The design of a virtual platform to foster the development of collaborative events among local businesses in the area of Barcelona

Document:
Report

Author:
Nora Boisserée

Director:
Maria Gonçalves Ageitos

Degree:
Master in Technology and engineering management (MEM)

Examination session:
Autumn, 2022-2023

MASTER FINAL THESIS

Abstract

This Final Master's Thesis examines the conceptual design of a virtual platform to foster the development of collaborative events among local businesses in the area of Barcelona. The state of the art reveals that there does not exist such platform for external business collaboration. Local businesses have to face various challenges, including a lack of knowledge about starting a business, a lack of necessary resources, and a highly competitive business environment. Incorporating the proof of a background study, including various papers and professional websites, this project uncovers the actual market situation and the potential for this project. The project aims to show a hypothetical approach to software development from scratch. The main intention of the project is to create real value for a pre-selected audience of potential users and actually be feasible to develop. By using agile project management methods and tools, the features and requirements of the platform have been narrowed down and a mock-up designed. The results of the users' feedback suggest that the platform has a lot of potential and creates value for businesses.

Finally, the economic feasibility study of the project is performed. First, calculating the necessary initial investment includes the cost of server capacity and maintenance, as well as the developers that build the software within the set project time. As part of the financial analysis, three different profit scenarios are estimated and compared to each other. At the end of the financial analysis, the return on investment is calculated to determine the project's viability. The financial analysis results show a return on investment of less than one year in the best-case scenario. This leads to the conclusion that overall objectives have been met because the company's requirements for features have been met and the project's profitability has been demonstrated.

Acknowledgement

Table of contents

List of tables

List of figures

Color Palette

#E2B8AC

#919F89

#CDDAD8

#98A7AC

List of abbreviations

Abbreviation	Description
APM	Agile Project Management
B2B	Business-to-Business
CPI	Click per Impression
CF	Cash Flow
DoR	Definition of Ready
EBITDA	Earnings Before Interest, Tax, Depreciation and Aromortization
EUR	The Euro
FDI	Direct Foreign Investment
GB	Giga Byte
KM	Kilometer
k	Discount rate
MVP	Minimum Viable product
NPV	Net present value
PBI	Product backlog item

PDF	Portable Document Format
PM	Project manager or Project management
RAM	Random-access memory
ROAS	Return on ad spend
ROI	Return of Investment
SA	Public limited liability companies
SAL	Labor-limited company
SCL	Limited Co-operative Society
SCS	Simple Limited Partnership
SMB	Small-Medium-sized-Busiensses
SME	Small-Medium-Enterprise
SL	Limited company
SLL	Limited employee-owned company
TIC	IT Services
UI	User Interface
USP	Unique Selling Point
UX	User Experience Development
WIP	Work in progress

1. Introduction

The area of Barcelona, which is located in Catalonia, is the target site of this work. The selected city has been chosen due to its strong, innovative, and fast-growing economic character. Barcelona, the capital of Catalonia, is one of Europe's most visited cities, where Catalan culture, architecture, and history have evolved their own distinctive personalities throughout the years. The growing potential for new businesses is huge, but often the start is rather laborious. Local companies in Barcelona must have access to a virtual platform to support the development of collaborative events among them.

1.1 Object

The objective of this project is to offer the concept of a virtual platform for B2B collaboration to local businesses in Barcelona. The platform aims to support local businesses in extending their range of clients and the exchange of knowledge and good practices among them. This results in the physical design of a mock-up of the platform and an assessment of its feasibility. Additionally, the Master's Thesis shows the process of agile project development and examines all necessary steps. The project's process goal is to explore the needs and characteristics of local businesses in the Barcelona area and narrow down the requirements for the design with the help of interviews.

1.2 Scope

Throughout the background study of the Thesis, different business models and sectors in Barcelona are presented and analyzed. The main industries and economic structure of Barcelona are screened to narrow down the potential types of targeted users.

This thesis applies agile project management methods to execute the project and is based on empirical outcomes. Agile has been chosen in particular because of its focus on continuous improvement and its ability to incorporate customer feedback into every iteration phase. There are several work packages within this project. The process of development is easy to iterate in order to deliver in all phases the best possible solution by not extending project deadlines. It pays major attention to the following deliverables: a product vision statement, user stories, product backlog, Sprint backlog, and features. The interviews with possible users' portfolios, from which user stories are created, that leads to the basis of the prototype backlog. To refine and narrow down the tasks and the duration of the product development, sprints are defined and organized. The platform's requirements and features will be defined in the sprint backlog and displayed as the foundation for the first prototype. The prototype is the MVP of this project and is tested by the potential users. The MVP prototype is only in its first iteration. Because this is a hypothetical study, the prototype is not modified further after receiving user feedback.

The project's content comprises, in addition to the prototypes' development, a monetization strategy and a promotion plan. Besides, a feasibility study will be carried out to prove whether the hypothetical approach is feasible or not. Lastly, the project is wrapped up with conclusions and takes a look at the future of the respective topic.

1.3 Requirements

The general requirements for this project are building a base for the requirements for the final mock-up. The user pool will first be analyzed and identified. They are restricted to small local businesses in the area of Barcelona. Potential users should include both foreigners and locals with a business in Barcelona to ensure that the feedback is diverse and useful. Furthermore, the users should have a variety of business models and products or services so that the prototype's functions meet all of their requirements. Based on the background studies, certain topics must be chosen and discussed with the identified potential users. The outcome of the user interviews has to show that there is a demand for the project's idea so that the product backlog and features of the mock-up can be designed.

1.4 Rationale

Barcelona is a multicultural city and a fundamental business hub for Europe. Barcelona is known for its local entrepreneurial activity and business ventures. Although there are numerous regulatory barriers to understand and overcome in order to be a successful entrepreneur. The current sources of information about how to start a business or grow a business are often not clear or not easy to access. There are organizations that focus B2B networking solely on one industry or one neighborhood. Besides, the competition between local businesses and the fear of business types copying each other is high. Due to studies, this lonesome atmosphere is not beneficial for businesses to flourish. There is no virtual B2B platform in Barcelona where all types of SMBs can connect and collaborate to support one another in business activities. This project aims to create the concept of a virtual platform where local entrepreneurs can find a space to collaborate with each other. The goal of this collaboration is to create events to promote their businesses and build a professional network in Barcelona. The features and requirements of the conceptual platform are based on a background study and the input of four selected businesses in Barcelona. The entire project process and development are framed by agile project management.

2   Background

2.1   The business area of Barcelona

This section examines the main business models that exist in Spain and, thus, in the area of Barcelona. The purpose of this part is to identify the potential users of the platform as a first step. Therefore, it is important to screen the variety of Spanish businesses, where a general impression is followed by a more detailed evaluation of the main key elements of some business types. A study of different journals and literature is being conducted to be able to explore the area of Barcelona for entrepreneurial potential. In this work, the focus is placed on small businesses that are at the beginning of their business stages.

2.1.1   Business models

The Mediterranean economy is heavily reliant on small economic units, such as micro- and small businesses and self-employed individuals. In 2022, there are currently 2.96 million people who are self-employed in Spain (Romero, 2022). That means 12% of the Spanish population has their own business. The latter constitute a sizable proportion of the workforce in Spain. However, the majority of Spanish businesses are classified as small or medium-sized enterprises (SMEs). In the year 2021, SMEs contributed 275 billion euros to the Spanish economy. Micro-businesses alone generated nearly 107 billion euros in economic activity (Romero, 2022).

In Spain, there is a general classification of businesses into two large groups according to their characteristics: individual companies and corporate companies.

Individual companies have a non-legal personality, which can be self-employed or a private partnership, whereas corporate companies have a legal disposition and not a physical one; that means the company has a character of its own that is different from that of its owners or partners. Another significant distinction is that all corporate businesses must be registered in the Commercial Registry and formalized through a public deed (Balcells Group, 22).

Figure 1. Scheme of Business Types in Spain

From the two general categories mentioned, three types of companies that exist in Spain can be classified (see Figure 1) and their legal obligations evaluated. In this study, the focus will be on individual companies, particularly micro-businesses, which means individual companies and SL. To categorize micro-businesses, and corporations in terms of magnitude, a micro-business is considered a type of small business distinguished by its small number of employees, annual revenue, and costs (Leigh Gross, 2022). First, the autonomous companies are analyzed following the corporate business model, which can be divided into Community of Goods and Civil Society and SL, SA, SLL/SAL, and SCL/SCS (see Figure 1).

Autonomous companies can be sole traders or self-employed individuals, who are considered more like freelancers. The autonomous company sole trader indicates that there is just one associate involved, and it is not possible to have more than one associate within the company. This leads to the point that the capital of the company is not divided. So, the legal responsibility of the owner is 100% and corresponds to the owner's present and future equity. In this business model, the government is not involved in the decision-making of the company, but only the head of the company. The tax is calculated according to the benefits obtained by the company. That means the higher the profit, the more tax will be paid. The big advantages of being autonomous and holding an individual company are the speed of the registration process and its low cost (about 16€). The management within this model is rather plain and simple. On the other hand, the biggest disadvantages are personal unlimited responsibility, which is a very high risk, and increased taxation with higher revenue (Pascual, 2021).

The community of goods and civil society do not have their own legal personality, different from the individual company. This means that an entity without a legal personality is a form of company in which both resources and skills will be pooled without the need to create a new company, but which will present common objectives for financial exploitation. In both models, it is crucial to have at least two associates and allow an infinite possibility of associates. The community of goods could be a property shared between various associates for commercial purposes. The tax is paid by the associates of the goods and increases corresponding to the benefits of the exploitation, similar to the individual company.

The advantage of this model is that there can be an unlimited number of associates involved. The huge disadvantage is the responsibility for the present and future patrimony. The major difference between civil society organizations and the community of goods is that the responsibility is not solitary and can be joint. The usage of the civil society model has decreased in recent years and has transformed into private limited companies (SL). In the previously presented three models, there is no minimum amount of starting capital necessary.

Lastly, business models with their own legal personalities are presented. The legal identity by which a person or company is recognized, with sufficient capacity to those who incur responsibilities and carry out activities that generate full legal commitment, both against themselves and against third parties, are referred to as their own legal personality companies. The model of the private limited company (SL) and stock corporation (SA) allows both, from one associate up to unlimited. The starting capital for SL is a minimum of 3000€, whereas for SA there is a minimum amount of 60.000€. In both business types, the legal responsibility is limited to the amount of the initial capital. In the case of the SL, the shares are social, and in the case of the SA, the shares are actions. The fact that the legal

responsibility is limited is a clear difference from the three prior models. A big advantage here is that the taxes do not increase with the company's profit. The registration fees and process complexity are definitely higher than for individual companies (Pascual, 2021).

Still, specifically, in the case of SL, the popularity of approximately 1.150.000 SL companies in Spain shows that this model has a lot of benefits. It is the most common type of commercial society used by small business owners and entrepreneurs (Faecta, 2018).

This can be highlighted as having limited legal responsibilities. The taxation system is clearly beneficial as soon as a company makes significant profits because it does not increase progressively with profits. A disadvantage of the SL compared to the SA is that the shares are difficult to convey, which is easier for the SA because of the clear company shares. So the SA´s primary advantage is that it is feasible to obtain external finance since the company's shares may be purchased on the stock exchange. However, it is preferable, to begin with, an SL and then progress to a stock company if you decide to go for an IPO (Balcells Group, 22).

Workforce-owned companies can be split into two forms, which would be a limited employee-owned company (SLL) and a labor-limited company (SAL). In general, workforce-owned companies start at three associates and go up to unlimited. A minimum of two associates have to be employees of the company. The popularity of those models is rather low, although they can be quite beneficial in terms of receiving grants and special reserve funds.

Lastly, the types of corporate societies, SCL and SCS, are briefly shown. The corporate societies may adopt the partners' limited (SCL) or supplemented (SCS) liability regime. The shares between a minimum of three associates are fixed in writing. In the limited model, the legal responsibility is limited to the amount of the contribution. In the SCS model, the partners react pro rata up to the amount stated in the articles of incorporation. These types are quite rare in Spain and not crucial for this project.

2.1.2   Key sectors in Barcelona

Barcelona has always been a trade hub due to its unique position in the Mediterranean and near the French border. The privileged geographical location results in the success of Spain's primary industrial and economic exports to the rest of Europe. The economic environment of Barcelona is strongly diversified, and it has a broad variety of productive industries and expertise. One of the most important contributors to Barcelona's economy has been its strong industrial base, which features highly specialized industrial sectors that are competitive and export-oriented, such as the food, automotive, consumer electronics, chemical, pharmaceutical, and energy industries (Fundació ENT & Živković, 2021).

According to the city council of Barcelona, most companies in the Barcelona area since 2019 have been in business services that include scientific, technical, administrative, and auxiliary services (Ajuntament de Barcelona & Barcelona Activa, 2020). This includes the ever-growing ICT sector, which is one of the most significant in Barcelona and Catalonia, since it is home to one-quarter of all ICT businesses. As a result, Barcelona is the host city

of the World Mobile Congress, an annual trade event organized by the company GSMA and principally dedicated to the mobile communications sector. The ICT sector's activity involves the development, manufacturing, marketing, and qualified use of new information and communication technologies.

Catalonia and Barcelona's ICT activity is predominantly supported by a network of micro-businesses and SMBs focused on delivering ICT services and generating high-quality software (Ajuntament de Barcelona, 2022). As a part of the ICT sector, 3D printing has become more important in the last few years. Barcelona's industry of 3D printing is strongly connected to vehicle testing, robotics applied to intelligent logistics systems, and big data excellence. Overall, it is clear to see a huge drive for many companies committed to doing business and developing technology in Barcelona. Commerce and tourism, along with the industrial sector, are the most important actors in Barcelona's economic ecosystem. Although tourism has been strongly affected by the COVID-19 pandemic, it is recovering this year and securing its position as a very significant sector (Generalitat de Catalunya, 2022). With over 61,000 stores and restaurants, local businesses, bars, and restaurants not only bring life to Barcelona's districts but are also an important component of the city's economic character. Furthermore, it is a crucial component in promoting social cohesion, community life, and the quality of city public places (Ajuntament Barcelona, 2022).
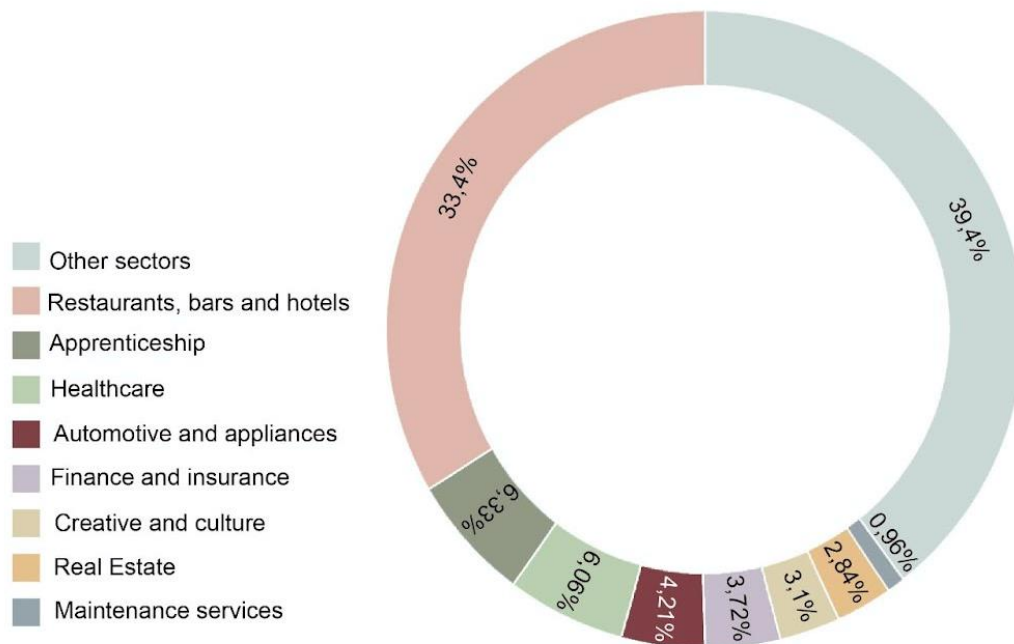
Figure 2. Main sectors in Barcelona by 2019 (Ajuntament de Barcelona, 2022)

Commerce and tourism, along with the industrial sector, are the most important actors in Barcelona's economic ecosystem (see Figure 2). Although tourism has been strongly

affected by the COVID-19 pandemic, it is recovering this year and securing its position as a very significant sector (Generalitat de Catalunya, 2022).

With over 61,000 stores and restaurants, local businesses, bars, and restaurants not only bring life to Barcelona's districts but are also an important component of the city's economic character. Furthermore, it is a crucial component in promoting social cohesion, community life, and the quality of city public places (Ajuntament Barcelona, 2022).

As shown in Figure 2, the main sector of commerce and services sector, represented as Other sectors represents almost 40% of active service establishments, which includes parking lots, transport services, storage, telecommunications, broadcasters, services in companies and offices, travel agencies, hairdressers and beauty salons, dry cleaners and arrangements, veterinarians and companion animals, and social services. The restaurant also has a prominent weight, since restaurants, bars, and hotel services add up to 33.40%. This data is from 2019, so it is important to keep in mind that due to the pandemic and its resulting regulations, a lot of businesses in these sectors suffered.

Furthermore, the arts and culture sectors are important drivers of economic activity in Barcelona. Consequently, 13 projects totaling 287.000€ were financed as part of the 'We boost what you do" (translated from Catalan to English) request for social and economic impulse subsidy ideas. These are programs that provide professionalization training in the performing arts, encourage the entrepreneurship of street musicians, and revitalize artisan activities (Barcelona Activa, 2016, 13).

Overall, it can be observed that Barcelona's wide variety of business activities promises a prosperous economic climate, which is why the FDI magazine's Top 10 rating in 2022 places Barcelona first in the "Top 10 major EU cities of the future by 2022-23." (FDI, 2022, 22). That implies Barcelona has the greatest approach to attracting technology investments in Europe. In its "Barcelona Never Stops" campaign, the Barcelona City Council has been executing its blueprint for preparing for the city's economic revival in the aftermath of the COVID-19 epidemic. As an example of big corporations investing in Barcelona, Pepsi, Microsoft, Decathlon, and TDCX have opened local offices in the last few years.

Through the Barcelona Green Deal, an economic model focused on sustainability, equality, and competitiveness, the city has also taken measures toward building a circular economy. This model includes recruiting sustainable food and transportation enterprises and hastening the city's energy transition. Furthermore, supporting the development of the blue economy, which supports ocean resource sustainability (FDI, 2022, 22).

A good example of associating with and connecting local businesses in Catalonia is Comertia. This Catalan Association, is an entity that brings together more than sixty retail chains, totaling more than 4,000 commercial establishments, employing 35,000 people, and jointly invoicing 4,000 million euros.

Comertia established their own "Retail Comertia Indicator" which is a monthly report that serves as a diagnosis in the short, medium, and long term on the reality of the commercial

sector. The key aspects of the sample of establishments and companies represented are employment, number and sales, totals, and sectors of activity.
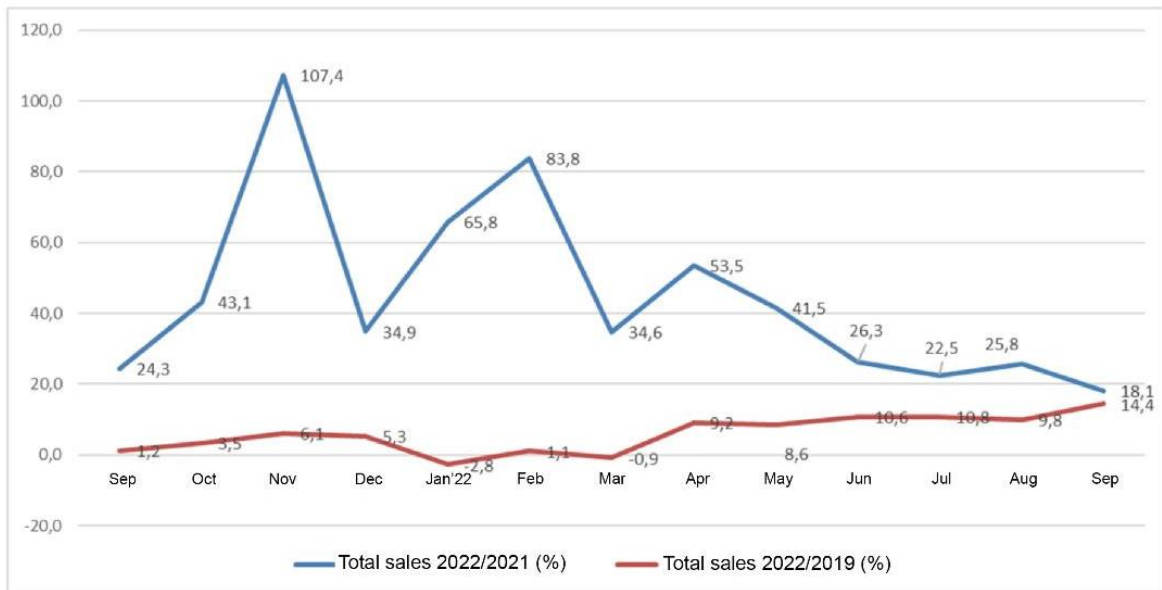
Figure 3.Comparison Comertia sales (Comertia, 2022)

The report from Comertia shows that commercial sales have risen since the pre-pandemic year of 2019. As displayed in Figure 3, the numbers for September 2022 show higher sales than the pre-pandemic year of 2019. The augmented sales for September 2022 are 18.1% higher than in 2021. Despite the good results, the variation in sales in units sold with respect to the previous year stands at 5.5%. The result of sales as measured by the indicator reflects the increase in sales of prices derived from increased inflation this year, rather than an increase in unit sales of products or services. In addition, the associated retail companies are assuming significant cost increases in 2022 compared to 2021, in terms of salaries, costs have increased by an average of 5.4%, and in terms of average product costs, the increase amounts to 12.7%. (Comertia, 2022)

Analyzing sales by category of activity compared to data from before the pandemic, the sectors that have grown the most in sales in September are the food industry (32.1%), Fashion (24.9%), Home Equipment (21.9 %), Personal Accessories (11.4%), and Non-basic Food (5%), while other sectors such as Others have decreased their sales (-5%).

