revenue value spent per country in importing stone and glass materials	Solid surface products rely on raw stone materials such as ATH, by using this variable it is possible to access which countries have already contracts and contacts with "stone suppliers", and so were it is easier to produce and where the competition will be more effective	6%
27	Mineral imports	The revenue value spent per country in importing mineral materials	Solid surface products rely on raw mineral materials such as ATH, by using this variable it is possible to access which countries have already contracts and contacts with "mineral suppliers" and so were it is easier to produce and where the competition will be more effective	6%
28	R&D expenditure	R&D expenditures as a percent of GDP, expressed in billions of dollars. They cover both capital and current expenditures in four main sectors: business, government, higher education, and non-profits. Experimental development, applied research, and basic research all fall under the R&D umbrella.	Due to the fact of the level of innovation of this industry, it is important to know which countries are more attractive to innovative products, and by consequence, R&D research	3%
30	Consumer spending per capita on furnishings, household equipment and routine maintenance of the house	Based on country-specific estimates, this statistic shows the per capita consumer spending on furnishings, household equipment, and routine maintenance of homes worldwide in 2020. In this context, consumer spending refers to the domestic demand of private households and non-profit institutions serving households (NPISHs).	As CR products are all bathroom and kitchen hardware, the fit in this category. Knowing in which country exists the most spending in these products can represent an advantage	4%
Standard of living				
Code	Name	Definition	Usefulness of the variable	Weights
31	Gini coefficient	The Gini index measures how far the distribution of income (or consumption expenditures, in some cases) within an economy deviates from perfect equality.	As CR's products are considered expensive, the level of income and the economy of the country must be evaluated	6%
Ease of doing business				
Code	Name	Definition	Usefulness of the variable	Weights
32	Country risk	Measures the level of risk associated with having commercial and economical activities in a country	Due to the level of investment associated with this internationalization, CR should have in consideration the level risk of each country to decrease its potential losses	4%
33	Economic Freedom Index	Several factors are considered in calculating the Economic Freedom Index, including the rule of law, government size, regulatory efficiency, and open markets. All factors are rated on a scale of zero to 100 and are weighted equally. As a result of the Index, every country is rated in terms of its economic health and freedom.	In order to ease the start of the business, CR should look at which countries have more economic freedom. This would facilitate the entering in the new country	4%
35	Ease of doing business index	Ease of doing business ranks economies from 1 to 190, with first place being the best. Economies are ranked according to their aggregate ease of doing business scores. A high ranking (a low numerical rank) means that the regulatory environment is conducive to business operation.	As CR wants to start the business soon and looks for a place where it can do it without having to much regulations, this indicator can provide the best country to start	3%
36	Time required to start a business	The time required to start a business provides the calendar days needed to complete the procedures to legally operate a business. This allows selecting the fastest procedure, regardless of cost, if speeding up the procedure is possible.	As CR wants to start the business soon and looks for a place where it can do it, this indicator can provide the best countries to plan it	3%
Sustainability & Ethics				
Code	Name	Definition	Usefulness of the variable	Weights
38	Sustainability & Ethics Index	Countries are ranked by their overall score. This score measures total progress towards achieving all 17 SDGs. The score can be interpreted as a percentage of SDG achievement, with 100 being the maximum score.	Due to the fact that solid surface products are sustainable, entering a market that has those concerns is interesting for the company. This means that there are more consumers that will value that feature	2%
Cultural distance				
Code	Name	Definition	Usefulness of the variable	Weights
39	Cultural distance	The Cultural Distance represents the level of difference between the values and reality of other countries compared with Portugal	Due to the fact the CR is a SME, it will have more difficulty to adapt to other countries due to the lack of resources. If the country is similar with Portugal this will ease the process	3%

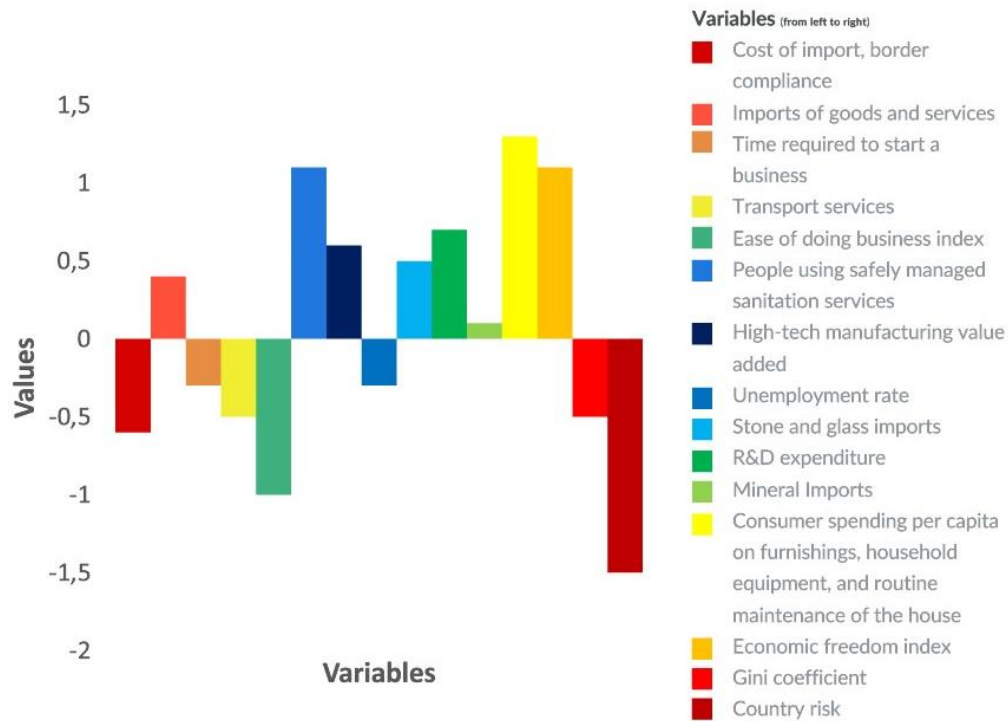
## Appendix 14 - Variables used for the Country Clustering Analysis

Variables used for the country clustering analysis
People using Safely Managed Sanitation Services
Stone and Glass Imports
Mineral Imports
Gini Index
Unemployment Rate
Cost to Import, border compliance
High-Tech Manufacturing Value Added
Consumer spending on household equipment
Economic Freedom Index
Country Risk
Imports of G&S (%)
Time required to start a business
Transport services
Easy of doing business Index
R&D Expenditure
Cultural Distance to Portugal

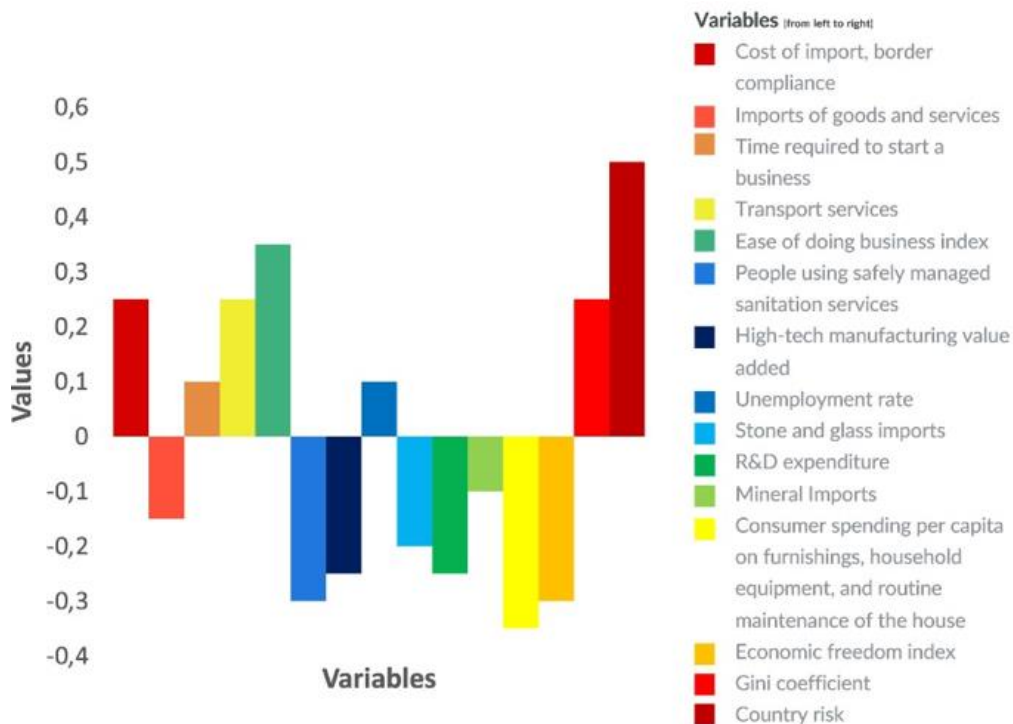
## Appendix 15 - Cluster 1



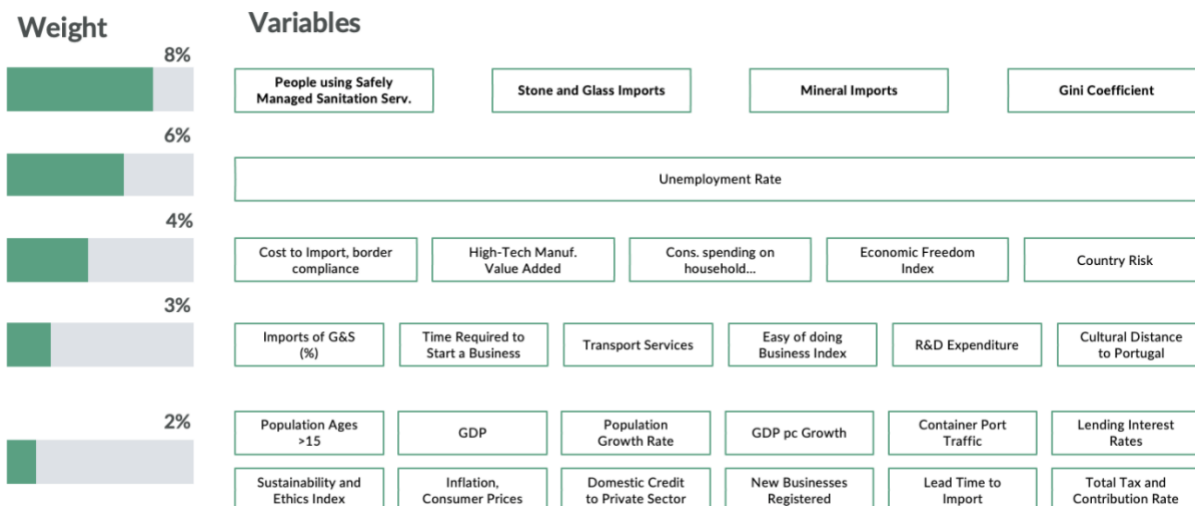
## Appendix 16 - Cluster 2



## Appendix 17 - Cluster 3



## Appendix 18 - Country ranking - weights given for each variable



## Appendix 19 - Country Ranking and Clustering

Countries	Cluster	Rank
Albania	3	153
Algeria	3	159
Angola	3	77
Argentina	3	133
Armenia	3	145
Australia	1	3
Austria	2	20
Azerbaijan	3	162
Bahamas, The	3	82
Bahrain	3	52
Bangladesh	3	113
Barbados	3	81
Belarus	3	124
Belgium	2	14
Belize	3	64
Benin	3	96
Bhutan	3	78
Bolivia	3	95
Bosnia and Herzegovina	3	141
Botswana	3	74
Brazil	1	50
Brunei Darussalam	3	98
Bulgaria	2	45
Burkina Faso	3	60
Burundi	3	121
Cabo Verde	3	92
Cambodia	3	69
Cameroon	3	87

Canada	2	19
Chad	3	161
Chile	2	10
China	2	5
Colombia	3	114
Comoros	3	86
Congo, Dem, Rep,	3	165
Congo, Rep,	3	150
Costa Rica	3	101
Cote d'Ivoire	3	75
Croatia	2	89
Cyprus	2	39
Czechia	2	34
Denmark	2	18
Djibouti	3	152
Dominican Republic	3	61
Ecuador	3	88
Egypt, Arab Rep,	3	118
El Salvador	3	91
Estonia	2	26
Eswatini	3	109
Ethiopia	3	154
Fiji	3	105
Finland	2	31
France	2	17
Gabon	3	158
Gambia, The	3	137
Georgia	3	130
Germany	2	6
Ghana	3	126

Greece	2	29
Grenada	3	90
Guatemala	3	54
Guinea	3	115
Guinea-Bissau	3	156
Guyana	3	102
Haiti	3	142
Honduras	3	58
Hungary	2	37
Iceland	2	25
India	3	53
Indonesia	3	55
Iran, Islamic Rep,	3	131
Iraq	3	148
Ireland	2	36
Israel	2	9
Italy	2	15
Jamaica	3	85
Japan	2	21
Jordan	3	68
Kazakhstan	3	111
Kenya	3	127
Korea, Rep,	2	11
Kosovo	3	108
Kuwait	3	46
Kyrgyz Republic	3	99
Lao PDR	3	110
Latvia	2	40
Lebanon	3	166
Lesotho	3	151
Liberia	3	116
Lithuania	2	23
Luxembourg	2	7
Madagascar	3	139
Malawi	3	160
Malaysia	2	32
Maldives	3	117
Mali	3	147
Malta	2	16
Mauritania	3	125
Mauritius	3	83
Mexico	3	41
Moldova	3	135
Mongolia	3	120
Montenegro	3	149
Morocco	3	84
Mozambique	3	70
Myanmar	3	123
Namibia	3	72
Nepal	3	129
Netherlands	2	12
New Zealand	2	28
Nicaragua	3	65
Niger	3	146

Nigeria	3	157
North Macedonia	3	163
Norway	2	27
Oman	3	80
Pakistan	3	138
Panama	3	49
Papua New Guinea	3	103
Paraguay	3	57
Peru	3	44
Philippines	3	38
Poland	2	30
Portugal	2	33
Qatar	2	24
Romania	2	47
Russian Federation	3	62
Rwanda	3	71
Samoa	3	104
Sao Tome and Principe	3	94
Saudi Arabia	3	66
Senegal	3	136
Serbia	3	134
Seychelles	3	79
Sierra Leone	3	144
Singapore	2	4
Slovak Republic	2	59
Slovenia	2	42
Solomon Islands	3	93
South Africa	3	43
Spain	2	35
Sri Lanka	3	73
Sudan	3	164
Suriname	3	128
Sweden	2	22
Switzerland	2	2
Tajikistan	3	122
Tanzania	3	132
Thailand	3	51
Timor-Leste	3	112
Togo	3	143
Tonga	3	97
Trinidad and Tobago	3	76
Tunisia	3	119
Turkey	3	56
Uganda	3	106
Ukraine	3	140
United Arab Emirates	2	13
United Kingdom	2	8
United States	2	1
Uruguay	3	63
Uzbekistan	3	100
Vanuatu	3	107
Vietnam	3	48
Zambia	3	67
Zimbabwe	3	155

## Appendix 20 - PESTEL analysis of the UK

Political
<ul style="list-style-type: none"><li>• <b>A new head of state after 70 years</b> - The UK is a constitutional monarchy and a parliamentary democracy. The head of state, His Majesty King Charles III, ascended to the throne in September 2022, while the British prime minister, Rishi Sunak, took over from the previous Conservative party leader Liz Truss in October 2022, 49 days after she became prime minister (BBC 2022b).</li><li>• <b>Suffering from political instability</b> - The UK presented a political stability index of 0.54 in 2021 (the 68<sup>th</sup> worldwide); this indicator achieved a minimum of 0.08 in 2018, and it's expected that the same value would decrease in 2022 given the previous point (The Global Economy 2022).</li><li>• <b>A trade-off between individual freedom and collective well-being</b> - Considering the political regime in 2021, the UK ranked 18<sup>th</sup> on the global democracy index with an index of 8.10. Despite the Government's commitment to protecting political freedoms and civil liberties, recently, there have been concerns over increasing government surveillance of residents and anti-immigrant sentiment in recent years (Freedom House 2022).</li><li>• <b>Corruption in focus</b> - The Corruption Perception Index presented a value of 0.78 (the 11<sup>th</sup> worldwide) (Transparency International 2021c).</li><li>• <b>"Fog in the channel, continent cut off"</b> - A referendum was held in June 2016 in which the British people voted to leave the EU. A withdrawal agreement came into force on February 2020 after the UK left the EU at midnight on January 31 2020. Member states are required to comply with Article 50 of the Treaty of the EU in order to withdraw from the Union (Council of the European Union 2022; la Moncloa 2016).</li><li>• <b>A new paradigm</b> - After the end of the Transition Period, from January 1, 2021, onwards, decision-making power shifts from the EU to the British Government. This paradigm shift increased the hypothesis that the differences between the four nations that make up the United Kingdom ought to be regulated and harmonized. Among other measures, the principle of mutual recognition was strengthened to ensure that a product that was legally manufactured or imported in one part of the UK and could be legally sold there could also be sold in any other part of the United Kingdom. Also, the non-discrimination principle prohibits direct or indirect discrimination against products and services from different regions. (Government of the UK 2022)</li><li>• <b>One of the most powerful nations worldwide</b> - The UK is one of the five permanent members of the UN Security Council and one of the founding members of NATO. The UK leads critical keys NATO efforts, such as cyber, emerging and disruptive technologies. Besides, this nation also takes a roll-on G-7 (Bureau of European and Eurasian Affairs 2022)</li><li>• <b>(Re)connecting the dots</b> - In the aftermath of Brexit, the United Kingdom has signed trade agreements with 71 countries and one accord with the European Union. Specifically, the UK-EU Trade and Cooperation Agreement prevents the introduction of tariffs (no taxes on goods) and quotas (limits on trade). Nevertheless, some new checks will be implemented at the border, such as safety checks and customs declarations. In addition to these agreements, one should highlight the UK-Canada Trade Continuity Agreement and the UK-Japan Comprehensive Economic Partnership Agreement. The UK is also currently negotiating to participate in the CPTPP, one of the most prominent trade agreements in the world. The UK-US Free Trade Agreement is also the first wholly new trade deal pursued by post-Brexit UK-US trade accounts for 16.6% of total UK trade, making it a significant trading partner (Tom Edgington 2022; UK Parliament 2021).</li><li>• <b>Trading across borders</b> - As part of the Trade and Cooperation Agreement, exports of goods must comply with the UK-EU rules of origin. To be eligible for the zero-duty rate, a certain level of processing must occur in the exporting country. Until 2021, the UK government will phase out border controls on goods imported from the EU. For example, customs declarations are now required for all interests. The Government planned to introduce the remaining rules by July 2022. These include different health certificates and sanitary and phytosanitary inspections (SPS). The Import Licensing Branch (ILB) (an</li></ul>

instance of the Department of International Trade) issues licenses for certain industrial goods (HM Revenue & Customs 2021).

- **The Government aims to support SMEs** - To make it easier for SMEs to work with the UK public sector as suppliers or subcontractors in its supply chains, the Foreign Commonwealth and Development Office has introduced several reforms. According to the agreement, the transport system will be continuously and sustainably interconnected to the air, road, rail, and maritime systems. Among other provisions, it ensures that EU and UK companies compete without compromising passenger, worker, and transportation safety rights (UK Parliament 2021).

