Implementing Digital Projects

MIS40740

Spring Term AY 2022 / 2023

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Digital Project Implementation

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1. Executive Summary

"Your one-stop-shop for all your subscription needs"

Subscrybe is a mobile-based subscription management application designed to provide users with a seamless and user-friendly all-in-one platform for managing their subscriptions. Our analysis shows a mostly untapped market, especially when looking towards Europe, with the potential for a significant market share if entered. While there are a few factors that could make competition in the market more uncomfortable, with a suitable go-to-market time and strategy, as well as incentives for suppliers, the potential highly outweighs the risk and upfront investment associated with entering this market. In the absence of direct competitors in Europe, we have highlighted potential models that could rival our application; however, through our analysis, we are confident that our application's features, such as management optimization and budgeting, will create a competitive advantage for Subscrybe in the target market. Based on our customer research, we have found a high demand for an all-in-one subscription management solution that is currently unmet.

This report aims to outline the application's business model and present our design and implementation plan to ensure its sustainable growth and success.

2. Situation Analysis

A strategic situation analysis is a comprehensive approach to detailing the consequential factors leading to and affecting a business strategy's success (Jakubíková, 2008; Straková et al., 2018). According to Porter, "the success of a company's competitive strategy depends on how it relates to its environment" (1980, p.30). Therefore, the following sub-chapters will present an exhaustive situation analysis consisting of both macro and micro environments, competitors and customer demand research.

a. Macro Environment - PESTLE Analysis

A PESTLE analysis allows for the key external factors that influence an organization to be examined. In this case, the PESTLE analysis will focus on the Irish market, as this is where the development and maintenance of Subscrybe will be located. In addition, it allows for an analysis of uncontrollable factors that can be applied to the business's operations, which aid in developing strategies for approaching these uncontrollable factors (Perera, 2017).

Political: Locating in Ireland is essential when looking at the political factors affecting our target market. This is due to a few main elements. Firstly, Ireland has a favourable corporate tax policy. The next reason is Ireland's membership to the EU, giving us access to the rest of the EU in providing our services. Ireland is home to many innovation centres and brings a host of initiatives that will allow us to gain guidance and potentially funding from government bodies such as Enterprise Ireland and the IDA. In Ireland's ICT Skills action plan, developed by the government, they outline how Ireland has become a hub for ICT students meaning that the availability of ICT skilled staff is growing in Ireland, with a 70% increase in ICT staff (Department of Education and Skills, 2022).

Economic: Ireland experienced a period of high Inflation in 2022 due to the exiting of COVID lockdowns and the geopolitical tensions creating an Energy crisis and supply chain shortages across Europe. However, in the European Commission report in February 2023, the outlook for Ireland is positive. Ireland exceeded expectations in 2022, with Quarter-on-Quarter growth of Real GDP seen when a recession was forecasted in Q3 and Q4 (European Commission, 2023). The IDA is also predicting an influx of foreign investment which will bolster Irish businesses.

Social: In a Statista report, it is estimated that Revolut's user base has grown from 1.5 million users in February 2018 to 26.35 million users in February 2023 (Statista, 2023). This demonstrates the growing demand for finance management and budget-style applications in the Irish market. Ireland also has

access to the highest level of STEM graduates per capita in the EU, with an education system tailored to align with the IT industry (IDA, 2023).

Technological: The technological landscape in Ireland has been growing over the past decade. In the past year, there have been estimated job losses of 1.4% in the IT sector in Ireland (McCashin, 2023). This, however, is only a fraction of global layoffs seen in this sector. Ireland remains a stronghold for the IT sector, and publicly funded research centres allow for support and collaboration with new Irish IT ventures (IDA, 2023). Along with significant funding for Irish ventures, Ireland attracts technology companies, with 9 out of 10 of the top US technology companies locating in Ireland (IDA, 2023).

Legal: The impact of legislation such as GDPR will mean that consumers' personal data is collected once consent is provided by the customer. The legislation outlines obligations which must be adhered to in the collection of consumer data. Ethical use of data is also essential to complying with the legislation.

Environmental: The rise of ESG and Sustainability will play an impact on the macro environment and how businesses conduct their operations. By ensuring that responsible decisions are made to mitigate any effect on the environment and follow guidelines outlined in the EU taxonomy, the risk of reputational damage will be reduced. In a paper by Sprinkle, they outline the benefits to incorporating Corporate Social Responsibility, which can be seen in attracting favourable employees and contracts whilst also bolstering the reputation of the firm (Sprinkle, 2010). Incorporating these responsible practices will allow for avoiding reputational damage from irresponsible practices that could lead to material impacts on an organization.

b. Micro Environment - Industry Analysis with Porter 5 Forces

Michael Porter's (1979) Five Forces is a model to analyze five competitive forces that shape an industry. These five forces are: Threat of new entrants, Bargaining power of suppliers, Bargaining power of customers, Threat of substitute products or services and Rivalry among existing competitors. Threat of entry refers to how likely it is that a new competitor will enter the market, shaking up the existing industry. Porter (1979) says this force is mainly dependent on two factors, the entry barrier to a market and the expected reaction from existing competitors. Bargaining power of suppliers refers to how much leverage the suppliers hold and, therefore, how much control they have over prices. This force is dependent on a few factors, such as whether the supplier market is more concentrated than the industry it delivers, if the products are differentiated or not and the forward threat of the supplier entering the market itself (Porter, 1979). Similarly, the buyers' bargaining power can also impact price and profitability, with powerful buyers being able to force lower prices or demand an increase in product or service quality. The power of a buyer can be estimated based on volume, whether the product they buy is differentiated or not and the threat of backward integration by the buyer, among others (Porter, 1979). Threat of substitute products or services concerns itself with the threat of substitutes, which results in a limitation on the price of the industry's product or service. This threat is measured by the price-performance trade-off between the original product/service and the substitute (Porter, 1979). Finally, Rivalry among existing competitors looks at the industry environment and how high competition currently is in the market. Rivalry can express itself in different strategic decisions, such as competitive pricing and big advertising spending. Factors that are examined in relation to rivalry are the number and size of players and their positioning in the industry, if there is product differentiation present, overall industry growth, to name a few. Below, the Five Forces model is applied to the subscription management industry.

Industry Rivals: This point will be further and deeper investigated in the following subchapters, but there is little direct competition in the market. Most competitors are payment providers with limited insight into the customer and his subscriptions, as they can only view the payments made with their cards and accounts. While they provide some insights, it does not offer the same extensive overview as

our application would. There are also some competitors who do offer a similar service, but they have limitations such as geographical availability or operation system constraints.

Threat of new entrants: There is a threat of new entrants to the market, as the application is relatively simple to implement. The only major market entrance barrier is cooperation with the payment providers. As there are currently not many pure players in the subscription management market, the expected reaction of the existing competitors is equally small. Once our application is launched and in broader use, we assume the incentive for new market entrants is small, as we believe people would not switch to another provider once set up with one. But this, in turn, means time to market is crucial for this project.

Substitute Products: One substitution that replaces the application's core functionality and is free is using the calendar application or reminders to set an alarm when signing up for a free trial or subscription. But this is tedious and can become quite overwhelming when dealing with multiple subscriptions, and most people tend to be too unorganised and not disciplined enough to do this every time when buying a new subscription and repeating every month. Therefore, while the substitution method already exists today, the need for the application still is there. Also, there is no real substitute for the spending optimization and alternative subscription suggestion features of the application.

