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Zumer Platform Marketing Plan

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Master in Marketing

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ISCTE Business School

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Department Of Marketing, Strategy and Operations

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Index

Resumo

Esta tese oferece uma estratégia de marketing completa para a plataforma Zumer; uma nova plataforma de construção criada para satisfazer as exigências da indústria da construção portuguesa. O principal objetivo desta investigação é criar um roteiro estratégico que permita lançar no mercado português a plataforma Zumer.

A tese é iniciada descrevendo os componentes essenciais e a proposta de valor da plataforma Zumer. A criação do plano de marketing baseia-se num exame detalhado da indústria da construção portuguesa, que inclui uma análise PESTEL e uma análise da concorrência.

Uma estratégia de marketing completa é criada usando o estudo de mercado e os resultados do *focus group* como base. Objetivos de marketing, segmentação do mercado-alvo, estratégia de posicionamento, componentes do mix de marketing e um plano de implementação são todos abordados neste plano.

A eficácia do plano de marketing e o desempenho da plataforma são medidos por meio de indicadores-chave de desempenho e métricas sugeridas. A tese conclui com sugestões para estudos adicionais e possíveis caminhos para o crescimento da plataforma Zumer.

Esta estratégia de marketing oferece táticas viáveis para a equipa de gestão e marketing da plataforma Zumer entrar com sucesso no implacável negócio de construção português. A plataforma Zumer pode desenvolver uma presença forte, fidelizar os clientes e promover o crescimento dos negócios na indústria da construção em Portugal, estando alinhada com as necessidades e preferências do mercado.

Abstract

This thesis offers a thorough marketing strategy for the Zumer platform; a brand-new construction platform created to meet the requirements of the Portuguese construction industry. The main goal of this research is to create a strategic roadmap that will allow the Portuguese market to successfully launch and utilize the Zumer platform.

The thesis is introduced by outlining the essential components and value proposition of the Zumer platform. The creation of the marketing plan is based on a detailed examination of the Portuguese construction industry, which includes a PESTEL analysis and a competition analysis.

A thorough marketing strategy is created using the market study and focus group results as a basis. Marketing goals, target market segmentation, positioning strategy, marketing mix components, and an implementation plan are all covered in this plan.

The effectiveness of the marketing plan and platform performance is measured using key performance indicators and metrics that are suggested. The thesis concludes with suggestions for additional study and possible avenues for Zumer platform growth.

This marketing strategy offers doable tactics for the management and marketing team of the Zumer platform to successfully enter the cutthroat Portuguese building business. The Zumer platform can develop a strong presence, foster client loyalty, and promote business growth in Portugal's construction industry by being in line with market needs and preferences.

Introduction

Any nation's economic progress depends heavily on the construction sector, and Portugal is no different. The goal of this thesis is to create a thorough marketing strategy for the Zumer platform, a state-of-the-art construction management technology created especially for the Portuguese market.

2021 was marked by the Covid-19 pandemic, which had a significant impact on global economic activity. Despite the economic recovery, issues with supply chains and rising energy prices restrained the expansion of international trade and activity. After experiencing a decline of 8.4% in 2020, Portugal's GDP saw a gain of 4.9% in volume, which reflected the impact of the COVID-19 epidemic on the country's economic activities (Relatório do Setor da Construção em Portugal 2021, 2022).

Given the effects of the Covid-19 epidemic, the construction sector in Portugal concluded 2021 with the Construction Production index growing 2.9% compared to the same period the previous year (in 2020, there was a loss of 3.3%). Investment in this industry increased by 3.5% year over year. After varying by 3.0% in 2020, the construction industry's gross value added had a fluctuation rate of 3.4% in 2021. Compared to the prior year, the sector's employment increased by 2.8%. In 2021, this economic sector will account for 6.3% of all jobs (Relatório do Setor da Construção em Portugal 2021, 2022).

The number of qualifying titles (ownership of a legal estate in registered land subject to some exception or qualification specified in the register) given to the building industry has been increasing. By the end of 2021, there were 2861 more qualifying titles available for the company's construction activities than there were at the end of 2020. In comparison to the previous year, there were 9.7% more valid permits (+2701 valid permits). In comparison to 2020, there was a 0.6% increase in the number of valid certificates (+160 valid certificates) (Relatório do Setor da Construção em Portugal 2021, 2022).

Environmental protection has gained importance throughout time. Today, it is commonly acknowledged that the quality of life and environmental quality are inextricably linked and that preserving the environment is no longer an option but a must. The constantly shifting external economic, technological, social, and political conditions

put increasing strain on all modern organizations (Dakhli and Guetat, 2013). Through their management practices and other operations, they directly affect the environment and society. As a result, to ensure sustainability, organizations must take ownership of their actions and ensure that they have as little impact as possible on the equilibrium of ecosystems and social activities (Robert et al., 2007).

According to Ibrahim et al. (2010), construction waste (CW), which consists of damaged or residual materials produced during the construction process, is the major contributor to landfills globally. To be more precise, CW consistently contributes between 16% and 60% of landfills worldwide (Luangcharoenrat et al., 2019). This massive amount is a serious issue that has worsened over time and has a negative impact on the ecosystem worldwide (Hao et al., 2019). A lot of nations are also dealing with an increase in CW, including Malaysia, China, the USA, and the UK (Alwan et al., 2017; Lu et al., 2021; Umar et al., 2018). Additionally, pressurized landfills and CW generation have been impacted by the construction process' rapid development (Bakshan et al., 2015). Or to put it another way, CW is a major global problem.

Recycling construction waste (CWR) is a practical method for preventing the dumping of CW in landfills (Ulubeyli et al., 2017). Additionally, CWR is a waste management technique that is eco-friendlier and more preferred than disposing of waste in landfills (Brum et al., 2021). Additionally, CWR transforms CW into fresh resources that can be used (Bao and Lu, 2021). As a result, CWR is seen as essential in the management of construction waste (Bao et al., 2020). Additionally, it is widely believed that encouraging CWR is essential for lowering CW (Liu et al., 2020). Additionally, raising people's awareness of CWR through educational initiatives may encourage them to recycle more (Liu et al., 2021). In order to improve the economy, protect the environment, and achieve construction sustainability, CWR is essential.

Businesses are essential to the growth of every nation's economy. According to Müller et al. (2018), companies are often classified as small-medium businesses (SMEs) if they have fewer than 250 employees and as large businesses (LEs) if they have more than 250. SMEs are becoming increasingly acknowledged as the main engine of the economy (Pu et al., 2021). Although LEs can support economic growth (Chong et al., 2019), SMEs typically lack sufficient resources and are easily impacted by their

surroundings. Therefore, according to Heiens et al. (2019) and Merich et al. (2020), SMEs are different from LEs. Based on their financial sources, SMEs in different nations can be distinguished by their primary characteristics. According to Coakley and Huang (2020), almost all SMEs received funding from banks or private sources, such as business partners or friends. In contrast, LEs have more funding and personnel resources than SMEs. As a result, LEs can distribute various tasks across various groups and people (Kwon et al., 2021). As a result, the SMEs and LEs have unique qualities that might either make it simpler or harder to apply CWR enhancement techniques.

The idea of sustainable construction is based on a cyclical process that necessitates close monitoring in all its stages to ensure all the sustainability principles are upheld (Ortiz et al., 2009): from project planning and design to construction, occupant use, and demolition stages.

The increased competitiveness in the Portuguese construction industry has brought to light the owners' obligations because of flaws in the work projects they have agreed to. Their clauses do not adequately describe or estimate the work that needs to be done. Regardless of the quality of the design project, the contractor is increasingly seen as a machine that produces a certain product on time, within budget, and according to the plan (Couto & Teixeira, 2006a; Santo, 2002). Therefore, the owner will be held accountable for any cost and scheduling adjustments that result from on-site repairs, revisions, or extra detail.

The main goal of this thesis was to create a thorough marketing strategy that is in line with the special traits and demands of the Portuguese construction industry. The strategy concentrated on successfully positioning the Zumer platform, a recent platform, which was created on the present year, 2023 that is now trying to establish itself in the construction market. It consists of an “Integration Platform” and as a leading solution that can revolutionize building processes and propel success for industry experts.

The Zumer platform has many features and functionalities that target the major problems in the construction sector. The ability to streamline operations, boost productivity, and improve project results is given to construction professionals by using the power of data integration, collaboration, and automation. However, a clear marketing

strategy is essential to the effective introduction and uptake of the Zumer platform in the Portuguese market, therefore, the research question of this project is the following:

How can the Zumer Platform be better positioned in the construction sector and gain competitive advantages to surpass the competition while addressing the main construction sector needs?

The Zumer platform is an Integration and Collaboration Platform for Construction and collects data from various sources and allows users without programming knowledge to build workflows for tasks, such as preparing budgets and cost estimates, work planning, or merge 3D models with information. The platform will be made available as a PaaS (Platform-as-a-Service) where users can aggregate data from places such as 3D BIM model hubs, databases, SharePoint, Google Drive, PowerBI or Excel and build the applications. The platform offers tools for data management, insight extraction, visualization, collaboration, and sharing to improve communication and transparency between stakeholders (Anonymous, Male, Zumer founder).

Zumer's platform provides a novel approach to some of the problems the Portuguese construction sector is now experiencing. Users of the platform can gather information from numerous sources and create workflows for tasks like creating budgets and cost estimates, planning projects, fusing information from 3D models, and achieving ESG (Environmental, social and governance) goals like calculating greenhouse gas emissions. The platform provides tools for data management, insight extraction, visualization, and collaboration, with the goal of enhancing stakeholder communication and transparency.

As for the methodology, a focus group with six potential clients who represent various positions and viewpoints within the construction business was conducted as part of the technique used in this thesis. Focus groups are an effective method for learning more about, getting input from, and understanding the target audience. By interacting with these people, we can better understand their wants, preferences, and requirements from a platform for creation like Zumer.

Participants were encouraged to provide their opinions on the features, usability, cost, and potential advantages of the Zumer platform during the focus group sessions. This methodology made possible to examine the platform's advantages, disadvantages,

prospects, and threats in an open and productive manner. The marketing approach and positioning of the Zumer platform in the Portuguese market was greatly influenced by the focus group's findings.

The marketing strategy also determined the target audience segments in the Portuguese construction market and an understanding of their requirements, difficulties, and goals, to evaluate the advantages and disadvantages of the current building platforms in Portugal, analyzing the market environment. It was also essential to create a value proposition for the Zumer platform that highlights its salient characteristics, advantages over rivals, and other qualities and establish the most effective marketing channels and communication plans to reach the target audience.

With a special emphasis on the Portuguese construction business, the goal of this thesis was to develop a Zumer platform marketing plan.

The next chapter will consist of a literature review about the construction sector, including themes such as waste and the technology inside this sector. Followed by the description of the methodology that was used for this study, and a complete marketing plan.

1. Literature Review

1.1 The construction sector

A crucial industry that significantly affects both the economy and environment is the building and construction sector (Zhao Z.Y, Zuo J, 2014). This industry supports the economy (approximately 9% of the EU's gross domestic product), creates direct and indirect employment possibilities (18 million direct jobs in the EU), and meets the demands of the population in terms of structures and amenities (C. Huang G. Wu, J. Zuo, X. Zhao, 2019).

Additionally, this industry consumes a significant number of resources: 36% of the world's final energy consumption and roughly 50% of all raw material consumption (C. Pout, J. Ortiz, L. P´erez-Lombard, 2008). The continuance of these greenhouse gas emissions at the same rate will undoubtedly result in a problematic situation, as this sector is responsible for 39% of the energy and process-related emissions as well as the agents of acid rain (A. Allouhi, A. Jamil, T. Kousksou, Y. El Fouih, Y. Mourad, Y. Zeraouli, 2015).

A third of the waste produced in the EU is attributed to construction and demolition projects, and a large portion of that waste is landfilled, which has a significant negative impact on the environment throughout the lifecycle of a building, particularly during the operational and end-of-life phases (M. Burman, N. Braimah, S.H. Ghaffar, 2020). Another significant concern is the rise in raw material prices, which forces the construction sector to use efficient resource alternatives, such as reusing and recycling (H. Birgisdottir, L.C.M. Eberhardt, M. Birkved, 2019). It can be deduced that there is a pressing need and pressure on the building sector to adopt a circular economy strategy to ensure a more sustainable building sector (A. Kylili, C. Panteli, L. Seduikyte, L. Stasiuliene, P.A. Fokaides, 2020).

