Designing a service web platform in a B2B context

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Abstract
Nowadays technology is evolving very quickly and all the information that companies need must be sent quicker and safety to their destination. Web platforms are an important channel to do this transfer of information between entities. A web platform is an important communication channel between companies. Web platforms have a crucial role for the companies when it comes to save their money and time. Web platforms are critical for the employees because they can finish all their tasks without spending time on activities that do not need the intervention of the employees. For the clients, the web platform is very useful because they want their problems to be solved quickly and safety. Clients need web platforms in order to have a place where to store in one place all their information regarding their projects and also clients want to manage all their files/documents more easily and simple. An important element included in web platforms is web design that has an important role in creating a web platform. Web design implies different elements, some of them crucial for creating a communication channel that offers quality information between companies. Different key design elements will be presented in this study that will prove the usability of a web platform. All relevant information can be accessed by users anytime using a web platform. This study will present also the need of a company to improve their current service by designing a new service web platform. The web platform is needed in the company because it is a chance of increasing the customer satisfaction of the company. The company’s current service has limited communication channels that the employees are using in order to share information with the clients. The communication channels used are not very efficient when it comes to time management, visualizing information, storing the information, managing the information. The study will present a method that carried the researcher from mapping the internal process of the company to designing the web platform (including Client interface and Manager Interface).
Acknowledgments

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List of abbreviations

B2B – Business to Business
BUD – Business Unit Director
CFO – chief financial officer
APP – Application
PM – Project Manager
PPI – Pedido de Pagamentos Intercalares – intermediate payment request
SNC – Sistema de Normalização Contabilística - Accounting system (SNC)
VOC – voice of the customer
BPM – business process modelling
BPMN – business process model and notation
NIF – Numero de Identificação Fiscal
Messg. – Messages
Publ. Rules – Publication Rules
FAQs – Frequently asked questions
Ul. Document – Upload Document
Dl. Document – Download Document
1 Introduction

1.1 Project Background

Nowadays technology is implemented in each company and plays a very important role when it comes to manage information.

Web platforms are used more often in many companies because for many of them, this new communication channel represents a solution for many problems that a company could have. Many companies are confronting with the problem of visualizing information, managing information and storing information. It is very hard for the employees of a company to visualize information on a paper and to analyse it by hand, is very hard for them to manage a big amount of papers that must be verified, sort and validated in order to be delivered to other people (inside the company or to the clients); is very hard to store the information in papers (creating physical archives) because it will be very difficult to find some information in a crucial moment when the speed of finding the right information in the right place will play the most important role.

For these aspects, web platforms are a solution that solves the problem of having quick access to relevant information that a person needed, having the possibility to store big amount of data and to manage it in a quickly way. Web platform offers the possibility for users to have updated information and to have access to that information anytime, anywhere (having the internet connection available).

1.2 Problem Description

The current service provided by HM Consultores is a service that in order for the employees to interact with their clients ( to share information ) , they must use as communication channels emails and phone calls. The employees use these channels in order to offer information to their clients. The information refers to client’s project development. The current service implies wasted time and costs for the company’s employees. All information regarding client’s project is shared between the employees and clients using the phone calls and emails. Most of the time the information that the clients ask for is the same or irrelevant. Having a web platform will reduce the wasted time for the employees to give irrelevant information to clients.

Having a web platform will increase the customer satisfaction and the customer does not have to call or to send emails to employees in order to view information regarding the state of his project, or information regarding billings, payment requests etc. All these information and more other, could be available for the client on a platform anytime and in anyplace.
1.3 Research Questions

The research questions, that this study will answer, are:

1. What are the critical variables in the development of a digital platform of communication with the client in a project management context?

2. What is the impact of a new digital communication channel on customer satisfaction in a B2B context?

1.4 Study and Project Development at Company HM Consultores

The study took place in a company, HM Consultores, which develop projects in different areas of activity. Inside the company there were identified some gaps that could be improved. The gaps drove to the main objectives that the company established:

- Improve the current service by designing a web platform
  - Design an interface for the HM Consultores customers
  - Design an interface for the HM Consultores manager

Both interfaces must be user friendly.

1.5 Report outline

In Literature Review Chapter will be covered aspects regarding Service Design, Web design, Customer satisfaction and Web platform.

In Problem characterisation chapter, first will be presented the company where the study took place and then will be presented the current service of the company with the gaps that were found.

In Methodology chapter will be presented the following aspects:

- First, will be covered the research methods that were used in this study (Survey, Focus Group, Blueprint, Business Process Modelling and Service Prototyping);

- Second, will be covered the method used in order to achieve the main goal of the study (to design a web platform). The method used consist on 3 stages:
  - Stage 1 – Map the internal process of the company;
  - Stage 2 – Design the web platform;
  - Stage 3 – Validate the web platform.

In Results chapter will be presented all the information gained from the internal meetings (between the researcher and HM Consultores employees), surveys, focus groups, blueprints. The Results chapter follows the methodology structure:

- Stage 1 – Map the internal process of the company

  In this stage will be presented information regarding
  - The internal process of the company (the process will be divided in 6 phases and each of this phase will be presented with detailed information);
  - The Touchpoints that were identified in the internal process of the company;
- The Artifacts that were identified and were associated to each touchpoint;
- Results from the survey that was used in order to understand the customer satisfaction regarding the current service provided by HM Consultores.

- Stage 2 – Design the web platform

  In this stage the web platform will be designed by creating 2 interfaces (a Client interface and a manager interface). A Client interface that will be available for HM Consultores Customers and a manager interface that will be available for the HM Consultores Manager (but also for several employees). Also will be presented information regarding:
  - The Client interface;
  - The manager interface;
  - The results from the first focus group (between the researcher and HM Consultores employees), survey, blueprints.

- Stage 3 – Validate the web platform

  In this stage the web platform will be validated using the second focus group (between the researcher and HM Consultores employees).
2 Literature Review

2.1 Service Design

Service design consist on understanding the user’s and customers’s need. It can be used in order to improve an existing service or to create a new service from scratch (Interaction Design Foundation, 2017). The iterative four steps of exploration, creation, reflection and implementation, are a very basic approach to structure a complex design processes that actually consists out of many loops (iterations) (Service Design Thinking, 2016).

Topics that are related to organization and employee issues for a successful service are important to address: Coordinating the interdependent roles of employees and customers in cocreation, Fitting together the service strategies and organizational designs and climates to drive positive for customer experiences, Generating employee engagement for improving the service outcomes, Identifying the effects of technology for the service employees, Changing organizational cultures for supporting servitization, Identify the leadership competencies that are critical to manage the services, Designing service-oriented human resource management (HRM) practices that drive to positive employee and customer outcomes, Understanding how consumer behavior affects the employee job performance, the satisfaction, and the overall well-being (Ostrom 2015).

Many businesses and organizations expect a wide range of benefits from organizing co-design, such as: improve the creative process, developing a better service definitions, organize the project more efficiently, and improve customers’ or users’ loyalty. (Steen 2011).

2.2 Web Design

In order to design websites, there are some aspects that must be taken into consideration. Some aspects are more important than others. A very important aspect is the usability of the website. The website must be user friendly in terms of:

- **Layout**: the screens should be as simple as possible; the page layout should be simple to follow and give people access to all the relevant information that they need without requiring a lot of effort.

- **Navigation**: in order to reach specific information on the website, there should be very simple ways of doing this; the path-length is very important – the problem consist on “how many clicks a user must do in order to have access to the information he needs?”

- **Overall Design**: when creating websites people must avoid lots of heavy graphics, logos, images, and other elements that make it hard for clients to know where to go next (Visual scope 2002).

A challenge is that the definitions of website design elements often overlap. For example, some companies are evaluated by how well a website incorporates logical and hierarchical structure, systematic information arrangement and categorization, meaningful headings and labels, and keywords. All the features are very important in a navigation design. Also, using different logos and icons implies graphical representation. Logos and icons
establish the unique identity for the company and can serve as visual aids for navigation. Another aspect that must be taken into consideration is that different industries have different objectives when it comes to design specific websites and should prioritize different website design elements. (Garett 2016).