Bargaining power of suppliers: This project's key partners/suppliers would be the payment providers such as Revolut, PayPal and traditional banks. Integration with these makes the collection of subscription payment information much more straightforward. The registration of subscriptions could also be done manually and through a browser plug-in, but that makes it more work for the customer, which we would want to avoid. Because of that, the suppliers do have an increased amount of power. But as the solution could be implemented without them and because they don't have any direct conflicting interests, this can be remedied by incentivising the suppliers accordingly. The forward integration of payment providers is equally possible, as already done so by some (e.g. Revolut). But this is only small competition, as a payment provider can only give oversight onto the payments facilitated by the company itself. Our application allows for the integration of all payment methods used to pay for subscriptions. Therefore, for the user, our solution would give him a much more comprehensive overview of subscription spending. Overall, the bargaining power of suppliers is low, and with correct incentives, we are very confident that the collaboration will be successful.

Bargaining power of customers: The application is operating on a freemium business model (for more details, see chapter 3 Business Model). Therefore, if the customer does not want to pay for the service, he can use the free version of the application. This de-facto nullifies the bargaining power of the customer, as he gets a free service. Additionally, there are few competitors and substitutes which offer the same full suite of features; therefore, the overall bargaining power of customers is low.

The analysis shows a mostly untapped market, especially when looking towards Europe, with the potential for a significant market share if entered. While there are a few factors that could make competition in the market more uncomfortable, with a suitable go-to-market time and strategy, as well as incentives for suppliers, we believe that the potential highly outweighs the risk and upfront investment associated with entering this market.

c. Competitor Overview

Below, there is a comprehensive overview of all organizations that could be classified as competitors for a subscription management application. It consists of payment providers, subscription management applications and other financial management tools. It outlines the strength and weaknesses of each competitor and their source of revenue.

Table 1: Overview of competitors

App Name	Strengths	Weaknesses	Source of Revenue
Apple Wallet	Integration with Apple Pay and passes. Automatically tracks subscription costs	Only available on iOS devices. Limited to tracking Apple-related subscriptions only	Commission on sales made through Apple Pay
RocketMoney	Tracks subscriptions and recurring payments, negotiates bills, and cancels unwanted subscriptions	Only available in the US. Limited functionality for free users	Subscription fees for premium features, commission on bill negotiations
Revolut	View active subscriptions, Cancel & Change subscriptions, get reminders, control spending and manage third-party subscriptions	Limited features for free account, Limited customer support, Manual updating required, Incomplete subscription tracking	Premium subscription fees, Fees for foreign currency transactions
PocketGuard	Automatically tracks subscriptions, bills, and spending. Sends alerts for overspending and upcoming bills	Limited support for international accounts. Limited functionality for free users	Subscription fees for premium features
Mint	Comprehensive financial management tool that tracks subscriptions, bills, and spending	Only available in the US and Canada. Some features may require a paid subscription	Commission on sales made through Mint Marketplace
Trim	Tracks subscriptions, negotiates bills, and cancels unwanted subscriptions	Only available in the US. Limited functionality for free users	Commission on bill negotiations
SubscriptMe	Tracks subscriptions and recurring payments, sends alerts for upcoming payments, and offers cancellation assistance	Limited functionality for free users. Only available on iOS devices	Subscription fees for premium features
Subs	Tracks subscriptions and recurring payments, sends alerts for upcoming payments, and offers cancellation assistance	Limited functionality for free users. Only available on iOS devices	Subscription fees for premium features
Cushion	Tracks subscriptions, negotiates bills, and cancels unwanted subscriptions. Offers financial advice and insights	Only available in the US. Limited functionality for free users	Subscription fees for premium features, commission on bill negotiations
Bobby	Automatically tracks subscriptions, sends alerts for upcoming payments, and offers cancellation assistance	Limited functionality for free users. Only available on iOS devices	Subscription fees for premium features

Charlie	Tracks subscriptions, sends alerts for upcoming payments, and offers financial insights and budgeting advice	Only available in the US. Limited functionality for free users	Commission on bill negotiations
Subby	Tracks subscriptions and recurring payments, sends alerts for upcoming payments, and offers cancellation assistance	Limited functionality for free users. Only available on iOS devices	Subscription fees for premium features
AliPay	Offers subscription cancellation in the AliPay application of subscriptions paid for with AliPay	Incomplete subscription tracking. Not popular with the target market of Europe	Charges transaction fees

d. Competitor Analysis

Based on the comprehensive table above, we have identified the main competitors to our application and provide further insights into their business model and market positioning below.

Revolut

- **Website**: https://www.revolut.com/en-IE/
- **Users**: 23+ million Link
- **Overview**: Revolut is an all-in-one finance management application, it allows for banking, crypto trading, stock trading, currency exchange, loans and finance management features (including subscription management)
- **Years in Operation**: 7 years, Founded July 2015
- **Pricing**: Free to use, but premium accounts are available (no difference in subscription management feature)
- **Markets (Region)**: Europe, North American, Latin America, and Asia Pacific Link
- **Strengths**: Regulated by the Central Bank of Ireland, has a strong presence in Western European markets and provides many finance management features for free users
- **Weaknesses**: Has unintentionally provided a platform for fraudulent and illegal activities in the past. Does only offer subscription management for subscriptions billed and paid for through Revolut and only for active subscriptions. Also, the manual effort to add subscriptions may lead to errors
- **USP**: An all-in-one finance management application

Rocket money

- **Website**: https://www.rocketmoney.com/
- **Users**: 3+ million Link
- **Overview**: Rocket Money is an all in one finance management application offering features such as managing money, mortgages, loans, subscription management, budgeting and calculating credit scores
- **Years in Operation**: 7 Years, Founded 2015
- **Pricing**: Free to use but can subscribe for additional features from $3-12 Link
- **Markets (Region)**: USA Centric, with plans to expand into Europe, Mexico, Canada and Australia Link
- **Strengths**: Provides budgeting options for subscriptions along with management, is linked with mortgage and short-term loan companies under the Rocket umbrella group, and has most features available to free users

- **Weaknesses**: Weak international presence outside North America. Only allows for subscription cancellation, but no other features in terms of subscription management
- **USP**: Allows for subscription management and budgeting in one place

Mint

- **Website**: https://mint.intuit.com/
- **Users**: 10+ Million Link
- **Overview**: Mint is a personal finance management application developed by Intuit. It allows users to connect their bank accounts and credit cards to track their spending and create budgets. Mint also offers investment tracking, bill payment reminders, and credit score monitoring, among other features
- **Years in Operation**: 17 years, Launched in 2006.
- **Pricing**: The Mint application is free to download and use. However, the budgeting application uses a lot of ads, which can feel intrusive. Users can opt for ad-free experience, which costs $0.99 per month. Also users can have the premium version of Mint, which cost is $4.99 per month Link
- **Markets (Region)**: The Mint application is available to users in the United States and Canada Link
- **Strengths**: Ability to connect with users' bank accounts and credit cards to provide real-time insights into their spending habits. Offers a variety of features to help users budget their money and manage their investments
- **Weaknesses**: Users may be concerned about the security of linking their bank accounts and credit cards to the application. Additionally, suggested financial products may not be the best fit for a particular user's needs, which could lead to suboptimal financial outcomes
- **USP**: Ability to provide users with a comprehensive suite of financial management tools, all within one platform