### Economical

- **The UK's economy as an open and competitive market** - The economy of the United Kingdom is highly developed and market-oriented. Before Brexit, London was considered the financial hub of Europe. GDP is projected to increase by 3.6% in 2022. In 2021, the GDP of the UK achieved 2.19 MM GBP; this represented an increase of 7.4% compared with 2020; however, the GDP did not surpass its pre-pandemic level (it presented a value of 2.25 MM GBP in 2019) (Statista 2022a).
- **International businesses view the UK's market as highly attractive** - The United Kingdom occupies the 8<sup>th</sup> worldwide ranking in the Ease of Doing Business Ranking, and it registered an 83.50 DB score out of 100 on the 2020 Doing Business Report (World Bank Group n.d.).
- **The Economic Freedom Index is diminishing** - It is noteworthy that the UK's index in 2021 was 78.4 (22<sup>nd</sup> worldwide), down from 79.3 the previous year, a change of 1.13% (Knoema 2021).
- **Time required to start a business** - In the United Kingdom, this indicator presented a value of 4.5 days in 2019 (the OECD average points to 9.2 days) (Trading Economics 2022a).
- **Remains an attractive FDI destination** - Foreign direct investment (FDI) inflows to the UK have been negatively impacted by the UK's decision to leave the European Union, particularly from foreign investors seeking access to EU markets. Even so, the UK remained one of Europe's most important recipient countries for foreign direct investment (743,1 million pounds) (Passport 2022).
- **The impact of Covid and Brexit on the economy** - COVID and Brexit, together, led to an economic decline of nearly 10% in the UK in 2020, the largest among G7 countries. After the pandemic, the UK's emergency and fiscal assistance helped protect jobs and incomes and, combined with the rapid rollout of vaccines, enabled the country to recover relatively quickly by the time the invasion of Ukraine began. Moreover, the recent political turmoil and the resignations of Boris Johnson and Liz Truss have aggravated the uncertainty surrounding the British economy (International Trade Administration 2022).
- **A worsening scenario is still up front** - The spread of new, more infectious, or vaccine-resistant COVID-19 variants could force the UK to reintroduce containment measures. This could lead to a pessimistic scenario with a sharper decline in private consumption and business income and a fall in employment and wages. As a result, real GDP growth in the UK would slow to 2.6% in 2022 and fall by 4.5% in 2023 (Office for National Statistics 2022b).
- **The challenge of balancing public finances** - At 101.9% of GDP (£2,436.7 billion), the UK general government gross debt at the end of the second quarter of 2022 was 15.5% above the EU average (the 7<sup>th</sup> among the European countries) (OECD 2021).
- **Highest inflation in G7** - As a result of supply disruptions in energy and commodities due to the Russian invasion of Ukraine and Brexit-related constraints, the annualized inflation rate for May 2022 was revised upward to 9.1%. Consumer prices rose 10.1% in the 12 months to July 2022. The Bank of England has responded to rising inflationary pressures by raising its policy rate since December 2022, from 0.1% to 1.5% in August 2022. Increasing tax revenues and boosting investments are part of the Government's medium-term fiscal consolidation plan to return to a sustainable fiscal path. From April 2023, the corporate tax rate will be raised from 19% to 25%. Rising energy prices have prompted the UK government to put together an aid package worth GBP 9.1 billion (0.4% of GDP 2022-23). Following the Russia-Ukraine

conflict, additional measures were taken, such as a 12-month reduction in fuel tax (OECD 2021; Passport 2022).

- **International trade as an instrument of economic diplomacy** - The UK trade to GDP ratio for 2021 was 55.24%, a 1.19% decline from 2020. More recently, in July 2022, total imports increased by £9.8 billion to £207.6 billion, and total exports increased by £8.5 billion to £180.7 billion. To note that the three biggest export markets are the USA, Germany and Switzerland, while the three main import markets are China, Germany and the USA. Moreover, minerals, the raw material for the solid surface industry, accounted for the fourth and third major commodities exported (\$35 MM) and imported (\$70.3 MM), respectively (Office for National Statistics 2022b).
- **The UK-Europe trade balance** - The UK imported £24.1 billion of goods from the EU and exported £11.6 billion in return (Office for National Statistics 2022a).
- **The role of SMEs in the UK's economy** - SMEs account for 44% of employment and collectively turnover £2 trillion each year (Marketing Stockport 2022).
- **The construction sector continues to weigh on GDP** - The GVA of the UK construction industry was \$151 billion in 2021. Private residential construction grew by 6% last year. Both personal commercial and public non-residential construction contracted in the 12 months to February 2022 (International Trade Administration 2022a).
- **Housing will continue to dominate spending** - Over the 2022-2040 period, real estate will remain the most significant consumer spending tier; however, either healthcare or education goods and services will show the most robust spending growth over the forecast period (Passport 2022)
- **Lower unemployment than peers** - In terms of the unemployment rate, this value was 3.5% in the second quarter of 2022 (Office for National Statistics 2021b).
- **The role of individuals as economic agents** - Private consumption accounted for 60.3% of the nominal GDP in March 2022; in 2021, this value achieved 1 326 626 M GBP (an increase of 1.5% compared with 2020 and represented 63.8% of GDP) (CEIC Data 2022; Statista 2021b)

## Social

- **United Kingdom, an aged nation** - The British population accounts for 67 508 936 inhabitants (an increase of 0,34% compared to 2020). It is the 21<sup>st</sup> most populated nation in the world. According to the United Nations, around 83.2% of the UK's population lives in urban areas, and one-third lives in South East England. Moreover, Britain expects to live 81.65 years of life at their birth, and the nation presents a fertility rate of 1.65 (MacroTrends 2022a; 2022b).
- **A country with high purchasing power** - Besides being the 6<sup>th</sup> largest economy worldwide, the UK ranks 26<sup>th</sup> in terms of GDP per capita. PPP is considered a high-income economy (\$47 334.36). England had the highest GDP per capita in 2019 at nearly £34,000 (higher than the UK average). Scotland's equivalent parameter was approximately £30,600, but Northern Ireland and Wales had comparatively lower values: £25,700 and £24,600, respectively (Worldometer 2019).
- **At first, the Brexit, then Covid, and now the Russian invasion** - About 2% of adults in the United Kingdom reported seeking assistance from charities (including food banks) due to increases in the cost of living, according to the latest data. The main reasons cited were increases in food prices (92%), gas or electricity bills (78%) and fuel prices (46%). More than two-thirds (67%) of adults spent less money on non-essential items due to the rising cost of living, while 63% used less energy in their homes (Office for National Statistics 2021a).
- **A society rooted in a solid education system** - In terms of high-degree education (undergraduate and postgraduate programs), the total number of student enrolments increased by 9% from 2019/20 to 2020/21, achieving the number 2 751 865 students. To two courses with more applications are Business and Management and Subjects allied to medicine (HESA 2022).

- **The UK as a millionaires' hub** - The United Kingdom has a total number of millionaires of 2 849 344 (the 4<sup>th</sup> globally), representing 5.3% of the worldwide share of global millionaires (Statista 2021d).

### Technological

- **UK aiming to become fully digital** - The United Kingdom is one of the world's most significant information and communications technology (ICT) markets, ranking second in ICT spending per capita. Digital technology revenue in the UK was over \$240 billion in 2018, and approximately 100,000 software companies operate in the UK. Despite Brexit uncertainty, the UK ICT sector attracted more venture capital investment than any other European country in 2018 (International Trade Administration 2020).
- **The global competition for data** - The digital transformation market in the UK was valued at \$24.90 billion in 2021 and is expected to grow at a CAGR of 22.2% from 2022 to 2030. On the basis of this growth, one can highlight the recent improvements in the Internet of Things (IoT) boosted by the increasing use of mobile devices like smartphones. Further, the outbreak of the COVID-19 pandemic has prompted several companies to adopt cloud technology for remote working (Grand View Research 2021).
- **The UK as e-world** - In terms of digital inclusion/literacy, the 2019 Consumer Index showed that 22% of the UK's population did not have the digital skills needed for everyday life. According to predictions, 8% of the population will remain digitally disconnected by 2030. Despite this, 90% of households have access to the internet, and 78% of people use mobile devices to access the internet (NHS Digital 2022).
- **Forecast near-universal Internet use** - eCommerce is more prevalent in the UK than in any other country. The online market accounts for 30% of the total retail market in the UK (up from 20% in 2020), corresponding to annual revenue of \$120 billion. A total of 82% of the UK population made an online purchase in 2021. Besides, in a population of 68M, 67.61M people had a mobile phone, 65.32M were Internet users, while 53M people were active social media users (International Trade Administration 2022c).
- **Online segment continues to gain strength** - The growth of online retail is leading people to continue to search online for the best deals and prices. As a result, the percentage of money spent online has increased for the second year in a row. The internet is now consumers' first choice regarding where to search for fashion, health and beauty products. With the proliferation of social networks and mobile Internet access, social media marketing is a crucial channel where companies are most likely to increase their e-commerce investment in the coming years (International Trade Administration 2022c).
- **A new digital paradigm** - Thanks to the commitment and investment from both the UK government and UK network operators (private funding), the 5G is now available across the UK. Note that the cooperation between private and public parties was fundamental to developing this new technology. Likewise, with the 5G ready to be used, investors can now use this technology to envision new projects in areas that are staying behind in terms of technological advances, such as rural projects. On the other hand, they can leverage 5G to develop projects of augmented and virtual reality (International Trade Administration 2022b).
- **Government investing in innovation** - According to MarketLine, total expenditure on R&D stood at \$47.2 billion in 2019, an increase from \$42.7 billion in 2012 (Marketline 2021a).
- **Government action to promote R&D** - Given the UK's competitiveness in high-technology exports, the country needs to innovate in export-oriented sectors. It is considered that the promotion of R&D and innovation are fundamental to increasing productivity. Therefore, the UK promotes higher and more attractive incentives to encourage the adoption of R&D comparatively to its peers. In January 2021, the UK announced plans to increase public investment in R&D (22.0B pounds per year by 2024 up to 2026, which means an increase from 1.7% of GDP in 2017 to 2.4% of GDP by 2027) (Marketline 2021b).
- **Lack of skilled personnel** - Despite the quality of education and research institutions in the UK, there is a shortage of human resources in technological sectors. This is primarily due to various attractive opportunities available in foreign labor markets (Marketline 2021c).

### Environmental

- **Reducing CO2 production** - In 2019, the UK's net territorial emissions were estimated at 454.8 million metric tonnes of carbon dioxide equivalent (MtCO<sub>2e</sub>). For 2020, the same value was estimated at 405.5 million tonnes of carbon dioxide, mainly due to restrictions imposed due to the Covid 19 pandemic (a decrease of 9.5% compared with the previous year). Therefore, 2020 was the first year in the UK's history that electricity came predominantly from renewable sources: 43% of electricity came from a mix of wind, solar, and hydroelectric power (Department for Business 2021; National Grid 2021).
- **Ambitious environmental targets** - As part of its commitment to combating climate change, the UK has proposed to achieve net-zero emissions by 2050. The UK also pretends to keep global warming under the limit of 1.5 degrees Celsius. The country's new goal of reducing emissions by 78 percent by 2035 has also set a high bar for other major economies (U.S. Department of State 2022).
- **Leading the path to sustainability** - The UK government is committed to positioning the UK as the first net-zero finance centre and a global hub for sustainable finance activity with the Greening Finance Roadmap. The UK Infrastructure Bank provides £22 billion of infrastructure finance to combat climate change. In 2021, the UK Treasury sold £16 billion worth of Green Gilt to help finance green projects across the UK. The Government is also planning to introduce a detailed green taxonomy for government bonds to be published by the end of 2022 (International Trade Administration 2022e).

### Legal

- **Solid rule of law** - The UK obtained an overall score of 0.79 (the 16<sup>th</sup> worldwide) in 2021 regarding the World Justice Project (WJP) Rule of Law Index, which measures a country's rule of law performance (World Justice Project 2021a).
- **The pyramid of instances** - All criminal cases are first heard in the Magistrates' Court. More serious offences are referred to the Crown Court. Crown Court judgments are appealed to the High Court and possibly to the Court of Appeal or even the United Kingdom Supreme Court. Civil cases are usually heard in the County Court (Courts and Tribunals Judiciary 2022).
- **A legal system to serve economic agents** - The United Kingdom's legal and regulatory systems are consistent with international standards. The UK legal system provides a high level of protection and monitors anti-competitive practices (International Trade Administration 2022e).
- **Improving intellectual property regulations** - There is a high level of protection for intellectual property rights under the UK legal system. Patents, trademarks, and copyrights are protected by the Intellectual Property Office (IPO), part of the UK government. Among the obligations imposed on operators of commercial websites by the E-Commerce Regulations 2002, there are obligations to provide users with certain information about the website and its services (International Trade Administration 2022e).
- **Strong global influence** - The UK is a World Intellectual Property Organization (WIPO) member. It is also a member of the major intellectual property protection agreements: the Berne Convention for the Protection of Literary and Artistic Works, the Paris Convention for the Protection of Industrial Property, the Universal Copyright Convention, the Geneva Phonograms Convention, and the Patent Cooperation Treaty (World Intellectual Property Organization 2021).

## Appendix 21 - Possible contacts for *Criar Raízes* in the United Kingdom

Distribution Channels	
<ul style="list-style-type: none"> <li>• Corian</li> <li>• Krion Porcelanosa</li> <li>• Staron</li> <li>• Hi-Macs</li> </ul>	<ul style="list-style-type: none"> <li>• Overall, these four major players, across the worldwide sector of solid surface materials, all operate in Portugal, and they are all suppliers of <i>CR</i>. Moreover, they already work in the UK: Porcelanosa possesses 21 retail stores with a home-delivery system for example (Porcelanosa Group 2022). Thus, the Portuguese enterprise should leverage its network connections to expand its business to the British Market.</li> </ul>
<ul style="list-style-type: none"> <li>• New View</li> </ul>	<ul style="list-style-type: none"> <li>• New View Surfaces provides a full range of solid surface templating, fabrication, and installation services tailored to suit its individual customer's needs. <i>CR</i> should use this distributor since it guarantees the installation of products across the UK through a high-skilled workforce (New View Surfaces 2022).</li> </ul>
<ul style="list-style-type: none"> <li>• James Lathan</li> </ul>	<ul style="list-style-type: none"> <li>• Hi-Macs is one of the major suppliers of solid surfaces across the UK. This company's distribution is under the responsibility of James Latham. It is one of the UK's largest independent trade distributors of timber, panels and decorative surfaces. Operating from twelve branches throughout the UK and Ireland, the firm works with distributors, construction professionals, designers, and architects, enabling the production of the most demanding designs and construction projects (Latham Timber 2022).</li> </ul>
<ul style="list-style-type: none"> <li>• International Decorative Surfaces (IDS)</li> </ul>	<ul style="list-style-type: none"> <li>• <i>CR</i> should take advantage of the presence of IDS across the UK since it is the largest distributor of solid surface materials. With an annual turnover of more than 120 million pounds, IDS is acknowledged as the distributor with the best nationwide network that can cope with the dynamics of the industry, delivering on a Just in Time basis (International Decorative Surfaces 2022).</li> </ul>
<ul style="list-style-type: none"> <li>• Hilton</li> <li>• Marriott</li> </ul>	<ul style="list-style-type: none"> <li>• The Hospitality sector accounts for 6% of all the business across the UK, corresponding to 5% of the GDP. Being of the primary clients' categories, <i>CR</i> should take advantage of these two hotel chains. Hilton Worldwide and Marriott International are two companies operating two of the world's largest hotel portfolios. For the subsequent years, the construction of 309 projects (46,296 rooms) in the UK is projected, where both chains account for the majority of the investment (Dobson 2022; Statista 2022d)</li> </ul>
Government Agencies	
<ul style="list-style-type: none"> <li>• Business Support Helpline</li> </ul>	<ul style="list-style-type: none"> <li>• A governmental program where a firm can get advice and financial help from government-backed schemes (GOV.UK 2021b).</li> </ul>
<ul style="list-style-type: none"> <li>• Innovate UK.</li> </ul>	<ul style="list-style-type: none"> <li>• The UK's national innovation agency helps businesses grow by developing and commercializing new products once the company is registered in the UK (UK Research and Innovation 2022).</li> </ul>
<ul style="list-style-type: none"> <li>• British Institute of KBB Installation</li> </ul>	<ul style="list-style-type: none"> <li>• The British Institute of Kitchen, Bedroom &amp; Bathroom Installation can help <i>CR</i> in various ways, for example, through installers recruitment or compliance management (British Institute of KBB Installation 2022).</li> </ul>
<ul style="list-style-type: none"> <li>• AICEP Portugal Global</li> </ul>	<ul style="list-style-type: none"> <li>• An institution of the Portuguese government that promotes a competitive business environment (AICEP 2022).</li> </ul>

<ul style="list-style-type: none"> <li>• Autoridade Tributária e Aduaneira (ATA)</li> </ul>	<ul style="list-style-type: none"> <li>• Due to Brexit, companies from EU member-states must comply with an array of new conditions if they pretend to sell their products into British territory. Each firm must, firstly, register its Economic Operator's Registration and Identification (EORI) either in the UK or the home country. Then, it must register for VAT and appoint an Importer of Record (IOR). To ship its products, the producer must include the proof of origin of goods and complete a commercial invoice (UPS - Portugal 2021).</li> </ul>
<ul style="list-style-type: none"> <li>• The Portuguese Embassy in the UK.</li> </ul>	<ul style="list-style-type: none"> <li>• The Portuguese Embassy in the UK could be important in the initial stages of the internationalization process. This contact can be helpful for CR not only for acting as a bridge between the two markets but also because it could increase the brand's awareness by helping CR to find, for example, fairs and events.</li> </ul>
<ul style="list-style-type: none"> <li>• The British Embassy in Portugal</li> </ul>	<ul style="list-style-type: none"> <li>• The British Embassy in Portugal is also a valuable point of contact, providing information about the UK market and the necessary documentation for internationalization in that country, as well as making the appropriate connections between CR and potential customers and contacts.</li> </ul>
<b>Associations and Organizations</b>	
<ul style="list-style-type: none"> <li>• Federation of Small Businesses</li> </ul>	<ul style="list-style-type: none"> <li>• It is a UK business organization representing small and medium-sized businesses. CR should leverage the support from this association to hire new workers, engage with education providers, and train new talent close to the UK's government (Federation of Small Businesses 2021)</li> </ul>
<ul style="list-style-type: none"> <li>• Business Service Association (BSA)</li> </ul>	<ul style="list-style-type: none"> <li>• The BSA is a policy research organization working to promote the role of markets in raising standards in the delivery of services, either in the private or public sector. It brings new sources of investments which improve efficiency, flexibility, and cost-effectiveness. (Business Service Association 2022)</li> </ul>
<ul style="list-style-type: none"> <li>• Portuguese Chamber of Commerce in the UK.</li> </ul>	<ul style="list-style-type: none"> <li>• The Chamber of Commerce is a private business association that aims to advise Portuguese companies who wish to expand their existing operations into the UK market on how best they should proceed. CR could improve its market research and business development methods, as well as establish a distributor or agency network (Chamber of Commerce and Industry 2020b)</li> </ul>
<ul style="list-style-type: none"> <li>• Associação Empresarial de Portugal (AEP)</li> </ul>	<ul style="list-style-type: none"> <li>• AEP is the largest business association in Portugal, carrying out extensive work to support economic activities in various sectors and defend and promote the business community's interests in areas such as recruitment, internationalization, strategic planning and competitiveness (Chamber of Commerce and Industry 2020).</li> </ul>
<b>Banks</b>	
<ul style="list-style-type: none"> <li>• Caixa Geral de Depósitos (CGD)</li> <li>• Millenium BCP</li> <li>• Santander Totta</li> </ul>	<ul style="list-style-type: none"> <li>• CR should look firstly to banks that already operate in Portugal or the UK. During the last years, solid financial results allowed the banks to efficiently conceive loans and other services to companies which aim to expand their operations as CR pretends to do. In fact, Santander Totta also disposes of the International Desk and Local Banking services to treat the foreign clients as a British entity and specializes in its specific area (Santander Totta 2021).</li> </ul>
<ul style="list-style-type: none"> <li>• HSBC</li> <li>• Barclays</li> <li>• Lloyds' Banking Group</li> </ul>	<ul style="list-style-type: none"> <li>• Three UK-based banks are not only the largest in the country but also rank among the top 10 banks in Europe in terms of market capitalization. These banking corporations provide a range of accounts and services for companies, and they also offer finance and borrowing for business expansions or improving cash flow.</li> </ul>

