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DE SERVIÇOS E GESTÃO

**Customer Support processes analysis and improvement: designing
a model for an *Agile* IT enterprise**

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Master Thesis

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*To the dedication, professionalism and enthusiasm
of the msg life Iberia people*

Abstract

In a company where agile principles are very present on the product development, there is a growing need to develop services. The trend is to think in services and products together and so, *msg life Iberia* is focusing on the client's needs. From this context appeared the need for this dissertation as well as organizing customer support in the company. So a structured customer support model was created in order to be used on *msg life Iberia's* future projects entering the support phase.

The support model consists of a set of services that encompasses all services provided to the customer in the post-production period. Structurally, the model is divided into actions in the different stages (backstage and frontstage), responsibilities, roles and also an operational perspective. The last is reflected in the measurement of the model: definition of service level agreements (SLA) and performance metrics. These are the topics covered in detail in order to fit the present dissertation, not only in the specific case study in which the design was based, but also to be a versatile model able to be used in other projects in the future.

In order to always look for the customer's vision and how to better meet his needs, the service experience blueprint (SEB) tool was used to design the processes/actions performed. Thus, it is intended to outline the actors' behavior when there is a request from the customer since the first point of contact to the final delivery of the service, going through the various levels of interaction.

The work developed allows to conclude that the current situation of *msg life Iberia*, in terms of customer support, presents several opportunities for improvement. During the development of this project, through the analysis of the support processes and the service redesign, it was possible to clarify ideas that previously were dispersed. It became a new opportunity for innovation and creation of value for the support team and for the company. However, this is not intended to be a closed work and there are some improvements that can still be made and are exposed as future work in this dissertation.

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List of abbreviations

BPMN - Business Process Modeling Notation

Cc - Copy carbon

ERP - Enterprise Resource Planning

I&A - Inspect and Adapt (activities)

IBM - International Business Machines Corporation

IT - Information Technology

ITIL - Information Technology Infrastructure Library

ITSM - Information Technology Service Management

MESG - Master in Services Engineering and Management

MSD - Multilevel *Service design*

PM - Product Manager

PO - Product Owner

QA - Quality Assurance

SEB - Service Experience Blueprint

SLA - Service-Level Agreement

UML - Unified Modeling Language

USA - United States of America

1 Introduction

The *agile* methodology has been widely used by IT companies. With the *agile* principles, the companies intend to be faster and better in the development of their products and meet the needs of customers, involving them in the processes that give rise to the products and services. The services also play a more relevant role in this area and in particular in the reality of *msg life Iberia*. Nowadays, the company has been developing these services along with their products, putting the customer in the center of the most important decisions. With the experience of past projects and a proactive support team, the services have an increasing relevance in the company. This changing reality created a need to organize, design and think in order to achieve continuous improvement. Customer support is, nowadays in the company, the way to provide services to customers. *Msg life Iberia* has currently several projects with support contracts and others that will soon start the support phase. Taking this into account, the lack of a greater definition on the customer support model was becoming noticeable.

The present dissertation contains an analysis of the existing processes related to customer support. After this analysis, a customer support model was created in order to improve the customer service processes. This chapter presents a description of the dissertation objectives, its organization and the case study on which it is based.

1.1 Case study

Msg life Iberia is a company with a primary focus on life insurance software solutions, having a customer portfolio containing both national and international companies. Despite *msg life Iberia* normally working with other *msg life* subsidiaries spread across the world while developing the projects in a distributed environment, it has the ability to develop some smaller projects individually (*O Jornal Económico*, 2018b). With these internally developed products, the company has been growing and becoming a reference in the insurance market (*Exame*, 2016).

Msg life Iberia has been focused on increasing his team, not only in size but also in skills. The company base their development and continuous improvement believing that the evolution is not only in the technology but also in the customer (*O Jornal Económico*, 2018a).

One of the products developed independently from the other *msg life* subsidiaries was a document generation system. It was developed for a company that already had a document generator but considered it outdated both graphically and technologically to meet their needs and their vision model. Besides the development of this product, the project management, tests, training sessions and initial support are also part of the project scope.

This customer has an information system department, so it has some technological support. However they are subcontracting two companies: one to manage the documents database and another, *msg life Iberia*, to develop the document generator. This means that *msg life Iberia* had to work with two different development teams: one being responsible for the data used to generate the documents and another one, the customer team, responsible for the project requirements and its implementation.

This project has several phases:

1st phase - With a three months durations it had as main goals to adapt the document generator engine in order to take into account the customer data structure, configure the generator output to the new layout and create an administrative console that will also allow to view the generated documents.

2nd phase - During this phase, also called production, the customer starts to generate the documents using the newly developed console. Besides the initial assistance to help the customer getting used to the new procedures, in this phase are also corrected small bugs that may appear. There is a period of three months of warranty in which these questions are addressed.

3rd phase - After the project conclusion and the end of the previously stated warranty a customer support contract will be signed. This phase introduces the customer support services, using of the customer support model designed in this dissertation.

1.2 Purpose and objectives of the dissertation

The present dissertation focuses on creating a customer support model. The model is designed based on the customer described in the previous section, however it is intended to be as flexible as possible. It is important that this model is adaptable to future projects with customers with different needs and projects with different scopes.

It is also important to analyse the processes used so far, especially by the customer service team. Based on this analysis, a structured customer support model was designed. The continuous improvement and the customer vision are essential in this approach. It is important to guarantee that they are integrated in the model design process. The customer support model has to be an integrated system taking into account the customer needs after the production phase started, the company business goals and the support team capacity. Bellow are stated the main goals of this dissertation:

- Client support processes analysis and improvement;
- Identify the support model requirements under the customer's perspective;
- Analyse the best process design tool according to both the company and the customer needs;
- Design a model capable of delivering a fast response to the customer's questions and issues;
- Design and trace metrics to understand customers and tracking enterprise resources;
- Allow the model to be versatile enough to enable its implementation in different projects and to be adaptable to different realities and needs.

1.3 Motivation

As this dissertation was written in a business environment, there were a lot of possibilities on how the theme could be approached. Currently, *msg life Iberia* is developing several projects and this dissertation was integrated on the customer service team. This team focus on the customer support services that are sold by the company along with the softwares. During this period, the experience did not revolve exclusively around the project where the model would be implemented. There were also meetings outside that project. Following *agile* principles,

which will be addressed further, the different teams don't work independently but, instead, constantly share knowledge and help. This behaviour aims to continuously improve the group as a big team. Those meetings allowed to increase the knowledge about the work developed with different clients, especially in terms of services. That allowed a wider perspective in order to design a model that fit the client support needs of *msg life Iberia*.

1.4 Methodology

The literature review was the first phase of the internship. The goal was to study the themes that were more related to the work done at *msg life Iberia*. This study, which started as an interaction with the company topics, ended up taking part of the state of the art chapter.

As stated previously, *msg life Iberia* conducts frequent meetings so the observation started since the first day. The best way to identify customer support processes was to experience them. Some previous documentation was also consulted to understand them. However, it is when the phone rings or there is an urgent e-mail from the customer that it is really possible to understand how the customer support really is happening.

It was based on those day-to-day notes and some interviews conducted to customer support team members that the customer support model requirements and the methodology here presented were defined. That data was also important to help define the metrics used to evaluate the model, defining the most important elements to measure once the model is used.

Afterwards it was necessary to define a case study for the model. Despite knowing that the model will be used by *msg life Iberia* customer service to provide support to all the customers with projects entering support phase, it is not possible to start by designing a model so vast that cover all the possibilities. So, the case study chosen was a relatively small new project, so that it could be easily understood and allowed a faster analysis and extrapolation.

After the requirements on which the model will be based were defined and having a good understanding of both the processes and the scenario, the next step was to define the methodology used to design it. Based on the first literature reviews and an additional one about *service design*, the chosen method was Service Experience Blueprint. The method was adapted to the specific needs and organization of *msg life Iberia*. After reorganizing the method to fit better the company environment, the final representation of Service Experience Blueprint was achieved. This final representation contains the customer points of contact, interactions between users and service as well as the technologies involved.

However, according to the *msg life Iberia* point of view, the support model would only be complete if it could be measured and quantified. So, some metrics were designed according to the requirements already mentioned above in order to measure specific parts of the model, thus allowing the model to be analysed at a higher level.

With the same objective, in the conclusions there are some suggestions on how to possibly improve the service. Here the methodology was to gather suggestions received during these months and the results of a survey done to a group of collaborators. This survey allowed them to informally give suggestions of future improvements.

1.5 Structure of the document

The dissertation is divided into four main sections, each one containing several chapters.

The first section, introduction, addresses the thesis context, explaining the case study, the objective and the motivation that originated it.

The second section, state of art and current enterprise reality, starts with a vision on the company and its organization, focusing on the Customer Service Team and how it operates. As *msg life Iberia* uses an *agile* methodology, next an overview on this type of methodology is presented, focusing on the roles, artifacts and main basis. This introduction allows the next chapter to address how the company uses *agile* methodologies, specifically *scrum*. In the next chapter the support models are introduced, analysing what already exists on customer support models in terms of processes, how to design them, what are service level agreements as well as metrics on these models. Finally, the last chapter explains what actually is done in *msg life Iberia* regarding customer support.

In the third section, proposal for customer support model, the customer support model is presented across multiple chapters. First, the requirements to the model regarding the team and the customer needs are presented. Finally, the model is designed resorting to processes, SLA and metrics.

In the fourth and last section, conclusion and future work, an overall view of everything that was developed is presented and discussed. Additionally a set of conclusions on the work done are exposed along with some ideas for future work to develop regarding customer support models.

2 State of art and current enterprise reality

This chapter presents a literature review on the theoretical topics relevant to this dissertation. This review aims to increase the knowledge on the area as well as enable to understand how the topics will be applicable to the solution developed. As it is intended to have a more complex dimension than just a literature review, it is here presented the actual context of the company. When a theoretical topic is presented, the next chapter is an analysis on how it is applied in the *msg life Iberia*'s context.

2.1 The enterprise

With more than 35 years of experience *msg life* developed software for insurance companies and has been setting standards for digitalizing and innovating insurance processes. With a strong presence in the market, the company has laid the foundations towards a relevant and recognized position in the insurance market, reinforced and validated by their customers' trust. Spread across Europe and the USA, it is a company with 900 employees.

As part of this innovative group, *msg life Iberia* is based in Porto and have two more offices in Iberian Peninsula. This company aims to look at the dynamic insurance market as an opportunity to be innovative and future driven. *Msg life Iberia* has a balanced approach between tradition and innovation to reach customers, following the fast pace of the market but don't forgetting conventional actions. For this company, the differentiating factor is the deep knowledge in insurance. This way it is not just a software house developing solutions for insurance companies, but instead is a company with a deeper understanding of customer needs and wishes, always balancing between services and products in order to materialize them. To do so, the company has a dynamic and growth-oriented work environment characterized by flat hierarchies and close communication channels. The company's spirit is based on using projects as a challenge to motivate people to keep learning. The company's motto is: share, learn and grow together. Therefore, *msg life Iberia* has a stake in rewarding performance and encourage personal vocational education and training.

Msg life Iberia follows the *agile* methodology, being organized in different roles but with almost flat hierarchies, working together in an open space office. The company has four main departments (figure 1): administration, customer service management, product management and development management.

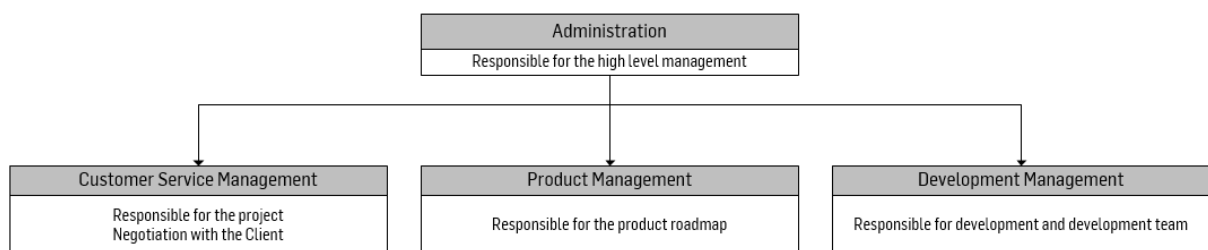


Figure 1 - *msg life Iberia* control level

Leading the administration there is a director who is liable for taking both strategic, administrative and financial decisions. Also on the administration, and immediately below the director in the hierarchy, there are marketing manager and administrative assistance, which constitute small departments, however important in assuring the maintenance of a reliable management. The other departments focus more on products, services and projects developed by *msg life Iberia*.

The product manager (PM) in the company has the responsibility to guarantee the product vision during the development process. At *msg life Iberia* the PM is the main responsible for the standard products developed in the company as well as selling them. As he takes part in the products development, the PM has an extend knowledge about standard products in *msg life Iberia* and also *msg life*. With that information it is easy for him to adjust the best product to sell to new clients while attract new ones. Every change, adaptation or customization must come through to his approval.

The customer service manager is responsible for interacting with the client, since the proposal until support, being the leader of the customer service team. He leads the negotiation with the client with the director participation. The customer service team is important to assure effective implementation of projects and their support after they go live. To assume this role, the customer service manager has knowledge about the *msg life* products and all the company resources. His expertise must comprise business analysis, insurance market, software development, valuable communication skills, leadership and teamwork.

The development manager leads the development team. To do it, he needs to know the tasks defined for each *sprint*, make effort estimates and deliver the work to the team. As *scrum master* he is also responsible for guaranteeing the correct application of *scrum* methodology and assuring that everyone follow the *agile* guidelines. He has the closest relationship with the development team, however always giving them freedom to make their own decisions.

Msg life Iberia has skilled workers in programming and insurance (mathematics), but also in customer assistance, business, administration and marketing. For this dissertation the team which is important to highlight is the customer service team. This team is a multidisciplinary team and can be represented like shown on figure 2.

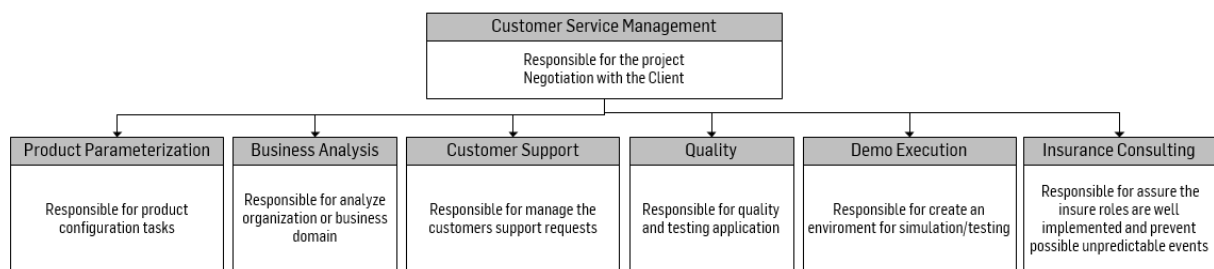


Figure 2 - Customer service team

The team is led by the customer service manager which has knowledge in different areas: programming, insurance, business, customer relationship and management. This manager is the responsible for the team. The product parameterization is essentially specialized in mathematics, programming and in the insurance business and take the responsibility for the specification of the software features and customers' needs. The business analyst also is part of the team. He is responsible for analyzing the organization and the business as well as

ensuring the company's vision always focused on continuously improving the project implementation. He works at both company and client level.

Customer support is the first line of support to the client with whatever they need. After the project enters the production phase and the client needs to clarify, fix or change anything in the product, it is the customer support responsibility to help him. Customer support agents are also responsible for creating and managing tickets, which are registered as a new event in the issue tracking software. In the *msg life*'s specific case, the software used to do this management is JIRA. These tickets are constantly updated to reflect their evolution as the issues are being fixed or new features added into the product.

The customer support team is also responsible to test and evaluate the quality of the product before it is accessed by the client. Sometimes these testing and quality assurance (QA) responsibilities are cumulative with client support, business analysis, demo execution and even insurance consulting. It depends on the projects, but most of the time there are more collaborators working on testing the product than those assigned to other tasks in order to ensure quality and minimize future problems. With this focus in mind, it is also necessary to rely on insurance consulting based on deep knowledge on insurance and *msg life* products to anticipate potential harmful scenarios both to the client and *msg life Iberia*.

2.2 Agile project management

In the last decades many methods regarding software systems development arose, intending to connect this process to essential sciences for this area: engineering and mathematics. Sometimes the customers' needs are forgotten and in most cases the client doesn't need the most well developed code, what he would like is the most functional one that meets his needs. Providing a practical system must be the focus of the software development team (Layton, 2012).