Trim

- **Website**: https://www.asktrim.com/
- **Users**: 600,000+ Link
- **Overview**: Trim is a personal finance management application that helps users save money on bills, track their spending, and manage their subscriptions. It connects with users' bank accounts and credit cards to provide insights into their spending habits and offers tools to help them optimize their finances. Trim can help users identify and cancel subscriptions they no longer need or negotiate bills with service providers
- **Years in Operation**: 7 Years, Founded 2015
- **Pricing**: The Trim application is free to download and use. However, Trim offers a paid service called Trim Premium for $10 per month
- **Markets (Region)**: The Trim application is available to users in the United States Link
- **Strengths**: Ability to connect with users' bank accounts and credit cards to provide real-time insights into their spending habits. Offers a variety of features to help users save money on bills and subscriptions, which can help users improve their overall financial health
- **Weaknesses**: May not be as effective for users who do not have many bills or subscriptions to manage. Additionally, some users may be concerned about the security of linking their bank accounts and credit cards to the application
- **USP**: Ability to help users save money on bills and subscriptions, as well as real-time insights into spending habits

Alipay

- **Website**: https://www.alipay.com/
- **Users**: 1.3+ billion Link

- **Overview**: Alipay is a mobile payment application developed by Ant Group, a subsidiary of Alibaba Group. The application allows users to make payments, transfer money, pay bills, and manage their finances all within one platform
- **Years in Operation**: 20 years, Launched in 2004
- **Pricing**: The Alipay application is free to download and use. However, there are fees associated with certain transactions, such as currency conversion or international transfers
- **Markets (Region)**: China, United States, Hong Kong, and some countries in Europe Link
- **Strengths**: Ability to provide users with a wide range of financial services and products. Strong security measures in place, which helps to protect users' financial information
- **Weaknesses**: Not widely accepted outside of China. Additionally, some users may be concerned about the privacy and security of their financial information, given the close ties between Ant Group and the Chinese government
- **USP**: Ability to provide users with a comprehensive suite of financial services and products, all within one platform

e. Consumer Research and Demand Analysis

To assess the need for a subscription management mobile application, a thorough customer research study was conducted to gather insights on the frequency of people forgetting to cancel their subscriptions. Based on the data collected from the research, which involved 50 participants, several insights were obtained about the market demand for a subscription management mobile application.

The results of the research demonstrate substantial market demand for a subscription management mobile application. Data showed that approximately 74% of the participants reported forgetting to cancel at least one subscription before, while 38% reported that they usually forget to cancel their subscriptions. A considerable proportion of the respondents (20%) have between 5-10 subscriptions, while 18% have over 10 subscriptions. This result highlights the potential market size for a subscription management application that can help users keep track of their subscriptions and reduce unnecessary costs.

A majority of the participants (53.06%) did not have a specific method for keeping track of their subscriptions. While there are currently some options available for subscription management, such as Revolut and Rocketmoney, these apps often only provide subscription management features as part of an upgraded account package. This means that users need to pay additional fees in order to access these features, which can make the subscription management process even more inconvenient and confusing. With payment providers such as Revolut, the management of subscriptions is also limited to the payments made with the associated credit cards. Remarkably, the vast majority of the participants (95%) were unaware of any similar apps, indicating an untapped market for a subscription management app. This presents a unique opportunity to introduce an effective solution that meets the needs and preferences of users.

The overall satisfaction score for current subscription management methods was rated as 3.3/5, suggesting that there is significant room for improvement in current methods. It underscores the potential value of a subscription management application that simplifies the process and makes it more efficient for users. In terms of interest in a subscription management app, it is noteworthy that a sizable portion of the participants (20%) are extremely interested in the app, while 36% are very interested in it. Additionally, 18% of the participants expressed a willingness to pay for such an app.

3. Business Model

The following chapter will present our business model. As a first step, we will introduce the Business Model Canvas of our application, then deep dive into some aspects of the BMC, describe the value-add by Subscrybe and present a SWOT analysis of the chosen business model and idea.

a. Business Model Canvas (BMC)

The Business Model Canvas (BMC), invented by Alex Osterwalder, is a powerful tool to visualize, assess and think through business models using a graphical representation broken down into nine components. These nine components are used to show how the business wants to generate revenue and deliver value to its customers (Osterwalder & Euchner, 2019).
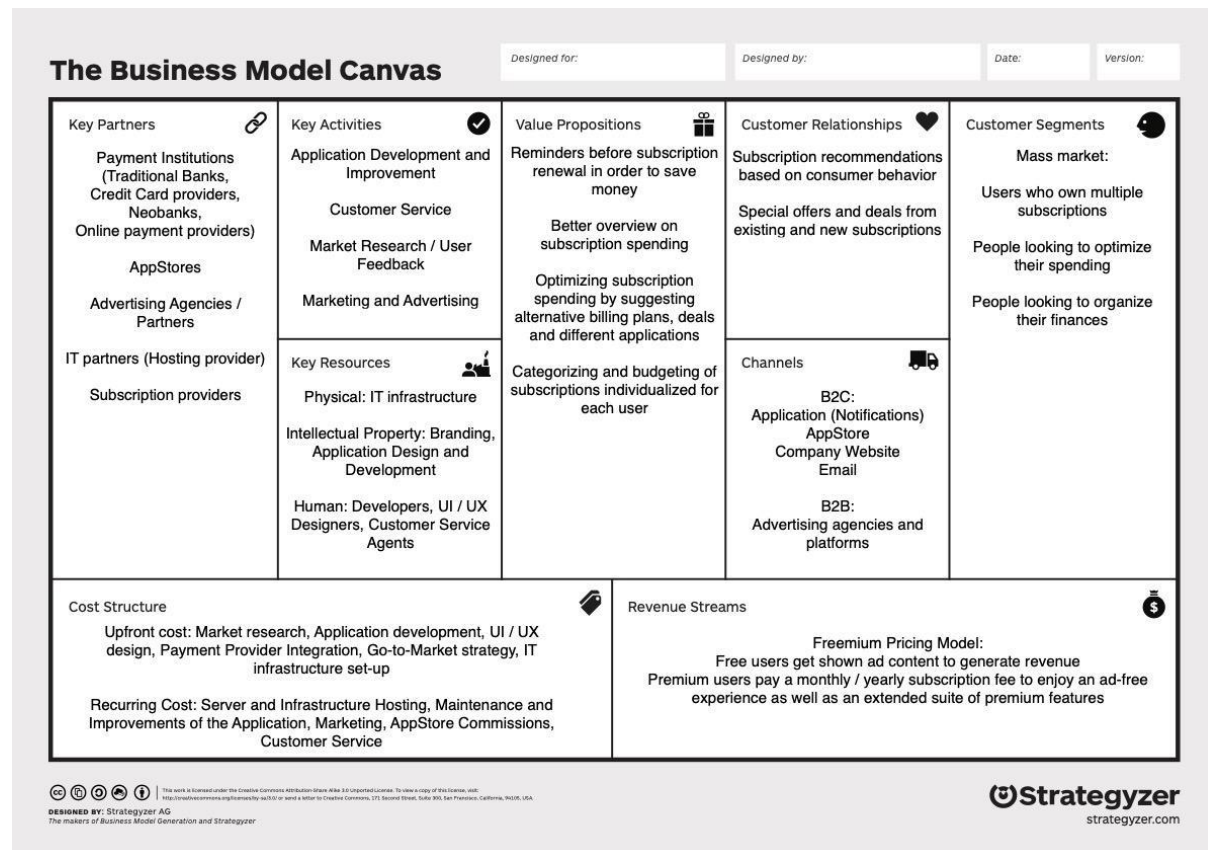

