# PRE-FEASIBILITY ANALYSIS FOR THE CREATION OF A DELIVERY COMPANY IN A CONTEXT OF GREAT COMPETITION

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# Credits

To Alice, the light of my life, the one that has given me so many good moments and has helped me so much in the last 3 years.

To my family: my parents, my sister, my grandparents ... they are the greatest thing I have.

To my Italian family, who have always shown me to be one more and have welcomed me from the first moment I arrived

To my roommates in Turin: Pol, Sergio, Barbany and Marc. They gave me two of the best years of my life and unforgettable moments.

Ai miei fratelli Stenis, Matteo e le mie grandi amiche Chiri, Cecilia and Giulia.

To Kobe, the very new member of the family, we are so proud and happy to have you in our lives.

# Index

# 1 Introduction

## 1.1 Origin and Motivation

Online shopping has grown exponentially over the years. As the use of online shopping is expected to increase as an alternative to traditional shopping, both for its present and future availability, as well as for its lower environmental impact, it is important to have great control over 'these and a good predictive analysis of their behavior.

There are now a lot of companies that are changing their business model and adapting it to online shopping. In this work, however, an attempt will be made to carry out a study of an online shopping application through which the aim is to receive the product as quickly as possible through mobile stores with a built-in location.

The growing wave of new technologies that drive changes in people's daily lives and revolutionize sectors in an uninterrupted way makes consumers adapt to them and at the same time speed up the process. The millennial generation (between the 1980s and 1990s) is now becoming famous for having its own capital, becoming independent and managing its time and money autonomously. This new generation is not only characterized by its critical personality thanks to the quick access to information, but they have also been born with the ease of using new technologies in an almost innate way.

The main motivation of the project has been to be able to study a case that could transform a business model, improve the shopping experience in a significant way and make people's daily lives easier. One contribution to changing the current city model, which is one of the main causes of environmental problems, has also been one of the reasons for this work.

Society currently lives in a period where the internet is the basis of everything, from shopping, managing the bank account or to communicating with other people. All of it is related to the internet but also to the mobile phone or smartphone. It has reached a point where you can have almost anything you want with just one click. This fact gives rise to new forms of business, and with them, new economies that have taken advantage of this evolution of the Internet to develop their product.

Being able to imagine and believe in a more sustainable, innovative model with a positive impact on society makes sense for this project.

It has also been valued to be able to do a project that would put into practice various knowledge acquired in different areas of the degree and to provide my study for future

predictive analyzes for the behavior of castings in an urban environment and analysis of the difficulties that may suppose.

## 1.2 Aims and Scope

The main objective of this project is to study the feasibility of maximizing the delivery time of an order and its effects on both the consumer and the company. One of the main factors that will be taken into account will be the environmental impact that this new business model can have and its consequences.

The first step is to analyze the available data in the environment where it will take place and to detect which will be the most important when studying them. Therefore, it will be necessary to know the weight of each of them within the distribution process and to be able to draw some first conclusions from those that may be related to each other.

Once the urban environment has been decided, the key points of interest, the density of vehicles according to areas of action, timetables and modes of distribution and order limits will be analyzed. An attempt will be made to explain the main anomalies so that they can be controlled in the future.

Finally, an attempt will be made to explain and exemplify how this delivery system would be modeled in order to be able to coordinate the stock of vans, their location and incoming orders in an efficient way.

This project is based on the study of an intelligent application to optimize delivery time in an urban environment. There will be vehicles that will circulate around the city with the stock inside that will have a built-in location and when an order enters, the application will choose the van that is closest and that carries the requested product. As the project progresses, different means of transport and different dimensions will be considered in order to better adapt to each situation and to have a greater flexibility of distribution.

The proposed application will be considered to be contracted by any company that requires this service, from large textile companies to parapharmacy or fruit shops, adapting to the needs of each. The company studied will be responsible for managing the orders, who will carry out the implementation and operational maintenance of the system.

The project will focus on a specific urban environment, but the goal is for this model to be able to move to different cities, adapting to each of its characteristics.

## 1.3 Structure of the document

This study will focus mainly on the feasibility of opening a company that can make last mile deliveries in a time that allows it to be competitive with other companies in this field.

# 2 Context

Once the objectives and scope of the project have been defined, it is important to investigate the market situation and the direction in which it is moving. When locating the services presented in this project, it is important to study the most important advances that have taken place. As our company will be based on order delivery, we need to research how they work today and how they can be improved. In addition, the evolution of the market over the last few years and how it has been adapted to new technologies will have to be studied and analyzed. Finally, we will study the urban environment of the city where we want to implement this business idea, the city of Barcelona.

## 2.1 Actual Delivery System

There are currently a large number of companies that deliver orders almost all day. A great example would be the multinational DHL, which makes deliveries by any means of transport, be it Airplane, Boat, Train, Truck or Van (DHL, 2019). The delivery or delivery system currently used by the German company is intended for one-day delivery. For example, DHL Express Worldwide ensures product delivery to anywhere in the world in 1 business day, while there are separate shipments by time slots (DHL, 2019)

The logistics of these companies maximize the time of collection and delivery of the products, sometimes arriving on the same day as the order. For example, Amazon offers express shipping services, which can take between 1 and 4 business days, or 1 day shipping, which allows you to place an order and receive it at home the next day, including Saturdays and Sundays. It also offers a delivery service today, with which they promise to take the product home on the same day of purchase (Amazon, 2019).

The main problem with these delivery methods is that they tend to be too expensive, especially on DHL. Amazon has begun to include cheaper prices, but we believe they could be even more so. As explained before, Barcelona is an urban center with a lot of strength on the international scene, and receives arrivals of all kinds of transport methods almost 24 hours a day. This fact leads us to think that it would be a good idea to take advantage of this factor and offer a more effective and economical distribution system which will be discussed later.

## 2.2 Market Evolution

### 2.2.1 Traditional method

Until the early twentieth century, people used to buy their things by physically going to the store and choosing the product they wanted. In general, to do this people followed a well-defined pattern: they took the car to go to the store, chose the product, bought it and returned home. This traditional method of purchase continues today, as it offers great advantages over other methods, such as seeing the product in person and, above all, being able to try the product (if it is a piece of clothing).

The big drawback to this method is the time, because sometimes you are looking for a product and either you do not know where to find it, or it takes a long time to get to the site, without being sure that there is an availability of the desired product. Also, if you have to travel, you will have to invest a small amount of money when you arrive at the store, either by car or subway. In the first case, then you will have to find parking, sometimes easy and free and other times difficult and expensive. It is true that people can walk, but being realistic and seeing the dimensions of a city like Barcelona, it is difficult to think that you can always walk.

So this traditional method of buying has some advantages and some disadvantages, although it remains the main method of buying in almost every city in the world. Despite continuing at number 1 on the list, the trend of people is changing more and more and more and more things are being asked for on the internet.

### 2.2.2 New technologies

At the beginning of the twentieth century began what was known as the Third Industrial Revolution, which consisted of the convergence of new communication technologies with new energy systems. New forms of communication become the means of organization and management that the most complex civilizations have made possible through new sources of energy. The conjunction of Internet communication technology and renewable energies in the 21st century is giving rise to the so-called third industrial revolution (Wikipedia, 2019). During this period the main objective was the change to 100% renewable energy, transport based on the electric vehicle or with renewable energy and, finally, smart grid technology.

Technological innovation is currently experiencing an exponential growth trend, with much more progress each year than ever before. In fact, almost 150 years passed between the beginning of the second and third industrial revolutions, while about 5-7 years have passed between the third and fourth industrial revolutions (Portillo, 2010). This so-called fourth industrial revolution is characterized by a fusion of technologies that blur the lines

between the physical, digital and biological spheres, collectively called cyber-physical systems. Emerging technological advances in various fields such as robotics, artificial intelligence, nanotechnology, quantum computing, biotechnology, the Internet of Things, the industrial Internet of Things, fifth generation 5G wireless technologies, 3D printing and autonomous vehicles (Wikipedia, 2019), mark it.

This fourth industrial revolution is the one that will allow us to connect almost all the intelligent systems that exist today. Mobile applications allow you to do anything today, and purchasing methods have changed a lot, to the point that from your smartphone you can place an order with just one click. Although these technological advances have reached a large part of the world's population, especially in developed countries, there is still no full adaptation to these methods, especially by the older generations, so it is not over to tip the scales by the traditional purchasing method or the online method.

The main problem with adapting to new technologies today stems from the fact that a large part of the population has lived through two or three industrial revolutions (second, third and fourth). This means that almost the vast majority of people over the age of 50 have lived with virtually no technological advancement (in terms of the internet, smartphone, etc.) and have suddenly encountered two technological revolutions in just over a decade.

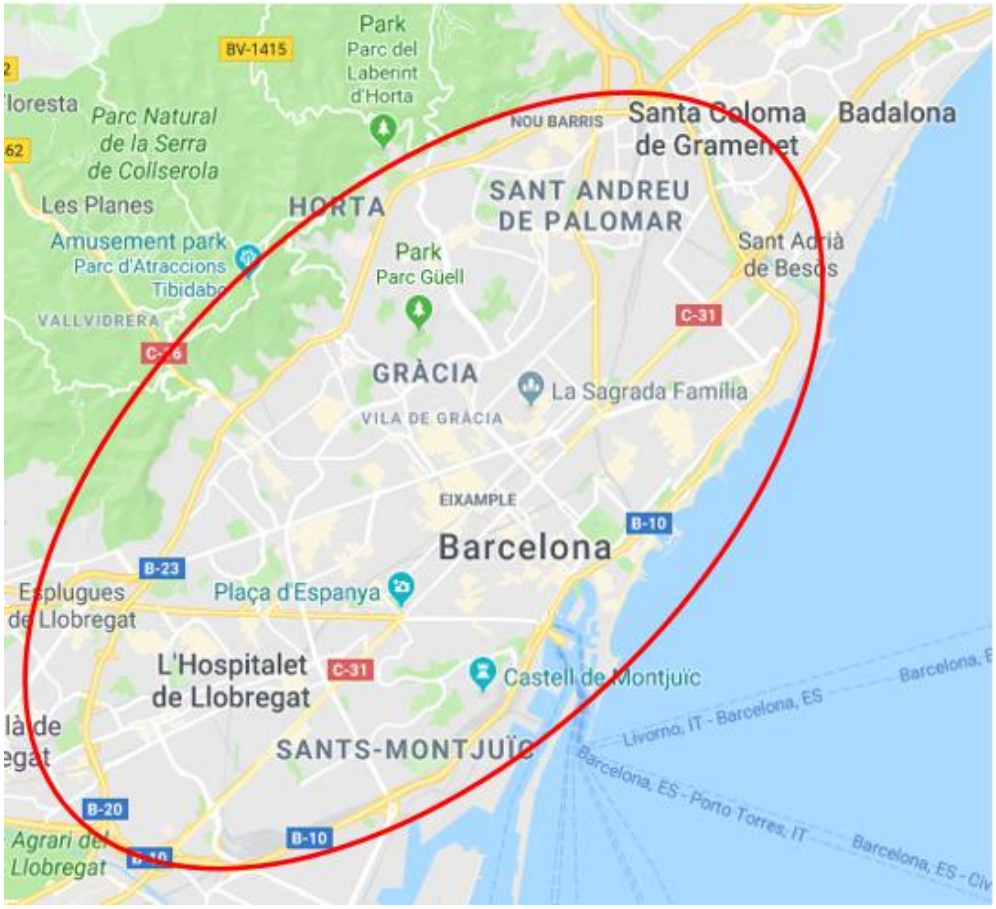
The new generations, known as millennials, have been born and raised with all these technological advances, so their adaptation has been almost instantaneous. This is clearly reflected in the fact that everyone today has a smartphone, a Tablet or a computer from a very young age, when in the past you didn’t have a mobile until you were 15/16 years old. These changes and the emergence of new generations open a new landscape for companies that want to work via the Internet, as consumption patterns are changing in this new direction, and it will certainly not take long to turn the situation around and establish -is the main pattern of consumption in modern society.

The ReasonWhy portal indicates that more and more millennials prefer to buy online and by card (ReasonWhy, 2018). The Snapchat platform has conducted a study that reveals that online purchases made by millennials have grown by 33% in the United States during 2018 (compared to 2017). This online shopping boom has to do with several factors. First of all, this new generation is aware of the value of money, so they are always looking for ways to save. In addition, the Internet world offers a wide range of information to compare prices and features before buying a product. This is the current new trend, whereby people do not have to leave home and do not have to take the car or public transport to consume and receive the product at home. In addition, it must be emphasized that this new fashion does not seem fleeting, and that it will become stronger and stronger when generational change takes place and all generations are fully adapted to new technologies.

The advent of the Internet changed the way people lived, changed the world of work and the habits of the people. It is true that this change has brought many benefits to society, but it is also true that it has left behind the elderly who have not been able to adapt to it. Online shopping is the most widely used way for people in the 15-40 age group, but it is also beginning to be used by people in their 40s and 60s who are increasingly adapting to new technological changes. From the age of 60, it is true that the use of online shopping is rarer, which must be taken into account.

## 2.3 Urban environment

Barcelona is one of the most important cities in Spain and Europe, with significant economic activity and an ideal location. It is the capital of the Autonomous Community of Catalonia, and is located in the northeast of Spain, on the Mediterranean coast bordering Andorra and France. In this work, not all of Barcelona will be studied, but the area of action will be delimited and those areas that hinder the objective of this work, which is to make the distributions as quickly as possible, will be excluded.



### 2.3.1 Population

The total population of Barcelona is 1,620,809 inhabitants where 766,625 are men and 854,184 are women, the number of foreigners is 288,675 and the main nationalities are Italy, Pakistan and China. The district where most citizens live is the Eixample with 266,416 (16%), but Sant Martí and Ciutat Vella have the highest net density, and the least in Les Corts with 82,033 inhabitants (5%).

