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Business plan: Lost Doc, an efficient way to find and deliver lost items to their owners

João Hugo Borges Barreto Silva

Master's in Management

Supervisor:
Professor José Pedro da Cunha Catalão Dionísio
Full Professor, ISCTE-IUL Business School

October 2020

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BUSINESS
SCHOOL

Department of Marketing, Operations and General Management

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"Memories live longer than dreams."

Agradecimentos

Esta tese encerra uma etapa muito importante da minha vida. A etapa que me torna mestre em Gestão pelo ISCTE Business School. Foram dois anos de esforço e dedicação que certamente serão recompensados no futuro.

Antes de mais, gostaria de agradecer ao meu supervisor de tese, Professor José Pedro Dionísio, pelo seu tempo, flexibilidade e paciência ao longo do desenvolvimento do projeto.

Quero agradecer à minha família por me ter apoiado em todas as decisões que tomei ao longo da minha vida. Nomeadamente à minha mãe Fátima, que sempre acreditou em mim e por isso lhe devo a pessoa que sou hoje, um rapaz livre; ao meu pai Fernando, por me transmitir os conhecimentos empresariais; à minha tia Aura, por me oferecer Kinders para os longos dias de estudo; e à minha irmã Mariana, por me apoiar em todas as decisões que tomo e pela cumplicidade ao longo dos últimos 23 anos.

Aos meus amigos que estiveram comigo ao longo deste percurso, em especial à Raquel Lourenço, pelas noites e dias de trabalho em conjunto.

A todos os colegas e professores que contribuíram para o meu crescimento em termos estudantis, mas também pessoais, muito obrigada.

Por último gostaria de agradecer a mim próprio. Por nunca desistir e seguir sempre os meus sonhos e objetivos. Por ter como lema de vida: "Não há nada a perder".

Resumo

Este projeto tese tem como objetivo desenvolver um plano de negócios em torno de uma solução eficiente para um problema que existe à escala global, os perdidos e achados.

Diariamente, cerca de 395 objetos perdidos são entregues às autoridades portuguesas, o que dá um total de 144.084 objetos por ano. A maioria destes objetos acabam por não ser devolvidos aos proprietários, uma vez que não existe um sistema eficiente de retorno ou de registo dos mesmos a nível nacional.

A Lost Doc quer tornar possível a qualquer pessoa em qualquer parte do país recuperar os seus objetos perdidos em 24 horas através de um website que faz a ponte entre os estabelecimentos que encontram o objeto e o proprietário.

Por forma a validar a viabilidade do projeto, foi feito um estudo intensivo da análise de mercado, usando para o efeito a análise PESTLE, Modelo Cinco Forças de Porter, análise Competitiva, análise VRIO, análise SWOT, Formulação Goal, modelo STP, e estratégia de desenvolvimento; assim com análise financeira e económica.

Por este serviço prestado, é cobrada uma taxa. A estratégia de implementação passa por inicialmente tirar proveito do estabelecimento de parcerias com locais e/ou eventos onde quantidades consideráveis de objetos são perdidas.

Os resultados obtidos através desta análise detalhada são promissores. É expectável que o *breakeven* seja atingido em um ano (2022) e que as receitas cheguem próximo de 1 milhão de euros em 2024 acompanhadas por um constante aumento nos custos, resultado de reinvestimento na empresa.

Keywords: Startup; Plano de negócios; Perdidos e Achados; Análise de Mercado; Análise Financeira.

Abstract

The thesis project has as main goal the development of a business plan for an efficient solution for a problem that exists on a global scale, the lost and found.

Daily, around 395 items are lost and given to the Portuguese authorities, which amounts to a total of 144.084 items per year. The majority of these objects end up not being returned to their owners, since currently there is no efficient returning systems or of registry of the lost items nationally.

Lost Doc wants to make possible for any individual in any part of the country to recover his/her lost objects in 24h through a website that acts as a bridge between the establishments that find the lost item and the owner.

Initially, the implementation strategy consists in taking advantage of the partnership established with the places and/or events where considerable amounts of items are lost.

In order to validate the proposed project, a thorough market analysis was performed using for that purpose PESTLE analysis, Porter Five Forces model, Competitive analysis, VRIO analysis, SWOT analysis, GOAL Formulation, STP model, and development strategy; also, financial analysis.

For providing this service, a fee is charged. The implementation strategy is initially to take advantage of the establishment of partnerships with locations and/or events where considerable number of objects are lost.

The results obtain through this detailed analysis are promising. It is expected that breakeven will be in one year (2022) and that revenues will reach close to 1 million euros in 2024 accompanied by a constant increase in costs, result of reinvestment in the company.

Keywords: Startup; Business Plan; Lost and Found; Market Analysis; Financial Analysis.

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Glossary

AI – Artificial Intelligence

B2B – Business to Business

B2C – Business to Customer

CEO – Chief Executive Officer

CMO – Chief Marketing Officer

COO – Chief Operation Officer

CTO – Chief Technology Officer

EEA – European Economic Area

EU – European Union

EBIT – Expenses Before Interests and Taxes

GDPR – General Data Protection Regulation

GNR – Guarda Nacional Republicana

ID – Identification Document

IVA – Imposto sobre o Valor Acrescentado

IRC – Imposto sobre o rendimento das pessoas coletivas

MAI – Ministério da Administração Interna

MVP – Minimum Viable Product

NPV – Net Present Value

OCR – Optical Character Recognition

PSP – Polícia de Segurança Pública

SEO – Search Engine Optimization

SIISPA – Sistema Integrado de Informação sobre Perdidos e Achados

TOC – Técnico Oficial de Conta

VAT – Value Added Tax

1 Executive Summary

The problem that Lost Doc aims to solve is losing an item and never recover it. It can either be a backpack, jewelry given by a grandmother, or an ID that was lost when grabbing a taxi.

Why these people can never get it back? Because does not exist a platform in Portugal known by everyone to help the owner get its item back. Usually, in Portugal, when someone loses or finds an item has to go to the police and report it. However, in most of the cases, when people find an item from another person, they hand it over to the closest establishment. The establishment only returns the item if the owner goes there and asks.

Lost Doc will solve this problem through the creation of a website. The establishments can register the documents that are found or delivered there. This way the network created will allow the owner to find its lost item and to receive at home in just 24 hours.

Lost Doc is targeting as final user young-adults between the ages of 16 and 25 years-old, since this age range tends to be more active and distracted. The establishment of partnerships with places frequented on a daily basis (e.g. clubs, restaurant chains, shopping malls, hospitals, supermarkets, cinema, airports, public transportation, amusement parks, stadiums, hotels, museums, coffee shops), and also events and festivals will be a key element for the project's success.

There are already a few competitors globally and locally trying to solve the same problem. Locally our main competitor is the website from MAI (Ministério de Administração Interna). However, the upload of lost items is not accurate and is delayed and has problems with matching. The global competitor that can have impact on Lost Doc is Have It Back, since they focus on the creation of paid partnerships with companies. Nonetheless, for their lost and found solution to work, the owner of the lost item needs to have a sticker on the lost item with an identifications number.

A thorough analysis of the business implementation, market and financial analysis is presented in the different chapters. On the business implementation was applied Business Model Canvas logic and developed two main revenue streams. Most of the lost items are found by big corporations as retail chains, restaurant chains and many others, which have responsibility and a relevant corporate image, and for that reason they can look at lost items as a cause of dissatisfaction for their clients, so Lost Doc is a way to satisfy customers and improve their image, and that is why they are willing to pay for a fee to use our service; and small establishments as coffee shops and restaurants, which can also upload the item on the platform without having to pay anything.

On the final consumer's side, the person who loses the item will have to pay a fee to have it back, which is used to support the project and send the item to its home.

It was proven that Lost Doc has many aspects in its favor to be successful. The breakeven point will be surpassed by far only one year after. The expected revenues for 2022 are 198.522,10€. A surprising number that proves the value of Lost Doc business idea and its implementation.

To conclude, at the beginning, Lost Doc implementation will be in Portugal with the aim to solve the lost and found problem and after growing and prove the traction in Portugal, will expand the business on the fourth year, to countries as Sweden, England and Spain to gain global market.

Mission Statement: to be an effective lost and found platform that links lost items to their owners.

Vision Statement: to become the EU Lost & Found logistic startup, which provides a service that allows people to receive their lost items in 24 hours at their home anywhere in Europe.

2 Problem to solve

Nowadays, a lot of people lose items every single day. To be more precise, around 396 items are found daily in Portugal, with the highest number being in Lisbon. Most of the items are personal documents, backpacks, bags, clothes, and wallets. The only way to recover them is if they are delivered at a police station or handed over to a police officer; ending up in the lost and found office of the police station. However, the current solution is not efficient enough, with all the establishments that we attend every day, from coffee shops, restaurants, shopping centers, airports, universities, and so on, it seems almost an impossible task to find a lost item. This is mainly due to the fact that most of these places do not deliver them to the correspondent authorities, since it entails costs and takes time.

In these situations, when an individual loses a document or wallet, he/she needs to go to the entities responsible for issuing the documents to request and pay for new ones. This process will require a considerable amount of time and money. At this point, it is clear that the process of recovering lost documents has to be more efficient, since individuals are advised to carry them on a daily basis, and also in specific situations such as travelling, random checking's, examination, hospital appointments, among others. In the specific case of travelling, if you lose a document in the host country the current solution is going to the embassy and request a temporary ID, which costs time and money, and may ruin holidays.

There should be an easier way to find lost items.

3 Proposal for Innovation

The aim of this project is to develop a solution to return in an efficient way lost and found items. Lost Doc will be a website where establishments will upload the data of lost items they found, giving them a chance to be found by the owner. These establishments can be divided in two categories: small companies which will not pay any fee to be our partners (small coffee shops and restaurants) and big companies that will pay a fee to be our partners, this fee will differ between companies.

When the owner accesses the platform to verify if its item was found and there is a match of the information about the item, he/she will have to pay a fee in order to know where it was found and to receive it at his/her address in 24 hours. Also, will be possible to send a thanks note to the establishment, if the person sees fit.

4   Literature Review

The literature review serves to expose concepts and explanations of topics that will be applied and referred to throughout the business plan.

These themes are focused in several aspects, such as: the definition of business plan; business model and its components, building blocks and patterns; definition of innovation and how it applies to a Business Model; definition of strategy; the importance of the development of a business plan before the creation of a startup; and presentation of GDPR.

4.1   Business Plan

As mentioned by Sahlman: "Business plans are undoubtedly one of the core aspects that determine the success of an organization." (Sahlman, W., 1997). A business plan defines all the aspects of a firm. From risks to revenues, from the entrepreneur's profile to the business profile, as Sahlman refers "When I receive a business plan, I always read the resumé section first. Not because the people part of the new venture is the most important, but because without the right team, none of the other parts really matters" (Sahlman, W., 1997).

The development of the business plan needs to carefully handle, and, in some cases, it may take years until a viable business plan is reached. In order for it to be applied, the business plan needs to be able to answer two questions "Is the total market for the venture's product or service large, rapidly growing, or both? Is the industry now, or can it become, structurally attractive?" (Sahlman, W., 1997). Any business manages to survive by adapting to the market and employee's necessities and demands, while keeping the business sustainable.

"A crucial factor for a successful business is the development of a clear strategic position that differentiates you from the competition", basically the business plan outlines the strategy of how the firm/company wants to develop their business in the present, but also how they are planning to develop and grow it in the future (Abrams, R., 2003).

For example, a publisher starts by editing one book, meanwhile it is expecting that ten years from now it will have thirty best-selling books. It is a possible vision of the future. But how can he/she reach this vision? What are the strategies to achieve this goal? These are the questions that the Business Plan has to answer, with the goal to summarize strategies and possible cash flows.

In this context, it is understandable that is difficult to plan ahead, but it is important to have knowledge of the different variables that may affect your business's future, a good entrepreneur

always has an idea of a reliable outcome, how far the business can go and viable paths of how to reach it (Abrams, R., 2003).

Two definitions that describe exactly what a business plan consists are the individual definitions of the words that together give its name. Business means "buying and selling as a way of earning money" (Waters, A., 2010); and Plan "to decide, organize or prepare for something you want do in the future" (Waters, A., 2010). It is a plan for the present and the future of the business, created to secure that the business generates money.

In conclusion, in order to create and maintain a successful company, it is essential to have a rich and complete business model (Abrams, R., 2003).

4.2 Business Analysis

Throughout the years were developed many methodologies to analyze a business idea, its potential on the market, and if exists a fit for it. These are PESTLE analysis, Porter's Five Forces Model, VRIO analysis, SWOT analysis and STP model that are going to be briefly introduced on this section and analyzed and discussed in section 6.

4.2.1 PESTLE Analysis

PESTLE analysis defines the political, economic, social, technological and legal constraints that can affect a business. A business when created will have interaction with external factors that will impact it daily, so this analysis is used as a tool evaluate how external factors can impact a company, and to better delineate a strategy that can solve any of the problems that may arise (Cadle, 2010). These factors can either have positive or negative impact at the timing of implementation. So, PESTLE analysis is a key factor in terms of designing the best implementation strategy.

4.2.2 Porter's Five Forces

Porter's Five Competitive Forces model was developed by Porter to analyze the industry and competition from a different perspective by having an outside-in view. This tool identifies the forces that lead competition and threatens company's profitability. These five forces are: power of buyers, power of suppliers, threat of new entries, threat of substitutes and competitive rivalry (Porter, 2008).

- Threat of new entrants
  - The threat of entries analyses how easy it is to get in the market. In case of being easy, new competitors will emerge and will do everything to get into the market. By doing so, the prices will decrease, and the costs and the investment volume will be under pressure. This is due to the fact that companies will not want to be left behind with the emergence of a new company, instead of holding up and to close as soon as possible (Porter, 2008).

- Bargaining Power of Suppliers
  - As the name says, it represents the power that suppliers have on the industry. If there are no alternatives for a company rather to use a specific product, the suppliers have the power to control the market (to ask for higher prices), control quantities and the quality of the product and the service delivered. If the client has no other option, they will have to agree or quit the specific production. Suppliers have the power to choose who to serve, it will depend on who brings them the highest value. This situation mostly happens when there is only one supplier (Porter, 2008).

- Bargaining Power of Buyers
  - Buyers can control how much they are paying for a product if it is a small group of buyers; or if the product is undifferentiated, because in both situation they can go to another vendor; or the buyer starts to produce itself the product due to the price (Porter, 2008).

- Threat of Substitutes
  - "A substitute performs the same or a similar function as an industry's product by a different mean" as defined by Porter (Porter, 2008). Is studied to analyze the chance of affecting a business's success by surging new competitors.

