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Digital Self-Service Hub

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MSc in Business Administration

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ISCTE

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BUSINESS
SCHOOL

Department of Marketing, Operation and Management

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Acknowledgments

Working on this project was extremely challenging from both a personal and professional point a view. Following the Executive MBA that I have finished in 2021, I've decided to endeavor this journey to fulfill an academic achievement but also to develop a special project to implement at TAP Air Portugal, my working company of a decade. For those reasons, I must thank my family, friends, and colleagues. Particularly a warm and special acknowledgement to my wife Catarina for her support during this journey in the good days and specially in the bad days. Last but not the least, I need to thank my supervisor for all the coaching and guidance during this process. One milestone at a time, as Professor Renato advocates.

Resumo

Esta tese assenta na estrutura de um projeto-empresa, desenvolvido para dar resposta a um problema identificado ao nível da gestão do ecossistema digital da TAP Air Portugal. Uma vez que diferentes equipas gerem canais digitais, tal pode levar a situações de ambiguidade assim como iniciativas incoerentes que potencialmente poderão gerar entropia interna e externamente, sobretudo se as equipas em questão não partilharem a mesma missão e visão.

Para alavancar o projeto em bases teóricas, foi desenvolvida uma revisão da literatura dos principais tópicos abordados, como estratégia, marketing, economia digital e controlo de gestão, para preparar a estrutura funcional do projeto e construir o racional estruturado ao longo dos capítulos.

As principais conclusões conduzem à implementação de uma nova estrutura organizacional para garantir uma visão estratégica alinhada, com melhor eficiência da utilização dos recursos visando entregar mais valor para os clientes e onde a redução de custos e o crescimento da receita são simultaneamente combinados, garantindo igualmente valor para a empresa.

Palavras-chave: Estratégia de negócio, Comércio eletrónico, Autosserviço, Transformação digital, Balcão único de atendimento, Relacionamento com o cliente.

Abstract

This thesis is based on the structure of an in-company project, developed to address a problem identified at a management level in the digital ecosystem of TAP Air Portugal. Since different teams are managing digital channels, it can lead to ambiguity and incoherent initiatives that potentially generate entropy internally and externally, particularly if the referred teams do not share the same mission and vision.

To support the project, a theoretical basis with reviewed literature in main key topics such as strategy, marketing, digital economy, and management control was initiated to prepare the functional framework of the project and to build the rationale and the business cases that will underly across the upcoming chapters.

The main findings ultimately lead to the implementation of a new organizational structure to guarantee an aligned strategic vision, with the most efficient usage of resources to deliver more value to customers and where cost reduction and revenue growth are simultaneously combined thus securing value to the firm.

Keywords: Business Strategy, Ecommerce, Airlines, Self-service, Digital Transformation, One-stop Shop, Customer Relationship Management

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Chapter 1 - Introduction

1. Contextualization

While working at TAP Air Portugal, the author worked in different roles around customer service and ecommerce spanning for an accumulated professional knowledge of more than ten years. This combination allowed to understand both customer and business needs, combined with the academic knowledge acquired. Having this bias in mind, the author pursued on a challenge to ideate on a project that could bring benefits for all stakeholders.

The digital economy has a growth leverage set in ecommerce. With intrinsic characteristics such as the absence of physical barriers, it transforms the way business is conducted and the way companies relate to customers. In its core, it offers virtually uninterrupted availability and offers a high degree of customization in sales processes and cost reduction compared to the traditional brick-and-mortar environment.

In the context of air transportation, ecommerce has long played an important role, as it allows airlines to interact with their customers without resorting to third parties such as travel agencies or tour operators and to be present in several markets, since a website or an app can be accessed worldwide.

At TAP the digital universe has positive annual evolution of revenue since the launch of flytap.com in 2011 and consolidated its space in the company's share of direct sales accounting for 45%. In the digital transformation of the Portuguese flag airline, the most recent milestone was marked in the last quarter of 2019, with the launch of a new ecommerce platform. It introduced a new booking management tool, customized and with new features and, a year and a half later, amidst of the COVID-19 pandemic, the new booking engine was launched.

According to a study developed by ACEPI – Associação Economia Digital in 2020 focusing on Portuguese Digital Economy, TAP is ranked on the top 15 of preferred online stores (with presence in Portugal). In fact, TAP's website (Flytap.com) accounts for 11% of the preference of respondents, with 33% of the universe of 1000 respondents claiming to buy airline tickets. This reveals the importance of ecommerce within the air transportation context, and for TAP, it constitutes a proof of brand awareness and customer confidence that translates into the usage of the airline's digital channels.

Acknowledging current customer trends and aiming for synergies in the value proposition, the author considered that it could be interesting to conceptualize, develop and implement a project that provided an integrated thinking of digital self-service to deliver solutions.

2. Objectives

This thesis will be based as an in-company project with the key objective to create and recommend the adoption of a new organizational structure – Digital Self-Service Hub – under Ecommerce & Digital Experience business unit. This would be a functional unit with its cost center, accountable for its budget and responsible for all after-sales ticketing processes, acting as an authentic one-stop shop with a focus on delivering scalable and customized self-service solutions in the digital ecosystem. Key activities to this functional team would be maintaining and evolving the up-sell and cross-sell processes such as handling the purchase of additional services, rebooking of upgrading flights. Besides the revenue stream component, it would also be accountable to provide service capabilities such as allowing customers to cancel their bookings, managing the online check-in, tracking lost luggage, interacting with a chatbot, and feeding a help center with dynamic frequently asked questions.

In addition to the continuous improvement of the digital customer experience, the aim is to strategically align these touchpoints towards the following Key Performance Indicators (KPI): increase the self-service rate, increase revenue, and ensure cost reduction. Collateral gains would inherently be the improvement of the Net Promoter Score, which traditionally translates into higher levels of satisfaction, engagement, retention, and loyalty. The usage of digital solutions mentioned previously would also enable an in-depth knowledge of customer trends and preferences, allowing the company to offer an enhanced personalized service in a constant cycle of optimization. Such process would be triggered through monitoring and analytics with customer relationship management tools.

In summary, the author will try to answer the question of this in-company project on how to increase the self-service rate, due to the need to mitigate the loss of abandoned telephone calls, as well as increase revenue and reduce costs. To achieve this objective, the author will propose a new organization model with a single strategic alignment, dedicated to digital self-service. In addition to the new structure, the author considers that it should have its own management mechanisms to allow the evaluate of performance at a strategic and operational level such as, respectively, the balanced scorecard as a performance management instrument and the dashboard as a performance measurement tool.

3. Project Structure

Considering the nature of this venture as an in-company project, a theoretical and practical structure will be followed to relate the topics discussed into a conceptual and applied framework to be implemented.

The first chapter will be dedicated to theoretical contextualization with a literature review to important issues necessary to develop and implement this project. Assessing what has been published about the topics will give a strong academic foundation to put in practice the findings and uncover possible limitations. In this exercise of building the knowledge it is also imperative to conduct benchmark initiatives if possible and if the content is available.

After setting the scene with the first chapter, the second chapter will focus on the project development and implementation. There will be a deep dive into the company itself with the corresponding internal and external analysis, the questions around the problem that this project intends to address and breaking down the strategy that should be applied after reaching to the main findings and conclusions.

4. Methodology

To support the structure of this thesis, the author will follow the exploratory research methodology due to the lack of information in current literature to a complete understanding of the problem in an organizational context within the scope of air transport.

A qualitative methodological angle was used in the review of existing literature based on the usage of keywords such as digital transformation, self-service, and ecommerce. In addition, the author's plan also foresees the analysis of case studies, benchmarking actions, and research of best practices in specialized literature within air transportation industry.

Strategy encompasses three stages – analysis, formulation, and implementation – and with the phases described previously, the author will have the baseline to define and develop the project so that ultimately its application can be achieved.