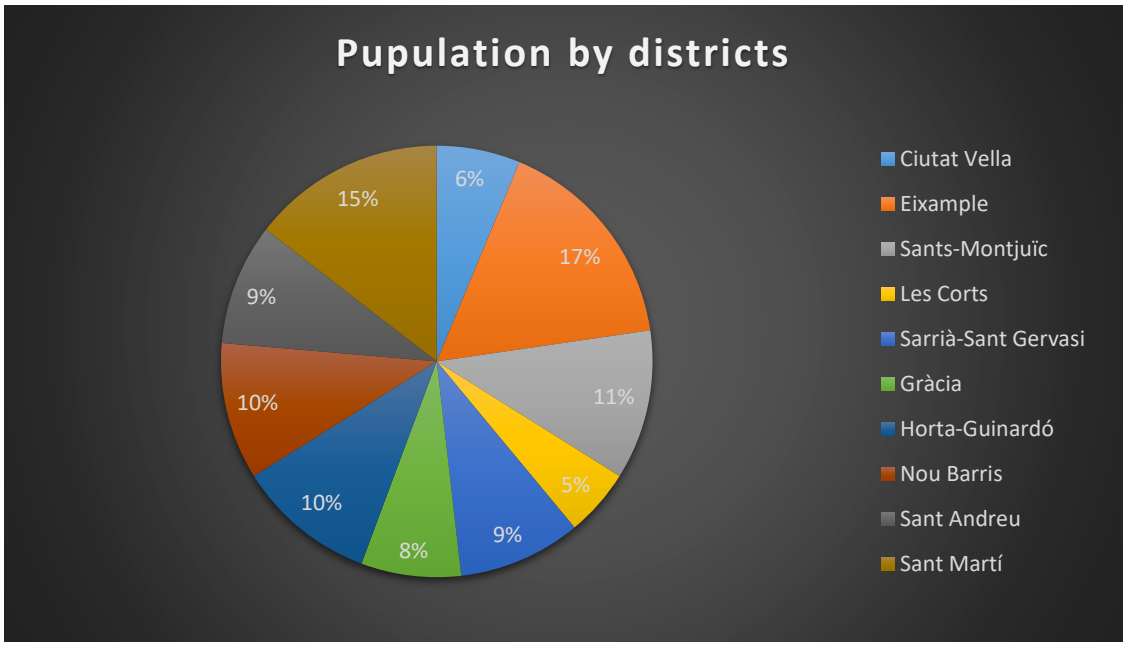



*Figure 1: Population by districts in 2017 in Barcelona*

The average household occupancy is 2.5 people per household and single-parent households account for 3% of the total.

In Sarrià - Sant Gervasi we find the highest proportion in the group of children and young people (17%). More than a quarter of the elderly live alone in the city (25.7%), a percentage that is almost a third in Ciutat Vella (32.5%). Life expectancy remains at 83.9 years in 2015, and has risen slightly for men (80.8 years) while stabilizing (86.6 years) for women. The group of men in Ciutat Vella has the lowest life expectancy (77.3 years). The number of people per home in the city of Barcelona is a very relevant figure in this study in order to optimize and locate orders.

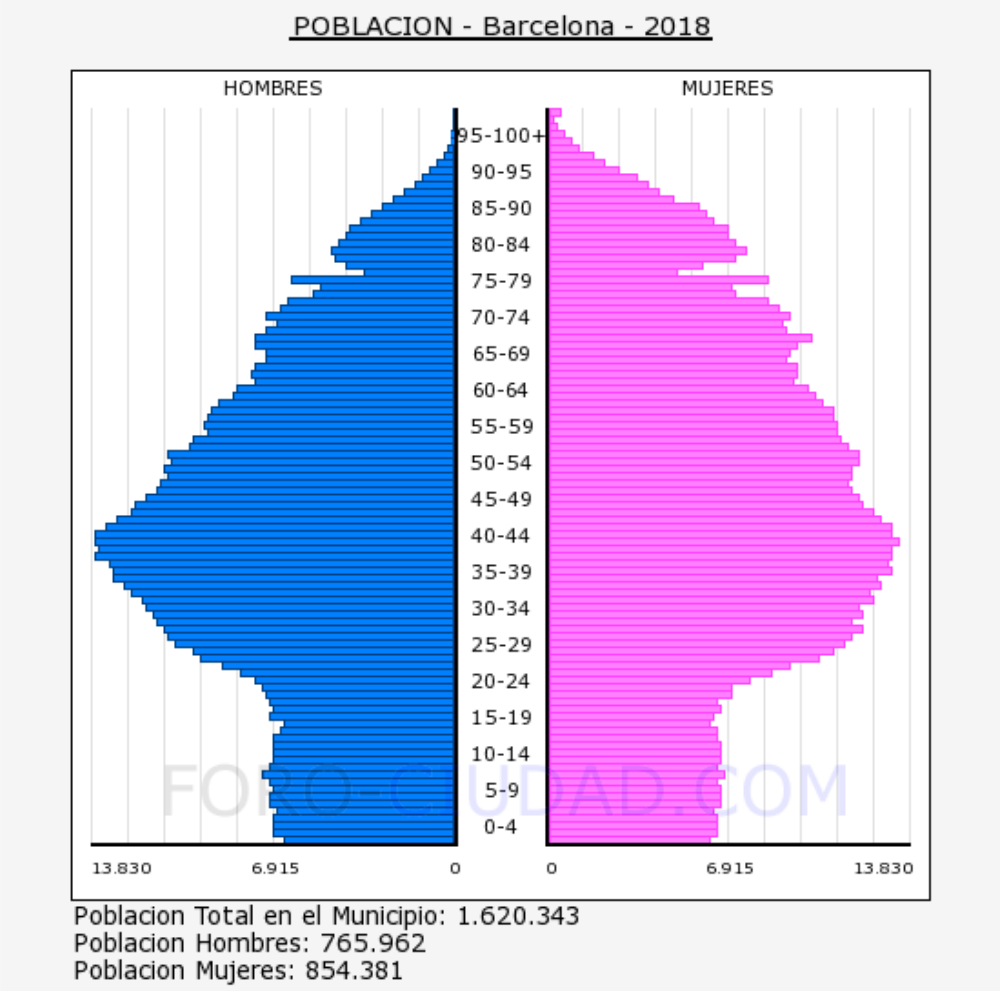



*Figure 2: Population pyramids in Barcelona in 2018. Source: INE*

### 2.3.2 Tourism

Barcelona receives approximately 9 million tourists each year, these important figures make it one of the main assets of the city. The total expenditure per tourist in 2017 was 998.4 euros on average and the average duration was 4.9 days. This indicates that tourists are a very important source of income for businesses in the city, so they will be important in the study of this project.

#### *2.3.2.1 Air and Land Tourism*

Barcelona is characterized by being a very touristy city and, in fact, is a very common destination for people from all over the world. This tourism is booming during the summer holidays, where the population of the Catalan capital can increase exponentially due to the growth of the arrival rate. As can be seen in the figure 3, the number of passengers arriving at Barcelona airport grows over the years, far exceeding the figure of 45 million people in 2017. Considering that, as mentioned before, the population of

Barcelona is 1.6 million inhabitants, the number of tourists who arrive there increases the population that consumes in the city of Barcelona considerably. In addition, the trend indicates that, surely, this number of tourists by air will continue to increase each year, further improving the business expectations we have.

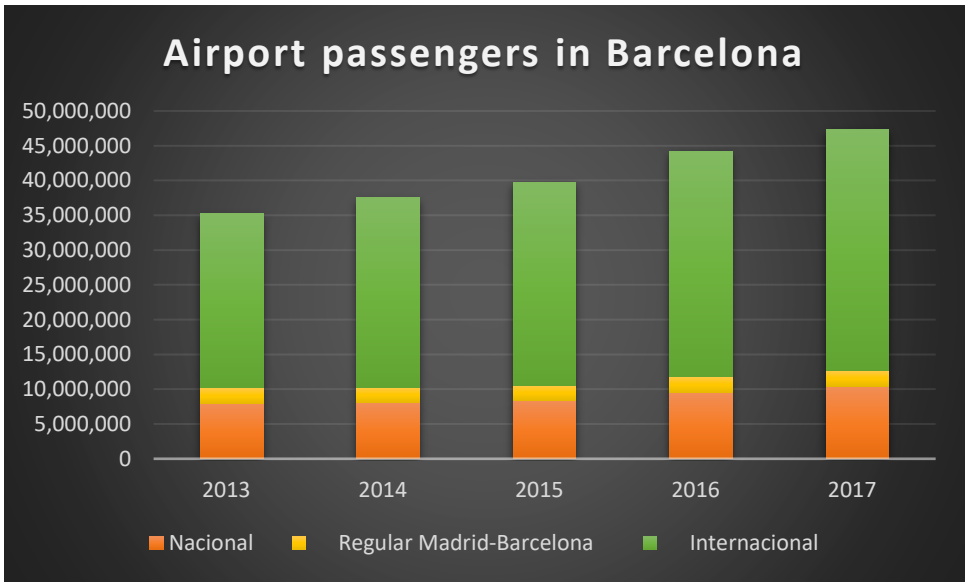



*Figure 3: Passengers in the Airport of Barcelona. Font: Barcelona.cat*

We could say that the vast majority of tourists or passengers who arrive in Barcelona come from outside Spain, while 20-25% of them are Spanish passengers. It is necessary to emphasize the great weight that has the Madrid-Barcelona network, since it supposes a great volume of people who move from the capital. However, it is important to note that this Madrid-Barcelona network has been somewhat stagnant in recent years, as the total growth has been 134,629 people, while the total number of passengers has grown by more than 12 million. This means that the relative impact of this network is not as great as before, although it is still very important for the city of Barcelona.

On the other hand, in the figure 4 you can see that the AVE traffic of the two main cities in Spain, Barcelona and Madrid, is also increasing. Passenger numbers are really high if we take into account that they almost tripled the total population of Barcelona in 2017, and it is very important to consider that, surely, these figures will continue to grow in the coming years.

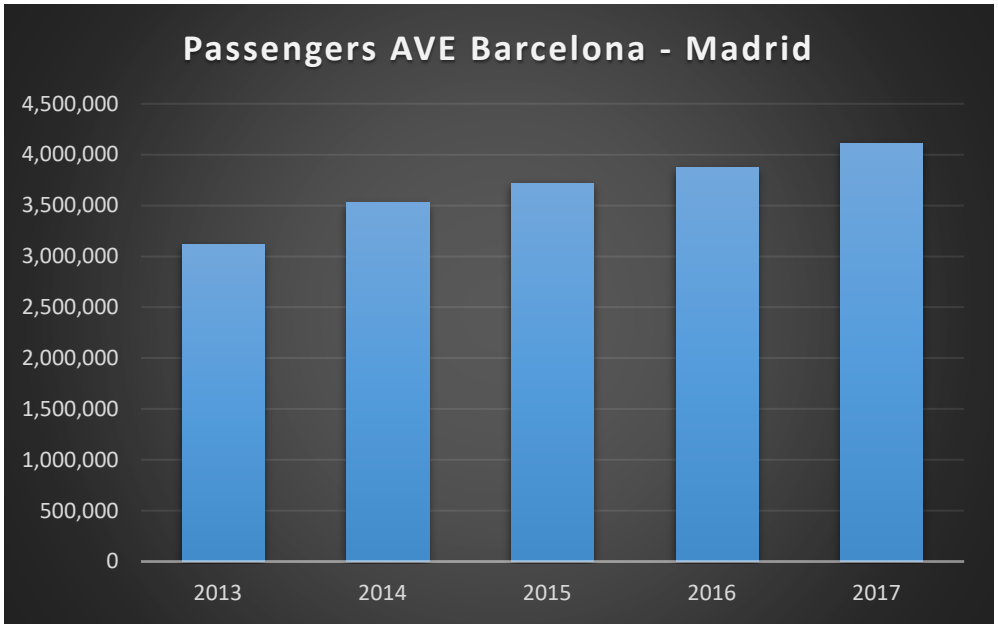



*Figure 4: Passengers in the AVE Barcelona-Madrid path. Font: Statista*

It should be borne in mind that the AVE lines that arrive in Barcelona are not limited to Madrid, but extend to Seville - Barcelona, and Malaga - Barcelona (Enterat, 2019). In addition, Barcelona has a large number of train connections with other cities that, although not high-speed lines, carry a large number of passengers to the Catalan capital. Green refers to Ferris passengers, while blue are all the Cruise's tourists and yellow are all the scales done in Barcelona.