Figure 1: Business Model Canvas of the 'Subscrybe' subscription management application

For our business model, the focus is a mobile-first approach with both a mobile application, a supportive website, and a web plug-in to be featured. The main problems we want to solve for our customers is losing oversight over a large number of subscriptions, which subscription is billed when, etc. The main value propositions are that we help our customer gain an overview of all his subscriptions, insights into spending behaviour through budgeting and categorizing, as well as helping him save money and optimize spending. We can also recommend subscriptions that fit the needs of our customers better and provide special deals and offers with subscription partners. The main activities to get our business up and running are market research and application design and development, as well as marketing and branding with the go-to-market strategy. Further activities that are important once the application has launched are application maintenance and improvement, customer service and user feedback collection. The key resources needed can be categorized into the following three types: physical, such as the IT infrastructure (cloud servers, DB services, etc.), intellectual property, such as the branding, application design and the code itself and lastly, human, such as all the employees of the company. Our target market is the mass market, as we do not offer any luxury products or services. Any type of user who has multiple subscriptions can benefit from our offer, no matter their age, gender or any other social factor. As a first step, we would launch into the European market, as this is still a largely untapped market, as seen in the situation analysis (See Chapter 1). As for cost and revenue, our initial cost is mainly the design and development of the application, as well as marketing. Cost, once the application is launched, would mainly consist of human capital (customer service), infrastructure maintenance and hosting and further marketing cost. On the other hand, our business model is based on a freemium pricing model, allowing us multiple streams of revenue, such as advertising revenue as well as monthly

or annual subscription payments. The cost and revenue structures are further elaborated on in the section Budget and Revenue Proposal in Chapter 5 - Project Implementation.

b. Sustainable Value-Add by Subscrybe

When looking back at the market analysis and the consumer research, there are clear gaps identifiable in the market as-is. There are some applications which do also incorporate some features of subscription management. Still, most of these have a different main focus, such as being a payment provider or an overall money management tool. The few ones which do have a subscription management focus have several limitations, such as geographical availability and OS limitations. Our application will fill the gap in the market by providing a user-friendly, centralized platform for managing subscriptions, eliminating the pain points of managing multiple subscriptions and helping consumers gain a better understanding of their subscription spending. In addition to centralizing the management of subscriptions, the application will also provide budgeting plans to assist users. This is achieved by allowing users to set budgets for various subscription categories, such as entertainment or wellness, and then providing alerts when they are approaching or exceeding the budgeted amounts. Another notable feature of the application is the categorization analysis, which provides users with a breakdown of their subscription spending by category, thus enabling them to make informed decisions about which subscriptions to retain and which to cancel.

This application will set itself apart from other similar solutions on the market by offering a comprehensive, user-friendly platform that is available on all mobile operating systems and to the European market, with the future possibility of scaling globally. The combination of its centralized management system and innovative features will provide a valuable solution for consumers, addressing the common pain points associated with keeping track of multiple subscriptions. With this app, managing all subscriptions will become a simple and stress-free process, offering a one-stop shop for a more organized and effective subscription management experience.

c. SWOT Analysis

In the graph below, a SWOT analysis based on the business model of a subscription management application launched in the European market is conducted. Where the term SWOT comes from is unknown, but it was first described in the late 1960s by Learned *et al.* (1969). Since then, it has grown into one of the most used frameworks to analyze the key factors relating to a business in order to plan future strategies. While the framework is called overly simplistic by modern standards and in relation to the increasingly complex business landscape, it is still considered a good way to "kick start the strategic planning process" (Helms & Nixon, 2010, p.234). It is in this capacity to provide a simple basis to develop a business strategy that we use the framework for our project.

	INTERNAL FACTORS	EXTERNAL FACTORS
POSITIVE	**STRENGTHS** • Mobile-first, customer-centric business model with web-plugin, available on all mobile operating systems • Saves the consumer time and money • Free to use with premium features available at a charge • Multiple revenue streams • Customer service and referral programme	**OPPORTUNITIES** • Highly untapped European Market • Subscription business models are highly popular and becoming more prevalent, making the growth potential for the app high • Partnering with subscription providers for in-app advertising, promotions and more
NEGATIVE	**WEAKNESSES** • Access to payment information and personal data	**THREATS** • Payment providers integrating forward • Cyber security threats

Figure 2: SWOT Analysis conducted based on existing business model and target entry market of Europe

We would in a first step focus on the strengths and weaknesses, ensuring to deliver the most value to our clients while minimizing any risks associated with the weaknesses. In a second step, we would then address the opportunities in a future scenario focussing on growth and scaling our business model, while also taking into consideration the threats. What has to be said about this analysis is that it is a snapshot in time of how our business model and the market are set up right now and is likely to change in the future.

4. Application Design

The following chapters will give an overview of the application design. This includes both a short overview of the technical application architecture, a features list with prioritization according to the MoSCoW method, as well as an in-depth look at the user interface design.

a. Application Architecture

In order to facilitate availability on all mobile operating systems, the application will be developed according to a cross-platform architecture. The architecture follows a three tier approach:
Presentation tier, business tier and data tier. Tiers are oftentimes also called layers, therefore these two terms are used interchangeably in this section. The presentation tier consists of what the user of the application sees and notices in the usage of the app. Main concerns for this tier are UI and UX design and user authentication and authorization. If the user interacts with the application and wants it to perform some kind of action, the presentation layer cannot perform this by itself. Therefore, the layer then calls up the business tier. The business tier contains the logic and rules behind the application. It deals with workflows, entities & components and exception handling. The business layer might need to call upon the data layer, depending on the function that is called. The data layer, as the name already suggests, deals with components relating to stored data, such as access management to stored data (Fernandez *et al.,* 2008). There are also overarching topics such as security and connectivity, spanning all three tiers.
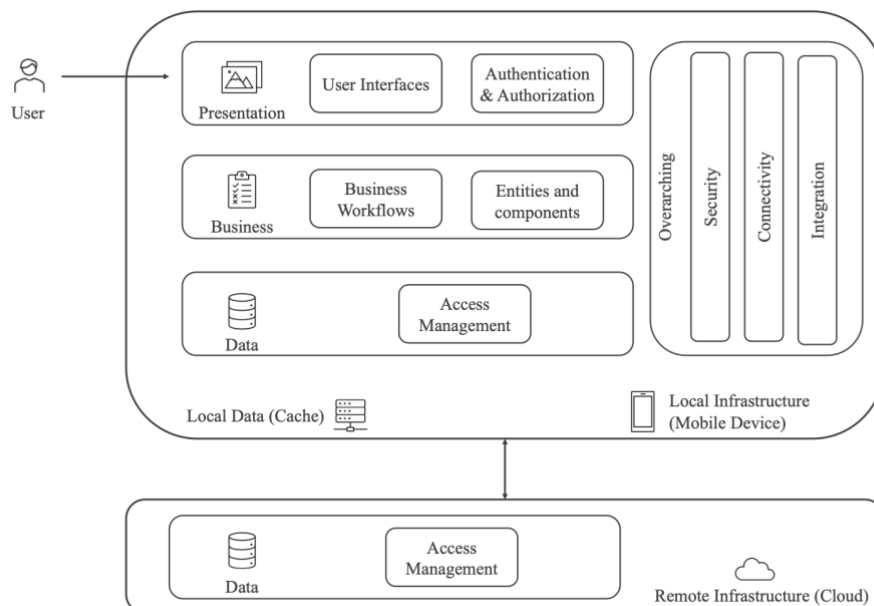