Besides these numbers, it is important to say that the increasing inflation after the pandemic (2022) has had a huge impact on the costs of labor and products. Thus, economic inflation has a positive effect on the results of Figure 3 and this underlines the positive trend in sales in 2022.

A "startup" is generally considered a company in its initial stages of business. Certain criteria exclude companies from being startups, like if they have been bought by a corporation or gone public. Also, if the founders become the only shareholders of the company and do not have any management responsibilities (Generalitat de Catalunya, 2021). Startups can grow into "unicorns," which are privately held startup firms worth more than $1 billion (Chen, 2022). Barcelona and Catalonia keep building their startup ecosystems and have earned the title of Southern Europe's leading hub. According to the analysis of the Barcelona & Catalonia Startup Hub's 2021 figures, the region is currently home to 1,900 startups, a number that has increased by 11% compared to 2020 and by 26.4% compared to 2019, before the pandemic (Generalitat de Catalunya, 2021).

In comparative research, Barcelona was placed against Madrid in terms of start-up innovation potential (Allen, 2022). The motivation for this comparative analysis was the DESI annual report for 2022, in which the European Commission ranked Spain as one of the most advanced countries in digital development among EU countries (European Commission, 2022). In her comparison, Allen came to the conclusion that Barcelona, in comparison to Madrid, actually has a slightly stronger position in terms of startup culture and potential.

This is due to the fact that Barcelona is developing fascinating businesses in a variety of fields, fostering them from early-stage startups to unicorn status. A few examples of such unicorns are Glovo, TravelPerk, Wallbox, and Typeform. Barcelona not only hosts the annual EU-Startups Summit meeting, where over 1,500 founders, startup enthusiasts, corporates, angel investors, and media from across Europe come together, but it also hosts the Mobile World Congress. The effect of this is that some of Europe's most important incubators, investors, and accelerators have established roots in Barcelona. According to statistics, Barcelona has attracted around $5.4 billion in new VC financing since 2015. The city's startup ecosystem is valued at $39 billion. That is more than $14 billion higher than the startup value in Madrid (Allen, 2022).
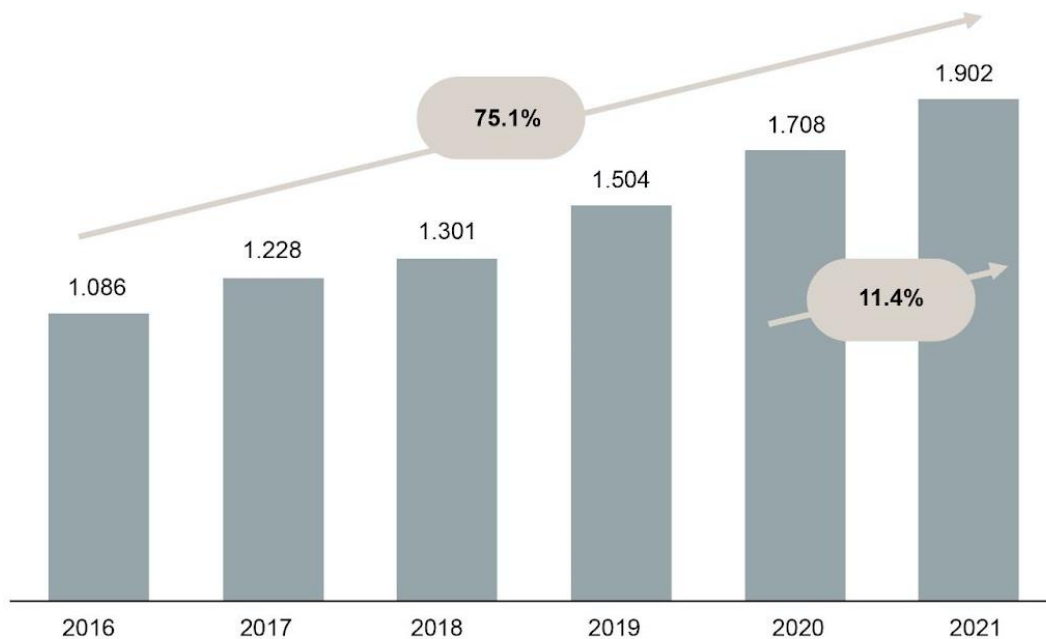
Figure 4. Barcelona and Catalonia Startup Hub (Generalitat de Catalunya, 2021)

The Barcelona and Catalonia Startup Hub is a comprehensive directory that identifies each startup with relevant information about its activity, funding stage, and business model. Since 2016, the number of startups in Catalonia has increased by 75%, and their total turnover in 2021 measured up to 1.710 million euros (see Figure 4). Figure 4. shows that despite the economic crisis in the year of the corona pandemic 2020-2021, the increase in startups remained constant at 11.4%. It is important to consider the fact that the numbers reflect and include the number of businesses that are not considered startups anymore. The analysis of 2021 also reveals that Barcelona ranks fifth among the best startup cities in Europe, followed by Madrid. The top positions are held by London, Paris, Berlin, and Dublin (Falcó, 2019).

There are platforms that promote technological advancement and entrepreneurship in Barcelona. Tech Barcelona is one of them. It is an autonomous private non-profit organization that offers a platform that promotes digital and technological innovation in Barcelona. The platform they provide is for connecting businesses and promoting entrepreneurship in order to obtain funding. The purpose is to create activities and events that promote mutual learning and information sharing within the ecosystem.

To meet the difficulties of technical, social, and economic development within the industry, the establishment of sector-specific task groups is encouraged. They provide visibility to push ideas and develop a worldwide network of ambassadors for new firms. Furthermore, they also provide a large database of innovative firms that are part of the tech ecosystem (Tech Barcelona, 2021).

2.1.3   Challenges for local businesses

Local businesses are any kind of company that provides goods or services to the local population. Thus, local businesses can be either corporations or SMBs. As mentioned before, within this project, only SMBs are being screened and analyzed.

The difficulties that small local businesses face differ greatly from those that corporations face. The presence of the COVID-caused health crisis since 2020 has had a massive impact on the activities of numerous companies. Since then, for many small local businesses, it has been an obligation to reinvent their approach and structures. Viable challenges for local businesses due to the pandemic have been, for example, order rests and cancellations, reorganization of work like changing office work into remote work, general health protection standards, and changing production flows. This time clearly discovered which companies are able to adapt quickly to the situation and are eager to survive (Libre Mercado, 2022).

Figure 5. Obstacles for SMBs (Visa, 2019)

All beginnings are difficult. Creating a solid base for a business and brand in the market is difficult. Many micro- and small-businesses fail to expand beyond the level of subsistence. This is not a question of work ethic or commitment; ambition is not the issue; most SMBs work extremely hard to meet their objectives. Nevertheless, there are severe business obstacles that stand in the way of their success (see Figure 5). Yet, despite these strains, they have personal and professional dreams for a better future and want to change the day-to-day struggle into long-term security. So, on the one hand, they must accelerate their digital transformation in order to engage in a highly competitive global market. On the other hand, they must innovate to have a sustainable and environmental focus in order to transition to a model of financial strength and a strong value proposition without losing their local essence (Visa, 2019).

One of the biggest challenges for local micro-businesses is the high level of competition. In order to compete and to cover the market share and needs that, for example, large companies do not cover, there is a strong connection with the lack of growth capital. When faced with rejection from a formal financial institution, entrepreneurs lose confidence in themselves and the system, which ultimately affects the resources needed to grow their business. Because of monetary limitations, SMBs commonly have difficulty finding and retaining reliable employees that bring value to the business.

Small and medium-sized businesses typically have limited knowledge of financial and accounting terms, resulting in rudimentary business planning. Due to a lack of skills or experience, they begin blindly rather than developing a comprehensive business plan and calculating the economic benefit (Visa, 2019, 9). Local SMB owners have a vision of contributing to their community.

In many cases, they see their neighborhood store as a focal point for their community. They view their role as more than just a provider of goods or services. The founders of SMBs are often keen to help and give advice to other entrepreneurs, but on the contrary, they are suspicious. If a business is successful in the community, they are concerned about the same model being replicated. As a result, there is a significant lack of trust. Therefore, the trust circle for a small business is incredibly tight due to the high competition and many low-cost competitors. Many businesses set very high criteria for themselves and often feel they must be highly sophisticated in their commercial dealings. As a result, they exhibit a disinclination to acknowledge limitations in their skills or knowledge, hindering the kind of common sharing that builds trust (Visa, 2019,10).

The lack of experience and resources often leads to a poorly developed marketing plan or, worse, no marketing action at all. Many businesses choose a random approach, especially in the early phases of a business, when it is crucial to reach the right target group with an effective marketing strategy. A business has to go beyond mouth-to-mouth propaganda and actively know its desired clients. Large corporations frequently have extensive resources, which gives them an advantage in terms of success. Smaller businesses with fewer resources frequently fail (salesrenewal, 2022).

2.1.4 Collaboration opportunities

It has been shown and studied that it can be quite beneficial for local businesses to prioritize collaboration over competition. Business collaborations can enhance getting a different viewpoint or advice at stressful moments, raise income, elevate the brand, and enable providing the finest customer service (Forbes, 2021). Another positive side effect of supporting each other is that successful businesses are more likely to reinvest in their communities and hire people in the area.

The partnership might involve working together and renting the same space to provide a package offering that includes both goods. The "Fort Orange General Store," a local shop in Albany, New York, is one of those excellent practice examples. They sell various clothing items and locally made household goods. The CEO of the company made the decision to collaborate with a nearby farm to establish a market that would allow customers to take advantage of farm activities like pony rides while simultaneously making market purchases. It can benefit both parties to tap into various client bases and broaden their prospective customer base by facilitating these events and commercial cooperation. It also provides an opportunity to create a memorable and social event for the community (Forbes, 2021).

There is currently no platform in Spain where SMBs can collaborate with one another. There is LinkedIn, an international business- and employment-focused social media platform. Here, companies and individual professionals can connect with each other and build relations, but they are not provided with their own platform to host events together.

There are also internal collaboration platforms to make it easier and faster for your staff to collaborate. The goal of those platforms is to promote effective teamwork. Built-in features help with project collaboration by securely storing chats, centralizing project management tools, allowing for co-editing on documents, and tracking progress.

As a result of this opportunity study, it can be determined that for B2B collaborations, there does not yet exist a platform that is only focused on local businesses in Barcelona.

3 Methodology

In the methodology the techniques and tools of project management are analysed and compared. The goal is to find the adequate method that fits best the objectives of the project.

3.1 Project management

The evolution of agile software development has been facilitated by the rapid development of technology over the last few decades. Due to challenges such as globalization, decreasing resources, and an increasing population, the rather traditional approach to planning a project had to be evolved into an agile form. The Agile approach is the best way for software development because it provides for more flexible planning by giving a highly personalized solution that is adaptive to changing market demands and trends (Seymour & Hussein, 2014, 234).

Table 1. Comparison between Agile vs. Traditional project management (Hoda et al., 2014, 219)

Type	Traditional project management	Agile project management
Model	Linear sequence	Iterative approach
Main emphasis	Process	People
Administrative structure	Supervising	Promoting
User involvement	Only in requirements and delivery phase	Constantly
Product functions	All included	Priority first
Product trials	At the end of the products development	Iterative
Process Documentation	Intensive	Only when necessary

As highlighted in Table 1, there are severe differences between traditional project management and agile methods of working (Hoda et al., 2014, 219). These two methods can be applied to software development. Traditional software development approaches are based on pre-defined phases and milestones of the software development lifecycle. To address the need for frequent changes in customer requirements, the traditional model of software development provides little scope for refactoring. It is unrealistic to assume that the customer's requirements will remain constant throughout the project. Traditional project management is a better approach for a project like house construction, where the features are set and stable. In this example, it totally makes sense to first construct bricks before electrical installations.

On the other hand, agile software development is primarily focused on people's requirements and needs to create the product's adequate features to respond to them. The process of development is different from the traditional model; it is not linear, but an iterative process. The huge advantages of agile software development are based on flexibility and iteration cycles. The flexibility and adaptability of an iterative method result in lower costs due to changes in scope and requirements. Because risky pieces are identified and handled during their iteration, it is much easier to test and debug during a smaller iteration, which leads to better risk management (Lynn, 2022).
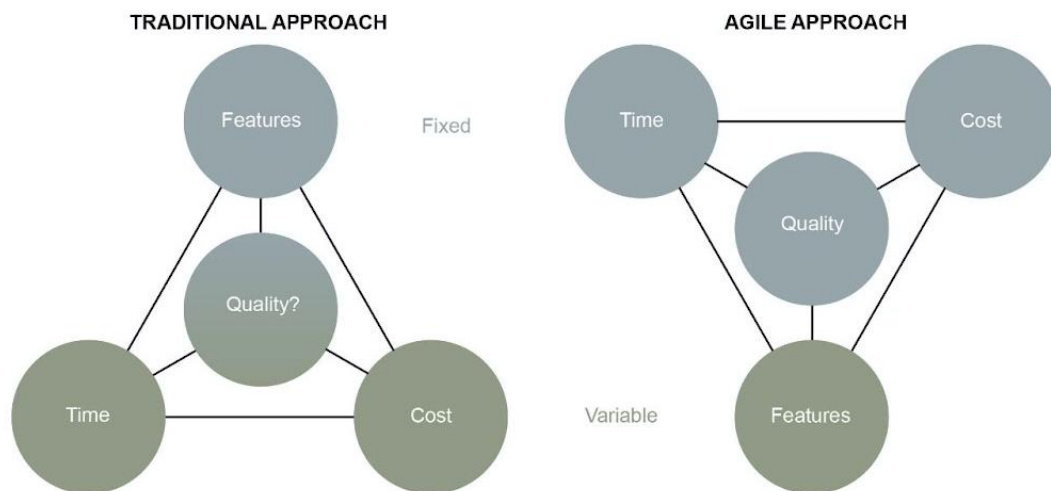
Figure 6. Focus of traditional vs. agile project management

The traditional approach (Figure 6) focuses on quality and features first, without considering changes in the requirements of the potential clients. That means the planning and the project process are rather rigid, while the scope in terms of time and costs can vary. So the entire sequence is step by step in a linear model where teams work successively in their field of proficiency.

This is different from the agile approach, which suggests a clear and fixed idea of time, cost, and quality. These resources are used for the iteration cycles that will be repeated until the best solution is found. This allows the implementation of the valuable feedback of stakeholders and possible customers before finishing the project and ensures a much better and more customized solution. That means the features are constantly modifiable and selected based on the stakeholders' needs and feedback, which results in them being completely variable and adaptable.

It can be concluded that if the scope and requirements are very clear from the start and the uncertainty is low, then a traditional approach to PM is a good approach. However, agile PM provides an advantage for innovative, less certain project outcomes, and is used in this project.

3.2 Agile Methods

The Agile methodology in general concentrates on making good, quick decisions and solving issues in the best possible way in the least possible time, which optimizes a lot of project progress. Agile doesn't break down when things change because it divides large projects into little parts and prioritizes work based on the business value it provides (Bennett, 2014).

Within APM, there are several different techniques to conduct the planning and execution of the project. Kanban and Scrum share similar concepts and aspirations, since they are both based on the Agile project methodology. Both frameworks promote teamwork, process improvement, and the division of projects into phases. In the following abstract, Kanban and Scrum techniques are analyzed and selected as the most appropriate approach for the project's needs.

3.2.1 Kanban

Kanban was originally a method to transition the production process workflow from "pull" to "just-in-time" to avoid wrong estimations of demand and product bottlenecks. Firstly, physical cards were used to symbolize tasks to do and break down a complex project into smaller steps. These cards enabled team members to easily see what was completed and what still needed to be done. In the 2000s, this method started to be used in agile project management (Wrike, 2022).
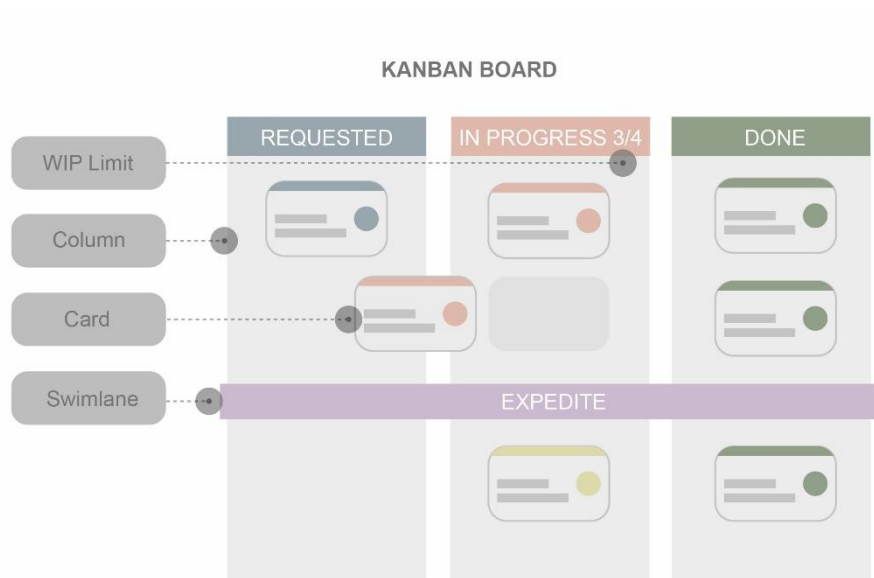
Figure 7. Kanban board (Kanbanize, 2022)

Kanban is a popular agile workflow management approach used to build, manage, and optimize knowledge work services (Kanbanize, 2022). The approach necessitates the use of a real or virtual board (see Figure 7) to illustrate how processes go from one step to the

next, which correctly visualizes the job to be done. To be highly productive and restrict work in progress, each project team should specify a limit on how many tasks can be conducted in each stage of the workflow at the same time. To actively enhance the process, the project manager must monitor the workflow for bottlenecks and make modifications to eliminate barriers and improve efficiency. A clear-defined protocol and process standards are defined in order to have clearly articulated regulations on how work is conducted, such as when a task is completed. This can be displayed as a checklist in each column or on each Kanban card, detailing what is necessary for it to progress to the next step. Kanban, as an agile technique, emphasizes feedback and iterative processes. Tools and methods are utilized to encourage early and continuous user input (Wrike, 2022).

