



# **Development of a framework for the measurement and control of customer support services**

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*To my parents,  
For their great support.*

## Abstract

This project has the main goal of developing a framework for the measurement and control of customer support services at Farfetch, an e-commerce luxury goods company. Due to the growth of the company and the aim to provide the best customer experience in the market, it is necessary to increasingly use the available data to optimize the three channels used on the process of customer support: contact form/email, chat and phone.

With this project, after an initial overview of channels and former metrics used for controlling customer support services, the Key Performance Indicators have been redefined and new reporting methods have been created using two Business Intelligence and Analytics software solutions: *Microsoft Power Pivot* and *Tableau*. These reporting methods enable the analysis of the performance of the players involved in customer support at different levels: global, by team and individual. They also allow the verification of which channels are being underused or which employees are being overloaded. With the new framework developed in this project, senior management will have multiple sources of information available that can help them to manage customer relationship and to improve customer support services. The dashboards implemented are available and automatically configured for the players involved in the three customer support teams, located in Porto, London and Los Angeles offices.

With the contribution of the work developed in this dissertation, the performance of the Customer Service Department has improved significantly. In the first twelve weeks after the implementation of the first report, the most relevant improvement is related to the increase of the Response Rate, from 60.2% to 86.4%, despite the growth of 11.7% in the number of contacts created. Besides this metric, the improvement has also been verified in three areas of business performance: Operational Efficiency, Service Quality and Customer Satisfaction.

## Desenvolvimento de um sistema para medição e controlo dos serviços de apoio ao cliente

### Resumo

Este projeto tem o principal objetivo de desenvolver um sistema para medição e controlo dos serviços de apoio ao cliente da Farfetch, uma empresa de vendas online de bens de luxo. Devido ao crescimento da empresa e ao objetivo de proporcionar a melhor experiência ao cliente do mercado, tornou-se necessário usar a informação disponível para otimizar os três canais usados no processo de apoio ao cliente: formulário de contacto/email, chat e telefone.

Com a realização deste projeto, depois de uma visão inicial dos canais e métricas anteriormente utilizadas para o controlo dos serviços de apoio ao cliente, os Indicadores de Desempenho foram redefinidos e novos relatórios foram criados em duas plataformas de Business Intelligence: *Microsoft Power Pivot* e *Tableau*. Os relatórios permitem a análise da performance dos membros envolvidos no apoio ao cliente a diferentes níveis: global, por equipa e individualmente. Também permitem verificar quais os canais que estejam a ser subutilizados e quais os funcionários que estão a ser sobrecarregados. Com o novo sistema desenvolvido neste projeto, a gestão de topo terá várias fontes de informação disponíveis que lhes permitirão gerir a relação com o cliente e melhorar os serviços de apoio ao cliente. Os *dashboards* implementados estão disponíveis e automaticamente configurados para os funcionários envolvidos nas três equipas de apoio ao cliente, localizados nos escritórios do Porto, Londres e Los Angeles.

Com a contribuição do trabalho desenvolvido neste projeto, a performance do Departamento de Apoio ao Cliente melhorou significativamente. Nas primeiras doze semanas após a implementação do primeiro relatório, a melhoria mais relevante está relacionada com a Taxa de Resposta, que subiu de 60.2% para 86.4%, ainda que tenha existido um aumento de 11.7% no número de contactos criados. Além desta métrica, a melhoria tem vindo a ser verificada em três áreas de medição de performance: Eficiência Operacional, Qualidade do Serviço e Satisfação do Cliente.

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## Acronyms

B2B – Business-to-business

B2C – Business-to-consumer

BI – Business Intelligence

CS – Customer Service

ERP – Enterprise Resource Planning

GMT – Greenwich Mean Time

IT – Information Technology

KPI – Key Performance Indicator

NPS – Net Promoter Score

SLA – Service Level Agreement

SQL – Structured Query Language

VPN – Virtual Private Network



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## 1 Introduction

Online commerce has become a very interesting business. However, the use of the Internet to sell luxury goods is not common. While the Internet is about access, luxury is usually associated to denying access (Pruzhansky, 2014). Therefore, it is necessary a great knowledge of the two businesses for their successful merge.

This dissertation, developed at the Continuous Improvement Team of Farfetch, a luxury goods e-commerce company, has the main goal of developing a framework for the measurement and control of the customer support services. Due to the company's target audience, it is fundamental to guarantee the provision of an excellent customer support service.

### 1.1 Farfetch Overview

Farfetch is an innovative e-commerce company that brings the world's most famous luxury fashion boutiques to customers all over the world. Launched in 2008, Farfetch is a London based company and it has continuously grown to become a truly global company. It currently belongs to the restricted groups of start-up companies that have soared to a \$1 billion valuation based on fundraisings.

The network of Farfetch associated stores is composed by more than 300 boutiques all over the world and offers customers a mix of products from over 1000 designers, providing services for customers on every continent.

The end customer is able to shop luxury fashion goods from the most famous and influential boutiques all over the world in a unique, safe and pleasant way. Farfetch offers a catalogue of products gathered in one place from the most renowned brands and designers and from boutiques such as American Rag, Biondini, L'Eclaireur, Stefania Mode and Vitkac.

Farfetch works simultaneously as an e-commerce platform and a different and extra sales channel for its various partner boutiques. The company works as a bridge between boutiques and end customers. The services provided by the company are related to two distinct segments: B2B segment – represented by the boutiques which gain a very strong sales channel – and B2C segment – represented by the customers which are able to shop luxury goods in a unique and revolutionary way.

The service provided by Farfetch stands out from competitors by its commission based and win win business model, in which boutiques benefit from online marketing, partner relations, customer support services, web platform and solutions for payment handling, logistics and warehousing.

The main advantage of the Farfetch business model is the unlikelihood of success of such a service for a single boutique, as its high costs would be hardly worth for a single entity. Farfetch benefits from economies of scale when providing all these services to a high number of boutiques. Moreover, Farfetch has the advantage of providing five times more labels and items on the website than its more direct competitors. As a result, consumers can choose from a bigger catalogue, which is only possible because the company does not hold inventory, unlike its competitors.

The company provides a very complete service every time a purchase is made. Its services include Fraud check, Payment processing and Customer Service (CS) as well as Courier service either directly from the boutique to the customer or from the customer to the boutique, in case the return is requested and accepted.

The relationship among the three players (Farfetch, Partners and Customers) is represented on Figure 1.

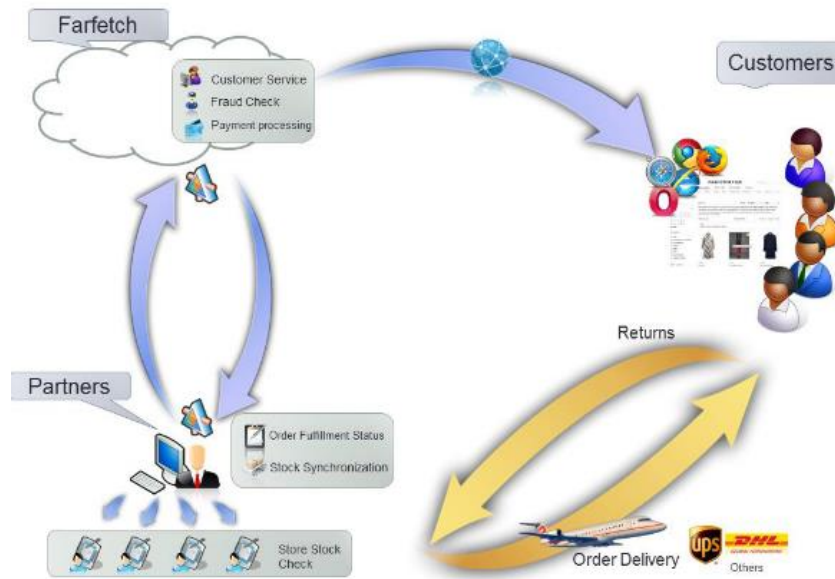


Figure 1 - Relationship among Farfetch, Partners and Customers

Farfetch aims to change the way the world shops for fashion, conquering a leading market position.

### 1.1.1 Farfetch Structure

Farfetch is currently divided in nine offices in seven countries: Brazil, China, Japan, Portugal (Porto and Guimarães), Russia, United Kingdom and United States (Los Angeles and New York). In total, Farfetch employs about 600 people.

Regarding the departmental division, Farfetch is divided in twelve departments: Account Management, Business Development, Customer Service, Finance, Human Resources, Marketing, Merchandising, Office Management, Operations, Partner Services, Production and Technology.

This project has been developed at the Continuous Improvement Team, integrated in the Operations Department. It is related to the improvement of Farfetch customer support services, so this dissertation is focused on the Customer Service Department.

The organizational diagram is represented on Figure 2.

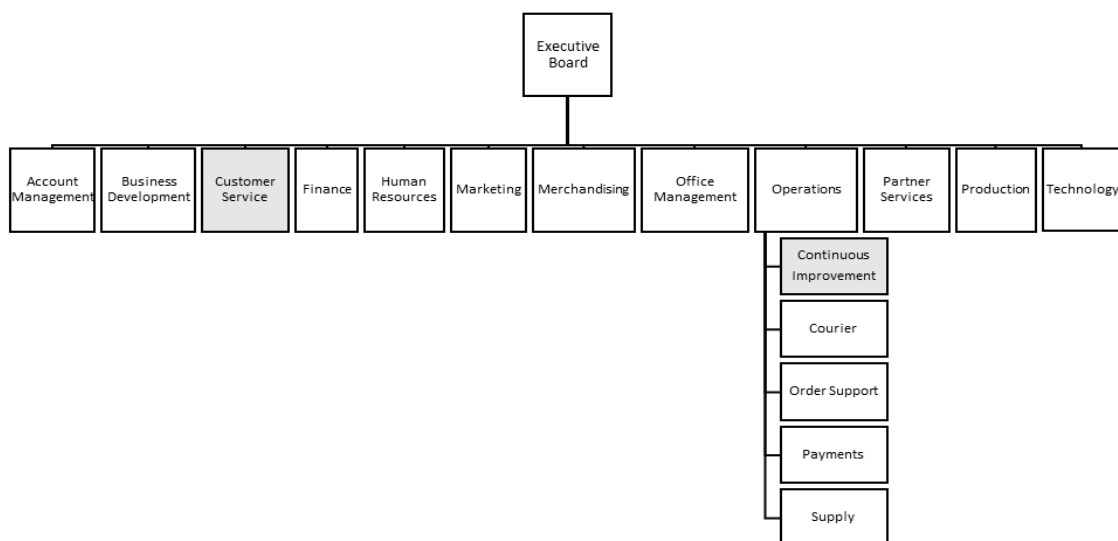


Figure 2 - Farfetch Organizational Diagram

### 1.1.2 Customer Service Department

Apart from Porto office, London and Los Angeles offices also have Customer Service Teams. There is also a Customer Service Team in the Brazilian office, but it works in a different way following procedures that are independent from the other Customer Service Teams, like most of the other Departments in Brazil. For this reason, the Brazilian office will be excluded from the developments made along this project.

The ever increasing number of contacts has forced the growth of the Customer Service Department workforce. Moreover, CS Teams are expected to be extended to the Japanese and Russian offices until the end of 2015.

Regarding the departmental structure, it is organized as follows:

- **Global Manager:** located in Los Angeles; responsible for taking strategic decisions and assuring that the players within the Department keep aligned with the global strategy of the company;
- **Team Managers:** one located in each of the offices; responsible for assuring that the needs of customer are being satisfied, managing staff and providing direction, instructions and guidance to supervisors and agents;
- **Workforce Manager:** this is a new role and the manager will be located in Porto; responsible for creating an effective global scheduling of agents and forecasting customer demand;
- **Training Coordinator:** located in London; responsible for training and preparing personnel and documenting training activities within the Department;
- **Supervisors:** two located in each of the three offices; responsible for providing guidance to the agents of the team and reporting to team managers, ensuring that all agents provide a good service;
- **Agents:** located in the three offices; responsible for interacting directly with customers and for ensuring that each customer has a pleasant experience.

The departmental structure is represented on Figure 3.



Figure 3 - Customer Service Structure

The customer can contact Customer Service Teams through three different channels: Email/Contact Form, Chat and Phone. These channels will be further explained in the following chapters.

However, Customer Service Teams do not communicate uniquely with customers. Queries often require the communication either with other internal teams or with Partner Boutiques. These queries are usually placed by customers who have completed their purchases.

The internal interaction takes place with:

- **Courier Team:** queries related to returns and delivery issues;
- **Partner Services Team:** queries that require the communication with boutiques;
- **Production Team:** queries related to sizing, photos, composition, brand, gender, friendly name or descriptions;

- **Order Support Team:** queries related to the detection of fraudulent customers;
- **Refunds Team:** queries related to processing refunds.

As a consequence of the communication with internal teams and Partner Boutiques, some of the Customer Service Department results are affected by the performance level of these entities. Developing ways to control and measure performance within this Department will also help to manage future process improvements of other Farfetch Teams.

### **1.1.3 Continuous Improvement Team**

The focus of the Continuous Improvement Team is to lead organizational-level change while training improvement methodologies. There is an ongoing effort to improve the organization's services and processes, focusing on efficiency, effectiveness and flexibility.

Keeping the services provided aligned with customers' needs enforces companies to adopt continuous improvement strategies. Both technology and customers' requirements evolve continuously. In order to keep the business growth, every company should have the permanent goal of improving both services provided and internal processes.

It uses the Kaizen approach, a Japanese method that aims to make improvements based on small changes. The Kaizen method needs the commitment of all levels of the organization and it highly depends on the workforce. It should continually be seeking ways to improve performance.

Once customer support services are most of the times the only means of direct contact with online companies, it is possible to understand the importance of applying this method within the Customer Service Department.

## **1.2 Project Motivation**

Due to Farfetch target audience, the company strives to deliver the best customer experience in the market. Mainly in the luxury e-commerce market, the provision of an excellent customer support is primordial for the success of the company.

With the growth of Farfetch and the respective increase of orders, the number of contacts received has continuously grown. It is necessary to increasingly use the available data to optimize the channels in the process of customer support. This is essential to align the customers' needs with the resources available.

It is now vital to guarantee a full control of Customer Service actions through the definition of Key Performance Indicators. These enable monitoring all players involved in Customer Services. Therefore, it is very important to align the specification of Key Performance Indicators with the company business model, as well as design reporting methods that make the relevant information available to the right users.

## **1.3 Project Goals**

When the project started, the Key Performance Indicators were reported on a weekly and daily basis. However, most of them were not being correctly calculated. Taking actions based on wrong KPIs is not advisable and might be risky. Moreover, the former metrics were not sufficient for the needs of the Customer Service department. More accurate ways of reporting, with new types of Key Performance Indicators, were needed in order to align the levels of Customer Service provided with the strategic goals.

After this project, with the redefinition of the Key Performance Indicators as well as the construction of new reporting methods, all Farfetch collaborators that directly interact with customer support should be able to assess more accurately their performance. This requires the

creation of proactive alerts, based on dashboards, that can inform managers and users that some channels are being unused or employees are being overloaded. Furthermore, top management should have access to more accurately performance measures, reported in different ways and periodicities, through the creation of Executive Reports.

The dashboards will be available for Customer Service users in all the offices with Customer Service Teams: Porto, United Kingdom and United States. In the near future, these will also be available in Japan and Russia. Executive Reports will be available for any Executive or Customer Service Manager on Farfetch SharePoint.

Furthermore, these reporting methods are expected to exist as an initial development to support future processes improvements. After this project, and with the establishment of these reporting methods, it should be possible to better understand where current customer support service processes fail and to work on their improvement.

#### **1.4 Methodology**

The first step defined was the identification of the former Customer Service metrics and processes. These were critically analysed and evaluated. Afterwards, the Key Performance Indicators were redesigned and complementary metrics were created to evaluate the level of service. It was made an analysis to the most appropriate reporting methods. Suitable software solutions, often involving queries to large databases, were developed to calculate the new metrics. At the same time, new reports were designed to disseminate accurately managerial information. Through the implementation of these reports, it should be possible to quickly and effortlessly present the new Key Performance Indicators.

A continuous interaction with the players involved in the Customer Service was necessary in order to establish the most appropriate Key Performance Indicators according to the information actually available in the databases. Their requirements and suggestions were always taken into account throughout the project.

After the implementation, a follow-up process was made in order to understand possible improvements to the reports and dashboards created. An intense dialogue with all Customer Service users was necessary to add and modify particular points of the reporting.

By following these steps, it was implemented an iterative process that allows to assess the needs of the players involved in the Customer Service and to promote a culture of continuous improvement.

#### **1.5 Report Structure**

The content of this dissertation is structured as follows:

Chapter 2 presents the state of the art of the main themes addressed – Customer Service in Luxury E-Commerce, Performance Measurement, Dashboards and Continuous Improvement.

Chapter 3 presents an overview of the main limitations found on the indicators of customer service originally used by Farfetch, which have motivated the execution of this project. The reports formerly utilized for measuring customer support service level were also reviewed.

Chapter 4 presents the new solutions developed along this project. It addresses the main issues found on the redefinition of the new Key Performance Indicators and the new types of reporting methods proposed, including their main functionalities and characteristics. It is also made a brief overview of the results achieved after the implementation of the reporting tools.

Chapter 5 concludes the dissertation and presents ideas for future work.

## 2 State of the Art

This chapter addresses the following topics: Customer Service in Luxury E-Commerce, Performance Measurement, Dashboards and Continuous Improvement.

### 2.1 Customer Service in Luxury E-Commerce

Luxury is a culture and a philosophy that requires the understanding of the business, because its intricacies and output are essentially different from other types of goods, such as daily consumer goods (Okonkwo, 2009). In economic terms, luxury objects are those whose price/quality relationship is the highest of the market (Kapferer, 1997). A major issue related to the definition and measurement of luxury thus arises from its subjective character (Kapferer and Michaut-Denizeau, 2014).

The unique luxury characteristics, such as high price and quality, are a challenge in the integration of luxury branding within the Internet and digital environment (Okonkwo, 2009). There is the perception that internet sales might affect the high end image that customers attach to luxury goods (Przhansky, 2014). For this reason, until recently the luxury industry showed low commitment towards integrating advanced Internet technologies in the sector's marketing and overall business strategies (Okonkwo, 2009). However, nowadays the consumers require retailers to communicate with them using the Internet. The changes in the technological environment have been rapid and relate closely to changes in consumer behavior in terms of how they prefer to shop, communicate and receive their deliveries (McCormick *et al*, 2014).

The most experienced and successful businesses in using e-commerce have realized that the key determinants of success or failure include customer service quality (Lee and Lin, 2005). An appropriate customer contact management is a primary determinant of end customer perceptions of overall service quality. As such, customer contact services have a great impact on customer satisfaction and they can be a strategic asset for the company (Froehle, 2006).

Understanding customer expectations is a prerequisite for delivering superior service (Parasuraman *et al*, 1991). Managing both the technologies and the personnel needed for providing high-quality, multichannel customer support creates a complex and persistent operational challenge. Adding to this difficulty, it is not clear how service personnel and these communication technologies interact to influence customer perceptions of the service being provided (Froehle, 2006).

Regarding customer support channels, telephone calls continue to be the most frequent means of communication, although companies are also using e-mail and chat. E-mail is defined as the sending of text-based messages of virtually any length that can be read and responded to in an asynchronous (nonreal-time) manner. Chat, is defined as the sending and receiving of short, text-based messages, where the sender and recipient communicate with usually no delays and high synchronicity (Froehle, 2006).

The three technology-based media – chat, e-mail and telephone – exist along a continuum of increasing media richness potential based on the medium's synchronicity and primary communication channel (text or audio). This framework is represented on Figure 4 (Froehle, 2006).



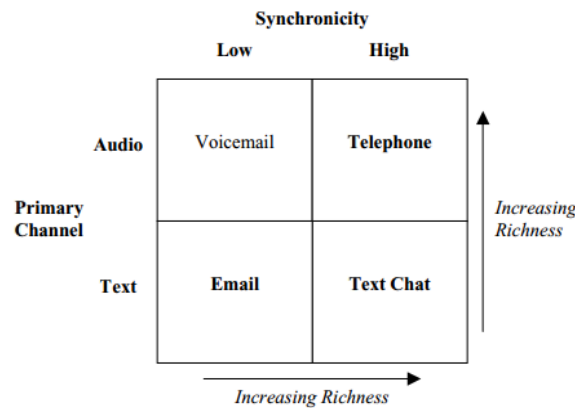


Figure 4 - Customer Service technologies and media richness potential

The difficulty with trying to keep customers returning online is the reason why the quality of the offering is critical (Cox and Dale, 2001). Typically, online customers can more easily compare alternatives than offline customers (Shankar *et al*, 2003). Specifically in the world of e-commerce, the interaction between a customer and a business will usually take place with a computer as the interface. Communication is difficult on the Internet, as the customer can only communicate directly with the company if the website offers these kind of services (Cox and Dale, 2001).

In customer support services, a customized service is very appreciated since the personnel can ‘give’ counsels, guidance to the customized advice, understanding the customer overall goals and needs (Olson and Olson, 2000). This happens because automated services are not intelligent enough. They do not allow the customer to have dialogue and ask follow-up questions or ask for explanations (Johan and Nahid, 2000). Many customers are hesitant to complete a purchase if they have even one unanswered question. Live support, such as phone or chat, gives customers answers to their questions on the spot, in real-time, which increases customers’ satisfaction level (Elmorshidy, 2011).

Customer service operations are often the most visible part of an IT organization to customers. By improving the quality of these processes, organizations can easily increase the customer satisfaction on services and products (Jäntti and Pylkkänen, 2008). Particularly in the luxury industry, given its special characteristics, it is vital to assure that the customers get satisfied with the service provided.

## 2.2 Performance Measurement

Performance measurement is a topic which is often discussed but rarely defined. Literally, it is the process of quantifying action (Neely *et al*, 1995). It is a fundamental principle of management. The measurement of performance is important because it identifies performance gaps between current and desired performance (Weber, 2005).

Nowadays strategies and competitive realities demand new measurement systems. There has been a shift from treating financial figures as the foundation for performance measurement to treating them as one among a broader set of measures. The impetus was the realization that the traditional companies’ existing systems, which were largely financial, undercut their strategies. (Eccles, 1990)

Key Performance Indicators, commonly known as KPIs, are quantifiable metrics which reflect the performance of an organization in achieving its goals and objectives. They measure the business health of the enterprise and ensure that all individuals at all levels are “marching in step” to the same goals and strategies. They also provide the focal point for enterprise-wide standardization, collaboration and coordination. The selection of the wrong KPIs can result in

counter-productive behavior and sub optimized results. Although all KPIs are metrics, not all metrics are KPIs (Bauer, 2004).