The traditional way to manage projects and software development requires a huge effort during the software requirement phase. This process is so intensive that sometimes the requirements change before development even begins. However, there are many drawbacks in this approach. When the focus is just in technical problems and the starting phase of a project requires a lot of resources, it may turn too expensive or complex. Thereby, the *agile* project management highlights as a solution for complex projects (Cervone, 2011).

Nowadays, in software development, the most well-known and used methodology is *agile*. In contrast to traditional software production methodologies, *agile* adopt an iterative development model focused on people and their needs. *Agile* allows implementing a facilitating management based on a constant on-site customer involvement. Over the development process the team members collaborate with each other and, doing so, it is easier to share information and knowledge. The product features are labeled with level of importance/urgency and their testing is made through iterations with time and tasks well defined previously. Regarding the documentation, it is only generated the truly essential one for the project and, therefore, the team doesn't waste time in documentation fulfillment instead of working on functional and technical issues (Hoda *et al.*, 2008).

The origin of *agile* project management dates back from 1995 OOPSLA conference where it took place the first discussion about this method. Jeff Sutherland and Ken Schwaber met several representatives from software development management and discussed the best alternative to documentation driven and complex software development processes. As a result

of this meeting emerged the “Manifesto for *Agile* Software Development”, signed by all participants (Sutherland and Schwaber, 2001). This manifesto can be consulted in APPENDIX A.

In *agile* methodology there are many types of projects and several different ways to apply *agile* methods. Some examples are: extreme project management, adaptive project management, dynamic project management method and *scrum*, being the latest most often used.

2.2.1 Scrum

Scrum is an *agile* development methodology developed by Jeff Sutherland and Ken Schwaber and has been used to manage software development since the early 1990s. *Scrum* uses incremental and iterative work beats that are also called *sprints* or iterations (Sutherland and Schwaber, 2017). It is a framework that allows people to address complex problems, delivering value productively and creatively. *Scrum* includes various processes and techniques in order to make clear the relative efficiency of product management and develop always improving practices (Lacey, 2012).

Scrum aims to move control from a central scheduling and dispatch authority to the individual teams doing the work. Delegate decision making to independent agents, who are close to the work, is more necessary as much complex the project is. *Scrum* is also a good tool for project management due to the short distance between customers and developers. That proximity is translated into feedback loops that match not only the wish list and implementation but also the investment and return on investment. When a system needs to cover constant changes and the technology won't stop evolving, working through short cycles of discovery is the best method to solve problems. *Scrum* is focused on delivering the highest priority business value as defined by the customer. For that, delivering complete product increments will help to ensure the business value of the final delivery. Complete increments only are possible to deploy if these different parts are tested and adapted to the customer reality, so *scrum* forces to test and integrate them and encourages to release to production. Fundamentally, *scrum* empowers the development team and satisfies customers while focusing on making fact-based decisions through a learning process (Schwaber, 2004).

Scrum Roles

In *scrum* there are three main roles: product owner, *scrum master* and development team, which are self-organizing. This means that the teams are responsible to decide the best way to fulfill the objectives, being self-sufficient and independent from outside management. These teams are designed to be flexible, creative, productive and cross-functional, having all the skills required to achieve the project goals.

- *Product owner* – is responsible for maintaining the correct business perspective, plays the role of maximizing the product value and the development team work. The PO is the person responsible for maintaining a clear view of the client's wishes, priorities and goals, i.e. requirements.

- *Scrum master* - is responsible for guaranteeing that *scrum* is understood and well implemented by users. He works with the PO to help find effective *product backlog* management techniques and coaches the team in self-organization. His role includes providing the best conditions to the team, thus being in charge of adding and removing

elements that may affect the productivity. The *scrum master* is not accountable for managing scope, cost or risk.

- Development team - should be composed by four to eight elements and have cross-functional and self-organizing skills to develop the product. In the *scrum* approach there are no traditional managers, instead it relies on self-organizing teams that work in internal agreement. It is the team responsibility to decide how to convert the *product backlog* into increments of potentially releasable functionality. There are no defined titles for team members, regardless of the work being performed by each one. A team member may have specialized skills and areas of focus, but accountability belongs to all team. As the team has all the skills combined, its cross-functionality enables it to create a full product increment (Sutherland and Schwaber, 2017).

Scrum Activities/Events

Scrum is heavily based on regular time-boxed events scheduled in project development agenda and with a maximum duration rule. In these events all attendees could speak in a freely way and share their knowledge, experiences and doubts through the project execution. The whole idea of *Scrum* is transparency and the open and clear communication that should happen in these meetings should help everyone to be transparent about their work and enhance the team spirit (Hoda *et al.*, 2008).

The *scrum master* leads the events and makes provision to ensure that *scrum* is correctly used during the activities. Consequently, the non-productive meetings are reduced, assuring that everyone's time it is not wasted.

- *Sprint* - the main event of *scrum* is a *sprint*. *Sprints* are iterations or cycles with a defined time-box, which could be from one week to one month, depending on the project specification. At the end of a *sprint* a reliable product increment is created, i.e. something tangible to the customer. Each *sprint* has a definition of what is supposed to be executed, a plan that will guide doing it and the expected resultant product. A *sprint* holds different events: *sprint* planning, daily *scrums*, the *sprint* execution, the *sprint* review and the *sprint* retrospective. As the *sprint* proceed and the knowledge increases, the scope may be clarified and re-negotiated between the product owner and development team. A *sprint* can be cancelled, though it must be avoided because it wastes the development team time to regroup the information in another *sprint* planning. There are a lot of reasons that can lead to cancellation, the most common is a *sprint* goal becoming obsolete, perhaps due to company management, market or technology condition changes.

- *Sprint planning* - each *sprint* begins with a planning meeting, divided in two parts. First, a *product backlog* review is made and the goals to the next *sprint* are described. Then, the product owner defines the priority of the listed items and clarifies them if necessary. The team then selects how many they can fit in the *sprint* with the *scrum master* supervision. It is important to guarantee a reasonable size in terms of effort necessary in order to maintain it achievable within the same duration as previous *sprints*. This review results in a *sprint backlog* for each *sprint*, i.e. a list of client requirements that will be fulfilled in the *sprint* time-box.

- *Sprint execution* - this phase, which follows the *sprint planning*, consists of actively working toward the *sprint* goals. Under the *scrum* master orientation the team self-organize and choose the tasks for each member in order to ensure the *sprint* goals fulfillment.

- *Daily scrum* - every day during the *sprint execution* there is a small meeting (maximum 15 minutes) with the development team and the *scrum master* in order to talk about the work done in the previous day and to discuss the work to be done in the next one. This meeting is an opportunity to present doubts and concerns about the development process and, therefore, a place to share knowledge. It is a meeting where there is an inspection, synchronization, and adaptive daily planning that helps to organize the team and assure the achievement of the current *sprint* goals.

- *Sprint review* - after the *sprint* there are two inspect and adapt (I&A) activities. First is the *sprint review*, in which everyone involved, especially stakeholders, inspect the state of the product and discuss how to adapt as needed. *Sprint review* revolves around what was developed, i.e. the shippable product increment produced in the last *sprint*. This meeting revolves around the content produced in the *sprint*, not focusing on how it was done.

- *Sprint retrospective* – it is a meeting primarily for the team to inspect their last *sprint*, concentrating less on what was done and more on how it was done. The goal is to empower the team with tools to improve the way they are developing the work. Here the stakeholders do not participate.

- *Product backlog grooming* - after all these activities it is time to prepare the next *sprint*. The process that goes before *sprint* planning is *product backlog grooming* and consist in creating and refining *product backlog* items, make time and resources estimates for those items, and prioritizing them (Rubin, 2012).

Scrum Artifacts

Artifacts defined by *scrum* are specifically designed to maximize key information transparency, so all the stakeholders have the same understanding of the artifact. These artifacts are:

- *Product backlog* – every product have requirements and, for the *sprint* to proceed, those requirements must be converted in an item list of features to implement in order to meet the product owner's vision. The product owner works with the stakeholders to gather and define these items. This set of items are called *product backlog* and it might contain new features, changes to existing features, issues needing to be solved or technical improvements. This *scrum* artifact is a living document, being subject to changes or reprioritization.

- *Sprint backlog* – for each *sprint* some items from product backlog are selected to be built, corrected or modified. This set of items from *product backlog* form the *sprint backlog*. The selection of items should be made according to estimates and the team's performance history during the *sprint planning*. The *sprint backlog* can be changed by the development team during the *sprint*, if necessary.

- *Burndown chart* – it is an artifact used in *scrum* with the objective of tracking the *sprint* progress, helping the team to follow the daily progress until the *sprint* is complete. It is a graphic representation of work and effort, in a very simple and clear way to track the tasks defined in the *sprint backlog* (Lacey, 2012).

Scrum framework

To summarize, the *scrum framework* includes several activities/events and artifacts all focused toward the main goal of facilitating the project management and execution. In order to represent how it works and how they are linked, figure 3 illustrates *scrum* activities and artifacts and how they fit together (Rubin, 2012).

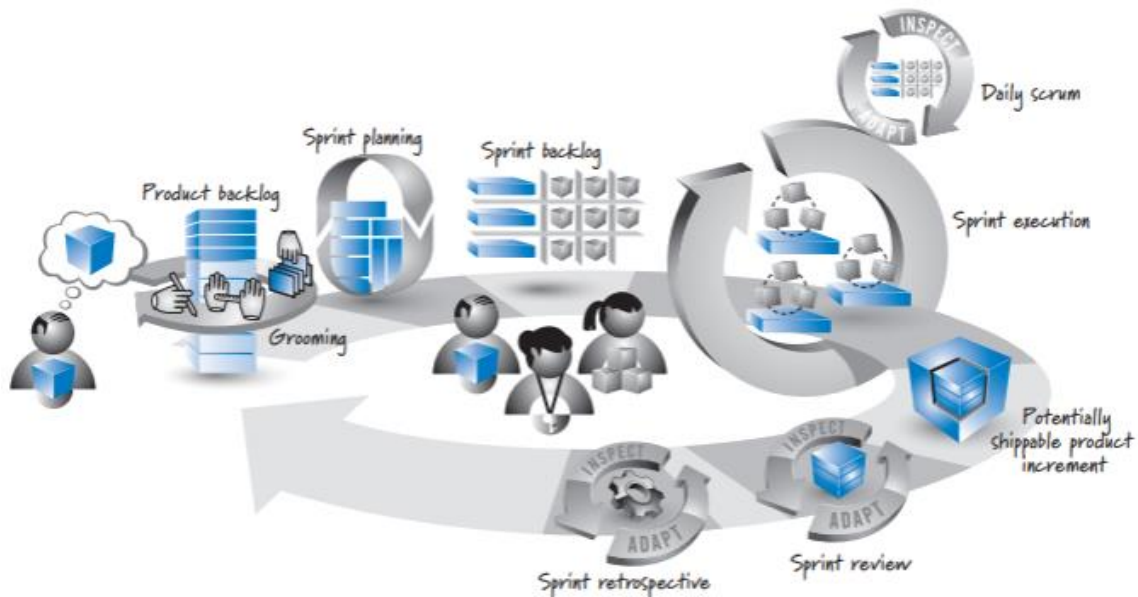


Figure 3 - Scrum framework – Source: Rubin, 2012

2.3 Msg life Iberia and agile

In *msg life Iberia*, *agile* and *scrum* methodologies are used daily by. Its principles are followed by the collaborators, however they are not "slaves" of the methodology and adapt it to the company reality and to the day-to-day questions that arise. The most important thing is to always facilitate the collaborators work and, at the same time, ensure that customer requirements are met and well interpreted throughout the product creation process. To follow these methodologies and update their knowledge on the subject, it is common within *msg life Iberia* that several collaborators make periodic training in *agile*. When an interesting opportunity arises the company guarantees the presence of these employees. The goal is to keep up with what's new in *agile* area and even renew and share experiences by being in touch with other professionals. It is also a company practice to bring knowledge from external workshops and provide an internal seminar. Here, the collaborators that were there, share their recently acquired knowledge. This way, it is possible that everyone get to know a little more about the important parts of the workshop even though they were not present.

The environment in the company is similar to what is expected from the *scrum* ideology: a flat hierarchy where everyone collaborates for a final delivery that meets customer expectations and requirements. The roles followed in the company are similar to the *scrum* ones. As previously mentioned in figure 1, there is an administration at a higher level and, at the operational level, a team of customer service, product management and development management. These last two operational teams are managed by the collaborator having the role, according to *scrum* methodology, of product owner and *scrum master* respectively. There is also the customer service manager, who manages the service team. There is no role specified by *scrum* for him, but he ends up having product owner responsibilities as well as project level tasks, like project manager.

The development teams in *msg life Iberia* have events similar to those described in the *scrum* methodology. There are daily meetings to keep up with the work developed called stand-up meetings, lasting only 10 to 15 minutes. There are also showcases every 15 days to present the work done in each project at the end of each *sprint*. The whole company participates in

these meetings and there is a general presentation of what was done as well as a technical presentation of the work. This technical presentation only occurs when necessary, possibly due to a more complex development that deserves a more in-depth technical discussion. After the showcase there are project planning meetings for the next *sprint*. Those meetings allow to discuss the next development steps and to define effort estimates for the tasks to be performed. These project team meetings are the key to plan and organize the work.

Following the *scrum* methodology, there are deliveries to the client, called releases. They are used by the clients to test what has already been done and give their feedback. These releases schedule is variable in *msg life Iberia* depending on the project type, since the project duration is also variable. The shorter is the development time, the shorter will be the periods between releases. The principle followed is to do, inspect and adapt, i.e. allow the development to always be up-to-date with the project requirements and the customer's needs and vision.

In terms of artifacts, there is a *product backlog*, which is a list of requirements defined at the start with the client based on the scope of the project that was contractualized. This list of requirements is an open and may become larger throughout the project, however the added requirements must be part of the initial scope. Out of scope requests are considered change requests and have to be revalued as new requirements in the initial contract. The requirements area is very delicate and it is necessary to make an agreement with the client between what can be added directly to the *product backlog* and what is out of scope and is considered change request. This negotiation is important to create a good relationship with the customer, to increase the chance of repeating business in the future and to secure a service contract after the product delivery.

In *msg life Iberia* there is also a list of requirements to be executed by *sprint*, similar to the *sprint backlog*. These requirements are rearranged in user stories, i.e. representations of requirements in a simple, clear and brief descriptive form of the functionalities that will be important to end users (Cohn, 2004). With the requirements organized by user stories, these will be registered on the development and issue management platform, which in this case is JIRA. Then, the tasks previously estimated in a planning meeting will be distributed to the development team members. This tool also allow to organize this team's work, for instance, by generating *burndown charts*.

2.4 Customer support models

IT customer support models are derived from two concepts that have evolved over time: help desk and service desk. In the beginning of the 1970s the term used was help desk and was created by IBM, originally used only as screen calls. Later, as early as the 1990s, they measured performance and customer satisfaction levels. In the same decade, along with the rapid evolution of technology, ITSM (Information Technology Service Management) was created to create a link between IT services and customers. To do so, a tool was created that is known as ITIL (Information Technology Infrastructure Library) practices. These are techniques that enable organizations to increase quality, improve management, solve IT service problems, and reduce costs. At the end of this decade, the concept of Service Desk appeared and with it began something wider than just the help desk that existed by then. There has been a natural evolution, integrating more and more components beyond simple immediate customer support. This led to an evolution and the help desk was integrated within the service desk in the early 2000s (Fisher, 2006). The service desk is a help desk created according to an ITIL framework, evolving from the help desk and based on the underlying concept of managing IT as a service. The service desk concept aims to be proactive instead of reactive, focusing on preventing problems instead of solving them (Knapp, 2010).

According to (Meijer *et al.*, 2011) the service desk is an integral part of service operation. The goal is to focus on the organization and application of the activities and processes required to deliver, manage and support the service. Thus, it is possible to ensure a central point of contact for IT users in their daily operation, being also responsible for managing various events related to the service provided. The processes that can be managed in the service desk are:

- Event management - it is the management of all events that occur in the system, the process that tracks the events in the IT system. It allows normal operation and also detects and increases the exception conditions.
- Incident management - management aiming to restore the normal level of service whenever the operation is disrupted. This is done as quickly as possible, minimizing the impact on business operations.
- Access management - managing users that are or are not allowed to access the service and preventing the access by users without permissions.
- Problem management - issue management in order to avoid, eliminate, minimize and solve possible incidents.
- Request fulfilment - aims to fulfill service requests, which, in most cases, are minor standard changes.

It will be based on these events and on those already used today in *msg life Iberia* that the support events of the model in this dissertation will be organized.