3.2.2 Scrum

Scrum, an agile method that encourages software development, was created in 1986. The approach of this agile method is a flexible, holistic product development strategy in which a team works as a unit to achieve a project goal (Seymour & Hussein, 2014).
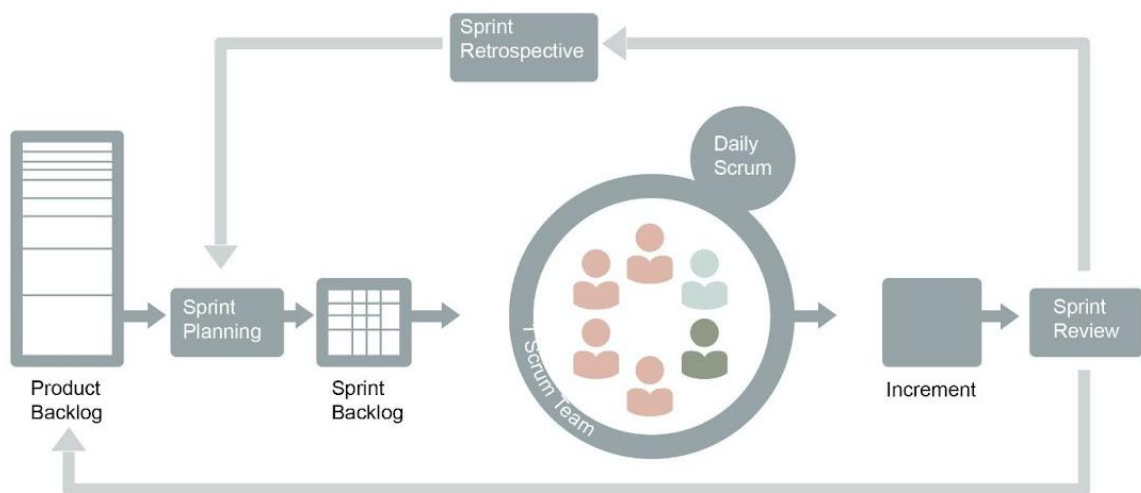
Figure 8. Scrum workflow (Schwaber, 2022)

While Kanban is centered around visualizing tasks and continuous flow, Scrum is more about implementing timelines (sprints) for each delivery cycle (see Figure 8) and assigning set roles: A Scrum master, one product owner, and a team of developers (Schwaber, 2022).

At the beginning of the planning phase (Figure 8), the product owner proposes a minimal set of features for the product, based on valuable user input, prioritizes them, and presents them to the team. The team then discusses the top-priority user stories, which are a general explanation of a software feature from the perspective of the end user. Then the team plans the timeframes for short periods called sprints (1-3 weeks). The output from the sprint planning is the sprint backlog, where a set of user stories are assigned to the next sprint.

The sprint backlog is a list of work items the team plans to complete during a project sprint. Each team member has to have a profound understanding of the content of the sprint backlog and know what to do in the next 1–3 weeks. Within this sprint time cycle, there is a daily Scrum team meeting in order to share what tasks are completed, actions that are in progress, or problems. The outcome of each sprint is a potentially finished product, which constitutes an increment towards the final solution. Each increment is rigorously tested to ensure that they all operate together and must be useful in order to offer value to the product.

Within a sprint, many increments can be produced. However, an increment may be given to stakeholders before the sprint ends. The Sprint Review is a meeting held at the end of a sprint, in which the team's accomplishments are shown, and it is determined if possible changes are needed; this provides a lot of value to the progress (Schwaber, 2022). Here, the product owner decides if the product is ready to launch or if there should be more features included.

At the end of the sprint, the sprint review showcases the sprint to the product owner, and an additional retrospective is conducted in order to improve the entire work process. The team then evaluates its success after the sprint by examining the concrete work product, absorbing its learnings, and making the necessary course adjustments for the upcoming sprint. This workflow is repeated for each sprint (Uzility, 2021). Every sprint that is not finished goes back to the product backlog and gets a new valuation of story points, so logically a part of this sprint is already executed, and that's why the story points will be very probably less than before.

3.2.3   Decision justification

The method that has been selected to be used is Scrum. There are several advantages to using Scrum. Part of the project plan is to interview potential users because their feedback is considered highly valuable for the outcome, and to use this as the base of user stories, it is preferred to give story effort points rather than date- and time-based deadlines. The method of making changes after completing a sprint is preferred to real time adaptation.

Because this project is solely being managed by the author of this thesis, all positions within the Scrum team are filled by the author. The author will represent the cross-functional capabilities of the team. The author will act as the Scrum master, coaching and enhancing the processes in order to achieve the goals. She will establish the product backlog as the product owner does, to maximize the value delivered by the team and ensure that the backlog is aligned with the potential user's needs. Moreover, she will develop the mock-up that creates a great user experience, just as the developers do with the actual software.

Within this project, it has been decided to use the software Jira, assembled by Atlassian, to plan and manage the project. This software allows the creation of projects based on Scrum and Kanban boards for teams that use agile methodology. These boards function as a task control center that maps assignments to customized workflows, resulting in transparency and insight into the status of each work item. That permits agile teams to precisely monitor their productivity over time using time tracking features and real-time performance reports such as burn-up/down charts, sprint reports, and velocity charts (Atlassian, 2022).

3.3   Scrum Methodology

To dig deeper into the Scrum methodology and the most important assets in this chapter, the theory of the three most important elements—the user stories, product backlog, sprint backlog—is presented.

3.3.1   User stories

In this thesis, PBIs are defined from user stories (see Chapter 4.1.1) that go beyond a specific change or requirement. It puts the end-user and their experience front and center. It's the smallest unit of work in agile development, expressed from the user's perspective. The aim is to speak a common, easily understandable language with the customer. This is the only way we can get fast customer feedback, which is the basis for our further adjustment processes.

As a < type of user >

I need to < perform some task >

So that < achieve some goal >.

Priority	Story name	Story Points
As basic user I need to chat to other businesses so that I can create a network.		
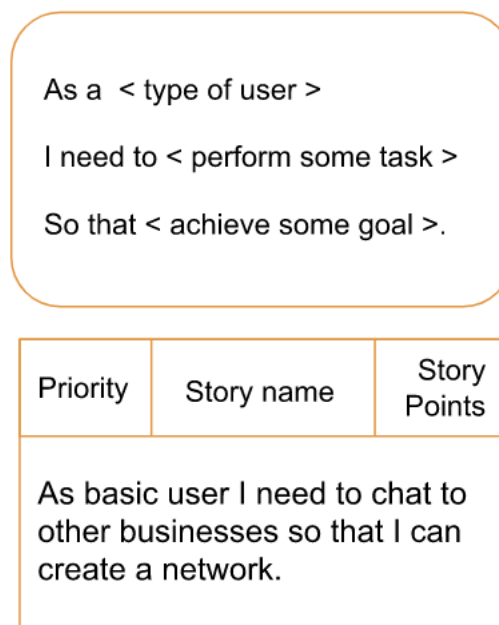
Figure 9. Example of a Scrum User Story

The structure of the user stories (see Figure 9) has emerged as the most effective and widely used type of product backlog item. While a product backlog may be viewed as a substitute for a traditional project's requirements document, it is crucial to note that the written component of an agile user story ("As a user, I want...") remains incomplete until the story is discussed. This is the reason why it is so important to reflect on the user stories and to carefully pay attention to what the users contribute.

The user story needs to be valued with story points, and prioritized. The story points, also called effort points, are determined by the complexity of the story in comparison to the others. They are critical to the entire Scrum team. The Scrum Master identifies bottlenecks based

on the development speed (velocity). Releases must be planned by the Product Owner. Usually, the team combines velocity with human capacity to plan the amount of work to be done for a sprint.

In order to estimate the story points of the user stories, they are all compared to one another, and the points are given relatively, considering the complexity and effort. So, the story points are the effort points for a user story. For the evaluation, the Fibonacci Sequence numbers 1, 2, 3, 5, 8, 13, and 21 are used. Hence, 1 is the least effort, and 21 is the most effort.

The priority of the user stories is determined by the MoSCoW method. The letters MoSCoW stand for the following priority stages of the user stories:

- ❖ **M** (Must Have) is a feature that must be present in the final product and without which the end product would be useless.
- ❖ **S** (Should Have) is a very important feature for the final product, without which we will have problems. However, there is a workaround for that finding.
- ❖ **C** (Could Have) is a really useful feature that could be nice to have in the solution, but frankly, it wouldn't be a problem if they don't have it.
- ❖ **W** (Will not Have This Time) is a good function, but there is no priority to invest in it. That could be interesting for later.

3.3.2 Product backlog

The product backlog is a dynamic concept that can be seen as a prioritized list of what needs to be done to improve the product through iteration. The product backlog items (PBI) in the product backlog can be ordered by the product owner. As explained in the previous chapter, in this project, the user stories are the PBIs.
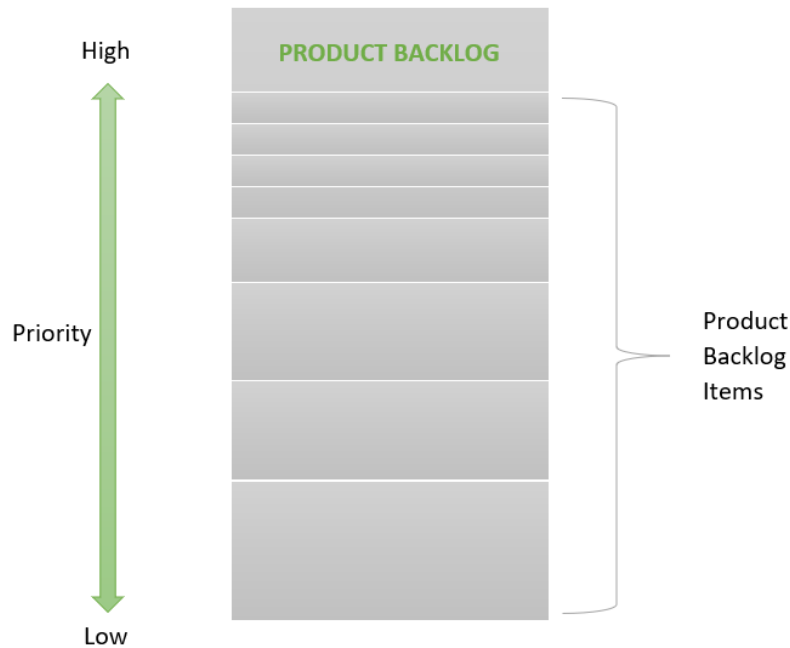
Figure 10. Product Backlog (García, 2019)

The product owner is frequently in charge of prioritizing and arranging PBIs in the backlog (see Figure 10). The Scrum team decides how to implement the items and what to do with them. The PBIs of the product backlog can be prioritized by the value/effort matrix which is a prioritization model. The idea of this matrix is to help prioritize the to-dos. It serves as a product development feature. The value/effort matrix assists product managers in making systematic and confident judgments about feature priorities (see Annex Figure 38). This prevents the product backlog from becoming overburdened with low-value activities. Furthermore, the product backlog is intended to be refined. The act of cutting down and further defining product backlog items into smaller, more precise things is known as refining. This is a continuous process of adding details such as a description, order, and size (Schwaber, 2022).
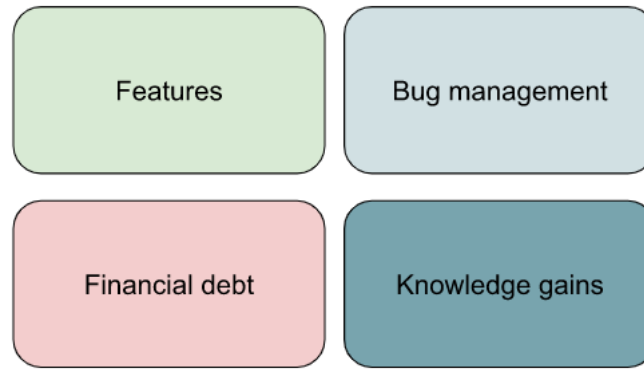
Figure 11.Four main categories for the product backlog (software) (Bordio, 2022)

As it is shown in Figure 11, agile teams generally work with four broad categories of the product backlog for software development. Within this thesis, only the component of features is taken into consideration, but it is important for the big picture of software development to keep the other categories in mind. "The features" is another term for user stories. They are the functions of a product that add value to the user's experience. They can be significant, such as key functions, or additional, such as platform support.

Another category of a usual software product backlog is bug management. A bug is a technical problem that mostly has a solution, such as when you try to enter a to-do in your productivity software and it crashes. Some defects are less harmful to the product and can perhaps wait longer to be handled, but the general guideline is to deal with them as quickly as possible to avoid future complications. During a current iteration (in Scrum, the sprint), we never add to the iteration backlog to add new items as we need to focus on the pre-selected ones. So in this case, it is necessary to wait until the next iteration to fix the bug in the product backlog and add it to the sprint backlog of the next iteration to fix. Bugs should be prioritized like other user stories, and if they are not of high value, must wait until a later iteration before they are fixed.

The component of financial debt can occur unintentionally when a mistake is made by the team or the company. Technical debt is the expense of choosing the quickest solution over the most effective one. In the software industry, the team might opt for faster code to free up time for feature development. It is done to fulfill deadlines, but if not handled effectively, it can create more harm than good. Last but not least, knowledge gains are all actions related to data collection that are necessary for future task performance. It can imply conducting research, developing prototypes, conducting tests, or putting POCs into action. If the development team lacks the necessary information to create the best outcomes, they must do knowledge acquisition before beginning development work (Bordio, 2022).

3.3.3 Sprint backlog

A sprint backlog is a set of activities to be accomplished during a project sprint that are based on the tasks outlined in the product backlog.
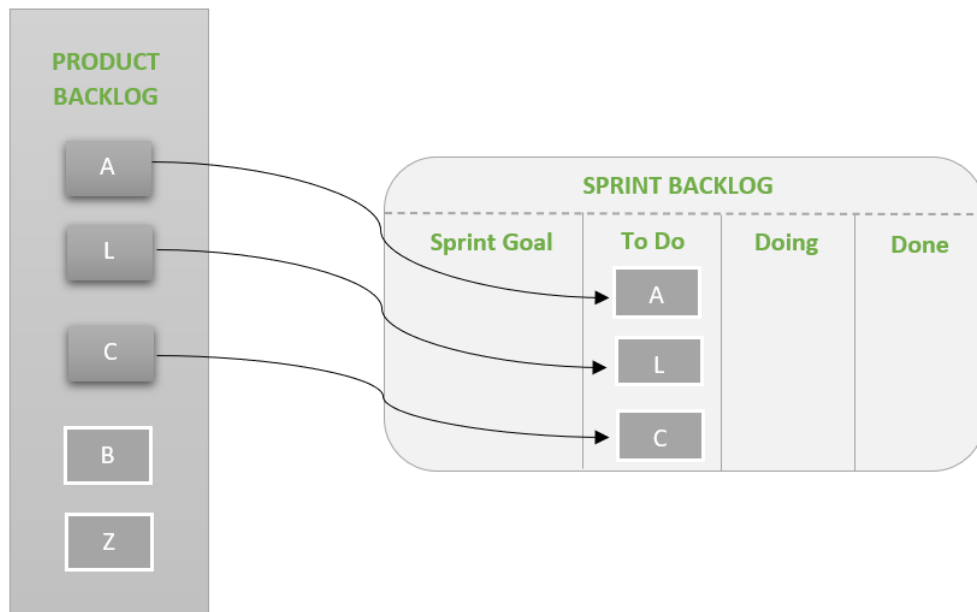
Figure 12. The Transition from product backlog to sprint backlog

Taking the product backlog as the big picture of the project plan, the sprint backlog is a narrowed-down version of it (see Figure 12). The Scrum Master defines a sprint as a time period of one to four weeks in which specific tasks should be completed in order to produce an incrementally releasable product. The "done stage" of the sprint is another name for it. However, it is essential to remember that the sprint is merely a milestone used to complete a task, rather than the final goal known as the sprint goal.

Throughout the Sprint, the development team will adjust the Sprint Backlog, and the Sprint Backlog will progressively emerge in the Sprint process, such as when the development team works according to plan and understands more about the work required to achieve the Sprint goals (Visual Paradigm, 2022). The duration of the sprints depends on how experienced the Scrum team is and how much guidance they need. If they are inexperienced, it is best to plan for shorter sprint times, such as one week.

4 Product: Collapp SMB

After the user stories, the outcomes of the learning topics are going to be transformed into the required functions and features of the virtual platform. In this chapter, the vision and actual requirements of the platform are laid out. Here, the product backlog is created, which consists of various sprints. Those sprints are going to be zoomed in on and the sprint backlog established. In the sprints, the requirements and necessary features are set and complemented with additional constraints for the features that have to be developed.

When developing a product, the name is important. Especially with regard to marketing, it is crucial to select a good product name. Collapp SMB has been chosen as the name of this virtual platform. This is the result of wordplay and a brief study of what names already exist in the market. It is important that the name be neutral and scalable, so it can be expanded nationally or internationally. This topic is evaluated in more detail in the branding section, Chapter 5.4.1 Brand Architecture. This is the name for the product internally and externally. Sometimes projects have a different name than the actual product that is put on the market.

4.1 Vision statement

The "Vision statement" of a product is a written statement that explains the product's overall long-term mission. Its objective is to express clearly in which direction the product should move and the long-term goals to be attained. The statement should act as a guide and reminder to all stakeholders engaged in the creation of the product. That means the entire Scrum team, executive staff, and marketing have to know about the common goal they're attempting to achieve with this product.

Providing a beneficial platform for local SMBs to create events in order to promote Barcelona as the central hub of social and economic areas of business that focus on collaboration rather than competition.

Figure 13. Collapp SMB Vision statement

Collapp SMB aspires to be an important exchange and collaboration app for local businesses in Barcelona (see Figure 13). It aims to include all kind of sector variety to collaborate.

4.1   Collapp SMB: User stories

This chapter identifies the potential users of the platform and summarizes their stories. Different local SMBs' needs and requirements will be discovered. This project targets ICT and commerce as fundamental sectors in Barcelona (see Section 3.2). The targeted audience is local businesses in those sectors, for which it is necessary to establish certain questions about the topics that are necessary to know for the features of the platform.

The companies that were selected for the user stories are all local entrepreneurs from Barcelona. Firstly, the CEOs of those businesses are going to be asked some background questions to get a better picture of their business and structure. Following that, the topics that are important to know for the platform are asked. These questions are developed with the assistance of a pre-selected set of learning subjects.
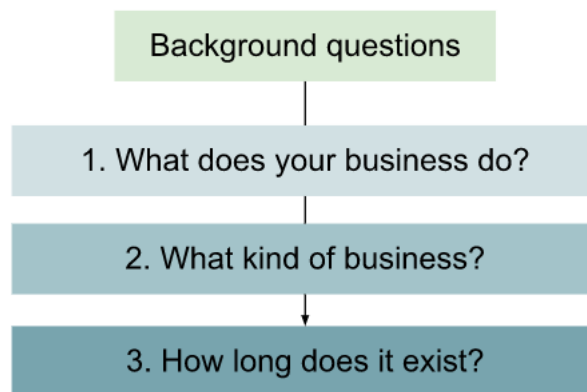
Figure 14. Background questions user stories

The background questions (see Figure 14) should provoke the user to reveal some insights into what the business offers and how it is structured. The first question elicits information on the sort of service or product offered, as well as the company's value proposition. The second question focuses on the structure of the business, such as what legal business type it is and if it is an online or offline firm or both. The final background question reveals the business's stage of development and future objectives.
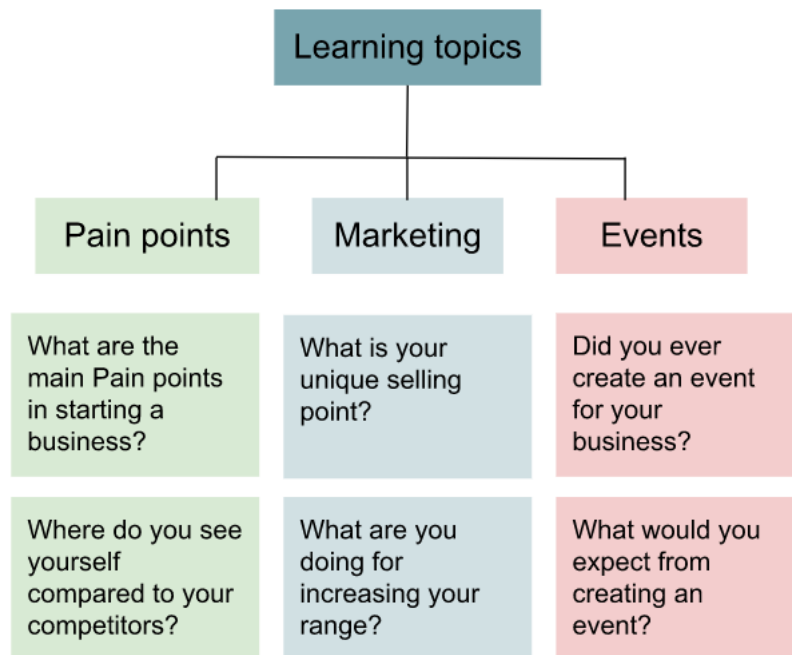
Figure 15.User Learning Topics

The second part of the interview focuses on the user's more detailed requirements. The questions are established while keeping in mind the topics that are unknown (see Figure 15). These questions are essential for the features of the platform. So the goal is to identify the users' pain points and the solutions that can be provided. It is important to take a lot of quotes and notes during the interviews in order to not miss any details (see full interviews in the Annex). The topics to learn about are pain points, marketing, and events.

Firstly, the pain points of the company are discovered. That is what a business faces once it has reached a certain level of development. In relation to this subject, it is interesting to evaluate how the CEO perceives the company's position in the local market in comparison to its competitors. As the second topic, marketing is selected. Marketing is a huge cost factor and is especially crucial in the early stages of a business's development, so it is important to know about the business's marketing strategy and how they increase their customer base.