One of the main issues for organizations that have information systems is data overload, as most of them generate some redundant performance reports. Yet another problem with the performance measures used in many organizations is that they are rarely integrated with one another or aligned to the business process (Neely, 1999). A key principle of performance management is to measure what you can manage. In order to maintain and improve performance, each function in the organization must focus on the portion of the indicators that they influence (Weber, 2005).

Selecting the right measures is vital for effectiveness. Even more importantly, the metrics must be built into a performance measurement system that allows individuals and groups to understand how their behaviors and activities are fulfilling the overall corporate goals (McNeeney, 2005). The development of these performance measurement systems can be divided into three main phases: the design of the performance measures and the identification of the key objectives; the implementation of the performance measures, which includes an initial collection, collation, sorting/analyse and distribution; the use of the performance measures to assess the implementation of the strategy and to challenge strategic assumptions (Bourne *et al*, 2000).

When designing the performance measures metrics, one must have the end result in mind, focusing on what the desired outcomes of the work processes are. This might be difficult to accomplish since organizations do not work as a set of isolated departments, as they collaborate with each other, so a single group does not control all the key steps. Moreover, different departments collect different silos of information that produce metrics, originating different opinions of company performance and limiting a common understanding of the business behaviour (McNeeney, 2005).

For the purpose of categorisation, implementation is the phase in which systems and procedures are put in place to collect and process the data that enable measurements to be made regularly. This may involve computer programming to trap data already being used in the system and present them in a more meaningful form. Some new procedures may be initiated so the information currently not recorded is captured, and completely new initiatives may occur (Bourne *et al*, 2000).

Performance measurement on customer contact services is extremely relevant since customer services are directly provided to end customers. A good communication between them and the company can have a large impact on end customer satisfaction. Most companies seem to miss the important link between the employee satisfaction, service quality, customer satisfaction and profitability (Marr and Neely, 2004). A predominant focus on efficiency may be counter-productive when trying to satisfy the customer. For example, if the agents are being measured on the total time spent on each contact, they might not focus on solving the customer's problem, but instead end the contact as quickly as possible (Tate and van der Valk, 2008).

According to Tate and van der Valk (2008) the Business Performance in Customer Services is mostly tested in the following 4 areas: Operational Efficiency, Customer Satisfaction, Service Quality and Employee Satisfaction. These measures are usually measured as follows:

- **Operational Efficiency:** the most commonly efficiency indicators are number of contacts, average times, average speeds of answer, queuing times and abandonment rates;
- **Customer Satisfaction:** most firms send customer satisfaction surveys to a sample of customers, others use automated surveys after the contact with the customer is finished;
- **Service Quality:** metrics as the compliance to standards of Service-Level Agreements (SLA). Besides classic operational measures such as queuing time or contact time, other

aspects frequently measured include Greeting, Communication Style, Tone of voice, Knowledge of employee, Competence in performing the task and Close;

- **Employee Satisfaction:** the most frequently metrics used are: Staff Turnover, Absenteeism, Timeliness, Compliance, Friendliness and Attitude (Marr and Neely, 2004).

According to Marr and Neely (2004) in order to manage well, managers “*need to ensure that the measurements accurately portray what management wants to be measured. The effective management of high quality voice-to-voice service delivery could be adversely affected by the absence of a valid measurement instrument.*” Moreover, the performance should not be measured in isolation from the performance of the whole organization and this service should be used to differentiate the product or service offered and to drive customer satisfaction.

Nowadays customer contact services allow a company to build, maintain and manage customer relationships by solving problems and resolving complaints quickly, providing information, answering questions and being available usually 24 hours a day. Some years ago, these services revolved around taking orders and fielding complaints by telephone. However more communications have appeared, such as email, person to person chat and other more advanced technologies (Tate and van der Valk, 2008).

The use of performance measures allows the organization to assess the implementation of its strategy. When designed and implemented carefully, the key performance indicators allow to know precisely where to take action in order to improve performance (Weber, 2005).

*“The vision of the future (mission) must be supported by the how (strategy), the what (objectives), the focus areas (critical success factors), the metrics (KPIs) and the action plan (key action initiatives) to realize full actuation.”* (Bauer, 2004)

### 2.3 Dashboards

The ever increasing amount of data available has become one of the main issues for managers. Therewith, it has emerged the need for a tool able to integrate the diverse systems of a company into a coherent picture of where the organization is heading and what needs to be done to improve its progress (Pauwels *et al*, 2009).

*“A dashboard is a means of presenting information to decision-makers, with a focus on visual communication, so that important information is consolidated and arranged on a screen in order to be easily monitored”* (Few, 2006). It is expected to improve decision making by amplifying cognition and capitalizing on human perceptual capabilities (Yigitbasioglu and Velcu, 2012).

Dashboards are expected to collect, summarize, and present information from multiple sources such as ERP and BI software, giving management a quick view of how various KPIs are performing (Yigitbasioglu and Velcu, 2012). After a quick review, management should be able to evaluate the performance of the organization and make decisions related to the results of the performance assessment (DeBusk *et al*, 2003). A dashboard can give the organization objective feedback on the outcomes achieved, which allows managers to work on the improvement of the drivers and processes (Wind, 2005). Moreover, dashboards allow organizations to incorporate various performance management concepts into only one solution, preventing data overload (Yigitbasioglu and Velcu, 2012).

A dashboard enforces consistency in measures and measurement procedures across department and business units, facilitating the standardization of metrics across them and gathering data that has never been gathered before. They help to monitor performance through the evaluation of current metrics and provide support to planning, as they are related to support systems that give management guidance on decisions. Furthermore, they facilitate communication to

important stakeholders about what the organization values as performance, by the choice of metrics on the dashboard (Pauwels *et al*, 2009).

The design features that a dashboard should have can be divided into functional and visual. Functional features are related to what the dashboard can do, such as drill down capabilities, presentation flexibility, scenario analysis or automated alerts. The visual features refer to the visualization of data and how efficiently and effectively information is presented to senior management, such as single screen page or frugal use of colors. In combination, these help to improve cognition and interpretation (Yigitbasioglu and Velcu, 2012).

Regarding functional features, these should be adapted to the dashboard's user characteristics, as a certain way to display information might not be the most appropriate for a specific user. Dashboards should be interactive, allowing users to drill down information so as to obtain further details on various performance indicators through a point and click interactivity. Therefore, it is highly recommended that the dashboard is fully integrated with the Online Analytical Processing system or data warehouse of an organization, so as to allow users to have full access to granular data for dimensional analysis. The presentation flexibility allows users to view data in different ways, slicing or filtering information. Scenario analysis provides managers a tool for planning. Finally, automated visual alerts help to identify measures that need immediate attention (through bright colors and/or flashing) when performance metrics go out of range (Yigitbasioglu and Velcu, 2012).

Visual features are key aspects when designing a dashboard. The visualization aspect helps users to assess the organization performance efficiently and effectively and make decisions according to it. It is commonly recommended that the data presented on a dashboard can fit and be arranged on a single screen. The use of colors to improve the process of visualization should be used carefully, since its excessive use can distract the user and may therefore have an adverse effect on decision making.

The information presented on a dashboard should be in line with its purposes. Unnecessary information should be eliminated, since it adds complexity and may impair cognition and the disregard of information. One must bear in mind the goal should be to improve and not complicate or bias perception. However, too few features can compromise its goals. Only selecting the right quantity of information and finding an optimal point is needed in order to make accurate decisions. A fit might be difficult to achieve as the exact goals of the dashboard might not be always known upfront, a good strategy will be to go with dashboard solutions that are more flexible and allow for easy upgrades (Yigitbasioglu and Velcu, 2012).

All in all, dashboards should be simple and effective in order to allow managers to assess performance and to enhance decision making based on the key metrics displayed. The features discussed above will help to provide managers a dashboard that will more easily serve their interests: *“Properly created dashboards will provide the mechanism to drive effective management and resource allocation decisions.”* (Wind, 2005).

## 2.4 Kaizen - Continuous Improvement

Nowadays organizations are constantly challenged to deliver strategic capital assets within highly competitive marketplaces. Businesses need metrics and analytics to help them streamline their value generating operations. These metrics also provide tangible evidence and validation regarding the value generated for customers (España *et al*, 2012). In particular, given the specificities of the e-commerce luxury industry, it is necessary to guarantee the provision of an excellent customer service.

The need to operate more efficiently and effectively has led to the appearance of the Kaizen philosophy. The meaning of Kaizen is “change for the better” and more and more companies are adopting continuous improvement management systems. It is becoming a company strategy

dedicated to the continuous improvement of operations, a truly operational strategy based on *kaizen* principles and tools (Coimbra, 2013).

It means gradual and continuous progress, increase of value, intensification and improvement (Karkoszka and Szewieczek, 2007). It is a carefully planned, structured event to improve a specific area of an organization in a quick and focused manner. Kaizen involves setting standards and then continually improving those standards (Isaacs and Hellenberg, 2009).

However, Kaizen is much more than continuous improvement. Everyone within the organization should be involved in the processes optimization (Rocha, 2014). These methods bring together all the employees of the company, ensuring the improvement of the communication process and the reinforcement of the feeling of membership (Titu *et al*, 2010). Each and every person is stimulated to look for changes in its own work according to the motto: “everywhere”, “everybody”, “everyday Kaizen!” (Imai, 2012).

The existence of Kaizen supposes a commitment of the organization’s workers towards the change of the working daily habits, through a continuous and daily training and experimentation of new practices up to the moment the new process is proved to be more efficient and gets standardized.

According to Rocha (2014), a continuous improvement model should comprise 4 vectors: (i) Mission and objectives – each company must define its mission and strategic goals for the continuous improvement. (ii) Improvement tools – to improve the performance of the organization and achieve the proposed goals (iii) Change Management – development of innovation capabilities and the clear definition of the way and control for an effective organization; (iv) Fundamental elements – related to the creation of a clear perception of what is waste.

The three main Kaizen Improvement tools are the following:

- **Plan Do Check Act (PDCA)/Standardize Do Check Act (SDCA) cycles:** iterative four-step management methods used in business for the control and continuous improvement of processes and products;
- **5S methodology:** an approach for productivity, quality and safety improvement; 5S stands for the Japanese words *seiri* (tidiness), *seiton* (orderliness), *seiso* (cleanliness), *seiketsu* (standardization) and *shitsuke* (discipline);
- **Daily Kaizen:** it is currently used by Farfetch Customer Service Teams; it consists on a simple and short meeting (around 10 minutes) around a board in which information is exchanged. The topics discussed in this meeting should be presented in the form of KPIs selected according to the department needs, updated action plans and 5S audit results. The board should be located strategically, on the passageway and close to the workplace (Rocha, 2014).

It can take years and should be implemented everywhere, every day, and by everybody (Imai, 2012). If such a culture is achieved, it will from its inception deliver significant benefits to the company, and these will be sustained or increased over subsequent years (Coimbra, 2013).

### 3 Customer Service Overview

With the increase of the number of services provided by the Customer Service Department, particularly in terms of languages provided, the complexity of the customer support services is continuously growing. Adding to this, the rapid growth of Farfetch and the respective increase of orders naturally represent more contacts to be dealt by the Customer Service agents.

Due to the company luxury nature, it is fundamental to keep the service quality on an excellent level. More efficient and adequate methods for measuring and controlling the customer support service level became imperative. It is necessary to optimize the channels in order to align customers' requirements with the resources available.

As a consequence of the ever increasing numbers and customer support services provided by Farfetch, the number of customer support agents, who directly interact with customers, has been subject to a year-on-year growth of more than 100%. In May 2015, there were 60 people spread over the three offices working at the Customer Service Department. The importance of having Customer Service Teams dispersed all over the world is related to two main reasons: the very different time zones around the globe and the availability of Customer Service agents, within regular working hours, speaking influential languages in terms of the market share of the company worldwide.

#### 3.1 Customer Service Channels

The customer can contact Farfetch through three different channels, each with a different provider. The processes associated with each of these channels are described next.

##### 3.1.1 E-mail/Contact Form

Every email or contact form filled in the website is received on the tickets platform, generating a new ticket. This new ticket will trigger an exchange of messages between either CS and customer (customers receive the messages in their inbox email accounts), CS and internal teams - Courier, Partner Services, Production, Order Support or Refunds Teams or CS and Partner Boutiques. The Farfetch contact form is shown on Figure 5.

**CONTACT FORM**

Simply complete the form and click 'send' to submit an enquiry:

Name

Email   
Please ensure that your email address is correct so that we can respond to your enquiry.

Contact Preferences

Location (Shipping Address)

Query Type (select)

Subject

Message

---

Upload File (Optional)  
 Nenhum arquivo selecionado

Figure 5 - Contact Form

The ticket categories, available on the contact form as “Query Type”, define the subject of the query. The categories available are the following: feedback, order, other, payment, product, returns, shipping, shopping, supplier and technical. These can either be filled by the customer, when the ticket is originated via contact form, or by the agent, when the ticket is originated via email or created by him/her.

Once a new ticket is responded, the agent fills in some mandatory fields (assignee, language and category, in case this one is still not filled in) and marks it with a tick in case it is to be shared with an internal team. At the end of the message, the ticket is submitted with a status according to its current stage of resolution. The interface can be seen on Figure 6.

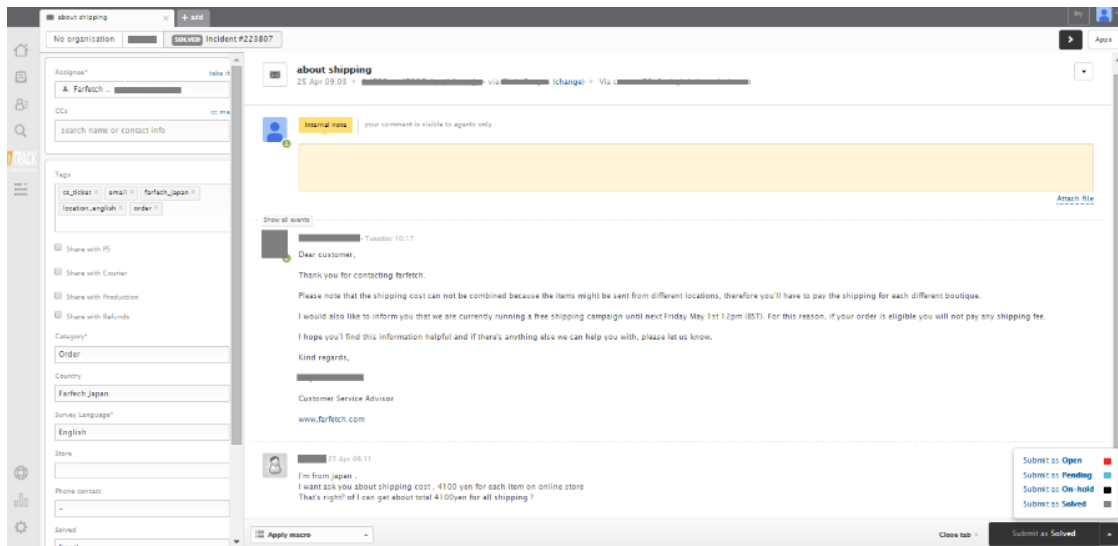


Figure 6 - Tickets Platform Interface

When accessing the platform, each CS agent is able to check his/her assigned tickets in backlog and the new tickets not assigned to any agent.

Assigned tickets						
ID	Subject	Requester	Requested	Updated	Group	
Status: Open						
#233944	Your Live chat with Farfetch: Order H1UH		Yesterday 16:34	Today 11:18	Farfetch EU + US	
#234060	Your Live chat with Farfetch: Order NOCM		Yesterday 17:50	Yesterday 18:00	Farfetch EU + US	
#220569	Votre appel avec Farfetch: Commande FX9I		23 Apr	Yesterday 15:37	Farfetch EU + US	
Status: Pending						
#219071	T5560815 - AWB 5116942810		22 Apr	Wednesday 12:44	Farfetch EU + US	
#218920	Your Live chat with Farfetch: Order EIAP		22 Apr	Wednesday 12:44	Farfetch EU + US	
#214400	Was sent the wrong item ALD24404		19 Apr	Monday 13:58	Farfetch FR	
#215250	Your Live chat with Farfetch: Order P51M/GRM22827		20 Apr	Monday 13:43	Farfetch EU + US	
Status: On-hold						
#225105	Order TFL66 - 7597826865		Monday 09:33	Yesterday 16:15	Farfetch EU + US	
#233730	Your Live chat with Farfetch: Order KX1Y		Yesterday 13:59	Yesterday 14:19	Farfetch EU + US	

Figure 7 - Tickets Platform Interface - Backlog Tickets

A ticket may be in different statuses from the moment that it is created up to the moment that it is completely resolved and the exchange of messages ends. The different ticket statuses are explained in detail:

- **New:** a ticket not assigned to any agent and, consequently, without an answer from a CS agent;
- **Pending:** a backlog ticket assigned to an agent and not solved because the agent is waiting for the sender answer;
- **On-Hold:** a backlog ticket assigned to an agent and not solved because he/she is waiting for an internal answer in order to be able to answer the sender;

- **Solved:** a ticket that is expected to have the exchange of messages ended since the situation is resolved;
- **Open:** a backlog ticket assigned to an agent, waiting for his/her action. These tickets represent the issues being worked on;
- **Closed:** a ticket that keeps its status as solved for more than 30 days becomes automatically closed. From this moment on, it is not possible to exchange messages through this ticket.

Although Courier, Partner Services and Production Teams have their ticket accounts, the Customer Service account is shared with Order Support and Refunds Teams. The account concept is important as a ticket shared between two distinct accounts does not have mandatorily the same status in both. Furthermore, the ticket ID (related to the ticket reference) is also different. The statuses mentioned further in this dissertation refer to the CS account.

### 3.1.2 Phone Calls

The phone calls provider records all the data related to calls, whether inbound or outbound. Inbound calls take place when customers call Farfetch through the phone number available on the website. In contrast, outbound calls are the ones when a CS agent calls the customer, in cases when the contact is requested to clarify a query.

Farfetch provides a specific version of the website containing, among other features, a specific phone number, according to the customer's IP Address region. By associating a version of the website to a specific language and phone line, it is possible to have the right agents available for the right phone lines at the right times.

An example of the phone number displayed on the website is represented on Figure 8.

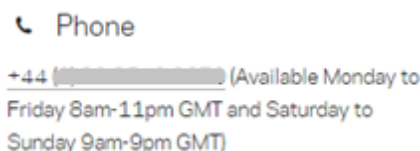


Figure 8 - Phone Number presented on the website

The hours presented on Figure 8 are related to the times when Farfetch promises to have agents available to answer phone calls. Before this project, Farfetch used to promise agents available at hours when there were no agents connected for such languages and phone lines in the offices. In order to manage customers' expectations, it is vital to assure that the process of allocating personnel takes into account the promises mentioned online, adjusting either the online information or the hours covered by agents on duty. With this work, the hours displayed on the portal have been redefined and the agents are currently being allocated accordingly.

### 3.1.3 Chat

With chat, Farfetch is able to offer a written real time support channel. Customers can find the chat button through the various contact points on the portal and, clicking on it, a pop up window opens. In case agents are available, the conversation customer-agent starts. CS agents answer these chats on the provider's platform, which allows to keep a history of previous chats messages as well as metrics such as agent, duration or chat status.

Unlike phone calls, the provider does not allow the identification of the customer region and a chat can be answered by any available agent. The chat interface as seen by the customer is represented on Figure 9.



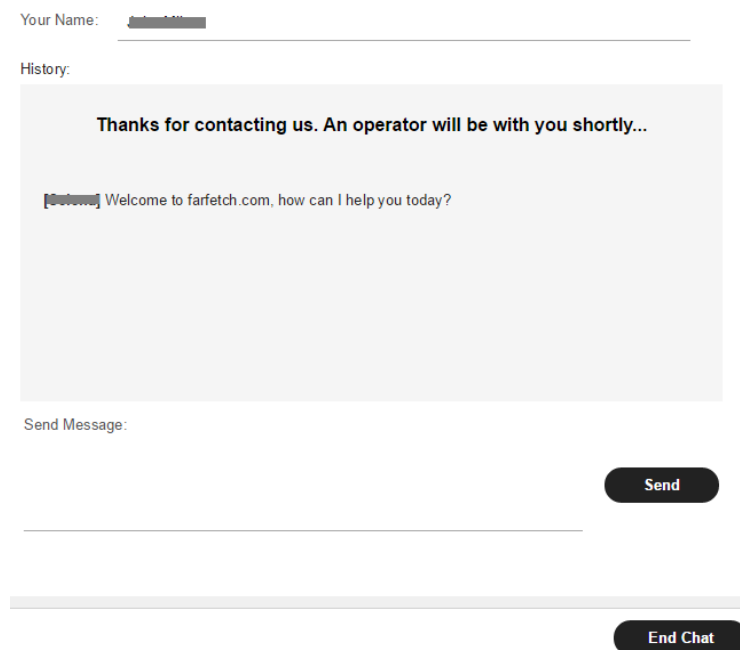


Figure 9 - Customer's Chat Interface

A chat may have one of the following statuses, as defined by the provider:

- **Unavailable:** an attempt by a visitor to initiate a chat when no agents are available;
- **Abandoned:** a chat click by a customer that abandons it before the chat starts;
- **Blocked:** a visitor whose IP Address is blocked to access Farfetch chat;
- **Unanswered:** a chat not responded by an agent, when at least one of them was available;
- **Answered:** a chat responded by an agent.

Like phone calls, each chat answered generates a new manually created ticket with the same purpose than the ones created by phone calls.

### 3.2 Former Reporting Methods

Before this project, Customer Service metrics were reported weekly for executives and team managers and daily, only through ticket metrics, for team managers, supervisors and agents, on the Daily Kaizen Team meetings. However, most of the metrics used were not being correctly calculated, giving a wrong perception of the service level.

Moreover, the level of detail of the former reporting methods did not meet current requirements. Executives and Customer Service managers did not have sufficient reporting methods to be able to manage appropriately the customer relationship and increase the level of service provided, according to the target quality levels required by the e-commerce luxury industry.

#### 3.2.1 Former Executive Weekly Report

The metrics available in the original weekly reports were calculated in Structured Query Language (SQL), which was possible due to the providers' integrations with *SQL Server Management Studio*. They allow to have all the data related to the three providers on Farfetch databases and easily select and manipulate the desired information. The indicators were classified in four different categories: General Metrics, Tickets, Calls and Chats.

