Development of a Dashboard for Monitoring Cross-Team Issues

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To you, my Grandmother

Abstract

Farfetch is a technological company that commercializes luxury fashion goods through its online platform. Due to the nature of the business, the company uses a Fast-Track process, a system for solving issues, where these are submitted to tech teams. This process happens through the issue tracking system, JIRA.

Due to the growth of the business, the number of collaborators and the significant increase of issues, the current process does not assure a convenient visibility and follow up, leading to features from the internal tools being lost, between other situations.

This project intends to solve the given problem by implementing a dashboard which allows operational teams to have more visibility of the issues reported through JIRA's platform. By using the reporting features of this platform, a tool was developed to allow a better control of the unsolved incidents, as looking for the team as a whole or by a specific collaborator of the company. Thereby, it is possible to follow a series of metrics as status, priorities, resolution times, average age of open tickets, among others. Additionally, it allows the teams to visualize issues being reported by other collaborators and, with that, to prepare in advance for a potential impact on them.

The project reached a peak with the implementation of a pilot in the Customer Operations team, being created a user training session in order to communicate a methodology to report, as well to follow the issues. As an immediate impact of the pilot, it was observed a decrease in the number and average age of the open issues. Regarding a future perspective, the results will have to be measured in a longer time span in order to better evaluate the results of the implemented solution and take benefits of the acquired experience to then proceed with the implementation for the other teams of the company.

Desenvolvimento de um *Dashboard* para Monitorização de Problemas Inter-equipas

Resumo

A Farfetch é uma empresa de tecnologia que comercializa moda de luxo através da sua plataforma online. Pela natureza do negócio, a empresa usa um processo de Fast-Track, um sistema para resolução de incidentes, em que estes são submetidos às equipas de desenvovimento. Este processo acontece através de uma plataforma de gestão de incidentes, o JIRA.

Devido ao crescimento, quer do negócio quer do número de colaboradores, e dado o significativo aumento de incidentes, o atual processo não garante a visibilidade adequada e respetivo acompanhamento originando, entre outros, que se percam funcionalidades nas ferramentas internas.

Neste projeto, pretendeu-se dar resposta ao problema através da implementação de um *dashboard* que permita às equipas operacionais ter mais visibilidade dos incidentes reportados através da plataforma JIRA. Usando as funcionalidades de criação de relatórios desta plataforma, desenvolveu-se uma ferramenta que permite o controlo de incidentes por resolver, quer olhando para uma equipa no seu todo, quer a nível de cada colaborador da empresa. Assim, é possível acompanhar uma série de métricas desde estados, prioridades, tempos de resolução, idade média de incidentes em aberto, entre outras. Adicionalmente, permite às equipas visualizarem incidentes a serem reportados por outros colaboradores e com isso prepararem-se antecipadamente para potenciais impactos que venham a sofrer.

O projeto culminou com a implementação de um piloto na equipa de *Customer Operations*, sendo criada uma sessão de formação para os utilizadores no sentido de transmitir uma metodologia para reportar, bem como acompanhar os incidentes. Como impacto imediato do piloto observou-se uma diminuição do número e idade média de incidentes em aberto. No âmbito de uma perspetiva futura, os resultados terão que ser medidos num período mais longo para uma melhor avaliação dos resultados da solução proposta e usar a experiência adquirida para prosseguir com a implementação para as restantes equipas da empresa.

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Glossary

B2B – Business to Business

B2C – Business to Client

BI – Business Intelligence

Bug – A type of tickets solved by tech teams

Business Needs – Problems and needs raised by the user. What the dashboard should answer

Customer Operations – Team that includes Delivery, Fraud and Payments. It is part of the Operations Department and where the pilot is implemented

Dashboard – A page showing information as charts or lists

Fast-Track – Farfetch's process for dealing with issues. Sometimes used as "FastTrack team" when referring to the team screening the submitted issues

Gazelles – Fast growing companies

JIRA – Issue tracking system, the platform used to submit tickets and manage them

KPI – Key Performance Indicator

IT helpdesk – A type of tickets solved by IT helpdesk

Pilot – An implementation test in order to assess results

Resolution Time – Age of a ticket when it was closed

Roll Out Plan – The plan to move from a pilot to the implementation for all the other teams

SLA – Service Level Agreement

Tasks – A type of tickets, usually solved by FastTrack team

Technical Requirements – The requirements that a platform should fulfil to be able to reach the Business Needs

Tech Teams – Teams belonging to the Technology Department. Sometimes referred as development teams. Teams that solve bugs

User – Any Farfetch collaborator able to submit issues through JIRA

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1 Introduction

It was during a Paris Fashion Week that Farfetch's founder, José Neves, saw two completely different scenarios. Firstly, José saw boutiques rejoice for their business and secondly, the ones striving to survive in an extremely volatile business. José understood the main difference between these two worlds, the first had an online presence, contrarily to the other boutiques. That's how he decided to create Farfetch.com, an online platform where boutiques from all around the world would be able to commercialize their products without the need of having knowledge of programming or even e-commerce. This is Farfetch, an online market place, connecting boutiques and clients all around the world, connecting e-commerce and luxury fashion goods.

1.1 Farfetch

Farfetch is an e-commerce company retailing luxury fashion goods in a unique business model. The company, founded in 2008, allows boutiques to have an online presence and reaching a broader number of clients, instead of being limited by their geographic location. Online presence is about to be available to everyone, since Internet has been more and more part of our daily lives. On the other hand, luxury goods are seen as elitist and restrict. Which might look like a contradiction is actually a target group.

This online presence and everything required to keep the business moving would be very expensive for each boutique to support with their own resources. Farfetch offers all these services and makes it possible through an economy of scale. The company is responsible for payments processing, fraud detection, customer support, maintenance of the platform, the whole delivery process from the boutique to the client and vice-versa (in case of a return). This delivery process is assured by third parties as DHL and UPS, but Farfetch is continuously in contact with the carriers and solves any problem. From the boutiques side, all they have to do is to confirm their stock once a request arrives, and prepare the package for the carrier. Farfetch is paid by the service offered to the boutiques.

When Farfetch was launched, the portal had less than 20 boutiques. Currently it has more than 600 partners online. For boutiques, being partners of Farfetch is now a matter of prestige. With this alignment, the company is part of the B2B segment by having hundreds of partners, and part of the B2C segment, allowing the customers to get the very top fashion having it all centralized in one portal. This revolutionary business model delivers something unique to the customer, a huge variety of items and brands hardly matched by the competition. This is one of Farfetch's main selling points. The company has been in a fast growth in matters of collaborators, offices and business complexity.

Currently, Farfetch has offices in 11 different locations: Portugal – Porto, Guimarães and Lisbon; England – London, United States of America – New York and Los Angeles; Brazil – São Paulo; Russia – Moscow; China – Hong Kong and Shanghai; Japan – Tokyo.

Figure 1 shows the geographic distribution of Farfetch, by country.

Figure 1 – Farfetch's offices locations

1.1.1 Farfetch Structure

Due to strategic reasons, Farfetch created a considerable net of offices, leading to some departments being represented in more than one location. A structure diagram is visible in Figure 2.
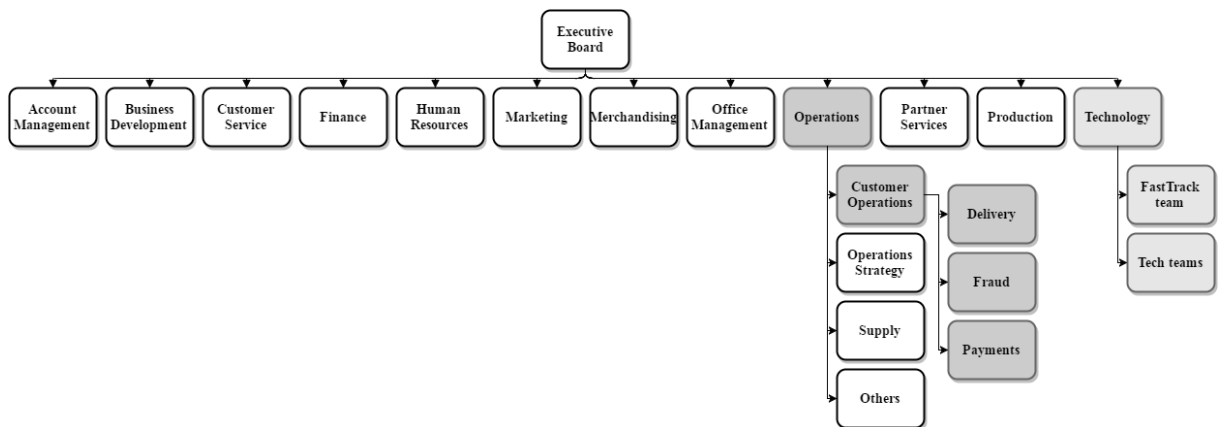
Figure 2 – Farfetch's Structure

The biggest office is in Porto where the following departments are represented: Human Resources, Merchandising, Finance, Partner Service, Account Management, Customer Service, Operations and Technology.

1.1.2 Operations Department

Having in consideration that this dissertation will have a pilot released in the Customer Operations team, this department will be focused. Operations department include three different teams: Operations Strategy, Supply and Customer Operations. The last one is itself formed by three teams, Delivery Development & Support, Fraud and Payments. Along this dissertation,

Delivery team will be considered to be split in Delivery Development and Delivery Support. These teams are represented in different offices:

- Delivery Support – represented in Porto, Tokyo and Los Angeles;
- Delivery Development – represented in Porto and Tokyo;
- Fraud – represented in Porto;
- Payments – represented in Porto and São Paulo.

This geographic distribution of teams and services contributes for the need of the project described hereafter. Problems of communication and visibility of issues are happening inside the same team and between different teams.

The main interactions of Customer Operations teams happen with Supply, Customer Service, Account Management and Partner Service, as these are the teams connecting customers and boutiques with Farfetch. The Technology department is also one of the departments with more interactions from Customer Operations. This happens in order to constantly improve, to handle the maintenance of the tools and develop new projects or initiatives.

1.2 Project

Due to the company's fast growth and the impact that different departments have on each other's work, it becomes difficult for each team to track and have visibility of all the issues reported to tech department. This has a bigger impact for situations that are not immediately solved since these tend to stay unresolved for a very long time and some functionalities get lost. Currently, issues are submitted as tickets through the issue tracking system platform, JIRA. The only way teams are making follow up to their tickets is through an e-mail automatically sent for the creator of the issue every time that the issue receives an update.

The project consists in raising the visibility and follow up methods for solving fast-track issues. The lack of visibility and follow up are being a problem for issues not solved for a long time. Teams do not know how many issues they have reported and are still waiting for resolution. In order to change this situation, a dashboard for monitoring reported issues will be developed along this project.

1.3 Project Goals

The main goals of the project are improving visibility and follow up of reported incidents. As a tool for this, a dashboard for monitoring the situation will be developed.

As a goal it is suggested the implementation of a pilot in the Customer Operations team. Also, standardizing some of the daily issues created will allow to analyze these situations in an operational perspective. With this, the teams will be better prepared for high seasons and performance analysis will be possible as well.

On a longer term, the goal is to be able to share the dashboard of control with the whole company.

1.4 Methodology

Taking into account it is intended to release a pilot in the Customer Operations team, a first approach was made by interviewing the Delivery, Fraud and Payments teams. These interviews were focused on understanding the business needs for each team. After this, a list of technical requirements was created according to the given business needs. These lists of business needs and requirements intend to be shared with the teams to be validated. After the approval of business needs and requirements, a first version of a dashboard will be conceptualized in order to verify the availability of the currently used tools.

Parallel to this, there was a discussion with the tech department to understand the potential impact and effort of the project, the potential of the available platforms as well as the possibility of integrating the database of tickets with different platforms.

After conceptualizing an ideal version of the dashboard and having selected a platform, a version similar to the ideal one was implemented, having in consideration the limitations of the platform. This implementation happened in two different moments, receiving feedback between them.

Regarding the user training, an induction was delivered and a training guide prepared and shared in order to give the user the necessary knowledge and the correct understanding of the process. Following this, the pilot was released and success metrics defined for short and long term. Figure 3 summarizes all the phases.
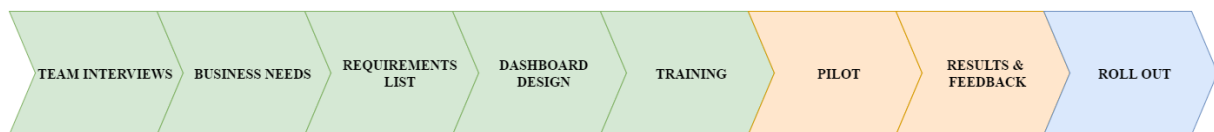
Figure 3 – Phases of the project

1.5 Report Structure

The structure of this dissertation is described like:

Chapter 2 is the literature review for the combination of luxury and e-commerce, fast growing companies perks and problems, dashboards & visual management, and lastly an overview of issue tracking systems.

Chapter 3 gives an overview of the current situation about the tickets and the impacts of the lack of visibility and control in Farfetch's teams.

Chapter 4 is related to the development process of the dashboard, presenting the gathered business needs and requirements, comparing platforms and describing the guidelines used in the selection process. A conceptualized version of the dashboard is presented as well as the implemented one. Lastly, the guidelines created for the user in order to extract the most from the tools are mentioned.

Chapter 5 is the conclusion of the dissertation, presenting a discussion regarding results and the possibilities for future work. It reviews the main knowledge and experience gathered during the last 4 months.

2 State of the Art

This chapter is focused on the topics of luxury & e-commerce, fast growing companies, issue tracking systems, visual communication and dashboards.