Chapter 2 – Theoretical Basis of the Topics Covered

1. Business Strategy

The Importance of Strategic Alignment

A business strategy consists of a set of decisions and actions that aim to obtain a competitive advantage from a company's core competencies (Grant, 2010). When opting for a business strategy, a company defines who it wants to serve, what the needs of the segments it intends to supply and outlines how those needs will be satisfied.

In the strategic formulation underlying the recommendation to create a new organizational structure at TAP, the intention is to position and elevate digital self-service as a critical success factor with a single strategic vision and alignment. This proposal configures a synergistic integration in the company's value chain, based on a convergence of human, organizational and physical resources to obtain a sustained competitive advantage.

2. Relationship Marketing

Customer Experience

One of the main concepts within relationship marketing is customer experience, strongly related to customer satisfaction. As the name suggests, the experience is an important variable and involves any given interaction between a customer and a company. Sometimes it starts even before the transactional side, if we consider the awareness step in a customer journey that a firm provokes before an intention becomes effective.

Applying successful brand experiences will play a relevant role in creating customer satisfaction and brand loyalty (Brakus, Schmitt & Zarantonell, 2009 as cited in Çakıroğlu, Eren & Önder, 2020). Thus, it's possible to claim that the success of customer experience provided by airlines is the starting point towards customer loyalty.

Within the scope of this core concept in relationship marketing, it should also be highlighted the relative importance of service and shopping experience in the service industry as customers and their satisfaction with the experience being perceived as a critical success factor in service management (Roosen & Katidis, 2019).

3. Digital Economy

3.1 Digital Transformation

Digital transformation is the “process of using digital technologies to create new – or modify existing – business processes, culture and customer experiences to meet changing market and business requirements” (Salesforce, 2019 as cited in Guenzi & Habel, 2020). This transformation has been powered through the generalization of Internet usage and the massification of smartphone devices at a global level, which revolutionizes the way of establishing, building and maintaining relationships between people and businesses.

Digitalization in customer relationships in commercial aviation is following the growth trend of the digital consumer, and it’s safe to say, with a high degree of confidence, that “the basic competitive advantage of airlines will be the degree of digital maturity and the possibility of investing in a personalized travel experience based on the use of new digital technologies” (Baykov, 2020). This is an argument also highlighted by Chong & Law (2019), by identifying the need for airlines to transform their websites into authentic sales channels to ensure sustainability in the market. Furthermore, they should provide additional functionalities such as proximity communication and the development of customer relationships, in addition to core and basic functionalities such as flight search, ticket reservation and check-in service.

Still supporting the previously cited authors, technology is keen to determine a firm’s competitive advantage as it touches the aspects of cost and differentiation (Porter, 1998), which in a sense is where the digital businesses are going to.

Contextualizing with a travel industry example, in electronic commerce “innovators have an advantage in attracting and retaining customers, especially in conjunction with a strong brand” (Amit & Zott, 2001) which is what Priceline.com, an online travel agency focused on finding the lowest possible offer, did. Their business model was breaking through innovation at the time the website was launched in 1997, developing brand awareness, reputation and creating switching costs.

3.2 Ecommerce

In the aviation industry, ecommerce plays a strategic role to achieve long-term competitive advantage, increasing customer satisfaction, as well as improving marketing effectiveness and enhancing management efficiency gains (Kim, Kim & Shin, 2009).

In service industries, the shopping experience is replacing quality as a competitive advantage, thus defining, and improving the customer experience are increasing priorities (Katidis and Roozen, 2019).

And leveraging customers' digital experience is ecommerce, which, according to Turban et al. (2015), is based on the transaction, purchase and sale of data, goods, or services online, being a sector that includes in its genesis an important cost reduction, combined with a simplification of processes for organizations.

It is also important to point out that one of the greatest benefits of ecommerce is the self-service component, which improves the shopping experience by providing access to a range of facilitating mechanisms, such as price comparison, a help section, and virtual assistants (Turban et al. al., 2015).

3.3 Self-service

Customer service is a fundamental component for the success of a company, representing a dynamical environment that constitutes its personification, according to Proches and Sayed (2021). Framed in the sphere of customer service, self-service provides benefits to service providers, such as high levels of efficiency and cost reduction, and simultaneously delivers several advantages for the customer, such as convenience and control during use (Collier & Kimes, 2013; Schumann et al., 2012; Zhu et al., 2007., as cited in Scherer, Wangenheim & Wunderlich, 2015). Moreover, self-service is also seen as an opportunity for innovation in the service dimension, which in its turn encourages continuous improvement and optimization of the benefits listed previously (Bitner et al., 2000; Meuter et al., 2005., as mentioned in Barrett et al., 2015).

To highlight the aspects around servicing, it should be observed that its “importance has grown as delivering high-quality service becomes a marketing requirement among air carriers as a result of competitive pressure and After-sales service now is considered a potential source of revenue, profit, and competitive advantage in most industries” (Elsbayee & Rady, 2019).

4 Management Control

4.1 Balanced Scorecard

Introduced in an article published in the general management magazine Harvard Business Review article in 1992 by professors Robert Kaplan and David Norton, the balanced scorecard is the instrument that translates the vision and mission of an organization into a set of strategic objectives, critical success factors and key performance indicators that serve the purpose of aligning the operational initiatives with the strategic objectives (Santos António & Lopes da Costa, 2015). The latter authors explore in depth the four analysis perspectives that the Harvard professors propose: financial, market, internal processes and learning and development.

The financial perspective allows the elaboration of an actionable plan financially wise so that the main interested parties can assess their return on capital. The main objectives of this perspective are growth, profitability, and value creation to the investor (Santos António & Lopes da Costa, 2015).

The market perspective contributes to consolidate the relationship with customers, allowing financial objectives to be accomplished in a sustained way. The main objectives of this perspective are retention, loyalty, profitability, and customer satisfaction (Santos António & Lopes da Costa, 2015).

The internal processes perspective is setting its emphasis in the analysis of activities related with each business processes that can lead to achieving the financial and market objectives. The main objectives of this perspective are acknowledging that organizations are a sequence of activities, erasing activities that do not create value and being efficient and effective while using resources (Santos António & Lopes da Costa, 2015).

The learning and development perspective focuses on analyzing past results to allow forecasting by putting the efforts in three aspects: people, systems, and procedures. The focus of this perspective is innovation, qualification, motivation, and technological development (Santos António & Lopes da Costa, 2015).

For each of the four detailed perspectives, choosing the objectives to be set, the critical success factors to be defined and key performance indicators to be measured is a challenging task that must be made in accordance to meet diverse business needs.

4.2 Dashboard

In the 1930's appeared in France a management control technique coined as "*tableau de bord*", which evolved to the instrument currently designated as dashboard, being complementary to the balanced scorecard (Baker & Bessine, 2005).

Important to retain is that the dashboard is a comparison tool that allows controlling the accomplishment of key performance indicators from previously designated objectives. Thus, the core purpose is to follow-up the evolution of a business, drawing the attention to key factors to catalyze diagnosis for the items that do not evolve as expected (Jordan, Neves & Rodrigues, 2011).

In addition, managers and decision-makers have a strong need to access up-to-date and reliable data besides the regular accounting and financial reporting. To identify deviations and apply corrective measures it is important to act swiftly, which is why it the dashboard should be available between five and seven days after the period in analysis for a monthly dashboard and within one day for a weekly dashboard (Jordan, Neves & Rodrigues, 2011).

5. Product Management with Agile Practices

Agile software development is a methodology that allows delivering value to customers using an iterative approach, by incrementing value one sprint at a time. Considering that a sprint and its scope are a contained timeframe varying between two and three weeks, it means that at each of these cycles new improvements or corrections are being created and delivered. Therefore, managing projects and products with agile project management is becoming the new standard for software development (Henriken & Pedersen, 2017).

Set in a concept that embodies breaking down business requirements into small actionable activities, it is also important to look at this methodology from an efficiency and speed point of view due to the focus that timeboxing implies on task management. Reinforcing this idea “agile methods have become an efficient way of working for organizations focused on delivering technological products, where concepts such as continuous improvement and rapid adaptation to customer needs are part of the job” (Batista, Pereira & Lopes da Costa, forthcoming).