### General Metrics

The KPIs related to general metrics are also relevant for other Farfetch departments apart from the Customer Service. They show how well the company is performing in various areas, such as technology or operations. The metrics in use were the following:

- **Total Contacts:** The total number of contacts was calculated based on the sum of the number of tickets created, the number of chats answered and the number of calls answered (inbound or outbound). As such, this metric failed for combining contacts solved (chats and calls answered) and contacts created (tickets not mandatorily solved). Total contacts was calculated as follows:

$$Total\ Contacts = \sum Tickets\ Created + \sum Chats\ Answered + \sum Calls$$

- **Contacts per Order:** The Contacts per Order was calculated as the Total Contacts, above explained, over the Number of Orders, for the same period of time. The formula is represented below:

$$Contacts\ per\ Order = \frac{\sum Tickets\ Created + \sum Chats\ Answered + \sum Calls}{\sum Orders}$$

- **Net Promoter Score (NPS):** The Net Promoter Score is a management tool metric to measure customer loyalty and it is based on the satisfaction of the customer after completing a purchase. After receiving the purchase, the customer receives an email with a form containing 2 questions about how likely the customer would be to recommend both Farfetch and Boutique in a 0-10 scale (0 for not likely at all and 10 for extremely likely). The first question is used to calculate NPS Farfetch, as follows:

$$NPS = \% Promoters - \% Detractors$$

Answers between 0 and 6 represent a “Detractor”, 7 and 8 represent a “Passive” and 9 and 10 represent a “Promoter”. The main goal of NPS Farfetch indicator is to minimize the number of Detractors.

### Tickets

The KPIs related to tickets included the results from Order Support and Refunds Teams. Besides this, they also included tickets created by agents, associated to the tickets created to follow up chats and calls conversations. These contacts will be counted on chats and calls metrics and, for this reason, should be excluded from the tickets calculations.

According to Tate and van der Valk (2008), most of these KPIs are related to Operational Efficiency, with the exception of the Percentage of Tickets Replied in SLA (<8h), which is related to Service Quality, and the Satisfaction Rating, which is related to Customer Satisfaction. The KPIs were the following:

- **Tickets Solved as a % of Created Tickets:** This metric was calculated as the ratio between the number of tickets solved and the tickets created within the selected week, as follows:

$$Tickets\ Solved\ as\ a\ \%\ of\ Created\ Tickets = \frac{Tickets\ Solved}{Tickets\ Created} \times 100\%$$

Based on this metric, it is not evident the number of tickets solved and created. Due to the reduced relevance of this percentage, this indicator was not included in the new report.

- **% Tickets Replied in SLA (<8h):** The Service Level Agreement (SLA) has been defined as to respond to 80% of the tickets in less than 8 hours. This KPI was calculated as the ratio between the tickets replied in less than 8 hours and the total tickets replied, as follows:

$$\% \text{ Tickets Replied in SLA } (< 8h) = \frac{\text{Tickets Replied in SLA } (< 8h)}{\text{Tickets Replied}} \times 100\%$$

- **% One Touch Tickets:** These tickets represent the tickets solved at the first time the agent went over the ticket, representing a service quality metric. This metric was calculated as the ratio between the tickets solved with 0 or 1 replies and the total tickets solved.

$$\% \text{ One Touch Tickets} = \frac{\text{Tickets Solved in One Touch}}{\text{Tickets Solved}} \times 100\%$$

- **% Tickets Solved in One Hour:** This metric represents the ratio between the tickets that have been resolved in less than one hour - from the moment of creation to the moment of resolution - and the total tickets solved. The formula was the following:

$$\% \text{ Tickets Solved in One Hour} = \frac{\text{Tickets Solved in One Hour}}{\text{Tickets Solved}} \times 100\%$$

Once this does not constitute an established target and due to the value of this ratio, this metric was not considered relevant. As thus, it was excluded from the new report.

- **Satisfaction Rating:** After a ticket is solved for the first time by the agent, the customer automatically receives an email containing a form to give feedback to the support service as “good” or “bad”. This metric was calculated as the ratio between the “good” reviews and the total reviews. It was calculated as follows:

$$\text{Satisfaction Rating} = \frac{\text{Tickets "good" Reviewed}}{\text{Tickets Reviewed}} \times 100\%$$

- **Average Full Resolution Time (Hours):** The full resolution time represents the time spent from the moment of creation to the moment of resolution of a ticket. The average full resolution time was calculated as the ratio between the sum of the full resolution times of the Tickets Solved and the total Tickets Solved, as follows:

$$\text{Average Full Resolution Time (hours)} = \frac{\sum \text{Full Resolution Time Tickets Solved}}{\text{Tickets Solved}}$$

- **% Ticket Categories:** The unique breakdown by category was related to the percentage that each one of them represented in terms of the number of Tickets Solved. This breakdown give an idea of the type of queries more and less solicited. It was calculated as follows:

$$\% \text{ Ticket Categories} = \frac{\text{Tickets Solved (Category } x)}{\text{Tickets Solved}} \times 100\%$$

### Calls

The metrics related to calls were only reported on a weekly basis, every Monday. All the measures referred to Operational Efficiency aspects, and were the following:

- **Total Calls:** This metric was calculated as the sum of the calls, inbound or outbound, answered or not answered. The formula was calculated as follows:

$$Total\ Calls = \sum Calls$$

- **Total Calls Inbound:** This metric was calculated as the sum of the calls received by agents. It was calculated as:

$$Total\ Calls\ Inbound = \sum Calls\ (CallDirection = Inbound)$$

- **Total Calls Outbound:** The total calls outbound was calculated as the sum of the calls made by agents, when the contact to the customer was required. The formula was represented as follows:

$$Total\ Calls\ Outbound = \sum Calls\ (CallDirection = Outbound)$$

- **% Calls Answered:** This percentage was calculated as the ratio between the calls answered, either inbound or outbound, and the total calls, as follows:

$$\% \text{ Calls Answered} = \frac{\sum Calls\ (CallConnected = Yes)}{\sum Calls}$$

- **Average Call Duration:** The average call duration was calculated as the ratio between the sum of the calls answered durations and the total calls answered.

$$Average\ Call\ Duration = \frac{\sum Calls\ Duration\ (CallConnected = Yes)}{\sum Calls\ (CallConnected = Yes)}$$

Due to their different purposes, it is not desirable to aggregate both inbound and outbound calls for KPIs calculations, such as the % Calls Answered. Furthermore, outbound calls, answered or not answered, do not depend on the performance of the agents. For these reasons, it does not make sense to aggregate the two different types of calls.

Additionally, and similarly to tickets, Order Support and Refunds Teams results were being included on these metrics and, therefore, distorting actual CS results.

Taking into account that there are various phone lines, with different workloads and trends associated, it will be important to have means available to measure and control each one of them. Therefore, with the design of a tool that allows this type of refinement, it should be possible to improve the process of the alignment of resources.

### Chats

Regarding chats, there were only three metrics available, all related to Operational Efficiency aspects. Similarly to calls, these indicators were only reported on a weekly basis, so it was impossible to evaluate the performance of the customer support provided on this channel in a shorter term. The metrics were the following:

- **Total Clicks:** The total clicks represented the total customers' attempts to start a chat, regardless of being answered or not. This KPI was calculated as follows:

$$Total\ Clicks = \sum Clicks$$

- **Total Chats Answered:** This KPI represented the total chats that had been answered. It was represented as:

$$Total\ Chats\ Answered = \sum Chats\ Answered$$

- **% Chats Answered:** This metric was calculated as the ratio between chats answered and total clicks. The formula was represented as follows:

$$\% Chats\ Answered = \frac{\sum Chats\ Answered}{\sum Clicks} \times 100\%$$

Based on these metrics, it was not possible to understand the reasons for having unanswered chats. One chat not answered may occur for three reasons: no agents at the office, no agents answering chats or agents busy chatting with other customers.

The only way that top management had to assess performance was through this report. It was not possible to assess daily results, as there was not available a visual tool (such as a dashboard) computed on a daily basis. Furthermore, these indicators were not divided by teams, so the values presented could not provide information of the workload for each CS team. For that reason, it was difficult to develop enhanced methods for resource allocation.

### 3.2.2 Former Daily Team Reporting

For the Daily Kaizen Team meetings, attended by team managers, supervisors and agents, the results were extracted by team managers or supervisors from the BI software platform integrated with the tickets provider. The metrics evaluated on the daily meetings, within each team, were only related to tickets. These ones were written on a board and discussed at the meetings.

The KPIs reported were the following:

- **Solved Tickets:** total tickets solved by the team;
- **Assigned Tickets:** total tickets previously "New" assigned to the team;
- **Tickets Replied in SLA (<8h):** total tickets replied in SLA by the team,, based on tickets created;
- **Satisfaction Rate:** the percentage of tickets "good" reviewed over the total tickets reviewed solved by the team;
- **New Tickets:** number of new tickets not assigned to any agent;
- **Assigned Tickets in Backlog:** number of assigned tickets in backlog (open, pending and on-hold) by the team.

According to Tate and van der Valk (2008), these KPIs cover the following areas: Operational Efficiency (Solved Tickets, Assigned Tickets, New Tickets and Assigned Tickets in Backlog), Customer Satisfaction (Satisfaction Rate) and Service Quality (Tickets Replied in SLA).

Team numbers were posteriorly compared to the global numbers in order to have an idea of the percentages that each team represented in terms of results achieved. Once again, the global numbers included the results for Order Support and Refunds teams, which were distorting CS metrics.

Daily Kaizen meetings were the only way for agents and supervisors to know their teams' performances. There was not a comparison between teams (only team vs. global and distorted by other teams results) or between agents. Apart from this, the metrics were uniquely related to tickets. There was the need for a tool that allowed the gathering of information in a single solution and the visualization of data through various refinements. With this type of tool, it would be possible to take actions based on alerts whenever results present eminent or existing problems.

### **3.3 Conclusions**

The first issue found on the previous reporting was the inaccuracy of the data presented on both Executive Weekly Report and Daily Team meetings. It is crucial to have the right information when looking at KPIs. The measurement of the wrong KPIs, as well as their wrong calculations, can result in counter-productive behavior.

The metrics available were not enough to address the current Customer Service needs. Both the Executive Weekly Report and the Daily Team metrics did not allow an immediate evaluation of performance. Furthermore, the information was very limited for the different players involved in the Customer Service. Executives did not have available a visual tool and the performance was only reported on a weekly basis. Moreover, data refinements, such as results per team, were not possible for team managers. Agents and supervisors only had available distorted daily ticket results. It was not possible to assess individual performances and the KPIs measured were insufficient for the type of analysis required at the Daily Kaizen Team meetings.

After the analysis of the existing KPIs, it was not easy to understand what actually took place in each of the channels. Given that, there was the clear need to improve the performance evaluation, both in terms of KPIs and presentation methods. It was necessary the identification and measurement of complementary performance indicators to give a more comprehensive view of performance in each one of the channels and the development of methods of presentation with multiple refinement options. These developments should allow the improvement of performance of the Customer Service Department at all levels, particularly in terms of Operational Efficiency, Service Level and Customer Satisfaction.

## 4 Implemented Solution

### 4.1 Requirements Verification

The design phase started with the verification of requirements, both from meetings with Customer Service members (from team managers to agents) and with executives, as well as from the analysis of existing processes. This work led to the development of the following types of reporting approaches:

1. **Executive Weekly Report:** reconstruction of the former report in terms of SQL queries and KPIs. This report is sent on a weekly basis to executives and CS managers;
2. **Executive Weekly Dashboard:** similar to the previous one in terms of KPIs, summarizing the main metrics on a dashboard for executives;
3. **Daily Dashboard:** implementation of a dashboard on *Tableau* with daily metrics for the three teams;
4. **Daily Management Dashboard:** implementation of a management version of the Daily Dashboard;
5. **Weekly Management Dashboard:** implementation of a weekly version similar to the Daily Management Dashboard, with various options for data refinement.

These reports enable the different players of the Customer Service to conduct performance assessments covering three different areas: Operational Efficiency, Customer Satisfaction and Service Quality. According to the classification proposed by Tate and van der Valk (2008), the only area that is not covered by these reporting tools is Employee Satisfaction, which is measured through surveys sent by the Human Resources Department to every employee. This is done twice a year, and discussed in performance review meetings.

As mentioned previously, new teams in the Japanese and Russian offices will be in operation until the end of 2015. The reports and dashboards have been designed in a way that contemplates this fact, so only small changes will be necessary in order to adapt them to future needs.

Taking into account the software platforms for Business Intelligence and Analytics used at Farfetch and the requirements identified, the two software solutions chosen were *Microsoft Excel Power Pivot* and *Tableau*. Both solutions allow to import data directly via queries in SQL language, through their integrations with SQL Server. Moreover, both allow having the files available on Farfetch Intranet, which can also be accessed from outside Farfetch via VPN connection, through *Microsoft SharePoint* and *Tableau Server*.

The main functionality requirements are listed next. All can be fulfilled by the two software solutions proposed.

- Automatic data refreshment
- Drill Down capability
- Filtering capability
- Integrated alert system
- Data Security
- Different levels of access
- Access outside Farfetch network

*Power Pivot* was selected for implementing reports with detailed KPIs and big amounts of information, as it is able to process and aggregate easily millions of rows of data. As such, it was chosen to implement the Executive Weekly Report.

*Tableau*'s data visualization capabilities determined its choice for the creation of daily/weekly dashboards for the teams, management and executives.

## 4.2 Executive Weekly Report

The first report implemented was the Executive Weekly Report for executives and Customer Service managers. The first phase was the redesign of the Key Performance Indicators. Afterwards, once most of the SQL queries were not being correctly calculated, these were rewritten.

This report is automatically updated every Monday, the beginning day of a CS week, showing the previous week metrics. The goal is to provide executives and Customer Service managers a tool to quickly assess performance covering three main areas: Operational Efficiency, Customer Satisfaction and Service Quality.

### 4.2.1 New Key Performance Indicators

#### *Tickets*

All the KPIs exclude the tickets created by agents, related to the ones created to follow up calls and chats conversations. These contacts will only be counted on calls and chats metrics. The KPIs included in the new report are the following:

- **Tickets Solved:** It represents the total number of tickets solved during the week. Its formula is represented as follows:

$$Tickets\ Solved = \sum Tickets\ (Status = Solved)$$

Previously, all the metrics related to tickets were represented as percentages. As such, it was verified the need of a KPI that represented ticket occurrences through real numbers.

- **% One Touch Tickets:** This KPI has transited from the former report.
- **% Tickets Solved with Reopens:** When a ticket is solved, and if no more than 30 days have spent from that moment, it can be reopen. This occurs when the agent considers the subject ended and the receiver still answers the ticket. This KPI was implemented to control Service Quality.

The goal is to minimize this percentage, so that agents only solve tickets when queries are completely clarified. It is represented as:

$$\% Tickets\ Solved\ with\ Reopens = \frac{Tickets\ Solved\ (Reopens \geq 1)}{Tickets\ Solved}$$

- **Average Full Resolution Hours:** This KPI has transited from the former report.
- **% Satisfaction Rate:** This KPI has transited from the former report.



- **Satisfaction Survey Response Rate:** Although there was already a KPI related to the satisfaction rate, there was no measurement concerning the percentage of tickets reviewed over the total tickets solved. This is a Customer Satisfaction KPI and it is calculated as follows:

$$\text{Satisfaction Survey Response Rate} = \frac{\text{Tickets Reviewed}}{\text{Tickets Solved}} \times 100\%$$

- **Breakdown of Ticket Categories:** Previously, the unique KPI breakdown was related to the percentage of tickets solved by category. However, there was no evidence of the breakdown through real numbers. This KPI is calculated as follows:

$$\text{Tickets Solved (Category } x) = \sum \text{Tickets (Status = Solved and Category } x)$$

- **Average Full Resolution by Category (Hours):** Complementary to the previous KPI, it has been created a breakdown related to the average full resolution hours by category. Topics that require communication with other teams will most likely have higher resolution times than the most common and easily resolved ones. The formula is represented as follows:

$$\text{Average Full Resolution (Category } x) = \frac{\sum \text{Full Resolution Tickets Solved (Category } x)}{\text{Tickets Solved (Category } x)}$$

- **Tickets Created:** Similarly to the Tickets Solved KPI, this value was not being directly measured. It is relevant for forecasts and identification of trends. The formula is represented as:

$$\text{Tickets Created} = \sum \text{Tickets (CreatedAt between 'StartDay' and 'EndDay')}$$

- **% Tickets Replied in SLA (<8h):** This KPI has transited from the former report.
- **% Tickets Created with Reopens:** This Service Quality KPI measures the percentage of tickets created which have already been reopen. These represent tickets with a short duration that have been solved, most likely at the first reply. It is calculated as follows:

$$\% \text{ Tickets Created with Reopens} = \frac{\text{Tickets Created (Reopens} \geq 1)}{\text{Tickets Created}}$$

- **Tickets Carryover:** This number represents all the backlog tickets (open, pending or on-hold) and all the new tickets that had already been created at the moment of the previous report and that have not been solved at the moment of the new report. In a weekly perspective, these are the tickets carried unsolved from the previous weeks, since they have been created more than one week ago. This is a relevant concept to calculate the weekly workload. It is calculated as:

$$\text{Tickets Carryover} = \sum \text{TicketsCarryover (ExtractionDate = 'CurrentDay')}$$

For this, it has been created a static table on *SQL Server* that every Monday extracts these tickets. The goal is to have as little carryover as possible, since these ones represent the oldest tickets in backlog.

- **Tickets Carryover – Range:** It was created a breakdown by duration range (1-2, 2-3, 3-4 or >=4 weeks), from the moment of creation to the current moment, in addition to the previous KPI. With this KPI is possible to realize the number of tickets carryover according to their duration times. It is calculated as follows:

$$Tickets\ Carryover\ (Range\ x - y) = \sum Tickets\ Carryover\ (Duration\ between\ x - y)$$

- **% Tickets Carryover with Reopens:** This metric represents the percentage of tickets carryover that have been reopen and it is also a service quality KPI. Typically, these ones should be tickets that are the result of conversations within teams. It is represented as follows:

$$\% Tickets\ Carryover\ with\ Reopens = \frac{Tickets\ Carryover\ (Reopens \geq 1)}{Tickets\ Carryover}$$

### Calls

The KPIs for calls included in the new reports are the following:

- **Total Calls:** This KPI has transited from the previous report.
- **Total Inbound:** This KPI represents all the calls received. The formula is the following:

$$Total\ Inbound = \sum Calls\ (CallDirection = Inbound)$$

- **Total Inbound Answered:** It represents all the calls received answered by CS agents. It is calculated as follows:

$$Total\ Inbound\ Answered = \sum Calls\ (CallDirection = Inbound\ and\ CallConnected = 'Yes')$$

- **Total Inbound Not Answered:** This metric represents all the calls received that were not answered. It is calculated as follows:

$$Total\ Inbound\ Not\ Answered = \sum Calls\ (CallDirection = Inbound\ and\ CallConnected = 'No')$$

- **% Inbound Answered:** It is calculated as the ratio between Total Inbound Answered and Total Inbound. The formula is represented as:

$$\% Inbound\ Answered = \frac{Total\ Inbound\ Answered}{Total\ Calls}$$

- **% Inbound Answered in SLA (<20s):** This is a Service Quality KPI and it is an industry standard SLA for measuring the percentage of calls answered in less than 20s. Even though this KPI can be calculated in various ways, it has been chosen to calculate it as follows:

$$\% Inbound\ Answered\ in\ SLA\ (< 20s) = \frac{Total\ Inbound\ Answered\ in\ SLA\ (< 20s)}{Total\ Inbound\ Answered}$$

- **Average Call Ring Inbound Not Answered:** It measures the average time a customer was waiting for the call to be answered unsuccessfully. The formula is the following:

$$\text{Average Call Ring Inbound Not Answered} = \frac{\sum \text{Call Ring (Total Inbound Not Answered)}}{\text{Total Inbound Not Answered}}$$

- **Total Outbound:** This KPI represents all the calls made by CS agents. It is calculated as follows:

$$\text{Total Outbound} = \sum \text{Calls (CallDirection = Outbound)}$$

- **Total Outbound Answered:** It is calculated as the total number of calls outbound that were answered by the customer. Its formula is the following:

$$\text{Total Outbound} = \sum \text{Calls (CallDirection = Outbound and CallConnected = 'Yes')}$$

- **Total Outbound Not Answered:** This metric is calculated as the sum of the calls outbound that did not have an answer from the customer. It is represented as follows:

$$\text{Total Outbound} = \sum \text{Calls (CallDirection = Outbound and CallConnected = 'No')}$$

The KPIs related to inbound calls are different from those applied to outbound calls, since the responsibility for these calls is on the customers' side.

Additionally to the metrics represented, similar metrics were created specifically for calls done within customer promise hours. As described previously, the Farfetch page varies with the customers' IP address region, such that different phone numbers are displayed on the website according to the location where the page is visualized.

Before this project, the hours promised were not realistic. Furthermore, there was no control regarding the number of calls answered within promised hours and the calls answered when Farfetch does not promise to provide customer support for this specific channel. When this issue was discussed with Customer Service managers, customer promise hours were updated and the resources are currently being allocated accordingly.

The redefinition of these hours seeks to guarantee that the most relevant countries and regions in terms of orders have an associated phone line that is available within regular working hours (from 09:00 to 18:00). The Farfetch expansion to new markets was also taken into account when redefining these hours.

The percentage of orders for the top 15 countries, from the beginning of the year 2014 onwards, is represented on Table 1.

Table 1 - Percentage of Orders by Country (from the beginning of 2014 onwards)

Country	% Orders
United States of America	32,64%
United Kingdom	9,43%
Hong Kong	7,39%
Australia	7,03%
Brazil	4,71%
Germany	3,28%
South Korea	3,25%
France	2,65%
Canada	2,20%
Japan	1,87%
Russia	1,64%
Singapore	1,55%
China	1,22%
Switzerland	1,20%
Italy	1,11%

Even though some of the countries do not yet have a specific phone line, their inclusion will happen in the near future. The new Customer Promise Hours, in local times and by phone lines, are presented on Table 2.