Industrial ecosystems and industrial symbioses, the 3Rs principle (reduce, reuse, and recycle), cleaner production, including manufacturing systems' circular materials flows, product-service systems, eco-efficiency, cradle-to-cradle design, and green agriculture are just a few of the concepts of the Circular Economy (CE), which emerged from industrial ecology (N.B. Jacobsen, 2008).

According to data from the National Statistics Institute (INE, 2008), the construction industry has a significant impact on the Portuguese economy, accounting for 12% of all direct employment in Portugal alone. A total of 11.6% of the Portuguese GDP is attributable to it (BP, 2007). The public's awareness, the displeasure with budget overruns and the repeated delays that happened in high-profile public works is also growing (Court of Auditors, 2009).

These data demonstrate the enormous contribution of the Portuguese building industry to the country's economy. It is crucial to reduce waste in a sector that is a little resistant to change, especially during this time of global recession.

The original definitions used by the Toyota Company should be examined to comprehend the many types of trash that are frequently generated in the construction industry. There are seven types of waste, according to Taiichi Ohno (1988), the first five of which deal with the flow of materials and the last two with human activity: defects that need to be fixed; overproduction; inventory; transportation of materials without a need; unnecessary processing steps; motion of employees without a need; and employee waiting.

Given that the current method is based on an "obsolete conceptual and intellectual basis," these waste issues are likely to continue (Koskela, 1992). Construction projects may become more wasteful as their complexity rises and their completion times are shorter.

The Portuguese construction industry is becoming increasingly conscious that the public will no longer put up with delays and budget overruns. According to Sapiens Project (Teixeira et al., 2005), "The European consumers are increasingly demanding with the construction they want." Portuguese businesses are being encouraged to seek out ways to enhance their methods, processes, and procedures by this shift in thinking. According to Moura and Teixeira's 2007 research, the Portuguese industry has a conservative attitude toward innovation. According to the same authors, one of the explanations for the industry's lack of innovation and competitiveness was the dearth of information regarding previous case studies and lessons gained.

According to Moura (2003), there are three possible causes of delays: (1) the duty of the construction owner; (2) the responsibility of the contractor; and (3) the obligation of a third party.

The most significant reasons for delays in Portuguese construction projects, according to Couto and Teixeira (2006) are: Design flaws (ambiguity, errors, omissions, lack of detail); Low bid method used for awarding public works; Low labor qualification; Poor planning, management, and control of activities/material/labor; Time-consuming process of obtaining permits and public approvals.

Portuguese businesses must therefore consider how to increase their effectiveness to, hopefully, achieve better outcomes in terms of budget and time management. In their 2004 investigation of the sources of waste in Turkey, Ballard and Polat paid particular attention to delays and material waste. According to this study, ordering materials that don't meet project criteria specified in design papers, improper construction planning, and worker errors are the three main sources of material waste.

In addition to these conclusions, Ballard and Polat (2004) found that the following factors contributed to delays: a delay in material delivery; receiving supplies that did not meet project requirements as specified in design documents and waiting for replacements; and irregular cash flow.

When studies of the Portuguese reality are compared to those of other nations depicted in the research cited in this section, it is evident that a lot of reasons for waste and delays are comparable, particularly those involving design concerns, inadequate planning, and labor-related problems. Given these commonalities, it might be claimed that findings from the Portuguese construction industry may apply to studies in other contexts in the future.

1.2 Waste in the architecture sector

K. Patel et al. (2011) and Pauline Jeruto Keitany et al. (2014) found that building materials and equipment can account for over 70% of the overall cost of a typical construction project.

All these factors result in waste and excess building materials, delays in construction projects, a decline in labor productivity, and a lack of current and real-time project information. A preliminary evaluation of the technologies and approaches now employed in materials management reveals that the majority are under development, with only a handful in commercial usage (N. Kasim et al., 2012). On construction sites, new emerging technologies such as wireless communication systems, bar-coding readers, and Radio

Frequency Identification (RFID) are used to reduce human error and are integrated with project management systems to facilitate the tracking and management of construction materials (N. Kasim et al., T. Madhavi et al. 2013). G.Kanimozhi et al. (2014) revealed that incorrect material management caused schedule delays in 70%, 40%, and 50% of government-funded construction projects in the United Kingdom, India, and United Arab Emirates (UAE), respectively. Overstocked materials due to improper planning, damaged materials due to logistics, handling, or application, loss of materials due to improper supervision, waiting of the materials to arrive at location due to improper tracking systems, frequent moving of materials due to improper site layout, inflation, and material changes in buying/purchasing are the primary causes of cost variance and problematic material management. It has been determined that administrative causes account for 30% of directly affecting causes, whereas 5% of causes are attributable to material unavailability owing to poor material management. According to research, building materials and handling equipment can account for between 50 and 70 percent of the overall cost of a typical construction project. Companies adopting an effective material management system have a 35% greater overall efficiency. (K V. Patel et al., 2011).

1.3 Technology in construction

Information technologies are increasingly widely used across the construction industry, according to recent national and international surveys (Fuchter, 1998; Howard et al., 1998; Rivard, 2000). However, the creation and production of these technologies typically occurs in different economic areas. The employment of these technologies by design, engineering, and construction companies fits into broader sectoral patterns of invention, adoption, and application.

The construction industry has seen several significant changes in the last ten years that have improved operations and resulted in sizable cost and time management project savings (Son et al., 2010). These changes primarily involve the digitization of the operation and maintenance phase as well as the entire engineering and construction value chain (Son et al., 2010). Key 4.0 technologies for the building industry have also been divided up into numerous major categories. In the framework of Industry 4.0 for construction, for instance, Oesterreich and Teuteberg (2016) identified a few significant technologies and concepts and organized them into three primary clusters: the smart factory, simulation and modeling, and digitalization and virtualization. Cyber-physical

systems/embedded systems, automation, the Internet of Things and Services (IoT and IoS), additive manufacturing, modularization (also known as prefabrication), robotics, product-life cycle management, and human-computer interaction are among the key concepts in the first cluster, according to Oesterreich and Teuteberg (2016). The second cluster focuses on simulation and modeling software, which is another essential component of Industry 4.0. While the fields of augmented, virtual, and mixed reality (AR (Augmented reality), VR (Virtual Reality), and MR (Mixed Reality), respectively) are still in their infancy as applications for use on construction projects, the field of BIM can be considered one of the central technologies to support the core idea of Industry 4.0. Technologies related to digitization and virtualization are included in the third cluster. Cloud computing, big data, mobile computing, and social media are some of these technologies. Dallasega et al. (2018) identified six key research areas related to Industry 4.0 ideas that are pertinent to Construction Supply Chains (CSC): digitization (management information system, real-time Supply Chain Management (SCM), intelligent transportation systems, connected vehicle systems), cloud computing (Web services technology, mobile Internet-based construction SCM, collaboration technology), BIM (information integration and sharing, monitoring CSC, supply ch), and Industry 4.0 concepts that are relevant to the construction industry. To assess the applicability of these clusters' concepts and technologies to construction supply chains, they were compiled into a thorough framework.

There isn't a single, integrated solution that unifies 4.0 technologies in the construction industry, unlike the manufacturing sector, which has witnessed the birth of numerous integrated business management software (Danjou et al., 2020). While Industry 4.0 in the construction industry has been largely driven by the integrated BIM model, contemporary trends also involve the emergence of several nonintegrated technical solutions (Danjou et al., 2020).

1.4 What is BIM

BIM is a breakthrough technology and technique that is revolutionizing the design, planning, construction, and management of buildings (Hardin, 2009). It is also viewed as a method for assisting the construction sector in developing new ways of thinking and conducting business.

BIM is also a digital representation of the physical and functional aspects of a facility, according to Smith (2007). It provides a "shared knowledge resource for information about a facility that serves as a trustworthy basis for choices throughout its life cycle from genesis onwards." Since its beginnings, a variety of methods and tools have been made accessible, including Virtual Prototyping (VP) technology, a computer-aided decision-making tool that utilizes digital product models and realistic graphical simulations (Li et al., 2009).

Over the past three decades, advancements in information technology, particularly in the field of building information modelling (BIM), have prompted construction practitioners to rethink the way in which information is shared on construction projects and innovative methods for generating and managing building data throughout its life cycles (Lee et al., 2006). Despite the substantial amount of research and studies on BIM over the years, it has been argued that the building and construction industry continues to lag in BIM development, whereas industries such as automotive and shipbuilding manufacturing have successfully integrated electronic product models into their operations for more than two decades (Liet al., 2008). BIM lacks a rigorous evaluation of its previous research efforts and accomplishments. A detailed examination of existing research is of significant value for determining where further efforts are required and, consequently, future research paths.

- **BIM for Design and Construction Planning**

In recent years, a substantial amount of research has been devoted to the development of novel BIM systems for the design and construction of building projects. According to Li et al. (2009), there are two primary uses for BIM in preconstruction planning. Using information encoded in 3D models, it intends to allow project planners to inspect their static realistic representations and check for design faults and collisions. Second, BIM is accepted as a comprehensive model of building components to serve as a design check and to generate a thorough construction activity.

The use of virtual reality (VR) technology is another sophisticated BIM application in design planning and construction. The VR technology has been applied extensively and effectively to the car and aerospace industries, but it has only just been implemented in the construction business (Whyte et al., 2000). The construction sector uses virtual reality for design applications, collaborative visualization, and as a tool to enhance

building operations. As it gives 3D imagery, can be changed in real-time, and can be used collaboratively to explore stages of the construction process, virtual reality is a suitable medium for building design. Li et al. (2008, 2009) used virtual prototyping (VP) technology for construction simulation and planning. The Building Virtual Prototyping (CVP) model was created to aid project planners in comprehending the construction process and predicting potential errors. The approach requires designers to modularize their designs into BIM models, which are three-dimensional representations including information for performance evaluation. Practitioners can test the project before constructing it. The model enables to replicate building processes accurately and efficiently capture design and construction information that can be used to future projects (Li et al., 2008; Li et al. 2009).

According to *Building Information Modeling Benefits for Architecture and Construction | Thought Leadership*, 2021), Building Information Modeling (BIM) is a procedure that enhances the design and construction of buildings by architects and engineers. Using BIM authoring tools, architects can generate a digital 3D model of the building, allowing them to see its appearance and functionality. The 3D representation can contain a variety of data and information that can be utilized outside of the authoring tool.

Additionally, BIM allows improved workflow features that enhance the design process from idea to completion. It provides architects with more than just a peek of the building's physical characteristics, it is a repository of shared knowledge where architects and collaborators may save all their ideas and do sophisticated computations in real time. Modern architects use this methodology to develop high-performance, efficient, and forward-thinking structures. Information Modeling Construction has several benefits, just like the fact that it allows to collaborate between designers, owners, and builders is one of the main benefits of BIM for the AECO business, as well as accelerating Project Completion (*Building Information Modeling Benefits for Architecture and Construction | Thought Leadership*, 2021).

Introducing the Zumer platform, a product that focuses on these urgent concerns. Our marketing strategy focuses on emphasizing the platform's major attributes and advantages regarding waste reduction, carbon footprint reduction, and encouraging environmentally friendly construction methods. By bridging the gap between the industry's challenges and the Zumer platform's solutions, the marketing plan will effectively highlight the

platform's value proposition and drive its adoption among construction professionals, transforming how projects are managed in the industry.

1.5 Marketing Planning

McDonald et al. (2011) defined marketing as the process of aligning a company's capabilities with the demands of its customers, in order to achieve goals and satisfy customers. A "win-win" scenario, or one in which both the business and the customer profit, is necessary for effective marketing. This often means that customers obtain a good product or service, and the business generates money by selling it to customers. In other terms, according to McDonald et al. (2011), marketing comprises the following procedure: Setting targets for your markets; Determining the needs of the client; evaluating the worth of satisfying various client wants; Expressing these principles to the business; Transferring values to customers via communication and Figuring out the actual value that was provided to customers.

