Online E-Commerce Platform that joins arts and cloths, using a business strategy for the Portuguese market

Suhail Giva

MSc Computing and IT Management

Supervisor: Kathryn Jones

School of Computer Science and Informatics,

Cardiff University

Contents

Preamble5
Introduction
Aim and Objectives
Functional and Non-Functional Requirements9
Functional Requirements9
Non-Functional Requirements9
Steps to Take10
Background material
E-commerce and E-Business11
E-commerce Business Formats12
COVID - 19 VS E-commerce in Portugal14
Problem15
SWOT analysis for Electronic Commerce16
Strengths17
Weaknesses18
Opportunities19
Threats19
Approach
Personas20
Similar Platforms22
Skeleton Layout35
Overview
Project Management Standards and Methodologies
Prince2 Usability43
Agile47
Application of the chosen approach48
Prince2 Influences
The technology used to build the platform50
UX Design for E-Commerce51

Products	
Fun	ctional Requirements51
1.	Preparing the Product Page55
2.	Creating the interviews function on the Product Page57
3.	Creating the LoadStatistics function on the Product Page57
4.	Creating the reviewsRepeater_itemReady function on the Product Page57
5.	Creating the show reviews function on the Product Page58
6.	Creating the addReview_click function on the Product Page60
7.	Creating the resultsPages_click function on the Product Page61
8.	Preparing the Review Box Lightbox61
9.	Creating the updateStatistics function in the Review Box Lightbox64
Non	-Functional Requirements73
Evaluation	
Conclusion	
Reflection.	
References	
Appendices	

Preamble

Abstract

At a time when digital growth is at an accelerated pace, the use of certain technological means of communication is something significant. In order to be listened to the needs of citizens, and with an eye to existing businesses, new ways of interacting with the markets tend to appear.

This project analysed the existing panorama during the Covid-19 phase in Portugal in the digital world of clothing and art, searching for certain points of Design to which the citizen user of technological applications feels comfortable.

Thus, it is proposed to develop a digital platform that can achieve the goal of aggregating different brands and artists that somehow have a certain Portuguese character at their core. Associated with a study that brings together different points of investigation, namely design, e-commerce business strategies, and project management for the development of technologies. In which it was allowed to acquire the necessary knowledge to support the project and its entire idea in general.

Following a methodology that consisted in the practice of analysing existing platforms, which help us to understand what currently exists in the market, the needs, and motivations of the user. The platform was developed based on the researcher's experience, associating the skills acquired during the Master's in Computing and IT management at Cardiff University and with the data collected during the entire research process.

The platform is proposed as a prototype, focused on the chosen area and that meets the usability parameters.

Acknowledgements

I would like to thank Professor Kathryn Jones, who, above supervisor, was also my personal tutor throughout the academic process, welcomed the idea for the project with open arms and made herself available to guide me along this path in the best possible way.

To my parents for all the opportunities they have given me to this day, who always faced my dream as if it were their dream, and without them I would not have gotten where I am today.

To my brother, who without a doubt was proof that if we risk high, everything will be possible.

To my friends who are a pillar in my life, always managing to pass on a word of motivation and for being a great support when times are not the best.

Thank you very much.

Introduction

As part of the completion of the master's degree in Computing and IT Management at Cardiff University, a dissertation was carried out in which issues related to the modules taught throughout the course could be investigated. The researcher who previously worked directly with one of the world's renowned clothing brands, with a background in the fashion field and a huge taste for art and design, came across a gap between fashion and technology, where, due to Covid-19, it was possible to observe this gap that meets the needs of the common citizen.

Given the nature of the researcher, he asked for a study to be carried out in which he developed a virtual platform that brings together clothing and art in his country of origin.

Throughout the work it will be possible to verify the development of a virtual platform and how some concepts related to the current panorama of Portugal were addressed due to Covid-19, as well as the analysis of platforms already existing in the market in question.

It will be possible to analyse what are the necessary requirements, both functional and non-functional, how they were implemented and what difference they make in the usability of the platform in question.

In the first phase of the project, it will be possible to visualize the entire concept related to the topic in question, what aroused the interest of the researcher and where different concepts such as technology, fashion and business can be combined into one. During the rest of the document, it will also be possible to see the different approaches that make the project well-conceived, from the project management part to the question of UX Design used in online platforms.

After analysing the general concept and similar platforms, it will be possible to observe some wireframes that meet what is foreseen as pages for the platform.

In the last phase, it will be possible to analyse the entire developed product, managing to carry out a prototype that meets the goals idealized above.

It is important to note that all data referring to people, users, brands and product names are fictitious and were used only for this academic object.

The platform can be found in its entirety as a prototype at the following address: https://suhailgiva.wixsite.com/untilcollective

Aim and Objectives

The online platform, associated with computers and mobile devices, allows query and acquire a single portal, data and products related to designers, stylists and artists.

The online platform aims to create commitment and promotion of Portuguese culture and fashion, aiming as the main objective, encourage the creation of new Portuguese brands, and give visibility and growth to designers, stylists, and artists.

The service provided by the Platform includes the exhibition/promotion of products directly on the platform and indication to an existing website / online store, as well as the history or concept behind each brand, respecting its individuality. It also covers a vital job of investigating and analysing data search and purchase, providing the results brands for products to invest and innovate, so that new products in the field of jewellery, ladies and gentlemen's bags, clothing, footwear, and headgear.

The online platform will be divided into the following topics:

- Portuguese designer clothes;
- Portuguese branded accessories;
- Portuguese pieces of art;

• Second-hand sales of the items mentioned above would reduce waste and encourage reuse.

In the current scenario resulting from Covid-19, the platform will also constitute an aid to the sale of products from physical stores, for those customers who are going through a difficult period of sales.

In this way, it is intended to encourage the consumption of Portuguese brands, contributing to the increase of the national economy and providing a branch of commerce in the virtual scope, stimulating e-commerce in Portugal.

Functional and Non-Functional Requirements

The e-commerce platform to be developed needs to cover some requirements, dividing them into functional and non-functional.

The choice of these requirements is directly linked to meeting the user's needs, seeking to improve the browsing experience and ease of interaction with the intended services.

A functional requirement is a function of an application or part of it, which, together with other functions, will meet the final application.

A non-functional requirement meets the transparency and reliability of the application in order to promote security, availability, performance and usability.

Functional Requirements

- 1. Feedback provider for each product;
- 2. Size matcher;
- 3. Fast and easy shopping cart;
- 4. Easy product selection, filter by model, brand and category;
- 5. Placing a payment method;
- 6. Show unavailable pieces;

Non-Functional Requirements

- 7. Exhibition/promotion of products;
- 8. Indication to an existing website / online store for the brand and artist;
- 9. Explain the history or concept behind each brand;
- 10. Describe the products, taking into account texture, weight, materials and fabrics used, colours and guarantees;
- 11. Put quality into the display of products, betting on high-quality images;
- 12. A clean and practical design;
- 13. Terms and Conditions, Privacy Policy and Frequent Asked Questions;

Steps to Take

To successfully create the platform, we will have to meet several UX design experiences to match the technology's mission.

After collecting some data referring to past experiences that support a design that meets the topic in question (art and fashion), the best technology to build the platform will be chosen.

To have good project management, we will use a project management methodology without losing focus on the purpose of the project and the platform, comply with project monitoring betting on ethics and be versatile to any changes that may occur during the process.

During the process, an approach will have to be made to the best business strategies in the world of fashion and art and the best strategy for e-commerce projects, either at the marketing level or at the promotional level.

Subsequently, a selection of brands that meet the study requirements will have to be made to test the platform.

Background material

E-commerce and E-Business

E-commerce and e-business are business activities that transform relationships to create market opportunities increasing the value of companies, dictated by the rules of the network economy. [Gartner Advisory 2000]

It should be noted that E-business has created new market opportunities by electronic means. With this fact comes the consequence of a reduction in transaction costs, a reduction in delivery times, improved customer service and increased convenience.

As can be seen, business by electronic means is no longer tricky and has become one of the main focuses of companies.

Start-ups are conquering the increase in market share online and putting pressure on physical companies to find the proper structure to get up on the Web quickly.

The reality is that there is no such thing as a simple model. Companies that share the same sector with similar cultures have to discover a trading strategy that is individual for each of them. The big problem that companies are facing is the discovery of the best e-business model to adopt.

As a result, they try different things, ranging from creating online subsidiaries to merging with existing digital start-ups.

Leveraging a company online is not just about having a good website but also about having a suitable warehouse, knowing the customers, and making all the contacts between production and distribution channels.

While speed is crucial, many companies are still struggling to get started online. The biggest mistake that companies have made is the imbalance in the management of investment funds, ending up investing a large part in web systems, without analysing the risks and without being prepared to deal with the complexity of applying the system.

[Fortunesection.com 2000]

E-commerce Business Formats

E-commerce is divided into four areas, depending on the role of each player, as shown in the figure below:



Source: [ResearchGate.net]

a) Business to Business (B2B)

Companies that use the B2B methodology end up using the online platforms of other companies, including online product catalogues, marketplaces, emails, online business networks, to improve and make their sales more effective (Kotler & Armstrong (2007)).

The category under analysis is based on the variety of transactions between companies, namely the purchase and sale of goods and services. However, it may also include some financial transactions, from insurance, bonds, commercial credits, among others (Frutuoso, 2020).

Choosing the most appropriate model depends on a set of factors, including the company's notoriety, the means at its disposal, its ability to attract business positioning and the intended relationship strategy with partners (Kotler & Armstrong (2007).

The B2B method will be used to consider the project in question, as it is an online resource platform that intends to improve the dissemination and sale of products from other brands.

b) Business to Consumer (B2C)

Online retailing services and products to end consumers. Currently, consumers can buy anything online, from airline tickets to meals, clothing and more. (Kotler & Armstrong (2007).

Nowadays, many physical stores have their services for selling products online. In this way, users can view and buy products with just one click. This strategy is called "brick-and-click" (Frutuoso, 2020).

We can give many examples in Portuguese territory, from FNAC, Continente and clothing stores such as Zara, Footlocker. There is also a virtual shopping mall, called the marketplace, which contains various merchants, where a customer can purchase a specific product in a store with several suppliers (Napier, 2006).

c) Consumer to Consumer (C2C)

In the model in question, users sell their products directly on the platforms to other users. Examples of C2C platforms are OLX, eBay and Amazon (Kotler & Armstrong (2007).

d) Consumer to Business (C2B)

In this model, the consumer can set a price for a good and a service to reach diverse sellers (Napier, 2006)

The best-known examples are tradable services, namely, car rental, hotels, cruises and travel packages. The consumer stipulates the value of the service and the seller accepts the proposal or rejects the consumer's proposal (Kotler & Armstrong (2007).