Table 2 - New Customer Promise Hours (in Local Times) by Phone Line

Phone Line	Time Zone	Mon-Fri		Sat-Sun	
		Start Hour	End Hour	Start Hour	End Hour
Japan	GMT +9	09h00	18h00	-	-
China	GMT +7	09h00	18h00	-	-
Russia	GMT +2	10h00	19h00	-	-
France	GMT +1	09h00	18h00	-	-
Germany	GMT +1	09h00	18h00	-	-
Spain	GMT +1	09h00	18h00	-	-
United Kingdom	GMT	08h00	23h00	09h00	21h00
USA	GMT -5	08h00	23h00	09h00	21h00
Mexico	GMT -6	09h00	18h00	-	-

The support for English lines (USA and United Kingdom phone lines) is provided beyond the standard hours and it includes weekends. This is relevant because these are the two top countries in terms of orders. Furthermore, English lines support every other customers from countries apart from the ones mentioned on Table 1. This redefinition also took into account the feasibility of working hours for agents. This is the reason why the Russian line has one hour deviation (from 10:00 to 19:00) from the standard hours.

The goal is to have the maximum number of calls inbound answered within customer promise hours, reducing the number of calls answered outside these hours. This is possible through the provider's feature that allows agents to log in/off from phone lines accounts.

It has been decided to present the two types of KPIs of calls answered (gross and within customer promise) in order to gain insights on the difference between both. Furthermore, it becomes possible to understand how accurately personnel is being allocated to these hours and how well the hours are adjusted to customers' real needs.

## Chats

Regarding chats, it has been made a breakdown by the statuses previously described. The following KPIs are currently in use:

- **Total Clicks:** The total chat clicks, regardless of having agents available or not;
- **Unavailable Chats:** The sum of the attempts by visitors to initiate a chat when no agents are available;
- **Others (Abandoned + Blocked Chats):** The total clicks from customers, when CS did not have the chance to answer the chat, either because the customer abandoned it before starting or because the user is blocked by Farfetch chat;
- **Available Chats:** The total clicks when at least one agent was available for answering chats;
- **% Available Chats:** This percentage represents the ratio between available chats and total clicks, as follows:

$$\% \text{ Available Chats} = \frac{\sum \text{Available Chats}}{\sum \text{Clicks}} \times 100\%$$

- **Unanswered Chats:** The total chats not answered, when at least one agent was available to answer;
- **Answered Chats:** The total chats actually answered by Customer Service agents;
- **% Answered Chats:** It is calculated as the ratio between the answered chats and the available chats, as follows:

$$\% \text{ Answered Chats} = \frac{\sum \text{Answered Chats}}{\sum \text{Available Chats}} \times 100\%$$

At the beginning of the implementation of this report it was noticed that customers tended to click several times in cases when the chat was unavailable. This represents a customer's dissatisfaction sign and, besides that, the Unavailable Chats KPI was being affected by this. Managing customers' expectations is a key aspect for the achievement of customer satisfaction. Initially, the solution found to minimize this was counting chats by IP Address per minute. This means several clicks in the same minute from the same customer would only count once.

However, a more appropriate solution has been put in practice. The chat feature on the portal has been turned completely dynamic. This means that when all the agents are unavailable, the chat button disappears from all contact points. This will assure that customers only visualize the chat option when Farfetch is able to guarantee at least one agent available.

The message currently shown on Farfetch website when no agents are available is presented on Figure 10.

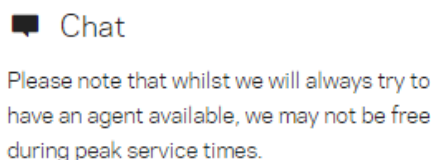


Figure 10 - Chat message after the implementation of the dynamic chat

### General Metrics

Regarding general metrics, the following KPIs are currently in use:

- **Workload:** The workload represents the maximum number of contacts that Customer Service can solve within one week. Its formula includes measures related to the three channels (tickets, chats and calls) and it is calculated as follows:

$$\begin{aligned} \text{Workload} = & \sum \text{Tickets Created} \\ & + \sum \text{Tickets Carryover (ExtractionDate = 'CurrentDay')} \\ & + \sum \text{Total Calls Inbound within Customer Promise} \\ & + \sum \text{Total Calls Outbound Answered} \\ & + \sum \text{Total Chat Clicks} \end{aligned}$$

Regarding tickets, this calculation includes all the tickets created in the week under analysis and the tickets carryover from previous weeks. Therefore, it represents the total amount of tickets workload.

In terms of calls, the formula includes calls inbound within customer promise, since these are the hours that Farfetch actually promises to answer. Every call inbound outside these hours will be excluded from the calculation. Additionally, outbound calls are counted when answered, since the workload generated by not answered calls can be considered insignificant in terms of time spent.

Finally, after the introduction of dynamic chat and the guarantee of agents available when the customer is faced to the click option, chats are being counted as all the clicks on the portal.

- **Total Solved:** This KPI includes all the contacts solved concerning the three contact channels. It includes tickets solved, calls inbound answered within customer promise, calls outbound answered and chats answered. The calculation is represented as follows:

$$\begin{aligned} \text{Total Solved} = & \sum \text{Tickets Solved} \\ & + \sum \text{Calls Inbound Answered within Customer Promise} \\ & + \sum \text{Calls Outbound Answered} \\ & + \sum \text{Chats Answered} \end{aligned}$$

- **Response Rate:** The response rate is calculated as the ratio between the Total Solved and the Workload, above explained. It is one of the most relevant metrics, as it represents the percentage of contacts that Customer Service was able to solve in comparison to the total workload. It is calculated as follows:

$$\text{Response Rate} = \frac{\text{Total Solved}}{\text{Workload}} \times 100\%$$

- **Contacts per Order:** The contacts per order calculation compares the number of contacts requested (including tickets created, calls inbound answered within customer promise, calls outbound answered and chats requested) with the number of orders for the same period. The formula is calculated as:

$$\begin{aligned}
 \text{Contacts per Order} &= \left( \sum \text{Tickets Created} \right. \\
 &+ \sum \text{Calls Inbound Requested within Customer Promise} \\
 &+ \sum \text{Calls Outbound Answered} \\
 &+ \left. \sum \text{Chat Clicks} \right) / \left( \sum \text{Orders} \right)
 \end{aligned}$$

- **NPS:** This KPI has transited from the previous report.

Table 3 summarizes the KPIs currently in use for the Executive Weekly Report. For a better perception, it has been associated a responsible to each metric (either Farfetch, CS or Customer) as well as the business aspects it covers.

Table 3 - New KPIs implemented, responsible and areas

	Key Performance Indicator	Type	Responsible	Area
<b>General Metrics</b>	Workload	New	Farfetch	Operational Efficiency
	Total Solved	New	CS	Operational Efficiency
	Response Rate	New	CS/Farfetch	Operational Efficiency
	Contacts per Order	Old	Farfetch	Service Quality
	NPS	Old	Farfetch	Customer Satisfaction
<b>Solved Tickets</b>	<b>Tickets Solved</b>	New	CS	Operational Efficiency
	% One Touch Tickets	Old	CS	Service Quality
	% Tickets Solved with Reopens	New	CS	Service Quality
	Average Full Resolution Hours	Old	CS/Farfetch	Operational Efficiency
	Satisfaction Rate	Old	CS	Customer Satisfaction
	Satisfaction Survey Response Rate	New	CS	Customer Satisfaction
	Breakdown of Ticket Categories	New	CS	Operational Efficiency
	Average Full Resolution by Category	New	CS	Operational Efficiency
<b>Created Tickets</b>	<b>Tickets Created</b>	New	Farfetch	Operational Efficiency
	% Tickets Replied in SLA (<8h)	Old	CS	Service Quality
	% Tickets Created with Reopens	New	CS	Service Quality
<b>Carryover Tickets</b>	<b>Tickets Carryover</b>	New	CS	Operational Efficiency
	% Tickets Carryover with Reopens	New	CS	Service Quality
	Range (in weeks)	New	CS	Operational Efficiency
<b>Calls (Gross and within Customer Promise results)</b>	<b>Total Calls</b>	Old	CS/Farfetch	Operational Efficiency
	<b>Total Inbound</b>	New	Farfetch	Operational Efficiency
	Total Inbound Answered	New	CS	Operational Efficiency
	Total Inbound Not Answered	New	CS/Farfetch	Operational Efficiency
	% Calls Inbound Answered	New	CS	Operational Efficiency
	% Calls Inbound Answered SLA	New	CS	Service Quality

	Average Call Ring Not Answered	New	CS	Operational Efficiency
	<b>Total Outbound</b>	New	CS	Operational Efficiency
	Total Outbound Answered	New	CS/Customer	Operational Efficiency
	Total Outbound Not Answered	New	CS/Customer	Operational Efficiency
<b>Chats</b>	<b>Total Clicks</b>	Old	Farfetch	Operational Efficiency
	Unavailable	New	CS	Operational Efficiency
	Others (Blocked + Abandoned)	New	Farfetch	Operational Efficiency
	Available	New	CS	Operational Efficiency
	<b>% Available Chats</b>	New	CS	Operational Efficiency
	Unanswered	New	CS	Operational Efficiency
	Answered	Old	CS	Operational Efficiency
	<b>% Answered over Available</b>	New	CS	Operational Efficiency

Although most of the metrics can be directly controlled by Customer Service actions, others depend on the performance of Farfetch in other departments. For instance, ticket resolution hours highly depend on the performance of internal teams and the workload is highly influenced by the performance of Farfetch in several areas, such as technology and operations. For this reason, it has been included a column on the previous table indicating the entity responsible for the performance indicator.

More than creating means to control and measure the performance of the Customer Service Department, this type of report will allow to implement improvement processes within Farfetch, and influence the way Farfetch is able to please customers.

All in all, these KPIs are focused in the three areas: Operational Efficiency, Service Quality and Customer Satisfaction. Even though there has been the goal of implementing KPIs covering these three business aspects, the implementation of KPIs related to Service Quality or Customer Satisfaction was not always possible due to unavailability of this type of data for calls and chats. This was one of the main limitations affecting the implementation of this project.

#### 4.2.2 Main Features

This report, developed on *Power Pivot*, is shown on Appendix A. It has the following main features:

- **Automatically update**

This report is programmed to be updated every Monday at 06:00, and no manually updates are required. Furthermore, it is also possible to manually request a data update without interfering with the weekly scheduling.

- **Drill Down**

This capability allows the user to dig into the numbers and get to the data source. When double clicking at the values, a new spreadsheet opens containing the data that feed the result. This feature is one of the most powerful ones, as the user can explore the data, moving from the numbers to the tabular data related to the result. An example of the drill down for calls is represented on Figure 11.



NatterboxCallId	CallStartDate	CallConnected	CallDirection	CallRingSeconds	CallDurationSeconds	CallerCountryShort	CalledCountryShort	CallsConnected	CallsNotConnected	
299	a00b000000RckUCAA1	19-05-2015 02:42:21	No	Inbound	264	264	USA	USA	0	1
300	a00b000000RxsqEAAR	22-05-2015 17:19:30	No	Inbound	263	263	USA	USA	0	1
301	a00b000000RxsqAAB	22-05-2015 17:20:38	No	Inbound	263	263	USA	USA	0	1
302	a00b000000RDBS9AAP	21-05-2015 00:01:53	Yes	Inbound	27	683	USA	USA	1	0
303	a00b000000RDBuyAAP	21-05-2015 00:13:43	Yes	Inbound	87	1034	USA	USA	1	0
304	a00b000000RDBVhAAP	21-05-2015 00:34:06	Yes	Inbound	39	235	USA	USA	1	0
305	a00b000000RD6gIAAD	20-05-2015 16:00:06	Yes	Inbound	34	833	USA	USA	1	0
306	a00b000000RD6iBAAT	20-05-2015 16:13:13	Yes	Inbound	82	196	USA	USA	1	0
307	a00b000000RD6ftzAAD	20-05-2015 16:17:08	Yes	Inbound	26	544	USA	USA	1	0
308	a00b000000RD6whAAD	20-05-2015 16:28:15	Yes	Inbound	26	170	USA	USA	1	0
309	a00b000000RD6yCAAT	20-05-2015 16:29:59	Yes	Inbound	80	249	USA	USA	1	0
310	a00b000000RD74FAAT	20-05-2015 16:20:48	Yes	Inbound	32	1220	USA	USA	1	0
311	a00b000000RD7EAAA1	20-05-2015 16:42:08	Yes	Inbound	66	894	USA	USA	1	0

Figure 11 - Drill Down capability on Power Pivot

- **Slicering**

Through the slicering feature, it is possible to filter data according to the user’s personal needs by office and by year and week. For instance, executives are more interested on getting a global performance perspective, whereas team managers are more interested on looking at their teams’ performances. For an easier perception, teams and respective offices have been represented through two-letter country codes, where PT stands for Portugal, UK for United Kingdom and US for United States of America.

Beyond the office filter, it is possible to check results from previous weeks through the week slicer.

The slicers are represented on Figures 12 and 13.

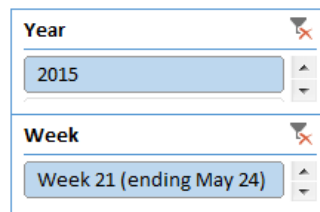


Figure 12 - Slicer by year and week

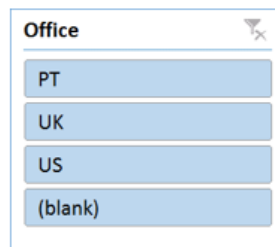


Figure 13 - Slicer by office

The blank option on the slicer by office represents metrics and values for which it is not possible to allocate to an office, such as New Tickets, Calls Inbound Not Answered or Chats Not Available. These slicers can be applied individually or simultaneously, allowing the user to choose the views according to his/her needs.

- **Previous Week Comparison**

The three columns represented for each KPI are: week selected result, week before result and comparison week select versus week before in terms of percentage, the % vs. Week Before. This percentage is calculated as follows:

$$\% \text{ vs Week Before} = [(Week \text{ Selected Result} - Week \text{ Before Result}) - 1] \times 100\%$$

An example of the presentation method for each KPI is represented on Figure 14.

Customer Service Dashboard			
Metric	Week Selected	Week Before	% vs Week Before
<b>General Metrics</b>			
Workload	10748	10566	1,7%
Total Solved	8234	8173	0,7%
Response Rate	76,4%	77,1%	-1,0%

Figure 14 - Example of KPI presentation columns

According to the KPI and to the result presented, the background color of the percentage column varies. This is done through the implementation of the conditional formatting feature available at *Microsoft Excel*. As such, good results appear in green, alarming results in red and neutral results in yellow, symbolizing the traffic lights and facilitating the user's reading on the recent performance and on the results obtained in comparison to the previous week.

- **Charts**

Apart from the spreadsheet mentioned before, it is possible to assess the evolution of every KPI in a long period of time (from the beginning of 2014 onwards). With this, it is possible to have a detailed view and have an idea of trends, outliers, forecast future results and take actions based on the historical data.

An example of one of these charts is presented on Figure 15.



Figure 15 - Example of a KPI chart

- **Online Publishing**

This report is published on the web on Farfetch SharePoint. In order to guarantee the data security, it is necessary authentication for accessing it. Furthermore, it is possible to access it outside Farfetch Intranet through VPN connection.

Regarding the queries developed in SQL, they allow to import the data from Farfetch databases through the *Power Pivot* integration with SQL Server. The queries created were the following:

- Solved Tickets
- Created Tickets
- Carryover Tickets
- Calls
- Chats
- NPS

These queries can be seen on Appendix B.

### 4.3 Executive Weekly Dashboard

The Executive Weekly Dashboard arose from the executives need to assess Customer Service performance in a more visual way. As such, it was developed on *Tableau*. Besides this, there were some types of KPIs presented on the Executive Weekly Dashboard that were not relevant for the type of analysis that executives need. This dashboard was designed to fit in an email body and it is updated and sent every Monday.

Regarding the queries, they were similar to the ones previously presented. The only difference lies on the period of time analyzed: only from 4 weeks ago to the current moment. With this, it is possible to have an overview of the recent performance in a quick and efficient way. The dashboard is presented on Figure 16.

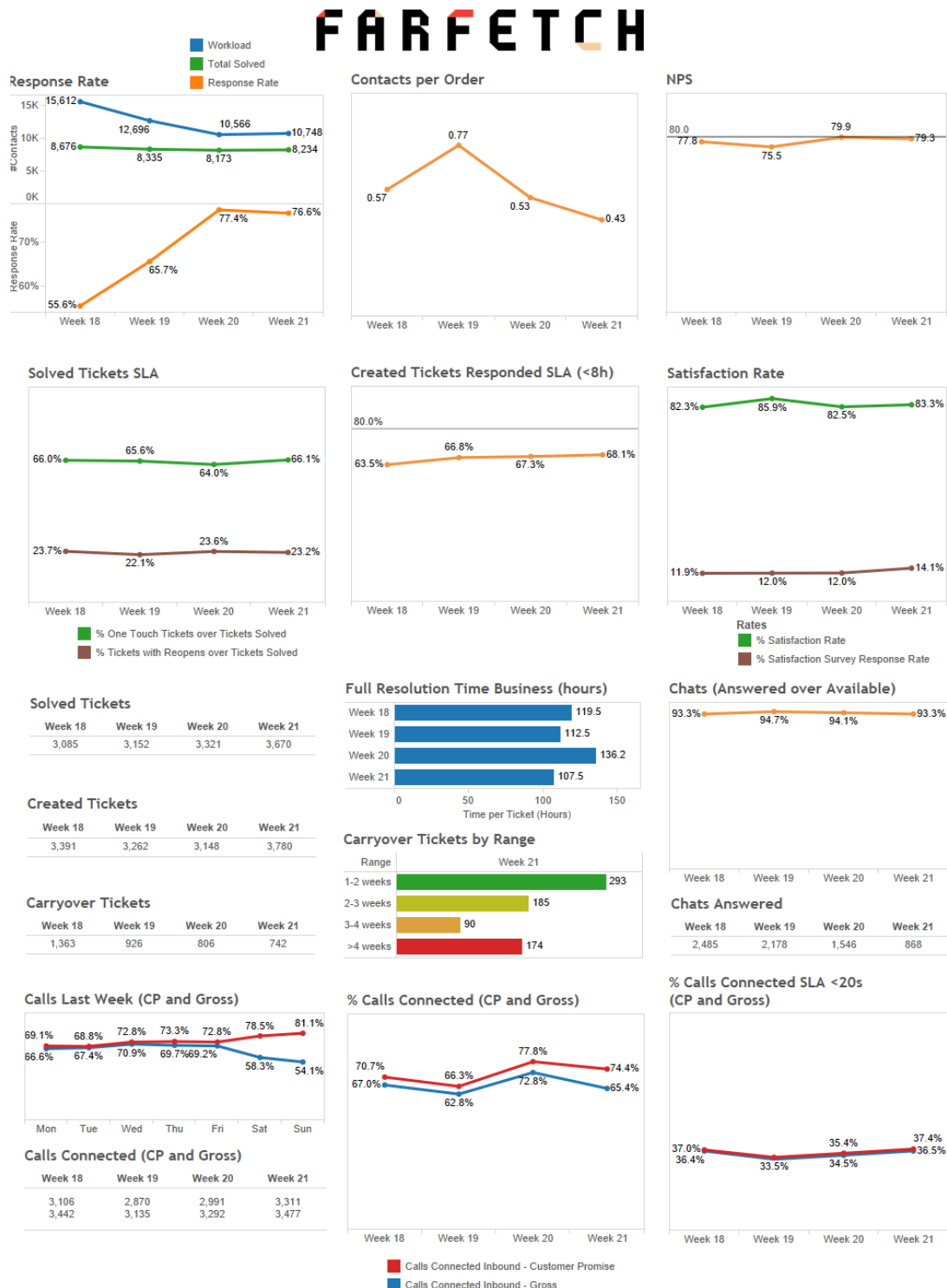


Figure 16 - Executive Weekly Dashboard

Even though there is no visual limitation separating the different KPIs/areas on this dashboard, it is organized in four different groups:

**1<sup>st</sup> Tier:** All the General Metrics are listed on the top of the dashboard. Starting with the graphs that include both Total Solved and Workload and below the ratio between the two, the Response Rate. Besides these metrics, also the Contacts per Order and NPS are listed in this order.

**2<sup>nd</sup> Tier:** The left and center graphs present KPIs related to Service Quality: % One Touch Tickets and % Tickets with Reopens over Tickets Solved. On the right side, the Satisfaction Rate and the Satisfaction Survey Response Rate are listed together, since both are related to Customer Satisfaction. Moreover, they are located just below the NPS, another Customer Satisfaction KPI.

**3<sup>rd</sup> Tier:** This tier represents Operational Efficiency KPIs, such as Numbers of Tickets (Solved, Created and Carryover), Average Full Resolution Times, Tickets Carryover by Range for the current week, % Chats Answered over Available and Numbers of Chats Answered. Due to the high backlog of tickets at the beginning of the implementation of the Weekly Executive Report, executives required a detailed previous week overview on Tickets Carryover by Range.

**4<sup>th</sup> Tier:** This tier shows uniquely call KPIs, comparing gross vs. customer promise results. Due to the unexpected low service level in terms of calls found at the very beginning of the implementation of the Executive Weekly Report, executives required a week to week as well as a day to day view on calls. Besides these two graphs, on the left side it is presented the Number of Calls Inbound Connected (gross and within customer promise) and on the right side the % Calls Connected SLA (<20s), a Service Quality KPI.

The main issue addressed when designing this dashboard was to find a way to present the most relevant metrics facilitating the understanding of the main recent occurrences. The frugal use of colors was taken into account when designing it to facilitate the visual perception. Regarding the KPIs presented, all General Metrics were included, given their importance for senior management. Besides these ones, detailed Operational Efficiency call and chat KPIs and the breakdowns by ticket categories were excluded from this dashboard, due to their irrelevance for the type of analysis needed by these users.

This dashboard, developed on *Tableau*, is also published on *Tableau Server*. Therefore, users can drill down and get to the source of the data in case they are interested in a specific view of some of the values presented.

#### 4.4 Daily Dashboard

The Daily Dashboard resulted from the need of a tool that allows the measurement and control of Operational Efficiency results for shorter periods of time. With this dashboard, team managers, supervisors and agents are able to quickly access their teams' performances, replacing the manual process of extracting tickets data for Daily Kaizen Team meetings and providing Customer Services players with accurate information about the previous day. Furthermore, with this tool it is possible to aggregate data related to the three channels in a single solution. This dashboard has also been designed in a way that allows the future insertion of the Japanese and Russian teams.

It is daily updated at 06:00 (GMT time) providing the previous day metrics for Porto, London and Los Angeles teams. This time was chosen because it is the exact moment when the day ends for Los Angeles team and the new day starts for London and Porto teams, providing a complete overview of a 24 hour day for the three teams.

Using the filtering option, it is possible to filter data by office. With this, team managers can have a detailed view of their team results and take action plans based on the current situation.