Figure 3: Application Architecture (Own Image, inspired by Srivastava, S. (2022) and Juhasz, N. (2022))

b. Feature List - MoSCoW Prioritization

As outlined in the micro environment analysis, time to market is essential to be the first to capture a large share of the currently highly untapped market in Europe. Therefore, the requirements of the application will be prioritized according to the MoSCoW method in order to be able to launch a fully functioning product that covers the basic value proposition as soon as possible. After that, further development according to the remaining requirements and user feedback will be done. MoSCoW is a strategy to prioritize requirements or features according to the category they fall into: M - Must Have, S - Should Have, C - Could Have, and W - Won't Have. In the first approach, the application will contain all the Must Have features, a number of Should Have features and a few Could-Have features. Overall, the project split will be around 55% Must Have, 25% Should Have, and 20% Could Have for the first launch (Agile Business Consortium, 2014).

M Must Have	**S** Should Have	**C** Could Have	**W** Won't Have
▪ Sign-Up ▪ Sign-In / Login ▪ Manual Subscription Add ▪ Subscription Add Plug-In ▪ Statement Scanning ▪ Subscription Overview ▪ Push Notifications ▪ Advertising ▪ Membership payment ▪ Self-Service Customer Service ▪ Data Protection	▪ Third-Party Sign-Up ▪ Budgeting ▪ Optimization ▪ Payment Provider Integration ▪ Live Customer Service	▪ Partnerships (Promotions & Discounts) ▪ In-App Cancellation ▪ Referral Programme ▪ Multi-tier Membership	▪ Payment Solution ▪ Price Negotiation

Figure 4: MoSCoW prioritization of the features comprising the subscription management application

c. User Interface Design

Following are excerpts of the application mock-up. They show the main screens of our application, such as log-in, subscription overview, spending overview, insights and how to add a subscription, either manually or from a screenshot.
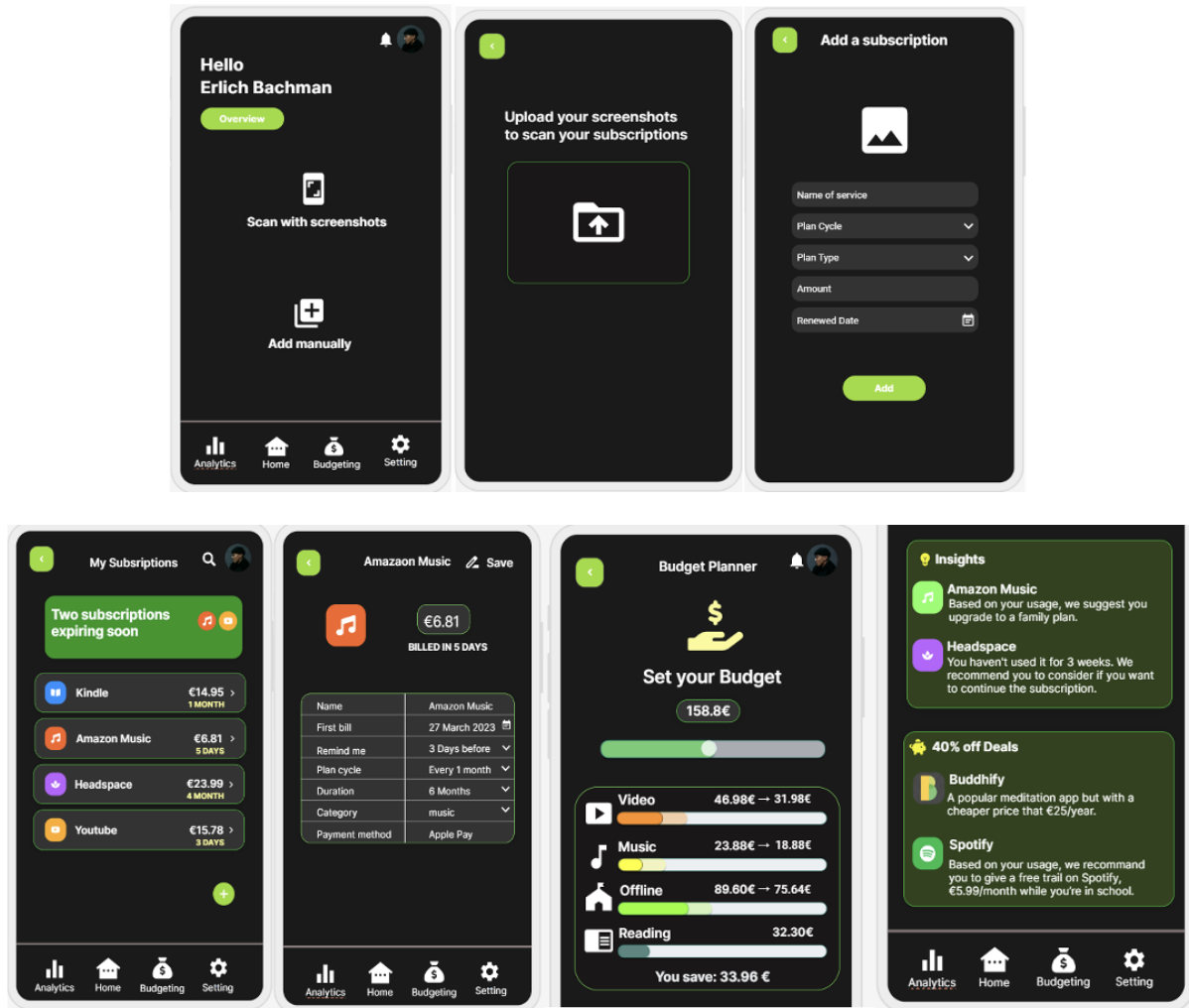
Figure 5: Screenshots of the application design

5. Project Implementation

In the following chapter, we will introduce the key information about the project implementation, such as timeline, budget and action plan with regard to both the development and promotion of the application.

a. Timeframe

The following section outlines the timeline and objectives for a 40-week project to create and launch a fully-functional subscription application that provides value to our users and meets the needs of the market. On February 14th, 2023, our 40-week project begins and ends on November 21, 2023. The project is organized in 20 sprints, each lasting 2 weeks. Our primary goal during this time is to create and launch a fully-functional minimum viable product for our subscription app, with the intention of promoting it starting from November 7th, 2023. Throughout the project duration, our aim is to shift our focus from product development to product launch while ensuring that our application aligns with the needs of the market.

To achieve our objectives, we have created a detailed work breakdown structure outlining the specific actions we will be taking. This includes conducting market research to identify target audiences, designing and developing the application's user interface and user experience, creating marketing and advertising campaigns, testing the application's functionality and user experience, analyzing and incorporating feedback, and finally, launching the application to the market. Additionally, we will

engage with subscription-based companies to cross-promote our app, collaborate with bloggers and social media influencers in relevant niches, and advertise in online communities that focus on discussing new apps.