<ul style="list-style-type: none"> <li>• OakNorth Online Bank</li> <li>• Airwallex</li> </ul>	<ul style="list-style-type: none"> <li>• <i>CR</i> should also take advantage of other financial institutions such as online banks: the OakNorth, a bank targeted to SMEs, helps businesses across all different industries thrive by funding their growth needs without restrictions in terms of the home country location. In fact, regarding Airwallex, its multi-currency account allows collecting payments from customers in the firm's preferred currency so the company can trade globally without the red tape and costless.</li> </ul>
<ul style="list-style-type: none"> <li>• Alternative Business Funding (ABF)</li> </ul>	<ul style="list-style-type: none"> <li>• ABF is a platform that matches SMEs with the best investment fund among an array of alternatives, approved by HM Treasury &amp; British Business Bank (Alternative Business Fundings 2022).</li> </ul>
<b>Fairs and Events</b>	
<ul style="list-style-type: none"> <li>• KBB Birmingham</li> </ul>	<ul style="list-style-type: none"> <li>• Last Edition: March 2022, at the National Exhibition Centre, Birmingham.</li> <li>• It is a biennial event and the UK's largest gathering of the world's best bathroom brands. This trade show increases <i>CR</i>'s opportunity to develop its network connections in the UK. It has showcased the latest product innovations and trends as well as created a unique environment to connect brands with hypothetical buyers and distributors (KBB Birmingham 2021).</li> </ul>
<ul style="list-style-type: none"> <li>• HIX Trade Show</li> </ul>	<ul style="list-style-type: none"> <li>• Last Edition: November 2022, at the Business Design Centre, London.</li> <li>• It's an annual event, and as the hospitality sector represents a significant component of <i>CR</i>'s total revenues, HIX Trade Show would be essential as it brings the hotel community together (HIX 2022).</li> </ul>
<ul style="list-style-type: none"> <li>• Surface Design Show (SDS)</li> </ul>	<ul style="list-style-type: none"> <li>• Last Edition: February 2022, at the Business Design Centre, London.</li> <li>• In an annual event with almost 200 companies, the SDS is the UK's leading event for architects and designers to explore and discuss solid surface material innovation. Although <i>CR</i>'s production facilities are in Portugal, this trade show will enable the acknowledgement of new production techniques and new models to be produced (The Natural Stone Show 2021).</li> </ul>
<ul style="list-style-type: none"> <li>• The Natural Stone Show (Hard Surfaces)</li> </ul>	<ul style="list-style-type: none"> <li>• Last Edition: June 2022, at ExCel, in East London's Royal Docks, London.</li> <li>• In the fast-moving field of surface design, the Natural Stone Show (Hard Surfaces) showcases the newest products and trends. All aspects of the manufacturing process, including design, specification, and procurement, are shown at the Hard Surfaces Event (The Natural Stone Show 2021).</li> </ul>
<b>Letters of Inquiries</b>	
<p>Regarding the Letters of Inquiries, <i>CR</i> has been contracted to develop kitchen countertops (4 000 pieces per year, according to the CEO). However, the Portuguese firm does not accept the requests due to the absence of production capacity.</p>	

## Appendix 22 – Leading solid surface brands and its correspondent parent brand

Sub-brand		Holding (or parent) Brand
Hi-Macs	»»»	LX Hausys
Avonite	»»»	Aristech Surface LLC
Corian	»»»	DuPont De Nemours, Inc
Staron	»»»	Lotte Chemical
n.a.	»»»	Wilsonart LLC
Hanex	»»»	Hyundai L&C
n.a.	»»»	Meganite
Kerrock	»»»	Kolpa
n.a.	»»»	Imbani
n.a.	»»»	Antonio Lupi
Krion	»»»	Porcelanosa

Note: n.a. means not applicable in the sense that those respective

## Appendix 23 – Additional general information about competitors

	Market Capitalisation (million \$ U.S.)	Number of employees	Country of Origin	Headquarters	Number of countries the company operates
<b>Lx Hausys (Hi-Macs)</b>	217	n.d.	South Korea	F1. 18-23, 98 Huam-ro, jung-gu, Seoul, 04637 Korea	More than 60
<b>Aristech Surfaces (Avonite)</b>	n.d.	682	U.S.	7350 Empire Dr Florence, KY 41042-2926 USA	n.d.
<b>DuPont de Nemours (Corian)</b>	33 300	28 000	U.S.	Chestnut Run Plaza 730, 974, Centre Road Wilmington, DE 19805, US	More than 40
<b>Lotte Chemical (Staron)</b>	n.d.	10 324	South Korea	14F-16F, Lotte World Tower, 300 Olympic-ro, Songpa-gu, Seoul	22
<b>Wilsonart (Wilsonart)</b>	n.d.	4 319	U.S.	13413 Galleria Circle, Ste. 200 Austin TX 78728	More than 100
<b>Hyundai L&amp;C (Hanex)</b>	n.d.	n.d.	Republic of Korea	Cheonho-Daero 1077, Gangdong-Gu 05340 Seoul, Republic of Korea	n.d.
<b>Meganite (Meganite)</b>	n.d.	n.d.	Taiwan	United States of America - 1461 S Balboa Ave, Ontario, 91761-7609	n.d.
<b>Kolpa (Kerrock)</b>	n.d.	n.d.	Slovenia	Rosalnice 5, 8330 Metlika, Slovenia	44
<b>Imbani</b>	n.d.	11 to 50	Spain	The Offices of Imbani, Alicante	More than 50
<b>Antonio Lupi</b>	n.d.	76	Italy	Via Mazzini 73/75, 50050 Stabbia Cerreto Guidi (Firenze) Italy	51 to 200
<b>Porcelanosa (Krion)</b>	n.d.	5000	Spain	12540 Villarreal (Castellón), Spain	144

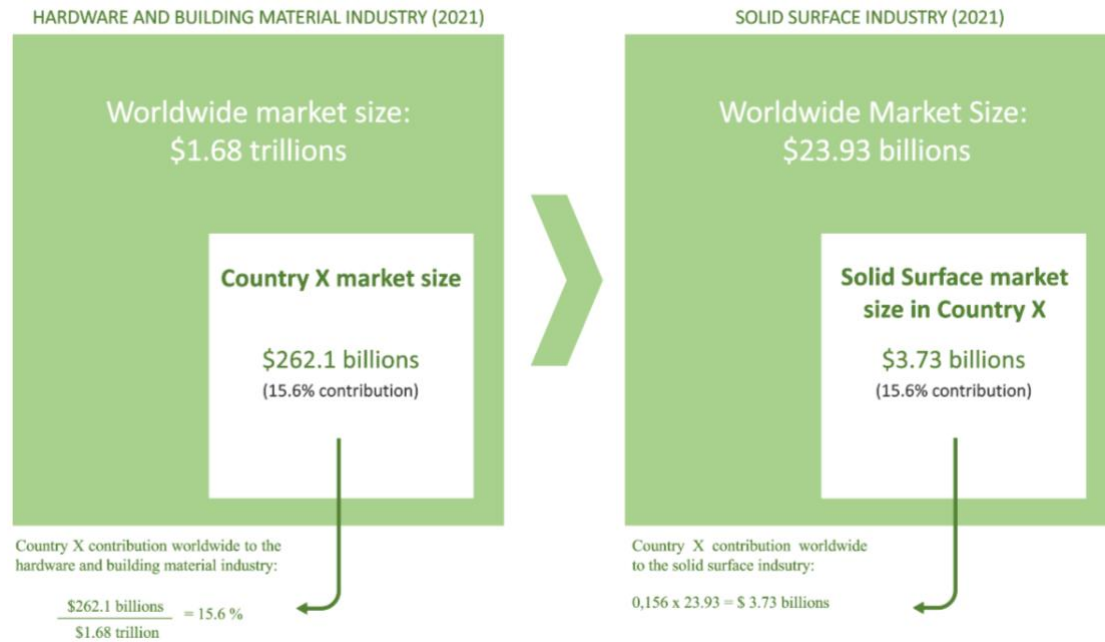
Source: Orbis and the official website of each company

**Appendix 24** – Proxy used for the market size of the parent brands

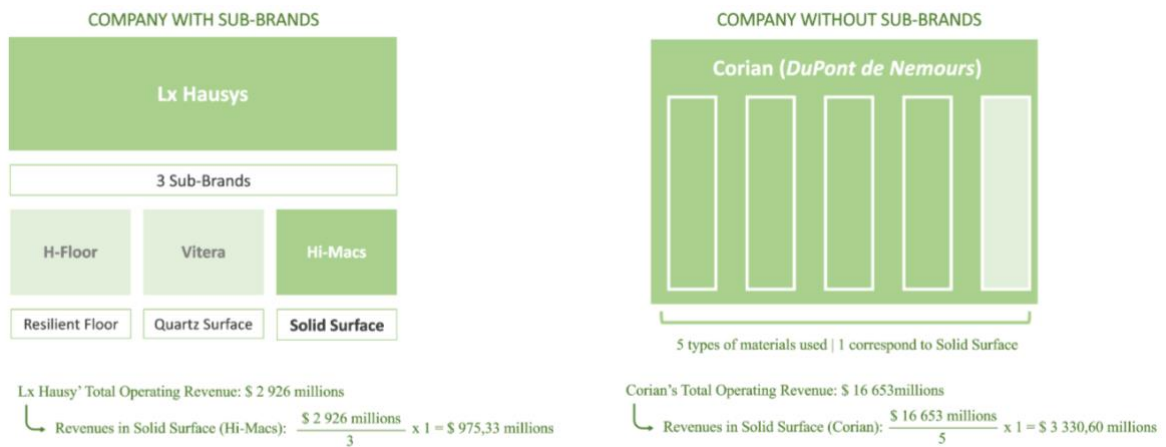
Variable used as a Proxy	
<p>The <b>Hardware &amp; Building Materials</b> sector includes a broad range of DIY products. Hardware encompasses a variety of goods related to doors, cabinets, floors, and garage accessories. Products connected to home safety and security are also featured in this category. Building materials comprise products connected to important home improvement components such as doors, walls, ceilings, and windows, as well as concrete, cement, and masonry. This sector excludes floor covering, which is featured independently in the Consumer Market Outlook's Furniture section. Construction and hardware services are also not included.</p>	
Reasoning for choosing this variable	
<p>This variable was assumed to be a good proxy for the competitors' parent brands since they all are building material companies that deal with a variety of different raw materials, such as solid surface. Since this sector is a niche industry, it would be convenient to use a variable that encompasses the manufacturing of solid surface products and other goods.</p>	
Source	
<p><i>Source:</i> <a href="https://www.statista.com/outlook/cmo/diy-hardware-store/hardware-building-materials/worldwide">https://www.statista.com/outlook/cmo/diy-hardware-store/hardware-building-materials/worldwide</a></p> <p><i>Most recent update:</i> Jun 2022</p>	
In-Scope	Out-Scope
<ul style="list-style-type: none"> <li>• Hardware</li> <li>• Building Suppliers</li> </ul>	<ul style="list-style-type: none"> <li>• Hardware Services</li> <li>• Construction Activities</li> </ul>

Assumptions and Rationality for Competitors' Data Collection
<p>When analyzing the major competitors of C.R., there was a big lack of information considering the Solid Surface industry. This industry is an emerging niche market, making it difficult to find financial data.</p> <p>By using the worldwide solid surface market size for 2020, and the CAGR expected between 2021 and 2027, we are able to compute the industry's total revenues for the evaluated period.</p> <ul style="list-style-type: none"><li>• <b>Assumption 1:</b> the country's percentage contribution to Solid Surface revenues will match the country's percentage contribution to the Hardware &amp; Building Materials revenues for each year.</li></ul> <p>To compute the market size of the solid surface industry for each country, we multiplied the worldwide solid surface market size by the countries' percentage contribution to the global Hardware &amp; Building materials industry.</p> <p>Nevertheless, in what regards the market size of the companies themselves, it is very common that companies create sub-brands dedicated to a specific raw material (for instance Solid Surface, Quartz, Laminate, or Natural Stones). Due to the lack of information in what regards the solid surface's sub-brands, we resorted to the parent brands' total operating revenues worldwide. To access the operating revenues regarding solid surface products, two assumptions was computed:</p> <ul style="list-style-type: none"><li>• <b>Assumption 2:</b> in the absence of sub-brands, the different materials used by the independent brand will be comparable to a sub-brand within the company.</li><li>• <b>Assumption 3:</b> the different materials among the portfolios' independent brands or sub-brands within the parent brands will contribute with the exact same percentage in the total operating revenue.</li></ul> <p>By dividing the company's total operating revenue by number of the sub-brands (or the number of the specific materials' divisions), and multiplying by the number of these internal division that reflect the use of solid surface, the operating revenue in solid surface will be achieved.</p> <p>Similarly, by diving the latest computed value by the worldwide solid surface market size in 2021, we obtained the market share of each sub-brand/material's division.</p> <p>To get the countries' contribution to a company's worldwide revenues, we multiplied the company's operating revenues on solid surface by the percentage contribution of each country in the industry (attending to <i>Assumption 1</i>).</p>
Visual representation of the assumptions together

- Visual representation of *Assumption 1*:



- Visual representation of *Assumption 2* and *Assumption 3*:



## Appendix 26 - UK's contribution to the hardware & building material industry

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
U.K. Revenues (in \$ U.S. billion)	17,0	15,3	13,2	14,5	15,5	15,2	16,5	17,0	15,2	16,6	16,9	17,2	17,5	17,8
Worldwide revenues (in \$ U.S. billion)	1320	1280	1330	1380	1550	1560	1600	1680	1580	1710	1750	1800	1840	1880
UK' contribution worldwide (in %)*	1,29%	1,19%	0,99%	1,05%	1,00%	0,98%	1,03%	1,01%	0,96%	0,97%	0,97%	0,96%	0,95%	0,95%

\* equals to U.K. revenues divided by worldwide revenues

Source: Statista, Appendix 23

## Appendix 27 - UK's contribution to the solid surface industry

	2020	2021	2022	2023	2024	2025	2026	2027	CAGR (in %) from 2021 to 2027
Worldwide Solid Surface market size (in \$ U.S. billion) *	22,70	23,93	25,22	26,58	28,01	29,53	31,12	32,80	4,6%
Share of the Solid Surface market size contribution for the H&B Materials industry (in %)	1,42	1,42	1,60	1,55	1,60	1,64	1,69	1,74	

UK' contribution to the solid surface industry (in \$ U.S. billions) **	0,23	0,24	0,24	0,26	0,27	0,28	0,30	0,31	3,7%
U.K.' contribution to the solid surface industry (in \$ U.S. millions) **	233,81	241,68	249,92	257,40	270,54	282,31	296,34	311,10	3,7%

\*based on the market size we got from 2020 and applying a 4,6% CAGR from 2021 to 2031 which was provided to us

\*\*based on U.K.' percentage contribution to the worldwide & building material industry (see Appendix 59)

## Appendix 28 - UK's contribution to the companies' parent brand's revenues in 2021

	Total Operating Revenues (in \$ U.S. million)	Total number of divisions of the parent brands	Number of solid surface divisions	Operating revenues in Solid Surface (in \$ U.S. million) *	Market share in the worldwide Solid Surface industry**	UK Revenues (in \$US million) ***
<b>Lx Hausys (Hi-Macs)</b>	2926,00	3	1	975,33	4,08%	9,85
<b>Aristech Surfaces (Avonite)</b>	129,00	12	3	32,25	0,13%	0,33
<b>DuPont de Nemours (Corian)</b>	16653,00	5	1	3330,60	13,92%	33,64
<b>Lotte Chemical Corporation (Staron)</b>	13392,27	27	1	496,01	2,07%	5,01
<b>Wilsonart (Wilsonart)</b>	1050,00	7	1	150,00	0,63%	1,52
<b>Hyundai L&amp;C (Hanex)</b>	856,00	8	1	107,00	0,45%	1,08
<b>Meganite (Meganite)</b>	13,20	1	1	13,20	0,06%	0,13
<b>U.S. Surface (LivingStone)</b>	35,00	2	1	17,50	0,07%	0,18
<b>Kolpa (Kerrock)</b>	56,20	3	1	18,73	0,08%	0,19
<b>Inbani</b>	5,83	13	3	1,35	0,01%	0,01
<b>Antonio Lupi</b>	43,43	14	1	3,10	0,01%	0,03
<b>Porcelanosa</b>	951,00	7	1	135,86	0,57%	1,37

\* equals to (total operating revenues/total number divisions)\*n° of solid surface divisions

\*\* equals to operating revenues in solid surface / Worldwide Solid Surface market size in 2021

\*\*\* equals operating revenues in solid surface multiplied by the UK' percentage contribution to the worldwide & building material industry in 2021 (15,6%)

Source: Orbis, 2021

## Appendix 29 - Smaller local company's profile

CDUK	With more than 40 years of experience, CDUK is a family-owned business. Since it became the exclusive distributor of Corian Solid Surfaces in the U.K., this distributor of solid surface materials has increased its brand awareness. The services and products offered by CDUK have expanded over the years, including products from numerous leading brands. To ensure that each step along the production chain is successful, the company offers its employees technical advice and training courses as part of its training and development program (CDUK 2022).
Ideal Surfaces	Ideal Surfaces, a solid surface materials fabricator, began in 2006 as a small family business near Leicester. Since the beginning, one point of distinction regarding the competition was the wide degree of personalization offered. It quickly achieved high acknowledgment patterns leading to supplying products to Buckingham Palace or the Royal Opera House. In 2008, Ideal Surfaces was awarded the DuPont Corian Quality Network Status ad; consequently, it received high recognition from other big players such as Hi-Macs, Krión, and Staron. At the beginning of 2019, the firm opened its newly renovated showroom (Ideal Surfaces 2022).
Interfab	Interfab is one of the U.K.'s leading acrylic and solid surface fabricators. The firm is a recognized fabricator of HI-MACS, Staron, Hannex, and Mistral. One competitive strategy that Interfab leverages to distinguish it from the remaining market players is its degree of personalization and customization: it reserves a personal service to each customer individually, including prompt pricing response to each request, either on residential or commercial projects. It possesses an array of colors and has won international awards for customer service and fabrication expertise (Interfab 2022).
Solid Surface Company	Solid Surfacing Company has been manufacturing top-quality products for almost three decades. Every project is tailored to the client's specifications, from a solid surface, laminate, or wooden bathroom or kitchen worktops to bespoke washrooms and solid surface vanity units. In addition, the firm has a factory showroom where clients can examine the products and get in touch with them before ordering (Venesta 2022).
Venesta	A total of twelve stone-like finishes are available from this British company. The company's solid surface products are manufactured by skilled craftsmen in order to create a seamless appearance. As a company, Venesta's brand awareness has been built on the basis of a commitment to conduct every project smoothly and with a keen focus on the needs of clients. Ingenuity, functionality, and beauty are the hallmarks of Venesta products (Venesta 2022).