2.1 Luxury & E-commerce

According to Okonkwo (2009), luxury's original function is significantly different from other products and services. Its purpose is rooted in past societies, when higher social classes through the use of their extravagant consumption would show their superiority and maintain distances from the less privileged social classes. Back then, luxury was about attributes, qualities and features of the product, seeking for status and prestige. Although, currently the concept of luxury focus on the experience given by the goods and services, fulfilling the fantasies of the clients (Brun *et al.* 2008). Okonkwo (2009) described luxury as an identity, a philosophy and a culture. According to Dubois (2001), regarding its nature and characteristics, luxury is defined as:

1. Excellent quality;
2. Very high price;
3. Scarcity and uniqueness;
4. Aesthetics and polysensuality;
5. Ancestral heritage and personal history;
6. Superfluousness.

The contrast between luxury goods and the Internet has been focused in the recent years. Some raise the compatibility issues between the two, while giving strategic approaches to maximize a luxury's brand online presence. Others suggest that the Internet must be purely a channel of communication for brands, as Kapferer and Bastien (2012) state that "A luxury product can communicate via the Internet, but should not be sold there". Through the Internet the consumer is in total control and expects to be looked up to. If this was the only relationship connecting clients and brands, it would probably lead to resistance, apprehension and anxiety from the brand while causing confusion, surprise and disappointment on the client (Okonkwo 2009).

The main contradictions lie on the sense of "exclusivity" that luxury gives, creating a desire on the customer. Yet, e-commerce transmits the feeling of being available for anyone, anywhere, anytime. Ultimately, the goal of going online which is increasing sales, is itself a contradiction with luxury, since this creates a risk of overexposure and destroying the perception of limited supply. This is increased by misconceptions such of Internet being a channel for retail of discounted products, damaged goods and counterfeits (Okonkwo 2009).

Table 1 summarizes the paradox between luxury and Internet.

Table 1 – Paradox between luxury and Internet. Source: Larraufie and Kourdoughli (2014)

	Codes of Luxury	Digital Characteristics
Communication	Elitist and prestigious image	Mass media image
	Values: Traditions – Family history – Timeless	Values: Modernity – Innovation – Instantaneity
	Exclusivity	Large diffusion
	Rarity	Unlimited
Distribution	In-store experience through the five senses	Visual experience mainly
	Service personalization	Common service to all users
	Physical dedicated retail space and sometimes exclusive	A retail space without any special boundaries
	Product display is key, price is secondary	Price and product display do matter similarly

Even having all this in consideration, fashion world is changing. Today, digital platforms influence around 20% of total luxury sales. In a world of computers and smartphones, more than 50% of the luxury shoppers owning at least one of these devices use them as a tool for research. In 2013, pure online sales were responsible for 4% of the total market, growing twice as fast as the luxury market overall. Considering this growth, it is expected to reach at least 20 billion euros revenue in 2018 (Dauriz *et al.*, 2013). Also, in matter of financial value, the price-value relationship is vital because even if a high price is accepted as a necessary element of these goods, luxury is qualitative and not quantitative (Okonkwo 2009).

As an e-commerce player of luxury goods, it is essential to get customers' trust, since this is a crucial step to get their loyalty. For this, brands need to cultivate their relationship with clients, but also to have a trustworthy and secure platform (Toufaily and Pons 2016). Figure 4 describes this connection.
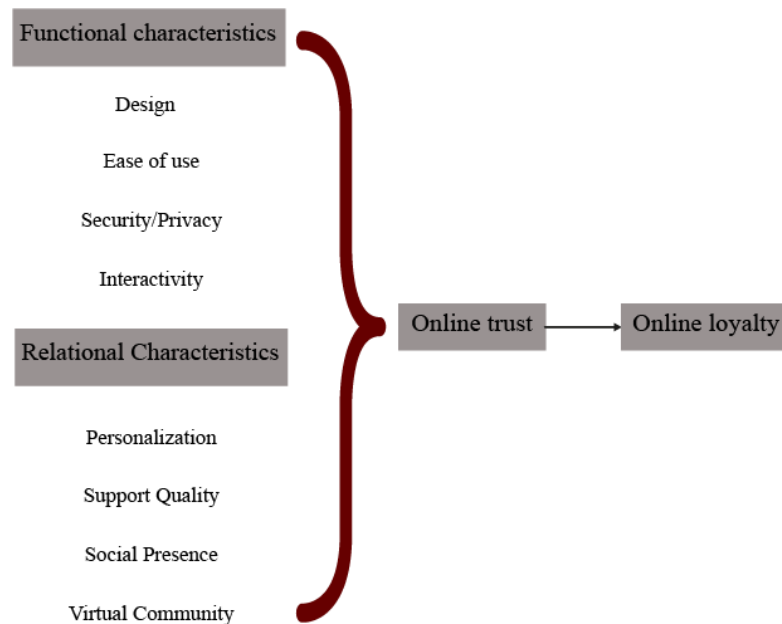

Figure 4 – Parameters impacting customers' trust and loyalty. Source: Toufaily and Pons (2016)

All these challenges support the need of a strategic approach from brands, to reach a market full of potential and highly profitable even though full of idiosyncrasies.

2.2 Fast Growing Companies

Understanding the reasons why some companies grow faster than others is a topic of interest for scholars but also for managers and entrepreneurs who intend to have an advantage to their competitors. Although the definition of a fast grow company is not a consensus, due to different metrics, indicators and formulas being applied (Delmar *et al.* 2003) and also due to difficulties comparing companies of different times or countries (Coad *et al.* 2014), a definition given by the Eurostat (2007) is commonly accepted. It describes fast growing companies as "All enterprises with average annualized growth greater than 20% per annum, over a three year period should be considered as high-growth enterprises. Growth can be measured by the number of employees or by turnover. (...) A provisional size threshold has been suggested as at least 10 employees at the beginning of the growth period".

These companies, also referred as "gazelles", show characteristic features identified as the existence of a vision, finding a need or opportunity, good products or services and a net of partnerships (Bibu *et al.* 2016).

Regarding the vision, several authors state the importance of having this vision coming from the leaders (Nicholls-Nixon 2005), this may come from their ambition and it is a necessary condition but not sufficient as described by Brüderl and Preisendörfer (2000). These companies have management teams with a clear vision for the future of the business and a motivation to make the company grow (Mason and Brown 2010).

Finding an opportunity is one of the key factors for fast growing. According to Coad *et al.* (2014) the opportunity for fast growers is often related to times of change such as crisis and post crisis periods. Creating a vision and finding opportunities are also correlated for the business success, since one answers to "How" and the other answers to "What" (Bibu *et al.* 2016).

The products and services offered are about strategies that improve the quality of the product instead of presenting lower prices. Often, young companies are not in conditions to give lower prices, rather they develop approaches that allow to better serve their clients (Tan and Smyrnios 2009). Therefore, fast growing companies are oriented towards innovation.

Creating strategic partnerships enhances company's growth, since it allows access to more resources, such as managing skills or intellectual knowledge (Barringer *et al.* 2005). Specially international partners and ventures can predict a rapid growth, even though the venture capital is not totally linked to a company's fast growth it feeds the alliances itself (Mohr *et al.* 2014).

A more recent study focused on Romanian companies and using the Eurostat definition, tried to find the commons between fast growers. Their conclusions are summarized in the Table 2.

Table 2 – Specific and common features for fast-growing companies. Source: Bibu *et al.* (2016)

Analyzes factors/variables	Findings of the analysis
Company's vision/mission	• Creates a clear image of what the company should become; • Integrates a powerful wish for the company's growth/development; • Includes phrases such as "growth", "international"; • It is declared (on the company's webpage, for example); • Indicates taking commitments to business; aiming for the things well done/high performance.
Identification of a need/opportunity	• The company is among the first to offer a certain product/service; • The business develops as the demand for a product/service increases; • Foresees the changes in the market demands or sense the occurrence of favorable changes; • Early understanding of an upcoming demand; • Knowledge of the competition's/other products'/services'/weaknesses; • Acts fast to make use of the identified opportunities.
Products/services tailored to the customers' needs	• Develops a culture oriented towards customer needs; • Creates a business model that allows flexibility; • Finds practical means through which the company can be better prepared to satisfy the customer needs; • Renewal of the technical capacity to meet changing customer demands; • Provides training to the employees to seek and identify the proper solutions for the customers' requests; • Uses customers' feedback to develop a competitive business.

The conclusions of the study support the previous conclusion, and reinforces the focus of a culture oriented towards customer needs.

Fast growing companies are also a source of challenges. Growing potentially brings problems if the company's structure is not ready for the change. Managing cash flow can be considered the first challenge; this requires a strong leadership with a clear vision for the company (Saunders and Chan. 2002). Some of the main challenges are related to internal structure and processes. As making employees feeling part of the evolution while having processes clear with tools to allow them to achieve their goals. This implies a segregation in terms of information and data, since not everyone need access to all the data, and giving it may translate to a risk for the business. The same applies when employees with critical knowledge leave the company, making it crucial to have processes and information documented (Saunders and Chan. 2002). These challenges being focused require solutions coming from IT tools, allowing to manage the inter-departmental communication, although defining processes is not replaced by tools and is vital for the company.

2.3   Issue Tracking Systems

Issue tracking systems may be known for different variations such as bug trackers or modification request control systems. Either way, they are databases that keep track of issues, changing between several statuses and keeping information during the transitions. One accepted definition in the literature is given by Henderson (2006) as "Issue tracking, is the process of keeping track of your open development issues. Bug tracking is a misleading term in many ways and obviously depends on your definition of bug. "Issue" is a broad enough term to describe most of the kinds of tasks you might need to track when developing".

These tracking systems can be used in different contexts. One of the main uses is for software development, in order to coordinate the work of different developers and teams. LaToza *et al.* (2006) noticed that developers at Microsoft spent nearly half of their time fixing bugs. Other typical usage of issue tracking systems is in companies having a heavy customer service department; where they are used in order to submit issues reported by customers.

These platforms can be considered more than a system to manage issues, they are communication channels between customers (internal), project managers, quality assurance testers, programmers and every other stakeholder.

The life cycle of issues is related to their workflow. Life cycle gives the vision of all statuses that a ticket can have from the first to the last status. Therefore, the workflow tells the story of paths taken for that specific issue, registering information regarding attributes being changed, who changed it and when, moving from status to status in order to be closed. Figure 5 gives a simplified version of tickets life cycle, while Figure 6 gives a more complex example.
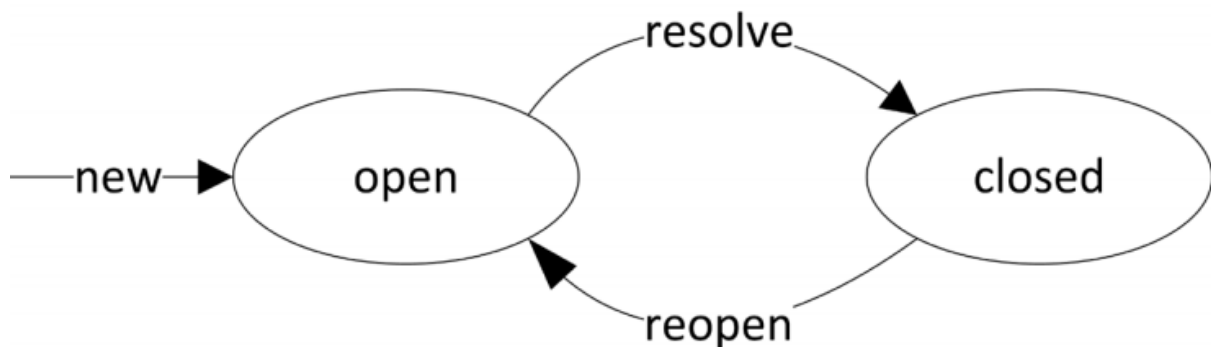
Figure 5 – Simplified issue life cycle. Source: Bertram (2009)

Still regarding tickets workflow, Joel Spolsky, co-founder of Trello, stated that the only person who can close a bug is the person who reported in the first place. Even though anyone can solve the ticket, only the person who firstly saw the bug can really be sure that what he saw is fixed.

A study from Bertram (2009) refers priorities as one of the main challenges of issue tracking systems. Having tickets prioritized is an outstanding way to organize the workload along the time. Although, the different perceptions of priorities from the users require project managers to reassess the priorities given to an issue.

