INSTITUTO
UNIVERSITÁRIO
DE LISBOA

Business Plan: Subscriptions Management Fintech

António Maria Romão Ferraz

Master in Management

Supervisor:
Prof. Nuno G. Pedro, ISCTE-IUL Business School, Department of Marketing, Operations and General Management

November, 2022

BUSINESS
SCHOOL

Business Plan: Subscriptions Management Fintech

António Maria Romão Ferraz

Master in Management

Supervisor:
Prof. Nuno G. Pedro, ISCTE-IUL Business School, Department of Marketing, Operations and General Management

November, 2022

Acknowledgements

The conclusion of this business plan represents the ending of a thoroughly meaningful phase of my studies. This is achieved through the combination of months of work and mostly resilience.

We are a combination of all the people we spend the most time with. Therefore, I want to thank my parents, who provided me with the best conditions to pursue my ambitions and supported me in every stage of my life. My grandfather, who played a substantial part in shaping me into the man I am today. Furthermore, my girlfriend, for all the motivation she provided me to conclude this chapter and for accompanying me while I wrote this business plan.

Lastly, I thank my supervisor, Professor Nuno Pedro, for the best example of what a teacher should represent to their students. I appreciate your commitment and for always being available.

Abstract

Digital payments have had extreme development over the last few years, and the subscription market had exponential growth. However, they never crossed paths in development, leaving customers with the same existing payment methods. The world is shifting from ownership to membership, and the subscription business model market forecasts to keep growing significantly. This statement is easily verified when not only companies try to adopt the subscription service model but also clients change their consuming habits, opting for this type of service or even acquiring products through subscription to lower their cost. With all these consumer and company efforts to embrace this model, some questions need to be addressed.

Namely, why is it only possible for one user to pay for the subscription when most of them are shared? Why financial providers are yet to tackle this specific sector?

In conclusion, the business plan development and the financial analysis results demonstrate that it only makes sense to introduce a solution that solves the identified problem.

Keywords: Digital Payments, Subscriptions, Fintech.

Resumo

Nos últimos anos os pagamentos digitais tiveram um desenvolvimento significativo, sendo que o mercado de subscrições teve um crescimento exponencial. No entanto, durante este período, os pagamentos digitais nunca foram desenvolvidos especificamente para este tipo de serviços, estando os consumidores limitados aos meios de pagamento existentes. Atualmente, assistimos a uma mudança nos paradigmas de consumo, passando de propriedade para subscrições, sendo que é estimado que o mercado de subscrições continue a crescer de forma significativa. Esta afirmação é facilmente suportada quando não só as empresas procuram adotar o modelo de subscrições, mas também os clientes mudam os seus hábitos de consumo, optando por este tipo de serviço ou mesmo adquirindo produtos por subscrições para reduzir o seu custo. Considerando os comportamentos de ambas as partes para adotar este modelo, existem questões que carecem de resposta.

Por que motivo apenas é possível que um dos utilizadores pague pela subscrição, quando a maioria é partilhada? E por que motivo os intermediários financeiros nunca desenvolveram um serviço específico para este tipo de transações?

Concluindo, o desenvolvimento do plano de negócios e os resultados da análise financeira realizada, demonstram que se justifica introduzir uma solução para o problema identificado.

Palavras-chave: Pagamentos digitais, Subscrições, Fintech.

Table of Contents

List of Tables

List of Figures

CHAPTER 1

Introduction

This thesis aims to envision an innovative business plan with a solution for the problem of managing subscription services and respective payments among sharers. Therefore, the work presented was conducted to analyse the business opportunity and desires to introduce a new business model for an unexplored online payment solution.

Broadly speaking about the concept, most subscriptions are shared among friends and family since they are usually cheaper than individual subscriptions. Nonetheless, no service allows users to manage their subscriptions while facilitating payments efficiently. With this being said, the main problem that this business plan intends to solve is that only one person can pay for the subscription and must pay upfront for the entire group, being left with the burden of trying to collect all the payments. The Fintech will develop digital platforms, namely a website and mobile applications, that will allow users to set up their recurring subscriptions, the people who share them, the login information, and to set automatic payments from every user of their respective share.

The business plan is relevant to subscription users and users with recurring payments that would have access to a platform especially suited for this purpose. The identified problem related to the available payment options and its limitations regarding shared subscriptions is answered by introducing a payment solution to tackle this same problem. Ideally, financial providers can use this idea to solve the identified problem.

The business plan development considers all the relevant areas associated with the business, such as market analysis, marketing strategy, human capital, and operations. It considers all this information in a financial analysis to evaluate the project's economic sustainability. This thesis is organised into eight chapters, starting with this introduction, followed by the literature review, where the relevant academic literature available is placed in context. The third chapter presents the methodology approach to developing the business plan. Moving to the fourth chapter, conducted a market analysis focused on the external analysis and the competitive factors. In chapter five, after the market analysis, it is already possible to comprehend the business opportunities and to determine the business model, project phases and development strategy. Marketing plays a role of utmost importance in the business strategy, and in chapter six, there is a presentation of the marketing strategy and implementation requirements. After presenting all relevant business aspects, the financial plan is presented, and the business plan ceases with the overall conclusion of whether this investment is worthwhile.

The Fintech name is Subswired, a combination of the abbreviation of the word subscriptions with Wired, which is a reference for Wire transfer, a method of electronic money exchange, trying to transpose the platform purpose of intermediating the payments between groups of users and the subscription services.

CHAPTER 2

Literature Review

Considering this project's purpose is to build an online platform to simplify the management and payment of subscriptions amongst users who share them, it is crucial to compose the literature review to cover the main concepts upon which this project was developed.

Therefore, the topics fundamental to developing this business plan are Digital Business Models, Fintech, Sharing Economy, Digital Payments, and Subscriptions.

2.1 Digital Business Models

The evolution of technology, alongside companies' massive adoption of the Internet, incorporated these technologies in the products offered, the innovation of business processes, and the business models used. Veit, D et al. (2014) states that a company embraces a digital business model when technology pushes fundamental shifts in the operation and revenue stream.

It is suggested in the strategic and innovation management literature that organisations compete and can gain a competitive edge through their business models. A business model represents “how the enterprise creates and delivers value to customers and then converts payment received to profits” (Teece, 2010: 173). According to Amit & Zott (2001), business model innovation affects the entire organisation and its ways of conducting business. As opposed to basic business process enhancements that do not change the sources of value creation or the existing business model, as stated by Mason and Leek (2008).

Digital advances redefine business models, with new technologies changing systems, structures, activities, and processes. These changes primarily arise during the digital transformation of enterprises. Digital transformation may then relate to the product and related information, the process leading to the customer experience, and the business platform utilized for product delivery, all of which require optimization to succeed, as stated by Weill and Woerner (2013). Thus, "Digital developments introduce a business model by implementing a new business logic using digital technologies to create and capture value for its stakeholders" (Teece, 2010; Amit & Zott, 2008).

There are several interpretations of digital business models in the available literature. Verhoef et al. (2019) define Digital Business Models as scenarios in which digital technologies fundamentally impact how firm structures and conducts business, thereby providing value for customers, the firm itself, and its partners. Complementing the notion presented, Peña et al. (2018) defended that management practices resulting from embracing digital technologies into the firm's operations can be considered a digital business. Mobile devices, applications, analytical tools, capacity-sharing platforms, and the Internet of things are the most common technologies in digital business environments. To sum up, "a digital business model can thus be defined as a business model whose underlying business logic deliberately acknowledges the characteristics of digitization and takes advantage of them, both in interaction with customers and business partners and in its internal operations." (Bärenfänger & Otto, 2015).

2.2 Digital Payments

The Internet and smartphones have radically altered how users connect and shop online. "*Digital payments* are transactions that occur through digital or online modes. This includes virtual cards, wire transfers, and digital wallets such as Apple Pay, Google Pay and Coinbase Wallet. Digital payments provide an automated, secure, and auditable way of making transactions" (Nesbitt, 2021) in the Forbes Finance Council.

We are currently seeing an unprecedented surge in the number of innovative financial services. We can now use cash, credit, debit cards, and smartphone apps when paying in stores. Apps for digital payment pledge to make our lives more effortless and more pleasing by tracking our spending, presenting discounts, and decreasing or eliminating the time we spend at the checkout counter. Their use is profoundly altering how we shop and pay for goods. In the decades leading up to today, payment methods for goods and services have changed dramatically, with more recent clients preferring digital payment over cash, according to Balakrishnan and Shuib (2021).

From a business perspective, "Moving from cash to digital payments can increase an entrepreneur's profitability by reducing operating costs and making it easier to manage trade contracts, delivery records, and accounts receivables. Making and receiving digital payments can increase an entrepreneurs' participation in e-commerce and improve their interactions with clients, vendors, and financial institutions." - (Klapper, 2017).

2.3 Sharing Economy

A sharing economy (SE) encourages the sharing of underutilised goods and services to enable efficiency and sustainability. The concept of the sharing economy has been characterised in various ways. Numerous researchers have examined SE definitions. According to Botsman and Rogers (2011), the term "sharing economy" can also be referred to as "collaborative consumption", "collaborative economy", or even "platform economy".

Herbert and Collin-Lachaud (2017) suggest that specifying the SE notion is difficult because SE practises are diversified and ever-changing. Nevertheless, Munoz and Cohen (2016) defined the concept in a balanced manner. They define SE as a socioeconomic system that facilitates an intermediary set of trades of goods and services between individuals and organisations to increase efficiency and optimise underutilised resources in society. This notion can also be complemented by the following, "The Business Model of the sharing economy consists of a firm, or service enabler, which acts as an intermediary between the suppliers of a good or service (service provider) and customers who demand those underutilised goods and services." - Kumar (2018), as envisioned in figure 1.

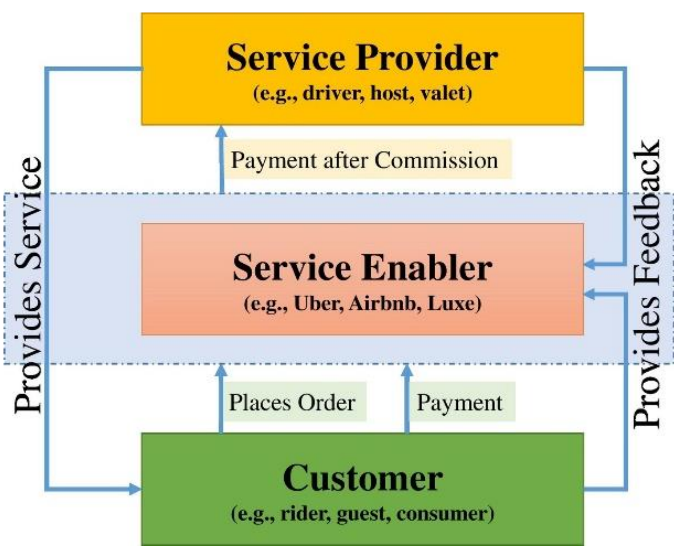

Figure 1 - The sharing economy business model; Source: Kumar, 2018.

Collaborative consumption promotes the lending, gifting, and swapping goods and services. As a result, rather than paying the entire cost of an asset that may lie unused, consumers might desire to share ownership of the service or products by contributing a small amount per person. Besides reducing consumer costs, there are economic and environmental advantages, as Frenken and Schor (2017) defended.

When analysing the drivers of SE, Belk (2014) concluded that as a result of living in a community, people share goods with family and neighbours. As also identified by the business opportunity related to this business plan, Schor (2015) concludes that associated with the Internet Business Model and the Digital Marketing evolution, commerce is simple and accessible.

The expansion of the sharing economy is exciting for this business because it corresponds to market demand. With customers who desire to share their subscription services more than ever, this business plan will allow them to do so and contribute to the SE.

2.4 Fintech

FinTech, a blend of financial services and technology, has swiftly evolved over the last decade, entirely reinventing the financial services landscape and how consumers spend, invest, and lend money. "It is a catch-all term for technology used to augment, streamline, digitise or disrupt traditional financial services" (Walden, 2022) in Forbes Advisor. Even though the FinTech emerging phase has already ended, and it is already an established industry, still with tremendous potential, there is yet to be a definition for Fintech that is broadly accepted. Nevertheless, the notion can be presented simply: "Fintech is a new financial industry that applies technology to improve financial activities." - Schueffel, P. (2016).