COVI - 19 VS E-commerce in Portugal

In 2018, a study was carried out by the Boston Consulting Group (BCG) and Google. The results estimated that Digital had an impact of 9 billion euros on Portuguese GDP, which represented approximately 5% of total GDP. In the study in question, it was pretty visible to verify that Portugal was far behind the other European countries. The average values pointed to approximately 8% of GDP.

The Covid-19 pandemic is changing the way people live and relate globally. Moreover, the increase in users of digital channels was a consequence of confinement and travel restrictions. In Portugal, according to a study by Group M carried out in mid-April, the effect of the pandemic generated e-commerce growth between 40% and 60% compared to 2019.

Additionally, SIBS (Sociedade Interbancaria de Serviços) announced that the average value of online purchases increased by about 18% throughout the emergency.

These factors combined demonstrate on the one hand that probably a relevant number of people started their experience in the digital part and used this type of solution for the first

time. On the other hand, people who already had access to digital channels continued to increase their utilisation.

The retail trade is the sector that can benefit most from the change in consumer behaviour. However, for that, a digital marketing strategy will have to be implemented, with the help of using data to generate and retain knowledge about its base potential and current customers online. Thus, it promotes the creation of targeted campaigns and more personalised offers for users.

The consumer experience on digital channels is an essential factor. For a company to be able to attract and retain a consumer until the end of the purchase process, it must ensure an experience of excellence, through simple and intuitive interfaces and with reduced page loading times (Google advises that this is not superior to 3 seconds), proper checkout and payment methods, among others.

In short, the Covid-19 crisis is a wake-up call for Portuguese companies to make the transition from offline to online. Having an offline presence continues to be essential for success at online levels, thus having more than one way to sell products successfully. Nevertheless, the online presence is evident that it can reach a scale it has never reached before.

(https://observador.pt/opiniao/o-impacto-covid-19-a-segunda-vida-do-e-commerce-emportugal/)

Problem

Within the panorama of Portuguese fashion culture, it is possible to observe that Portugal is a country that receives many investors from abroad to produce its collections. "We are good at producing, we are good at transforming what we touch into unique pieces, and our gift of know-how is recognized across borders in the fashion industry, by brands that, possibly, do not even cross your mind. Portugal has the savoir faire, the know-how – whatever you want to call it and in the language you prefer – and that is taken very seriously out there"(Moura, 2020).

However, within the current situation, there is also a gap in the market, considering that we have the capabilities to develop and create, but we do not have enough names to achieve a certain exposure.

The research objective is to put the Portuguese user in the position to buy what is national online. Considering that Covid-19 forced citizens to do this, compared to the rest of Europe, we are one of the markets with a lower volume of online purchases. The task involves betting on guidelines that are marked as important for a marketplace in the Portuguese market (André Teixeira, 2020).

The creation of the platform serves, in a way, to encourage the national brands that were emerging to be able to take a leap in their path and gain online exposure.

As described by Vera Maia, mentor of the "Tudo Sobre E-commerce platform."

In 2019, online sales grew "in the order of 300% in some sectors, reaching 600% in brands with international expansion (Ataide, 2019).

The creation of several brands and the digital expansion of some that already existed in physical models ended up having some impact on the market. Since we are excellent producers, and we have difficulty creating and scaling brands. And in the panorama, we are in at the moment, brands need to work more at the digital level, in order to have a greater impact at the online sales level (Ataide, 2019). The virtual platform meets these needs to complement the creators work, thus achieving a significant number of online sales.

SWOT analysis for Electronic Commerce

To connect the introductory part - in which the introduction and framing of the theme correspond to the scope of electronic commerce during the Covid-19 phase - and the part related to the platform to be developed, the researchers will carry out a SWOT analysis. In particular, it will analyse the strengths, weakness, opportunities and threats that come from e-commerce.

Strengths

One of the main strengths linked to e-commerce is the fact that it can reach a global market without the financial investment being a huge burden. Associated with this is the fact that there is the possibility of developing services focused on end consumers. This can sometimes have an impact on the product distribution chain.

Global market: Service boundaries are not defined geographically, they are only defined by network coverage, which allows users to be able to compare offers from different providers, regardless of their location.

Choose the consumer's measure: by electronic means, suppliers can obtain information about the needs of potential customers, namely what they like the most. In this way, they can improve the offer of products and services suited to customers preferences in the market where companies are acting.

Increased productivity/competitiveness/quality: the virtual market can bring suppliers closer to customers, increasing productivity and competitiveness in their companies. As a result, the consumer benefits from higher service quality, which can be applied to more efficient pre-and post-sales support.

Permanence services: With online services, there is no time limit for the user, who now has virtual stores open 24 hours a day.

Giving relief to distribution chains: ecommerce allows the efficient direct distribution of products to end consumers, which ends up bypassing the traditional market operators, wholesalers and retailers, in terms of costs and speed. When the product is an electronic object, the sale turns out to be immediate, which ends up reverting to the elimination of distributors that work with this type of traditional service.

Cost reduction: the greater the sales flow, there will consequently be an impact on the reduction of transaction costs and prices charged to customers.

All the above aspects will enable companies to benefit from a significant increase in opportunities, which will also imply gains at the level of consumers, namely with the improvement of quality and reduction in the prices of the products and services provided.

Weaknesses

The weaknesses associated with e-commerce are as follows:

Technology Dependencies: Organizations are dependent on information and communication technologies.

Deficient or badly dimensioned communication infrastructures: It is possible to find certain flaws in the communication and data processing infrastructures, namely in terms of bandwidth and computational capacity in accessing certain servers.

High costs in telecommunications: the persistence of high telecommunications costs, namely in countries where there are monopoly situations (legal or effective), among telecommunications operators. In this sense, the intervention of regulatory identities is necessary in order to allow the existence of healthy competition. Insufficient legislative framework: There is a lack of legislation that adequately regulates new electronic commerce activities on a national and international scale.

Market culture opposes electronic forms of commerce: the fact that potential customers cannot touch or try the products, as happens in conventional stores, may result in an impediment to their acceptance.

Disadvantages of excessive interaction with customers: When interaction with different customers is taken to an extreme, it can turn out to be quite negative. For example, dealing with many messages and issues daily will require a very quick reaction from companies, as a problem that is not resolved in a short period of time could lead to customer dissatisfaction.

Opportunities

There are several opportunities that arise with e-commerce. From a generic point of view, new companies, new services should emerge, namely in the supply and support of computer networks. New business models, as well as the emergence of new business processes from traditional companies.

These opportunities can be presented according to the agents to which they relate: Companies: possibility of reaching new and expanded markets more quickly, demand for new applications, services and technological challenges, less bureaucracy in relations with public administration.

Financial Institutions: new types of commercial transactions and customer-centric services. Public Administration: greater agility, transparency, and efficiency, bringing people and companies closer together.

Teaching: new ways of teaching and learning, supported by e-learning platforms.

Employees and Companies: remote work developed.

Threats

One of the factors that could be a threat to the emergence of electronic commerce is the lack of awareness of it. In other words, there is a danger that some companies, namely small companies, will be left behind and at a disadvantage simply because they are not aware of the possibilities and opportunities provided by this new type of trade. It is urgent to make society in general, as well as the business world, aware of what the benefits of electronic commerce are. Show examples of your application and provide adequate education and training.

Another threat is to leave out a significant percentage of the population or the business fabric of this new economic model, whether for lack of adequate communication and computing infrastructure, or insufficiency in training and education, and above all, for lack of financial resources to sustain this movement.

Consequently, other types of threats related to users and companies appear, due to the intensification of the evolutionary process, such as the loss of privacy of users and insecurity in carrying out commercial transactions. To circumvent these threats, it is necessary to have some type of certification that can pass on reliability to the user and the companies.

Considering the researcher's analysis regarding the contextualization of the platform concept, the analysis of the problem and its consequent placement on the market, all the production-related parts will be presented.

Approach

Design aspects

Personas

The personas represent the platform's users, which are created with a data match of the target audience's most common behaviours and characteristics to use the platform. Based on the data in question, new stories are put on the table with motivations and intentions, concerns and challenges that help understand what kind of people will use the application in question. (Siqueira, 2016)

Ideally, personas are created to bring the actual user to life to make decisions on UX implementation in an interface. To make them consistent and credible, an identity is created, attributing specific characteristics such as names and age, physical characteristics and other details and specific information based on the results of previous research. Some questions are run around Personas to put users in the designer's mind during the platform development process. (Garrett, 2011)

The descriptions below indicate some personas created by users of the platform:

Mary is 24 years old, a medical student at the University of Lisbon and used to go to the clothing stores during periods of study break. Due to Covid-19, it continued with the same type of activity but online. With the amount of information on social media, Ana feels lost when choosing products for buying online since she does not know which brands exist and which ones stand out.

Joana, 35 years old, mother of two Children, works for an insurance company in Oporto; during breaks in work activities, she usually keeps an eye on social networks and ends up seeing national clothing catalogues. Joana supports brands with a different vision and that are of national origin.

João, a 31-year old single ex-worker at a clothing store, decided to create his own clothing-related project in which his clothing products are made with organic materials, 100% sustainable of national origin, using the fibre of banana directly collected on the island of Madeira. João will create his page online but would like to have an audience related to his project and gain value by being advertised on a page where he will have some prominence due to its sustainable component.

Similar Platforms

To make a platform within the requirements we want, it is necessary to analyse what already exists in the market. The following platforms were found:

• Amazon - Amazon is an online trading platform whose prominent name is one of the largest stores in the world at the moment. In addition to selling various products making the connection between different suppliers, Amazon allows users to leave their opinion regarding each purchase, thus creating an object of comparison between products that will facilitate the user's choice.

Website	https:// <u>www.amazon.co.uk</u>
visited	https://www.amazon.es
Icon	Figure 1 The Amazon Icon
Advantages	More than 240 million Amazon customers worldwide.







• OLX - OLX is a marketplace that offers the usability of users being able to sell their products, from used to new. Aggregating various types of sectors, from clothing to technology. The diversification of goods and the ease of being tradable is one of the advantages of the platform.

Website	https://www.olx.pt/
visited	
Icon	Figure 7 The OLX Icon
Advantages	Users can place their ads for free.
	The platform does not charge any transaction. Ads can be placed for exchanges or donations.
Disadvantages	The platform is not responsible for any advertisements on its website.
	The ads are standard, without any prominence.
	They only gain prominence if the respective amount is paid; it will not be
	possible to modify the ad during the prominence period.