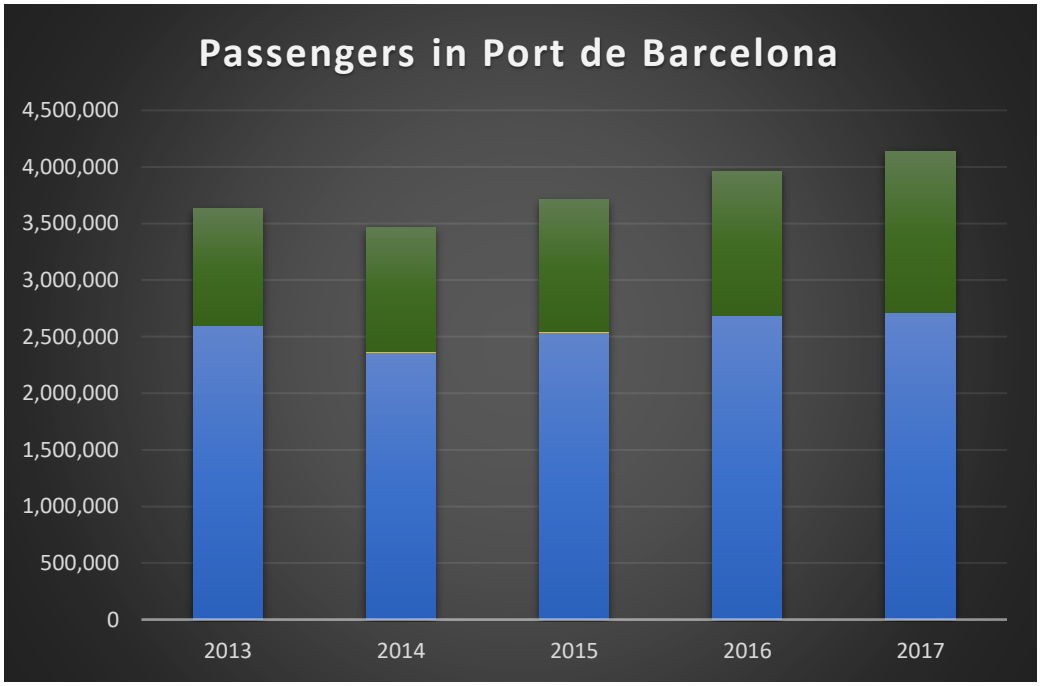



*Figure 5: Passengers in Port de Barcelona. Font: Port de Barcelona*

In addition, the figure 5 has analyzed the last route to Barcelona, the sea. The number of passengers arriving in Barcelona by cruise and ferry has been studied, also differentiating how many people arrive by ferry but are only calling for a short period of time. It can be seen in the graph that the total number of passengers decreased between 2013 and 2014, but currently has 4 consecutive years with a growing trend that makes us think that tourism with these means of transport will continue to increase over the years. If we refer to the total number of passengers arriving by cruise or ferry, we can see that it is practically the same as the number of passengers on the AVE Madrid - Barcelona line. In this sense, it should be emphasized that, although it is a very large number of people, it is clearly limited due to the Mediterranean area, which prevents the cruise market from expanding further.

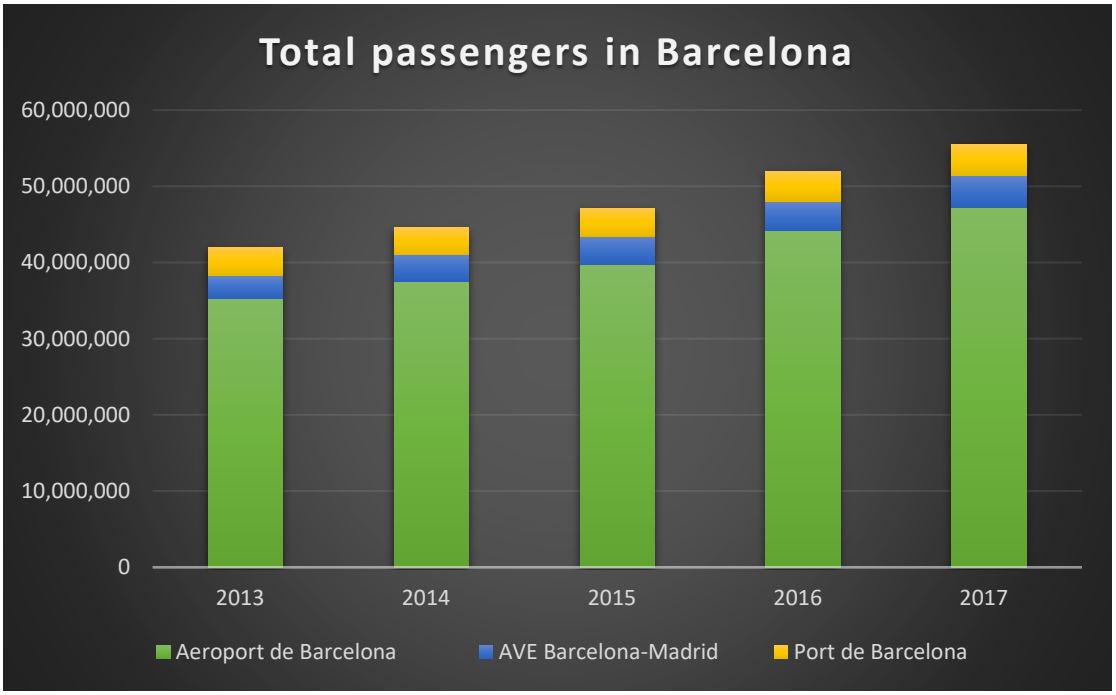



*Figure 6: Total passengers in Barcelona over the last 5 years.*

To conclude the study of the arrival of people and, therefore, the increase in a possible future demand, the overall number of passengers who have visited Barcelona in recent years has been analyzed. As you can see, and due to all the alternatives and options it offers, the means of transport that brings the most passengers to the city of Barcelona is the plane. For its part, both the port of Barcelona and the AVE Barcelona - Madrid line have almost the same number of users, more than 4,000,000 in 2017, but far from the more than 45,000,000 passengers who arrive with the plane.

### 2.3.3 Port of Barcelona

When starting a business, all possible variables must be considered in order to get the best possible result. In our case, the arrivals of people as well as goods and goods are very important, as they are the main driver of our business idea. As we have seen in the previous section, tourism is one of the decisive factors, as it increases the population throughout the year, thus giving us the possibility of having even more customers. In addition, Barcelona has the Port of Barcelona, a seaport, industrial, commercial and fishing port located at the foot of the mountain of Montjuïc (Wikipedia, 2019). The port has an area of more than 22 km and an area of more than 1,000 hectares, becoming one of the largest ports in the Mediterranean (Port of Barcelona, 2019). It should be noted that, on a global scale, the port of Barcelona is the fourth cruise port behind the Caribbean ports.

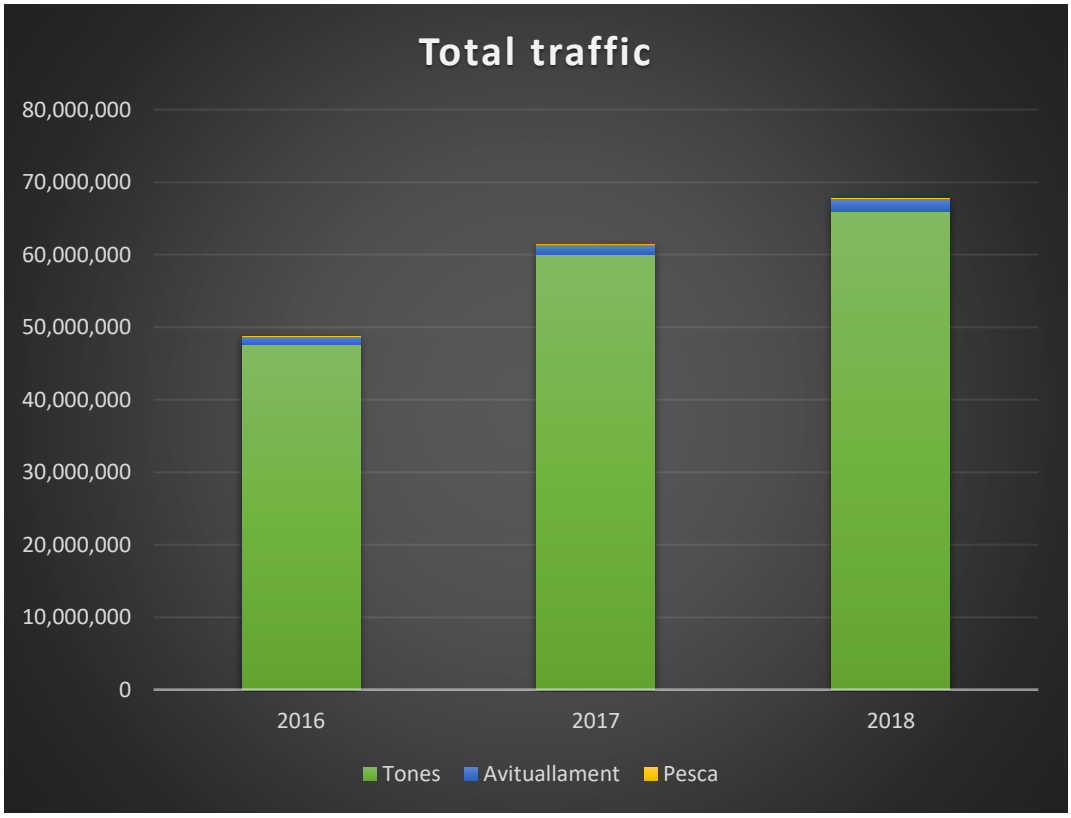



*Figure 7. Total traffic at the port of Barcelona. Source: Wikipedia*

From Figure 7 we could highlight the increase in Tones transported to the port of Barcelona, which has increased considerably in the last two years. It is clear that the main magnitude to consider when we talk about traffic in the port of Barcelona are the tons transported, as they account for almost 97% of the total. It can also be seen that the trend is growing, so it is assumed that the port will continue to expand over the next few years.

As can be seen in Figure "X" (TOTALS OF TRAFFIC IN BARCELONA), the activity of the port only increases in all sections except Fishing and Automobiles, with a particular decrease in the latter. On the other hand, if we consider the magnitudes of Figure "X", we can see that, indeed, all are experiencing steady growth, especially the number of passengers and the TEU (Twenty-foot Equivalent Unit), which is a unit of measurement. used in logistics to measure freight transport capacity and is equivalent to a standard 20-foot container (Wikipedia, 2019). For its part, the number of UTI (Intermodal Transport Unit) has also increased to 9.8% in the last two years.

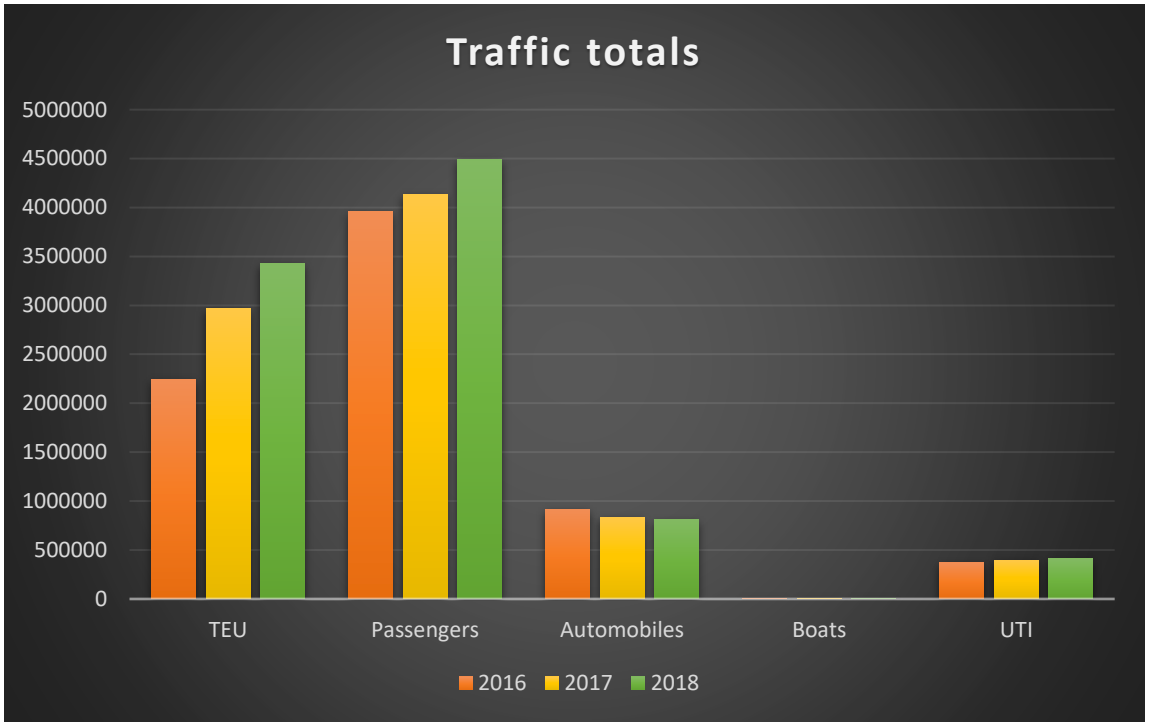



*Figure 8. Traffic totals of the port of Barcelona. Source: Wikipedia*

It is important to make a good analysis of these figures because they are a key point in our business idea, as they open up the possibility of further enlarging this idea. The port of Barcelona has regular lines in almost every city in the world, from Abu Dhabi to Sydney or Baltimore, among many others. This opens a great way for imports and exports around the world, which is why the port of Barcelona is considered the main port in Europe in the Mediterranean.

In addition, the port of Barcelona also has the ZAL Logistics of Europe, and is the engine of economic and social development of its environment, and decisive with the economies it serves, both locally and internationally (Zalport, 2019). It is also necessary to consider that the ZAL Port is located next to El Prat Airport, and is also connected by rail around it. This indicates the great capacity of the port to handle all types of arrivals and departures of goods and merchandise.

Figure 9 shows the dimensions of both the port and the ZAL, and you can see how they occupy the entire part of the coast of Barcelona, from almost Barceloneta to El Prat International Airport.


*Figure 9. ZAL and Port of Barcelona. Source: ZAL Port*

### 2.3.4 Mobility

It is essential to study mobility in the urban environment where the distributions will be carried out in order to optimize the service to be offered. The urban environment of this work is Barcelona, a city that has a fluid traffic compared to the main European and world cities, however it is the city in Europe with the highest density of vehicles, it has the figure of almost 6,000 cars circulating per $km^2$, twice as much as Madrid city and more than three times as much as London, as examples. Barcelona is the city with the most retentions in Spain, with drivers spending on average 29% more time during each trip, followed by Palma de Mallorca (25%), Granada (24%), while Madrid is in fourth place. Santa Cruz de Tenerife with 22%.

It is important to differentiate the number and type of vehicles by district and thus be able to accurately estimate their traffic. It can be seen that the districts with the most cars are those in the Eixample and Sant Martí, and the least in Ciutat Vella. The district where it has the most mopeds in proportion is Sarrià-Sant Gervasi, this is a relevant fact as it indicates that it is a district that generally has a fluid circulation.