Some of the most known issue tracking systems are: Bugzilla, Redmine, YouTrack and JIRA. It is important to say that are a few variations of these platforms, according to their goals. These systems are also used as knowledge management tools, since they keep all the historic information of what problems happened and if everything is correctly documented, the why.
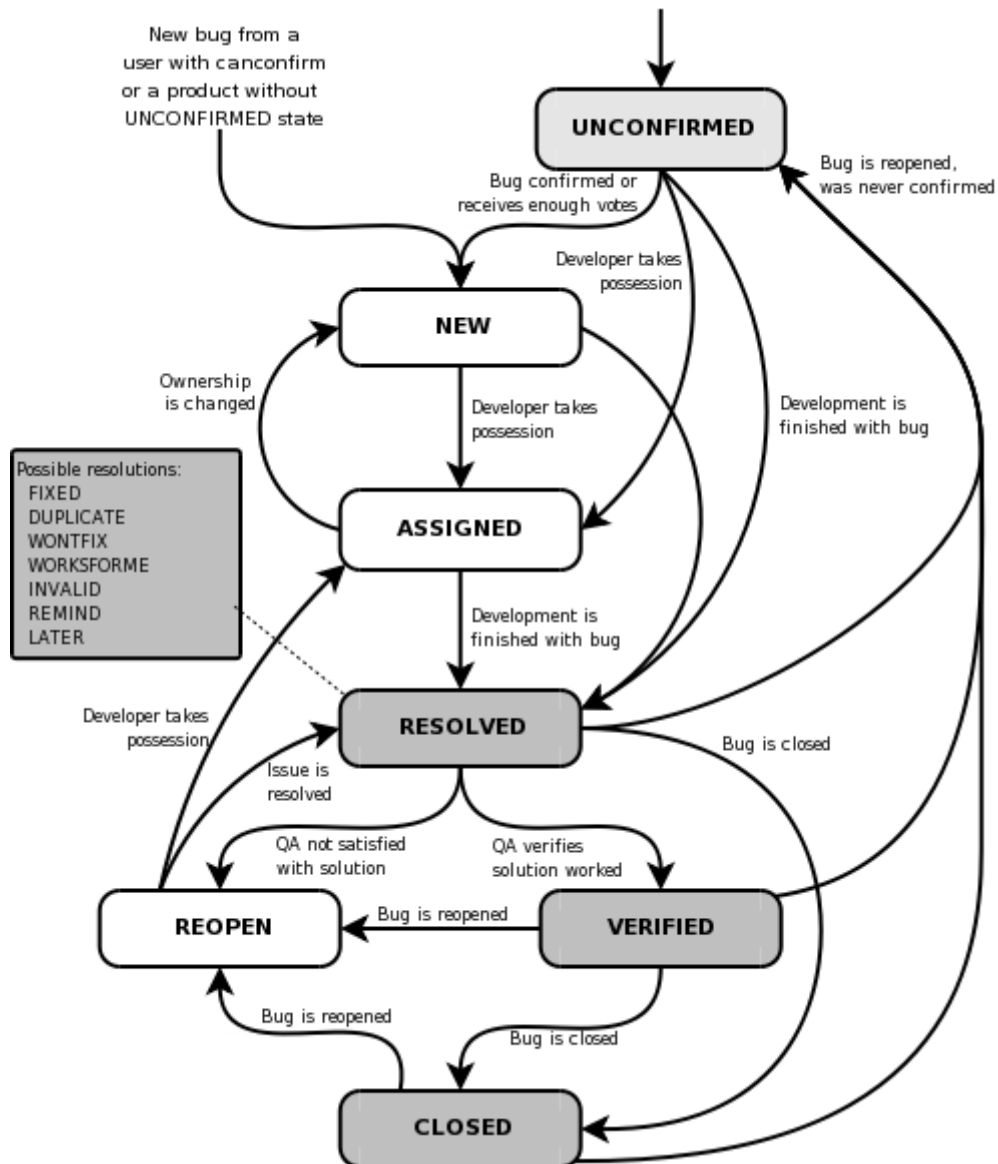
Figure 6 – Lifecycle of a Bugzilla Bug. Source: Bugzilla Guide site

2.4 Dashboards & Visual Communication

In the information age, the increasing amount of data available has become a problem for managers. Dashboards offer a unique and powerful solution to an organization's need to look through information, they allow to centralize the main KPIs in one picture, giving the overview of how is the company's current situation. Having access to understandable information is the first step to take measures to improve (Pauwels *et al.* 2009).

Dashboards were first developed in the 1980s with the purpose of displaying a handful of key measures through a simple interface that "even an executive could understand" (Few 2006). It is expected from a dashboard to collect, summarize and present information even from multiple sources when needed, as BI databases. Dashboards can be used in different levels depending on who is going to consult it. For top managers, it must present the most general KPIs of the company in order to give the information needed to act or to start a deeper investigation when something does not seem right. For managers closer to the daily operations, dashboards may show the relevant KPIs that allow to evaluate the performance of the operational teams (Ballou *et al.* 2010).

When creating a dashboard, two fields must be considered. Their functional features, such as drill down capabilities, automated alerts, frequency of updates and flexibility. On the other hand their visual features, which refers to how the data is displayed, making it the more efficient and effective as possible (Few 2006). It is also needed to have a clear vision of what is the purpose of the dashboard to settle the correct information. In a more advanced perspective, all the information given should have an associated action plan, this way the user will know how to act if some metric is not inside the correct parameters.

Dashboards should be interactive, giving the possibility for the users to access the data source. This way, it is possible to give a granular detail on data and make it easier for the user to access any specific situation needing his attention. Automated alerts are ways of warn the user when some metric is out of control.

Regarding the visual features of the dashboard, having colors can improve the visualization of the information, but shall be used carefully in order to not abuse from them and therefore having a negative impact. An effective dashboard does not need to give much detail to the user, rather the user should be able to detect a call for action just with a glimpse. Also, it is recommended to present data able to fit in a single screen. The information can be shown as charts, traffic lights, relative rankings, lists (top, most recent, oldest) or absolute scores/metrics (Ballou *et al.* 2010).

Dashboards are a form of visual communication. By visualizing processes and numbers, it becomes easier to recognize improvement opportunities. There are processes of companies that may require a dedicated dashboard. These processes are of high importance for the correct progress of the daily operations of the business.

As a tool of communication that centralizes a summary of the most relevant information, it allows to keep all the stakeholders informed as they want, without the need of asking other people for that info. This gives a feeling of openness and transparency through the company.

3   Fast-Track Visibility

3.1   History of Fast-Track

During the early stages of the Fast-Track project, it was a team of developers solving issues as they appear. Later, with the company growth, complexity involved, and the specialization of tech teams in parts of the business, this FastTrack team wasn't always able to solve the issues. Due to this, they would regularly ask for the participation of someone else from the specialized team. Since this was becoming more and more common and the flow of issues was increasing, it became clear that something needed to change. Therefore, Fast-Track team started to work as a helpdesk, screening the issues in terms of priority and putting them on FASV – Fast on Vertical, which implies creating a clone of the original ticket invisible for the original reporter. This FASV ticket is where the tech team works the issue. This allows a segmentation in communication, since tech teams can comment on their ticket and this information, useless for the reporter, does not reach him. As needed, a script developed at Farfetch would synchronize some fields of both tickets, as status, attachments and some comments. From the tech side, all teams would be able to see the vertical tickets, and the team specialized in the field of the issue would start working on a solution for it.

After some time, another problem started to raise. Some issues were touching the fields of different tech teams, this lead to more than one team taking the responsibility for the issue. In some situations, work was being wasted and duplicated, by having two different teams working independently on the same issue. To change this, issues began to be assigned to a specific team and only that team is able to see the ticket. Currently, this assignment is made by the Fast-Track team, as a helpdesk that validates the priority, the info given by the reporter, and asks for more info if needed, all before assigning to the right tech team.

To understand the complexity involved, it is important to refer that currently the technological department is split in 13 clusters, each one with one to six teams and specialized in a specific field of business, in a total of 46 teams.

Having the process been improved on the tech side, it is needed to assess the situation from the reporter side. The platform used as issue tracking system is also specialized for software development management. For that reason, this tool is part of the day by day of tech teams, as these teams use the tool for managing their daily work and workload. Although, other departments only use the platform to report issues and do it through simplified system. This lack of knowledge of the platform capabilities is the first reason for not being able to track reported issues, because features as filters and reports are not being used. The only communication that users receive is an e-mail sent every time that information is updated in the original ticket.

Adding to this problem, the number of issues is increasing as the business grows, this makes it even more complicated for users to track all of their reported situations through e-mail. Also the number of people and the geographic dispersion contribute for the difficulties for people to talk face to face before reporting or regarding something reported. As a result, features end up

being lost because the user reporting could not properly track the issue and it never became a priority for the tech teams. Another situation, also contributing for the problem, are tickets that were created and wrongly assigned during the submission process, instead of passing through Fast-Track. This means that unless someone specifically searches for a ticket, it will not be worked by tech teams.

The problems can be summarized as:

1. Lack of knowledge regarding the platform used for reporting;
2. E-mail is the only communication available making it more complicated to track as the number of issues grow;
3. Different geographic locations difficult the face to face communication;
4. Submission form is too complex, allowing the submitter to wrongly assign tickets. These tickets are only detected if specifically searching for them.

In order to change this, an easy and visual way of tracking the situation is needed. As so, there is an urgent need of creating a dashboard to control Fast-Track issues.

3.2 Process Map

Figure 7 shows the process and interactions between teams.

The process starts with a user identifying a need and submitting a ticket. This ticket is then validated by the FastTrack team regarding information given and priority. If needed, the team will ask the reporter for more information.

After the validation, depending of the situation, the ticket may be solved by the FastTrack team. In this case, the ticket is solved and closed with a comment on the ticket informing the reporter. If the ticket is not solvable by FastTrack team, then it is assigned to a tech team specialized in the field of the issue.

The tech team assesses the issue and asks FastTrack team for more information if needed. After having all the information needed, the tech team will schedule the "sprint" for solving the ticket. When solved, the ticket is closed.

By analyzing Figure 7 is possible to have an overview of the process and also identify some points:

- There is no direct interaction between the reporters and the tech teams. According to the process, this communication is always through the FastTrack team;
- The identification of where the tickets actually end up waiting the most of their time. Both of these moments are from tech side, either before making an assessment of the issue, and before deciding to put the issue in roadmap for resolution.
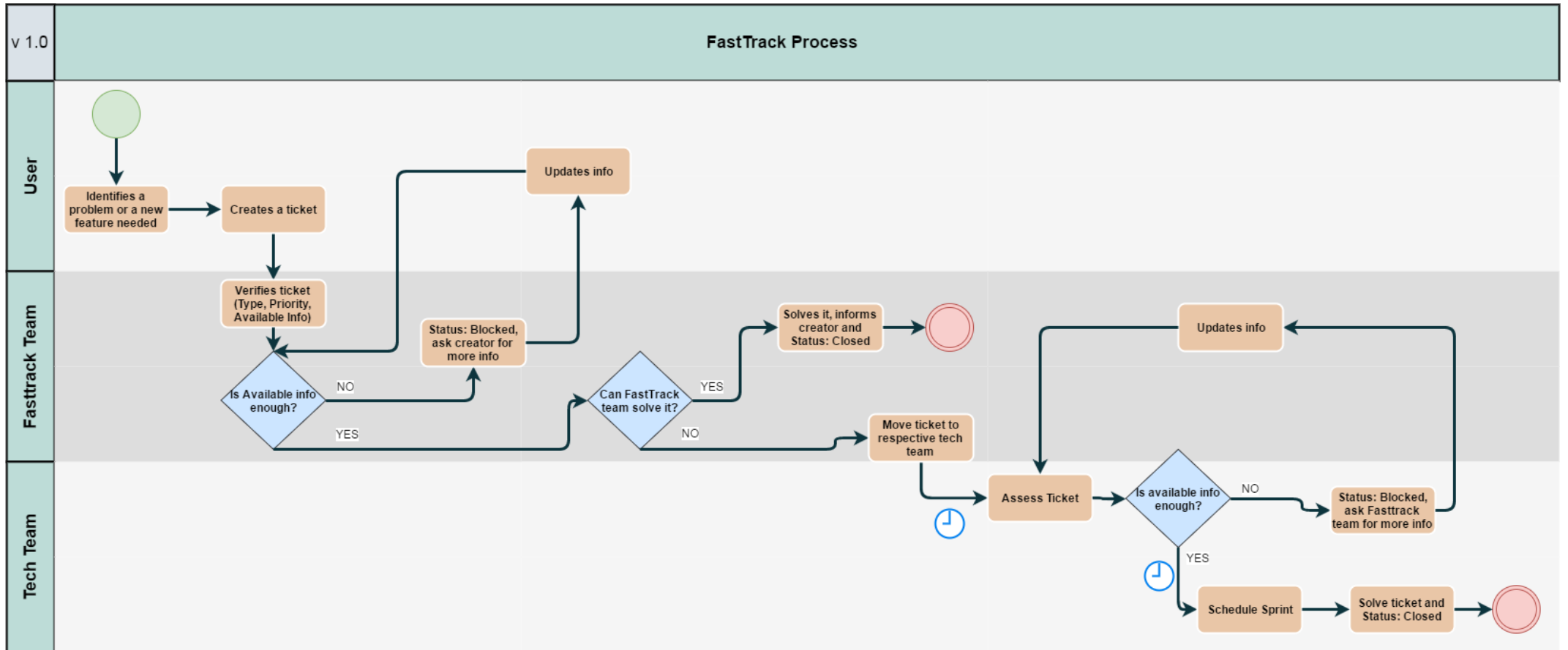
Figure 7 – Fast-Track Process Map

3.3 Types of Tickets and Priorities

There are mainly three different types of situations being reported through issue tracking system. The first type and the most common is "Tasks"; these are tickets created as part of a process. This is used, for instance, to ask for address changes of an order, or to deactivate a promotional code, or to ask logs needed in an investigation. These situations require a direct interaction with the database and the operational teams usually do not have access to it, only the tech teams and the FastTrack team can work on it. Usually these tasks are solved in the proper day or in a relative short time. One of the main factors contributing for this is that these tickets usually do not need to be assigned to any other tech team than FastTrack.

A second type of tickets reported are "IT helpdesk" tickets. These requests, such as asking for access to specific tools, IT equipment's, or other similar problems, are reported through the same platform but are assigned to the IT department. These tickets are solved in a short time, even though sometimes they may take longer. That can happen due to lack of the right equipment for instance. The fact that these requests are very important for the daily work of the user, regarding permissions or equipment, makes it easy for the user to keep the track of these situations.

The last type, and the main focus of this project, are "Issues". These are tickets reporting bugs or system errors. They are used for asking for a small new feature in a tool or document too. Unless having a very high priority, these are the tickets taking longer to be solved and that need the attention of tech department. Before this project, the system had various confusing types of tickets related to these issues and new features. This became a difficulty for measuring them. Here, these situations are all being grouped as "Issues".

To summarize the types of tickets:

- Tasks – Solved by FastTrack team and quickly solved;
- IT helpdesk – Solved by IT department and quickly solved;
- Issues – Solved by tech teams and may take longer to be solved.

Regarding the priorities, the reference for defining tickets at Farfetch is the following:

- P0 – Avoids sales;
- P1 – Might have a direct impact on sales;
- P2 – Impacts a main process business;
- P3 – Impacts moderately a business process;
- P4 – Impacts on one person's work

Where P0 is the highest priority and P4 is the lowest priority.