Web platform consist in several aspects that contribute to a better development of the platform: Establish User Requirements (this uses all available resources for a better understanding users’ requirements. The greater the number of exchanges of information with potential users is, then the better the developers’ understand of the users’ requirements. The more information that can be exchanged between developers and users, the higher the probability to have a successful Web site is. These include customer support lines, customer surveys, interviews, focus groups, etc ); Understanding and meeting the user’s expectations (Ensure that the Web site format meets user expectations, especially related to navigation, and organization. Users define 'usability' as their perception of how consistent, efficient, organized, easy to use, intuitive, and straightforward it is to accomplish tasks within a system. It is important for designers to develop an understanding of their users’ expectations through task analyses and other research that they do. Users can have expectations based on their prior knowledge and past experience ) ; Involving users for establishing the user’s requirements (Involve users to improve the accuracy of user requirements. A basic principle of user centered design is the early and continual focus on users. For this reason, user involvement has become a widely accepted principle in a development of an usable system. Involving users has the most value when trying to improve the completeness and accuracy of user requirements. It is also useful in helping to avoid unused or little-used system features ); Focus on Performance before preference (If user performance is important, make decisions about content, format, interaction, and navigation before deciding on colors and decorative graphics. Focus on achieving a high rate of user performance before dealing with aesthetics. Graphics issues tend to have a little impact, if so, on users’ success rates or speed of performance); Set usability goals . Increase web site credibility (Optimize the credibility of information oriented Web sites such as: Provide a useful set of frequently asked questions (FAQ) and answers, Ensure the Website that is arranged in a logical way, Provide articles that contain references, Show author’s credentials, Ensure that the site looks professionally designed, Provide an archive of the past content, Ensure the site is as up-to-date, Provide links to external sources and materials, and Ensure the site is frequently linked to by other sites. ); Warn of “time outs” (Let users know if a page is programmed to 'time out,' and warn the users before time expires so they can request additional time. Some pages are designed to 'time out' automatically (usually because of security reasons). Inform Users of Long Download Times (Indicate to users the time required to download an image or document at a given connection speed. Provide the size and download time of large images or documents gives users sufficient information to choose whether or not they are willing to wait for the file to be downloaded. ); Enable Access to the Homepage (Enable users to access the homepage from an another page. Users return to homepage to begin a new task or to start a task over again. Create an easy way for users to quickly return to the homepage of the Web site from any point that they are in the site) (Leavitt 2017).

It is necessary for web designers to know to make a good organization of the HTML page, so that they could easily adapt to different resolutions and devices. Important characteristics of a web page : The number of columns of the web page should be adaptive to the screen/window dimensions, The menus and the content have to be displayed according to
the interest of the users. Images and videos should dynamically be resized in order to fit the screen width. Menus, links and buttons have to be bigger on touch screen devices, so it could enable a user friendly environment. The space between interactive links has to be sufficiently high in order to avoid an occasional press on small devices like smart phones or tablets. The font size and line spacing should be determined to enable easy reading. The number of columns should also be carefully chosen in that manner (Subić 2014).

Web design consist also on taking into consideration the color that is used, texture, typography, Imagery (Beaird, 2010).

One of the most important aspect of web design is planning. Planning is the point at which the designer defines the goals and strategies of the website. The result of this planning is a "site plan" document. The site document should ideally be a short concise document that state the goals and strategies for the site of the designer. Everyone that is involved in the project can reference this document in order to determine whether the project design or implementation is on the right way. The document can act as a judge, concerning new ideas, designs or technology. The site plan should contain the mission of the company or organization and the way the website will support it. The plan will have the three most important goals for the site. Consistency of design refers to layouts, typestyle, and colors within a visual interface. Elements such as text appeared in a different font, size, or color than the one set by the designer. (Collins, 2006).

Usability is described as the ease-of-use, learnability, efficiency, memorability, error prevention and recovery and user satisfaction. During the usability test, different types of problems could be observed and analyzed. Then with these aspects, more usable and more users friendly web sites could be developed. Usability has been an important criteria of decision making for users, product designers, and software developers for their purposes. Usability has been defined by many research studies in many ways. Usability is the capability in human functional terms to be used easily and effectively. There are three classifications to measure usability including effectiveness, efficiency, and satisfaction. Effectiveness is the degree of success with which users achieve their task goals. The Focus Group Discussion were recorded and transcribed using a video recorder. The group discussion guide included questions and prompts to obtain information on the evaluation context, data collection and analysis, and analyst challenges and needs. Specific questions targeted in evaluation and redesign suggestions of the existing application. The purposes of the group discussion were: to evaluate the existing website, to identify the recommendable practice, to assess the satisfaction level (Sari 2015).

Web platform consist on several fundamental elements: **Navigation**: This assesses whether a site includes the main tools and links which facilitate the navigation of users through a site, enabling them to reach the required information in a quicker way. Navigation comprised five subcategories. These were: navigation support: Navigational links are in each page of the website so that users can explore and find their way on the site and navigate in an easy way; effective internal search: Internal search is effective: is fast, accurate and provides useful and clear results which are easy to be interpreted; working links: Links are discernible, working properly and not misleading so that the user knows what to expect from the destination page; no broken links: The site has no broken links; and no orphan pages: The site has no dead-end pages. **Architecture/organisation**: This criteria relates to the structure of the site's information which should be divided in logical and clear groups; each group should include related information. Architecture/organisation consists of three subcategories. These
are: Logical structure of site: The structure of the site is simple and straightforward; related information is grouped together; not deep architecture: Architecture is not too deep so that the number of clicks to reach goals is not too large, e.g. it does not require clicking more than 3 links; and simple navigation menu: The navigation menu is straightforward. Design: this relates the visual attractiveness of a site's design; the appropriate design of a site's pages, and the appropriate use of images, fonts and colours in the design of a site. Design comprises six subcategories: Aesthetic design: The site is attractive and appealing so that impresses the potential customer; appropriate use of images: The quality of images is adequate, images make a contribution for the understanding and for navigation in the site, image size is also relevant so that it has minimal effect on loading time; appropriate choice of fonts: Font types are appropriate and easy to read; appropriate choice of colours: The choice of colours for both fonts and background is appropriate, the combination of background and font colours is appropriate; appropriate page design: Pages are uncluttered, page margins are sufficient, the page title is appropriate; and consistency: Page layout or style is consistent throughout the website: e.g. justification of text, font types, font sizes, colours, and position of the navigation menu in each page (Hasan, 2014).

2.3 Customer satisfaction

The success of voice of the customer (VOC) programs in driving enhanced customer experience depends on the ability to integrate the voice of the employee (VEO). The following steps can be used to converge important elements of each program to help organizations move forward for the next level of customer experience:

- Use the right data not more data;
- Leverage technology to drive action: in large organizations, it is important to have the right technology in order to support a successfully automated VOC program. The ability to listen across every channel, geographical location and touchpoint is critical. Another important aspect, feedback needs to be captured in a way that makes the most sense to an organization and its customers (Quirk’s Media, 2017).

2.4 Web platform

In order for a web platform to be user friendly there are several characteristics that should be taken into considerations:
- **mobile compatibility**: more and more people nowadays are using their mobile phone in order to access the internet;
- **well planned information architecture**: for a good usability of the web platform, the way the information is organized and presented, represent a very important aspect;
- **effective navigation**: for an effective navigation the web designer must limit the number of menu items as much as possible (Singh 2013).
3 Problem Characterization

3.1 Company presentation

HM Consultores has 29 years of experience in supporting business organizations, promoting, through management and business consulting, its growth and strengthening of the competitive model. It distinguishes itself by providing its clients with specialized and dedicated advice, high quality services and personalization, always being present in its action a strong focus on the client, its needs and the excellence of the service and the results presented.

Mission: Through innovation, skills and learning, HM Consultores creates value for its clients and other stakeholders, ensuring sustained growth and providing a service of excellence, on a basis of collaboration, sharing and trust.

Vision: To be a nationally recognized consulting firm, with the internationalization process started, recognized for excellence, innovation and customer relations.

Values: Highest priorities for the company are the Services and Customer Relationship.

The areas of activities in which HM Consultores develop projects are presented in Table 1 – HM Consultores areas of activities (HM Consultores).

