

**Operational Costs: a focus on returned items on fashion e-tail**

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*À minha família,*

## Resumo

Os custos operacionais são algo que qualquer empresa, independentemente do sector, tem necessidade de medir, controlar e otimizar. Neste sentido, e dadas as especificidades do modelo de negócio da Farfetch, empresa de comércio online de moda de luxo, os problemas encontrados não só estão intimamente ligados ao consumidor final mas também a toda a cadeia de processamento operacional.

É num destes processos que ocorre uma situação típica em qualquer empresa de retalho mas que, no entanto, se revela problemática para a Farfetch – os itens devolvidos cuja devolução é recusada pela Boutique. Dado que a Farfetch lida com artigos de moda de luxo e dado o seu elevado valor comercial é expectável que o cliente tenha uma experiência condizente com o valor monetário do artigo ou, pelo menos, é esse o tipo de experiência que a Farfetch quer que o cliente tenha.

No entanto, é necessário conjugar todas as entidades envolvidas e criar medidas de controlo que diminuam os custos operacionais incorridos, bem como solidificar a relação comercial entre a Farfetch e os seus parceiros de negócio chave, as Boutiques, tudo sem prejudicar a experiência final do cliente.

Assim, o propósito da dissertação foi analisar todo o processo, perceber o impacto financeiro que este estava a ter e propor um plano de ação, sempre respeitando as condições enumeradas.

Desta forma, chegou-se a uma solução que, conseguindo a redução dos custos, tem também a vantagem de solidificar a relação comercial entre a Farfetch e as Boutiques, conseguindo reverter o paradigma até aqui instaurado – soluções como ações reativas aos problemas encontrados.

Como se poderá concluir, o maior benefício da solução proposta é não só lidar com o problema proposto – recusa, por parte das Boutiques, em aceitar certas devoluções – quer de um ponto de vista financeiro, quer de um ponto de vista comercial mas também iniciar um ciclo de soluções que funcionem como medidas preventivas de controlo.

## Abstract

Operational costs are a matter that any company, despite the sector, has need to measure, control and optimize. In this sense, and given the specificities of Farfetch business model, an online high fashion luxury company, the problems encountered not only are closely connected to the end consumer but also with the entire operational chain.

It's one of these processes, typical for most retail companies, that reveals troublesome for Farfetch - items returned refused by the Boutiques. Since Farfetch deals with high fashion luxury items and given their high commercial value, it is expected that the client has an experience that matches with the item value or, at least, it is that kind of experience that Farfetch wants to pass along to their clients.

However, it is necessary to work together with all the involved entities and create control measures that reduce the incurred operational costs, as well as solidify the commercial relationship between Farfetch and their key business partners, the Boutiques, all without harming the customer experience.

So, the purpose of this dissertation was to analyze all the process, understand all the financial impact and propose a line of action, always bearing in mind the above conditions.

Thus, a solution was found that, while reducing costs, has also the merit of solidifying the commercial relationship between Farfetch and the Boutiques, managing to revert the ongoing paradigm – solutions as a mean of reaction to the problems.

It can be concluded that the major benefit of the proposed solution was not only dealing with the proposed problem – refusal, by the Boutiques, in accepting certain returns – both from a financial point of view and commercial perspective but also to initiate a cycle of solutions that act as preventive measures.

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# Index

1	Introduction.....	1
1.1	Farfetch .....	1
1.2	Project .....	2
1.3	Structure .....	2
2	State of the Art.....	4
2.1	Luxury.....	4
2.2	E-commerce .....	5
2.3	Business to Business and Customer Relationship Management.....	7
3	Current workflow and problems encountered .....	9
3.1	Process .....	9
3.1.1	Order Processing .....	9
3.1.2	Returns Policy .....	10
3.1.3	Return Process .....	11
3.2	“Amaze Customers” and Operational Costs .....	13
3.3	Current Cost Structure .....	14
4	Analysis and Solutions Proposed.....	16
4.1	Analysis.....	16
4.2	Global solution and control metrics .....	18
4.3	Budget generation .....	20
4.3.1	Scenario 1 – 0.10% GMV.....	20
4.3.2	Scenario 2 – Equal Budget per Boutique .....	22
4.3.3	Scenario 3 - GMV impact cluster .....	23
4.3.4	Scenario 4 - Cluster by GMV impact and Refused Returns cost behavior.....	26
4.4	Final Solution.....	30
5	Conclusions and future work .....	32
6	References.....	34
	Appendix A: Budget formation scenarios .....	36

## Glossary

AOV – Average Order Value – it refers to the average of every orders placed on Farfetch or to the average of every orders placed on some specific Boutique;

GMV – Gross Market Value – it refers to the total value of all orders placed on Farfetch. It is discriminated by Boutique;

Operational Costs – it refers to every cost incurred along the operation. It starts with the order placement and ends with the order received by the customer. It also encompasses all the costs associated with the customer returning the item. It can also refers to the application existent to process the above mentioned costs;

Refused Returns – it refers to the items that are returned to the Boutiques but that the Boutiques refuse to accept, alleging some kind of problem with the item.

## Figure Index

Figure 1 - Order Process .....	9
Figure 2 - Return Process .....	11
Figure 3 - Refused Return process .....	12
Figure 4 - Budget application and flow .....	19
Figure 5 - 0.1%GMV representation .....	20
Figure 6 - EqualBudget process .....	22
Figure 7 - Budget formation: GMVClusters .....	24
Figure 8 - Cluster formation: GMV&RRC .....	28

## Graphic Index

Graphic 1 - Customization, Personalization and User Recognition, adapted from (Bjorn-Andersen and Hansen 2011).....	5
Graphic 2 - E-commerce sales, adapted from (Niranjanamurthy, et al. 2013).....	6

## Table Index

Table 1 – Advantages and disadvantages of e-commerce, adapted from (Niranjanamurthy, et al. 2013).....	6
Table 2 - B2B Economic Principles, adapted from (Zeng, Wen and Yen 2003) .....	7
Table 3 - CRM features, adapted from (Zeng, Wen and Yen 2003) .....	8
Table 4 - Operational Costs categories.....	14
Table 5 - Overall cost structure .....	15
Table 6 - Top 10 Refused Return costs Boutiques .....	17
Table 7 - Average Refused Returns per Boutique.....	17
Table 8 - Average global values .....	17
Table 9 - Current Refused Return costs and GMV values .....	18
Table 10 - Global solution control metrics .....	20
Table 11 - Top 10 Boutiques: 0.1%GMV .....	21
Table 12 - Budget summary: 0.1%GMV.....	21
Table 13 - Top 10 Boutiques: EqualBudget .....	22
Table 14 – Budget summary: EqualBudget.....	23
Table 15 - Top 10 Boutiques: Cluster distribution .....	25
Table 16 - Top 10 Boutiques: GMVClusters.....	25
Table 17 - Budget summary: GMVClusters.....	26
Table 18 - Cluster formation: GMV weight .....	26
Table 19 – Clusters formation: Refused Returns costs over GMV .....	27
Table 20 - Final clusters .....	27
Table 21 - Top 10 Boutiques: Cluster allocation.....	28
Table 22 - Final clusters: metrics and global values .....	29
Table 23 - Top 10 Boutiques: GMV&RRC.....	30
Table 24 - Budget summary: GMV&RRC.....	30
Table 25 - Budget generation summary .....	31
Table 26 - 0.1%GMV Scenario .....	36
Table 27 - EqualBudget Scenario .....	37
Table 28 - GMVClusters Scenario .....	38
Table 29 – GMV&RRC Scenario.....	39

## 1 Introduction

The present dissertation originates from an absolute need to first measure, control and then optimize the efficiency of some of the core processes within the 8-year old online luxury fashion company – Farfetch. In this particular case, the project is related with the analysis, improvement and control of the Refused Returns costs, a large part of the operational costs incurred by the company.

Operational Costs, as a whole, are a very complex topic if taken into account the number of variables, entities, processes associated and a major difficulty in coordinating all the players involved. This complexity extends to the problem being tackled – Refused Returns – and the solution proposed is a reflex of the difficulty in dealing with all the stakeholders involved.

Operational Costs represent a high priority problem due to the related high costs for the company and developing control mechanisms is of the utmost importance.

### 1.1 Farfetch

Farfetch is an online marketplace focused on luxury fashion that curates the best Boutiques around the world. The Boutiques, key partners of Farfetch, are, themselves, curators of some of the best articles that fashion brands have to offer. Supported by this strong partnership, Farfetch can bring a wide variety of high end fashion products to the final customer.

The portal allows customers to shop online from Boutiques all over the world offering articles typically available only offline. The variety and number of articles available in all the Boutiques on Farfetch platform makes the experience more interesting than shopping exclusively on the Boutique online site.

Farfetch's main competitive advantage is its business model. The most interesting and noticeable trace is that Farfetch does not own stock. In this sense, when a sale is done a third party logistic provider will collect the order at the Boutique and deliver it to the customer's appointed address. This strategy excludes the need of Farfetch to hold its own stock which makes the cost of operating significantly lower but it shifts the impact of business to the operational performance of the Boutiques.

On the opposite side of the whole process, Farfetch relies heavily on the customer appreciation trying to do the most to bring value and deliver an amazing experience to the customer. For this purpose, the portal is translated in several languages and customer service is available in different languages and time zones.

Farfetch is spread worldwide, having established offices in London, New York, Los Angeles, Porto, Guimaraes, Lisbon, Sao Paulo, Shanghai, Moscow, Hong Kong and Tokyo with a team of over 1000 people.

Farfetch is a fast growing company, having completed a round of funding, being currently valued in 1.5 billion US dollars.

## 1.2 Project

This project is born as a consequence of a series of events that dictate the way Farfetch runs its operations and the way it conducts itself.

Farfetch conduct is based on a set of six values. One of these values regards the customers' experience and it's called "Amazed Customers".

This was the last value introduced to Farfetch culture and it symbolizes the kind of experience that Farfetch, as a service provider, wants their customers to have: an experience of luxury where the treatment, efficiency and overall satisfaction is the same as the quality of the articles being sold.

Before "Amaze Customers" was introduced, Farfetch had a tight policy regarding all kind of returned items and refunds being made to customers. Post change, Farfetch let go off this policy and embraced a new philosophy of delivering an all-out full luxury experience from the moment the client buys an item.

Accounting this new policy, it was only natural that the costs associated with running the operations went up. This was expected and some measures were taken to minimize the growth of these new Operational Costs. Although these measures were created, they proved insufficient to fully control and optimize these new Operational Costs. In this sense, it is necessary to understand all the processes, re-analyze the impact on the Operational Costs and develop long term sustainable solutions that allow Farfetch to provide an amazing online customer experience and sustain the costs associated to it.

Given the above explained scenario, the project will focus on one of the areas of the Operational Costs - Refused Returns. Refuse returns are the perfect embodiment of the complexity of the Operational Costs, forcing Farfetch to deal with multiple entities and coordinate itself with them while trying to provide a sustainable solution for every part involved.

In this scope, the project will pass by understanding the current process, analyzing the data available and propose a solution that suits all the requirements.

## 1.3 Structure

The main objective of the thesis is to provide a complete in depth look to the Operational Costs Refused Returns with focus on understanding the processes, analyze all the data and provide solutions that, while reducing costs, maintains a good commercial relationship between Farfetch and the Boutiques and, also, doesn't interfere with the customer final experience in Farfetch.

So, the logical structure built up for this dissertation is as follows:

Chapter 2 will deal with the literature review related with online commerce, luxury, business to business model and customer relationship management given that they all play a major role in Farfetch's business model.

Chapter 3 will be related with understanding the process, the problem definition, its importance to the company its effects. All these topics will be supported by data.

Chapter 4 will be composed of the proposed solutions and strategies found to solve the analyzed problems and the relevance of both.

Finally, Chapter 5 will present the conclusions of the thesis and the continuity of this project on the company in the form of next steps to tackle, application of some of the solutions and possible outcomes on a long-term perspective.

## 2 State of the Art

In this chapter, some of the most relevant topics related to the thesis will be discussed.

It is intended to, first, define luxury and its part regarding commercial trades.

Then, e-commerce will be defined and its evolution over the years, exposed.

Finally, the relationship between e-commerce, Business to Business (B2B) and Customer Relationship Management (CRM) will be analyzed.

### 2.1 Luxury

Luxury, more specifically luxury markets and luxury goods, cannot be easily defined or even benchmarked.

It could be presented the case that luxury, as it is, it's a concept, a notion. However, luxury is pointed as being a culture and a philosophy, clearly stating that the differences between luxury and any other kind of goods are so great - ranging from their functions all the way through the relationship that luxury items and markets have with their customers - that it would be erroneous to dismiss luxury as a culture (Okonkwo 2009).

As mentioned, it is credited to luxury the main function of stratification. It was through the exhibition of luxury that social classes were well defined and the ostentation of such luxury was regarded as a social convention and obligation. These habits were seen in such a distance time period as the Roman Empire, perpetuating themselves all the way through Middle Age up until the rise of the eighteen century and the rise of Enlightenment philosophy (Okonkwo 2009), (Kapferer and Bastien 2009).