• Farfetch - Farfetch is the leading luxury fashion online trading company that encompasses several haute-couture brands. The company was created by a Portuguese businessman but is present in several international markets and has the presence of more than 1200 brands, which are of national and international level, where high fashion brands stand out.

Website	https://www.farfetch.com/pt/
visited	
Icon	
	FARFEICH
	Figure 12 The Fartech Icon
Advantages	Optimised distribution, with express delivery in over 190 countries.
	A significant presence on social networks, betting heavily on
	communication.
	The diversified premium product line.
Disadvantage	Extensive investment in technological equipment has an enormous impact
S	on a company's financial investment.
	Price variation between different countries.
	The platform inevitably encourages consumerism and goes against
	sustainability standards.







 Dott - Dott was created to be the reference marketplace in Portugal and presents itself as the 100% Portuguese marketplace. We are selling several articles from various sectors, containing more than 500 thousand references available, equivalent to two hypermarkets.

Website	https://dott.pt/pt/
visited	
Icon	Figure 18 The Dott Icon

Advantages	Fast delivery (between 7 pm and 10 pm).
	Several collection points throughout Portugal.
	Personalised helpline.
Disadvantage	Due to the number of suppliers, stock control is not analysed in detail.
S	Sales charge between 7,5% and 14,5%.
	The little versatile colour palette influences the purchase of certain items.
Home Page	<complex-block></complex-block>





(https://www.jasminsoftware.pt/blog/5-marketplaces-em-portugal/)

Skeleton Layout

After analysing the organisation of the platform's content, a sketch was performed to visualise the layout. The colourless, simple drawings and usually represented by geometric

figures of easy perception are called Wireframes, which help the designer to understand the collaboration of the interactive elements present on the screen. When analysing these low-fidelity prototypes, there are some advantages, including ease of creation, ease of change and interaction, easy identification of usability problems, portability, and ease of use of the machine found in the project. These features can also be used to define the system. (Tavares, 2013)

In the figure below, we can analyse the wireframes created for the platform, which will serve as a way for the visual details:



Home Page Wireframe

[Source: Designed at Wirify.com]


Product Page Wireframe

[Source: Designed at Wirify.com]

T		 -

Cart Page

[Source: Designed at Wirify.com]

Overview

The work can be fully definable in projects if you have the mandatory requirements when starting the project. It can be pretty uncertain, such as implementing a new design never performed before resolving a problem or something previously done. As agile methods predict short development cycles, they can pay more attention and adapt to change as long as evaluation and feedback are constant. (PMI, 2017a).

Project Management Standards and Methodologies

According to ISO (1996), a standard is considered as "a document established by consensus and approved by a recognized body that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context" (Ahlemann et al., 2009, p.293).

Project Management standards, standards or norms are increasingly crucial for organizations. Their objective is to be able to aid in attending to the different processes and methods that exist. There is a wide variety of standards available to manage projects. Due to this wide variety, some organizations feel difficulty choosing and applying the standard with which they identify the most.

To choose which standard is most appropriate for their organization, they must elect a standard that everyone involved agrees on, that is, hybrid in the organization and the projects being dissolved, and that its implementation is successful.

A methodology consists of methods, processes, techniques, and tools, which are often considered guides, indicating the steps and describing each task in detail. (Mafalda Sofia Antunes Ferreira, 2013)

The investigator chose to describe which standard was most recognized and which best identified the project in question. In this case, Prince2 (OGC, 2009).

Prince2 (Projects in a Controlled Environment) consists of a methodology oriented towards the organization's control projects and their management, having been developed in 1989 by the Central Computer and Telecommunications Agency, CCTA. The methodology is based on PROMPT, a Project Management method developed by Simpact Systems in 1975.

It was published in 1996 and became public domain, and the trademark was registered by the UK OGC (Prince2, 2013).

Prince 2 is widely used by the British government and is widely recognized by the English private sector; since the new version allows it to be adapted to any organizational environment, this methodology adapts to any project dimension in any sector. (Mafalda Sofia Antunes Ferreira, 2013).

The entire structure of Prince 2 and manages to bring together processes, principles, themes and the entire environment that involves the project itself.



Prince2 Structure (OGC, 2009)

Source [Crowrider.com]

Processes

Processes describe the entire development of the project lifecycle, from beginning to end. Each process is responsible for showing checklists of activities, product recommendations and related responsibilities. These processes are divided into seven different points (OGC, 2009):

Starting Up a Project: This is the first process that guarantees the prerequisites for the initiation of the project, from a document called Project Mandate, which defines the reasons for the project.

Directing a Project: This process consists of directing the project, by the board, also called Project Board, from the previous process to its conclusion.

We are initiating a Project: Consists of getting a better understanding by the management and the project manager on aspects such as the project's scope, restrictions, main risks, and quality.

Managing a Stage Boundary: Prince2 recommends splitting the project into stages. At the end of each stage, this process is carried out to ensure that all planned products have been executed, provide all the necessary information to assess the project's feasibility, list lessons learned, prepare and approve the next stage.

Controlling a Stage: This process describes the monitoring and control activities for each project stage, evaluating risks, change requests and necessary corrective actions.

Managing Product Delivery: This process aims to ensure that all products are delivered as planned.

Closing a Project: This process aims to execute and control the closing of the project. This process only happens when all the proposed products have been executed and delivered or when the project at some point became unfeasible.

Themes

Themes describe aspects that must be continuously addressed from the beginning to the end of the project. The Prince2 themes are also divided into seven (OGC, 2009):

Business Case: This is the strategic plan that does justice to the project's existence and where its viability can be found. Its objective is to develop the idea in a question format, to obtain a viable investment with added value without losing focus on the organization's ideals during the process. If the Business Case is not satisfactory, it should not be started.

Organization: Prince2 defines a structure of the project, in which it defines the responsibilities, roles and relationships of the stakeholders.

Quality: Prince2 includes the entire approach to quality control of management and technical aspects to provide the client's quality.

Plans: Plans consist of making available a set of plans that can be adapted to the project's characteristics. The plan in question must contain as much detail as possible to clarify the results.

Risk: This defines any moment at which risks must be reviewed, controlled, and evaluated.

Changes: Consists of the technique that allows the control of changes in a project and manages to assess the impact of each one in comparison with the initial plan.

Principles

The principles consist of techniques and practices that guide and determine whether the project is managed through Prince 2. The principles are divided into seven (OGC, 2009):

- Continued justification of the Business Case.
- Learn from experience.
- Defined responsibilities and roles.
- Manage in stages.
- Manage by exception.
- Focus on products.
- Adapt to suit the project environment.

Some techniques are covered by Prince2 (Angelo, 2008):

- Product-based planning Prince2 focuses mainly on product planning and not production activities.
- Change Control Prince2 defines all the steps to carry out the changes requested as part of the project in a controlled manner.
- Quality Review Prince2 allows you to review quality to ensure that all products delivered are within compliance limits.

Prince 2 defines that in case there is no applicability of any of these principles, it is assumed that the project in question is not using the Prince2 methodology; that is, for the project to be using Prince 2, these seven principles must be present in total.

Environment

The environment in which Prince2 finds itself allows it to be adapted to different types of projects, regardless of their size, organizational context, and sector of the organization. Like PMBOK, Prince2 also has certifications. The primary certificates are:

- Prince2 Foundation.
- Prince2 Practitioner.

There are other types of organizational methods that are recognized and widely used in technological projects; however, in this case, that is not entirely based on the project on the table, such as PMBOK (PMI, 2008a), APMBOK (APMBOK, 2006), P2M (PMAJ, 2005) and the ICB (IPMA, 2006).

Prince2 Usability

PRINCE2 is an acronym for "**P**roject **IN** Controlled Environment" (Pawar & Mahajan, 2017). The principle is used to control initiation and progression in addition to ending the project.



Figure 24 Benefits of PRINCE2 use for project Management

[Source: https://doi.org/10.23956/ijarcsse/v7i3/0134]

Using PRINCE2 methodology, three scopes define a project and its eventual management. The first one is the cost constraint, while the second one is the time constraint. Finally, the last scope of project management using the PRINCE2 model is the quality constraint (Pawar & Mahajan, 2017). For any individual managing a project, they should understand how the three aspects of the project and the constraints adjust each other to deliver the project within the selected time and scope (Pawar & Mahajan, 2017).



Figure 25 Project Management Triangle

[Source: https://doi.org/10.23956/ijarcsse/v7i3/0134]

PRINCE2 defines the role and responsibilities of the project's team members and focuses on the product which the project is essentially supposed to deliver. The method allows the project to be broken down into stages with a well-defined and established beginning, middle and conclusion. The method focuses on the end product. Therefore, it means that it has a strong focus on the delivery of the final product.

PRINCE2 Principles



Figure 26 PRINCE2 Principles

[Source: https://doi.org/10.23956/ijarcsse/v7i3/0134]

These principles apply to all projects and are used to determine the usability of PRINCE2 in any or all projects.

1. Continued business justification

In this case, justification is defined as the reason why an individual starts a project. It remains a valid and essential aspect throughout the life cycle of the project. In this case, this project is justified as offering fashion and artistic features. The online platform aims to create commitment and promotion of Portuguese culture and fashion, aiming as the main objective of encourage the creation of new Portuguese brands and giving visibility and growth to designers, stylists, and artists. It is the reason for starting the online platform and remains a relevant idea throughout the various stages of the project. It is usually updated at the end of each stage of the project and becomes more refined as time goes by (Pawar & Mahajan, 2017).

2. Learn from experience

The individuals involved in the project take part and learn from past experiences. It requires an evaluation and study of any previous similar projects to look at mistakes and strengthen in addition to what the other individuals did not tackle (Pawar & Mahajan, 2017). In this case, the project coordinator analyses various other vital projects such as Amazon, which is an online trading platform whose prominent name is one of the largest stores in the world at the moment. In addition to selling various products making the connection between different suppliers, Amazon allows users to leave their opinion regarding each purchase, thus creating an object of comparison between products that will facilitate the user's choice. Another one is OLX, a marketplace that offers the usability of users being able to sell their products, from used to new. Aggregating various types of sectors, from clothing to technology. The diversification of goods and the ease of being tradable is one of the advantages of the platform.

Moreover, another platform studied is Farfetch, the leading luxury fashion online trading company that encompasses several haute-couture brands. The company was created by a Portuguese businessman but is present in several international markets and has the presence of more than 1200 brands, which are of national and international level, where high fashion brands stand out. These previous projects are studied, and the various lessons learnt from them are established and applied to the current project (Pawar & Mahajan, 2017).