FinTech is about introducing cutting-edge technologies into the financial sector and, as a result, revolutionising the financial industry. Technology has always impacted the financial sector, with innovations affecting how the industry runs. New technologies are being tested and incorporated into banking more rapidly than ever. However, more importantly, this FinTech revolution is so distinctive that most developments occur outside the finance sector. Young start-ups and big technology businesses try to disrupt by bringing new products and technologies, incrementing the competition in the market. FinTech activity began with mobile payments, money transfers, peer-to-peer lending, and crowdfunding and has now expanded to the emerging worlds of blockchain, cryptocurrencies, and robot investing, as enumerated by Goldstein et al. (2019).

2.5 Subscriptions

Subscription services are fundamental to this business project considering that this Fintech service's primary usefulness will be managing customers' payments and subscriptions.

Various definitions of subscription in the literature agree on a recurring price for a specific product, material, or service. The goal is no longer to supply the consumer with a one-time acquisition but to continually provide value to the customer through a product or service. This Business Model enables businesses to develop long-term, profitable relationships with their customers, which appears to be the ideal solution for the digital disruption era, as Baxter (2016) mentioned in an article for HBR. Tzuo & Weisert (2018) identified subscription models as the primary means of transitioning from product-centric to customer-centric business models, shifting the conventional linear transaction channels between businesses and customers to a circular, dynamic, and long-term relationship. In comparison, Baxter (2015) defined this shift in strategy as the transition from Ownership to Membership.

Subscriptions aim to offer customers value regularly to justify the recurring cost of the service or product. This business model can bring massive advantages to companies, primarily the recurring revenue and predictable cashflows, lower incremental cost on customer acquisition through customer referrals, and the possibility to analyse consumer data to tailor its tactics to keep delivering value to existing clients. Businesses that adopt the Subscription business model mainly focus on customer retention rate and the lifetime value they might bring, ultimately striving to retain customers for life, "Mastering the forever transaction" (Baxter, 2015).

CHAPTER 3

Methodology

Gathering the fundamental aspects of this project, emphasising the market analysis, the business concept itself, the operating model, and the financial plan will facilitate the assessment of the project's economic viability.

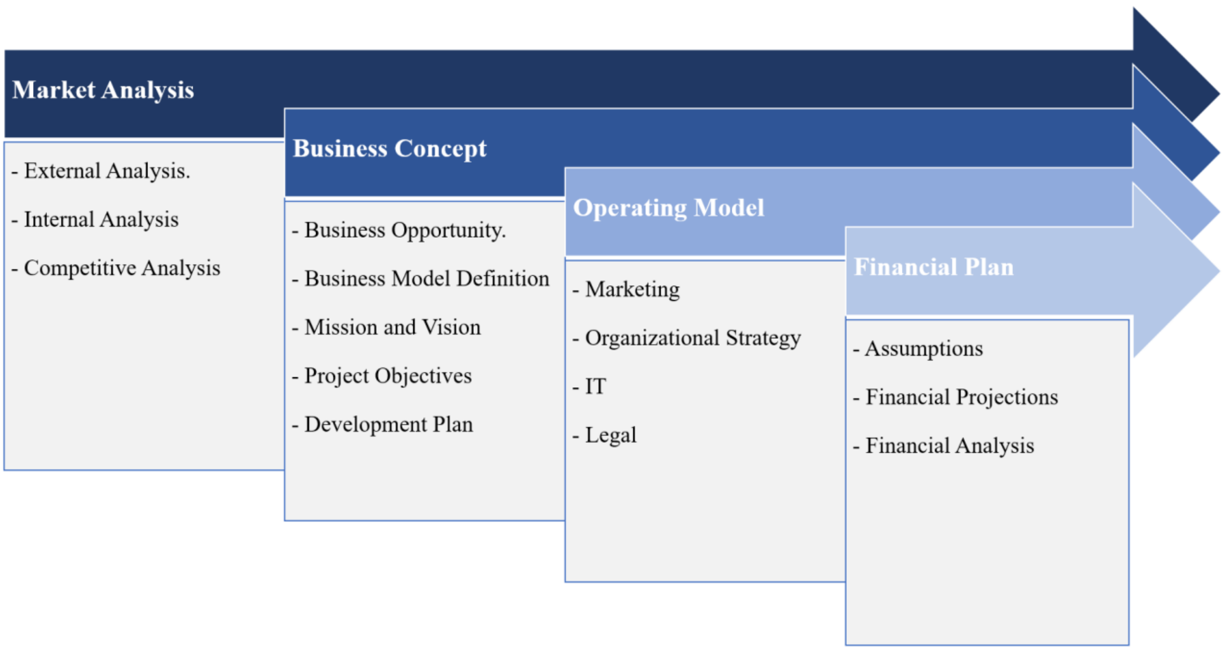

Figure 2 - Business Plan Methodology; Source: Own Elaboration.

3.1Market Analysis

A market analysis can assist decision-makers in determining how to position a company better to be competitive and satisfy its customers. In chapter four, a market analysis focused on the external, internal, and competitive factors within all the markets relevant to the project will be conducted.

Ultimately, this Market assessment will allow an adequate understanding of the market attractiveness and the risks associated with applicable markets. As mentioned, the elements evaluated are the following:

3.1.1 External

The external market analysis examines a company's industry environment, namely, the current industry definition and situation, the external environment, and its relationship with the business plan.

- Industry Definition: The current state of the industry and the size of the market
- Primary Research: A fundamental step of the business plan was developed on the outputs of an online survey. Based on the examination of the replies, assumptions are developed to sustain the financial forecasts.
- PESTEL (Political, Economic, Social, Technological, Environmental and Legal Analysis): Definition of the external environment and context and how it affects the project.

3.1.2 Competitive Factors

This chapter analyses Porter's five forces, a framework for examining a company's competitive environment and industry attractiveness.

- Porter's five forces: "Competition in an industry is rooted in its underlying economics, and competitive forces exist that go well beyond the established combatants in a particular industry. Customers, suppliers, potential entrants, and substitute products are all competitors that may be more or led prominent or active depending on the industry." (Michael E. Porter, 1997).

3.2 Business Concept

As a result of the market analysis conducted in chapter four, it is now possible to determine the opportunities arising from the current gaps in the market of FinTech's offering payment solutions, explicitly introducing subscription payment management features. In chapter five, the absence of a market offering for this type of service is exploited and presented as a new idea for a business initiative. Furthermore, the primary operations of the business and its scope will be defined, determining the project's mission and vision. This chapter will also go over the project's objectives and development plan.

3.3 Operating Model

In chapter six, four central departments are fundamental to implementing such a concept: Marketing, Organizational Strategy, IT and Legal.

- Marketing: A mission statement delineates the organisation's business, its goals, and how it plans to achieve them. A vision statement describes the direction the company desires to go. Following the mission and vision, the target market is set, and the value proposition is presented.
- Organisational Strategy: The company's organogram, with the required positions, descriptions of functions and the expected headcount evolution, will make the Fintech operations feasible.
- IT: FinTech's are inseparable from technology since the company embraces a digital business model to provide financial services. Without a capable, secure, user-friendly platform, the business would not succeed. Information technology is the core of the business.
- Legal: There are legal implementation requirements. Every company must comply with applicable legislation, given further significance, considering that this company is a payment institution that must be authorised to conduct its activity legally.

3.4 Financial Plan

The presentation of the financial plan supporting the sustainable economic viability of this project occurs in chapter seven. Ultimately, the analysis in this chapter determines whether this project is worth an investment. The ground for this analysis arises from assumptions defined according to the answers to an online survey, and the predictions will allow an accurate evaluation of the business. The future cashflows, Net Present Value, Payback, and the Internal Rate of Return are techniques used alongside a sensitivity analysis to account for alternative scenarios that differ from the expected. As Elroy Dimson stated, "Risk means more things can happen than will happen”.

CHAPTER 4

Market Analysis

4.1External analysis

4.1.1 Industry definition

In the last decade, subscriptions and the Fintech markets have exponentially grown. However, did these two markets ever cross paths? There is no FinTech focused and specialising in managing and paying subscriptions that, more than ever, are shared among users.

Digital Payments, Personal Finance, Alternative Lending and Alternative Financing are the segments that usually compose the Fintech Market. In the first stage, the business presented in this plan intends to combine digital payments and personal finance segments with the subscription market.

The subscription market once started with magazines and newspapers. Nevertheless, streaming services are currently the service with the most subscribers, but other market segments, such as software, product boxes and E-commerce, are gaining traction.

If the subscription can be shared, usually the price splits between users, and the goal is to ease the management of users while facilitating their payments, guaranteeing that no user needs to pay in advance for everyone sharing.

4.1.2 Industry Data

This business plan intends to develop a platform that enables subscription users who share their subscriptions to manage their payments easily among people who share them. The main target of the provided service in the first phase is Subscription Video-on-Demand (SVOD). This technology provides video content, such as movies and tv shows to individual customers for instant consumption.

The number of subscribers of the primary SVOD services in Eastern Europe has been growing, having had a significant boost in 2020 and 2021 resulting from COVID-19 quarantines, where people had to stay at home and consequently opted for this type of service. In the following chart, it is possible to verify this growth and the forecasted number of subscribers by 2027, (Figure 3).

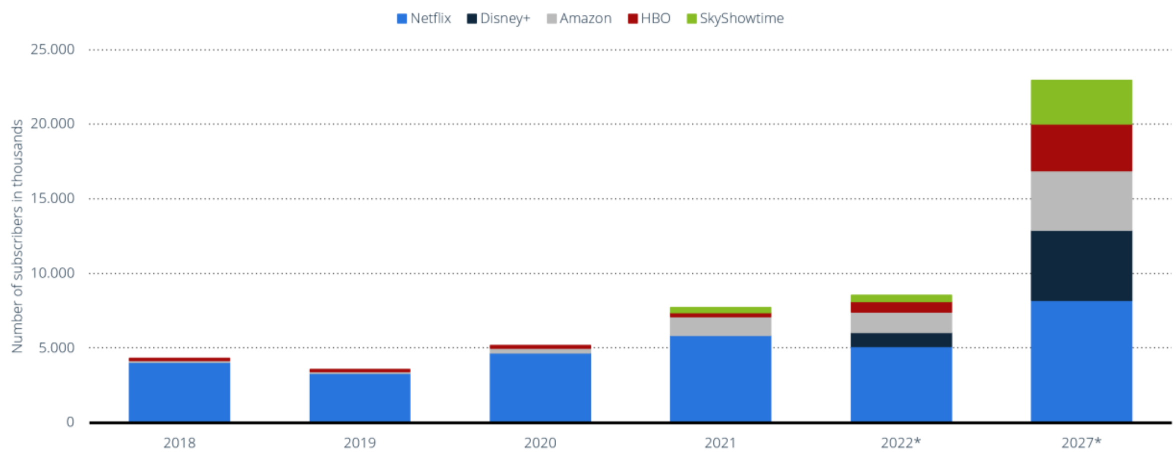

Figure 3 - Number of SVOD Subscribers in Eastern Europe, Source: Statista.

4.1.3 PESTEL Analysis

PESTEL is the acronym for Political, Economic, Social, Technological, Environmental and Legal factors. It is a method used to assess and evaluate external business circumstances and discover whether external variables beyond the company's control might affect performance. As stated by Aguilar (1964), the creator of the PESTEL analysis, environmental scanning is the collecting and use of information regarding events, trends, and relationships in an organisation's external environment that would aid management in planning the organisation's future course of action.

Political

Portugal is a democratic country with a semi-presidential republic and parliamentary democracy, with the Prime Minister serving as the Head of Government and the President serving as the Head of State. The Portuguese Parliament, the President of the Republic, the Government, and the Courts are the organs of sovereignty. The principle of separation of powers, collaboration, and mutual supervision bind these entities constitutionally.