So, given this ingrained notion of luxury, it is important to understand what part luxury takes on current society.

Although luxury lost its pronounced function of segregating and stratifying the social classes, it now takes a more subtle role of creating social status. It can be argued that, despite luxury ostentation is no longer seen as a social convention, the exhibition of luxury, in current society, it is a way of recreating the social stratification seen in previous ages.

However, this new subtle and not forced stratification is made by the choice of luxury.

Luxury now functions as a token of belonging to a superior class and, since the choice of one sense of luxury is only limited by their financial capacity, luxury takes this application of money into something representative of their social condition. Contrary to past times, where luxury was an imposition of social stature, in the modern, democratic times, luxury although still having the role of class segregation, does it not through the display of wealth but through the transformation of that wealth in "a culturally sophisticated product" (Kapferer and Bastien 2009).

So, it is now important to understand the connections between this new interpretation of luxury and its part in the luxury market that, globally, had seen a rapid growth from the latest 1980 till 2007 (Tynan, McKechnie and Chhuon 2010).

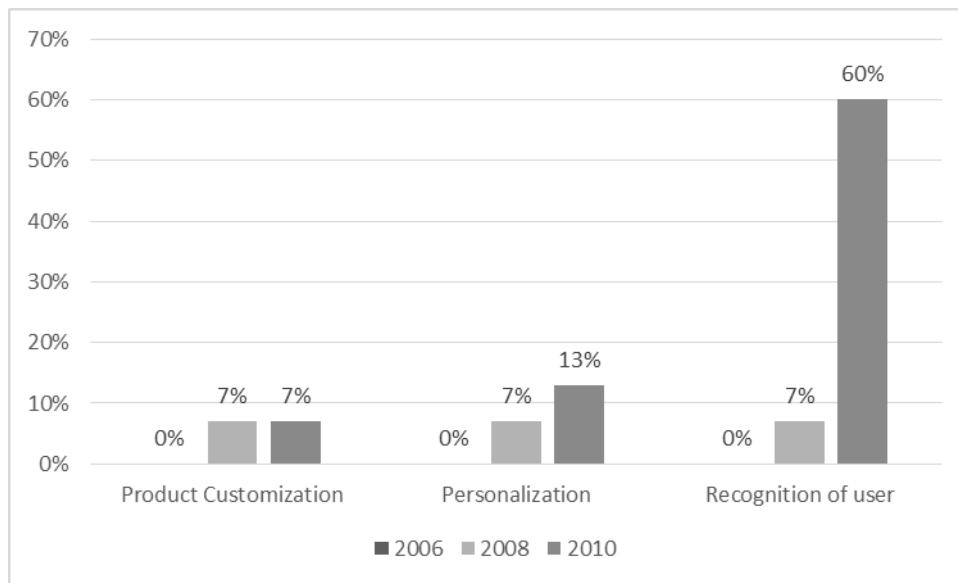
Luxury presents itself as a pointer towards the representation of an upper class and so remains in a superior position. Given this, and its rapid growth as a market it is only logical to question what role does luxury take in the e-commerce market and how its relationship with its customers

would be affected. Considering its upper status condition, the role of luxury on an e-commerce platform would be met with defrauded expectations. The luxury brand would have to deal with the consumer position of expecting to be looked up upon and in full control, reverting completely the instated paradigm (Okonkwo 2009).

After considering this paradigm reversion, it is interesting to show how some luxury brands tried to penetrate the e-commerce market, what strategies were used and their impact.

Given that luxury products are intrinsically connected with customization and personalization, it's only natural that, upon entering the e-commerce market, the luxury brands allowed for these concepts to remain unchanged (Bjorn-Andersen and Hansen 2011).

However, and as seen in [Graphic 1](#), that was not the case.



Graphic 1 - Customization, Personalization and User Recognition, adapted from (Bjorn-Andersen and Hansen 2011)

Given the above mentioned – the role of luxury in the society, the growth of luxury market, its penetration in the online market and the reversion of the customer-brand paradigm – it is with no surprise that it's seen an increased interest of luxury brands on social and interactive digital technologies (Bjorn-Andersen and Hansen 2011).

## 2.2 E-commerce

Electronic commerce (e-commerce), refers to all economic activity taken place on an online platform. As such, e-commerce ranges from a multitude of business such as banking all the way through hair and nail salons (Niranjanamurthy, et al. 2013)

Given the wide range of business variety, it makes sense to understand what advantages and disadvantages e-commerce has and its growth over the past years.

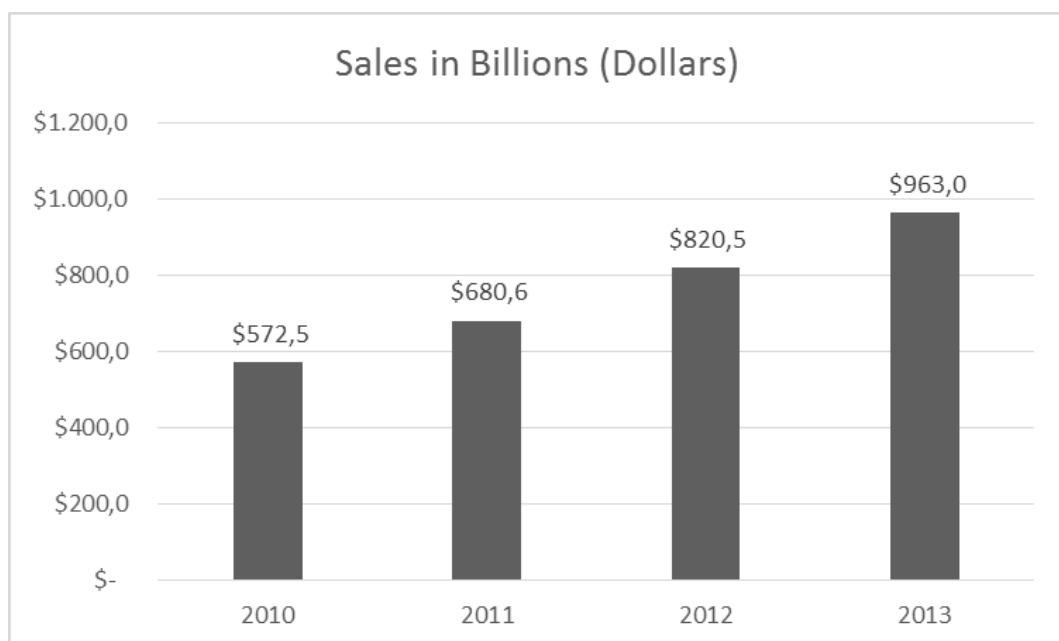
The benefits of e-commerce can be related, in a way, to an availability condition.

In [Table 1](#), a few advantages and disadvantages of e-commerce are shown.

Table 1 – Advantages and disadvantages of e-commerce, adapted from (Niranjanamurthy, et al. 2013)

<b>Advantages</b>	<b>Disadvantages</b>
Access to stores anywhere – either from the customer perspective, either from the store	Inability to experience and try the product before purchase
Stores are open at any time, allowing for a 24/7 interaction	E-commerce is liable to credit card fraud and security issues
Instant purchase of digital goods – items such as movies and videogames can be downloaded instantly	When buying some type of items there is a delay between the purchase and the reception, deferring the instant gratification of shopping
Ability to sell low volume goods – the economics of e-commerce allows for this type of products to be sold	Extraordinary dependence on the website – even a minor downtime can carry substantial loss

After presenting some advantages and disadvantages of e-commerce, the market evolution is exposed in [Graphic 2](#).



Graphic 2 - E-commerce sales, adapted from (Niranjanamurthy, et al. 2013)

As shown in [Graphic 2](#), the current e-commerce sales are growing and the next step will be to try and relate this factor with the trust and familiarity the customers have in the e-commerce business model.

Client trust in e-commerce, as a major factor, is affected by three sources (Corbitt, Thanasankit and Yi 2003):

1. E-commerce reputation;
2. The consumers pre-disposition;
3. The specific web-site visited.

Trust, not only associated with e-commerce but as a concept, is a major factor in the majority of social and economic interactions. It plays the most vital role regarding important decisions

and the acceptance of new technologies. Trust is also related with the decision of an e-commerce customer to download software, however, trust importance, as a factor, is linked to the task itself (Gefen, E-commerce: the role of familiarity and trust 2000).

Given the above explanation it is now possible to establish a connection between trust as a concept and trust related to e-commerce, and how it is affected.

E-commerce reputation, or impression, as a whole is the first major condition and barrier to win over the confidence of the customer. So, e-commerce credibility influences the decision to adhere to online shopping. The specific web-site visited will influence if the customer buys or not – regardless of having already adopted online shopping. Finally, consumer pre-disposition and formed ideas of e-commerce will affect the entire process and this pre-disposition is largely impacted by technology trustworthiness and perceived risk (Corbitt, Thanasankit and Yi 2003).

As seen in (Gefen, E-commerce: the role of familiarity and trust 2000), trust and familiarity play a pivotal role in e-commerce, especially on “people’s intention to purchase”.

So, in light of the contents presented, and acknowledging that people have particular beliefs – instead of plainly trusting e-commerce or not (McKnight, Choudhury and Kacmar 2002) – it can be said that trust is deeply correlated with attitude towards products, services and, more relevant, towards purchasing behaviors (Gefen, Karahanna and W. Straub 2003)

## 2.3 Business to Business and Customer Relationship Management

Business to Business (B2B) plays a pivotal role within markets. In an e-commerce related definition, B2B allows a business to interact with another business, via an online way of communication. This communication between businesses entails diverse benefits, such as: an increase in productivity and a potential reduction in excessive staff (Yang and Papazoglou 2000).

B2B offers solid economic principles, and in [Table 2](#), some of them are presented.

Table 2 - B2B Economic Principles, adapted from (Zeng, Wen and Yen 2003)

<b>Economic Principle</b>	<b>Brief description</b>
Exponential growth	A B2B hub critical value “increases as the square of the number of participants grows”.
Critical mass	Related to the first principle, it states that the more participants a hub has, the more valuable it is.
Customer “cohesion”	Given that any decision of importance must obey to a chain of command, with B2B this chain is fulfilled more smoothly.
More range of services	With full B2B integration is possible to provide a wider range of services such as payments processing, credit analysis and logistic services.

After understanding the core advantages of B2B, it is important to understand the different states in which companies can be.

The two different states, “vigilant” and “relaxed”, describe the sensitivity towards costs and stock. In that sense, vigilant state is described as having a “high buyer price sensitivity and a

cautious approach towards ordering” and relaxed state is presented as having a low price susceptibility (Zhang and Asim Ansari 2014).

The main point to carry from the different states is that price and costs decisions affect the passage from one state to the other and these same decisions, while in the relaxed state can function as trust builders, making B2B model more secure and less susceptible to negative external factors (Zhang and Asim Ansari 2014).

This very same conclusion is tied to the findings of (Garicano and N. Kaplan 2001) that argued that B2B e-commerce was likely to reduce “coordination costs/increase efficiency”.

As for Customer Relationship Management (CRM), it can be defined as not only a tool to guide relationship with customers but also all the procedures and technologies involved in managing and supporting interactions with, as said, clients but also with business partners (Davenport, Harris and Kohli 2001).

A CRM, in order to prove itself effective, must present some of the features shown in [Table 3](#).

Table 3 - CRM features, adapted from (Zeng, Wen and Yen 2003)

<b>Features</b>	<b>Brief description</b>
Relationship Management	“Service response based on customer input” as well as a series of guidelines that deliver the best experience to the customer
Use of technology	Using new technologies to add value to the client – deliver data and information as fast as possible
Opportunity management	Establish good conditions such as flexibility in order to adapt to any unpredictable variation in sales or demand and provide a good response to the customer

Following these features a CRM policy can itself be classified as a variety of concepts.

It was (Soliman 2011) that presented CRM as a process, a strategy or even a philosophy. The case was presented in such a way that, to work with a CRM approach, the effort put in discovering the needs of its main customers would be its most important variable.

So, after establishing all these conditions and criteria, it can be said that the stratification role of luxury associated with the increase in sales of e-commerce must lead e-commerce companies in a direction in which the best efforts are made to understand and captivate the customer needs. This effort is made with the intention of increasing the customer trust in e-commerce – factor that plays a vital role on customer decision to purchase.

### 3 Current workflow and problems encountered

The following chapter serves to expose the most relevant processes in Farfetch that, directly or indirectly, are related with Operational Costs, in specific, the Refused Returns parameter.

An overview of the related processes will be given, highlighting the critical situations and demonstrating how a Refused Return arises.

The entire process begins with an order from a customer.

#### 3.1 Process

##### 3.1.1 Order Processing

The order process begins when the customer confirms the order placement on the website. For the order to be triggered, one or more items must be added to the shopping bag. As soon as the order is created, a Portal Order is generated. Within this Portal Order there could be several Boutique Orders that represent the order from the Boutique perspective.