- Competitive Rivalry
  - Takes into consideration the competition and analyzes the type of rivalry that exists between the new business and the businesses already in the market.

4.2.3 VRIO Framework

VRIO framework has been used throughout the years to make internal analysis. Internal analysis allows us to observe where the company stands, its strengths and weaknesses, and its competitive advantages (Cardeal, N. & António, N., 2012). VRIO is used to evaluate the company's resources and capabilities by answering 4 questions, which are the following:

- V – Value: Do the resources of the company add value in order to be able to neutralize threats?

- R – Rarity: Are the resources limited?

- I – Imitability: How difficult is to imitate and how expensive can it be to another company?

- O – Organization: Is the company sufficiently organized in procedural and structural terms to exploit the resources?

Is important to answer the questions above because it will have an impact on the competitive advantage level.

4.2.4 SWOT Analysis

SWOT analysis focuses on two perspectives, internal and external. There needs to be a fit between both. The internal perspective serves to analyze the company strengths and weaknesses. By knowing the strengths, the company knows what distinguishes them from their competitors; by knowing the weaknesses the company knows what they have to improve or correct so that they cease to exist and are not put at risk by its competitors. On the other hand, the external perspective allows us to analyze the opportunities and threats that the surrounding environment provides, which will help making strategic decisions (Hill, T. & Westbrook, R., 1997).

4.2.5 STP Model

Usually used when designing marketing strategies and campaigns, is a model that already proved its value among all the existing models on marketing.

The STP model is helpful to know which propositions to prioritize in order to deliver the message to the audience. It starts by identifying the segmentation for the company service; followed by targeting, evaluation of customers based on segmentation; and for last, company's position within the market (Smart Insights, 2020).

4.3 Business Model

In 2009, Teece referred that "a business model articulates the logic, the data, and other evidence that support a value proposition for the customer, and a viable structure of revenues and costs for the enterprise delivering that value." (Teece, D., 2009).

There is a logic that has become very well-known and gained a greater relevance which is the Business Model Canvas. Was originally developed by Alexander Osterwalder, which defined it as "the rationale of how an organization creates, delivers, and captures value" (Osterwalder, A., 2010).

Market segments

In the customer segment, the company's target has to be well defined. This component is critical to the first market research, to gather knowledge about the customer's needs and desires (Afuah, A., 2014). The market research is followed by a series of talks with potential customers to verify if there is a fit between their needs and what the company offers; how much the costumer is willing to pay; and if it will be a profitable business, in other words, if the investment is or not worthy (Afuah, A., 2014). This section needs to answer the question: "For whom are we creating value?" (Osterwalder & Pigneur, 2010). It corresponds to the group of segments, market segments, that will be the target audience, for who the product is being offered or should be. "The market segment component is about the groups of customers to whom a value proposition is being offered or should be offered" (Afuah, A., 2014). For example, if a firm is launching a product and does not know how to answer the last question and properly justify it, probably it means that the company is not ready to launch their product, since it does not have any idea of who and/or which segments to target (Afuah, A., 2014; Osterwalder & Pigneur, 2010).

Segmentation is essential to any business, it can be done according to demographics, geography, needs, behaviors, attributes, type of customers and their preferences, willingness to pay, the type of relationships that a firm has or wants to develop with its customer, and the concept of the brand itself (Afuah, A., 2014). With segmentation, the firm gets to know better their customers, which makes it easier to better satisfy them and plan the approach and positioning of the products (Afuah, A., 2014; Osterwalder & Pigneur, 2010).

Customer Value Proposition

This component is of the upmost importance. This component "describes the bundle of products and services that create value for a specific Customer Segment" (Osterwalder & Pigneur, 2010). Or, as Afuah refers, "A firm's value proposition to customers consists of those things that the firm and its products/services can do for customers to solve their problems and/or satisfy their needs better than competitors" (Afuah, A., 2014).

Briefly, value proposition "creates value for a Customer Segment" (Osterwalder & Pigneur, 2010). There are two types of value propositions: quantitative, in which the difference can be on the price, cost reduction, risk reduction or service's speed; qualitative, differs the product by its design, customer experience, newness, performance, brand or accessibility. A product can also have both values, in case of the product being completely new, innovative, and disruptive (Afuah, A., 2014; Osterwalder & Pigneur, 2010).

Revenue Model

A revenue model is about "How many customers get to pay how much for what product/service, when and how" (Afuah, A., 2014). Based on the customers who liked the value proposition, how much they would be willing to pay to acquire it? A firm must develop the revenue model since the beginning of a project, this is due to the fact that having a business idea is not enough, developing it will have costs that need to be covered by the revenues at some point in the future, in order for it to be self-sustainable (Afuah, A., 2014; Osterwalder & Pigneur, 2010).

There are two types of revenue streams: first, "transaction revenues resulting from one-time customer payments"; second, "recurring revenues resulting from ongoing payments" (Osterwalder & Pigneur, 2010). Regarding the last one, there are numerous possibilities, such as asset sales, subscription fees, usage fee, lending/renting/leasing, licensing, freemium, fee for service, advertising, among others.

Note that getting the right price for the product/service is the most important aspect of the revenue model. The price is determinant to attract customers and to drive them away from other competitors' products/services (Afuah, A., 2014; Osterwalder & Pigneur, 2010).

Growth Model

The growth model component answers the question "How can a firm grow profitability?", it concerns the firm's strategies that aim to increase the number of customers, willingness to pay and keep prices close to customers' expectations (Afuah, A., 2014).

Is also important to keep in mind the competitors, if the product/service is being successful, other companies may try to enter the same market, by imitating or leapfrog the firm (Afuah, A., 2014). Is important to be prepared for it, mainly to avoid and prevent the loss of costumers (that required time and money to get them acquainted with the business), its core values, and social concerns of the firm. There is a need to protect the business while it is growing, not only from competitors, but also from suppliers, both are going to try to influence the price of the product. As consequence, the costs of the firm can increase, or the revenues decrease (Afuah, A., 2014).

In order to maintain high revenues, "three strategies can help a firm stem erosion of its revenues and grow profitability": by pursuing a block strategy; run strategy; or team up (Afuah, A., 2014). The first is to "defend its position in the market", and it can be by obtaining a patent (Afuah, A., 2014). The second, which is also a good option, is "one of the first to innovate" (e.g. if a competitor arrives to the market with a similar product the firm is one step further and has already a new product ready to launch or an updated version with more functionalities) (Afuah, A., 2014). The last, which a lot of firms do when they want to keep growing, while having difficulties or lacking something to make them conquer more market, is to team up with competitors. It can happen through strategic alliances, joint ventures, licensing, venture capital participation or acquisitions (Afuah, A., 2014).

Capabilities

The entrepreneur. The success of a firm depends on the people behind it, the one that runs it and the people who he/she is working with. It is all about capabilities, but not only of people. Capabilities of the product, capability to answer the market needs, capability to create value proposition, capability to attract market, capability to adapt to future challenges.

Capabilities are resources and activities, these "resources or assets are what a firm owns or has access to", it can be brands, people, equipment, products, among others (Afuah, A., 2014). On the other hand, "activities are what it does", this meaning to turn the resources into value created and/or captured (Afuah, A., 2014).

It is acceptable to include four questions in order to justify how much value can be created/captured with these activities. Being them: Which? Who? Where? How? First, which activities are being used to transform these resources. Second, who is developing them. Third, where they are being performed. And fourth, how are they being performed. These questions

are going to bring the answers everyone needs to know about how successful a firm can be. Every and each activity in a firm has an impact in the final outcome (Afuah, A., 2014).

4.3.1 Business Model Canvas Building Blocks

The business model is divided in five components and nine building blocks, which the company needs to develop with the purpose to have a complete knowledge about the product and the market.

It is possible to see how the nine building blocks are organized on the image showed below (Figure 4.1). "A business model can be best described through nine basic building blocks that show the logic of how a company intends to make money (…) Cover the four main areas of a business: customers, offer, infrastructure, and financial viability." (Osterwalder & Pigneur, 2010).
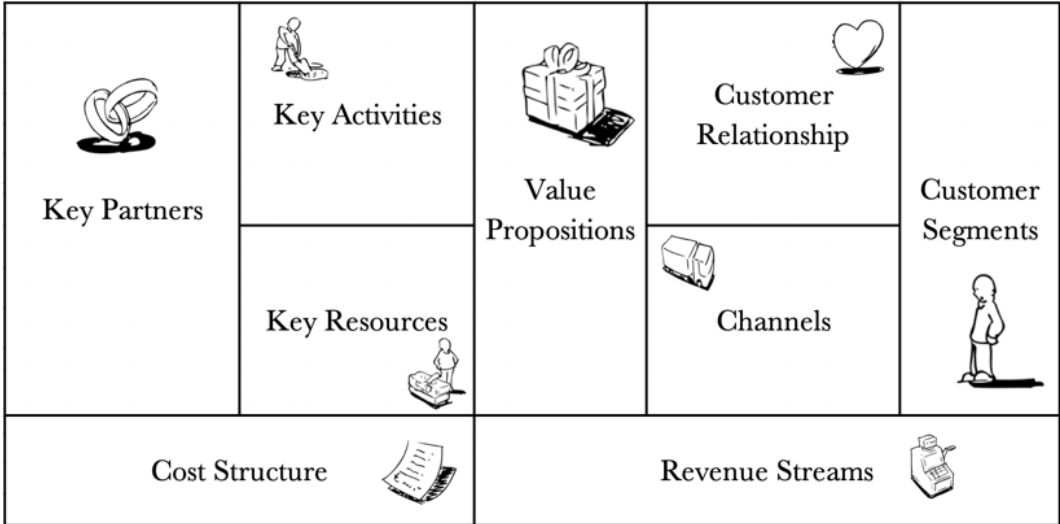
Figure 4.1 - Business Model Canvas structure. Adapted from: Toro-Jarrín, Ponce-Jaramillo, Güemes-Castorena, 2016.

Figure 4.1 is known worldwide. It is present in many business offices, but mostly small companies or projects that are still in the idealization phase. It helps projects to spread wings by delineating the points needed to move from an idea to a company. Partnerships, activities, resources, value proposition, customer relationship, channels to get to our customer, customer segment, costs and revenues are the building blocks that answer the questions (Osterwalder & Pigneur, 2010).

Partnerships: Who are the key partners/suppliers?

Activities: What key activities are required for the business? Distribution channels? Revenue streams?

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Resources: What key resources are required to create the business?

Value proposition: What is the value delivered to the customer? Which is the problem that we are trying to solve to our customer?

Customer relationship: Which type of relationship are our customers expecting from us? What are our values?

Channels: Which channels are going to be used to reach our customer segment?

Customer segments: Who are the people that are going to use our service? The most important customers?

Cost structure: What are the costs that will be needed to develop the business?

Revenue streams: How much our customers are willing to pay? How are they going to pay it?

4.3.2 Business Model Patterns

Different business models can have similar characteristics, patterns. These are helpful for the dynamic of a business model to inspire others. There is also the possibility that a business model has more than one pattern, being more complete (Osterwalder & Pigneur, 2010).

Unbundling Business Models

Developed by Hagel and Singer in 2000, unbundled corporation by itself means a disaggregated company. This pattern can be applied to three different types of businesses: customer relationship, product innovation, and infrastructure (Osterwalder & Pigneur, 2010). Is rare to have all of them in the same corporation, since it is important to avoid conflicts or undesirable trade-offs (Osterwalder & Pigneur, 2010). Moreover, Hagel and Singer (2000) always contended that a firm should only try to have one of these three in order to not lose focus in the core business. Each of these types of business have different economics, competition and culture imperatives. As example of an exception we have Pictet, a Swiss private bank, which develops deep Customer Relationships, handles many client transactions, and designs its own financial products and its being successful. (Hagel & Singer, 2000; Osterwalder & Pigneur, 2010).

The Long Tail

"Selling less of more" was the moto that Anderson used to best describe the pattern created by himself, also known as Pareto Law (80/20) (Figure 4.2). This pattern is all about focusing

on a diversity of niche products produced in small volumes (Osterwalder & Pigneur, 2010). It is more about the number of products than the number of sales. Usually it is seen a small number of different products being sold in big volumes, but Anderson came to counteract it. This situation describes the way Amazon works (Anderson, C., 2004; Osterwalder & Pigneur, 2010; Afuah, A., 2014).
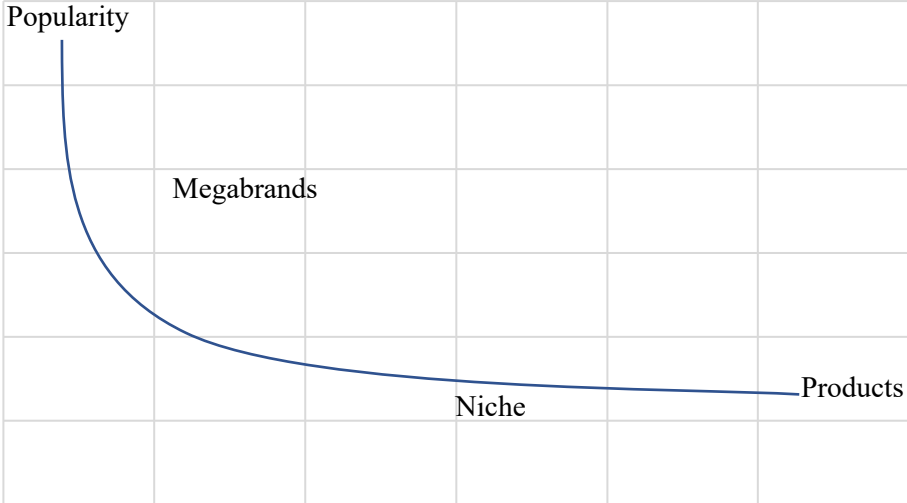
Figure 4.2 - Representation of Long Tail model developed by Chris Anderson. Adapted from: Afuah, A., 2014.

Multi-sided Platforms

The third pattern is also known as "network effect" phenomenon, this happens when a platform brings together different but connected groups of customers, meaning that it only brings value to a group of customers if the other is also included (Osterwalder & Pigneur, 2010). This is because by attracting two or more groups of customers is generated value for the company. eBay is one of the biggest companies that lives by this business model pattern in order to exist, sellers can only "survive" if there are people willing to buy their products (Eisenmann & Parker, 2006; Osterwalder & Pigneur, 2010).