3.4 Data Analysis

Analyzing the number of tickets needs a very sense of criticism to understand patterns and why some specific tickets are reported by this platform. In order to better understand the results, this analysis will focus on the tickets created by the Customer Operations team, due to the better knowledge of this team that allows to better criticize the results.

An overview of the tickets situation is given by Figure 8. From a universe of 4831 tickets created since 2011 until November 2016, more than 3800 are from 2016, where 3771 are closed. This means that only 20% of all tickets are pre 2016. It is also possible to identify 80 unsolved tickets, some created prior to 2016, where the oldest is from 2014.
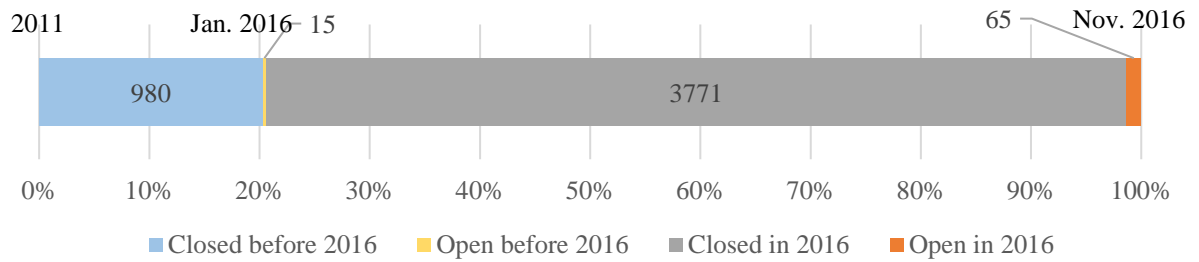
Figure 8 – Tickets overview in a total of 4831 tickets

From this analysis is possible to conclude a huge increase in the number of tickets reported in 2016, comparing to the previous years.

The results showed can be justified by two reasons. Firstly the growth of the company which means an increase in the risk of errors to happen. Secondly, and the most significant factor, tickets of the type "Task" happen in a daily basis, such as "address change" requests. Since the volume of request of these type is very high, this impacts the total number of tickets in a very significant way.

Regarding the amount of tickets of each type, the field "Type" is an attribute of the ticket when it is created. Although, this classification was not being correctly applied. It was common to find tickets classified with the wrong type. This allows the field "Type" to be used to compare the number of Tasks, IT helpdesk and Issues but there will exist a considerable error associated. Figure 9 gives the percentage of tickets of each type.
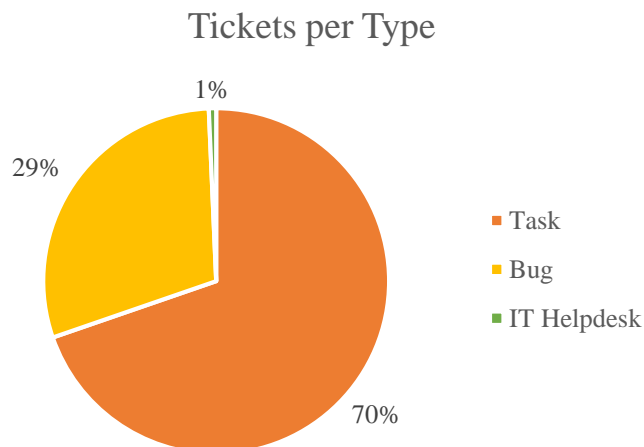
Figure 9 – Percentage of tickets from each type

Around 70% of the tickets raised are related to tasks and almost 30% are bugs and issues. The real number of tasks is even bigger.

In order to understand the most common subjects it was made an analysis using the field "Summary", the tickets name. This is an open field and these tickets are not standardized, for that reason it was necessary to search for all titles variations to group them all. Due to this, there is a considerable error associated to this chart. Although, it is accurate to understand the relative weight of the most common tickets. Figure 10 is the result of the analysis.
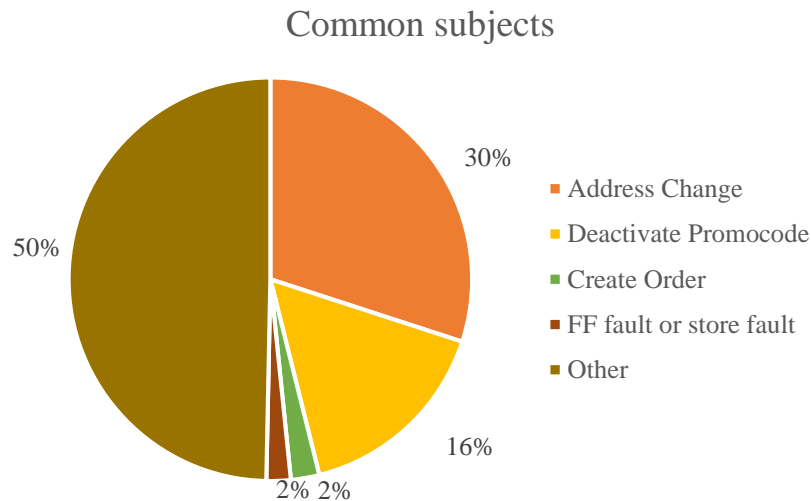
Common subjects

Figure 10 – Most common subjects reported

The proportion referring to "Other" is around 50%. Inside these, are many tickets of tasks, IT helpdesk and issues. Since these tickets had to be grouped by their title and variations, it was not possible to give more detail.

In order to understand the resolution time of tickets, it was created a chart to understand how the resolution time changes with the age of the ticket. Figure 11 is the result of this analysis. It is visible that more than 80% percent of the tickets are solved in one day.

Tickets Solved per Time Split (days)
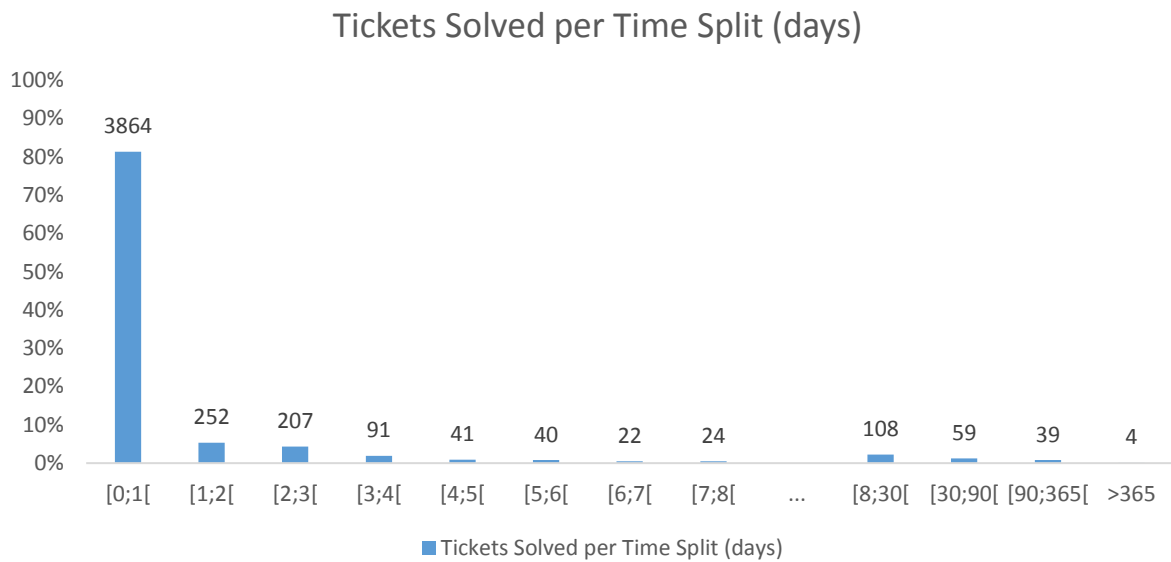
Figure 11 – Nº of tickets solved per time split

After analyzing the closed tickets, an analysis to the age of open tickets was made. By comparing the two charts, Figure 11 and Figure 12, it is possible to conclude that during the first 5 days, there is an effort to solve all the created tickets. After this time, the number of issues solved starts to reduce and the tickets tend to keep as open for a longer time. It is not uncommon to have tickets with more than 30 days or even some older than one year.
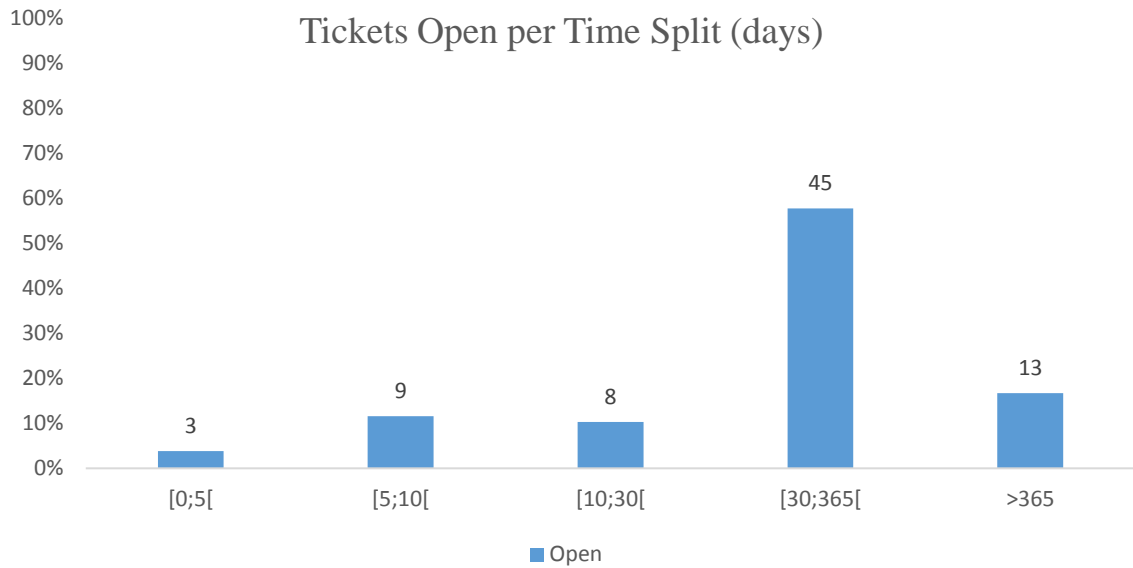
Figure 12 – Nº of open tickets in each time split

For the following analysis, in order to have a more detailed analysis, the tickets were filtered as:

- Creation date between December 2014 and November 2016;
- Removing IT Requests, a query removing the tickets with the type "IT helpdesk" and also removing the tickets assigned to someone from the IT team;
- Removing as many tickets related to processes as possible, by a query that removes the tickets with some specific expressions on the summary field.

The first filter intends to have more recent data, since the situation more than two years ago was completely different than it is today. The second and third filters, intend to have a "cleaner" data, since the fast resolution tasks and IT requests, would be hiding the values of the issues. Using these filters will allow a better identification of real issues tickets and respective resolution times. After this, the number of tickets reduced for:

- Total Nº of Tickets: 1050
- Open tickets: 52

The following charts, Figure 13 and Figure 14, compare the amount of tickets created along 2015 – 2016 and the resolution times for the same period. It is not possible to identify patterns between both years. It is important to refer that resolution time is improving in the recent months, this is possibly due to the fact that as closer as the creation date is from November 2016, the tickets that take more time to be solved will not be in analysis.

Nº of Tickets 2015 - 2016
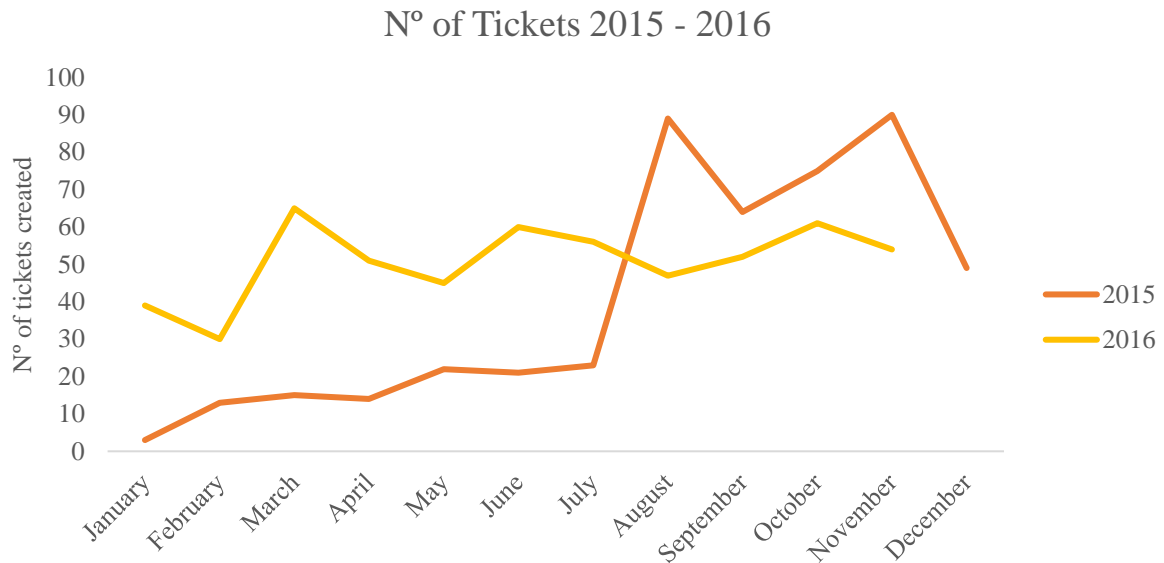
Figure 13 – Evolution of Nº of tickets created (2015 – 2016)