The Portuguese Parliament is elected by universal, direct, and secret suffrage. Currently, the Socialist Party holds the Parliament majority, having won the elections that occurred in the past 30 January 2022 and occupying 120 of the 230 seats that compose the Parliament, followed by the Social Democratic party, with 77 seats. The current government is Socialist and headed by Prime Minister António Costa. It is now on its third term after the President dissolved the Parliament and convoked early elections in late 2021 after the Parliament rejected the State Budget for 2022. The next elections will happen in 2026. Marcelo Rebelo de Sousa is Portugal's President and was re-elected for a five-year second term in January 2021.

Economic

Portugal's economy grew fast after entering the European Union in 1986 until the late 1990s. Then came two decades of economic near-stagnation. During the last ten years, according to PORDATA, the Portuguese GDP has grown from 168.295.569k/€ in 2012 to 214.470.702k/€ in 2021. The forecast by PORDATA is to reach 230.526.000 k/€ in 2022, meaning a compound annual growth rate (CAGR) of 3,56%.

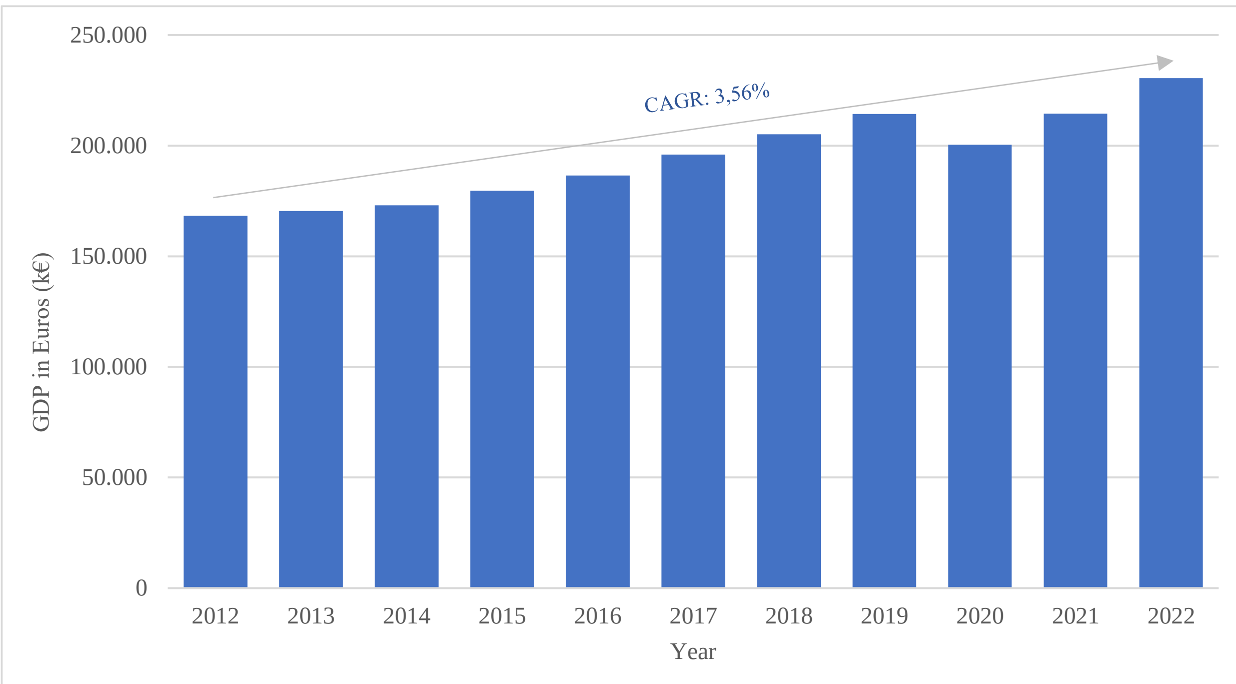

Figure 4 - Portuguese GDP Evolution. Source: PORDATA - (Own Elaboration).

The global pandemic has negatively affected the Portuguese GDP by 8.30%, followed by recuperation of 5.5% (Source: BdP) compared to 2020. Despite the recovery, the actual evolution of the Portuguese GDP between 2019 and 2022 is on route to 1.7%, placing Portugal in 20th among the EU27, according to the European Economic Forecast. Banco de Portugal estimates that the Portuguese GDP will grow by 6.7% in 2022, while the remaining Euro Zone will stick to 3.1%, according to the European Central Bank.

		2021	2022 (p)
Gross domestic product	Portugal	5.5	6.7
	Euro Area	5.2	3.1

Figure 5 - Portugal vs Euro Zone GDP. Source: BdP and ECB.

Inflation is one of the most worrying factors impacting the current worldwide macroeconomic situation, and Portugal is no exception. According to INE, Inflation in Portugal reached the highest level since October 1992, rising in October to 9.3% homologous and up from 8.9% the previous month. This increase is primarily due to rising food and energy prices. Banco de Portugal projects the 2022 inflation to reach 7.8%, slightly under the 8.1% of the UE.

The European Commission launched the program NextGeneratioEU, a recovery plan for its members to emerge from the pandemic and truly transform economies, being the most extensive stimulus package ever in Europe. Significant investments in climate action, digital transition, infrastructure, and human capital aim to achieve the program's purpose. Portugal's economic future is inseparably related to the successful execution of this substantial financial package.

Social

According to the 2021 Census, there are 10.344.802 individuals residing in Portugal, of which 4.921.180 are men and 5.423.632 are women. Regarding literacy, 2.199.251 residents went to secondary school, 21% of the total, and 1.800.101 (17%) have superior education, ranking this as the most qualified population in the country.

In a study called "Residing Population Projections, " INE reached some conclusions on what might happen to the Portuguese demography between 2018 and 2080. The most relevant takeouts are the possible population loss, decreasing from 10.3 to 8.2 million people residing in the country, and a decrease in the number of children from 1.4 to 1 million, contrasting with the increase in the elderly population from 2.2 to 3 million. The ageing index assesses the relationship between those above the age of 65 and those under the age of fifteen. The indicator's objective is to highlight the significant imbalance between the vast number of elderly individuals and the low birth rate. In Portugal, with the decrease in the number of children and the increase in the elderly, the old age index would double from 159 to 300 elderly for every 100 children.

Technological

The technological context assumes further importance since the business project embraces a Digital Business model. The adoption of smart devices and the acquisition of subscription services are significant to understand the relevance of the business in the study.

Smartphone adoption: In a study by Marktest in 2020, 7.698 million people in Portugal used a smartphone, which translates to 89,9% of the entire population over 15 years old. Compared to the 27% of the population with a smartphone in 2012, the adoption increase is motivated by the exponential technological evolution verified during this period. Marktest also confirmed that the penetration of this product is so high in the population that is only above 54 years old that the level of adoption was under average.

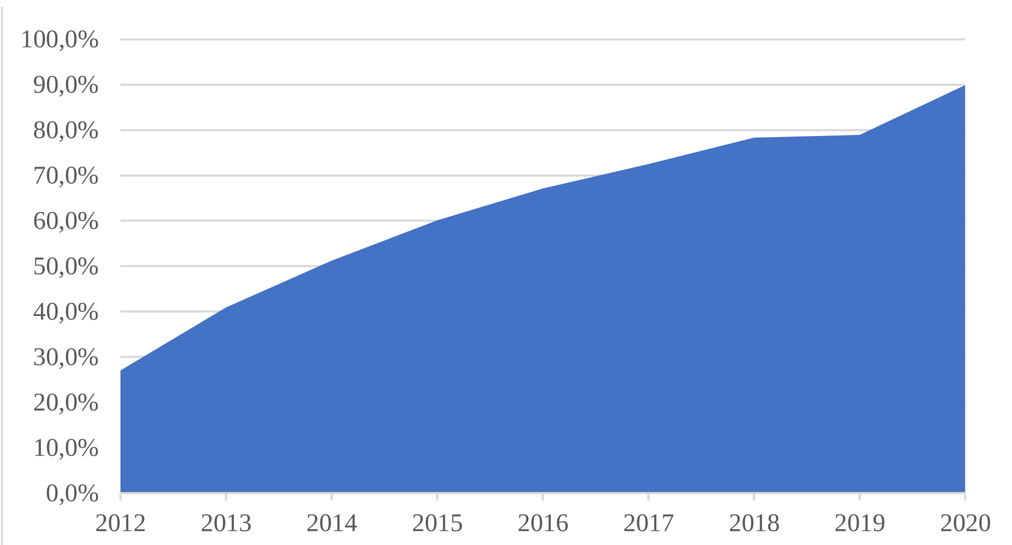

Figure 6 - Portuguese Smartphone Adoption. Source: Marktest & TGI.

Internet and Smart TV usage: Besides smartphone adoption, internet consumption through television has gained further preponderance. Marktest conducted a study called "Bareme Internet 2022." and concluded that 6.974 million of Portugal's residents older than fifteen used the internet, representing 81.4% of the population in the study. The conclusions show that television is the platform used to access the internet with the most growth, reaching 3.715 million people, around 43.4%. It is ranked third among every platform used to access the internet, only behind the mobile phone with 78.9% and the computer with 62.9%.

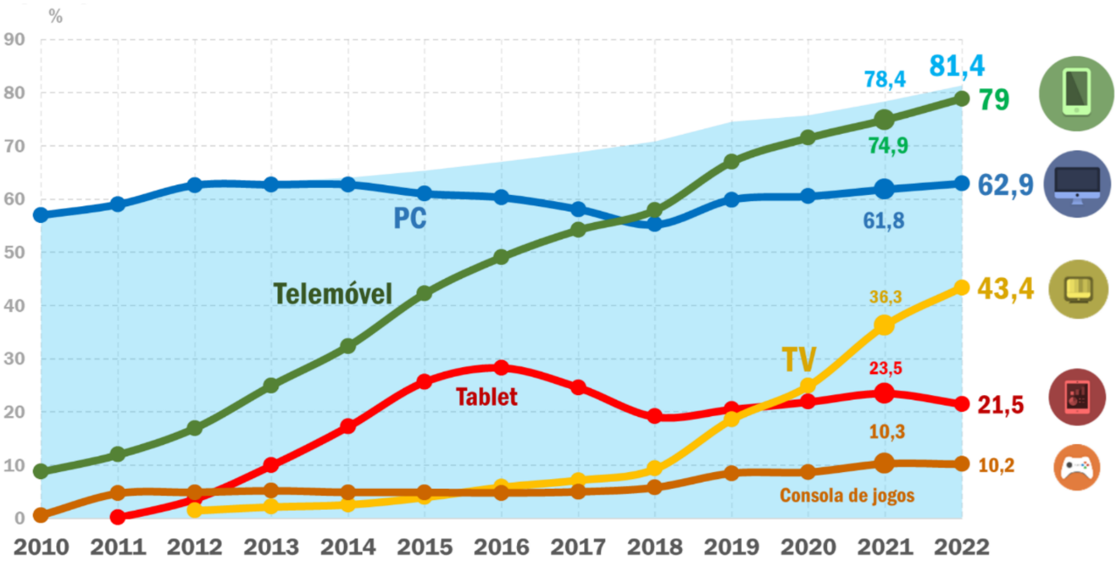

Figure 7 - Internet usage per platform. Source: Marktest, Bareme Internet 2022.

The data retrieved from the "Q2 2022 State of Streaming report" collected by Conviva demonstrates which platforms people are consuming content. Nowadays, television is the favourite platform people stream in Europe, reaching 26.7% directly in Smart TVs and another 32.8% in devices connected to a TV, followed by the mobile phone, computers, and tablets with 11.7%, 11.2% and 9.5%, respectively. Compared to global statistics, Smart TVs and tv connected devices reach 69.9% combined, followed by mobile phones, computers, and gaming consoles with 11.3%, 7.1% and 6.8%, respectively.