2.5 Service design

To design a service it is necessary to have a broad vision and not just think about what the service involves in terms of business. The basic principles on which the design of a service is based are (Stickdorn, 2010)(Stickdorn *et al.*, 2018):

- Human-centered - the vision of everyone affected by the service is essential, not just the point of view of the service user.
- Collaborative - in the process of *service design* all stakeholders must be included, i.e. take into account not only who participates in the service directly, but everyone that influences the service in some way. These stakeholders must come from different backgrounds and different functions.
- Sequencing - The service must be designed interrelated and the actions are sequential.
- Real - intangible services must have a way of being visualized in terms of physical artifacts. For example, when the toilet paper in a hotel room is folded, it represents the cleaning service of the room after the last use of it.
- Holistic - the entire environment surrounding a service must be considered and it must correspond to the needs of the stakeholders through the service and the business.

Service design can then be defined in several ways in the recent publication “The *Service design* Doing” (Stickdorn *et al.*, 2018). In this book, 150 *service designers* chose and voted for their favorite definitions on what is *service design*. It can be summarized as an innovative way of creating or improving an existing service, making it more useful. It is the design application of processes and skills, previously established in the development of services, in order to deliver something useful, usable, efficient, effective and desirable.

In *service design* there are specific tools and methodologies to design services. The tools relate to what is used to design the services and the methodologies are guides on how to create and work with those tools. Examples of tools are journey maps, spreadsheets and storyboards templates, on the other hand, the methodologies are procedures such as interviews or desktop walkthroughs (Stickdorn *et al.*, 2018). According to Sousa (2013), there are several tools that can fit the *service design* in IT, specifically in customer support models. Figure 4 represents the analysis that was done of the different tools in this area with focus on the main aspects to consider to choose the designing solution.

		Topics in analysis							
		Requirements identification	Qualitative analysis	Users' view	Contact points approach	Holistic view of the service experience	Reduced development time need	Custom solution design	Convert AS IS in TO BE
Service Design methodologies	Multilevel Service Design	X	-	X	X	X	X	X	X
	Human Activity Modeling	-	-	X	-	-	-	-	-
	Quality Function Deployment	X	X	X	X	-	X	X	X
	Customers As Innovators	X	-	X	X	-	-	X	X
	Turn Customer Input Into Innovation	X	X	X	-	-	-	X	-
	Etnography (in contextual design)	X	X	X	-	-	-	-	-
	Experience Prototyping	X	X	X	-	-	-	X	X
	Design Thinking	X	X	X	-	-	-	X	-
	Bridge Model	X	X	X	-	-	-	X	X

Figure 4 - Service design tools analyse – Source: adapted from Sousa, 2013

However, in the specific case of Sousa's (2013) study, it makes sense to use *Multilevel Service Design* (MSD) as a *service design* tool, since it has other variables. In the specific case of the *msg life Iberia* customer support model, since it has some processes already defined that can not be changed, the team is small (7 elements) and the complexity of the system is relatively low, the exploratory component of MSD would not make much sense. This methodology was created to design complex service systems, combining various levels of development (Patrício *et al.*, 2011). In *msg life Iberia*, and following the requirement of the service simplicity also inherent to the *agile* methodology, a simplification of this MSD methodology was chosen. Since service experience blueprint (SEB) was one of the levels of the MSD methodology and the support model was a relatively simple system, it was then chosen as the *service design* tool.

2.5.1 Service experience blueprint

To understand SEB it is necessary to understand its origin. Shostack (1982) already addressed the concept of SEB as a tool used by marketers (who were in charge of the services at that time) to map services explicitly and objectively, while capturing the essential functions that marketing used to create and manage those services. Nowadays, it is more important to deliver an experience instead of only delivering products or services. This experience requires a *service design* that often complements the product or, sometimes, is a pure service by itself. Whenever there is a need for a new service or to improve it, the SEB tool can be used. Although there are more operational approaches and other more experience-oriented perspectives, according to (Patrício *et al.*, 2008), SEB is the methodology that best combines service management with software engineering, therefore allowing to create a fusion of technology and services. The company seeks continuous improvement of its services, not looking exclusively for the products developed. Its goal is to always be aligned with the client, since it applies the *agile* methodology.

SEB is a very comprehensive tool that encompasses all backstage and frontstage interaction, touch points and physical evidence. It is a tool that has derived from several other tools and languages like Business Process Modeling Notation (BPMN) and Unified Modeling Language (UML). It currently represents the best way to organize the customer experience with in-depth detail. The customer journey is thus represented with a user-centered perspective. SEB layers may include several items that vary according to the complexity of SEB. These may include (Bitner *et al.*, 2008):

- User/client activities;
- Points of contact/actions that are visible to the client;
- Backoffice systems/services needed which are invisible to customer;
- Notes such as external flow support processes, or fail points and waiting points;
- Physical evidences.

2.6 **Msg life Iberia and customer support models**

At *msg life Iberia* customer support is made shortly after the project goes into production. It is said that a project goes into production when everything defined within the scope of the project in terms of requirements is delivered to the customer and after having passed tests and implementation. In practical terms it means that the customer has become the effective user of the product. When the project goes into production there is a contractual warranty period (usually 3 months) where the customer is supported on the form of warranty, i.e. there is no type of service contract with the customer. During the warranty period any problem inherent to what was implemented is covered by this warranty. At the end of the warranty, a service offer is made in order to continue customer support with SLA. These SLA correspond to the commitment in the response level to the services that will be provided by the company to the customer.

Over the years and with the emergence of projects from different fields, *msg life Iberia* has been gaining experience and also another size that it did not have at the beginning. With this, emerged the need to design processes related to customer support. An increasing effort has been made in this direction, organizing the projects in order to move towards a customer support standardization. Currently in *msg life Iberia*, when there is a proposal to provide customer support services, it contemplates the following main points:

- Team - support team members, stating who is the responsible as well as each member role.
- Escalation Model - hierarchical responsibilities both from *msg life Iberia* and from the customer.
- Support lines - definition of the support lines used by *msg life Iberia* to provide support to the customer.
- SLA - definition of the levels of response as reaction time, issue closing time, work mode and resources

Along with these points, there is still a concern in applying metrics to better estimate the service effort. However, there is still room for improving customer support metrics in the company. Thus, the proposal of customer support model in this thesis intends to improve what exists today regarding customer support service in *msg life Iberia*.

3 Customer support model requirements

What started out as a company focused on developing products to support the existing *msg life* subsidiaries has now a very different dimension and vision. It has currently a much wider team, not only in size but also in knowledge. With the experience acquired in the development of both internal and distributed projects, always with the presence of the *agile* principles and the integration of the customer in the process, it is possible to refine even more the services provided and to meet the customer needs. In addition to its products, currently *msg life Iberia* focuses on services, always with a customer-centric thinking. The observation of the support processes that are currently executed in the company was essential to understand how to design the new support model.

3.1 Requirements identification

Throughout *msg life Iberia*'s history, the support model has been changing according to customer support needs. During a period of reflection, and following the company's indications, it was concluded that the most effective method to understand and analyze the current situation would be a survey with open answers. This way, the panel of respondents would have the opportunity for reflection and openness to give their opinion, being the least intimidating possible and with less associated pressure. Using surveys with open-ended questions, classified as a qualitative data collection, it allows to capture the individual perspective of each respondent (Mack *et al.*, 2005).

Besides the information gathered on day-to-day conversations at *msg life Iberia*, an individual survey was conducted in order to have a strong support for the requirements. All the respondents were very willing to participate, so the prior preparation of the respondents was not very complex. All were willing to help and thus allow to achieve the defined goals: gathering different opinions, constitute requirements based on them and, ultimately, try not to commit mistakes already committed while predicting future ones.

A total of 6 respondents were invited to answer the survey: 5 members of the customer service team and the director of *msg life Iberia*, represented in table 1.

Table 1 – List of respondents

Repondant name	Job title	Joined the enterprise
Jorge Miranda	General Director	2011
Anibal Couto	Customer Service Manager	2012
Miguel Ferreira	Implementation Lead	2016
Rui Azevedo	Implementation Lead	2015
Rui Pires	Implementation Lead	2012
Susana Pinto	Mathematician	2015

The information gathering process required prior preparation in order to collect as much information as possible on customer support. Only after a long time of integration, active participation in team meetings, reading documents from various projects and asking many questions it was possible to perceive what would be important to ask in this survey. Once the survey was carried out, the panel of respondents was chosen: the customer service team (with the exception of two members who were involved in the preparation of the present dissertation and, consequently, the survey) and the Director of the company. Since the customer service team is the most varied of the entire company, being its members from different areas and working daily with customer support, it was important to integrate them into the panel of respondents. The presence of the *msg life Iberia*'s Director among the panel of respondents is essential to have a business perspective in the survey responses. He is the person who has a more comprehensive vision of what customer support is at *msg life Iberia*. He has been in the company since its beginning, when there was no customer support, so he also witnessed the customer support implementation along with the company's evolution. The surveys were sent by e-mail following prior notice that an open-ended survey would be conducted. Each survey also followed a cover letter of what are the objectives of the survey, an explanation of how to proceed and a thanking message for participation as can be consulted in APPENDIX A. The survey was based on qualitative questions, addressing several topics. Those topics were chosen using knowledge acquired from reading articles on customer support and services and from the team observation during the dissertation period. The topics approached are:

- Importance of services in the company, perception of the services quality and possible improvements;
- Perception of the support service and possible improvements;
- Perception of the issue management tool and possible improvements;
- Communication Language;
- Performance metrics, SLA and customer satisfaction;
- Other suggestions.

Surveys in their entirety can be found in APPENDIX B. Next will be presented an analysis made of these topics in order to remove requirements from the customer support model based on the interpretation of survey responses.

3.2 Survey results

By crossing information gathered in the surveys it was possible to find certain response patterns. Within each topic addressed, the main aspects described by the collaborators were identified. Their analysis will be the key to the proposed solution design.

Importance of services in the company, perception of the services quality and possible improvements

Questions:

1. Are you aware of the current services provided by the customer service team?
 - a. What do you think about the idea of a service catalog (with some preset services)?

Answers summary:

In this topic it was intended to first understand if the respondents knew the services provided by the Customer Service team.

- In general everyone has knowledge on the services provided, with the exception of services more related to development by elements that do not perform these functions in the team.

Next it was suggested the creation of a catalog of services.

- The idea was well received by almost the entire team.

Requirements for a service catalog:

- Be consistent with what currently exists in the projects.
- Should help to adapt new collaborators to the Customer Service team.
- Be organized based on previous projects, by categories and with support from various areas of the company (commercial, financial).
- Be generic to serve various projects.
- Be periodically updated.

Perception of the support service and possible improvements

Question:

2. What is your perception about the quality of the provided services?

Answers summary:

To understand the team's perception of the services they are providing and what can be improved, it was asked what they thought about the quality of the services.

- The answers vary from the "excellent" to transmitting the idea that there is much to improve.

Requirements for quality of service:

- Improve the suitability of the *agile* methodology to customer support needs.

Question:

3. In your opinion, does the support service schedule is adapted to the customer needs?

Answers summary:

Next, the adequacy of support service hours was discussed.

- They generally agreed that it is suitable, except for projects where the time zone is different.

Requirements for support schedule:

- Adapt in the contract with the client the hours of attendance to the needs of the client.

Questions:

4. If an issue is not resolved immediately by the first line of support, which is the existing hierarchy that will solve it? Do you think this solution is adequate?

Answers summary:

The first line of contact is the one that speaks directly to the customer, many of the respondents contact customers every day. It was asked what was the hierarchy responsible to solve a problem if the first line of contact could not solve it and if this solution was adequate.

- The answers were very varied. That leads to believe that it is not clear within the team what is the procedure to have, nor who's responsible for some tasks and, therefore, these processes can benefit from some improvements.
- However, it is necessary to take into account the project variability since not all projects work in the same way

Requirements for problem resolution:

- Improvement in process design
- Clarification of responsibilities (roles)

Questions:

5. Are you aware of the response times demanded to resolve an issue? Do you think they fit the current users' needs?

Answers summary:

The next question relates to if the response times are being met and whether they are adequate to the current needs of the support from the perspective of the respondents.

- The team's opinion in general is that the response times are being met. However it is noteworthy that one of the respondents alerted to the response time not being well measured.

Requirement for issue resolution time measurement:

- Improve time measurement: offset between the ticket creation and closing date and the time actually spent working on the ticket.

Questions:

6. Do you know what the current issue treatment workflow is?
a. If positive, do you consider it to be the most appropriate? What would you change?

Answers summary:

The knowledge about the current workflow as well as possible improvements were asked in the next question. The results were:

- Everyone knows the workflow.
- The most critical and mentioned issue is the occurrences communication between the support and development teams.
- Existence of customer calls that are not posted.

Requirements related to the current workflow of event handling:

- Improve the occurrences communication between teams
- Adapt the current workflow to project needs that are not currently being taken into consideration.

Perception of the issue management tool (JIRA) and possible improvements

The tool used in the company for issue management, JIRA, is used daily by all support team members. There are projects where the client also has a JIRA associated with their support and can create their own issues and other projects where only the support team can do it.

Questions:

- 7a. Do you think the training with this tool was sufficient?
7b. Did you have any problems dealing with this tool?

Answers summary:

The first questions were related to the ease of adaptation to the tool when they arrived at the company, if they had any training in this sense and if they need to have it.

- Overall the adaptation was good, however it has to be considered that a large part of the team has IT related knowledge. It may be relevant to treat non-developers differently in terms of JIRA adaptation.

Question:

- 7c. Which are its strengths and weaknesses?

Answers summary:

Then the respondents were asked about the tool's strengths and weaknesses.

- They focused more on the strengths, emphasizing the high possibility of customization and adaptation to the current work cycle of the company.
- As weaknesses, the difficulty of some customers in filling all the information needed to create a ticket was mentioned. That leads to the previous point, training people who are not so familiar with JIRA's technical specifications.

Question:

7d. How would you describe this tool according to:

- Usability :
- Effectiveness :
- Efficiency :
- Security :
- Functional consistency :
- Indexing (MENUS) :
- “Clear, clean and simple tool” :
- Memory (easy to remember) :
- Language used :
- Quickness :

Answers summary:

A qualitative response question was asked on several topics about JIRA and the results are represented in the figure 5.



Figure 5 - Features evaluation

Questions:

- 7e. From the previous list, what do you consider most important in a software?
- 7f. Which features would you like to be implemented?
- 7g. Do you think there should be an exclusive area to evaluate *msg life Iberia* customers' satisfaction (not only for JIRA users, but to all support service users)? i. If positive, which features should be included?

Answers resume:

Regarding the characteristics mentioned above, the respondents emphasized more

- Usability, speed and efficiency

The features you would like to see added in JIRA are:

- Plugin Time to be used for more efficient time management;
- Integration with the ERP which is the system of resources management and invoicing of the company;
- Improved dashboard and tool filters to aid in data analysis.

Also in the suggestions of functionalities, it was suggested to the respondents the possibility of an area to assess customer satisfaction.

- The suggestion was well received in a general way.
- It was suggested to create standard questionnaires with the possibility of exporting data after completion.

Requirements for JIRA:

- Initial training with special focus on members with less IT knowledge
- Improvement in initial customer training
- Functionalities possible to integrate with JIRA
- Creation of customer satisfaction questionnaires in JIRA.

Communication Language

Questions:

8. Do you think there should be a standard language to communicate with the customer? If positive, what would you suggest?

Answers summary:

In *msg life Iberia* there is no standard on how to treat clients. With no type of guide or training, there are only templates for written communication. Since it is a small team there is no need to have a "call center environment". The team was asked if they feel they lack some standardization in the way they communicate with the client.

- Everyone considers that there should be a standard language, however only a few think it is a relevant issue to improve

Requirements for Customer Communication:

- A communication guideline should be developed. It should take into account non-technical language in a way that can be perceived by clients of non-technical departments and forms of treatment.
- Guidelines for classification and treatment of different types of situations: information request, bug, change request.

Performance metrics, SLA and customer satisfaction

Question:

9. Which metrics do you think are most important?

Answers summary

At this time, the metrics are not explored on the support team. The question was general and it was about which metrics they considered most relevant to measure. It was purposefully general so that they could think of several issues at once and not restrict or influence the level of thinking more than they would already be near the end of the survey. Suggested metrics were:

- Number of occurrences by type of occurrence (to measure response efficiency)
- Response time to occurrences by type of request and importance of problem (SLA)
- Customer satisfaction (net promoter score)
- Time spent on ticket resolution
- Change Request Time
- Response Efficiency
- Productivity of projects

Questions:

9. Do you think the SLA are being accomplished?
10. What do you think is the current customer satisfaction level regarding support services? (bad, good, excellent). Why?