Resolution Time 2015 - 2016
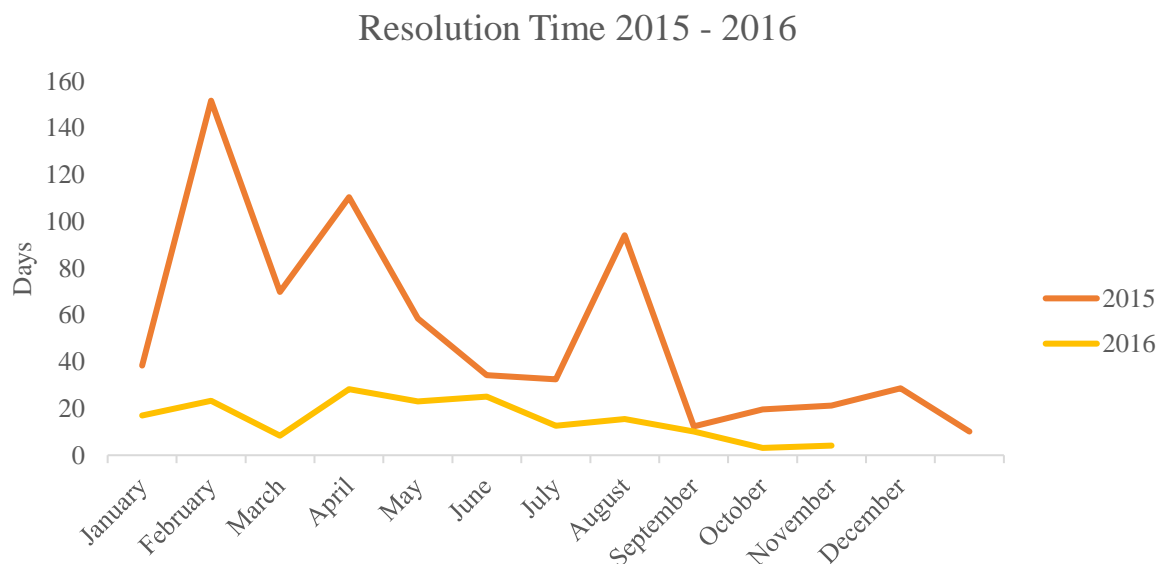
Figure 14 – Resolution time (2015 – 2016)

Regarding the resolution time per priority, this analysis can be find as Appendix A. From these charts, it is possible to conclude that P0 tickets are quickly solved, usually in less than one day. For P1 tickets, these are usually solved in less than 20 days, which seems consistent to the priority itself. For P2 and P3, doesn't seem to exist a significant difference on the average resolution time, but it seems that in fact are less P3 than P2 and as a result, the exceptions have a bigger impact in the average.

Even though SLAs exist for certain tickets, they were defined more than four years ago, and are completely outdated when comparing the business then and now. As a result they are not respected by the department. Appendix A allows to understand some of these discrepancies.

A summary of the information regarding the average resolution time per priority of previous tickets is visible on Table 3.

It is important to signal the difference of resolution time for P4 when compared to P2 or P3. To understand this, it was made an examination of the tickets inside this category. It was concluded that the majority of these tickets are Tasks, which, as stated before, have a shorter resolution

time due to being solved by the FastTrack team. This leads to a contradiction between the priorities and the average resolution time.

Table 3 – Average resolution time (days) per priority

	Avg Resolution Time	Avg Open Time	Avg Res. Time (if all closed)	Nº of closed	Nº of open
P0	0,8	0,0	0,8	7	0
P1	8,4	269,1	13,1	434	8
P2	30,2	238,1	51,8	216	25
P3	40,2	169,0	49,8	112	9
P4	9,4	292,3	21,3	226	10

After understanding the evolution of resolution time with priorities, a study of resolution time by user was made. Even though many users have a considerable number of reported tickets, a deeper analysis concluded that the majority of these users were reporting mainly Tasks. For this reason, the sample of Issues reported by them was not significant enough to take conclusions. Due to that, this study was not considered.

To conclude, the lack of visibility and awareness highly contributes for tickets having more than 200 days, but it is not the only problem. The form to create an issue has more than 30 fields available to be filled. This complex form leads to users wrongly changing fields that should only be changed by the FastTrack team. By changing these fields, for instance the "assignee", the users wrongly assign tickets, while this should be made by the FastTrack team only. These wrongly submitted tickets may stay as unresolved for years, since unless specifically looking for these issues they will not be assigned to the correct person/team. This happens because this form is the same used by tech teams for their daily work, where they require a higher detail for creating the "stories".

4 Implemented Solution

4.1 Tickets

Tickets have many different attributes since the form for creating tickets has more than 30 fields, Figure 15. Although the big majority of these fields are not filled by the common user, the possibility of selecting options that the user did not understand was one source of mistakes and entropy. For that reason, the form was reviewed and simplified to the point where only 5 fields are currently available, as visible on Figure 15. Even though this change was already being planned by the technological department, simplifying the submission form was also one of the initiatives planned to reach the goals of this project.

After the revamp, the submission form allows the user to act in 5 fields:

- Summary – The heading of the ticket, as an open text box;
- Priority – From P0 to P4, as presented before, as a list box;
- Description – A long text box, to allow the user to write all the important information regarding the ticket;
- Application – A field where the user is able to identify the tool where the bug is happening. These are tools used on the day by day of the teams;
- Attachments – A field for the user to upload images or any other file relevant to the resolution of the ticket.

Figure 15 – Print screen from JIRA of part of the old submission form (left) and new submission form (right).

Regarding the types of tickets, previously there were more than 20 different options, since the form was the same for tech teams using it for creating their day by day tasks. After the revamp, Fast-Track tickets have two types:

- Fast-Track
    - Bugs – For reporting situations where something is having an unexpected behavior;
    - Tasks – For reporting part of processes tasks and asking for the introduction of simple new features;

- IT Helpdesk
    - Issue – For reporting situations regarding IT support, as hardware or software problems;
    - Request – For requests regarding IT support, as software installation.

Additionally, the tickets' type is not defined by the user anymore. Currently, tickets' type is defined by choosing an option before reaching the form, as seen on Figure 16.

Figure 16 – IT Helpdesk or Fast-Track ticket
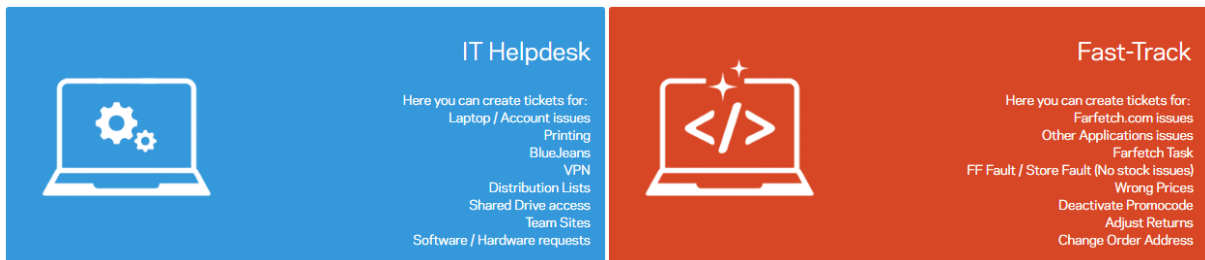
Clicking on IT Helpdesk, gives access to the screen represented on Figure 17 (left). By clicking on Fast-Track, it gives access to the screen represented on Figure 17 (right).
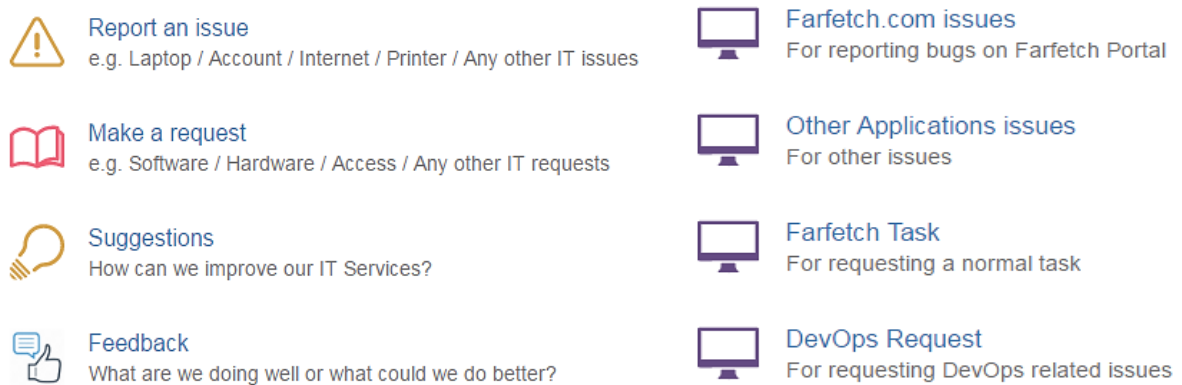
Figure 17 – IT Helpdesk options (left) and Fast-Track options (right)

IT Helpdesk

Report an issue – To open a ticket of the type "Issue"

Make a request – To open a ticket of the type "Request"

Fast-Track

From now on, only Fast-Track tickets will be focused.

Farfetch.com issues – Opens a ticket with the type "Bug" and the application "Portal". This option is for reporting issues related to the site.

Other Applications issues – Opens a ticket with the type "Bug", the application is a field where the reporter can select the related application. This option is for reporting issues related to any tool of Farfetch but the site.

Farfetch Task – Opens a ticket with the type "Task" and does not use the field Application. This option is for reporting tasks related to processes or asking for small new features.

DevOps Request – This option is only used by the technological department, not being part of the scope of this project.

Although the form for creating tickets is simpler than before, the tickets as an entity still have the same attributes as before, which may or may not be visible. Since some of these were already depicted when describing the form, only the most relevant attributes missing will be mentioned:

- Key – Ticket ID
- Reporter – User creating the ticket
- Assignee – FastTrack team member validating the ticket
- Status – Indicates the progress
- Resolution – Indicates the reason for closing a ticket. It can be a positive reason as "Fixed" or "Done" but it also can be a "Won't fix" or "Declined", between others
- Created Date – Date of ticket creation (a static attribute)
- Last Update – Updates every time any attribute is changed
- Resolution Date – gives the most recent time a ticket was closed – in case of being reopened
- Due Date – A date given by tech team of when the ticket will be solved
- Watchers – Users for whom the ticket is relevant can add themselves as observers, receiving the same updates as the creator
- Comments – Even though is not an attribute of the ticket, it is an open field inside it. Comments and the attachments fields, are the only ones where the user is able to add info after the submission of the ticket.

When searching for tickets, each attribute matches to one column. These are also the attributes used in the queries that sources the data for each chart in the dashboard.

4.2 Requirements and Business Needs

The first step to approach the problem was to understand the business needs of each team, Table 4 lists these needs. This process was made by interviewing the managers of each team and the people that create more Fast-Track tickets. The business needs were split in five main business needs which relates to a main problem of Fast-Track, followed by a set of business needs more specific. The following tables summarize all the outcomes and were used in order to understand what the dashboard and process must accomplish.

Table 4 – Summary of Business Needs

Main Business Needs		Business Needs
1	**Visibility of reported situations**	
	1.1	All users have tickets access
	1.2	All users can comment on tickets
	1.3	Know how many open tickets the user or team has
	1.4	Filtering and organizing tickets according to different metrics
	1.5	Being able to see other teams' tasks
2	**Improve follow up and avoid forgotten tickets**	
	2.1	Being able to know for how long is the ticket as open
	2.2	Being able to know when was the last update on ticket
	2.3	Users and watchers receive updates of ticket status
	2.4	Have an expected due date
	2.5	Know who's the ticket Assignee
	2.6	Having a FAST tracking, even after the FASV is created
	2.7	Know in which status of the ticket the user needs to act
	2.8	User receives an initial explanation of what the problem might be
	2.9	User receives a final explanation of what the problem was
	2.10	Fast resolution for serious situations / Measure resolution time per ticket
3	**Know what and how to report**	
	3.1	Having a sense of priority. IE, how much does it affect the client?
	3.2	Differences of issue, task, bug...
	3.3	Avoid duplicated tickets. Search before submitting
	3.4	Know which tickets impact on other teams
4	**Having a visual analysis available for different metrics**	
	4.1	Resolution time per subject
	4.2	How many tickets of each type (issue, bug...)
	4.3	How many tickets created per person
	4.4	How many are solved in each time split
	4.5	How many tickets raised per month
5	**"Justify" low productivity days due to problems raised on tickets**	
	5.1	Search tickets per date

From the identified business needs, a list of requirements was developed and presented for approval, Table 5 presents these requirements.

Table 5 – Technical Requirements

Requirements	
1	Everyone has access to tickets
2	Everyone can comment on tickets and have full read permissions
3	Searching and filtering tickets by user or team
4	Searching and filtering tickets by any existing field
5	Having a "Created Date" field and compare it with current day
6	Having a "Last update" field
7	User and watchers receive tickets updates
8	Having an "Assignee" field from tech side
9	Status that transmits the need of action from user
10	Having a field for initial and final explanation of the problem (as commentary possibly)
11	Field comparing "Created Date" and "Resolution Date"
12	Possibility of defining priority criteria
13	Possibility of defining different types of tickets
14	Field to insert area of impact of the ticket
15	Having a Due Date field

Table 5 gives the list of requirements needed for the tickets and the dashboard platform. Since changing the Issue Tracking System software was not part of the scope, the first step was to understand if the current software was fulfilling these needs. Some of these requirements are considered in the tickets attributes, while others are accomplished through JIRA settings and JQL queries – JIRA Query Language.

After a study of the platform, it was concluded that it would fulfil all the technical requirements, therefore it is possible to focus the given business needs. The selection of the platform where the dashboard is developed is closely connected with the possibility of solving those same needs. In order to understand what features the platform needed to have, an ideal version of a dashboard was conceptualized, not looking to any technical limitation.