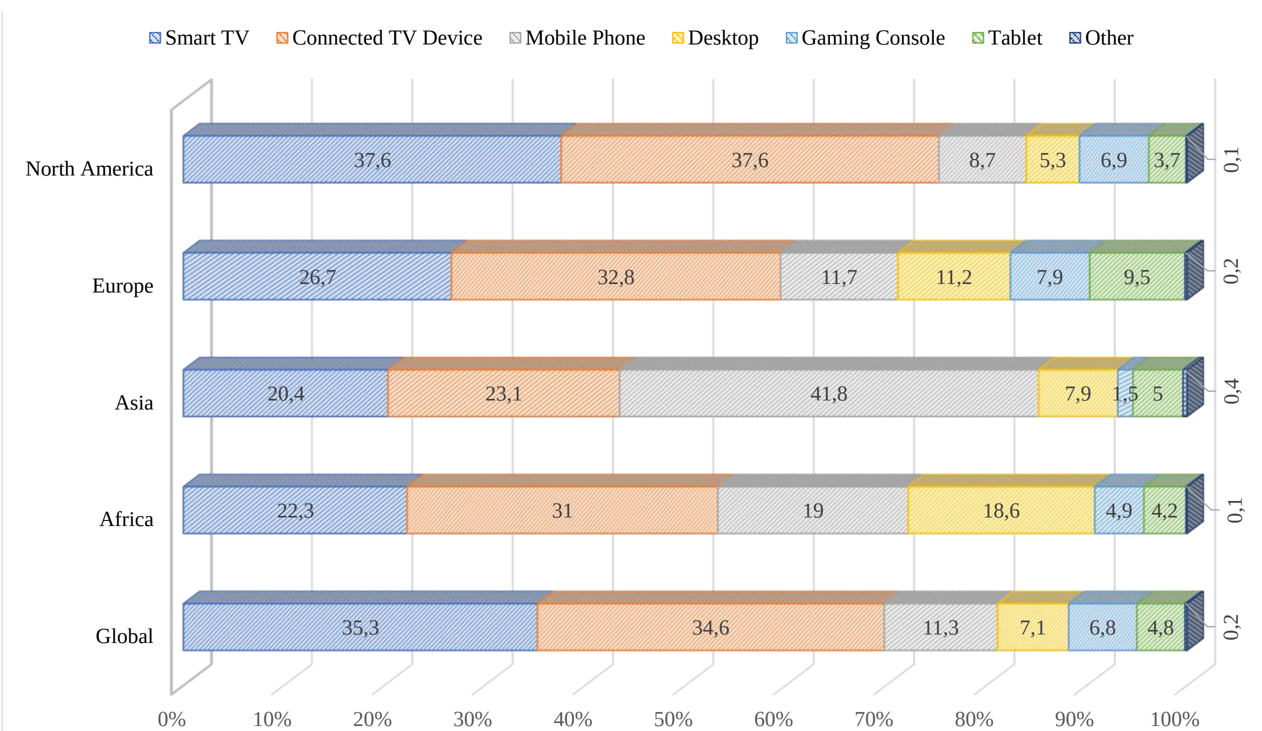

Figure 8- Global and Regional Share of Viewing Time by Device. Source: Q2 2022 State of Streaming report" by Conviva.

Environmental

This business project is not directly impacted by the environmental surroundings, particularly given its value proposition.

Regardless, there is an environmental ambition. Portugal aspires to be carbon neutral by 2050. The MEET 2030 was a project developed by Business Council for Sustainable Development (BCSD) Portugal and Instituto Superior Técnico in collaboration, and according to the MEET2030 Report, this project was an experimental initiative that established a shared vision and numerous directions for 2030, intending to achieve carbon neutrality in Portugal by 2050 while anticipating economic growth and competitiveness in the different sectors involved. It is more apparent than ever that we live amid a technological and sustainable revolution. Consequently, during this shift, it is vital to maintain economic growth and prosperity while respecting and improving human rights, inclusiveness, and minimising current global disparities.

Legal

There still needs to be specific legislation regarding digital platforms in Portugal. The existing legislation falls into IT programs that can include mobile applications.

Nonetheless, as a member of the European Union, Portugal falls covered by the Digital Services Act, seeking to establish a protected and responsible online environment for everyone in the European Union. This act establishes standard guidelines for the intermediary's responsibilities and accountability. The European Union seeks with this act to position the consumers at the centre by setting their rights and creating crucial transparency and accountability structure for digital platforms. Implementing this act will likely incentivize innovation, growth, and competitiveness.

Besides the Digital Services Act, the General Data Protection Regulation (GDPR) must be considered as a business established in Europe. Thought as the strictest data management-related law in the world, imposing the obligations of any organization that targets or collects from EU citizens to comply. "The GDPR has six general data protection principles: fairness and lawfulness, purpose limitation; data minimization; accuracy; storage limitation; and integrity and confidentiality. However, data protection is at the core of the GDPR by default." - Goddard, M. (2017). Due to the extensiveness of the regulation, compliance can be challenging, especially for SMEs.

4.2 Competitive analysis

4.2.1 Porter's five forces

Porter's five forces is a framework for industry research and corporate strategy formulation developed by Michael E. Porter of Harvard Business School in 1979. Porter (1979), referred to these influences in the microenvironment as those forces close to a company that affect its ability to serve its customers and generate a profit. Typically, a change in any of the forces requires a business unit to re-evaluate the marketplace due to a change in industry information.

Threat of Substitute Products or Services: While there is no alternative service, if one arises and can provide the service with a better attractive price-performance trade-off to the customer, it could lead to a loss of customers. However, the main threat could be if more significant subscription services started offering the ability to manage the subscription and split the payment between the people who shared them.

The latest industry practices demonstrate that companies prefer users who do not share subscriptions since the service price is much higher when compared to shared plans. It would be contradictory to supply an alternative service to ours.

Threat of new entrants: As mentioned previously, the subscription market has had exponential growth in the last decade, and it will not stop here, as it is expected to reach around 904.2 billion dollars by 2026. Many companies may find this upside attractive and try to be part of it.

The main barrier to entry into this market is the software that must integrate seamlessly the ability to manage subscriptions and corresponding payments. For this to happen, the platform must be updated constantly with every new subscription plan allowing users to tailor their services to their needs. Therefore, while this is not impossible for a competitor to try to copy this idea, none of the current services targeting subscriptions has done so, and none can tackle the problem identified by the analyses conducted. Considering that no other fintech analysed offered this type of innovation, it could be possible to pursue patent protection to defend this technology from possible competitors.

Bargaining Power of Buyers: Even though our service focuses on the customer's needs, there is little to no bargaining power on the customer side due to the company's strategy for its revenue. As mentioned, our strategy will be to offer a service financed by advertisements on the platform or for customers that do not want to use a platform with advertisements. We will offer the same service with a small fee for each payment processed. This way, it depends on customers' preferences without much room to bargain.

Bargaining Power of Suppliers: Our company will only rely upon one supplier, the payments processing partner, which will integrate with our platform thru an application programming interface (API). Luckily for us, there are many suppliers for this type of service and rising technologies, namely cryptocurrencies, that can be presented as an alternative. As a result of such supply, unless significant changes would occur in the payment sector that could increase costs, that would be an alternative supplier.

Rivalry Among Existing Competitors: The conducted market study allowed the conclusion that no competitor provides the same service. While some might tackle the identified concerns, our value proposition is still more complete. In the coming years, resulting from the expected growth of the subscriptions market, expectedly with new competitors, our acquisition cost will likely be higher than in the beginning. However, it can be possible to take advantage of being the first to present this technology and gain from mouth-to-mouth spreading. For this to happen, it is crucial to be updated according to the subscription services and constantly look for innovation.

Attractiveness Overview

According to the analysis and classification of Porter's five forces, this market has a medium level of attractiveness. While there are some elements to consider, the forces that present higher risks will only initiate a more profound concern for the company to serve the customers better. Nevertheless, this is a rapidly growing market yet to be fully explored, which is a very optimistic sign.

Table 1 - Summary of Porter's Five Forces; Source: Own elaboration.

Porter's 5 Forces	Classification
Threat of Substitute Products	Medium
Threat of New Entrants	Medium/High
Bargaining Power of Buyers	Low
Bargaining Power of Suppliers	Low
Rivalry Amongst Competitors	Low
Global Attractiveness	Medium

4.2.2 Main Competitors

Competition occurs when companies offer an identical/similar good or service and need to compete for their customers. It is inevitable and thoroughly essential to customers since there is an additional stimulus to deliver higher-quality goods and services, lower prices, and more innovation.

There are two direct competitors identified, ShareSub and Together Price. After analysing both websites and comparing their features, it is possible to identify some resemblances with the service in the study and some limitations compared to our value proposition.

ShareSub

ShareSub, launched in France in 2020, is a solution for sharing the costs of subscriptions and monthly bills. It intends to reduce the need to track down friends for refunds or to avoid hesitation when purchasing a subscription.

<u>Mission</u>: Offers the easiest way for friends to split the cost of subscriptions and other monthly expenses. It offers many categories to share subscriptions, such as music, TV, news, games, house, office, and apps.

<u>Limitations</u>: Firstly, Sharesub does not solve the problem of one of the participants having to advance with the entire payment. Contrarily to our value proposition, Sharesub will gather the individual payments of the participants and refund the member who subscribed.

Secondly, Sharesub places the entire costs on the remaining participants in the subscription, a fee of 0,39€ + 4,5% will be charged to each participant. These fees appear too high for the type of service provided, possibly being a drawback to participants using this specific service.

Together Price

Together Price efficiently manages all steps of sharing a subscription: A Group Subscription Plan for a digital service can be accessed by two or more people. The subscription owner might make unused slots accessible for sharing with a plan for each service. Otherwise, joining one of the many already existing groups is possible.

<u>Mission</u>: We offer the technology to share it safely and comfortably.
<u>Limitations</u>: There are "Admin Fees". Every time a payment occurs towards Together Price, a fee between 0,99£ and 2,99£ will be charged based on the shared cost. There is also a 1£ fee charged to the administrator of the subscription if the withdrawn amount is inferior to 15£. Once again, similar to ShareSub, these fees appear too high for the type of service provided, possibly a drawback to participants using this specific service.

Competition is not only made of direct competitors that intend to offer an identical/similar good or service and compete for their customers. It is required to account for services that, even though they are not directly attempting to unravel the same problem, might have a try too.

In this category, banks and other FinTechs facilitating money transfers between individuals can compete with our service. Although it will not solve the main problem that this Fintech will try to decode, it might facilitate the collection of other participants' share of subscriptions. However, the main problem of one user having to pay upfront will remain untouched.

CHAPTER 5

Business concept

5.1 Business Opportunity

The industry information and statistics presented in chapter 4.1.2 demonstrate the exponential growth subscriptions have had in previous years and are forecasted to grow even further. As mentioned in the literature review, subscriptions aim to offer customers value regularly to justify the recurring cost of the service or product, meaning that there must be a recurring payment flowing from customers towards the subscription, typically monthly. Almost every subscription offers individual plans, usually with a higher cost when compared with shared plans, resulting in favouritism for shared plans and substantially lower costs when considering the cost per user.

Currently, traditional payment options for online services demand that one of the users pays in advance for everyone's sharing and is responsible for collecting everyone else's share of the payment since subscriptions only allow one debit/credit card to pay. Even though banking solutions have evolved thoroughly in the last years, it is highly uncomplicated to transfer money between people. However, there is only the option to split payments/ask the other party for their share instead of everyone paying only for their share in the beginning. After questioning why each user could not pay for their share directly to the service acquired, this business opportunity arose.

The concept is straightforward, to create a Fintech responsible for payment intermediation, facilitating the splitting of the costs equally. Where each customer makes a payment to the Fintech of the amount they owe for their share, the Fintech gathers everyone's payment. It delivers a debit card to pay for the subscriptions. This way, no one needs to pay upfront, and there is no burden for one of the users to constantly ask everyone for their share. Another highly relevant feature is to offer an interface that allows users to tailor their subscriptions to their needs, allowing users to manage their subscriptions and people who share easily. This way provides customers with complete control of their subscriptions.

There are other possible uses for this service, allowing customers to assemble recurrent expenses and immediately split them with the other beneficiary, for example, recurring household expenses such as communication expenses, insurance, or even family gym memberships.

5.2 Business Model

The Business Model Canvas comprises nine primary elements that showcase the most significant aspects of a project and its activity. The model facilitates the development of an illustrated framework that outlines the proposed business plan.