Despite the benefits that agile practices bring, it should be taken in consideration that this methodology that was originally idealized for small projects or teams and is traditionally associated with startups, can lead to a paradigm where “aviation management overall struggles on how to adapt to the real-time and agile environment” (Silling, 2019).

Settled this ambiguity, it is extremely important to combine and apply product management best practices by hosting regular team meetings with stakeholders, preparing roadmap updates to executive leadership, reviewing product performance and sales, and studying market competitor. Moreover, it is relevant promoting customer surveys, recording key takeaways from meetings, writing problem statements and hypotheses, communicating release notes. Hence, it is possible to establish that there are three strategic components, connect and communicate, discover, and analyze, document, and decide, in product management that must be fine-tuned to match up with agile methods. Sustaining this formulation, intrinsic activities in product management are more important than ever before such as “conducting market and customer research, creating personas and business cases, making tough trade-offs and prioritizations, planning roadmaps, developing pricing, creating sales tools, and launching the product” (Cohen, 2010).

Chapter 3 – Functional Presentation of the Study – Project Company

1. Contextualization

To understand the conjuncture a PESTEL Analysis was performed to help understand the impact of external factors have on a business. Moreover, it allows to assess in a high-level view if the company business fits the market. PESTEL is based on the analysis of five macro-environmental factors such as political, economic, social, technological, environmental, and legal. We can grasp the surroundings of a firm by using this framework, besides being part of the toolkit essentials of strategic management to assist the decision-making processes.

Political Factors

Internal emergency, war, or political instability can hinder the business of any airline company. Most of the tourists are not interested in visiting countries that have threats due to political conditions. Governments have set up some strict rules and guidelines for the operation of an airline which can ensure the utmost security of the passengers.

Economic Factors

Recession and unstable economic conditions can severely affect the airline industry. The number of passengers may decrease while the cost of raw materials may increase. Due to the pandemic, several countries have suspended flight operations up to some extent which led to major passenger traffic decline with negative results in the long run.

Social Factors

Maintaining a clean and safe image is key for airlines. Otherwise, sharp decline in passenger numbers may arise. In the event of accidents, and if related to the company's carelessness, the core business may get severely affected. Positioned in the hospitality and services sector, airlines must have a good reputation. Moreover, to meet the dynamic demands of consumers, airlines are expected to incorporate changes.

Technological Factors

Airline companies need to invest in technology and bring in continuous changes to ensure the security and safety of the passengers. As a service-providing industry, the airlines are expected to incorporate constant technological enhancements and changes to improve their services.

Environmental Factors

Airlines need to improve continuously systems and aircrafts to decrease harmful emissions. Otherwise, this can be a massive concern in the future. Carbon footprint is possible to be calculated and to be transparent. The companies can take on some corporate responsibilities and include environment-conscious messages in campaigns aligned with climate changes.

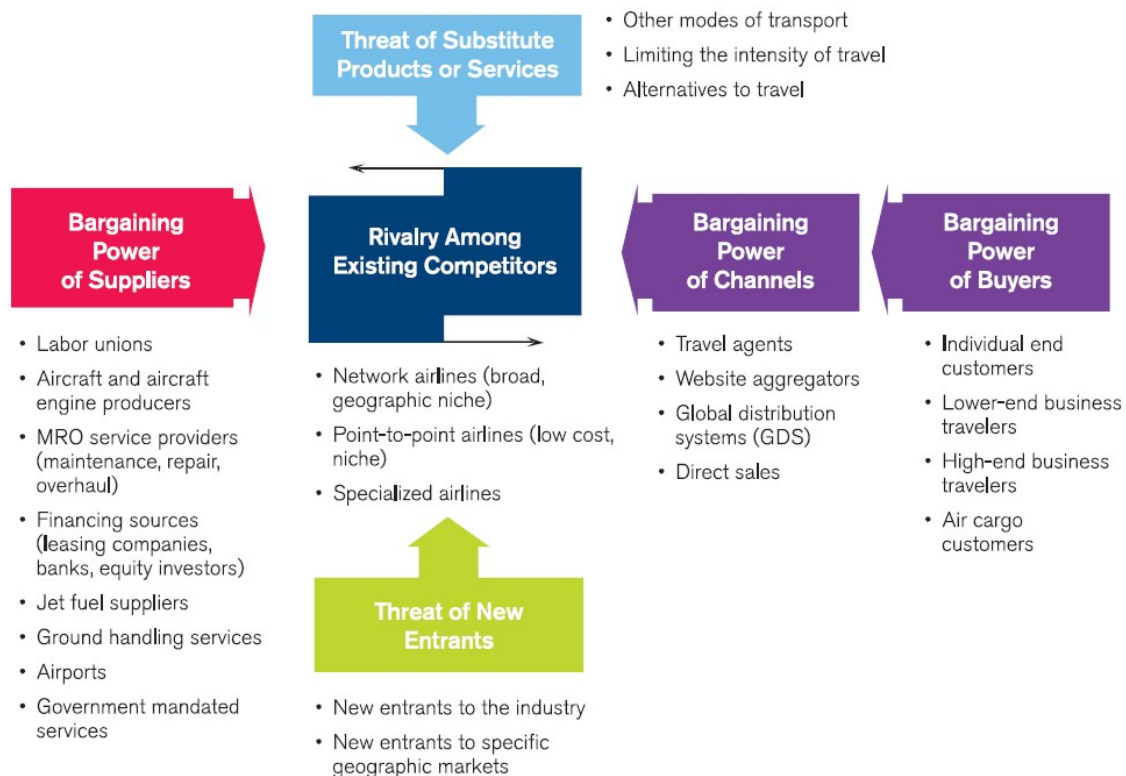
Legal Factors

Most countries have regulation concerning the service. The rules help to protect the environment and to ensure the safety of the passengers. Airlines must be aware and abide by those rules to avoid legal proceedings. As for incidents and accidents, on most occasions, airlines are held responsible. It can harm the image and have negative impact on the business.

Porter Five Forces Analysis

Although conducted back in 2011, the analysis run by Michael Porter for the Vision 2050, a full industry report produced by the International Air Transport Association, it is still up to date and being used among business players in aviation.

Figure 3.1 – Michael Porter’s five forces analysis on aviation industry.



Source: Vision 2050, IATA, 2011.

Threat of Substitute Products

Currently a new trend is being observed regarding people's mobility, particularly when it comes down to the carbon footprint and its impact. As such, new ways of travel such as train and bus are becoming popular for short travel distance. In addition, this environmental awareness may also provoke a mindful approach about the frequency of travel, whether for business or leisure, particularly with the boom of remote work as a direct consequence of the pandemic in working habits. Lastly, should also be considered the phenomenon of domestic travel and vacation which in a vast majority of countries represents road trips rather than catching flights.

Threat of New Entrants

In aviation industry, the entry barriers for new airlines are substantial, specially when it comes to down to capital requirements, access to distribution channels and, regulatory affairs to name a few. In addition, it can also vary by market and/or geography. Nonetheless, in the last few years several airlines entered the industry, with product differentiation through the development of new value propositions or targeting niche markets or underserved airports.

Bargaining Power of Channels

The actors around the airlines ecosystem can be divided in travel agencies, both physical and online and distribution systems, besides the direct sales itself. These types of intermediates that work through charging fees can reduce the already tight margins which has triggered evolution amongst carriers through the implementation of new distribution channels that provide a direct channel to airlines inventory and leveraged by the investment in improving direct sales. The latter is materialized in the rollout of new websites and smartphones apps with a strong sense of scalability, ease of use and a clear focus on delivering value to the customer.

Bargaining Power of Buyers

Traditionally the buyers, or passengers, in commercial aviation are divided into business and leisure, while some more recently have also coined the term *bleisure* to identify a genre that may combine both variables. It is also important to highlight that this type of division in groups of passengers has also a product mix within the offer of seats available since there is a combinability of cabins such as first, business and, economy that can match these profiles.