**Appendix 30 - Competitor's profile**

<p><b>Lx Hausys (Hi-Macs)</b></p>
<p><b>Lx Hausys (Parent Brand):</b> LX Hausys is a publicly held company and a subsidiary (or sub-brand) of LG Corp. It is a manufacturer and marketer of building and decorative materials. The firm divides its business into Building &amp; Decorative materials, Industrial Film, and Automotive Products. The first category includes HI-MACS (Solid Surface), Viatera (Quartz surface), H-Flor (Resilient flooring), Industrial Film, and Automotive products. The company's key markets are the U.S., China, and Europe (Lx Hausys n.d.)</p> <p><b>Hi-Macs (Sub-brand):</b> Hi-Macs provides a wide range of products (sinks, baths, basins and shower trays) made of solid surfaces, suitable for a wide range of applications (kitchens, bathrooms, hospitals, hotels, restaurants, shops, among others.). All raw materials are guaranteed to be of superior quality thanks to Hi-Macs' access to the high-tech infrastructure and development experience of LX Hausys. Hi-Macs' acrylic is produced in its own factories, ensuring quality from start to finish (Hi-Macs n.d.).</p>
<p><b>DuPont de Nemours &amp; Company (Corian)</b></p>
<p><b>DuPont de Nemours (Parent Brand):</b> DuPont de Nemours is a global chemical group founded in 1802 in Delaware, USA. With more than 100 featured brands, DuPont operates in twelve different industries, with a wide range of product lines. The chemical and pharmaceutical manufacturer is known for continuously investing in technological improvements and innovations, resulting in a complex network of Innovation and R&amp;D Centres around the world. DuPont is the number one in market-based innovations, proposing distinct products and new patents yearly. DuPont is present in more than forty countries, with nine locations, in Germany. ("Du Pont" n.d.)</p> <p><b>Corian (Sub-brand):</b> DuPont created, in 1967, Corian, the first brand of solid surface material. The sub-brand material has broad areas of applications such as kitchens, furniture, and hotels. Beyond solid surface material, the featured brand commercializes Corian Quartz surfaces and Corian Endura High-Performance Porcelain. As a DuPont featured brand, Corian is placed in more than ninety countries worldwide ("Corian" n.d.).</p>
<p><b>Lotte Chemical (Staron)</b></p>
<p><b>Lotte Chemical (Parent Brand):</b> Lotte Chemical, founded in 1976 in Korea, is one of the top 7 chemical companies worldwide and the national leader in the chemical sector. The group offers an extensive portfolio of products, divided into two categories: Basic Chemicals, varying from Polyolefin, Monomers, and Aromatics, and Advanced Materials, which include more specialized materials such as Construction &amp; Interior Materials and Water Treatment Membranes for clean and safe water. These last sets of specialized materials contain numerous applications counting home and energy appliances, among others. Overall, the company continuously invests in R&amp;D and provides sustainable and technological solutions for its customers. The group is present in 22 countries with Manufacturing corporations, Overseas Branch &amp; Sales Corporation, or both. Regarding the specific countries in consideration, the company has Overseas Branch &amp; Sales Corporation in US and Germany. (Lotte Chemical n.d.)</p> <p><b>Staron (Sub-brand):</b> Staron is Lotte Chemical's solid surface material brand. Staron is recognized for its product quality, application amplitude, and design variety; all applied to the construction sector. The brand has six offices in each continent and more than 180 distribution channels. Beyond this, Staron carries many partnerships with well-known corporations. (Staron n.d.)</p>

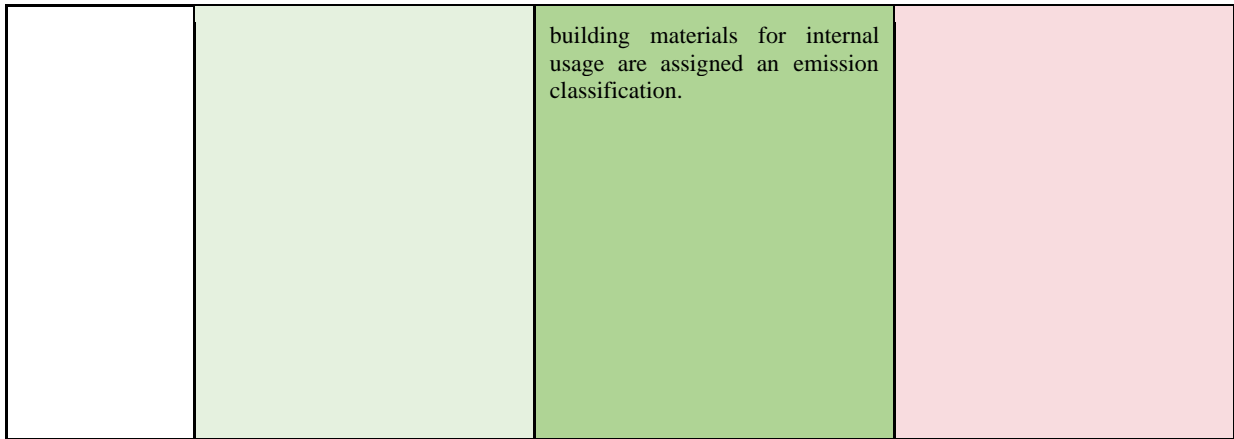
## Appendix 31 – Strengths and weaknesses of competitors

	Hi-Macs	Corian	Staron
<b>Range of application</b>	<p>14 types of applications</p> <ul style="list-style-type: none"> <li>• Kitchen</li> <li>• Bathroom</li> <li>• Healthcare</li> <li>• Hotels</li> <li>• Restaurants</li> <li>• Indoor claddings</li> <li>• Shops</li> <li>• Offices</li> <li>• Outdoor</li> <li>• Public spaces</li> <li>• Furniture</li> <li>• Marine industry</li> <li>• Educational places</li> <li>• Airports</li> </ul>	<p>17 types of applications</p> <ul style="list-style-type: none"> <li>• Kitchen</li> <li>• Bathroom</li> <li>• Healthcare</li> <li>• Hotels</li> <li>• Restaurants</li> <li>• Indoor claddings</li> <li>• Shops</li> <li>• Offices</li> <li>• Outdoor</li> <li>• Public spaces</li> <li>• Furniture</li> <li>• Marine industry</li> <li>• Educational places</li> <li>• Airport</li> <li>• Art objects</li> <li>• RV countertops</li> <li>• Railway stations</li> </ul>	<p>14 types of applications</p> <ul style="list-style-type: none"> <li>• Kitchen</li> <li>• Bathroom</li> <li>• Healthcare</li> <li>• Hotels</li> <li>• Restaurants</li> <li>• Indoor claddings</li> <li>• Shops</li> <li>• Offices</li> <li>• Outdoor</li> <li>• Public spaces</li> <li>• Furniture</li> <li>• Marine industry</li> <li>• Educational places</li> <li>• Art objects</li> </ul>
<b>Variety</b>	<p><b>Variety of colors (101 colors)</b> - Hi-Macs has a color book with 101 colors separated into 11 collections, each having a specific finishing (for example, a shimmery collection or a collection imitating natural stones). No matter what color is chosen, they are all 100% homogeneous</p> <p><b>Variety of texture and patterns</b> - When exposed to light, certain HI-MACS colors and thicknesses display a modest translucency. With its transparent qualities, HI-MACS is ideal for lamps and other lighted furniture.</p> <p><b>Variety of catalog products</b></p> <ul style="list-style-type: none"> <li>• 21 basins</li> <li>• 19 sinks</li> <li>• 3 bathtubs</li> <li>• 3 shower trays</li> <li>• 14 edge-treatments</li> </ul>	<p><b>Variety of colors (97 colors)</b>- Corian® provides a broad color palette, with 97 shades ranging from saturated solids, moody darks, bright, bold, subtle whites and neutrals, pastels, earthy hues, and blacks. The R&amp;D laboratories of DuPont developed the DeepColor™ Technology, committed to developing darker solid surfaces that provide richer, more dramatic, and long-lasting aesthetic colors. All colors are organized among 10 main categories (for example, one collection focused on imitating wood's varied graining and rich colors, another dedicated to whites or pastels)</p> <p><b>Variety of texture and patterns</b> - Corian® colors come in a wide range of effects, including veining, translucency, and varying degrees of graining. For instance, Corian® provides a unique line of multi-dimensional, carved, and textured walls designed by Mario Romano.</p> <p><b>Variety of catalog products</b></p> <ul style="list-style-type: none"> <li>• 21 basins</li> <li>• 23 sinks</li> <li>• 3 bathtubs</li> <li>• 2 shower trays</li> <li>• 19 edge-treatments</li> </ul>	<p><b>Variety of colors (96 colors)</b> - Staron provides a vast color spectrum amounting to 96 colors. The Staron range of colors is divided into 10 groups</p> <p><b>Variety of texture and patterns</b> - Staron® Solid Surface comes in 150 patterns (plain colors, marble and stone effects, among others)</p> <p><b>Variety of catalog products</b></p> <ul style="list-style-type: none"> <li>• 16 basins</li> <li>• 16 sinks</li> <li>• 12 edge-treatments</li> </ul>

<p><b>Degree of personalization</b></p>	<p>The brand does not offer the possibility for individual customers to tailor the products according to their personal designs and preferences.</p> <p><b>Standardized sheet format-Hi-Macs</b> offers a standardized set of sheet formats. Special format sheets are only available in specific colors, with minimum quantities required.</p> <p><b>The endless design possibilities are applied to huge projects</b> in different sectors. Commonly, the highest levels of customization are reached in bigger projects, such as airports, bus stations, and work offices.</p>	<p><b>Ample flexibility for product installation:</b> sinks can be either under-mounted or beveled, mounted flush or stepped down; include or not a backsplash.</p> <p>Corian has a large variety of inlays and edge treatments.</p> <p><b>Customers can do their own color plaque</b> by matching a color sample, a fabric strip, a paint chip, a color code, and a logo.</p> <p><b>Possibility of customized sheets and shapes-</b> Corian provides a wide range of sheet thicknesses and sizes.</p> <p><b>Bespoke shapes</b> based on customers' unique designs.</p>	<p>More than 55000 <b>customized color solutions.</b></p> <p><b>Standardize sinks and bowls:</b> Staron's portfolio does not include customized sinks and bowls. Additionally, these two products are only available in a set of pre-defined colors.</p> <p><b>The brand provides exclusively two mounting options:</b> seam and under mount.</p> <p><b>The highest levels of personalization are only reached in greater projects</b> such as public buildings, and hotels, among others.</p>
<p><b>Distribution channels</b></p>	<p>The company focuses on indirect sales, as it only uses distributors and does not have its own stores. These distributors are spread across all major economies and their number varies depending upon the dimension of the country.</p> <p>In France it has 4. Additionally, the company has also showrooms to present examples to its clients. In Paris it has 1.</p> <p>In Germany it has 4. Additionally, the company has also showrooms to present examples to its clients.</p> <p>In Switzerland it has 1. Additionally, the company has also showrooms to present examples to its clients.</p> <p>In UK it has 10. Additionally, the company has also showrooms to present examples to its clients.</p> <p>In the U.S., the company sells mainly through The Home Depot stores having a strong capillarity in each state. For example, in New York, the company has 97 home center stores that sell their products</p>	<p>Corian has a vast network of distributors in France. Nowadays, by looking at its website, Corian presents more than 60 in the country.</p> <p>Corian has a vast network of distributors in Germany. Nowadays, by looking at its website, Corian presents more than 100 in the country.</p> <p>Corian on its website alerts for the fact that if the consumer is from Switzerland, he should use and make his demand from the website of one of the neighborhood countries (Germany, France, or Italy). By using the distributors located close to the frontiers, Swiss companies can access Corian products.</p> <p>Corian has a vast network of distributors in UK. Nowadays, by looking at its website, Corian presents more than 150 in the country.</p> <p>Corian is present in 20 states of the U.S., and in all of them, it has accords with many distributors and manufacturers to develop and create innovative design pieces.</p>	<p>The company has an office from where it commands and is handling all the European countries and more. It is present through distributors and some manufacturers in both France, Germany, Switzerland, and UK</p> <p>The company is in 14 states of the U.S., has locally owned offices, and accords with distributors. This network enables the company to reach the entire country. It is also in Mexico, close to the borders, where it can supply the U.S. demand in the four terrestrial communicating states.</p>

<p><b>Marketing</b></p>	<p>Website visitors can leave their email to receive the company's <b>newsletter</b></p> <p>On the website, for each application, visitors can see pictures, technical drawings, and videos of <b>past projects and get detailed information about each product used</b></p> <p>The website has a page dedicated to explaining the <b>features and benefits</b> of HI-MACS design, quality, fabrication, and sustainability.</p> <p>The website has a "<b>Welcome to the Partner Section</b>", which is a restricted area dedicated to affiliates</p> <p>The website has a <b>virtual showroom where visitors can have a 360-degree</b> view of the different application areas and change the colors and types of products to have a better idea of how the projects will look at the end</p> <p>Many brochures are available online to be consulted, some in <b>5-7 different languages</b></p> <p>The different colors can be found on the brochures</p> <p><b>Social media:</b> Instagram, Facebook, Twitter, Pinterest, and Youtube</p>	<p><b>Slogan:</b> Engrave it. Color it. Thermoform it.</p> <p>The <b>Corian Design Visualizer Augmented Reality App</b> brings clients' vision to life: it is an interactive experience that enables clients to overlay digital renderings of colors onto their real-life surfaces</p> <p>All the <b>benefits of solid surface are clearly explained</b> on the company's website</p> <p>Every document about Corian is provided on the website for download</p> <p>All the possible colors are available on the website, and with the help of a filter, it becomes easy for visitors to find the desired color</p> <p>The website has a convenient locator tool that helps visitors locate a <b>Local Home Design Partner or a Home Depot</b> store near them</p> <p>The website has a <b>map and a table</b> that provides information about Corian <b>Fabricators</b> and Corian <b>Distributors</b></p> <p>There is <b>not a specific newsletter</b> for Corian Solid Surface, only for DuPont Group</p> <p><b>Social media:</b> Facebook, Twitter, Pinterest, Youtube, Instagram, LinkedIn, and Houzz</p>	<p>The website has a world map with a pin in all the countries the company operates in</p> <p>There is a variety of colors to choose from with the help of a filter</p> <p>Materials that introduce Staron's excellent quality and use cases are available for download at the website, as well as the catalog</p> <p>The benefits of solid surface are well described on the website</p> <p>The website has a vast Gallery with photos and videos of past projects, separated by application</p> <p>On the website, there is a <b>Virtual</b> Simulation with 7 different areas in which visitors can change the color of the surfaces</p> <p>There are 3D images of the different edge options that products can have and a table with product dimensions</p> <p>Staron provides many videos with the explanation of how products should be applied and much documentation to be downloaded from the website</p> <p><b>Social media:</b> Facebook, Instagram, LinkedIn and Youtube</p>
<p><b>Certifications</b></p>	<p><b>Leadership in Energy and Environmental Design:</b> It is a standard voluntary system to certify the high performance of buildings from the U.S. Green Building Council. The use of HI-MACS contributes toward satisfying Environment Quality Credit for Low-Emitting Materials.</p> <p><b>Greenguard:</b> In the US, Greenguard has certified HI-MACS as a "low emission product." The Greenguard certification ensures that items intended for indoor use don't emit chemicals beyond the permitted levels. Through initiatives that enhance indoor air quality, the organization</p>	<p><b>Eurofins Indoor Air Comfort Gold certification:</b> Corian is the first solid surface material to have achieved the prestigious certificate, the most ambitious low VOC-emitting label. This certification combines all of the EU legal and regulatory requirements and the most stringent internationally recognized voluntary VOC emissions specifications into a single certificate. The title, therefore, guarantees the safety of the Corian solid surface for both the product installer and the end user of the home or commercial premises. These include:</p> <ul style="list-style-type: none"> <li>• <b>Greenguard Indoor Air Quality certified:</b> member of many environmental</li> </ul>	<p><b>Environmental Management System:</b> Korean Foundation for Quality certifies that the Environmental Management System of Staron organization has been audited and has complied with the requirements of the following standard.</p> <p><b>SCS Material Content Certified:</b> Utilizing recycled material lessens the need for transportation at specific stages of a product's life cycle, frees up landfill space, and contributes to energy and resource conservation.</p> <p><b>Greenguard Indoor Air Quality Certified:</b> Greenguard has certified Staron as a "low emitting product". The</p>

	<p>seeks to enhance public health and quality of life.</p> <p><b>German Sustainable Building Council (DGNB):</b> For the total product's local environmental effect, HI-MACS has achieved quality level 4 of 4 in 2018. The DGNB system is a comprehensive and distinctive certification program for green buildings.</p> <p><b>Class M1:</b> LNE measures a material's flammability. Class M1 demonstrates that HI-MACS has enhanced fire resistance. In France, this certificate is advised.</p> <p><b>Occupational Health and Safety Assessment Series certificate:</b> OHSAS is a British Standard for management systems for occupational health and safety. Organizations may prove they have a system in place for occupational health and safety by complying with it.</p>	<p>organizations, Corian is working in partnership with other industry leaders to create a more sustainable world.</p> <ul style="list-style-type: none"> <li>• <b>Leadership in Energy and Environmental Design:</b> LEED is a standard voluntary system to certify the high performance of buildings from the US Green Building Council (USGBC).</li> <li>• <b>BREEAM International:</b> One of the top British sustainability evaluation techniques for planning infrastructure, buildings, and projects is called BREEAM. The value of higher performing assets is acknowledged and reflected throughout the built environment lifespan, from new construction through in-use and renovation.</li> <li>• <b>FRENCH A+:</b> It is a French requirement for VOC AND CMR emissions, and level A+ is the highest level of certification for formaldehyde emissions.</li> <li>• <b>SKA Rating:</b> In the UK, a method for grading the environmental effect of fit-outs has been introduced by the Royal Institution of Chartered Surveyors. 99 practices measures are included in the SKA ranking, which covers areas like as energy and CO2, waste, water, pollution, transportation, materials, and well-being.</li> </ul> <p><b>LGA QualiTest GmbH:</b> An independent German organization has recently approved the sanitary performance of Corian® Solid Surface. Corian® Solid Surface outperformed numerous commonly used traditional materials in a wide variety of rigorous tests that evaluated resilience against germs and fungi, cleaning convenience, and design rating in terms of cleanliness.</p> <p><b>M1 certification:</b> M1 designates the system's lowest emission class. Based on an emission chamber test conducted after 28 days,</p>	<p>Greenguard certification ensures that items intended for indoor use don't emit chemicals beyond the permitted levels.</p> <p><b>SCS Material Content Certified:</b> Pre-consumer recycled content is used in the making of the Staron Recycled Series products, which reduces the amount of energy and industrial waste generated during production.</p>
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Legend:

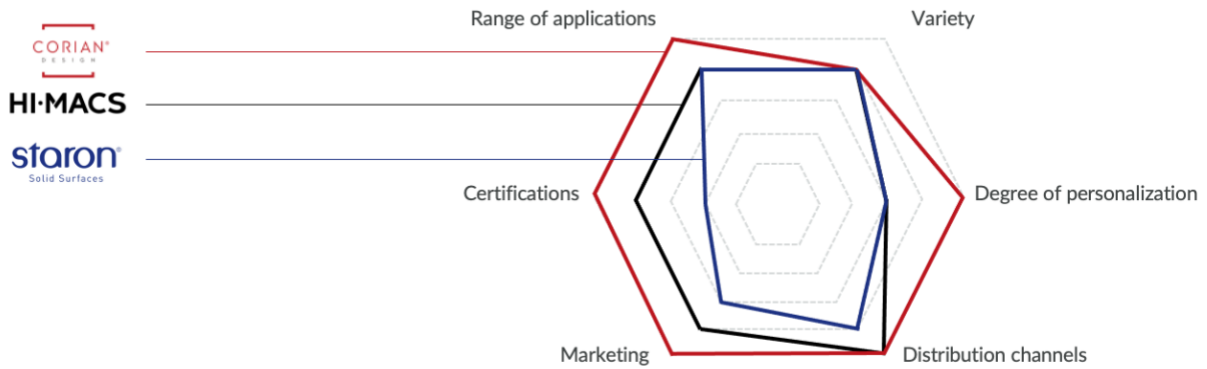
Weakness



Strength

Source: Hi-Macs website, Corian Website, and Staron website (Hi-Macs n.d.; "Corian" n.d.; Staron n.d.; Lotte Chemical n.d.)