In [Figure 1](#), is shown the flow of Steps needed from the moment an order is placed to the moment the order is received by the customer.

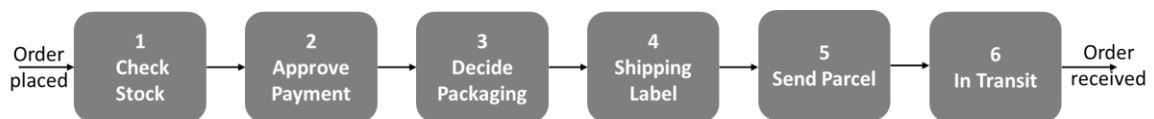


Figure 1 - Order Process

The different Steps that an order undergoes are described below:

##### Step 1 – Check Stock

In this first Step the Boutique is responsible for checking if the product is still available for sale. Between the moment the customer bought something on the website and the order gets to the Boutique, the Boutique could have already sold the item physically on the store. This kind of situations could lead to a No-Stock problem.

##### Step 2 – Approve Payment

Step 2 is where an order is approved or rejected depending on several parameters. The Fraud team, the sole team responsible for evaluating the orders, assess the customer's details based on a set of indicators and decides if a client is trustworthy or not. Therefore, there are two lines of action: the order is approved or not.

If the order is approved, it enters the next Step. If it is not, it can be immediately cancelled or is put under investigation.

### **Step 3 – Decide Packaging**

After the Boutique confirms the existence of stock and the Fraud team approves the order, it relies on the Boutique to choose the packaging of the box in which each item will be delivered. The main box - the outside box - is designed by Farfetch but every Boutique can personalize the interior box to improve the customer experience.

### **Step 4 – Create Shipping Label**

Step 4 consists in the creation of the air-way bill (AWB), a transport document vital to the courier provider to deliver the package to the customer.

In its essence is an automatic Step but, some of the times, errors occur and the Delivery Team must act and correct them in order to the package arrive at the correct destination.

### **Step 5 – Send Parcel**

After all the previous Steps are correctly completed, the package awaits to be picked up in the Boutiques. The pick-ups frequency is made using Farfetch managing tools and can vary from day to day, when a Boutique has many sales, to sporadic pick-ups booked by the Boutiques.

### **Step 6 – In transit**

Step 6 represents the time gap between the pick-up date in the Boutique and the delivery date at the customer. This time gap is controlled by the several logs which allows Farfetch to control the package.

In all of these Steps, problems can arise and, if necessary, it is always possible to create a Return to Origin (RTO) where the package is reversed and is sent back to the Boutique.

This is the standard procedure as to place an order.

After the customer receives the order and, in this specific scenario, it will be assumed that he wants to return it. To do so the customer must respect a series of norms in order to the return to be valid.

### **3.1.2 Returns Policy**

Next, follows a list of requirements needed in order for the returned item be accepted by the Boutiques.

- A returned item must arrive at the Boutique or brand from where it was ordered no later than 14 days after the customer received it. If the return period surpasses the demanded, Farfetch cannot guarantee that the Boutique will accept the return.
- Items must be returned unworn, unwashed, undamaged and unused with their original tags. Footwear and accessories must be returned in the original boxes provided and inside a protective shipping box.

- If the item comes with a security tag this must be left on. If the security tag is removed, then the returned item will not comply with the returns policy.
- Hosiery must be returned in its unopened packages.
- All skincare and cosmetics must be returned unused, unopened, with an unbroken seal and in their original packaging.

If all the return policies are fulfilled, then the return process is initiated.

### 3.1.3 Return Process

Similar to the order process – as seen in [Figure 1](#) - also returned item follow a series of Steps inside Farfetch system in order to guarantee the security and service level of the customer and of the item.

In [Figure 2](#), this flow of Steps is shown.

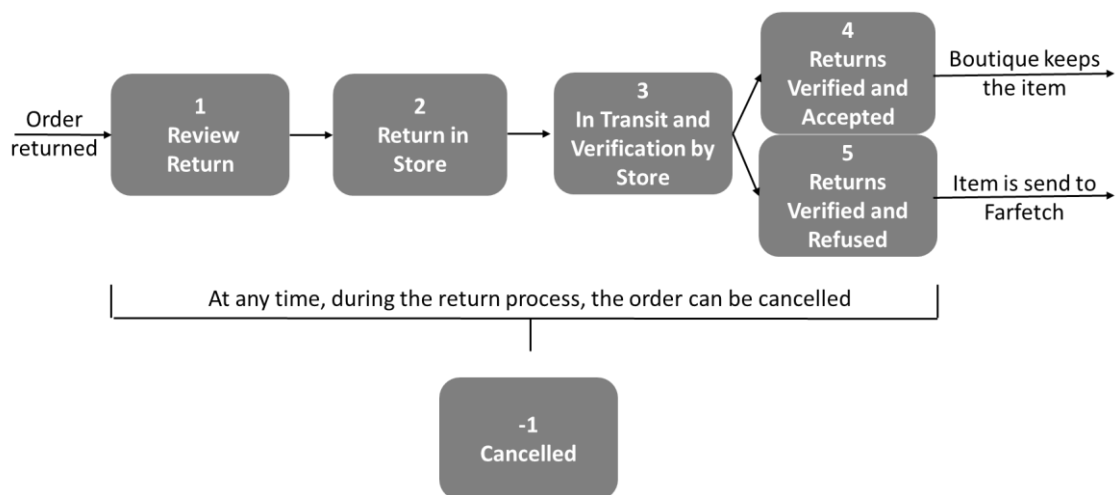


Figure 2 - Return Process

Next, the Steps a return must follow are presented.

#### Step 1 – Review Returns

In this Step, it is guaranteed, by Farfetch, that the customer was able to create the return correctly and that the time requisite – item returned within the return period – was met.

#### Step 2 – Return in Store

This Step is a staging area for local returns - customer lives in the same area as the Boutique, where the air-way bill was created manually.

### Step 3 – Returns in transit to the Store and to be verified by Store

This Step represents the time lapse between the item being picked up on the customer address and being delivered to the store. It also includes the time period until the Boutiques accepts or refuses the item.

### Step 4 – Returns Verified and Accepted

In this Step are placed all the items that are verified and accepted by the Boutiques. In this sense, all the returns policies were met and the item is in good conditions.

### Step 5 – Returns Verified and Refused

This Step represents the most critical Step in all the process. After Step 3, an item can go to three different Steps: Step 4, Step 5 or Step (-1) (Cancelled). If it goes to Step 4, it means that is a normal return and no follow-up is necessary. However, if the item is placed in Step 5, it means that the Boutique found that the item did not fulfill the minimum requirements to be accepted and to be put back on sale again. Therefore, it will not accept it and the item is shipped to Farfetch, at Farfetch cost.

### Step (-1) – Cancelled

Step (-1) represents all returns that are cancelled. In this Step are placed all the items that are cancelled when the customer withdraws from returning the item.

Following the above guidelines explained, and regarding the Refused Returns issue, it can be established a work flow that originates a Refused Returned item:

An order is placed, a return is created, the return arrives at the Boutique, the Boutique refuses the return, Farfetch pays for the item and it's sent to Farfetch facilities.

In [Figure 3](#), a summary of the two processes leading to a Refused Return item is shown.

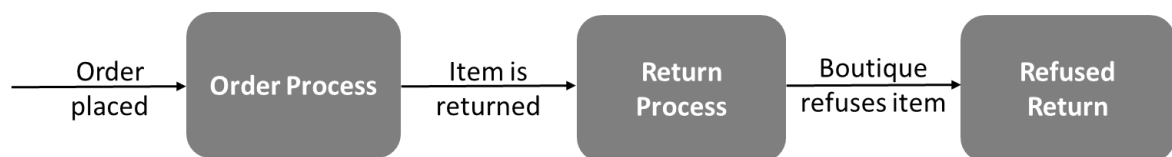


Figure 3 - Refused Return process

After the general process is exposed and in order to fully understand the Refuse Return problem, it is necessary to detail what the Operational Costs represent and how they are so tightly related with Farfetch's internal politic regarding customer experience – “Amaze Customers”.

### 3.2 “Amaze Customers” and Operational Costs

In July 2015, Farfetch changed its position regarding the customer experience and introduced a new value called “Amaze Customers”. This change represents all the effort that Farfetch can put in order to deliver a full luxury experience to the customer. To accomplish that goal, Farfetch totally reversed its internal policy on how to deal with returns, refunds and all kind of problems originated on a client. Before this change, only after all the process has been completed the client would get a response from Farfetch regarding his request. This was leading Farfetch on a poor customer experience, the feedback was negative and Farfetch was losing money on potential revenue.

With the new defined mindset, the paradigm completely reversed: the client was the first and most urgent part of the process. In this sense, the customers’ needs were handled first and the remainder of the process was dealt with internally.

In the meantime, it was realized that, with the introduction of this new value, the costs associated with the operation were going to rise substantially. So, also in July 2015, and at the same time as “Amaze Customers” was introduced, the Operational Costs application was released.

This application was designed to fully control the new so-called operational costs and to be able to standardize all the events associated with this item. With this new control tool, it was possible to fully grasp the major causes of costs, the corresponding reasons, and to develop solutions that, aligned with delivering the final customer an amazing online experience, would create a sustainable cost structure to Farfetch.

Now, given that all the processes are clarified, it can be fully understood how a Refused Return item originates and its implications on Operational Costs.

In order to clarify this situation, a standard procedure of a Refused Return is exposed:

Any given client places an order, the order is delivered in the client shipping address and, then, he decides to return the item. The item is then picked up at the client address and delivered back to the store. Upon arriving at the store, the Boutique refuses the item, invoking one of the many reasons existent to validate its decision. Between the time the item took to arrive at the store and the time the Boutique took to give Farfetch an answer, the client was fully refunded immediately after the return was created (under the new politics mindset).

So, after the Boutique refuses the item, the item is send to Farfetch and Farfetch pays the Boutique the full price of the item. In this sense, the refused return represents a huge problem to Farfetch costs’ – because by refunding the client immediately, Farfetch assumes all the costs and all the risks of an item that is returned.

As it can be seen, this process has several critical moments regarding the costs structure. The first one is when Farfetch does the full refund on the customer side. This situation leaves Farfetch at a disadvantage situation because, even if the item is refused because of something customer related, the client has already been reimbursed, leaving Farfetch no margin for re-negotiating the item with the customer. The second critical moment is when the Boutique refuses the item, leaving Farfetch no other choice but to pay the Boutique full retail price and to stay with the item.

On the second critical moment, Farfetch has no choice but to pay the Boutique the value of the item and it is this value that truly originates an Operational Cost. The value that Farfetch pays to the Boutique represents an Operational Cost and is saved on the application so that it can be consulted, analyzed and resolved.

So, regarding the Refused Returns parameter, one of the many Operational Costs, Farfetch has now to control the cost that this kind of item represent.

To understand the real dimension of these costs, a description and summary of the current status will be presented.

### 3.3 Current Cost Structure

There are multiple reasons for an issue to be classified as an Operational Cost.

In [Table 4](#) are presented the six categories in which Operational Costs are divided.

Table 4 - Operational Costs categories

Operational Costs categories
Order
Tech
Campaigns
Delivery
Returns
Wrong price

Despite the partition above presented, Operational Costs can be divided in two major categories: Refused Returns and Customer Compensations.

Considering this division in only two categories, is necessary to apprehend the complete state of Operational Costs cost division and structure.

To understand this scenario, it is necessary to comprehend that the performance of Operational Costs is based on the weight it has on the total [Gross Market Value](#) (GMV). Therefore, the total GMV from quarter 1 to quarter 3 was calculated in order to realize at what point Operational Costs and Refused Returns were standing.

The defined target to Operational Costs over GMV is 0.30%.

Given that Refused Returns costs represent a huge part of Operational Costs it was necessary to assess which Boutiques were critical, if there were any, and design a solution that must comply by some conditions: reduce Refused Return costs, and consequently reduce Operational Costs; don't impact the commercial relationship between Farfetch and the Boutiques; don't harm in any manner whatsoever the customer experience.

To do this, a more in-depth analysis was required to be aware of the major players involved in Refused Returns.

In [Table 5](#) it is represented all the data collected from the beginning of 2016 (January 1st) until the end of September 2016.

Table 5 - Overall cost structure

<b>Total GMV</b>	£ 300 000
<b>Total Operational Costs</b>	£ 1 342
<b>Total Refused Returns</b>	£ 450
<b>Refused Returns / Operational Costs</b>	33.53%
<b>Operational Costs / GMV</b>	0.45%
<b>Refused Returns / GMV</b>	0.15%

## 4 Analysis and Solutions Proposed

After understanding the current status of Refused Returns in Operational Costs it was necessary to make a full analysis, evaluate key-situations and propose solutions to this problem.

### 4.1 Analysis

So, in order to understand the complete specifications of the problem a deeper analysis than the one provided in Chapter 3, was required. In that sense, the first step was to divide the current costs of Refused Returns per Boutique in order to understand which Boutiques were having a greater impact. It was also relevant to calculate the GMV of each Boutique to realize the proportion of Refused Returns costs on the total of sales.