Besides the traveler's side, buyers have also a well-defined category in aviation which is the air cargo. In this group, airlines can offer either cargo space on regular scheduled passengers flights or dedicated air freight services.

Bargaining Power of Suppliers

The extent of the suppliers in the figure unveils the multiple challenges inherent to the business profitability. Besides the financial aspect, there are other impacts than can harm such as the reputational and trustworthy. In addition to these, it should also be referred that are also internal factors too such as labor unions that account for a major force to consider in the airlines industry, especially on legacy and flag carriers.

Industry Rivalry

Competition in this industry is to the fullest, representing a major threat. Particularly since the deregulation that came in place in late 1970's which removed several government-imposed entry barriers and price restrictions resulting in the decrease of airline tickets thus turning air travel more affordable. Apart from a few tweaks, such as in Europe where the major shareholder must have a European nationality, airlines can now be created with far less barriers and they can nowadays apply to serve virtually all routes. It should also be noticed that this is a highly price-sensitive market in addition to punctuality for the vast majority of customers. These typically are the main purchase drivers and when well combined they can account for serious rivalry. Another aspect that needs to be highlighted as well is that competition is worldwide, occurring on each market that an airline operates and flies to. What is also challenging and interesting to observe is that even in different positionings, airlines can be rivals. As an example, in short-haul flights, a flag carrier or full-service carrier such as TAP faces the competition of its counterparts and as well the likes of low-cost carriers, respectively Iberia, Lufthansa, British Airways, KLM, and Ryanair, Vueling, Volotea, Wizzair, among many others and. In long-haul flights the same flag carriers compete with TAP using the same hub-and-spoke model in addition to other carriers in farther markets where the Portuguese flag carrier operates such as American Airlines, Delta Air Lines and United Airlines in the United States of America and Azul and LATAM in Brazil.

VRIO Analysis

This framework focuses on evaluating the resources and dynamic capabilities of a firm by assessing the value, rarity, imitability, and organization criteria to achieve a sustainable competitive advantage. The strategic decision making should be a result of a firm's resources and capabilities that deep down is its DNA. If a given resource fulfills all VRIO criteria, then the firm has an identified critical success factor.

Despite having causal ambiguity in determining the importance of resources and capabilities and shortage of empirical support, this model still provides a perspective to develop the competencies that

emerge as a key factor to succeed towards other players. Moreover, it can be applied to a specific business unit or organizational structure within a firm, provided it has resources and capabilities.

Figure 3.2 – VRIO analysis made on TAP Air Portugal’s resources and capabilities.

Resource/ Capability	Valuable	Rare	Inimitable	Organization	Competitive impact
Brand reputation and strength	☑	☑	☑	☑	Sustainable competitive advantage
Human capital know-how	☑	☑	☑	☑	Sustainable competitive advantage
CAPEX in digital self-service	☑	☑	☒		Temporary competitive advantage
Ecommerce platform	☑	☒			Competitive parity
Customer Relationship	☑	☒			Competitive parity

Source: Author’s elaboration.

Considering the applied framework, we can observe that TAP has two success factors at its core and three factors that currently grant either a temporary competitive advantage or parity. In the author’s point of view, this constitutes an opportunity to fill a gap in the market and formulate a business strategy with this mindset.

SWOT Analysis

Integrated with the strategic planning of a firm, the SWOT analysis aims to synthesize the strengths, weaknesses, opportunities and, threats by assessing the relevant aspects of its business. In a nutshell, enables the possibility to compare the resources and capabilities of a company with the existing and arising opportunities and threats. Through this framework, one can also determine the success factors of company by detailing the strengths and weaknesses and providing an actionable tool to compare with other competitors. In the process, it is also possible to identify the available resources and action points to achieve competitive advantages.

Summarizing, the SWOT analysis is the trigger to strategic formulation, a framework that allows a company to run an assessment regarding its positioning towards the market and to design strategies with those internal and external factors.

Strengths

- Brand notoriety
- Geographical location
- Recently renewed fleet
- Robust presence across the Americas and Africa
- Operational safety

Weaknesses

- Heavy cost structure
- Accumulated negative results
- Limited hub capacity
- Low punctuality performance

Opportunities

- Digital native customers
- Diverse destinations in the portfolio
- Exploration of new alliances
- Portugal trending outlook as a tourist destination
- Regular and tactical air cargo services

Threats

- Entry of new competitors
- Emergence of new outbreaks
- Jet-fuel price volatility
- Adoption of substitute products
- Cyberattacks

To translate the SWOT analysis into an actionable framework, the author went further on creating a scheme using the dynamic SWOT model, that allows the formulation of strategies relating one quadrant to the other with tangible measures.

Figure 3.3 – Dynamic SWOT model applied to TAP Air Portugal.

Strengths		Weaknesses	
Brand notoriety	S1	Heavy cost structure	W1
Geographic location	S2	Accumulated negative results	W2
Recently renewed fleet	S3	Limited hub growth capacity	W3
Robust presence across the Americas and Africa	S4	Low punctuality performance	W4
Operational safety	S5		

Opportunities		Threats	
Digital native customers	O1	Entry of new competitors	T1
Diverse destinations in the portfolio	O2	Emergence of new pandemic outbreaks	T2
Exploration of new alliances	O3	Jet-fuel price volatility	T3
Portugal's trending outlook as tourist destination	O4	Adoption of substitute products	T4
Regular and tactical air cargo services	O5	Cyberattacks	T5

Dynamic SWOT	Strengths	Weaknesses
	S1: Brand notoriety S2: Geographic location S3: Recently renewed fleet	W1: Heavy cost structure W2: Accumulated negative results

	<p>S4: Robust presence across the Americas and Africa</p> <p>S5: Operational safety</p>	<p>W3: Limited hub growth capacity</p> <p>W4: Low punctuality performance</p>
Opportunities	Challenge	Constraint
<p>O1: Digital native customers</p> <p>O2: Diverse destinations in the portfolio</p> <p>O3: Exploration of new alliances</p> <p>O4: Portugal’s trending outlook as tourist destination</p> <p>O5: Regular and tactical air cargo services</p>	<p>O1 x S1: Digital experience alongside with brand awareness is key to retain customers while unlocking new ones. Moreover, strategical brand activation events and association to travel-related influencers can engage new customers drawn by lowest fares.</p> <p>O2 x O3 x O4 x S2 x S3: Beyond the current network, seasonal destinations may be explored to attract new audiences. Such endeavor can be accomplished either through own fleet or by broadening code-share agreements thus leveraging current hub-and-spoke model.</p> <p>O5 x S4 x S5: Air cargo business was revamped by the demand caused amidst the pandemic. This led to the conversion of passenger aircrafts into freighters. The move provides</p>	<p>O1 x W4: The digital era that we’re living and testifying carries a need for information and the urge of being up to date. Providing a real-time service that identifies exactly the status of flights and baggage could help to engage with a chronic aviation problem in congested airports.</p> <p>O2 x W3: Diversifying the destinations served or even adding more frequencies to routes already served can be compromised by the infrastructural deficiencies associated to Lisbon International Airport that serves as hub.</p> <p>O3 x W1: To cope with a legacy heavy cost structure in the Portuguese flag carrier, either firming new alliances such as the integration within a large aviation group or establishing</p>

	the agility to monetize current and new markets.	joint ventures can leverage the company stability and support its growth.
Threats	Alertness	Danger
<p>T1: Entry of new competitors</p> <p>T2: Emergence of new pandemic outbreaks</p> <p>T3: Jet-fuel price volatility</p> <p>T4: Adoption of substitute products</p> <p>T5: Cyberattacks</p>	<p>T2 x T3 x S2 x S4: Besides jet-fuel price volatility, airline's business can be hit by several other external factors such as geopolitical distress, pandemic outbreaks, terrorism, natural disasters. Each and all can lead to overall demand instability which means that readiness to act will be key to mitigate the negative effects.</p> <p>T5 x S1: The risk and exposure to cyberattacks is increasing at high rates. Such event can compromise systems besides exposing customer data. If intended, it may compromise digital operations, thus impacting an ecommerce platform. Online channels account for roughly half of the revenues, thus reinforcing the importance of investing in robust protective measures.</p>	<p>T1 x T4 x W2: While new competitors can be on the lookout and entry into direct competition with minimized barriers, substitute products are starting to emerge as serious rivals to consider. In countries with a strong, robust, and fast railway infrastructure such as France, trains are being promoted by central and local government as an eco-friendly alternative opposed to airlines for short distance travel, such as domestic flights. In addition, flight shame, an anti-flying movement started in Sweden is influencing travel behavior as well.</p> <p>T5 x W1: Although cyberattacks are proved to cause major reputational and financial damage to a firm, budget constraints may translate into low investment and precarious security.</p>

Source: Author's elaboration.