The third learning topic is learning about any events that the businesses have planned or their eagerness to hold an event and how they perceive its effectiveness.

The key aspects of these interviews (see Annex 8.1) will be wrapped up in Scrum user stories in the following section as their results.

4.1.1 Results: User stories

Based on the previous sector study (Chapter 2.1.2) the target users have been identified. In total, four local companies have been researched and requested to conduct interviews. As the literature review has discovered, Barcelona shows a rich variety of commercial sectors. It is important to also keep in mind the offline and online presence of a business, as this has an effect on many strategic aspects and probably also on future business collaboration.

The local companies identified as potential users are:

- I Wear Dolls Barcelona (on and offline) Retail
- Wine Workshops (offline) Service
- Barber brothers (offline) Service
- Transformatelavida (online) Service

The sector and focus of the potential users are very different, with the goal of achieving a very broad perspective of potential customers. The offline and/or online presence is especially important to know if it is attractive to collaborate at offline events, even for businesses that have a purely online presence. The three learning categories from the user interviews are used to categorize the user stories into:

- Pain Point user stories
- Marketing user stories
- Event user stories

User stories are written in a non-technical manner. This is because the product backlog (see Chapter 3.3.2) serves as a means of communication with non-technical customers. They should be independent of each other, so they can be developed in any order. There are five user stories in total, each with effort punctuation and a priority to indicate their importance.

Pain points

C	Forum	2

As a professional starting a SMB in Barcelona
I need more valuable information about how it works
So that I don't do common mistakes.

Figure 16. User Story Forum

The pain points were determined to be, for most of the users, a lack of experience and knowledge about how to start a business. Especially for expats, it seems hard to know where to find the right guidelines and information on how to begin a business in Barcelona.

This user story's implementation and requirement would imply a kind of platform where users can chat with one another and share common mistakes and best practices. This could be done in the form of a blog or forum on the virtual platform (see Figure 16). The user story is valued at 2 story points, as it is not complex to develop a blog or a forum. Also, the priority is lower with a could-have because this aspect is a secondary matter. It is a useful aspect, but is not crucial for the main solution.

Marketing

M	Online Offline Events	8

As an online business
I need different marketing methods than offline companies
So that I have the right customer targeting.

Figure 17. User story Offline/Online Events

The user story in the marketing topic is about the different requirements of online and offline companies. The users make it clear that they need the right marketing channel to be successful and reach the right audience. They remarked that they have different requirements for targeting the right customers according to their required channel, whether online, offline, or both (see Figure 17).

For implementation, that means there must be the possibility to create different kinds of events. Therefore, the virtual platform must offer the ability to create both online and offline events so that businesses can choose according to their needs. The story points assigned are 8 because developing two different solutions for end users is more difficult. The criteria

of the matching algorithm have to be programmed separately, which implies a higher workload. The priority is a must-have because it is a core feature that users need to have to be successful.

Events

| C | Advertising Template | 5 |

As a local SMB in Barcelona
I need to create events
So that I can grow brand awareness.

| M | Matching Function | 21 |

As a local SMB in Barcelona
I need to collaborate with suitable partners
So that we have a mutual outcome.

| S | Network Community | 13 |

As a local SMB in Barcelona
I need to connect to other businesses
So that I can expand my business network.

Figure 18. User Stories about events

The user stories concerning the events (see Figure 18) are about the kind of needs and conditions the users have when they want to plan an event. The "Advertising Template" user story is about the main goal of the users´ creating an event to grow their brand awareness and generate more leads. This means, as a feature, the platform could have some sort of advertising template for the event in order to promote it. The story points of this user story are more or less low, with 5 points, as it is not very complex.

The "Matching Criteria" user story is about the wish to have the same outcome as the result of an event. That means that businesses have to provide adequate information to be correctly matched with events or other businesses. That implies the virtual platform has very adequate selection criteria, which users have to fill out. This is a crucial must-have that is estimated at 21 story points, as it is complex and requires a high workload. The complexity comes from the matching criteria algorithm, potential optimization of the matching characteristics, maintenance of a database, and security issues to maintain the integrity of the data of the users.

The "Network Community" user story is about the event experience between businesses, supporting each other and giving feedback in the form of ratings. Reviews are an important source of feedback; they help surface real experience. The story points here are 13, as it is estimated to be of medium complexity. This means that the implementation of the function, implies an effort to prevent security issues and to care for the integrity of the data of the users. This user story has a lower priority selected as a should-have, but it is definitely a very good feature to have that brings a lot of value for the end user.

4.1 Collapp SMB: Product Backlog

Because this Master's thesis is a hypothetical approach to agile software development and all roles within Scrum are filled by one person, the backlog has a smaller scope than usual. Following, the outcomes from the user stories from the previous chapter are sorted into the product backlog below. The goal here is to concentrate on the must-haves and treat the should-haves and could-haves secondarily.
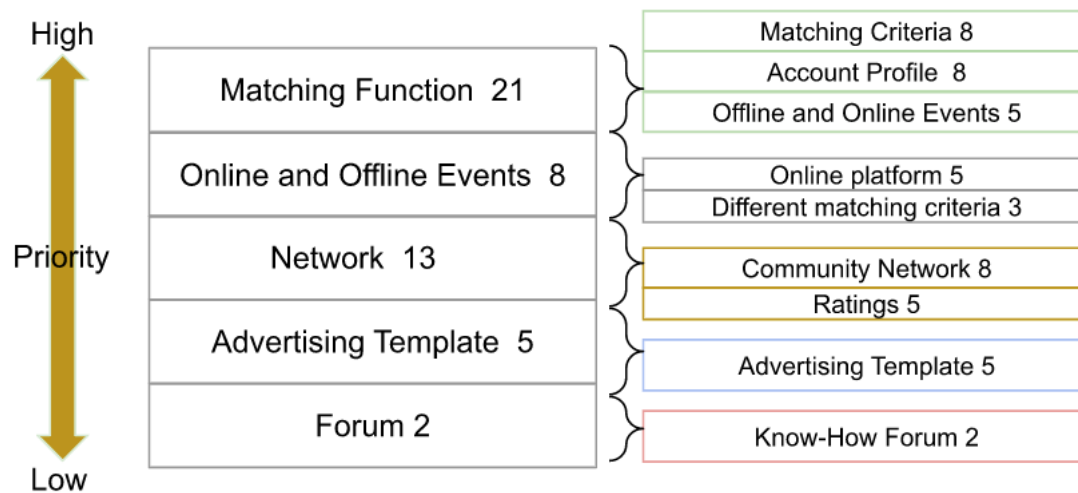
Figure 19. Collapp SMB product backlog refinement with the effort points

The product backlog derived from user stories (on the left) and the resulting product backlog refinement (on the right) are represented in Figure 19. The user stories are organized according to their prioritization as PBIs in the product backlog with the given effort points. A refined product backlog indicates that user stories have been further defined into smaller, more precise items. The newly refined backlog items must be assigned a new effort point value. The effort points for the PBIs are taken as equal to those of the user story they belong to.

Besides the PBIs that have been developed from the user stories, it has been decided to add a menu from which users can navigate within the app. The effort points for the menu are 5, as it is of low to medium complexity to program a menu as it has just a navigating function. In this case, it is determined that the PBIs do not have dependencies and that all PBIs can be developed independently of each other.

Before moving the items from the product backlog to the sprint backlog, the PBIs must be put in the right prioritization order according to the value/effort matrix in Figure 38 see Annex. The PBIs have to be evaluated based on their value to users and the effort required to execute them. The matrix is divided into four quadrants. The quadrant "Important Wins" has a high value and a low effort, the quadrant "Big Tasks" has a high value and a low effort, the category "Maybes" has a low value and a low effort, and finally, "Time Wasters" has a low value and a low effort.

Figure 20. Value/Effort Matrix for Prioritization

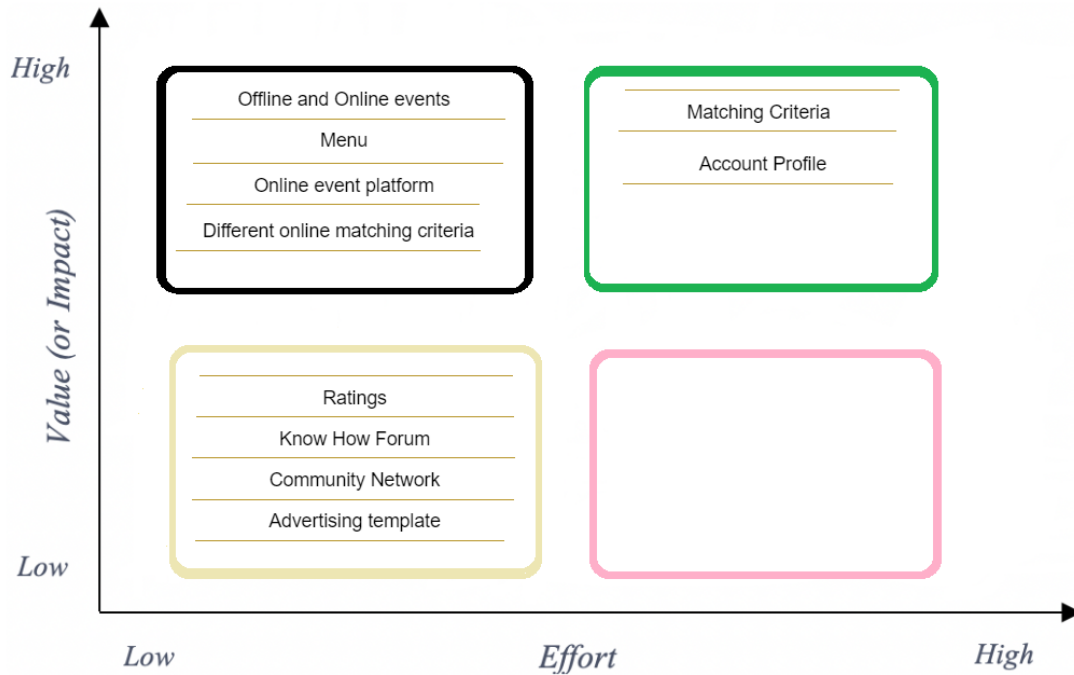Figure 20 shows the Value/Effort matrix for Collapp SMB as the first prioritization approach. This is done to get a first impression of the importance and complexity of the PBI.The quadrant "Important Wins" with high value and low effort contains the most attractive features, requiring only a low degree of effort, and giving the highest value to users. This class is the first development focus, because it is easy to complete and wins customers quickly. These features are promising and should give the best return for the development effort.

The quadrant "Big Tasks" with high value and high effort is also known as "Big Bets" or "Strategic initiatives". These initiatives or features have a high value or impact, but also require high levels of effort (high resources and costs involved with them. Big usability redesigns and new major business functionalities often fall into this bucket. The best approach here is to be selective, pursue these initiatives and features and prioritize them high if they are likely to be worth the effort (and of course if you have the time and resources). But plan carefully and execute efficiently, if possible, by breaking down these big work packages into less complex and better-defined work items (this is where the art of slicing work comes in handy). Moreover, due to the complexity and effort of these initiatives, it is a good practice to set specific deadlines and build checkpoints/milestones into your schedule to allow for easy follow-up.

"Maybes" are categorized as having low value and low effort. The features are rather unimportant and not crucial to have on the platform. These are the PBIs for the development team to pick up when the more prioritized tasks are completed. "Time Wasters" with low value and high effort are important to avoid. The implementation of these features is just not worth the high effort they require because they don't bring a high level of user value. In this case, there are no "Time Wasters" because all PBIs chosen are deemed important (Andreev, 2020).

32

To know the exact prioritization order of the PBIs in the product backlog, the items are placed in the value/matrix table with exact punctuation in the Fibonacci numbers.

Table 2.Value/effort matrix

		VALUE						
		21	13	8	5	3	2	1
EFFORT	1	Offline and Online Events 21	Menu 13	Event platform (online) 8				
	2	Matching criteria (offline) 11	Account profile 7			Advertising template 2		
	3	Matching criteria (online) 7	Ratings 4					
	5	Know-How Forum 4						
	8	Community Network 3						
	13							
	21							

After the PBIs have been categorized into the four quadrants, Table 2 shows the exact prioritization for the backlog. It puts the criteria in place to identify the features with more or less value. The numbers inside the fields of the items show the order of prioritization, where 21 is the most important and 2 is the least important.

Menu	5
Matching Criteria	8
Online event platform	5
Account Profile	8
Different online matching criteria	3
Ratings	5
Know How Forum	2
Community Network	8
Advertising template	5

Figure 21. Priority list and final backlog

The completed backlog with all necessary items (see Figure 21) has been developed and ordered into priority. The following step will occur in the sprint planning phase, where the duration or length of the product development is defined. The effort points are shown next to each of the PBIs. The sum of effort points is 54.

4.1 Collapp SMB Sprint Backlog

In this case, the scenario is based on inexperienced Scrum members. The development team consists of three freelance developers who have been hired only for this project. According to the level of Scrum experience of the team and their capacity, the sprint length is one week, which means five working days. There are nine sprints in total.

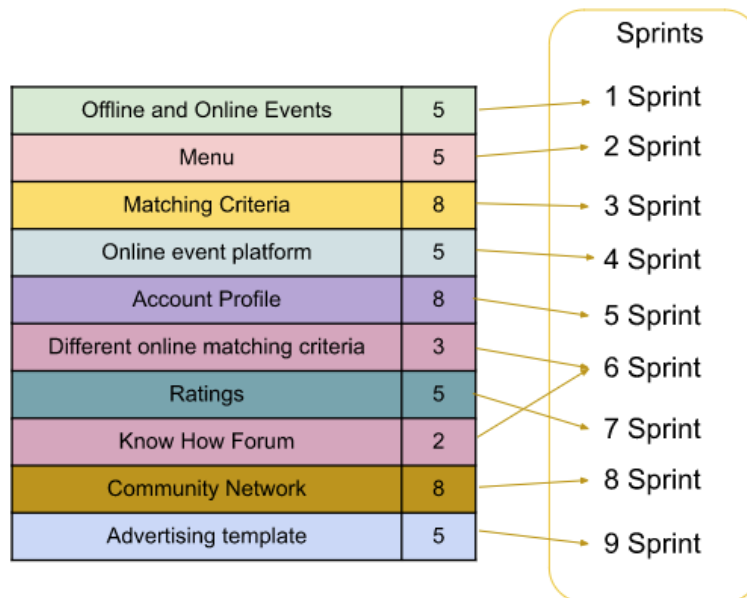|		
Offline and Online Events	5	1 Sprint
Menu	5	2 Sprint
Matching Criteria	8	3 Sprint
Online event platform	5	4 Sprint
Account Profile	8	5 Sprint
Different online matching criteria	3	6 Sprint
Ratings	5	7 Sprint
Know How Forum	2	8 Sprint
Community Network	8	9 Sprint
Advertising template	5	

Figure 22. Collapp SMB sprint backlog

The sprints in Figure 22 have been planned according to the project duration, the sprint length, and the effort points per sprint. Usually, it is important to also calculate the sprint velocity, which can be calculated using the information about how much work the Scrum team did and how long it took them to do that task. Because there is no experience or data on how long it takes the team to complete a sprint in this case, the project duration is calculated. The equation is the sum of effort points divided by the total length of the sprint in days. The total number of story points, in this case, is 54, and the average sprint duration is one week, five days because weekends are not counted (Asana, 2022).

54 story points/5 days = 10.8 weeks

The project duration is 10.8 weeks, which means that sprint backlog planning can take place and PBIs from the backlog can be ordered into different sprints. The calculated project duration and the products' development are rounded up to a maximum of 11 weeks, which is almost 3 months. Hence, the sprints are determined with a maximum capacity of 10 story points per sprint. In order to distribute the to-dos wisely and max out the teams' capacity, there are 9 sprints of 5 days each. This also means that the 55 days that are available are not completely filled. There is a buffer time of 10 days left in case any inconvenience happens.

Usually, the tasks for the sprint backlog would be organized as shown in chapter 3.3.3. Figure 12. As in this case, the product backlog is quite manageable, and besides one

exception, there is just one PBI per sprint, so this step is skipped and the requirements, features, and additional criteria are examined.

4.1.1 Technical Requirements

The technical requirements result from the user stories and user input on the different topics. The requirements form the fundamentals on which the future terms and conditions for successful collaboration are based. According to those requirements, product development is executed.

1. To be able to register in the app, the users will have to accept a terms and conditions form to prevent them from of violating the good balance between the partners. Each partner must adhere to these principles.

2. Each partner must be able to benefit from the cooperation (mutual win-win situation). This is the only way to expect the same level of commitment from every partner.

3. The goal for the collaboration must be formulated very precisely. A rough agreement on vague cooperation goals is very likely to lead to dissatisfaction and rarely to success.

4. Expectations and goals of the partners must be brought to a common denominator before the start of the collaboration. Even if each partner should have their own clear objective, it must be prevented people work past each other.

5. The individual cooperation measures, deadlines, costs, etc. must be clearly defined. This is the only way to make the joint work comprehensible for everyone involved, its success measurable and course corrections possible.

6. Tasks and competencies must be clearly distributed. This is the only way that the collaboration can actually be carried out hand in hand based on the division of labor. In addition: Conflicts about responsibilities, misunderstandings, duplication of work or work that is left undone are avoided in this way.

7. The distribution of costs and results must be determined in advance. Each partner must benefit appropriately from the success of the cooperation.

8. Each partner must have the same rights and obligations. This is the only way to avoid, for example, that one partner is dependent on the other or that the partners within the cooperation become competitors.

9. Each partner must be willing to compromise. No one may try to "run over" the other.

10. Each partner must be equally committed to the collaboration, in terms of personnel capacity and time availability.

11. The employees of each partner company must know, accept, and support the collaboration goals and measures.

4.1.2 Features

Derived from the user stories and requirements, the main features of the MVP Mock-Up and the necessary matching requirements are set forth in this chapter. To give the user the maximum value, the following features have to be part of the platform:

If the user has already created an account and is led after log-in in to the **Main Menu,** it is possible to go to the different functionalities:

1. **Account profile,** where users can enter basic information to help create the ideal collaboration match**.**

2. **Event creation** is a feature that allows businesses to find a suitable event partner or to post an event.

3. **Community Network,** is where ratings, comments, and pictures of the event are posted for a good user experience.

4. **The Know-How Forum,** where users can post their issues and doubts about start-up-related topics.

An extra service for both subscription users (see 6.3 App Monetization) is templates for promoting the events. Once the event is created there is an automatic template with a QR code with both website of the event which each one of them. The users can use this automatic generated document to promote their event.

The customer service is available as an add-on and is only available for one subscription type (see chapter 6.3 on app monetization). It professionally advises businesses based on their company strategy on how they can make their events more fruitful.

4.1.3 List of criteria

The list of matching criteria is complementary to the requirements and is the base for the algorithm. They are very important to define as matching restrictions in order to create more value for the matching function and the event creation. The list of items that is shown below is adding more value to the design of the mock-up.

1. It is important to not match businesses that are direct competitors.

2. It is important to not match businesses where the goods cannibalize each other.

3. It is mandatory to not match companies that have a different targeted audience.

4. It is important to not match companies that have different price ranges.

5. It is important to not match companies that have a different time schedule.

6. It is important to not match companies that have a different time frame.

7. It is important to not match companies where the good doesn't fit in the free space.

8. It is important to not match companies that have a different event entrance fee.

5 Concept for the virtual platform

Primarily, it is crucial to decide which virtual platform is going to be used for this type of project. When determining whether to construct a native, hybrid, or web app, the best option truly depends on the ultimate goals as well as the budget. If the objective is to provide mobile-friendly material at an affordable price to as many people as possible, a hybrid website is certainly the best way to proceed.

As the name suggests, hybrid applications are a combination of native and web apps in that they are installed and run like native apps but have the inner workings of a web app (Summerfield, 2022). A hybrid application for this type of platform seems to be the most suitable and has been selected as the source of the virtual platform. Besides, an app landing page has to be developed. This helps to advertise and drive downloads of the mobile application. The landing page is where leads are generated and advertised through digital marketing and organic traffic.

5.1 MVP Mock-up

A mock-up of a conceptual MVP is necessary due to the unknown acceptance of the software. It is crucial to develop a minimum viable product (MVP) with defined testable objectives in mind. With the MVP, it is possible to gain user feedback and other necessary information before launching the finished end-product. It is valuable to analyze the user's behavior and, with a growing user base, adjust the MVP and make necessary changes.

A prototype of the software project can be created to visually represent the UI and UX. The UI is the focal point of human-computer interaction and communication. It refers to how a user interacts with the program. The UX refers to the user experience in designing the product to make it enjoyable for the user. The prototype can be utilized to solicit feedback from team members and shareholders. In this case, the prototype is a conceptual design in the form of a mock-up. The goal of the mock-up is to create a good user experience that is intuitive and easy to use. The mock-up is then presented to two potential users to get feedback. As a result, potential flaws are identified more quickly, leading to a more polished MVP and a better end product.