As it can be seen in [Table 6](#), several parameters were calculated so that it was possible to fully perceive the dimension of Refused Returns costs per Boutique and to try and make the analysis as complete as possible.

First, it was calculated the total amount of Refused Returns cost (in pounds) that the Boutique incurred in the period considered. Then, it was calculated the amount of GMV correspondent to each Boutique, in order to evaluate the weight of the Refused Return costs on the total GMV. This was the first calculated control parameter: Refused Return over GMV.

This control parameter permits to understand the state of each individual Boutique, enabling comparison between Boutiques and the further computation of group parameters to serve as overall control.

Finally, the [Average Order Value](#) (AOV) for each Boutique has been calculated and, based on that, the number of items refused and the number of items sold were both determined.

This parameters – AOV, number of items refused and number of items sold - were calculated in order to further understand if they played an important role on the impact of the Refused Returns on each Boutique. However, they did not play a decisive role and were only used on this first overall analysis.

In [Table 6](#) is presented the top 10 Boutiques. The objective of the Table is to show how the parameters were calculated and how they fit each Boutique.

Table 6 - Top 10 Refused Return costs Boutiques

Boutique	Refused Returns cost	GMV	Refused Returns / GMV	AOV	Number of items refused	Number of items sold
Boutique 5	£ 45.91	£ 9 670.29	0.47%	£ 0.24	196	40 211
Boutique 9	£ 27.11	£ 5 870.41	0.46%	£ 0.24	115	24 290
Boutique 3	£ 20.20	£ 13 045.46	0.15%	£ 0.23	91	57 087
Boutique 1	£ 11.37	£ 14 011.00	0.08%	£ 0.23	50	60 369
Boutique 34	£ 11.34	£ 1 683.44	0.67%	£ 0.17	67	9 650
Boutique 2	£ 10.38	£ 13 638.76	0.08%	£ 0.34	31	40 301
Boutique 4	£ 9.53	£ 9 958.02	0.10%	£ 0.37	27	27 021
Boutique 11	£ 9.25	£ 3 710.56	0.25%	£ 0.37	26	10 048
Boutique 18	£ 7.54	£ 2 750.56	0.27%	£ 0.21	37	13 126
Boutique 7	£ 7.27	£ 7 459.32	0.10%	£ 0.24	31	31 499

Based on the individual information of each Boutique, it became possible to calculate aggregate measures and average values to completely understand how the Boutiques, as a whole, were behaving.

So, it was calculated the average percentage of Refused Return over GMV. Although, on an individual analysis many Boutiques had a cost of Refused Returns amounting to zero pounds – 375 Boutiques corresponding to 59% of the total Boutiques existent – so, to perceive the real impact of the Refused Returns costs an adapted metric was created. It was calculated the average percentage of Refused Returns over GMV excluding the Boutiques that had zero pounds of Refused Returns costs.

In [Table 7](#), this metrics are shown.

Table 7 - Average Refused Returns per Boutique

Average of Refused Returns / GMV	Average of Refused Returns / GMV - adapted
0.13%	0.32%

It was also calculated, as shown in [Table 8](#), the Average Order Value of all the Boutiques, the average number of items refused, the average number of items refused excluding the Boutiques that had zero pounds of Refused Returns cost – again due to the condition mentioned above - and the average number of items sold.

Table 8 - Average global values

Average Order Value	Average number of items refused	Average number of items refused - adapted	Average number of items sold
£ 0.24	3	7	1 969

Finally, and in order to make the link between the analysis and the proposed solutions, it was calculated the total sum of Refused Returns, the total sum of GMV and the ratio of Refused Returns costs over GMV.

In [Table 9](#), all the values are presented in order for a full, summarized view of the current costs and proportions existent.

Table 9 - Current Refused Return costs and GMV values

<b>Sum of Refused Returns costs</b>	<b>Sum of GMV</b>	<b>Refused Returns / GMV</b>
£ 450	£ 300 000	0.15%

From these measures, it was possible to assess the state of Refused Returns costs.

Since Refused Returns costs represented 0.15% of the total GMV and given that they represented 33.53% of Operational Costs, combining both metrics revealed that, in order to Operational Costs to be 0.30% of the GMV – the defined target - Refused Returns costs must be 0.10% of the total GMV.

This value was calculated assuming that all the categories of Operational Costs would reduce proportionally to Refused Returns costs.

Both conditions were held through all the process of creating a solution.

## 4.2 Global solution and control metrics

Given that the new calculated target of Refused Returns costs is 0.10% of the total GMV, it was necessary to articulate a global solution in order to achieve it.

Refused Returns depend on two parameters: the return itself and the decision of the Boutique as to accept the return or not.

Since Farfetch cannot control the rate of returns and cannot directly control the Boutiques' decision it was necessary to develop a mean of controlling the amount of Refused Returns cost and items a Boutique could have.

So, it was decided to create a Budget for each Boutique. The total Budget would amount to 0.10% of the total GMV for the given period and it had a surplus attached: if the Boutique did not spend its available Budget, it would keep the remainder to themselves as a token of good will. This would serve as a guide to the behavior that Farfetch wants Boutique to follow and would reinforce the trust bond between Farfetch and the Boutiques.

In [Figure 4](#), the flow of how the Budget would act and how it would affect the Boutiques is shown.

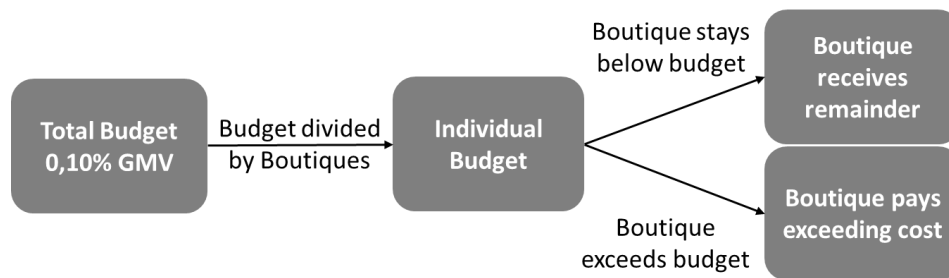


Figure 4 - Budget application and flow

The Budget was designed to fulfill multiple demands: the fact that it represented 0.10% of the GMV meant that the new established target was going to be met; it was controlled in the source: since that it is Farfetch that establishes the Budget and allocates it per Boutique, it can be controlled and managed directly by Farfetch, not depending on the Boutiques decisions; it would model the Boutiques behavior because they would realize that they had a certain Budget to spend and would make a better effort not to spend it, in order to keep the remainder and would serve as a new control metric to evaluate the Boutiques behavior.

However, it was understood that downsizing the Boutiques from their current situation – where they sell to Farfetch the item full retail price without any restrictions attached – to a scenario where they must be obliged to a certain amount of pounds could be too limiting. This reduction implied that Boutiques, now, would have to refuse a much smaller number of items – on average – meaning that their operational way of running the business was compromised.

This was a delicate situation, given that the Boutique's operations could not be compromised to an elevated extent.

So, a middle ground solution was found, constituting an additional step to be installed at the same time as the application of the Budget – the Refused Return items were now bought at wholesale price - meaning that the Boutiques could still have liberty and flexibility to refuse the same number of items as previously, but they wouldn't be as handsomely rewarded as before.

Given this, the next step of the process was to decide how to distribute the total Budget per Boutique. In order to do so, several metrics were created to evaluate which solution proposed was the best.

It was calculated the total amount of Refused Returns costs in pounds, as previously; the total corresponding amount if, instead of buying at retail price, the items were bought at wholesale price – it was considered a 2.5 times downsizing of the full retail price; the Budget allocated at each Boutique; if the Boutiques would win money or not; the difference between the Budget and the amount spent at wholesale price.

Given that the total Budget must correspond to 0.10% of the total GMV, seven parameters - adding two more to the ones referred previously - were analyzed in order to reach the most suitable solution:

- GMV produced by the Boutique;
- the impact that that amount of GMV has on the total GMV – the weight of that Boutique on total GMV;
- the current cost of Refused Returns;
- the cost if the items were bought at wholesale price;
- the corresponding Budget for that given scenario;

- if the Boutique would win money with the Budget allocated to it;
- the amount of money won or lost over the Budget.

In [Table 10](#), the control metrics are presented.

Table 10 - Global solution control metrics

Boutique GMV	Boutique GMV weight	Refused Returns cost	Wholesale price	Budget	Profit?	$\Delta$ Profit
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So, to achieve a feasible solution, it was necessary to generate the Budget for each Boutique and then compare each scenario.

### 4.3 Budget generation

Given that a global solution was found – create a Budget amounting to 0.10% of the total GMV – it was now necessary to generate the individual Budget per Boutique.

The individual Budget per Boutique must fulfill two distinct conditions: correspond to the individual necessities of the Boutique - from a finance and commercial point of view - and contribute to an overall satisfactory global Budget.

Given the two distinct conditions that the Budget needed to fulfill, there were also two major points that needed to be secured. The Budget must consist on a solution that, while satisfying the financial needs of an individual Boutique, must not generate a sense of injustice or misapplication towards the others Boutiques.

So, while trying to generate a solid financial Budget, the commercial relationship between Farfetch and the Boutiques must be held in consideration when formulating an overall solid Budget.

Baring the supra-cited conditions, to try and achieve the most satisfactory Budget, several solutions were proposed and, later, compared between them.

#### 4.3.1 Scenario 1 - 0.10% GMV

This scenario (Scenario 1 or 0.1%GMV), the most straightforward one, consists in giving the Boutiques 0.10% of their GMV as their Budget. So, each Boutique would be given an amount proportional to its GMV, functioning as a mean of incentive of its selling power at Farfetch.

In [Figure 5](#), this simple method of division is shown.

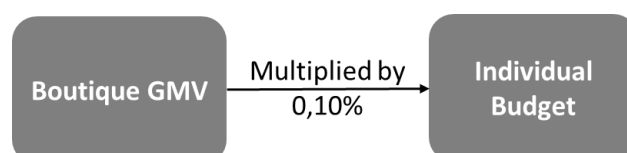


Figure 5 - 0.1%GMV representation

This model has other benefits such as being directly adapted to the Boutiques sales – meaning there is no subjectivity in the way that the Budget is allocated – and it is easily understandable and communicable to the Boutiques.

On the other side, this way of creating the Budget would not protect Boutiques with higher Refused Returns costs – given that there is no linear relationship between GMV and Refused Returns costs – and the Boutiques with low GMV have a very low Budget.

Given this, the Budget was calculated and, in [Table 11](#) is presented a top 10 of the Boutiques only as a mean of showing the results and then, in [Table 12](#), a summary of the top 34 Boutiques - that constitute around 50% of the total GMV - as well as the results considering all the Boutiques.

Table 11 - Top 10 Boutiques: 0.1%GMV

Top 10 Boutiques	Boutique GMV	Boutique GMV weight	Refused Returns costs	Wholesale price	Budget	Profit?	Δ Profit
Boutique 1	£ 14 011.00	4,67%	£ 11.37	£ 4.55	£ 14.01	Yes	£ 9.46
Boutique 2	£ 13 638.76	4,55%	£ 10.38	£ 4.15	£ 13.64	Yes	£ 9.49
Boutique 3	£ 13 045.46	4,35%	£ 20.20	£ 8.08	£ 13.05	Yes	£ 4.96
Boutique 4	£ 9 958.02	3,32%	£ 9.53	£ 3.81	£ 9.96	Yes	£ 6.14
Boutique 5	£ 9 670.29	3,22%	£ 45.91	£ 18.36	£ 9.67	No	£ -8.69
Boutique 6	£ 7 478.46	2,49%	£ 4.82	£ 1.93	£ 7.48	Yes	£ 5.55
Boutique 7	£ 7 459.32	2,49%	£ 7.27	£ 2.91	£ 7.46	Yes	£ 4.55
Boutique 8	£ 5 914.42	1,97%	£ 4.22	£ 1.69	£ 5.91	Yes	£ 4.23
Boutique 9	£ 5 870.41	1,96%	£ 27.11	£ 10.84	£ 5.87	No	£ -4.97
Boutique 10	£ 3 886.16	1,30%	£ 0.49	£ 0.19	£ 3.89	Yes	£ 3.69

Table 12 - Budget summary: 0.1%GMV

	Boutique GMV	Boutique GMV Weight	Refused Returns costs	Wholesale price	Budget	Profit?	Δ Profit
<b>Top 34 Boutiques - Total</b>	£ 150 881.59	50.29%	£ 247.48	£ 98.99	£ 150.88	76.47%	£ 51.89
<b>Total</b>	£ 300 000.00	100.00%	£ 450.00	£ 180.00	£ 300.00	86.19%	£ 120.00

As it can be seen in [Table 12](#) the distribution of the Budget is proportional to the weight of each Boutique on Farfetch's GMV, guaranteeing that the top Boutiques receive a Budget high enough to deal with the volume of problems associated with a high volume of sales.