3. Define roles and responsibilities

Every individual involved in the project is assigned a role or responsibility. In the case of this project, every individual has their roles and duties, which they have to fulfil in order for the project to succeed. For instance, there are those in charge of developing the code for which the program will run. Then there are the artists and designers and all the other individuals involved who develop the database and the product that will be displayed in the application or program. Each person is a shareholder and has a critical role in the whole development process. PRINCE2 model allows for clearly defined roles and responsibilities for every individual involved in charring out the project (Pawar & Mahajan, 2017). Lack of communication between the various members involved is one of the reasons why many projects eventually fall and fail (Pawar & Mahajan, 2017).

4. Manage by stages

The project is broken down into various essential stages, which are then managed and coordinated by those involved in conducting the project. Every project must have an initiation stage where all the ideas start (Pawar & Mahajan, 2017). Throughout the various stages of the projects, development goals and matters that matter to the entire project are tested and changed to better suit the needs of the project so that, in the end, it may succeed. The division of the project into the various stages also allows for better coordination and eventual management of the project till it is established and functional. Putting up the project as one activity may be too significant as it does not consider all the functional aspects. Those in charge of managing the project can find this method too overwhelming, especially in supervision (Pawar & Mahajan, 2017). Braking up the project into various parts ensures adequate management levels for the entire progress of the project.

Agile

Agile point of view

Agile approaches take a short-term view rather than a broader look at the project to see if the benefits pay off later since they focus on delivering products incrementally and efficiently.

These products can give the customer a sense that we are in a constant cycle of changes in terms of requirements, development, testing, and feedback.

This methodology was chosen since the project in question meets the need for a more focused orientation in the organisational part. It is known which point to focus on and the destination to reach from the time of planning.

Use Prince2 and Agile

In order to get the best of both methods, put Prince 2 on one side and focus on understanding what products are needed by the business, Agile has the function of focusing on completing the products more incrementally, but not The case of software would be something more functional, as new aspects are developed as the work progresses.

Using Agile approaches in Prince2 projects can bring out the best of Prince2 direction and Agile responsiveness.

Considering that the researcher has experience with the Prince2 methodology, used in a work whose objective was to obtain professional experience in Circle IT (a company that follows all the standards regarding the methodology), this was eventually chosen.

The big difference and major reason for implementing Prince2 as opposed to an Agile method were that the project has a predefined plan, as opposed to Agile, which uses shortterm incremental achievements rather than a comprehensive plan.

The objective has always been to focus on the project's original goals, with the investigator being its client. Unlike Agile, the changes in the project environment and requirements did not change.

Since the delivery was made in full and not by by-products, the development process was more predictable.

Application of the chosen approach

Prince2 Influences

The entire process was pre-planned and had some direct influence from Prince2, not following the entire organisational process but based on the essence of the methodology.

Since there was a business justification from the beginning, there was a learning process at each stage. The responsibility was well defined. The process was planned in phases, and there was never a deviation from the focus on quality in the final product.

Considering the professional experience I had with the Prince2 Process, I applied certain points to the project in question.

Prince2 is a flexible methodology that ends up keeping us in line with the focus we have. In this case, the focus was the construction of a virtual platform linked to the world of fashion, design, and art, in which the alignment was always kept in full.

Regarding the principles of Prince2, there was not exactly a Business Justification, bearing in mind that this project was built from the ground up and aimed at creating a concept that objectively meets the needs of the population in Portugal because of the impact of COVID-19.

Phases were defined throughout the creation process, namely the creation of the concept, analysis of similar platforms but with different concepts, choice of technology to apply, application of the design in the interface, choice of brands to be inserted in the platform, and consequently the coverage of the requirements. Never deviating from the concept of the final product, and always applying a bespoke design according to the environment that was intended to apply.

Regarding the scope of the themes, as it is a project made from scratch and initially without a previously established business part, only the topics of organisation and quality were taken into account, taking into account that there was no initial business case and factors such as risk, change and progress were constant.

As far as Prince2's processes are concerned, there is not exactly the project board; more concise topics were considered and not as distributed as expected in the 7 points expected by Prince2. In this case, the Starting Up a Project (SU), Controlling a Stage (CS), and Closing a Project (CP) part.

The technology used to build the platform

Wix technology was used to develop the platform, which provides templates and works with HTML5, including apps, graphics, image galleries, fonts, and animations. The Wix platform is used by millions of users worldwide. It allows the creation of personalised web pages using pre-designed examples (templates) or pages designed from scratch by the user. Its spectrum of possible uses is vast, as it allows the creation of all types of web pages, from personal pages to online stores. Its versatility and highly intuitive nature make it a simple platform to use, a factor that allowed it to receive the "Best Website Builder Software Award" from the Finances Online website ("Wix REVIEW," 2018).

In addition to its versatility in content presentation and disposition, this technology also allows the application of a certain type of function development, using the JavaScript language in Dev Mode by Velo. Which turns out to be something that lives up to what we were looking for, considering the different development approaches taught throughout the year.

The choice of this platform was because the researcher is already familiar with its operation (due to past experiences in developing website pages for micro-companies) and is

therefore aware of its benefits and the numerous applications it could have in the process of developing the product in question is together due to its intuitive and simple character.

The development of the page that matched the indicated design profile was done, which included:

- Clean and organised profile;
- Monotonic/duotone colour character;
- Minimalist design;
- Basic profile font, so as not to be identical to any of the brands in question;
- Quickly accessible product page with a regular layout where all the necessary information for the consumer appears.

Furthermore, where the following UX Design practices were created and implemented (https://www.bis2bis.com.br/blog/ux-design/):

- Understand what the public wants;
- Adapt to the hierarchical structure of useful information;
- Be user-friendly;
- Provide information in a clear, complete and up to date;
- Keep the pages visually harmonious, with the look taken care of each other and with the e-commerce visual identity;
- The fact that it is monotonic and minimalist meets accessibility in adapting it for the visually impaired;
- An attractive and intuitive layout;
- Put all the quality possible in the product photography;
- Facilitate contact to streamline communication with the company;

UX Design for E-Commerce

UX design is used in e-commerce to create the ideal user experience for the various clients that access these sites (Anblicks, 2015). Ecommerce website designers use the UX design interface to see what the designers want them to see. It, therefore, means that the homepage and various other areas that promoted the natural navigation process should not be disturbed. In this case, it means that the buyer passing through the website cannot see the hindering factors and has the liberty to ignore such disadvantages if they do not bring any interests in them. In this case, it means that headings and scroll bars in addition to containers have to be used in a balanced manner.

Consumer satisfaction holds the key to the success of any product that the producer might offer in the market. A suitable UX design can assist in the efficient satisfaction of the consumers of the ecommerce platform by helping it retain the existing consumers at a greater level. Moreover, a good UX designed system enables owners to establish a proper and adequate loyal consumer base in their eCommerce retail stores (Anblicks, 2015). In addition, because a producer can maintain a loyal consumer base using the UX design, it saves them the cost of extensively advertising their products.

UX design is used purposefully for the creation of an ideal user experience (Anblicks, 2015). When logging into the online platform, those interested in butting the product cannot see the software's weaknesses but can interact with the software adequately. UX application in the software design process allows all aspects to be balanced out to ensure an ideal and beneficial user experience in the whole process (Anblicks, 2015). Through the use of UX Design, things such as headings, containers, or scroll bars are used in a balanced manner (Anblicks, 2015). It incorporates various aspects such as user need, business objectives, content, the look and feel of the application, and a host of other factors to bring in the ideal user experience.



Figure 27 Application of UX Design on E-commerce

[Source: https://anblicks-inc.medium.com/importance-of-ux-design-in-ecommerce-

a07a712b3c0f]

Products

Functional Requirements

Considering the previously defined requirements, in order to have a concise and functional product, the following were explored:

Size matcher

In this functionality, several ways were explored to achieve the best solution, from the code implementation part to the part of placing a frame with the measures corresponding to the different countries that the platform will be able to reach, the best solution taking into account the limitations of the technology that is being used as the implementation of a framework, based on universal measures, in which the user can identify the best possible conversion for his country, in case the measure presented is not the corresponding one,

because there are three possible conversions, within the parameters we are used to using, such as UK conversion, EU conversion, and US conversion.

The design of the frame in question turned out to have a simple character and maximum functionality for the user within the minimalist concept.

Implementing the framework was done by the product definitions, creating a structure of 7 columns by four lines in which the sizes covering the brands in question were applied. In this way, a selection of products was made in which the same type was applied of application, more specifically articles related to clothing and accessories.

Within the product page, the user will be able to access this table, as shown in the figure easily:

Size	e Cl	nart					_	
CC UI TF Y	C N R	XX S	XS	S	Μ	L	XL	
El	J	32	34	36	38	40	42	
U	5	0-2	4	6	8	10	12	
Uł	<	6	8	10	12	14	16	

Font: Image from the platform (product page)

Feedback provider for each product

Regarding the feedback provider functionality, they consider that it is a requirement that can be quite determinant of the platform because it can give the user trust in the notions they may have about the products. When someone buys a product, they can write a review about it and before the user buys the product, they can also have different opinions about the product they are looking for; this turns out to be a determining factor, especially when the user is indecisive between two similar products. The technology that was used allows you to get some applications created by other developers, in which you can find an extension for a feedback provider. However, for this to happen, it is necessary to have the premium version of the technology. Since the researcher only developed the platform for academic purposes, he did not want to switch to the premium version. Having had this limitation, the researcher finds the code of the Feedback Provider in the JavaScript language and adapts it to the platform, having taught this language during the academic period of the course.

The code for the functionality is shown below (WixSupport,2021):

1. Preparing the product Page:

```
Javascript
     import wixData from 'wix-data';
1
     import wixWindow from 'wix-window';
2
     import wixLocation from 'wix-location';
3
4
5
     let product;
6
7
     $w.onReady(async function () {
8
         product = await $w('#productPage1').getProduct();
9
         initReviews();
10
11
      wixLocation.onChange(async (location) => {
         product = await $w('#productPage1').getProduct();
12
         initReviews();
13
14
       })
15
     })
```

Image from: (https://support.wix.com/en/article/velo-tutorial-adding-ratings-and-reviews-to-

a-wix-stores-site)

Understanding the Code

Lines 1-3: Import the modules we need to work with Wix Data, Wix Window, and Wix Location libraries.

Line 5: Define the global product variable.

Line 7: When the page loads, do the following:

Line 8: Using the get product function on the current product page, set the product variable to the currently displayed product.

Line 9: Run the interviews function to load the current product's ratings and reviews.

Line 11: Some functionalities change the product without refreshing the page (for example, next/previous buttons and the related products gallery). This change triggers Wix Location's on Change () API, then:

Line 12: Update the product variable for the newly displayed product.

Line 13: Run the interviews function to load the current product's ratings and reviews.