Figure 9 - Business Model Canva. Source: Own elaboration.

Key Partners

Our partners will play a significant role in the business. The financial provider will allow us to receive the payments from our customers and generate the debit cards used by them to pay for the subscriptions.

Another relevant partnership would be direct with companies with subscriptions by integrating our payment solution into their payment options. These partnerships would allow the company to grow even more, but firstly it is essential to present this solution to the market and build trust in the company.

Key Activities

Platform Development is fundamental. Not only in the early stages of our investment, but it is also crucial to constantly maintain and update it.

Marketing is essential. Besides the platform, it will play a prominent role in selling the service, having even greater importance in the first years because an initial push is necessary to gain brand awareness.

Customer Support must always be available. Constant care and attention towards satisfying customer needs and solving every problem that might urge as soon as possible to ensure that the customer remains satisfied.

Key Resources

- Customer Database: The customers that the company can acquire and retain will be critical for the business's success. As identified previously, most subscriptions are shared. The more customers the business can convert, the more users are expected to emerge.
- IT Expertise: Our mobile apps and website technological platforms need to work securely and seamlessly. The IT team is responsible for making this happen.

Value Propositions

There are multiple aspects to consider regarding the value that this company might offer to its customers who want a solution for better managing all the subscriptions they are sharing and easing the payments among users.

Firstly, the newness, there is not any company solving the identified problem the same way. In every other competitor solution, there was still the need for one of the users to pay for everyone up front.

Secondly, allowing consumers to customize their subscription package and tailor it to their needs while facilitating the management and payments.

Thirdly, there is risk reduction for the person who usually paid for everyone to be left without receiving everyone else’s share. Moreover, on the other hand, for someone to forget that they owe their share to a friend/family.

Lastly, offer a safe alternative to split recurring payments while guaranteeing their money is secure.

Customer Relationships

The success of this business depends on the ability to deliver customers the power to control and tailor their subscriptions fully. Therefore, there will be a team focused solely on customer service from the first year. Official communication channels will be set in place, allowing constant communication and feedback for the customer through chats and email.

Channels

There are three main channels on which the company must be present. Firstly, available in different mobile app stores (Apple Store and Google Play) and a website. The third channel will be social media accounts. It is vital to have the social media updated and linked with the platforms, allowing potential customers to reach us.

Customer Segments

The initial target segment is consumers with subscription services who share it with friends/families. Nonetheless, there will be a second target, consumers with recurring expenses incurred by multiple people, allowing them to set the payment scheme they need.

Cost Structure

Initially, the cost structure will be mainly related to Human Resources, Office Rent and Marketing.

Even though it is a technological company, the platforms require constant updates, so the decision to have the people responsible for the platform in the payroll instead of subcontracting made sense. The headcount will grow alongside the user evolution. The rent is for an office with enough space for the initial employees and the expected headcount growth in five years. Lastly, Marketing costs will take a decisive role in this Business Plan, as the expected user evolution will directly depend on the amount spent on Marketing. The chosen platforms to advertise are YouTube and Instagram ads.

Revenue Streams

Currently, there is one revenue stream included in the forecast. The fee our customers pay is 0,20€. Out of the amount paid to Subswired, there are two fees paid to the financial partner, 1% of every payment received from customers and another 1% for the payment to the subscription services. The total of these fees paid is 0,05€, and the 0,15€ is the company profit. The 0,20€ user payment every month is inexpensive when accounted for the total yearly cost, including this fee, and substantially lower than our competitors' fees.

5.3 Value Proposition Testing

Testing the value proposition requires market research, customer feedback, and iteration, continuously testing and refining it until a product or service resonates with the target audience and meets their needs. Following these steps, the business plan has a solid value proposition suitable for the target audience. When considering that the customer feedback and iteration would occur after launching the business and, therefore, not applicable to the value proposition testing, considering this limitation, a survey was used to understand further how solid the value proposition is and, ultimately, how customers would perceive the service.

The survey was created qualitatively, gathered 275 responses through the Typeform application, and collected answers between May and September 2022. The survey goal was to present and explain to potential customers the problem and the proposed solution in this business plan, ultimately to perceive the interest in such a solution. The survey ended with the following questions:

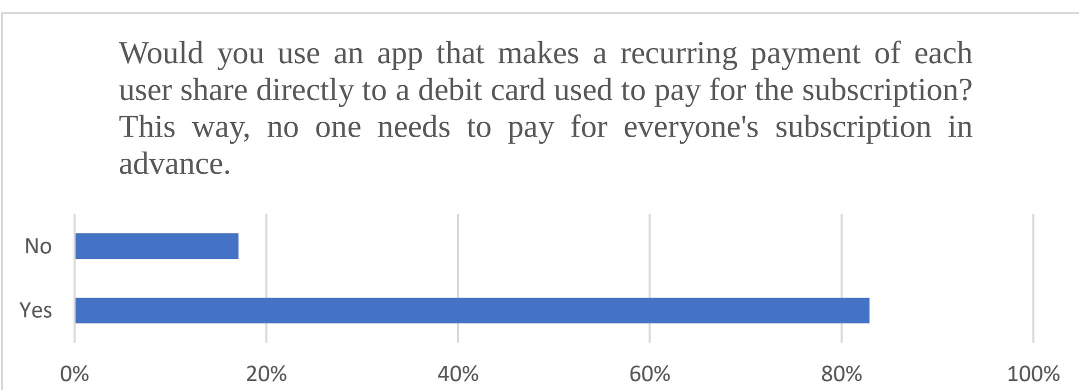

Figure 10 - Potential customer service perception. (Own elaboration)

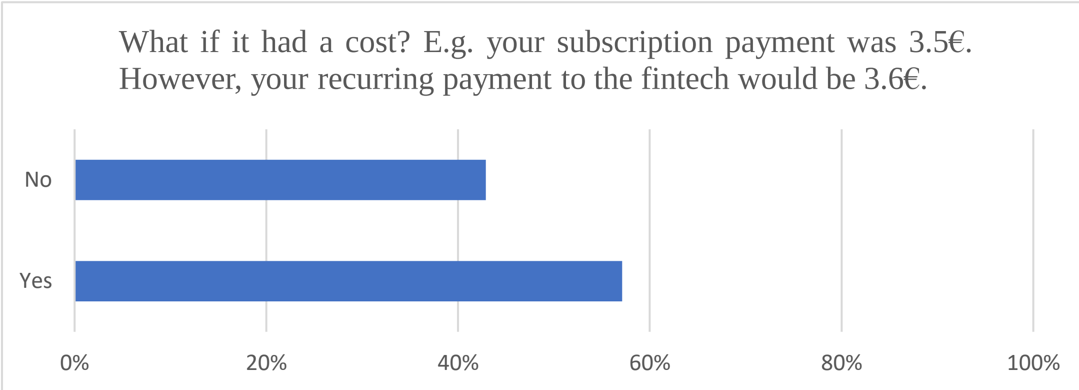

Figure 11- Potential customer service perception with fee. (Own elaboration)

The survey encouraged the proposed value proposition, as 82,9% of respondents would use the presented application (figure 10), with this number decreasing to 57,1% if a small fee of 10 cents was charged for the service provided (figure 11). Despite the decrease, it is still possible to conclude that most responders approved and were likely to use the presented service.

Following the comprehensive competitive analysis conducted in chapter three, combined with the qualitative survey responses, created significant grounds for assessing the suitability of the value proposition to the business plan, providing both qualitative and quantitative data about the market and target customers.

5.4Project phases

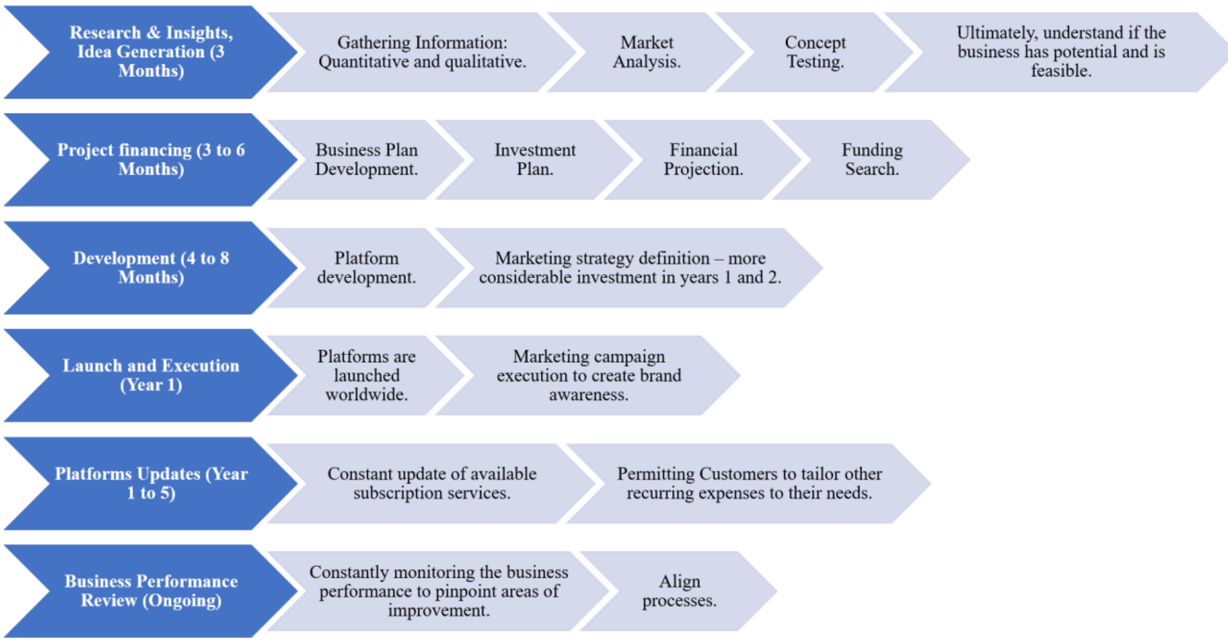

Figure 12 - Project Phases. Author: Own elaboration.

5.5 Strategic Objectives, and Development Strategy

Strategic Objectives

Launch January 2024, based in Lisbon, with services available worldwide.

- Reach approximately 330K users by the end of year one, 860k by year 3 and 1.250K in year 5. Gradually increase our headcount, trying to grow in line with the sector average.
- Achieve payback before the fifth year of activity.
- Having subscription services include our payment solution directly on their websites.

Development Strategy

During the project's development phase, the digital platforms will start development and a marketing campaign preparation to launch near the conclusion of our platforms. We must present our service to potential customers to build brand awareness. Once this has been achieved, it is necessary to continuously develop the platforms to guarantee that they are updated and offer the best service experience to our customers.

The most reasoning approach for achieving the strategic objectives is market penetration and required product development. The user's growth will directly depend on the amount spent on Instagram and YouTube ads, and the decision was to split the marketing budget between both platforms. The two main metrics used were the cost per mile (Cost per one thousand interactions) and conversion rate (Percentage of customers that end up acquiring a product/service). The product development aspect is the constant update of existing subscription packages offered, and the carefulness of including new services to broaden the coverage of potential users will increase the number of users.

Once the concept is thoroughly proven in the market, and a considerable number of users are converted. Hopefully, the last strategic objective defined can be achieved. Having subscription services offering our payment solution directly to their customers would culminate the objective of this business plan.

CHAPTER 6

Implementation / Marketing Strategy

6.1 Marketing strategy

This project needs marketing to be prosperous. Therefore, it is of utmost importance that the company can attract customers through the marketing campaign. Our marketing strategy will create brand awareness by allowing us to present our service to potential customers. During year 0, a communication plan will be developed to implement in the upcoming launch month, aiming at presenting the business to customers. Our communication will occur through placing an advertisement on mainly two platforms: Instagram and YouTube, to reach the vastest potential customers possible.

The approach can be easily simplified. The campaign aims to demonstrate to potential customers the value our service can bring to their lives and how easy it would be to manage their subscriptions and payments. Increasing Subswired visibility and awareness will allow for further business growth and increase the perception of added value that this platform delivers to its customers. Establishing the company's mission, vision, positioning, and segmentation is essential.