Answers resume:

The final questions focused on what is the perception about SLA compliance and the degree of customer satisfaction about previous services (specifically support).

- Everyone agrees that they are being met and that the degree of satisfaction is good or excellent. However, it is important to note that customer dissatisfaction is not always based on the support but rather on the quality of the product he is using. In this case, his dissatisfaction comes from external factors to the support team.

Other suggestions

At the end of the survey, a field was left open so that respondents could suggest something else they had not yet had a chance to address earlier, or simply summarize what they want to suggest as improvement in customer support. Suggested topics for this issue were:

- Improvement or greater definition in the customer support processes design
- Integrating the tools that are used in the company management nowadays, JIRA (management of issues) and ERP (resource management and invoicing), in order to avoid the need to insert information in duplicate
- Ensure that the client is also committed to the agreed process, such as using JIRA
- Possibility of logging work on the client's JIRA, allowing to record the actual working time on the ticket, similar to what happens in the internal JIRA used for development

Survey conclusions

This analysis is an essential source of information for the development of the present case study, allowing an overview of the current situation regarding the services provided, the team that provides these services and, more specifically, the customer support. This analysis is also important to project and design future solutions, as it allows the requirements identification. The table 2 show some requirements used in specific for the dissertation' case study and other that are possible to implement in other projects but do not fit in this particular case.

Table 2 - Requirements identification resume

Requirements for the case study	Requirements for others projects
Adapt support schedule (hours of attendance)	Create a service catalog
Improve the processes design	Adapt agile methodology to customer support
Clarification of roles	Adapt support schedule (hours of attendance)
Improve time measurement (metrics)	Improve time measurement (working time)
Improve communication between teams	JIRA improvements
Customer communication guidelines	

The approach used in the surveys allowed to begin a more practical and concrete phase, with the knowledge of what can be created or improved, by identifying opportunities for innovation and value creation in the services provided, particularly in customer support.

The overall perception of services and support is good, however there are some points where it still can be improved. Due to the fact that the team is small in size and has a strong presence of members associated with the development, the vision is more related to IT technical concepts. The first steps in developing process design and especially definition of metrics are being taken. It is necessary to break barriers and that everyone understands each other since it is not always the case and this may reflect in customer support.

Msg life Iberia is committed to continuous improvement and adaptation, so it would be important that surveys like these are conducted more often to evaluate the current state of the service and share their analysis with the team, so that there is a real perception of the current situation regarding customer support.

4 Proposal for a customer support model

After reviewing the literature and its contextualization within the reality at *msg life Iberia*, the requirements were gathered and analyzed. It was possible to identify possible solutions to current problems and improvements. The solution proposed was based on the issue management methodology currently in use at *msg life Iberia* in order to avoid a disruptive implementation of the model. However other parameters were taken into consideration, some that, until now, had not been addressed in dept. Thus, in this chapter we intend to analyze each constituent point of the customer support model, presenting a little of what is the current solution at *msg life Iberia* and what is suggested as improvement in this new model. The solutions were based on the analysis made in the literature review, the requirements addressed previously and observation throughout the internship period in the company.

4.1 Team

The support team is the central piece of the customer support model. It was purposely chosen as the first point to address due to its importance and impact on customer support. All the people working every day on this team will make the difference between whether the model will work or not. At the moment the team consists of 7 elements from different training areas. As described in the introductory chapter, it has been a goal of *msg life Iberia* to find the most balanced team possible throughout the company's years of existence. The company includes more knowledge within the team, aiming to meet the needs of what are the current challenges of services, business and customers seeking *msg life Iberia*. Nowadays it congregates knowledge in IT, maths and insurance, management and, most recently, business analytic, processes and services.

To ensure the proper functioning of the customer support model, the relevant points to consider regarding the support team should be:

- Existence of members of the areas of knowledge previously addressed available within the team.
- The level of knowledge within the team is balanced and up-to-date, investing on formations to update knowledge.
- The number of team members is balanced with the level of work / projects that exist in *msg life Iberia* to avoid too much workload in team members.
- Ensure availability of the team whenever requested by the customer - compliance with the SLA.
- Establish satisfaction metrics for each team member.
- Periodic evaluation of the level of satisfaction of the team's work.
- Establishment of estimates that are the closest to the reality as possible.

4.2 Communication channels

In order to get the information and solve the customers' problems, communication is necessary. This is done through what is defined in this model as communication channels. In this chapter, it will be analyzed how they work in the present and will be presented the respective proposals of how it would be expected to work in the new model.

The channels by which the communication between the customer and the team, or vice-versa, is established are:

- **Telephone** - telephone calls usually only happen when the customer has an urgent need to talk to the support team or when there is a situation that is more easily explained via a telephone call than by e-mail.

- The service schedule is currently, and should be maintained, limited to a certain time period that should be respected whenever possible.

- The team responsible to communicate with the customer is the customer support team. However, being a small team and with the possibility of work travels or working remotely, the team members may not be at the office to answer customer calls. In this case, another person from *msg life Iberia* will answer the call

These two first points can create a problem: currently the only way to answer calls is presentially at *msg life Iberia*. One of the suggestions for the model is, not changing the service schedule, setup a call forwarding system and define a call answering scale. With the possibility to change the number that will receive the forwarded calls remotely it is possible to ensure the telephone service availability while granting that the customer will only talk to a support team member who has the necessary knowledge to help him.

- The call registration must be made according to the call complexity. What happens now is that when a call is simple and does not imply any further action after it, for example just a clarification of a simple doubt, then there is no record of it. When the answer is not immediate and some type of development is necessary, a ticket is created. If the answer is not immediate but it is not a very complex development, it is enough to send an e-mail without the need of creating a ticket.

- **E-mail** - This electronic contact is made to solve questions where it is necessary to send attachments so that the issue is better understood or solved, for example installation files, illustrative print-screens of errors that occurred, among others.

The e-mail address is global to the project and allows the client to send e-mail to the support that is received by several elements of the project at the same time.

It is also important to send e-mails as a way of register the information especially if related to requirements or any requested change so that this information is not lost in a telephone call that cannot be consulted later. For this reason, it is essential to ensure a good organization of the information for easy future consultation. It is therefore recommended that:

- Subject should include the name of the project between square brackets followed by the subject of the e-mail. If a ticket is the subject then it will be followed by the number of the ticket (linked) and only then the subject to be treated. This allows an easy access to the respective subject in the issue management platform (JIRA).

- A carbon copy (cc) should always be sent to the Project Team Leader, Customer Service Manager and those involved in the project, aiming to keep the project information easily accessible to everyone involved. This prevents from always having to question what was done and who made it, being everything clear to all the team.
- E-mail storage should be done when these are of high importance (for example contains important documentation attached, requirements, project approvals) in the network folder of msg life Iberia. This folder contains information about the company and the projects and must be updated with relevant information like the ones stated above. The responsibility of doing it is with the project's Team Leader or someone designated by him to do so.
- **Meetings** - This communication channel is only used when it is necessary to go through a large volume of work together with the customer, normally focused on decision making. It can also happen in cases of installing some product or testing it with the customer's presence. The meetings can be in person or remotely (through video-conference), being that decision taken depending on the need to travel to the client or the client to come to msg life Iberia's office. It is up to the Customer Service Manager and the Director of the company to decide about meeting in person with the customer, since they are superior decisions. Remote meetings happen as much as they need to be, and should be managed to happen only when the volume of work justifies.
- **JIRA** – it is the software used by msg life Iberia to manage tickets. Due to its complexity, it will be addressed in a separated chapter..

4.2.1 JIRA

JIRA is a software that allows you to prioritize issues in order to track and manage them. It is also possible to access a series of project management functions that allow you to manage the projects that are being developed. This software can be purchased and has some level of customization, it is what happened in *msg life*. The license was purchased and it is used by the different subsidiaries for issue management and development of projects in distributed environment.

In the *msg life Iberia* 's JIRA platform it is possible to access a series of functions, being the most important:

- Have an overview of all the information about the projects recent activities, tasks assigned to the current user and other section the user can add to visualize when he accesses the applications.
- Organize projects by *sprints* and their respective tasks. It allows to define the priority and the responsibility for tasks, follow tasks as a viewer and understand the issue that originated the task
- Possibility to treat the tasks as user stories and to be able to attach documents, videos and print screens to help better understanding the problem to solve or the feature to develop.
- Creation, management and tracking of issues which allows to organize the requests at the client support level, assigning them to the developers so that the problems are solved
- Ability to extract reports to perceive if the work is done in the right direction. It is possible to view graphics related to the *sprint*, for example the *sprint* report, where the goal is to understand the work completed or pushed back to the backlog in each *sprint*.

This helps the user to determine if the team is overcommitting, i.e, if there is an excessive scope creep. It also allows an analysis of issues being created and resolved, presenting a map of created issues versus resolved issues over a period of time. This can help understand whether the overall backlog is growing or shrinking.

Msg life Iberia created a specific way of organizing types of issues that may arise, called a ticket. This organization is shaped by the needs that have been appearing in projects over time. To do so, the entry of issues within JIRA is done with the creation of a ticket. This organization is very similar also to the principles of service desk followed in Meijer *et al.* (2011), which were discussed in the state of art chapter. So, based on these two points it would not make sense to change the organization of something that follows the stated good practices and currently works in the company. Besides that, a change on this issue tracking method would not be able to be realistically implemented, which would defeat the purpose of the model here presented. The types of tickets used in the company are:

- Information request - when the client requests an information or a task that does not require great technical development, such as elaboration of documentation.
- Bug - when the client reports an error in the system and it is necessary to perform a technical development to make that correction.
- Change Request - when a client requests a process of requirement change, that is, changes or developments not included in the initial scope of the project, so that the analysis, proposal and estimation process can begin.

This tool can be used in two ways: with exclusive use of the support team or giving the customer permission and access to a specific area created in JIRA to create tickets. This decision depends on the support templates agreed upon with the client at startup.

- Creation of tickets by the support team - in this scenario the support team receives the request by phone call or by e-mail and has to access JIRA and create the ticket. Only the support team has access permissions and can take this role.
- Creation of tickets by the client - in this case the client is allowed to create tickets and can execute everything that does not imply access related to internal development, restricted comments and internal company subjects. This scenario assumes that the client have more knowledge of IT and had a small training on working with this tool.

As previously mentioned, the process of creating tickets using JIRA was not change in this dissertation, despite belonging to the customer support process. The cycle of a ticket is summarized in figure 6.

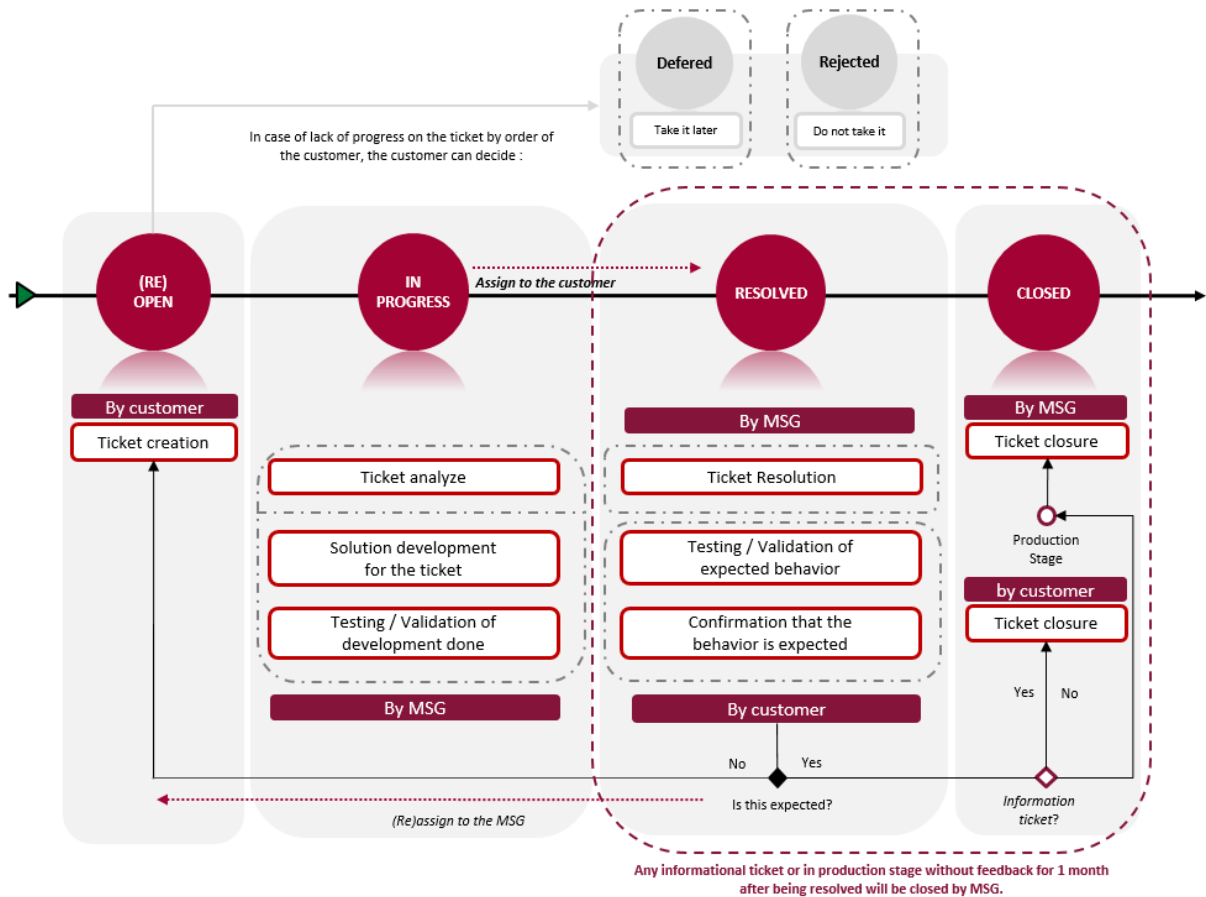


Figure 6 - Ticket lifecycle

Not getting into too much detail it is explained, based on the company's current documentation, how this cycle takes place:

1. The ticket is created and is in the "open" state. If it does not proceed for analysis it can then be "deferred" and later addressed in cases of low priority or "rejected" if it is not concordant with the rules of creating a ticket, for example being a bug that after all was not well reported.
2. If the ticket status changes to "in progress" there is an analysis made by *msg life Iberia* that goes through evaluating what will be done on that ticket, the necessary resources and who will do it. Then, the ticket goes to development and later to testing in order to validate that the solution is effectively working. These processes occur as many times as necessary until the solution is found. At the end of this phase the ticket is assigned to the client and passed the status to "resolved".
3. Being the ticket "resolved" there is still a validation by *msg life Iberia* that everything is going as it is supposed, with tests to the expected behavior. The same happens on the client side and at this stage the customer can test / validate the ticket solution. Here is a decision in the process: if the behavior is not what is expected the ticket is reopened and returns to the "open" status, following the whole course again. If, on the other hand, the behavior is what is expected, then it is moved to another status: "closed".
4. In the "closed" status it is necessary to take into account that tickets of the non-informative type, i.e. bug or change request, still have one more step that is the transition to production. In that case, the ticket can only be closed by *msg life Iberia*, due to being a

development ticket where the customer does not have access to JIRA, as previously mentioned.

In the specific scenario of the present dissertation, the client does not have permissions in JIRA, since it was not contractualized in this way. Thus, tickets go through this cycle but are created exclusively by members of the support team of *msg life Iberia*, more specifically the person responsible for the first line of customer support.

4.3 Requests

Taking into account the scenario of this dissertation, in which the initial process of production is already implemented and the warranty period has ended, there are some problems, doubts and issues that have to be solved. These issues have to be anticipated in a set of contractually defined services with the client. This customer support model is intended to cover the issues of the three types previously described: information request, bug and change request.

In schematic form and represented by the SEB tool in figure 7, figure 8 and figure 9 is presented a redesign of the customer support processes. In all the representations there are common important elements from the point of view of the processes representation that define the services provided by *msg life* support Iberia, these are:

- Communication channels - these requests can be sent via telephone or e-mail. It is necessary to follow the rules previously established for them.
- Actors - in the present SEB are present the customer, a member of the support team represented here as "customer service". It will be between them that the customer/support interactions take place. In the development side is present the "team member" with tasks related to the ticket resolution and "JIRA" that represents *msg life Iberia's* issue management software.
- Line of visibility - this is the point that separates, according to the theory associated with SEB (Bitner *et al.*, 2008), the frontstage from the backstage. This means, as the name itself suggests, that actions happening beyond this line (in the backstage) are not visible to the customer. The same happens in the line of visibility that separates the "team member" from "JIRA", actions that occur within the "JIRA" system are not visible to the "team member".
- Line of interaction - where there is contact between actors taking actions. There is a first line between the customer and the support team which, in this case, can be established either by telephone or by e-mail. The second line is between the support team and the team member where some interactions can occur. These interactions can appear during ticket resolution, when doubts arise during testing, or if the development has to be done together due to the requirement been gathered by the support team, among other situations.
- Fail points - these are points where it is likely that a failure will occur due to poor execution of the actions, for example misinterpretation of the actor.
- Waiting points - these are sections where the process may take longer than normal for some reason, in the specific case of these processes we have the example of the action "open the ticket" since a ticket can be reopened several times if it is not resolved or the problem persists.