<table>
<thead>
<tr>
<th>Project Area</th>
<th>Description</th>
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<tbody>
<tr>
<td>Projetos &amp; Incentivos</td>
<td>The Projects &amp; Incentives Area supports the implementation of investment strategies, in partnership with its clients, by meeting optimized financing solutions. HM Consultores develops and proposes solutions so that the client can obtain the necessary financing for its projects, in particular through the use of investment incentive systems, at national or international level.</td>
</tr>
<tr>
<td>HMBO</td>
<td>HMBO is one of the registered trademarks of HM Consultores that brings together consulting services in the areas of corporate finance and Mergers &amp; Acquisitions, looking for business opportunities, advising on business buying and selling operations, preparing business plans and Business valuations. For more detailed information: <a href="http://www.hmbo.pt">www.hmbo.pt</a></td>
</tr>
<tr>
<td>Sistemas de Gestão</td>
<td>HM Consultores has highly qualified and highly experienced employees and consultants who guarantee active, collaborative and participative support in specialized management system services within a wide range of areas of action: Quality; Environment &amp; Energy; Occupational Health and Safety; Food Safety; Sustainability; Innovation; Information Security and Social Responsibility.</td>
</tr>
</tbody>
</table>
Leanked is a company of the HM Consultores group, specialist in operations consulting, with an action focus in the implementation of Lean management and kaizen methodologies. The main objective of this business area is to generate more value for the customer, increasing its operational efficiency and significantly improving organizational performance, in the path of excellence. For more detailed information, visit the website: www.leanked.com

Table 1 – HM Consultores areas of activities

<table>
<thead>
<tr>
<th>3.2 Problem description</th>
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<tbody>
<tr>
<td>This study is focused on “Projectos&amp;Incentivos” service provided by HM Consultores. The current service consists on helping other companies to develop their projects in different areas of activity. HM Consultores helps other companies with the strategy that the customers must have in order to increase their chance of gaining funds for their projects. In order to share information between the clients and HM Consultores employees, the only communication channels are Email, phone calls and meetings. All the project’s information, all the important documents that must be sent from one to another must be done using these channels. This implies waste of time, costs, delays, unstructured information, information that is very hard to manage. The client needs to know the state of their project without sending emails or to call HM Consultores employees. Projects have a duration of several years. The clients do not have the necessary time to call and to send emails to HM Consultores employees regarding every information that they need to ask for. The current service consist on the fact that all the information of the client’s projects is stored and managed in Microsoft SharePoint.</td>
</tr>
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4 Methodology

4.1 Comparative analysis of existing approaches and reasons for the choice of adopted approach

4.1.1 Surveys

A survey is an activity that collects information using an organised methodology about characteristics of interest from some or all available units of a specific population using different concepts, procedures and methods, and summarize such information into a useful form (Statistics Canada 2003). Surveys are extensive because are useful in describing characteristics of a large population (no other research method can provide this broad capability) (Wyse 2012).

4.1.2 Focus Groups

Focus group is a meeting between several individuals (could be between 4 and 8) who are brought in order to discuss a particular topic chosen by the researcher. The researcher is the moderator of the focus group and is the person that realize the structure of the discussion (Pearson 2016).

The focus group is one of the best methods of data analysis because is effective in assessing attitudes, opinions, and experiences relative to a specific topic. Focus groups provide speedy results and are time and cost effective relative to reaching the same number of participants to interview individually (Pearson 2016).

4.1.3 Blueprint

Service Blueprint are used when: an entity wants to improve their service offering (Knowing how the organisation service gets produced is an essential aspect for addressing breakdowns or pain points); an entity wants to design a new service that mixes the digital and the non digital touchpoints; (Ross 2014).

4.1.4 Business process modelling

A Business Process Model (BPM) represents a diagram which highlights a sequence of activities. It shows events, actions and links (or connection points) in a specific sequence from end to end. The sequence is the most important aspect and also is essential in a business process modelling.

A standard Business Process Model and Notation (BPMN) will provide businesses with the capability of understanding their internal business procedures in a graphical notation and will give organizations the ability to communicate these procedures in a standard manner. The graphical notation will facilitate the understanding of the performance collaborations and business transactions between the organizations. This will ensure that businesses will understand themselves and participants in their business and will enable organizations to adjust to new internal and B2B business circumstances quickly (Chapman 2017).
4.1.5 Service Prototyping

In this study is used service prototyping because it reduces time and costs (prototyping could improve the quality of requirements and specifications provided to developers). This service requires user involvement and allows users to view and interact with a prototype allowing the users to provide better and more complete feedback and specifications. Using this service prevents many misunderstandings and miscommunications that occur when each side believe the other understands what they said (Nehal 2009).

4.2 Method used in the project

![Diagram of Method used]

This chapter will present the method used by the researcher for a better understanding of the sequential of the steps made in order to accomplish the theme: design a web platform service.

The study is divided in three stages: Stage 1 – Map the internal process of the company, Stage 2 – Design the web platform, Stage 3 – Validate the web platform. In each of these stages will be presented the activities, that the researcher did, the tools, that were used during the process and the methods that were used as a support in order to understand better what was done inside each stage.
Stage 1 – Map the internal process of the company

The main objective of this stage is to map the internal process of the company in order to understand better what the company does. In order to accomplish this goal, several activities were done by the researcher as follows:

**Identify Actors**: inside the company were identified all the actors (employees) that are involved in the process of helping the clients regarding their projects. All the actors are represented in the diagrams that describe the internal process of the company. All the diagrams were realized using a free tool named Bizagi Modeler (Bizagi 2012).

**Identify Activities**: after all the actors were established, there were identified all the activities that each actor performed in order to understand the role that each actor has inside the company.

**Identify Resources**: the actors in order to realize their activities, they need resources to use as a support for their work. The resources used are Microsoft SharePoint (Microsoft SharePoint) (where all the information is stored and managed; information regarding the client’s project), physical documents.

**Identify Touchpoints**: Touchpoints represent the moments of interaction between the client and the employees. In these touchpoints, information and documents are shared between the client and employees.

**Identify Artifacts**: Artifacts represent the tools used by the employees in order to share information and documents with the clients. The artifacts used are the email, phone calls and meetings.

**Understand each phase of the process**: The internal process of the company is divided in 6 phases (Phase I – Commercial Phase, Phase II – Passagem, Phase III – Application development, Phase IV – Application Management, Phase V – Project Management, Phase VI – Project Conclusion). Each phase of the process includes activities that are done by different actors using the available resources.

**Map the process**: Using a free tool, named Bizagi Modeler (Bizagi 2012), the internal process of the company was realized. Each phase of the process was realized using this tool.

**Measure and understand the customer satisfaction**: In order to understand the customer satisfaction regarding the current service, that HM consultores provides for their clients, was realized a survey which was sent to 86 customers (See Appendix C).

All these activities in order to be performed correctly, inside the company were realized internal meetings between the researcher and the employees.
The main objective of this stage is to design a new service web platform in order to increase the customer satisfaction. The web platform will help the clients to visualize and to manage all their relevant project’s information using an user friendly interface. The web platform will help the employees of HM Consultores to have more time to complete their day by day tasks without spending a lot of time on sharing the same information with clients (much of the information shared between the employees and the clients are the same or take a lot of time to send it).

**Analyze internal process of the company:**

The internal process of the company must be analysed in order to know what kind of information must be put on the web platform. Not all the information from the process is relevant to be put on the web platform because the clients want to have access to the platform in order to visualize and to manage valuable information regarding their projects.

**Design Client interface:**

The client interface will be designed in order for the clients to have the possibility to visualize their project’s relevant information, to upload/download documents, and to interact with HM Consultores employees. The interface must be user friendly:

- the clients must have access to any information available on the platform using the shortest path - minimum number of clicks in order to reach a specific information on the interface;
- all the information must be placed on the interface in order to be easy to identify, visualize.

**Design Manager interface:**

The manager interface will be designed for the manager of HM Consultores but also several employees inside the company will have access to the interface. The manager will have the possibility to add information, to send messages and documents to a specific client and also to multiple clients, to upload documents and also to download documents received from the clients. The interface must be user friendly:

- the manager must have access to any information available on the platform using the shortest path - minimum number of clicks in order to reach a specific information on the interface;
- all the information must be placed on the interface in order to be easy to identify, visualize.
In order to design the both interfaces, was used a free online tool named NinjaMock (NinjaMock).