6.1.1 Mission and vision

Mission: Subswired will ensure that people who share subscriptions can easily manage all the services and payments between participants.

Vision: To be acknowledged as the go-to service to consumers who have subscriptions or other recurring expenses, guaranteeing payment safety and the ability to tailor subscriptions to customers, not the way around.

6.1.2 Positioning – differentiation

Market positioning can affect consumer perception of a brand or product compared to competitors by developing a distinguishing image or identity so that people perceive it precisely. No other company currently offers the same payment solution as Subswired, which is an obvious differentiation factor.

The main objective is to demonstrate to customers that this platform will unravel the issues related to subscription management among people sharing them and bring automation to the cost splitting. After a thorough search of our identified competitors, there was no imminent marketing promoting their service. Another business aspect we aspire to be different from competitors is a creative campaign with targeted content prepared to present as ads to our target audience.

The goal is to be recognized for our innovative payment solution, the user-friendly platform, and ultimately, as the leading solution for sharing services.

6.1.3 Segmentation and targeting

As previously stated in the Business Model Canvas, the business target is straightforward but broad simultaneously. We primarily offer services to people who own subscription services and share them with relatives. However, we also target people with recurring expenses that can be treated similarly to subscription services when shared, e.g., students who rent, splitting the Wi-Fi bill with housemates.

As mentioned in the literature review, currently, consumer preferences are shifting from ownership to a sharing economy. This shift has been visible in the growth of the subscription market and selecting this target will allow the company to capitalize on that growth and gain further clients than initially forecasted.

6.2 Implementation requirements

6.2.1 Main Activities

Three main activities are the company's core when scrutinising the business idea. They are IT development, Marketing and Customer Service.

IT Development

The business relies entirely upon technological platforms, a website, and mobile applications, making this clearly the most critical activity where the company must succeed to achieve its goal. This activity will take a role from the beginning, but the required maintenance and constant improvements will lead to continuous intervention from this department. In the first two years, the department, led by the CTO, will have three employees: a System Security Manager, a UX/UI developer, and a UI Designer.

Marketing

Once all the platforms are developed and optimised, they are worth nothing to the company if there are no customers. There is a need to spread the business concept throughout the market and create brand awareness. The Marketing department will start with a Head of Marketing and a Digital Marketing Lead/Social Media Manager, both responsible for the execution of a substantial investment in marketing, namely in YouTube and Instagram Ads.

Customer Support

With customers convinced and acquiring our service, customer support must constantly worry about keeping them satisfied. They are the company's focus, so delivering immediate resolutions to any concerns is mandatory for its success

6.2.2 Legislation

Firstly, the new company registration is mandatory and can be done online. There are some legislation requirements for registration, and the following documents are required: Commercial registry (Conservatória do Registo Comercial); Social insurance registration; Declaration of activity initiation; Certificate of admissibility; Social Capital Deposit; Society Constitution Act.

Presently, opening a company cost 360€, which includes commercial registration and society-associated publications, an amount paid at the time of the company's constitution.

Afterwards the opening, there are fiscal obligations such as IRC (21%), Derrama (up to 1,5%), IVA (23%, 13% or 6%) and Social Security (23,75%).

CHAPTER 7

Financial Plan

7.1 Assumptions

The assumptions are the business plan's guidelines to have a solid foundation for the financial forecast. Financial assumptions, in essence, act as a projection of what the company will do in the future. They are essential information for the business plan reader to understand the strategy and how realistic the estimates are. These guidelines should be tailored to the business in study and include every relevant information that impacts the forecast, such as revenues, costs, funding, operation, and startup costs, among others.

For this analysis, six years were considered, with year zero as the development year for the software and marketing campaign and five years with the business already operating. Being a technological startup, the ongoing update of platforms, the consumer's behaviour towards the service offered, and possible competitors' evolution/appearance might impact the outcome of this project.

CAPEX Investment

Considering this is a digital business model and the entire business will rely on the developed platforms, the principal CAPEX investments will be the website and mobile applications development, computers for the employees, office furniture, mobile phones, monitors and all the network infrastructure needed. This investment will totalize around 240k€ in the beginning. Based on the fiscal accepted depreciation rates, there will be a reinvestment in computers and mobile phones in years three and five, respectively, since the initial assets will be fully depreciated by that time.

Table 2 - CAPEX Investment (Own elaboration)

Asset Name	Asset Category	Quantity	Amount	Total	Depreciation Rate	Annual Depreciation
General Office Equipment	Office Equipment	N/A	N/A	40.000	12,50%	5.000
Web-Applications	Intangible Asset	N/A	N/A	126.473	16,67%	21.079
Computers	Basic Equipment	20	1800	36.000	33%	12.000
Computer (Year 3)	Basic Equipment	20	1800	36.000	33%	12.000
Monitors	Basic Equipment	20	400	8.000	14,28%	1.142
Mobile Phones	Basic Equipment	20	950	19.000	20%	3.800
Mobile Phones (Year 5)	Basic Equipment	20	950	19.000	20%	3.800
Network infrastructure	Basic Equipment	1	10000	10.000	12,50%	1.250

Funding needs

Fintech has emerged as a potent disruptor in the financial industry, with several entrepreneurs offering revolutionary answers to long-standing issues. One of the noteworthy impediments that fintech firms encounter is obtaining finance to support their operations and growth. Fintech firms have various funding alternatives accessible to them, each with pros and downsides. This chapter will examine the different funding choices available to fintech firms and explain why an angel investor is the best option.

Financing options available for FinTech:

- *Bootstrapping* is a funding method in which the founders finance the company's operations and growth using their money. This is a potential alternative for firms with low financial requirements and the ability to produce revenue quickly. Bootstrapping offers various benefits, including complete company management, the flexibility to pivot fast, and no debt or stock dilution. Nevertheless, bootstrapping can limit the startup's growth potential and may not be long-term viable.

- Crowdfunding implies raising funds from many people whom each invest a small amount. Because of the popularity of crowdfunding platforms such as Kickstarter and Indiegogo in recent years, this fundraising option has grown in popularity. Crowdfunding provides various advantages, including access to a broad pool of possible investors, product or service validation, and no stock dilution. Conversely, crowdfunding can be time-consuming and may not give the firm enough capital to finance its operations and growth.

- Venture capital is about raising funds from institutional investors to invest in firms with excellent growth potential. In exchange for shares in the startup, venture capital firms provide cash. Venture capital has various advantages, including investors' access to vast funds, knowledge, and industry contacts. However, venture capital firms often invest in startups with a track record, making early-stage fintech ventures harder to fund.

- Angel investors are high-net-worth individuals who invest in early-stage enterprises in exchange for shares in the company. Angel investors contribute capital, experience, and connections to help a firm thrive. Angel investors benefit from various advantages, including financing, business expertise, and connections to future consumers and partners. Furthermore, angel investors often invest in early-stage firms with significant growth potential but no track record.

Table 3 - Fintech funding options (Own elaboration)

Funding Option	Advantages	Disadvantages
Bootstrapping	No debt or stock dilution, complete ownership of the company.	Low growth potential; not long-term sustainable.
Crowdfunding	Access to a vast pool of interested parties, product or service validation, and no equity dilution.	Time-consuming, may not provide the necessary funding.
Venture Capital	Investors provide substantial quantities of capital, experience, and business contacts.	Usually invests in startups with a track record of success; may not invest in early-stage startups.
Angel Investors	Access to capital, industry expertise, and connections to potential clients and partners.	Not as much money as venture capital, and the possibility of conflicts with angel investors.

For various reasons, angel investors are the most viable alternative for FinTech. For starters, angel investors often invest in early-stage firms, making them a viable alternative for fintech startups without a track record and likely with limited access to other financing options. Second, angel investors contribute more than capital; they also provide industry expertise and connections that aid the firm's growth. Finally, angel investors do not want as much equity as venture capital firms, which can assist the startup in maintaining control.

After analysing the different funding alternatives and assessing a technological startup's nature and associated risks, the most credible funding source was to get an angel investor onboard. An internal rate of return of 22% is considered suitable for this investor. While this is a massive cost for a business looking for early-stage financing, the cheaper alternatives are likely unavailable to lend to this type of business. The loan totals five hundred thousand euros with a lack of one year's capital, covering the CAPEX investment and the salaries for the first two years. This also simplifies treasury management for the analysis. Besides the secured loan from the business angel, there is also equity of 125k€ divided by the three founders, the CEO, CTO and CFO.

Table 4 - Debt Service (Own elaboration)

Angel Investor loan						
	0	1	2	3	4	5
Loan at the beginning	500.000	500.000	435.397	356.581	260.426	143.117
Refund		64.603	78.816	96.155	117.309	143.117
Interest and Charges		110.000	95.787	78.448	57.294	31.486
Installment		-174.603	-174.603	-174.603	-174.603	-174.603
Loan at the end	500.000	435.397	356.581	260.426	143.117	0
Cash flow	500.000	-174.603	-174.603	-174.603	-174.603	-174.603

Payment
-€174.602,97

Return Rate
22,00%

	0	1	2	3	4	5
Short-Term Loan	0	64.603	78.816	96.155	117.309	143.117
M/L Term Loan	0	435.397	356.581	260.426	143.117	0

<u>Headcount and Payroll Costs</u>

Initially, the idea was to subcontract the development of the platforms. Nonetheless, after evaluating the ongoing updates these platforms will require, hiring the developers to code and design the platforms in-house was more credible. Therefore, the cost of development is accounted for in the wages, without resources spent on external services to tackle this need.

After analysing the average company size per fintech category and discovering that the average personal finance fintech has twenty-four employees, the decision was to converge with this number by the end of the investment. Initially, there will be ten employees, with increases until reaching twenty by year five. The initial organization will be the following:

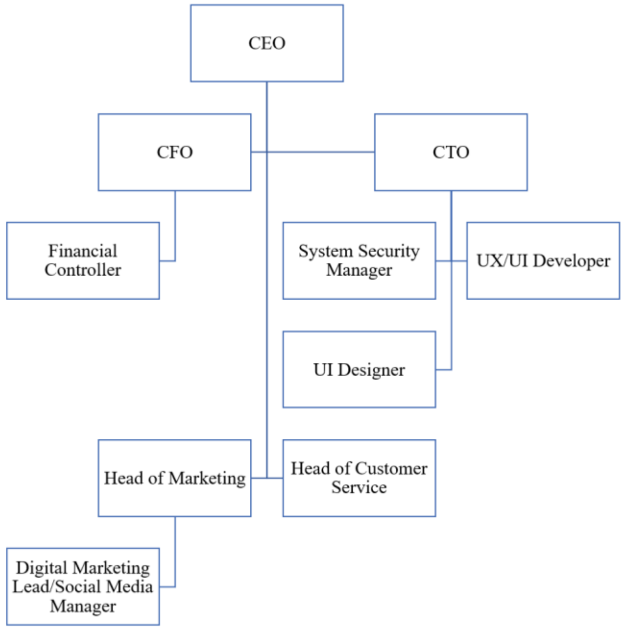

Figure 13 - Initial organizational chart (Own elaboration)

The salaries paid will be above the national average salary. With the founders not taking wages in the first two years, this is common in a startup environment, with usually negative cashflows in the first years. All the resources should be put to work in the business and not be retrieved from it. All the applicable taxes for salaries were considered.

Table 5 - Initial headcount wages (Own elaboration)

Function	Base Salary	Retention Rate	IRS	Social Security (23,75%)	Total Cost
CEO	3.000	27,0%	810	713	51.975
CFO	2.500	24,8%	620	594	43.313
CTO	2.500	24,8%	620	594	43.313
Head of Marketing	1.600	18,6%	298	380	27.720
Head of Customer Service	1.400	16,2%	227	333	24.255
Financial Controller	1.600	18,6%	298	380	27.720
System Security Manager	1.600	18,6%	298	380	27.720
UX/UI Developer	1.600	18,6%	298	380	27.720
UI Designer	1.600	18,6%	298	380	27.720
Digital Marketing Lead/Social Media Manager	1.400	16,2%	227	333	24.255
Total	**18.800**				**325.710**

Table 6 - Headcount evolution and total payroll costs (Own elaboration)

Headcount Evolution						
Year	0	1	2	3	4	5
Headcount	10	10	12	12	15	20
Total Cost	187.110	187.110	379.170	379.170	459.360	593.010
Total Tax	63.092	63.092	136.419	136.419	145.432	163.458

Marketing Costs

Marketing costs are one of the most sensible variables in this financial forecast, with the number of users highly depending on it. As mentioned in chapter six, the rationale of the marketing is to design a campaign to run in the form of YouTube and Instagram. Two metrics were used to calculate the number of users this campaign could reach and convert. The Cost per Mille is the cost that an advertiser will pay for a thousand interactions, and the average conversion rate is the percentage of users acquiring a service or product after the interaction.