Freemium

The name can be misleading, although it has the word "free" in its name that does not mean that no one pays for the product/service. It only means that a large customer segment is constantly benefiting from a free-of-charge offer (Osterwalder & Pigneur, 2010). However, its being financed by someone or by another part of the business model. One financial model that helps to clarify this pattern is the freemium model, which provides basic services free of charge and premium services for a fee (Osterwalder & Pigneur, 2010). Anderson was also a pioneer

on this concept. A great example of a free service as a business model is Facebook, since it is for free for the usual customer, but charges money to companies that want to advertise their products/services on the platform (Anderson, C., 2008; Osterwalder & Pigneur, 2010).

Open Businesses Models

This last pattern has been implemented by companies that create and capture value by systematically collaborating with outside partners, and was coined by Henry Chesbrough (Osterwalder & Pigneur, 2010). A firm can establish two types of collaboration: "outside-in", by exploiting external ideas within the firm; "inside-out", by providing external parties with ideas or assets lying idle within the firm" (Osterwalder & Pigneur, 2010). The first, "outside-in", occurs when a firm needs to subscribe/contract services from other companies in order to create and develop the product/service, basically it takes advantage of other firm's services (e.g. intellectual property); the second, "inside-out", is the opposite, the firm is selling their services, such as patents, in order to secure other firms existence. Procter & Gamble did an "outside-in" strategy in 2000, when hired a new CEO; 50% of the innovation in the firm was developed by creating partnerships (Chesbrough, 2006; Osterwalder & Pigneur, 2010;).

4.3.3 Business Model Innovation

Innovation is key for the company survival, since another firm can just copy the first and improve the service/product provided by adding functionalities or making the design more appealing. It is important to develop and work constantly on how to improve the product during his lifetime, because innovations not only rely on the companies' activities, but also on how they do them (Dodgson & Gann, 2010). Kao defined innovation as "creating what is both new and valuable", but also as "the ability of individuals, companies, and entire nations to continuously create their desired future" (Kao, J., 2007).

If innovation means create something new and with value, by adapting this definition, a Business Model Innovation is the secret mix a company develops for creating and capturing value by doing things disruptively, a new way to acquire customers and revenues by developing something truly innovative (Afuah, A., 2014).

4.3.4 Choice of a business model

Strategy is "the choice of business model through which the firm will compete in the marketplace" (Casadesus-Masanell, R., 2010). Porter defines strategy as "the creation of a unique and valuable position, involving a different set of activities" (Casadesus-Masanell, R.,

2010). In order to reach a certain goal, a company needs to design a strategy, also known as plan of action. When designing this plan, the firm has to organize it by levels, with different goals, and when one of the levels is reached, then the firm moves to the next on, and so on, until it reaches the final goal (Casadesus-Masanell, R., 2010). The strategy must be ever evolving.

4.4   Business Plan before creating a start-up

Why is important to structure a business plan before creating a start-up? In a business plan, as it has been said before, strategies are defined for the long run of a company. So, it will determine the possibility of success of the company *ex-ante*. It will help the entrepreneur make better decisions and verify if they are executable. Is important to give value to a business plan before the firm is created, even if most of the empirical analyses focus first on creating a company and afterwards on the business plan, *ex-post* market performance (Chwolka & Raith, 2012).

The purpose of a business plan *ex-ante* is to have "better forecasts of the expected cash flows for a given business, is to obtain reliable signals concerning the future prospects of the planned venture and, thus, to reduce the probability of failure by keeping poor business ideas from reaching the market" (Chwolka & Raith, 2012). With this preparation beforehand, the probability of failure will be reduced by delineating the possible paths to reach the final goal (Chwolka & Raith, 2012).

4.5   Impact of GDPR in the Business Plan

The GDPR is the regulation defined by the European Parliament and Council in 2016 on the protection of personal data and their processing and free movement (Official Journal of the European Union, L119/5).

This regulation has brought several implications for companies that used their users' data as a mean of making it profitable. Companies had to adapt and change business models in order to stay in business.

Since its creation, any use of users' data requires their prior consent before any treatment or movement. "The principles of data protection should apply to any information relating to an

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identified or identifiable natural person" (Official Journal of the European Union, L119/5 - 26). The data obtained by any company shall not allow the person to be identified.

This applies to Lost Doc due to the fact that it will use data from items to find their respective owners and it will have a big implication on documents mostly, it will not be possible to use data that can be used for other purposes or find another alternative in order to Lost Doc do not have access to this data, only the person that has the document and its owner.

5 Framework and Methodology

On the framework and methodology section will be analyzed a reference table that was made to better understand the subjects from the literature review, its issues and possible solutions; research context and questions; and methodology.

5.1 Reference table

The literature provided insightful aspects that need to be taken in consideration and further analyzed, in order to understand how they can be applied to the project. It will help to find the better solutions during implementation. Some of the subjects can be found on table 5.1:

Table 5.1 - Schematization of the issues and respective solutions regarding the Literature Review.

Subject	Issues	Possible solutions
BUSINESS MODEL COMPONENTS	Find the right target that guarantees users, i.e. that lose items.	Test the market during the first 3 to 6 months.
Business model patterns	Find the most efficient and effective way to have revenues through our customers.	Put myself in the customer position and check how much I would be willing to pay for the service. Market research on how much people would be able to pay in these situations.
Innovation	Find the right strategy to differentiate Lost Doc from competitors.	Look into every competitor strategy and delineate the alternative way that can bring a service differentiation to Lost Doc.
GDPR	There are some regulations that can bring conflict to Lost Doc creation in terms of solving the problem when IDs/wallets are lost. Find the strategy that does not bring any legal issue.	Not using the personal data from these two types of items to find the owner. Use "hash" in order to make impossible to know who the owner is, if Lost Doc website is hacked.

5.2 <u>Research</u>

5.2.1 Research Context

The business idea hereby presented arises from a problem which was noticed 5 years ago, when taking my bachelor's degree in Economics in Coimbra. I lost my ID in a bar at night. When I woke up the next day, I did not find my ID, so I decided to go look for it. I started by trying to remember every place I had been the night before. At the third try, I found it. Mine was only one among the 60 different IDs that that bar had. Honestly, I was only expecting 1 or 2 more, so you can imagine my surprise when I heard that number. That day was when I started thinking about all the lost documents and the current ways to recover them.

In Portugal, PSP and GNR are the authorities responsible for the lost and found in our country, with a specific department dedicated to it. The way of action is when you find any item from another person, you should deliver it to the closest police station/police officer. However, is not easy to find them on the streets, for that reason numerous Portuguese people give it to the closest establishment. This creates a problem, the person who lost it is not going to look for it in an establishment which did not went to. Additionally, these establishments (e.g. restaurants, bars, among others) do not deliver the lost documents to the responsible authorities, mainly due to the costs and time involved.

Also, the PSP is not so efficient. It is impossible to recover your lost item in 5 minutes, unless you are really fast to take notice that you have lost it, what rarely happens. When lost documents are given to PSP or GNR, during the week that follows they are going to try to contact the owners. However, during that time, is probable that the owner already requested a new document, since most of them are required to carry on a daily basis. Every three months, the documents found during this time period are returned by PSP to the entities who issued them.

In conclusion, is not an efficient plan of action. There should be a possibility to recover lost documents/items in minutes, maximum a couple of hours.

5.2.2 Research questions

Throughout the Business plan is going to be analyzed the problem, the market and the solution. The main question is: who is our target and how are we going to return the lost and found items?

There are also other important questions, such as "How is it possible to have revenues from this business?" and "How are we really going to solve the problem?".

5.3 Methodology

As mentioned on the specific issues and research proposition, it was impossible to test Lost Doc. Consequently, the future and possible impact of Lost Doc will be analyzed through macro (PESTLE) and micro analysis (Porter Five Forces Model); Competition analysis; Internal analysis (VRIO framework); Goal Formulation, STP Model; Strategy Definition; Market Size; Implementation Plan; and, one of the most important, Economic and Financial analysis.

On the tables below (Table 5.2 – 5.4), are presented the variables that will allow people to find their lost items but also the case when someone finds an item from another person (Table 5.2); the entities, which are going to give data and support during the project (Table 5.3); and places where the project was going to be tested (Table 5.4).

These variables will allow us to better understand people's behaviors once they find or lose an item, understand the project market fit and, most important, if the project is viable and if it can efficiently solve the problem, or if there are areas to improve.

The gathering of this data will be also important for the development of Key Performance Index.

Table 5.2 – List of variables that are going to be analysed by using the data collected on the platform.

Variables	
Lost documents	**Found documents**
Document Type	Document Type
Document's nationality	Document's nationality
ID full name	ID full name
ID number (Optional)	ID number
When have you lost?	When have you found?
Contact Method (E-mail / Phone)	Contact Method (E-mail / Phone) - Optional
Do you have any idea where you lost it?	Where is the document? Where did you gave it?
Do you remember how? What did you do when you realized it?	What was the first thing that came to your head when you found it?
Notes from participants	

Table 5.3 -Entities that are going to provide data and support for the project.

Entities	
PSP	MAI

Table 5.4 – Places where to test.

Places where to test
ISCTE
Universidade de Coimbra
NB (Club)
Lust in Rio
Rock in Rio

6 Market analysis

The potential of a business is accessed when the market is analysed. To do an accurate market analysis is necessary to consider internal and external factors that can impact the business.

On this chapter will be applied two perspectives to analyse external factors that can impact Lost Doc: PESTLE analysis, which uses a macro perspective; and Porter's Five Forces model, which uses a micro perspective.

6.1 PESTLE analysis

PESTLE analysis defines the political, economic, social, technological and legal constraints that can affect Lost Doc success.

6.1.1 Political

Currently the political situation in Portugal is stable, both in terms of the presidency and the council of ministers. Since the last severe crisis in 2008/2009, Portugal has had the necessary capabilities to adapt to external events over the last few years, but also to the new crisis that is arising due to COVID-19.

Political subjects do not have the power to affect Lost Doc in any of its activities.

6.1.2 Economical

2008 crisis, as mentioned before, left sequels that were difficult to erase. A considerable number of people were unable to pay government debts. To worsen the situation, in 2019 COVID-19 appeared, which came to change not only how the world works, due to the lock down that people were obliged to respect, but also brought a serious global crisis. Worse than the one from 2008.

However, before COVID-19 appeared, Portugal was blooming economically again. People were spending money on goods and services and living without constraints.

According to Pordata, it is possible to verify that the Portuguese economy (GDP) grew over the last years, to be more precise, +2.16% in 2019. Due to COVID-19 is now expected to decrease, although some industries are expected to remain unaffected, like pharmaceutical which has seen an increase in exportations; on the other hand, industries like tourism and events are being affected the most, close to 0% growth (Pordata, 2020).

Since 2013, unemployment rate has been decreasing from 16,2%, in 2013, to 6,5%, in 2019. Now is expected to increase this year, COVID-19 brought uncertainty to the markets, employers do not know what is going to happen next week, month or years. If the world goes into lockdown again, a lot of businesses will not be able to survive. If this happens to be the case, unemployment rate will grow exponentially, and with the disappearance of businesses, small, medium and big, there will be no jobs for people to take (Pordata, 2020).

We are living uncertain times, with consequences impossible to predict. After this brief introduction regarding the impact of COVID-19, it must be said that in Portugal there has been an increasing number of startups and respective growth, which can help through this crisis. It also means that solutions to solve people's new daily problems, or problems that no one noticed before, are being solved.

With this information, is to expect a decrease in Portuguese population purchase power. Nonetheless, it can have a positive impact on Lost Doc business, since in the case of someone losing an item the individual will put more effort in finding it. It can be considered that the economic situation has medium-low impact on Lost Doc.

6.1.3 Social-Cultural Analysis

In the recent years was possible to verify that the young population is becoming more active and increasing in numbers.

However, 2020 is an exceptional year due to COVID-19. Most of the events and festivals were cancelled or postponed due to health and safety measures. One of them with worldwide relevance, Web Summit. It happens in Lisbon every year and receives some of the biggest tech companies in the world and also small startups. Around 60.000 people from all around the world participate in this event. It has made people move to Portugal and create their first startup, since this city provides incubators for all different areas, investors, people with education, infrastructures, and nice weather.

Portugal is becoming known worldwide thanks to the investment of the Portuguese Government on the Portuguese Startup Ecosystem, but also due to the constant pressure from entrepreneurs. Both are trying to make it successful and attractive to foreign people to live, work, travel and start a family in Portugal.

Portugal is house of billion-dollar startups as Farfetch (fashion), Talkdesk (AI), Outsystems (Software) and many more that are working hard to achieve that next level using Portuguese taskforce.

This active lifestyle and awareness about Portugal can bring buzz to Lost Doc from tourists by participating on festivals but also on Web Summit.

6.1.4 Technological

In terms of technology, Portugal is at the top level of the European countries, having very well trained and recognized engineers. There are no tax incentives for technology, but there are several programs throughout the year with cash prizes for almost all business areas, many of them created by one of the largest Portuguese investment groups, Portugal Ventures.

Portuguese are leaders in innovation, we have startups that work for NASA, Critical Software; Farfetch, which is revolutionizing the way to sell expensive clothes; and Barkyn, delivers dog food at everyone's house through a mobile subscription. Portugal has everything needed to build a successful innovative tech company.

At the end of the first semester in 2019 there were 7.8 million Portuguese with access to internet on their phones, which means that almost 80% of the population can access to worldwide information and technology (ANACOM, 2019).

This means that most of Portuguese people know how to use a phone and can access Lost Doc's website through it. At the same time lost Doc will take advantage from the technological know-how from other Portuguese startups and will reach out to them to better understand how it can be different and which technology could be the best for this project.

6.1.5 Legal

In 2018, European Commission created a new regulation to protect consumers' data which was named GDPR. This regulation covers all the individuals from EU and EEA.

GDPR prohibits any company from exporting personal data of its consumers to other companies without prior authorization. This makes it impossible for companies to withhold data or to make money from personal data. The measure has had an impact on different companies around Europe.

Lost Doc, the project hereby presented, ended up being affected since it could no longer use the data presented on citizens documents to find the owner. Moreover, according to the Law No. 7/2007 from 5th of February 2007, regarding the loss of common passport, Decree-Law No. 138/2006 of 26 July 2006 - Article 5/3 states – "3 - The person who finds the citizen card that does not belong to him or the entity to whom the card is delivered should immediately send it to any reception service or police authority".

6.1.6 Environmental

Lisbon was elected as the European Green Capital for 2020. This means that in 2018 Lisbon was considered one of the most sustainable capitals in Europe due to its progression on the environmental rules implemented, as forbidding cars with more than 20 years old on historical parts of the city, since these contribute to increase pollution inside the cities.