2. Creating the interviews function on the Product Page

```
1 async function initReviews() {
2 await $w('#Reviews').setFilter(wixData.filter().eq('productId', product._id));
3 showReviews();
4 loadStatistics();
5 }
```

Image from: (https://support.wix.com/en/article/velo-tutorial-adding-ratings-and-reviews-to-

```
a-wix-stores-site)
```

Line 2: Chain an eq function to set filter to filter out all items in the Reviews dataset where

the product ID does not match the ID of the currently displayed product.

Line 3: Run the show reviews function to display all filtered reviews.

Line 4: Run the load Statistics function to load and display statistics for the current product.

3. Creating the load Statistics function on the Product Page

```
1
     async function loadStatistics() {
                                                                                Javascript
         const stats = await wixData.get('review-stats', product._id);
2
3
         if (stats) {
4
             let avgRating = (Math.round(stats.rating * 10 / stats.count) / 10);
             let percentRecommended = Math.round(stats.recommended / stats.count * 100);
5
6
             let ratings = $w('#generalRatings');
7
             ratings.rating = avgRating;
8
             ratings.numRatings = stats.count;
9
             $w('#recoPercent').text = `${percentRecommended} % would recommend`;
10
             $w('#generalRatings').show();
11
         } else {
12
             $w('#recoPercent').text = 'There are no reviews yet';
13
         }
14
         $w('#recoPercent').show();
15
    }
```

Image from: (https://support.wix.com/en/article/velo-tutorial-adding-ratings-and-reviews-to-

<u>a-wix-stores-site</u>)

Understanding the Code

Line 2: Use the current product's ID to get its statistics from the review stats collection and assign them to the stats variable.

Line 3: Check whether there are any statistics related to the current product, indicating that one or more users have rated the product. If there are stats, do the following:

Line 4: Calculate the average rating of the product by dividing the sum of all ratings the product received from all reviewers by the number of times the product was rated, multiplying by ten, and rounding the number.

Line 5: Calculate the percentage of people who recommended the product by dividing the number of recommendations the product received by the number of times the product was rated, multiplying by 100, and rounding the number.

Line 6: Get the general rating element and assign it to the rating variable.

Line 7: Set the ratings element's rating value to the average rating calculated above.

Line 8: Set the ratings element's total number of ratings from the count field in the reviewstats collection for the current product.

Line 9: Set the text that displays the recommended per cent.

Line 10: Show the rating element.

Lines 11-14: If there are no stats (indicating that no reviewers have rated the product yet), display text stating no reviews.

4. Creating the reviews Repeater_item Ready function on the Product Page

```
export function reviewsRepeater_itemReady($w, itemData, index) {
                                                                                Javascript
1
2
         if (itemData.recommends) {
3
             $w('#recommendation').text = 'I recommend this product.';
4
        } else {
5
             $w('#recommendation').text = "I don't recommend this product.";
6
        }
7
        if (itemData.photo) {
            $w('#reviewImage').src = itemData.photo;
8
9
             $w('#reviewImage').expand();
10
        }
        $w('#oneRating').rating = itemData.rating;
11
12
        let date = itemData._createdDate;
13
        $w('#submissionTime').text = date.toLocaleString();
14
   }
```

Image from: (https://support.wix.com/en/article/velo-tutorial-adding-ratings-and-reviews-to-

a-wix-stores-site)

Understanding the Code

Line 2: Check if the reviewer recommended the product using the Boolean recommends field in the reviews collection of the current item.

Lines 3-4: Display text stating whether the reviewer recommended or did not recommend the product.

Lines 7-9: If the reviewer uploaded a photo, set the image URL from the item photo and expand the image.

Line 11: Set the rating value for the review in the one Rating display as the rating of the current item.

Line 12: Get the date the review was submitted and assign it to the date variable.

Line 13: Use the to Local String function to format the date text according to date format settings on the visitor's computer.

5. Creating the show reviews function on the Product Page

```
1 export function showReviews() {
2     if ($w('#Reviews').getTotalCount() > 0) {
3        $w('#reviewsStrip').expand();
4     } else {
5         $w('#reviewsStrip').collapse();
6     }
7  }
```

Image from: (https://support.wix.com/en/article/velo-tutorial-adding-ratings-and-reviews-toa-wix-stores-site)

Understanding the Code

Line 2: Use the get Total Count Function to check whether there are any reviews in

the Reviews dataset for the current product.

Lines 3-5: If there are reviews, expand the review strip. If there are no reviews, collapse the

review strip.

6. Creating the add Review_click function on the Product Page

```
Javascript
     export async function addReview_click(event, $w) {
1
2
         const dataForLightbox = {
3
             productId: product._id
4
         };
5
         let result = await wixWindow.openLightbox('Review Box', dataForLightbox);
6
        $w('#Reviews').refresh();
7
        loadStatistics();
         $w('#thankYouMessage').show();
8
9
    }
```

Image from: (https://support.wix.com/en/article/velo-tutorial-adding-ratings-and-reviews-to-

a-wix-stores-site)

Javascript

Understanding the Code

Lines 2-3: Create a data For Light box object containing the current product's ID to be sent to the Review Box lightbox.

Line 5: Open the Review Box lightbox, send it the product ID object created above, and wait for it to close.

Line 6: After the review lightbox is closed, refresh the Reviews dataset, so the new review appears on the page.

Line 7: Reload the statistics of the current product to reflect the new rating.

Line 8: Show a thank you message.

7. Creating the results Pages_click function on the Product Page

```
1 export function resultsPages_click(event, $w) {
2 $w('#Reviews').loadMore();
3 }
Javascript
```

Image from: (https://support.wix.com/en/article/velo-tutorial-adding-ratings-and-reviews-to-

a-wix-stores-site)

Understanding the Code

Lines 1-2: When the event handler is triggered, the Reviews dataset loads the next page

(chunk) of reviews using the load More function.

8. Preparing the Review Box Lightbox

```
1 import wixWindow from 'wix-window';
2 import wixData from 'wix-data';
3 4 let productId;
Javascript
```

Image from: (https://support.wix.com/en/article/velo-tutorial-adding-ratings-and-reviews-to-

a-wix-stores-site)

Understanding the Code

Lines 1-2: Import the modules we need to work with Wix Data and Wix Window libraries.

Line 4: Declare a global variable to store the product ID.

Then, added the following code to the on Ready function:

```
Javascript
1
    $w.onReady(function () {
2
3
         productId = wixWindow.lightbox.getContext().productId;
4
5
         $w('#SubmitReviews').onBeforeSave(() => {
             if ($w('#radioRating').value === '') {
6
7
                 $w('#rateError').show();
8
                 return Promise.reject();
9
             }
10
             $w('#SubmitReviews').setFieldValues({
11
12
                 productId,
                 rating: $w('#radioRating').value,
13
                 recommends: $w('#radioGroup1').value
14
15
             });
16
         });
17
    });
```

Image from: (https://support.wix.com/en/article/velo-tutorial-adding-ratings-and-reviews-toa-wix-stores-site)

Understanding the Code

Line 3: When the page loads, use the get Context function to get the object passed to the

lightbox when it is opened. In this case, the object contains the current product ID.

Line 5: Set the action before the new review is saved to the reviews collection via the Submit Reviews dataset.

Line 6: Check if the reviewer rated the product.

Lines 7-8: If the reviewer did not rate the product, show the rate Error message and do not save the new review.

Line 11: If the reviewer rated the product, use the set Field Values function to update

the Submit Reviews dataset.

Lines 12-14: Update the dataset item with the input element values. The item will then be saved to the reviews collection.

Moreover, finally, the research added the following code to the on Ready function:

```
1 $w('#SubmitReviews').onAfterSave(async () => {
2 await updateStatistics($w('#radioGroup1').value);
3 wixWindow.lightbox.close();
4 });
```

Image from: (https://support.wix.com/en/article/velo-tutorial-adding-ratings-and-reviews-to-

```
a-wix-stores-site)
```

Understanding the Code

Line 1: Set the action after the new review is saved to the reviews collection via the Submit

Reviews dataset.

Line 2: Update the product's statistics using the update Statistics function. The reviewer's

recommendation (or not), as stored in the radioGroup1 radio buttons, is sent as a parameter to

the function.

Line 3: After the statistics are updated, close the lightbox to return the reviewer to the

Product page.

9. Creating the update Statistics function in the Review Box Lightbox

```
1
    async function updateStatistics(isRecommended) {
                                                                                 Javascript
         let stats = await wixData.get('review-stats', productId);
2
3
         if (stats) {
4
5
             stats.rating += parseInt($w('#radioRating').value, 10);
6
             stats.count += 1;
             stats.recommended += (isRecommended === "true") ? 1 : 0;
7
             return wixData.update('review-stats', stats)
8
9
        }
10
11
         stats = {
             _id: productId,
12
             rating: parseInt($w('#radioRating').value, 10),
13
14
             count: 1,
             recommended: (isRecommended === "true") ? 1 : 0
15
16
        }
17
        return wixData.insert('review-stats', stats)
18
    }
```

Image from: (https://support.wix.com/en/article/velo-tutorial-adding-ratings-and-reviews-toa-wix-stores-site)

Understanding the Code

Line 2: Get the review statistics for the current product from the review-stats collection.

Line 4: If statistics data already exist for this product, do the following:

Line 5: Extract the string representing the value of the radio button rating selected by the

user. Use the parseInt function to convert the string to an integer. Add the integer to the total rating points.

Line 6: Increase the rating count by one.

Line 7: Check if the reviewer recommended the product. If the Recommended input

parameter from the reviews collection is true, increase the recommendation count by one.

Line 8: Update the product's statistics in the review-stats collection.

Line 11: If no previous statistics data exist for this product, create a new statistics item:

Line 12: Set the statistics item's ID to the current product's ID.

Line 13: Extract the string representing the value of the radio button rating selected by the

user. Use the parseInt function to convert the string to an integer. Set the statistics item's

rating to the integer.

Line 14: Set the statistics item's ratings count to 1 because this is the first rating.

Line 15: Check if the reviewer recommended the product. If they did, set the

recommendation count to 1.

Line 17: Insert the new product's statistics into the review-stats collection.

10. Create the radio Rating_change function in the Review Box Lightbox

```
1 export function radioRating_change(event, $w) {
2 $w('#rateError').hide();
3 }
```

Javascript

Image from: (https://support.wix.com/en/article/velo-tutorial-adding-ratings-and-reviews-toa-wix-stores-site)

Understanding the Code

Lines 1-2: When the visitor selects a rate, hide the error message stating, "Please rate this product."