According to McDonald et al. (2011), marketing plays a role in business in the following ways: Ensures that a product or service meets the requirements of its intended market; Defining and putting into practice operational efficiency inside a company; Encouraging an environment where staff members are free to approach problems creatively and entrepreneurially and, finally, it reminds a company that the customer is at the center of everything.

The role that marketing plays in a company is always influenced by a variety of financial, political, social, and legal issues. As a result, marketing departments are required to follow any rules that are in place and that are specific to their company (McDonald et al., 2011).

Strategic marketing planning, according to Perreault et al. (2008), entails identifying appealing prospects and creating viable strategies that specify a target market and associated marketing mix. A strategic marketing plan should outline the target markets and the value proposition that will be provided based on an analysis of the best market prospects, according to Armstrong and Kotler (2011) and Kotler and Keller (2009). The organization's primary tool for guiding and organizing its marketing efforts is its marketing plan, which should include information on the present condition, objectives, strategies, action plans, budgets, implementation, and control.

According to Johnson et al. (2008), a strategic plan's goal is to outline the organization's current business and future course. According to Cravens (2008), the process of strategic marketing planning must consider the environment and all functional aspects of a corporation, including finance, marketing, and personnel. According to Cravens (2008), the strategic marketing planning process involves the following crucial steps: environment analysis, creation of a marketing strategy, creation of a marketing program, and implementation and management of the marketing program. Environmental analysis, goal setting, strategy creation, implementation, and control are steps in the process of strategic planning, according to Cravens (2008) and David (2009).

The process includes the following elements, either implicitly or explicitly, according to a review of the major prescriptive literature on the subject (Armstrong & Kotler 2011; Cravens 2008; Cravens & Piercy 2006; Cravens, David 2009; Johnson et al. 2009; Kotler & Keller 2009; McCarthy 2009; Paley 2006; Parnell 2000; Perreault et al. 2008; Pride & Ferrell 2010; Rogers 2001; Stanton 2008).

To successfully achieve their goal(s), marketing plans should additionally incorporate any or all the following: Be imaginative since it draws the attention of potential customers; Encourage enthusiasm for the company, the brand, or the product; Engage and amuse the intended audience and finally, increase consumer/target audience convenience (Luther, 2011).

The American Marketing Association defines marketing as the process of organizing and carrying out thought, pricing, promotion, and channeling ideas, goods, and services to create exchanges that satisfy individual and organizational goals, as cited by Kotler and Keller (2012). According to Kotler and Keller (2012), marketing is a social process that enables one person or group to obtain the needs and wants it seeks through developing, providing, and freely exchanging valuable goods and services with others. The term "strategy" describes a variety of managerial choices and actions intended to set a company apart from rivals and preserve its competitive advantage. A company's strategy must align with its objective, available resources, and external environment. In order to create demand for their products and enhance performance, businesses use marketing strategies to interact with their distribution channels, offer effective promotional strategies, and provide their target customers with high-quality goods at competitive prices (Daniel, 2018).

Behavioral economics, sociology, and human psychology are the main foundations of marketing strategies, which are subsequently simplified for managers' everyday use (Kotler et al., 2020).The process begins with an understanding of the present state of the market and the competition, followed by an examination of the most lucrative client segments and, lastly, the adaptation of a distinctive value offer for the selected target market (Kotler et al., 2020).Making a distinctive value proposition for clients, however, gets harder as the market ages. In order to interact and engage with clients via digital platforms, the organization has created new engagement models (Kotler et al., 2020).

Segmenting

Market segmentation is a concept used in economics. An addressable market (TAM) is created when a corporation divides a market into homogeneous categories based on factors like age, income, area, lifestyle, or behavior (Blankand Dorf, 2020). The quantity of potential customers is determined by TAM, but this does not imply that they all consume in the same manner (Kotler et al., 2020). The company has reportedly adopted a variety of segmentation strategies, ranging from country-by-country design to hybrid strategy, where part of segments is defined globally, and then regional attributes are used to get the most out of components. Group purchasing patterns and the reputation of brands inside the group serve as the cornerstone for determining various segmentation methods for client groups (Kotler et al., 2020). The company must next pick how many segments to focus on, employing techniques like segmentation trees or cluster analysis (which divides the market into user types based on behavior and finds related groupings based on attributes) (Blank & Dorf, 2020). 2020's Blankand Dorf. Studies on segmentation appear to rely too much on uniform ideology, and similar trial-and-error methods produce similar results. If the outcomes of segmentation change depending on the market and circumstance, it can only be utilized as a framework and cannot be repeated successfully. It is necessary to conduct further research on the causation of purchase segmentation, or why customers choose to use services and fall into a particular customer group.

Targeting

Philip Kotler asserts that there is just one effective tactic. Here, the target market is thoroughly identified, and a superior solution is targeted to that market. Therefore, the goal is to determine how many profitable consumer categories a business can target given the budget it has set out for its primary marketing initiatives (Kotler et al., 2020).

Therefore, businesses must assess the best strategy that maximizes profits from the targeted sector (Blankand Dorf, 2020). The competitiveness matrix can be used by businesses to evaluate their products (Arnett and Hunt, 2004). Applbaum (2003) emphasizes that while there is no concrete formula for determining how desirable a target segment is, the model that is chosen needs to be well-tested. Companies should think about "Target Design," which Markey et al. (2007) define as focusing on the clients who are most likely to tell their friends about a product or brand. The target market may not be sizable enough to benefit from the brand on its own, but word-of-mouth (WOM) and brand potential will turn them into brand ambassadors (Markey et al., 2007). For this, they also created a tool called Net Promoter Score (NPS) that businesses can use to assess customer matches as brand advocates. Research on targeting is unreliable when entering new markets because it requires sales data or existing client information. Forecasts are more likely to succeed than calculations of the profitability of current market segments and the use of data in new market segments with distinct needs.

Positioning

In order to position a company's products in the eyes of potential customers, positioning is necessary (Kotler et al., 2020). Companies must comprehend how the brand of that market segment is positioned in the thoughts of consumers to develop a unique selling proposition (UP) (Keller, 2012). In order to accomplish this, Keller (2012) established the idea of the "Brand Ladder," which has three levels and was further refined by Bolden et al. (2012). According to Bolden et al. (2012), there are four classes, the first of which are the initial Attributes, features, or actual specifications provided by the product. Both functional advantages, advantages that clients receive from the product.

The product helps clients become better members of society, which is the fourth social advantage. Companies must compare their Points-of-Difference (PODs) to those of their rivals to distinguish their own product brands from those of their rivals (Armstrong & Kotler, 2016).

Additionally, shoppers demand town-branded goods in that product category, called Points of Parity (POPs). Companies employ positioning and market perception maps they aim to enter to validate POD and POP (Kotler et al., 2020). After identifying a USP for the market, a corporation must decide which positioning technique effectively communicates that USP to clients (Hooley et al., 2016). Understanding a consumer's

everyday activities and gauging brand approval of feature and benefit acceptance are key components of positioning research. The business will probably need to have the means to frequently gather the data for this. The accuracy of brand awareness metrics and benefit measurements needs further investigation.

Marketing Mix

Keller and Kotler (2012) claim that the marketing mix is a collection of marketing instruments used by businesses to consistently achieve their marketing objectives in the target market. On the other side, the Marketing Mix may be altered, with the manufacturer changing the components for each target market. If the variables in this marketing mix are organized in accordance with the circumstances and situations now present in a company, they can be employed effectively. Traditionally, the 4Ps—Product, Price, Place, and Promotion—have been considered the cornerstones of marketing. However, as consumers got more sophisticated, three additional "Ps"—people, process, and physical environment—were principally introduced to the service sector. Organizations respond to external and internal influences using a marketing strategy that includes product, pricing, place, and promotion to achieve their objectives (Armstrong & Kotler, 2016).

A company's answers to the target market to make sure that it has a positive impact on the demand for its products are all included in a mixed marketing strategy. Businesses that want to satisfy client wants should frequently concentrate on comprehending their needs and coming up with effective techniques to boost productivity (Muchiri, 2016). Because the marketing mix examines products, services, prices, and location, it is the ideal way to consider all operational aspects of Arena Corner marketing. But Yonly Glass uses a 7P marketing mix in the current competitive environment. It is anticipated that Yonly Glass will be able to develop a strong strategy to outperform the competition using the 7P marketing mix. Specifically, the product, price, promotion, place, people, tangible proof, and process are used in the 7P Yonly Glass marketing mix variables. From the definition, marketing managers can leverage their awareness of the marketing mix to influence consumers' purchase decisions.

3. Methodology:

In order to acquire qualitative research data for this study, a focus group was held to gain insights into the utility of the Zumer platform and its potential adoption within the construction sector. The major goals were to comprehend the advantages and disadvantages of the platform and gauge participants' readiness to use and pay for it.

To achieve a comprehensive understanding, it was carefully selected a focus group consisting of six male participants who are project managers, BIM manager, construction engineers and architects actively involved in the construction industry. These professionals were considered ideal candidates as they possess firsthand experience and expertise in the sector, making them potential users or clients for the Zumer platform. Their contacts were provided by the CEO of the Zumer company.

The decision to choose a focus group approach was based on its effectiveness in eliciting in-depth responses and facilitating group discussions. After establishing anonymity and getting participants' informed consent, the session started with an explanation of the focus group's goals. To help direct the conversation, a list of open-ended questions and discussion points was given. The issues addressed, features of the construction business, and prospective applications of the Zumer platform were all explored in these discussions. It was performed with one moderator and no observants.

The open-ended questions, organized around a list of topics, allowed us to explore various aspects of the construction sector, contextualize the Zumer platform, and delve into specific details about its potential applications in the participants' daily lives and within the current market. The focus group was held in a controlled setting with the necessary audio and video recording equipment to record all discussions.

To document participant replies, exchanges, and non-verbal clues, the full focus group session—including audio and video—was taped. Thorough notes were taken during the session, in order to document participant replies, group dynamics, and noteworthy discoveries. Following the focus group, the recorded session was literally transcribed to turn spoken words into text. This phase made sure that all comments and conversations were accurately recorded.

Finally, the transcribed data, considering the recording previously made, was analyzed to discover recurrent themes, trends, and important components pertaining to the difficulties facing the construction industry and the deemed usefulness of the Zumer platform. To glean important thoughts and viewpoints offered by the participants, a content analysis was conducted.

Critical components and important lessons learned throughout the qualitative analysis were highlighted. These included obstacles the construction industry faced, possible business opportunities, and the platform's distinctive selling advantages. The marketing plan for the Zumer platform was developed by incorporating the crucial components and insights obtained from the focus groups and qualitative analysis.

The primary purpose was to gain valuable insights and feedback from professionals who could benefit from or have a direct impact on the adoption of the Zumer platform. With the provided results, it was possible to create a swot analyses, as well as the marketing plan, given the responses and opinions of the potential clients.

Understanding their perspectives and preferences will help us refine the platform to cater to their needs. Project managers, architects, and construction engineers were among the people who were specifically chosen for the focus group so as to represent a variety of people working in the construction industry.

4. Marketing Plan

The strategy will be concentrated on successfully positioning the Zumer platform, a recent platform, which was created on the present year, 2023, that is now trying to establish itself in the construction market. It consists of integration, and as a leading solution that can revolutionize building processes and propel success for industry experts, it has many features and functionalities that target the major problems in the construction sector. The ability to streamline operations, boost productivity, and improve project results is given to construction professionals by using the power of data integration, collaboration, and automation. This platform can collect data from various sources and allow users without programming knowledge to build workflows for tasks such as preparing budgets and cost estimates, work planning, or merging 3D models with information. The platform will be made available as a PaaS (platform-as-a-service) where users can aggregate data from places such as 3D BIM model hubs, databases, SharePoint, Google Drive, PowerBI, or Excel and build the applications. However, a clear marketing strategy is essential to the effective introduction and uptake of the Zumer platform in the Portuguese market.

4.1 Construction Sector Analysis in Portugal

The Portuguese building industry has recently faced several difficulties. The financial crisis had a detrimental effect on the construction industry in Portugal, which resulted in a major decrease in investment in construction projects, a collapse in construction activity, and a reduction in employment in the sector (Ferreira, 2019).