On the corporate side, also most of the companies are aware of the environmental impact so they are implementing measures and rules to guarantee that their impact at the end of the day is positive. Furthermore, there are Portuguese startups studying the best strategies to extinguish fires more efficiently, and how to use circular economy to save trees from being cut.

People in Portugal are aware of climate change and, as in any other country, there are believers and disbelievers. The consequences of global warming are going to be catastrophic, not only for Portugal but everywhere. Governments and International organizations are implementing and imposing regulations to countries in order to decrease the amount of pollution and its impact.

COVID-19 brought one positive thing. Once people worldwide had to stay lockdown at their places to avoid being infected by the virus, pollution levels decreased exponentially worldwide and brought life to some places where it had disappeared.

In Lost Doc this can have a positive impact since this solution is also sustainable, makes it possible for people to recover their item and eliminates the need to get a new one.

6.2 Porter Five Forces Model

Porter's Five Competitive Forces model was developed by Porter to analyze the industry and competition from a different perspective by having an outside-in view. This tool identifies the forces that lead competition and threatened the company's profitability. These five forces are: power of buyers, power of suppliers, threat of new entries, threat of substitutes and competitive rivalry (Porter, 2008).

6.2.1 Threat of New Entrants

Currently, the biggest barrier to entry this market is data protection, where no data from an individual can be used without his/her permission, and the fact that the lost and found are currently managed by the Lost and Found Department of the PSP, under the supervision of the MAI. In general, barriers to entry turn out to be medium-low.

It should be noted that the market has no room for more than two companies to solve this problem; my solution promises to be unique and efficient.

Our strategy is to bet on the brand, we believe that we can get all the market to trust it and to be loyal. To achieve it, we are going to start by implementing our lost and found system on specific events as summer festivals. By being present in 10 to 15 festivals in only 2 months, it will bring awareness from the people that attend them. Is important to create a loyal and efficient relationship with our potential customers, to make them "fall in love" with our company and our moto. Because, at the end of the day, we will exist to return them their lost items. In conclusion, threat of new entrants is considered medium.

6.2.2 Bargaining Power of Suppliers

This force does not apply to Lost Doc, the project is not dependent on suppliers but on the creation of partnerships and on the people that lose items.

6.2.3 Bargaining Power of Buyers

At Lost Doc this problem does not exist. In Portugal we only have one competitor, the public authorities. The public authorities have a platform that is used by the lost and found services of the PSP and it does not work. Being this the case, our customers will have no possibility to negotiate prices with us, since they have no better alternative. This is only possible when there is a problem in the market that nobody else, but the Government, is trying to solve since it is a sensitive and intricate area, but with a fantastic market potential due to the large size of the market worldwide. Bargaining power of buyers is low.

6.2.4 Threat of Substitutes

The Lost & Found world does not have many companies trying to solve its problem. There are some current solutions in Europe and some in America, but in the majority of the cases is the Government who tries to solve this problem. Nonetheless, the government does not have the right tools and resources to solve it. As mentioned on the Bargaining Power of Buyers, we have one main competitor in Portugal, which is the Lost & Found department from PSP. Threat of substitutes on a global point of view is high.

SIISPA: Platform created by the Portuguese MAI but managed by PSP. When any lost object is delivered to the authorities, they update the information on the online

platform in order to check if there is a match. Most of the times it does not match, even if the object is there, due to system failures.

YesWeFound: French website where people announce what they lost and where. Whoever finds an item corresponding to an advertisement will have to pay a fee as a reward. The placement of the advertisement is free.

RewardHero: Slovenian company where users have to buy a sticker through the website to put on the objects they want to recover in case of loss. This sticker comes with an ID and in case someone finds the item, the person will have to go to their website and register the item for the owner to be notified and to receive the promised reward.

Wereturnit: Irish company that has partnerships with airlines and rent-a-car services. People will have to go to the website and identify the type of item. After identifying the type of item, a form has to be filled with the description of the same and place where they lost. This allows the company to make a search in the objects they have in their possession. In order to recover it the person will have to pay a fixed fee for it to be delivered to their home, it is named "Find & Return fee".

ReturnMe: Canadian company that advocates being the world's largest global recovery service. People will have to buy tags and put them on their devices. After losing the item, whoever finds it calls the company's call center which is available 24 hours a day. Then the company contacts the owner in order to plan how the item will be delivered. The person who returns the item will be rewarded by the company. It turns out to be similar to RewardHero.

FIDO: A UK-based company that operates in the same way as ReturnMe and RewardHero, but with no reward. The finder of the lost item sends a private message saying where the lost item was found.

Haveitback: Is a German website present worldwide where they track the items that were lost or stolen through a map on the website. 90% of the entries on the website are from finders that want to return the items to the respective owner. If there is a match

they will be rewarded. If you want to be notified if there is a match, the user will have to pay a monthly fee. People can offer rewards to the finders.

They also have a software available for companies in order to make easier their life, all they have to do is take a picture of the item (OCR) and it will describe the item (model, color, series number, etc.). Companies have to pay a 550$ monthly fee.

A summary of the market competitors is presented on Table 6.1.

Table 6.1 - Summary of the different characteristics associated with markets' competitors and comparison with Lost Doc.

	Lost Doc	SIISPA	YesWeFound	Reward Hero	Wereturnit	ReturnMe	FIDO	Haveitback
Accessible to all	x	x	x	x	x	x	x	x
Pay if found	x		x	x	x	x		x
User Friendly	x			x		x	x	x
Customer experience	x			x		x	x	x
Partnerships with festivals, clubs and events	x							
Iberian Market	x							x

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6.2.5 Competitive Rivalry

Based on the analysis previously made, it is possible to verify that are some competitors spread worldwide. Some have already an advantage over us, since they are already established and running. However, besides that, most have a common point, selling stickers. In my opinion, the current solutions are not actively solving the problem. Lost Doc will be more complete that any of these, and due to that, competitive rivalry is considered to be medium, which is possible to verify it through the business plan.

6.3 Competitive analysis

Taking into consideration our main competitors, analyzed in the previous section, was developed a graph which compares Lost Doc's position with its competitors' position in terms of innovation and efficiency (Figure 6.1).

The closest competitor to Lost Doc is Have It Back. This is due to its business strategy, focusing both on the creation of partnerships with companies and on people that lose items. They are not efficient and innovative as Lost Doc, they only help people that has their tags, which limits their market. Lost Doc does not require a tag, people just have to describe their item and we take care of the rest, we can reach a bigger market.

In last place is SIISPA, the Portuguese solution developed by the Government, which does not do the job that is supposed to. This is the reason why there is an opportunity for Lost Doc to succeed.
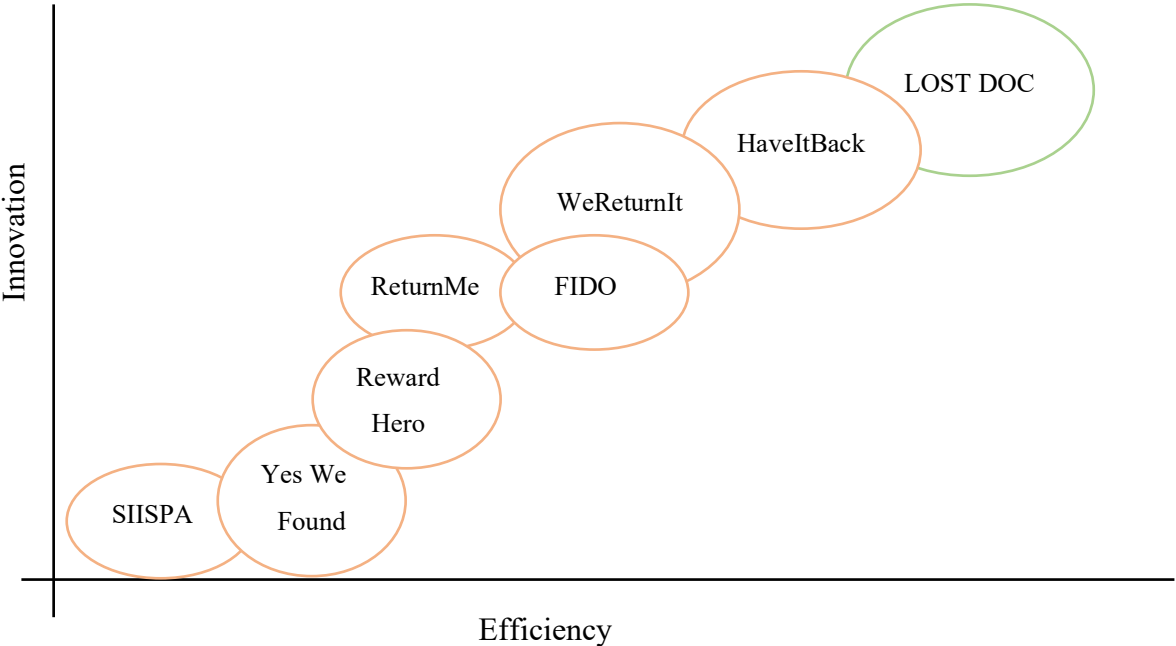
Figure 6.1 - Graphical representation of Lost Doc and its competitors taking into consideration efficiency and innovation.

6.4   VRIO Framework

Lost Doc's VRIO framework will answer the question presented on the literature review (Chapter 4.2.3) to evaluate the company's resources and capabilities. These questions are important to answer, since they have repercussions on the competitive advantage level, as it is shown on the Table 6.2.

Table 6.2 - Table VRIO that provides answers regarding value, rarity, imitability and organization.

Valuable?	Rare?	Costly to imitate?	Exploited by the organization?	Competitive implication
No				Competitive disadvantage
Yes	No			Competitive parity
Yes	Yes	No		Temporary competitive advantage
Yes	Yes	Yes	No	Unexploited competitive advantage
Yes	Yes	Yes	Yes	Sustained competitive advantage

Lost Doc is valuable and rare. Lost Doc will revolutionize the way objects will be recovered and how in a short period of time they will be delivered to their owner's homes, something that current competitors do not do and cannot guarantee. Our competitors, by offering rewards may indirectly be encouraging theft, because even if it is something of no value to the thief, it can have immense value, especially personal to the owner and, consequently, will make them offer money. Besides that, it will be simple and easy to use.

At the beginning this project is easy to be copied. Almost everyone can create the same platform, as we pretend to do. However, not everyone will be able to put the effort, sweat and create some of the amazing partnerships that Lost Doc already has. It is hard nowadays to develop something that is controlled by GDPR. People are the asset that makes a project inimitable and unique, and that is where I want to put my efforts when it comes the time to

grow and get to new cities worldwide. Recruit people with the passion to solve simple problems that affect our daily life.

According to the table above (Table 6.2), Lost Doc is in a position of temporary competitive advantage, which is good for the beginning of a project. As it grows it will develop features that will put it in a position of sustained competitive advantage.

6.5   SWOT analysis

SWOT analysis focuses on two perspectives, internal and external as mentioned on the literature review (Chapter 4.2.4). On this strategy will be analyzed Lost Doc's strengths, weaknesses (internal perspective), opportunities and threats (external analysis). A schematic representation of these points is presented on Figure 6.2.

6.5.1 Strengths

1. Lost Doc is going to be simple and of easy access. Is going to start as a website where people fill the empty spaces with data corresponding to the lost item, in order to see if there is a match. In case there is a match, the individual will know immediately. The only thing they need to do is to pay a small fee and wait for receiving it at their place, in 24 hours.

2. Effective. Our software will guarantee that if someone searches for an item and if it has been uploaded on the platform, they will have a match.

3. Safety is guaranteed. Data with sensitive information, such as names, address, contacts, etc., will not be used for the benefit of the company nor will they be sold to any entity. In addition, all individuals who make the request for match information, and if the same is positive, will have to register in the platform.

4. Lost Doc will save people's money, because by finding their items and paying a small fee, people are saving money, and time in the queues of the entities responsible to issue a new document, for example.

5. Throughout Lost Doc lifetime there will be always partnerships with the main establishments where people lose items, for example clubs and festivals. All the items that are found in national territory will be brought together in a single platform.

6.5.2 Weaknesses

1. Lack of brand awareness can be a problem at the beginning to create partnerships and to raise the needed awareness of the people who lose items.

2. Lack of contacts within MAI, to help us reach the government to make it mandatory to every establishment to use this platform. This is a service that everyone should use.

6.5.3 Opportunities

1. At this moment, Lost Doc, has a big opportunity to get traction, since the government platform, SIISPA, does not work and it is not known by the population.

2. According to Portuguese legislation, establishments that keep objects lost items in their possession for indefinite periods of time are not complying with law. By joining the platform, they not only comply but also improve the client's opinion on the establishment, since the goal is to return the item as soon as possible.

3. Few are the platforms that focus on the execution of partnerships with establishments (e.g. cafes, restaurants, airports, carriers, hotels, hospitals, etc.). This is a strategical advantage, since it becomes an opportunity for Lost Doc, since these are the main locations where items are lost and found. Most of the items are lost in closed places and the fact that the platform can be used by any type of establishment makes it a great opportunity.

4. The fact that there is no common platform to the European Union makes the project appealing, as it would make perfect sense in the long run to become a common platform for all countries belonging to the Schengen area.

5. Portugal is at the top of the European countries and world in the development of innovative and global projects.

6.5.4 Threats

1. Government laws are constantly changing so it transmits in uncertainty and can influence Lost Doc's business.

2. Worldwide competitors are always a threat but a good type of threats, because is a healthy way of innovating a product/service. Competition obliges the world to be in constant development.

3. The GDPR has made it impossible to transfer and upload data without the prior permission of the respective owner.

4. The Government Platform, SIISPA, may decide to copy our method of operation and have ours shut down.

Strengths	**Weaknesses**
Simple and of easy access; Effective; Data safety; Save's people money; Partnerships.	Lack of brand awareness; Lack of contacts with Ministry of Internal Affairs.
SIISPA and security forces inefficiency; Establishments not complying with the law; None of the existing platforms have partnerships with all types of establishments; Inexistence of a common EU platform; Portugal as a trend;	Government Laws; Competitors, in specific SIISPA; GDPR.
Opportunities	**Threats**

Figure 6.2 - Lost Doc's SWOT analysis.

6.6 Goal Formulation

Goal formulation is useful to summarize the conclusions taken from the SWOT analysis. Through this formulation, is possible to verify how to avoid threats, minimize weaknesses and how to make the most out of Lost Doc's strengths and opportunities

6.6.1 Strengths and Opportunities

- European Union has some of the most powerful countries. So, it is a great opportunity for Lost Doc to reach the European market, taking advantage of how easy it is to everyone access it. It would be great for European Union to have a common lost and found platform for all countries, since Europeans are always traveling between countries.