Activity	Details	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Funding	Research Potential Investors	█	█	█																	
	Contact Investors		█	█	█																
	Negotiate funding terms			█	█	█															
	Finalize funding agreement				█	█															
Market Research	Competitor Analysis	█																			
	Consumer Analysis	█	█																		
	Business Plan	█	█	█																	
App Development	Wireframing and Prototyping	█	█	█																	
	UI and UX design				█	█	█														
	Backend and API development						█	█	█	█	█	█									
	Frontend and mobile development									█	█	█	█	█	█	█					
Testing	Unit Tests																█	█			
	Integration Tests																█	█			
	User Acceptance Tests																█	█			
	Optimization																		█	█	
Promotion	Influencer Marketing																				█
	Create Ad Campaigns																				█
	Social Media Posting																				█

Figure 6: Timeline based on Work Breakdown Structure of the project

By adhering to this work breakdown structure, we will launch a successful subscription application that satisfies the market's demands and adds value to our users.

b. Action Plan

Design stage
The design process of our subscription application will be a critical focus for our development team, as we recognize the importance of providing an intuitive and user-friendly experience for our users. Therefore, we will pay close attention to the design process of the application to ensure maximum user engagement. We understand that users prefer an application that is easy to use and navigate, and we will keep these aspects in mind throughout the development process.

Our first step will be to create wireframes and prototypes to set up a solid framework for the application's interface. This will help us to determine the user flow and navigation. Next, we will focus on UX and UI design. The design team will work with us to create an interface that is attractive and user-friendly, following our brand identity. This will involve choosing a suitable color scheme, typography, and layout. As we proceed with the development process, we will also work on backend and API development to give our users fast and smooth access to the application's features.

Throughout the development process, we will prioritize testing to identify and address any issues before the application is released to the public. This will include rigorous unit tests, integration tests, and user acceptance tests, as well as ongoing optimization to ensure that the application delivers an enjoyable experience for our users.

Promotion Stage
When it comes to promoting our subscription app, it is essential to consider the competitive landscape and potential threats and substitutes in the market. As mentioned before, new entrants are a potential threat due to the simplicity of our application. For instance, a competitor could develop a subscription management application with better features or a more user-friendly interface, potentially reducing our market share. Therefore, time-to-market is critical for our project.

Our main approach to effectively promoting our application will centre around digital marketing strategies such as social media marketing, influencer marketing strategy, and search engine optimization

(SEO). To create a strong brand identity that aligns with our application's user-friendly design and core value proposition of simplifying subscription management, we will utilize social media platforms such as Twitter, Instagram, and Facebook to showcase our brand and engage with our audience. By crafting engaging and informative content, we will build a strong following of users who trust and rely on our application for their subscription management needs.

We also plan to collaborate with bloggers and influencers in the personal finance and lifestyle niches. This influencer marketing strategy will enable us to reach a specific audience that is likely to be interested in our app. Furthermore, we aim to advertise in online communities that focus on new and interesting apps, such as Product Hunt. People who are active in these communities are likely to be early adopters and tech-savvy individuals who have multiple subscriptions to various services. Therefore, they may have a greater need for a subscription management application like ours, making them an ideal target audience.

Another effective marketing approach is cross-promoting with subscription-based companies to offer exclusive deals to their customers, such as partnering with a meal delivery service and providing a discount to users who subscribe to both our application and the meal delivery service. This allows us to reach out to existing customer bases of other subscription-based companies and connect with users who are already interested in subscription-based services, potentially expanding our user base and increasing our revenue.

To encourage our users to spread the word about our app, a referral program will be offered to users, incentivizing them to invite friends and family. This approach leverages the power of word-of-mouth marketing, which is more reliable and trusted than traditional advertising. By providing a reward for successful referrals, users are encouraged to share their positive experiences with others and help bring in new users to our platform.

In order to increase not the overall user base, but to increase the percentage of premium users is to offer a free probation period of the premium subscription of the application to existing users. Offering one to three months of premium for free to existing users gets them used to our extended set of features and helps them see their value add as opposed to just the basic version. Once this has happened, the likelihood of them going back to the basic account is decreased, leading to overall more profit. This could be specifically offered to customers most likely to need the premium suite of features, such as customers with a lot of subscriptions, many payment methods or subscriptions with especially high fees.

c. Budget and Revenue Proposal

In this section, we will introduce an outlook on the financial side of the business, both in terms of cost and revenue, as well as strategies on funding the initial phases of the business.

Table 2: Overview of the project costs

Cost Element	Budget
Development	$50,000 - $150,000
Design	$10,000 - $30,000
Server and Hosting	$5,000 - $10,000
Third-Party Services	$5,000 - $15,000

Testing and Quality	$10,000 - $20,000
Marketing	$5,000 - $20,000
Maintenance and Updates	$10,000 - $30,000
Contingency	$5,000 - $15,000
Total Budget	**$100,000 - $285,000**

The cost structure table for our subscription management application project provides a breakdown of the various cost elements and their estimated budgets. As per the application development cost estimate guide provided by website 'Clutch', the total budget required to develop and maintain our subscription management application could be a maximum $285,000, depending on the specific requirements and features of the app. This figure has also been verified by the website 'App development cost', as it has provided a total development cost to be around '$245,458 - $295,673' with total hours required for development to be around 5000-6000 hours.

In different scenarios, the cost structure can change based on the project's scope and objectives. For instance, if the applicatino requires more complex features, such as advanced analytics, security protection or tablet integration, the development cost may increase. Similarly, if the target market is larger, the marketing budget may need to be increased to reach a broader audience. Additionally, if the application needs to integrate with third-party services or APIs, the cost for those services may increase, impacting the overall budget. It's important to note that unexpected changes or delays during the development process can also increase the overall cost, which is why a contingency budget is included in the table.

Figure 7: Application development cost estimation provided by website AppDevelopmentCost.com (2023)

As per the cost structure estimating the potential costs involved in developing and maintaining a subscription management application, below budget is required for various cost element:

Development: The cost of developing the application considering size and complexity of the project, it could range from $50,000 to $150,000 or more.

Hosting and Maintenance: The cost of hosting the application on a cloud platform/internal database and ongoing maintenance considering the application's complexity and usage, could range from $10,000 to $30,000 per year.

Marketing: According to industry averages, the cost of marketing a mobile application can range from 10% to 50% of the total development cost. For a subscription management app, the marketing budget may range from $5,000 to $20,000 or more, depending on the factors like marketing goals, target audience, and advertising channels.

<u>**Revenue:**</u>
Subscription fees: The application will charge users a monthly or annual subscription fee, depending on the features and services offered. A typical subscription fee could range from $5 to $20 per month.

In-app purchases: The application could offer additional features or services for one-time purchase within the application. The prices for these purchases could range from $0.99 to $9.99 or more.

Advertising: The application will generate revenue through advertising by displaying targeted ads to users. The revenue generated would depend on the number of users and the advertising rates.

Partnerships: In the future, the goal of the application is also to partner with companies providing subscription services to advertise and promote directly on the app. This not only allows for targeting specific users who are more likely to want such a subscription, it also presents a future revenue stream for the app, as it would charge commission for each user that has signed up through the app.