Additionally, the building industry has had a difficult time adjusting to the evolving regulatory landscape, particularly in terms of sustainability and energy efficiency. According to Oliveira et al. (2018), Portugal has been sluggish in implementing sustainable construction techniques, with few firms taking proactive steps to lessen their environmental impact. Platforms like “Zumer”, which concentrate on tools for the decarbonization of building and achieving ESG goals, may benefit from this position.

Furthermore, there is fierce competition in Portugal’s construction industry due to the prevalence of small and medium-sized businesses (SMEs) there (Silva et al., 2020). Companies face substantial obstacles when trying to stand out in the market and secure contracts due to market fragmentation and intense competition. However, Zumer’s

platform is a desirable option for SMEs in the construction sector because it is usable by both large and small businesses.

In conclusion, there are issues with the economy, the legal system, and the level of competition in the Portuguese building industry. However, there is a chance for a product like Zumer's platform to offer solutions that can assist the industry in achieving its sustainability goals. The platform's tools for data management, insight extraction, visualization, collaboration, and sharing can enhance stakeholder communication and transparency, making it an effective solution for businesses in the construction sector. (Anonymous, male, general director of engineering and architecture office).

4.1.1 PESTEL Analysis

• Political aspects:

According to the Committee of Experts on Public Administration (2006), public administration oversees government initiatives including the implementation of laws, rules, and decisions pertaining to the delivery of public services. The political approach is concerned with government participation in construction through institutional settings and policy (Parham & Economics 2008). Productivity enhancement strategies are crucial for changing procurement, incorporating new technologies and materials, reskilling the workforce, and redefining regulations, contractual frameworks, design, and engineering processes (Barbosa et al. 2017).

The necessity to cut carbon emissions and implement sustainable practices is one of the major issues facing Portugal's construction sector. The building industry contributes around 10% of Portugal's carbon emissions, according to research by the Portuguese Environment Agency. The Green Building Program, which offers financial incentives for buildings that satisfy specific energy efficiency and environmental requirements, is one of the steps the Portuguese government has implemented to promote sustainable construction methods.

Consistency in policies enables stakeholders in the business to plan long-term resources, which boosts productivity (Green, 2016). The literature, however, identified delaying local authority approval as a major barrier to productivity improvement (Kadir et al., 2005).

• Economic factors:

According to Chia et al. (2014), economic volatility is positively correlated with construction productivity. The issues, including the labor shortage, have a detrimental impact on productivity growth (Javed et al., 2018). The marginal productivity of labor is reduced as employment increases during booms (Chia et al., 2014). For a construction industry to remain competitive over the "boom-bust" business cycle, long-term planning of public asset development and open public sector procurement are essential (Chia et al., 2014).

The economic crisis had a significant negative impact on Portugal's construction industry. Between 2010 and 2013, the number of businesses in the larger construction sector decreased by 19.1%, with the construction sub-sector suffering the largest loss (-23.8%). This was a result of the macroeconomic instability. Building construction saw the biggest reduction in productivity between 2008 and 2014 (-56.6%), and the gross operating rate dropped from 36.7% in 2008 to 8.5% in 2013, indicating a sharp decline in the profitability of the industry (Hardiman, S, 2018).

For the government, housing affordability and availability are major obstacles. Between 2008 and 2015, the availability of new housing decreased by 83.3%, and 58% of young adults between the ages of 18 and 34 still reside with their parents. The drop in mean equivalized net income since 2008 is another contributing factor. Parallel to this, both governmental and private investment in the industry has sharply decreased, with inland infrastructure spending dropping from 1% to 0.2% of GDP between 2008 and 2013 (Hardiman, S, 2018).

In the area of environmentally friendly building, Portugal is particularly active. The Sustainable Habitat Cluster and the Energy Efficiency Fund are two initiatives that support eco-innovation in the built environment and co-finance energy-efficient home improvements, respectively. To evaluate the environmental efficiency and sustainability of buildings, Portugal has also created two voluntary systems.

However, the administrative burden imposed by the stringent regulatory framework for the provision of construction services, along with late payments and the restricted national budget, continue to have an impact on the Portuguese construction sector and may impede future investment in civil engineering (Hardiman, S, 2018).

• **Social variables:**

According to Ho (2016), social factors such as cultural facets, population growth rate, and career views significantly affect the workforce in the construction industry. Across many economies, the labor shortage has been a significant barrier to productivity; the aging population has made the issue worse (Ho, 2016; Karimi et al. 2017). Construction is not seen by young people as an appealing career choice due to the industry's reputation for having risky, unpleasant, and unclean working conditions (Barrett et al. 2014). Young skilled personnel must be attracted, trained, and retained, and this requires a clear ladder of career advancement (Loosemore, 2014).

According to the findings of an investigation into the state of the industry, released by the Associação dos Indústrias da Construção Civil e Obras Públicas (AICCOPN), more than two-thirds of contractors (68%) say that their levels of activity remained stable in the third quarter of the previous year. A number that shows an increase of 6 percentage points (pp) over the quarter before.

On the other hand, businesses that indicated an increase in activity decreased by 7 percentage points to 19%, while companies that indicated a decrease in activity increased by 12% to 13%.

According to data gathered by the AICCOPN, in the public works sector, 75% of businesses cited a shortage of specialized labor, while 73% of those surveyed cited rising costs for raw materials, energy, and construction materials as the main issues under discussion (Negócios, 2023).

When compared to other industries, it is possible to conclude that it shows significant resistance to innovation in construction techniques or the use of new materials and tools. Due to the industry's structural factors, including current globalization, the existence of complicated business ventures, the demand for specialized labor, and rising costs, the administrations of these organizations must begin to think beyond their bottom lines (Ferreira & Zancul, 2014). The sector's activity in the first quarter of 2019 provided indicators that point to a positive development in construction investment (FEPICOP, 2019b).

Given that labor is regarded as the most crucial resource in the completion of civil construction projects, accounts for a significant portion of total costs, and is connected to living beings who have a variety of needs that must be met, one way for organizations to become more competitive is by increasing labor productivity (Souza, 2000).

- **From a technological standpoint**:

Productivity can be increased by utilizing construction technology (Goodrum et al., 2010). Modern technologies are disrupting traditional processes and industrializing the building supply chain, building Information Modeling (BIM) (Ahn et al., 2016), offsite prefabrication (Pan et al., 2008), and automated and robotic construction (Pan et al., 2018). Due to its ability to integrate different disciplines and minimize downstream design errors and expensive reworks, BIM is a productivity-enabling technology (Ahn et al., 2016).

Waste and inefficiencies can be reduced by using standard design, off-site prefabrication, automated building procedures, and labor substitution techniques (Chiang et al., 2006; Pan & Sidwell 2011). The use of such innovative technology is hampered by a lack of government rules and incentives, high initial costs, and a reliance on conventional construction procurement (Oduyemi et al., 2017; Pan et al., 2008). Therefore, statutory authorities should offer incentives (Chiang et al., 2006).

According to Gonçalves and Gomes (1993), the ease of using information leads to several changes in how businesses are organized, including interactions between various departments and professions. When analyzing the effects of the introduction of information technology on people, the following effects stand out: ways in which people interact with one another; skills required for the accomplishment of tasks; people's capacity for influence; levels of privacy; people's access to information; and people's work products.

In relation to the introduction of BIM technology, Gu and London (2010) claim that this technology's adoption has an impact on the modification of requirements for four connected factors: the work process, the resources, the scope/start of the project, and the mapping of the tools. These are connected to the stage of the business cycle, the goal of

BIM in relation to the project requirements, the requirements of the agents involved, and the capacity of the collaborators.

- **Environmental considerations:**

Construction sustainability includes processes for maintaining existing structures to maximize social, economic, or environmental benefits (Chiang et al., 2016), in addition to decisions for the construction of capital projects that enhance current and future social, economic, and environmental needs (O'Connor et al., 2016). Prefabrication and other sustainable building techniques, however, may be more expensive than traditional construction techniques (Chan et al. 2017; Pan et al., 2008).

To encourage efficiency improvement, rating systems and regulatory standards are therefore necessary (O'Connor et al., 2016; Shealy et al., 2016). The advantages of sustainable construction in lowering lifespan costs and carbon emissions should also be reflected in productivity measurement (Hu & Liu 2016; Teng et al., 2018).

- **Legal considerations:**

Regulatory frameworks have been changed in several economies to ensure high-quality, safe, and sustainable building (Borg & Song 2014). Meanwhile, it has been documented that tighter regulatory requirements have a detrimental impact on productivity growth (Sveikauskas et al., 2016). Such specifications might raise the cost of construction and impede productivity growth (Borg & Song 2014; Chang & Ibbs 2006).

In accordance with Portaria No. 255/2023, which "approves the mandatory content of the execution project, as well as the procedures and standards to be adopted in the preparation and phasing of public works projects," BIM is acknowledged as being important on a global scale, which justifies the "recourse to the BIM methodology in the preparation of public works projects." Information models are now part of the definition of final screens, and a BIM execution plan (BIM execution plan - BEP) contracting is now anticipated. Though there is no duty, there is currently a legal framework for recruiting in BIM.

To maintain productivity, improved agency collaboration and simpler approval procedures were advised (Green, 2016). Due to the superior performance of collaborative project delivery over traditional methodologies, collaborative procurement is also used to improve the value for money of complex capital projects (Hanna, 2016).

According to Wloch, T. (2022), legal action frequently targets the construction sector. Conflicts frequently occur and can be expensive, time-consuming, and bad for everyone concerned. In the following typical situations, working with an expert lawyer who is knowledgeable in construction law can assist successfully resolving disputes:

- **Contractual Conflicts**

Contract conflicts, which happen when the parties to a contract disagree, are quite common in the construction sector. There is either a real or apparent infringement of the provisions of the building contract in these situations. This can be the result of improper upfront negotiations, a misinterpretation of the contract's terms or circumstances, or both. To prevent problems later, your attorney should supervise contract negotiations and flag any potential red flags early on (Wloch, T, 2022).

- **Engineer's Liens**

A mechanic's lien serves as a guarantee of payment to suppliers, subcontractors, construction companies, contractors, and builders. Construction companies have an interest in the upgraded property thanks to mechanic's lien regulations, which help them get paid for their work. Utilizing these regulations, though, can be exceedingly challenging. The procedures required to perfect a lien are intricate and require the utmost accuracy. For thousands of previous clients, the development and enforcement of their mechanic's lien rights was made possible thanks to our expertise and knowledge of Illinois mechanic's lien law (Wloch, T, 2022).

- **Timeline Arguments**

It might be difficult to create an accurate schedule for a building project. Unfortunately, plans do not always work out as expected, and extra time may occasionally be needed to finish a project successfully. As more time often entails higher costs and possible logistical difficulties for the customer, disputes can easily develop. A legal dispute is more likely to become a problem the more substantial the delays (Wloch, T., 2022).

- **Errors in Construction**

Construction flaws can give rise to substantial claims because they endanger the occupants' or the structure's safety. A failure of a building system or component that can result in significant property damage and severe personal injury is often categorized as a

construction defect. A foundation flaw or other structural problems, electrical systems, drywall, plumbing, or other code breaches are a few examples of this. Construction industry personnel facing allegations of negligence must comprehend the gravity of the situation and the importance of hiring knowledgeable legal counsel (Wloch, T, 2022).

4.1.2 Competition Analysis

Other providers of construction management software, including **Procore, PlanGrid, BuildSmart, and Autodesk,** are a competition to the Zumer platform, according to the focus groups' participants. Zumer will need to set itself apart from the competition by highlighting its special emphasis on sustainability and innovation, as well as the adaptability and use of its platform.

Email and text messages, which grew popular among contractors through any smartphone that had this functionality, were the main drivers of mobile devices in the construction industry. Since then, technology has advanced significantly and produced gadgets like the iPad and the Microsoft Surface. Mobile devices appear to be saving time and money on projects, and that is another crucial issue. Businesses may be searching for competitive advantages over rivals. The industry has advanced significantly because of businesses accepting and utilizing mobile devices on job sites. Each year, these gadgets' technology improves with new applications that make them valuable in various aspects of construction management. With the applications offered by these devices, it is hoped that construction organizations will be able to save time, communicate more effectively, and save costs (Hegeman, Kimberly, 2014).