An interesting fact is that the use of motorcycles is the second transport used in all districts, this indicates that a significant amount of citizens' use it as a means of intercity transport as it is a fast way to move, reduces the number of cars and traffic is more fluid.

If it is a working day in 2018, Barcelona showed 60% of traffic in the morning rush hours (from 8 am to 11 am), increasing the half-hour journeys by 18 minutes. In the

afternoon, at rush hour the level of retention decreased by 5% causing a 17-minute increase in journeys of the same duration.

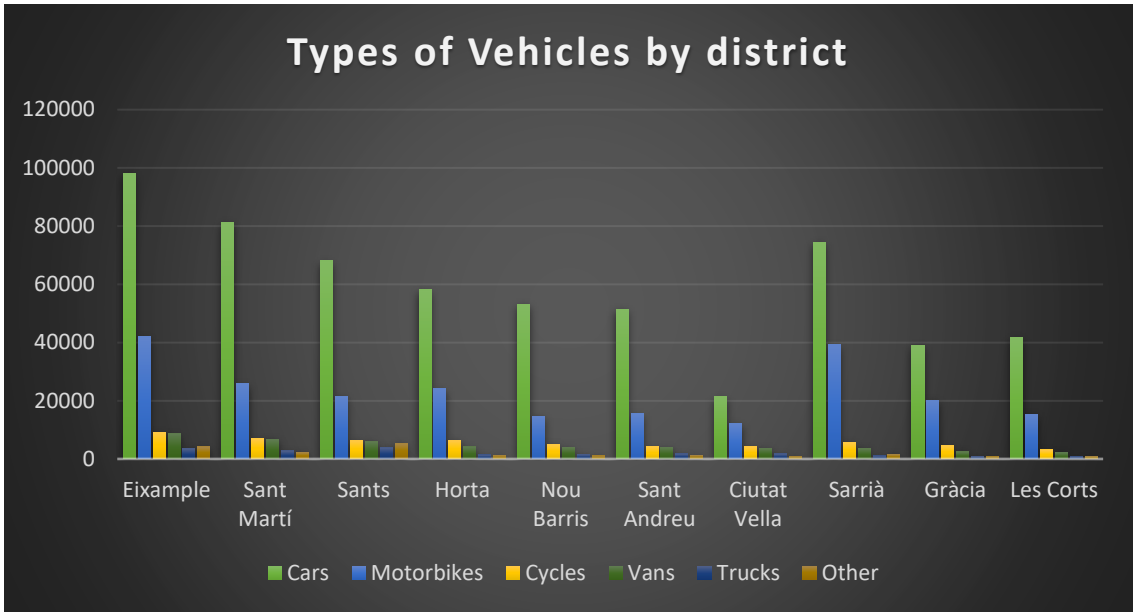



*Figure 10: Type of vehicles by district in 2017*

The following graph (figure 11) shows that the district with the largest number of vans is the Eixample with 8,707, which may correspond to a district with a large number of shops.

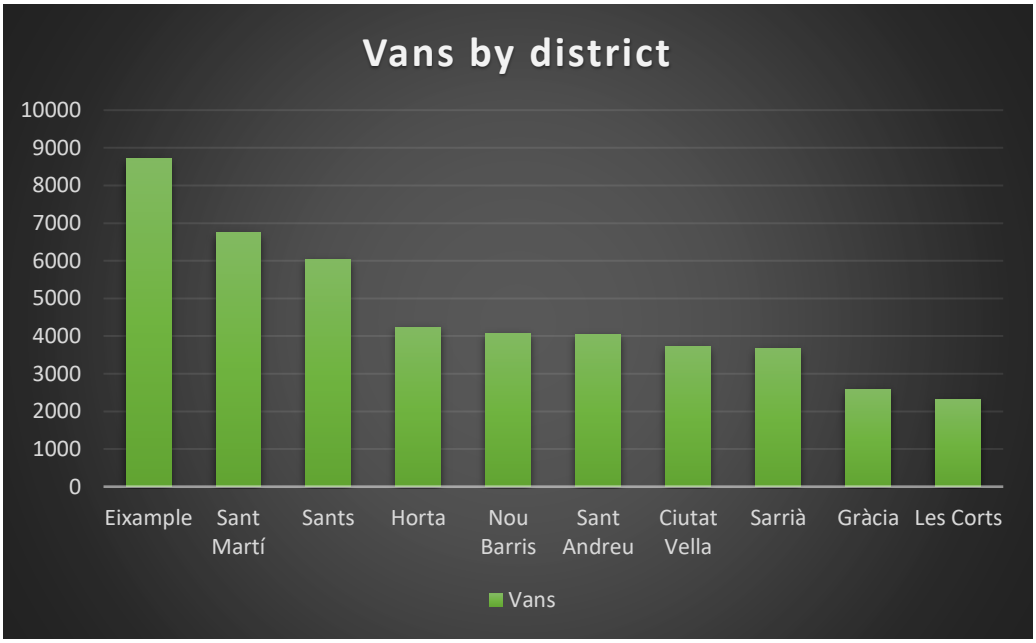



*Figure 11: Number of vans by district in 2017*

Electric vehicles that will act as mobile warehouses will have to travel around the city and will have to follow pre-established routes that will depend on the volume of orders in the area, the level of traffic and the speed limit on the street. Barcelona is structured with mainly vertical and horizontal streets, and it is important to know what percentage of them will have to circulate in vertical and horizontal lanes.

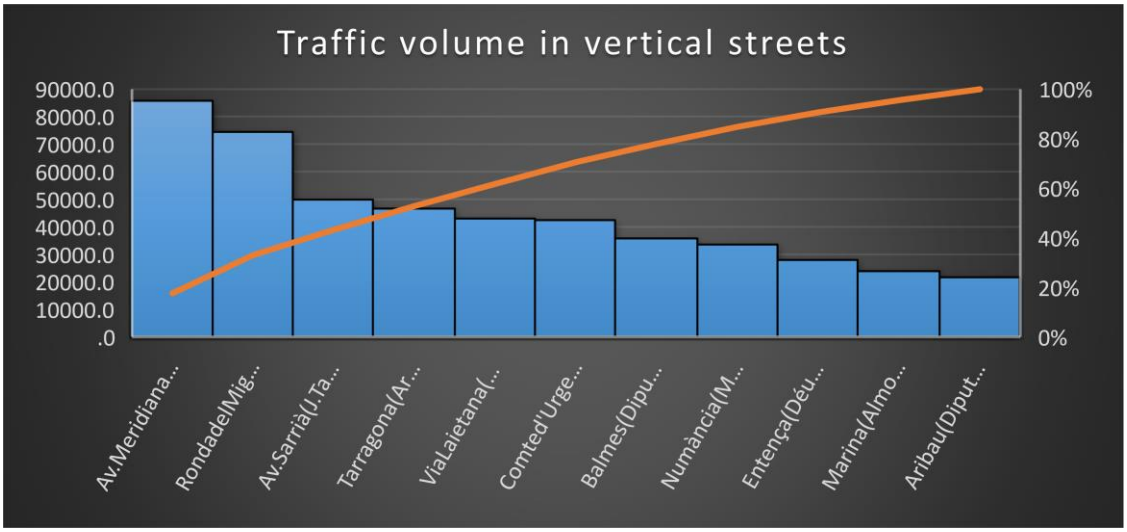



*Figure 12: Volume of traffic on the main vertical streets of Barcelona*

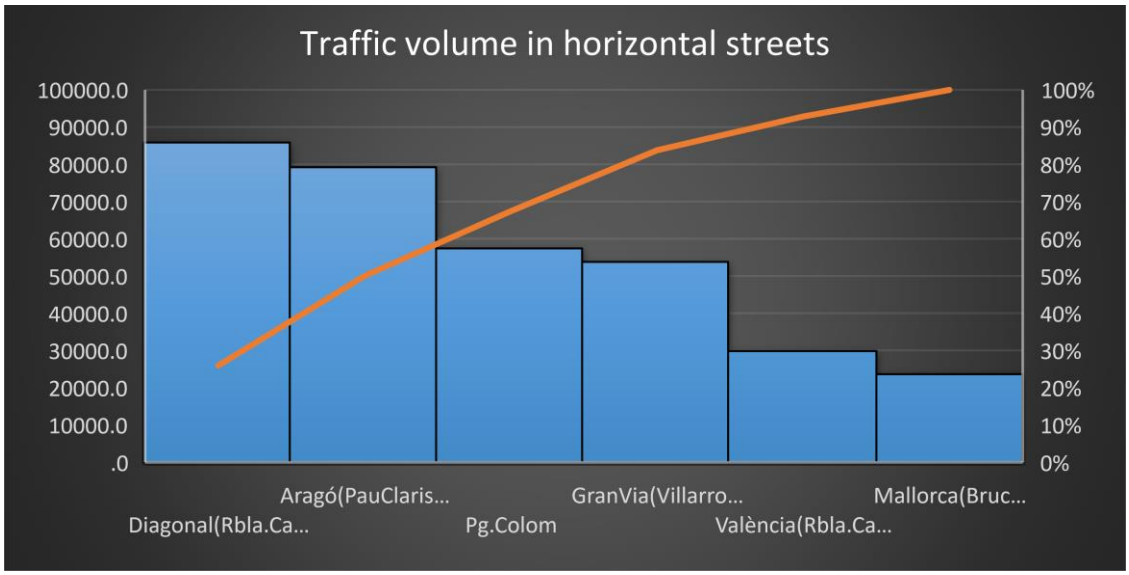



*Figure 13: Volume of traffic on the main horizontal streets of Barcelona*

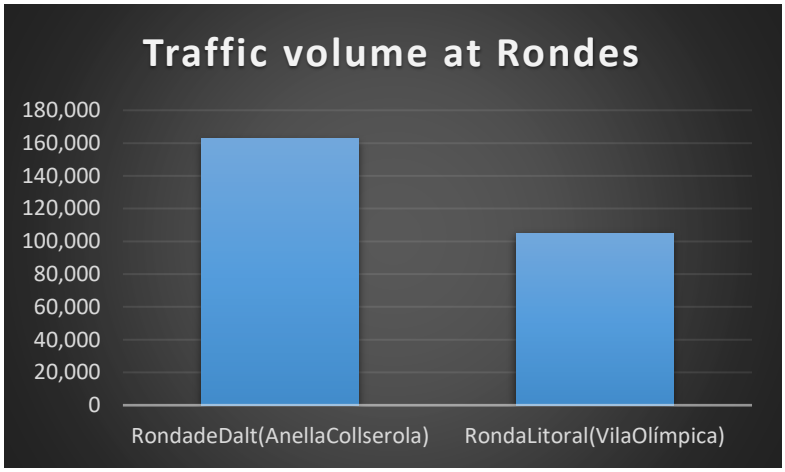



*Figure 14: Rondes de Barcelona traffic volume*

Barcelona is a city with an important economic activity where the main national and international companies are present, this means that many jobs are generated. Not all workers in the city live there, but it is very common for them to come from nearby towns, which is why the main roads to enter the city are the busiest on weekdays such as Rondes de Dalt and Litoral, the Avinguda Diagonal and Avinguda Meridiana.

It is observed that the volume of traffic in the vertical streets is distributed among more streets, where the busiest street is Avinguda Meridiana, however, in the horizontal lanes are mostly traveled in 6 streets, where the busiest is the street Aragon. The traffic on weekdays on the streets with the highest traffic intensity is: on vertical roads it represents 44.82%, on 30.46% on horizontal roads and 24.71% in the Dalt and Litoral roundabouts.

If the aim is to optimize delivery time, any factors that may affect it must be taken into account, and accidents can lead to a delay in delivery. It is impossible to determine when an accident will occur but it is possible to know where more have occurred, and in case we are on a day with an accident to have the alternative ready. Below are the main streets of Barcelona, sorted by order of more accidents to less depending on the stretch of street.