- SIISPA, the Portuguese government platform, is not effective on matching the documents in their possession with the information/description given by the person who lost them; and reaching Portuguese people, i.e. for people to know of its existence. Lost Doc pretends to take advantage of social media to raise awareness for this problem and to encourage people to give items found on the streets to our partners, to make possible for the owner to recover it. Besides that, our software will give a match through the precise description of the items and by autocorrecting errors on people's writing to make sure that the match happens.

- Data protection is our number one priority. Since the release of the European regulation for customer's data, it became of the upmost importance for companies to make sure that they are not violating people's rights without their consent. Lost Doc is adapting the data needed to have a match in order to be GDPR compliant, but also to help establishments improve their relationships with customers by giving them the chance to recover their items, and to comply with Portuguese laws.

- Portugal is becoming one of the biggest and beknown hubs for the development of technological startups, with international investors having a close look on the projects being here developed. This is an opportunity for Lost Doc. Also, most of these investors are looking for sustainable projects that can save people's money and also that is sustainable for our planet. Lost Doc fits these two requirements. This way it will not be needed to purchase a new item, by consuming less, you are having a positive impact on the planet.

- Right partnerships make a business grow easily. The companies need our platform to solve a problem for them. As previously mentioned, this is one of Lost Doc's main focus. To create partnerships that impact positively all three parties involved; individual that lost an item, establishment that has it, and Lost Doc for making it possible.

6.6.2 Minimize weaknesses

- The lack of brand awareness can be fought by creating a partnership with a big brand that has strong values and is trusted by their customers, like Coca-Cola. To have a positive impact, facilitate the establishment of new partnerships, but also to get more people aware of our platform in case they lose an item. Social media is also a great way to get people's attention, since most have a cell phone and check their social media (e.g. Facebook, Instagram, snapchat, LinkedIn, etc.) daily. Also, the partner establishments will play a key role to share Lost Doc.

- The lack of contacts inside the government is difficult to overcome but through LinkedIn it will be possible to reach out to some members of the Ministry of Internal Affairs and if we get the traction and the buzz needed, it will make them aware of Lost Doc existence. If Lost Doc proves to be successful and to solve this problem worldwide, would be a great advantage to try to find a way to create synergies.

6.6.3 Avoid threats

- Competitors are a threat that cannot be avoided. The way to go through it is to be aware of what they are doing and what will be their next steps, in order to always be one step ahead of our competition. SIISPA is the competitor that worries us the most for belonging to the Portuguese government. It has total access to people's information and funds to improve it and grow. However, they have not done it yet.

- Government laws and GDPR are threats that are impossible for Lost Doc to control, but they can be managed. Lost Doc needs to be careful with the data it uses from the users and to be compliant with law. There is a need of being constantly up to date with any changes that may occur.

6.7   STP Model

The STP Model is designed to identify Lost Doc's segmentation for our service; followed by the targeting, evaluation of customers based on the segmentation; and for last, Lost Doc position within the market.

6.7.1 Segmentation

Companies cannot target all the people. It would be great, but it is impossible, since companies are creating a solution (or any product/service) for a problem that affects a specific group/groups of people.

Lost Doc's service focuses on people who lost an item (e.g. wallet, jacket, computer, jewelry, hat). Although losing something can happen to anyone, there is a need to segment the market.

At Lost Doc we segment taking into consideration demographic, psychographic and geographic criteria and its variables.

- Demographic: Age and Gender;
- Psychographic: Lifestyle;
- Geographic: Region.

6.7.2 Targeting

Knowing that segmentation consists in identifying clusters of customers, targeting defines which are these segments. On the table 6.3, presented below, the business criteria, variables, and targets are identified.

Table 6.3 - Segmentation of the market, identification of business criteria, variables and targets.

Criteria	Variable	Target
Demographic	Age	16 - 25
	Gender	Man
Psychographic	Lifestyle	Travelers
		Smokers
Geographic	Region	Portugal

- **Age:** between the ages of 16 to 25 years old, since these are those who have a more active life. The young adults are, usually, less responsible and less conscious of their behaviors. Commonly, they do not pay attention to the dangerous environment and are easily distracted.

- **Gender:** Inside this group of young adults there is a gender that tends to be more reckless, male, beside both genders losing items.

- **Smokers:** In Portugal, numerous ID cards are left in various establishments, mainly coffee shops and restaurants. Furthermore, an increase has been seen due to the new tobacco vending machines. These only unlock the underage system with ID cards. Oftentimes, people collect the cigarettes and the change and forget their ID cards in the machine.

- **Travelers:** People who are frequently travelling for leisure or business and need to carry with them their ID cards, portable computer or many other items are more vulnerable get lost since they are in constant movement. In case of loss, there must be an effective and fast system to help them to recover their belongings.

- **Region:** Lost Doc will be tested and developed in Portugal with the aim to go global, especially to expand to United States of America.

6.7.3 Positioning

Lost Doc's mission is to be an effective lost and found platform that links lost items to their owners. On the long run, aims to become the European Union Lost & Found logistic startup which allows people to receive their lost items in 24 hours at their place.

7   Development Strategy

In order to define the implementation plan for Lost Doc's success, it will be needed to study the business model canvas, which will be implemented on the strategy sight.

7.1   Market Size

Items are lost every single day around the world and the number is increasing every day due to our stressed and busy life. The article of Wellness published by Tunajek mentions that Americans spend, on average, 9 million hours every day trying to find lost and misplaced items (Tunajek, S., 2009). Also, an FBI report says that people are delivering to lost and found departments around 200 lost items, on average, per day and more than 100 mobile phones are lost every single minute in the United States of America (FBI Report, 2014).

According to the Lost and Found Department of the Portuguese PSP, in 2018 about 144,084 items were handed over to the authorities, excluding all those that never passed through their hands and which are still to be found. This figure gives an average of 395 lost items per day in Portugal (DGIE, 2019).

When we compare the data from Portugal with those from Stockholm, obtained in a face-to-face meeting with the Lost and Found Department of the public transportation network, a city with about one million inhabitants, the numbers surprise us even more. In Stockholm, about 130,000 items are found per year. And the main challenges they face is to storage the items and find the owners.

There is a great potential to effectively solve this problem worldwide. Lost Doc will start in Lisbon where 45% of the items are lost in the country, according with the data given by MAI. In the beginning partnerships with festivals, clubs and universities are going to be established. This decision is justified by facts. For example, Portuguese festivals in 2018 had around 2.700.000,00 spectators (Observador, 2019).

Afterwards, it will expand to people's transport companies, almost 6000 in Portugal; and creation of partnerships with Portuguese airports due to the high level of passenger's movement. About 29 million people have been to Humberto Delgado Airport in Lisbon in just 12 months. The numbers of lost and found items are unknown, but anonymous sources have reported the existence of corridors with miles of length where these items are stored (Observador, 2019).

On the long run, there are some cities to consider expanding, namely: Stockholm, based on the information we have; London, the public transport office received almost 350.000 items

between 2017 and 2018, from which only 13% were recovered. It receives on a daily basis 1100 items without counting for the items that are lost on establishments, like the ones Lost Doc pretends to create partnership with (Business Insider, 2019).

7.2   Business Model Canvas

This business model developed by Osterwalder, as explained on the literature review, has many years and is used worldwide by different entrepreneurs to help summarize most of the topics explored in the previous sections on a single table, as can be seen on Figure 7.1 applied to Lost Doc business.

- **Key partners**: Establishments where people lose items and go to multiple times during the week. Mostly coffee shops, bars, restaurants, shopping malls, supermarkets, public transports. Additionally, festivals, hospitals, airports, etc. that besides not being on a daily basis receive a lot of people. And CTT to deliver the lost items.

- **Key activities**: How we can guarantee Lost Doc's existence on a daily basis to help people recover their lost items? The main activities are maintenance of the platform, to be effective in matching items with owners; creation of partnerships with companies that want to help people get back their items together with Lost Doc; and marketing campaigns of the positive impact it can have, not only on people's life but also on the environment.

- **Key resources**: What are the most important resources needed to build Lost Doc. Without developers that know how to build websites and apps from the scratch and using encryption, is impossible to develop it, so they are the number one priority; followed by the platform and partnerships, because without them no one will upload the data of the lost item; and social media to reach our customer.

- **Value proposition**: Is the message that the company wants to pass to the customer, what is the value of the company to them. Lost Doc wants to show that is an accessible platform to every person, no matter what background, in order to find their lost item in a fast and safe way.

- **Customer relationship**: How Lost Doc pretends to be seen by their customer and which type of values the relationship must have. Lost Doc pretends to create a relationship of transparency, safety, efficiency, utility, easiness, and efficacy.

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Key Partners	Key Activities		Value Propositions	Customer Relationship	Customer Segments
Coffee shops; Bars; Restaurants; Malls; Airports; Hospitals; Supermarkets; Public Transports; CTT.	Maintenance of the platform; Manage lost & found items; Creation of partnerships; Marketing campaigns.		Platform accessible to everyone, so they can find their lost document quickly and safely.	Transparency, Safety, Efficiency, Utility, Easiness, and Efficacy .	(B2C) Youth - Adults: 16 - 25 years (B2B) Some establishments
	Key Resources			Channels	Although It was mentioned this age group as a target audience, anyone, regardless of age, can use the platform.
	Platform - Website; People - Developers; Partnerships (establishments, CTT); Marketing.			Website; Social Media; Posters in partner establishments, public establishments and universities.;	

Cost Structure

Marketing;

Domínio (".pt" / ".com");

Marketing – Advertising;

Lawyers;

TOC – Official Accounting Technician;

Administrative salaries.

Revenues Streams

Freemium: Free → for small companies | Premium → for médium-big companies or events.

Fee for Service: receive the lost item at home.

Sell Data: places where more items are lost.

Figure 7.1 – Lost Doc's Business Model Canvas.

- **Channels**: How it will possible for our target to get to know us. On our partners will be possible to see a sticker, which identifies them as our partners and a poster explaining our purpose; social media, as mentioned before; through our website.

- **Customer segment**: Which is our target customer. Explained on the STP framework, B2C young-adults (16-25 years); but also B2B, these are: 1) one-time events (festivals/events); 2) individual establishments (e.g. clubs, hospitals, transports, hotels, universities); 3) big companies with up to 10 establishments (e.g. retail chains, gas stations, hotel chains, food chains); 4) big companies with more than 10 establishments and 5) airline companies. Some of our partner establishments will not be considered here, since they will not pay any fee, such as individual restaurants and coffees.

- **Cost structure**: What are our main costs. Will be marketing, domain, cloud – Amazon web services, trademark registration, payroll expenses and creation of the company.

- **Revenue streams**: How Lost Doc is going to make money. Through subscription fees, cost of service fee and sale of data.

8 Implementation Plan & Costs

Lost Doc needs a plan in order to turn its aims into reality. How can it get to the B2C and B2B in order to make it happen; What will be achieved by marketing campaigns to get the traction that guarantees customers and partners; How the company will be organized; How it is the company going to be profitable; and technology used. All the subsections presented below show that there is global potential, since existing solutions cannot provide a proper response.

Taking into consideration the Business Model Canvas applied to Lost Doc, afterwards will be analyzed how is expected to reach out customers, B2B and B2C, and resources and activities to make it happen, to make it possible to reach users.

8.1 How to reach out the expected customers?

It is important to analyze how Lost Doc is expecting to create partnerships and reach out the final user. Also, expected revenues for each of them will be studied.

8.1.1 How can we create partnerships?

For this project to be implemented there is the need to create partnerships with many establishments, which importance has been highlighted in the previous sections.

These partnerships will be made with businesses. These B2B will be segmented in 3 types:

- **One-time events**, which are festivals and fairs (web summit, per example);
- **Individual establishments**, which means that the company only has one establishment. For example, clubs, hospitals, transports, hotels, universities, malls, amusement parks, museums, coffee shop, restaurants, etc.;
- **Companies with less and more than 10 establishments and airlines**, where they can use our service to improve their customer service and social responsibility.

The best way to create a list of possible partners to reach out is through a google scrapping. This technique is used by many companies, to find other companies with the characteristics they are looking for, but also through LinkedIn. It facilitates the contact with the business's owners.

On the first year, these partnerships will be settled prudently through the scheduling of meetings with the business's owners or commercial/innovation directors. On these meetings

will be discussed the implementation of Lost Doc, and also how Lost Doc can be adapted to their businesses and generate a positive impact. The customer will remember that the establishment made it possible for them to recover the item, which can make the person go back there for being thankful and impressed by the previous experience, but also the person will have the chance to send a thank message to the establishment after paying for the fee.

This way the establishment can measure the positive social impact it is having within the people that lost an item on their establishment. This pretends to be the simplest as possible. People can choose between sending a pre-defined message or to personalize their own message.

After the first year most of the partnerships will be done through phone, cold calling. Is the most efficient and cost friendly. Also, on Lost Doc's website, will be possible to find a form for businesses to fill if they pretend to become our partners. Then a member of our team will reach out to them. A number of contacts and meetings has been established for the first years, Table 8.1, per type of establishment. These meetings will influence the numbers of partners on the financial analysis.

Table 8.1 - Summary table on the number of contacts per establishment on the first year.

		No of Contacts for the 1st Year
One Time Events	Events/Festivals	15
Subscriptions	Individual Establishments	30
	Companies with < 10	8
	Companies with > 10	4
	Airline Companies	0

8.1.2 How can we get our final users?

Since Lost Doc is a new and innovative project, and does not has brand awareness, structured communication and marketing are of the upmost importance at the beginning to attract users and create awareness around Lost Doc's solution.

At the beginning, Lost Doc MVP will be tested on ISCTE, so it will focus on young people (our main target), and to attract young people without being through social media, is difficult. Nowadays, most of advertisement seen daily is online, that is why Lost Doc wants to be different and invest also on offline strategies.

An example of offline marketing for ISCTE is the next image, impactful (Figure 8.1).

Figure 8.1 - Example of Lost Doc's offline marketing campaign at ISCTE for documents.

The example pretends to raise awareness for the problem of losing documents and items. By losing an ID, people lose the ability to prove who they are. There is also another example of offline marketing strategy to be used by Lost Doc, not only at ISCTE but also in other establishments where people lose documents, bags, among others (Figure 8.2).

Figure 8.2 - Offline campaign to get people's attention on the problem the company is trying to solve.

The idea would be to spread this kind of edited ID across the floor of different establishments. The people's instinct will be to pick it up from the ground. Then, they would realize what it is about as soon as they flip it to get more information about who lost it. It is also something that they can keep in their wallet and give to someone they know has lost an item.