Total estimated revenue: This would depend on the number of users and the pricing strategy used, but could range from $50,000 to $500,000 or more per year.

<u>**Funding:**</u>
Potential avenues to explore to get funding for our application would be:

Crowdfunding: We could launch a crowdfunding campaign on platforms such as Kickstarter or Indiegogo to raise funds from the general public. This approach can be effective if you have a compelling pitch and are able to generate interest in your project.

Angel investors: We could seek funding from angel investors, who are typically wealthy individuals who invest in early-stage startups. Angel investors can provide both capital and expertise, but may require a significant equity stake in the company in exchange for their investment.

Venture capital: We could pursue funding from venture capital firms, which provide funding to startups that have high growth potential. Venture capital firms typically invest large sums of money than angel investors, but may also require a larger equity stake in the company.

Bank loans: We could apply for a small business loan from a bank or other financial institution to fund the development of our app. This approach can be challenging as this is a new startup without a proven track record or significant assets to use as collateral.

Government grants: We could also look into government grants that are available to support the development of new technology startups. These grants can provide a source of non-dilutive funding but can be highly competitive and may require a significant amount of paperwork.

6. Feedback & Control

a. Metrics

To ensure the efficacy and triumph of our subscription app, we shall consistently monitor and analyze a set of critical performance indicators (KPIs) and key metrics. These metrics, categorized into user acquisition, user engagement, and user satisfaction, will be monitored throughout the application's launch and continued improvement stages.

User Acquisition: In order to be able to monitor and predict user acquisition, we would track a few metrics. One of the main ones is the app store ranking, which measures the application's visibility when users search for similar applications. A higher ranking increases the likelihood of the application appearing among the top search results, improving visibility for potential users. Application ranking is particularly important for iOS, as Apple uses a search algorithm that prioritizes higher-ranked applications. To improve our ranking, the developers can focus on using relevant keywords and providing version updates. Another important acquisition metric is the number of downloads. By tracking the number of downloads, we can assess the effectiveness of marketing strategies and make necessary adjustments to increase the application's reach. A third important metric we consider here is the referral campaign success, so how many users sign up via a referral code from an existing user. This also helps us to gauge how happy existing users are to recommend the application.

User Engagement: We will utilize user engagement metrics to optimize our strategy and ensure that we retain the existing users we have. One metric that is important here is the activity level of the users, which quantifies their frequency of use and interaction with the application. Another metric that is important for this category is the user retention rate, which indicates the proportion of users who return to the application within a given timeframe, and the churn rate, which highlights the percentage of users who discontinue their use of the application, allowing us to identify and address potential engagement issues. In this category, there are also several metrics to track which have a direct financial impact on our business model. The first is the engagement rate with advertisers, which measures the frequency of user interactions with third-party advertising placed within the application. A high engagement rate can lead to us being able to charge more for advertisements placed on our application. Another highly important metric is the conversion rate of users to paying subscribers, as this directly impacts our revenue. This rate provides insight into the attractiveness of our value-added services and enables us to refine our payment plan accordingly. Additionally, the paying subscriber retention rate also needs to be considered, ensuring that once a user becomes a paying premium subscriber, he stays one. In summary, these user engagement metrics will enhance our understanding of user behavior and enable us to optimize our value add in order to maximize revenue.

User Satisfaction: User satisfaction help capture the overall attitude and feelings users have towards our application. User ratings and reviews represent the most direct feedback from customers. In-app feedback through customer service chat boxes is a channel for gathering improvement ideas from users, as well as analyzing the issues reported to the service agents through our customer service channels. Another metric to consider here is the app-store ratings given by users. Additionally, we would conduct user feedback surveys, incentivized by a free premium subscription month, in order to see which additional problems the users have which the application could solve, what additional features the users would like and if there are any existing issues with the application. Overall, these measures are to ensure that once a person becomes a user, he will remain one for as long as possible and upgrading to a premium version, helping drive both user engagement and profit.

b. Risks

Using a Risk Matrix we are able identify the severity of risks and the probability that they will occur. By plotting the risks faced we are able to focus on the most severe risks which are more likely to occur.

This will help to mitigate any material impacts from these likely events and plan accordingly for the rarer events, which may cause more harm.

Figure 8: Risk Matrix demonstrating the probability and severity of risks faced by our application

7. Recommendations and Outlook

Outlook: The Implementation plan for Subscrybe follows a three phase process. The initial phase will be our hard launch giving access to the public with the must-have features from the Moscow diagram in section 4(b), and some should haves. The next phase is refining bugs and introducing new features to enhance the user experience, this will focus on the should haves of the moscow and some could haves. The final phase is where we will introduce more revenue streams to the app.

Phase 1: This is our initial launch, where we will focus on delivering on the main features of the application such as Overview of subscriptions, Manual and Screenshot adding, Budgeting of Subscriptions, Optimizing of Subscriptions and self service customer support. This initial phase has been identified as key to gaining users, whilst also being able to manage the applicaiton to ensure that we can limit all bugs and errors.

Phase 2: After the initial phase, we will look to improve the users experience on our app. This will consist of the addition of new features such as live customer support, subscription recommendations, greater insights in the optimization feature and the integration of payment platforms to allow for subscription adding. The phase is key to retaining our users as we will be enhancing their experience and providing more value to the user.

Phase 3: Finally, we have the addition of new revenue streams. In this phase we will launch our multi-tiered memberships to Subscrybe. These tiers will be in the form of the premium membership, where users will gain access to integrating multiple payment providers, access to in-app cancellations of subscriptions, access to special deals which we aim to negotiate with partner apps and the removal of ads. The middle tier will include a no-ad experience, some access to special deals with partner apps and integration of 2 payment platforms for adding their subscriptions. Additional revenue streams will also be created through partnering with subscription-based apps, and gaining affiliate links which we can earn additional revenue.

8. Bibliography

Agile Business Consortium (2014) *MoSCoW Prioritisation*. Available at: https://www.agilebusiness.org/dsdm-project-framework/moscow-prioririsation.html [Accessed: April 11, 2023].

App Development Cost (2023) *The app development cost calculator*. Available at: https://www.appdevelopmentcost.com/quiz?qid=vjoYFIx7VJiRb5FE6gRo&state=report [Accessed April 01, 2023].

Department of Education and Skills (2019) '*Technology Skills 2022*'. Dublin: Department of Education. Available at: https://www.gov.ie/pdf/?file=https%3A%2F%2Fassets.gov.ie%2F24698%2F50fcbc8f80ab4a828ab7f44e2114aa7b.pdf#page=null [Accessed: April 03, 2023].

European Commission (2023) *Economic Forecast for Ireland*, *Economy and Finance*. Available at: https://economy-finance.ec.europa.eu/economic-surveillance-eu-economies/ireland/economic-forecast-ireland_en#:~:text=A%20strong%20labour%20market%20together,is%20set%20to%20support%20exports [Accessed: April 03, 2023].

Fernandez, E. B. *et al.* (2008) 'The Secure Three-Tier Architecture Pattern', *International Conference on Complex, Intelligent and Software Intensive Systems*. Barcelona, Spain, 04-07 March. IEEE, pp. 555-560.

Helms, M.M. and Nixon, J. (2010) 'Exploring SWOT analysis–where are we now? A review of academic research from the last decade', *Journal of strategy and management*, 3(3), pp.215-251.