Considering the design of the functionality, what was already existing from the technology library was adopted, which was prepared to match the design predefined with a simple structure that ended up having only two steps to follow. Placed at the bottom of the product page, the size specifications and product description immediately follow. The choice was made considering the user's usability, ease to handle, and equally, ease to consult. Step 1:

The user clicks on the box that says "WRITE A REVIEW."

	. 0
WRITE A REVIEW	
	WRITE A REVIEW

Figure 28 Font: Image from the platform (product page)

Step 2:

A lightbox will immediately appear with the following points: Overall Rating, User data,

Comment writing area, and whether the product is recommended. After filling in the data,

just click on Post Review.

Overall Rating:	
0102030405	
Nickname:	Review Title:
Location:	Your Review:
Email:	
Upload Photo:	Do you recommend this product?
CHOOSE FILE +	Yes! No Post Revi

Figure 29 Font: Image from the platform (product page)

The post is automatically created and is available for other users to review.

A. Jones	****	11/10/2021, 14:35:51
Location: Bristol	Best relation quality/price	
	I bought this product once was available on the 15 washes it still looks like new.	ne platform and I use twice a week, after
	I recommend this product.	

Figure 30 Image from the platform (product page)

Moreover, above the comment, it will appear the average of rates.

Spread the Love	
🚖 🚖 🚖 🚖 5.0 1 Product ratings	
100 % would recommend	WRITE A REVIEW

Figure 31 Image from the platform (product page)

Unavailable Pieces

It is very useful for the user to know what is in stock. However, the negative answer is something that does not meet his expectations.

As the investigator's technology is automated for the number of existing products, it is immediately unavailable as soon as the product reaches number 0 in the inventory.

other causes can lead to lack of stock, such as configuration errors on the website and lack of Joint Business Plan (JBP). (<u>https://dcx.lett.digital/availability-stock/</u>)

Although this is difficult to present to the user because it can leave space for him to go and see what products exist on the competition side, leaving the alternative that has the function of notifying the user as soon as the product is available turns out to be. It is an excellent way to retain customer loyalty. By receiving the email with the notification, you can also receive more content in the same notification, added to the product in question.



Figure 32 Image from the platform (All products page)

When the user clicks on the product, it will open a product page with all the information.

	MUSTRA - daily shirt 6	
—	Size	
	Select ~	
	Color Cuantity Notify When Available	

Figure 33 Image from the platform (product page)

After that, the user only needs to select the Size and the colour and a lightbox will appear for the user to enter the email address.



Figure 34 Image from the platform (product page)

After this process, the user will receive an e-mail with the confirmation that will be notified.

Considering the design, this turned out to be quite user friendly, replacing the add to cart button with 'Not available'. So the user can quickly realise that this is out of stock, taking into account the colour of the button. This is also different from the 'add to cart' colour, which catches the user's attention in the visual component of primary reading. On the product page, the user can quickly find the 'Notify when available' button in place of the checkout button, making the notification request intuitive.

Fast and easy shopping cart

When the user adds a product to the cart, he can access it in the upper right corner of the screen; this way, he will access all the products present in his previous selection.

ing our						
	MUSTRA - time is priceless	- 1 +	110,00€	\times	Subtotal	110,00
	110,00 €				Shipping	FREE
Ĭ					<u>Lisboa, Portugal</u>	
Inter a pr	omo code				Total	110,00 €
Add a note	9				🔒 Chec	kout

Figure 35 Image from the platform (cart page)

The layout of the content meets the analysed layouts of the similar pages, and the product will appear on the left side, with the information referring to it, and in the right column all the necessary information for monetary values, namely the value of the product, the shipping amount and the sum of all the values below.

There is also a space to enter a promotional code, if any is provided to the user and a space to add notes.

Since the technology is used as the SSL certificate, it gives credibility to the user when he is purchasing the product.

Easy product selection; filter by model, brand and category.

Bearing in mind that for this project, fictitious brands were considered and that only two apparel brands and an artist brand were presented as an example, the possibility of applying a filter by models and brands was greatly reduced. Which the researcher found of a possibility that has been reviewed in the platforms that were previously analysed.

Therefore, a Menu was created that initially separates the families of the products that the user is looking for by Women, Men, Accessories and Art, as shown in the following figure:



Figure 36 Image from the platform (Menu)

To facilitate the user's search, two quick search methods were applied on the home page. One of which is a search bar, where the user can write the brand or model or another keyword

relating to the product in question, and this automatically filters the options that the platform has to show the user.



Figure 37 Image from the platform (Search bar)

To synthesise and recall the fundamental concept of the platform, and emphasise the reason why the platform exists. The second option added is that the user can directly access the Apparel or Art family from the main page. Later, after the user has clicked on one of them, he will redirect to a page where only the family's products appear.



Figure 38 Image from the platform (Home Page)
Placing a payment method

The payment method should be adopted when the project is already underway. Since the researcher has not acquired the premium version of the technology, no payment methodology was applied. However, the technology is directly linked to the following payment methods:

Wix currently accepts payment by credit/debit card, as well as SEPA debit payments.

- Accepted Credit Cards: VISA, Master Card, American Express, Discover, JCB, Diners and UnionPay (UnionPay is not yet available to all users)
- Accepted Debit Cards: Visa & MasterCard.

(Wix Support, https://support.wix.com/en/article/request-additional-payment-methodsaccepted-by-wix)

Non-Functional Requirements

Passing the analysis of the pre-selected requirements and functionalities applied to the platform, the implementation of the non-functional requirements was also reviewed in the product execution. As previously mentioned, these are requirements that pass by transmitting the basic needs that judge the quality of the platform, not interfere directly in the development of the system.

(https://blog.betrybe.com/tecnologia/requisitos-nao-funcionais/)

The initial objective of the platform meets a different concept from the existing concepts. However, considering what exists in common with other platforms, it included the exhibition and promotion of products, presenting a page where users can see all the products on the same, ending up also promoting the products that are the most sold on the homepage. Thus giving the customer some help if they are looking for a trending product.



Figure 39 Image from the platform (Home Page)

When we go a little deeper into the initially predefined concept for the platform, we come across a non-functional requirement previously devised by the researcher. Where each story referring to a designer, brand or artist is found. What is its connection to the concept of art and design? Portuguese is the indication for your online page. Easily accessible, being linked from the main menu, the Our Stories page is one of the main points of the page, where the user understands the real concept of the project in question.



Figure 40 Image from the platform (Our Stories Page)

On the product page, the researcher left spaces so that it was possible to place all the descriptions that make sense to allocate to each product from the general product description. Where you can put a captivating speech that can sell the product and grab the consumer, describing the product in detail and consistently, applying all the keywords that follow the concept to be addressed. Besides, you can find the product information, namely how the product should be cared for and washed and how consumers can get more out of it. The return and refund policy will also be placed on the same page, covering all the guarantees to which the item in question will be entitled. To conclude, you will find the shipping information and previously added information regarding the size chart below.

ΛΛ	Product Info						+
I'm a product description. This is a great place to "sell" your product and grab buyers' attention. Describe your product clearly and concisely. Use unique keywords. Write your own description instead of using manufacturers' conv.	Return and Refund Policy						+
using manufacturers copy.	Shipping Info					+	
	Size Chart -						-
	CO UN TR Y	XX S	XS	S	M	L	XL
	EU	32	34	36	38	40	42
	US	0-2	4	6	8	10	12
	UK	6	8	10	12	14	16

Figure 41 Image from the platform (Our Stories Page)

The arrangement of this information comes following the analysis of the product pages of similar platforms, where information of similar character and a similar structure were found; the arrangement of these topics is because they have been analysed in other product pages such as a constant, which turns out to be an almost intuitive query in the user's eyes.

One of the criteria that the researcher placed in the initial design concept for the platform was the fact of creating a concept where quality is a must-have, and one of the best ways to convey this concept and to bet on the quality of the content that is published, namely photographs and videos. The researcher accessed image banks of the technology used, where he managed to acquire images that do justice to the quality that is sought, where they also manage to show the detail that the user seeks.





Within the scope of the privacy policy, terms and conditions, and FAQ, all measures were implemented to meet what an e-commerce business is supposed to be equipped with before acting, namely information regarding returns, privacy, and safety, cards of credit, and usability of the user with the respective rules, with the investigator having made a general overview on all platforms with the same type of online commerce.



Figure 43 Image from the platform (Store Policy)

The approach to this concept was accompanied by the minimalist trend that exists in Portugal.

It is easy to identify that one can see an invasion of modernity in the graphic arrangement in newspapers and magazines. On magazine covers and advertisements, abstract solutions often appear as a manifesto of the pagination used. Many artists quickly achieved clarity and simplicity through practice. This freedom of clarity meant that covers and advertisements promoted the best women's fashion. In contrast, magazines dedicated to women, such as EVA (1925-1928), did not follow the visual culture, remaining backwards and bad taste.

The platform's design seeks the most modern concepts present in Portugal and tries to capture the attention of those willing to support art and design of national origin.

The investigator used neutral tones such as white and grey not to attract any attention to any identity in question, thus being impartial to any brand exposed to the platform.

I am betting on a straightforward design and directing its usability.

Business Strategy

The initial concept of the platform's business strategy, as indicated above, is a B2B (business to business) concept in which the platform in question provides services to other companies.

Initially, the platform will try to add as many brands as possible, name brands that do justice to the concept that the platform seeks, with some understanding of the Portuguese market. Since some factors are required to enter, namely having quality material to post, having product specifications, and having sufficient stock per product of at least 20 pieces, this value is since the researcher met several factories at the Portuguese national level, and where he managed to conclude that the minimum number of pieces to be manufactured was 30 units, in a swimwear factory, located in Figueira da Foz. Other factories consulted had all the values above 30 units.

Brands must use social networks and an online store in which customers can be redirected.

The platform will work with a freemium system, where other brands will be able to enjoy their presence on the platform after fulfilling the predefined requirements and where they will have the possibility of placing a maximum of 20 products in view. If they want to place more, they will have to be allocated attendance costs.

The platform will also earn money with the transactions carried out, with 7% of the total value of the transaction.

Subsequently, the platform will provide the service of creating brands if there are contacts where the ideas exist. However, the contents do not exist, thus allowing them to sell the remaining necessary services, such as, for example, product photography, contact with factories, website management and social networking, thus promoting that brands meeting the requirements initially requested by the platform and managing to gain a presence on it. In this way, the concept of promoting brands and artists will be fulfilled, stimulating

entrepreneurship and increasing the concept of art and design in Portugal, allowing those who want to transfer their ideas and points of view to art and design to be recognised.

Evaluation

The product initially conceived was always something reasonably achievable in terms of technical issues. Given the researcher's experience in creating websites and developing businesses related to micro-enterprises, the platform and concept were very tangible goals. Given the products developed, which were followed by the line previously created in the initial requirements, there were eventually some route changes.