2. In-company Project Objectives

Society has evolved in a way that calls for a change that improves the innovation workflow within TAP's digital ecosystem. It should be one that produces strategic thinking with a holistic view in all aspects related with after-sales processes. This vision and its materialization are imperative to meet customer needs in the fast-paced environment that we are living.

To summarize, it is the author's intention to increase self-service levels with a single and aligned business vision and strategy, boost revenue growth and stimulate cost reduction, position the digital ecosystem as a key success factor and achieve a sustainable competitive advantage in the market.

As discussed in the Chapter 1 of this project, these objectives are co-related to address the problems that arise due to an inexistant centralized management team for self-service subjects. Further ahead, the author will detail the as-is and to-be situation to cope with the inefficiencies.

3. Capitalizing Digital Self-Service

Based on the framework that emerged with the review of topics covering self-service in digital environment, we've observed that while acting as a customer service component, it encompasses benefits for the service provider such as high levels of efficiency and cost savings. Moreover, it also foresees several advantages from a customer perspective, such as convenience and control during use.

As it will be detailed further ahead, the combination of the benefits for all parties and the arise of a new generation of consumers the appealing side is high. Particularly if seen from a firm's perspective since on average an answered call can cost 5 times more than a query handled via digital self-service tools as explained in the business case in the subsequent chapters. Furthermore, the capability of generating high-quality leads should not be neglected despite the need of an initial cost for which the return on investment will largely pay off as the author will explain in detail in the business cases that support the project.

4. Technology as a Competitive Advantage

Considering that digitalization is playing a key role in the way businesses are being handled and the way companies are relating to customers and consumers, we should be aware that technology is the engine where all innovation is relying on.

Looking at the beginning of the 2000's, we can trace back to the launch of the first iPhone and the development of new broadband cellular network technology in telecommunications industry,

particularly the fourth generation (4G) that introduced a brand-new mobile world. The emphasis on the mobility is surely one of the success factors for companies relying on technology to develop their portfolio because individuals can now be connected virtually anywhere. These technological breakthroughs epitomized a way for companies to step up their value propositions and offer new products and services in a fast-paced environment.

Most recently, undoubtedly the introduction of the fifth generation of broadband cellular network technology (5G) will uncover of new possibilities due to faster connectivity, multi-device capabilities and almost zero latency.

Technology paradigms can create new habits and routines, triggering new market gaps to fill, leading to continuous improvement processes, reducing internal or external pain points, developing new solutions, among other quasi endless possibilities. Hence, the value creation associated to technology and the value added that a company can deliver, sets the basis to obtain sustained competitive advantages.

5. Functional Framework of the Project

During the development of this subchapter the author will explain the concepts around the digital ecosystem at TAP that should allow the reader to have better preparation and more context to understand the project needs and desired outcomes.

Next step is set on identifying the key stakeholders that will have interest in the development, implementation, and monitoring of this plan like any other cycle in project management. Since this initiative is cross functional, it will impact other areas besides digital touchpoints not just internally but externally as will be explained further ahead.

Furthermore, the author prepared a feature map to provide a high-level view to explain the vision and intersections that should be achieved. To conclude, the as-is and to-be situations will be explored which ultimately ends in the recommendation that the author suggests with also a walkthrough of business cases from the perspective of business and customer.

5.1 Concepts

To fully grasp the scope of the project and its recommendations, the main concepts that are going to be addressed will be detailed as follows. The explanation of these concepts will serve as an engine to understand the scope and delimitations of each one.

Digital channels

The digital channels are touchpoints that do not involve human assistance. Thus, the premise is self-service with a do-it-yourself motto, so that customers can be autonomous to execute their tasks. They can also be referred as online channels, opposed to offline or assisted channels that required an assistant to handle with customer queries.

Booking

A booking within the airlines industry refers to the ticket purchased by a passenger. In addition, it also comprehends other elements, such as personal and contact details, frequent flyer number and also, extras purchased (i.e., seat reservation, additional baggage).

Manage your booking

When an airline passenger needs to handle any type of query related to its booking, such as changing flights, editing contact details, purchasing extras to a trip, cancelling a booking, requesting a refund, among others, these after-sales processes in the industry are referred as manage your booking.

Web check-in

To successfully board on an aircraft, there is a crucial step that must be followed in between purchasing an airline ticket and the flight departure and that is the check-in. In the beginning of the past decade, this procedure was done at airport facilities, however, with technological evolution of systems nowadays this process executed in predominance through digital channels. There are several benefits that can be highlighted which explain the success of web check-in, since it is a seamless process relying on following a step by step, it allows seat reservation in advance and doesn't have paper involved.

Chatbot

The written conversational workflow between customers and businesses in the digital ecosystem has evolved to a current model where interactions can be made with artificial intelligence resources. That is, a customer may use an automated tool that allows him to clarify doubts or asking questions and being impacted with the requested content or answer. Furthermore, some technological solutions also provide handovers to human assistance when queries are too complex to handle.

Frequently Asked Questions

A set of questions that typically are made by customers are known by companies and may be categorized and grouped into major topics. Traditionally, they can have a dynamic aspect, since the questions may evolve as time goes by as new situations arise.

5.2 Stakeholders

The implementation of this project has dependencies and interests of a wide range of internal and external stakeholders which will be detailed further ahead.

Ecommerce & Digital Experience

The main stakeholders are personified by Tiago Phillimore as the Director of Ecommerce & Experience and by Silvia Mosquera and the Chief Commercial & Revenue Officer since the new recommended structure to be implemented would be framed under its organizational structure, with a defined governance to report to the Director.

Contact Center

As key actor interested in the effectiveness of the digital ecosystem is the Contact Center. To this stakeholder it is highly relevant if the digital channels can have a strong containment ration in customer queries and avoid unintended calls, so that assistants can be focused on complex tasks that add more value to both customers and the airline.

Ancillaries

The additional extras added to an airline booking besides the flight ticket itself are called ancillaries. They encompass extra baggage, seat reservation, sports equipment business class upgrades and others. In most airlines, it originates into an organizational structure which is the case in TAP. As such, this is an extremely active stakeholder due to the intrinsic transactional side and the follow up of incoming projects and new implementations.

Loyalty

Airlines have a business unit that accounts for engagement, benefits, and rewards purposes. In the industry this type of customer management it is typically designated as loyalty. Therefore, all aspects regarding these pillars around the relationship with customers are directly under the scope of this structure.