### Appendix 32 – Positioning of the companies



**Appendix 33 - Assumptions and rationality for market sales potential**

Assumptions and Rationality for Market Sales' Potential
<p>When analyzing the major competitors of C.R., there was a big lack of information considering the Solid Surface industry. This industry is an emerging niche market, making it difficult to find financial data. Nevertheless, it is very common that companies create sub-brands dedicated to a specific raw material (for instance Solid Surface, Quartz, Laminate, or Natural Stones). To overcome the fact that there is no published data for all solid surface's sub-brands, an assumption was made:</p> <ul style="list-style-type: none"><li>• <b>Assumption 1:</b> the distribution of solid surface revenues across markets will match the distribution of Hardware &amp; Building materials for each year.</li></ul> <p>By using the worldwide solid surface market size for 2020, and the CAGR expected between 2021 and 2027, we are able to compute the industry total revenues for the evaluated period.</p> <p>To compute the contribution of Portugal for the solid surface industry, we multiplied the worldwide market size by the country's distribution concerning the Hardware &amp; Building materials sector.</p> <p>By using the 2021 C.R.'s revenues, provided by the CEO, the firm's market share for the solid surface industry in Portugal in that year was computed.</p> <p>To access the potential countries future growth, based on the predicted values between 2021 and 2027, the CAGR for each country was computed.</p> <p>When internationalizing, it is normal and expected that a company does not achieve in the first years the same market share that it has at the home country. To tackle this issue, an assumption was created:</p> <ul style="list-style-type: none"><li>• <b>Assumption 2:</b> in every scenario, for every country, a percentage of its home country market share is used to start the expansion plan and compute the new country market shares and revenues.</li></ul> <p>For the first year, the new country market shares correspond to the defined percentage of the home country market share. However, for the following years a percentage market share growth is assumed:</p> <ul style="list-style-type: none"><li>• <b>Assumption 3:</b> equally in every scenario, each country will have associated a percentage of market share growth reflecting all the aforementioned analysis concerning the country.</li></ul> <p>By using this percentage, it is possible to compute the market share of the new country by multiplying the percentage of its home country market share by this percentage compounded.</p> <p>Having the new market share, the revenues are computed by multiplying the market share for the year in the new country by the its solid surface market size in the respective year.</p>

## Appendix 34 – Portugal's contribution to the Solid Surface industry worldwide

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Hardware & Building Material Revenues in Portugal (in \$ U.S. billion)	1,72	1,48	1,57	1,77	2,01	2,12	2,25	2,34	2,05	2,32	2,4	2,47	2,54	2,62
Hardware & Building Material Revenues worldwide (in \$ U.S. billion)	1320	1280	1330	1380	1550	1560	1600	1680	1580	1710	1750	1800	1840	1880
Portugal's contribution to the Hardware & Building Material Industry worldwide (in %)*	0,130%	0,116%	0,118%	0,128%	0,130%	0,136%	0,141%	0,139%	0,130%	0,136%	0,137%	0,137%	0,138%	0,139%

Solid Surface's Revenues worldwide (in \$ U.S. billion)	-	-	-	-	-	-	22,70	23,93	25,22	26,58	28,01	29,53	31,12	32,80
Solid Surface market size in Portugal (in \$ U.S. million)**	-	-	-	-	-	-	31,92	33,33	32,72	36,06	38,42	40,52	42,96	45,71

\* equals to Hardware & Building Material's revenues in Portugal divided by Hardware & Building Material's revenues worldwide

\*\* equals Portugal's contribution to the Hardware & Building Material industry worldwide in percentage multiplied by Solid Surface's revenues worldwide

## Appendix 35 – CR's revenues and market share in 2021 in Portugal

CR's Revenues (in million €)*	0,525
Conversion Rate from € to US\$**	1,054

CR's Revenues (in millions US\$)	0,553
CR's Market Share for Solid Surfaces***	1,66%

\* this value is equal to C.R.'s total revenues minus the exportation revenues, to know exactly the revenues generated in the Portuguese territory

\*\* Retrieved from <https://longforecast.com/euro-to-dollar-eur-usd-forecast-2017-2018-2019-2020> (date: 30/11/2022)

\*\*\* equals C.R.'s revenues in Portugal divided by Portugal's solid surface market size (see Appendix 34)

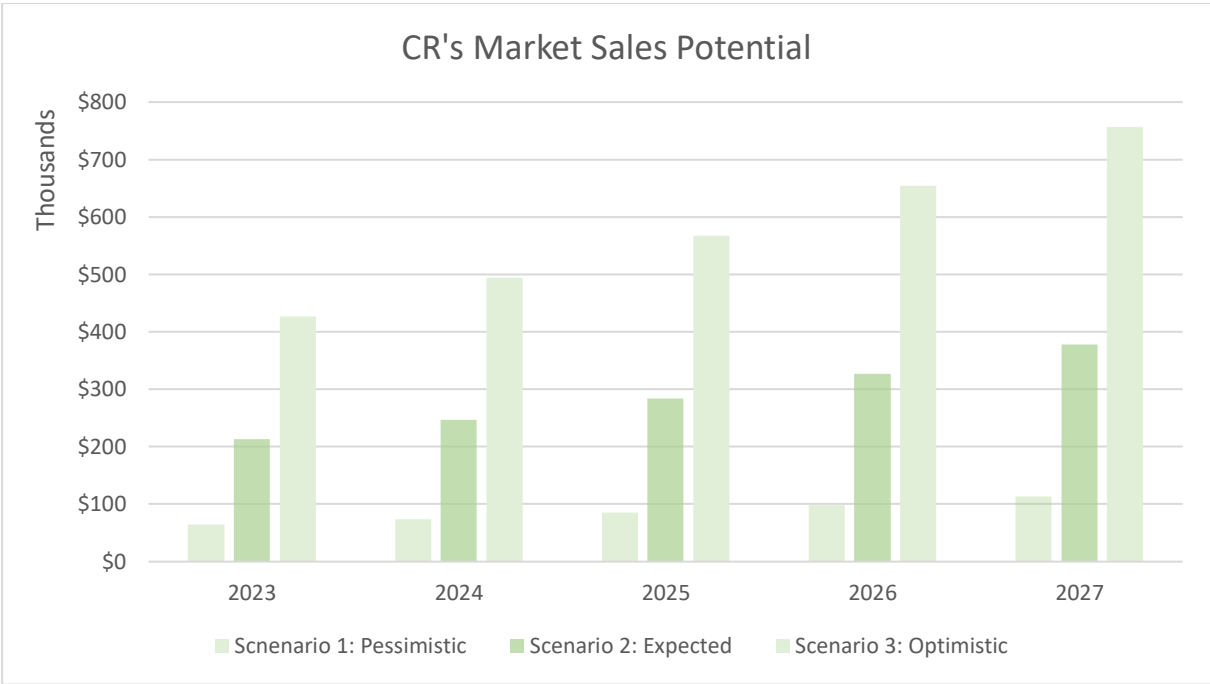
**Appendix 36 - Reasoning for each scenario of the UK**

	Pessimistic	Expected	Optimistic
<b>United Kingdom</b>	Percentage of Market Share of Portugal that the company will have when entering the new country		
	1,5%	5%	10%
	Percentage of Market Share growth per year		
	10%	10%	10%
	The existence of some already established contacts and potential clients, as so the larger dimension of the market when compared to Portugal, makes possible for C.R. to enter the country with some small but achievable market share that fulfil the company’s aims.		
	As the United Kingdom has the smallest CAGR among the five select countries, its market share growth rate has to reflect this less strong tendency. Additionally, after the Brexit, the number of trade barriers has increased with new restrictions concerning either imports or exports to the British territory.		

**Appendix 37 – Scenario Analysis: CR’s sales potential in the UK**

Scenario 1: Pessimistic		2023	2024	2025	2026	2027
Percentage of Market Share of Portugal that the company will have when entering the new country	1,5%					
Percentage of Market Share growth per year	10%					
Market Share		0,025%	0,027%	0,030%	0,033%	0,036%
Revenues (in millions US\$)		0,064	0,074	0,085	0,098	0,113
Scenario 2: Expected		2023	2024	2025	2026	2027
Percentage of Market Share of Portugal that the company will have when entering the new country	5%					
Percentage of Market Share growth per year	10%					
Market Share		0,083%	0,091%	0,100%	0,110%	0,122%
Revenues (in millions US\$)		0,214	0,247	0,284	0,327	0,378
Scenario 3: Optimistic		2023	2024	2025	2026	2027
Percentage of Market Share of Portugal that the company will have when entering the new country	10%					
Percentage of Market Share growth per year	10%					
Market Share		0,166%	0,183%	0,201%	0,221%	0,243%
Revenues (in millions US\$)		0,427	0,494	0,567	0,655	0,756

**Appendix 38 - Graphical Analysis of CR’s market sales potential in the UK**



**Appendix 39 - UK market entry conditions**

Tariff and non-tariff trade barriers
<p><b>Trading Agreements</b> – The United Kingdom has more than 70 trade agreements signed with nations and customs unions all around the world. One can highlight the recent deals that have come into force: the Singapore Digital Economy Agreements and Japan Comprehensive Economic Partnership Agreement (GOV.UK 2020; Department of International Trade 2022).</p> <p><b>Trade picture</b> – In 2019, 48,1% of the U.K.'s foreign trade in goods went to the EU, the U.K.'s biggest trading partner. In addition, the UK is the E.U.'s third largest trading partner (12,6%) (European Commission 2021).</p> <p><b>U.K. and E.U. Trade Deal</b> – The EU-UK Trade and Cooperation Agreement was signed in December 2020, aiming to consolidate and harmonize the economic and social differences between both parties and also, to regulate environmental and fisheries issues (European Commission 2021).</p> <p><b>A post-Brexit world</b> – Several non-tariff barriers are now imposed on E.U. member-states, such as declarations of imports or exports, product standards, and inspections (KPMG 2020).</p> <p><b>New Trading Scheme</b> - More recently, in the latest summer, the U.K. Department for International Trade established a new Developing Country Trading Scheme. This new external policy focuses on extending and improving the trade relationships between the U.K. and developing countries (aiming to benefit the economies of the latest) by lowering the price of imported goods and simplifying and liberalizing the product-specific rules of origin (EY 2022).</p> <p><b>Tariffs' policy</b> – Imported goods and their customs duty are assessed based on their fair market value at the time of landing in the U.K. A standard VAT of 20% is levied on the aggregate value of import prices for products entering the U.K. Prices include Cost, Insurance, Freight, and Duty. Some goods and services, such as children's car seats and home energy, are subject to a 5% VAT. The VAT rate is further reduced to 0% for certain goods, such as food and clothing for children (International Trade Administration 2022d).</p>
Standards and regulations
<p><b>Conformity Assessment</b> – To be traded in the British market, from July 2023 onwards, all the business people that aim to export into the U.K. (except producers of medical devices) must obtain the United Kingdom Conformity Assessment certificate. This ensures that all the requirements have been complied with (according to British legal standards), so the good can be traded in the U.K (Direção-Geral de Atividades Económicas 2021).</p> <p><b>Post-Brexit new rules</b> – In addition to the previous point, The E.U. C.E. safety marking is required for bathroom products under the Construction Products Regulation. These markings indicate that the manufacturer has checked the product to ensure it complies with E.U. safety, health, and environmental regulations (Bathroom Manufacturers Association 2021).</p> <p><b>Product labelling</b> - BSI Kitemarks are voluntary quality marks that indicate that products and services have been tested and certified (BSI 2020).</p> <p><b>New Regulations</b> – Yet, the Building Regulations were amended after the Grenfell Tower fire (BBC News 2019), which affected British solid surface standards, prescribing fire resistance levels (ISFA 2013)</p> <p><b>Food and Drug Administration's regulations</b> - Since solid surfaces can be a food contact material, they should comply with the U.K. Food and Drugs Administration. In the U.K., food safety and food hygiene are regulated by the Food Standards Agency (FSA). Besides enforcing food safety regulations, it works with local authorities to ensure standards are met (GOV.UK 2021a).</p>

## Transportation

**The appropriate transportation method** – Due to the weight and size of *C.R.*'s products and the geographic distance between Portugal and the U.K., according to the CEO, if *C.R.* chooses to export its products, the most suitable option will be to ship through maritime containers. This method of transportation would make it possible to save on costs (compared, for example, with airfreight) and use larger storage capacity. However, this method is time-consuming and depends on port accessibility (Navata Road Transport 2021).

**The largest sea freight companies** – According to Alphaliner data, the following companies ship the most cargo (based on their total TEU capacity), representing the largest freight shipping companies worldwide: A.P. Moller Maersk, Mediterranean Shipping Company, Ocean Network Express, Evergreen Line and HMM. Notwithstanding, it is essential to mention that, given their network connections and past experiences, the first three companies mentioned appear to be the most appropriate to transport goods from Portugal to the UK (Witham 2022).

**Arriving at the U.K.** - Within the host country, companies such as FedEx (and its subbrand TNT Express), Yodel Shipping Company, UPS, and Hermes Logistics Company may be able to assist *C.R.* in expanding its distribution network (Click Post 2022; Clutch 2022)

**Transportation of goods in the U.K.** – The previous becomes important to analyze considering that 89% of all goods are transported directly by road (RHA 2021).

**Top 11<sup>th</sup> infrastructure quality** - Based on the 2019 World Economic Forum report, the U.K. ranked 11<sup>th</sup> (out of 141 countries) globally in terms of infrastructure quality (Keep 2021)

**Government's plans** - The Government published a National Infrastructure Strategy offering programs for infrastructure investment to support decarbonization and climate change adaptation, among other things. Furthermore, it outlines the Government's approach to improving delivery and supporting private investment (Keep 2021).

## Availability and sophistication of local distribution channels

**Retailers and Hotels as appropriate distribution channels** – Knowing that *C.R.* plans to sell standardized bathroom items, stores that resell solid surface products and hotels seem to be good options. Hotel sales would be a direct channel since the company would directly manage client operations.

**Availability and sophistication** - It is estimated that there are almost 10 000 hotels in the U.K. at present. According to The Telegraph, 60% of British adults claim to possess DIY skills. Thus, in 2021, only Screwfix and B&Q had more than 1 000 Home Improvement Stores (DIY) across the United Kingdom (Statista 2022c; Telegraph Reporters 2017; Office for National Statistics 2021c).

## Payments and financing methods

**Payment method** – the most used payment method by small and medium enterprises in the United Kingdom are BACS and Fast Payments (a real-time payment system). However, *C.R.* would need a bank account in the U.K. to use these channels (Department for Business Innovation & Skills 2021).

**The role of national agencies** - national agencies like Business Support Line and Innovate U.K. can also help businesses obtain financial help from government-backed schemes (UK Research and Innovation 2022; Business Service Association 2022).

**How easy it is to do business** – The U.K. is the 8<sup>th</sup> worldwide (out of 190) country where it is easier to do business; also, it scored 75 out of 100, in 2019, regarding how easy it is to get credit. This consequently can reflect the company's willingness to stimulate the economy and firms' investments (Trading Economics 2022a).

**Increasing lending rate** – Overall, the lending interest rate (prime lending rate) has been consistently increasing, reporting a 1,25% interest rate in January 2022, as opposed to 4% in November. Consequently, this creates worse incentives for companies to ask for loans (Trading Economics 2022b).

**Access to the banking sector** – As it was mentioned in section 6.1.3. a) *Contacts*, the company should leverage its contacts with Portuguese banks already operating, such as Millenium BCP or Santander Totta in the U.K. Their British operation includes the International Desk and Local Banking services dedicated to foreign clients. Also, banks like Barclays and HSBC would provide crucial loans for business expansion (Santander Totta 2021).

### Registration and documentation

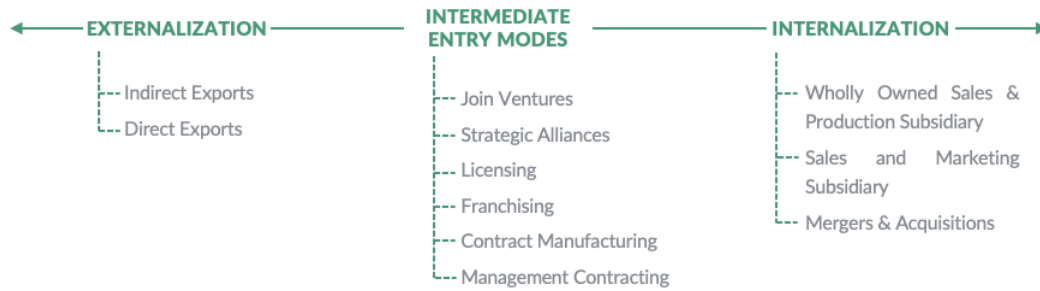
**The time needed to start a business** – In the U.K., registering a new company only takes 8 to 10 days (GOV.UK 2021c)

**Steps to start a business in the U.K.** – In order to operate economic activity in the United Kingdom and sell products in the country, a company must do its commercial registration and comply with the following steps (Rangel Logistics Solutions 2020):

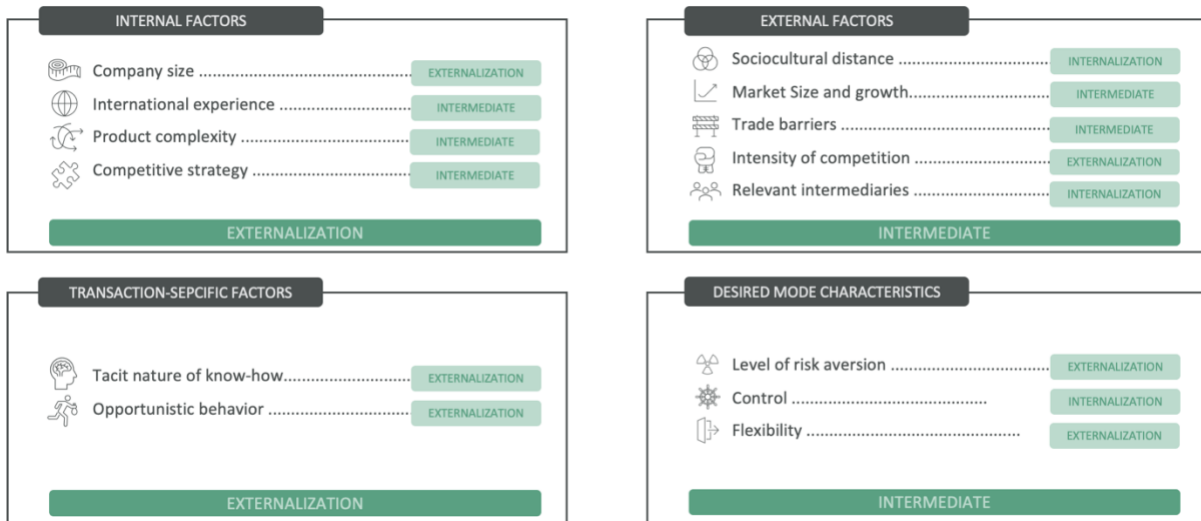
- To choose a business structure, name and register it:
- To prepare commercial documentation.
- To prepare the certificate of origin.
- To prepare the taxes declarations with the exit certification.
- To guarantee that all the documentation mentioned nextly is ready.

**Documents required** - It is necessary to prepare a memorandum and articles of association, as well as choose a business structure. Portugal's firms aiming to conduct business in the U.K. must have an Economic Operator Registration and Identification (EORI), a Common Transit Convention, to be enrolled in the REX system and act in accordance with the Autoridade Tributária e Aduaneira (GOV.UK 2021c; AICEP Portugal Global 2022).