The entire Collapp SMB mock-up, including the features mentioned in Chapter 5.1, is available on the website Figma. By scanning the QR-Code with a mobile device it directly leads to the full view of the mock-up. Additionally, the concept is added as a PDF to the Annex.

This chapter intends to provide a more thorough explanation of the mock-ups characteristics and functionalities. It leads through the requirements of the concept and explains their existence in more detail.

5.1.1 Account Profile

The main goal is to connect companies that can benefit from each other. This implies that there must be matching criteria for a successful collaboration, which serves as the foundation for the matching algorithm. The Account Profile fulfills this requirement. It is mandatory for each user to fill out this information in order to create an event and use the other functionalities of the platform. The information consists of various topics that have been considered to be the most important for matching collaboration partners. Additionally, the information backs up the requirements and criteria for the platform in Chapter 4.1.

Figure 23. Example of the Account Profile, General Information

The General Information of the Account Profile (see Figure 23) has been already pre-filled as an example to give a better impression on the criteria options. This information is visible to all application users, and it helps to choose the right collaboration partner and learn more about their business profile, in addition to building the foundation of the matching criteria. On the left, in purple, there have to be filled in the personal details about the business website, the user's name, and the user's job role.

This general information consists of the following aspects that have fill-in options:

1. **Business Name:** Write the official name of the company.
2. **Company Start Date:** Select the date of foundation.
3. **Location:** Select the address of the company. This can be left in blank if it does not have a physical location.
4. **Type of business:** Selection if it is Online | Offline | Both
5. **Type of sector:** Selection of different sector types.
6. **Type of good:** Selection of the type of product or service
7. **Cost of good:** Write the cost range for products or services
8. **Targeted Customers:** Select the audience for your product or service.
9. **Availability event location:** Select YES | NO, if a physical location is put for events.
10. **The space you offer**: Write the physical space you offer for your collaboration partner (leave additional recommendations, add picture).

The user is asked what type of events they want to participate in during the second step.

Figure 24. Event choice

The user has the option to choose between online and offline events, or can do both (see Figure 24). This is asked because the next set of criteria changes depending on the type of event users want to start.

A second requirement is to fill out the Specific Information section of the Account Profile. This information is necessary in order to obtain more specific user information about the events they want to start. So after selecting the Event choice (see Figure 24), users pass on to the Specific Information. Then users have to fill out different criteria according to their previous selections. Based on the general and specific information (online, offline, or both), the application gives the user the right business matches for non-competing sectors. Once there is a collaboration match, both businesses can see each other's Specific Information.

Figure 25. Example of Specific Information for Offline Events

This is the more specific part of the matching criteria, as the name "Specific Information" implies (see Figure 25). For offline events, the required information consists of the following aspects:

1. **Time schedule:** Select the schedule for events between Mornings, Afternoons, Evenings.
2. **Event duration:** Select the event duration in hours.
3. **Space occupation of good:** indicate space occupation of the product or service with references that are provided and displayed as: S | M | B (small, medium, big) where S: Size of a ring, M: is the size of a bottle, and B: is the size of a chair or bigger.
4. **Other products necessary:** Select if you need other products/service to sell your service/product (Yes | No).
5. **If Yes:** Select or write directly what you need like electricity, water or specific tools.
6. **Entrance fee:** Select Yes | No, if you want to take entrance fee for your events.
7. **How much?** Write a price in EUR how much per person.

As previously stated, different information criteria must exist for users who wish to participate in online events. The criteria is shown below.

Figure 26.Example of Specific Information for Online Events

The Specific Information (see Figure 26) for online event matching is specialized and contains the necessary requirements for those who just want to host online events and collaborate online. The options are displayed as follows:

1. **Time schedule:** Selection of the schedule for events between Mornings, Afternoons, Evenings.
2. **Event duration:** Selection of the event duration in hours.
3. **Agenda:** Writing of the structure of the online event.
4. **Time occupation:** select the amount of time you need within the event duration.
5. **Presentation templates:** Select Yes | No if a presentation template is needed.
6. **Entrance fee:** Select Yes | No, if you want to take admission fee for your events.
7. **How much?** Write a price in EUR how much per person.

If the account holder wants to create both online and offline events, the application will automatically combine the complementary details from both scenarios. After completing the Account Profile Information, the user gets a confirmation. Then Event creation can start.

5.1.2   Events

After creating an account or directly navigating from the main menu, users can choose whether to post an online or offline event. This is the main function of the application and provides the most value to users.
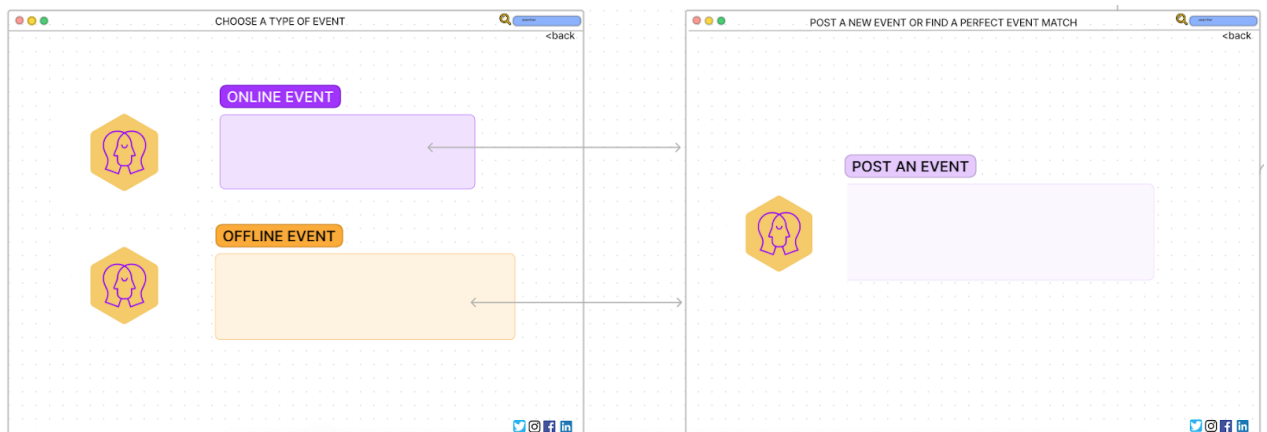
Figure 27.Post an Event

The event feature (see Figure 27) is meant to match two businesses for a collaborative event according to the criteria in the Account Profile. The goal is for the participants to have a positive experience during the event and a win-win collaboration. Offline event creation is shown first.
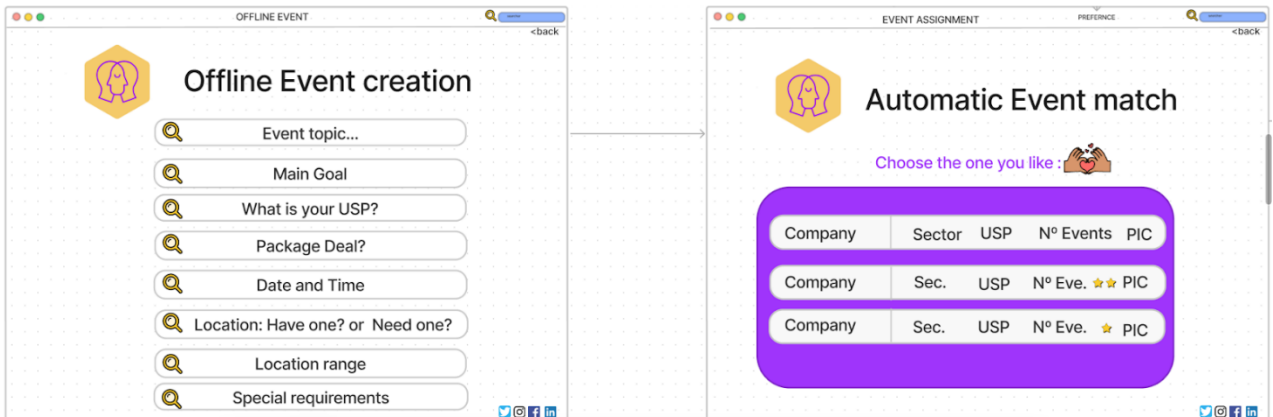
Figure 28.Offline Event Options and Automatic Match

As demonstrated in Figure 28 on the left, to start an event collaboration, the user has to fill in event details. The details are necessary for further and more exact partner matching. The Offline Event creation consists of:

1. **Event topic**: Select from various available topics, this works like a keyword and matches businesses who select the same topic. Example: Jewelry Socials etc.

2. **Main Goal:** Select the main goal of the event. Examples: Brand awareness, Sales, Networking.

3. **What is your USP?** Select an option of what is your business does in particular good. Example: Service

4. **Package Deal?** Select if you want to offer a package deal with your collaboration partner.

5. **Date and Time:** Indicate various availability of the event's Date and Time.

6. **Location:** Have one? Need one? There are matches where one of the collaboration partners has a Location. So they complement each other.

7. **Location range:** select a range of km, how far should the collaboration partner be from your business location.

8. **Special requirements:** indicate special requirements for this event.

Once the users have filled in the details of the event creation, they get to choose the collaboration partner in the automatic event match (see Figure 28, right). It displays the company collaboration options and their ratings (the number of options is based on the subscription type).

Next, the online event creation is shown. The users who want to start online events need other details to fill in different criteria.
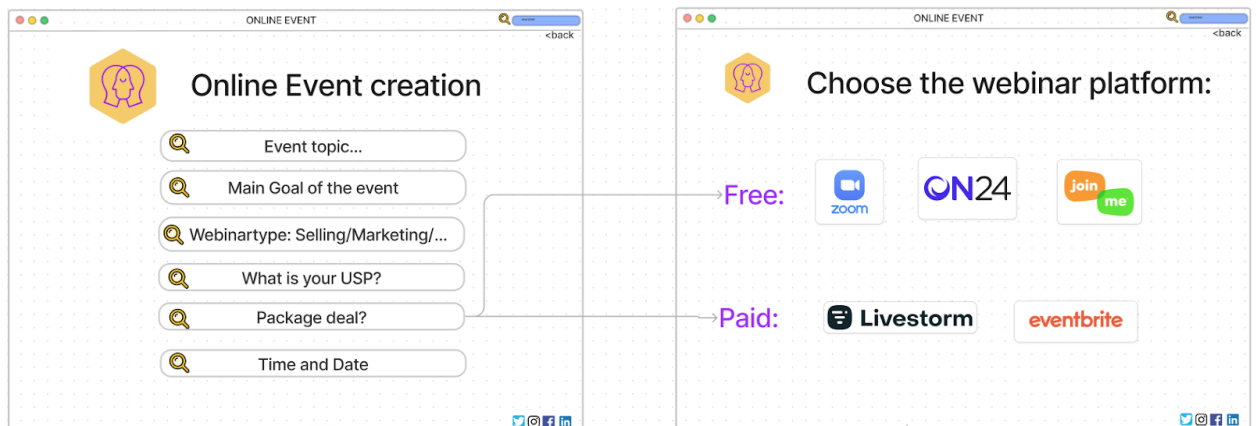
Figure 29. Online Event Creation and Webinar Platform Selection

In figure 29 on the left, there are the details to fill in for the users to start an online event. They have to complete the following information:

1. **Event topic:** Select from various available topics, this works like a keyword and matches businesses who select the same topic. Example: Meditation etc.
2. **Event Goal:** Select the main goal of the event. Examples: Brand awareness, Lead Generation.
3. Webinar type:
4. **What is your USP?** Selection of an option of what is your business does in particular good. Example: Service.
5. **Package deal?** If the user has indicated in the specific information that an admission price is required, they can select if they want to offer a package deal with the collaboration partner.
6. **Time and Date:** Indication of various availability of the event's Date and Time.

An online event's creation is done in the form of a webinar. This occurs in a live online session. After the event creation details, the user is led to choose a webinar platform (see Figure 29 on the right). The main point to emphasize here is the package deal; depending on the choice, the user is advised to use certain webinar platforms because there are platforms that are freely accessible and there are paid platforms. The webinars' goal is to be interactive, with participants getting information, asking questions, and discussing a topic in real time.

Following the selection of the platform, users for online event matching will have the same selection options as users for offline events.
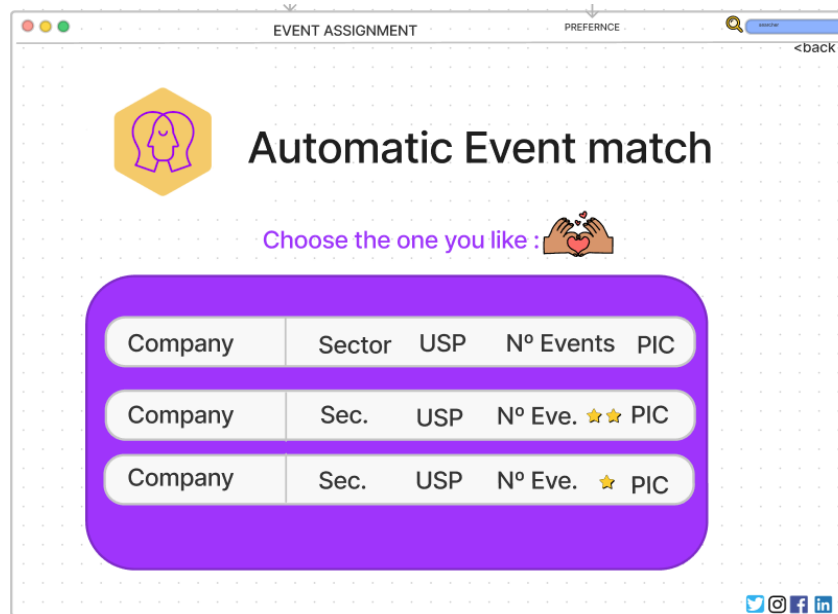
Figure 30. Event match

As shown in Figure 30, the user has the opportunity to select the collaboration partner. The number of options, as with offline events, is determined by the subscription type (see Chapter 5.3 on App Monetization).

For online as well as offline events, once the users choose the collaboration partner, they get a confirmation and the details of the event and can see all the Specific Information about the collaboration partner.
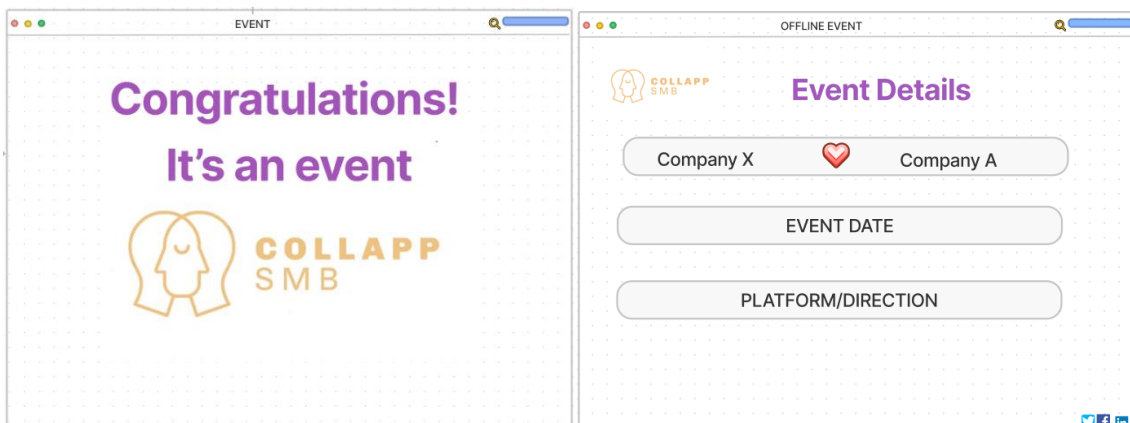
Figure 31. Event confirmation and event details

The collaboration partners see the confirmation for the event (Figure 31 on the left). The event is created once the partner has been chosen. In the Event Details (see Figure 31 on

the right), the users see the event information as the date and the location (if offline) or direction (if online). Those details are also sent to the users' email addresses.

For subscription users, they will be provided with a template that promotes the event.
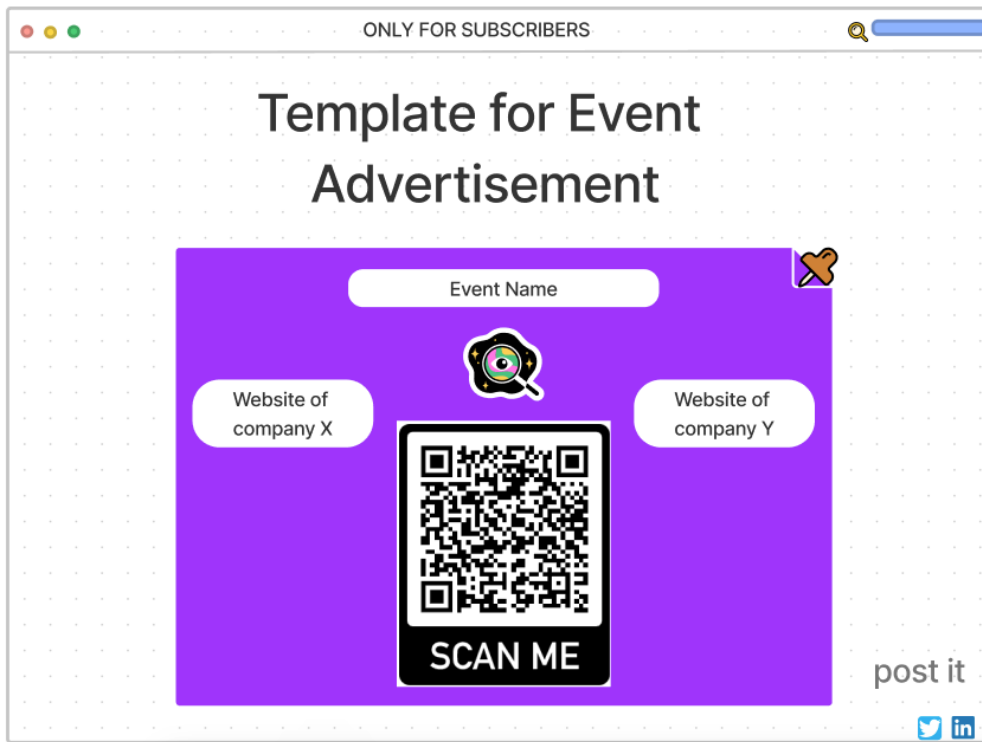
Figure 32.Template for Event Advertisement

The Template for Event Advertisement is an additional feature that provides a framework for the promotion of the event (see Figure 32). The app is generating Event Name options with the base of the event topic previously selected. If none of the name options fit, users can insert a name directly. The template creates an event landing page automatically from both provided websites with the necessary event details. A QR-code of the landing page is generated.

Besides, after the event is created, the users are asked to leave each other a rating. The users have up to ten days.
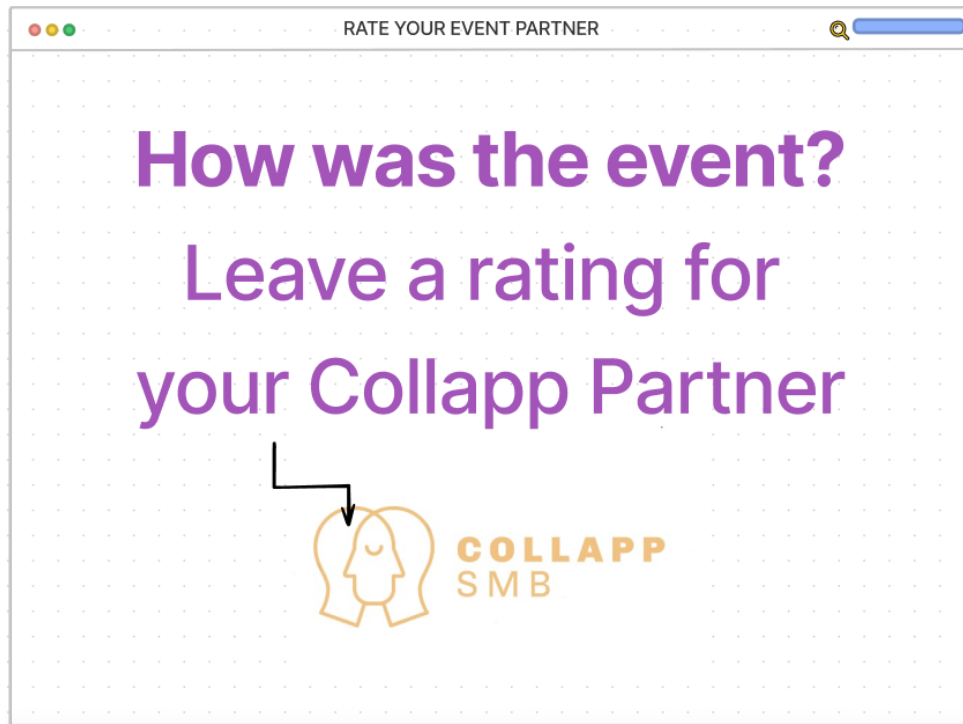
Figure 33.Rating Pop-up

The rating of the users is very important to give an impression of the experience of the event. The users get a pop-up within the app after the event date (see Figure 33). The users are additionally reminded via their email address to give feedback. The ratings of the collaboration partners build the main content for the Community Network.