#### 4.4.1 Metrics

On the Daily Dashboard, there are three types of representations: Global, Filter by office and Teams Benchmarking.

**Global:** it represents metrics that are measured for the three teams globally due to the preclusion of allocating them to an office, such as New Tickets metrics (tickets are still not assigned to a specific agent), Calls Inbound (connected or not connected – for the second ones it is not possible to allocate a responsible) or Chats Status (the same issue for not available chats).

**Filter by office:** it represents metrics for which the filter is applied. This means that when the user switches the office, these metrics will automatically change accordingly. This allows Customer Service managers to quickly assess their teams' performances. There is also an "all" option that allows to view results together for all the teams.

**Teams Benchmarking:** it is associated to pie charts in which the three teams' results are compared in terms of percentages. These pie charts were a request from team managers, so that they can compare their teams' performances.

The following results are presented on the Daily Dashboard:

##### *Solved Tickets*

- **Solved Tickets by Range (Filter by office):** Number of tickets solved according to their duration time (from the moment of creation to the moment of resolution) in days by range: 0-1, 1-7, 7-14, 14-28, >=28 days, represented through the traffic light color range;
- **Solved Tickets by Agent (Filter by office):** Number of tickets solved by agent, listed from the highest to the lowest in terms of solved tickets. As per Customer Service managers' request, all the agents that have solved less than 40 tickets will have their names in red, all the others will have them in green;
- **Solved Tickets by Category (Filter by office):** Number of tickets solved by ticket category. This metric is very relevant to understand the type of queries most solicited in the previous day and to detect eventual issues on some specific area of the company. For instance, if there are many tickets related to payment, it might indicate that there is some technical issue related to it;
- **Average Full Resolution Time by Category (Filter by office):** For all the categories, it is possible to see the average time of resolution of those tickets;
- **Solved Tickets Distribution (Teams Benchmarking):** Percentage of solved tickets among the three teams represented in a pie chart.

##### *Backlog Tickets*

- **Backlog Tickets by Range (Filter by office):** Number of tickets in backlog according to their current duration time (from the moment of creation to the current moment) in days by range: 0-1, 1-7, 7-14, 14-28, >=28 days, represented through the traffic light color range;
- **Backlog Tickets by Agent (Filter by office):** Number of tickets in backlog by Agent, listed from the lowest to the highest in terms of backlog tickets. As per Customer Service Managers' request, all the agents that have in backlog less than 40 tickets will have their names in green, all the others will have them in red;
- **Backlog Tickets by Category (Filter by office):** Number of tickets in backlog by ticket category;
- **Average Backlog Time by Category (Filter by office):** Average backlog time (from the moment of creation to the current moment) by category;
- **Backlog Tickets Distribution (Teams Benchmarking):** Percentage of backlog tickets among the three teams represented in a pie chart;

### *New Tickets*

- **New Tickets by Range (Global):** This number represents all the new tickets, still not assigned to an agent, according to their duration time in days by range: 0-1, 1-2, 2-4, 4-7, >=7 days, represented through the traffic light color range. The range of these tickets is more tightened than the previous ones, since these are tickets not yet assigned to an agent.

### *Assigned Tickets*

- **% Tickets Replied in SLA <8h (Filter by office):** Although this is a Service Quality metric, it has been included so that Customer Service managers know the quickest and slowest teams responding new tickets;
- **Assigned Tickets Distribution (Teams Benchmarking):** Percentage of assigned tickets among the three teams represented in a pie chart.

### *Chats*

- **Chats by Status (Global):** Represented through a pie chart, it represents the distribution of the previous day chat clicks according to the statuses mentioned previously (unavailable, blocked, abandoned, not answered and answered);
- **Available Chats (Filter by office):** This pie chart represents the relation, in percentage and numbers, between answered (in green) and not answered chats (in red). In both cases there were agents available;
- **Average Duration Answered Chats (Filter by office):** It represents the average duration of the answered chats. According to Customer Service managers, in this phase it has been defined that an average under 10min is a good result (represented in green) and an average over 10min is an out of target result (represented in red);
- **Chats Answered Distribution (Teams Benchmarking):** Percentage of chats answered among the three teams represented in a pie chart.

### *Calls*

- **Calls Inbound (Global):** Represented through a pie chart, it represents the global calls inbound connected and not connected. For their obvious meanings, calls connected are represented in green and calls not connected are represented in red;
- **Calls Answered (Filter by office):** Once it is not possible to allocate calls not connected to an office, this chart only shows answered calls: inbound in less than 20s (represented in dark green), remaining inbound (represented in light green) and outbound (represented in black);
- **Average Duration Answered Calls (Filter by office):** It represents the average duration of the calls answered. According to Customer Service managers, in this phase it has been defined that an average under 5min is a good result (represented in green) and an average over 5min is an out of target result (represented in red);
- **Calls Inbound Answered Distribution (Teams Benchmarking):** Percentage of calls inbound answered among the three teams represented in a pie chart;

Although the goal of this dashboard is to give an overview of the daily operational efficiency, two service quality metrics have been included, the % Tickets Replied in SLA and Number of Calls Answered in SLA (<20s), in order to reinforce the need to rise Service Quality performances. This dashboard is presented on Figure 17.

4.4.2 Dashboard

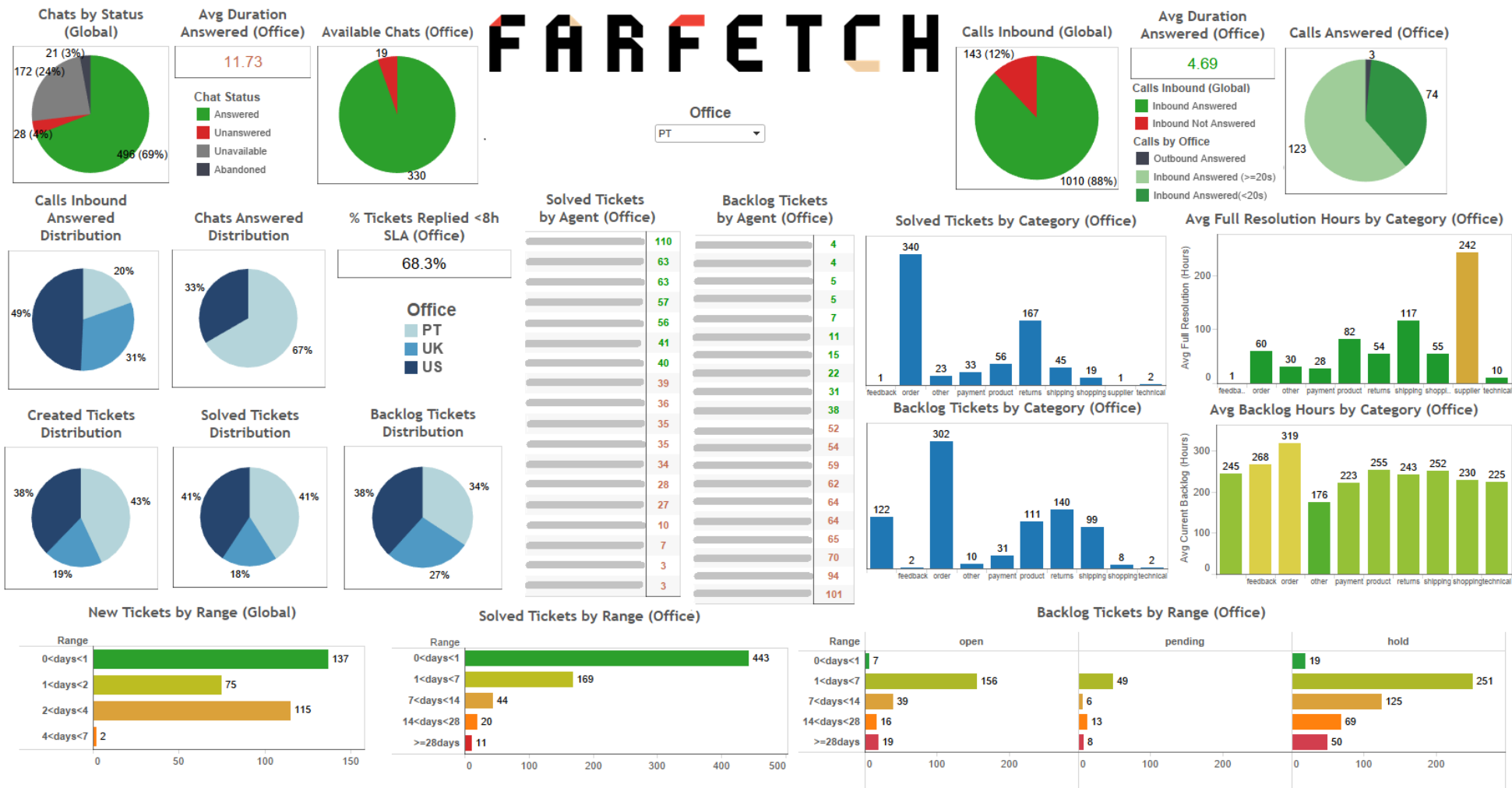


Figure 17 - Daily Dashboard

The layout of this dashboard is organized as follows:

- **Top:** graphs related to chats (chats by status, average duration answered chats and available chats) and calls (calls inbound, average duration calls answered and calls answered) and filtering option by office;
- **Middle Left:** graphs related to teams benchmarking and % tickets responded in SLA (<8h);
- **Middle Center and Right:** detailed views by agent and by category (number and average time) for solved and backlog tickets;
- **Bottom:** graphs related to the New, Solved and Backlog Tickets (open, pending, on-hold) by duration range – from the moment of creation to the current moment – in days.

The colors used in this dashboard seek to give the end user an easy visual perception on good and bad results. For this reason, it has been used a traffic light color ranging from green hues, representing good results, to alarming results, in red hues. Moreover, an intermediate scale in yellow and orange hues has been created, for representing results that are close to be alarming in some of the metrics, such as ranges and breakdowns by category. Regarding the teams benchmarking, each team is represented by a different blue hue, so that it is easy to distinguish from the previously presented results.

#### 4.4.3 Script for Blocks of Information Shift

Through the use of VNC software, it is possible to remotely access a computer. This software solution allows to show the Daily Dashboard on the monitors located in each one of the offices. With them, Customer Service players are able to regularly view and know their individual, team and global performances.

However, due to the high number of charts presented on the Daily Dashboard, it was not easy to quickly assess performance through the use of the monitors. For this reason, it has been developed a script that automatically changes the information presented every minute. According to this feature, the Daily Dashboard was branched in three different blocks of information. With this, it should be possible to easily assess performance visualizing related data. The three different blocks are described and presented on Figures 18, 19 and 20.

- **Ticket Charts:** Solved Tickets by Range, Solved Tickets Distribution, Backlog Tickets by Range, Backlog Tickets Distribution, % Tickets Replied in SLA (<8h), Created Tickets Distribution and New Tickets by Range;

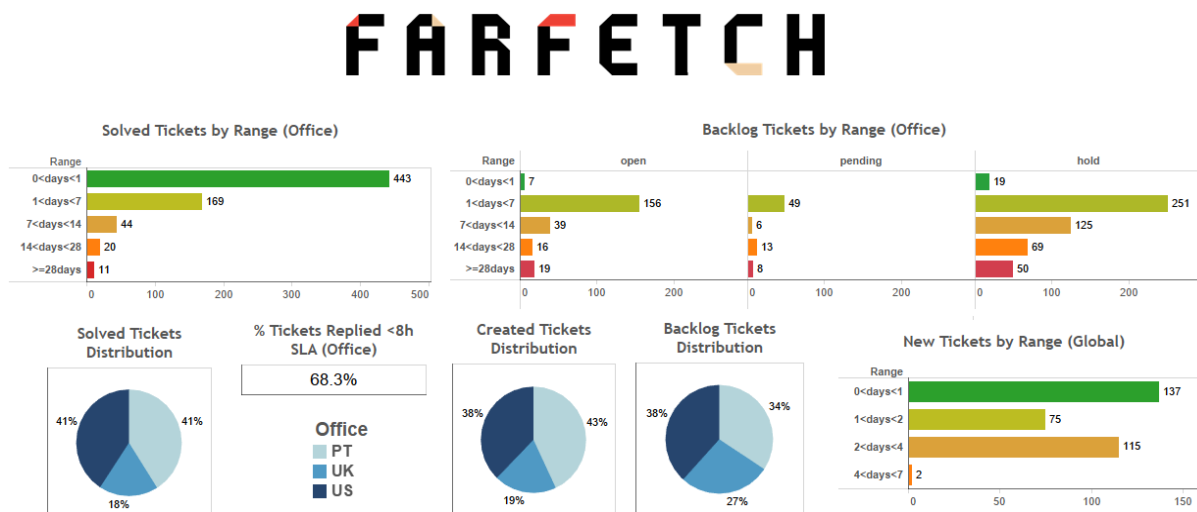


Figure 18 - Daily Dashboard: Ticket Charts Block



- Detailed Ticket Charts:** Solved Tickets by Agent, Solved Tickets by Category, Average Full Resolution Time by Category, Backlog Tickets by Agent, Backlog Tickets by Category, Average Backlog Time by Category;

# FARFETCH

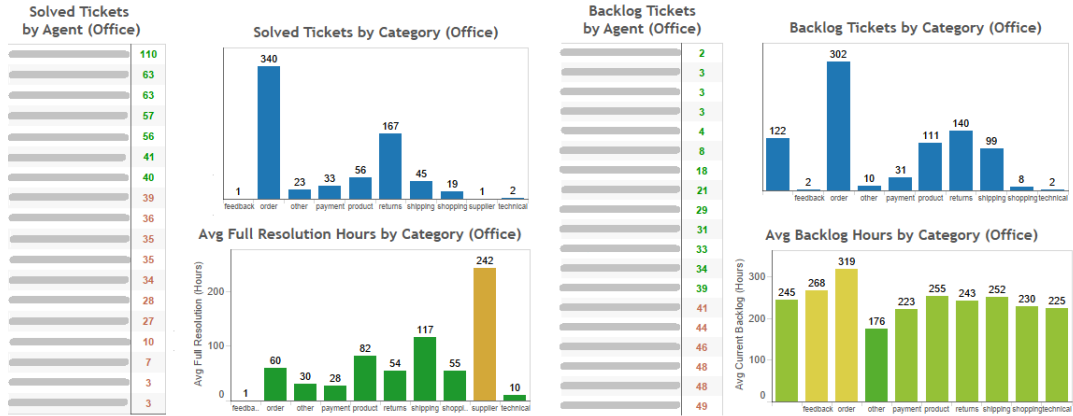


Figure 19 - Daily Dashboard: Detailed Ticket Charts Block

- Call and Chat Charts:** Chats by Status, Average Duration Chats Answered, Available Chats, Chats Distribution, Calls Inbound, Average Duration Calls Answered, Calls Answered and Calls Inbound Distribution;

# FARFETCH

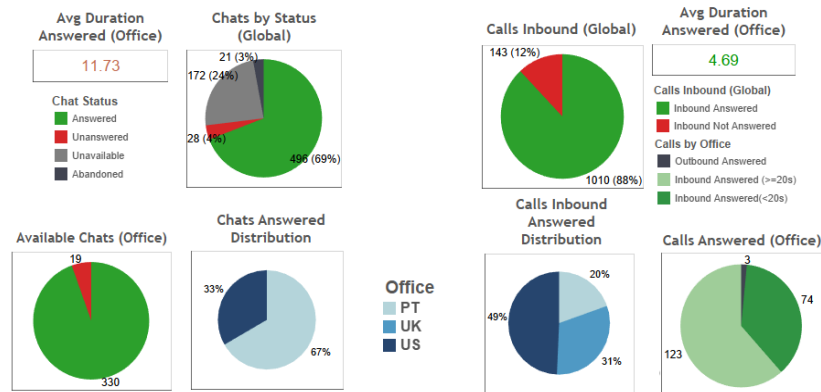


Figure 20 - Daily Dashboard: Call and Chat Charts Block

With this development, the dashboard branched in blocks of information and containing the script feature is exposed on the monitors and the initial Daily Dashboard constitutes a laptop version for assessment through *Tableau Server* for all the Customer Service players, enabling the use of all *Tableau* capabilities.

The realization of the current Daily Kaizen Team meetings, where the previous day performance is discussed, is accompanied by the exhibition of the metrics presented on the Daily Dashboard. It provides valuable and visual information for the players involved in the Customer Service and a tool for rapid assessment of individual, team and global performances.

#### 4.4.4 Main Features

The dashboard, developed on *Tableau*, has the following main features:

- **Automatically update:** The queries on this dashboard are programmed to automatically update every day at 06h00 (GMT), showing the previous 24 hours results for the three teams. This is a very relevant characteristic, specially taking into account the periodicity of this dashboard.
- **Drill Down:** This capability is one of the most valuable ones, once the user can get to the granular data that feeds the results. When clicking at a chart on the dashboard, the user can find an option to view data, as represented on Figure 21.

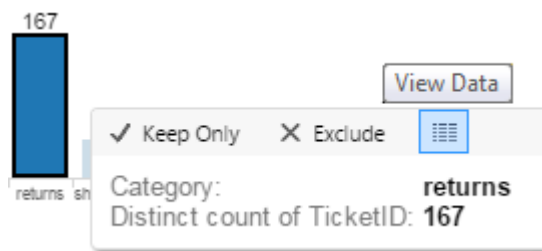


Figure 21 - Drill Down assessment on Tableau

Clicking on this option, it is possible to see the tabular data related to the number. An example of drill down is represented on Figure 22.

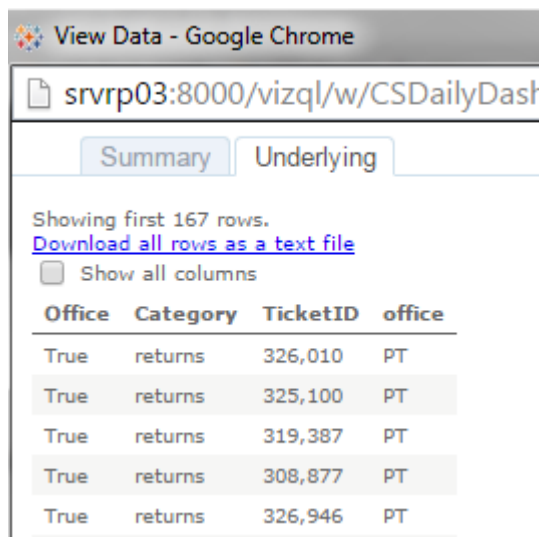


Figure 22 - Drill Down example on Tableau

Furthermore, it is possible to download this information in a CSV (“Comma Separated Values”) file format.

- **Filtering Option by Office:** It is possible to filter data by office according to the user’s personal needs. As previously explained, the filter will not be applied to all the metrics. The filtering option is shown on Figure 23.

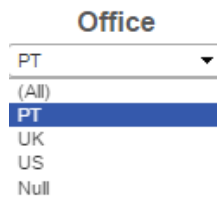


Figure 23 - Filtering option (by office)

- **Alerts:** Similarly to the conditional formatting applied to the Weekly Executive Report, visual alerts have been created in order to alert the dashboard's users for results that passed or failed the target, following the same traffic light logic previously applied. The concept of target is very relevant for the analysis of results. However, due to the initial low service level provided on Farfetch customer support services, many targets for these metrics have not yet been established. The idea is to apply most of them some months after the implementation of these reporting methods, as soon as the performance has increased to stable values.
- **Online Publishing:** This dashboard is published on Tableau Server, allowing any user to consult it in any device connected to the Internet. It is also possible to access it outside Farfetch through VPN connection. The data security is assured, since this dashboard requires authentication and the access to the dashboard is by invitation only.

Regarding the queries created in SQL language, they are the following:

- Solved Tickets
- New Tickets
- Backlog Tickets
- Created Tickets
- Calls
- Chats

These queries are available on Appendix C.

#### 4.5 Daily Management Dashboard

As a result of the previous reports presented and the low response rate on calls inbound, Customer Service managers required a tool that allows their visualization in various ways. As such, it has been created a Daily Management Dashboard. It is similar to the Daily Dashboard, containing a few changes in terms of the metrics represented. As it is also developed on *Tableau*, the features are similar to those previously described.

Whilst the Daily Dashboard constitutes a tool for agents and supervisors, providing a visualization of detailed data on several operational performance aspects whenever needed, the Management version is to be used by CS managers, providing different types of information according to their specific needs.

This dashboard excludes the breakdowns by categories in terms of number of tickets solved and backlog as well as average times, as they do not represent essential views for the type of analysis management needs. By replacing them, it is possible to include more insights on calls. Furthermore, it has also been included a presentation of the number of tickets escalated by team. These are the tickets transferred on a daily basis from agents to supervisors and team managers, when their resolution is requested either by the agent or by the customer. In addition to this, it has been included the 'Management' team on the filtering by office.

This dashboard is represented on Appendix D. The new views and filters included are the following:

- **Calls by Phone Number:** graph with the calls inbound connected/not connected distributed by Called Phone Number. With this, it is possible to understand the daily workload of calls for each phone line and language associated. It is presented on Figure 24.

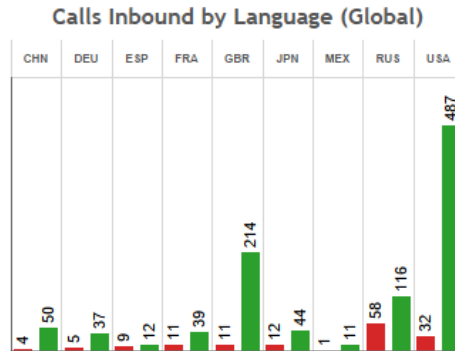


Figure 24 - Calls Inbound by Language/Phone Line

- **Calls by Hour:** graph with the distribution of the calls connected/not connected by hour (from 6am to 6am GMT, in order to comprise the Customer Service 24 hour day). This graph is represented on Figure 25.

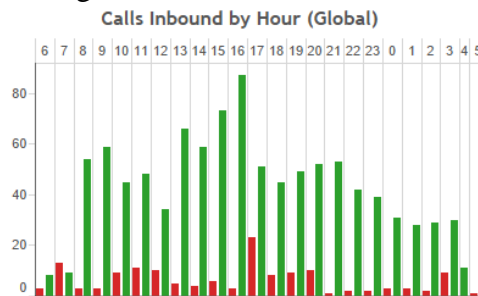


Figure 25 - Calls Inbound by Hour

- **Filter - Calls by Language/Phone Line:** filter applied to the graph “Calls by Hour”. Selecting one of the phone lines available, the previous graph is automatically adjusted so that it is possible to see “Calls by Hour” for the chosen phone line. It is represented on Figure 26.