In order to understand the need of HM Consultores employees of having a web platform was realized a first focus group between the researcher and several employees of HM Consultores (See Appendix D, from Figure D.1 – First Focus Group_Invitation to Figure D.3 – First Focus Group_Consent Form_Page 2 and Table D.1 – First Focus Group_Participants and Table D.2 – First Focus Group_Questions).

In order to understand the need of the clients of having a web platform, was realized a survey using online Google Forms (Google). Using this survey the clients express their opinion regarding the current service that they already use and also they express their opinion about improving the current service by creating a web platform where all the information is updated and easy to manage (See Appendix C).

In order to understand the interaction between the client and the Client’s interface and also to understand the interaction between the manager and the manager’s interface, were realized two blueprints.

**Improve Client interface / Improve manager interface:**

In order to improve both interfaces, were performed internal meetings between the researcher and HM Consultores employees.

Stage 3 – Validate the web platform

In order to validate the web platform (the Client interface and the manager interface), was realized a second focus group between the researcher and several HM Consultores employees (See Appendix D, Table D.3 – Second Focus Group_Participants, Table D.4 – Second Focus Group_Questions).

Also, to validate the web platform, were established internal meetings between the researcher and the employees.
5 Project Results

In this chapter will be presented all the study results regarding the Stages mentioned in Methodology (Stage 1 – Map the internal Process of the company, Stage 2 – Design the web platform, Stage 3 – Validate the web platform). Each Stage contains detailed information as follows:

Stage 1 - Map the internal process of the company

In this stage will be presented information about:

- Internal Process of the company
  
  - the process is divided in six Phases (Phase I – Commercial, Phase II – Passagem, Phase III – Application Development, Phase IV – Application Management, Phase V – Project Management, Phase VI – Project Conclusion);
  
  OBSERVATION 1: Each of these phases will be presented in detailed information using a free tool named “Bizagi Modeler”.

Figure 2 – Stages of the web platform service design
Each phase of the internal process has a specific duration;
- In each Phase of the process are identified a specific number of touchpoints which represent the moments when the client interacts with the service.
- Associated to each touchpoint are artifacts (communication channels) that the client and also the employees are using in order to share information between them;

**OBSERVATION 2:** All the results regarding Stage 1 are presented in detailed information, based on a Survey and based on internal meetings between the researcher and employees of the company.

**Stage 2: Design the web platform**

In this stage, the web platform will be analysed from two points of view:

- from the Client point of view by creating an web platform interface for the Client;
- from the company’s manager point of view by creating an web platform interface for the manager;

**OBSERVATION 1:** Both web platform interfaces will be presented in detailed information. Each interface contains the necessary information that the client/manager can have access to manage it.

**OBSERVATION 2:** Both interfaces are designed using a free online tool named “NinjaMock”.

**OBSERVATION 3:** All the results in Stage 2 are presented in detailed information based on:
- the information extracted from internal meetings between the researcher and the employees of the company;
- the information extracted from Blueprints;
- the information extracted from the first focus group between the researcher and the employees;
- the information extracted from the Survey.

**Stage 3: Validate the web platform**

In this stage, the relevant information that was put in the mapping process (Stage 1) is verified to be the same with the information that was put on both interfaces.

The web platform validation is done by using the second focus group between the researcher and the employees of the company. The results and the analysis will be presented in detailed information.

A summary of all above presented is illustrated in Figure 2.
5.1 Map the internal process of the company

In this chapter will be presented information regarding:

- the internal process of the company (the process will be divided in 6 phases and each of this phase will be presented using Bizagi Modeler);
- the touchpoints that were identified in the internal process of the company (several touchpoints were identified in each phase of the process);
- the artifacts that were identified in the internal process of the company.

OBSERVATION: In order to measure and to understand the customer satisfaction, regarding the current service of the company, for this study was used a survey.

5.1.1 Internal process of the company

In this chapter will be presented detailed information regarding each phase of the internal process of the company. The structure used in order to present each phase of the process with detailed information is the following:

- First, in the beginning of each phase of the process, will be presented the actors, the resources used by the actors and also the approximate duration of the phase.
- Second, each phase of the process will be mapped using Bizagi Modeler.
- Third, each phase of the internal process of the company will be presented in a summary.

The internal process of the company is divided in 6 phases: Commercial phase, Passagem, Application Development, Application Management, Project Management and Conclusion.

**Commercial Phase:**

The actors in this phase are: The Client, the Key Account, and the Administrative of the company.

The Resources used by the actors are: Microsoft Sharepoint and physical documents.

The approximate duration of this phase is about maximum 1 month.

![Figure 3 – Commercial Phase_Contact Clients](image-url)
In this Phase of the process, the Key account is contacting the potential Client, verify if the person is registered or not in the system. The Key Account schedule a meeting with the client in order to present details regarding HM Consultores company. The client will explain the strategy that he has and the key account must choose the program that fits best with the client’s needs (See Figure 3 – Commercial Phase Contact Clients).

The key account will simulate the project Score. Based on the Score and on program requirements fulfillment, the key account will create the proposal or will advise the client to change investment or strategy (See Appendix A, Figure A.1 – Commercial Phase Register proposal).

The key account will present to the client the proposal, investment plan, and the simulation. Based on a negotiation, they will move forward to the contract (See Appendix A, Figure A.2 – Commercial Phase Create Contract).

**Passagem Phase:**

The actors in this phase are: The Development Team, The Business Unit Director and Key Account.

The approximate duration of this phase is about 30 minutes.

Passagem Phase represents the transition between commercial department and technical department.

In this Phase, the BUD has responsibilities to check HR availability, to assign a team for the project. The Key Account must meet with the development team and also the BUD will have a meeting with them because after the discussion, the development team will inform the client that they are responsible for his Application (See Figure 4 – Passagem Phase).
**Application Development:**

The actors in this phase are: BUD, Development Team, CFO and the Client

The Resources used by the actors are: Microsoft Sharepoint and physical documents.

The approximate duration of this phase is about 3-4 weeks.

The company uses Microsoft Sharepoint as a resource to save all the information of each client’s project.

In this phase, the development team ask the client for more documents or information. They must understand the strategy having access to more details because after gathering information from the client, the development team will give the client some advices and then the team will start develop the Application (See Figure 5 – Application Development Phase_Development Team).

The development team will send the Application to the client and wait for his validation. If the validation is positive, the team will fill a form and submit it. The BUD will assign a Project Manager and will inform the client who is the person (See Appendix A, Figure A.3 – Application Development_Assign Project Manager).

**Application Management**

The actors in this phase are: The Entity, CFO, Project Manager, BUD

The Resources used by the actors are: Microsoft Sharepoint and physical documents.

The approximate duration of this phase is about 3-6 months.
In this Phase, the BUD and the Project Manager will update the Sharepoint with information. If the Entity has doubts the Project Manager must solve them and also inform the client that there will be delays (See Figure 6 – Application Management Phase_Project Manager).

The entity will send to the client the results of the Application (The Results can be: Not Approved, Approved or Approved with no funds). Based on the results, the client will move forward to the contract sign or must renegotiate and start the process from the commercial phase (See Appendix A, Figure A.4 – Application Management_Contract Sig).

**Project Management:**

The actors in this phase are: The Client, PPI, BUD, Project Manager, Client’s Accounter, Entity, CFO

The Resources used by the actors are: Microsoft Sharepoint.

The aproximate duration of this phase is about maximum 2-4 years.
In this phase, the client moves to the next step, the contract sign with the entity. The project manager must plan the project and ask the client if he is ready to ask for funds. Based on the answer, the Project Manager will advice the client or he will inform the BUD that a PPI is needed and the BUD will assign a PPI. The PPI will organize the information and fill a form (See Figure 7 – Project Management Phase_Sign Contract).

The PPI will validate all the information with the client, submit the form and send an email to the BUD. The BUD will request an invoice to CFO (See Appendix A, Figure A.5 – Project Management_Submit Form).