It also has the upside of giving a profit to 76.47% of the top Boutiques, meaning that this cost structure would be beneficial for most of them, and an overall profit rate of 86.19% meaning that the majority of Farfetch's Boutiques will be rewarded.

This model of Budget generation functions also as a controller and motivator to the Boutiques in the sense that the Boutiques understand that the more they sell, the higher the tolerance and leverage to negotiate Refused Returns items and higher the margin for them to make a profit.

### 4.3.2 Scenario 2 - Equal Budget per Boutique

In this scenario (Scenario 2 or EqualBudget), the individual Budget would consist in dividing the total Budget available for the total number of Boutiques.

In [Figure 6](#), the process of reaching the individual Budget is shown.

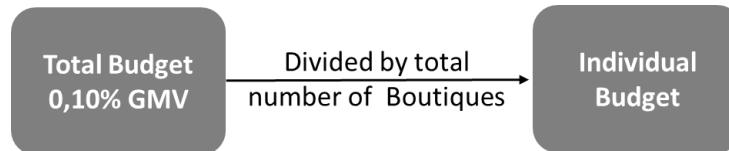


Figure 6 - EqualBudget process

This model guaranteed that each Boutique received an equal amount of cash-flow, however it largely disregards any impact the Boutique had on Farfetch - either the impact on GMV or the impact on the Refused Returns costs.

This created an unprotected Budget, given that the major Boutiques at Farfetch would not receive a reasonable amount and the minor Boutiques would be over-rewarded.

This would be hard to communicate – from a commercial point of view – given that the major Boutiques would not comprehend why they would be receiving the same as the smaller Boutiques, since that smaller Boutiques have a smaller impact both in Refused Returns and in GMV.

In [Table 13](#) and then on [Table 14](#), and following the same logic previously applied, first the top 10 Boutiques are shown and then the summary of this scenario.

Table 13 - Top 10 Boutiques: EqualBudget

Top 10 Boutiques	Boutique GMV	Boutique GMV weight	Refused Returns costs	Wholesale price	Budget	Profit?	Δ Profit
Boutique 1	£ 14 011.00	4,67%	£ 11.37	£ 4.55	£ 0.47	No	- £ 4.08
Boutique 2	£ 13 638.76	4,55%	£ 10.38	£ 4.15	£ 0.47	No	- £ 3.68
Boutique 3	£ 13 045.46	4,35%	£ 20.20	£ 8.08	£ 0.47	No	- £ 7.61
Boutique 4	£ 9 958.02	3,32%	£ 9.53	£ 3.81	£ 0.47	No	- £ 3.34
Boutique 5	£ 9 670.29	3,22%	£ 45.91	£ 18.36	£ 0.47	No	- £ 17.89
Boutique 6	£ 7 478.46	2,49%	£ 4.82	£ 1.93	£ 0.47	No	- £ 1.46
Boutique 7	£ 7 459.32	2,49%	£ 7.27	£ 2.91	£ 0.47	No	- £ 2.44
Boutique 8	£ 5 914.42	1,97%	£ 4.22	£ 1.69	£ 0.47	No	- £ 1.22
Boutique 9	£ 5 870.41	1,96%	£ 27.11	£ 10.84	£ 0.47	No	- £ 10.37
Boutique 10	£ 3 886.16	1,30%	£ 0.49	£ 0.19	£ 0.47	Yes	£ 0.28

Table 14 – Budget summary: EqualBudget

	<b>Boutique GMV</b>	<b>Boutique GMV weight</b>	<b>Refused Returns costs</b>	<b>Wholesale price</b>	<b>Budget</b>	<b>Profit?</b>	<b>Δ Profit</b>
<b>Top 34 Boutiques - Total</b>	£ 150 881.59	50.29%	£ 247.48	£ 98.99	£ 16.01	11.76 %	- £ 82.98
<b>Total</b>	£ 300 000.00	100.00%	£ 450.00	£ 180.00	£ 300.00	86.19%	£ 120.00

As presented in [Table 14](#), it is possible to understand that this Budget is highly negative for the Boutiques of greater impact at Farfetch given that an equal Budget for all Boutiques does not satisfy the needs of the bigger ones and that value is represented in only 11.76% of the top 34 Boutiques making a profit.

Also, this kind of division does not reinforce the kind of behavior and relationship that Farfetch wants to have with the Boutiques given that applying this kind of Budget division would not reinforce any kind of good actions – such as increasing their GMV or lowering their Refused Returns costs. The Boutiques would only be impacted by how much GMV overall they would produce and how many total Boutiques exist. This leads to a sensation of not having a direct impact on their own Budget and the motivation to work and be better would cease to exist.

#### 4.3.3 Scenario 3 - GMV impact cluster

In this scenario (Scenario 3 or GMVClusters), the Boutiques were divided in 5 clusters according to their impact on GMV.

The Boutiques were ordered according to their total GMV and then grouped by their cumulative impact. Each cluster represents 20% of the total GMV and the Boutiques are sorted in such a way that the first cluster represents the Boutiques that contribute the most to it and the last cluster represents the Boutiques that contribute the least to the total GMV.

Each cluster receives 20% of the available Budget and then is divided equally between the number of Boutiques that exist in that given cluster.

In [Figure 7](#), it is represented the logic that led to the individual Budget for each Boutique within their cluster.

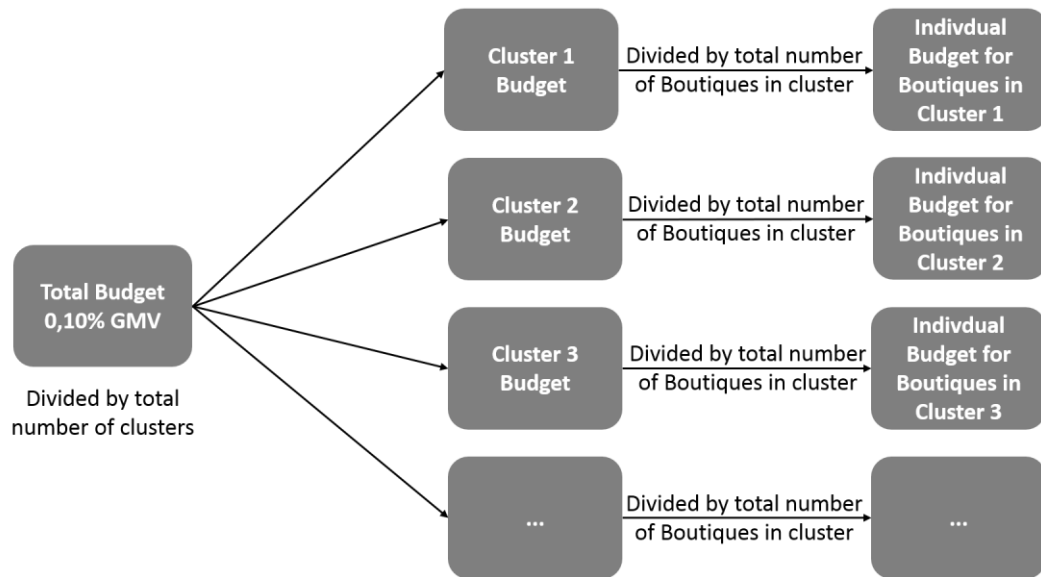


Figure 7 - Budget formation: GMVClusters

This way of generating the Budget would motivate Boutiques to increase their sales, because they would understand that they could move up on their cluster being able to receive a greater Budget. However, it could also work as a demotivation because Boutiques would have visibility of how far they were from moving to their next cluster and how far ahead were the other Boutiques. It could also leave a sense of injustice between Boutiques inside the same cluster or between Boutiques on the frontier of each cluster given that there can be a significant difference in sales and they are both inside the same cluster, therefore, receiving the same Budget; or, in the frontier case Boutiques, a small difference in sales could mean a big difference in the Budget received.

This Budget model would be easy to communicate to the Boutiques, however, given the above mentioned problems, it could be sensible to work with.

All these factors were taken into account while formulating the Budget and were measured in the final decision.

In [Table 15](#) is presented, using the top 10 Boutiques as an example, the division made and how the Budget was allocated to each cluster and consequently Boutique.

Table 15 - Top 10 Boutiques: Cluster distribution

Top 10 Boutiques	Cumulative GMV	Cluster	Budget
Boutique 1	4.67%	C1	£ 12.00
Boutique 2	9.22%	C1	£ 12.00
Boutique 3	13.57%	C1	£ 12.00
Boutique 4	16.88%	C1	£ 12.00
Boutique 5	20.11%	C1	£ 12.00
Boutique 6	22.60%	C2	£ 4.29
Boutique 7	25.09%	C2	£ 4.29
Boutique 8	27.06%	C2	£ 4.29
Boutique 9	29.02%	C2	£ 4.29
Boutique 10	30.31%	C2	£ 4.29

As it can be seen, the Boutiques were sorted and, when the sum of their cumulative GMV equals 20%, a cluster is formed. Then transits to the next one, summing again till the cumulative GMV reaches 20%. As the Table is run and the clusters are formed each cluster is constituted by an increasing number of Boutiques, given that, individually, they contribute less to the total GMV.

In [Table 16](#) the top 10 Boutiques are presented as a mean of showing how the Budget would be divided and then, in [Table 17](#), the sum of the top 34 Boutiques and the sum of all the Boutiques are also presented, synthesizing this model.

Table 16 - Top 10 Boutiques: GMVclusters

Top 10 Boutiques	Boutique GMV	Boutique GMV weight	Refused Returns costs	Wholesale price	Budget	Profit?	Δ Profit
Boutique 1	£ 14 011.00	4,67%	£ 11.37	£ 4.55	£ 12.00	Yes	£ 7.45
Boutique 2	£ 13 638.76	4,55%	£ 10.38	£ 4.15	£ 12.00	Yes	£ 7.85
Boutique 3	£ 13 045.46	4,35%	£ 20.20	£ 8.08	£ 12.00	Yes	£ 3.92
Boutique 4	£ 9 958.02	3,32%	£ 9.53	£ 3.81	£ 12.00	Yes	£ 8.19
Boutique 5	£ 9 670.29	3,22%	£ 45.91	£ 18.36	£ 12.00	No	- £ 6.36
Boutique 6	£ 7 478.46	2,49%	£ 4.82	£ 1.93	£ 4.29	Yes	£ 2.36
Boutique 7	£ 7 459.32	2,49%	£ 7.27	£ 2.91	£ 4.29	Yes	£ 1.38
Boutique 8	£ 5 914.42	1,97%	£ 4.22	£ 1.69	£ 4.29	Yes	£ 2.60
Boutique 9	£ 5 870.41	1,96%	£ 27.11	£ 10.84	£ 4.29	No	- £ 6.56
Boutique 10	£ 3 886.16	1,30%	£ 0.49	£ 0.19	£ 4.29	Yes	£ 4.09

Table 17 - Budget summary: GMVClusters

	<b>Boutique GMV</b>	<b>Boutique GMV weight</b>	<b>Refused Returns costs</b>	<b>Wholesale price</b>	<b>Budget</b>	<b>Profit?</b>	<b>Δ Profit</b>
<b>Top 34 Boutiques - Total</b>	£ 150 881.59	50.29%	£ 247.48	£ 98.99	£ 145.00	76.47 %	£ 46.01
<b>Total</b>	£ 300 000.00	100.00%	£ 450.00	£ 180.00	£ 300.00	84.14%	£ 120.00

This solution, as perceived by [Table 17](#), from a financial point of view, guarantees a solid distribution of the overall Budget through all the Boutiques; however from a commercial point of view, could lead to some injustices on some Boutiques case.

#### 4.3.4 Scenario 4 - Cluster by GMV impact and Refused Returns cost behavior

This model (Scenario 4 or GMV&RRC), as the one before, also relies on the formation of clusters. However, it relies on two different metrics of grouping Boutiques: their individual impact on the GMV and their behavior towards the Refused Returns cost.

So, regarding the GMV impact, the Boutiques were divided in 3 groups - High impact, Medium impact and Low impact – depending on their individual contribution to the total GMV.

In [Table 18](#), the percentages representative of each category are shown:

Table 18 - Cluster formation: GMV weight

<b>Impact</b>	<b>GMV individual weight</b>
High	>1%
Medium	Between 0.25% and 1%
Low	<0.25%

With the values shown, the objective was to clearly define which Boutiques contributed the most to the overall GMV and which Boutiques contributed with only a very small percentage, leaving the rest of the Boutiques in the middle.

After this separation was set, the next step was to define the groups based in the behavior towards Refused Returns.

As in the GMV separation, a 3 group separation was used, dividing the Boutiques in Good, Reasonable and Bad, and, as in the GMV division, based on their individual performance regarding this metric.

However, for this division, the metric of Refused Returns costs over their total GMV was used; so, in a sense, not only their absolute cost was taken into consideration but the proportion of costs regarding their overall GMV as well.

In [Table 19](#), the categories and their corresponding metric division are shown.