These strategies are different. People are not prepared to find lots of IDs on the floor and have posts posted on the wall saying they can lose their identity when they lose a document. This kind of marketing creates such a strong impact that people get Lost Doc marked on their minds due to this strong campaign that can be easily implemented in all partner establishments.

Online is where we are also going to get the attention from most of the people that will become users, since most of the people worldwide have at least one social media account.

Lost Doc pretends to use Facebook, Instagram and LinkedIn (some of the most used social media in Portugal) to launch impactful campaigns to get the attention and raise the awareness needed.

Our message has to be clear and thrustful as our values are; there is a need of transparency. At the beginning, Lost Doc will use paid advertisement to create buzz around it. Through this

paid advertisement is possible to target the people, like age, demography, geography, what people like to see, based on the accounts they already follow. This way it will be possible to target people from 16 to 25 years old that are smokers and/or travelers; that go out and like to live an active life without worries.

On our marketing we also pretend to be transparent with the price that people will pay for the service, which will be explained afterwards (Chapter 8.1.3). People think that this type of company should be free to everyone, but it is impossible to make it free, due to the costs involved.

Some of the posts on our social media will be data related with lost and found; but mostly catchy and funny to bring a happy mood to our social media. Follows some examples of posts (Figure 8.3).
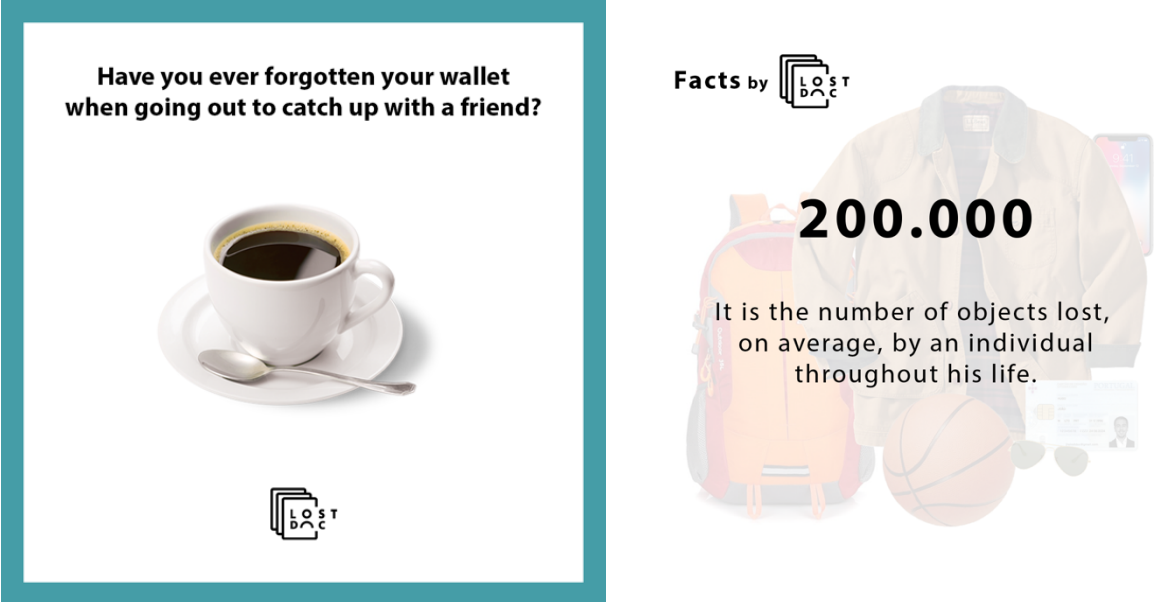

Figure 8.3 - Example of Lost Doc's online marketing campaigns on Instagram.

8.1.3 Revenue streams from our customers

For each type of customer, Lost Doc will have a different revenue stream. For the partnerships segment there will be 2 types of fee asked to our partners. A one-time payment for one-time events, that will be 499€. This price was validated after several meetings with directors of Portugal's biggest festivals, as Rock in Rio; The second fee is a monthly payment subscription that has different prices depending on the number of establishments a company has. For individual clubs/hospitals/transports/hotels universities and many others, would be 499€, this number was agreed by the number one group of clubs on the center of Portugal. For companies with less than 10 establishments would be 2.999€, and for a company with more than 10 establishments would be 4.999€, the last one agreed with one of the largest private hospital networks in Portugal, with about 19 hospitals in its portfolio, before COVID-19 emerged.

Our partners will choose to use our service and pay for the fee, because it has many costs to them to have lost items. These costs can be item management, since it takes space, money and time to have the item on their establishment for long periods without having the chance to return to its owner; and actually, nothing is being done by many companies to return the items or at least try to. Our platform brings to our partners a good brand image of social responsibility that can be thanked by our customers as explained previously.

Lost Doc will be free for the partners that have only a small establishment, as coffee shops and restaurants, will be crucial. Since there are thousands of them in Portugal and to lose an item there is a situation that doesn't happen every single day, the option is for them to be our free partners because it will give us buzz.

On Table 8.2 it is possible to verify which type of revenue Lost Doc will ask to its partners. There is sale of data, also. Data as establishments and age where people lose most of the items can be sold to other companies in order to have revenues from it.

Table 8.2 - Summary table of the types of service provided and the fee asked for each one of them.

		Price asked
One Time Events	Events/Festivals	499 €
Subscriptions	Individual Establishments	499 €/month
	Companies with < 10	2 999 €/month
	Companies with > 10	4 999 €/month
	Airline Companies	4 999 €/month
Sell Data	For each location and age	0,49 €

The expected grow on each type of paid partnership created per year is different for each type of establishment, as will be explained on the financial analysis (Chapter 9). The Table 8.3 is synthesis of new partners per month and respective annual growth rate.

Table 8.3 - Summary table of the amount of partnerships gotten per month and respective growth rate.

		New Partnerships Per Month	Growth Rate Per Year
One Time Events	Events/Festivals	0,6	33%
Subscriptions	Individual Establishments	0,5	20%
	Companies with < 10	0,2	20%
	Companies with > 10	0,2	15%
	Airline Companies	0,12	15%
Sell Data	For each location and age	Half of users of fee for service	-

On the other side, we have our final users, people that lost an item. In order to have their items back at home, they will have to pay a fee. However, this fee will be optional for documents but mandatory for all the other types of items. This fee can be charged according to Portuguese legislation, because the item is taking space from someone who is keeping it, which has its costs.

The price per item will be different according to type of item, size, weight, and importance. The cost of receiving back the item can vary between 6,50€ to 30€, as it is presented on Table 8.4.

Table 8.4 - Practical example of the application of its revenue streams.

Items	Management Fee = Shipping Fee + Packaging Cost
Phones	30,00 €
Headphones	13,00 €
Clothes < 2kg	13,00 €
Glasses	10,00 €
Bag < 2kg	30,00 €
Wallet	30,00 €
Documents	6,50 €

For example, Lost Doc was invited to be on a festival; at the festival we would have a stall where the security guards, people and establishments participating in the festival deliver all the items found during it (cost of 499€).

A hypothetical situation: there is a guy called Luís that has lost a bag during the festival. Luis does not know where his bag is and only noticed when arrived at home, because he was hyped with the music and environment. Luís remembered an advertisement that had seen on the festival and on the festival social media for lost and founds. The first thing he does is going to the festival social media to find our website. When Luís finds our website, he fills the blank spaces asked; where he lost it and characteristics of the bag (the bag data was already uploaded by an employee). If there is a match for the info, Luís will have to register on the platform to guarantee that it is his bag. After that validation Luis will be asked to pay the fee of 30,00€ to have it back in 24 hours at his place. On the bag there was a camera and his favorite bracelet given by his mother. Luís saved hundreds of dollars on the camera and a bracelet that has invaluable emotional value thanks to Lost Doc.

The expected growth on fee for service users, i.e. people that lost an item and recover it on our platform, is expected to be more than 100% each year. On the first year, since it will have only 4 months of activity, is expected to return 600 items, but on the second year 3800, on the third year 9600 and on the fourth year 19200, as can be seen on Table 8.5. This happens due to the constant grow of partnerships being created and more awareness on Lost Doc business among our target population.

Table 8.5 - Summary table of the amount of fee for service users per year and respective growth rate.

NEW FEE FOR SERVICE USERS PER YEAR

	2021	2022	2023	2024
Fee for service new users per year	600	3.800	9.600	19.200
Growth rate	N/A	+533%	+152%	+100%

Revenue streams:

Monthly/Punctual Fee from Service Providers/Establishments

Fee for service

Sale of data
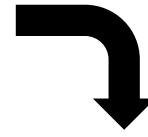
- Establishments will pay to Lost Doc in order to comply with the law, to make their life easier and costs reduced. They will insert the data and after 30 days, if no one claims, the items will be delivered to the police by us.
- Customer will pay us a fee to receive the item at home.
- On the Long run, data will be sold to companies that would like to know which are the places that most people lose items and respective age.

Figure 8.4 – Schematic representation of the Revenue Streams.

8.1.4 Revenue streams costs

Lost Doc has costs with its revenue streams. The margin for partnerships is between 70% to 80%, due to designing and printing of offline marketing, but also with online marketing campaigns and costs associated with client management. These 30% reduction is for problems that may arise with partners and in situations where the customer failed, money may be needed to be returned to our customer or any logistical problem.

On the Table 8.6 is possible to verify that the expected profit from one-time events is 349€ and with subscriptions is between 2.099€ and 3.999€.

Table 8.6 - Summary table of the types of service provided and the fee asked for each one of them, margin and profit.

		Price Asked	Margin	Profit
One Time Events	Events/Festivals	499€	70%	349,30€
	Individual Establishments	499€	70%	349,30€
Subscriptions	Companies with < 10	2.999€	70%	2.099,30€
	Companies with > 10	4.999€	70%	3.499,30€
	Airline Companies	4.999€	80%	3.999,20€
Sell Data		0,49€	100%	0,49 €

Also, the process of send the item back to the owner has costs for Lost Doc. To send the items Lost Doc will partner with the national post office company, CTT; which is the company with more competitive prices. The highest cost for the company will be sending items of high

value as phones, computers and wallets, but that is not a problem since Lost Doc's margins will be at least 50% per item sent back to the owner, as can be seen on the Table 8.7, which guarantees at least 4,25€ for the company.

Table 8.7 - Summary table with the cost involved in the process and the expected margin for each one of them.

Items	Management Fee = Shipping Fee + Packaging cost	Shipping Fee	Packaging Cost	Profit Per Item = Margin €	Margin %
Phones	30,00 €	3,35 €	1,00 €	25,65 €	85,50%
Headphones	13,00 €	2,25 €	0,50 €	10,25 €	78,85%
Clothes < 2kg	13,00 €	5,90 €	0,50 €	6,60 €	50,77%
Glasses	10,00 €	3,35 €	1,00 €	5,65 €	56,50%
Bag < 2kg	30,00 €	5,90 €	1,00 €	23,10 €	77,00%
Wallet	30,00 €	5,90 €	1,00 €	23,10 €	77,00%
Documents	6,50 €	1,95 €	0,30 €	4,25 €	65,38%

8.2 How does the platform work?

In first place, is of the upmost importance that Lost Doc is compliant with the legislation and regulation. A solution for the GDPR has been studied over the last 9 months with one of the top lawyer's company in Portugal, Morais Leitão, in order to secure Lost Doc's existence. The answer is that it is possible to upload data from documents, if not used for other things rather than try to find the lost document's owners, and through "Hash" (hash is a type of encryption that makes impossible the decryption of the data uploaded on its system). For other items as bags, backpacks, clothes, jewelry, etc. there is no problem, since these do not hold any owner's information.

To better understand how it works for a document but also for an item, were developed two schemes for each situation; Figure 8.5 and Figure 8.6, respectively.
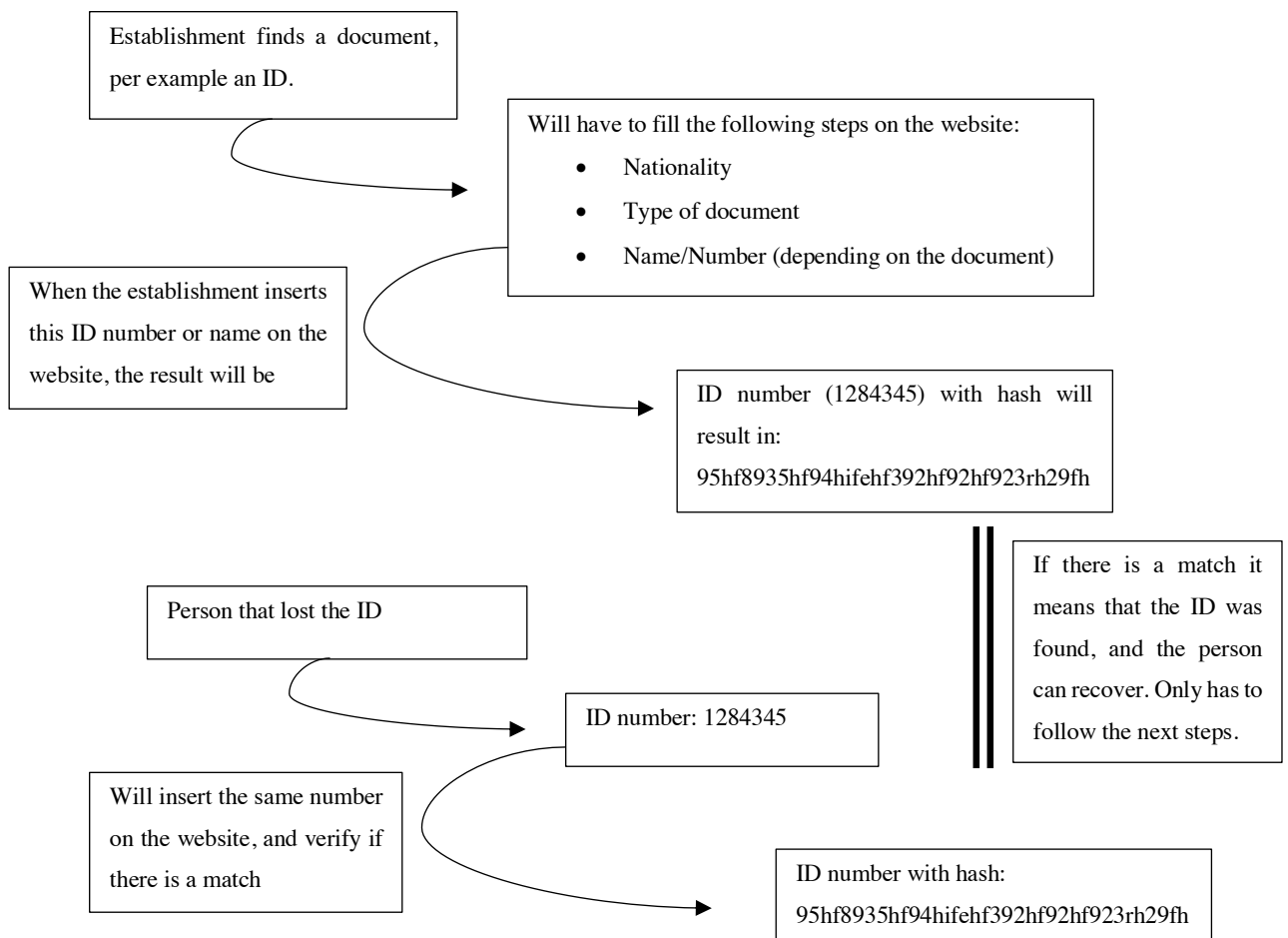
Figure 8.5 - Schematic explanation of how the system works for documents with the use of hash.