The CFO will issue the invoice and send it to the client. Based on the fact that the entity could have doubts, the PPI must analyse the doubts/or not and the Entity will send the funds. The PPI are responsible with updating the Sharepoint, organizing the information and fill the form (See Appendix A, Figure A.6 – Project Management_Assign PPI).

The form submission depends on a validation from the client and CFO. The client will request an invoice to CFO. The CFO will issue the invoice and send it to the client (See Appendix A, Figure A.7 – Project Management_Issue Invoice).

**Project Conclusion:**

The actors in this phase are: The Client, Project Manager, PPI, BUD, Entity, CFO.

The approximate duration of this phase is about 1-2 months.

![Figure 8 – Conclusion Phase_Final Report](image)

The Project Manager will inform the Client that the project is ending, reason why both (the Project Manager and PPI) prepare the information for Conclusion report. Another Simulation of the Score is done in order to correct deviations and to issue the final report and also to submit it (See Figure 8 – Conclusion Phase_Final Report).
5.1.2 Touchpoints:

All the touchpoints that were identified for each phase of the internal process of the company are represented in the Figure below. These Touchpoints represents the moments when the Client interacts with the current service provided by HM Consultores (See Figure 9 – Internal Process Touchpoints).

![Figure 9 – Internal Process Touchpoints](image)

5.1.3 Artifacts

The artifacts that are used for each Touchpoint of each phase of the process are illustrated in Figure below. Artifacts represent tools that Both sides (The Client and HM Consultores company) are using when they interact each other during the process (See Figure 10 – Internal Process Artifacts).

The artifacts that HM Consultores use: the email, the phone calls and the meetings.

![Figure 10 – Internal Process Artifacts](image)
5.1.4 Current Service customer satisfaction

In this chapter will be presented the study results from the survey that was sent to the HM Consultores customers. The survey was sent to 86 customers and were registered 23 responses. The goal of the survey is to understand the customer’s satisfaction regarding the current service provided by HM Consultores (See Appendix C).

Size of the companies:

The study illustrates that there are 4 types of customers that HM Consultores work with: micro companies, small companies, medium companies and big companies. The majority of the companies that work with HM Consultores are small (12 companies) and medium (9 companies) (See Figure 11 – Customer_Size of the company, See Appendix C, Figure C.1 – Survey Results_Company size).

![Figure 11 – Customer_Size of the company](image)

Area of activity

The areas of activity where companies develop their projects are diversified (Vitivinicola, Servicos, Agro-industria, Metalomecanico, Textil, Turismo, Retalho, Logistica e Transportes, Automacao Industrial). Most of the companies develop projects in Vitivinicola (4 companies) and Metalomecanico (6 companies)(See Figure 12–Customer_Area of activity, See Appendix C, Figure C.2 – Survey Results_Area of activity).

![Figure 12 – Customer_Area of activity](image)
Time period of working with HM Consultores

The survey presents that 15 companies (65.2 %) are doing business with HM Consultores for 1-3 years. Just 4 (17.39 %) companies are using HM Consultores current service (See Figure 13 – Customer time period doing business with HM Consultores, See Appendix C, Figure C.3 – Survey Results_Customer time period of doing business with HM Consultores).

Overall customer satisfaction

The survey shows that 15 companies (65.2 %) are satisfied regarding the current service that HM Consultores provides for them. Very few companies are unsatisfied regarding the current service, just 3 companies – 13.04 % (See Figure 14 – Customer_Current Service Overall satisfaction, See Appendix C, Figure C.4 – Survey Results_Current service overall customer satisfaction).

Figure 13 – Customer_time period doing business with HM Consultores

Figure 14 – Customer_Current Service Overall satisfaction
**Customer satisfaction regarding information received by phone & email**

Customers that work with HM Consultores, interact with the employees and they share information using the email and the phone as communication channels. All the information shared between the customers and the employees are very important. The survey shows that 15 customers (65.2%) are satisfied regarding the information that they received by phone and 14 companies (60.86%) are satisfied regarding the information that they received by email (See Figure 15 – Customer satisfaction_Phone and Email Information received, See Appendix C, Figure C.5 – Survey Results_Customer satisfaction_Phone information received and Figure C.6 – Survey Results_Customer satisfaction_Email information received).

![Figure 15 – Customer satisfaction_Phone and Email Information received](image)

**Manage the project’s information**

For each customer is very important to have the possibility to store and to manage as easy as possible their project’s information. The survey shows that 13 companies (56.52%) store their information in an easy way comparing to 3 companies (13.04%) that store the information in a hard way. In terms of managing the project’s information the proportion is equal because 8 companies (34.78%) manage their project’s information in an easy way and other 8 companies (34.78%) manage their project’s information in a hard way (See Figure 16 – Customer Satisfaction_Manage information, See Appendix C, Figure C.7 – Survey Results_Customer satisfaction_Store information in one place and Figure C.8 – Survey Results_Customer satisfaction_Manage information).
**Continue with & Recommend HM Consultores current service**

The survey illustrates that 18 companies (78.26 %) want to continue with the current service and 19 companies (82.60 %) would recommend the current service to other companies. (See Figure 17 – Customer satisfaction_Continue with HM Consultores, See Appendix C, Figure C.10 – Survey Results_Customer satisfaction_Continue with the current service, Figure C.11 – Survey Results_Customer satisfaction_Recommend current service to other companies).

**Customer suggestions regarding current service**

The survey illustrates that most of the customers are satisfied regarding the current service. Customers specified some improvements that could be done in the current service. The majority of the suggestions from the customers refers that the current service is a good one in which some aspects could be improved. The survey illustrates that few suggestions from the customers refers to bad aspects of the current service provided by HM Consultores. (See Table 2 – Customer Suggestions and also See Appendix C Table C1 – Customer Suggestions).
5.2 Design the Web Platform

In the beginning of this chapter the study will present the need of designing a web platform (which will include two interfaces: Client interface and manager interface).

After specifying the requirements of the interfaces the study will present the two interfaces (Client Interface and Company’s Manager interface), both explained with detailed information.

Each screen that will be presented has a “green circle” that is helpful for the client to know what is his current position in the platform (the current screen that is viewed).

5.2.1 The need of designing a web platform

Customer satisfaction regarding the current service is high (many companies appreciate the current service). All the communication channels (email, phone and meetings) between the customers and the employees will be kept. The majority of the customers refer to the need of having a web platform where all their project’s information could be visualized at any time of the day, having just the internet connectivity available (See Appendix C, Figure C.9 – Survey Results_Customer need of having a web platform).

The employees of HM Consultores want to improve the current service by creating a web platform for the clients. The web platform will have 2 interfaces:

- **Client interface:**
  - The client must have the possibility to view information about his projects (relevant information must be available in a summary and also the client must have the possibility to view more detailed information regarding his projects);
  - The client must have the possibility of upload and download documents that are needed related to a specific project;
  - The client must have the possibility to interact with HM Consultores Employees.
- Manager interface
  - The manager must have the possibility to add information if needed;
  - The manager must have the possibility to send messages/documents to a specific client or to multiple clients;
  - The manager must have the possibility to upload and download documents.

Both interfaces must be user friendly. Most relevant project’s information must be put on both interfaces as a summary and with the possibility to view more detailed information regarding a specific topic of the project. The path to access a specific information about the project must be very short (no more than 3 clicks). All the information that will be put on the interfaces must be easy to visualize.

All the requirements above were discussed during the internal process phases in the internal meetings (between the researcher and employees) and also in the first focus group (between the researcher and employees).

The information gathered from the first focus group is the following: The Key Account, Business Unit Director, Project Manager, PPI technicians and CFO must have access to the platform.

In order for the employees to login into the platform they will use a static password rather than a temporary one (temporary password represents the password that is active just for several seconds, after several seconds the password is not eligible anymore, another password must be generated).

The platform is a need of improving the current service because all relevant project’s information must be put in one place where the client can visualize it at anytime, anyplace.

The platform will avoid the risk for the clients of asking the HM Consultores employees about the same documents or about the same information. The platform will simplify the work for the clients because the clients will have the possibility to visualize all the information they need and also to upload/download all the documents they need regarding their projects.

The platform is another channel of communication between the employees and the clients, but having the platform available will not eliminate the existing communication channels (email, phone calls and meetings).