Table 19 – Clusters formation: Refused Returns costs over GMV

<b>Behavior</b>	<b>Refused Returns / GMV</b>
Good	<0.10%
Reasonable	Between 0.10% and 0.13%
Bad	>0.13%

The value 0.10% was used based on the individual observation of the top Boutiques and was decided as a reference value to modulate what to expect from a Boutique.

The 0.13% value was used as the average value of all Boutiques.

Given that the two different clustering procedures were made, it was then possible to allocate each Boutique into one of the nine clusters.

In [Table 20](#), the total nine clusters are shown.

Table 20 - Final clusters

<b>GMV Impact</b>	<b>Refused Returns Behavior</b>	<b>Final Cluster</b>
High	Good	High and Good
High	Reasonable	High and Reasonable
High	Bad	High and Bad
Medium	Good	Medium and Good
Medium	Reasonable	Medium and Reasonable
Medium	Bad	Medium and Bad
Low	Good	Low and Good
Low	Reasonable	Low and Reasonable
Low	Bad	Low and Bad

And, in [Figure 8](#), it is shown how the match between the two types of clusters was made.

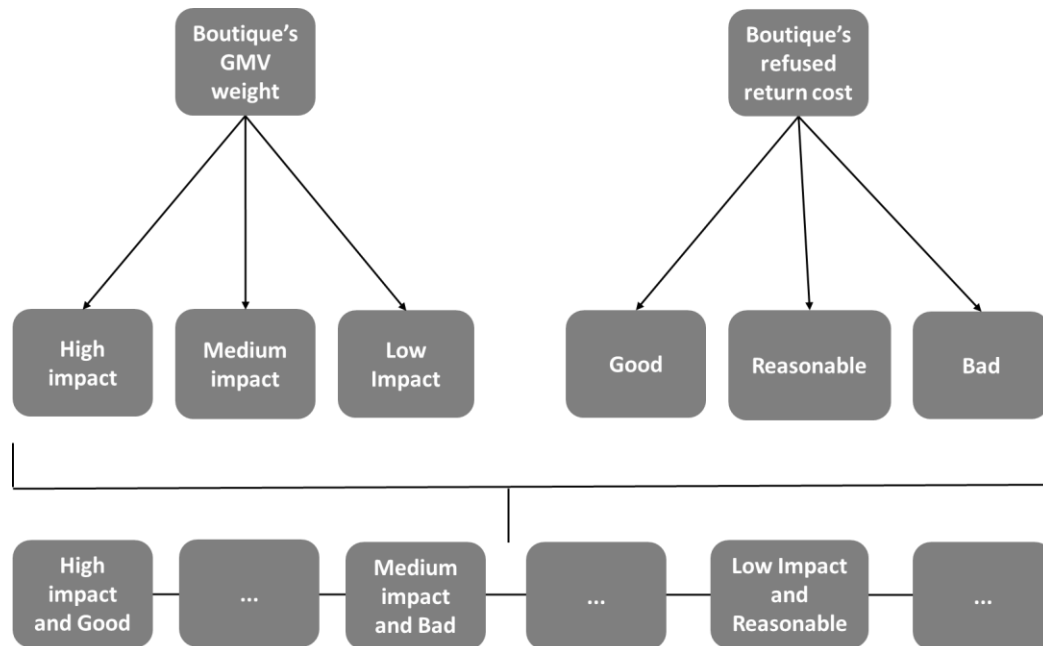


Figure 8 - Cluster formation: GMV&amp;RRC

After the nine clusters were formed and defined, each Boutique was placed in one of them. In [Table 21](#), the top 10 Boutiques are used to show how this allocation was made.

Table 21 - Top 10 Boutiques: Cluster allocation

Top 10 Boutiques	Weight on GMV	Refused Returns / GMV	GMV Impact	Behavior	Final Cluster
Boutique 1	4.67%	0.08%	High impact	Good	High impact and Good
Boutique 2	4.55%	0.08%	High impact	Good	High impact and Good
Boutique 3	4.35%	0.15%	High impact	Bad	High impact and Bad
Boutique 4	3.32%	0.10%	High impact	Good	High impact and Good
Boutique 5	3.22%	0.47%	High impact	Bad	High impact and Bad
Boutique 6	2.49%	0.06%	High impact	Good	High impact and Good
Boutique 7	2.49%	0.10%	High impact	Good	High impact and Good
Boutique 8	1.97%	0.07%	High impact	Good	High impact and Good
Boutique 9	1.96%	0.46%	High impact	Bad	High impact and Bad
Boutique 10	1.30%	0.01%	High impact	Good	High impact and Good

After the allocation of each Boutique to its final cluster, it was necessary to decide how the distribution of the global Budget was going to be made and what impact the final cluster would have.

The approach decided was that each Boutique, depending on the cluster, would receive a percentage of their individual GMV.

In order to guarantee that the overall percentage of the Budget was met – 0.10% of the total GMV – it was necessary to take into account the number of Boutiques set in each Cluster, the total GMV they represent and the percentage over the total GMV.

These values were necessary in order to distribute the Budget according to the clusters.

In this model, the best cluster – High impact and Good behavior - would receive the highest amount of GMV percentage, and it would scale down within the High impact cluster – meaning that the High impact and Good behavior received the highest percentage, the High impact and Reasonable behavior received a smaller amount and the High impact and Bad behavior received an even smaller amount. When the Medium impact cluster was reached the same line of thinking was applied.

Given the process above explained, it was through several iterations that the final values were obtained.

In [Table 22](#), follows a summary of the line of thought that was used while formulating this model.

Table 22 - Final clusters: metrics and global values

Clusters	Number of Boutiques	GMV	% of total GMV	% of GMV given	Budget
High Impact and Good	8	£ 65 464.89	22%	0.13%	£ 85.10
High Impact and Reasonable	2	£ 6 885.48	2%	0.12%	£ 7.92
High Impact and Bad	6	£ 39 230.51	13%	0.10%	£ 39.23
Medium Impact and Good	27	£ 33 602.20	11%	0.12%	£ 38.64
Medium Impact and Reasonable	7	£ 8 945.01	3%	0.10%	£ 8.95
Medium Impact and Bad	40	£ 60 677.91	20%	0.08%	£ 45.51
Low Impact and Good	433	£ 58 309.99	19%	0.10%	£ 58.31
Low Impact and Reasonable	12	£ 4 077.98	1%	0.08%	£ 3.06
Low Impact and Bad	102	£ 22 678.94	8%	0.06%	£ 13.61
<b>Total</b>	<b>638</b>	<b>£ 300 000.00</b>	<b>100%</b>	<b>0.10%</b>	<b>£ 300.00</b>

This way of generating the Budget shows clearly the Boutiques that the higher their impact on GMV and the best their behavior the greater the reward.

However, from a commercial point of view, it could be hard to communicate and could lead to some sense of injustice or misplacement of some of the Boutiques concerning the cluster they belong to.

From a financial perspective, [Table 23](#) shows the impact this model had – yet again using the top 10 Boutiques as a mean of showing the individual allocation of the Budget – and, on [Table 24](#), using the top 34 Boutiques sum and the total Boutiques sum as a mean to compare the final solution.

Table 23 - Top 10 Boutiques: GMV&amp;RRC

Top 10 Boutiques	Boutique GMV	Boutique GMV weight	Refused Returns cost	Wholesale price	Budget	Profit?	Δ Profit
Boutique 1	£ 14 011.00	4,67%	£ 11.37	£ 4.55	£ 18.21	Yes	£ 13.67
Boutique 2	£ 13 638.76	4,55%	£ 10.38	£ 4.15	£ 17.73	Yes	£ 13.58
Boutique 3	£ 13 045.46	4,35%	£ 20.20	£ 8.08	£ 13.05	Yes	£ 4.96
Boutique 4	£ 9 958.02	3,32%	£ 9.53	£ 3.81	£ 12.95	Yes	£ 9.13
Boutique 5	£ 9 670.29	3,22%	£ 45.91	£ 18.36	£ 9.67	No	- £ 8.69
Boutique 6	£ 7 478.46	2,49%	£ 4.82	£ 1.93	£ 9.72	Yes	£ 7.79
Boutique 7	£ 7 459.32	2,49%	£ 7.27	£ 2.91	£ 9.70	Yes	£ 6.79
Boutique 8	£ 5 914.42	1,97%	£ 4.22	£ 1.69	£ 7.69	Yes	£ 6.00
Boutique 9	£ 5 870.41	1,96%	£ 27.11	£ 10.84	£ 5.87	No	- £ 4.97
Boutique 10	£ 3 886.16	1,30%	£ 0.49	£ 0.19	£ 5.05	Yes	£ 4.86

Table 24 - Budget summary: GMV&amp;RRC

	Boutique GMV	Boutique GMV weight	Refused Returns cost	Wholesale price	Budget	Profit?	Δ Profit
<b>Top 34 Boutiques - Total</b>	£ 150 881.59	50.29%	£ 247.48	£ 98.99	£ 165.32	73.53 %	£ 66.33
<b>Total</b>	£ 300 000.00	100.00%	£ 450.00	£ 180.00	£ 300.00	80.06%	£ 120.00

As seen in [Table 24](#), this model produces the highest concentration of Budget on the top 34 Boutiques, giving more relevance to the High and some of the Medium impact Boutiques, independently from their behavior.

However, this model doesn't protect the smaller Boutiques, leaving them subdued to Farfetch's own criteria on which cluster they belong to.

So, this model does not incentive the behavior and positive reinforcement that the Budget was created to do and, from a financial point of view, does not bring the best compensations to the Boutiques – from an overall point of view.

#### 4.4 Final Solution

So, after the four above mentioned models have been completely designed and calculations done, it was just a matter of comparing them and select the one that better fits all the stipulated conditions – financially and commercially.

From a starting point, EqualBudget solution was ruled out, given that from a financial point of view it wasn't strong enough and commercially didn't have any appealing traits.

The next step was to rule out GMV&RRC given that, from a commercial point of view, it was the most subjective one and could lead to difficulties dealing with the Boutiques in the future.

Finally, between the two remaining solutions: GMVClusters model and 0.1%GMV model it was necessary to understand which one was better suited, both from a financial point of view and from a commercial one.

Given that both were very similar from a financial perspective, the tie-breaker criteria was the impact that it was going to have on the commercial relationship between Farfetch and the Boutiques.

Since that the formation of clusters was a subjective measure, held only by Farfetch parameters, the solution selected was applying 0.1%GMV to be the Budget available to each Boutique.

As mentioned, this model, in contrast with the others, was only Boutique dependent and did not create a sense of comparison between Boutiques, making the relationship between Farfetch and the Boutiques stronger.

This solution is expected to aid the commercial and the financial relationship that Farfetch holds with its key partners, the Boutiques, given that it plays as a monetary bonus and guide, and entrusts the Boutiques with a token of good will as to solidify commercial relations.

In [Table 25](#), a summary of the financial perspective is shown as well as the commercial perspective.

Table 25 - Budget generation summary

	<b>Pros</b>	<b>Cons</b>	<b>Profit Percentage – Top 34</b>	<b>Profit Percentage – Total</b>	<b>Profit – Top 34</b>	<b>Profit - Total</b>
<b>0.1%GMV</b>	Adapted to the Boutiques sales	Refused Returns cost has no impact	76.47%	86.19%	£ 51,89	£ 120,00
<b>EqualBudget</b>	-	Boutiques had no direct impact	11.76%	86.19%	£ 82,98	£ 120,00
<b>GMVClusters</b>	Protects Boutiques with higher sales	Sense of injustice forming the clusters	76.47%	84.14%	£ 46,01	£ 120,00
<b>GMV&amp;RRC</b>	Fully adapted to the Boutiques needs	Subjectivity and disparity forming the clusters	73.53%	80.06%	£ 66,33	£ 120,00

So, with the final solution decided and, given that the global solution was to reduce the Refused Returns costs to 0.10% of the GMV – reducing it from the current 0.15% GMV – this final solution will be able to reduce the Refused Returns costs in around 33.33%, also reducing the total Operational Costs in around 11.18%, and with the advantage of also contributing to the solidification of the commercial relationship between Farfetch and the Boutiques.

## 5 Conclusions and future work

The main objective of this thesis was to minimize the Refused Returns costs, one of the main influencers of Farfetch's global Operational Costs. This need to minimize and control is closely related to the increasingly rapid growth of Farfetch, since the increase in sales led to a proportional increase in costs and, when this rapid growth incurred, Farfetch structure was not prepared to fully deal with it.

So, the solution proposed aims not only to reduce the costs but also to revert the current situation when dealing with Refused Returns costs. At the time, all the solutions proposed were a way of reacting to the on-going problems. With the solution proposed, however, the scope is to prevent these costs, controlling them at Farfetch – not letting any external agent play a decisive role – and fortifying the existing commercial relations.

The first action taken to accomplish this task was to understand the current Refused Returns process. After the process was established, it was necessary to assess how the costs were affected and what parameters were critical when dealing with this current way of processing Refused Returns.