Bellow each of the issues will be addressed and described so that when a request of that specific type (information request, bug or change request) is made, it can follow the workflow designed. That way it is easier to understand at what point in the process the request is and to where it should follow.

Information Request - When the customer makes an information request he is requesting something that the customer service department does not consider technical development. It may be a simple question to ask how to run something on the system, for example. But it can also be something like making a document or a report, it will depend on the scope of the project being supported by the model. However, it is important to point out that they will always have to be issues previously agreed contractually and that are within the scope. Out of this scope the request will be considered a change request.

The representation of the information request is shown in figure 7:

1. The process begins with a request for information from the customer, either by telephone or by e-mail.
2. This request is received by the customer service team member that is designated as the first line of support for this project. It will, through the request for information, assess whether there is a possible response to the request. If in the future there is a script of possible responses, it will be in this step that will be verified if that information is already in the database of possible answers (in the case of being an e-mail request, once by telephone it would not give time for a search at this level). If the answer exists then the client receives the response and the process ends here.
3. If there is no answer, a ticket is created, filling in the necessary fields for the creation of the ticket: the ID number, title, comment and description of what is required to respond to that ticket.
4. The process following the submission of the ticket by the support member is the actual creation of the ticket in the "JIRA" system, which is in an invisible action. From the moment the ticket enters the system, it begins to follow the "Ticket lifecycle" route, already described previously.
5. The actions of the ticket lifecycle have a team member as actor, but will have the actors that are necessary in this cycle since it is apart from this representation (figure 6). Here is only presented the main actor since he is the one who develop the ticket solution.
6. Once resolved, the ticket is reported to the support member who report it to the customer. This happens again in this specific case where the client does not have permissions to JIRA, otherwise this action could be within the "ticket lifecycle".
7. In order to improve the evaluation of customer satisfaction, actions were taken in this process to collect customer feedback in relation to the service provided. This is done with a request to the customer to participate in a service satisfaction survey sent to him by e-mail.
8. If the customer rejects the process ends here. If the client accept a satisfaction inquiry is generated by "JIRA".
9. The support team member is then responsible for submitting the inquiry to the customer's email.
10. The customer responds to the email with the service feedback and the process terminates. It may happen that the client does not respond to the email, leaving it to its discretion to do it or not.

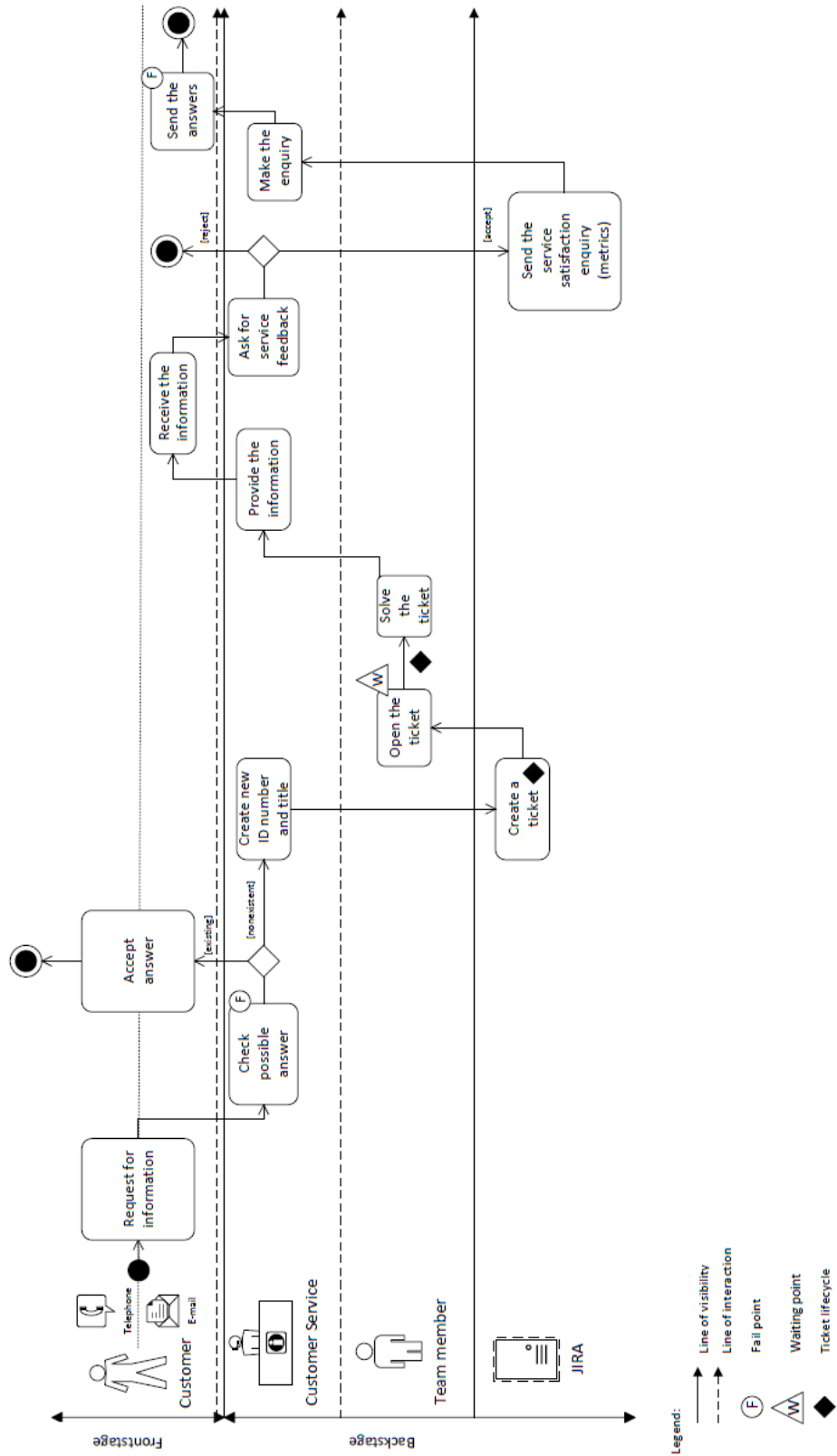


Figure 7 - Information request SEB

Bug – The client reports a bug to the support team when, for some reason, the system returns an error, i.e. its behavior is different from what it was supposed to be. This error can be more or less complicated to solve but it will be required that a ticket is opened. Since this is an issue of technical development nature, the ticket is mandatory. Like the information request, it is necessary to analyze whether the development is within the scope of the project. The client may be reporting a supposed error that, after all, is not a bug. It can be a system behavior that was requested in the requirements but not initially planned. In this case, since it not in the project scope, it may need to be treated as change request.

The representation of the bug is shown in figure 8:

1. The client reports the bug through one of the communication channels: email or telephone. In this action it is important to encourage the client to be the most illustrative possible in order to report clearly what the error is, since often the error can be reported by someone with non-technical language. It is valued the maximum possible amount of information about what is happening with the system, with tools as, for example, printscreens being used to explain the development team exactly what is the error. Communication here is essential, it is extremely important for those who support the customer to know the business processes, products and systems the client uses. This allow to get in the same page as the client, making him feel perfectly at ease talking to whoever is giving him support.
2. After the client reports the bug, the support team member has to check if it is a recurring issue. If there is already a ticket for this specific issue then the ticket is reopened, the information provided by the customer is added and the ticket lifecycle is followed.
3. If it does not exist, a new ticket is created and the route is similar to that previously described in the information request section from point 3 until the end of the process.

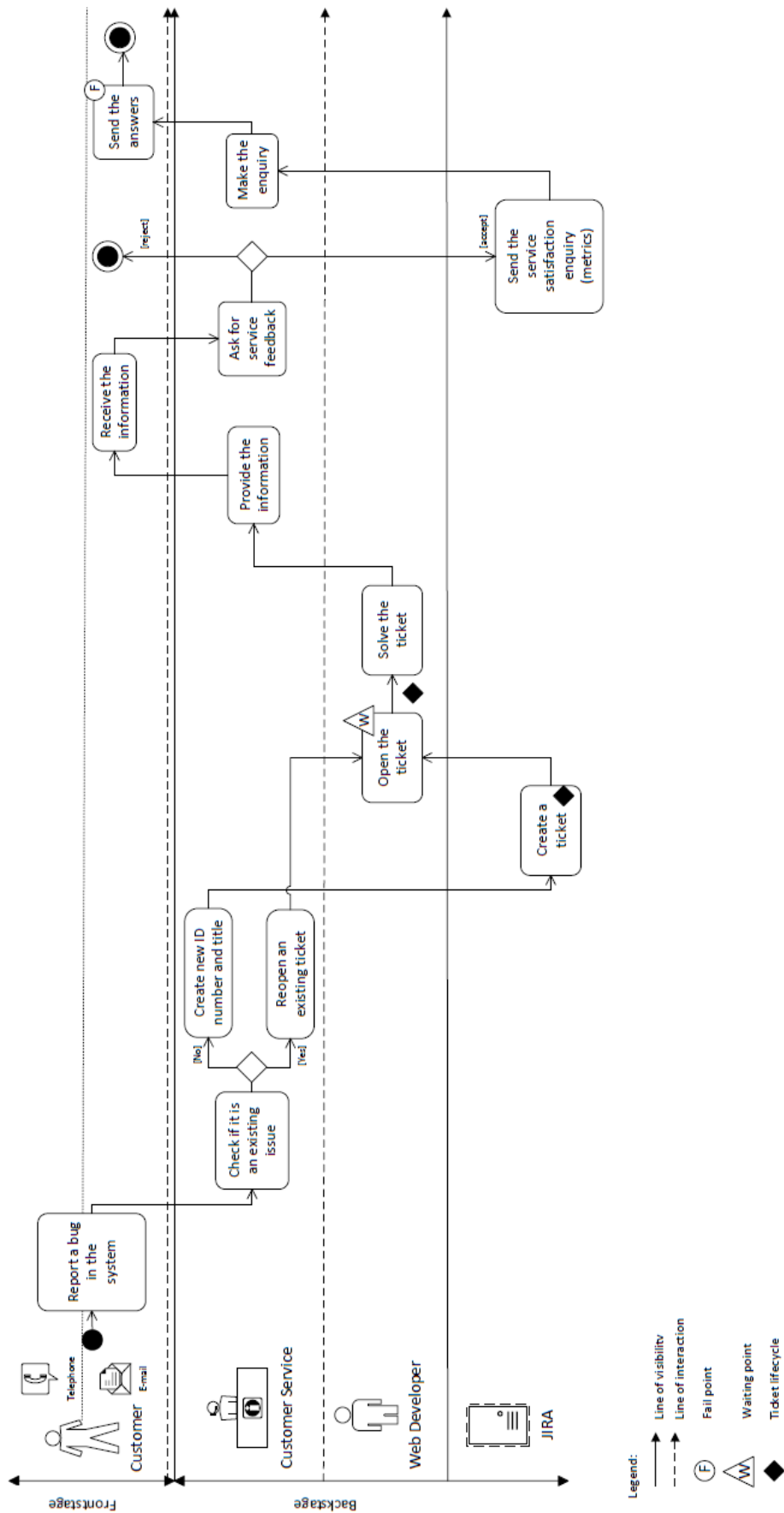


Figure 8 – Bug SEB

Change Request – As soon as an information request or bug type request appear, if it was not defined initially in the project scope, it is called a change request. In this scenario it is necessary to have a negotiation with the customer to identify the issue that is faced and what is the budget implied in implementing it. Some situations exist in which changes of less value are developed and not taken as change request. This behavior is a form of customer relationship management, making it salutary and gaining the will of the client to repeat business with the company. However it should not be a recurring behavior and the decision can only be taken by senior management as the director of *msg life Iberia* itself or the customer service manager in conjunction with the development manager.

The change request representation is shown in figure 9:

1. The client's request, in this case, can initially be of the information request or bug type and is communicated by means of telephone call or e-mail.
2. When the support team member receives this request, it evaluates the response to the problem and can realize it correspond to a request outside the project's scope.
3. In the action "provide a proposal for change request" there is a possible waiting point, since it is necessary to evaluate the request size. Often it is necessary to make a budget and ask effort estimates to the development team. This process can take some time and require meetings and decisions to be made.
4. If the client does not accept the proposal given by *msg life Iberia* and, for example, keep the previous behavior, then the process ends here.
5. If, on the other hand, the customer accepts the proposal, a new ticket is created (of type: change request) and the route is similar to that described previously in the information request section from point 3 until the end of the process.

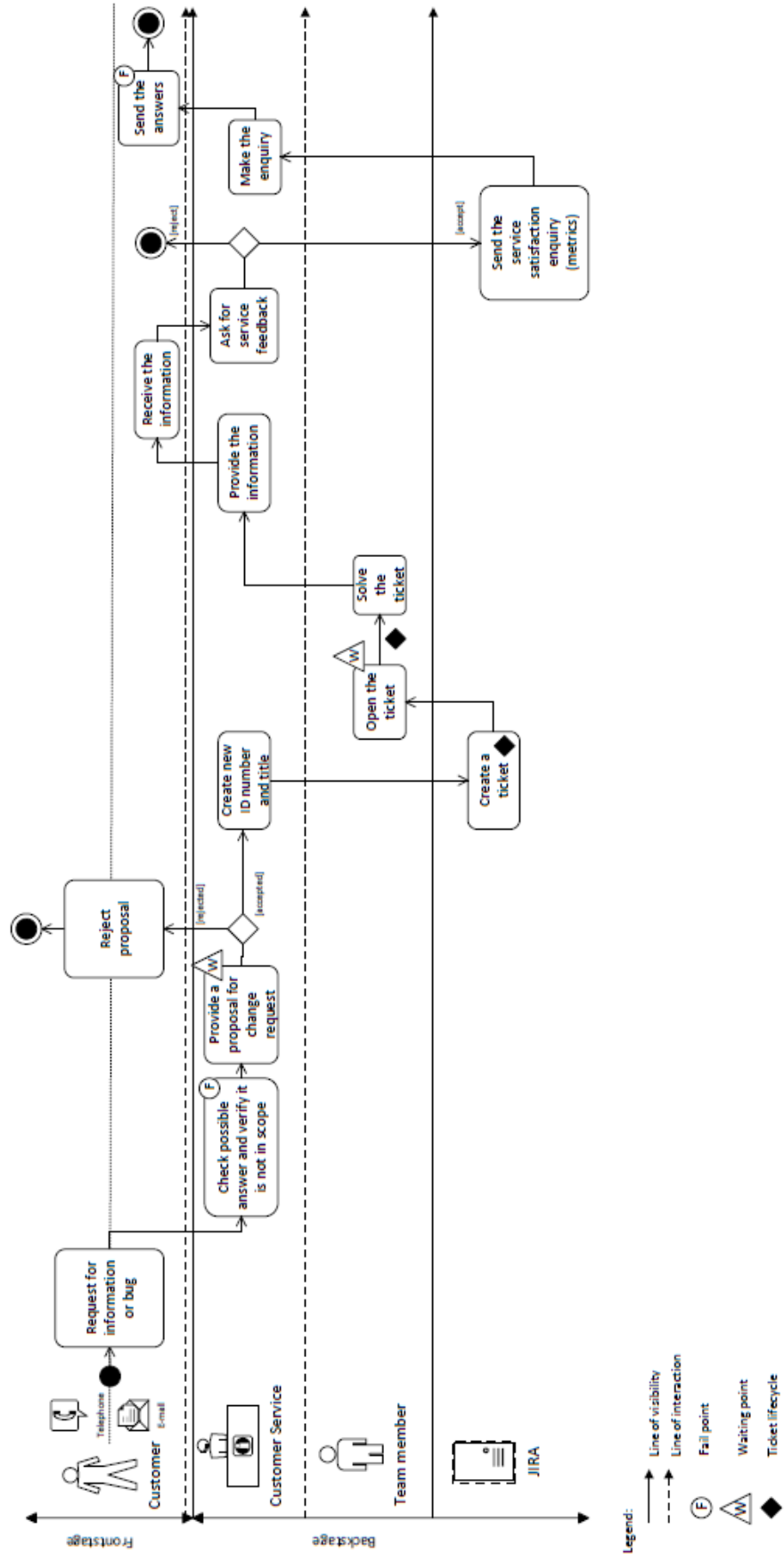


Figure 9 - Change request SEB

4.4 SLA

The Service Level Agreement (SLA) involves the quality attributes and ensures that a service has what it takes to be processed. They are usually used in IT areas especially those that cover services such as help desk or problem resolution. When well defined the SLA is effective in providing metrics to measure service performance and to check if the service is meeting the service stakeholders' expectations (Paschke and Schnappinger-Gerull, 2006).