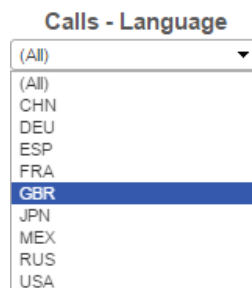


Figure 26 - Filter for Calls by Phone Line

- **Filter – Customer Promise Hours:** with this filter it is possible to switch between gross and customer promise results for calls. This filter has been applied to all the call metrics (Calls Inbound, Calls Answered, Calls by Hour, Calls by Phone Number, Average Duration Answered and Calls Inbound Answered Distribution). It also gives an idea of the number of calls connected/not connected within and outside customer promise hours. Moreover, it will be possible to observe trends on calls not connected outside

customer promise hours and, in the future, adjust customer promise hours to the actual demand. This filter is presented on Figure 27.

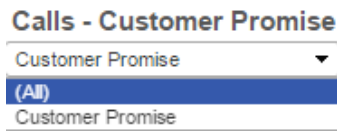


Figure 27 - Filter for customer promise results

Regarding the filters presented, they can be applied individually or simultaneously, acquiring multiple levels of data refinement. These graphs and filters are placed just below the previous existent call charts (Calls Inbound, Calls Answered and Average Duration Call Inbound).

In the near future it is expected to expand the number of phone lines offered for customer support. With the inclusion of these new services, these charts will be automatically updated.

- Escalations:** These numbers allow the perception of the average percentage of tickets that agents escalate, on a daily basis, to their supervisors and team managers. This happens when the resolution of the tickets is required either by agents or by the customers, representing a time consuming activity for supervisors and team managers. It is presented on Figure 28.

**% Escalations per Solved Tickets**

Team	Solved Tickets	Escalations	
PT	693	6	0.86%
UK	322	15	4.45%
US	687	2	0.29%

Figure 28 - Escalations per Solved Tickets

Through the implementation of these numbers on the dashboard, it is expected to raise the perception of the more solicited supervisors and team managers by office. It represents both the Service Quality, for the capability or not of the agent to solve the customer’s issue, and the Customer Satisfaction, for the need of the customer to request further clarifications.

With the inclusion of the ‘Management’ team on the filter by office, it is possible to check the same type of metrics and graphs for the tickets assigned to supervisors and team managers. The confidentiality of this type of information is guaranteed, once agents are not provided with the access to this dashboard.

The goal is to check thoroughly each one of these tickets and to act through training processes on the most frequent type of queries escalated. This type of data will be fundamental for the future internal processes improvement.

#### 4.6 Weekly Management Dashboard

This dashboard arose as a request from Customer Service managers for a tool that allows them to visualize weekly performance in different ways and data refinements. It is updated every Monday, providing data from the previous seven days. It consists on a similar dashboard to the previously presented Daily Management Dashboard in terms of metrics and charts.

The main purpose is to have a weekly overview of Operational Efficiency aspects and, in particular, to measure and control calls by language/phone line, hour and day of the week. With the introduction of the new phone lines, such as the Chinese, German, Japanese, Mexican and Spanish, associated to the uncertainty related to trends and needs in terms of personnel on each one of these lines, it became necessary to create means of data refinement for calls. With this type of data, in the future it should be possible to forecast demand and to allocate personnel to all the phone lines more accurately.

Regarding the charts, New Tickets by Range has been removed, due to its little meaning in a weekly perspective. In addition to the Solved Tickets by Agent and the Backlog Tickets by Agent, it has been included the Assigned Tickets by Agent, making possible to have a complete overview of the weekly performance of each one of the agents.

This new list allows to know the total tickets that each agent assigned, including chat and call tickets, therefore providing a correct comparison among agents. If individual comparisons excluded chat and call follow up tickets, agents who had been on call or chat services would be impaired in relation to the ones who had only been responding to tickets generated via email or contact form.

The layout of this dashboard, represented on Appendix E, is the following:

- **Left:** on the top graphs related to chats (chats by status, average duration answered and available chats); below graphs related to distribution among teams and % tickets replied in SLA (<8h);
- **Center:** filter by office and detailed views by agent: solved tickets, assigned tickets and backlog tickets;
- **Right:** graphs and filters related to calls; escalations per solved tickets;
- **Bottom:** graphs related to the Solved and Backlog Tickets (open, pending, on-hold) by duration range – from the moment of creation to the current moment – in days.

For the assigned tickets by agent, and considering an agent works on average five days per week, it has been considered that a positive result is to assign and solve more than 200 tickets and to keep in backlog less than 40 tickets. Although this is not an established target, it constitutes an initial way to push the global performance up.

All the features apart from the day of the week filter are similar to the previous Daily Management Dashboard. The filter as well as the other graphs/filters related to calls are presented on Figure 29.

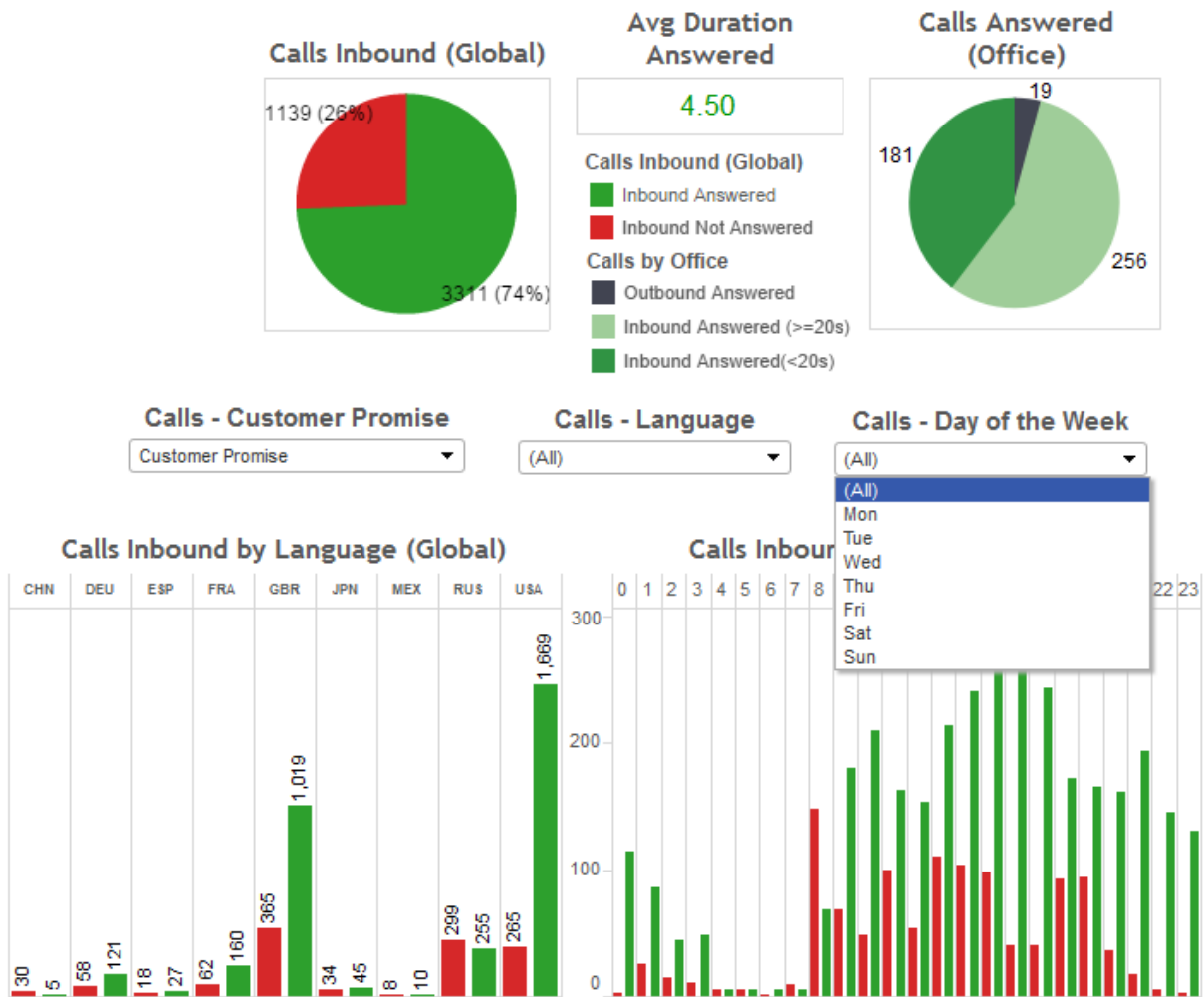


Figure 29 - Call Graphs and Filters on the Weekly Management Dashboard

With this dashboard, it should be possible to turn scheduling processes easier, to find changes on trends as well as to act on staffing processes and customer promise hours whenever necessary. Therefore, this dashboard constitutes an important source of information for Customer Service managers to allocate personnel accurately.

Since these dashboards are integrated with Farfetch databases and are automatically updated, any change in terms of customer promise hours, personnel or offices just needs to be registered on the databases.

After the implementation of these reporting methods and the stabilization of the results as to approach the excellence level required, the goal is to analyze customer support processes. With this type of analysis and the reporting methods available, it should be possible to understand where improvements can be made. More than improving the performance on the customers' point of view, it should be possible to guarantee the quality of the processes that are the basis for the customer support. With the elimination of the causes of non-conformity and the stabilization of the processes, it should be possible to improve efficiency and to guarantee the continuous improvement of the performance of Farfetch as a whole.

Given that good customer relations are fundamental for the success of any business and that customers within the luxury market require excellence, every small step taken forward is essential for keeping the business growth.

#### 4.7 Main Results

After the implementation of the new Key Performance Indicators and the new report and dashboards, all the players that are directly involved in the Customer Service have become more aware of the performance of the Department, whether globally, by team or individually. These reporting methods are being used daily and weekly to control Farfetch customer support services.

Since the requirements came from different players, each one of the reporting tools implemented and their visualisations have been the result of intense dialogues with the main end users involved. For the ones who were not so closely involved in the progress of the project, it was necessary to guide them at the beginning of the implementation so that they could understand the meaning of each of the KPIs measured.

One of the difficulties found, especially for the metrics updated on a daily basis, was the different time zones and working hours among CS teams. The solution found for this was the normalization of the hours to GMT standard time and the establishment of the concept of the CS day (from 6am to 6am), in order to comprise the time that European offices start the day and that Los Angeles office ends the day, hence providing a correct comparison among teams.

With the contribution of the solutions developed along this project, the Customer Service performance levels have improved significantly, though there has been the rise of the number of contacts generated after the implementation of the first report. The evolution of the total number of contacts generated (through tickets created via contact form/email, calls inbound requested, calls outbound answered and chats available), covering a period of twelve weeks since the implementation of the first report, is represented on Figure 30.

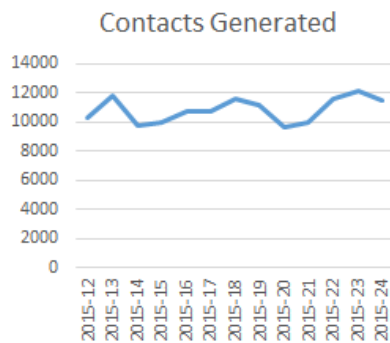


Figure 30 - Evolution of the number of contacts generated

The number of contacts generated increased 11.7%, from the first to the last week in analysis. The most visible improvements during this time frame can be seen on:

**Response Rate:** The response rate has increased significantly, from 60.2%, on the week that the Weekly Executive Report was launched, to 86.4%, twelve weeks later. This evolution is represented on Figure 31.

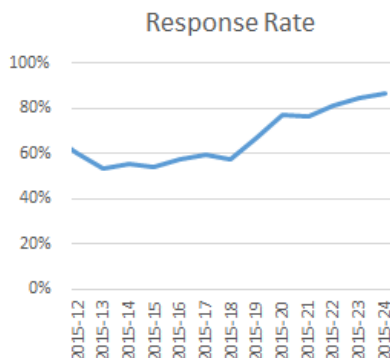


Figure 31 - Evolution of the Response Rate



Despite the readjustments in the customer promise hours and the dynamic chat, which have also contributed to the rapid growth of this rate, Farfetch is currently able to guarantee a very higher response on its customer support services.

**% Calls Inbound Answered:** after the establishment of the first report and the readjustment of the customer promise hours, the percentage of calls inbound answered, both in terms of gross and within customer promise results, has increased from 67.2% (gross) and 73.6% (within customer promise) to 80.2% (gross) and 87.4% (within customer promise). This evolution is represented on Figure 32.

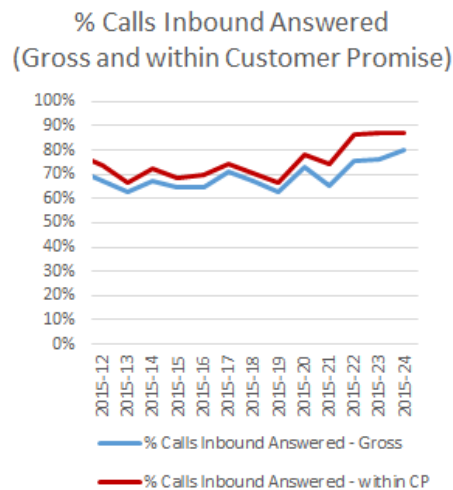


Figure 32 - Evolution of the percentage of Calls Inbound Answered (Gross and within customer promise results)

Although the increase of languages provided could lead to the decline of the percentage of calls inbound answered, as a consequence of the major complexity of resources allocation, this indicator has been increasing continuously.

The results of both Service Quality and Customer Satisfaction KPIs have also been improving. Since Service Quality is an antecedent to Customer Satisfaction, the KPIs established for measuring it are very relevant for Farfetch. Furthermore, Customer Satisfaction is directly linked to Customer Loyalty, and if not managed correctly, this can be one of the main issues that companies have to face when competing online (Cox and Dale, 2001).

The most visible improvement on these areas of KPIs can be seen on:

**% Tickets Solved with Reopens:** This Service Quality KPI has decreased from 29.4% to 24.4%, for the same weeks in comparison. The evolution of this KPI can be seen on Figure 33.

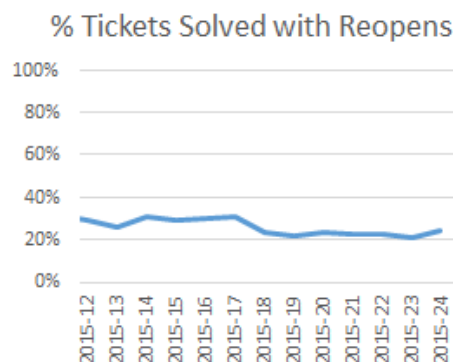


Figure 33 - Evolution of the percentage of Tickets Solved with Reopens

With the reporting methods developed, executives and CS managers are currently provided with multiple ways to measure and control performance. According to their roles and responsibilities, they can develop action plans for the short or long term based on reliable data.

Customer Service managers have been continuously working on ways to improve teams' performances through the use of these reporting tools. Once Farfetch has three contact channels available for customers using several languages, many different resource allocations are possible. The goal is to have the right number of resources at the right times for the right languages. Defining the optimal combination is an iterative process, which requires accurate and reliable data to do the right adjustments.

Even though the Customer Service Department is not responsible for some of the metrics, they have an impact on the performance of the Department as a whole. With the inclusion of this type of KPIs and the division of indicators according to their sources, CS teams have the perception of what type of metrics they are directly responsible for, and top management has means available for acting on the areas of the company that present the worst results. Furthermore, after the implementation of these reporting methods and based on the recent results, understanding where the current processes fail will be an easier task. This continuous improvement activity should lead to the improvement of internal processes, not only in the CS Department, but in all other departments that interact with customer services. This type of management should help Farfetch to boost the quality of customer support processes with a positive effect on customer perceptions.

Beyond the reporting tools and the new measurements implemented, the modification of the way how chat works can also be considered an action taken to improve customer experience. With the dynamic chat, Farfetch avoids the legitimate customers' dissatisfaction generated by the unsuccessful attempts to start a chat conversation, managing at the same time customers' expectations. Although the impact of this new feature cannot be directly measured, it is evident the improvement on customers' experience when the chat option is hidden in cases when Farfetch is not able to offer an available agent. Despite not being part of this dissertation, this development arose from the problem identified when redesigning the Key Performance Indicators.

The redefinition of customer promise hours for calls was another measure taken to improve customer experience. Since Farfetch was not able to provide customers the hours promised on the website for the various phone lines and languages, it did not make sense to keep them announced. The hours have been updated based on the evaluation of the most influential countries in terms of orders. For this reason, specific language support lines cover the standard working hours period (Mon-Fri, from 09:00 to 18:00) in the respective countries and regions, and English support lines, which cover USA, United Kingdom and all the other countries that do not have a specific phone line, cover extra week hours (from 08:00 to 23:00) and weekends (from 09:00 to 21:00). Furthermore, the feasibility of working hours for agents was also taken into account and, for this reason, Russian line has one hour deviation from the standard language lines hours. Currently, Customer Service teams can guarantee that the hours offered on the portal are covered by agents.

Despite the visible improvements on the performance level after this project, it is expected that the benefits delivered are significantly bigger in the future. Improvement is a longstanding process that involves a cultural shift, therefore it can take months or years until this shift is completely implemented. If this is achieved, it will certainly allow the company to provide an excellent customer support service level.

## 5 Conclusions and Future Projects

Online luxury customers have been continuously increasing their requirements in terms of the offer provided. In order to maintain competitiveness in this industry, it is necessary to guarantee the provision of an excellent service in many ways, including quality, price and the range of products available. A first-rate service at all the levels is primordial for the global success of the company. Especially customer support services assume vital importance, since these are often the only direct means of communication between the customers and the company.

The needs of Farfetch in terms of customer support services have increased continuously. However, the former level of quality offered was short of expectations. In this segment, customers do not hesitate to express their demands. For these reasons, Farfetch recognized the need to act in order to provide customers an excellent support service. This dissertation intended to create the means to increase the customer support service level, through the redefinition of Key Performance Indicators and the development of mechanisms for their measurement and control, such as reports and dashboards.

After this project, all the players involved in the Customer Service have become more aware of the performance of the Department at different levels: global, by team and individual. Through the framework developed, the players have multiple sources of information available that can help them to improve customer support services. With the various reporting tools, they can assess performance in different ways and periodicities. Furthermore, with the increasing complexity of Farfetch support services, mainly caused by the addition of new languages, it is vital to guarantee that these ones can be measured and controlled, in order to guarantee a full control of the Customer Service actions.

With the contribution of the solutions developed, the performance of the Department has improved significantly. In the first twelve weeks after the implementation of first report, the Response Rate increased from 60.2% to 86.4%, despite the growth of 11.7% in the number of contacts generated. Besides this KPI, the improvements have also been verified in the three areas assessed on this project: Operational Efficiency, Service Quality and Customer Satisfaction. The most relevant ones are related to the increase of the percentage of calls answered, from 67.2% (gross) and 73.6% (within customer promise) to 80.2% (gross) and 87.4% (within customer promise), and the reduction of the percentage of tickets solved with reopens, from 29.4% to 24.4%. Furthermore, the dynamic chat and the redefinition of the hours promised on the portal and were two actions taken to improve the customer experience.

### 5.1 Future Projects

Businesses are becoming more and more competitive and companies' strategies have to take this into account. Creating means to measure and control performance in different ways and adopting different viewpoints is currently considered one of the most important assets for big companies.

The selection of the metrics was limited by the data available from each of the channels providers. For instance, the creation of extra metrics, such as Service Quality and Customer Satisfaction KPIs, was not possible in terms of calls and chats. As a further development, it would be important to consider the change of providers. With benchmarking studies and SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis, it should be possible to select the providers that best fit Farfetch needs in terms of customer support services. Apart from their functionalities, these providers should be able to make available multiple types of data so that the creation of meaningful metrics is possible.

Another important development would be the creation of a real-time dashboard. The more up to date and accurate the information is, the more quick can be the reaction to changes in the business environment. However, due to the current data synchronization periodicity, it is not

possible to have such type of reporting. With this type of dashboard, peaks of volume in the different channels could be rapidly assessed and personnel allocation could be configured accordingly.

When defining KPIs, the establishment of targets is essential. The measurement of the values should be assessed as meeting expectations or not. However, for most of the metrics the targets have not yet been defined. Since the company aims to deliver the best customer experience in the market, the targets will have to be very tight. Their establishment would not make sense within the time frame of this project, once the performance of the Customer Service Department is very low and the targets would certainly not be reached. These ones should be established as soon as the values of the KPIs implemented stabilize. Together with the establishment of the targets, it will also be relevant to adapt the visuals, for example through the addition of straight lines, conditional formatting and traffic light colors.

Even though customer promise hours for calls have been established according to the standard working hours and feasible working hours for agents, it will be important to keep an eye out on these hours and, eventually, in the future adapt them to customers' demand. Through the use of the dashboards, it should be possible to understand the need to readjust them.

As mentioned in the first chapter of this dissertation, Brazilian CS Team works in a separated way, with different providers for each one of the channels. In addition to this, the Brazilian team only supports Brazilian customers. The development of the same type of reporting methods for this team should be considered in the future. With this implementation, Farfetch should also be able to increase the performance and the service provided to the Brazilian market.

Currently, it is implemented a very simple process for the global and team weekly productivity evaluation. It consists on a comparison between the total hours expected to solve the number of contacts actually solved for the three contact channels (including tickets solved, chats answered, calls inbound answered within customer promise and calls outbound answered) and the total hours available by the agents during the week. The first one is calculated through the attribution of an estimated average resolution time by contact channel, based on the measurement of handling times by channel. Due to the providers' limitation, it is not possible to calculate them accurately. As a future work, and with the eventual change of providers, it should be possible to find a way to accurately know the number of contacts solved and working time by agent. With this, it would be possible to calculate weekly and daily productivities on a global, team and individual scale.

After the creation of these reporting methods for the Customer Service Department, similar projects for other areas of the company can be created. For example, a similar framework should be created for the Partner Services Department, once this one is related to the services provided by the suppliers of Farfetch, the Partner Boutiques. Therefore, the quality of the services provided by them also influences the end customers' perception of the company.

Farfetch has continuously been developing new solutions to provide its customers the best experience in the market. The number of services provided will certainly continue to increase in the future and the creation of means to measure and control them is imperative. The establishment of KPIs and the design of reporting tools, such as the report and dashboards developed along this project, will be one of the keys for the achievement of the strategic goals of the company.