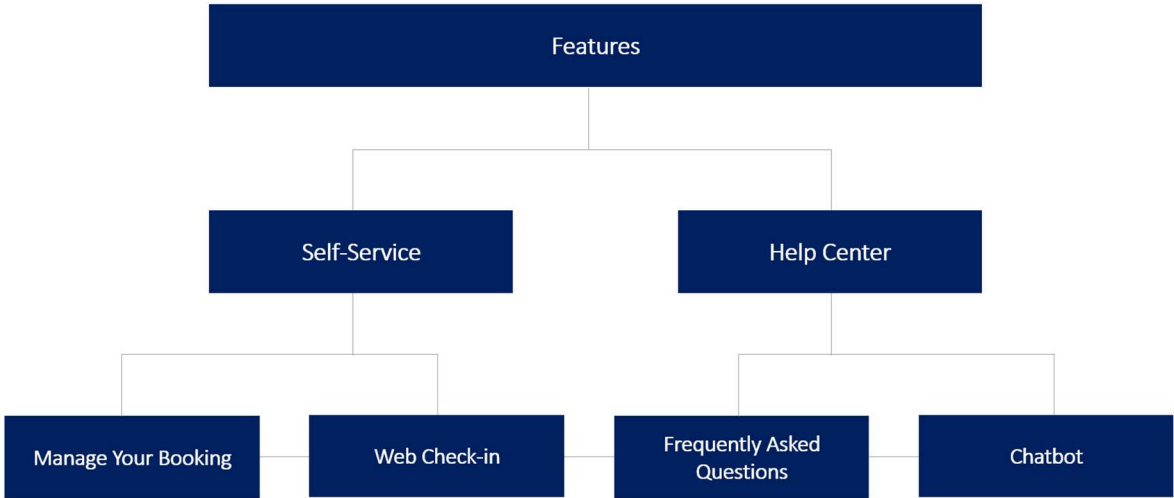
Third parties

Finally, there is also a group of external stakeholders such as hotel accommodation providers, rent-a-car companies, and insurance firms that also have a deep interest in the strategy followed on airlines digital channels since it represents an additional revenue stream for them, due to the partnerships established and the exposure on airlines digital products shopping process as an add-on to a booking.

5.3 Feature Map

In this subchapter it is the author’s intention to demonstrate the segmentation and concurrently the intersections of the features that express what is the project vision. Two main components, Self-Service and Help Center will feed respectively Manage Your Booking, Web Check-in, and Frequently Asked Questions and Chatbot so that a single strategic alignment can be achieved regarding after-sales revenue and servicing processes at TAP.

Figure 3.4 – Project feature map



Source: Author’s elaboration.

5.4 Digital Self-Service Structure

5.4.1 Current Situation

Nowadays, the team responsible for managing and evolving the booking management platform isn’t responsible for handling the web check-in channel nor the support area on TAP’s website. Instead, this touchpoint is currently managed by IT teams despite being a self-service and sales digital channel. It is also relevant to highlight that the current web check-in platform is an out of the box application with limited customization and unsuitable product development capabilities.

Regarding the existing support area for customers in TAP’s website, it relies on a complex search tool, an assortment of topics and videos and a form to submit questions, which may be confusing to understand and use, potentially leading to a pain point for a customer looking an autonomous way to be served. In addition, it is managed by a team responsible for creating and curating content.

5.4.2 Future Situation

In the quest of evolving the digital ecosystem, the author suggests creating a functional unit reporting to the Director of Ecommerce & Digital Experience, acting as a digital self-service hub with an accountable program lead, heading a total headcount of 7 employees, having the responsibility of managing and evolving all aspects surrounding the after-sales processes in the airlines business. To materialize the concept, the author suggests the integration of web check-in, a new chatbot solution and automated frequently asked questions on top of the online booking management that is already within the Ecommerce & Digital Experience organizational structure as previously referred.

The program lead should act as the accountable person to set the go to market strategy to enhance the digital adoption by customers and to define the digital education to front-line workers that deal with customers such as contact center assistants, airport personnel, and flight attendants.

Digital education plays an extremely important role to help and assist customers by handling their queries within the digital ecosystem. In other words, this can be the trigger that puts customers in charge. To illustrate, the underlying actions should be focused to the customers that reach the customer service center with an issue that is possible to resolve online. At this point, an opportunity emerges and, through a guided interaction focused on the usage of digital channels as a valid alternative may lead to a change in customer behavior towards a digital first approach with an insightful perceived added value.

To evolve the as-is situation the author proposes setting up a dynamic help center with automated frequently asked questions and chatbot with handover capabilities to a human assistant if needed, for instance to cope complex queries. The knowledge base supplying the help center should be set with an architecture and structure that displays to the user the top 3 articles based on the keywords used to perform a given search. If any of the articles isn't satisfactory, then it will be given the option to access to the full library. The articles should also have a rating system so that the hit between the top 3 suggested articles and each keyword can be fine-tuned in the algorithm.

In addition, to cope with business needs and to allow product management best practices it is highly recommended to launch an RFP regarding the web check-in platform so that a new one can be scalable with the capability to be evolved and allow user login. Moreover, the new provider should work on a variable cost model as opposed to current fixed cost model.

To continuously achieve product market fit, the Digital Self Service Hub team should be responsible for implementing a program of Alpha testers, consisting in a pool of employees, followed by a group of Beta testers, comprising a group of selected real customers with different types of digital

profiles. The testing loop program should have these two stages since the first has a strong focus on identifying possible usability issues and software bugs in a controlled environment, and the second one is keener in obtaining insights about the functional side of the product or feature. Overall, both stages will allow an assessment of the willingness to use, and validate the experience designed which eventually assists in the adoption of a product or service.

With the goal of demonstrating the relevance of recommending the new functional unit previously mentioned, the author prepared a set of use cases grasping both customer and business point of view, detailed as follows as well as deep dive to a new go-to-market approach for new products or services launched.

Customer perspective

Figure 3.5 – Business case from a customer perspective.

Actor	Description	Effect
An authenticated user	Is purchasing additional services on MYB before entering web check-in.	Customer loses login after accessing web check-in in this channel, disrupting the personalized experience.
An authenticated user	Is purchasing seats through web check-in.	Loss of integrated customer data due to inadequate analytics in this channel.
An authenticated user	Is trying to upgrade to executive class during web check-in flow.	Loss of revenue due to inexistent option to upgrade in this channel.
A non-authenticated user	Is purchasing wi-fi access through web check-in.	Loss of revenue due to inexistent ancillary in this channel.
A non-authenticated user	Is purchasing lounge access through web check-in.	Loss of revenue due to inexistent ancillary in this channel.
A non-authenticated user	Is trying to change flights during web check-in flow.	Loss of revenue due to inexistent flight rebooking capabilities in this channel.

Source: Author’s elaboration.

Business perspective

Figure 3.6 – Business case from the firm perspective.

Check-in Investment Items	Cost
Implementation setup fee	60.000€
Hosting setup fee	11.200€
Yearly hosting fee	42.000€
Yearly license fee	24.000€
Usage fee per passenger	0,024€

Scenario A Year 1	Cost
Hosting fee	42.000€
Yearly license fee	24.000€
Passengers processed	240.000€
Total	306.000€

Scenario B Year 1	Cost
Hosting fee	42.000€
Yearly license fee	24.000€
Passengers processed	288.000€
Total	354.000€

Scenario A Year 1	Income
Seats and bags	8.000.000€
Other ancillaries	221.750€
Flight rebooking	305.300€
Total	8.527.050€

Scenario B Year 1	Income
Seats and bags	9.600.000€
Other ancillaries	319.000€
Flight rebooking	366.360€
Total	10.285.360€

NPV (r10%)	7.374.663€
ROI	2,160%
COS	4,42%

NPV (r10%)	8.925.127€
ROI	2,318%
COS	4,13%

Dynamic FAQ's	
Interactions	1.000.000
Call deflection	40%
Cost saving	600.000€

Chatbot	
Interactions	1.500.000
Call deflection	40%
Cost saving	900.000€

Usage and Engagement
41% of customers use conversational marketing tools for purchases.
55% of business that use chatbots generate more high-quality leads.
40% of live volume could be resolved in self-service channels.

Source: Author's elaboration.

The business case detailed above is leveraged by the following assumptions: Seats and bags revenue based on 2021's third quarter from web check-in channel: 2,6M€; Other ancillaries and rebooking yearly revenue based on manage your booking performance: 887k€ + 6,1M€ (with 25% of willingness to purchase ancillaries and 5% to change flights); Investment based on current commercial conditions (2,40% annual increase); Estimate of 10M passengers for scenario A and 12M for scenario B with a 20% delta; The baseline for the call deflection rate for common enquiries has a starting point at 40%, using studies from consultancy firms and providers such as Gartner and IBM, respectively a consultant firm and a technological powerhouse; Cost per call answered anchored with the current figures spent with internal resources: 1,5€; Usage and engagement percentual based on Drift, a conversational marketing and sales technological company.