The construction sector is under customary pressure to cut costs, boost field productivity, and maintain a competitive advantage in terms of service quality and client satisfaction. Understanding how businesses are using these technologies will help us make changes in the future and help future users of this technology see the possibilities.

• Procore: One of the most popular construction project management tools, Procore, is used in cloud-based projects. The Procore platform is easy to use and is the leading construction management solution in the market. It works well with ProEst estimating software. Construction companies can manage all phases and components of a project,

from pre-development and bidding to project completion, using the project management platform Procore (ProEst, 2019).

• ACC, previously known as BIM 360 by Autodesk, a cloud-based tool from Autodesk, enables project teams to work effectively together. To complete projects from conceptual design to construction and project turnover, it connects all project stakeholders in the AEC sector (Autodesk, 2022).

• PlanGrid, a great tool for organizing and viewing construction blueprints is a smartphone or tablet application. Because PlanGrid is so quick and easy to use, anyone can upload their designs to PlanGrid.com and publish them to any iPad or Android in the field within a few minutes (PlanGrid, 2022).

• Autodsk Revit: A program to develop building information models (BIM). The most frequent users of it are architects, structural engineers, mechanical, electrical, and plumbing (MEP) engineers, designers, and contractors. Users using Autodesk Revit can create, edit, and carefully examine 3D models. It can be used to model the steel connections further precisely or pipes. (Autodesk).

4.2 Consumer Behavior

According to Kotler and Keller (2011), consumer buying behavior is a crucial component of marketing and is the study of how people, groups, and organizations acquire and dispose of products, services, ideas, and experiences to fulfill their needs and desires.

According to Enis (1974), the definition of buyer behavior is "a process that, through inputs and their use through process and actions leads to satisfaction of needs and wants." Numerous aspects that make up consumer buying behavior are thought to influence customers' purchasing decisions in one way or another.

Consumer buying behavior, on the other hand, "refers to the purchasing behavior of final consumers, both individuals and households, who buy goods and services for personal consumption" (Kumar, 2010). The reasons why consumers make purchases, specific elements that influence the patterns of consumer purchases, an analysis of changing social factors, and other challenges are some specific aspects of consumer behavior that marketers believe need to be examined.

When it comes to platforms to help in the construction planning process, possible clients think that what is important is the ability to “Anticipating information that comes in later to help with decarbonization, meaning that knowing important information ahead of time will result in the impossibility to change what was originally planned” (Anonymous, Male, BIM Manager). In today’s market, one of the biggest problems in the industry is the lack of qualified labor. So, another important feature would be user-friendliness, meaning that people wouldn't need to be trained to use the platform, so that more people could use the platform without needing specific qualifications or training, democratizing the ease of handling/removing the complexity (Anonymous, Male, Architect).

4.3 Internal Analysis

The Zumer platform has many features and functionalities that target major problems in the construction sector. The ability to streamline operations, boost productivity, and improve project results is given to construction professionals by using the power of data integration, collaboration, and automation.

Zumer is a recent platform, that was created on the present year, 2023, that is now trying to establish itself in the construction market. It consists of an Integration and Collaboration Platform for Construction that collects data from various sources and allows users, without programming knowledge, to build workflows for tasks, such as preparing budgets and cost estimates, work planning, or merge 3D models with information. The platform is a PaaS (Platform-as-a-Service) where users can aggregate data from places such as 3D BIM model hubs, databases, SharePoint, Google Drive, PowerBI or Excel and build the applications. The platform offers tools for data management, insight extraction, visualization, collaboration and sharing to improve communication and transparency between stakeholders. “The fact that more people can use the platform without needing specific qualifications or training, democratizing the ease of handling, removing the complexity.” (Anonymous, Male, Zumer founder).

As previously said, in order to use this platform, it won't be necessary to have specific skills, solving the problem of a lack of qualified labor because people wouldn't need to be trained to use the platform and making it possible for a construction supervisor to

understand the process without being, for example, a BIM expert (Anonymous, Male, Architect).

Summarizing, Zumer's platform provides a novel approach to some of the problems the Portuguese construction sector is now experiencing. Users of the platform can gather information from numerous sources and create workflows for tasks like creating budgets and cost estimates, planning projects, fusing information from 3D models and achieving ESG goals like calculating greenhouse gas emissions. It is a platform that is designed to be more user-friendly and customizable than other construction management software solutions in the market currently (Anonymous, Male, project manager at Rockbuilding). How does it work?

- **Independent Systems working together**: Clients can create live connections to multiple applications to bring data to one spot: BIM models, spreadsheats, databases, lists. Being able to always work with the latest versions without opening the software.

- **Creates Knowledge**: Clients are able to inspect, audit, transform, mix models and information to create insights from data. Perform quantity Take-offs or Quality assurance checks on the models.

- **Information at the tip of the fingers**: Clients can create and share dashboards for data-driven decision-making.

Platforms like Zumer have a greater opportunity to gain market share and expand their user bases because of the Growing Demand for Technological Construction: As the construction industry adopts more and more technological solutions. Not only that, but there is also a possibility for integration with new Technologies, in order to improve its capabilities and provide consumers with more sophisticated features, Zumer may investigate integrating with new technologies like artificial intelligence, machine learning, or virtual reality (Anonymous, Male, Architect).

For now, the Zumer platform will be focused in the portuguese market; however, in the future, it may have the chance to make its platform available to other industries besides construction, including those that share a need for data integration and cooperation (Anonymous, Male, general director engineering and architecture office).

When it comes to the main concerns regarding this platform, they are mostly about data privacy issues, competitors, and pricing strategies. “Information can be shared without the need for extra platforms, which often require extra rights and costs”

(Anonymous, Male, BIM Manager). In order to retain users' confidence and compliance with laws, it is essential to implement strong data security measures and handle privacy issues when collecting and aggregating sensitive project data.

The possible competition from established players in the construction industries, who already provide comparable integration and collaboration solutions, could pose competition" (Anonymous, Male, Project manager).

Finally, "Price implementation, initial price, platform maintenance cost." (Anonymous, Male, general director engineering and architecture office).

4.3.1 SWOT Analysis

SWOT analysis is a fundamental framework that offers guidance and serves as the foundation for the creation of marketing strategies. It achieves this through evaluating an organization or product's strengths, what it can do, and weaknesses, what it cannot do, as well as opportunities and threats, possible favorable and unfavorable conditions for the product or organization.

It is a crucial planning stage, yet despite its ease of development, its importance is frequently overlooked. The purpose of a SWOT analysis is to differentiate internal (strengths and weaknesses) and external (opportunities and threats) issues using information from an environmental analysis. Following this, a SWOT analysis determines whether the data points to a factor that will help the company achieve its goals (a strength or opportunity) or a challenge that must be removed or minimized to produce the desired results, a weakness or threat (Marketing Strategy, 1998).

Strengths	Weaknesses
• S1: Zumer's platform is designed to be more user-friendly and customizable than other construction management software solutions in the market currently. • S2: More people can use the platform without needing specific qualifications or training, democratizing the ease of handling/removing the complexity. • S3: It solves the problem of the lack of qualified labor. People wouldn't need to be trained to use the platform. • S4: Anticipating information that comes in later to help with decarbonization. • S5: Information can be shared without the need for extra platforms, which often require extra rights and costs.	• WK1: Price implementation, initial price, platform maintenance cost. • WK2: It would need maintenance over time. • WK3: Quantification of the cost of the platform. • WK4: Dependence on External Data Sources: The platform's efficacy depends on the availability and accuracy of data from external sources.
Opportunities	**Threats**
• O1: Growing Demand for technological construction: As technological solutions are adopted by the construction sector increasingly, platforms have more potential to earn market share and grow their user bases. • O2: Integration with new Technologies in order to improve its capabilities and provide consumers with more sophisticated features. • O3: Expansion into New Markets. • O4: Portaria No. 255/2023 "approves the mandatory content of the execution project, as well as the procedures and standards to be adopted in the preparation and phasing of public works projects," BIM is acknowledged as being important on a global scale.	• T1: Competition from Established Players: The construction industry's well-established software vendors, who already provide comparable integration and collaboration solutions, could pose competition. • T2: Data Privacy and Security Issues.

4.3.2 Dynamic SWOT Analysis

Based on the SWOT analysis previously performed and crossing the strengths and weaknesses with the opportunities and threats we will proceed to a Dynamic SWOT analysis with the objective of defining different strategies by crossing the matrix components.

Weihrich (1982) asserts that four categories of techniques will be established: SO Strategies (maxi-maxi), utilizing advantages to capitalize on strengths; WT Strategies (mini-mini), reducing strengths and avoiding threats; WO Strategies (mini-maxi), utilizing opportunities to overcome weaknesses; ST Strategies (maxi-mini), utilizing strengths to deal with dangers.

- **SO Strategies**

S1-O1- User-Friendly Marketing: Promotion of Zumer as the go-to construction management solution by using the platform's adaptable and user-friendly capabilities. It is important to emphasize how the platform's simplicity of use enables construction experts of all backgrounds to comprehend and use it successfully.

S4-O3- Solutions for reducing carbon emissions: The platform's capacity to anticipate information and support decarbonization initiatives presents an opportunity to target environmentally responsible construction firms through marketing campaigns, offering Zumer as a solution to reduce their carbon footprints.

S5-O2- The platform's integrated approach to information sharing, obviating the need for separate platforms and saving construction companies money, with that, Zumer simplifies data access and teamwork to increase project efficiency.

S1-O4- There is an increasing need for creative and user-friendly construction management systems considering the recent ratification of Portaria No. 255/2023, which acknowledges the global significance of BIM (Building Information Modeling) in public works projects. The Zumer platform is well-positioned to meet this demand and act as a crucial tool for contemporary building projects looking to comply with the new norms and processes established by the rule. Zumer's platform is renowned for its great user-friendliness and high degree of customization.

- **WO Strategies**

WK4-O2- Limitations in customization can be overcome by investing in research and development to gradually increase these capabilities in order to pinpoint areas where customization might be enhanced without compromising ease of use.

WK1-O1- Clear and honest information on implementation costs, maintenance expenses, and the quantification of benefits will help allay worries regarding platform price.

WK2-O2- Collaborations with External Data Sources: To guarantee a constant stream of reliable data into the platform, working with reputable data suppliers and sector partners to improve the accuracy of data.

- **ST Strategies**

S1-T1- Building on Reputation: Zumer's reputation for being more comprehensible and adaptable than rivals can be used to strengthen its position in the market. There should be a focus on setting Zumer apart from its well-known rivals by emphasizing its special advantages, such as simplicity of use and assistance with decarbonization initiatives. Show how Zumer offers definite advantages over other software options.

- **WT Strategies**

WK2-T2- Data Security Measures: To reduce potential dangers and protect user information, strengthen data privacy and security measures is crucial, besides, there should also be conducted a third-party audits and routine security procedure updates to make sure data protection laws are being followed.

WK1,2-T1- Continuous Market Analysis: Keeping an eye on the construction market and its competitors to spot any dangers or new trends, in order to be quick to modify the platform to meet new challenges and preserve competitive advantages.

The Zumer platform may use its strengths to seize opportunities, overcome weaknesses by taking advantage of market possibilities, use strengths to lessen risks, and minimize weaknesses to ward off possible threats by using these dynamic SWOT methods. In the always changing construction management software market, Zumer will be able to maintain a competitive advantage and continue growth thanks to this ongoing strategic evaluation and adaption.

3.4 Key Success Factors

According to Campbell, D. (2020), Being in the construction industry may make running a business even more difficult. The industry is overrun with big businesses and little competitors, and it also has one of the highest failure rates in the nation. The lowest percentage of all the investigated industries, 36.4% of construction enterprises, reach their fifth year of operation, according to data from the U.S. Census Bureau's Business Dynamics Statistics.

Contractors and suppliers of building materials can believe that the deck is stacked against them. To guide the business in the right way, corporate leaders must comprehend several crucial success aspects (Campbell, D, 2020). These are the first ones:

1. Accepting technological advancements

Construction is second only to agriculture in terms of least-digitized industries. Analytics enables the extraction of data from ongoing activities and the acquisition of relevant information for data-driven decision-making. Managers and workers on the field can communicate with one another using cloud technologies and communication platforms. A construction business needs to use these advances for operational effectiveness and excellent communication to be successful (Campbell, D, 2020).