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## APPENDIX A: Executive Weekly Report

### Customer Service dashboard overview

**Year** ✕

2015 ▲ ▼

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**Week** ✕

Week 21 (ending May 24) ▲ ▼

**Office** ✕

PT

UK

US

(blank)

Customer Service Dashboard			
Metric	Week Selected	Week Before	% vs Week Before
<b>General Metrics</b>			
Workload	10748	10566	1,7%
Total Solved	8234	8173	0,7%
Response Rate	76,4%	77,1%	-1,0%
Contacts per Order	0,43	0,53	-18,7%
NPS	79,3	79,9	-0,8%
<b>Zendesk Tickets Breakdown</b>			
<b>Solved Tickets Metrics</b>			
<b>Solved Tickets</b>	3670	3321	10,5%
% One Touch Tickets	66,1%	64,0%	3,3%
% Solved with Reopens	23,2%	23,6%	-1,9%
Full Resolution Time (hours)	107,5	136,2	-21,0%
% Satisfaction Rate	83,3%	82,5%	1,1%
% Satisfaction Survey Response Rate	14,1%	12,0%	17,0%
<b>New Tickets Metrics</b>			
<b>New Tickets</b>	3780	3148	20,1%
% Responded in SLA (<8 hours)	68,1%	67,3%	1,2%
% New with Reopens	23,2%	20,9%	10,7%
<b>Carryover Tickets Metrics</b>			
<b>Carryover Tickets</b>	742	806	-7,9%
% Carryover with Reopens	39,4%	40,7%	-3,3%
<b>Range</b>			
1-2 weeks	293	376	-22,1%
2-3 weeks	185	161	14,9%
3-4 weeks	90	88	2,3%
>4 weeks	174	181	-3,9%
<b>Calls Breakdown</b>			
<b>Calls Metrics (within Customer Promise)</b>			
<b>Total Calls</b>	4839	4186	15,6%
<b>Total Inbound</b>	4450	3843	15,8%
Total Inbound Answered	3311	2991	10,7%
Total Inbound Not Answered	1139	852	33,7%
% of Calls Inbound Answered	74,4%	77,8%	-4,4%
% of Calls Inbound Answered (<20sec)	37,4%	35,4%	5,5%
Avg CallRing Inbound Not Answered (min)	2,72	2,48	9,6%
<b>Total Outbound</b>	389	343	13,4%
Total Outbound Answered	278	218	27,5%
Total Outbound Not Answered	111	125	-11,2%
<b>Calls Metrics Gross</b>			
<b>Total Calls</b>	5864	5023	16,7%
<b>Total Inbound</b>	5317	4522	17,6%
Total Inbound Answered	3477	3292	5,6%
Total Inbound Not Answered	1840	1230	49,6%
% of Calls Inbound Answered	65,4%	72,8%	-10,2%
% of Calls Inbound Answered (<20 sec)	36,5%	34,5%	5,8%
Avg CallRing Inbound Not Answered (min)	2,12	2,47	-14,5%
<b>Total Outbound</b>	547	501	9,2%
Total Outbound Answered	385	315	22,2%
Total Outbound Not Answered	162	186	-12,9%



Development of a framework for the measurement and control of customer support services

Chats Breakdown			
Chats Metrics			
<b>Total Chats (by IP)</b>	1327	2334	-43,1%
Chats Unavailable	333	568	-41,4%
Others (Blocked + Abandoned)	64	123	-48,0%
Chats Available	930	1643	-43,4%
<b>% Available Chats</b>	70,1%	70,4%	-0,4%
Unanswered	62	97	-36,1%
Answered	868	1546	-43,9%
<b>% Answered Over Available Chats</b>	93,3%	94,1%	-0,8%

Breakdown of Zendesk Categories (based on Solved Tickets)			
Quantity			
Feedback	282	305	-7,5%
Order	1275	1279	-0,3%
Other	278	193	44,0%
Payment	95	93	2,2%
Product	466	354	31,6%
Returns	757	698	8,5%
Shipping	316	305	3,6%
Shopping	160	50	220,0%
Spam	6	27	-77,8%
Supplier	15	7	114,3%
Technical	20	10	100,0%
Full Resolution Time (Hour)			
Feedback	12	11	15,1%
Order	129	161	-19,8%
Other	72	58	25,0%
Payment	69	125	-44,9%
Product	87	105	-17,1%
Returns	134	162	-17,3%
Shipping	165	220	-24,9%
Shopping	27	61	-55,7%
Spam	1	1	-7,1%
Supplier	23	2	846,6%
Technical	69	27	151,1%

## APPENDIX B: Weekly Queries

### Solved Tickets

```

SELECT      acc.AccountName ,
           t.ID AS TicketID
           , t.Type
           , t.Status
           , t.Via
           , Groups.Name AS [Group]
           , Users.Name as [Agent]
           , Users.Role
           , UserRequester.Name as AgentRequester
           , UserRequester.Role as RoleRequester
           , Users.ID
           , t.Tags
           , m.Reopens
           , m.Replies
           , CAST(t.CreatedAt as date) as [CreatedAt]
           , DATEPART(HOUR,t.CreatedAT) as CreatedHour
           , m.AssignedAt
           , t.UpdatedAt
           , m.SolvedAt
           , m.LatestCommentAddedAt
           , m.FirstResolutionTimeBusiness
           , m.ReplyTimeBusiness
           , m.FullResolutionTimeBusiness
           , m.AgentWaitTimeBusiness
           , m.RequesterWaitTimeBusiness
           , source.Value AS Source
           , case when category.Value = 'cs_other' then 'other' else category.Value end AS Category
           , rating.Score
           , case when csa.office is not null then csa.office else 'Null' end office
           , CAST(m.solvedat as date) as [Fulldate]
FROM        dbo.Zendesk_Tickets (noLOCK) AS t
           LEFT OUTER JOIN dbo.Zendesk_Accounts as acc (noLOCK) on acc.ID = t.AccountID
           LEFT OUTER JOIN dbo.Zendesk_TicketMetrics AS m (noLOCK) ON t.ID = m.TicketID and acc.id = m.AccountID
           LEFT OUTER JOIN dbo.Zendesk_TicketsCustomFields AS source (noLOCK) ON source.TicketID = t.ID AND source.CustomTicketFieldID in (20835191,24147711) and acc.id = source.AccountID
           LEFT OUTER JOIN dbo.Zendesk_TicketsCustomFields AS aa (noLOCK) ON aa.TicketID = t.ID AND aa.CustomTicketFieldID = 20842853 and acc.id = aa.AccountID
           LEFT OUTER JOIN dbo.Zendesk_TicketsCustomFields AS category (noLOCK) ON category.TicketID = t.ID AND category.CustomTicketFieldID in (20844922,24147731) and acc.id = category.AccountID
           LEFT OUTER JOIN dbo.Zendesk_Groups AS Groups (noLOCK) ON Groups.ID = t.GroupID and acc.id = Groups.AccountID
           LEFT OUTER JOIN dbo.Zendesk_SatisfactionRatings AS rating (noLOCK) ON rating.TicketID = t.ID and rating.score <> 'offered' and acc.id = rating.AccountID
           LEFT OUTER JOIN dbo.Zendesk_Users as Users (noLOCK) ON users.ID = t.AssigneeID and acc.id = Users.AccountID
           LEFT OUTER JOIN dbo.Zendesk_Users as UserRequester (noLOCK) ON UserRequester.ID = t.RequesterID and acc.id = Users.AccountID
           LEFT JOIN bi_custserv.dbo.CustomerServiceAdvisors csa (noLOCK) on users.id = csa.ZendeskNewID

WHERE       (t.Tags NOT LIKE '%closed_by_merge%')
and t.via <> 'web'
and acc.id IN (3)
and CAST(t.CreatedAt as date) >= '2014-01-01'
and m.solvedat is not null
and t.status in ('solved','closed')
and cast(m.solvedat as date) <= getdate() -datepart(dw,cast(getdate() as date))+1
and not (Groups.Name is not null and Groups.Name in ('Order Supporte BR', 'Order Support BR', 'Order Support', 'Style Advisors', 'Refunds'))
and not (office is not null and office in ('OPS - PT', 'OPS - US', 'SA - UK'))

```

### Created Tickets

```

SELECT      acc.AccountName
           , t.ID AS TicketID
           , t.Type
           , t.Subject
           , t.Status
           , t.Via
           , Groups.Name AS [Group]
           , Users.Name as [Agent]
           , Users.Role
           , UserRequester.Name as AgentRequester
           , UserRequester.Role as RoleRequester
           , m.Reopens
           , m.Replies
           , cast(t.CreatedAt as date) as [CreatedAt]
           , DATEPART(HOUR,t.CreatedAT) as CreatedHour
           , m.AssignedAt
           , t.UpdatedAt
           , m.SolvedAt
           , m.LatestCommentAddedAt
           , m.FirstResolutionTimeBusiness
           , m.ReplyTimeBusiness
           , m.FullResolutionTimeBusiness, m.AgentWaitTimeBusiness
           , m.RequesterWaitTimeBusiness
           , source.Value AS Source
           , category.Value AS Category, rating.Score
           , CAST(t.CreatedAt as date) as [Fulldate]
           , case when (case when m.ReplyTimeBusiness is null then m.FirstResolutionTimeBusiness else m.ReplyTimeBusiness end ) <= 480 then 1 else 0 end as RepliedSLA
           , case when csa.office is not null then csa.office else 'Null' end office
FROM        dbo.Zendesk_Tickets (noLOCK) t
           LEFT OUTER JOIN dbo.Zendesk_Accounts as acc (noLOCK) on acc.ID = t.AccountID
           LEFT OUTER JOIN dbo.Zendesk_TicketMetrics AS m (noLOCK) ON t.ID = m.TicketID and acc.id = m.AccountID
           LEFT OUTER JOIN dbo.Zendesk_TicketsCustomFields AS source (noLOCK) ON source.TicketID = t.ID AND source.CustomTicketFieldID in (20835191,24147711) and acc.id = source.AccountID
           LEFT OUTER JOIN dbo.Zendesk_TicketsCustomFields AS aa (noLOCK) ON aa.TicketID = t.ID AND aa.CustomTicketFieldID = 20842853 and acc.id = aa.AccountID
           LEFT OUTER JOIN dbo.Zendesk_TicketsCustomFields AS category (noLOCK) ON category.TicketID = t.ID AND category.CustomTicketFieldID in (20844922,24147731) and acc.id = category.AccountID
           LEFT OUTER JOIN dbo.Zendesk_Groups AS Groups (noLOCK) ON Groups.ID = t.GroupID and acc.id = Groups.AccountID
           LEFT OUTER JOIN dbo.Zendesk_SatisfactionRatings AS rating (noLOCK) ON rating.TicketID = t.ID and rating.score <> 'offered' and acc.id = rating.AccountID
           LEFT OUTER JOIN dbo.Zendesk_Users as Users (noLOCK) ON users.ID = t.AssigneeID and acc.id = Users.AccountID
           LEFT OUTER JOIN dbo.Zendesk_Users as UserRequester (noLOCK) ON UserRequester.ID = t.RequesterID and acc.id = Users.AccountID
           LEFT JOIN bi_custserv.dbo.CustomerServiceAdvisors csa (noLOCK) on users.id = csa.ZendeskNewID

WHERE       (t.Tags NOT LIKE '%closed_by_merge%')
and t.via <> 'web'
and acc.id IN (3)
and cast(t.createdat as date) <= getdate() -datepart(dw,cast(getdate() as date))+1
and not (Groups.Name is not null and Groups.Name in ('Order Supporte BR', 'Order Support BR', 'Order Support', 'Style Advisors', 'Refunds'))
and not (office is not null and office in ('OPS - PT', 'OPS - US', 'SA - UK'))

```

## Carryover Tickets

```

SELECT *
, case when datediff(day, Createdat, extractiondate) between 8 and 15 then 1 else 0 end [1-2 weeks]
, case when datediff(day, Createdat, extractiondate) between 16 and 22 then 1 else 0 end as [2-3 weeks]
, case when datediff(day, Createdat, extractiondate) between 23 and 29 then 1 else 0 end as [3-4 weeks]
, case when datediff(day, Createdat, extractiondate) >= 30 then 1 else 0 end as [>4 weeks]
, datediff(day, CreatedAt, extractiondate) as days
, dateadd(day, 7, extractiondate) as workcount
, dateadd(day, -7, ExtractionDate) as CarryoverT
FROM BI_CUSTSERV.dbo.tickets_carryover (nolock)
LEFT JOIN bi_custserv.dbo.CustomerServiceAdvisors csa (nolock) on agent = csa.Advisor
WHERE datepart(dw, extractiondate) = 2
and datediff(day, CreatedAt, extractiondate) >= 8
and dateadd(day, -7, ExtractionDate) <= getdate()-datepart(dw, cast(getdate() as date))
and status not in ('deleted')
and not ([Group] is not null and [Group] in ('Order Supporte BR', 'Order Support BR', 'Order Support', 'Style Advisors', 'Refunds'))
and not (Office is not null and Office in ('OPS - PT', 'OPS - US', 'SA - UK'))
and AccountName = 'Farfetch - Global'

```

## Calls

```

SELECT
calls.*
, cd.Country
, ct.subfolder
, case when ((ct.startHour >= ct.endHour) and (cast(calls.CallStartDate as time) not between ct.EndHour and ct.StartHour)) then 1
else case when ((ct.startHour <= ct.endHour) and (cast(calls.CallStartDate as time) between ct.StartHour and ct.EndHour)) then 1 else 0 end end as CP
, case when ((ct.startHour >= ct.endHour) and callconnected = 'yes' and calldirection = 'inbound') and (cast(calls.CallStartDate as time) not between ct.EndHour and ct.StartHour)) then 1
else case when ((ct.startHour <= ct.endHour) and callconnected = 'yes' and calldirection = 'inbound') and (cast(calls.CallStartDate as time) between ct.StartHour and ct.EndHour)) then 1 else 0
end end as CallConnectedNetInbound
, case when ((ct.startHour >= ct.endHour) and calldirection = 'inbound') and (cast(calls.CallStartDate as time) not between ct.EndHour and ct.StartHour)) then 1
else case when ((ct.startHour <= ct.endHour) and calldirection = 'inbound') and (cast(calls.CallStartDate as time) between ct.StartHour and ct.EndHour)) then 1 else 0 end end as CallRequestedNetInbound
, case
when (callconnected = 'yes' and calledgroup = 'US Agents' and calldirection = 'inbound') then 'US'
when (callconnected = 'yes' and calledgroup = 'UK 2nd' and calldirection = 'inbound') then 'PT'
when (callconnected = 'yes' and calledgroup = 'Customer Services' and calldirection = 'inbound') then 'UK'
when (callconnected = 'yes' and calledgroup = 'US Agents' and calldirection = 'outbound') then 'US'
when (callconnected = 'yes' and callerGroup = 'UK 2nd' and calldirection = 'outbound') then 'PT'
when (callconnected = 'yes' and callerGroup = 'Customer Services' and calldirection = 'outbound') then 'UK'
else null
end as office_calls
, cast(calls.callstartdate as date) as Fulldate
FROM BI_CUSTSERV.dbo.SalesForceCalls (nolock) calls
LEFT JOIN [BI_CUSTSERV].[dbo].[CountryData] (nolock) cd on
cd.ISO3 = case when calls.CallDirection = 'inbound' then calls.CalledCountryShort else calls.CallerCountryShort end
LEFT JOIN BI_CUSTSERV.dbo.CustomerServiceAdvisors csa (nolock) on
csa.SalesForceID = case when calls.CallDirection = 'inbound' then calls.CalledFullName else calls.CallerFullName end
LEFT JOIN [BI_CUSTSERV].[dbo].[CustomerPromiseTimes] (nolock) ct on
datepart(weekday, calls.CallStartDate-1) between ct.WeekdayStart and ct.WeekdayEnd
and ct.Type = 'Phone'
and ct.Subfolder =
, case when (ct.WeekdayStart = 1 and ct.WeekdayEnd = 5) then
(case when cd.ISO2 in ('CN', 'DE', 'ES', 'FR', 'JP', 'MX', 'RU', 'US') then cd.ISO2
when cd.ISO2 = 'GB' then 'UK'
ELSE null end)
, case when (ct.WeekdayStart = 6 and ct.WeekdayEnd = 7) then
(case when cd.ISO2 in ('DE', 'ES', 'FR', 'JP', 'MX', 'RU', 'US') then cd.ISO2
when cd.ISO2 = 'GB' then 'UK'
else null end)
else null
end
WHERE cast(calls.callstartdate as date) <= getdate()-datepart(dw, cast(getdate() as date))+1
and not (Office is not null and Office in ('OPS - PT', 'OPS - US', 'SA - UK'))
and not (CallerGroup is not null and CallerGroup in ('Administration'))
and not (CalledGroup is null and CallConnected = 'yes' and calldirection = 'inbound')

```

## Chats

```

SELECT distinct [ChatType]
, [ChatStatusType]
, [CountryCode]
, [IPAddress]
, chats.[OperatorID]
, [CreateDate]
, [StartDate]
, [AnswerDate]
, cast(chats.createdate as date) as fulldate
, case when ChatStatusType in (7) and answerdate is null and chats.operatorid is null then 1 else 0 end as Unavailable
, case when ChatStatusType in (10,18) and answerdate is null and chats.operatorid is null then 1 else 0 end as Blocked
, case when ChatStatusType not in (7,10,18) and answerdate is null and chats.operatorid is null then 1 else 0 end as Abandoned
, case when AnswerDate is null and chats.operatorid is not null then 1 else 0 end as Unanswer
, case when AnswerDate is not null and chats.operatorid is not null then 1 else 0 end as Answer
, case when csa.Office is not null then csa.Office else 'Null' end Office
FROM [dbo].[boldchat_chats] (nolock) chats
LEFT JOIN BI_CUSTSERV.dbo.boldchat_operators op (nolock) on chats.OperatorID = op.OperatorID
LEFT JOIN [BI_CUSTSERV].[dbo].[CountryData] cd (nolock) on chats.CountryCode = cd.ISO2
LEFT JOIN BI_CUSTSERV.dbo.CustomerServiceAdvisors csa (nolock) on chats.OperatorID = csa.BoldChatID
where cast(CreateDate as date) > '2014-01-01'
and cast(CreateDate as date) <= getdate()-datepart(dw, cast(getdate() as date))+1

```

## NPS

```

SELECT DateNPS
, NPS_FF
, case when NPS_FF >= 9 then 1 else 0 end Promoter
, case when NPS_FF <= 6 then 1 else 0 end Detractor
FROM dbo.FactOrdersFeedbackReviewv2 (nolock)
WHERE DateNPS < getdate()-datepart(dw, cast(getdate() as date))+1

```

## APPENDIX C: Daily Queries

### Solved Tickets

```

SELECT
case
  when datediff(hour,t.createdat,m.Solvedat) between 0 and 24 then '0<days<1'
  when datediff(hour,t.createdat,m.Solvedat) between 24 and 168 then '1<days<7'
  when datediff(hour,t.createdat,m.Solvedat) between 168 and 336 then '7<days<14'
  when datediff(hour,t.createdat,m.Solvedat) between 336 and 672 then '14<days<28'
  when datediff(hour,t.createdat,m.Solvedat) >= 672 then '>=28days'
end as [Range]
, acc.AccountName
, t.ID AS TicketID
, t.Type
, t.Subject
, t.Status
, t.Via
, survey.Value
, Groups.Name AS [Group]
, Users.Name as [Agent]
, Users.Role
, UserRequester.Name as AgentRequester
, UserRequester.Role as RoleRequester
, t.Tags
, m.Reopens
, m.Replies
, t.Createdat as [Createdat]
, DATETIMEPART(HOUR,t.Createdat) as CreatedHour
, m.Assignedat
, t.Updatedat
, m.Solvedat
, m.LatestCommentAddedat
, m.FirstResolutionTimeBusiness
, m.ReplyTimeBusiness
, m.FullResolutionTimeBusiness
, m.AgentWaitTimeBusiness
, m.RequesterWaitTimeBusiness
, source.Value AS Source
, case when category.Value = 'cs_other' then 'other'
  when category.value = 'test' then 'other'
  else category.value end AS Category
, rating.Score
, case when csa.office is not null then csa.office else 'Null' end office
, case when csa.office not in ('MGT') then csa.office
  when csa.office in ('MGT') and csa.advisor in ('XXXXXXXXXXXXXXXXXXXX') then 'PT'
  when csa.office in ('MGT') and csa.advisor in ('XXXXXXXXXXXXXXXXXXXX') then 'UK'
  when csa.office in ('MGT') and csa.advisor in ('XXXXXXXXXXXXXXXXXXXX') then 'US'
  else null end as office_escalation
FROM
  dbo.Zendesk_Tickets (nolock) t
  LEFT OUTER JOIN dbo.Zendesk_Accounts as acc (nolock) ON acc.ID = t.AccountID
  LEFT OUTER JOIN dbo.Zendesk_TicketMetrics AS m (nolock) ON t.ID = m.TicketID and acc.ID = m.AccountID
  LEFT OUTER JOIN dbo.Zendesk_TicketsCustomFields AS source (nolock) ON source.TicketID = t.ID AND source.CustomTicketFieldID in (28835191,24147711) and acc.ID = source.AccountID
  LEFT OUTER JOIN dbo.Zendesk_TicketsCustomFields AS aa (nolock) ON aa.TicketID = t.ID AND aa.CustomTicketFieldID = 28842853 and acc.ID = aa.AccountID
  LEFT OUTER JOIN dbo.Zendesk_TicketsCustomFields AS category (nolock) ON category.TicketID = t.ID AND category.CustomTicketFieldID in (28844922,24147731) and acc.ID = category.AccountID
  LEFT OUTER JOIN dbo.Zendesk_TicketsCustomFields as Survey (nolock) ON Survey.TicketID = t.ID and Survey.CustomTicketFieldID = 24159192 and acc.ID = survey.AccountID
  LEFT OUTER JOIN dbo.Zendesk_Groups AS Groups (nolock) ON Groups.ID = t.GroupID and acc.ID = Groups.AccountID
  LEFT OUTER JOIN dbo.Zendesk_SatisfactionRatings AS rating (nolock) ON rating.TicketID = t.ID and rating.score <> 'offered' and acc.ID = rating.AccountID
  LEFT OUTER JOIN dbo.Zendesk_Users as Users (nolock) ON users.ID = t.AssigneeID and acc.ID = Users.AccountID
  LEFT OUTER JOIN dbo.Zendesk_Users as UserRequester (nolock) ON UserRequester.ID = t.RequesterID and acc.ID = Users.AccountID
  LEFT JOIN bi_custserv.dbo.CustomerServiceAdvisors csa (nolock) ON users.ID = csa.ZendeskNewID
WHERE
  (t.Tags NOT LIKE 'Xclosed_by_mergeX')
  and acc.ID IN (3)
  and t.Status not in ('closed')
  and cast(t.createdat as date) >= '2014-01-01'
  and solvedat is not null
  and Solvedat >= (case datepart(dw,cast(getdate() as date))
  when 1 then DATEADD(DAY, DATEDIFF(DAY, 2, CURRENT_TIMESTAMP), 0.25)
  when 2 then DATEADD(DAY, DATEDIFF(DAY, 3, CURRENT_TIMESTAMP), 0.25)
  when 3 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
  when 4 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
  when 5 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
  when 6 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
  when 7 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
  end)
  and Solvedat < (case datepart(dw,cast(getdate() as date))
  when 1 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
  when 2 then DATEADD(DAY, DATEDIFF(DAY, 2, CURRENT_TIMESTAMP), 0.25)
  when 3 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
  when 4 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
  when 5 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
  when 6 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
  when 7 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
  end)
  and FullResolutionTimeBusiness is not null