Besides the topics covered previously, the author also suggests the implementation of a go to market framework based in three stages to achieve growth of the digital channels: planning, testing, and launching which will be detailed further ahead.

Planning

The first stage, like any other project, starts by planning. Setting a go to market strategy is a key milestone to ensure that new products or features meet the customer needs. This should be a smooth-running process, starting by understanding the customer journey, identifying the personas, targeting ads, optimizing content, and communicating according to each audience preference (push notification, SMS, email, newsletter, etc.). After defining the strategy, the next step should be elaborating release notes, by disclosing what's new for each product or feature released since it demonstrates the benefits as well as unveils the improvements and bugs fixed. In addition, shedding some lights on what's coming soon is a way to create eagerness. The approach of having a steady routine to publish release notes is also a tool for user engagement besides the informative purpose.

Testing

Before launching a major product or feature to all customers, a controlled approach to learn and improve can be applied. This is achievable using Alpha and Beta testers. This first group is made up of employees with different digital and technological backgrounds that enroll into a controlled program of internal testing. The latter group consists in real customers that volunteer to test new products or features before they become available to a wide audience thus.

The testing loop program should have these two stages since the first has a strong focus on identifying possible usability issues and software bugs in a controlled environment, and the second one is keener in obtaining insights about the functional side of the product or feature. Overall, both stages will also allow an assessment of the willingness to use and validate as a proof of concept the experience designed.

Launching

The last state of the go to market framework comprehends three milestones defined in a project timeline than spans from pre-launch, to launch and post-launch. The pre-launch goal is to ensure the quality and stability of the solution with different testing phases involving employees and customers. The launch action ultimately is to make the feature available to users in stages and communicate it to create awareness for its usage. Finally, the post-launch objective is to gather feedback and insights from users and analyze KPI's to measure and apply corrective measures if needed.

Chapter 4 - Conclusion

Idealizing this project, followed by the investigation that resulted into the previously described recommendations gave a new insight to the author about the power of restructuring. As one may think, the reorganization process does not necessarily mean to downsize. In fact, it can epitomize the ability to make smart business moves and take new opportunities.

While performing is day to day duties, the author realized that better management can be applied to teams' working flow and the possibility of capitalizing on digital channels. This awareness was triggered when decision making, and new initiatives weren't fully aligned across the organization which in its turn sparked the author into a quest to analyze, formulate and implement a new strategy with its own planning, implementation, and control timelines.

Wrapping up in one brief sentence, this project aims to be a small contribution to reorganize the existing resources while applying certain investments towards the company's sustainability and profitability.

1. Suggestions

Following the study endeavored to produce this project, it is highly suggested to adopt a birds-eye view and assess firmly the limitations of the implementation recommended, particularly when it comes to new investments. Nevertheless, as observed by the business cases demonstrated, the net present value and return on investment support the decision making. Hence, considering the budget restraints it has the utmost importance to implement a monitoring system to evaluate performance, identify possible deviations and take strategic measures.

On top of, the author also suggests performing more business simulations bearing in mind the most recent passenger traffic figures, revenue, and the new forecasts, as the aviation market is bouncing back earlier than previously anticipated when this project was idealized.

It is similarly suggested to implement the new go to market approach, even before a reorganization approval so that a change in the mindset may be driven within the firm when it comes to launch new products of features. In addition to the details discussed in previous chapter, this represents an opportunity to move forward to a failing fast culture which in a glimpse means that we can learn something out of a given failure helping to succeed faster in the next venture.

2. Acquired Experience

Starting and developing this project was an authentic challenge that provided the author more resilience for upcoming academic, professional, and personal activities. At an academic level, it was at first difficult to obtain quality material due to the shortage of articles published about the topics covered, however, the author firmly believes that the reviewed literature sustains the vision and ambition to accomplish the recommendation that was produced.

It also important to highlight the professional challenges since it was, on innumerous occasions, extremely difficult to manage time efficiently and parallelize both activities. In its turn, it also took a toll on the personal side. Even though it was not the case, the author realized what burnout effects can be and what mental health issues can to one's condition.

3. Limitations

Just like any other study there is a set of limitations that can inflect into refining the current model that the author is proposing.

The core limitations that must be acknowledge are brought by the business cases presented previously due to the assumptions involved, despite the combination of real data as well backed by benchmarks and consulting firms' findings.

Considering the current restructuring plan that TAP is carrying out after state bailout due to the negative impacts of COVID-19 in the industry, the investment on new technological solutions may be considered with less priority or postponed until the turnover is achieved.

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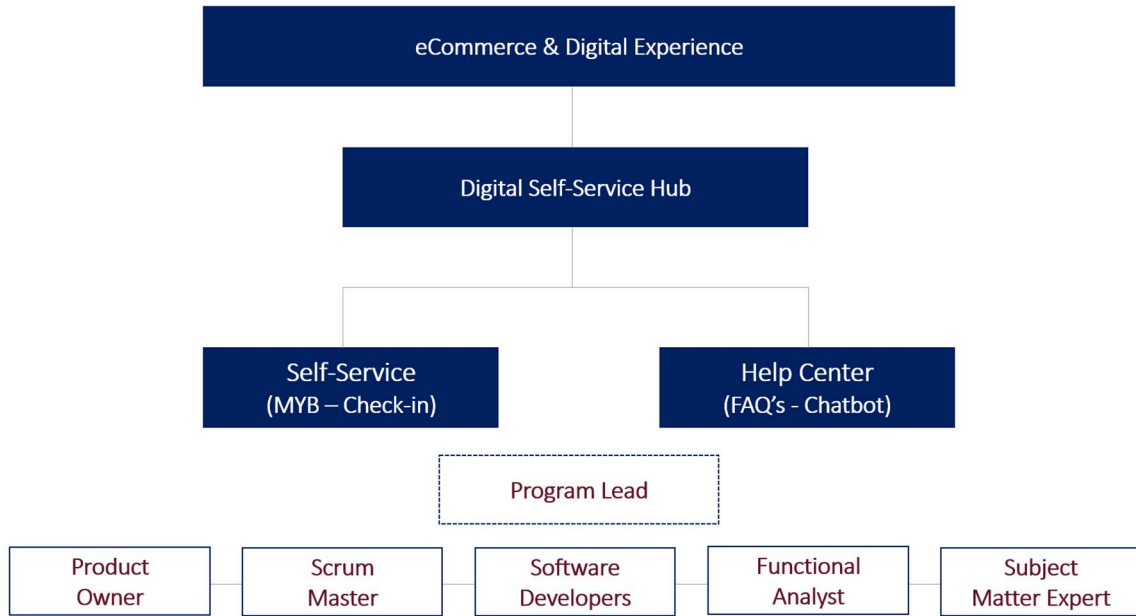
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Appendixes

Appendix 1: Organizational Structure

Breaking down the organizational details proposed in the author’s recommendation.



Appendix 2: Team profiles

Description of team profiles, detailing each role, responsibilities, requirements, and skillset.

Role	Responsibilities	Requirements	Skillset
Program Lead	Organizing programs and activities aligned with the mission and goals of the organization.	Master's degree in business administration or a related field.	Strong knowledge and of building products and applying program management methods.
	Planning the overall program roadmap and monitoring the progress.	Experience managing products and teams.	Effective leadership and management skills.
	Coordinating projects, applications, and their interdependencies.	Knowledge of agile methodologies.	Able to find innovative ways to resolve problems.

	Managing the relationship, communication, and align expectations with stakeholders.	Proven track record in creating successful products.	Excellent communicator and team player.
	Developing an evaluation method to assess program strengths and identify areas of improvement.		
	Producing accurate and timely reporting of program status throughout its life cycle.		