The platform must be open for future developments. The platform must be reliable, the clients must have quick access to the information they want to visualize.
5.2.2 Design Client Interface

Observation: All icons that are used on interfaces are taken from Google images:

The Client interface is designed in order to have access to all the information he needs regarding his projects.

The Client will receive from HM Consultores a NIF and a static Password in order to enter into the platform. The password can be changed if the Client wants to do this (See Figure 18 – Client interface_Log In).

A main screen appears by default when the Client will enter after he will Log in with a NIF and password into the platform. The screen is divided into 3 parts:

- First part (the left column) where are displayed for the Client the Document Archive (where the client can choose to Upload or to Download documents), Publication Rules, FAQs and HM Consultores Contacts.

- The second part is represented on top of the screen, where the Messages and a specific Project Calendar are available for the Client to access.

- The third part is in the middle of the screen, where all the necessary/relevant information regarding each project is displayed (relevant project information: Project Name, Internal
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Project ID number, Conclusion Date, Execution Rate, Investment executed, Total investment, Money received, Percentage of total investment, and the Project State).

**OBSERVATION:** In top left of the Screen are displayed the Logo of HM Consultores and the “Home Button”. In top right of the screen is the “Logout” button in order to exit from the platform (See Figure 19 – Client interface_Main screen).

![Figure 19 – Client interface_Main screen](image)

After the Client will click on a specific project a main screen will be displayed. In this screen there are 2 sections of information:

- First one, on middle top, where are represented General Information (Project Number, Name of the company, Project Manager assigned, the general Project State, Aviso de abertura and Medida) and the Client information that he must know about accessing the online platform for his project (Entity, Login and Password).

- The second section, in the middle bottom represent icons that are connected to more details regarding Client Project (the client can view details regarding Application, Contract, Billing, Investment, Payment Request, and also he can view all of them in just one screen by clicking on “Documents”) (See Figure 20 – Client interface_Project Details).

![Figure 20 – Client interface_Project Details](image)

**Project Application screen** contains the following details for the client’s project: Project number, Entity, Submission date; details regarding Investment: Starting date, Conclusion date, total investment, Eligible; details regarding Incentive: Refundable and Not Refundable. In the bottom of the screen the Client has the possibility to upload the necessary information regarding the Application. It is displayed the Document name, the type of the Document (PDF, Word, Excel), Uploaded date – which is the date when the document was uploaded on the platform, Download status – represents the status of the document, if the Client already downloaded the document or not, and Download date – representing the date when the Client downloaded the document (See Appendix B, Figure B.1 – Client interface_Project Application).

**Project contract screen** contains the following details for the client’s project: Date, post project; details regarding the Investment: Starting date, Conclusion date, Total Approved, Eligible Approved, Incentive rate; details regarding Incentive: Refundable and Not Refundable; and other 2 more project details: Achievement award and Project Merit. In the bottom of the screen the Client has the possibility to upload the necessary information.
Billing screen contains the following details for the client’s project: Payment Conditions (Application Delivery, Decision Announcement, Technical Assistance), a table of Billing Orders (Date, Registration Number, Amount and Observations). In the bottom of the screen the Client has the possibility to upload the necessary information regarding the Application. It is displayed the Document name, the type of the Document (PDF, Word, Excel), Uploaded date – which is the date when the document was uploaded on the platform, Download status – represents the status of the document, if the Client already downloaded the document or not, and Download date – representing the date when the Client downloaded the document (See Appendix B, Figure B.2 – Client interface_Project Contract).

Investment screen contains the following details for the client’s project: a table with the following fields: Designation, Acquired, Market, Contract (Investment, Eligible, SNC), Achieved (Investment, Eligible, Certificate), and Eligible deviation. In the bottom of the screen the Client has the possibility to upload the necessary information regarding the Application. It is displayed the Document name, the type of the Document (PDF, Word, Excel), Uploaded date – which is the date when the document was uploaded on the platform, Download status – represents the status of the document, if the Client already downloaded the document or not, and Download date – representing the date when the Client downloaded the document (See Appendix B, Figure B.3 – Client interface_Project Billing).

Payment Request screen contains the following details for the client’s project: Execution Summary (Total Eligible, Incentive total, Total Certificate Eligible and Execution Rate). Also a table regarding Payment request is available for the client in which he can view details regarding Type of the payment Request, State, Submission date, Investment Eligible, Certificate Eligible, Incentive Received, Assigned to. In the bottom of the screen the Client has the possibility to upload the necessary information regarding the Application. It is displayed the Document name, the type of the Document (PDF, Word, Excel), Uploaded date – which is the date when the document was uploaded on the platform, Download status – represents the status of the document, if the Client already downloaded the document or not, and Download date – representing the date when the Client downloaded the document (See Appendix B, Figure B.4 – Client interface_Project Investment).

Documents screen contains the following details for the client’s project: all the documents that the client wants to download are grouped by Application, Contract, Billing, Investment, Payment Request or Other Documents. This screen is designed in order for the client to be more easy to access all the documents from one place. The client has the option to download all Documents by pressing the “download all Documents” button (See Appendix B, Figure B.5 – Client interface_Project Details_Documents).
In “Messages” screen the client has the option to view the available information about INBOX or to view the information regarding ALERTS. The field “Total” represents the total messages that are in “INBOX” and “ALERTS”. The field “Unread” represents the number of unread messages that are available in “INBOX” and “ALERTS” (See Figure 21 – Client interface_Messages).

The Inbox screen contains information where there is a table that includes details of the messages received: Date, hour, Message text, Relevance (Low, Medium, High). By relevance, the client will have displayed on the screen the most important messages:

- messages with low relevance: represent messages that the client can respond or not;
- messages with medium relevance: represent messages that for the client could be important to respond;
- messages with high relevance: represent messages that the client must respond quickly because contain information that is very important to be read.

The client can choose how to sort the messages in the table: by date (newest - oldest), relevance (highest - lowest), hour (early morning – late evening). If the client wants to send a message to HM Consultores, the client can do it from the current screen (See Appendix, Figure ) (See Appendix B, Figure B.7 – Client interface_Messages_Inbox).

The Alerts screen illustrates a table that includes information about the event name, deadline for the event and the “Days remained” for that event. All the alerts are represented in 3 colours (Red – Urgent Alert, Orange – Medium Intensity of the alert, Green – Normal Alert). Below the table is represented a box where the client can view the information details regarding each alert by clicking on each alert. If the client wants to send a message to HM Consultores, he can do it from this screen (See Appendix B, Figure B.8 – Client interface_Messages_Alerts).
In Document Archive - Download documents screen is illustrated information that the Client can choose to select a specific project and he has the possibility to download documents by group (Application, Contract, Billing, Investment, Payment Request, Other documents) (See Figure 22 – Client interface_Download Documents).

In Document Archive - Upload documents screen is illustrated information that the Client can choose to select a specific project and he has the possibility to upload documents by group (Application, Contract, Billing, Investment, Payment Request, Other documents) (See Appendix B, Figure B.9 – Client interface_Upload Documents).

In Publication Rules Screen the client can access online information regarding each program that is available on the platform: Norte 2020, Centro 2020, Compete 2020 etc (See Appendix B, Figure B.10 – Client interface_Publication Rules).

In Text Message screen is represented a field that can be filled in with the message that the client wants to send to HM Consultores employees (See Appendix B, Figure B.11 – Client interface_Send message).

In FAQs screen are represented the most frequent questions that Clients Addressed. The client can also add a Question if he has doubts regarding his project. There are 2 types of answers
- one answer that is given by HM Consultores
- several answers that are given by other Clients (See Appendix B, Figure B.12 – Client interface_FAQs).

In Contacts screen the client can view information regarding the address of the company, general phone number and the contacts of different members from HM Consultores: BUD, Project Manager, CFO etc. Each Contact has an email icon on the right of the screen in order for the client to be more easy to send a specific email to the person he wants (See Appendix B, Figure B.13 – Client interface_HM Consultores Contacts).
In Calendar screen, the client can select a specific date and all the closest deadlines, for the next event associated to each project, will be displayed (See Appendix B, Figure B.14 – Client interface_Calendar).