```

### New Tickets

```

select case
  when createdat between DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25) and DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25) then '0<days<1'
  when createdat between DATEADD(DAY, DATEDIFF(DAY, 2, CURRENT_TIMESTAMP), 0.25) and DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25) then '1<days<2'
  when createdat between DATEADD(DAY, DATEDIFF(DAY, 4, CURRENT_TIMESTAMP), 0.25) and DATEADD(DAY, DATEDIFF(DAY, 2, CURRENT_TIMESTAMP), 0.25) then '2<days<4'
  when createdat between DATEADD(DAY, DATEDIFF(DAY, 7, CURRENT_TIMESTAMP), 0.25) and DATEADD(DAY, DATEDIFF(DAY, 4, CURRENT_TIMESTAMP), 0.25) then '4<days<7'
  when createdat < DATEADD(DAY, DATEDIFF(DAY, 7, CURRENT_TIMESTAMP), 0.25) then '>=7days'
end as [Range]
, acc.AccountName
FROM (SELECT
  acc.AccountName
  , t.ID AS TicketID
  , t.Type
  , t.Subject
  , t.Status
  , t.Via
  , Groups.Name AS [Group]
  , Users.Name as [Agent]
  , Users.Role
  , UserRequester.Name as AgentRequester
  , UserRequester.Role as RoleRequester
  , m.Reopens
  , m.Replies
  , t.Createdat as [Createdat]
  , DATETIMEPART(HOUR,t.Createdat) as CreatedHour
  , m.Assignedat
  , t.Updatedat
  , m.Solvedat
  , m.LatestCommentAddedat
  , m.FirstResolutionTimeBusiness
  , m.ReplyTimeBusiness
  , m.FullResolutionTimeBusiness
  , m.AgentWaitTimeBusiness
  , m.RequesterWaitTimeBusiness
  , source.Value AS Source
  , category.Value AS Category, rating.Score
  , case when csa.office is not null then csa.office else 'Null' end office
  , case when csa.office not in ('MGT') then csa.office
  when csa.office in ('MGT') and csa.advisor in ('XXXXXXXXXXXXXXXXXXXX') then 'PT'
  when csa.office in ('MGT') and csa.advisor in ('XXXXXXXXXXXXXXXXXXXX') then 'UK'
  when csa.office in ('MGT') and csa.advisor in ('XXXXXXXXXXXXXXXXXXXX') then 'US'
  else null end as office_escalation
FROM
  dbo.Zendesk_Tickets (nolock) t
  LEFT OUTER JOIN dbo.Zendesk_Accounts as acc (nolock) ON acc.ID = t.AccountID
  LEFT OUTER JOIN dbo.Zendesk_TicketMetrics AS m (nolock) ON t.ID = m.TicketID and acc.ID = m.AccountID
  LEFT OUTER JOIN dbo.Zendesk_TicketsCustomFields AS source (nolock) ON source.TicketID = t.ID AND source.CustomTicketFieldID in (28835191,24147711) and acc.ID = source.AccountID
  LEFT OUTER JOIN dbo.Zendesk_TicketsCustomFields AS aa (nolock) ON aa.TicketID = t.ID AND aa.CustomTicketFieldID = 28842853 and acc.ID = aa.AccountID
  LEFT OUTER JOIN dbo.Zendesk_TicketsCustomFields AS category (nolock) ON category.TicketID = t.ID AND category.CustomTicketFieldID in (28844922,24147731) and acc.ID = category.AccountID
  LEFT OUTER JOIN dbo.Zendesk_Groups AS Groups (nolock) ON Groups.ID = t.GroupID and acc.ID = Groups.AccountID
  LEFT OUTER JOIN dbo.Zendesk_SatisfactionRatings AS rating (nolock) ON rating.TicketID = t.ID and rating.score <> 'offered' and acc.ID = rating.AccountID
  LEFT OUTER JOIN dbo.Zendesk_Users as Users (nolock) ON users.ID = t.AssigneeID and acc.ID = Users.AccountID
  LEFT OUTER JOIN dbo.Zendesk_Users as UserRequester (nolock) ON UserRequester.ID = t.RequesterID and acc.ID = Users.AccountID
  LEFT JOIN bi_custserv.dbo.CustomerServiceAdvisors csa (nolock) ON csa.ZendeskNewID = Users.ID
WHERE
  (t.Tags NOT LIKE 'Xclosed_by_mergeX')
  and acc.ID IN (3)
  and cast(t.createdat as date) >= '2014-01-01' tnp
  where solvedat is null and Status in ('new')

```

## Backlog Tickets

```

select case
  when datediff(HOUR, Createdat, getdate()) between 0 and 24 then '0days<1'
  when datediff(HOUR, Createdat, getdate()) between 24 and 168 then '1days<7'
  when datediff(HOUR, Createdat, getdate()) between 168 and 336 then '7days<14'
  when datediff(HOUR, Createdat, getdate()) between 336 and 672 then '14days<28'
  when datediff(HOUR, Createdat, getdate()) >= 672 then '>=28days'
end as [Range]
, datediff(minute, createdat, getdate()) as CurrentBacklogTime
from (SELECT
  acc.AccountName
, t.ID AS TicketID
, t.Type
, t.Subject
, t.Status
, t.Via
, Groups.Name AS [Group]
, Users.Name as [Agent]
, Users.Role
, UserRequester.Name as AgentRequester
, UserRequester.Role as RoleRequester
, m.Reopens
, m.Replies
, t.CreatedAt as [CreatedAT]
, DATEPART(HOUR, t.CreatedAT) as CreatedHour
, m.AssignedAt
, t.UpdatedAt
, m.SolvedAt
, m.LatestCommentAddedAt
, m.FirstResolutionTimeBusiness
, m.ReplyTimeBusiness
, m.FullResolutionTimeBusiness
, m.AgentWaitTimeBusiness
, m.RequesterWaitTimeBusiness
, source.Value AS Source
, case when category.Value = 'cs_other' then 'other'
  when category.value = 'test' then 'other'
  else category.value end AS Category
, rating.Score
, case when csa.office is not null then csa.office else 'Null' end office
FROM
  dbo.Zendesk_Tickets (nolock) t
  LEFT OUTER JOIN dbo.Zendesk_Accounts as acc (nolock) ON acc.ID = t.AccountID
  LEFT OUTER JOIN dbo.Zendesk_TicketMetrics AS m (nolock) ON t.ID = m.TicketID and acc.id = m.AccountID
  LEFT OUTER JOIN dbo.Zendesk_TicketsCustomFields AS source (nolock) ON source.TicketID = t.ID AND source.CustomTicketFieldID in (20835191,24147711) and acc.id = source.AccountID
  LEFT OUTER JOIN dbo.Zendesk_TicketsCustomFields AS aa (nolock) ON aa.TicketID = t.ID AND aa.CustomTicketFieldID = 20842853 and acc.id = aa.AccountID
  LEFT OUTER JOIN dbo.Zendesk_TicketsCustomFields AS category (nolock) ON category.TicketID = t.ID AND category.CustomTicketFieldID in (20844922,24147731) and acc.id = category.AccountID
  LEFT OUTER JOIN dbo.Zendesk_Groups AS Groups (nolock) ON Groups.ID = t.GroupID and acc.id = Groups.AccountID
  LEFT OUTER JOIN dbo.Zendesk_SatisfactionRatings AS rating (nolock) ON rating.TicketID = t.ID and rating.score < 'offered' and acc.id = rating.AccountID
  LEFT OUTER JOIN dbo.Zendesk_Users as Users (nolock) ON users.ID = t.AssigneeID and acc.id = Users.AccountID
  LEFT OUTER JOIN dbo.Zendesk_Users as UserRequester (nolock) ON UserRequester.ID = t.RequesterID and acc.id = Users.AccountID
  LEFT JOIN bi_custserv.dbo.CustomerServiceAdvisors csa (nolock) ON users.id = csa.ZendeskNewID
WHERE
  (t.Tags NOT LIKE '%closed_by_merge%')
and acc.id IN (3)
and cast(t.createdat as date) >= '2014-01-01') tmp
WHERE
Status not in ('solved', 'closed', 'new', 'deleted')

```

## Created Tickets

```

SELECT
  acc.AccountName
, t.ID AS TicketID
, t.Type
, t.Subject
, t.Status
, t.Via
, Groups.Name AS [Group]
, Users.Name as [Agent]
, Users.Role
, UserRequester.Name as AgentRequester
, UserRequester.Role as RoleRequester
, m.Reopens
, m.Replies
, CAST(t.CreatedAt as date) as CreatedAt
, DATEPART(HOUR, t.CreatedAT) as CreatedHour
, m.AssignedAt
, t.UpdatedAt
, m.SolvedAt
, m.FirstResolutionTimeBusiness
, m.ReplyTimeBusiness
, m.FullResolutionTimeBusiness
, m.AgentWaitTimeBusiness
, m.RequesterWaitTimeBusiness
, source.Value AS Source
, case when category.Value = 'cs_other' then 'other'
  when category.value = 'test' then 'other'
  else category.value end AS Category, rating.Score
, case when csa.office is not null then csa.office else 'Null' end office
, CAST(t.CreatedAt as date) as day
FROM
  dbo.Zendesk_Tickets (nolock) t
  LEFT OUTER JOIN dbo.Zendesk_Accounts as acc (nolock) ON acc.ID = t.AccountID
  LEFT OUTER JOIN dbo.Zendesk_TicketMetrics AS m (nolock) ON t.ID = m.TicketID and acc.id = m.AccountID
  LEFT OUTER JOIN dbo.Zendesk_TicketsCustomFields AS source (nolock) ON source.TicketID = t.ID AND source.CustomTicketFieldID in (20835191,24147711) and acc.id = source.AccountID
  LEFT OUTER JOIN dbo.Zendesk_TicketsCustomFields AS aa (nolock) ON aa.TicketID = t.ID AND aa.CustomTicketFieldID = 20842853 and acc.id = aa.AccountID
  LEFT OUTER JOIN dbo.Zendesk_TicketsCustomFields AS category (nolock) ON category.TicketID = t.ID AND category.CustomTicketFieldID in (20844922,24147731) and acc.id = category.AccountID
  LEFT OUTER JOIN dbo.Zendesk_Groups AS Groups (nolock) ON Groups.ID = t.GroupID and acc.id = Groups.AccountID
  LEFT OUTER JOIN dbo.Zendesk_SatisfactionRatings AS rating (nolock) ON rating.TicketID = t.ID and rating.score < 'offered' and acc.id = rating.AccountID
  LEFT OUTER JOIN dbo.Zendesk_Users as Users (nolock) ON users.ID = t.AssigneeID and acc.id = Users.AccountID
  LEFT OUTER JOIN dbo.Zendesk_Users as UserRequester (nolock) ON UserRequester.ID = t.RequesterID and acc.id = Users.AccountID
  LEFT JOIN bi_custserv.dbo.CustomerServiceAdvisors csa (nolock) ON users.id = csa.ZendeskNewID
WHERE
(t.Tags NOT LIKE '%closed_by_merge%')
and acc.id IN (3)
and t.createdat >= (case datepart(dw, cast(getdate() as date))
when 1 then DATEADD(DAY, DATEDIFF(DAY, 2, CURRENT_TIMESTAMP), 0.25)
when 2 then DATEADD(DAY, DATEDIFF(DAY, 3, CURRENT_TIMESTAMP), 0.25)
when 3 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
when 4 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
when 5 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
when 6 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
when 7 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
end)
and t.createdat < (case datepart(dw, cast(getdate() as date))
when 1 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
when 2 then DATEADD(DAY, DATEDIFF(DAY, 2, CURRENT_TIMESTAMP), 0.25)
when 3 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
when 4 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
when 5 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
when 6 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
when 7 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
end)

```

## Calls

```

select Natterboxcallid
, CreatedDate
, CallStartDate
, datepart(day,callstartdate) as CallDay
, datepart(hour, callstartdate) as CallStartHour
, CallConnected
, CallDirection
, CallRingSeconds
, CallDurationSeconds
, CallerCountryShort
, calledCountryShort
, CalledNumber
, CallerNumber
, CalledFirstName
, calledGroup
, CalledFullName
, datepart(dw, calls.CallStartDate) as weekday
, case
when (callconnected = 'yes' and calldirection = 'inbound') then 'Inbound Answered'
when (callconnected = 'no' and calldirection = 'inbound') then 'Inbound Not Answered'
end as [Calls Inbound Global]
, Office
, cd.Country
, ct.subfolder
, case when ((ct.starthour >= ct.endhour) and (cast(calls.CallStartDate as time) not between ct.EndHour and ct.StartHour)) then 'Yes'
else case when ((ct.starthour <= ct.endhour) and (cast(calls.CallStartDate as time) between ct.StartHour and ct.EndHour)) then 'Yes' else 'No' end end as CP
, case when ((ct.starthour >= ct.endhour) and callconnected = 'yes' and calldirection = 'inbound' and (cast(calls.CallStartDate as time) not between ct.EndHour and ct.StartHour)) then 'Yes'
else case when ((ct.starthour <= ct.endhour) and callconnected = 'yes' and calldirection = 'inbound' and (cast(calls.CallStartDate as time) between ct.StartHour and ct.EndHour)) then 'Yes' else 'No' end end as CallConnectedMetInbound
, case when ((ct.starthour >= ct.endhour) and calldirection = 'inbound' and (cast(calls.CallStartDate as time) not between ct.EndHour and ct.StartHour)) then 'Yes'
else case when ((ct.starthour <= ct.endhour) and calldirection = 'inbound' and (cast(calls.CallStartDate as time) between ct.StartHour and ct.EndHour)) then 'Yes' else 'No' end end as CallRequestedMetInbound
FROM [BI_CUSTSERV].[dbo].[SalesForcecalls] (nolock) calls

LEFT JOIN BI_CUSTSERV.dbo.CustomerServiceAdvisors csa (nolock) on calls.CalledFullName = csa.SalesForceID

left join [BI_CUSTSERV].[dbo].[CountryData] (nolock) cd on
cd.ISO3 = case when calls.CallDirection = 'inbound' then calls.calledCountryShort else calls.callerCountryShort end

left join [BI_CUSTSERV].[dbo].[CustomerPromiseTimes] (nolock) ct on
datepart(weekday, calls.CallStartDate-1) between ct.WeekdayStart and ct.WeekdayEnd
and ct.Type = 'Phone'
and ct.Subfolder =
case when (ct.WeekdayStart = 1 and ct.WeekdayEnd = 5) then
(case when cd.ISO2 in ('CN','DE','ES','FR','JP','MX','RU','US') then cd.ISO2
when cd.ISO2 = 'GB' then 'UK'
ELSE null
end)
when (ct.WeekdayStart = 6 and ct.WeekdayEnd = 7) then
(case when cd.ISO2 in ('DE','ES','FR','JP','MX','RU','US') then cd.ISO2
when cd.ISO2 = 'GB' then 'UK'
else null
end)
else null end

WHERE
CallStartDate >= (case datepart(dw,cast(getdate() as date))
when 1 then DATEADD(DAY, DATEDIFF(DAY, 2, CURRENT_TIMESTAMP), 0.25)
when 2 then DATEADD(DAY, DATEDIFF(DAY, 3, CURRENT_TIMESTAMP), 0.25)
when 3 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
when 4 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
when 5 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
when 6 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
when 7 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
end)
and CallStartDate < (case datepart(dw,cast(getdate() as date))
when 1 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
when 2 then DATEADD(DAY, DATEDIFF(DAY, 2, CURRENT_TIMESTAMP), 0.25)
when 3 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
when 4 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
when 5 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
when 6 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
when 7 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
end)
and not (csa.Office is not null and csa.Office in ('OPS - PT','OPS - US','SA - UK'))

```

## Chats

```

SELECT distinct [ChatType]
,[ChatStatusType]
,[CountryCode]
,[IPAddress]
, chats.[OperatorID]
,[CreateDate]
,[StartDate]
,[AnswerDate]
, csa.Advisor as Agent
, case when csa.Office is not null then csa.Office else 'Null' end Office
, case
when ChatStatusType in (7) and answerdate is null and chats.operatorid is null then 'Unavailable'
when ChatStatusType in (10,18) and answerdate is null and chats.operatorid is null then 'Blocked'
when ChatStatusType not in (7,10,18) and answerdate is null and chats.operatorid is null then 'Abandoned'
when AnswerDate is null and chats.operatorid is not null then 'Unanswered'
when AnswerDate is not null and chats.operatorid is not null then 'Answered'
end as chatstatus

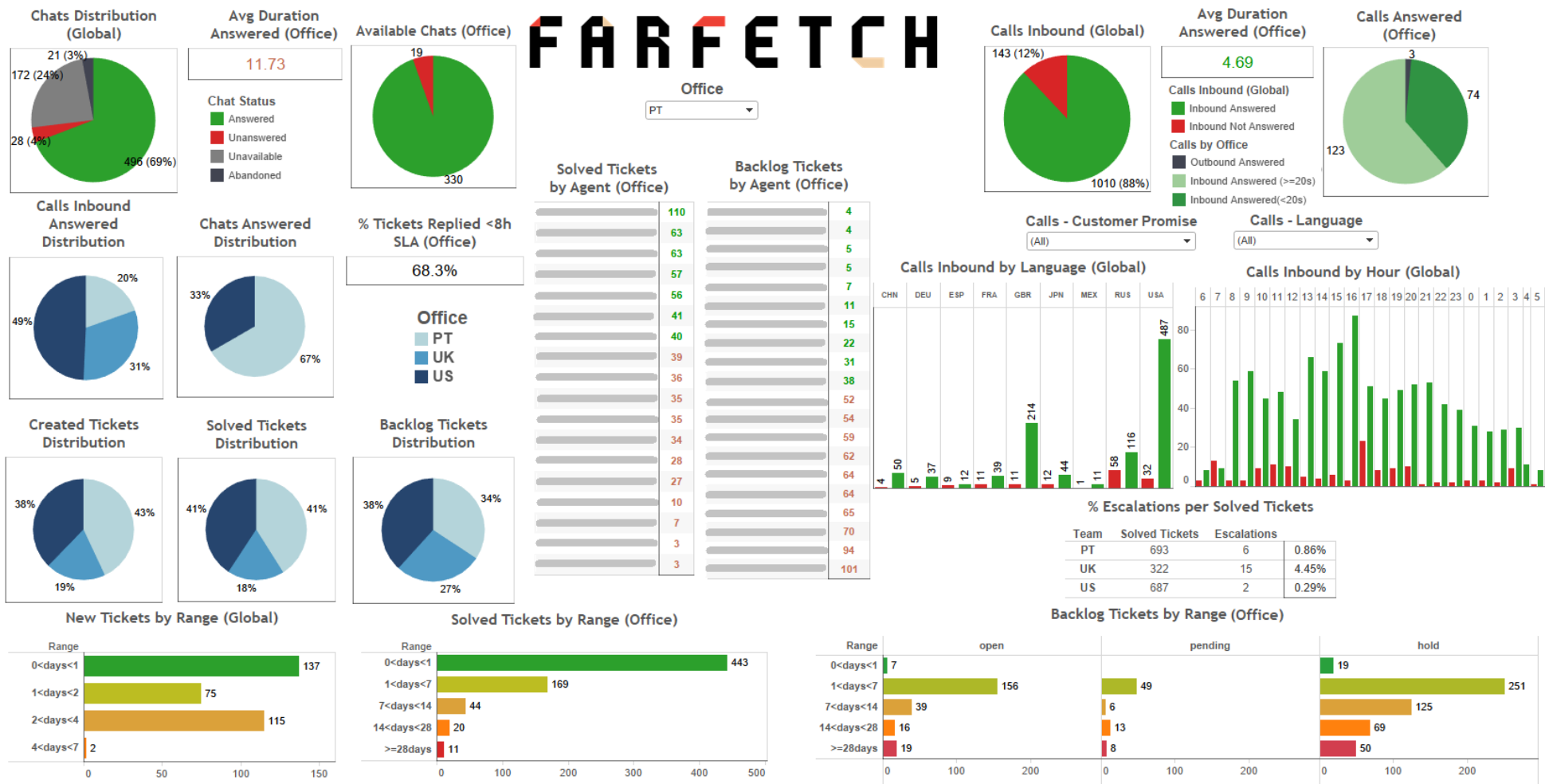
FROM [dbo].[boldchat_chats] (nolock) chats

LEFT JOIN BI_CUSTSERV.dbo.CustomerServiceAdvisors csa(nolock) on chats.OperatorID = csa.BoldChatID

WHERE
CreateDate >= (case datepart(dw,cast(getdate() as date))
when 1 then DATEADD(DAY, DATEDIFF(DAY, 2, CURRENT_TIMESTAMP), 0.25)
when 2 then DATEADD(DAY, DATEDIFF(DAY, 3, CURRENT_TIMESTAMP), 0.25)
when 3 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
when 4 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
when 5 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
when 6 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
when 7 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
end)
and CreateDate < (case datepart(dw,cast(getdate() as date))
when 1 then DATEADD(DAY, DATEDIFF(DAY, 1, CURRENT_TIMESTAMP), 0.25)
when 2 then DATEADD(DAY, DATEDIFF(DAY, 2, CURRENT_TIMESTAMP), 0.25)
when 3 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
when 4 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
when 5 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
when 6 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
when 7 then DATEADD(DAY, DATEDIFF(DAY, 0, CURRENT_TIMESTAMP), 0.25)
end)

```

## APPENDIX D: Daily Management Dashboard



# APPENDIX E: Weekly Management Dashboard