4.3 Dashboard Design

Having in consideration the business needs, the relevant information to be visible and the recommended frequency to check the dashboard, an ideal version was conceptualized with the following information:

- **Open tickets** – Number of open tickets, visible by status and by priority
  - $Open\ Tickets\ =\ \Sigma\ Tickets\ (Status\ !=\ Closed)$ (4.1)

- **Average resolution time** – Average time since creation until ticket resolution, tickets grouped by time split (day, week or month)
  - $Average\ Resolution\ Time\ =\ \dfrac{\Sigma\ Tickets\ Resolution\ Time}{\Sigma\ Tickets\ (Status\ =\ Closed)}$ (4.2)

- **Average age of open tickets** – Average time since creation until "today", only for open tickets

$$\circ \quad Average\ age\ of\ Open\ = \frac{\Sigma\ Tickets\ Age}{\Sigma\ Tickets\ (Status = Closed)} \qquad\qquad (4.3)$$

- **Created and solved tickets** – An overview of how many of the tickets created per time frame are now solved, while giving an overview of how is the creation of tickets along the year;

- **Open tickets age** – As a complement of the previous two charts, this gives the age distribution of the open tickets. Giving the information of how many tickets are between $0 - 5$ days ; $5 - 15$; $15 - 30$ and < 30 days;

- **Open tickets per user** – An overview of how many open tickets a user has in comparison with the rest of the team;

- **"My" open & observed tickets** – A list of open tickets of the user logged, returning all of the open and observed tickets of that user. The columns suggested are Priority / Type / Summary / Status / Reporter / Last Update / Due Date;

- **To be aware tickets** – A list of tickets created by any user in the company that may impact the team. The query searches for tickets that are reported with the field "Application" filled by specific applications, these are different from team to team. When the user identifies a ticket being impactful for his team, the user adds himself as an observer. This will make the ticket to appear on the previous list – "My" Open / Observed tickets;

- **Closed & unsolved tickets** – A list of tickets closed without a positive resolution. This allows the user to detect these situations in an easier way, giving him the possibility of reopen the ticket.

For some teams it is important to keep track of the number, resolution time and age of tickets from specific tasks, the charts related to these metrics can be reproduced, keeping one version for the whole tickets of the team and another for those specific tasks.

4.4 Platform Selection

After a benchmark review of different dashboard platforms, the following parameters were taken in consideration in the analysis:

- Possibility of implementing the conceptualized version of the dashboard or similar;
- Automatic refreshment data;
- If it is a software already in use inside Farfetch;
- May need a license in case of being a new software;
- Using software already known are easier to maintain, since more people will have the know-how to do so;
- Data security;
- Online access;
- User experience.

Several platforms fulfil the criteria, Tableau is one of those and is the main dashboard platform used in Farfetch.

It was decided to use JIRA software for the following reasons:

- It is already the ticket submission platform. Using its own report features makes it unnecessary to integrate the JIRA's database and Farfetch Business Intelligence database. This BI database is where the majority of other Farfetch dashboards are getting the data;
- Absence of delay for synchronization, which makes the queries to real-time update;
- Centralizing all information regarding issues in one same tool, improving the user experience regarding the subject;
- Sharing definitions with specific teams;
- Regarding data security and online access, it is needed authentication to access Farfetch's JIRA account and is only possible if the user is inside the Farfetch Intranet or using VPN, that needs authentication as well;
- Drill down feature – Possibility of interacting with the dashboard by pressing a number, a part of a chart, or a filter and being returned the tickets sourcing the element pressed. After that and due to centralization of dashboard and tickets, the user is able to immediately open a ticket of the given list.

Although, JIRA as downsides as well.

- Loss of flexibility to create charts and gadgets, since these are based on XML files, accessing JavaScript and HTML libraries (Maddox, 2014)
- New charts need to be approved by the company responsible for JIRA and later added in the marketplace. Only after this process, the new chart would be available for integration on the dashboard.

Although this is a considerable downside, it also became a challenge to find ways of building a dashboard fulfilling the business needs, similar to the conceptualized version but just using the charts/gadgets available in JIRA platform. After a deeper investigation of the available charts, it was considered that it would be possible to build a valuable dashboard while still keeping the potential of using JIRA instead of any other platform.

4.5 Implemented Dashboard

The charts available on JIRA are powered by a query sending the correct data to be processed, having in consideration the final goal of each specific chart. Therefore, it is needed to find the right chart that, with the right query, returns the information desired on the design version.

- **Open tickets** – This is fulfilled by Figure 20 , Figure 18 and Figure 19. These charts are on the top of the dashboard since are the main information to be consulted in a daily basis;
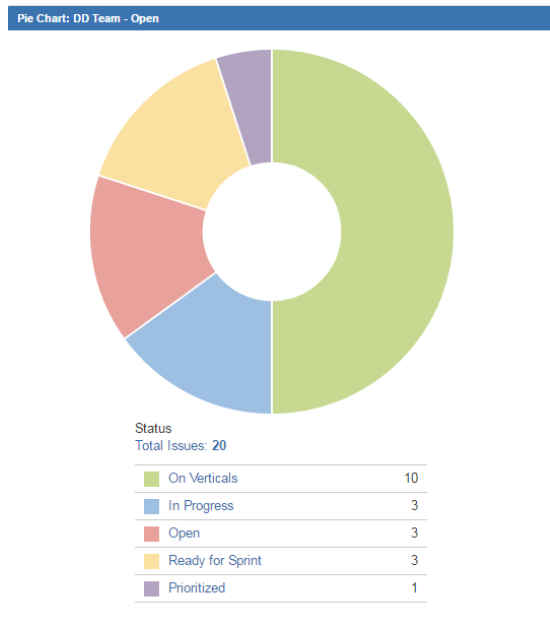
Figure 19 – Open tickets status

Figure 18 – Open tickets priority
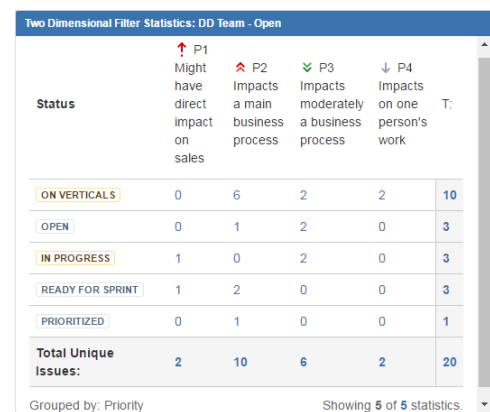
Figure 20 – Open tickets, priority and status

- **"My" open & observed tickets** – This list is given by Figure 21;
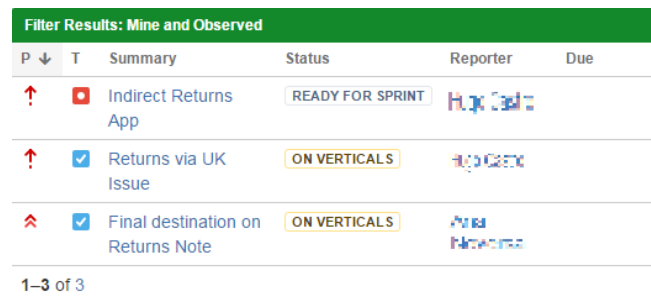
Figure 21 – Issues reported of observer by the user

- **Closed & unsolved tickets** – List given by Figure 22;

Figure 22 – Issues closed without being solved

- **To be aware tickets** – List given by Figure 23;

Figure 23 – Issues reported by anyone that may impact the team

- **Open tickets per user** – The heat map Figure 24, immediately gives the information of the users who have more open tickets. By passing over or pressing the name of the user, it is possible to know how many are those tickets and which ones;

Figure 24 – Users with more open tickets

- **Created and solved tickets** – Chart on the Figure 25;
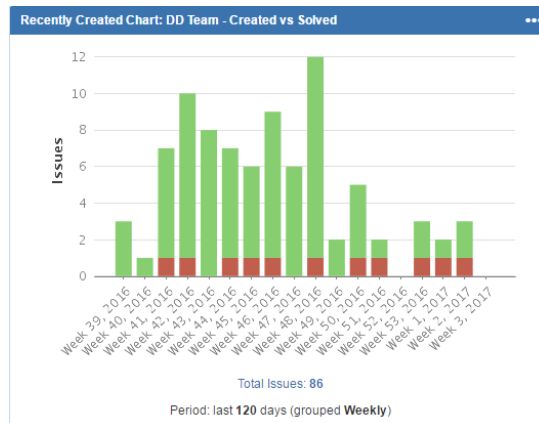
Figure 25 – Comparing tickets created and solved per time split

- **Average age of open tickets** – Chart on the Figure 26. Ideally this chart would be made of a continuous line instead of being a bar chart;
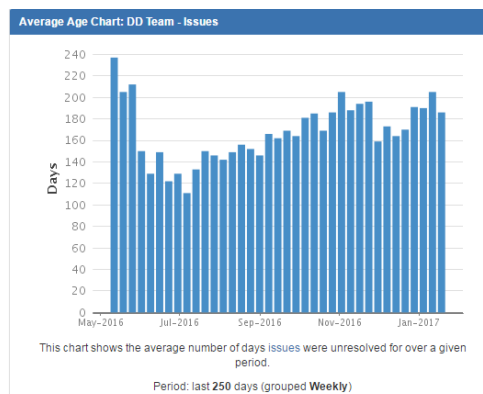
Figure 26 – Average age of open tickets

- **Average resolution time** – Chart on the Figure 27. Ideally this chart would also be made of a continuous line instead of being a bar chart;
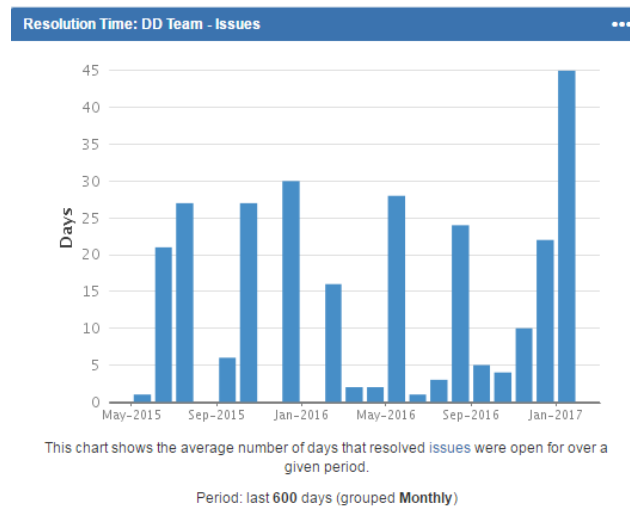
Figure 27 – Average Resolution time per month

- **Open tickets age** – It was not possible to implement this chart. Although, the main information extracted from it was to understand the tickets age distribution, this metric can still be assessed by consulting the "Average age of open tickets".

The presented structure is a general one, Appendix B. There is no "one solution fits all", since all teams have different needs. Each dashboard of each team has slight differences in order to better correspond to their goals. Teams that create a considerable number of tasks have charts dedicated to those specific tasks. Queries were created for each of the most common types of tasks. All charts are updated at least once each two hours.

4.6 User Training

After having a new submission form and the dashboard, a training was prepared to be delivered to every member of the Customer Operations team. The training is accomplished in two ways:

1. By delivering a training session explaining the Fast-Track process as it is. In this session, the way of creating tickets with the new forms and the differences between each option were explained in a sharing/discussion environment. The dashboards of each team were presented and the information given by each chart explained. After this, it was learned how to do searches on JIRA, either using JQL or a simpler version of check boxes and text searching. The meaning of each status and which ones require a special attention from the user were introduced as well. Lastly, one set of guidelines on which questions shall the user answer before reporting and one other set on how to follow up a ticket. These guidelines for reporting are:
   a. Consult the dashboard looking if the issue is already being reported by someone else;
   b. Make a search on JIRA tickets database for some keywords that may lead to a ticket related to the issue the user is having;
   c. Answer the following questions:
      - How many are affected?
      - Which priority to choose?
      - Where is this happening? (Application / Component)
      - Is this urgent?

- Does it worth to have a team working on it?
- Can you think about any other solution?
- Who is this going to impact?
- Should Project Managers be involved?

Guidelines to follow up:

a. Consult the dashboard looking for the average age of whole tickets;
b. Check for tickets in a status needing an action from the user;
c. Look for the "Last Update" date;
d. When tickets are taking too long the user must comment on the ticket asking an update;
e. When the previous actions do not bring a conclusion, then a Project Manager should be involved, since the closer connection between PMs and tech teams helps speeding up some situations. This only applies for issues that have a big impact on the users' work or even the customers.

2. By creating a handout, as Appendix D, with the information and guidelines regarding tickets' status, reporting and follow up. This allows the user to keep the information on their desk while the process is not completely aligned between all the users.

In order to create awareness and start receiving feedback from other teams, external to Customer Operations, one to two members of each team were invited to be part of the training session. This will help a roll out plan to be implemented and it starts to involve some key people, for instance, the Continuous Improvement team that need to be part of process as well.

4.7 Results

After the training the users were asked for the users to verify their tickets using the respective dashboards. As an immediate result it was possible to see a decrease in the number of open tickets, in the average age of open tickets and an increase of the average resolution time, since it is calculated based on the age of closed tickets.

Although, there is a delay between the requests for closing a ticket and the action of closing it, this means that it is expected to keep this trend of decreasing the open tickets for the next weeks. For the pilot, the users from Porto's office were trained and in a near future the foreign offices with Customer Operations members will be trained as well. Therefore it is expected to have even more tickets closed. If all the tickets with more than six months were closed, the backlog would be reduced to 40 - 50 tickets.

From a feedback survey, as Appendix C, asked to be fulfilled after each training sessions it was possible to measure the user perception of the dashboards. From 21 answers and a scale from 1 to 5, where 1 is "not useful" and 5 is "totally useful", the session usefulness was evaluated in an average of 4 and the dashboard usefulness received an average of 4. This is visible in Figure 28 and Figure 29. It was identified that the users belonging to teams with a higher flow of tickets, gave higher classification than the others.