5.1.3 Community Network

The community network is the platform where ratings can be seen and works as a networking function. Its primary function is to assign ratings after an event has occurred. The collaboration partners have 1–5 stars to give and a comment to make according to the satisfaction of the event. The Community Network also works as an informative tool. The users can insert keywords in the search field in order to check other companies' ratings.

Figure 34.Community Network

As shown in Figure 34, the ratings can be narrowed down by keywords (for example, "wine"), and users can see what kinds of companies there are. The ratings consist of the following information:

1. The name of the company
2. The type of sector
3. The company USP
4. The total numbers of events
5. Pictures of the event

The company's USP is displayed as a marketing statement and is the focus of what distinguishes the business from its competitors. The total number of events is shown to know if it is a more experienced matching partner or less. It is highly recommended to add pictures of the event to the ratings, so the experience can be conveyed better to other users.

The ratings are given after the event date. Collaboration partners have 10 days after the event to rate the other part. They will get app pop-ups and reminder emails to their log-in email. The ratings have rules for leaving only constructive critique. Hence, it is not allowed

to write a negative comment about another business, as it is not compliant with the inclusive philosophy of Collapp SMB. There is an algorithm inside the app that proofreads the comments before unlocking and publishing them.

5.1.4 Know-How Forum

The forum is where users can interact and exchange knowledge. It is used as an online discussion board where users can post questions they have. The know-how forum is used to make social connections and promote businesses helping each other. This creates a sense of community.

To get users motivated to contribute to the community and answer questions, there is a reward system. The reward for answering a lot of the forum questions is getting preferred visibility in the collaboration matches for the events. That means once a business starts a collaboration and wants to be matched, the businesses that are active in the forum are given preference for matches. This is promoted in the app through pop-up messages informing the user.
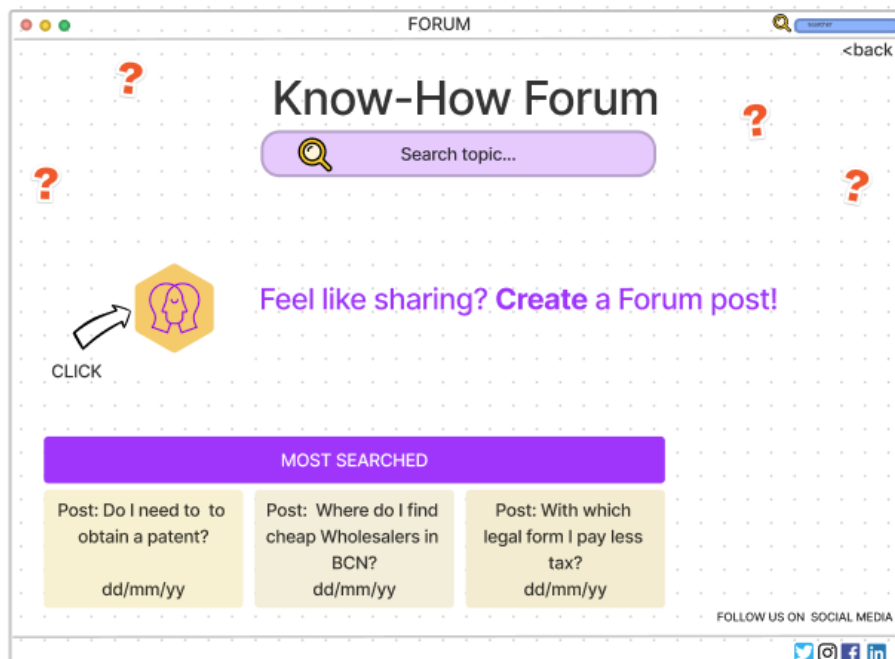
Figure 35.Know-How Forum

The Know-How Forum (Figure 35) can be filtered with a search engine by topics that work like keywords. That gives users the possibility to search for topics that have already been discussed and solved. Users who have questions can easily create a post when they click in the middle of the Collapp-icon. The three most searched topics are always shown at the bottom of the section.

5.2 MVP Test

It is necessary to move the app into a "testing state" before completely launching it. The link to the prototype concept was given to two of the interviewed companies. The feedback shows that it is generally positive, though the participants have made some observations that can be improved. The feedback is received by "transformatelavida", the online business, and "iweardolls" the retailer who has an online and offline presence. These two companies were chosen for feedback because they have the most diverse business structures of all the interview participants. That means they represent a broader user audience.

5.2.1 Account Profile

It has been noted in the Account Profile that the details requested for the Specific Information can be part of the Event Creation Details. In the users' opinion, this fits better in the events section. Another valuable point to keep in mind is to include a very broad user base. That means different sectors have different requirements. The recommendation is to tailor the options to the type of sector.

The feedback also showed that it can be interesting for businesses to collaborate with others in the same sector and with similar services and products to promote B2B networking. The decision to limit this in the matching algorithm can be left up to the users. That means that the users are initially asked with whom they want to collaborate. That can be comparable with a fair where businesses gather for common commercial activities.

5.2.2 Events

The feedback on the events section is only focused on the online event section.

The feedback has shown that it is not clear how to agree on an event structure with the collaboration partner. The tasks assigned to each collaboration partner should be broken down in the online events. It would be an option to provide different options, and a clear webinar structure. As a consequence, users may choose a desired structure and then modify it with the collaboration partner.

5.2.3 Community Network

The feedback about the Community Network has shown that the users do not like the rating system in the form of stars. There is a fear of one- or two-star ratings, and the improvement suggestion is to just write feedback as a comment. The feedback also revealed that the network could be used much more effectively to provide true user value. The suggestion is to create partnerships within the Community Network. That means already-matched partners can create their networks with each other. Additionally, it could be a good idea to use this networks for bigger collaborations involving more than two partners.

As mentioned in the scope of the project (chapter 1.2) this thesis includes just the design of the first mock-up. Usually, the feedback of the potential users has to be taken into consideration and the mockup adapted accordingly.

5.3   App monetization

Before starting the development of an application, it is crucial to plan the income generation strategy. It is easy to lose time and money if the app monetization model is not determined accurately and does not fit the product and potential users. The main goal here is to win over the users of the app as actual clients and generate revenue with them (Schranz, 2018).

It is necessary to compare different strategies in order to demonstrate how the selected monetization approach will generate profit. A well-researched app monetization plan guarantees the generation of a great user experience in order to successfully increase and maintain users (Appel et al., 2020, 93). There are several ways of generating revenue through an application, whether through the end-user or advertisers. For this project, it is important to look at the type of business of the application, which is a service as a platform. So keeping that in mind, the following part aims to find out the most suitable and successful monetization model.

Users do not directly pay for the free version, but the space for advertising or promotion is sold, and thus money is earned with each app download. This is a very easy and indirect way to get revenue with the application, as it does not come directly from the users. For the end consumer, this means a lot of value. They are small local businesses in Barcelona, and some of them are in the early stages of business. That means money is a limited resource. The app allows them to interact with other businesses in order to reach new target groups and provide the service to boost your company's exposure and network.

Another model is the freemium monetization model, which offers a free download but limits features and functions in the app. This model is often used for games and learning apps, but it does not really fit the user or type of platform of Collapp SMB, as it does not match the functionalities of the application.

A monetization model that earns revenue from the end user is the premium model. According to the premium monetization model, an app has a certain cost, and the user must thus pay to get it. The problem here is that the purchase price has to be quite high to give a positive ROI quickly. From the consumer's perspective, it is a basic yes-or-no decision, and since it is a service, consumers would want to try it before actually buying the software. According to those facts, it does not seem like the right monetization model for Collapp SMB.

Lastly, the studied model is the subscription model. Rather than buying software like the previous one, users subscribe to the service and make regular payments. For the Collapp SMBs' revenue, subscriptions mean a regular income. It is no secret that subscriptions are the best revenue model for online platforms but also the most difficult to achieve (Lazzaro, 2022). Studying the existing monetization models of applications, it can be said that there has to be a combination of models. So, in this case, the free version with the in-app advertising revenue model and the subscription model are combined.

The free version gives the users the possibility to download the app for free and at the same time earn the first experience with it. With this model, an indirect revenue stream is

generated. Besides, if users want more functionalities and fewer limitations, they can subscribe to two possible options. The value of this subscription type depends on the functionalities users choose.

To get a positive ROI rapidly, Collapp SMB is offering a 25% discount if users are subscribing on a yearly basis. For the users, this means a significant price advantage, so they are more tempted to pay annually. When the subscription model is implemented, the app's value and, of course, the regular income rise with each new user.
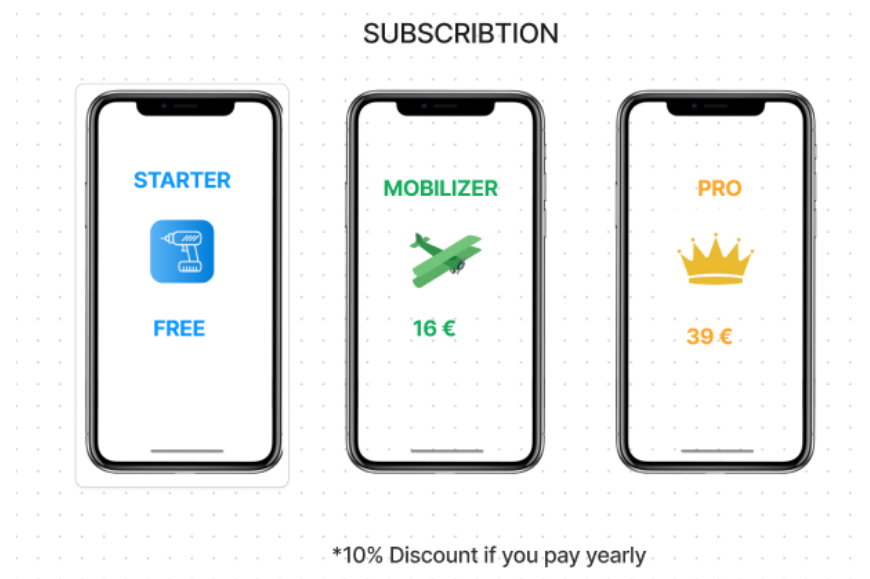
Figure 36.Monitizaion model of Collapp SMB

As already explained, the combined monetization plan for the app is demonstrated in Figure 36. There are three options for users to use the app. The three options have been selected based on neuromarketing studies. The decoy effect is a tendency wherein buyers frequently alter their selections when given a third option. That means the buyer decides to select the cheaper option A over the more expensive option B. When a third choice emerges between the two, people frequently decide otherwise (Minderest, 2022).

The "Starter" version is the free version, where it is possible to sell advertising space. For the users, that means they will see ads within the application. All three options offer full access to the Account profile, Community Network, and Know-How forum. The only difference in limitations is between the event feature and the main feature of the app. The Starter model is limited to four collaborations (online/offline) a year and only one per quarter. In the matching function, there are only two recommended matches to create the collaboration events.

In the Mobilizer subscription type, businesses can create eight offline or online collaboration events, two per quarter. The matching function allows viewing and selecting five possible matches. The Mobilizer package costs €16 per month, or approximately €145 per year with a 25% discount.

54

The Pro package includes the ability to create an unlimited number of collaboration events (online or offline), implying an unlimited number of quarterly events. The matching function shows the pro-users all possible matches without limitations. As a special add-on, pro-users have a special customer service. It professionally advises businesses based on their company strategy on how they can make their events more fruitful. The Pro package is €39 per month, which would be €468 yearly with a discount of 25% or €351 per year.

Both Mobilizer-users and Pro-users have access to the promotion templates; once the event is created, there is an automatic template with a QR code that leads to a newly created event landing page that each of them possesses. This automatically generated landing page can be used by users to promote their events.

As with testing the users' acceptance of and feedback to the MVP in the chapter before, it is interesting to test the monetization strategy on the users. This allows putting the project's theoretical concepts into practice. The monetization plan is presented to all interviewees, and the results show that two out of four people confirmed that they would use the "Mobilizer" package. The two companies considered it the best offer for the price and functionality. They also confirmed that they would pay annually because they liked the discount. The other two companies said that they would prefer to start with the free "Starter" version and test the application. They considered the fact that this is possible and approved that they would change to the "Mobilizer" subscription type if they liked the app.

The results are just a sample, but they show a tendency toward the decoy effect. Users have the intention of choosing the middle solution if there are three, which is partly confirmed. It could be considered to change to three subscription types instead of two. That means, apart from the free "Starter" version, there could be three subscription offers. That would probably raise the possibility of users subscribing directly to the middle option, which would cost more than the actual subscription.

5.4 Promotion plan

The promotion plan for a new product is one of the most important aspects. The strategy has to be developed according to the type of product and the targeted market. As the customers of the end solution are other businesses, the strategy has to be based on B2B marketing. Firstly, it is necessary to know that the buying process for B2B products is different. This means that promoting a product to businesses is not the same as promoting a product to individual customers. B2B product purchases and research are typically more involved. Besides, often more than one person is involved in it. So the challenge lies in finding the right channels, content, and tools to promote the app to the right prospects by creating interest or satisfying their needs.

Digital marketing, especially for B2B marketing, has acquired greater prominence and has become a fundamental part of successful companies with a positive ROI. Digital marketing opens up infinite possibilities and business opportunities like: increased efficiency and productivity; the generation of new business opportunities and streamlining of demand, stimulation of innovation; and improved data usability (Elorriaga, 2022).

To promote an application to other businesses, it is necessary to determine which forms of advertising are used. Ad creatives are visual advertisements that appeal to users via the use of pictures or videos. For this, it is crucial to comprehend the target market and the driving forces behind why customers download the app so that the best possible advertising materials can be created (Viscanti, 2022, 14). The target audience is small to medium-sized businesses that offer local products or services in Barcelona.

Based on the potential for high customization, the main focus of the marketing strategy is set on digital marketing tools. YouTube is an adequate channel to use for B2B promotions for this type of product. Video advertising is among the most engaging ads given to consumers. Videos need more interaction from viewers than banners and may be far more informative than other ad creative styles. As a result, incentivized videos have a greater conversion rate than other app-install campaign creatives and attract users who produce post-install events in particular. Furthermore, it is important to have display ads. They are the most prevalent app install campaign creatives. Standard display ads are banners that can be displayed on any screen, have a cheap CPI, are not too invasive, and can be created in large quantities (Viscanti, 2022, 15).

With time and experience, it is a good idea to expand the platform to more users and create an approachable experience for them. A good plan to achieve this is to advertise with business success stories. An existing customer story is a testimonial that explains how customers are successful using the platform. It shows other potential clients how the major aspects of your product contributed to customer advantages like increased productivity and cost savings. Possibly the finest marketing content you can have is your customers' testimonies.

5.4.1 Brand architecture

To create additional value for the product and make a brand easier for people to access and relate to, the brand architecture is established. It aids in organizing a portfolio of brands so that consumers can quickly determine which brands are related and to what extent.

An integrated system of names, symbols, colors, and visual vocabulary that is directly influenced by consumer cognitive processes makes up effective brand architecture. Marketing activities are far more effective when brands are designed with a rational, intuitive approach. Marketing is more successful when cross-promotion across brands is possible (Lischer & guide, 2022).

The name "Collapp SMB" was chosen for the MVP after researching existing brands and companies, followed by a brainstorming session to come up with alternatives that don't yet exist on the market. A word play and a user evaluation were done. Three possible names were possible to select, which are:

- Collapp SMB
- Collapp BCN
- Bcnollaborate

The clear winner with four out of five votes is Collapp SMB. This is a wordplay between "Collaboration", "Application" and "Small, Medium Business".

In order to create a unique and distinct brand, it is necessary to select the right color palette and a logo. As the platform is about networking and promoting B2B collaboration, the idea is to create a logo with a social touch.
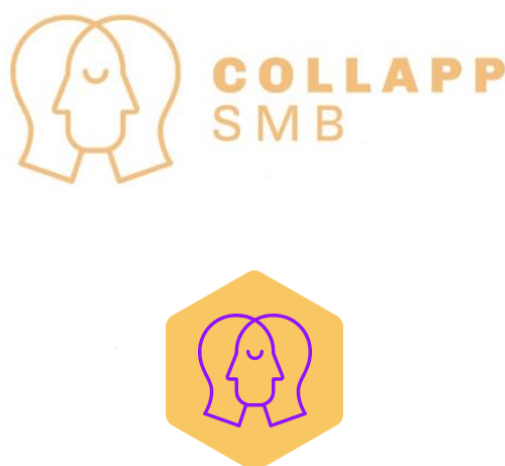
Figure 37. Logo and negative logo (made with logomaster.ai)

As shown in Figure 37, the logo puts emphasis on the social aspect. This is reflected in two heads building one face together. This stands for a mutual goal of business collaboration and a win-win outcome. The primer color is yellow, which symbolizes optimism, good energy, and friendliness. The secondary color is purple, which stands for power, and ambition. The logo is also created as a negative image to use for buttons and interactive actions within the app. The negative logo is yellow and purple, which are opposites, which makes them complementary, which is a nice symbol for the main idea of the business idea: to complement businesses with each other.

The logo and negative logo are used in the UI design. This leaves a permanent mark on the user. The logo design is also important for the interface animation. Once the user is utilizing the app, the experience must be as pleasant as possible. Furthermore, all types of animation must be included to provide seamless navigation and transitions in the MVP. This is not only beneficial for the usability, but also improves the UX.

6   Feasibility Study

To determine if the project's hypothetical concept is feasible to convert, it is necessary to examine the feasibility from several perspectives.

6.1   Technical feasibility

The technical viability test investigates whether software can be created at all with the resources and professionals available. Technological viability, is dependent upon and strongly influenced by the available money, deadlines, legal restrictions, and post-development activities such as maintenance. Usually, the feasibility is evaluated during the ideation stage of product development, following the collection of preliminary project needs, including, on the one hand, the functional specifications, which business analysts record and describe aspects of the solution; and the non-functional requirements, which are often gathered by a software architect and related to the characteristics of the system, such as performance and scalability.

Since this is a conceptual approach to developing an app, the backend of the MVP is not developed within this project. This is solely a proposal for a frontend concept and the ideation of the app, not the technical development itself. Front-end development is concerned with the visual parts of the software, which users interact with. Back-end development includes the structure, infrastructure, and data. Therefore, it is crucial to have an idea of what is needed for the actual development and finally be able to assess the technical feasibility. Following, the elements of a real development like hardware and software, technical hazards and limitations, compatibility with other IT systems of the app, and its maintenance are identified (Altexsoft, 2022).

A hybrid app relies on rendering in a browser that is embedded within the app, but can still be distributed through app stores like native apps. In the development of the hybrid app, the developers just need to create one code base compatible with any platform. That also has the result of easier and quicker maintenance, since just one code base has to be maintained. The first important aspect is the hardware platform, where the mobile app is hosted. This is crucial because it hosts the content that users will access through the app. The Server type has to be defined and the needed characteristics, it is decided that an 16 GB RAM is sufficient space. To develop the hybrid app, it is helpful to use an adequate framework that helps for faster app development. Frameworks are software libraries that provide structure and features to aid in the development of specific applications (Altexsoft, 2022). In this case, a cross-platform framework is needed because the app has to be compatible with several operating systems and platforms. In relation to this, the framework should be chosen according to the preferred programming language, in this case, HTML, which is used for the app's development.

Besides these aspects, there are several components that are important for the technical feasibility, best is to get the right consulting from a specialist who has experience building hybrid applications.

6.2 Economic feasibility

The economic feasibility study is to see if the project is viable and profitable. The hypothesis is based on three different user revenue forecasts. The numbers are all hypothetical.

The first step is to know the actual costs of the project. As it is a virtual product, the units are quite small. The costs are divided between the one-time project investment and the running

Table 3. Project Investment

Name	Unit	Price €/day	Project Duration (days)	Project Cost
Developers	3	€640.00	€55.00	€105,600.00
Programs	1	€80.00	€55.00	€4,400.00
Meeting space	3	€60.00	€55.00	€9,900.00
Total Costs				**€119,900.00**

The project's investment (see Table 3) is the cost that occurs during the 55 days of the project's duration. Here, the investment is defined by the following factors: the three developers, the program (App Framework, see Chapter on Technical Feasibility), and a co-working space for the developers. The total investment is **€119,900**.