## Appendix 40 – Type of EM



## Appendix 41 – Selection criteria for the international entry strategy



## Appendix 42 – Definition of EM under analysis

Direct Exportation	Direct exports involve the sale of goods directly to a customer in an overseas market. Direct exports have low variable costs, but high fixed costs due to the need to integrate traditional intermediary services (Elango and Pangarkar 2021c).
Indirect Exportation	The indirect exporting process involves a firm selling to an intermediary in its own country who then sells the goods internationally. Indirect exporters (generally small and new businesses) benefit from export intermediaries in several ways: they help identify customers, arrange financing, and provide distribution infrastructure. Indirect exports are generally claimed to have low fixed costs (as a result of economies of scale and scope enjoyed by intermediaries), but high variable costs due to intermediary fees (Elango and Pangarkar 2021c).
Management contracting	An agreement between investors or project owners and a management company contracted to coordinate and monitor a contract (Martin Luenendonk 2019)
Contract manufacturing	Contract manufacturing is a type of contractual agreement in which a company negotiates and executes a contract with another local company to produce products according to its design and requirements. In other words, contract manufacturing is the process by which a manufacturing business makes items under the brand of another. (Nguyen Hoang Tien 2019, 30)
Franchising	Contractual relationship whereby a company, the franchisor, grants a person or a group the right to use the franchisor's name to sell the franchisor's product or service , in return for an initial fee plus future royalty (Philip C. Cheng and James J. Kregor 1973, 35).
Licensing	Licensing is a market-based option that allows company's innovations to be profitable (Fosfuri 2006). A firm usually licenses research and development ideas, inventions, formulas, technological know-how, services, brands, art, music, designs, and trademarks (Glazer 1991; Mottner and Johnson 2000). In return for these assets, the licensee often pays the licensor a lump-sum payment and/or a royalty fee per unit, as well as a guarantee to follow the licensing contract (Masaaki Kotabe and Kristiaan Helsen 2009, 185).
Strategic Alliances	A strategic alliance consists in a voluntary agreement formed by two or more autonomous organizations, typically firms, with the goal of achieving both their individual and common strategic goals (He et al. 2020, 2)
Joint Venture	According to the OECD, JVs are activities in which the operations of two or more firms are, in part, but not completely, functionally integrated in order to perform activities in one or more of the following areas: (i) buying or selling operations; (ii) natural resource exploration, development, and/or production operations; (iii) research and development operations; and, (iv) engineering and construction operations." (Yannis Caloghirou n.d., 2)

## Appendix 43 – Market Entry Modes (Export vs FDI)

Market Entry Strategy	Variables			
	Resource Commitment	Control and Flexibility	Risk	Speed of Implementation
Exports*	Low	Medium	High	High
Foreign Direct Investment	High	High	Low	Low

\*Considering both **Direct** and **Indirect Exports**

Source: Retrieved from (Gaur et al., 2014; L Hill et al., 1990)

## Appendix 44 – Reasoning for excluding some of the potential EM from the analysis

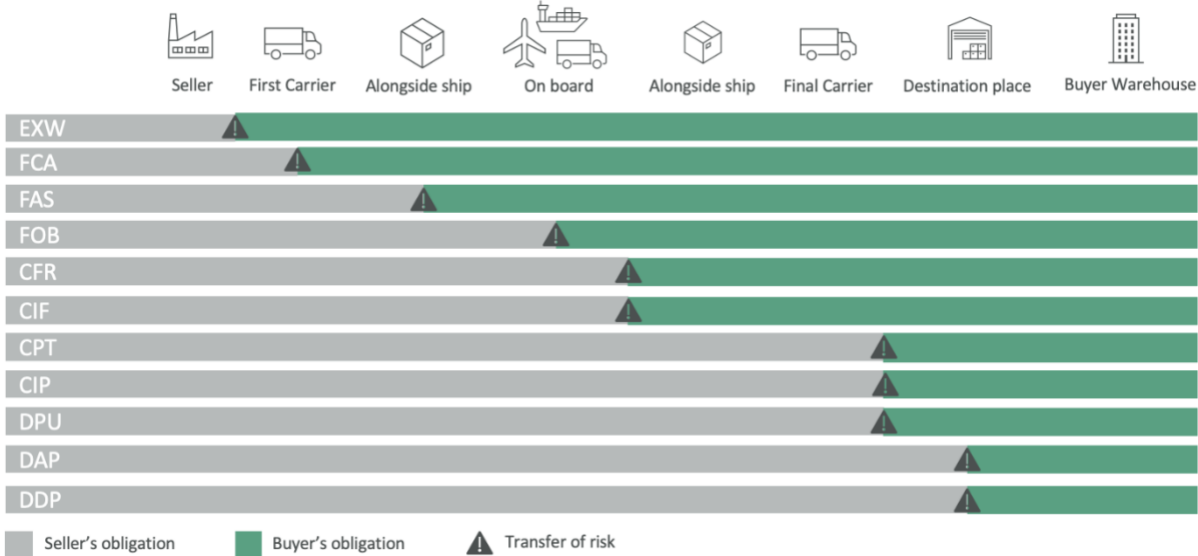
Management Contracting	CR is not interested in having third parties to manage their company locally in France. The main reason for that is that they do not have yet organizational flexibility and structure to delegate others on how to manage the company. In fact, they have an organizational structure that is completely centralized
Franchising	CR is not interested in transferring their technical knowledge to other companies, they don't want to lose brand control, they don't to take the investment associated to it.
Licensing	CR is not interested in transferring their technical knowledge to other companies, losing the control of their intellectual property
Joint Venture	CR is not interested in sharing with third parties their know-how and don't want to commit the required resources since this would decrease the company's flexibility, and so the easiness to terminate the operations in France, if necessary

## Appendix 45 – Analysis of the alternative EM

	Indirect Exportation	Direct Exportation	Contract manufacturing	Strategic alliances
Control and flexibility	<p><b>MEDIUM TO LOW</b></p> <p>The indirect export strategy represents one of the possible entry-mode strategies in which the company intending to expand into international markets will have significantly less control over its operations.</p> <p>This company will handle all business on the French market through the field agent: the Portuguese company takes only responsibility for the production of the goods.</p> <p>To ensure a beneficial and successful contract agreement, it is essential to clearly define both parties' roles and responsibilities.</p>	<p><b>HIGH</b></p> <p>Exporting directly implies that the internationalization plan is under greater control.</p> <p>As a result of this entry-mode strategy, <i>Criar Raizes</i> would also have a greater degree of responsibility during the expansion process.</p> <p>The company will be able to control its operations either in Portugal or in France.</p> <p>Furthermore, CR will be able to adjust its operations in accordance with the French market's characteristics, including knowledge, finance, and production capacity.</p>	<p><b>MEDIUM</b></p> <p>Contract manufacturing is relatively <b>easy to terminate</b> as it only requires to close the contract with the local manufacturer</p> <p>On the other hand, the company gets <b>less flexibility on the production</b> since it will be dependent on the manufacturer's limited capacity in terms of volume, techniques and colors available</p> <p>CR would loose control also because the company will have to depend on the agenda of the manufacturer and therefore both the <b>delivery time</b> and the <b>quality and finishing</b> of the products will be less under the control of CR.</p>	<p><b>MEDIUM TO LOW</b></p> <p>By partnering with another company, there will be a loss of control over the aspects that CR would delegate the other company to focus on (either marketing, production, quality of employees...)</p> <p>Depending on the type of partnership chosen (either technological cooperation, integration of production, access to better distribution and marketing networks, among others), the easiness to terminate will vary.</p> <p>Overall, being a very informal agreement, allows companies to easily end this interfirm relationship.</p>
Resource commitment	<p><b>LOW</b></p> <p>By adopting an indirect export strategy, CR will be able to commit its resources at a low level.</p> <p>Upon agreement with a commercial agent, all field work on the French market will be handled by the intermediary.</p> <p>The Portuguese firm would only be concerned with ensuring adequate production capacity to meet the demand coming from the home country or from the French market.</p>	<p><b>LOW</b></p> <p>As a result of direct exportation, CR would have to use a greater amount of resources than if it were to cooperate with a partner.</p> <p><i>Criar Raizes</i> will lead all logistical processes from the creation of network connections to the production and delivery of goods, resulting in a greater commitment of resources on our part.</p> <p>It will also be the responsibility of the Portuguese enterprise to conduct a market analysis, thereby increasing the time and financial commitment.</p>	<p><b>MEDIUM TO LOW</b></p> <p>Contract manufacturing requires an incremental level of resource commitment when compared to exports since the local manufacturer will need organized and detailed information to know exactly how CR wants its products to be developed.</p> <p>This would allow CR to guarantee that the company has the capacity to serve all the new French demand.</p> <p>With this entry mode, CR could access to new technologies and techniques of local manufacturers.</p>	<p><b>MEDIUM</b></p> <p>Doing a strategic alliance with a local partner allows to share the resource commitment, thus allowing for a higher level of flexibility and thus easiness to terminate.</p> <p>The motivation for undertaking alliances if often related to the gain of knowledge, but also to have access to better distribution and market networks, to find technological cooperating, or the integration of production to facilitate operations.</p> <p>For CR, for this EM it would be more pertinent if the company commits with resources such as creativity unique pieces in exchange for local distribution network and knowledge of French customs and culture</p>
Net gain (revenues – costs)	<p><b>MEDIUM TO HIGH</b></p> <p>The net gain of CR conducting an indirect exportation entry-mode strategy will be slighter.</p> <p>A significant reason for the lower fixed costs associated with</p>	<p><b>HIGH</b></p> <p>CR would not have to pay anymore for international delivery expenses.</p> <p>The profit margin for direct exporters is higher than that for indirect exporters. Therefore,</p>	<p><b>MEDIUM</b></p> <p>CR would not have to pay anymore for international delivery expenses.</p> <p>This EM generates higher expenses than exports because it requires the payment for the</p>	<p><b>MEDIUM</b></p> <p>Costs are shared between the partners</p> <p>In strategic alliances, the resource commitments should generally be higher than the others</p>

	<p>intermediaries (compared to direct exports) can be attributed to the economies of scale and scope that are enjoyed by an intermediary.</p> <p>There is however, a higher incidence of variable costs due to the fact that the intermediary will need to be compensated for the assistance it provides.</p> <p>Despite this, even though the financial risks are lower, the profit margin will be lower as a result.</p>	<p>intermediaries and agents will not be charged the profits and commissions they are earning from the sale of their products.</p> <p>As long as the exporting firm integrates the services that would have been provided by an intermediary if indirect exporting had been used, then CR has low variable costs, but high fixed costs since the exporting firm is paying for the intermediary's services.</p>	<p>production of the products made by this third-party.</p> <p>However, these costs are obviously lower costs than if the company would have to create its own facilities in France because it would have to invest in equipment and personnel.</p> <p>In terms of revenues, they may increase since if the company decided to only export, and produce in Portugal, it may not be capable to satisfy all the demand, thus losing opportunities of business. Choosing to contract a manufacture would allow this not to happen, and so grab all the potential revenues from local French clients.</p>	<p>EM-mentioned otherwise this EM wouldn't add value to companies.</p> <p>Consequently, the synergies created should generate higher benefits than the other EM presented in this table. This benefits could either be an increase in revenues, increase in brand awareness, a reduction of production costs due to local production made by the partner, or an increase in quality of the products thanks to the expertise and quality of the facilities and machines of the partners to produce the solid surface products.</p>
Risk	<p><b>MEDIUM TO LOW</b></p> <p>An indirect export has the risk of transferring authority to the intermediary organization.</p> <p>Overseas markets rely heavily on middlemen for their development.</p> <p>Adding an intermediary also increases the time it takes for a CR's product to reach a buyer. Having no direct contact with customers also makes establishing brand loyalty harder.</p>	<p><b>MEDIUM TO LOW</b></p> <p>Direct exporters are responsible for conducting not only their operations in their home country as well as overseas. They will be more exposed to risk.</p> <p>This EM will involve a more remarkable managerial ability, increasing the difficulty in maintaining stocks.</p>	<p><b>MEDIUM TO HIGH</b></p> <p>Opportunistic behavior: risk of sharing core competences and unique resources. In this case, there is the risk that the local manufacturers appropriate itself from the unique designs, colors, patterns, and textures of CR' products portfolio. This is a considerable risk as this constitutes one of the core competencies of the company.</p>	<p><b>MEDIUM</b></p> <p>Opportunistic behavior: risk of sharing core competences and unique resources. In this case, the biggest risk for CR is if the partner capture the company's know-how and decides to apply it in their own business.</p>
Speed of implementation	<p><b>HIGH</b></p> <p>The speed of implementation is relatively high as CR would only have to search for a partner and sign for a contract. No strong relationships are required for such EM to be implemented. It is the quickest approach to enter international markets for smaller companies.</p>	<p><b>MEDIUM TO HIGH</b></p> <p>The speed of implementation is relatively high as CR. Nevertheless, it presupposes that the company analyses the host market not only in terms of marketing and distributors' network but also in social and economic aspects.</p> <p>The logistical planning concerning this EM is time-consuming and complex.</p>	<p><b>MEDIUM TO HIGH</b></p> <p>The speed of implementation is relatively high as CR would only have to search for a partner and sign for a contract. No strong relationships are required for such EM to be implemented.</p>	<p><b>MEDIUM</b></p> <p>Get instant market access, or at least speed your entry into a new market</p> <p>The speed of entry into the solid surface French market would be accelerated if the company decides to make a strategic alliance, when comparing to FDI.</p> <p>When comparing Strategic Alliances with the EM of this table, the time of implementation increases as a partnership and relatively strong relationship needs to be created.</p>

**Appendix 46 – Incoterms 2020**

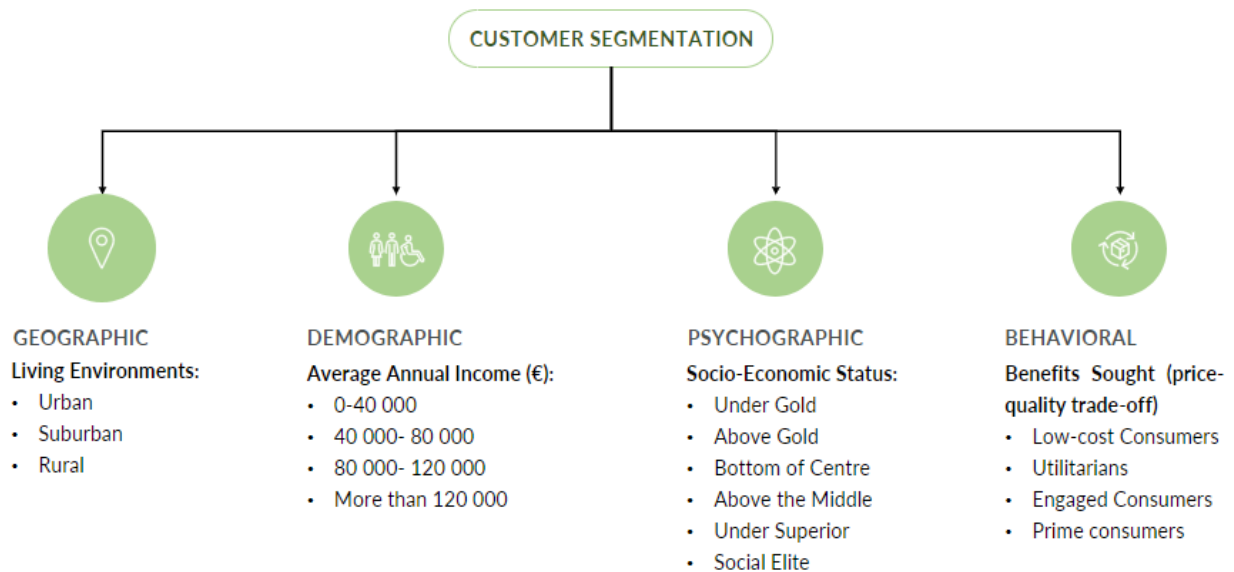


**Appendix 47 - Definition of SMART Goals**

Specific	Specific means the goals must be well defined, clear, and unambiguous. Does the goal define exactly what is being pursued? What exactly is it that we want to achieve?
Measurable	Measurable means the goals need to have specific criteria that measure the progress towards the accomplishment of the goals. Is there a number to track completion? How will we know we've achieved it?
Achievable	Achievable means the goals can not be impossible to reach and, instead must be attainable. Can the goal be achieved?
Realistic	Realistic means the goals must be within reach, and relevant to the company's purpose. Is the goal doable from a business perspective? Why are we doing this? Is it really what we want?
Time-bound	Time-bound means the goals must have a clearly defined timeline, that includes a starting date and a target date, with the purpose of creating urgency. Can the goal be completed in a reasonable amount of time? When will the company achieve the goal by?

Source: (K. Blaine Lawlor and Martin J. Hornyak 2012)

## Appendix 48 - Customer Segmentation



## Appendix 49 - Personas

### Françoise

Living Environment: Suburban

Average income: More than 120 000 €

Socio-economic status: Social elite

Benefit sought: Prime consumers

**Description:** Françoise comes from a wealth family of doctors and lives in a great house nearby Paris. Matilde and her family are used to luxury goods, willing to pay higher prices for prestige brands.



### Jean Louis

Living environment: Urban

Average income: 80 000- 120 000 €

Socio-economic status: Under superior

Benefits sought: Engaged consumer

**Description:** Jean Louis is a rich and successful entrepreneur, living in the centre of Paris. He is an interested and informed consumer, willing to pay higher prices for products he recognizes are worthwhile the price.



### Marie

Living environment: Suburban

Average Income: 80 000-120 000 €

Socio-economic status: Above the middle

Benefits sought: Utilitarians

**Description:** Marie is an university professor, living nearby Lyon. Despite being sensitive to product's price, she values product attributes and is constantly paying attention to the best price performance in the market.



### Michel

Living environment: Urban

Average income: 80 000-120 000 €

Socio-economic status: Under superior

Benefits sought: prime consumers

**Description:** Michel, who is currently residing in Toulouse, has an important work in a French Bank. He always seeks out the most prestigious goods among the many consumer options available and isn't concerned with the cost of the items he often purchases.



**Appendix 50 - Promotion Strategies**

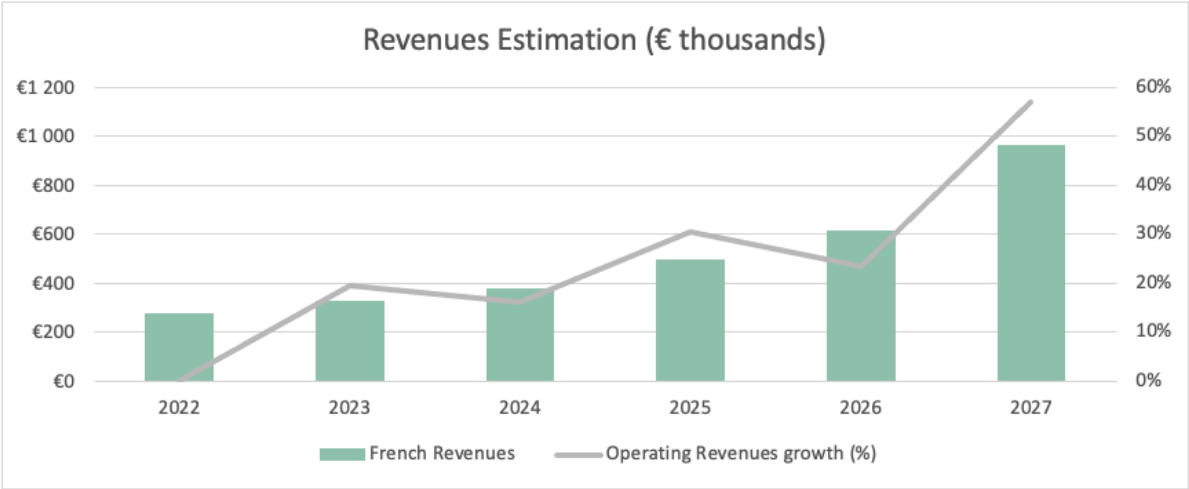
Website	Chronological strategies' implementation
	<p><b>Before entering France in 2023:</b></p> <ul style="list-style-type: none"> <li>• Make the website available in three languages: french, portuguese and english</li> <li>• Include in the website:             <ul style="list-style-type: none"> <li>○ Explanation of the benefits for consumers of the solid surface material</li> <li>○ Past projects and detailed information about the materials used</li> <li>○ Show the variety of applications, colors palette, patterns</li> <li>○ Show all the stores where the products are distributed</li> <li>○ Show all certifications CR has</li> </ul> </li> </ul> <p><b>Starting in 2023:</b></p> <ul style="list-style-type: none"> <li>• In order to increase the number of potential customers. <i>CR</i> should invest in google ads:             <ul style="list-style-type: none"> <li>○ <b>2023-2024:</b> Targeting <b>10</b> additional customers, per month, related with the Google ads advertisement.</li> <li>○ <b>2025- 2027:</b> Aligned with the investment in new equipment, the expense with google ads will increase, targeting <b>20</b> additional customers per month.</li> <li>○ <b>2027:</b> Increasing the expense in google ads, targeting <b>50</b> additional customers per month.</li> </ul> </li> </ul> <p><b>After 2027:</b></p> <ul style="list-style-type: none"> <li>• Create dynamic and interactive options for consumers to visualize <i>CR</i>'s products             <ul style="list-style-type: none"> <li>○ Create the possibility to see in 3D all the products, colours, patterns, and textures. Allow consumers to change the features</li> <li>○ Create 3D rooms where consumers can construct their bathroom or kitchen piece by piece, with the products they want, changing sizes, colours, patterns, textures, and edges</li> <li>○ Provide a scanner where it is possible to scan something in real time at home and see a simulation how it will look with <i>CR</i>'s products</li> </ul> </li> </ul>
	KPIs
	<ul style="list-style-type: none"> <li>• Number of views</li> <li>• Number of views per country</li> <li>• Traffic by source</li> <li>• Average time on page</li> <li>• Number of visitors that come to the website from organic search results</li> <li>• Number of additional customers</li> </ul>
Participate in Events and fairs	Chronological strategies' implementation
	<p><b>In 2024:</b></p> <ul style="list-style-type: none"> <li>• Bring to these events and fairs, samples of the different colors, textures, and patterns <i>CR</i> has</li> <li>• If possible, use a TV to show different explanatory videos and inspiring photos of past projects</li> <li>• Bring to the events and fairs, samples of the different edges</li> </ul>
	Fair and Events occurring in France
	<ul style="list-style-type: none"> <li>• Batinov</li> <li>• Habitat Fontenay-le-Comte</li> <li>• BlueBat</li> <li>• ARTibat</li> <li>• EquiHotel Paris</li> </ul>
	Chronological strategies' implementation
	<p><b>In 2024:</b></p> <ul style="list-style-type: none"> <li>• Besides Facebook (where <i>CR</i> already has an account), create an account on Instagram, Facebook, Youtube, and Linkdin</li> <li>• Create regular posts – <i>CR</i> should try to post weekly:             <ul style="list-style-type: none"> <li>○ Create inspiring photos of the different projects <i>CR</i> made</li> <li>○ Create engaging posts to stimulate consumers</li> </ul> </li> <li>• In the photos description, publish always with the 3 core languages</li> </ul>