How useful was the session?
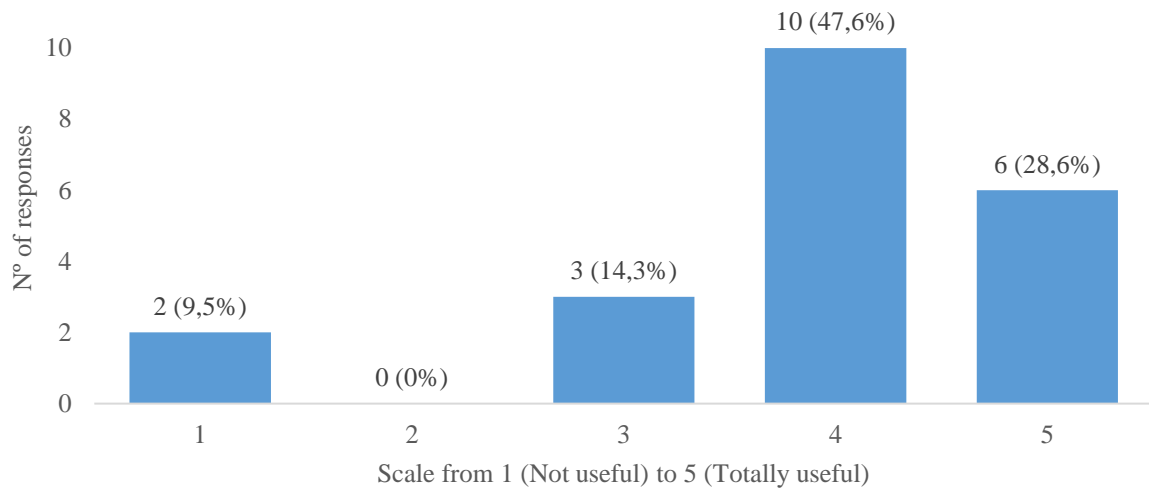
Figure 28 – Result of training session's feedback

Do you consider the dashboard to be useful?
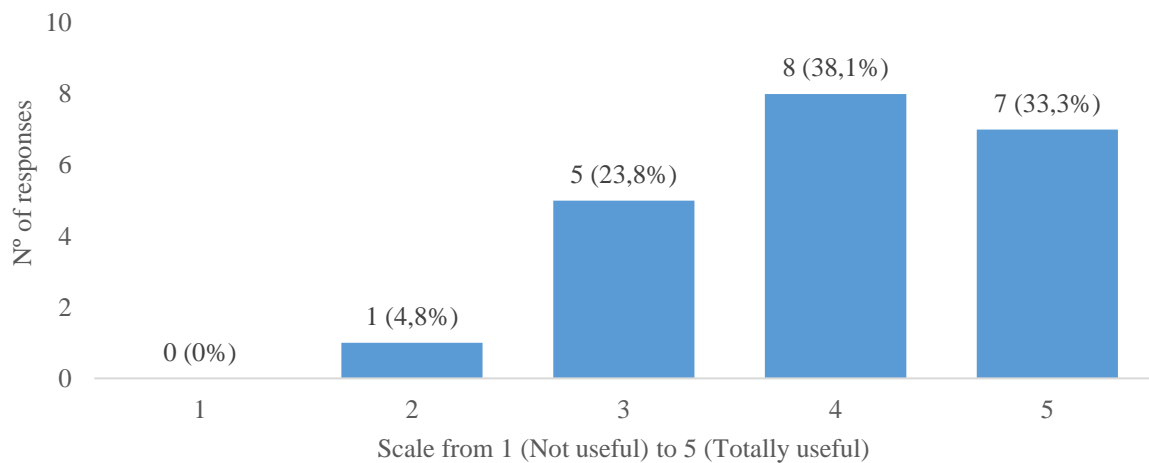
Figure 29 – Result of dashboards' feedback

Regarding the business needs, all were achieved except 2.5, 2.8 and 2.9. Despite the fact all the fields required are available (due date and comments) and even though this is happening just for some issues, it requires a review of the process from tech teams. For that reason, it will take longer to be implemented.

In a medium/long term assessment the open tickets number will not necessarily be decrease, since the business is growing it will also increase the number of situations being reported. Although it is expected to have a lower average age of tickets because there will be a decrease of "lost" tickets that dramatically increase the average age chart. Duplicated tickets are not an issue, contrarily to what was believed in the beginning of the project. Since the number is not significant, it is then expected to be maintained. Either way, not all duplicated tickets are closed as "duplicated", for that reason this situation must be regularly assessed.

Making information available and measurable is the first step for having the possibility of defining accurate SLAs. These can be defined having in consideration the priority given and the application where the problem is occurring.

4.8 Roll Out Plan

During the next weeks it is suggested to keep monitoring the use of the dashboard. Users may realize that are not using all the charts. This seems a contradiction to the previous analysis. Although the shared business needs were the ground base for the dashboard, it does not mean that later the users will realize that do not need so much detail. After having these results and historic regarding the use of the dashboards, it must be reviewed and updated if necessary.

By having this experience and knowledge, it will be easier to implement the solution for the rest of the company, since it will be easier to identify the real needs of each team from Farfetch.

The roll out shall be made step by step. Firstly, it is happening in the Customer Operations team from Porto's office. After this, it will roll out for the other Customer Operations' teams that are in other offices. Having the local users already comfortable using the dashboard, will help when reaching the users from other offices.

In a second phase, the dashboard will be rolled out for the whole Operations department. It includes Operations Strategy and Supply, among others.

The last phase will be a roll out for the rest of the company. This approach will allow to gather feedback between each new phase.

5 Conclusions and Future Initiatives

The technological industry has been in a constant grow for the last years. Even for this industry, Farfetch is growing above the average and this is sustained by being a unicorn – company evaluated in more than 1 billion dollars. The global presence visible by the fast expansion of net offices, number of people and teams make it hard to coordinate everything while keeping a communication flow. Even the business complexity is increasing with new initiatives being constantly embraced. The company considers itself not a fashion company that developed an online portal, but a technological company that has a business related to fashion and e-commerce.

Every company needs to reach profitability. In order to do that, efficiency and optimizing processes must be a continuous goal. Giving visibility of a main business process, in fact one of the few processes that crosses the whole company, will not directly improve the performance of the operational teams since for them this is an informative dashboard more than a performance measure one. Although, for the whole company, the dashboard may actually have an impact in the efficiency, an impact measured mainly by the time that tickets take to be solved. It is important to state that this metric of time is not only impacted by the visibility issue, but also by the number of tickets raised, the number of collaborators in the tech department and the priority of projects coming in roadmap.

Looking from a point of view of collaborators satisfaction, having the feeling that the situations they have reported were forgotten, could lead to a lack of motivation in a long term. As so, the dashboard can help avoiding this feeling.

With this project, the whole team became aware of how the Fast-Track process works. The team measured the number of tickets created for the first time and realized the real workload coming from situations where tasks creation is involved, even though this is very different from team to team. The dashboard implementation led to many improvement opportunities. For instance, if a specific task generates a large volume of tickets, maybe developing a solution that allows the team to directly implement the changes needed, instead of creating a ticket, may be considered. Another solution could be creating macros for reporting these tasks. In case of reaching a point where the charts available are not enough, then two options are raised: developing new charts or switching to a different platform, with more freedom. In case of teams having a considerable amount of issues raised, it is suggested to have regular meetings with the tech team solving those same issues, where the agenda is for tickets' updates.

Regarding the relationship with the customer, having Fast-Track process more efficient, will translate in a better service for the customer, or at least keeping the perception of quality by being faster to react to situations where the customer is affected by the bug. This strengths the fragile connection of trust and loyalty so important in the e-commerce market.

For a company that keeps growing at an amazing pace, it is important to clarify processes and improve them to make this same growth as sustainable as possible. For sure there is still a lot of work to do in this field, and the goal is not perfection now, it is to always be better than the

previous day. By having this mentality deeply rooted, it will be easier to engage in continuous improvement initiatives.
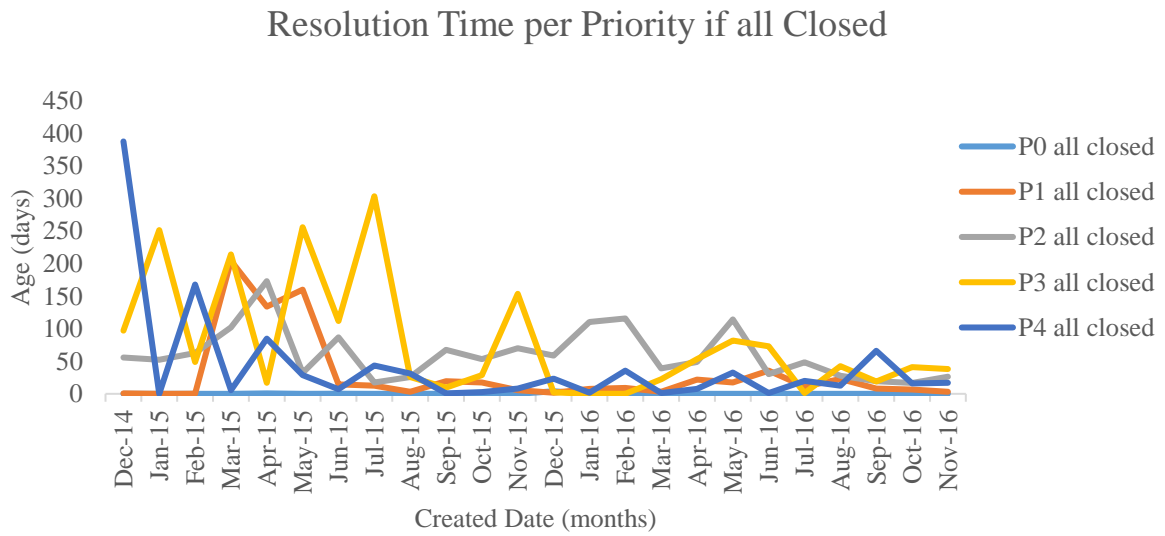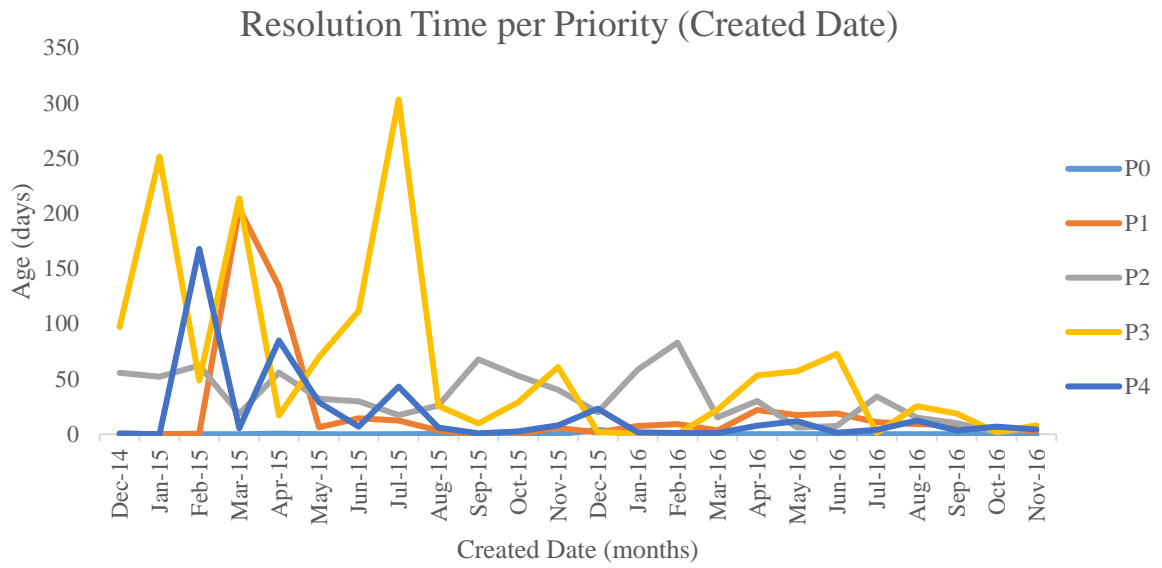
Lastly, a review of all dashboards should be made in the future, in order to use the same concepts for all of them, when possible. Having the same nomenclature and method for visualizing information is also something to be standardized. It will help improving the inter-departmental communication, in the way that all the company uses the same language and line of thought.