Table 4.Running costs of Collapp SMB

Name	Units	Price €/month	Price €/year
16GB RAM server	1	€320.00	€3,840.00
Marketing costs	1	€180.00	€2,160.00
Employees	1	€2,000.00	€24,000.00
Freelancer	1		€500.00
Own Remuneration	1	€1,800.00	€21,600.00
Co-Working space	1	€1,200.00	€14,400.00
Total costs			**€66,500.00**

The operating costs are the running costs per year that Collapp SMB has to pay (see Figure 4). A cost factor is the 16 GB of RAM server. Additionally, there are relatively low marketing costs estimated because there will be a full-time employee hired as a marketing specialist. A freelancer for bug repairs is paid sporadically. The project manager's own remuneration is also counted; she will do the sales. The co-working space is planned for the full-time

marketing specialist. The space price includes the equipment of the employee. The annual operating costs are €66,500.00 and must be considered from the start of the project.

The user subscription forecast revenues are categorized into three different scenarios. The scenarios are: Worst case, Middle case and Best case. According to the names of the scenarios (Worst, Middle, Best), there are the minimum amounts of a subscription users estimated and the revenue they bring with the yearly discount of 25% (see App monetization chapter 5.3). This study is done for 5 years (see Annex Table 12).

Table 5. First year - Worst case

Subscription	Min Amount Users	Revenue annually	Total in one Year
Starters	250	Average €60 /user	€15,000.00
Mobilizers	80	€145.00	€11,600.00
Pro	20	€351.00	€6,480.00
Total	350		€33,080.00

In the Worst case scenario (see Table 5), the total amount of minimum users is estimated to be 350 for the first year. This number is split into the three types of subscriptions that are available. For the Starters, there is an indirect revenue stream since they do not pay to use the app. The amount of €60 per user is won via the advertising space that is sold. The total amount of earned revenue in the worst case scenario is **€33.080**.

Table 6. First year - Middle case

Subscription	Min Amount Users	Revenue annually	Total in one year
Starters	500	Average €60 /user	€30,000.00
Mobilizers	100	€145.00	€14,500.00
Pro	50	€351.00	€17,550.00
Total	650		€62,050.00

The total minimum number of users for the first year is estimated to be 650 in the middle case scenario (see Table 6). The number of new users, in particular, is expected to be much higher than in the worst-case scenario. The total amount of earned revenue in the middle case scenario is almost double that of the worst case, **€62.050**.

Table 7.First year - Best case

Subscription	Min Amount Users	Revenue annually	Total in one year
Starters	600	Average €60 /user	€36,000.00
Mobilizers	200	€145.00	€29,000.00
Pro	100	€351.00	€351,000.00
Total	**900**		**€416,000.00**

The "best case scenario" (see Table 7) shows that the total number of minimum users for the first year is estimated to be 900. This is only 300 more than in the middle case scenario, but the number of users required for paid subscriptions has more than doubled. As a result, the total amount of earned revenue is **€416k**. This is more than double the revenue of the middle scenario.

These revenue forecasts show clearly that it is especially important to focus on the acquisition of paid subscription users, since this contributes to high revenue.

Based on the revenue predictions for five years in total, the Cash Flow is forecasted for the following five years.

Table 8.Cash Flow

Fiscal Year		1	2	3	4	5	Total	Average
Revenues	Worst	€33,080	€40,344	€47,606	€55,223	€62,954		
	Middle	€62,050	€93,075	€134,959	€192,205	€259,476		
	Best	€416,000	€190,190	€342,342	€581,981	€931,170		
Operating Expenses		€186,400	€66,500	€66,500	€66,500	€66,500		
EBITDA	Worst	-€153,320	-€26,156	-€18,894	-€11,277	-€3,546	-€213,193	-€42,639
	Middle	-€124,350	€26,575	€68,459	€125,705	€192,976	€289,365	€57,873
	Best	€229,600	€123,690	€275,842	€515,481	€864,670	€2,009,284	€401,857

Table 8 shows the Cash Flow for the different scenarios (worst, middle and best). The calculation is: Revenue less operating expenses equals EBITDA. And the total of the years is the Cash Flow. For the first year, the investment is included in the operating expenses. In the following years, only the running costs of the company are taken into account. The results of the EBITDA are clear that in the worst case scenario, **€- 213.193** indicates a loss. The results of the middle case of **€289.365** and the best case of **€2.009.284** show a positive EBITDA.

Table 9. Cash Flow with discount rate of 5.7%

Fiscal Year		1	2	3	4	5	Total	Average
EBITDA	Worst	-€145,052	-€23,411	-€15,999	-€9,034	-€2,688	-€196,184	-€39,237
	Middle	-€117,644	€23,786	€57,970	€100,705	€146,261	€211,078	€42,216
	Best	€217,219	€104,739	€233,580	€412,965	€655,353	€1,623,856	€324,771

For the assessment, it is necessary to consider the change in the value of money with time, so to the EBITDA is k applied a discount rate of 5.7% (see Table 9). The results are the present value of any future cash flow. The discount rate is fixed and based on the current inflation rate in Spain (5.8%). The results show the same tendency as in Table 8 that the worst case shows a negative EBITDA and the middle and best cases indicate a positive result.

Table 10. Payback Period

Cash Flow Scenarios	Invest-ment	x̄ Cash Flow	Pay-back period CF	Total days	Payback time	x̄ Cash Flow 2 (5.7%)	Pay-back period CF 2	Total days CF 2	Payback time CF 2
Worst	€186,400	-€42,639	-4.37	1,595.6	4 years 4 months 13 days	-€39,237	-4.75	1,733.9	4 years 8months 29 days
Middle	€186,400	€57,873	3.22	1,175.6	3 years 2 months 18 days	€42,216	4.42	1,611.6	4 years 4 months 29 days
Best	€186,400	€401,857	0.46	169.3	5 months 18 days	€324,771	0.57	209.5	6 months 27 days

To know the time it will take to recover the initial investment, the Payback period is calculated (see Table 10). The Payback Period is calculated: Investment divided by the Average Annual Cash Flow (x̄). This is done for both Cash Flow calculations. The Cash Flow without the discount rate is marked in light orange. The Cash Flow 2 (CF 2) with the discount rate k is marked in blue. The Payback time of the CF 2 is slightly higher than for the CF. The three scenarios worst, middle and best demonstrate variating times. It can be said that the higher the revenue is, the shorter is the Payback time. In the best case the Payback time is in both CH half a year approximately which indicates a very healthy business. The Middle case is acceptable, with a bit more than three years.

The future cash flows cannot be used to establish the project's viability. This is due to the fact that the value of money drops with time. In addition, there is future uncertainty or risk that must be considered. That is why the NPV is calculated.

Table 11.NPV

	Initial Investment	Cash Flow					k	NPV
		1st	2nd	3rd	4th	5th		
Worst	€186,400	-€153,320	-€26,156	-€18,894	-€11,277	-€3,546	10%	-€371,497.9
Middle	€186,400	-€124,350	€26,575	€68,459	€125,705	€192,976	10%	-€20,367.4
Best	€186,400	€229,600	€123,690	€275,842	€515,481	€864,670	10%	€1,220,767.5

The NPV (see Table 11) shows the present value of the future cash flows and reveals the profitability of the investment in the project. Here it is also important to apply k a discount rate. A positive NPV shows that the present value of cash flows exceeds the original cost of the project, implying that returns surpass costs. That leads to the result that only in the best case scenario, the project is worth investing in, as there is a NPV of **€1.220.767.** Adapting the investment could be considered in order to achieve positive results for the worst and middle-case scenarios. A possible option is to not provide a co-working space for the developers and the employee.

Concluding, it can be said that marketing and the acquisition of paid subscribers is crucial for the success of Collapp SMB.

6.1 Legal feasibility

In the study of Legal Feasibility, the project is analyzed from a legal aspect. Analyzing legal impediments to project execution, such as data protection legislation or social media restrictions, project certifications, licenses, copyright, and so on. Overall, a legal feasibility study may be defined as an inquiry to assess whether a proposed project conforms with legal and ethical criteria.

One of the goals is to develop solid terms and conditions that users have to agree to if they want to use the platform. This provides strict clarity about the "rules and conditions" customers agree to by using Collapp SMB. It provides clarity about what they buy and under what conditions. Furthermore, it protects Collapp SMB from any misunderstandings. Terms and conditions have to be written professionally by an attorney to ensure the coverage of all necessary fields (Greenwood, 2020). Furthermore, it is important to ask for the user's consent for data processing. Without the user's agreement, it is not possible in Europe to processclients's data. Collapp SMB must ask users to opt in and agree to the storage and/or re-use of their personal data for Collapp SMB's purposes (European Union, 2022).

In connection with this, it is important to study if Collapp SMB is compliant with European and national laws. As data protection and online privacy are quite strict in Europe, it is crucial to identify and understand the relevant laws in this context. Some examples of important questions about laws with regard to data protection are:

1) Who is the legal owner of the data that Collapp SMB customers provide? This must be classified according to the type of data.

2) What kind of agreement sets up the data exchange? This must be clarified if Collapp SMB utilizes data coming from other organizations or if Collapp SMB delivers its data to other organizations and in which extend.

3) How are the Spanish regulations regarding data privacy? The EU General Data Protection Regulation (or GDPR), which describes different situations where a company is allowed to collect or reuse your personal data, is important to prove if Spain has other rules or exceptions (European Union, 2022).

4) Does the app adopt internal rules for data protection? This has to be specified by class of data (European Comission, 2008).

These are only a few examples of the legal point of view to develop Collapp SMB, but it is possible that some regulations or legislation, whether European or National, can be restrictive in the development of the platform. That means this topic is extremely critical and could be a possible threat to the projects' development. It is important to check this with professionals and get consulted.

6.2   Environmental feasibility

An environmental feasibility study evaluates a proposed development's viability from an environmental and social standpoint, identifying potential problems and dangers to the development's successful completion.

One threat to the platform can be irresponsible actions on the platform. Like agreeing to collaborate in an event and then not showing up. It is possible that there can be last minute cancellations due to unforeseen circumstances, but these circumstances should be defined and written down in behavior rules. If these rules are violated, the user must be banned from the website in order to protect the collaborative environment.

Another point to be aware of is the general protection against criminal activity on the platform. There must be an algorithm for detecting basic criminal energy. Besides, Collapp SMB has to be clear about just providing the platform and not being liable for any of its actions of users.

Another threat can be the competitive environment among local businesses. This is another reason to restrict collaboration within the same sector because it can have bad intentions. For example, snooping on the supply chain and pricing information of collaboration partners.

In conclusion, the possible threats of the platform environment have to be considered and a solution found to minimize them. The platform's goal is to provide businesses with a secure environment in which to conduct beneficial business activities.

7 Conclusions

Concluding, it can be said that the literature study reveals that there is no virtual platform for local businesses in Barcelona to foster collaborative events. Therefore, this project is established to provide a conceptual approach to the solution in the form of a virtual platform design. The main objectives of this project are to establish the platform's requirements based on potential user interviews and show the developments' feasibility. The project is screened by Scrum, and all milestones and work packages are based on this methodology.

In the initial background study, the objective is to analyze in detail the business sectors and activities in Barcelona and narrow down the learning topics of the interviews. It can be said that the literature analysis and the background study confirmed the lack of resources and the existence of high competitiveness among local SMBs. The opportunity for a supporting business collaboration solution lies in understanding the enablement of local SMBs in Barcelona and the likely challenges to conducting their business successfully. Based on the background study, the potential users and the questions for the user interviews are set.

The outcome of the user interviews, which laid the foundation for the software requirements and features, showed that the platform can be a beneficial addition to the local business community in Barcelona. The learning included the fact that there are specific requirements for online business activities and offline activities. Another key takeaway was that there must be matching criteria in place to avoid incompatible partners and promote a win-win situation.

Regarding the design, it can be determined that the established mock-up of the MVP has to be further adapted to the users' feedback. This has to occur in loops until the feedback of the users is considered positive enough to launch a beta version of the product. The first feedback and reaction to the platform have been incredibly positive. The potential users considered the idea to be of potential benefit to their business activities. It can be concluded that the agile methodology is best suited for this project. As the outcome has to provide the maximum value to the users, it is very important to include feedback from stakeholders and to constantly adjust the product to the users' needs.

The financial feasibility study showed clearly that the investment costs should be adapted and lowered. It also provided an estimate of the number of users that must be acquired each year in order to be profitable. This project showed that there is a demand for a platform for B2B collaborations. It showed a difficult entrepreneurial environment without an established local business network. As a result, this virtual platform can add value and benefit local businesses.

As future steps or possibilities, it can be said that once the mock-up of the platform is finished and all frame conditions are set, an MVP prototype has to be developed. This is crucial to being successful in app development. This means an early version of Collapp SMB with only the most important functionality. The purpose is to test the app concept in the real world, so it can be decided whether it's worthwhile to pursue (Strizic, 2022). It is vital to keep testing the Collapp SMB app, since technical bugs are detrimental to mobile applications. They are typically the reason why an app does not get the required number of downloads from the app store.

Once the application is successful in Barcelona, the business can be expanded nationally. As the study in chapter 2.1.2.1 "Start-up Culture," showed, there are a lot of start-ups in Madrid, so it can be an idea to expand the demographics to Madrid.

8 Annex

8.1 Interviews

<u>I wear Dolls</u>

https://iweardolls.com/

I Wear Dolls is an online and offline jewelry retail start-up founded in 2021 by Marly Moreau. The brand has an online shop and a little shop in the heart of Born-Neighborhood. The Barcelona-based company concentrates on selling what began as a desire to wear distinctive, eye-catching jewelry. From her own motivation, the Dutch owner discovered a market gap for jewelry. She sells high-quality stainless steel earrings, bracelets, and necklaces. Not only is the product quality excellent, but it can also be obtained at a reasonable price. Stainless steel is different from other fashion jewelry materials in that it does not lose its original color and is resistant to water and sweat. That makes the jewelry basically "Barcelona-prove." Moreover, every personal request/change can be done by the owner.

Pain points

The main pain point for an expat opening a business in Spain is the complicated bureaucracy. This can already be quite challenging for natives. So, for foreigners with a possible language and cultural barrier, it seems nearly impossible without external help. That leads to the next challenge, finding the right "external help." In any case, when starting a specific type of business, it is difficult to know what kind of specialty the support has to be because there are many agencies that profit from people's helplessness and even fail to provide the necessary support. Additionally, as a foreigner, you always face certain cultural barriers. That implies laws, national and regional, and maybe possible gray zones. In the case of I Wear Dolls, the owner has to import the materials and did not know that this requires an import license.

The second pain as a retail business with a local store is finding the right wholesalers. This is necessary for decoration or indirect products for the business, like packaging, etc. Of course, it is possible and easy to purchase those items online, but at the same time, it can be risky because the material can be less qualitative or the product can be different from what is shown in the images.

In terms of competitiveness, there are people checking out the store and wanting to copy, the owner of I Wear Dolls made it clear that she does not feel intimidated because what she offers is very competitive pricing.

Outcome: Expat disadvantages to get the adequate information, Lack of Wholesalers

Pain points

The main pain point for an expat opening a business in Spain is the complicated bureaucracy. This can already be quite challenging for natives. So, for foreigners with a possible language and cultural barrier, it seems nearly impossible without external help.

That leads to the next challenge, finding the right "external help." In any case, when starting a specific type of business, it is difficult to know what kind of specialty the support has to be because there are many agencies that profit from people's helplessness and even fail to provide the necessary support. Additionally, as a foreigner, you always face certain cultural barriers. That implies laws, national and regional, and maybe possible gray zones. In the case of I Wear Dolls, the owner has to import the materials and did not know that this requires an import license.

The second pain as a retail business with a local store is finding the right wholesalers. This is necessary for decoration or indirect products for the business, like packaging, etc. Of course, it is possible and easy to purchase those items online, but at the same time, it can be risky because the material can be less qualitative or the product can be different from what is shown in the images.

In terms of competitiveness, there are people checking out the store and wanting to copy, The owner of I Wear Dolls made it clear that she does not feel intimidated because what she offers is very competitive pricing.

Outcome: Expat disadvantages to get the adequate information, Lack of Wholesalers

Marketing

I Wear Dolls has a clear mission, to offer exceptional customer service. Although in retail and especially in sales, it is primarily about making a profit and selling the product, the brand has no customer-pushing-policy. The owner herself teaches her employees to face their clients with great kindness and joy in order to please them.

Another very important point related to customer service is that the clients can actually design their own jewelry. The people that work at I Wear Dolls have a great passion for making jewelry and following the customers' desires.

The product's quality and pricing strategy are what make it extra attractive to young customers. The jewelry is made from stainless steel and is resistant to water, so it is jewelry that can always stay on. As the main audience is 15- to 35-year-old women, pricing is critical. It has to be affordable for young women, as they are the biggest target. So in order to increase the range, mainly online marketing methods are used. The primary focus is on Instagram and Facebook, which can be used effectively to target a younger audience of 15-35-year-old women.

Offline marketing is not on the priority list. Although, they plan to get more offline visibility through exhibiting the jewelry at nail salons or similar businesses. The owner wants to move soon to a bigger place.

Outcome: Customer Service and kindness is crucial in retail, the right channel for the targeted audience is crucial to choose.

Events

I Wear Dolls, created a collaboration event together with Wine Workshops. The event is called Cava Collabs and finds place every fourth month. The event is about purchasing a glass of Cava and shopping for jewelry. The outcome of this event until now has been very fruitful for both parts, as they share the same audience. According to Marly it is very important to collaborate within the same price range. In the future, the owner of the jewelry brand would like to participate in the Born commercial market. As the shop is located in Born, it would service as a signpost.

The event creation and participation on local markets is not primarily focused on the sales.The intention is more for a long term effect for marketing reasons and create brand awareness and the interest of new customers.

Outcomes: Collaboration only with same price +audience type, main outcome is to reach more potential customers

Wine Workshops

https://www.eventbrite.co.uk/org/54519945713

The physical business, founded in 2021 by expat Nicholas Roberts, who hosts guided tastings of Spanish wines paired with tasty snacks in Barcelona's trendy neighborhood of Poblenou. The host and wine expert is guiding the events with this expertise with the objective of everyone having fun. His mission is to get wine to be approachable, exciting, and tailored to taste. The workshops are structured yet fun, authentic, and with a personal twist. Even for those who return again and again, there's always something new to learn.

Pain Points

The main pain points according to the owner Nick is that as a new business you don't know what's the priority. Especially as an expat opening a business or a local shop, how do you get people to know about you.

Competitiveness: he wants to figure out what others do better - wine tasting workshops-similar, so he went to one of the workshops to see if it's concerning competition.
The outcome was that he did not have to be concerned about it. It was completely different.

Marketing

USP: Offers different kind of experience - his aim is to leave his experience and the people to have fun for value for their money. Also, he wants to transmit useful information about wine to the world. The ultimate goal is to help people to pair wine well to food. He is making this event relevant.

Most Advertising on Instagram because it is free and reaches lots of people, he tried ads, no outcome. He uses Google Analytics to analyze the data of his website. He uses platforms as Event brides, Airbnb, meetup to post his service. He is doing offline marketing,

mainly promoting at little fern café: word of mouth. He leaves business cards at the café because there is a big community in Poble Nou.

Events

He already created an event with the owner of I wear dolls and the outcome was very good. In general, he is expecting a mutual outcome for both sides. The goal of the collaboration is to appeal both to the same people. Break-even is at the moment more important for him. He had chats with wine producers and did not found common ground for collaboration.

The barber brothers Barcelona

https://booksy.com/es-es/33096_the-barber-brothers_barberia_48863_barcelona#ba_s=sr_1

General information

The barbershop "The barber brothers Barcelona" is a physical business founded in 2021 by three associates. The interview was conducted with one of the associates named, Jeisson Montoya.

They are an individual company that offers high quality. There are three professional barbers employed who conduct various services. The services vary from cutting the hair, beards, and fixing the eyebrows with a blade and thread. The goal is to definitely increase services and implement coloration and exfoliation. The challenge is to find the right professionals for the service. Moreover, the barber shop offers a selection of professional barber products such as hair powders, waxes, gels, and shaving supplies. The key aspect of the business is to hire barber professionals who already have an existing customer portfolio. The principal targeted demographics of the barbershop are male customers, with a focus on kids and adolescents. The barbershops' future goal is to have the resources and possibilities to expand their business and open more barbershops under the same brand. Another important goal is to sell franchise products.

Pain points

Having a solid customer base is difficult to achieve. Many barbers already have loyal regulars. So it is very important to only hire professionals who bring a client base to the shop. Another important, critical point is that the three associates of the business are not professional barbers, which means they have to rely 100% on their employees. The problem is that if one day they lack personnel, the business will suffer as they do not have the necessary skills. Additionally, the increasing inflation is very threatening and will provoke a rise in employees' salaries as well as in service prices.

Regarding the competition, they see themselves as very strong as they were one of the first barbershops in the neighborhood. Lately, around this district of Barcelona, four other barber shops have opened. That is an indicator that it is successful. The barbershops' value proposition is to offer the client excellent service because they always come back for more.