If the match of description is verified, the user will have to register on the website and will be faced with two options, in the case of the item being lost is a document. First option is to pay for a fee and receive the item back at their place in 24 hours; Second option is to know the establishment where the document is located and go there to recover it. This is an exception only for documents, due to the sensitivity of the data it contains.

For other items the fee to have it back and at their place will be mandatory. The overall match process is similar to documents, as can be seen on Figure 8.6.

```
┌─────────────────────────────┐        ┌──────────────────────────────────────────────┐
│ Establishment finds a bag   │        │ Will have to fill the following steps on the   │
└─────────────────────────────┘        │ website:                                       │
                                        │   •  Which type of item                        │
                                        │   •  Color                                      │
                                        │   •  Brand                                      │
┌─────────────────────────────┐        │   •  Size                                       │
│ When the establishment and  │        │   •  State                                      │
│ the owner insert this data  │        └──────────────────────────────────────────────┘
│ and there is a match.       │
└─────────────────────────────┘        ┌──────────────────────────────────────────────┐
                                        │ Pay the fee to receive it at their place in    │
                                        │ 24 hours.                                       │
                                        └──────────────────────────────────────────────┘
```

Figure 8.6 - Schematic explanation of how the system works for items.

Lost Doc website will have 3 different types of users: 1) person that lost an item; 2) establishment that uploads the data for the item, and 3) Lost Doc team to manage both accounts.
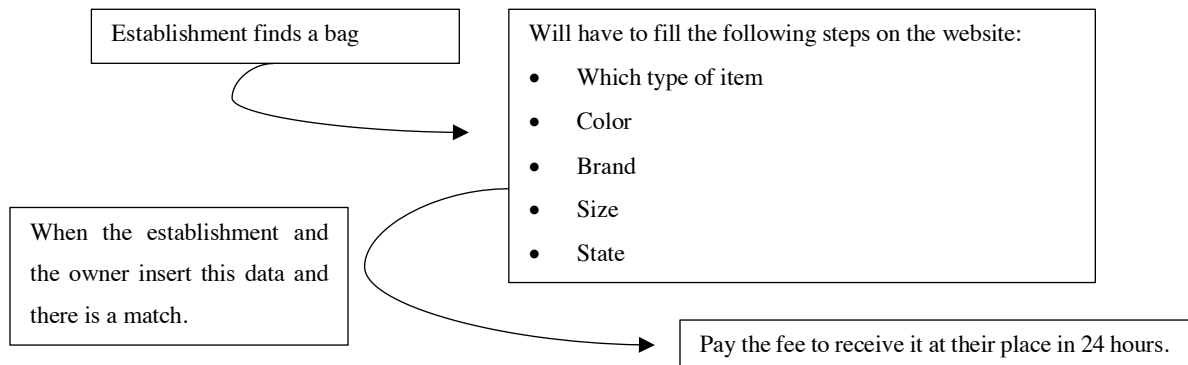
The website backend will be developed with Google Cloud Platform for having dozens of products, support different languages, being scalable and safe. It will be developed with nodeJS, one of the existing programming languages, used by various companies to develop websites and to provide best customer experience. With Google Cloud Platform, Lost Doc will use its fire base, storage and its cloud functions. Nowadays, with the development of technologies, there is no need to create an app, not only because people usually delete it if they do not use it regularly, but because it is possible to create websites that are both computer and phone friendly without undermining the experience.

For the frontend there are many options as React, Angular and VueJS. These are all similar and will have identical results. It will depend on the developer's knowledge and experience (which languages he/she is more familiar with).

OCR is under evaluation to be implemented on the platform, but not on the short run. OCR to turn the process more efficient. Through a photo that is taken of the item, it can be described. Nowadays is more common to find this feature in online banking platforms to make all the process of creating an account faster and more reliable. The only thing needed is to take a photo of the ID and it will read the required information and convert it to text.

There are two types of OCR developed so far. OCR on cloud, where first is taken the picture and this one is saved and afterwards analyzed by someone to guarantee the correct data; and OCR done locally, where it takes the data from the photo and deletes it immediately, the photo is never saved. Lost Doc will use the last option to be in compliance with GDPR and

protect its users. Nonetheless, is impossible to guarantee that the data is 100% correct, what can undermine that the recovery of the lost item.

Overall, is something costly and that will not be considered in the short run, only in the medium-long run. Not only because of costs but to let this technology improve to reduce the risk of failure.

The main page of the website will have a clean and fresh look as shown in Figure 8.7. It will have to be user friendly and fast.

The user will have to fill the blank spaces above in order to verify if there is a match as shown previously in the Figures 8.5 and 8.6.
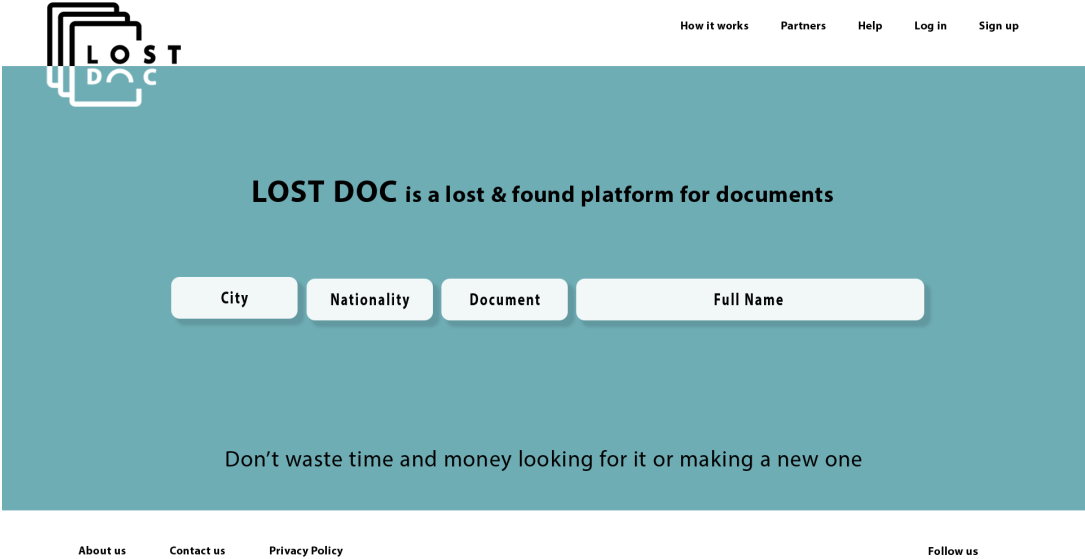
Figure 8.7 – Example of Lost Doc's website main page.

8.3 Activities & Resources

To create partnerships, have users and the platform to work resources are needed. There is the need for maintenance of the platform, creation of partnerships and marketing campaigns, management of lost and found items on the platform, and a website.

This will only possible with people. Our team will be composed by 3 people on the first year: a CEO & DPO, which will be the person that takes most of the responsibility for all the decisions taken on the implementation and development of strategies, but also financial decisions; is the person who will guide the business to the success. The CEO is the person that selects the DPO, the person who becomes responsible for the data protection from the users and

guarantees that Lost Doc is GDPR compliant; the CTO, the person responsible for the technology. Guarantees that everything is working, and Lost Doc is using the best technology to provide the experience that we want for our users and partners. If any technical problem arises is the person people to contact; and a developer, responsible for the development of the website together with the CTO.

At the beginning the CEO will be responsible for the creation of partnerships and marketing content while the CFO will be responsible for the creation of the website and assure that it works perfectly for the first 4 months. Afterwards, more people will be hired and assume different positions in order to facilitate their jobs. These other people will be presented on the financial analysis where they will be taken into account for the forecasts and can also be seen in the future company structure for the first 3 years on Figure 8.8.
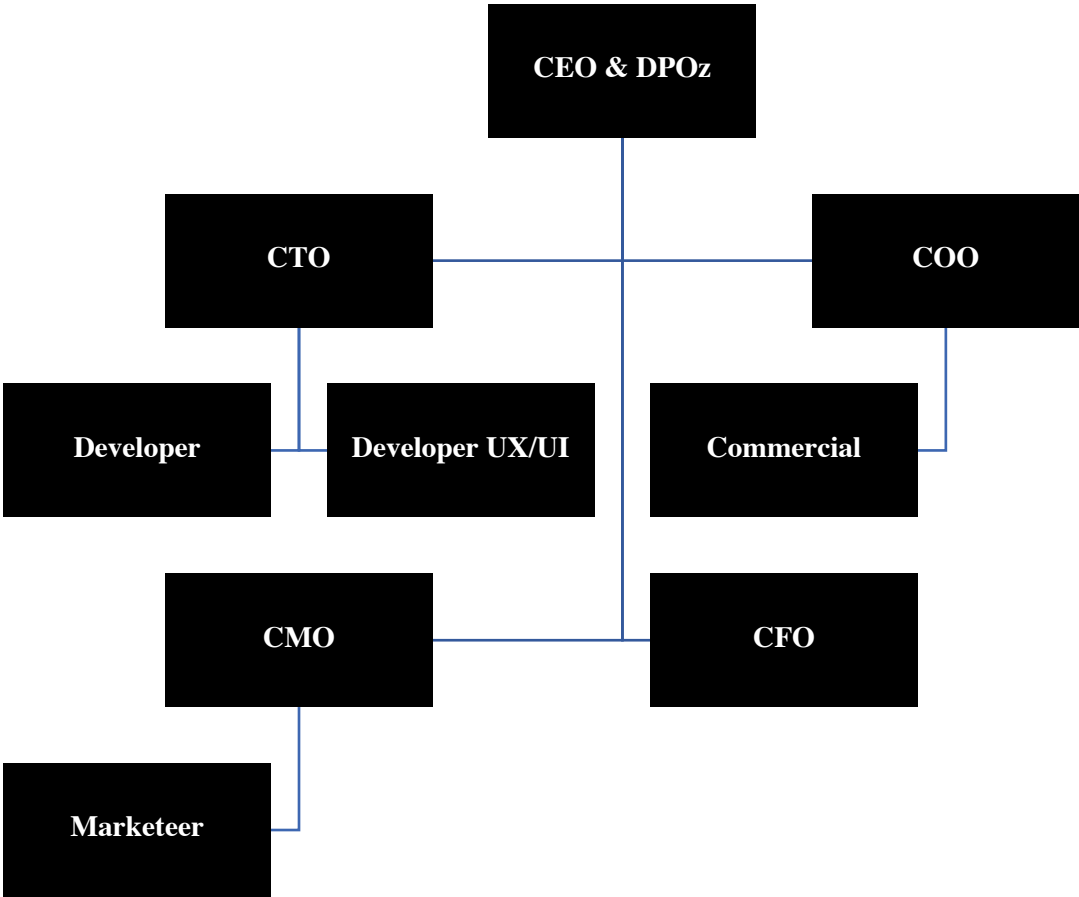
Figure 8.8 - Structural organization of the company for the 3-year period forecast.

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8.4   Implementation Plan Timeline

Below on the Table 8.8 it is possible to find the timeline of the development of strategies and the test in the market of the website, the minimum viable product, which means that is what is needed to work and proof its value.

Table 8.8 - Lost Doc's project timeline.

	Jan/21	Feb/21	Mar/21	Apr/21	May/21	Jun/21	Jul/21	Aug/21	Set/21	Oct/21
	1	2	3	4	5	6	7	8	9	10
Website Development	█									
Partnerships	█	█	█	█						
Test MVP		█	█	█	█	█	█			
Final adjustments						█	█			
Market preparation - Marketing								█		
Official launch									█	
Start looking for investment										█
Project Management	█	█	█	█	█	█	█	█	█	█

- **Website development**: Since our team will be composed by two developers, is expected to take 2 months in order to have a functional MVP which guarantees its use by users (businesses and final users).

- **Partnerships**: The creation of partnerships takes time; has it takes time to build thrust. Will be needed 4r months to explore possible partners and close deals. Is expected to have as partners a minimum of 2 universities, 5 clubs, 5 bars/pubs, and 5 festivals, that makes a total of 17 establishments.

- **Test MVP**: After the development of the website and creation of partnerships, the platform will be tested using real cases and to analyze what needs to be improved to provide better customer experience; and if it gets the attention and traction needed before the official launch.

- **Final adjustments**: During the test time, the platform will be improved having into consideration users' feedback and the problems that appeared during MVP test.

- **Market preparation – Marketing**: With the market and platform tested and improved, it comes the time to prepare the big launch. For everyone to know what Lost Doc is, does and the goal. During this period of 2 months the marketing strategy will be active. Through our online but also offline campaigns.

- **Official launch**: When the steps above are done: the website is finished and ready to run thousands of lost items, and the market prepared for our service and excited with it, Lost Doc will be launched on the 9th month. It will be on all Lost Doc's social media, tech news, partners social media and many others. The goal is to create buzz around the company.

- **Start looking for investment**: During the 1st month is expected to have traction, since there are several partners with lost items on the establishment already. So is expected that people that lost an item on the past to go to the platform to try to find it. With that traction, Lost Doc will reach out investors with interests on the logistics and technological sector and start building a relationship in order to become easier to raise investment in the future when needed.

- **Project management**: It is important to be aware of all the processes need to meet this deadline and to be available at any time to solve any problem. At the end of this timeline is time to analyze results, strategies; and study the best way to make it grow for the next couple of years and potential countries to expand Lost Doc.

9 Financial Analysis

On the economic and financial analysis will be possible to understand the numbers behind the project and why this business idea should be implemented. For that, was taken into consideration: Sales forecast; Expenses forecast; Projected Income Statement; Projected Cashflow Statement for a 3-year forecast.