This business will gain from economies of scale, and the decision was to invest more in the first two years of the business. Two hundred and fifty thousand each year, followed by a reduction to one hundred fifty thousand per year, to gain a more considerable customer base. With these amounts and the two metrics, it was possible to forecast the number of users converted. The total marketing cost is divided over the twelve months. The ad spent was based on this number, allowing us to divide the customer evolution per month to present a more accurate revenue.

Table 7 - Total Marketing cost and users gained per platform, (Own elaboration)

Marketing Costs	Weight	1	2	3	4	5
Youtube	60	150.000	150.000	90.000	90.000	90.000
Instagram	40	100.000	100.000	60.000	60.000	60.000
Total Marketing Costs (Budget)		**250.000**	**250.000**	**150.000**	**150.000**	**150.000**
Total of Users Reached Youtube		12.244.898	12.244.898	7.346.939	7.346.939	7.346.939
Total of Users Converted Youtube		171.429	171.429	102.857	102.857	102.857
Total of Users Reached Instagram		14.925.373	14.925.373	8.955.224	8.955.224	8.955.224
Total of Users Converted Instagram		161.194	161.194	96.716	96.716	96.716

Table 8 - Social media advertisement metrics used (Own elaboration)

12,25	Average Youtube Cost per Mille - (Cost per 1000 engagements)
1,40%	Average Youtube Ads Conversion Rate
6,7	Average Instagram Cost per Mille - (Cost per 1000 engagements)
1,08%	Average Instagram Ads Conversion Rate

With the number of users, it was more straightforward to define how the company would generate revenue. As chapter five mentions, a fee is charged to clients to receive their payment. Besides the marketing costs, this is the other sensible variable. This fee is going to be twenty cents per month per customer. Compared to competitors, it is undoubtedly cheaper, placing a total annual cost of two euros and forty cents to the customer for using our service. The decision of the twenty cents was to offer a lower price than competitors while still obtaining a satisfactory profit during the investment. This fee also provides some assurances in case cost increases and the ability to raise fees to accommodate the increase.

Table 9 - User evolution (Own elaboration)

Year	1	2	3	4	5
Expected number of users	332.623	645.288	806.144	957.349	1.099.482

The main operational expense that the business has is related to the financial provider that will allow Subswired to integrate the option to receive payments from clients but also to make funds available in a debit card to pay for the subscriptions. The fee is 1% for both payments, and if the fee remains twenty cents, this represents a total cost of intermediation of five cents per customer/month.

Table 10 - Fees calculation (Own elaboration)

Average Cost of Subscription Payments	€ 10,11
Average Cost of Subscription Payments + Fees	€ 10,21
Average amount received from clients	€10,94
Average amount received from clients - Fee	€ 10,83
Profit	€ 0,62
Profit per Subscriber	€ 0,15
Revenue per user	€ 0,20
Total Fees paid to Payoneer	€ 0,05
Average number of people per subscription	4,14
Payoneer Fee (Both Payments/Receivements)	1%
Fee per User Receivement (Monthly)	€ 0,03
Fee per User Payment (Monthly)	€ 0,02

Overall, the most significant variables will be the marketing costs that result in the number of users. The fee charged for the provided service. Moreover, lastly, the only ones that the business does not have a direct influence on are the fees charged by the financial provider.

Discounted Cash Flow Rate

Following the funding decision, it only made sense to use the Weighted Average Cost of Capital (WACC) to discount the company's cash flows. The Weighted Average Cost of Capital (WACC) is a financial metric measuring the cost of financing a company's operations through debt and equity. It is typically calculated as a weighted average of the cost of debt and the cost of equity, with the weights determined by the proportion of debt and equity in the company's capital structure.

There were two alternatives regarding the WACC formulation since it is possible to compound the rate using an average debt/equity ratio and a dynamic debt/equity ratio that accounts for the company's capital structure over the investment period. When employing a WACC with an average debt/equity, the assumption is that the company's capital structure would stay reasonably consistent over time. In this situation, the WACC weights remain constant, representing the company's average debt-to-equity ratio during the investment. However, when utilising a dynamic WACC, the assumption is that the company's capital structure is not static but varies over time. As a result, the WACC weights are changed to reflect changes in the company's capital structure.

Even though the cost of the selected funding option does not change during the investment period, the company's capital structure varies year after year. This variance in the debt/equity ratio of the company means that using a dynamic WACC rather than an average is more accurate for compounding the cost of financing the company's operations since it considers the changes in the company's capital structure and risk profile over time, as seen in Chapter 7.2.

7.2 Projections and Financial Statements

Based on the assumptions, it is now possible to understand and analyse the financial projections to properly evaluate the project and its viability.

As mentioned in the assumptions, the revenue was calculated upon the accumulated number of users every month of the investment paying the twenty cents fee. This was the most accurate way of representing the progressive evolution in terms of users. Nonetheless, it is common in these types of companies to have churn rates regarding their customers, which is the rate at which a company loses its customers. For this analysis, the churn rate used was the average of the subscription services, around 6%. Accounting for these effects, the revenue forecast is much more accurate. The following table represents the calculations made to reach the total revenue for the first year and respective fees paid to the financial provider, and the same method was used for the remaining years.

Table 11 - Total Revenues Year 1 (Own elaboration)

Revenue & Marketing Costs 1st Year	Month												
	1	2	3	4	5	6	7	8	9	10	11	12	Total
Investment per Month	20.833	20.833	20.833	20.833	20.833	20.833	20.833	20.833	20.833	20.833	20.833	20.833	
Users Gained	27.719	27.719	27.719	27.719	27.719	27.719	27.719	27.719	27.719	27.719	27.719	27.719	
Acumulated Users	27.719	55.437	83.156	110.874	138.593	166.311	194.030	221.748	249.467	277.186	304.904	332.623	
Monthly Revenue	5.544	11.087	16.631	22.175	27.719	33.262	38.806	44.350	49.893	55.437	60.981	66.525	432.409
Payoneer Costs	1.409	2.819	4.228	5.638	7.047	8.457	9.866	11.276	12.685	14.095	15.504	16.914	109.938
													322.472

The following table sums up the total revenues projected for the five years and the transaction costs delivered to the financial provider. These costs account for approximate twenty-five per cent of the revenue.

Table 12 - Total investment revenues (Own Elaboration)

Streams of Revenues:					
Year	**1**	**2**	**3**	**4**	**5**
Payment Fee	432.409	1.182.806	1.715.215	2.078.107	2.419.225
Payoneer Fee	109.938	300.722	436.084	528.348	615.075

Given the anticipated revenues and costs, determining whether the project's outcomes will result in positive or negative net income is simple. The project will begin to have a positive net income after its second year of operation. The net income is forecasted and progressively grows with the acquisition of new customers to reach 759.493€ by the fifth year. However, this metric is not enough to evaluate the investment.

Table 13 -Income Statement (Own elaboration)

Income Statement	0	1	2	3	4	5
Sales and Services Provided	0	432.409	1.182.806	1.715.215	2.078.107	2.419.225
Service Fees	0	432.409	1.182.806	1.715.215	2.078.107	2.419.225
External supplies and services	-24.000	-383.938	-574.722	-610.084	-702.348	-789.075
Fees Paid to Financial Provider	0	-109.938	-300.722	-436.084	-528.348	-615.075
Adverstisement	0	-250.000	-250.000	-150.000	-150.000	-150.000
Rent	-24.000	-24.000	-24.000	-24.000	-24.000	-24.000
Wages	-187.110	-187.110	-379.170	-379.170	-459.360	-593.010
EBITDA	**-211.110**	**-138.638**	**228.914**	**725.961**	**916.399**	**1.037.140**
Depreciations/Amortizations	44.271	44.271	44.271	44.271	44.271	44.271
EBIT	**-255.381**	**-182.910**	**184.643**	**681.690**	**872.128**	**992.869**
Financial Expenses	0	110.000	95.787	78.448	57.294	31.486
EBT	**-255.381**	**-292.910**	**88.855**	**603.242**	**814.834**	**961.383**
Accumulated EBT	**-255.381**	**-548.291**	**-459.435**	**143.806**	**958.641**	**1.920.024**
Tax (21%)	0	0	0	30.199	171.115	201.890
Net Income	**-255.381**	**-292.910**	**88.855**	**573.042**	**643.719**	**759.493**

The operational Cashflows were calculated based on the net income, removing the effect of financial expenses and depreciation, and later including the investment in Capital Expenditures and Working Capital variation.

Table 14 - Cashflow Statement (Own elaboration)

CashFlow Statement	0	1	2	3	4	5
Net Income	**-255.381**	**-292.910**	**88.855**	**573.042**	**643.719**	**759.493**
Financial Expenses (1-t)	0	86.900	75.672	61.974	45.262	24.874
Depreciation	44.271	44.271	44.271	44.271	44.271	44.271
Operational cash Flow	**-211.110**	**-161.738**	**208.799**	**679.287**	**733.252**	**828.638**
Capex	-239.473	0	0	-36.000	0	-19.000
ΔWC	0	0	0	-30.199	-140.916	-30.775
Residual Value Capex						28.846
WC Residual Value						0
CASHFLOW	**-450.583**	**-161.738**	**208.799**	**613.088**	**592.336**	**807.708**
Discounted CF	**-450.583**	**-131.844**	**145.527**	**435.561**	**393.414**	**507.079**
Acumulated Discounted CF's	**-450.583**	**-582.427**	**-436.900**	**-1.339**	**392.074**	**899.153**

The Cashflow statement needs to be discounted to the date of analysis. Otherwise, making an investment decision without the cashflows reporting to the same period would be inaccurate. However, there needs to be a discount rate. Usually, when someone invests in a project, the return is expected to be at least a risk-free rate. Generally speaking, it should be added premium risk to this rate.

For this project, the Capital Asset Pricing Model (CAPM) was used to calculate the cost of equity and later used a Dynamic Weighted Average Capital Cost, which accounts for the use of both equity and debt, which is the case and, therefore, the most accurate rate to use.

Table 15 - Discount Rates – CAPM and Dynamic WACC (Own Elaboration)

Discount Rate	
Risk Free Rate (Germany Bonds 10 years; CAPM)	1,97%
IRC	21%
Beta Market - Software	1,14
Market Risk Premium	6,1%
Re	8,9%
Rd	22%

Year	WACC
1	23%
2	20%
3	12%
4	11%
5	10%

The following Balance sheet demonstrates the financial position that the company would have by the end of the investment years.

Table 16 - Balance Sheet (Own elaboration)

Balance Sheet	1	2	3	4	5
Property, Plant & Equipment	250.201	205.930	161.659	117.388	73.117
Total Non-Current Assets	**250.201**	**205.930**	**161.659**	**117.388**	**73.117**
Cash and Bank Balances	17.286	71.597	622.955	1.334.552	2.025.974
Total Current Assets	**17.286**	**71.597**	**622.955**	**1.334.552**	**2.025.974**
Total Assets	**267.487**	**277.527**	**784.614**	**1.451.940**	**2.099.090**
Equity Capital	125.000	125.000	125.000	125.000	125.000
Legal Reserves					
Retained Earnings		-292.910	-204.054	368.988	1.012.707
Net Income	-292.910	88.855	573.042	643.719	759.493
Total Equity	**-167.910**	**-79.054**	**493.988**	**1.137.707**	**1.897.200**
Loans	356.581	260.426	143.117	0	0
Total Non-Current Liabilities	**356.581**	**260.426**	**143.117**	**0**	**0**
Loans	78.816	96.155	117.309	143.117	0
State and other Public Entities	0	0	30.199	171.115	201.890
Total Current Liabilities	**78.816**	**96.155**	**147.509**	**314.232**	**201.890**
Total Liabilities	**435.397**	**356.581**	**290.626**	**314.232**	**201.890**
Total Equity + Liabilities	**267.487**	**277.527**	**784.614**	**1.451.940**	**2.099.090**

7.3 Evaluation and economic decision

The primary indicators for the current economic viability analysis were calculated based on the operational cash flows and the required rate of return by the investor.