Social Media	<p><b>In 2026:</b></p> <ul style="list-style-type: none"> <li>• Start paying for ads</li> <li>• Give products to influencers specialized in home decor to promote CR's products</li> </ul>
	Social Media Platforms suitable for CR
	<ul style="list-style-type: none"> <li>• Instagram</li> <li>• Facebook</li> <li>• Youtube</li> <li>• Linkdin</li> </ul>
	KPIs
	<ul style="list-style-type: none"> <li>• Number of followers for each social media platform</li> <li>• Interactions per post (like, comments and shares)</li> </ul>
Invest on a professional photographer	Chronological strategies' implementation
	<p><b>In 2024:</b></p> <ul style="list-style-type: none"> <li>• Create content to publish in social media, website and events &amp; fairs: <ul style="list-style-type: none"> <li>○ Make small videos showing the versatility of the products</li> <li>○ Make explanatory videos about the production of solid surface products</li> <li>○ Take inspirational pictures to publish in the different platforms</li> </ul> </li> </ul>
	French Photographers
	<ul style="list-style-type: none"> <li>• Dominic Egan</li> <li>• Katya Mukhina</li> <li>• Vladimir Kiselev</li> <li>• Serg Liulka</li> </ul>
Partner with marketing agencies	Chronological strategies' implementation
	<ul style="list-style-type: none"> <li>• Delegate to the marketing agency the responsibility to create the website and to develop social medias</li> </ul>
	Portuguese marketing agencies
Promote products in French decoration and construction magazines	Chronological strategies' implementation
	<p><b>When entering France in 2023:</b></p> <ul style="list-style-type: none"> <li>• Promote the different products and applications on renowned decoration and construction magazines since these are targeted at a specific demographic and offer advertisers the chance to target more specifically their audience. This measure will allow new potential clients to have their first contact with the company and make it know to others by word-of-mouth</li> <li>• Publish diversified impactful images of past projects to capture readers' attention</li> </ul>
	French decoration and construction magazines
	<ul style="list-style-type: none"> <li>• Ask</li> <li>• Marie Clair Maison</li> <li>• Ançaise</li> <li>• Ecoration</li> <li>• Architectural Digest</li> </ul>
	Chronological strategies' implementation
Partner with a local designer	<p><b>After 2027:</b></p> <ul style="list-style-type: none"> <li>• Create an exclusive collection with a French designer to connect customers more easily with the brand</li> </ul>
	French designers
	<ul style="list-style-type: none"> <li>• Artemest</li> <li>• Patrick Norguet</li> <li>• Ora-Íto</li> </ul>
	KPIs
	<ul style="list-style-type: none"> <li>• Sales volume of the collection</li> <li>• Percentage CR's sales that came from this partnership with the designer</li> </ul>
	Chronological strategies' implementation

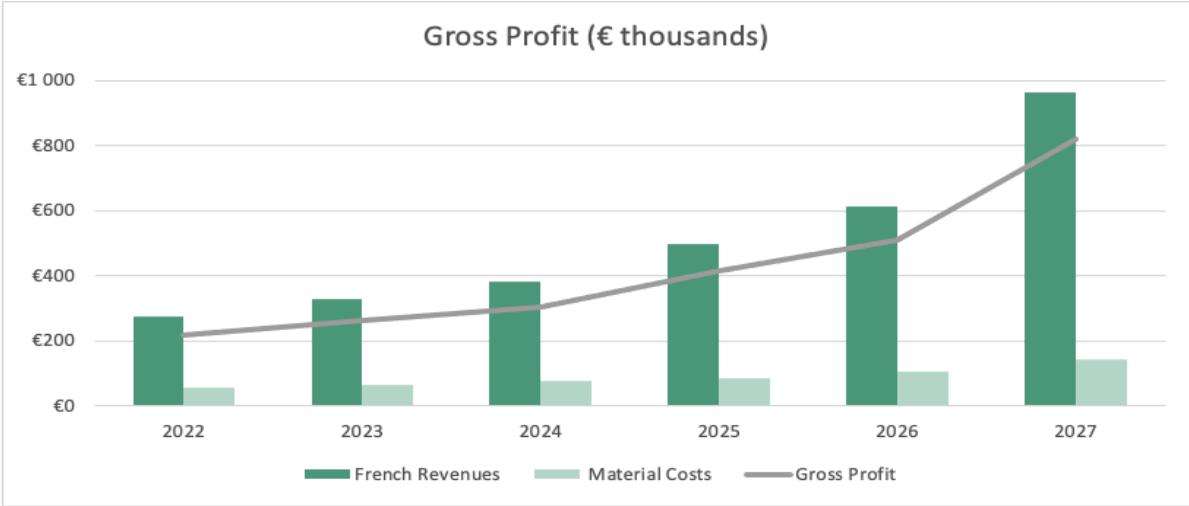
## Appendix 51– Assumptions used for the Financial Forecasts

<b>Operational Plan</b>	
Sales 2021	734,703
<b>Material costs</b>	
Material costs 2021	734,703
Material costs 2023-2024 (% revenues)	<b>100%</b>
Material costs 2025-2026 (% revenues)	<b>17%</b>
Material costs 2027 (% revenues)	<b>15%</b>
Production locked to internacionalization 2021 (% of total)	33%
<b>Cost of employees</b>	
Cost of employees 2021	322,670
<b>Cost of employees allocated to export</b>	<b>106,48</b>
<b>Other Operating Costs</b>	
Other Operating Costs 2021	238,984
Other Operating Costs allocated to export in 2022	<b>78,864678</b>
Other Operating Costs growth in 2025	10%
Other Operating Costs growth in 2027	15%
<b>Outsourced professional photographer</b>	
Average Hourly wage	€25,00
Working days per year	30
Hours per year	240
<b>Partnership with local designers</b>	
2023	0
2024	1
2025	1
2026	2
2027	3
Initial consultations	€250,00
Redesign the layout	€3 000,00
High-end interior designer	€2 500,00
Life-Time of CNC Machine in years	15
<b>Investment in Google Ads</b>	
Average cost per click (\$)	5,74
Average conversion rate (%)	10,73%
Number of clicks p/month to reach 10 additional customers	93,20
Number of clicks p/month to reach 20 additional customers	186,39
Number of clicks p/month to reach 50 additional customers	465,98
<b>Cost with fairs and events</b>	
Stand rental 20m <sup>2</sup> (175 €/m)	3500
Stand construction (280 €/m)	5600
Stand staff (including travel and accommodation expenses)	2100
Promotion (mailings, ads...)	2800
Total cost per fair	<b>14000</b>
<b>Taxes' contribution:</b>	
The Corporate Income Tax Rate (IRS) is 21%. SMEs benefit from a rate of 17%, but which only applies to the first 25 thousand euros of the so-called taxable amount. For the remainder, the normal rate applies.	
<b>Investment Plan</b>	
<b>CAPEX</b>	
Oven	50,000
CNC machine	60,000
Website	1,000
<b>Salvage Value</b>	
Salvage Value rate	5%
Salvage Value	0,75
<b>Net Working Capital</b>	
Inventories (%)	10%
Payable (days)	60
Receivables (days) until 2025	0
Receivables (days) 2026 onwards	30
<b>Depreciation and Amortization</b>	
Life-time of Oven in years	15
Life-Time of CNC Machine in years	15
<b>Financial Viability</b>	
<b>NPV</b>	
Inflation rate (mean)	2,40%
Risk rate	7,68%
Discounted Rate	10,08%
Growth rate = CAGR of Solid Surface industry	5,40%

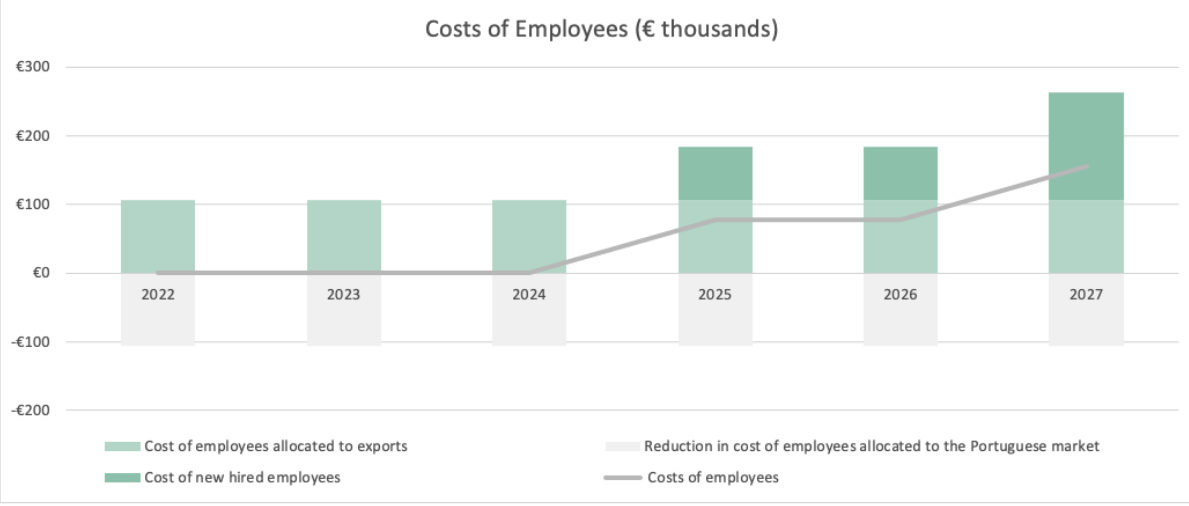
**Appendix 52 – Revenues Estimation**



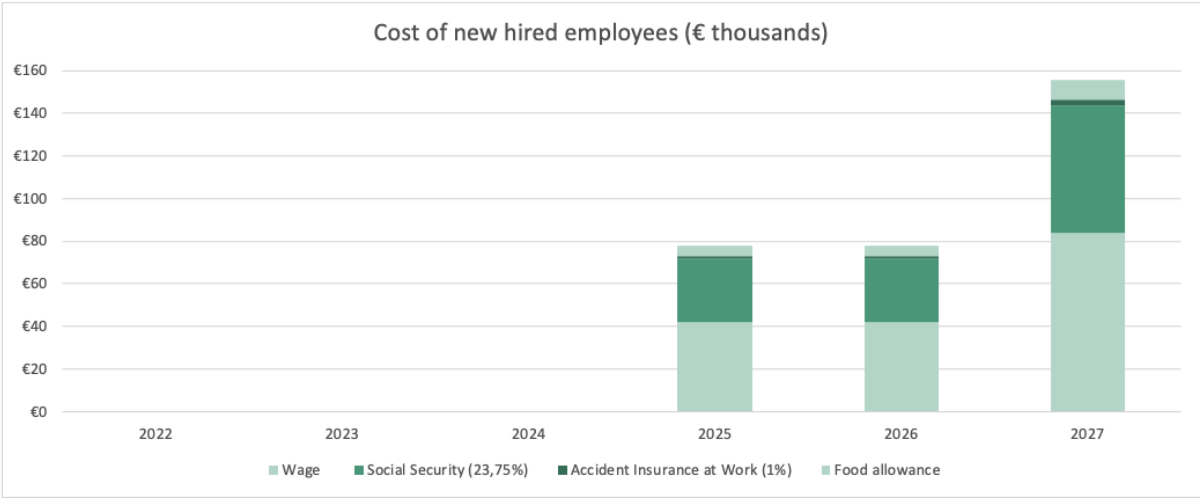
**Appendix 53 – Gross Profit and Material Costs**



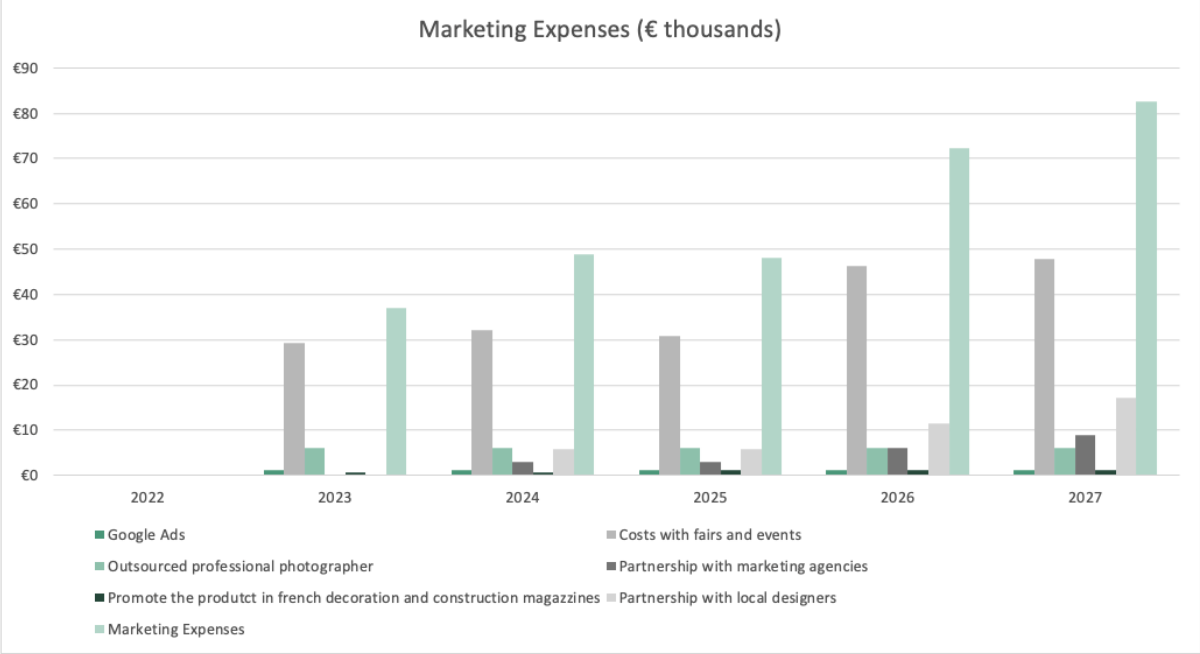
**Appendix 54 – Costs with the reallocation of employees**



**Appendix 55 – Costs with new hired employees**



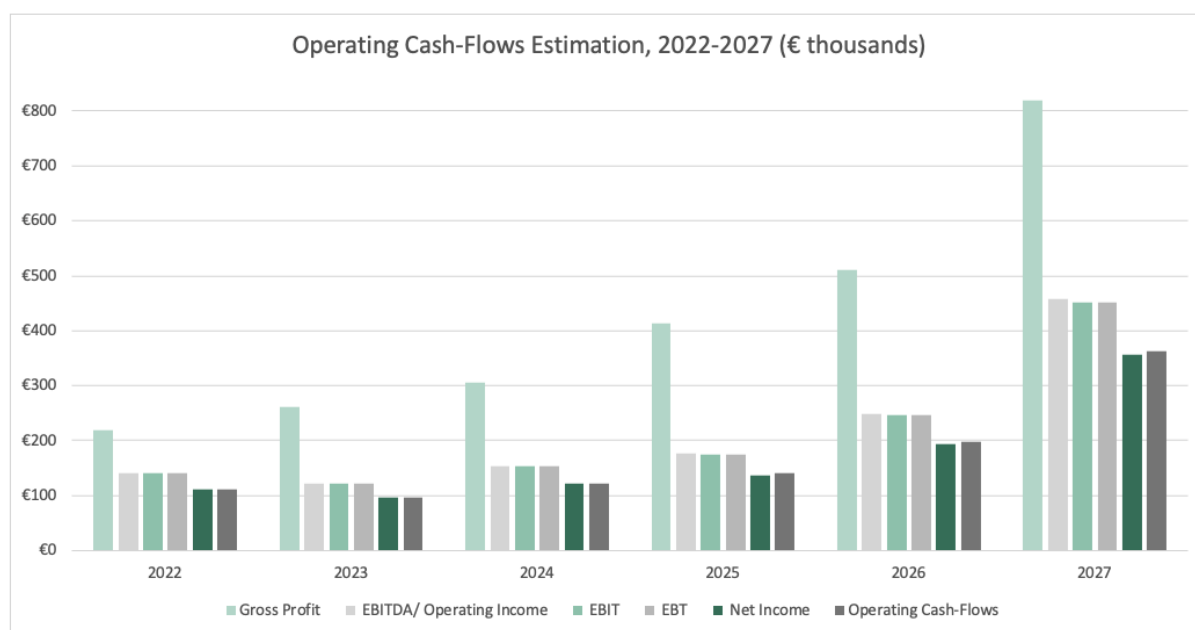
**Appendix 56 – Total Marketing Expenses**



## Appendix 57 – Operating Costs Estimation

	2022	2023	2024	2025	2026	2027
<b>Revenues Estimation</b>						
<b>French Revenues</b>	€274,78	€328,02	€381,26	€497,94	€614,63	€964,68
<i>Operating Revenues growth (%)</i>	-	19,4%	16,2%	30,6%	23,4%	57,0%
<b>Cost Estimation</b>						
Material Costs	€55,25	€65,95	€76,66	€84,65	€104,49	€144,70
<b>Gross Profit</b>	€219,53	€262,06	€304,60	€413,29	€510,14	€819,98
<i>Cost of employees allocated to exports</i>	€106,48	€106,48	€106,48	€106,48	€106,48	€106,48
<i>Reduction in cost of employees allocated to the Portuguese market</i>	-€106,48	-€106,48	-€106,48	-€106,48	-€106,48	-€106,48
<i>Cost of new hired employees</i>	-	-	-	€77,92	€77,92	€155,84
<i>Wage</i>	-	-	-	€42,00	€42,00	€84,00
<i>Social Security (23,75%)</i>	-	-	-	€29,93	€29,93	€59,85
<i>Accident Insurance at Work (1%)</i>	-	-	-	€1,26	€1,26	€2,52
<i>Food allowance</i>	-	-	-	€4,73	€4,73	€9,47
<b>Costs of employees</b>	-	-	-	€77,92	€77,92	€155,84
<i>Commercial Agent</i>	-	€23,80	€23,80	€23,80	€23,80	€23,80
<i>Google Ads</i>	-	€1,17	€1,29	€1,23	€1,24	€1,28
<i>Costs with fairs and events</i>	-	€29,33	€32,23	€30,84	€46,39	€47,89
<i>Outsourced professional photographer</i>	-	€6,00	€6,00	€6,00	€6,00	€6,00
<i>Partnership with marketing agencies</i>	-	-	€3,00	€3,00	€6,00	€9,00
<i>Promote the product in french decoration and construction magazines</i>	-	€0,60	€0,60	€1,20	€1,20	€1,20
<i>Partnership with local designers</i>	-	-	€5,75	€5,75	€11,50	€17,25
<b>Marketing Expenses</b>	-	€37,10	€48,87	€48,02	€72,32	€82,62
<i>Transport Expenses</i>	-	€36,00	€36,00	€36,00	€36,00	€114,00
<i>Travel Expenses</i>	-	€8,00	€8,00	€8,00	€12,00	€12,00
<i>Other operating costs</i>	€78,86	€78,86	€78,86	€86,75	€86,75	€99,76
<b>Total Operating Costs</b>	€78,86	€139,76	€151,54	€236,49	€260,79	€362,02
<b>EBITDA/ Operating Income</b>	€140,67	€122,30	€153,06	€176,80	€249,35	€457,96
Depreciation and amortization	-	-	-	€3,17	€3,17	€6,97
<b>EBIT</b>	€140,67	€122,30	€153,06	€173,63	€246,18	€450,99
Financial P/L (Interests and similar expenses)	-	-	-	-	-	-
<b>EBT</b>	€140,67	€122,30	€153,06	€173,63	€246,18	€450,99
Taxes	€29,54	€25,68	€32,14	€36,46	€51,70	€94,71
<b>Net Income</b>	€111,13	€96,62	€120,92	€137,17	€194,48	€356,29
└ Depreciation and amortization	-	-	-	€3,17	€3,17	€6,97
<b>Operating Cash-Flows</b>	€111,13	€96,62	€120,92	€140,34	€197,65	€363,25