5.2.3 Design Manager interface

Client Login Screen illustrates that the client can login into the platform using an “User” and a “password” that the client will receive from HM Consultores (See Figure 23 – Manager interface_Login).

Figure 23 – Manager interface_Login

Figure 24 – Manager interface_Main Screen
Manager Main Screen is divided in 3 parts:

- top of the screen where he can click on “Messages”,
- left of the screen part where he can access “Document ARchive”, Publication Rules, FAQs and Contacts,
- middle of the screen which also is divided in 3 sections:
  - middle top left ( where the client can Send a document to a specific client ),
  - middle top right ( where the manager can send a message to a specific client )
  - middle bottom ( where the manager has the possibility of sending messages and documents to multiple clients ). By selecting “Destination” , the document , that the manager want to upload, will go to a specific folder/group of documents (Application , Billing, Contract, Investment, Payment Request).

(Figure 24 – Manager interface_Main Screen )

In **Messages screen** is represented a table where the manager can view all the messages that he sent to clients. In this screen the manager can select the client, insert the information text and select the relevance of the information (Low/Medium/High) (See Appendix B, Figure B.15 – Manager interface_Messages ).

In **Document Archive – Download Documents screen** is illustrated the possibility of the manager to select a specific client and a specific project associated, and he can download all the documents that the client sent to him (all documents are grouped by Application, Contract, Billing, Investment, Payment Request, Other documents) (See Appendix B, Figure B.16 – Manager interface_Download Documents ).

In **Document Archive – Upload Documents screen** the manager has the possibility to upload documents and to send them to a specific client and to a specific project associated (See Appendix B, Figure B.17 – Manager interface_Upload Documents ).

In **Publication Rules screen** the manager in order to add a publication he must add the image and the link associated (See Appendix B, Figure B.18 – Manager interface_Publication Rules).

In **FAQs screen** the manager can answer to all the questions that he received from the clients (See Appendix B, Figure B.19 – Manager interface_FAQs ).

In **Contacts screen** the manager can add the company Address, the general phone number, and also he can add employees and their contact details (Name, Position in the company, Email, Phone number) (See Appendix B, Figure B.20 – Manager interface_HM consultores Contacts).
5.2.4 Usability of the interfaces

In this chapter will be presented information regarding the usability of the client interface and also the usability of the manager interface. The client and the manager interfaces are designed in order to be user friendly. All the information that is available for the client and for the manager is placed in a specific location of the screen (some information placed on top of the screen, some information placed in the middle of the screen or on the left part of the screen). An important aspect for the client and also for the manager is the number of clicks that they do in order to have access to information of a specific screen.

For the Client, the interface was designed in order for him to view information regarding his projects, to have the possibility to upload and download documents and also to interact with HM Consultores employees.

For the manager, the interface was designed in order for him to add information, to send messages to clients, to upload and download documents.

The screen placement of the buttons and of the information is also very important for the client and for the manager.

Client interface usability

For the client the most important aspects of having the interface are: to view relevant information regarding his projects, Upload documents, Download documents and send messages to HM Consultores. For all these aspects, the client has to do a maximum of 2 clicks on the interface in order to have access to information of a specific screen (See Figure 25 – Client interface usability-path length).

![Figure 25 – Client interface usability_path length](image)

The interaction between the client and the Client interface is represented in Figure 26 – Client interface usability_interface interaction. First the client must Log in into the system by introducing a NIF and a password; the client has to wait for the validation of the NIF and password that he introduced. If the NIF and password are correct then the client has access to the main screen from where he can decide for what reason he wants to use the interface: for viewing relevant information regarding his project, for upload documents, for download documents or for sending messages to HM Consultores.
Manager interface usability

For the manager, the most important aspects of having the interface are: to have the possibility to add information, to send messages to clients, to upload and download documents. For all these aspects, the manager has to do 1 click on the interface in order to have access to information of a specific screen (See Figure 27 - Manager interface usability_path length).

The interaction between the manager and the manager interface is represented in Figure 28 – Manager interface usability_interface interaction. First the manager must Log in with an user name and password, and wait until the Backend system validates the user and password. If the user and password are ok then the manager can have access to the main page of the interface from which he can choose for what reason to use the interface: add information, upload/download documents or send messages.
5.3 Improve the current service by creating a web platform

The survey illustrates that 21 companies (91.30%) want to have a web platform where all their project’s information is updated is easy to manage (See Figure 29 – Customer_need of designing a web platform).
5.4 Validate the web platform

In order to validate the web platform interfaces (Client Interface and Manager Interface) a second focus group study was done between the researcher and the internal employees of HM Consultores.

All the information that is put in both interfaces are relevant for the clients and for the manager. The interfaces are user friendly because:

- clients have the possibility to visualize all the information they need regarding a specific project;
- clients have the possibility to upload and download documents;
- clients have the possibility to interact with HM Consultores employees;
- clients have the possibility to have quick access to the information they want to visualize (no more than 2 clicks in order to reach a specific project information);
- all the client’s project information is available on the platform in a summary format option and also in a detailed format option.
- Manager has the possibility to add information if is needed;
- Manager has the possibility to send messages and documents to a specific client or to multiple clients;
- Manager has the possibility to upload and download documents;
- Manager has the possibility to have quick access to specific information on the platform (no more than 1 click in order to reach a specific information available on the platform)

Both interfaces are open for improvements in terms of design, maintenance, security of data, available space for the documents that are saved in a specific location (See Appendix D, from Figure D.6 – Second Focus Group_Invitation to Figure D.11 – Second Focus Group_Consent Form_Page 3).
6 Conclusion and future research

6.1 Method used

The method used in this study consisted in 3 stages (Stage 1 – Map the internal process of the company, Stage 2 – Design the web platform, Stage 3 – Validate the web platform). In each of these stages were performed activities by the researcher, were used tools and also were used different types of approaches in order to accomplish the goal of each stage.

The main goal of Stage 1 was to understand the internal process of HM Consultores and to map this process. The goal was accomplished performing different activities inside the company by the researcher. All the activities including “Identify Actors”, “Identify Activities”, “Identify Resources”, “Identify Touchpoints”, “Identify Artifacts”, “Understand each phase of the process”, “Map the process”, “Measure & Understand the customer satisfaction” were done using internal meetings between the researcher and HM Consultores employees. The tool used to map the process, “Bizagi Modeler”, helped the researcher to draw the company’s internal process by highlighting the main actors and their main activities. A survey was used in order to understand the customer’s satisfaction, regarding the existing service.

The main goal of Stage 2 was to design a web platform including a Client interface and a manager interface. The goal was achieved by performing several activities inside the company, including : “Analyze internal process of the company”, “Design client interface”, “Design manager interface”, “improve client interface”, “improve manager interface”. All the activities were performed by the researcher who chose “NinjaMock” as a tool, for prototyping the interfaces. In order to know what kind of information must be put on the interfaces was established internal meetings between the researcher and HM Consultores employees. The First focus group that was used in this study, had it’s usability in understanding the need of HM Consultores to improve the current service by creating a web platform. The blueprints used in this report showed the interaction between the client and the client’s interface and also showed the interaction between the manager and the manager’s interface.

The main goal of Stage 3 was to validate the web platform. The goal was accomplished using the second focus group (between the researcher and HM Consultores employees) and also by establishing internal meetings (between the researcher and HM Consultores employees). All the information that was put in both interfaces (Client interface and manager interface) was validated by comparing the information from the company’s internal process with the information that is available on the interfaces. The interfaces are user friendly because both interfaces contain relevant information to view for the client and for the manager and also because the information available on both interfaces is placed on each screen in an easy way to find it.
6.2 Results based of the method used

All results obtained in each Stage contributed on answering the two research questions presented in the beginning of the report and also contributed on achieving the main goal of designing a web platform.

The Results from Stage 1 – Map the internal process of the company, helped the researcher to understand which are the company’s activities and also to map the internal process of the company. The results from the Survey showed that the majority of Hm Consultores customers are small and medium companies. The survey was sent to 86 customers and the study registered 23 answers from the customers. Most of the customers work with HM Consultores for 1-3 years which is a proof that the current service provided by HM Consultores is a good one in which the customers can have trust. Customer’s observations were majority positive regarding the current service but also some customers specified some gaps in the current service.