Table 17 - Project evaluation (Own elaboration)

NPV	**€ 899.153,06**
IRR	**44,87%**
Payback Period	**3 Years**

The projected Net Present Value (NPV) is 899.153,06€. Given that this is a very positive NPV, it suggests that developing this project is economically viable and will benefit its stakeholders because the current value of the predicted returns will exceed the project's anticipated costs.

The Internal Rate of Return (IRR), or the projected growth rate, is 44.87%, more significant than the needed rate of return (Dynamic WACC discount rates). This also reinforces the notion that this project will be successful, and there are compelling reasons to proceed with the proposed business plan.

The Payback Period, or the time it takes to recover the investment, is nearly three years. This is a brief payback time, shorter than the investment period under analysis. As a result of all the metrics displayed, the project is economically and financially feasible.

7.4 Sensitivity analysis

The sensitivity analysis quantifies the consequences that a change in particular variables can have on the investment outcome. As mentioned, the main variables critical to this project are marketing costs and customer fees. Therefore, it was comprehended how the variation of such variables would impact the project.

The three scenarios selected for the customer fee are pessimistic, current, and optimistic. Were the current scenario, charging twenty cents per customer. In the pessimistic, the fee would lower to fifteen cents. In the optimistic, the fee would be twenty-five cents.

Table 19 - Customer fee scenarios (Own elaboration)

Scenarios Fee Charged	Pessimistic 0,15	Current 0,20	Optimistic 0,25
NPV	-289.350	899.153	2.290.006
IRR	-5,64%	44,87%	88%
Payback	N/A, there is no breakeven during investment.	3 years	2 years, 1 month and 7 days.

Table 18- Marketing costs scenarios (Own elaboration)

Scenarios Marketing Cost	Pessimistic 150.000,00	Current 250K (Year 1) & 150K (Year 2)	Optimistic 300.000,00
NPV	13.884	899.153	2.128.360
IRR	10,11%	44,87%	72%
Payback	4 years, 11 months and 12 days.	3 years	2 years, 6 months and 16 days.

The feasibility of this project highly relies on the customer fee. If the applicable scenario were pessimistic, the company would not even reach breakeven within five years. Nonetheless, the company can control the fee charged. If there is no increase in the financial partner costs, the current scenario and the optimist would be viable investment options.

Contrarily to the customer fee, all the scenarios considered in the marketing costs would yield a viable project. It is possible to verify that the bigger the marketing expending is, the better the project feasibility.

CHAPTER 8

Conclusion

After identifying the lack of offerings directed to subscription payment and management, this business plan aimed to study the development of such a platform to fill in the identified gap. Subswired will be the Fintech created to deliver this service, allowing customers to manage the subscriptions they have and whom they share them with, facilitating everyone's payment, so there is no need for one of the members to pay upfront for the entire group.

The industry analysis demonstrated the exponential growth of the subscription market over the last few years and what is forecasted to keep growing. According to the market analysis, a high-potential market with few players competing with Subswired service, and none solved the same problem in the study.

The financial plan was developed based on assumptions, aiming to be the most accurate as if this investment were to proceed forward. This plan considered the most reasonable and expected assumptions. However, some critical variables for the investment are the fee charged to customers for the service and the marketing costs. They were studied through scenario analysis to understand how their variation would impact the financial plan outcome.

In the most expected scenario, the fee charged to customers would be twenty cents, the marketing costs would be two hundred and fifty thousand in the first two years and one hundred and fifty thousand for the remaining years. The NPV would be approximately 899K€ and the IRR 44.9%, and the payback period would be nearly three years, a very positive outcome.

In the remaining scenarios, the marketing costs would be one hundred and fifty thousand (Pessimistic) and three hundred thousand (Optimistic), and the payback would be within the investment period, obviously with the optimistic scenario breaking even faster and yielding higher returns during the investment period.

When the modified variable was the customer fees, the outcome was different. If the fee charged was lowered to fifteen cents, this would be the only scenario where there would be no breakeven within the investment period. Contrarily, as expected, if the raised to twenty-five cents, this could be considered the best scenario investment return wise, with an NPV of approximately 2.290K€, an IRR of 88% and the payback within two years and one month.

The current scenario fee is significantly lower than the prices charged by our competitors. Consequently, reaching the pessimistic scenario where the fee charged was fifteen cents would be highly unlikely. Therefore, all the remaining scenarios concluded that this investment is economically and financially feasible.

References

Aguilar, F. J. (1967). Scanning the business environment. Macmillan.

Amit, R., & Zott, C. (2001). Value creation in E-business. Strategic Management Journal, 22(6-7), 493–520. https://doi.org/10.1002/smj.187

Balakrishnan, V., & Shuib, N. L. M. (2021). Drivers and inhibitors for digital payment adoption using the Cashless Society Readiness-Adoption model in Malaysia. Technology in Society, 65, 101554. https://doi.org/10.1016/j.techsoc.2021.101554

Banco de Portugal. (2019). Projeções económicas. https://www.bportugal.pt/page/projecoes-economicas

Bärenfänger, R., & Otto, B. (2015, July 1). Proposing a Capability Perspective on Digital Business Models. IEEE Xplore. https://doi.org/10.1109/CBI.2015.18

Baxter, R. K. (2015). The Membership Economy. Mcgraw-Hill Education – Europe.

Baxter, R. K. (2016, July 13). Subscription Business Models Are Great for Some Businesses and Terrible for Others. Harvard Business Review. https://hbr.org/2016/07/subscription-business-models-are-great-for-some-businesses-and-terrible-for-others

Belk, R. (2014). You are what you can access: Sharing and collaborative consumption online. Journal of Business Research, 67(8), 1595–1600. https://doi.org/10.1016/j.jbusres.2013.10.001

Botsman, R., & Rogers, R. (2011). What's mine is yours: How collaborative consumption is changing the way we live. London; Collins.

Brealey, R. A., Myers, S. C. & Allen, F. (2007) Principle of Corporate Finance. Machine Industrial Publishing House, Peking, 966-967.

Business Council for Sustainable Development & Instituto Superior Técnico. (2016). MEET 2030: Business, Climate Change and Economic Growth. https://bcsdportugal.org/wp-content/uploads/2020/12/MEET2030-Resumo.pdf

Cohen, B., & Muñoz, P. (2016). Sharing cities and sustainable consumption and production: towards an integrated framework. Journal of Cleaner Production, 134, 87–97. https://doi.org/10.1016/j.jclepro.2015.07.133

Conviva. (2022). Conviva's State of Streaming Q2 2022 | The State of Streaming: As the Market Matures, Complexities Arise. https://www.conviva.com/wp-content/uploads/2022/09/Q2-SoS.pdf

European Commission. (2022). Summer 2022 Economic Forecast: Russia's war worsens the outlook. https://economy-finance.ec.europa.eu/economic-forecast-and-surveys/economic-forecasts/summer-2022-economic-forecast-russias-war-worsens-outlook_en

European Commission. (2021). The Digital Services Act: ensuring a safe and accountable online environment. https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/digital-services-act-ensuring-safe-and-accountable-online-environment_en

Frenken, K., & Schor, J. (2017). Putting the sharing economy into perspective. Environmental Innovation and Societal Transitions, 23, 3-10.

Goddard, M. (2017). The EU General Data Protection Regulation (GDPR): European Regulation That Has a Global Impact. International Journal of Market Research, 59(6), 703–705. https://doi.org/10.2501/ijmr-2017-050

Goldstein, I., Jiang, W., & Karolyi, G. A. (2019). To FinTech and Beyond. The Review of Financial Studies, 32(5), 1647–1661. https://doi.org/10.1093/rfs/hhz025

Herbert, M., & Collin-Lachaud, I. (2016). Collaborative practices and consumerist habitus: An analysis of the transformative mechanisms of collaborative consumption. Recherche et Applications en Marketing (English Edition), 32(1), 40–60. https://doi.org/10.1177/2051570716678736

James, W. (2021, September 5). Your Simple Guide to the 8 Ps of Marketing. https://www.8bitcontent.com/8-ps-of-marketing

Klapper, L. (2017). How digital payments can benefit entrepreneurs. IZA World of Labor. https://doi.org/10.15185/izawol.396

Kumar, V., Lahiri, A., & Dogan, O. B. (2018). A strategic framework for a profitable business model in the sharing economy. Industrial Marketing Management, 69, 147–160. https://doi.org/10.1016/j.indmarman.2017.08.021

Marktest Group. (2021, April 20). Utilização de smartphone em crescimento. https://www.marktest.com/wap/a/n/id~2767.aspx

Mason, K. J., & Leek, S. (2008). Learning to Build a Supply Network: An Exploration of Dynamic Business Models. Journal of Management Studies, 45(4), 774–799. https://doi.org/10.1111/j.1467-6486.2008.00769.x

Nesbitt, P. (2021, June 16). Council Post: How Digital Payments Can Change Your Business. Forbes. https://www.forbes.com/sites/forbesfinancecouncil/2021/06/16/how-digital-payments-can-change-your-business/?sh=2e5a6c633893

Peña, M. L. M., Díaz-Garrido, E., & Sánchez-López, J. M. (2018). The digitalization and servitization of manufacturing: A review on digital business models. Strategic Change, 27(2), 91–99. https://doi.org/10.1002/jsc.2184

Porter, M. E. (1979). How competitive forces shape strategy, Harvard Business Review.

Schor, J. B., & Fitzmaurice, C. (2015). Collaborating and Connecting: The Emergence of a Sharing Economy, Handbook on Research on Sustainable Consumption edited by L. Reisch and J. Thogersen, 410–25. Cheltenham: Edward Elgar.

Schueffel, P. (2017). Taming the Beast: A Scientific Definition of Fintech. Journal of Innovation Management, 4(4), 32–54. https://doi.org/10.24840/2183-0606_004.004_0004

Sharesub. (2022). Sharesub. https://www.sharesub.com/cms/en/

Statistics Portugal (2022). Índice de preços no consumidor. https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_destaques&DESTAQUESdest_boui=540172949&DESTAQUESmodo=2

Statistics Portugal (2020, March 31). Projeções de População Residente. file:///C:/Users/e707147/Downloads/31ProjPop2018-2080.pdf

Teece, D. J. (2010). Business Models, Business Strategy and Innovation. Long Range Planning, 43(2-3), 172–194. https://doi.org/10.1016/j.lrp.2009.07.003

TogetherPrice. (2022). Share the cost of your digital assets and save. Together Price. https://www.togetherprice.com/us/

Tzuo, T, & Weisert, G. (2018). Subscribed: Why the subscription model will be your company's future - and what to do about it. Penguin.

Veit, D., Clemons, E., Benlian, A. et al. (2014). Business Models. Bus Inf Syst Eng 6, 45–53. https://doi.org/10.1007/s12599-013-0308-y

Verhoef, P. C., & Bijmolt, T. H. A. (2019). Marketing perspectives on digital business models: A framework and overview of the special issue. International Journal of Research in Marketing, 36(3), 341–349. https://doi.org/10.1016/j.ijresmar.2019.08.001

Walden, S. (2020, August 4). What is Fintech and how does it affect how I bank? Forbes Advisor. https://www.forbes.com/advisor/banking/what-is-fintech/

Weill, P. & Woerner, S. L. (2013). Optimizing your digital business model.

MIT Sloan Management Review, 54 (3), 71-78.

Zott, C., & Amit, R. (2007). The fit between product market strategy and business model: implications for firm performance. Strategic Management Journal, 29(1), 1–26. https://doi.org/10.1002/smj.642