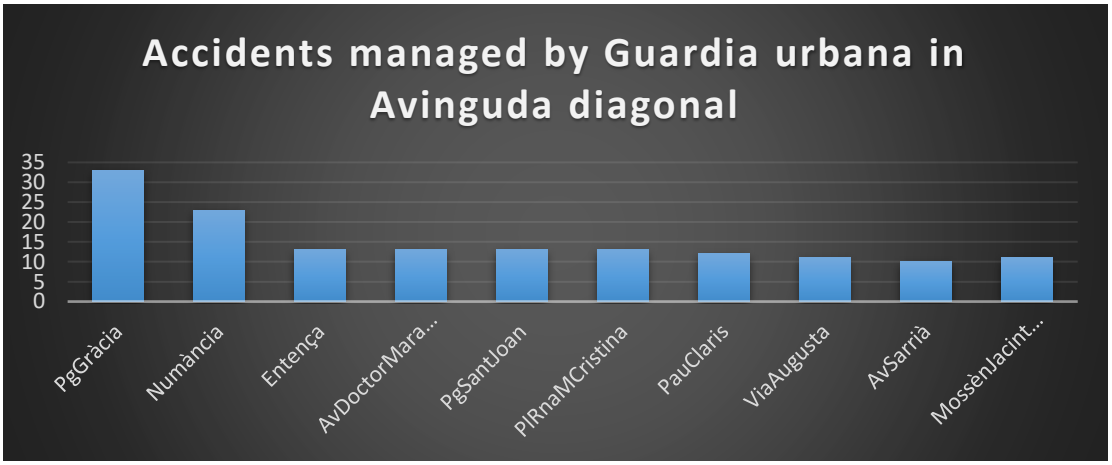



*Figure 15: Accidents in Avinguda Diagonal, year 2017*


*Figure 16: Accidents in Carrer d'Aragó, year 2017*

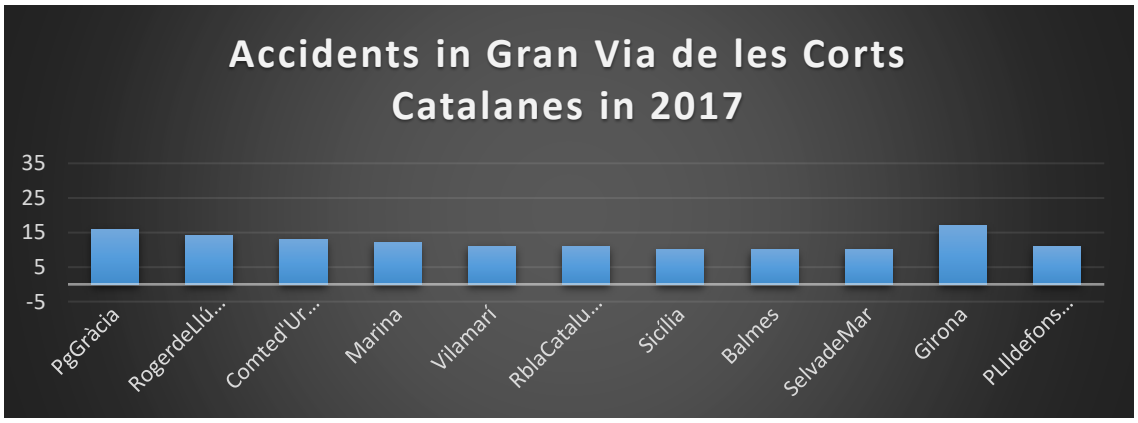



*Figure 17: Accidents in Gran Via de les Corts Catalanes, year 2017*

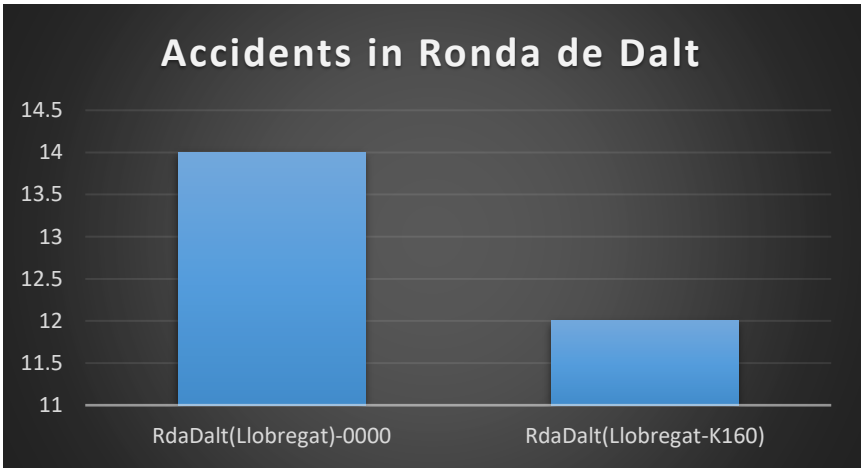



*Figure 18: Accidents in Ronda de Dalt, year 2017*

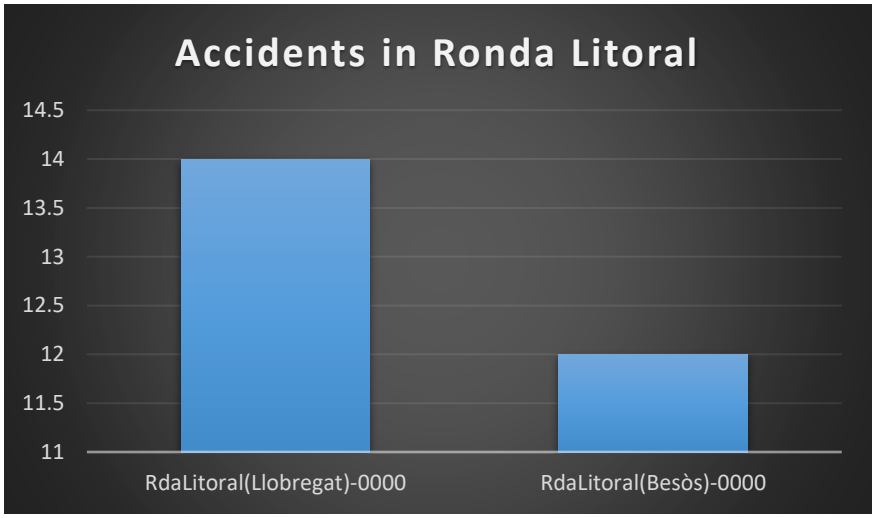



*Figure 19: Accidents in Ronda de Litoral, year 2017*

# 3 Market Research

## 3.1 ICT

ICT is defined as a set of resources, procedures, and techniques used in the processing, storage, and transmission of information and data. It could be said that ICTs encompass two different subgroups, traditional communication technologies, made up mainly of the main means of communication such as radio, television, telephony and finally the internet; and information technologies, characterized by the digitization of content recording technologies.

The use of these ICTs represents a great change in society, and in the long run in education, interpersonal relationships and the way information is disseminated and generated.

### 3.1.1 Cabify

Cabify is a mobility technology platform that connects individuals and companies with the forms of transport that best suit their needs through a smartphone application. The company was founded by Juan de Antonio in 2011, a telecommunications engineer at Stanford University of Spanish nationality, a few months after its birth it expanded rapidly in Latin America. It currently operates in Argentina, Brazil, Chile, Colombia, Ecuador, Spain, Mexico, Panama, Peru, Portugal, the Dominican Republic and Uruguay, is located in more than 130 cities and has more than a thousand employees worldwide.

The emergence of new business models that have emerged from technological evolution can significantly affect sectors that have not adapted to the new times (or that have not had this forecast). In the city of Barcelona there were significant concentrations of taxi drivers against this new platform because according to their criteria they violated the law and there was unfair competition. This problem led the Government of the Generalitat to announce a decree law through which only the services of a Cabify could be contracted 15 minutes in advance, this fact led the platform to leave the city and make an ERE with thousands of workers. Put that Cabify is back, you just have to wait 15 minutes for the first ride and then you can use it normally. Put a lot of emphasis on the constant changes we are facing and the danger of new technologies, which must be at the forefront so that technological changes instead of generating social problems, have a positive impact on everyone. Generate jobs, innovation, adapt to the new market and a sustainable business model with minimal environmental impact.

### 3.1.2 Glovo

Glovo is a Spanish start-up founded in 2015 in Barcelona by engineer Òscar Pierre. It is a smartphone application that allows you to order anything you want as long as it does not exceed 30 cm wide, 40 cm long and 40 cm high, up to 9 kg in weight. This platform allows you to track through the geolocation of the 'glover' and see which route it will take and on what time it will arrive, all in real time.

The order takers are known as 'glovers' and move around the city on a motorbike or bicycle.

The emergence of this easy-to-make one-click purchase has created many jobs as no prior training is required. This has led many long-term unemployed or people with difficulty finding work to earn a living as a 'glover'. This has led these people, in many cases at risk of social exclusion, to accept precarious conditions given the lack of legislation in these new forms of business.

### 3.1.3 Amazon

Amazon is the world's leading online shopping platform founded by American businessman Jeff Bezos. It is the most representative icon of e-commerce and one of the busiest websites in the world. It has a catalog full of products of all types and sectors and with prices and conditions that usually attract the attention of all its users, both those who usually buy online and those who have never done so. Its ease of purchase, effectiveness and speed have made the evolution of this company in recent years extraordinary.

Amazon Prime is an annual subscription through which the consumer ensures that their requested product will arrive as soon as possible and at the same time allows real-time tracking of the package and exclusive offers.


*Figure 20. Amazon trimester sales*

# 4 Company

The business idea of this company is based on taking to the extreme the speed of delivery of an online order using new technological advances and in a sustainable way. Therefore, the job of this company will be to adapt an optimal, efficient, emissions-free, intelligent and fast delivery model in the environment where the company requesting our services requires it.

This is a market as we have seen above whose growth has been very significant in recent years and which is expected to become the buying model of the future. In carrying out this project, it is considered essential to maintain a futuristic vision in order to try to anticipate the cities of the future and to be able to be prepared for future changes.

There are a lot of companies in charge of making the deliveries, most of which do it in a traditional way and this company wants to evolve this sector using intelligent systems. In this way, any changes that occur in the urban environment (traffic disruptions, traffic restrictions) or in the volume of orders, can be managed in an optimal way in real time. Not only is there flexibility in handling orders and deliveries, but there is a wealth of information stored in the system that can be very useful to the business. For example, make a personalized follow-up for each vehicle according to the orders you have made and study the cases separately and thus achieve continuous improvement. What has not yet been seen in the market is that vans, bicycles, scooters, shops cross all their data in real time and find the best way to make the delivery at that very moment, while each of the vehicles at once is making its deliveries.

The company that has been designed for this work arises from the need to adapt to the imminent change of the traditional purchasing system for an online one. The new generations already do practically everything through the internet, and it could be said that the purchase is already made online. Well, we have thought of a business model that uses new technologies to improve the current purchasing system, we want to improve the consumer experience and at the same time that the company that sells the product is a pioneer in this change.

## 4.1 Mission

The aim of the company is to create a new online distribution model where both the company that sells the product and the consumer win, generating positive externalities for society. Today, climate change is a reality, and finding a way to buy that will lead to a clear reduction in pollutant emissions from private vehicles is essential for the development of a city. As mentioned before, the implementation of our company will

serve to reduce the number of vehicles in a city because people will not go shopping physically. This new trend makes us believe that we will be able to help the environment in an active, effective and continuous way.

Evolution in this market is taking place very quickly and it is thought that it is essential to prevent and innovate at the same time so that these changes have a positive effect on society.

## 4.2 Vison

The study that has been carried out on this company aims to change the traditional distribution model to a model that uses the powerful technological tools that we have at our disposal and that are not being used in this sector so far. We also want to make it clear that current city models in the future will be obsolete, which is why it is important to make predictions about how we will be in the future. We want to make a commitment to sustainable change, which brings benefits to cities and at the same time can improve people's quality of life.

### 4.2.1 Values

1. Quality: it wants to be one of the pillars of the company, as it is essential in a sector like this to gain the trust of users through a fast, reliable and quality service.
2. Effort: The fundamental requirement to achieve our goal is the effort of the entire company staff creating an atmosphere of motivation and commitment.
3. Safety: Safety is essential for our brand, as part of the staff will be continuously circulating around the city. Also the security that the requested product arrives in perfect condition is a priority.
4. Convenience: A key feature of the service offered is the convenience of how to transform the delivery model in a fast and smart way.
5. Ease: with all the tools at our disposal it will be possible to easily define the online sales model according to all the information that the company will keep from all the distributions.
6. Connectivity: Part of the goal as order managers is to give peace of mind to our distributors, and to effectively model their delivery routes. The entire system of the company will be connected in order to adapt in real time to the volume of incoming orders.
7. Flexibility: The service will adapt at all times to the real needs of the company allowing them to access our data system, and customizing the help if required.

8. Continuous improvement: thanks to the use of new technologies, a large amount of information is available that will be very useful for the future.

## 4.3 SWOT Analysis

A SWOT analysis of a company is used to establish a list of the current situation of the company. It studies both internal factors (Weaknesses and Strengths) and external ones (Threats and Opportunities). At the end of an analysis you can see what things the company is doing well and what opportunities there are, whether created by the market or by the name and reputation of the company.

Below is a SWOT analysis of our company to see its strengths and weaknesses.

| Strengths | | |
|---|---|---|
| Quick delivery time | Alliances with other companies to distribute their orders | Efficient service |
| Economic prices | Can be consumed by people of all ages | |

| Weaknesses | | |
|---|---|---|
| Branding: New company that still did not create it's own name | Complexity of vehicle flow | |
| High competition in a market with many difficulties to penetrate | | |

| Opportunities | | |
|---|---|---|
| Existing technology | New online shipping trends | Disloyalty of users, looking for best product at the best price. Branding is not that important. |
| Emergence of new generations more used to the use of technology | Need for fast service, which is a requisite for almost all users | Growing market |

| Threats | | |
|---|---|---|
| High competition with a large number of companies with high market share | Lack of experience | High initial investment |
| Possibility of collapse during rush hour delivery | Laws and Regulations | |

- **Weaknesses**
  - Branding: The name of the company is not known due to its recent incorporation into the market.
  - High competition in a market with many difficulties to penetrate.
  - Complexity of vehicle flow.
- **Strengths**
  - Very short delivery times.
  - Economic prices.
  - Alliances with other companies to distribute their orders.
  - It is a product for people of all ages.
  - It offers an efficient service.
- **Threats**
  - High competition with a large number and a large market share.
  - Possibility of collapse during rush hour (lunch, dinner ...).
  - Lack of experience.
  - Laws and regulations.
- **Opportunities**
  - Existing technology.
  - Emergence of the new generations more accustomed to the use of technology.
  - New online shopping trends.
  - Need for fast service, which is a prerequisite for almost all users.
  - The disloyalty of users, who are always looking for the best product at the best price regardless of who they ask for.

## 4.4 PESTEL Analysis

The PESTEL analysis analyzes the macroeconomic environment of a company and helps to identify its opportunities and threats. To do this, the political, economic, socio-cultural, technological, environmental (environmental) and legal factors that affect the company today or that may affect it in the future are studied (Ana Trenza, 2018).