The Results from Stage 2 – Design the web platform, helped the researcher understand that the current service could be improved by creating two interfaces (an interface for the client and another one for the manager) which will facilitate the work for both sides. The results from the survey showed that the majority of the customers (21 customers from a total of 23 customers) agree with the aspect of improving the current service by creating a web platform. Even if the customers were satisfied regarding the current service, there is a desire of improving and of having a better service. The results from the focus group realized between the researcher and the HM Consultores employees showed that the web platform must be user friendly and must eliminate work redundancy from the employees (eliminate duplicate work). Took into consideration the fact that several clients ask for the same information for many times, having the platform this aspect is eliminated because having the platform will give the client the possibility to:

- View all relevant project’s information (available in a summary and in detailed format);
- Upload and download all needed documents;
- Interact with HM Consultores employees.

The results from the blueprint showed that the client can use the platform in order to view information, upload/download documents and also to interact with HM Consultores employees. The manager can use the interface in order to add information, upload/download documents and also to have the possibility to send messages and documents to a specific client or to multiple clients.

All these aspects of having an implemented web platform drove to gain more time for the employees (in order to finish their tasks without being interrupted by customers with irrelevant activities such as: repeat the same information for several times) and also drove to an increased customer satisfaction.

The results from Stage 3 – validate the web platform, helped the researcher to achieve to main goal of this study (design a new service web platform). The results from the second focus group showed that all the information available on both interfaces are relevant for the client and for the manager. The information is well placed, easy to find, easy to access, by using a minimum path-length of 2 clicks for the client and 1 click for the manager in order for them to reach a specific information available on a screen.
6.3 Future Development

This project can be improved by the following aspects that can be added:

- Store all the data in Cloud;

  All the data that is available on the platform can be added in Cloud in order to increase the security of the files and documents. Using Cloud the customer satisfaction will increase (all the projects are saved in a place which can be accessed easily using a PC or a mobile phone)

- Create a mobile Application;

  In order to have access to the project information, for the user would be more easier to have installed on his smartphone an Application that allows him to the same operations as the user does using the PC.
References


Microsoft SharePoint, 2017, Share and manage content, knowledge, and applications to empower teamwork, quickly find information, and seamlessly collaborate across the
Designing a service web platform in a B2B context


APPENDIX A: Internal Process of the company

Commercial Phase

Figure A.1 – Commercial Phase_Register proposal

Figure A.2 – Commercial Phase_Create Contract
Designing a service web platform in a B2B context

Application development Phase

![Diagram of Application development Phase](image)

Figure A.3 – Application Development_Assign Project Manager

Application Management Phase

![Diagram of Application Management Phase](image)

Figure A.4 – Application Management_Contract Sign
**Project Management Phase**

Figure A.5 – Project Management_Submit Form

Figure A.6 – Project Management_Assign PPI
Figure A.7 – Project Management_Issue Invoice
**APPENDIX B: Web Platform interfaces**

Client Interfaces

![Figure B.1 – Client interface_Project Application](image1)

![Figure B.2 – Client interface_Project Contract](image2)
Designing a service web platform in a B2B context

Figure B.3 – Client interface_Project Billing

Figure B.4 – Client interface_Project Investment
Designing a service web platform in a B2B context

Figure B.5 – Client interface_Project Payment Request

Figure B.6 – Client interface_Project Details_Documents
Designing a service web platform in a B2B context

Figure B.7 – Client interface_Messages_Inbox

Figure B.8 – Client interface_Messages_Alerts
Designing a service web platform in a B2B context

Figure B.9 – Client interface_Upload Documents

Figure B.10 – Client interface_Publication Rules
Figure B.11 – Client interface_Send message

Figure B.12 – Client interface_FAQs
Designing a service web platform in a B2B context

Figure B.13 – Client interface_HM Consultores Contacts

Figure B.14 – Client interface_Calendar
**Manager interface**

Figure B.15 – Manager interface_Messages

Figure B.16 – Manager interface_Download Documents
Designing a service web platform in a B2B context

Figure B.17 – Manager interface_Upload Documents

Figure B.18 – Manager interface_Publication Rules
Figure B.19 – Manager interface_FAQs

Figure B.20 – Manager interface_HM consultores Contacts
APPENDIX C: Survey results documents

Survey Results

Figure C.1 – Survey Results_Company size

Figure C.2 – Survey Results_Area of activity

Figure C.3 – Survey Results_Customer time period of doing business with HM Consultores
Designing a service web platform in a B2B context

Figure C.4 – Survey Results_Current service overall customer satisfaction

Considera que a informação recebida, via telefone, relativa ao seu projeto, durante a prestação do serviço Projetos & Incentivos foi/é:

23 responses

Figure C.5 – Survey Results_Customer satisfaction_Phone information received

Considera que a informação recebida, via email, relativa ao seu projeto, durante a prestação do serviço Projetos & Incentivos foi/é:

23 responses

Figure C.6 – Survey Results_Customer satisfaction_Email information received
Considero que centralizar toda a informação relativa ao meu projeto de investimento num só local é:
23 responses

- Muito difícil: 47.8%
- Difícil: 13%
- Nem difícil nem fácil: 8.7%
- Fácil: 30.4%
- Muito Fácil: 13%

Figure C.7 – Survey Results_Customer satisfaction_Store information in one place

Considero que gerir toda a informação relativa ao meu projeto de investimento é:
23 responses

- Muito difícil: 34.8%
- Difícil: 30.4%
- Nem difícil nem fácil: 30.4%
- Fácil: 30.4%

Figure C.8 – Survey Results_Customer satisfaction_Manage information

Considero que seria útil existir uma plataforma online onde toda a informação relativa aos meus projetos de Investimento estaria centralizada e atualizada, permitindo um fácil acesso e consulta:
23 responses

- Discordo Totalmente: 56.5%
- Discordo: 34.8%
- Não tenho opinião: 6.1%
- Concordo: 30.4%
- Concordo totalmente: 30.4%

Figure C.9 – Survey Results_Customer need of having a web platform
Designing a service web platform in a B2B context

Figure C.10 – Survey Results_Customer satisfaction_Continue with the current service

Figure C.11 – Survey Results_Customer satisfaction_Recommend current service to other companies

Table C.1 – Customer suggestion
**APPENDIX D: Focus group documents**

**First Focus group: “Create a web platform”**

- **Focus group Participants**

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Name</th>
<th>Position in the company</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Paulo Pires</td>
<td>Business Unit Director</td>
</tr>
<tr>
<td>2</td>
<td>Marta Ferreira</td>
<td>Assessor da Direção</td>
</tr>
<tr>
<td>3</td>
<td>Ana Ribau</td>
<td>PI Consultant</td>
</tr>
</tbody>
</table>

Table D.1 – First Focus Group_Participants

- **Focus Group Questions**

<table>
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<tr>
<th>Nr.</th>
<th>Question</th>
<th>Estimated time (minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>How this platform will influence your work?</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>What impact do you think this platform will have for your clients?</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Will this platform be useful for your clients? Why? Could you please give me more details?</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>How do you think the information should be placed on the interface? Why? (Do you think the interface should have a lot of information displayed? On the interface must be displayed the relevant project’s information?)</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Who do you think should have access to the interface as admin?</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>How important do you think the platform should be from the point of view of future development?</td>
<td>5</td>
</tr>
</tbody>
</table>

Table D.2 – First Focus Group_Participants
Second Focus group: “Validate web platform Interfaces”

- **Focus Group Participants**

<table>
<thead>
<tr>
<th>Nr.</th>
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</thead>
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<tr>
<td>3</td>
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<td>PI Consultant</td>
</tr>
<tr>
<td>4</td>
<td>Sofia Ventura</td>
<td>PI Consultant</td>
</tr>
<tr>
<td>5</td>
<td>Viviana Ferreira</td>
<td>Key account</td>
</tr>
</tbody>
</table>

Table D.3 – Second Focus Group_Participants

- **Focus Group Questions**

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Question</th>
<th>Estimated time (minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Could you please share with me your opinion regarding the Client’s interface?</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>Could you please share with me your opinion regarding the Manager’s interface?</td>
<td>20</td>
</tr>
</tbody>
</table>

Table D.4 – Second Focus Group_Questions