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APPENDIX A: Resolution Times per Priorities

Resolution Time per Priority (Created Date)

Resolution Time per Priority if all Closed

P1 Resolution Time if all Closed Comparison

P2 Resolution Time if all Closed Comparison

P3 Resolution Time if all Closed Comparison

P4 Resolution Time if all Closed Comparison

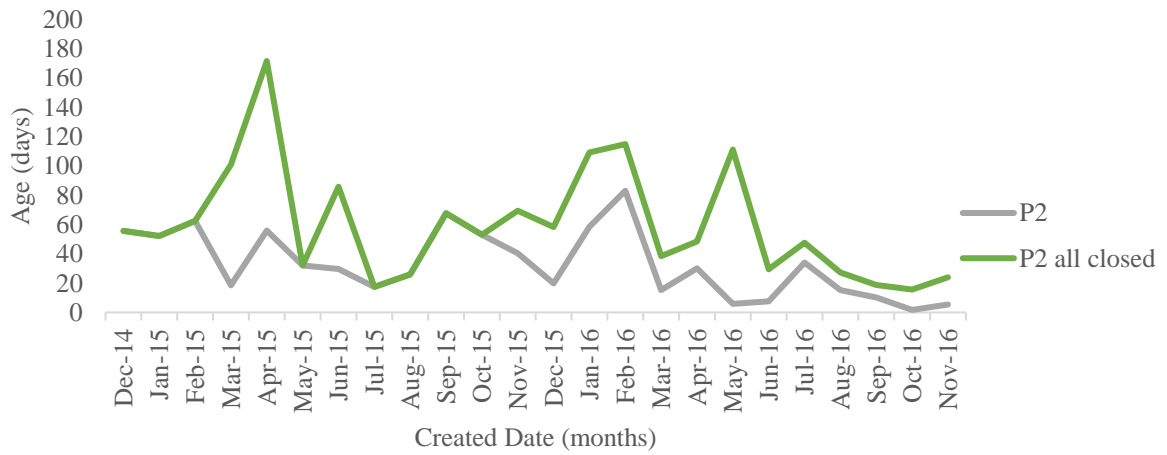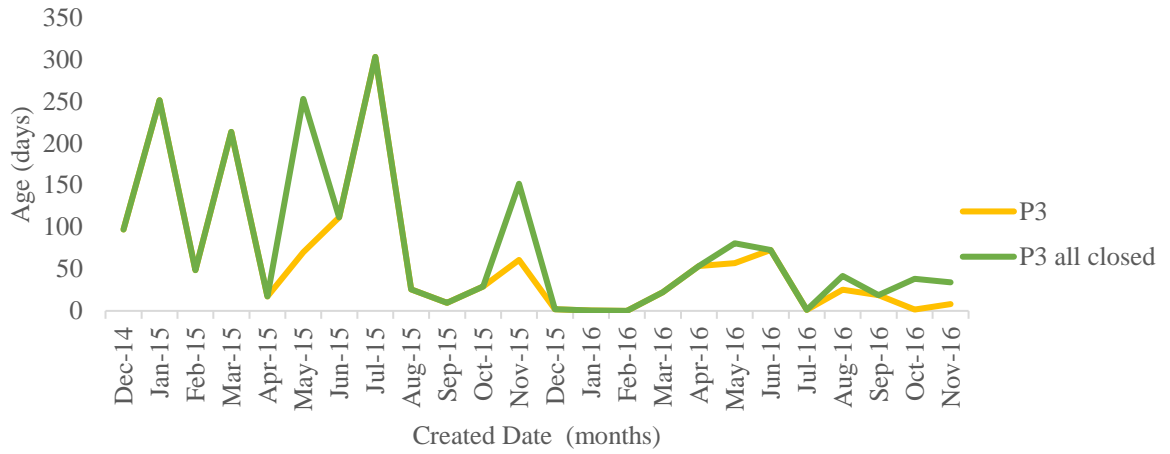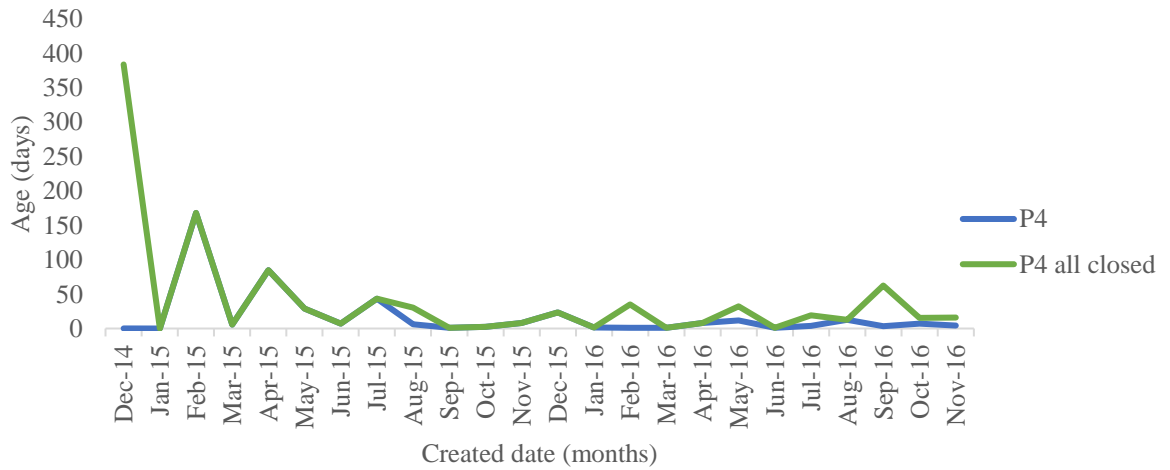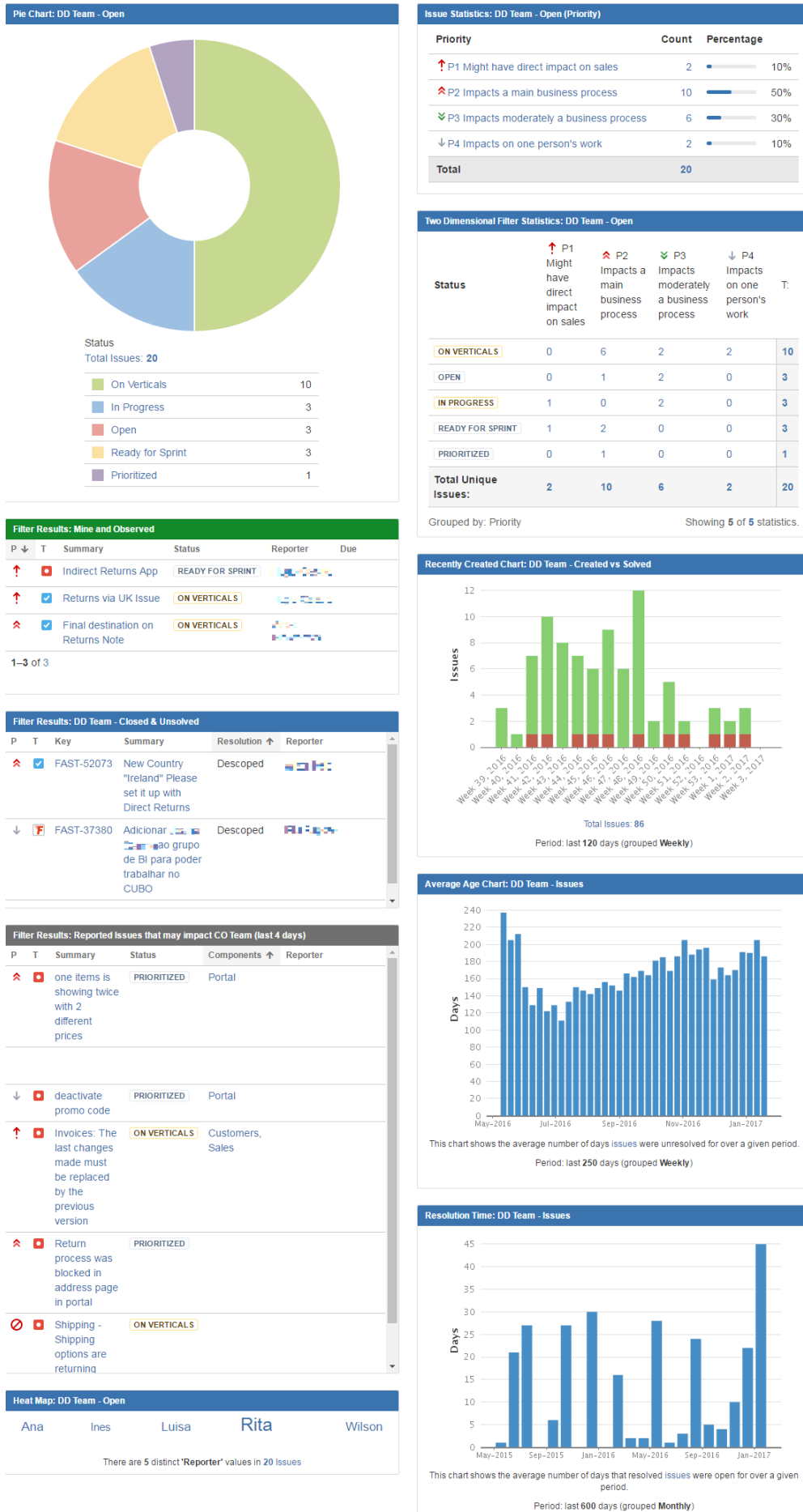# APPENDIX B: Dashboard

Pie Chart: DD Team - Open

Status
Total Issues: **20**

●	On Verticals	10
●	In Progress	3
●	Open	3
●	Ready for Sprint	3
●	Prioritized	1

Issue Statistics: DD Team - Open (Priority)

Priority	Count	Percentage
↑ P1 Might have direct impact on sales	2	10%
⌃ P2 Impacts a main business process	10	50%
⌄ P3 Impacts moderately a business process	6	30%
↓ P4 Impacts on one person's work	2	10%
Total	**20**	

Two Dimensional Filter Statistics: DD Team - Open

Status	↑ P1 Might have direct impact on sales	⌃ P2 Impacts a main business process	⌄ P3 Impacts moderately a business process	↓ P4 Impacts on one person's work	T:
ON VERTICALS	0	6	2	2	10
OPEN	0	1	2	0	3
IN PROGRESS	1	0	2	0	3
READY FOR SPRINT	1	2	0	0	3
PRIORITIZED	0	1	0	0	1
Total Unique Issues:	**2**	**10**	**6**	**2**	**20**

Grouped by: Priority   Showing 5 of 5 statistics.

Filter Results: Mine and Observed

P ↓	T	Summary	Status	Reporter	Due
↑	◩	Indirect Returns App	READY FOR SPRINT		
↑	☑	Returns via UK Issue	ON VERTICALS		
⌃	☑	Final destination on Returns Note	ON VERTICALS		

1–3 of 3

Recently Created Chart: DD Team - Created vs Solved

Total Issues: 86

Period: last 120 days (grouped Weekly)

Filter Results: DD Team - Closed & Unsolved

P	T	Key	Summary	Resolution ↑	Reporter
⌃	☑	FAST-52073	New Country "Ireland" Please set it up with Direct Returns	Descoped	
↓	F	FAST-37380	Adicionar ao grupo de BI para poder trabalhar no CUBO	Descoped	

Average Age Chart: DD Team - Issues

This chart shows the average number of days issues were unresolved for over a given period.

Period: last 250 days (grouped Weekly)

Filter Results: Reported Issues that may impact CO Team (last 4 days)

P	T	Summary	Status	Components ↑	Reporter
⌃	◩	one items is showing twice with 2 different prices	PRIORITIZED	Portal	
↓	◩	deactivate promo code	PRIORITIZED	Portal	
↑	◩	Invoices: The last changes made must be replaced by the previous version	ON VERTICALS	Customers, Sales	
⌃	◩	Return process was blocked in address page in portal	PRIORITIZED		
⊘	◩	Shipping - Shipping options are returning	ON VERTICALS		

Resolution Time: DD Team - Issues

This chart shows the average number of days that resolved issues were open for over a given period.

Period: last 600 days (grouped Monthly)

Heat Map: DD Team - Open

Ana   Ines   Luisa   Rita   Wilson

There are 5 distinct 'Reporter' values in 20 Issues

41

APPENDIX C: Survey Feedback

Which team do you belong? *

☐ Delivery Development

☐ Delivery Support

☐ Fraud

☐ Payments

☐ Other...

How often do you create tickets on JIRA? *

○ I don't create tickets

○ One per month or less

○ One per week

○ Almost everyday

Which type of tickets do you create on JIRA? *

☐ I don't create tickets

☐ Report issues

☐ Create tasks

☐ IT helpdesk

How useful was the session? *

	1	2	3	4	5	
Not much	○	○	○	○	○	Completely

Do you consider your team's dashboard to be useful? *

	1	2	3	4	5	
Not useful	○	○	○	○	○	Completely. For sure, I'll be using it

Do you have any suggestion to improve your team's dashboard?

Long-answer text

Do you have any suggestion to improve the session?

Long-answer text

APPENDIX D: Fast-Track Framework Handout

1. Access to http://jira.farfetch.local/ or browser favorites bar - Farfetch – JIRA
2. IT Helpdesk or Fast-Track?
   a. IT Helpdesk – Issue or Request
   b. Fast-Track:
      i. Where is the bug?
         1. Site – Option Farfetch.com issues
         2. Sales, payments tool, any other application – Other Application Issues. In the field application, select one of the following
            a. AWBTrackingAndFeeds
            b. Checkout
            c. Customers
            d. DiscountService
            e. Finance
            f. Internal Tools
            g. OperationalCosts
            h. PackagingService
            i. FraudTool
            j. PaymentService
            k. PriceConverter
            l. PromoCodes
            m. RefundService
            n. Reporting
            o. ReportingTableau_BI
            p. Retail
            q. Sales
            r. Sales_BI
            s. Shipping
            t. ShippingService
            u. Transportation Service
            v. WayBillService

      ii. Is it a task? Asking for a small new feature?
         1. Farfetch Task - Address Change, Deactivate Promocode etc... For each one of them, use the respective template when available.

3. **Before reporting a bug:**
   a. Go to the dashboard,
   b. Check if what you are reporting was already reported, If yes: open the ticket and add yourself as a watcher
   c. Make a quick search
   d. Question yourself – Is it really a bug? How many times is this happening? Which is the right priority?
   e. After creating or adding as a watcher, the bug will appear on the list "Mine and Observed"

4. **Main status:**
   a. "On Verticals", Open, Ready for Sprint, Prioritized, In progress – Things are moving, just keep track of tickets age.
   b. Blocked – Probably is waiting for your answer,
   c. Reopened – A closed ticket was opened again, open it and check if it affects you. Might be good to add yourself as a watcher
   d. Resolved – Possibly, a solution was applied and is waiting for your validation, please do it.

5. **List View vs Detail View:**
   a. When searching for tickets, there are two views, the list and the detail.
      i. See for yourself and decide which one you prefer, personally I prefer the List view, it's easier to have an overview of each ticket, because main infos, are visible.

6. **When a ticket is taking too long to be solved:**
   a. Comment on the ticket asking for news
   b. After some time, if still having no answer (**and is important to solve it fast**), ask someone from project team for a help