- **Politics**: The instability of the Spanish government, added to the existing political instability in Catalonia creates a difficult situation to establish a company. However, the impetus offered by the Catalan Generalitat by giving money to Catalan startups can be a good starting point for our company.
- **Economic**: The last economic crisis has left a warning to people, who have decided that they do not want to go through something like this again. All this has led to a new model of purchase, through which the customer compares the products he wants to buy and chooses the best in terms of value for money.
- **Sociocultural**: A new model of life is promoted, according to which people will not have to leave home to go shopping. Adapting people to new technologies and these revolutionary new methods helps make this service possible.
- **Technological:** The growth of technology in recent years and the forecast for even greater growth makes the service possible as everything will be much more efficient and fast due to good communications. In addition, this technology, together with the arrival of the new generations, will make our service available to everyone.
- **Ecological (environment):** The use of bicycles, scooters and vans means that the service offered by our company can reduce traffic and pollution, as well as making people aware that the environment must be taken care of.
- **Legal**: Workers 'working conditions, rising import or export tariffs, product regulations, or loading and unloading areas for vans can be some of the restrictions we may face.

## 4.5 Logistics

A company's logistics plan is an essential tool for determining the supply chain and actions to improve productivity, profitability and customer satisfaction. To establish the logistics plan of our company, we will analyze all the activities that take place during the life cycle of the product: from the supply to the delivery of the product to the customer. This company does not produce anything, so it will not be necessary to establish a logistics plan for the production chain.

### 4.5.1 Supply

To be able to offer a fast delivery service, everything must be very well synchronized. In our case, we consider that in order to guarantee the shortest delivery time we must have a series of supplies in the vans. This means that, taking advantage of their large storage capacity, the vans will always have the most typical products in their delivery area. For

example, if in the Eixample the most bought product is the X book, all the vans in the Eixample area will have this product in their trunk, in order to avoid going to a store or warehouse and earn so more time.

It is important to know that there will be a number of restrictions on orders, especially the volume and weight of the product. The weight and volume limits will be 6 kg and 40 cm x 40 cm x 30cm respectively, this volume is the same as the box used in bicycles and motorcycles in online delivery companies such as Glovo or Deliveroo.

At the end, the supply to the distributors will be made by means of a system that will check the inventory available in each delivery vehicle and will indicate to them which is the nearest point of collection. As delivery vans run out of stock, the system will tell them where to stock up. The process of refilling the van will be done by always connecting delivery van with supply van.

On the other hand, the supply vans will be in charge of circulating in their indicated area with the aim of reducing the time of collection of a product in case the distributor does not have it at the time the command. In order to have these products, the supply vans will collect in the stores the most consumed products in their area, always using the data of the supplier company that acts as our customer. This process will take place before the start of the working day, with the aim of being available from the first minute to the last. The number of supply vans will be determined by the number of existing districts, located at least 1 in each district and will be moving throughout the area.

In the event that a supply van runs out of products, shuttle vans will enter the system, which will refill the supply vans according to the stock indicators they have. To do this, the shuttle vans will leave the central warehouse and supply the supply van.

There is a possibility that the system detects that the selected vehicle is a bike or a motorcycle, either for reasons of traffic, proximity or availability of the product. In this case, we are talking about vehicles with a very small storage capacity, so they will always go to the supply vans to be able to have the product desired by the customer.

Finally, it may happen that the customer orders a product that is not in the list of the most typical or usual, and that this means that the supply van does not have this product. In these situations, the distributor, whether van, motorcycle or bicycle, will go to the nearest store and pick up the product to deliver to the customer. With the idea of further optimizing this process, when the customer's order is entered and it is checked that there is no product availability, the system will indicate which establishment should pick it up, and will take care of placing this order at the store, so that when the dealer arrives the order is ready.

### 4.5.2 Planning

This section basically focuses on the tasks of planning, carrying out and controlling the physical flow of products from the warehouse to the place of consumption by the customer. As mentioned before, our company does not have the production part, as it is only responsible for the distribution of the products. In order to monitor all orders and relate them to the inventory available in each van or warehouse, it is proposed to install an automatic inventory accounting system, so that when a van delivers a product, the system currently receives this information and knows that the van "X" is missing the product "Y".

The monitoring of the system will allow to have always available the products for all the vehicles, minimizing like this the time of collected when it enters a new order. As mentioned before, the vans will be initially loaded with the most common products in their area, so that it will be easier to guarantee fast delivery.

### 4.5.3 Operations

The company's services will be operational from 8 a.m. to 10 p.m., Monday through Saturday. The weight and volume limits will be 6kg and 40cmx40cmx30cm respectively, this volume is the same as the box used in bicycles and motorcycles in online delivery companies such as Glovo or Deliveroo.

As seen during the work, the company will work with different types of vehicles in order to optimize delivery time, these vehicles will be: electric vans, electric mopeds, bicycles or electric scooters. All vehicles except vans will have a box of the dimensions mentioned above in order to store the product and then make the delivery.

The algorithm of this application will always choose the fastest option or combination, below are the main factors that the algorithm will take into account:

- If it is a working day: in 2018 Barcelona presented 60% of traffic in the morning rush hours (from 8-11 hours) increasing by 18 minutes the half-hour journeys. In the afternoon, at rush hour the retention level decreased by 5% causing a 17 minute increase in journeys of the same duration.

The application algorithm will always choose the fastest option taking into account many factors, such as if it is a working day, if we are from 8-10 am, if it rains, if there has been an accident, if it is a public holiday. The application will have an algorithm that taking into account the traffic in real time, the time it would take each type of vehicle

The map shows where the warehouses and parking of the contracted fleet will be located.

- **There are three types of vans in the delivery:**
    - **Shuttles**: they will be in charge of supplying the product from the central warehouse or from the customer's store to the mobile or supply vans. In case of extreme urgency, you can also make the final delivery.
    - **Supply**: they will be parked in the loading and unloading areas, distributed in different districts and will supply the product to the vans, bicycles or mopeds that require the requested product or have run out of stock. These will move as there is a maximum parking time, and the next parking will always be according to the area with the highest demand.
    - **Mobile vans**: they are circulating and through the application they are chosen according to their location and stock to make the final delivery.

As seen during the work the company will work with different types of vehicles in order to optimize delivery time, these vehicles are electric vans, electric mopeds, bicycles or electric scooters.

Once the list of products that the company wants to offer the consumer is received, the vans are filled, some with orders that have entered outside working hours that will already have a first determined route, and others that will be available at circulate along its established route. Throughout the day there will be a type of van that will only be dedicated to supplying product from the customer's warehouse or from some store, to those vans that are running out of stock.

Once the vans are ready to circulate and an order enters, there are different variants when delivering the requested product. The working days, according to the data that have been studied, are the days that present the most difficulty due to traffic. To avoid this, there are electric motorcycles or electric scooter launchers that are dedicated to making the final delivery in case of saturation. These bikes will be people who will be hired eventually, it has been thought to make a collaboration agreement with the company Glovo to carry out the last stage of delivery.

# 5 Competitors

The parcel and courier shipping and transportation sector is currently booming, which is generating many opportunities for the different companies that already belonged to the union, but also for all those companies that have decided to embark on an adventure in this sector. The number of competitors is numerous, but if the focus is kept on the city of Barcelona, it can be seen that there are a large number of companies that are dedicated to sending and transporting packages and / or messages.

In this section, the main competitors will be studied, especially taking into account the giants of the sector, since they are the ones that pose the greatest threat to any new company that wants to enter this world. Different delivery services will be very important for the company, since it is planning to deliver parcels in the very same day, so it is also a key factor to analyze in the different competitors.

## 5.1 METEOR

Backed by 27 years in the document and small parcel management, transport and distribution sector, this company offers an EFFECTIVE AND SAFE SERVICE guarantee. It is specialized in managing and sending documents and parcels both within the same day and the next day, for which they have a fleet of light vehicles, which allows them to develop the agile and dynamic service that characterizes them.

Meteor offers a door-to-door service and personalized customer service, always trying to promote human interaction with the customer, offering seriousness, discipline and uniformity. There is also the possibility of viewing the P.O.D delivery vouchers through the online service on its website 24-48 hours after the delivery has been made.

The main services that Meteor makes available to the client are:

• Urgent Meteor Today: Service of collection and delivery of documents and parcels the same day

• Meteor 10 hours: Bridge service that picks up during the day to deliver before 10 hours the next business day.

• Meteor 14 hours: Bridge service that picks up during the day to deliver before 14 hours the next business day.

• Meteor 24 hours: Bridge service that picks up during the day to deliver before 7 pm the next business day.

• Immediate Meteor: Immediate collection and delivery of packages and documents, exclusive service appropriate to your needs.

• International shipments: The courier service abroad is an exclusive service adapted to the needs of companies.

• E-commerce solutions: Service specially designed for companies that market and sell their products over the internet.

• Meteor logistics: Meteor Logistics manages the service of your shipments, with management, storage and reception of your parcel.

In addition to the main delivery services that Meteor performs, it is also a logistics and transportation operator, with the ability to offer a global solution. In its centers, Meteor can carry out all kinds of logistics operations, from receiving goods or storing them to preparing orders, handling orders or managing everything related to reverse logistics (changes, returns ...).

According to webportal empresia.es, Meteor had a total sales value of around 2.5M € in the year 2017.

## 5.2 Nacex

Nacex is a leading company in the Express Courier sector, thanks to the high quality of our services and the use of the most advanced technology, put to the service of their clients.

In 1995 NACEX began its business in the Express Courier sector with 110 franchises and 8 connection hubs. 5 years later, in 2000, they celebrated its fifth anniversary with a network of 224 franchises, and in 2002 Nacex joined the logista group, the leading distributor of products and services to local businesses in Southern Europe.

In 2012 NACEX.shop was launched, a network of delivery and collection points as a “last mile” distribution solution for e-commerce services.

NACEX wins in two categories of the 2018 Social Enterprise Awards for its campaign, "Donate a top, a grand gesture of charity", in favour of the Asdent Foundation : "Best CSR Project" in the courier sector and "Best Responsibility Project"by the courier sector in support of medical research. NACEX obtains the certification verifying the Carbon Footprint calculation for its shipments. For the fourth year running, NACEX is "Best Courier Operator" in Portugal, at the IFE Group's "Transport & Logistics Today Awards" (Premios Logística & Transporte Hoy del Grupo IFE).

Compañía de Distribución Integral Logista Holdings S.A., or Grupo Logista, through its subsidiaries, operates as a distributor of products and services close to retailers in

southern Europe. The company's distribution includes different product categories such as tobacco, convenience, pharmaceutical, books and press, as well as e-transactions among others. Logista also provides long distance and full freight forwarding services, temperature-controlled transportation services, industrial parcel and parcel services, and express courier services.4

The group serves approximately 300,000 delivery points in Spain, France, Italy, Portugal and Poland, as well as approximately 45,000 point of sale terminals. It supplies clients in various sectors comprising tobacco, publishing, books, e-transactions, healthcare, HORECA, wholesale distribution, and public sectors.

The different services offered by Nacex are divided into some main categories:

- Services-premium: Delivery in 08:30h-12h since receiving the product.
- Services-urgent deliveries: Delivery same day, Saturdays or before 7pm are the main services offered.
- Nacexpharma: Pharmaceutical deliveries from 08:30am to 12pm (including Saturdays)
- International services
- E-commerce
- My preferred Delivery: Nacex.shop, including Smart locker in car delivery.

## 5.3 Tipsa

TIPSA is a company specialized in comprehensive services for the urgent transport of light parcels, couriers and documentation, with a wide presence in Spain, Portugal and Andorra. With 100% Spanish capital, TIPSA has positioned itself, in a short period of time, as one of the leading companies in the sector; It is also one of the business parcel companies that has experienced the highest growth in recent years.

Through their network of more than 270 transport agencies connected daily with an efficient system of our own double routes, we guarantee full coverage in the Iberian Peninsula, the Balearic Islands and the Canary Islands. Likewise, they offer express delivery services and international logistics with options adapted by price and time, with a fleet of express trucks with daily departures to the main towns of the European Union and an international air service.

They guarantee a fast, safe and adapted service to your needs. To do this, they have cutting-edge technology applied to the classification, handling and tracking systems of

shipments. But, above all, their strength lies in our team of professionals, who provide the greatest organizational care so that your shipments always arrive at their destination, within the agreed deadlines and with the best information on the delivery result.

Their main commitment is to offer you the best express transport options with an optimal quality-price ratio. Therefore, at TIPSA you will find an agile, dynamic and constantly evolving company. A company trusted by more than 25,000 customers every day.

Main services offered by TIPSA include urgent delivery from 10 to 14hs, massive delivery package in 48/72h or economic delivery in max 2 working days. They also deliver to the Canary and Balearic Islands, Ceuta and Melilla, Portugal, Andorra, and other international destinations.

## 5.4 SEUR

SEUR is one of the most important Spanish transport companies, a subsidiary of the French group GeoPost, which operates in Spain. It has a history of more than 75 years in the sector, currently integrating 4 main business areas: international, electronic commerce and value-added logistics.

SEUR has a structure made up of 8,100 employees, more than 2,300 stores and a fleet of 4,700 vehicles. The company also delivers in 230 countries, through GeoPost networks. The company manages its social action through the SEUR Foundation whose main objective is the support and protection of children and youth.

Justo Yúfera Cerdán founded SEUR in 1942. Its first service was the rail transport of packages between Madrid and Barcelona within 24 hours. In subsequent decades, SEUR expanded its distribution network to cover the main cities of the Iberian Peninsula and began an internationalization process.

In 2004 GeoPost, a subsidiary of La Poste (the French state postal company), entered the capital of SEUR and began to gradually acquire the company's franchises in Spain until controlling the majority of the company in 2012. In 2014 SEUR launches two pioneer solutions: SEUR Sameday and SEUR Sundays.

In its constant commitment to innovation, it has developed solutions that improve the customer experience, such as Predict, an interactive system to arrange delivery, or Now, for super urgent deliveries in one or two hours.

As part of DPDgroup, one of the largest international express transport networks that groups together the brands DPD, Chronopost and SEUR, it delivers all over the world.

Thanks to this integration, they strive every day to offer a unique experience to their clients, based on the knowledge of their needs, while building solid relationships with all of them.