2. Client Expansion

Economic downturns have a significant impact on the building industry. This was particularly clear during the 2008 financial crisis, when businesses collapsed, and millions of workers lost their jobs. Construction organizations are better able to withstand any unfavorable changes in economic conditions by having varied revenue sources from numerous industries as well as multiple geographic locations. Additionally, it keeps cash flow stable and lowers volatility, both of which are essential to the ongoing operations of a construction company (Campbell, D, 2020).

3. Accurate Recordkeeping

Construction businesses should place an equal emphasis on PPEs (Personal protective equipment) and precise documentation when working on a project. It not only directs the project's progress and maintains its budget, but it also safeguards the business from legal action. Insufficient paperwork will result in a negative judgement if the corporation is required to prepare pertinent documents for a court case (Campbell, D, 2020).

4. Taking Care of Complexity

Construction projects are getting more and more intricate. There may be numerous stakeholders and even different locales involved in a single building project. Unexpected occurrences like bad weather, mishaps, and delays in supplier shipments are also possible. A construction company needs to be able to handle this complexity well in order to succeed (Campbell, D, 2020).

4.5 Value Proposition – What it does, critical success factors + Competitive advantages

According to the focus group participants, the Zumer platform offers an integrated and collaborative solution for the construction industry, providing the following key elements in its value proposition:

- Better Construction Processes: By enabling users to develop workflows for tasks like budgeting, cost estimation, job planning, and 3D model fusion, Zumer streamlines complicated construction processes. Professionals in the construction industry can save time and effort by streamlining these operations with the platform.

- Improved Collaboration and Communication: Zumer helps project stakeholders collaborate and communicate more effectively. It offers resources for sharing information in real time, promoting better collaboration and openness among team members, outside contractors, suppliers, and customers. Project execution is made easier because of this improved teamwork.

Construction industry experts can make wise judgments thanks to the platform's data management and insight extraction capabilities. Zumer assists users in extracting useful insights for better project planning, budgeting, and overall decision-making by gathering and analyzing data. This data-driven methodology enhances project results and lowers risks. Zumer's user-friendly interface makes it possible for construction industry professionals without programming experience to use it. The platform's user-friendly tools and design make it simple for users to manage data, extract insights, and efficiently collaborate. This user friendliness enhances the ease of use and adoption.

In terms of strategic goals for this new platform, these are the main ones:

- Market Expansion: To attract a larger user base and boost revenue, the platform's footprint should be extended into new geographic markets, both locally and internationally.

- User Acquisition: By adopting targeted marketing efforts and referral programs, the number of users that register and make purchases can be increased.

- Product Development: To remain competitive and satisfy changing client expectations, it is important to constantly improve the platform's features and functionalities. Enhancing customizing possibilities, incorporating new connectors, and implementing cutting-edge technology like AI and machine learning are all part of this.

- Sustainability Integration: To attract environmentally conscious construction enterprises and satisfy the industry's expanding need for eco-friendly solutions, further develop and promote the platform's sustainability and decarbonization features.

- Customer Retention: Putting tactics into place to raise customer retention and satisfaction levels, such as offering exceptional customer assistance, regular training, and responding to client comments.

- Data Security: To preserve user confidence and maintain data integrity, it is crucial to continuously invest in data security measures and compliance with data protection laws.

- Financial Sustainability: To sustain profitability through effective resource management, cost control, and pricing strategy optimization.

- User Education: To create thorough instructional materials for users, such as webinars, tutorials, and manuals, to enable them to get the most out of the platform.

These strategic objectives cover topics like expansion, product development, sustainability, customer satisfaction, and industry leadership, all of which can help the Zumer platform succeed and have an influence in the long run.

4.6 Target & Positioning

- Target

A market is segmented into clearly defined segments. A group of clients who have a similar set of needs and wants is referred to as a market segment. It is the responsibility

of the marketer to determine the right number and type of market segments and to select the one or ones to focus on. To divide up the consumer market, we employ two large categories of data. By examining geographic, demographic, and psychographic descriptive qualities, some researchers attempt to establish segments. The next step is to determine if these consumer segments have distinct needs or product reactions. For instance, they might look at the various perspectives held by "professionals," "blue collars," and other groups toward, let's say, "safety" as a benefit of a product. Other researchers try to categorize segments by taking behavioral factors like consumer reactions to advantages, usage scenarios, or brands into account. The researcher then checks to see if each consumer-response section is linked to particular traits. Do those who prefer "quality" over "low price" in an automobile, for instance, have different regional, demographic, and psychological make-ups? Regardless of the segmentation method we choose, the most important thing is to adapt the marketing strategy to account for client variations. Geographical, demographic, psychographic, and behavioral segmentation are the main segmentation factors (Keller, K. L & Kotler, P, 2016).

Geographical Segmentation: Since the platform wants to target the Portuguese market, that means that here it makes sense to only target Portuguese people or people that live in Portugal.

Demographic Segmentation: Here it is important to consider the segmentation of gender and age, more precisely, men or women between the ages of 21 and 68.

The Zumer platform's target market in the Portuguese construction industry consists of a variety of project participants, men or women between the ages of 21 and 68, including construction firms, project managers, architects, engineers, developers, and other industry experts. The target audience may also include people who work on data management, project planning, and collaboration duties in the construction industry.

The construction industry as a whole—including project managers, architects, engineers, contractors, and other parties participating in the industry—is the major target audience.

- Positioning

According to Kotler et al. (2017), positioning is the process of developing a distinctive and alluring picture of a company in the minds of its target market. Positioning

is the act of designing a company's offering and image to occupy a distinctive place in the minds of the target market. The goal is to locate the brand in the minds of consumers to maximize the potential benefit to the firm. A good brand positioning helps guide marketing strategy by clarifying the brand's essence, identifying the goals it helps the consumer achieve, and showing how it does so in a unique way.

According to Kotler et al. (2017), points-of-difference (PODs) are qualities or benefits that customers strongly connect with a brand, rate favorably, and feel they would not be able to find to the same level with a rival brand. Points of difference can be based on associations with almost any kind of feature or advantage, multiple points of differentiation are possible for strong brands.

Points of Difference (PoDs)

- Customization that is User-Friendly: Zumer distinguishes out as a construction management platform that combines high Customization with User-Friendliness. Zumer gives consumers the ability to customize their processes without the requirement for specialized training, in contrast to many competitors that could necessitate extensive training or technical skills.

- Decarbonization Focus: Zumer adopts a progressive stance by proposing ways to lower carbon emissions from construction projects. Due to this distinctive characteristic, Zumer is promoted as an eco-friendly platform and attracts sustainable construction companies.

- Collaboration Streamlined: Zumer specializes in streamlining teamwork on construction projects. Without the need for extra platforms, it easily integrates data from diverse sources, cutting costs. This collaborative strategy improves stakeholders' efficiency and transparency.

According to Kotler et al. (2017), Enough customers must think the brand is "good enough" on that dimension for the offering to reach a point of parity on that quality or benefit. With points of parity, there is a zone, range, or acceptance. Although consumers must believe the brand performs adequately on that specific feature or advantage, it does not necessarily need to be perceived as being on par with other brands. If they do, they could be willing to base their assessments and judgments on other variables that might be

better for the brand. Although a light beer would probably never taste as nice as a full-strength beer, it would need to taste comparable in order to be competitive.

Points of Parity (PoPs)

- Data Integration: Unlike many of its rivals, Zumer offers strong data integration features that let customers combine data from various databases, 3D BIM models, and other sources. This complies with technical requirements for contemporary construction management needs.

- Project Management: Zumer offers fundamental project management tools like budgeting, cost estimating, task planning, and 3D model integration, like other platforms. These features are essential for software used to manage construction projects.

- While Zumer excels at usability, some of its rivals also possess this quality. This is a point of parity with the industry because the ease of use is prioritized by many construction management solutions to serve a wide user base.

Positioning Statement: Zumer is the platform of choice for construction professionals looking for a contemporary, user-centric approach to project management and collaboration. In contrast to conventional systems, Zumer stands out for its unmatched user-friendliness, enabling users to easily tailor workflows. Our dedication to sustainability—Zumer is your partner in decarbonizing construction projects—is what genuinely sets us apart. We effortlessly combine data from diverse sources, which makes collaboration easier and is less expensive. Zumer: Giving you the tools to construct more effectively and sustainably.

In conclusion, Zumer's positioning is centered on its distinguishing qualities, such as user-friendly customization and a dedication to decarbonization. It stands out in a crowded market thanks to these distinctive qualities. While doing so, it preserves points of parity with industry standards, guaranteeing that it satisfies the fundamental requirements of construction specialists. Zumer is positioned as a competitive and cutting-edge platform for construction project management and collaboration thanks to this blend of distinctive strengths and fundamental skills. It is regarded as a cutting-edge solution that satisfies the needs of construction professionals looking for efficient and effective project management solutions because of its adoption of the triangulo de oro positioning. It sets itself apart from rivals by providing user-friendly data management,

collaboration tools, and a sustainability-focused approach, making it a valuable and revolutionary platform for the construction sector.

4.7 Marketing Mix

Businesses employ the marketing mix, a collection of manageable marketing instruments, to develop and advertise their goods and services to a specific audience. The four Ps of marketing are: product, pricing, place, and promotion. The term "product" refers to the actual good or service being provided, whereas the term "price" refers to the cost to the client. Place refers to the channel of distribution that makes the good or service available to consumers, and marketing refers to the numerous strategies utilized to reach the target market with the good or service (Keller & Kotler, 2016).

According to Dr. Muhammad Khan (2014), the economy has changed today more than it ever has, and the same is true of customers and their behavior. Judd (1987), (people) proposed a fifth P. Bitner and Booms (1980) expanded the original four Ps to include three Ps (participants, physical evidence, and method) to apply the marketing mix concept to the service industry. Kotler (1986) incorporated political influence and the creation of public opinion to the Ps paradigm. The 15 Ps concept was put forth by Baumgartner (1991), according to Dr. Muhammad Tariq Khan (Khan, 2014). MaGrath (1986) identified the three Ps as personnel, physical evidence, and process management. According to Harrington (2017), the marketing mix has changed to incorporate not only the 4Ps but also the 7Ps because of changes in consumer behavior. According to Muala and Qurneh (2012), researchers later clarified seven factors—known as their 7Ps, or product, price, place, promotion, personnel, process, and so forth—by including three additional aspects.

According to Kushwaha and Agrawal (2015), customer-oriented staff tries to exhibit individual attention, interpersonal care, civility, and swift behavior. According to Kukanja et al. (2016), the people aspect in the seven principles of marketing mix refers to the part played by people in the supply of goods or services that may affect consumer perceptions. According to Qurneh and Muala (2012), this component refers to the service providers who design and deliver the service. Numerous services involve direct meetings between clients and site personnel, and these encounters significantly affect the client's perception of the level of service quality. For clients to have exceptional service, personnel are essential (Khan, 2014). Process is described by Qurneh and Muala (2012)

as the execution of activities and tasks that increase brand value at a low cost and with a high benefit to the client; it is more important for services than for goods.

In conclusion, firms use the marketing mix as a key tool when creating their marketing plans. Businesses may efficiently manufacture and promote their products or services while considering the demands and preferences of their target market by focusing on the seven Ps of product, pricing, place, promotion, people, processes, and physical evidence.

4.7.1 Product

The Zumer platform is an Integration and Collaboration Platform for Construction that collects data from various sources and allows users without programming knowledge to build workflows for tasks, such as preparing budgets and cost estimates, work planning, or merging 3D models with information. The platform will be available as a PaaS (Platform-as-a-Service) where users can aggregate data from places such as 3D BIM model hubs, databases, SharePoint, Google Drive, PowerBI or Excel and build the applications. The platform offers tools for data management, insight extraction, visualization, collaboration, and sharing to improve communication and transparency between stakeholders. (Anonymous, Male, Zumer founder)

Zumer's platform provides a novel approach to some of the problems the Portuguese construction sector is now experiencing. Users of the platform can gather information from numerous sources and create workflows for tasks like creating budgets and cost estimates, planning projects, fusing information from 3D models, and achieving ESG goals like calculating greenhouse gas emissions.