In Size Matcher, the initially idealised objective was to create a matcher where people could put their measurements, namely height, body type and weight, and inside a lightbox choose with a cursor on a scale from 0 to 100. Where 0 means tight and 100 means wide, answering the question of how they would feel good when using the garments for both the upper part of the body and their lower part. The system would immediately match the user's

needs and the measures introduced in the system that corresponds to the garments. The answer would come out between 0% and 100% that corresponded to a specific garment measurement. For example, "meeting your needs, the size M of this piece makes 89% of what you are looking for". This way would innovate the choice of sizes online, passing on reliability to the user.

Considering the limitations of the technology used, it was not possible to meet this type of innovation, and the researcher ended up opting for something more direct and used as usual in online e-commerce stores.

What was not difficult to implement ends up meeting what the user is already used to seeing. In the case of the Feedback provider, its implementation was 100% successful, considering that what was initially planned was achieved and applied. As mentioned above, this function allows the user to leave his opinion about the product in question. Above all, he can analyse the previous reviews to understand the product he is purchasing. Considering the functions that were applied on the platform, this turns out to be one of the ones that give greater reliability to the user, as the consumer's opinion is crucial for the new user to take the first step towards a purchase. At the same time, it also conveys a good image of the platform, as users can have a better comparison between similar products but from different brands.

Regarding Unavailable Pieces, it turned out to be a very straightforward function. However, it makes a difference from the consumer's point of view. As mentioned above, the fact that it presents a way to notify the user as soon as the piece is present in stock ends up being one of the best ways to captivate customer loyalty, as it ends up opening up the option of the user having to visit another competitor store. The reasons for the lack of stock are beyond the platforms and directly linked to the supplier store. The product ended up being 70% of what was foreseen in the initial requirements in the part where you manage to apply a filter for the clothing model, brand, and category. It is mainly because there are not enough brands on the platform to date. The styles are also very versatile and are not so isolated, but the margin of difference between the functions in question did not imply the ease of product selection. As previously mentioned, the menu and a search bar were created to get to the desired results quickly. It does not translate into a difference in reliability for the user as this type of function is present in similar platforms, which ends up meeting something the user is already used to.

The shopping cart meets what the consumer is already used to seeing, simple, with the necessary information that he needs to know and a very clear and trustworthy appearance. It turned out to be a very successful mission considering what was initially planned.

The product format turned out to meet what is used today, judging by the good UX rules and clean and minimalist design.

Considering the details that any e-commerce business must have, namely, Privacy Policy, FAQ and shipping and return rules. Which automatically manages to mostly put aside the general doubts that any consumer may have, also passing the contacts of the stores into question and the platform automatically reverts to a trusted word for the user.

Conclusions

An online platform, more specifically aimed at e-commerce, is something people are already used to seeing.

The initial objective was always to meet something that was missing in Portugal, to fill the gaps between technology and the art and clothing business, an objective that was somehow accomplished.

The platform was able to fulfil the requirements' objectives initially, thus offering a practical way of usability for the user.

Considering the specificities of the functions to be inserted, this was a little behind what was expected. The researcher's initial idea was to create a platform that was a useful tool for leisure activities and the functions present in it that were somehow innovative.

In the example of the Size matcher, the researcher had the idea of putting something that is a must-have for any online ecommerce business that sells clothes, an innovation that is present in e-commerce businesses in certain countries but which has not yet been seen in Portugal.

Bearing in mind that the researcher's skills were the maximum it could achieve, whether at a technological or research level.

If the time is not mandatory and limited permission, the investigator would have invested in the following points described below.

Within the implemented requirements, the Size matcher part would have worked a little more, going towards something more dynamic within the possibilities that were feasible to carry out, namely offering the user a faster way to conclude that size is the most indicated for the same.

In the case of the Feedback provider, where users can express their opinions about the products, there is nonsense in this function, because as the game does not yet have any filter for comments, any type of comment without guarantee before posting by the party from the administration can cause some unpleasant situations. It is good to know the opinion, but it is

also important to make sure that the person who communicates the feedback is trustworthy and that they are contributing so that other users have a true evaluation. To avoid this, the researcher has to set a basis for accepting comments and requirements for them to be accepted and published on the product page.

Once more brands are implemented, more articles will be present in the database, and more filters will be possible to apply, considering the brand, the model, the size, colour, the season, whether it is organic or not, the price, and among others, more filters that may exist taking into account the diversity of the products. In the case of art, the researcher also intends to put a filter that covers the different types of art present on the platform, namely paintings, pieces, pop art, and varying within styles, realism, abstract, contemporary and others.

Within the scope of non-functional requirements, it is possible to analyse that much emphasis was given to the criteria that support the concept of the platform, namely the aggregation of different brands and artists that are Portuguese.

Being able to implement the display of the products, both on the main page and the product page, was successful. However, the only part that was able to innovate was in the selection between 'APPAREL' and 'ART', where you can go directly to the centre of the two largest product families promoted on the platform. The display of products, in general, turned out to be something quite usual within the normal criteria to which the user is already used. The researcher intends to continue investigating to discover an innovation that goes towards promoting products in a different way than usual and is intuitive for the user.

When you go to the 'Our Stories' page, you can find a brief history of the brand, an artist or designer, and a redirection to your brand page. It is considered that this point was successful considering the expectations that were previously imposed. In topics related to product descriptions, promotional material (photographs, video, and others) and Usage and Privacy Policies, the researcher ended up meeting what any ecommerce platform has, trying to provide the best user experience without this having any doubts related to usability and at the same time being able to have the notion that the platform is a trustworthy place to interact.

The researcher chose the business strategy to meet the average found in the business strategies that other similar platforms are equipped with.

There was no intrinsic study in this area of business, which did not lack a business plan and mapping of tasks and actions to take place in the future. The researcher was more concerned about the product and concept development. However, he seeks to investigate this area of study so that the Business Strategy is trustworthy and that goes towards giving financial liquids when the business is in progress.

Above all, it is correct to say that the researcher managed to contribute to the study related to the rise of technology in the field linked to art and clothing in Portugal, where he started from the technological advance that was registered due to Covid-19 and made the connection to the reaction of art and fashion related markets.

The researcher intends to invest in testing the platform, bearing in mind that the only tests that were carried out were by himself. The objective will go on to be able to give other people the opportunity to experience the platform, from part of the writing of comments on the products, passing through the different pages and even being able to talk to some brands that are aware of it so that you can see it. That is the platform and a functional product.

Bearing in mind that the time for platform development and dissertation writing was limited, the researcher only managed to keep within the register that it was possible to see. In future advances in product development, the researcher intends to bet on other features that can meet the concept previously thought for the dissertation.

The researcher intends to bet on the following feature:

Provide a service where new brand creators can, through the platform, have access to masterclasses where great national artists give their feedback on their entire journey in the world of art or design, where they can convey a word of motivation above all and, in a way, be able to pass on knowledge about the business area. This topic somehow manages to stimulate the national concept as well as the platform's perspective.

Reflection

A dissertation, considering that it is an object of research, in which the researcher is not sure what he or she will find along the way, immediately reveals itself as an experience that will probably remain in the memory for some time, bearing in mind that it is an end-of-course object that for many people, is probably the end of an academic life.

The research process initially proved to be somewhat complex, but taking into account the concepts covered during the CMT 222 module - Topics, Research and Skills in Computing and IT management. It was possible to acquire some types of knowledge about organizational and research methods, namely knowing about the existence of repositories such as Google Scholar, RCAAP, among others.

Considering the intrinsic process in the research part, it turned out to be something much easier to start considering that I was already able to reach at least the articles I needed.

The idea was also well stimulated in my head, due to the experience I had with creating websites and also the fact of being inside the world of fashion and art in Portugal.

The process went on to point out the crucial topics that would lead to the development of the final product, namely what the e-commerce business is and what the business panorama in Portugal is. With some research in the repositories, it was easy to reach articles, books, and previously carried out a research where it was possible to assess their reliability quickly. When I didn't find what was wanted within the repositories, I ended up looking for news that really did justice to the opinion I had formed, or in a way that would lead me to a real idea of what currently exists.

I can say that from the experience that was carried out. I am quite comfortable when it comes to researching and measuring certain subjects, considering that I managed to form a personal method that ranges from understanding what the concept in question is to the point of arriving at the development and application of this concept in another context.

I managed to achieve what was expected in terms of research without any doubt, feeling quite confident in researching any related subject.

Regarding the entire concept learned related to the topic addressed, I can say that the research work was quite decisive for the perception of certain concepts namely those related to the design of the platform's pages.

The research of themes related to UX design and analysis of similar platforms made me gain the notion that there is a way forward, to which the user is already used, also following the ethical aspect of UX.

It is important to delineate that any e-commerce business that meets the online sale of clothing and fashion will have to approach a somewhat clean style and pass only the necessary information to the user, betting on a more minimalist aspect. It is possible to notice the difference in the level of knowledge within the concept between before and after the study and, above all, assess the limitations of the project at a business level and which aspect is best suited to it, namely in the B2B part.

Considering that during the entire process, it was a little complicated to manage time and availability, bearing in mind that I had to travel between Cardiff and Lisbon to renew my passport, and still manage to take a break from the thesis process to attend to a professional experience provided by the university.

Which in a way was something that added a lot to me, because working in different environments has the power to stimulate the imagination and be able to analyse issues from different points of view. Considering the professional experience, I managed to learn a lot about the Prince2 project management method, which turned out to be important in the platform development process.

I also learned that our brain is not always available when we want it, and that we have to learn how we function. Keeping a work routine helped me to be focused and productive.

Above all, it was a very positive experience on a personal level as I am an international student and English is not my native language. Learning all the technical concepts, and being able to translate them was a great challenge. I can recognize that it was a mission well accomplished and that I managed to overcome certain limits that I had as predefined. Since I was also able to point out certain points where I can improve in the future, namely investing in knowing certain areas within the approached concept, such as design, development with computer language, and above all e-commerce businesses, how they work, there is a vast list of concepts to know and learn within these topics.

Considering my experience working with fashion in Portugal, I already had a point of view about certain points developed, but the research work made me a little more intrinsic in the subject to learn a little more, and my taste between fashion, art and technology was highly developed, which turns out to be another strong point.

A point that turns out to be a mix of strengths and weaknesses is the fact of knowing about project management methods but thinking that there is always a little more to discover about them. The next step to take soon will be to get a PMP certification.

During the entire process, having my dissertation advisor's support was crucial to clear up certain doubts or even be able to give a word of motivation when I was a little nervous.