In terms of processed volume, SEUR delivered more than 115 million packages in 2019 throughout all the world. The main delivery services offered by SEUR to the private customer include:

- Send now
- International shipping
- Send burofax
- Send telegram
- Prepare your package for shipping
- Change my delivery
- Tracking

They are also working and offering services to professionals, which include most of the private services plus some e-commerce solutions and SEUR integration, by which they install special software in the company, which may be customized according to company's needs and interests. This helps to track packages and shipments.

## 5.5 DHL

DHL (Dalsey, Hillblom and Lynn) International GmbH is a German courier, parcel, and express mail service which is a division of the German logistics company Deutsche Post DHL. The company delivers over 1.3 billion parcels per year.

The company was founded in the United States in 1969 and expanded its service throughout the world by the late 1970s. In 1979, under the name of DHL Air Cargo, the company entered the Hawaiian islands with an inter-island cargo service using two DC-3 and four DC-6 aircraft. Dalsey and Hillblom personally oversaw the daily operations until its eventual bankruptcy closed the doors in 1983. At its peak, DHL Air Cargo employed just over 100 workers, management and pilots.

The company was primarily interested in offshore and intercontinental deliveries, but the success of FedEx prompted their own intra-US expansion starting in 1983.

In 1998, Deutsche Post began to acquire shares in DHL. It reached controlling interest in 2001, and acquired all outstanding shares by December 2002. The company then absorbed DHL into its Express division, while expanding the use of the DHL brand to other Deutsche Post divisions, business units, and subsidiaries. Today, DHL Express shares its DHL brand with business units such as DHL Global Forwarding and DHL

Supply Chain. It gained a foothold in the United States when it acquired Airborne Express.The DHL Express financial results are published in the Deutsche Post AG annual report. In 2016, this division's revenue increased by 2.7% to €14 billion. The earnings before interest and taxes (EBIT) increased by 11.3% over 2015 to €1.5 billion.

In December 2014, Deutsche Post DHL purchased the StreetScooter company, a small manufacturer of electric vehicles as part of its long-term goal to reach zero emissions in its delivery operations. By year-end 2016, some 2,000 vehicles had been produced.

In the future, electric vans with a much greater range will be required to achieve the long-term goal of replacing the entire Deutsche Post and DHL Express fleet of approximately 70,000 vehicles with StreetScooter models.

The Deutsche Post/DHL GoGreen program plans to reduce emissions of greenhouse gases and local air pollutants; the company has four interim goals for doing so, to be achieved by the year 2025. The long-term goal, summarized by Frank Appel, Chief Executive Officer, is more aggressive. "From now until 2050, our mission will be to drive our business toward zero [logistics related] emissions. We are setting the standard for the future of the transport sector and doing our part to help the world community reach its goal of limiting global warming to less than two degrees Celsius."

They offer different services both to private customers and to professionals, including document and parcel deliveries, freight shipping or international mail. Tariffs depend on size, weight, destination country and delivery time, but they offer a wide range of solutions to the customers, and giving the possibility to choose whatever delivery time the customer wants.

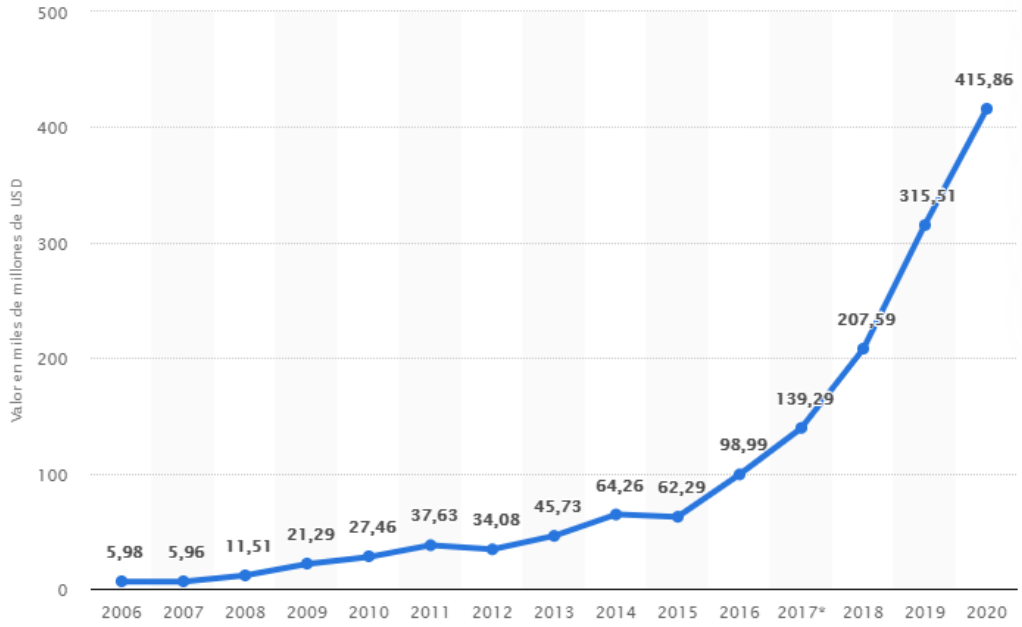
# 6 Amazon

Amazon was founded in 1994 by computer scientist Jeff Bezos. Amazon clearly distinguished itself from the competition with numerous innovations, such as the "1-click" feature introduced in 1997 in the United States. This feature allows you to buy something with a single click. Amazon.com also operates retail websites, including www.amazon.co.uk and www.amazon.es to name a few. Amazon also acquired the IMDb movie database. Other subsidiaries of Amazon.com, Inc. include Javari.de, Amazon Game Studio, Booksurge, Zappos and LoveFilm.

Amazon allows each customer a personalized shopping experience. Features such as the "wish list" (list of viewed items, access to the friend list), "one-click shopping" and the "first reading sample" make it easy to navigate the product range and therefore they help the purchase decision.

Since 2000, both private retailers and established companies have been able to offer their products on Amazon. Brands like Marks & Spencer or Lacoste are among the many companies that use this feature to increase their sales and attract new customers. Amazon also offers products under its own brand. In addition to the Amazon Kindle, a device for reading electronic books, Amazon also launched the Amazon Kindle Fire tablet.

As can be seen from the Kantar and WPP BrandZ Rankings, Amazon not only continues to hold its leadership as the world's most valuable brand, but has also grown 32% to reach $ 415 billion.This represents an increase in its brand value by almost 100 billion dollars compared to last year, and that represents a third of the total growth of the Top 100 brands. A ranking that this 2020 has reached a value of 5 billion dollars and that has shown how the big brands are better resisting the current crisis than the one experienced in 2008.




Amazon product ads were launched in April 2014. It allows e-commerce companies to place ads on the Amazon platform. By clicking, the user is directed to the merchant's external website.

Nowadays Amazon is working around many countries all over the world, and although some domains are not activated yet, amazon is selling products from other countries. The clear example of this feature is Luxemburg, where there is no www.amazon.lx but products are sold from German websites. The amazon delivery system is clearly divided into 3 big steps: Fulfillment Center (FC), Delivery Station and Delivery transport.

Amazon has now more than 175 Fulfillment Centers all over the world, amounting more than 13 million m2 where all workers pick, pack and send millions of orders every year. BCN1 was the first FC opened in Barcelona in October 2017, and it is currently located in El Prat de Llobregat, very close to the city's airport. More than 1700 people are working as fixed employees in this building, which is also including one of the three Central Flow nodes of all Europe (Birmingham, London and Barcelona).

## 6.1 Amazon in the Spanish Market

E-commerce is increasingly important in our country. Consumers are increasingly accustomed to buying online, payment procedures are increasingly diverse and safe, causing fear and mistrust that previously existed to be lost and causing online sales to skyrocket and ecommerce platforms to do more money than ever.

The eCommerce business grows exponentially every year. The turnover of e-commerce in Spain has increased in 2019 by 22.2% year-on-year to reach 10,969 million euros according to the latest electronic commerce data available on the CNMCData portal.

The sectors of activity with the highest income have been travel agencies and tour operators, with 15.0% of total turnover; air transport, with 9.1% and clothing, in third place, with 5.9%.


At the top of the ranking we find the giants of global eCommerce: Amazon and AliExpress. The two American and Chinese lead the market, both in turnover and in the number of orders and visits. Amazon is the undisputed king of eCommerce in Spain, tripling the turnover of Aliexpress, which is in second place on the list. In addition, it has increased its sales in Spain by 70% in the last year.


All these data allow us to affirm that Amazon is the great dominator of the market worldwide, but also particularly at the national level in Spain. With growth forecasts and given the current number of competitors, everything would indicate that entering the transport and package delivery sector would be apparently difficult.

## 6.2 Amazon's Delivery Service Partner (DSP) Program

The Delivery Service Partner program seeks dedicated partners who are passionate about developing and managing great teams. With low start-up costs, consistent demand, and access to Amazon's logistics technology and expertise, this is an opportunity to create and grow a successful package delivery business.

Amazon will facilitate and guarantee DSPs access to a consistent volume of shipments, access to the company's high technology, practical training and discounts on a range of goods and services (including insurance), customized vehicles and corporate uniforms of the company.

In this way, this offer, which was launched at the end of 2019, will cover the start-up costs of those employees who want to create their own package delivery company in Spain.

The multinational will also provide financial support equivalent to three months of the employee's current gross salary so that their companies can "take off more easily."

Those employees who decide to create their delivery company could get between 50,000 and 100,000 euros in profits per year, operating with a fleet of between 20 to 40 delivery vehicles, according to the multinational.

- Amazon then offers a series of advantages to its partners so that they can contribute and help in the growth of the company: Low start-up costs: Start your business with just € 15,000 and a total of € 30,000 in required liquid assets.
- No logistical experience required: Use Amazon's technology and processes and take advantage of Amazon's 20+ years of logistics experience to help you set up and manage your delivery business.
- Focus on people, not sales: Amazon packages keep your business growing, so you can focus on building your business and shipping without having to worry about driving sales.
- Assistance when you need it: Amazon's expertise is behind you every step of the way, from training to technical support, to ensure your business runs smoothly.
- Deliver smiles: Delight thousands of customers every day with the best possible experiences - an essential part of Amazon, the most customer-centric company on the planet.

### 6.2.1 How is Amazon helping the DSPs?

- We help you get started

Among other things, you can take advantage of offers for personalized vans by Amazon, comprehensive insurance; industrial-grade portable devices and other services that will help you start your delivery business.

- Training program

Amazon offers a multi-week training course to ensure that you are prepared for success. DSP will start with an introductory week to Amazon in Madrid, followed by a period of work with other collaborators and drivers who currently collaborate with Amazon, in order to learn the best tips and tricks when operating a successful delivery business.

- Provide a toolkit

Amazon will give you the tools and technology necessary to help you in your day to day, with the aim of making your work easier.

- Amazon offers personalized assistance

DSPs or partners receive technical assistance, including an operations manual, driver assistance for road problems, and an account manager.

- Amazon shares his experience

Amazon offers more than 20 years of technological and logistics experience to guide you in one of the fastest growing industries in the world.

### 6.2.2 How to become DSP

The main steps to become a DSP are detailed below:

1. Create your company, if you do not already have one, and officially become the owner of a delivery business.
2. Request your delivery vehicles, devices, fuel cards and uniforms through recommended providers at special rates negotiated by Amazon and take out insurance for your fleet.
3. Configure the services you need to hire drivers. Create a manual for drivers, defining the process by which drivers will be paid, and consulting with advisors legal and other departments to finalize your plan.
4. Set up your account on the DSP portal. This includes providing the bank account details of your company to make payments, complete a tax interview and upload business documents.
5. Start looking for and hiring the first drivers. This will be an ongoing process tailored keep the business growing.
6. Establish your area within the assigned logistics station, in addition to learning and perfecting the processes and time required to load vehicles
7. Train drivers in a culture of obsession with the customer, together with the tools and processes they will use to make deliveries. Start receiving your fleet, devices, cards fuel and uniforms to prepare the first delivery routes.
8. The launch begins! You will start with five routes a day during your first week.
9. Track weekly activity and processes together with Amazon representatives at your local logistics station and a personal account manager. Successful partners can grow more and more over time, increasing the delivery fleet to 20 or more vans.

# 7 Environmental impact

Mercedes receives from Amazon the largest order for electric vans in its history, 1,800 vehicles that will begin to deliver to customers in European markets before the end of this year. An important step forward to reduce pollution and CO2 emissions in the center of large cities. Of this order, 600 units will correspond to the Spanish eVito manufactured at the Vitoria plant.

The agreement between Amazon and Mercedes will reduce emissions in the center of European cities. The vehicles will be of the eVito models manufactured in Spain and eSprinter. They will begin to be delivered at the end of this year for use throughout the European territory. This order is divided between 600 units of the eVito, a mid-size van, and another 1,200 full-size eSprinter vans, with up to 11m3 of cargo capacity. In Spain, 140 units of the eVito are already committed, which began production in Vitoria at the end of last year. This fleet will be progressively expanded throughout 2021.

The electrification of last-mile distribution is going strong. In particular the courier and parcel services industry, which is a great driver of this sector. Increased commerce through the internet and flexible delivery services have increased traffic in city centers and therefore also pollutant emissions. This use of urban distribution requires conditions of use that are perfectly adapted to electric vans. And is that the route can be planned well in advance and are suitable for distance traveled for electric vehicles and their current autonomy. Furthermore, as a general rule, distribution centers have large spaces where they can install the necessary charging infrastructure.

With the eVito in 2018 and the eSprinter in 2019, the Mercedes Benz Vans division has taken on an important role in the emission-free transport of goods in city centers. The positioning of the batteries in the lower part of the vehicle allows a large capacity interior, without restrictions by load volume. In the case of the eVito and its passenger variant EQV, both 100% electric, they allow emission-free transport of both passengers and objects.