Product Owner	Managing and prioritizing the product backlog.	Bachelor's degree in business or a related field.	Good communication skills.
	Translating program lead strategies and business requirements to tasks for development.	Proven success in releasing products that meet and exceed business objectives.	Time management while customer oriented.
	Acting as a primary liaison between product and development.	Subject matter expertise in the product.	Strong analytical skills.
	Overseeing the product development during all stages.	Proven ability to influence cross-functional teams without formal authority.	Effective decision-making.

	Evaluating the product progress at each iteration.		
	Being always available to the development team to answer any questions that may arise.		

Scrum Master	Assisting the product owner with the product backlog.	Bachelor's degree in computer science or a related field.	Excellent verbal and written communication skills.
	Planning the iterations with the development team.	Experience as an agile software developer.	Sharp sense of accountability and.
	Acting as a coach or facilitator for the team, helping to solve problems.	Proven track record as a scrum master.	Willingness and ability to embody multitask.
	Facilitating the agile ceremonies such as the sprint planning, review, and retrospective meetings.	Scrum master certification is highly preferable.	Resourceful problem solver.
	Empowering the development team to create and innovate.		
	Removing impediments to help the development team to stay focused on the tasks to be accomplished.		

Software Developer (Front-end and Back-end)	Producing clean and efficient code based on specifications.	Bachelor's degree in computer science or a related field.	
	Integrating and implementing software components.	Proven experience as a software developer or similar role.	Ability to learn new technologies quickly.
	Maintaining systems up and running.	Familiarity with agile development methodologies.	Commercial and business awareness.
	Working closely with other developers, designers, business, and systems analysts.	Knowledge of coding languages (JavaScript, HTML) and frameworks (AngularJS, Git).	Attention to detail with critical thinking.
	Testing and evaluating new features.		
	Developing quality assurance procedures.		

Business Analyst	Analyzing the existing systems and highlight areas of improvement.	Bachelor's degree in computer science or a related field.	In-depth knowledge of IT and computer science principles.
	Reviewing code to ensure best practices are in place.	Relevant background in airlines industry.	Strong written and verbal communication skills.
	Monitoring performance, discover variances and propose corrections.	Demonstrated ability to operate in a multi-product environment	Analytical and critical thinking.
	Preparing technical specifications, system configuration documents and other technical reports.	Proven track record of successfully managing their own work.	Advanced Excel capabilities and SQL knowledge.

	Overseeing the development of the product as per the specifications.		
	Documenting business requirements, create the functional specifications, and prepare wireframes and flowcharts.		

Subject Matter Expert	Providing inputs for the design of test cases and scenarios.	Bachelor's degree in business or a related field.	Good communication skills.
	Testing the product features to meet user acceptance criteria.	Strong experience in airlines business.	Strong analytical skills.
	Being available to clarify questions in the field of expertise.	In-depth knowledge of customer support.	Ability to embody multitask.
	Providing subject expertise and guidance to developers during the software development life cycle.	Familiarity with agile development methodologies.	Knowledgeable in the particular industry.
	Understanding the language, terms, and jargon in the field of expertise.		
	Identifying areas where technical solutions would		

	improve business performance.		
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Appendix 3: Financial Impact and Business Economics

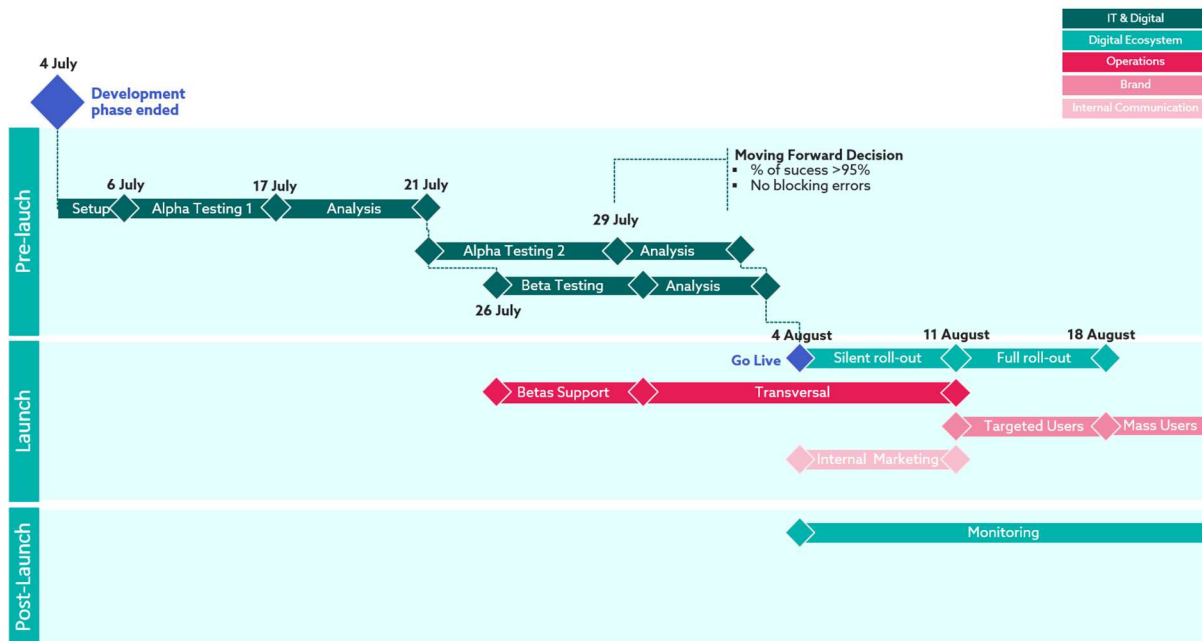
The author endeavored a financial impact simulation by assessing the costs, revenue and saving per channel that would be under the digital self-service hub structure and its cost center.

Channel	Metric	Cost	Revenue	Saving
Manage Your Booking	Session	0,01 €	5,10 €	
Web Check-in	Session	0,37 €	0,85 €	
Frequently Asked Questions	Interaction	0,03 €		2,47 €
Chatbot	Interaction	0,40 €		2,10 €

The following assumptions were used to build this exercise: Manage your booking revenue represents the total sold in 2021; the accounted costs are according to the share of 2,5% in 2021. Check-in revenue is based on the amount sold in 2021; the accounted costs rely on an estimate of 10 million of passengers carried. Frequently asked questions cost is based on current contract. Saving is calculated with a 10% deflection rate over 750k interactions. Chatbot cost is based on IT budget. Saving is calculated with a 30% deflection rate over 500k interactions. Cost per answered call on contact center is set at 2,5€ fee.

Appendix 4: Go to market timeline, after planning and testing phases

Recommended approach to be followed when new structural products or features are planned to be released.



Appendix 5: Value Proposition Canvas

This business model tool, created by the developer of the Business Model Canvas allows assessing a product-market fit. In other words, by analyzing the value proposition through the product features and its gain creators and pain relievers it is possible to evaluate if customer needs are being addressed by products.

Value Proposition		
Product features	Gain creators	Pain relievers
<ul style="list-style-type: none"> Ancillary services Flight rebooking Web check-in Chatbot Automated FAQ's 	<ul style="list-style-type: none"> Unified help center Hassle free navigation Fully customer autonomy 	<ul style="list-style-type: none"> Knowledge base Fast access Uninterrupted availability

Customer Profile		
Tasks	Gains	Pains
<ul style="list-style-type: none"> Buy extras Change flights Check-in Search info 	<ul style="list-style-type: none"> Ease of use Time saving Personalized experience 	<ul style="list-style-type: none"> Time on hold Fuzzy navigation Difficulty to find answers

Appendix 6: Knowledge base structure

The following table depicts the structure that the author has idealized for each content to be organized under a major umbrella topic.

Help Center				
Flights	Extras	Refunds	Restrictions	Complaints
- Book flights	- What to buy	- Conditions	- Health	- Talk to us
- Change flights	- Where to buy	- Request	- Visa	- Lost baggage
- Campaigns	- How to buy	- Status	- Mobility	- Status
- Check-in	- Advantages	- Flight canceled	- Documentation	- Flight disruption