To maintain a level of service that meets customer expectations, a number of topics need to be kept in mind:

- **Level of malfunction** - describes the level at which the problem is found, usually three levels of severity or importance are defined, being the most serious business blocker and the smallest only having a minor impacts in it.
- **Reaction time** - is the amount of time it takes for the support team to respond to a customer request. For example, if the client sends an e-mail with a request, the reaction time corresponds to the time that takes between the reception of the email and the response of *msg life Iberia* to the client.
- **Resolution time** to a problem - time between starting working on the ticket until finishing working on it. It can not be confused with the time since the ticket creation. The ticket could have been created 3 days ago and only be worked for 5 hours, for example. This is important in terms of metrics in order to be able to give better estimates in the future and also is useful to manage customer billing.
- **Work mode** - the way to work or how it is going to work: on a continuous basis or scheduled work periods.

The more critical the problem is, the faster should be the response to the customer and therefore the SLA should be appropriate to the ticket's level of malfunction. They are always values agreed previously with the customer, estimated based on experience of other projects and the resources that *msg life Iberia* currently has.

According to the inquiries made, the SLAs have been fulfilled, which leads to believe that they are well designed and that the company knows how to respond to the customers' needs. However, it was also noted that it was not clear if they were being correctly measured, so if the metrics are not being well applied this perception may not correspond to reality.

4.5 Metrics

In order to obtain good metrics that represent what one intends to analyze, realistically it is necessary to do a research in the various company's departments that provide IT services. The best way to measure metrics in IT is from SLA, which are a direct consequence of customer requirements. These agreements with customers follow the agreements at the operational level where the way the service is delivered is defined. Consequently in IT, this operational level is treated as the critical success factor and are measured as performance metrics (Brooks, 2006).

When analyzing the requirements that lead to the metrics chosen to be measured, a company has to do it from various perspectives. Each department will have its own vision of what is most important to measure, however there will always be some metrics that are cross-departmental. Topics related to customer satisfaction, employees, and improving the work environment are common objectives. This is only possible when the company has a vision focused on the client's needs and has an united team with a flat hierarchy that doesn't stand out in the company environment.

Throughout the period in *msg life Iberia*, it was possible to verify that for the Administration the most important is how the time is spent. The focus for who runs a business is, essentially, financial and the resource most related to money is time. However, when the inquiry was made to the director, he sought to focus on services, emphasizing that it depended on the scope that was being addressed. From the operational point of view, highlighting respondents more closely related to development tasks, there is a clear inclination toward addressing efficiency metrics in ticket resolution. That should be expected since, in the perspective of internal performance, it is necessary to look at issues more related to operations such as bug resolution metrics, product development issues and internal team responsiveness.

If taking into account the service team vision, the most common is to focus on the performance in relation to customer satisfaction, support agent and service effectiveness using SLA. It was focused, at least by all respondents throughout the survey, the importance of measuring customer satisfaction. It will always depend on the response time, resolution time and respective percentages or number of issues solved (depending on how it is chosen to measure it).

The metrics for this support model were then designed with a more operational perspective of issues resolution and oriented to evaluate the most qualitative parameters such as customer, service and support agent satisfaction.

Requests/Issues

In order to get an overview of what kind of tickets are usually created in customer support, to see what is more important to address and evaluate why the problems come from there, the following metrics have been designed:

- Number of information request tickets (in support) by certain period of time
- Number of bug tickets (in support) by determined period of time
- Number of change request tickets (in support) by certain period of time

The resolution time(*) is an internal parameter used to evaluate whether the development team is actually working on the tickets. When invoicing customers, the calculations are based

on the working time, so it is important to realize what is the average time spent to solve a certain type of ticket with a certain level of importance. This knowledge allows to give better effort estimates when a new ticket appears based on previous data collected from previous tickets with that specific type and level of importance. For this, metrics were created to evaluate the average resolution time by ticket type and by importance:

- Average resolution time for an information request ticket (critical, significant, minor)
- Average resolution time for a bug ticket (critical, significant, minor)
- Average resolution time for a change request ticket (critical, significant, minor)

(*) Resolution time - period between the opening of the ticket until its resolution in working hours, not counting the time in which the ticket was not being actually worked on.

Response time and compliance with the SLA was the most discussed parameter in the surveys. Response time is similar to the resolution time however to evaluate the period of time since the ticket is created until the ticket is implemented and closed. With this metric and the previous one (average resolution time) it is possible to analyze, for example, if the team has a lot of associated work. This analysis is possible since if it has a low resolution time but a high response time, it means that it is taking a long time to start working on the ticket, meaning the team could be overloaded.

- Number of information request tickets enclosed within the response time (critical, significant, minor)
- Number of bug tickets closed within the response time (critical, significant, minor)
- Number of change request tickets closed within the response time (critical, significant, minor)

Another parameter of the SLA that is agreed with the customer is the reaction time. This corresponds to the period between the client's request and the correspondent response by *msg life Iberia*. It is a metric that allows us to evaluate whether customer support is being fast enough to respond, not regarding the quality of service but only its speed.

- Number of requests answered within reaction time

Service Quality

Related to the quality of service, and being able to connect it with the metric of reaction time, the first call resolution metric was designed. It is a metric that allows evaluating the effectiveness and quality of the service through the number of customer requests that are resolved in the first contact (Desmarais, 2012). In this way, besides being able to obtain the information of the speed of the service (time of reaction), it is also possible to measure the service quality and effectiveness.

- First call resolution (number of requests resolved on the first contact)

In order to evaluate the response efficiency, that is, if the answer to the problem was sufficient, a metric that evaluates the number of tickets reopened by ticket type and importance was created.

- Number of reopened information request tickets (critical, significant, minor)
- Number of reopened bug tickets (critical, significant, minor)

- Number of reopened change request tickets (critical, significant, minor)

Customer and agent satisfaction

In the surveys, one of the topics that was referred as most important to measure was customer satisfaction. There are several ways to do this, but the most common is with customer satisfaction surveys created in order to get the most usual customer service metrics. These surveys also adapt to the support in *msg life Iberia*, they are the net promoter score and customer effort score.

- Net promoter score - is obtained by subtracting the percentage of respondents who would not be willing to recommend the company to those they would be willing to recommend it (Hill *et al.*, 2007).
- Customer effort score - measures the customer's level of effort to solve a problem (Dixon *et al.*, 2010)

Support agents are an essential parts in the support and, therefore, there must also be metrics that allow to analyze their satisfaction and effort. This allows to improve the team's working conditions and to know if the team is working with the necessary resources.

- Number of processed tickets / agent rate (sum of the number of tickets processed in a period of time / quantity of agents available in those intervals).

5 Conclusions

The objectives of the dissertation were reached in its general scope.

Initially there was a need to provide a more efficient and effective set of customer support services, also aligned with business needs, focusing on improvements in people and processes. With this objective in mind, an analysis was made of the existing processes in the customer support and proposed a new model design.

The first objective was reached through the analysis of the current panorama. It was possible to understand the strategy of IT management in *msg life Iberia*, identify its implementation of the *agile* methodology, examine the customer support processes and analyse how the teams work, specifically the customer service team. To help this analysis, a literature review was done on the most relevant topics. With this review it was possible to understand the *agile* methodology, to perceive a little better how IT companies work and how *msg life Iberia* implements *agile*. This knowledge also allowed to conclude that, at the customer support level, some adaptation was needed since it was not meeting the company's current needs.

Another equally important objective was the choice of the tool for designing customer support processes. This choice was only possible through an analysis of various *service design* tools. It was concluded that to design the processes inherent to the services provided the best tool would be the SEB. Although it is a redesign of a service, it is a simple system by company requirement and due to the *agile* methodology, so the SEB was the best option.

Another objectives was to design a model capable of responding to the customers' needs in a fast and appropriate way. For this, the presented model was designed aiming to be as comprehensive as possible. Although it was based on a specific case study, it was designed to be applied to other projects, being this possibility discussed throughout the different topics covered.

Metrics were designed to make the model more robust, making possible to track the company's efforts as well as customer's and support agents' satisfaction. It was intended to complete the model with something not done so far in customer support at *msg life Iberia*, which is to measure the work developed by the teams. Just inspecting create the possibility to improve, this is one of the principles of *agile* that was not being applied here to date, but with the new model will be possible.

There is still improvement to be done in the company and the model still has to be put into practice in its entirety to assess whether everything that was designed works or if some adjustments are necessary. It is however possible that, with the diversity of the projects and the diversity of needs that these entail, there are some small adaptations in the day to day reality that needs to be done. Nevertheless, the results of this dissertation were validated by the users (customer support team) and the feedback was very positive and valued.

6 Future work

During the requirements analysis phase, other solutions were found that, together with the solution presented in this dissertation, constitute a set of improvement opportunities for the company's current situation regarding customer support. Due to the size of this project it was not possible to develop all the solutions bellow, which will be presented in a very succinct way. These solutions could constitute a future object of study and, if the analysis is favorable, of implementation.

Adapting the *Agile* methodology to customer support

The *agile* metrics should be revised because they do not fit the customer's support needs. It can happen that, if there is a blocking or worrying error, it becomes debatable to plan if its resolution will be done in the current or the next *sprint* (15-day time horizon). While the first solution can compromise the current sprint's goals, the latest can be unacceptable by the customer due to a possible long wait. It is essential that the SLA and the *agile* method are consistent with each other, i.e. defined in a compatible way so that a functional relationship can be established between them.

Improvements to be implemented in JIRA

- The *log work* functionality enables the software to track ticket work, thus allowing to compare this values with the resolution time, previously discussed. This would enable to access the information on how much time has actually been spent working on that ticket, allowing better metrics. The proposal is to allow this option in the customer's JIRA, although not making it visible to him. Since these hours are the ones charged to the customer, it would make the work of *msg life Iberia* too exposed to him.
- When creating tasks in JIRA it would be important to make two improvements:
 - Integrate ERP (resource manager) and JIRA
 - Make task creation more uniform by creating a task creation manual.

This would mean that ERP and JIRA tasks would be created in one go and the information duplication would end. It would make the fill-up task easier for employees and, at the same time, would allow to make better estimates and take metrics. In addition to that, the task creation manual would help to compare tasks between similar projects.

- Nowadays, besides JIRA, there is a range of software that can be purchased from the same developer with a lot of options in the area of IT. Recently, a new service desk support software was released. It works with the ITSM framework following ITIL recommendations and allows integration with JIRA. This software could be a significant improvement in support processes since it allows options such as: service request fulfillment, change management, incident management, problem management and calculating priority automatically.

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APPENDIX A: Manifesto for *Agile* Software Development

The *agile* manifesto is based on four core ideas (Sutherland and Schwaber, 2001):

- Individuals and interactions over processes and tools;
- Working software over comprehensive documentation;
- Customer collaboration over contract negotiation;
- Responding to change over following a plan.

As it focuses on people, communication, product and its continuous improvement, scope flexibility, team input and delivering essential quality products, this methodology follows twelve *agile* principles:

1. Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
2. Welcome changing requirements, even late in development. *agile* processes harness change for the customer's competitive advantage.
3. Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
4. Business people and developers must work together daily throughout the project.
5. Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
6. The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
7. Working software is the primary measure of progress.
8. *Agile* processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
9. Continuous attention to technical excellence and good design enhances agility.
10. Implicit — the art of maximizing the amount of work not done — is essential.
11. The best architectures, requirements, and designs emerge from self-organizing teams.
12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

APPENDIX B: Survey example

Caro/a [Entrevistado],

Neste momento encontro-me a estagiar na *msg life Iberia*, onde surgiu a oportunidade de realizar o meu projeto de dissertação de Mestrado. O tema aborda os serviços de suporte ao cliente pretendendo analisar os processos atuais neste âmbito e desenhar um modelo.

Uma vez que a *msg life Iberia* já é fornecedora de serviços atualmente, tendo inclusive uma equipa de Customer Service a operar diariamente, o objetivo desta entrevista será recolher algumas informações inerentes aos processos ligados ao suporte ao cliente, nomeadamente a nível de *Service Desk* e métricas inerentes ao mesmo.

Para tal, estou a constituir um painel de entrevistados cujos testemunhos serão com certeza uma mais-valia para o trabalho a desenvolver.

No final da entrevista, todos os dados recolhidos serão analisados de forma a constituírem requisitos para o desenho de soluções. Por conseguinte, os processos atuais poderão ser redesenhados de forma a melhorar a prestação de serviço, acrescentando valor para o cliente e para a empresa.

Desta forma, venho solicitar a sua disponibilidade em colaborar neste projeto, em formato de inquérito de resposta aberta, com a duração máxima de 10/15 minutos.

Caso necessite de algum esclarecimento adicional, não hesite em contactar-me.

Atenciosamente,
Daniela Varandas

Name:

Job title:

Joined the enterprise at [Eg: 2015-2018]:

1. Are you aware of the current services provided by the customer service team?
 - a. What do you think about the idea of a service catalog (with some preset services)?
2. What is your perception about the quality of the provided services?
3. In your opinion, does the support service schedule is adapted to the customer needs?
4. If an issue is not resolved immediately by the first line of support, which is the existing hierarchy that will solve it? Do you think this solution is adequate?
5. Are you aware of the response times demanded to resolve an issue? Do you think they fit the current users' needs?
6. Do you know what the current issue treatment workflow is?
 - a. If positive, do you consider it to be the most appropriate? What would you change?
7. Related to JIRA:
 - a. Do you think the training with this tool was sufficient?
 - b. Did you have any problems dealing with this tool?
 - c. Which are its strengths and weaknesses?

- d. How would you describe this tool according to (Scale: very bad, bad, reasonable, good, very good) :
- Usability :
 - Effectiveness :
 - Efficiency :
 - Security :
 - Functional consistency :
 - Indexing (MENUS) :
 - “Clear, clean and simple tool” :
 - Memory (easy to remember) :
 - Language used :
 - Quickness :
- e. From the previous list, what do you consider most important in a software
- f. Which features would you like to be implemented?
- g. Do you think there should be an exclusive area to evaluate *msg life Iberia* customers’ satisfaction (not only for JIRA users, but to all support service users)?
- i. If positive, which features should be included?
8. Do you think there should be a standard language to communicate with the customer?
- a. If positive, what would you suggest?
(Eg: creating guidelines to communicate with the customer; standard sentences to use in predefined situations)
9. Which metrics do you think are most important?
10. Do you think the SLA are being accomplished?
11. What do you think is the current customer satisfaction level regarding support services? (bad, good, excelent). Why?
12. Please add any other suggestion.

Thank you for participate

APPENDIX C: Surveys (by respondents)

Respondent #1

Nome: Jorge Miranda

Função na empresa: Gerente

Longevidade na empresa [Ex: 2015-2018]: 2011-2018

1. **Tem conhecimento sobre todos os serviços prestados pela equipa de Customer Service ?**
Resposta: Sim, claro.
 - a. **O que acha da ideia de um catálogo de serviços (com alguns serviços pré-definidos)?**
Resposta: Acho interessante. Atualmente os serviços são sempre prestados no âmbito de projetos, estando “catalogados” nos respetivos contratos.
2. **Qual a percepção que tem acerca da qualidade dos serviços que são prestados?**
Resposta: São excelentes.
3. **O horário do serviço de suporte adapta-se às necessidades dos utilizadores?**
Resposta: Sim, é um horário standard. Há abertura para estender o horário caso o cliente assim o deseje, estabelecendo para isso acordos específicos.
4. **No caso duma ocorrência não ser resolvida no primeiro contacto com a 1ª linha de Suporte, qual a hierarquia existente para a sua resolução? Acha que está adequada?**
Resposta: Quando a primeira linha não resolve, são contactados os especialistas em cada solução para poder haver o apoio necessário à sua resolução. Estes especialistas num primeiro momento serão os locais (Iberia), podendo depois ser envolvidos especialistas de outras unidades. Julgo que o processo é o adequado.
5. **Tem conhecimento dos tempos de resposta exigidos para a resolução de uma ocorrência? Acha que estão adequados às necessidades atuais dos utilizadores do serviço de suporte?**
Resposta: Sim.
6. **Tem conhecimento sobre o workflow atual de tratamento de ocorrências?**
 - a. **Se sim considera-o que é o mais indicado? O que alteraria?**
Resposta: Julgo que evoluiu muito ao longo dos últimos meses, pelo que atualmente é o adequado.
7. **Relativamente à ferramenta usada: JIRA (tratamento de issues)**
 - a. **Considera que a formação nesta ferramenta foi suficiente?**
Resposta: N/A
 - b. **Teve alguma resistência em começar a lidar com a ferramenta?**
Resposta: N/A
 - c. **Quais os pontos fortes e pontos fracos mais evidentes?**
Resposta: Parece uma ferramenta muito poderosa e adaptável a diferentes realidades e necessidades.

d. Como descreveria esta ferramenta quanto à sua (Escala: Muito Má, Má, Razoável, Boa, Muito Boa)

Resposta: Não utilizo a ferramenta diariamente, pelo que não sou a pessoa indicada para responder.