## Appendix 58 – Operating Cash-Flows Estimation



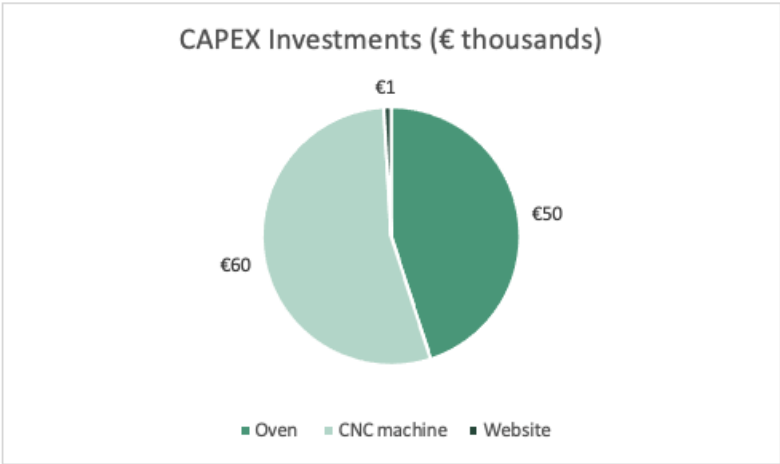
## Appendix 59 – Operational Risk Analysis

	People Risk	Process Risk	System Risk	External Events Risk	Legal Risk	
Probability of happening	5,00%	3,00%	1,50%	0,50%	1,50%	
Impact on the project's results	70%	80%	20%	70%	75%	
<b>Weighted risk</b>	<b>3,50%</b>	<b>2,40%</b>	<b>0,30%</b>	<b>0,35%</b>	<b>1,13%</b>	<b>Total Risk</b>
						<b>7,68%</b>

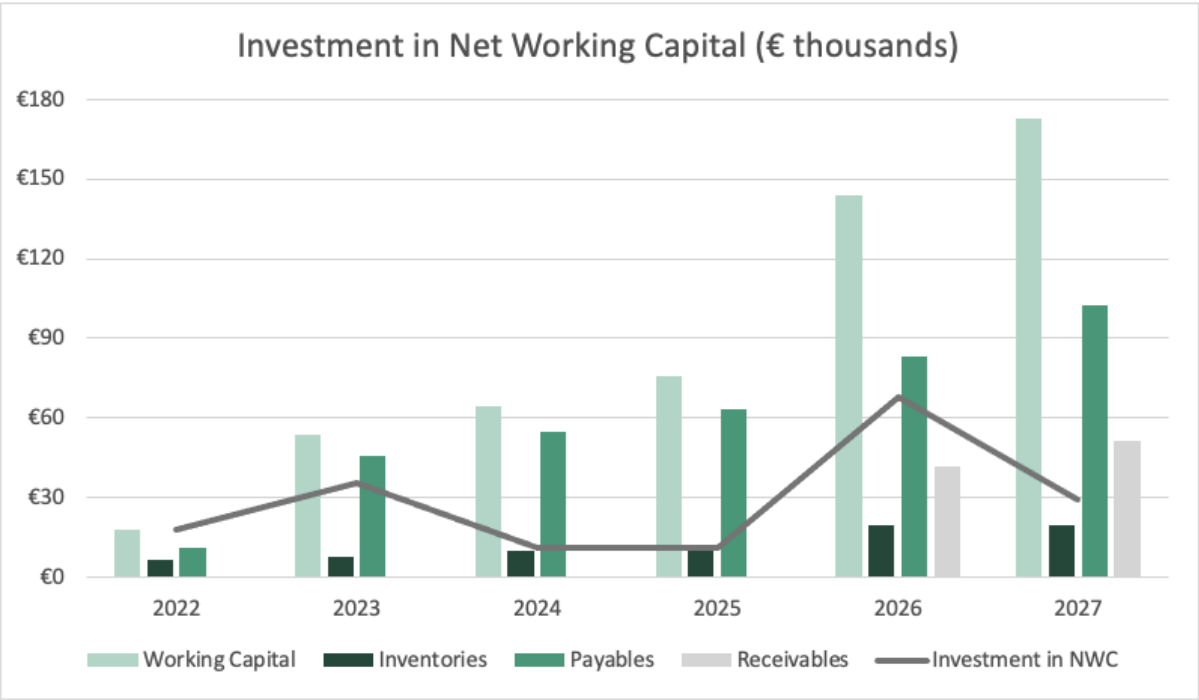
## Appendix 60 – Investment Plan

	2022	2023	2024	2025	2026	2027
<b>CAPEX</b>	<b>€0,000</b>	<b>-€1,000</b>	<b>-€50,000</b>	<b>€0,000</b>	<b>-€60,000</b>	<b>€0,000</b>
Operating Machines	-	-	-€50,000	-	-€60,000	-
Website	-	-€1,000	-	-	-	-
<b>Salvage value after taxes</b>	<b>€0,000</b>	<b>€0,000</b>	<b>€0,000</b>	<b>€0,000</b>	<b>€0,000</b>	<b>€0,000</b>
Salvage value	-	-	-	-	-	-
Taxes on capital gain	-	-	-	-	-	-
<b>Investment in NWC</b>	<b>-€17,762</b>	<b>-€35,700</b>	<b>-€9,672</b>	<b>-€10,857</b>	<b>-€64,964</b>	<b>-€29,171</b>
Working Capital	€17,762	€53,463	€63,135	€73,991	€138,955	€168,127
Inventories	€6,595	€7,666	€8,465	€10,449	€14,470	€14,470
Payables	€11,167	€45,797	€54,670	€63,543	€82,990	€102,438
Receivables	-	-	-	-	€41,495	€51,219
<b>Investment CFs</b>	<b>-€17,762</b>	<b>-€36,700</b>	<b>-€59,672</b>	<b>-€10,857</b>	<b>-€124,964</b>	<b>-€29,171</b>

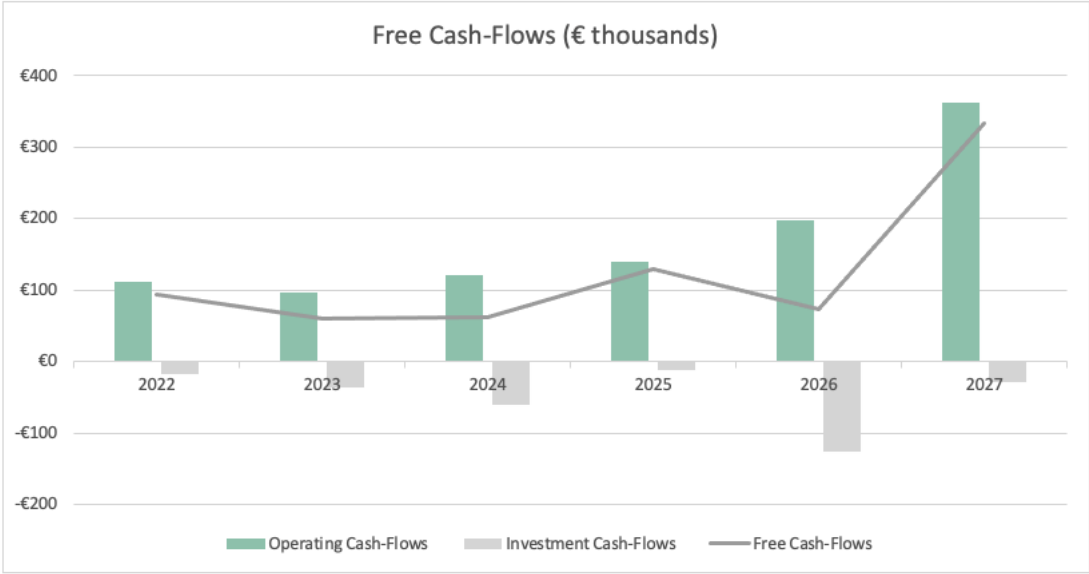
**Appendix 61 – Capital Expenditure**



**Appendix 62 – Investment in Net Working Capital**



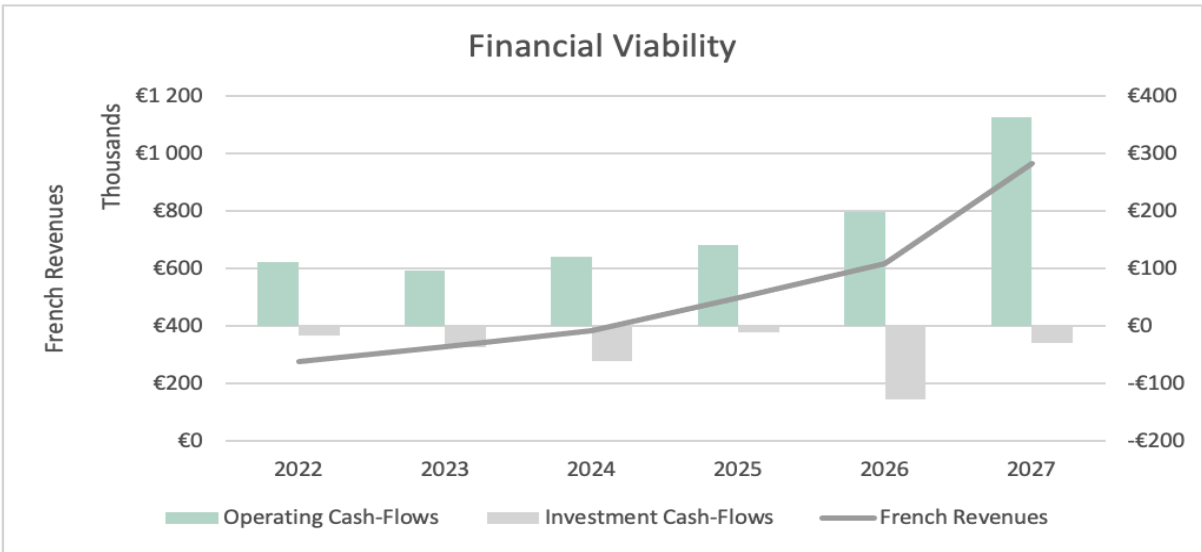
**Appendix 63 – Free Cash-Flows**



**Appendix 64 – Financing plan**

	2022	2023	2024	2025	2026	2027
Increase in Debt	-	-	-	-	-	-
Interests	-	-	-	-	-	-
<b>Financing Cash-Flow</b>	<b>€0,00</b>	<b>€0,00</b>	<b>€0,00</b>	<b>€0,00</b>	<b>€0,00</b>	<b>€0,00</b>

**Appendix 65 – Financial Viability**



## Appendix 66 – Profitability Ratios

	2023	2024	2025	2026	2027	Mean
Inflation Rate	4,60%	2,44%	1,76%	1,64%	1,56%	2,40%

Gross Margin	79,89%	79,89%	83,00%	83,00%	85,00%
Operating Margin	37,29%	40,15%	35,51%	40,57%	47,47%
Return on Sales (ROS)	37,29%	40,15%	34,87%	40,05%	46,75%
Net Profit Margin	29,46%	31,72%	27,55%	31,64%	36,93%

	No Perpetuity	With Perpetuity
Net Present Value (NPV), (in € thousands)	€454,70	€4 670,07

Internal Rate of Return (IRR)	-
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Payback Period	0
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## Appendix 67 – Scenario Analysis

Scenario Analysis- Base Case						
	2022	2023	2024	2025	2026	2027
<b>Revenues Estimation</b>						
<b>French Revenues</b>	€274,78	€328,02	€381,26	€497,94	€614,63	€964,68
<i>Operating Revenues growth (%)</i>	-	19,4%	16,2%	30,6%	23,4%	57,0%
<b>Cost Estimation</b>						
Material Costs	€55,25	€65,95	€76,66	€84,65	€104,49	€144,70
<b>Gross Profit</b>	€219,53	€262,06	€304,60	€413,29	€510,14	€819,98
Costs of new hired employees	-	-	-	€77,92	€77,92	€155,84
Marketing Expenses	-	€37,10	€48,87	€48,02	€72,32	€82,62
Transport Expenses	-	€36,00	€36,00	€36,00	€36,00	€114,00
Travel Expenses	-	€8,00	€8,00	€8,00	€12,00	€12,00
Other operating costs	€78,86	€78,86	€78,86	€86,75	€86,75	€99,76
<b>Total Operating Costs</b>	€78,86	€139,76	€151,54	€236,49	€260,79	€362,02
<b>EBITDA/ Operating Income</b>	€140,67	€122,30	€153,06	€176,80	€249,35	€457,96
Depreciation and amortization	-	-	-	€3,17	€3,17	€6,97
<b>EBIT</b>	€140,67	€122,30	€153,06	€173,63	€246,18	€450,99
Financial P/L (Interests and similiar expenses)	-	-	-	-	-	-
<b>EBT</b>	€140,67	€122,30	€153,06	€173,63	€246,18	€450,99
Taxes	€29,54	€25,68	€32,14	€36,46	€51,70	€94,71
<b>Net Income</b>	€111,13	€96,62	€120,92	€137,17	€194,48	€356,29
L Depreciation and amortization	-	-	-	€3,17	€3,17	€6,97
<b>L Operating Cash-Flows</b>	€111,13	€96,62	€120,92	€140,34	€197,65	€363,25
Investment Cash-Flows	-17,76	-36,70	-61,22	-11,22	-127,98	-29,17
Financing Cash-Flows	0,00	0,00	0,00	0,00	0,00	0,00
<b>Free Cash-Flows</b>	93,37	59,92	59,70	129,12	69,67	334,08
<b>NPV</b>	4 670,07 €					

Scenario Analysis- Pessimistic Scenario						
	2022	2023	2024	2025	2026	2027
<b>Revenues Estimation</b>						
<b>French Revenues</b>	274,78	320,03	364,18	458,92	550,33	816,76
<i>Operating Revenues growth</i>	-	16,5%	13,8%	26,0%	19,9%	48,4%
<b>Cost Estimation</b>						
Material Costs	55,249	72,549	84,324	93,115	114,935	159,172
<b>Gross Profit</b>	219,531	247,484	279,860	365,809	435,399	657,583
<b>Costs of new hired employees</b>	-	-	-	77,918	77,918	155,836
<b>Marketing Expenses</b>	-	37,098	48,872	48,025	72,323	82,616
Transport Expenses	-	36,000	36,000	36,000	36,000	114,000
Travel Expenses	-	8,000	8,000	8,000	12,000	12,000
Other operating costs*	78,865	86,751	86,751	95,426	95,426	109,740
<b>Total Operating Costs</b>	78,865	167,850	179,623	265,369	293,667	474,192
<b>EBITDA/ Operating Income</b>	140,667	79,634	100,237	100,440	141,732	183,391
Depreciation and amortization	-	-	-	3,167	3,167	6,967
<b>EBIT</b>	140,667	79,634	100,237	97,273	138,565	176,424
Financial P/L (Interests and similiar expenses)	-	-	-	-	-	-
<b>EBT</b>	140,667	79,634	100,237	97,273	138,565	176,424
Taxes	29,539	16,722	21,049	20,426	29,098	37,048
<b>Net income</b>	111,128	62,912	79,188	76,847	109,468	139,376
└ Depreciation and amortization	-	-	-	3,167	3,167	6,967
<b>└ Operating Cash-Flows</b>	111,128	62,912	79,188	80,013	112,634	146,343
Investment Cash-Flows	-17,76	-36,70	-61,22	-11,22	-127,98	-29,17
Financing Cash-Flows	0,00	0,00	0,00	0,00	0,00	0,00
<b>Free Cash-Flows</b>	<b>93,37</b>	<b>26,21</b>	<b>17,97</b>	<b>68,79</b>	<b>-15,35</b>	<b>117,17</b>
<b>NPV</b>	<b>1 630,72 €</b>					

Scenario Analysis- Optimistic Scenario						
	2022	2023	2024	2025	2026	2027
<b>Revenues Estimation</b>						
<b>French Revenues</b>	274,78	336,00	398,72	539,05	684,32	1132,53
<i>Operating Revenues growth</i>	-	22,3%	18,7%	35,2%	26,9%	65,5%
<b>Cost Estimation</b>						
Material Costs	55,249	59,358	68,992	76,185	94,038	130,232
<b>Gross Profit</b>	219,531	276,646	329,726	462,867	590,280	1002,294
<b>Costs of new hired employees</b>	-	-	-	77,918	77,918	155,836
<b>Marketing Expenses</b>	-	37,098	48,872	48,025	72,323	82,616
Transport Expenses	-	36,000	36,000	36,000	36,000	114,000
Travel Expenses	-	8,000	8,000	8,000	12,000	12,000
Other operating costs*	78,865	70,978	78,865	86,751	86,751	99,764
<b>Total Operating Costs</b>	78,865	152,077	154,563	231,025	256,493	417,794
<b>EBITDA/ Operating Income</b>	140,667	124,569	175,163	231,842	333,787	584,499
Depreciation and amortization	-	-	-	3,167	3,167	6,967
<b>EBIT</b>	140,667	124,569	175,163	228,675	330,620	577,533
Financial P/L (Interests and similiar expenses)	0,00	0,00	0,00	0,00	0,00	0,00
<b>EBT</b>	140,667	124,569	175,163	228,675	330,620	577,533
Taxes	29,539	26,159	36,783	48,021	69,429	121,281
<b>Net income</b>	111,128	98,411	138,380	180,655	261,191	456,252
└ Depreciation and amortization	-	-	-	3,167	3,167	6,967
<b>└ Operating Cash-Flows</b>	111,128	98,411	138,380	183,821	264,358	463,218
Investment Cash-Flows	-17,76	-36,70	-61,22	-11,22	-127,98	-29,17
Financing Cash-Flows	0,00	0,00	0,00	0,00	0,00	0,00
<b>Free Cash-Flows</b>	<b>93,37</b>	<b>61,71</b>	<b>77,16</b>	<b>172,60</b>	<b>136,38</b>	<b>434,05</b>
<b>NPV</b>	<b>6 087,34 €</b>					

**Scenario Analysis- Intense Rivalry**

	2022	2023	2024	2025	2026	2027
<b>Revenues Estimation</b>						
<b>French Revenues</b>	€274,78	€328,02	€381,26	€497,94	€614,63	€964,68
<i>Operating Revenues growth (%)</i>	-	18,0%	15,1%	28,5%	21,8%	53,0%
<b>Cost Estimation</b>						
Material Costs	€55,25	€70,57	€82,02	€90,58	€111,80	€154,83
<b>Gross Profit</b>	€219,53	€257,45	€299,23	€407,37	€502,83	€809,85
<b>Costs of new hired employees</b>	-	-	-	€77,92	€77,92	€155,84
<b>Marketing Expenses</b>	-	€37,10	€48,87	€48,02	€72,32	€82,62
Transport Expenses	-	€36,00	€36,00	€36,00	€36,00	€114,00
Travel Expenses	-	€8,00	€8,00	€8,00	€12,00	€12,00
Other operating costs	€78,86	€78,86	€78,86	€86,75	€86,75	€99,76
<b>Total Operating Costs</b>	€78,86	€159,96	€171,74	€256,69	€284,99	€464,22
<b>EBITDA/ Operating Income</b>	€140,67	€97,49	€127,50	€150,67	€217,83	€345,63
Depreciation and amortization	-	-	-	€3,17	€3,17	€6,97
<b>EBIT</b>	€140,67	€97,49	€127,50	€147,51	€214,67	€338,67
Financial P/L (Interests and similiar expenses)	€0,00	€0,00	€0,00	€0,00	€0,00	€0,00
<b>EBT</b>	€140,67	€97,49	€127,50	€147,51	€214,67	€338,67
Taxes	€29,54	€25,68	€32,14	€36,46	€51,70	€94,71
<b>Net Income</b>	€111,13	€71,80	€95,35	€111,04	€162,97	€243,96
└ Depreciation and amortization	-	-	-	€3,17	€3,17	€6,97
<b>└ Operating Cash-Flows</b>	<b>€111,13</b>	<b>€71,80</b>	<b>€95,35</b>	<b>€114,21</b>	<b>€166,14</b>	<b>€250,92</b>
Investment Cash-Flows	-17,76	-36,70	-61,22	-11,22	-127,98	-29,17
Financing Cash-Flows	0,00	0,00	0,00	0,00	0,00	0,00
<b>Free Cash-Flows</b>	<b>93,37</b>	<b>35,10</b>	<b>34,13</b>	<b>102,99</b>	<b>38,16</b>	<b>221,75</b>
<b>NPV</b>	<b>3 098,52 €</b>					