In summary mode, I think I managed to be successful in the following aspects:

- Research methods and being able to capture which concepts meet what I'm looking for.
- Organization of thought and ideas.
- Perception of new concepts such as Design and Minimalism.
- Manage time well among the obstacles that were placed on the journey.
- Stimulate different points of view about topics I am not familiar with.
- Get the best productivity out of me, adapting a good work routine.
- Improve English as a secondary language.

And I was less positive on the following points and am looking forward to improving them:

- Improve a technical area of knowledge, namely the part of computational languages, which will allow the development of more functions.
- Investing in certain areas related to the project, namely related to the e-commerce business, managing to execute a business plan in the long run.
- Take some certifications related to project management, PMP and PRINCE2.

References

- Anblicks. (2015, October 20). Importance of UX Design in eCommerce. Medium. https://anblicks-inc.medium.com/importance-of-ux-design-in-ecommercea07a712b3c0f
- André Teixeira. (2020, July 28). Como está a evoluir o E-Commerce em Portugal em 2020 -Digitalks. Digitalks Portugal. https://digitalks.pt/artigos/a-evolucao-do-e-commerceem-portugal/
- Angelo, & Adalcir da Silva. (2008). Revista MundoPM. Www.mundopm.com.br. http://www.mundopm.com.br/noticia.jsp?id=264
- Ataide E. (2019). Mercado português de e-commerce dispara em 2019.

FashionNetwork.com. https://pt.fashionnetwork.com/news/Mercado-portugues-de-e-commerce-dispara-em-2019,1154438.html

- Buehring, S. (2015, December 30). PRINCE2® vs Agile: A comparison. Knowledge Train; Knowledge Train. https://www.knowledgetrain.co.uk/project-management/prince2agile/prince2-agile-comparison
- Climba. (2017, December 6). What good site for e-commerce should have? Blog Climba Commerce. https://www.climba.com.br/blog/o-que-um-bom-site-para-e-commercedeve-ter/
- Codificar. (2021, February 25). Requisitos funcionais e requisitos não funcionais, o que são? Codificar. https://codificar.com.br/requisitos-funcionais-nao-funcionais/

Crowrider. (2015, July 14). PRINCE2® METHODOLOGY. CrowRider.

https://crowrider.com/prince2-certification/prince2-methodology/#page-content

- Dott. (2021). O maior shopping online de Portugal. Dott.pt. https://www.dott.pt/
- Frutuoso, L. F. (2020). Comércio eletrónico: análise do desempenho das empresas em Portugal. Repositorium.sdum.uminho.pt. http://hdl.handle.net/1822/67319
- Gomes, M. (2020, July 28). Quais são os 5 maiores marketplaces em Portugal? Jasmin Software. https://www.jasminsoftware.pt/blog/5-marketplaces-em-portugal/
- Huang, J., Briedis, H., Choi, M., & Kohli, S. (2021). How to win with digital marketplaces | McKinsey. Www.mckinsey.com. https://www.mckinsey.com/industries/retail/ourinsights/moving-past-friend-or-foe-how-to-win-with-digital-marketplaces
- Ilhe, G. (2020, May 27). UX Design no e-commerce: importância e práticas essenciais. Bis2Bis E-Commerce. https://www.bis2bis.com.br/blog/ux-design/

Kotler, P., & Armstrong, G. (2007). Princípios de marketing. Pearson Prentice Hall.

Makkonen, J. (2015, December 29). How to choose the right business model for your marketplace. Marketplace Academy. https://www.sharetribe.com/academy/how-to-choose-the-right-business-model-for-your-marketplace/

Marcandier, S. (2020, January 17). Disponibilidade de estoque: o que é e qual a sua importância. DCX. https://dcx.lett.digital/disponibilidade-estoque/

- Mercado. (2020). Comparando concorrentes Vantagens e DesvantagensErcadolivre.com.br | Ercadolivre.com.br. http://www.ercadolivre.com.br/comparando-concorrentesvantagens-e-desvantagens/
- Moura, V. (2020, October 28). Marcas estrangeiras que têm peças made in Portugal. Time out Lisboa; Time Out. https://www.timeout.pt/lisboa/pt/compras/conheca-estasmarcas-estrangeiras-que-tem-pecas-made-in-portugal
- Napier, H. A. (2006). Creating a winning E-business. Boston, Mass: Thomson Course Technology.
- Noleto, C. (2020, April 25). Non-functional requirements: the complete guide! Blog Da Trybe. https://blog.betrybe.com/tecnologia/requisitos-nao-funcionais/
- Pamplona, P. E. (2017). CRIAÇÃO DE INTERFACES PARA UM APLICATIVO DE ENGAJ AMENTO SOCIAL DESTINADO A ESTUDANTES UNIVERSITÁRIOS. https://repositorio.ufsc.br/bitstream/handle/123456789/177160/%2807.07%20.17%29 PCC_Paula_Pamplona.compressed.pdf?sequence=1&isAllowed%20=y
- Pawar, R. P., & Mahajan, K. N. (2017). Benefits and Issues in Managing Project by PRINCE2 Methodology. International Journal of Advanced Research in Computer Science and Software Engineering, 7(3), 190–195. https://doi.org/10.23956/ijarcsse/v7i3/0134
- Pereira, P. (2020). O impacto Covid-19: a segunda vida do e-commerce em Portugal? Observador. https://observador.pt/opiniao/o-impacto-covid-19-a-segunda-vida-do-ecommerce-em-portugal/

Rozwell, C. (n.d.). CEO and CIO Update: Critical Success Factors for E-*Business*, ". Ssofed.gartner.com; Gartner Advisory Group. http://gartner.jmu.edu/research/ras/85700/85746/

Simon Consulting. (2019). Amazon: Advantages & Disadvantages | Simon Consulting Gmbh. Simonconsulting.at. https://www.simonconsulting.at/amazon-vn_EN.html

Tavares, S. (2013). Tavares, S. (2013). Plataforma para gestão de conteúdos de entretenimento: UX Design da investigação ao protótipo. (Mestrado em Multimédia). Universidade Do Porto, Porto. https://repositorioaberto.up.pt/handle/10216/68488

- Wix. (2018). Wix Reviews: Pricing & Software Features 2021. Financesonline.com. https://reviews.financesonline.com/p/wix
- Wix. (2021). Help Center | Wix.com. Support.wix.com.

https://support.wix.com/en/article/request-additional-payment-methods-accepted-bywix

Wix Support. (2020). Help Center | Wix.com. Support.wix.com.

https://support.wix.com/en/article/velo-tutorial-adding-ratings-and-reviews-to-a-wix-stores-site

Appendices



Figure 44 PRINCE2 Methodology

[Source: What Is PRINCE2 Methodology? | Lucidchart Blog]



Figure 45 Code for Preparing the Product Page

```
Javascript
   1
                      async function loadStatistics() {
                                        const stats = await wixData.get('review-stats', product._id);
  2
  3
                                        if (stats) {
  4
                                                         let avgRating = (Math.round(stats.rating * 10 / stats.count) / 10);
  5
                                                        let percentRecommended = Math.round(stats.recommended / stats.count * 100);
   6
                                                        let ratings = $w('#generalRatings');
  7
                                                        ratings.rating = avgRating;
  8
                                                        ratings.numRatings = stats.count;
  9
                                                         $\u00ed \u00ed \u0
                                                        $w('#generalRatings').show();
10
11
                                       } else {
                                                        $w('#recoPercent').text = 'There are no reviews yet';
12
13
                                        3
14
                                       $w('#recoPercent').show();
15
                     }
```

Figure 46 Code for Creating LoadStatistics Function

```
1
     export function reviewsRepeater itemReady($w, itemData, index) {
                                                                                 Javascript
2
         if (itemData.recommends) {
             $w('#recommendation').text = 'I recommend this product.';
3
4
         } else {
5
             $w('#recommendation').text = "I don't recommend this product.";
6
         }
7
        if (itemData.photo) {
8
             $w('#reviewImage').src = itemData.photo;
9
             $w('#reviewImage').expand();
10
         }
11
         $w('#oneRating').rating = itemData.rating;
12
         let date = itemData._createdDate;
13
         $w('#submissionTime').text = date.toLocaleString();
14
    }
```

Figure 47 Code for crating ReviewsRepeater Function

```
export async function addReview click(event, $w) {
                                                                                 Javascript
1
2
         const dataForLightbox = {
3
             productId: product._id
4
        };
5
        let result = await wixWindow.openLightbox('Review Box', dataForLightbox);
        $w('#Reviews').refresh();
6
7
        loadStatistics();
8
         $w('#thankYouMessage').show();
9
    }
```

Figure 48 Code for creating AddReview click Function

```
Javascript
1
     $w.onReady(function () {
2
3
         productId = wixWindow.lightbox.getContext().productId;
4
         $w('#SubmitReviews').onBeforeSave(() => {
5
6
             if ($w('#radioRating').value === '') {
                 $w('#rateError').show();
7
8
                 return Promise.reject();
             }
9
10
             $w('#SubmitReviews').setFieldValues({
11
12
                 productId,
                 rating: $w('#radioRating').value,
13
14
                 recommends: $w('#radioGroup1').value
15
             });
16
         });
17
     });
```

Figure 49 Code for Creating onReady click Function

PERSONAS ID



MARY

Demographics Age: 24 Location: Lisbon, Portugal Job: Student at University of Lisbon Med School

Goals Be a Doctor within the next 3 years After graduate construct their own clinique

Locations to go browser online Mostly when is at home, after classes Frustrations Feels lost when faced with too much scattered information

Phone Usage Social Networks: 65% Messaging: 15% Learning: 20%

image from https://www.pexels.com/photo/closeup-photo-of-woman-with-brown-coat-and-gray-top-733872/



JOANA

Demographics Age: 35 Location: Oporto, Portugal Job: Consultant on a Insurance company

Goals Explore at least the whole Europe within the next 15 years.

Locations to go browser online Mostly on the pauses of work, since is a hybrid job it's half at the office and half at home

image from https://www.pexels.com/photo/woman-smiling-at-the-camera-1181686/

Doesn't like people in Portugal to be seen as if they don't know how to dress

Frustrations

Phone Usage Social Networks: 55% Messaging: 35% Learning: 10%

JOAO

Demographics Age: 31 Location: Madeira, Portugal Job: Owner of a clothing company

Goals Discover some way to turn one clothing collection into 100% sustainable

Locations to go browser online Everywhere, Joao needs to be online all the time to manage his project and be in search of new ideas Frustrations Do not understand why plastic is still in commerce

> Phone Usage Social Networks: 80% Messaging: 5% Learning: 15%

image from https://www.pexels.com/photo/portrait-photo-of-smiling-man-with-his-arms-crossed-standing-in-front-of-white-wall-2379004/