It became clear that the Operational Costs were largely impacted by Refused Returns – representing 33.53% of the total costs and 0.15% of Farfetch's GMV. It also had an impact in the Boutiques, Farfetch's key partners, because dealing with these items was a stressful process having to allocate the cost to either Farfetch or the Boutiques and, this negotiation process and cost allocation, placed a strain on this relationship.

A combined solution had to be found. The proposed solution had to fulfill the requirements of being a financially solid solution, being able to solidify the relationship between Farfetch and the Boutiques and revert the ongoing paradigm: solutions “as a mean of response” instead of solutions “as a mean of preventing and controlling” costs.

In order to meet the required criteria, the Budget solution was proposed – create a 0.10% total GMV Budget available and break it per Boutique the way it seemed most fit – adding the reward bonus: if the Boutiques stay below the Budget, they can keep the remainder as a gesture of good will and trust.

This solution had three merits: it guaranteed a solid financial solution – estimating a 33.33% save regarding Refused Returns costs; it secured a solidification of the commercial relationship between Farfetch and the Boutiques – the fact that Boutiques were given the remainder of the attributed Budget, if any was available, reinforced the position of Farfetch and the Boutiques as business partners and not two different entities competing against one another; it allowed the solution to be controlled in the source, Farfetch, thus preventing any extra cost to be incurred.

After this global solution has been established, it was necessary to distribute the individual Budget per Boutique the best possible way.

Four different solutions were proposed – attribute 0.10% of the GMV to each Boutique; give all the Boutiques an equal Budget; create clusters based on the Boutique GMV impact; and, the last solution proposed, was to create clusters based on the GMV impact and the behavior towards Refused Returns.

Then, it was necessary to choose, between the four solutions, the one that better fit the above mentioned criteria.

Globally, the final cost reduction was always going to be met.

After several calculations, comparisons and reflections, the choice of the criterion to be considered fell into the individual Boutique Budget and the commercial validation of the solution.

Therefore, EqualBudget solution was ruled out since it produced the most unfair distribution of the overall Budget per Boutique. Out of the three remaining solutions, GMV&RRC was excluded, given its subjectivity towards the formation of the clusters.

Between the two remaining solutions, the same criterion – subjectivity in the cluster formation – was used, and so, the final model used to allocate the individual Budget per Boutique was to give each Boutique 0.10% of their GMV.

This way of forming each individual Budget guaranteed that the criteria above mentioned were met: the solution was financially solid; wasn't based on any subjective criteria, guaranteeing that no Boutique had to deal with any sense of injustice; had the benefit of working as an incentive for the Boutiques to increase their sales, given that it would also result in an increase in their available Budget; finally, it was a solution completely controlled by Farfetch because it established a given Budget and no extra-costs were incurred.

This solution resulted in a saving of 33.33% of the Refused Returns costs, and also a saving of 11.18% on Operational Costs, and it was implemented by Farfetch as the conclusive solution regarding this matter.

In this sense, the next steps regarding the Refused Returns costs are to monitor and control what impact this solution is going to have either from a financial point of view, or from a commercial perspective with the Boutiques.

However, in parallel with this control, further analysis and solutions regarding all Operational Costs must undergo in order to produce an effective saving in all the Operational Costs, and not only in the Refused Returns ones.

Given this situation, there is an assumed need for further analysis to be made and Farfetch made clear its intentions to do so.

Going along with this trend of thought, the overall environment and posture of everyone involved in the project was nothing short of professional, helpful and overall comprehensive towards the difficulties and troubles found along the entire internship.

Farfetch members made sure that the integration within the team was made smoothly and naturally and the increasing responsibilities were given at the due time.

In this sense, complete freedom was given to the trainee and all the necessary data were made available to him, guaranteeing that any technical difficulty encountered would be dealt without compromising the core of the project.

It is expected that, in the future, more solutions will be implemented, making Farfetch cost structure a role model for any given company.

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## Appendix A: Budget formation scenarios

In this appendix the Tables with the top 34 Boutiques will be presented for each modeled scenario.

Table 26 - 0.1%GMV Scenario

0,10% GMV							
Top 34 Boutiques	Boutique GMV	Boutique GMV Weight	Refused Returns Cost	Wholesale Price	Budget	Profit	Δ Profit
Boutique 1	£ 14 011.00	4.67%	£ 11.37	£ 4.55	£ 14.01	Yes	£ 9.46
Boutique 2	£ 13 638.76	4.55%	£ 10.38	£ 4.15	£ 13.64	Yes	£ 9.49
Boutique 3	£ 13 045.46	4.35%	£ 20.20	£ 8.08	£ 13.05	Yes	£ 4.96
Boutique 4	£ 9 958.02	3.32%	£ 9.53	£ 3.81	£ 9.96	Yes	£ 6.14
Boutique 5	£ 9 670.29	3.22%	£ 45.91	£ 18.36	£ 9.67	No	-£ 8.69
Boutique 6	£ 7 478.46	2.49%	£ 4.82	£ 1.93	£ 7.48	Yes	£ 5.55
Boutique 7	£ 7 459.32	2.49%	£ 7.27	£ 2.91	£ 7.46	Yes	£ 4.55
Boutique 8	£ 5 914.42	1.97%	£ 4.22	£ 1.69	£ 5.91	Yes	£ 4.23
Boutique 9	£ 5 870.41	1.96%	£ 27.11	£ 10.84	£ 5.87	No	-£ 4.97
Boutique 10	£ 3 886.16	1.30%	£ 0.49	£ 0.19	£ 3.89	Yes	£ 3.69
Boutique 11	£ 3 710.56	1.24%	£ 9.25	£ 3.70	£ 3.71	Yes	£ 0.01
Boutique 12	£ 3 705.80	1.24%	£ 4.82	£ 1.93	£ 3.71	Yes	£ 1.78
Boutique 13	£ 3 570.95	1.19%	£ 3.89	£ 1.56	£ 3.57	Yes	£ 2.01
Boutique 14	£ 3 314.53	1.10%	£ 3.82	£ 1.53	£ 3.31	Yes	£ 1.79
Boutique 15	£ 3 228.00	1.08%	£ 5.39	£ 2.16	£ 3.23	Yes	£ 1.07
Boutique 16	£ 3 118.75	1.04%	£ 1.26	£ 0.50	£ 3.12	Yes	£ 2.62
Boutique 17	£ 2 875.60	0.96%	£ 3.98	£ 1.59	£ 2.88	Yes	£ 1.28
Boutique 18	£ 2 750.56	0.92%	£ 7.54	£ 3.02	£ 2.75	No	-£ 0.27
Boutique 19	£ 2 683.15	0.89%	£ 6.50	£ 2.60	£ 2.68	Yes	£ 0.08
Boutique 20	£ 2 632.13	0.88%	£ 4.76	£ 1.90	£ 2.63	Yes	£ 0.73
Boutique 21	£ 2 484.54	0.83%	£ 3.43	£ 1.37	£ 2.48	Yes	£ 1.11
Boutique 22	£ 2 460.53	0.82%	£ 3.49	£ 1.40	£ 2.46	Yes	£ 1.06
Boutique 23	£ 2 211.19	0.74%	£ 6.40	£ 2.56	£ 2.21	No	-£ 0.35
Boutique 24	£ 2 158.83	0.72%	£ 4.03	£ 1.61	£ 2.16	Yes	£ 0.55
Boutique 25	£ 2 090.36	0.70%	£ 5.71	£ 2.28	£ 2.09	No	-£ 0.19
Boutique 26	£ 2 073.68	0.69%	£ 1.16	£ 0.47	£ 2.07	Yes	£ 1.61
Boutique 27	£ 2 051.65	0.68%	£ 3.71	£ 1.48	£ 2.05	Yes	£ 0.57
Boutique 28	£ 2 017.11	0.67%	£ 0.86	£ 0.34	£ 2.02	Yes	£ 1.67
Boutique 29	£ 1 905.31	0.64%	£ 1.58	£ 0.63	£ 1.91	Yes	£ 1.27

<b>Top 34 Boutiques</b>	<b>Boutique GMV</b>	<b>Boutique GMV Weight</b>	<b>Refused Returns Cost</b>	<b>Wholesale Price</b>	<b>Budget</b>	<b>Profit</b>	<b>Δ Profit</b>
Boutique 30	£ 1 904.89	0.63%	£ 2.33	£ 0.93	£ 1.90	Yes	£ 0.97
Boutique 31	£ 1 796.08	0.60%	£ 0.73	£ 0.29	£ 1.80	Yes	£ 1.51
Boutique 32	£ 1 788.90	0.60%	£ 5.55	£ 2.22	£ 1.79	No	-£ 0.43
Boutique 33	£ 1 732.76	0.58%	£ 4.65	£ 1.86	£ 1.73	No	-£ 0.13
Boutique 34	£ 1 683.44	0.56%	£ 11.34	£ 4.54	£ 1.68	No	-£ 2.85
<b>Top 34 Boutiques - Total</b>	<b>£ 150 881.59</b>	<b>50.29%</b>	<b>£ 247.48</b>	<b>£ 98.99</b>	<b>£ 150.88</b>	<b>76.47%</b>	<b>£ 51.89</b>
<b>Total</b>	<b>£ 300 000.00</b>	<b>100.00%</b>	<b>£ 450.00</b>	<b>£ 180.00</b>	<b>£ 300.00</b>	<b>86.19%</b>	<b>£ 120.00</b>

Table 27 - EqualBudget Scenario

<b>Equal Budget</b>							
<b>Top 34 Boutiques</b>	<b>Boutique GMV</b>	<b>Boutique GMV Weight</b>	<b>Refused Returns Cost</b>	<b>Wholesale Price</b>	<b>Budget</b>	<b>Profit</b>	<b>Δ Profit</b>
Boutique 1	£ 14 011.00	4.67%	£ 11.37	£ 4.55	£ 0.47	No	-£ 4.08
Boutique 2	£ 13 638.76	4.55%	£ 10.38	£ 4.15	£ 0.47	No	-£ 3.68
Boutique 3	£ 13 045.46	4.35%	£ 20.20	£ 8.08	£ 0.47	No	-£ 7.61
Boutique 4	£ 9 958.02	3.32%	£ 9.53	£ 3.81	£ 0.47	No	-£ 3.34
Boutique 5	£ 9 670.29	3.22%	£ 45.91	£ 18.36	£ 0.47	No	-£ 17.89
Boutique 6	£ 7 478.46	2.49%	£ 4.82	£ 1.93	£ 0.47	No	-£ 1.46
Boutique 7	£ 7 459.32	2.49%	£ 7.27	£ 2.91	£ 0.47	No	-£ 2.44
Boutique 8	£ 5 914.42	1.97%	£ 4.22	£ 1.69	£ 0.47	No	-£ 1.22
Boutique 9	£ 5 870.41	1.96%	£ 27.11	£ 10.84	£ 0.47	No	-£ 10.37
Boutique 10	£ 3 886.16	1.30%	£ 0.49	£ 0.19	£ 0.47	Yes	£ 0.28
Boutique 11	£ 3 710.56	1.24%	£ 9.25	£ 3.70	£ 0.47	No	-£ 3.23
Boutique 12	£ 3 705.80	1.24%	£ 4.82	£ 1.93	£ 0.47	No	-£ 1.46
Boutique 13	£ 3 570.95	1.19%	£ 3.89	£ 1.56	£ 0.47	No	-£ 1.09
Boutique 14	£ 3 314.53	1.10%	£ 3.82	£ 1.53	£ 0.47	No	-£ 1.06
Boutique 15	£ 3 228.00	1.08%	£ 5.39	£ 2.16	£ 0.47	No	-£ 1.69
Boutique 16	£ 3 118.75	1.04%	£ 1.26	£ 0.50	£ 0.47	No	-£ 0.03
Boutique 17	£ 2 875.60	0.96%	£ 3.98	£ 1.59	£ 0.47	No	-£ 1.12
Boutique 18	£ 2 750.56	0.92%	£ 7.54	£ 3.02	£ 0.47	No	-£ 2.55
Boutique 19	£ 2 683.15	0.89%	£ 6.50	£ 2.60	£ 0.47	No	-£ 2.13
Boutique 20	£ 2 632.13	0.88%	£ 4.76	£ 1.90	£ 0.47	No	-£ 1.43
Boutique 21	£ 2 484.54	0.83%	£ 3.43	£ 1.37	£ 0.47	No	-£ 0.90