In addition to using AI tools, Zumer is a pioneer in the research/development of solutions for the decarbonization of construction, which have already been proven with partners from the industry. Zumer is well-positioned to take a sizable chunk of the Portuguese construction management software industry by offering a user-friendly platform that aids construction enterprises in achieving their sustainability and efficiency goals.

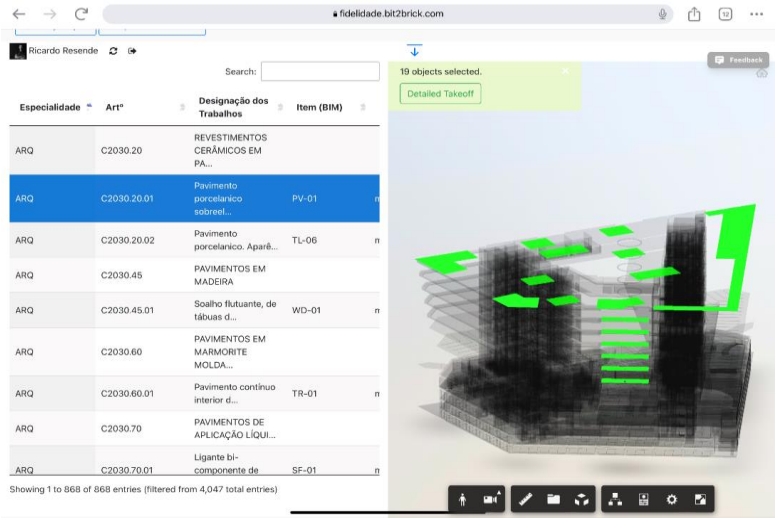

Figure 1- Zumer platform example

4.7.2 Placement

The Zumer platform is a product-as-a-service (PaaS) solution that can be accessed via online and mobile applications.

Direct sales, agreements with construction technology resellers, and industry stakeholder engagements are some examples of distribution methods. Making sure that the platform is simple to use, with smooth onboarding and customer support, for the target demographic. Considering the various distribution and access channels through which the platform will be made available to customers. Here are some detailed strategies:

- Website: The Zumer platform ought to have a dedicated webpage where prospective users can read about its features, advantages, and pricing options. The website should be easy to use, visually appealing, and mobile and desktop device optimized, so the users can navigate through the website more easily, regardless of their location, if they are at home/office or somewhere else.

- Online registration and subscription: Any billing system that allows for subscription flexibility is a subscription-based plan, making it the greatest possible pricing model. Because you can only use it for a certain period before canceling. It is preferred to subscribe since it provides you the option to choose and the ability to end your subscription at any time (Anonymous, male, architect). Users must be able to register for and subscribe to the platform online. To please each client's needs, it is indeed to provide a variety of subscription alternatives.

1. Basic Plan: The Basic Plan is intended for individuals and small construction teams wanting to simplify project administration. It offers the necessary tools for effective project planning and collaboration. The features for this plan:

-Data Integration with a User-Friendly Interface from 3D BIM Models

-Basic cost estimation and budgeting

-Collaboration tools for work planning

-Small-scale decarbonization construction teams, freelance contractors, and startups with little resources make up the support target audience.

2. Pro Plan: The Pro Plan provides a complete set of tools to satisfy the demands of medium-sized construction enterprises as part of its value proposition. It places a strong emphasis on adaptability, flexibility, and sophisticated project management skills. The features of this plan:

-Every feature of the Basic Plan

-Options for Advanced Customization

-Robust cost estimation and budgeting

-Improved Work Scheduling and Planning

-Decarbonization Providing assistance with carbon footprint calculations

-Priority Customer Service

-Medium-sized construction enterprises looking for a feature-rich and adaptable platform to maximize project management and sustainability initiatives are the target market.

3. Enterprise Plan: The Enterprise Plan is created for significant construction businesses and corporations. High levels of customization, scalability, and specialized assistance are provided for challenging projects and data integration. The features of this plan:

-Every Pro Plan Perk

-Integration and Customization at the Enterprise Level

-Visualization and Advanced Data Analytics

-Comprehensive Decarbonization Real-time Monitoring Assistance

-Large Teams with Dedicated Account Manager Onboarding and Training

-Large construction companies, firms, and organizations with intricate project portfolios and a dedication to sustainability are the target market.

These subscription options clearly state their distinctive value propositions while catering to a variety of clients, from small businesses to independent freelancers. This strategy enables users to select a plan that matches their unique requirements and financial constraints, making the value of each plan obvious based on the features and capabilities offered.

- Working together with other construction-related software suppliers to integrate the Zumer platform with their products. Customers will benefit from this integration, which will also increase the platform's functionality.

- Local Focus: To start, concentrate your marketing efforts on customers in Portugal in order to build a solid local presence. However, in the long run, extending the platform's accessibility to more nations inside and outside of Europe as it acquires popularity and success in Portugal.

- Support for several operating systems and devices, such as desktop computers, tablets, and smartphones, is essential for the Zumer platform. Offer mobile users' applications or responsive design. The platform should be accessible around-the-clock to accommodate users from various time zones and to promote real-time collaboration.

By putting these tactics into practice, the Zumer platform can make sure that it is widely accessible, easy to use, and has top-notch customer service, further solidifying its position as a user-friendly and effective integration and collaboration platform for construction. This is precisely what distinguishes it from the rest of the competition since it is an easy-to-use platform, without the need for qualified labor, and also with the ability to also reduce unnecessary material expenditure, through more precise planning.

4.7.3 Price

According to information collected in our focus group, The Zumer platform's pricing strategy should consider things like the value offered, competitive pricing, and the target market's willingness to pay (Anonymous, male, BIM Manager).

Any billing system that allows for subscription flexibility is a subscription-based plan, making it the greatest possible pricing model. Because you can only use it for a certain period before canceling. It is preferred to subscribe since it provides you the option

to choose and the ability to end your subscription at any time. (Anonymous, male, architect). Since it is a subscription-based plan, here are more thorough approaches, based on the focus group that was preformed:

To improve price structures, firstly, it should be conducted a price testing, in order to continuously monitor customer behavior and comments to evaluate the effects of various pricing strategies on client acquisition and retention.

It is important to offer several subscription tiers with various features and functionalities. The tiers can be created to meet various customer demands, project sizes, and usage specifications. A clear breakdown of the features offered in each tier should be provided so that clients may select the one that most closely matches their unique needs. As in any subscription plan, it should be able to give subscribers a variety of pricing options, including annual, quarterly, and monthly billing cycles. Customers can choose a payment frequency based on their financial situation and level of commitment, thanks to this. To promote loyalty and lower churn, providing discounts or other incentives to consumers who choose longer-term subscriptions should also be an option (Anonymous, male, construction engineer).

Before the clients commit to a subscription plan, there should be access to a small number of functions during a free trial period. By doing this, they can get a feel for the advantages of the platform before opting to upgrade to a premium subscription with full access. After that, there should be created a customer loyalty program that offer bonuses or discounts on subsequent renewals to thank long-term subscribers. As the existing customers' requirements and projects expand, use upselling techniques to persuade them to upgrade to higher-tier plans.

The Zumer platform may successfully attract and keep members while increasing income and customer happiness by putting these pricing strategies into place. The platform can concentrate on providing ongoing value to its customers and upholding long-term relationships in the construction industry thanks to the subscription-based model, which guarantees a consistent and recurrent revenue stream.

4.7.4 Promotion

The primary communication target for promoting the Zumer platform are the construction professionals, including project managers, architects, engineers, and construction

company decision-makers. The secondary target includes professionals handling data management, collaboration, and project planning within construction projects. The communication aims to reach individuals and organizations seeking innovative solutions to streamline project workflows, enhance collaboration, and optimize construction project efficiency.

The goals of promotional activities should be to raise awareness, spark interest, and encourage the use of the Zumer platform. Online advertising, content marketing, social media campaigns, trade shows and conferences, and collaborations with associations in the construction sector are some examples of marketing channels that could be used (Anonymous, male, BIM Manager). It is also crucial to underline the advantages of the platform, including time and money savings, enhanced teamwork, data-driven decision-making, and environmental sustainability.

- Communication between consumers/word of mouth: Customers are discussing the services with other consumers and potential consumers, while service providers are not present in the conversation. They have access to a variety of channels, such as social media sites, review websites, and other web forums, to discuss services before, during, or after utilizing them. Service businesses should promote these customer-to-customer interactions and give value to them whenever possible (Panwar, T., & Khan, K., 2022).

Because of this, it is essential for service providers to interact with clients on all available channels to build a solid rapport. Regardless of whether the service provider is present on these platforms, these clients would share favorable word of mouth about the service there as well (Panwar, T., & Khan, K., 2022).

- Personalized Conversation: For Internet-based services, personalization is a crucial component of engagement. Customers of these services are rarely influenced by messages, ideas, or communication styles that are not personalized or pertinent to them. With the aid of knowledge, they have about their clients, these services must try to customize communication. Personalization, according to Goldsmith (1999), must be a component of the new marketing design process for all firms. By engaging in conversation with clients, service providers can more effectively connect with their target market. This discourse can also assist service providers learn important details about consumer wants that can be used to build new products and services (Goldsmith, 1999).

To communicate with this client generation, marketers must be able to choose the appropriate platform and message. Historically, these subtleties were frequently ignored when the Promotion" element's goal was to communicate. Social media platforms now play a significant role in "millennial" culture. Social media plays a crucial role in helping customers decide what goods to buy, when to buy it, and where to buy it (Weigand, 2009). Internet-based services are designed to interact with users, motivate them to share their opinions, and persuade them to use them again. This also addresses the issue of trust since prospective clients are more likely to believe testimonials and recommendations from other clients than advertising from the service provider.

According to the Digital Marketing Institute (2019), the technique through which search engines "crawl" information to determine how well it will draw traffic is known as search engine optimization (SEO). Search engines will evaluate a website's content (including keywords, tags, and link titles) and assign it a ranking based on how well it can draw in organic traffic from a variety of sources. The term "search engine marketing" (SEM) refers to several different paid search advertising models. This is the kind of thing that appears as a Google advertisement and frequently at the top of a list of pages. This typically has to do with keyword placement and usage, which is one reason why executing it correctly can call for some additional expertise and planning.

Search engine optimization (SEO) and search engine marketing (SEM) are crucial digital marketing tactics to raise brand awareness, draw in targeted traffic, and produce leads. Here are some thorough methods for properly promoting the Zumer platform using SEO and SEM:

Search Engine Optimization (SEO):

- Researching and using keywords: Identify high-impact terms for the project management, sustainability, and construction industries by conducting extensive keyword research. Use specific keywords to enhance website content, such as blog articles, product descriptions, and landing pages, to boost organic search ranks. For example, some keywords that could be used: Project management software, Construction project management, Project planning tools, Task scheduling software, Collaboration tools for projects, Workflow automation and Task tracking system.

- SEO techniques: Make that the website's technical elements, such as site speed, mobile friendliness, and secure surfing (HTTPS), are optimized for search engines. Use

schema markup to improve your website's visibility on search engine result pages (SERPs).

- Content Management: Create a content calendar that includes consistent blog postings, case studies, and business analysis pertaining to building, sustainability, and project management. By using insightful, high-quality content, you may promote thought leadership and deal with client problem points.

- Mobile Optimization: To give mobile consumers a smooth experience, the Zumer website should be also responsive to mobile devices and loads rapidly on a variety of platforms, since mobile friendliness is essential for SEO rankings and user delight.

- Social Media: For example, LinkedIn ads are an effective form of paid advertising that allows businesses to promote their products, services, or content to a highly targeted audience on the LinkedIn platform. These ads can appear in users' newsfeeds, on the right-hand side of their LinkedIn homepage, or within the LinkedIn Messaging interface.

In terms of the message, Zummer must promote the elements of its positioning previously mentioned such as the fact that the platform has customization that is User-Friendly, it distinguishes out as a construction management platform that combines high Customization with User-Friendliness; decarbonization Focus, it adopts a progressive stance by proposing ways to lower carbon emissions from construction projects, and also that Zumer specializes in streamlining teamwork on construction projects. Without the need for extra platforms, it easily integrates data from diverse sources, cutting costs. This collaborative strategy improves stakeholders' efficiency and transparency.