9.1 Sales forecast

As mentioned before on this business plan, Lost Doc will have three revenue streams: 1) the fee for service, which is when our users pay to know where their lost items are and to receive them at their place (there is the exception for the documents); 2) monthly subscription from companies with different establishments, and punctual payments for one-time events; and 3) the sale of data that does not compromise our user privacy.

To make this business plan be as real as possible and based on the timeline designed on the Table 8.6, will be made the sales forecast for a 3 – year period with the expectations for the business.

The Table 9.1 demonstrates that is expected that users will receive their items at home in the first month of the official launch of the website, but also partners to enjoy the service and feel like they are having a positive impact on society.

For the Fee for Service system, the minimum profit possible was used in the delivery of an item to a user in the profit estimation of this revenue stream, which means that the volume of revenue can be much higher, since the average profit among all the lost items is around 14,09€.

On the Table 9.1 was taken into consideration that Lost Doc will start in September with 2 "one-time events" and on the 2nd month it will not have any events. This happens due to the expected number of partners raised per month on this revenue stream, because when dealing with partnerships it takes time to close them, Lost Doc is considering a 0.6 new client per month with a growth rate of 33% per year.

It is possible to verify that our subscription revenue stream will be the most profitable with the highest total revenue. On the first 4 months, Lost Doc will only have individual establishments as clubs, hospitals, transportation companies, hotels and universities paying for the subscription, but will start with 4 partners. For these revenue streams is considered a new 0,5 user per month with a growth rate of 20% per year.

For the companies with less than 10 establishments will be consider a new 0.2 user per month with a grow of 20% per year; and for the companies with more than 10 establishments, will be considered also a 0.2 new user per month but with a growth rate of 15% per year, since it takes more time to build these relationships and close deals.

Airlines are the hardest to get in, so a new 0.12 user will be considered per month, starting on 2022 with a growth rate of 15% per year afterwards.

For the sale of data, location and age, that is expected to be sold per 0,49€, is taking into consideration that half of the data from our users of fee for service will be sold, starting on the second half of 2022.

Table 9.1 - Summary table 3 - years sales forecast.

3 - YEAR SALES FORECAST

	2021	2022	2023	2024
Fee for service	2.550,00€	16.150,00€	40.800,00€	81.600,00€
One Time Events	1.047,90€	3.143,70€	4.191,60€	5.588,80€
Subscription for Companies with One Space	6.287,40€	37.375,10€	70.907,90€	110.728,10€
Subscription for Companies with More Than One and Less Than 10 Establishments	0 €	48.283,90€	125.958,00€	222.525,80€
Subscription for Companies with More Than 10 Establishments	0 €	76.984,60€	199.460,10€	346.430,70€
Subscription For Airlines	0 €	15.996,80€	83.983,20€	175.964,80€
Sale of Data	0 €	588,00 €	2.352,00 €	4 704,00€
TOTAL REVENUES	9.885,30€	198.522,10€	527.652,80€	947.542,20€

The final values presented in Table 9.1 are the result of the careful management and constant growth of Lost Doc after the end of each year. These are very attractive figures, result of an exponential growth that is intended to continue after the 3 years of forecast and expansion to new countries.

At the end of 2024 is expected to be giving back 1600 items per month to its owners; be present on 16 one-time events; have 31 companies with 1 one establishment subscribed; 11 companies with less than 10 establishments, and 10 companies with more than 10 establishments; 5 airlines paying for the subscription and be selling around 800 users data.

As mentioned on this business plan, after these 3 years of market growth and solidification in Portugal, Lost Doc will expand to Stockholm in Sweden and London in

England. This expansion to other countries will only happen after 2023, to reinvest money from the company in order to no give Lost Doc shares to investors on such an early stage, where the valuation can be misleading.

9.2 Expenses forecast

Lost Doc expenses are separated in different sections. Payroll expenses is one of them and one of the most important. Without a team will be impossible to get the expected revenues, so the team needs to be compensated and have a nice wage in order to not be worried about personal expenses, that is why the management team is not going to earn more than its employees on the first 3 years.

Other expenses are important to also be taken into consideration. The other sections that were developed are:

- Company expenses, which are one-time expenses as the company creation, brand purchase, company name and domain for the website;

- Office equipment, which gather computers, business phones and gadgets for the employees and management team;

- Marketing and Communication, contains everything related with social media but also with marketing campaigns (online and offline);

- Software and licenses to facilitate communication within the team but also with customers and partners, and to make the website run perfectly;

- Office and Warehouse expenses, as office and warehouse rent plus its management expenses (electricity, water, etc.);

- Contract labor, because there are many costs associated with lawyer's contract, bank accounts and insurances; and

Other expenses that are not fitted in any of these sections, but are probably the most important for the success of Lost Doc, are: accounting of the company (to guarantee that the company doesn't miss any payment to the government and others), web maintenance, costs associated with the development of an Optical Character Recognition and Facial Recognition system to facilitate all the processes and improve customer experience, and cyber security systems to make it safe for our website users.

At this early stage the team will not be paid but the costs need to be considered. Lost Doc wants the employees to be motivated and not be worried about the personal bills while building this company, so the wages are going to be paid above the average (Table 9.2).

Is expected to have an increase of 25% on all wages starting on the second year and afterwards. In order to be one of the best startups Lost Doc has to show to their employees that their work is being appreciated and if they work hard and have results, they will be rewarded. On the wages are considered 14 months, starting with a base gross wage of 18.200,00€ on 2021.

Table 9.2 - Summary table representing the payroll expenses for a 3-year period.

3 - Year Payroll Expenses Forecast

Functions	2021	2022	2023	2024
CEO, DPO	7.507,50€	28.153,13€	35.191,41€	42.229,69€
CTO	7.507,50€	28.153,13€	35.191,41€	42.229,69€
Developer	7.507,50€	28.153,13€	35.191,41€	42.229,69€
Developer – UI/UX	- €	- €	35.191,41€	42.229,69€
Commercial	- €	28.153,13€	35.191,41€	42.229,69€
Marketing	- €	- €	35.191,41€	42.229,69€
COO	- €	- €	- €	42.229,69€
CMO	- €	- €	- €	42.229,69€
CFO	- €	- €	- €	42.229,69€
TOTAL	**22.522,50€**	**112.612,52 €**	**211.148,46€**	**380.067,21€**

On the table 9.3, which contains all the expenses, it is possible to verify that these will increase substantially over the next three years as a result of the continuous investment of revenues on the company due to the need for constant improvements and reach a bigger market inside Portugal. The big increase on costs is related with the main impact on marketing and communication, but also with the development of the platform with the addition of new features; physical space for easier management and monitoring of growth; and payrolls.

Table 9.3 - Summary table representing all expenses for a 3-year period

3 - Year Expenses Forecast

	2021	**2022**	**2023**	**2024**
Company	939,00€	0 €	0 €	0 €
Office Equipment	0 €	3.200,00€	1.700,00€	6.900,00€
Marketing & Communication	1.852,00€	15.156,00€	49.956,00€	81.858,00€
Software & Licenses	320,00€	1.410,00€	2.964,00€	3.854,40€
Office & Warehouse	0 €	4.200,00€	33.000,00€	36.600,00€
Other Expenses	800,00€	3.300,00€	19.065,00€	41.760,00€
Contract Labour	1.080,00€	4.440,00€	5.850,00€	20.250,00€
Payroll and other expenses	23.402,50€	113.492,52€	222.856,82€	420.952,42€
TOTAL EXPENSES	**28.393,50€**	**146.958,50€**	**337.151,79€**	**613.934,80€**

Payroll expenses are the highest expense that Lost Doc will have to support. In 2024 are expected to be around 69% of all expenses (Table 9.3), followed by marketing with 13% of shares on total expenses.

9.3   Projected Income Statement

The project income statement is important and used to know how much money the company will generate in the future. Lost Doc's projected income statement is really positive. Not that many startups are profitable. Lost Doc will be profitable in 2022, probably due to the fact that Lost Doc does not has that many costs with the development and management of the website. Depreciation and Amortization will not be considered in the statement, since tangible assets have low value (computers, business phones, etc.); in these are considered expenses in the accounting.

The breakeven will happen in 2022 with a positive balance of 50.790,15€, and in 2023 will have an increase of almost 200% followed by a decrease due to the investment on the hiring of new people and marketing, which will correspond to an increase of 60% in 2023. These numbers show how Lost Doc is a great business to be developed and the market size. If it scales to worldwide scale, it will become unstoppable.

The Municipal Tax and Corporate Tax are considered to be zero on the first year because in Lisbon offers tax exemption to companies with net sales less than 150.000€, and Lost Doc will have a loss of 18.508,20€ on the first year (Table 9.4).

Table 9.4 - Summary table of the projected income statement for the first 3 years.

Projected Income Statement

	2021	2022	2023	2024
Total Revenues	9.885,30€	198.522,10€	527.652,80€	947.542,20€
Total Expenses	28.393,50€	146.958,50€	337.151,79€	613.934,80€
EBIT	(18.508,20)€	51.563,60€	190.501,01€	333.607,40€
Municipal Tax (1,5%)		773,45€	2.857,51€	5.004,11€
Corporate Tax (21%)	0 €	0 €	40.005,21€	70.057,55€
Net Income	**(18.508,20)€**	**50.790,15€**	**147.638,29€**	**258.545,74€**

9.4   Projected Cashflow Statement

Lost Doc's Projected Cash Flow Statement presents how much cash is entering and leaving the business. It is one of the most important financial statements for the managing of businesses accounting and to make that there is enough money to keep the business going (Table 9.5).

With the initial investment of 15.000,00 € the company will reach a sustainable growth and will not consider requesting for investment on the first three-year period. Dividends will not be paid, because all the cash will be reinvested on the company.

Table 9.5 - Summary table of the projected cash flow for the next 3 years.

3 - YEAR PROJECTED CASH FLOW STATEMENT

	2021	2022	2023	2024
Operating Activities				
Cash Generated From Fee For Service	2.550,00€	16.150,00€	40.800,00€	81.600,00€
Cash Generated From One Time Events	1.047,90€	3.143,70€	4.191,60€	5.588,80€
Cash Generated From Companies With One Space	6.287,40€	37.375,10€	70.907,90€	110.728,10€
Cash Generated From Companies With Less Than 10 Spaces	0 €	48.283,90€	125.958,00€	222.592,58 €
Cash Generated From Companies With More Than 10 Spaces	0 €	76.984,60€	199.460,10€	346.430,70€
Cash Generated From Airline Companies	0 €	15.996,80€	83.983,20€	175.964,80 €
Cash Generated From Sale Of Data	0 €	588,00€	2.352,00€	4.704,00 €
Cash Paid For Marketing & Communication	(1.852,00) €	(15.156,00) €	(49.956,00) €	(81.858,00) €
Cash Paid For Software & Licenses	(320,00) €	(1.410,00) €	(2.964,00) €	(3.854,40) €
Cash Paid For Office & Warehouse	0 €	(4.200,00) €	(33.000,00) €	(36.600,00) €
Cash Paid For Contract Labor	(1.080,00) €	(4 440,00) €	(5 850,00) €	(20 250,00) €
Cash Paid For Payroll	(22.522,50) €	(112.612,52) €	(211.148,46) €	(380.067,21) €
Cash Paid For Other Expenses	(800,00) €	(3.300,00) €	(19.065,00) €	(41.760,00) €
Cash Generated From Operating Activities	**(16.695,20) €**	**57.443,58€**	**205.669,34€**	**303.219,37€**
Investing Activities				
Company	(939,00) €	0 €	0 €	0 €
Purchase Of Equipment	0 €	(3 200,00) €	(1 700,00) €	(6 900,00) €
Cash Generated From Investing Activities	**(939,00) €**	**(3 200,00) €**	**(1 700,00) €**	**(6 900,00) €**
Financing Activities				
Proceeds From New Capitals	15 000,00 €	0 €	0 €	0 €
Dividends Yield	0%	0%	0%	0%
Cash Generated From Financing Activities	**15 000,00 €**	0 €	0 €	0 €
Net Increase/Decrease In Cash	(2.634,20)€	54.243,58€	203.969,34€	296.319,37€
Opening Cash Balance	0 €	(2.634,20)€	51.609,38€	255.578,72€
Closing Cash Balance	(2.634,20)€	51.609,38€	255.578,72€	551.898,09€

9.5 Net Present Value

Some of the best metrics besides Projected Expenses and Revenues, Projected Income Statement and Project Cashflow Statements, is the Net Present Value (Table 9.6).

The Net Present Value serves to access the business attractiveness to invest. In order to access it for Lost Doc was taken into consideration a discount rate of 10% and the initial capital investment of 15.000,00€. Which gives a Net Present Value of 300.900,23€ that guarantees the great attractiveness of the investment.

Table 9.6 - Summary table of the present net value, taking into account cash flows and present value of cash flows.

Net Present Value (Discount Rate (10%))

Year	0	1	2	3	4
Cash Flows	(15 000,00)€	(17.634,20)€	54.243,58€	203.969,34€	296.319,37€
Present Value of Cash Flows	(15 000,00)€	(15.870,78)€	48.819,22€	183.572,41€	266.687,43€

10 Conclusion

Lost doc aims to revolutionize the world of the lost and found and, consequently, make a positive impact in the world by allowing people to recover their lost items. Furthermore, it will also impact positively the environment, by reducing the acquisition of new items, previously acquired and after lost. Lost Doc is an innovative and efficient solution for a current worldwide problem.

The developed business plan took into considerations a wide variety of models and methodologies, that thoroughly analyzed the proposed solution and respective impact on the market. All the analyses performed presented positive conclusions.

The same was also validated by the establishment of partnerships with:

- Portuguese summer festivals (Rock in Rio and many others);
- University of Coimbra and ISCTE also approved the implementation of this platform on its campus with tens of thousands of students that can easily spread the word;
- Nightclubs that belong to NB, center of Portugal;
- Coffee shops and restaurants of small dimension;
- Private hospitals.

After implementation, Lost Doc will keep growing and will generate the cash flow required to invest on its expansion through the country, as it has been showed in the financial analysis. The financial analysis presented quite impressive numbers. The increase of the expenses during the first 3 years and 4 months is followed by a positive volume of revenues that will contribute for the company to reach a billing volume of almost 1 million euros by the end of 2024. Is then clear the economic potential of Lost Doc.

Big projects have always risks associated. Some examples of issues that can occur are regarding the team, misleading expenses and/or revenues.

Although this business plan is speculative, the numbers showed and the analysis performed are based in real-life values and show the potential that Lost Doc has to become a startup at a global scale, the next Portuguese "Unicorn". Tim Draper's team showed interest in the internationalization of the project.

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