Usabilidade :
Eficácia :
Eficiência :
Segurança :
Consistência funcional :
Indexação (a nível de MENUS) :
“Ferramenta simples, clara e limpa” :
Memória (facilidade em recordar) :
Linguagem utilizada :
Rapidez :

e. Da lista anterior, que características considera mais importantes num software (a nível geral)?

Resposta: N/A

f. Que funcionalidades gostaria de ver adicionadas além das já existentes?

Resposta: N/A

g. Considera que deveria existir uma área exclusiva para avaliação da satisfação do cliente da *msg life Iberia* (não só para utilizadores do JIRA mas para utilizadores dos serviços a nível geral)?

Resposta: N/A

i. Se sim que funcionalidades poderia incluir?

Resposta: N/A

8. Considera que deveria existir uma linguagem standard na comunicação com o utilizador?

Resposta: Sim, é algo que definitivamente temos que melhorar.

a. Se sim o que sugeria?

(Ex: criação de guidelines de como comunicar com o cliente; formas de tratamento; frases standard a utilizar para determinadas situações)

Resposta:

Temas como:

- Formas de tratamento
- Guiões/Orientações para classificação e tratamento dos diferentes tipos de situações:
 - Diagnóstico de problemas
 - Esclarecimentos de dúvidas
 - Novos pedidos

9. Quais as métricas que considera mais relevantes medir?

Resposta: Depende do âmbito que estiver a ser considerado. Se falarmos de tudo o que é serviços, o mais importante é quantificar o nr de ocorrências por tipo, e medir qual a eficácia na resposta pela *msg life*. Ou seja, medir qual o lead time, entre os pedidos do cliente, e a nossa resposta, classificando por tipo e importância do problema, de

acordo com os SLAs, e claro o indicador de satisfação do cliente, Net Promoter Score, medido por inquéritos periódicos.

10. A nível geral, o SLA está a ser cumprido?

Resposta: Sim, sem dúvida, o nível de resposta é melhor que o contratado.

11. Qual considera ser o grau de satisfação atual dos clientes *msg life Iberia* a nível de serviços (especificamente de suporte)? (mau, bom, excelente) E Porquê?

Resposta: Algures entre o Bom e Excelente.

12. Sugestões:

Respondent #2

Nome: Anibal Couto

Função na empresa: Customer Service Manager

Longevidade na empresa [Ex: 2015-2018]: 2012-2018

1. Tem conhecimento sobre todos os serviços prestados pela equipa de Customer Service ?

Resposta: Sim, tenho

a. O que acha da ideia de um catálogo de serviços (com alguns serviços pré-definidos)?

Resposta: Existe um catálogo sobre o âmbito da equipa, tirando a parte da implementation Team que não está a 100%.

2. Qual a perceção que tem acerca da qualidade dos serviços que são prestados?

Resposta: O serviço prestado ao cliente é mt bom, existe uma grande competencia e comittement por parte de toda a equipa.

3. O horário de suporte ao serviço adapta-se às necessidades dos utilizadores?

Resposta: Sim, é o horario normal de uma equipa de suporte. Caso tenha que ser diferente o contrato de manutenção com o cliente é diferente.

4. No caso duma ocorrência não ser resolvida no primeiro contacto com a 1ª linha de Suporte, qual a hierarquia existente para a sua resolução? Acha que está adequada?

Resposta: Não gostando da palavra hierarquia penso que equipa tem que trabalhar em equipa, a hierarquia so deve ser utilizada em situações que nao sao resoluveis. Existem coisas a corrigir, mas penso que estamos no caminho certo.

5. Tem conhecimento dos tempos de resposta exigidos para a resolução de uma ocorrência?

Resposta: Sim.

Acha que estão adequados às necessidades atuais dos utilizadores do serviço de suporte?

Resposta: Sem duvida!

6. Tem conhecimento sobre o workflow atual de tratamento de ocorrências?

Resposta: Sim

a. Se sim considera-o que é o mais indicado? O que alteraria?

Resposta: Sim, tem de se acrescentar mais tipos de pedidos ao jira e o workflow de um CR tem de ser diferente.

7. Relativamente à ferramenta usada: JIRA (tratamento de issues)

a. Considera que a formação nesta ferramenta foi suficiente?

Resposta: Sim

b. Teve alguma resistência em começar a lidar com a ferramenta?

Resposta: Não

c. Quais os pontos fortes e pontos fracos mais evidentes?

Resposta: Só vejo pontos forte.

d. Como descreveria esta ferramenta quanto à sua (Escala: Muito Má, Má, Razoável, Boa, Muito Boa)

Usabilidade : Muito boa

Eficácia : Muito boa

Eficiência : Muito boa

Segurança : Muito boa

Consistência funcional : Muito boa

Indexação (a nível de MENUS) : Muito boa

“Ferramenta simples, clara e limpa” : Muito boa

Memória (facilidade em recordar) : Muito boa

Linguagem utilizada : Muito boa

Rapidez : Muito boa

e. Da lista anterior, que características considera mais importantes num software (a nível geral)?

Resposta: Usabilidade e rapidez

f. Que funcionalidades gostaria de ver adicionadas além das já existentes?

Resposta: NA

g. Considera que deveria existir uma área exclusiva para avaliação da satisfação do cliente da *msg life Iberia* (não só para utilizadores do JIRA mas para utilizadores dos serviços a nível geral)?

Resposta: Sim. Já efetuamos um survey ao nossos clientes para medir a satisfação

i. Se sim que funcionalidades poderia incluir?

8. Considera que deveria existir uma linguagem standard na comunicação com o utilizador?

Resposta: De alguma maneira já o fazemos, no entanto cada cliente é um cliente.

a. Se sim o que sugeria?

(Ex: criação de guidelines de como comunicar com o cliente; formas de tratamento; frases standard a utilizar para determinadas situações)

9. Quais as métricas que considera mais relevantes medir?

Resposta: Tempo de resolução dos pedidos de acordo com a severidade, numero de CRs, Productividade dos projectos.

10. A nível geral, o SLA está a ser cumprido?

Resposta: Sim

11. Qual considera ser o grau de satisfação atual dos clientes *msg life Iberia* a nível de serviços (especificamente de suporte)? (mau, bom, excelente) E Porquê?

Resposta: Excelente

12. Sugestões:

Respondent #3

Nome: Miguel Ferreira

Função na empresa: Implementation Lead

Longevidade na empresa [Ex: 2015-2018]: 2016-2018

1. Tem conhecimento sobre todos os serviços prestados pela equipa de Customer Service ?

Resposta: Os serviços são de suporte ao cliente, em que existe o apoio de negócio ao cliente, apoio técnico, instalação de software, manutenção de software e configuração. Existem também tarefas relacionadas com gestão de projectos que são aqui realizadas.

a. O que acha da ideia de um catálogo de serviços (com alguns serviços pré-definidos)?

Resposta: Sim, este catálogo deveria funcionar como um template para garantir que não é esquecido nenhum serviço da lista que temos disponíveis. Penso que servirá como apoio à equipa desde que se garanta que é atualizado regularmente. Este tipo de catálogos tem sempre a tendência para ser posto de lado com o tempo por ficar desatualizado.

2. Qual a perceção que tem acerca da qualidade dos serviços que são prestados?

Resposta: A empresa ainda é jovem nesta área. É necessário ainda melhorias tanto a nível de processos como de equipa. A equipa é forçada a adaptar-se rapidamente a todos os projectos que vão surgindo e daí achar que ainda não existem processos bem definidos nesta área.

3. O horário do serviço de suporte adapta-se às necessidades dos utilizadores?

Resposta: O horário de suporte deve sempre ser contratualizado com o cliente previamente e por isso deverá ser efetuado sempre nesse tempo. Neste momento penso que só a April tenha este esquema definido.

4. No caso duma ocorrência não ser resolvida no primeiro contacto com a 1ª linha de Suporte, qual a hierarquia existente para a sua resolução? Acha que está adequada?

Resposta: Existe sempre uma segunda/terceira linha mais técnica que será responsável por efetuar o troubleshooting do problema.

5. Tem conhecimento dos tempos de resposta exigidos para a resolução de uma ocorrência? Acha que estão adequados às necessidades atuais dos utilizadores do serviço de suporte?

Resposta: Neste momento penso que apenas a April tenha isto definido. Estes tempos são de acordo com os SLAs definidos e são os tempos de resposta aceitáveis para a resolução de acordo com cada prioridade de cada problema.

6. Tem conhecimento sobre o workflow atual de tratamento de ocorrências?

Resposta: Tenho para a UNIQA, VHV e APRIL.

a. Se sim considera-o que é o mais indicado? O que alteraria?

Resposta: Na April o que há sempre a garantir é que qualquer contacto que é efetuado pelo cliente é sempre registado e que temos todas as horas que são gastas nesse suporte. O que acontece muitas vezes é que por exemplo, podem existir chamadas directas para as pessoas de suporte que depois não são

contabilizadas. Muitas vezes e devido à quantidade de trabalho é difícil de o fazer porque aparecem mais tarefas logo de seguida. Deverá sempre ser criado ou catalogado, por exemplo no ticket do JIRA todas estas horas gastas com suporte directo ao cliente.

7. Relativamente à ferramenta usada: JIRA (tratamento de issues)

a. Considera que a formação nesta ferramenta foi suficiente?

Resposta: Já conhecia e a formação dada ao cliente até hoje parece-me suficiente.

b. Teve alguma resistência em começar a lidar com a ferramenta?

Resposta: Não.

c. Quais os pontos fortes e pontos fracos mais evidentes?

Resposta: Fortes: Fácil utilização, permite workflows, altamente personalizável a cada projecto, possibilidade de tirar métricas.

Fracos: Alguns clientes têm alguma dificuldade em criar tickets com toda a informação, sendo necessário muitas vezes pedir mais detalhe sobre o que estão a relatar. Penso que esteja ligado também à forma como lhes foi dada formação acerca do JIRA.

d. Como descreveria esta ferramenta quanto à sua (Escala: Muito Má, Má, Razoável, Boa, Muito Boa)

Usabilidade : Boa

Eficácia : Muito boa

Eficiência : Boa

Segurança : Muito boa

Consistência funcional : Boa

Indexação (a nível de MENUS) : Boa

“Ferramenta simples, clara e limpa” : Boa

Memória (facilidade em recordar) : Muito boa

Linguagem utilizada : Boa

Rapidez : Muito boa

e. Da lista anterior, que características considera mais importantes num software (a nível geral)?

Resposta: Usabilidade, rapidez e eficácia.

f. Que funcionalidades gostaria de ver adicionadas além das já existentes?

Resposta: Plugin TEMPO a ser usado. Permite gerir todo o tempo gasto de uma forma mais eficiente.

g. Considera que deveria existir uma área exclusiva para avaliação da satisfação do cliente da msg life Iberia (não só para utilizadores do JIRA mas para utilizadores dos serviços a nível geral)?

Resposta: N/A

i. Se sim que funcionalidades poderia incluir?

Resposta: N/A

8. Considera que deveria existir uma linguagem standard na comunicação com o utilizador?

Resposta: Sim facilitava o nosso trabalho mas é um enorme desafio. Esta linguagem teria que ser através de guidelines no entanto é difícil caso seja um programador a dar apoio ao cliente devido à parte técnica surgir a meio da conversa. Caso seja uma pessoa não tão dedicada a esta área conseguisse desenvolver melhor esta comunicação.

a. Se sim o que sugeria?

Resposta: Respondida na anterior.

9. Quais as métricas que considera mais relevantes medir?

Resposta: Tempos gastos nos tickets, tempos dos ChangeRequests, tempos de apoio ao cliente, tickets resolvidos (etc..).

10. A nível geral, o SLA está a ser cumprido?

Resposta: Sim.

11. Qual considera ser o grau de satisfação atual dos clientes msg life Iberia a nível de serviços (especificamente de suporte)? (mau, bom, excelente) E Porquê?

Resposta: Bom. É tudo entregue, pode não ser com a máxima qualidade mas os problemas que são identificados são prontamente corrigidos.

12. Sugestões:

Resposta: Definição de processos para suporte ao cliente.

Integração das ferramentas que temos, como o JIRA, ERP, etc.

Garantir que o cliente fica também comprometido com o processo acordado, como por exemplo utilização do JIRA.

Respondent #4

Nome: Rui Azevedo

Função na empresa: Implementation Lead

Longevidade na empresa [Ex: 2015-2018]: 2015-2018

1. Tem conhecimento sobre todos os serviços prestados pela equipa de Customer Service ?

Resposta: Sim

a. O que acha da ideia de um catálogo de serviços (com alguns serviços pré-definidos)?

Resposta: Não sei se funcionaria no sentido que o trabalho de uma equipa de suporte parte do cliente e pode ter diversas origens e contextos. Nesse sentido a eficácia de um conjunto de serviços pré-definidos poderia ser baixa. Penso que a formalização e adequação de processos são as maiores melhorias numa equipa de serviços.

2. Qual a perceção que tem acerca da qualidade dos serviços que são prestados?

Resposta: A minha perceção sobre a qualidade dos serviços prestados é que é boa.

3. O horário do serviço de suporte adapta-se às necessidades dos utilizadores?

Resposta: Sim.

4. No caso duma ocorrência não ser resolvida no primeiro contacto com a 1ª linha de Suporte, qual a hierarquia existente para a sua resolução? Acha que está adequada?

Resposta: Dependendo da situação poderá ser encaminhada para uma equipa de DEV interna ou externa. Daquilo que conheço penso ser adequada e ajustada com a realidade de outras empresas.

5. Tem conhecimento dos tempos de resposta exigidos para a resolução de uma ocorrência?

Resposta: Sim (embora não os tenha memorizados na minha cabeça ☺).

Acha que estão adequados às necessidades atuais dos utilizadores do serviço de suporte?

Resposta: Sim.

6. Tem conhecimento sobre o workflow atual de tratamento de ocorrências?

Resposta: Sim

a. Se sim considera-o que é o mais indicado?

O que alteraria?

Resposta: Um ponto crítico no processo de suporte é a passagem de ocorrências entre equipas, neste caso entre Suporte e DEV. Por vezes perde-se o controlo da prioridade e dos tempos de resposta e/ou requer uma insistência das pessoas de suporte para que seja dada uma resposta ao cliente. Por isso, e tendo em conta que o processo da equipa de Suporte me parece bem sistematizado e claramente definido, penso que este ponto poderia ser algo a melhorar.

7. Relativamente à ferramenta usada: JIRA (tratamento de issues)

a. Considera que a formação nesta ferramenta foi suficiente?

Resposta: A minha perceção é que a formação básica para o uso diário da ferramenta foi dada.

b. Teve alguma resistência em começar a lidar com a ferramenta?

Resposta: Não.

c. Quais os pontos fortes e pontos fracos mais evidentes?

Resposta: Pela positiva a ferramenta adapta-se perfeitamente ao ciclo de trabalho através da configuração dos processos. O ponto fraco a assinalar é a interoperabilidade com outros sistemas, seja o JIRA da equipa de DEV ou outro sistema de incidências usados pelo cliente, que penso ser um problema mais global desta ferramenta.

d. Como descreveria esta ferramenta quanto à sua (Escala: Muito Má, Má, Razoável, Boa, Muito Boa)

Usabilidade : Boa

Eficácia : Muito Boa

Eficiência : Boa

Segurança : Boa

Consistência funcional : Boa

Indexação (a nível de MENU) : Razoável

“Ferramenta simples, clara e limpa” : Boa

Memória (facilidade em recordar) : Boa

Linguagem utilizada : Boa

Rapidez : Razoável

e. Da lista anterior, que características considera mais importantes num software (a nível geral)?

Resposta: Eficiência e Rapidez

f. Que funcionalidades gostaria de ver adicionadas além das já existentes?