<b>Top 34 Boutiques</b>	<b>Boutique GMV</b>	<b>Boutique GMV Weight</b>	<b>Refused Returns Cost</b>	<b>Wholesale Price</b>	<b>Budget</b>	<b>Profit</b>	<b>Δ Profit</b>
Boutique 22	£ 2 460.53	0.82%	£ 3.49	£ 1.40	£ 0.47	No	-£ 0.93
Boutique 23	£ 2 211.19	0.74%	£ 6.40	£ 2.56	£ 0.47	No	-£ 2.09
Boutique 24	£ 2 158.83	0.72%	£ 4.03	£ 1.61	£ 0.47	No	-£ 1.14
Boutique 25	£ 2 090.36	0.70%	£ 5.71	£ 2.28	£ 0.47	No	-£ 1.81
Boutique 26	£ 2 073.68	0.69%	£ 1.16	£ 0.47	£ 0.47	Yes	£ 0.00
Boutique 27	£ 2 051.65	0.68%	£ 3.71	£ 1.48	£ 0.47	No	-£ 1.01
Boutique 28	£ 2 017.11	0.67%	£ 0.86	£ 0.34	£ 0.47	Yes	£ 0.13
Boutique 29	£ 1 905.31	0.64%	£ 1.58	£ 0.63	£ 0.47	No	-£ 0.16
Boutique 30	£ 1 904.89	0.63%	£ 2.33	£ 0.93	£ 0.47	No	-£ 0.46
Boutique 31	£ 1 796.08	0.60%	£ 0.73	£ 0.29	£ 0.47	Yes	£ 0.18
Boutique 32	£ 1 788.90	0.60%	£ 5.55	£ 2.22	£ 0.47	No	-£ 1.75
Boutique 33	£ 1 732.76	0.58%	£ 4.65	£ 1.86	£ 0.47	No	-£ 1.39
Boutique 34	£ 1 683.44	0.56%	£ 11.34	£ 4.54	£ 0.47	No	-£ 4.07
<b>Top 34 Boutiques - Total</b>	<b>£ 150 881.59</b>	<b>50.29%</b>	<b>£ 247.48</b>	<b>£ 98.99</b>	<b>£ 15.99</b>	<b>11.76%</b>	<b>-£ 83.01</b>
<b>Total</b>	<b>£ 300 000.00</b>	<b>100.00%</b>	<b>£ 450.00</b>	<b>£ 180.00</b>	<b>£ 300.00</b>	<b>86.21%</b>	<b>£ 120.00</b>

Table 28 - GMVClusters Scenario

<b>GMV impact Cluster</b>							
<b>Top 34 Boutiques</b>	<b>Boutique GMV</b>	<b>Boutique GMV Weight</b>	<b>Refused Returns Cost</b>	<b>Wholesale Price</b>	<b>Budget</b>	<b>Profit</b>	<b>Δ Profit</b>
Boutique 1	£ 14 011.00	4.67%	£ 11.37	£ 4.55	£ 12.00	Yes	£ 7.45
Boutique 2	£ 13 638.76	4.55%	£ 10.38	£ 4.15	£ 12.00	Yes	£ 7.85
Boutique 3	£ 13 045.46	4.35%	£ 20.20	£ 8.08	£ 12.00	Yes	£ 3.92
Boutique 4	£ 9 958.02	3.32%	£ 9.53	£ 3.81	£ 12.00	Yes	£ 8.19
Boutique 5	£ 9 670.29	3.22%	£ 45.91	£ 18.36	£ 12.00	No	-£ 6.36
Boutique 6	£ 7 478.46	2.49%	£ 4.82	£ 1.93	£ 4.29	Yes	£ 2.36
Boutique 7	£ 7 459.32	2.49%	£ 7.27	£ 2.91	£ 4.29	Yes	£ 1.38
Boutique 8	£ 5 914.42	1.97%	£ 4.22	£ 1.69	£ 4.29	Yes	£ 2.60
Boutique 9	£ 5 870.41	1.96%	£ 27.11	£ 10.84	£ 4.29	No	-£ -6.56
Boutique 10	£ 3 886.16	1.30%	£ 0.49	£ 0.19	£ 4.29	Yes	£ 4.09
Boutique 11	£ 3 710.56	1.24%	£ 9.25	£ 3.70	£ 4.29	Yes	£ 0.59
Boutique 12	£ 3 705.80	1.24%	£ 4.82	£ 1.93	£ 4.29	Yes	£ 2.36
Boutique 13	£ 3 570.95	1.19%	£ 3.89	£ 1.56	£ 4.29	Yes	£ 2.73

<b>Top 34 Boutiques</b>	<b>Boutique GMV</b>	<b>Boutique GMV Weight</b>	<b>Refused Returns Cost</b>	<b>Wholesale Price</b>	<b>Budget</b>	<b>Profit</b>	<b>Δ Profit</b>
Boutique 14	£ 3 314.53	1.10%	£ 3.82	£ 1.53	£ 4.29	Yes	£ 2.76
Boutique 15	£ 3 228.00	1.08%	£ 5.39	£ 2.16	£ 4.29	Yes	£ 2.13
Boutique 16	£ 3 118.75	1.04%	£ 1.26	£ 0.50	£ 4.29	Yes	£ 3.78
Boutique 17	£ 2 875.60	0.96%	£ 3.98	£ 1.59	£ 4.29	Yes	£ 2.69
Boutique 18	£ 2 750.56	0.92%	£ 7.54	£ 3.02	£ 4.29	Yes	£ 1.27
Boutique 19	£ 2 683.15	0.89%	£ 6.50	£ 2.60	£ 4.29	Yes	£ 1.69
Boutique 20	£ 2 632.13	0.88%	£ 4.76	£ 1.90	£ 1.67	No	-£ 0.24
Boutique 21	£ 2 484.54	0.83%	£ 3.43	£ 1.37	£ 1.67	Yes	£ 0.30
Boutique 22	£ 2 460.53	0.82%	£ 3.49	£ 1.40	£ 1.67	Yes	£ 0.27
Boutique 23	£ 2 211.19	0.74%	£ 6.40	£ 2.56	£ 1.67	No	-£ 0.89
Boutique 24	£ 2 158.83	0.72%	£ 4.03	£ 1.61	£ 1.67	Yes	£ 0.06
Boutique 25	£ 2 090.36	0.70%	£ 5.71	£ 2.28	£ 1.67	No	-£ 0.62
Boutique 26	£ 2 073.68	0.69%	£ 1.16	£ 0.47	£ 1.67	Yes	£ 1.20
Boutique 27	£ 2 051.65	0.68%	£ 3.71	£ 1.48	£ 1.67	Yes	£ 0.18
Boutique 28	£ 2 017.11	0.67%	£ 0.86	£ 0.34	£ 1.67	Yes	£ 1.32
Boutique 29	£ 1 905.31	0.64%	£ 1.58	£ 0.63	£ 1.67	Yes	£ 1.04
Boutique 30	£ 1 904.89	0.63%	£ 2.33	£ 0.93	£ 1.67	Yes	£ 0.74
Boutique 31	£ 1 796.08	0.60%	£ 0.73	£ 0.29	£ 1.67	Yes	£ 1.38
Boutique 32	£ 1 788.90	0.60%	£ 5.55	£ 2.22	£ 1.67	No	-£ 0.55
Boutique 33	£ 1 732.76	0.58%	£ 4.65	£ 1.86	£ 1.67	No	-£ 0.19
Boutique 34	£ 1 683.44	0.56%	£ 11.34	£ 4.54	£ 1.67	No	-£ 2.87
<b>Top 34 Boutiques - Total</b>	<b>£ 150 881.59</b>	<b>50.29%</b>	<b>£ 247.48</b>	<b>£ 98.99</b>	<b>£ 145.00</b>	<b>76.47%</b>	<b>£ 46.01</b>
<b>Total</b>	<b>£ 300 000.00</b>	<b>100.00%</b>	<b>£ 450.00</b>	<b>£ 180.00</b>	<b>£ 300.00</b>	<b>84.01%</b>	<b>£ 120.00</b>

Table 29 – GMV&amp;RRC Scenario

<b>GMV weight and Refused Returns cost behavior Scenario</b>							
<b>Top 34 Boutiques</b>	<b>Boutique GMV</b>	<b>Boutique GMV Weight</b>	<b>Refused Returns Cost</b>	<b>Wholesale Price</b>	<b>Budget</b>	<b>Profit</b>	<b>Δ Profit</b>
Boutique 1	£ 14 011.00	4.67%	£ 11.37	£ 4.55	£ 18.21	Yes	£ 13.67
Boutique 2	£ 13 638.76	4.55%	£ 10.38	£ 4.15	£ 17.73	Yes	£ 13.58
Boutique 3	£ 13 045.46	4.35%	£ 20.20	£ 8.08	£ 13.05	Yes	£ 4.96
Boutique 4	£ 9 958.02	3.32%	£ 9.53	£ 3.81	£ 12.95	Yes	£ 9.13
Boutique 5	£ 9 670.29	3.22%	£ 45.91	£ 18.36	£ 9.67	No	-£ 8.69

## Operational Costs: a focus on returned items on fashion e-tail

<b>Top 34 Boutiques</b>	<b>Boutique GMV</b>	<b>Boutique GMV Weight</b>	<b>Refused Returns Cost</b>	<b>Wholesale Price</b>	<b>Budget</b>	<b>Profit</b>	<b>Δ Profit</b>
Boutique 6	£ 7 478.46	2.49%	£ 4.82	£ 1.93	£ 9.72	Yes	£ 7.79
Boutique 7	£ 7 459.32	2.49%	£ 7.27	£ 2.91	£ 9.70	Yes	£ 6.79
Boutique 8	£ 5 914.42	1.97%	£ 4.22	£ 1.69	£ 7.69	Yes	£ 6.00
Boutique 9	£ 5 870.41	1.96%	£ 27.11	£ 10.84	£ 5.87	No	-£ 4.97
Boutique 10	£ 3 886.16	1.30%	£ 0.49	£ 0.19	£ 5.05	Yes	£ 4.86
Boutique 11	£ 3 710.56	1.24%	£ 9.25	£ 3.70	£ 3.71	Yes	£ 0.01
Boutique 12	£ 3 705.80	1.24%	£ 4.82	£ 1.93	£ 3.71	Yes	£ 1.78
Boutique 13	£ 3 570.95	1.19%	£ 3.89	£ 1.56	£ 4.11	Yes	£ 2.55
Boutique 14	£ 3 314.53	1.10%	£ 3.82	£ 1.53	£ 3.81	Yes	£ 2.28
Boutique 15	£ 3 228.00	1.08%	£ 5.39	£ 2.16	£ 3.23	Yes	£ 1.07
Boutique 16	£ 3 118.75	1.04%	£ 1.26	£ 0.50	£ 4.05	Yes	£ 3.55
Boutique 17	£ 2 875.60	0.96%	£ 3.98	£ 1.59	£ 2.16	Yes	£ 0.56
Boutique 18	£ 2 750.56	0.92%	£ 7.54	£ 3.02	£ 2.06	No	-£ 0.95
Boutique 19	£ 2 683.15	0.89%	£ 6.50	£ 2.60	£ 2.01	No	-£ 0.59
Boutique 20	£ 2 632.13	0.88%	£ 4.76	£ 1.90	£ 1.97	Yes	£ 0.07
Boutique 21	£ 2 484.54	0.83%	£ 3.43	£ 1.37	£ 1.86	Yes	£ 0.49
Boutique 22	£ 2 460.53	0.82%	£ 3.49	£ 1.40	£ 1.85	Yes	£ 0.45
Boutique 23	£ 2 211.19	0.74%	£ 6.40	£ 2.56	£ 1.66	No	-£ 0.90
Boutique 24	£ 2 158.83	0.72%	£ 4.03	£ 1.61	£ 1.62	Yes	£ 0.01
Boutique 25	£ 2 090.36	0.70%	£ 5.71	£ 2.28	£ 1.57	No	-£ 0.72
Boutique 26	£ 2 073.68	0.69%	£ 1.16	£ 0.47	£ 2.38	Yes	£ 1.92
Boutique 27	£ 2 051.65	0.68%	£ 3.71	£ 1.48	£ 1.54	Yes	£ 0.05
Boutique 28	£ 2 017.11	0.67%	£ 0.86	£ 0.34	£ 2.32	Yes	£ 1.97
Boutique 29	£ 1 905.31	0.64%	£ 1.58	£ 0.63	£ 2.19	Yes	£ 1.56
Boutique 30	£ 1 904.89	0.63%	£ 2.33	£ 0.93	£ 1.90	Yes	£ 0.97
Boutique 31	£ 1 796.08	0.60%	£ 0.73	£ 0.29	£ 2.07	Yes	£ 1.78
Boutique 32	£ 1 788.90	0.60%	£ 5.55	£ 2.22	£ 1.34	No	-£ 0.88
Boutique 33	£ 1 732.76	0.58%	£ 4.65	£ 1.86	£ 1.30	No	-£ 0.56
Boutique 34	£ 1 683.44	0.56%	£ 11.34	£ 4.54	£ 1.26	No	-£ 3.27
<b>Top 34 Boutiques - Total</b>	<b>£ 150 881.59</b>	<b>50.29%</b>	<b>£ 247.48</b>	<b>£ 98.99</b>	<b>£ 165.32</b>	<b>73.53%</b>	<b>£ 66.33</b>
<b>Total</b>	<b>£ 300 000.00</b>	<b>100.00%</b>	<b>£ 450.00</b>	<b>£ 180.00</b>	<b>£ 300.00</b>	<b>79.94%</b>	<b>£ 120.00</b>