Search Engine Marketing (SEM):

- Google Ads Campaigns: In order to show up in search results when potential clients are actively looking for construction management solutions, setting up tailored Google Ads ads while using pertinent keywords is an important aspect. To be able to offer more details and promote direct engagement ad extensions like sitelink extensions and call extensions should be used.

- PPC (Pay-Per-Click) Marketing: Launch focused PPC campaigns using Google Ads to put Zumer at the top of the page for pertinent keywords. Also, it is useful to make ad groups for things like "sustainable construction tools" and "construction project management software" that are in line with user intent.

- Displaying commercials: To reach a larger audience, it is essential to use display advertising on Google's Display Network. While also creating an eye-catching banner advertising that highlight Zumer's salient features and advantages.

- Retargeting Initiatives: To re-engage website visitors who did not convert on their initial visit, it is important to implement retargeting campaigns, such as, for example, Personalized Display advertising: Produce eye-catching display advertising that draw attention to Zumer’s eco-friendly project management and carbon footprint tracking capabilities. These advertisements ought to include appealing visuals and catchy content, such as "Build Greener with Zumer."; another example is to utilize dynamic remarketing to show visitors the precise goods or features they interacted with during their initial visit. Show adverts for this feature, for instance, if a visitor looked at Zumer’s carbon footprint calculator.

- Optimizing the landing page: To increase conversion rates, create dedicated landing pages for SEM campaigns. A/B testing should be done to improve the headlines, CTAs, and form fields on landing pages.

Monitoring and Improvement: In order to continuously track the effectiveness of SEO and SEM initiatives, the utilization of analytics tools like Google Analytics and Google Search Console is needed. As well as the adaptation of SEO tactics, organic traffic, and keyword rankings, based on user behavior.

Zumer can increase its online presence, draw in a targeted audience, and efficiently drive user acquisition through both organic and paid search channels by putting this promotion proposition into practice, thereby expanding its user base in the cutthroat construction software market.

4.7.5 People:

The "People" element here refers to the employees of the company who connect with customers directly or indirectly and help to fulfill the brand promise of collaboration, sustainability, and user-friendliness.

- Customer Service Group: Zumer's user-friendliness promise must be kept, and here is where the customer care team comes in. They should have the necessary training to help users with any problems or inquiries relating to Zumer's customization options and sustainability features. Knowledge of sustainability issues and how Zumer's features can

help make construction projects more environmentally friendly should be taught to some members of the customer care team.

- Sales Team: The sales team oversees explaining to prospective customers the user-friendly customization features and sustainability advantages of Zumer. They should be skilled at demonstrating how Zumer streamlines and sustains project management. The sales team should make presentations that can be customized to demonstrate how Zumer can be modified to fit the unique requirements of building professionals. Highlight how simple it is for users to customize the platform for their workflow.

- Team for Product Development: The product development team is essential to preserving the sustainability and user-friendliness of Zumer. The customization possibilities and sustainability functions of the platform should be improved and innovated upon constantly. User feedback should be used into platform development to make it more responsive to users' demands. User input can direct changes that support Zumer's placement.

- Team for Marketing and Branding: Positioning in line with Through their language and content, the marketing and branding team should demonstrate Zumer's dedication to collaboration, sustainability, and user-friendliness. Share customer success tales and case studies that demonstrate how industry professionals in the building industry have profited from Zumer’s user-friendly customization and sustainability features.

The purpose is that the organization makes sure that every client interaction displays the dedication to user-friendliness, sustainability, and collaboration by coordinating the "People" element with Zumer's positioning. Construction industry professionals seeking a platform that authentically reflects their beliefs and needs have more trust in the brand because of this alignment, which strengthens the brand promise.

4.7.6 Processes:

An important feature is the user-friendliness, meaning that people wouldn't need to be trained to use the platform, so that more people could use the platform without needing specific qualifications or training, democratizing the ease of handling/removing the complexity (Anonymous, Male, Architect).

-User Onboarding: To assist new users in getting up and running quickly, Zumer features a streamlined onboarding procedure that includes lessons and guidelines.

-Smooth operations are guaranteed by a well-defined method for integrating data from diverse sources into the platform.

-Continuous Improvement: The platform is regularly updated and improved based on user feedback and market developments.

4.4.7 Physical Evidence:

The term "Physical Evidence" here refers to the visual cues and representations, both physical and intangible, that support the brand's positioning and value proposition.

- User-friendliness of Zumer's website and user interface should be a top priority. The website should be user-friendly, intuitive, and provide detailed, step-by-step instructions on how to modify workflows and add sustainable features. The website should include sustainability content to emphasize Zumer's dedication to environmentally friendly building methods.

- Product Demonstrations and Tutorials: Product demonstrations and tutorials that highlight how customizable Zumer should be provided, as well as detailed instructions for customizing workflows and utilizing sustainability features. It is also important to include examples or case studies that show how Zumer assists building industry experts in achieving sustainability objectives for their projects.

- Customer Testimonials and Reviews: To display customer reviews and testimonials that highlight how user-friendly and environmentally friendly Zumer is in actual construction settings. Also, it is crucial to point out examples of how users have adjusted the platform to their needs. Sharing collaboration success stories will help the organization's cooperation ability.

- Sustainability Certifications and Badges: To make sure to prominently display any sustainability certifications or badges that Zumer has obtained on the platform and website. This demonstrates in a concrete way Zumer's dedication to sustainability. To direct users toward customization options and collaboration capabilities, the platform's interface must include intuitive iconography and visual clues.

- Responsive Customer Support: To make certain that customer support channels are responsive and simple to use. This verifiable proof indicates Zumer's dedication to helping users customize the platform and take care of environmental issues. It is also

crucial to have user-friendly support channels that can effectively assist users, including chatbots or interactive FAQs.

The digital aspect of a PaaS like Zumer is considered in this modified marketing mix with People, procedures, and Physical Evidence, which emphasizes the significance of customer support, efficient procedures, and the digital interface as essential elements of the service's marketing and delivery. By matching the "Physical Evidence" component to Zumer’s positioning, the company offers concrete cues and examples that support the brand promise of collaboration, sustainability, and user-friendliness.

5. Conclusion

The construction industry has long grappled with challenges such as inefficient project management, data fragmentation, and the imperative for sustainability. These challenges have underscored the need for innovative solutions that can streamline processes, enhance collaboration, and support environmentally responsible practices.

In this project, the primary objective was to explore the landscape of construction management solutions and shed light on a transformative player within this arena: the Zumer platform. Our comprehensive analysis delved into Zumer's unique features, market positioning, and strategic goals to provide a holistic understanding of its potential impact. Zumer is more than just a software platform; it's a strategic ally for construction professionals seeking to thrive in an increasingly complex industry. At its core, Zumer offers user-friendly customization, decarbonization support, and streamlined collaboration. These features are not just differentiators; they are solutions to longstanding industry challenges:

- **User-Friendly Customization:** Zumer simplifies complex processes, making it accessible to professionals without extensive technical expertise. This user-centric approach sets it apart.

- **Decarbonization Focus:** Zumer's commitment to sustainability is unparalleled. It equips construction firms to reduce their carbon footprint while meeting industry regulations and market demands.

- **Streamlined Collaboration:** Zumer integrates data seamlessly, reducing the need for additional platforms. This fosters efficient communication and transparency among stakeholders.

Zumer's contributions extend beyond being a construction management tool; they represent a paradigm shift in the industry:

- **Efficiency and Collaboration:** By streamlining project management and enhancing collaboration, Zumer significantly improves project efficiency and reduces costly delays.

- **Sustainability:** Zumer empowers construction firms to adopt eco-friendly practices, contributing to a greener construction sector and meeting sustainability goals.

- **Accessibility:** Its user-friendliness and accessibility democratize construction management, ensuring that smaller firms and individuals can compete effectively.

- **Data-Driven Insights:** Zumer provides real-time data insights, enabling informed decision-making and helping firms stay ahead in a competitive market.

Zumer has set strategic objectives for market expansion, user acquisition, product development, and sustainability integration to increase company success. These objectives operate as a road map for the platform's future development and influence on the building sector. It uses the strength of SEO and SEM to promote itself and improve its online visibility.

In closing, Zumer is not just a disruptor; it's an enabler of positive change in an industry that demands efficiency, collaboration, and sustainability. Its user-centric design, decarbonization focus, and strategic vision position it as a leader in construction management innovation. As construction projects become increasingly intricate and sustainability remains paramount, Zumer's contributions to the market are poised to shape the future of construction management, fostering a more efficient, transparent, and eco-conscious industry.

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Attachments

A: Questões Focus Group:

• Que fatores consideram ao escolher um projetista de arquitetura ou de engenharia para um determinado projeto? Habitação/ escritórios, alguém familiar- contratação pública, tipologia, portfolio do gabinete e experiência com a possível equipa. Alinhamento budget

• Notaram alguma mudança ou tendência na indústria da construção nos últimos anos? Se sim, quais? Escalada de valores materiais/ mão de obra, sustentabilidade, transformação digital- BIM, AI

• Agarrando aqui o tema da sustentabilidade que falaram há pouco, qual a importância que dão à sustentabilidade e eficiência energética em projetos de construção? Acham que é dos fatores principais a considerar?

• Quais diriam que são os principais desafios/obstáculos ao trabalhar na indústria da construção? E quais são algumas potenciais soluções para esses desafios/ ou o que utilizam? Mão de obra qualificada, falta de técnicos qualificados, associados ao BIM e não só

Enquadramento:

Como sabem, as obras de construção civil têm tipicamente derrapagens de prazo e de orçamento, o que tem riscos elevados e potencial de conflitualidade para as empresas. A produtividade muitas vezes evolui devagar, as margens são baixas e a inovação por sua vez também. Um projeto dura normalmente anos e envolve dezenas de técnicos que para responder às exigências regulamentares, económicas e ambientais, e acaba-se com centenas de desenhos e documentos. A comunicação é difícil e as decisões - simples ou complexas - são tomadas muitas vezes com base em informações incompletas.

Para além disto, a maioria dos modelos 3D inteligentes que as empresas utilizam, como o Building Information Modelling (BIM), geram e consomem enormes quantidades de dados, dispersos e difíceis de relacionar.

Estas foram as questões mais gerais, tinha mais, mas acabaram por responder já agora nesta discussão.

Sei que muitos de vocês já estão familiarizados com a plataforma em questão, vou fazer aqui um enquadramento**: Então a plataforma Zumer é uma** Plataforma de Integração e Colaboração para a Construção**, e recolhe dados de várias fontes e permite a utilizadores sem conhecimentos de programação construir fluxos para tarefas, como preparação de orçamentos e estimativas de custos, planeamento de obra, ou fundir modelos 3D com informação.**

A plataforma será disponibilizada como uma PaaS (Platform-as-a-Service) onde os utilizadores podem agregar dados de locais como hubs de modelos 3D BIM, bases de dados, ERPs, Sharepoint, Google Drive, PowerBI ou Excel e construir as suas aplicações. A plataforma oferece ferramentas para gestão de dados, extração de insights, visualização, colaboração e partilha para melhorar a comunicação e transparência entre stakeholders.

· E pegando aqui nisto, como lidam atualmente com a comunicação e tomada de decisões em projetos de construção? E quais as ferramentas/métodos que usam para melhorar a comunicação entre stakeholders? Discussão, quando e como dar imput, outras plataformas: procor, equipas já estão habituadas a trabalhar por essas plataformas, pandemia promoveu a digitalização, realidade visual

· Em que medida é que uma plataforma de agregação e manipulação de modelos e dados iria poder ajudar em projetos/ melhorar o setor? (Vantagens estratégicas) democratizar a manipulação, descomplicar

· Para finalizar, quais seriam as principais dificuldades/barreiras potenciais na implementação/ uso de uma plataforma deste tipo?

· Estariam abertos à possibilidade de incorrer em custos para automizar/integrar/explorar a informação que já existe? E qual o tipo de modelo de preço preferido? Desenvolvimento de serviços (consultoria) OU subscrição anual/mensal e porquê? **Preferem subscrição**.

· Para finalizar, haveria interesse neste momento na implementação da plataforma e quais seriam os próximos passos a seguir?