IDA (2023) *Talent*, *Talent and Education | Reasons To Invest | IDA Ireland*. Available at: https://www.idaireland.com/why-companies-choose-ireland/talent-education [Accessed: April 03, 2023].

IDA (2023) *Technology | IDA Ireland*. Available at: https://www.idaireland.com/explore-your-sector/business-sectors/technology [Accessed: April 03, 2023].

Jakubíková, J. (2008) *Strategický management*. Praha: Grada Publishing.

Juhasz, N. (2022) *Fundamentals of Mobile Application Architecture* [Figure]. Available at https://tateeda.com/blog/fundamentals-of-mobile-application-architecture [Accessed: April 08, 2023].

Learned, E.P. *et al.* (1969), *Business Policy: Text and Cases*, RD Irwin: Homewood, IL.

McCashin, C. (2023) 'Central Bank Reveals The Number Of Irish Tech Jobs Lost In Past 12 Months', *Business Plus*, 7 March. Available at: https://businessplus.ie/jobs/tech-jobs-lost/#:~:text=The%20estimated%20job%20losses%20to,average%20going%20back%20to%202008. [Accessed: April 03, 2023].

Osterwalder, A. and Euchner, J. (2019) 'Business Model Innovation', *Research-Technology Management*, 62(4), pp. 12-18.

Perera, R. (2017) *The PESTLE analysis*. Avissawella, Sri Lanka: Nerdynaut.

Porter, M.E. (1979) 'How competitive forces shape strategy', *Harvard Business Review*, 57(2), pp. 137-145.

Porter, M.E. (1980) 'Industry Structure and Competitive Strategy: Keys to Profitability', *Financial Analysts Journal*, 36(4), pp. 30–41.

Sprinkle, G.B. and Maines, L.A. (2010) 'The benefits and costs of corporate social responsibility', *Business Horizons*, 53(5), p.445.

Srivastava, S. (2022) *Explained: Mobile App Architecture – The Basis of App Ecosystem* [Figure]. Available at https://appinventiv.com/blog/mobile-app-architecture-explained/ [Accessed: April 08, 2023].
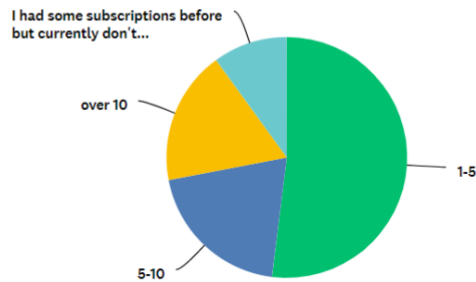
Straková, J. *et al.* (2018) 'Situational analysis and its role in the process of strategic business management', *Polish Journal of Management Studies,* 18(1), pp. 353-364.

9. Appendix

A - Results of User Survey (February 2023)
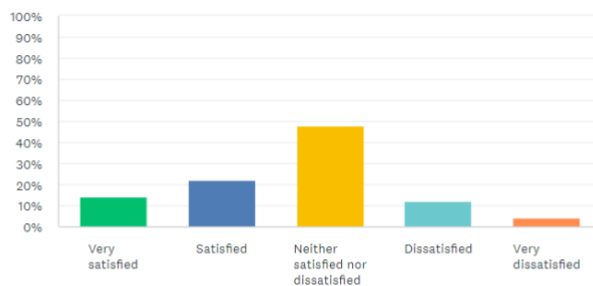
How many subscriptions do you currently have?

Answered: 50   Skipped: 0

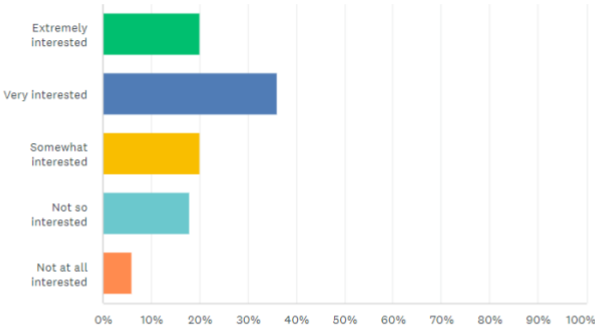| ANSWER CHOICES	RESPONSES	
1-5	52.00%	26
5-10	20.00%	10
over 10	18.00%	9
I had some subscriptions before but currently don't have one	10.00%	5
TOTAL		50

Are you satified with your subscription management methods?

Answered: 50   Skipped: 0

QUIZ STATISTICS			
Percent Correct 14%	Average Score 3.3/5.0 (66%)	Standard Deviation 0.99	Difficulty 1/1

ANSWER CHOICES	SCORE	RESPONSES	
✓ Very satisfied	5/5	14.00%	7
Satisfied	4/5	22.00%	11
Neither satisfied nor dissatisfied	3/5	48.00%	24
Dissatisfied	2/5	12.00%	6
Very dissatisfied	1/5	4.00%	2
TOTAL			50

Would you be interested in receiving reminders for subscription payments or renewals?

Answered: 50   Skipped: 0

ANSWER CHOICES	RESPONSES	
Extremely interested	20.00%	10
Very interested	36.00%	18
Somewhat interested	20.00%	10
Not so interested	18.00%	9
Not at all interested	6.00%	3
TOTAL		50

How do you keep track of your subscriptions?

Answered: 49   Skipped: 1
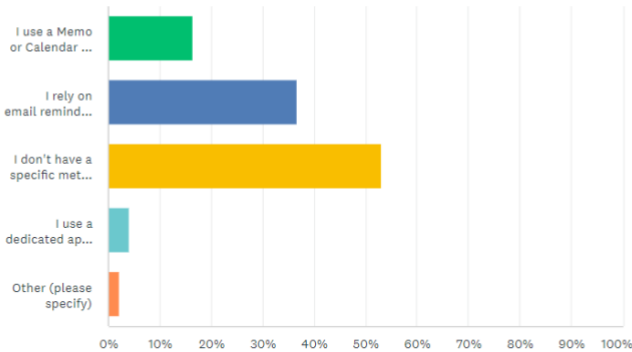
ANSWER CHOICES		RESPONSES	
I use a Memo or Calendar to keep track of my subscriptions.		16.33%	8
I rely on email reminders or my bank statement to keep track of my subscriptions.		36.73%	18
I don't have a specific method for keeping track of my subscriptions.		53.06%	26
I use a dedicated app such as Revolut or Rocketmoney to manage my subscriptions.		4.08%	2
Other (please specify)	Responses	2.04%	1

Have you ever missed a subscription payment or forgotten about a subscription altogether?

Answered: 50   Skipped: 0
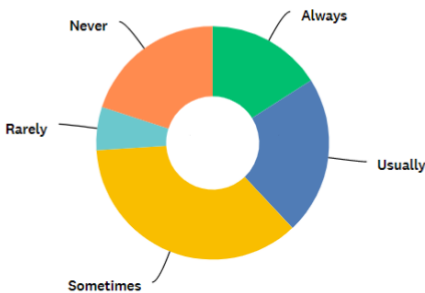
ANSWER CHOICES	RESPONSES	
▾ Always	16.00%	8
▾ Usually	22.00%	11
▾ Sometimes	36.00%	18
▾ Rarely	6.00%	3
▾ Never	20.00%	10
TOTAL		50