Mercedes has joined the Climate Pledge agreement initially launched by Amazon and Global Optimism, the objective of which is to contribute to the achievement of the objectives of the Paris Agreement. The important thing about this project is that it seeks to achieve the objectives set forth in the Paris Agreement in 2050 but ten years before that date, in 2040.

Amazon unveiled its first all-electric delivery truck on October 2020. The van, built by electric vehicle startup Rivian, will have the latest automotive technologies incorporated, such as detection equipment and an advanced driver assistance system.

The e-commerce giant states in its statement that "starting in 2022" they will have 10,000 vans on the road making deliveries, and that they will reach 100,000 vans by 2030.

The initiative is part of its plan The Climate Pledge, a commitment with which the company aims to have zero net carbon emissions by 2040.

This is one of three different models that Amazon "has invested in and fully customized with Rivian to enhance the driver experience and optimize safety," the company says. The vehicle is not only electric, they emphasize. "We prioritize safety and functionality to create an optimized vehicle for parcel delivery," says RJ Scaringe, Rivian CEO, of the van designed especially for the king of ecommerce. "We thought about how drivers get in and out of the van, what the workspace feels like, and what the workflow is for delivering packages."

Some of the safety, navigation and design features included in the new 100% electric van from Amazon are:

- State-of-the-art sensor detection, a suite of road and traffic assist technology, and a large windshield to improve driver visibility.
- Exterior cameras around the vehicle that are linked to a digital display inside the cabin, giving the driver a 360-degree view outside the vehicle.
- Alexa integration for hands-free access to route information and the latest weather updates.
- A reinforced door on the driver's side for additional protection.
- A 'dance floor' inside the driver's cab for easy movement inside the van.
- Bright taillights that surround the rear of the vehicle to easily detect braking.
- Three tiers of shelving with a bulkhead door, which can be easily opened and closed to provide additional protection for the driver while on the road.

The e-commerce giant Amazon has created a fund of 2 billion dollars (1,766 million euros) with the aim of investing in technologies and companies that reduce emissions and facilitate operating in a more sustainable way. The company has disclosed its carbon emissions for the first time. In 2019 they reached 51.17 million tons of carbon dioxide, with a growth rate of 15% compared to the previous year.

For the first time, the e-commerce giant has unveiled its carbon footprint. A step in transparency to achieve the commitment to become a zero emissions company by 2040. The company's sustainability report provides the first year-over-year data on its emissions.

The figures show that in parallel to their rapid growth, polluting gases have grown in tandem. At the end of 2019, total emissions, which include those from business trips, delivery people and customer trips to the company's retail stores, amounted to 51.17 million tons of carbon dioxide, 15% compared to the a year earlier.

Despite the growth in absolute emissions, Amazon explains that the latest figures reflect efforts to make its operations more efficient. Excluding the impact of currency

fluctuations, the company's sales grew 22%, while the measure of emissions per dollar of merchandise sales fell 5%.

The company has announced the creation of a $ 2 billion fund for the "development of sustainable technologies and services" that will enable both Amazon and other companies to achieve carbon neutrality.

Amazon hopes in this way to accelerate compliance with 'The Climate Pledge', the commitment it signed in September last year to meet the objectives of the Paris Agreement ten years before its 2050 deadline.

The Climate Pledge Fund, as Amazon has called the fund, will seek to invest in visionary entrepreneurs and innovators who are creating products and services to help companies reduce their emissions and operate in a more sustainable manner, explained the CEO of the company, Jeff Bezos.

"Companies from all over the world and of all sizes will be considered in any of their evolutionary stages, from startups to established companies. Each potential investment will be evaluated according to its potential to accelerate the path to zero emissions and to protect the planet for future generations, "added the executive.

The fund will invest in companies in multiple sectors, including transportation and logistics, energy generation, storage and use, manufacturing and materials, the circular economy, as well as food and agriculture. Over time, Amazon will also look for opportunities to involve other signers of 'The Climate Pledge' in this investment program.

# 8 Conclusions

In order to help entrepreneurs in the creation of profitable businesses and also advance in the establishment of a shipping platform with its own brand, Amazon announced the contribution to small and medium-sized companies to expand their purposes specifically to the shipment of products marketed by Amazon. Through a special statement, the e-commerce giant announced that it will directly support entrepreneurs interested in being part of this new project, giving the opportunity to promote their own deliveries within the digital platform.

The world-renowned company stressed that the support to the emperors will consist of providing vehicles and the most outstanding technologies to ensure the operability and efficiency of the companies in the matter of shipments, in addition to the timely attention to each of the clients. He also emphasized that the amount of up to 40 vehicles per fleet destined to send parcels is estimated, perfectly identified with the Prime logo.

Regarding the training of small and medium-sized companies for the hiring of the numerous personnel that will carry out the transfer of parcels in the United States, it will be carried out through the Delivery Service Partners program, with which the most visited ecommerce platform in all the world, aims to provide quality and satisfaction to its customers in the shipment of their orders.

The supply of uniforms, insurance policies to contracted personnel and other benefits duly established by North American legislation, will be covered by the companies, which represents the emergence of a source of employment for hundreds of people who will have the opportunity to be selected by the companies. entrepreneurial companies.

The e-commerce giant also pointed out that the financing of companies of this type with up to one million dollars, as long as they are headed by military veterans, in which case it will reimburse them for 10 thousand dollars if they meet some requirements.

Amazon through its statement, explained that experience is not a limitation to start in this ambitious project, clearly indicated that small or medium-sized companies destined to send their products, will receive the training required to carry out the logistics that comprise the parcel process in electronic commerce.

Likewise, he explained that, thanks to the training, entrepreneurs will have the opportunity to expand or strengthen their knowledge regarding the administration and operation of a parcel company. In addition to receiving training in supervision and the delivery procedure for each of the products distributed by the electronic sales giant in its 75 stations.

He indicated that, through this project, interested companies will have the possibility of receiving highly beneficial discounts for entrepreneurship. In this sense, through the

support of Amazon, the cost of setting up the parcel company could be up to $ 10,000, an offer that is unmatched for starting a company.

With economic benefits that could reach 300 thousand dollars a year, thanks to the number of shipments that the company makes during this period. Amazon indicated that in principle the entrepreneurship offer is established in more than 24 states of the country. However, he assured that the expansion of this will be carried out if enough companies interested in being part of the project are located.

During the training, the trainees will not have to use their private vehicles, the company will provide first-hand the tools required to ensure that the learning procedure is optimal and meets the expectations for which the project was created from its inception.

With the start of this venture, it could be thought that Amazon's purpose is to target competition in the parcel service offered by recognized companies in the United States, such as UPS (United Parcel Service Inc), FedEX and DHL. However, the great of electronic commerce assured that this is not the plan in principle.

He qualified these companies as "excellent partners", while detailing the need to start this parcel project, given that the aforementioned companies provide these services for themselves and for third parties, in addition to the number of orders that the industry receives, requires other delivery methods are implemented. Therefore, it is presumed that this project will start as a complement to the partners that until now carry out parcel services on Amazon.

However, for several years now, Amazon has come up with the idea of establishing its own parcel service, this has been reflected in the investments that the company eradicated in Seattle has made in order to expand in this area. For example, in 2015, Amazon launched the Flex program, an initiative that promotes the delivery of parcels by private individuals from their own vehicle, with an estimated cost per delivery hours. Another case is that of 2017, when the company carried out financial operations at a Kentucky airport in its operation as a cargo center and has also evaluated other more direct forms of delivery.

The expectations generated by this entrepreneurship project have been numerous, and although until now there is no more information about whether this venture will cross the North American borders, it is expected that the success of this new project will be on a large scale for both Amazon and for participating entrepreneurs.

All this amazon project makes the adventure of opening a new delivery company much more affordable for anyone, even with a not very large initial capital. Thus, the idea is to open a company for the distribution of goods that will start in the urban area of Barcelona and will take advantage of the initial push with the Amazon's Delivery Service Partner (DSP) program to thus achieve the experience that can attract new partners to expand the business.

The delivery sector is very crowded nowadays but it is not like, for example, the telephony / communications sector, where the barriers to entry are considerably higher than those that we will find in this sector. In addition, as we have mentioned before, we will have the initial support of the largest partner in the world, which can help considerably in the growth phase of the company.

It is therefore determined that the viability of this project is very promising, with which it will be carried out in the coming months / years after having acquired everything necessary to start it up.

# 9 References


https://www.20minutos.es/noticia/4413194/0/amazon-presenta-sus-nuevas-furgonetas-electricas/

https://www.elmundo.es/economia/ahorro-y-consumo/2019/05/13/5cd95cba21efa0b1198b4687.html

https://logistics.amazon.es/marketing/opportunity

https://www.muycanal.com/2020/07/03/amazon-marca-mas-valor-del-mundo

https://expansion.mx/mercadotecnia/2020/01/22/amazon-es-la-marca-mas-valiosa-del-mundo-y-rompe-la-barrea-de-los-200-000-mdd

https://ecommerce-news.es/top-5-ecommerce-por-facturacion-espana/

https://comunica-web.com/blog/marketing-digital/Ranking-eCommerce-en-Espana/

https://marketing4ecommerce.net/ranking-las-tiendas-online-que-mas-venden-de-espana/#:~:text=Amazon%20sigue%20siendo%20l%C3%ADder%20indiscutible,es%20de%207.567.426.725%20%E2%82%AC.

https://es.statista.com/estadisticas/680417/marcas-lideres-del-mundo-por-valor-de-marca/

https://www.aboutamazon.es/centros-log%C3%ADsticos-de-amazon/inversi%C3%B3n-local

https://www.aboutamazon.es/

https://www.aboutamazon.es/impacto-economico

https://www.dhl.com/global-en/home/logistics-solutions.html

https://www.seur.com/en/professional/integration-with-seur/

https://www.tip-sa.com/empresas-de-transporte/envios-de-paquetes

https://www.nacex.es/irHome.do

https://en.wikipedia.org/wiki/DHL

https://es.wikipedia.org/wiki/Logista

https://es.wikipedia.org/wiki/Seur

https://www.axesor.es/Informes-Empresas/66058/METEOR_TRANSPORT_URGENT_SL.html

https://www.meteor.es/

https://www.empresia.es/empresa/meteor-transport-urgent/

https://sixformedia.com/comercio-tradicional-vs-comercio-online

https://ferreteria-y-bricolaje.cdecomunicacion.es/noticias/sectoriales/33182/ecommerce-vs-tienda-tradicional-situacionse-espana

https://www.interempresas.net/Ferreteria/Articulos/209113-Comercio-tradicional-vs-comercio-electronico.html

https://marketing4ecommerce.net/tecnologias-marketing-digital/

https://comunicacionmarketing.es/marketing/12/12/2018/las-nuevas-tecnologias-transforman-la-investigacion-del-mercado/4993.html

https://www.interempresas.net/Alimentaria/Articulos/232065-Tecnologias-y-tendencias-el-supermercado-del-futuro.htmlhttps://www.peru-retail.com/retail-las-nuevas-tecnologias-cambian-la-cadena-de-valor-de-la-industria/

https://ajuntament.barcelona.cat/premsa/wp-content/uploads/2017/07/Resum-de-resultats_Poblaci%C3%B32017.pdf

https://www.bcn.cat/estadistica/catala/dades/anuari/cap02/C020102.htm

https://www.idescat.cat/poblacioestrangera/?b=10&geo=mun:080193&lang=es

http://www.idescat.cat/poblacioestrangera/?geo=mun:080193&nac=d414&b=10

https://www.ine.es/jaxiT3/Tabla.htm?t=2861

https://www.ine.es/covid/piramides.htm

https://www.ine.es/inebaseDYN/cp30321/cp_inicio.htm

https://www.bcn.cat/estadistica/castella/dades/economia/transport/aeroport/paev03.htm

https://es.statista.com/estadisticas/486742/trafico-de-pasajeros-del-tren-de-alta-velocidad-ave-madrid-barcelona/

https://www.hosteltur.com/126729_ave-madrid-barcelona-suma-855-millones-pasajeros-diez-anos.html#:~:text=La%20l%C3%ADnea%20de%20alta%20velocidad,7%20millones%20a%2011%2C2

https://cronicaglobal.elespanol.com/business/record-ave-madrid-barcelona_157046_102.html

http://nudoss.com/pasajeros-port-de-barcelona-como-puerto-base/

http://www.portdebarcelona.cat/es/web/autoritat-portuaria/estadisticas

http://www.apice-project.eu/content.php?ID1=&ID2=30&ID=30&ID3=&lang=SPA

http://www.portdebarcelona.cat/es/web/autoritat-portuaria/estadisticas

https://www.elperiodico.com/es/economia/20191118/el-trafico-de-mercancias-de-port-de-barcelona-crecio-el-13-hasta-octubre-7740676

https://es.wikipedia.org/wiki/Puerto_de_Barcelona

http://www.zalport.com/es-es/inicio.html

https://www.bcn.cat/estadistica/catala/dades/inf/veh/veh03/t0201.htm

https://www.barcelona.cat/mobilitat/sites/default/files/DB_2015.pdf

https://www.bcn.cat/estadistica/catala/dades/anuari/cap15/C1511010.htm

http://www.bcn.cat/estadistica/catala/dades/anuari/index.htm

https://ajuntament.barcelona.cat/premsa/wp-content/uploads/2018/01/2018_01_25-Accidentalitat-2018.pdf

https://es.wikipedia.org/wiki/ICT#:~:text=al%20ICT%2C%20Tecnolog%C3%ADa%20de%20Informaci%C3%B3n,el%20turismo%20en%20Costa%20Rica.

https://es.wikipedia.org/wiki/Cabify

https://es.wikipedia.org/wiki/Glovo

https://glovoapp.com/es/sti/

https://www.eleconomista.es/empresas-finanzas/noticias/10623849/06/20/Amazon-crea-un-fondo-de-inversion-verde-de-1766-millones.html