Resposta: Integração com o ERP

g. Considera que deveria existir uma área exclusiva para avaliação da satisfação do cliente da msg life Iberia (não só para utilizadores do JIRA mas para utilizadores dos serviços a nível geral)?

Resposta: Não pois entendo existirem outras formas melhores para fazer isso.

i. Se sim que funcionalidades poderia incluir?

8. Considera que deveria existir uma linguagem standard na comunicação com o utilizador? Resposta: Idealmente sim, mas não penso que seja de grande importância

a. Se sim o que sugeria?

Resposta: Orientações sobre como comunicar com o cliente poderia ser uma melhoria, embora penso que as pessoas já o façam naturalmente

9. Quais as métricas que considera mais relevantes medir?

Resposta: Rapidez e eficiência na resolução de incidências

10. A nível geral, o SLA está a ser cumprido?

Resposta: A minha percepção é que sim.

11. Qual considera ser o grau de satisfação atual dos clientes msg life Iberia a nível de serviços (especificamente de suporte)? (mau, bom, excelente) E Porquê?

Resposta: Embora não esteja muito ao corrente do trabalho no dia-a-dia da equipa de suporte a minha perceção é que a satisfação do cliente é boa. Porquê? Penso que o tempo de resposta e o apoio prestado à resolução de incidências tem sido bom.

12. Sugestões:

Respondent #5

Nome: Rui Pires

Função na empresa: Implementation Lead

Longevidade na empresa [Ex: 2015-2018]: 2012-2018

1. Tem conhecimento sobre todos os serviços prestados pela equipa de Customer Service?

Resposta: Sim

a. O que acha da ideia de um catálogo de serviços (com alguns serviços pré-definidos)?

Resposta: Penso que será uma boa ideia, já que será mais fácil a adaptação de pessoas novas que ingressão na equipa.

2. Qual a percepção que tem acerca da qualidade dos serviços que são prestados?

Resposta: A percepção que tenho, é que prestamos um bom serviço, devido ao facto de a nossa preocupação é dar resposta o mais breve possível e priorizando as situações, de forma a poder responder de forma mais breve aos casos mais urgentes.

3. O horário do serviço de suporte adapta-se às necessidades dos utilizadores (clientes)?

Resposta: Nem sempre, porque como somos uma empresa, que instala, configura e suporta software de outras empresas do grupo, o fuso horário nem sempre ajuda neste suporte.

4. No caso de uma ocorrência não ser resolvida no primeiro contacto com a 1ª linha de Suporte, qual a hierarquia existente para a sua resolução? Acha que está adequada?

Resposta: Quando a 1ª linha de suporte não é suficiente para resolver a questão, e devido ao explicado no ponto anterior, nem sempre a resposta é a mais rápida. Penso que aqui deveria haver melhorias.

5. Tem conhecimento dos tempos de resposta exigidos para a resolução de uma ocorrência? Acha que estão adequados às necessidades atuais dos utilizadores do serviço de suporte?

Resposta: Sim, penso que estão bem definidos e adequados as necessidades.

6. Tem conhecimento sobre o workflow atual de tratamento de ocorrências?

Resposta: Sim

a. Se sim considera-o que é o mais indicado? O que alteraria?

Resposta: Sim

7. Relativamente à ferramenta usada: JIRA (tratamento de issues)

a. Considera que a formação nesta ferramenta foi suficiente?

Resposta: Sim, sendo que talvez o fluxo de tratamento de um “issue” nem sempre seja claro.

b. Teve alguma resistência em começar a lidar com a ferramenta?

Resposta: Não.

c. Quais os pontos fortes e pontos fracos mais evidentes?

Resposta: Quanto a ferramenta, só vejo pontos fortes, já que se trata de uma ferramenta indicada para tal. Os pontos fracos, será mais na definição do workflow da mesma.

d. Como descreveria esta ferramenta quanto à sua (Escala: Muito Má, Má, Razoável, Boa, Muito Boa)

Usabilidade: Muito Boa

Eficácia: Muito Boa

Eficiência: Muito Boa

Segurança: Muito Boa

Consistência funcional: Muito Boa

Indexação (a nível de MENUS): Muito Boa

“Ferramenta simples, clara e limpa”: Muito Boa

Memória (facilidade em recordar): Muito Boa

Linguagem utilizada: Muito Boa

Rapidez: Muito Boa

e. Da lista anterior, que características considera mais importantes num software (a nível geral)?

Resposta: Na minha opinião as características mais importantes são: a usabilidade e eficácia a tratar/gerir o que se propõe.

f. Que funcionalidades gostaria de ver adicionadas além das já existentes?

Resposta: A ferramenta possui possibilidade de criar dashboards e filtros que ajudam na análise, penso que aqui poder-se-ia melhorar muito.

g. Considera que deveria existir uma área exclusiva para avaliação da satisfação do cliente da msg life Iberia (não só para utilizadores do JIRA mas para utilizadores dos serviços a nível geral)?

Resposta: Sim

i. Se sim que funcionalidades poderia incluir?

Resposta: Não sei ao certo, mas receber o feedback dos utilizadores, seria importante.

8. Considera que deveria existir uma linguagem standard na comunicação com o utilizador?

Resposta: Sim e Não

a. Se sim o que sugeria?

Resposta: Penso que em alguns casos já esta a ser realizado. Mas em muitos casos, as situações tem que ser tratadas de maneira diferente e caso a caso.

(Ex: criação de guidelines de como comunicar com o cliente; formas de tratamento; frases standard a utilizar para determinadas situações)

9. Quais as métricas que considera mais relevantes medir?

Resposta: Na minha opinião, as métricas mais importantes serão:

- Qualidade do serviço

- Tempo de resposta

10. A nível geral, o SLA está a ser cumprido?

Resposta: Penso que sim.

11. Qual considera ser o grau de satisfação atual dos clientes msg life Iberia a nivel de serviços (especificamente de suporte)? (mau, bom, excelente) E porquê?

Resposta: Na minha opinião, penso que o grau de satisfação atual dos clientes estará no bom. Sendo que para cada cliente o nível pode ser diferente, já que estamos a falar de softwares diferentes, e nem sempre se trata da qualidade do serviço, mas sim da qualidade do software e adaptação a cada realidade.

12. Sugestões:

Resposta: NA

Respondent #6

Nome: Susana Pinto

Função na empresa: Matemática

Longevidade na empresa: 2015 – 2018

1. Tem conhecimento sobre todos os serviços prestados pela equipa de Customer Service ?

Resposta: Não. Conheço apenas os serviços prestados pelos projetos nos quais me enquadro. Relativamente a serviços de carácter técnico (operacional no que se refere a engenharia de software / desenvolvimento), sei que existem (não sei detalhar em que consistem).

a. O que acha da ideia de um catálogo de serviços (com alguns serviços pré-definidos)?

Resposta: Interessante. Se a pré-definição implicar a existência de um catálogo base de oferta genérico (para todo e qualquer projeto), deduzo que esse trabalho obrigaria a um pré-tratamento de possibilidades a ser feito pela área comercial em conjunto com a área de gestão financeira e de projeto (com base no histórico do que os clientes têm pedido e possam eventualmente pedir), possivelmente organizado por categorias (exemplo: produto, IT, consultoria) dado que, neste momento, os projetos possuem âmbitos muito diversificados.

2. Qual a perceção que tem acerca da qualidade dos serviços que são prestados?

Resposta: Baseando-me nos projetos dos quais tenho conhecimento, diria que, no geral, existe uma resposta rápida e eficaz (sobretudo no que se refere à primeira linha de suporte e aos temas diretamente sob a responsabilidade da equipa de serviços de Portugal).

Penso que no âmbito da qualidade interna de resposta, há um ponto específico a melhorar: a metodologia Agile (implementada em particular na área de desenvolvimento) deverá ser revista porque, do meu ponto de vista, não se adequa à necessidade de suporte a um cliente.

Justificando: havendo um erro bloqueante ou preocupante em produção (ou em testes que possa comprometer uma entrega), torna-se discutível planejar a resolução do mesmo por sprint (horizonte temporal de 15 dias) ou ocupar o tempo que poderia ser de resolução com reuniões de planeamento. Os SLAs e o método Agile deveriam ser consentâneos e coerentes entre si (isto é, definidos de modo compatível, para que seja possível estabelecer uma relação funcional entre eles).

Apesar de existir sempre alguém de suporte na equipa de desenvolvimento, por vezes verifica-se que a resolução poderia ser mais eficaz (menos demorada) se os responsáveis pelo desenvolvimento em questão fossem os mesmos que analisassem o problema (porque saberiam, à partida, identificar a origem do problema de um modo mais eficiente do que alguém que é colocado pela primeira vez à frente de um problema cujo histórico de desenvolvimento desconhece).

3. O horário do serviço de suporte adapta-se às necessidades dos utilizadores?

Resposta: Presumo que não se adapte a todos os clientes, dado que existem diversos fusos horários para os diferentes utilizadores dos sistemas. No entanto, a lógica empresarial implementada prende-se com a tentativa de que o suporte seja feito em primeira instância pelos trabalhadores do país de origem dos usuários.

Note-se ainda que o horário de suporte é definido nos contratos numa fase inicial de projeto. Qualquer horário fora do acordado terá de ser revisto e negociado noutras moldes porque já não se trata de um suporte obrigatório em horário laboral do provedor de software.

4. No caso duma ocorrência não ser resolvida no primeiro contacto com a 1ª linha de Suporte, qual a hierarquia existente para a sua resolução? Acha que está adequada?

Resposta: No caso de a ocorrência não ser resolvida no imediato, é criado um ticket JIRA (pelo cliente - ou pela MSG apenas em casos prioritários) com a descrição do mesmo. Normalmente também é enviado um email para o email de suporte da empresa.

A partir desse momento, é atribuída uma prioridade ao assunto em questão (que pode ser diferente da que o cliente definiu na criação do ticket) e é validado o tipo de ticket (erro, pedido de esclarecimento, solicitação de melhorias ou ainda alteração de requisito).

Posteriormente o tópico é direcionado a quem o possa resolver (consoante se trate de um tema de desenvolvimento, de configuração, etc. – o que pode implicar contactos externos com outras empresas do grupo). É uma hierarquia pouco flexível mas que, como todos os modelos, tem vindo a melhorar com o histórico de projetos da empresa.

5. Tem conhecimento dos tempos de resposta exigidos para a resolução de uma ocorrência? Acha que estão adequados às necessidades atuais dos utilizadores do serviço de suporte?

Resposta: Tenho conhecimento de apenas alguns tempos de resposta, sendo que não são fruto de uma análise muito profunda, mas apenas de comparação entre data de criação, data de progresso, data de resolução e data de fecho (porque no JIRA de cliente que conheço – alemão, e portanto com menos flexibilidade de configuração do que o americano – não é possível fazer Log Work nem Stop Progress, o que torna o acompanhamento dos tempos de resposta menos precisos do que no JIRA interno).

Os tempos de resposta são eficientes quando nos referimos a temas que a equipa de suporte pode corrigir diretamente. Quando se tratam de temas de desenvolvimento mais profundos ou restritos a contacto externo, a tendência é que os tempos de resposta aumentem ligeiramente (em parte relacionados com ambas as técnicas de planeamento mais atempado de ambas as áreas (15 em 15 dias)).

6. Tem conhecimento sobre o workflow atual de tratamento de ocorrências?

Resposta: Sim

a. Se sim considera-o que é o mais indicado? O que alteraria?

Resposta: Penso que o processo deveria começar sempre por uma instrução ao cliente, no início do projeto, sobre este tema do ciclo de tratamento de ocorrências (uma vez que pode existir alguma resistência à criação de tickets por parte do cliente e deve existir um processo de formação nesse sentido). Acredito também que, em vez de uma associação direta à pessoa que pode corrigir a situação, deveria existir: ou um utilizador comum de correção no JIRA cliente e um user específico no JIRA interno, ou a total dissociação entre JIRA cliente e JIRA interno (devendo o projeto pautar-se apenas pelo primeiro).

Neste último caso, na minha opinião, dever-se-ia fazer uma associação ao gestor de projeto para que possa fazer a triagem do problema e atribuí-lo ao responsável da equipa relacionada com a categoria da ocorrência reportada, sendo que esse responsável ficaria com a função de definir dentro da sua equipa quem pode atuar sobre o problema. Olhando para o modelo atual, penso que não está claro onde é que termina a equipa de serviços e onde começa a de desenvolvimento (sendo que há elementos que intersejam ambas as equipas), o que cria confusão quando há um problema de desenvolvimento para resolver.

Relativamente ao email enviado para o email de suporte: deveria incluir o ID to ticket criado pelo cliente, que, ao atribuir o ticket ao user do suporte, permitiria identificar o problema e o ID a ele referente.

7. Relativamente à ferramenta usada: JIRA (*tratamento de issues*)

a. Considera que a formação nesta ferramenta foi suficiente?

Resposta: Não. Nunca tive formação na ferramenta. Ainda hoje, se for para criar um ticket interno, não conheço o padrão de preenchimento dos campos nem ciclo de tratamento dos mesmos.

b. Teve alguma resistência em começar a lidar com a ferramenta?

Resposta: Sim.

c. Quais os pontos fortes e pontos fracos mais evidentes?

Resposta: Diria que o facto de ser configurável abrange ambas as características (boas e más). Permite que seja feita uma configuração personalizada por projeto / cliente / metodologia de trabalho, mas, por outro, faz com que, não havendo formação, não seja fácil para um estranho à ferramenta saber usá-la sem pré-acompanhamento (apesar de ser intuitiva em alguns aspetos, há campos de preenchimento obrigatório que podem existir apenas num determinado projeto, o que implica total conhecimento de quem usa a ferramenta, sobre o modo como o JIRA em questão foi configurado).

d. Como descreveria esta ferramenta quanto à sua (Escala: Muito Má, Má, Razoável, Boa, Muito Boa)

Usabilidade : Razoável

Eficácia : Boa

Eficiência : Boa

Segurança : Boa

Consistência funcional : Muito Boa

Indexação (a nível de MENUS) : Razoável

“Ferramenta simples, clara e limpa” : Boa

Memória (facilidade em recordar) : Boa

Linguagem utilizada : Boa

Rapidez : Boa

e. Da lista anterior, que características considera mais importantes num software (a nível geral)?

Resposta: Usabilidade, simplicidade e facilidade no acesso à informação (“Ferramenta simples, clara e limpa”).

f. Que funcionalidades gostaria de ver adicionadas além das já existentes?

Resposta: Não conheço suficientemente bem a ferramenta para saber identificar algo que não contenha e que achasse ser útil.

g. Considera que deveria existir uma área exclusiva para avaliação da satisfação do cliente da msg life Iberia (não só para utilizadores do JIRA mas para utilizadores dos serviços a nível geral)?

Resposta: Sim.

i. Se sim que funcionalidades poderia incluir?

Resposta: Questionário standard e exportação automática dos dados lá contidos após preenchimento (para que as respostas pudessem ser objeto de análise). Idealmente já se poderiam extrair dados – exemplos: tabelas com tabelas simples (contagens), pivots de dados agrupados, frequências relativas, etc.

8. Considera que deveria existir uma linguagem standard na comunicação com o utilizador?

Resposta: Sim.

a. Se sim o que sugeria?

(Ex: criação de guidelines de como comunicar com o cliente; formas de tratamento; frases standard a utilizar para determinadas situações)

Resposta: Definição de modelo de suporte genérico e organização de uma estrutura de workflow de trabalho que pudesse ser partilhada com qualquer cliente (sendo esse workflow diferente por tipologia de ticket – isto é: um erro e um pedido de alteração de requisitos não deverão seguir o mesmo ciclo de tratamento porque se tratam de tópicos de naturezas diferentes).

Penso que neste momento já existem templates de comunicação standard (layout de atas e power points); acredito que também existam para comunicações de maior formalidade.

9. Quais as métricas que considera mais relevantes medir?

Resposta: Satisfação do cliente, tempos de resposta, eficácia de resposta (um bom tempo não implica um bom serviço).

10. A nível geral, o SLA está a ser cumprido?

Resposta: Penso que no início dos projetos é sempre mais complexo estabilizar as aplicações e corresponder aos SLAs

11. Qual considera ser o grau de satisfação atual dos clientes msg life Iberia a nível de serviços (especificamente de suporte)? (mau, bom, excelente) E Porquê?

Resposta: Bom. Porque a resposta (quer o acusar da recepção quer a resolução) surge rapidamente e existe disponibilidade para apoio imediato.

12. Sugestões:

Resposta: Possibilidade de fazer log work no JIRA de cliente.

Possibilidade de relacionar automaticamente dados inseridos no JIRA e sistema de faturação de empresa (neste momento a informação é inserida em duplicado).