A much more general pain point to mention ç0/ is the huge disadvantage of opening a local shop in Spain. There is a lot of pressure on the founders to set up a physical business. The taxation increases with the increased revenue. Moreover, for physical business, the Spanish government implements a quarterly rental tax called "Retention of the premises" of 19%. Especially in months like August, when everyone is on holiday, it is a pure act of survival.

Outcome Pain points: Lack of the right professionals, maintaining the employees, 100% trust in them, Tax

Marketing

As already mentioned, The Barber Brothers' unique selling point is the excellent service they provide to their customers. The most important online marketing reference for them is the rating on Google My Business, which helps with local SEO.

A listing for a local company is more likely to appear when customers search for a nearby business using Google Maps. So clients who have used the service can rate it (from 1-5) and give their opinion about the business.

Besides, for the barber brothers, offline advertising is more important. They try to attract new customers with flyers and special offers. They are collaborating with soccer schools and colleges around the neighborhood to win more brand awareness and new customers. The special offers are for example to bring 5 friends and get a haircut free.

Outcome: Offline marketing and collaborations are the most important

Events

The barber brothers have very good experience in creating agreements with a soccer school. The soccer school promotes the services of the barbershop, and the clients who come from this promotion get discounts on the services.

As the barber brothers' goal is to get more known and win more clients and so establish their brand in the sector, they are highly interested in collaborations with other companies as long as it contributes to their profits.

Outcome: Good experiences with collaborations and willingness to keep on doing them

Transformatelavida

https://www.transformatelavida.com

This online business has been founded 2018 by Marc Cuenca and Sergi Sáez Damas two sport science professionals who believed sustainably to help women in their fitness journey. They are helping women who have very little time to transform not only their bodies, but also their mindset and lifestyle.

Pain points

The interview found place with Marc Cuenca, one of the CEO, who explained that the main pain points is the lack of education about executive business skills in the university. In the university, the main topics are very theoretical and not practical. Especially about being an autonomous entrepreneur, there are no classes or lectures. This results in lack of knowledge once starting a business.

Marketing

The unique selling point of Transformatelavida is to offer women with very little time, a plan to transform their lives and health. The company is focused on digital marketing as it is an online business and targets a very specific demographic. As an online business, Transformatelavida sets primarily on online marketing methods as the return on investment is very high. They use different channels such as Instagram, YouTube and TikTok to promote their services. They are highly specified in E-mail marketing, which has had a very positive impact on increment sales. Email marketing helps effectively to remain in touch with clients and website visitors on a frequent basis. Regarding existing customers, it is a great approach to also like being kept up to date on new items and promotions.

Events

As the online presence for this business is the main marketing strategy, holding physical events is less attractive. The fear is to spend a lot of time and money into it with a low targeting. This is perfectly reached through online marketing tools and platforms.
If transformatelavida collaborated for an event, they would expect new leads that they could convert into customers.
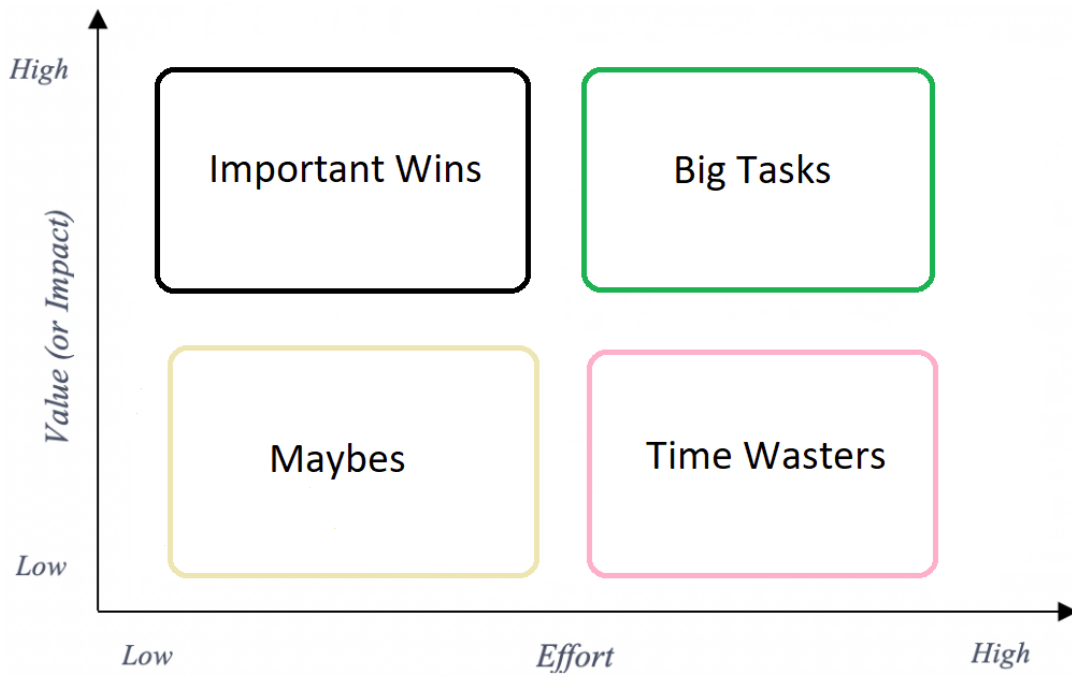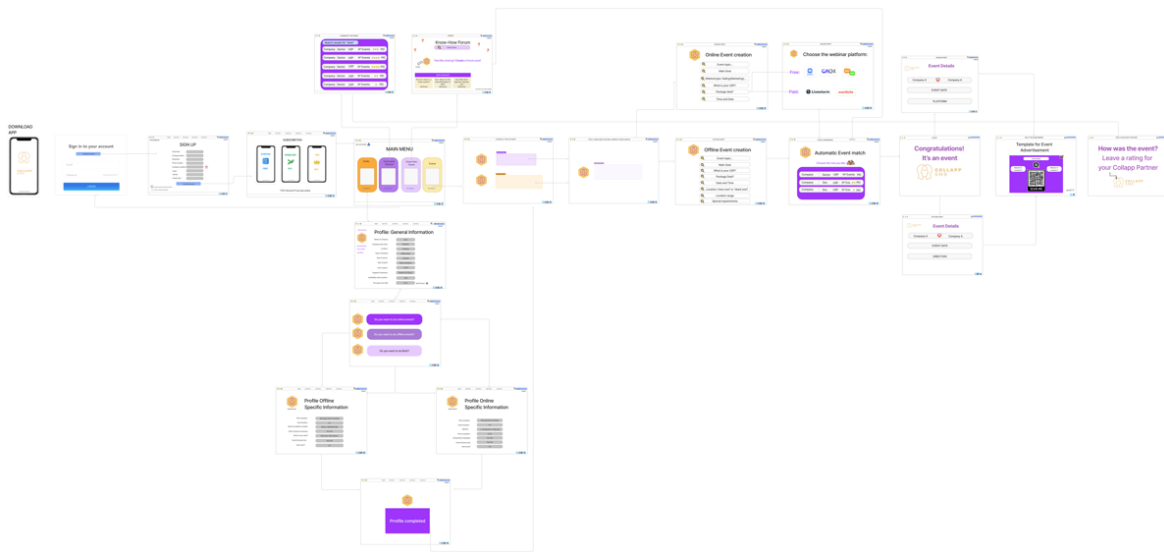
8.2 Backlog

Figure 38. Example Vaule/Effort estimation

Figure 38 shows the categorization in the fours quadrants of the Value/Effort matrix

8.3 Mock-up of MVP concept

Following this link:

https://www.figma.com/file/yIPZH9cYMFRiAkFUrIMEli/TFM-COLLAPPSMB?node-id=0%3A1&t=97NgZXJ4sinkoOwC-0

8.4 Economic feasibility

Table 12. Revenue Expectations of five years

Worst case	Year 2	Year 3	Year 4	Year 5
Starters	€300.00	€354.00	€410.64	€468.13
Mobilizers	€96.00	€113.28	€131.40	€149.80
Pro	€24.00	€28.32	€32.85	€37.45
Total	€40,344.00	€47,605.92	€55,222.87	€62,954.07
Middle case				
Starters	€750.00	€1,087.50	€1,576.88	€2,128.78
Mobilizers	€150.00	€217.50	€304.50	€411.08
Pro	€75.00	€108.75	€152.25	€205.54
Total	€93,075.00	€134,958.75	€192,204.75	€259,476.41
Best case				
Starters	€1,140.00	€2,052.00	€3,488.40	€5,581.44
Mobilizers	€380.00	€684.00	€1,162.80	€1,860.48
Pro	€190.00	€342.00	€581.40	€930.24
Total	€190,190	€342,342	€581,981	€931,170

The expected revenue for the next five years (Table 12) has been applied in three different scenarios, with a percentage that grows with each year.

9 References

1. Ajuntament Barcelona. (2022). *Who we are | Barcelona Commerce.* Ajuntament de Barcelona. Retrieved October 18, 2022, from https://ajuntament.barcelona.cat/comerc/en/commerce/who-we-are

2. Ajuntament de Barcelona. (2022). *TIC.* Barcelona Activa. Retrieved October 5, 2022, from https://treball.barcelonactiva.cat/porta22/es/sector/pagina51497/tic.do

3. Ajuntament de Barcelona & Barcelona Activa. (2020). Main economic indicaors for the Barcelona area. *Barcelona Data Sheet 2020*, 40.

4. Ajuntament de Barcleona. (2019). Estudis de les activats comercials a Barcelona 2019. *Informe_r13, 1*(1), 82. https://ajuntament.barcelona.cat/comerc/sites/default/files/arxius/19032_informe_r13.pdf

5. Allen, P. (2022, September 13). *Battle of the Startup Cities: Madrid vs Barcelona.* EU-Startups. Retrieved October 17, 2022, from https://www.eu-startups.com/2022/09/battle-of-the-startup-cities-madrid-vs-barcelona/

6. Altexsoft. (2022, January 6). *Technical Feasibility in Software Engineering: Things to Consider Before Development Starts.* AltexSoft. Retrieved December 2, 2022, from https://www.altexsoft.com/blog/technical-feasibility/

7. Andreev, M. (2020). *Prioritization Methods and Techniques*.

   https://www.linkedin.com/pulse/prioritization-methods-techniques-part-4-value-vs-effort-an-dreev/?trk=pulse-article_more-articles_related-content-card

8. Appel, G., Libai, B., Muller, E., & Shachar, R. (2020). On the monetization of mobile apps. *International Journal of Research in Marketing*, *37*(2020), 93-107. https://reader.else-vier.com/reader/sd/pii/S0167811619300473?tken=5D3766F673EAA31829FEF7D9A17CCCF6119B3648EBF0C179F5710C0C6D67F797366B5878795B51BDF91BF061AE36ED83&originRegion=eu-west-1&originCreation=20221206102337

9. Asana. (2022, June 14). *Why You Should Measure Your Team's Sprint Velocity • Asana*. Asana. Retrieved December 11, 2022, from https://asana.com/de/resources/sprint-velocity

10. Assemblea. (2022). *Economy*. Assemblea Nacional Catalana. Retrieved October 18, 2022, from https://int.assemblea.cat/about-catalonia/economy/

11. Atlassian. (2022). *What is Jira Software used for?* Jira Software. Retrieved October 11, 2022, from https://www.atlassian.com/software/jira/guides/use-cases/what-is-jira-used-for#jira-for-agile-teams

12. Balcells Group. (22). *Types of Companies and Business Structures in Spain*. Balcells Group. Retrieved September 15, 2022, from https://balcellsgroup.com/types-of-companies-in-spain/

13. Barcelona Activa. (2016). WEB Sectors Strategics. *Strategic sectors in Barcelona*, 22. https://ajuntament.barcelona.cat/economiatreball/sites/default/files/documents/WEB-Sectors-Estrategics-2018-EN.PDF

14. Bennett, J. (2014, July 30). *Traditional Project Management is 100 Years Old. It's Time to Upgrade.* Random Ant. Retrieved October 11, 2022, from https://randomant.net/traditional-project-management-is-100-years-old/

15. Bordio. (2022, September 23). *What Is Product Backlog? Product Backlog Examples.* Bordio. Retrieved October 26, 2022, from https://bordio.com/blog/product-backlog/

16. Chen, J. (2022, May 13). *Unicorn: What It Means in Investing, With Examples.* Investopedia. Retrieved October 17, 2022, from https://www.investopedia.com/terms/u/unicorn.asp

17. Comertia. (2022, October 5). *Indicador Retail Comertia.* Comertia. Retrieved October 24, 2022, from https://www.comertia.net/els-establiments-comertia-augmenten-un-144-les-vendes-al-setembre-respecte-el-mateix-mes-de-2019/

18. Elorriaga, A. (2022). *Tendencias para el marketing industrial 2022.* ISMARK. Retrieved December 14, 2022, from https://www.ismark.es/blog/tendencias-marketing-industrial

19. European Comission. (2008, August). *FEASIBILITY STUDY ON THE SETTING UP OF A PLATFORM FOR DATA & INFORMATION EXCHANGE FOR THE EUROPEAN FRUIT & VEGETABLE MARKET.* Retrieved January 11, 2023, from https://agriculture.ec.europa.eu/system/files/2020-02/ext-study-data-platform-full_report_2009_en_0.pdf

20. European Commission. (2022, July 28). *Q&A: Digital Economy and Society Index (DESI) 2022.* European Commission. Retrieved October 17, 2022, from https://ec.europa.eu/commission/presscorner/detail/en/QANDA_22_4561

21. European Union. (2022, January 7). *Data protection and online privacy - Your Europe*. European Union. Retrieved January 11, 2023, from https://europa.eu/youreurope/citizens/consumers/internet-telecoms/data-protection-online-privacy/index_en.htm

22. Faecta. (2018, October 29). *Sociedad Cooperativa versus Sociedad Limitada, ESA ES LA CUESTIÓN*. FAECTA. Retrieved October 19, 2022, from https://www.faecta.coop/index.php?id=14&no_cache=1&tx_ttnews%5Btt_news%5D=7602

23. Falcó, J. L. (2019, June 17). *Barcelona y Madrid, en el 'Top 6' de ciudades europeas con más crecimiento de startups*. El Referente. Retrieved September 15, 2022, from https://elreferente.es/tecnologicos/barcelona-y-madrid-en-el-top-6-de-ciudades-europeas-con-mas-crecimiento-de-startups/

24. FDI (Ed.). (2022, February/March). European Cities and Regions of the Future 2022/23. *The best and brightest among europe´s investment destination*, 40.

25. Forbes. (2021, February 2). *6 Effective Ways To Team Up With Local Businesses*. Forbes. Retrieved December 14, 2022, from https://www.forbes.com/sites/square/2021/02/02/6-effective-ways-to-team-up-with-local-businesses/

26. Fundació ENT & Živković, I. (2021, 03). Business Leaders and Climate Change in Barcelona. https://ent.cat/wp-content/uploads/2021/03/Business-leaders-and-climate-change-in-Barcelona.pdf

27. García, R. (2019, February 27). *¿Qué es el Backlog? - Muy Agile*. Muy Agile -. Retrieved November 30, 2022, from https://muyagile.com/que-es-el-backlog/

28. Generalitat de Catalunya. (2021). *Barcelona & Catalonia Startup Report 2021*. Catalonia Trade & Investment. Retrieved September 15, 2022, from http://catalonia.com/startups-in-catalonia/know-them-all-the-barcelona-catalonia-startup-directory/barcelona-catalonia-startup-hub.jsp

29. Generalitat de Catalunya. (2022). *CATALONIA FACTS & FIGURES*. Catalonia connects your business to the competitive economy it needs.

30. Greenwood, S. (2020, June 19). *Terms and Conditions: Why Are They So Important?* Farleys Solicitors. Retrieved January 10, 2023, from https://www.farleys.com/terms-and-conditions-why-are-they-so-important/

31. Hoda, R., Prof. Noble, J., & Dr. Marshall, S. (2014, April 26). Agile Project Management. *NZCSRSC*, *2008*. Researchgate.

32. Kanbanize. (2022). *What Is Kanban? Explained in 10 Minutes*. Kanbanize. Retrieved October 11, 2022, from https://kanbanize.com/kanban-resources/getting-started/what-is-kanban

33. Lazzaro, A. (2022). *4 Best Revenue Model Options for Your Online Platform*. Bplans Blog. Retrieved December 12, 2022, from https://articles.bplans.com/online-platform-revenue-model-options/

34. Leigh Gross, R. (2022, January 22). *What Is a Microbusiness?* BUILDING YOUR BUSINESS. https://www.thebalancemoney.com/what-is-a-microbusiness-5210249

35. Libre Mercado. (2022). *Estos son los principales desafíos para las pymes*. https://www.libre-mercado.com/2023-01-09/el-deterioro-de-las-pymes-se-acentua-con-la-subida-de-los-costes-por-encima-de-las-ventas-6973865/

36. Lischer, B., & guide, s. (2022). *What is Brand Architecture and How Does it Impact Your Business?* Ignyte Branding. Retrieved December 14, 2022, from https://www.ignyte-brands.com/brand-architecture-creating-clarity-from-chaos/

37. Lynn, R. (2022). *History of Agile.* Planview. Retrieved October 11, 2022, from https://www.planview.com/resources/guide/agile-methodologies-a-beginners-guide/history-of-agile/

38. Minderest. (2022). *What is the decoy effect, and how to use it.* Minderest. Retrieved December 16, 2022, from https://www.minderest.com/blog/what-is-decoy-effect

39. Pascual, B. (Director). (2021). *Tipos de EMPRESAS Y SOCIEDADES mercantiles según FORMA JURÍDICA* [Types of COMPANIES AND COMMERCIAL COMPANIES ACCORDING TO LEGAL FORM] [Film].

40. Roadmunk. (2022). *Scrum Roadmap - Template and Examples.* Roadmunk. Retrieved October 11, 2022, from https://roadmunk.com/roadmap-templates/scrum-roadmap

41. Romero, T. (2022, March 11). *Spain: self employment 2020.* Statista. Retrieved October 2, 2022, from https://www.statista.com/statistics/947183/self-employed-workers-in-spain/

42. salesrenewal. (2022). *Why Small Business Marketing Fails So Often.* Sales Renewal. Retrieved October 20, 2022, from https://www.salesrenewal.com/resources/why-small-business-marketing-fails-so-often/

43. Schranz, M. (2018, August 24). *Mit Apps Geld verdienen, wie geht das?* Apps with love. Retrieved August 11, 2022, from https://appswithlove.com/blog/mit-apps-geld-verdienen-wie-geht-das

44. Schwaber, K. (2022). *What is Scrum?* Scrum.org. Retrieved October 11, 2022, from https://www.scrum.org/resources/what-is-scrum

45. Seymour, T., & Hussein, S. (2014). The History of Project Management. *International Journal of Management & Information Systems*, *18*(4). file:///C:/Users/Carlos/Downloads/The_History_Of_Project_Management.pdf

46. Strizic, M. (2022, August 17). *MVP app development: how to build an MVP for your mobile app.* DECODE. Retrieved December 5, 2022, from https://decode.agency/article/mvp-app-development/

47. Summerfield, J. (2022). *Mobile Website vs. Mobile App (Application) – Which is Best for Your Organization?* Human Service Solutions. Retrieved December 14, 2022, from https://www.hswsolutions.com/services/mobile-web-development/mobile-website-vs-apps/

48. Tech Barcelona. (2021). *About us.* Tech Barcelona. Retrieved October 17, 2022, from https://techbarcelona.com/en/about-us/

49. Uzility (Director). (2021). *Introduction to Scrum - 7 Minutes* [Film]. https://www.youtube.com/watch?v=9TycLR0TqFA

50. Visa. (2019). Understanding Obstacles Facing Small and Micro Business Owners. *Small and Micro Business Immersive Study*, 32. https://usa.visa.com/dam/VCOM/global/about-visa/documents/understanding-obstacles-facing-small-and-micro-business-owners.pdf

51. Viscanti, L. (2022). THE ULTIMATE GUIDE T O MO B I LE APP MARKETING 2 0 22. *MA-PENDO*, 21. https://mapendo.co/?utm_source=gs&utm_medium=cpc&utm_campaign=brand_1&utm_term=mapendo&gclid=Cj0KCQjw--2aBhD5ARIs-ALiRlwDD7n3SG0x_6kqMx6aXij3pUkMJ6pyooewJJk-WzU-A4XZzxw0e1VIaAvgaEALw_wcB

52. Visual Paradigm. (2022). *What is Sprint Backlog in Scrum?* Visual Paradigm. Retrieved December 17, 2022, from https://www.visual-paradigm.com/scrum/what-is-sprint-backlog-in-scrum/

53. Wrike. (2022). *What is Kanban Methodology? The Ultimate Guide.* Wrike. Retrieved October 11, 2022, from https://www.wrike.com/kanban-guide/what-is-kanban/