

# FINAL PROJECT



DESIGN AND VALIDATION  
OF THE STARTUP *W O O D Y*  
FOLLOWING THE LEAN METHOD

**W O O D Y**  
Circular  
Furniture

- T E A M -

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## Executive Summary

**Woody** is a circular economy business that not only aimed to help young people but also our home, the Earth.

The project offers an online renting service of handmade furniture made of recycled wooden pallets by local artisans. With those, Woody creates a circular cycle to reduce the amount of furniture waste, while providing the customer benefits and a more comfortable life.

Furniture with a past, planet with a future.

**Website:**

[woody-circularfurniture.webnode.es/](http://woody-circularfurniture.webnode.es/)

### The team

Woody's team represents the perfect mix of young international professionals, coming from Spain, Portugal, Italy and Argentina. We started to study our Master's degrees, that gave us the mentality of making a change in the world, with a high level of technical background, interdisciplinarity, internationality, sustainability knowledge and motivation, including renewable energy engineers and experts in sustainable development and circular economy. This combination has resulted in a project thought with heart and sense, not only focusing on the actual dispose problem but also thinking about real people, like us.

Our mission is to create a sustainable and innovative project in Madrid, with the goal of designing a replicable model that can help reduce waste all over the world. The success of our project stands in our pillars: **environmental** - recycled products, **social** - service that helps young people, and **economical** - competitive relation between quality and prices.

### The problem

Nowadays, the modern society is facing a severe situation of parallel realities: resource waste and economic waste, that are directly correlated to each other. In fact, as consumption and overconsumption are increasing, the rate of disposal and the amount of wasted materials are increasing as well. From an economic and strategic perspective, we can see this situation as a profit or a loss. We decided to take action against this unsustainable situation and try to make a difference, creating a recycled furniture service. In this way, a young student or professional can find a solution not only for his/her wallet but also for the environment.

Woody aims to create a positive impact on the young people that dream to live in Madrid and, at the same time, reduce a worldwide problem such as resource and materials waste.

### The solution

Woody's products offer a solution for international and national young students and professionals that are moving temporarily to Madrid, providing an online rental platform of recycled furniture made of wooden pallets.

Our solution aims to give a second life to wooden pallets, but also offers an optimum quality-price relation for our products. Our plan includes a positive impact on the proper use of materials,

such as wood, to increase their lifetime, on young workers and on students to help them in their dynamic life. Nowadays, concerns related to the environment are increasing, not only in young generations, but also in the business world. More and more enterprises are taking care of their sustainable development, which proves a better future for their results in economic and social terms.

Finally, here is where we found a potential niche - already existing - in which we can participate, creating a sustainable and replicable system.

It is important to point out that Woody's service goes towards a closed circular system due to the disposal of the products once their useful lifetime ends. In fact, we sell these materials to a biomass company for its use as a renewable energy source.

### **The business model**

Woody's service is addressed to international students and international young professionals, that moved from their hometowns to Madrid for academic and professional reasons. They are looking for a shared apartment to rent as they will stay in Madrid for a limited amount of time. Because of this reason, they don't want to buy brand new furniture that they will have to sell or throw away after their stay.

When Woody's potential clients are looking for a solution to the furniture issue, they find a comfortable and easy renting service, with competitive and affordable prices that include the transportation and maintenance service.

This flexibility generates a positive experience with this service, and thanks to social media, our clients will be able to share how Woody helped them in their moving experience and so other students and young workers will be interested to enjoy Woody's products.

### **The market**

In order to see whether Woody has a market, we have to analyze the market size for our potential customers. The age group from 20 to 34 years living in Madrid, represents 15% of the population. From this 15%, the 50% live alone, so these are our possible customers. Moreover, out of the potential customers that live alone, the 70% pays a rent. Flats with furniture represents half of the flats rented, thus, Woody is going to try to reach the 10 percent of this potential market, which represents 7875 possible clients.

Finally, we analyzed the pallets market. After visiting the town hall and the industrial complex of Alcobendas, a North district of Madrid, we realized that there was a large amount of broken pallets. Just in this town hall, the wood's volume that ends up in the landfill was 426.268 kg, and approximately 40% is wood coming from pallets (if a pallet weights 25 kg, the number of pallets is 6.820) (Ministry of Environment, 2018).

The furniture business is a broad market. It's important to remember that not all product-as-a-service innovations offer a circular outcome, which is the next step that explain, our added value. The furniture business has a large amount of competitors but Woody's solution connects the problem with society's needs and wants.

### **Business validation**

In order to validate the main hypothesis of the business idea, three different online surveys were shared during the validation period. In the last and definitive survey, answered by 65 people, we collected the final data, that we are going to present.

The survey helped us to see that there is a huge potential and opportunity for Woody in the growing society we have nowadays. As in the circular economy system, the product servitization is being more accepted and requested in the society. To confirm this, 43,1% of the answers strongly supported Woody's idea of servitization of furniture.

It is highly important to highlight the fact that 41,5% of the answers showed that people are willing to spend more for an eco-friendly product, our final idea of using wooden recycled pallets was validated.

Moreover, the 67,7% of the respondents chose the idea of having sets of furniture rather than individual items, which made Woody decided to introduce sets of furniture but also the option of renting individual items to include potential customers needs.

The business validation was a very efficient tool to measure the potential size of the market and from the results obtained, we can see that people are enthusiastic about Woody and are firmly inclined towards using the service. The responses were positive, which proves that we are on good track to launch the business within few weeks.

## **Marketing strategy**

Woody's marketing strategy is based on a very intuitive user experience on the website, that is our main channel, and on transparent communication. In fact, our website is designed to be easy-to-use and very visually clear. Together with our social media pages like Instagram and Facebook, these will be our main channels to communicate and engage potential clients. The products offered, together with the list of materials used, is organized and well explained: we want our customers to be immediately aware of the prices of the materials used and, in line with our mission, show information on the problems regarding wood waste - a section on the web page will explain the waste issues related to the environment. We believe that including a sustainable vision, not only in the logistic term, but also in the raw material origins will make our products more mediatic and attractive, together with a simple and minimal design.

Finally, we analysed the 4Ps that are overall the key elements (product, price, place and promotion) of our marketing strategy. About the promotion strategy, that is our channel for communication and engagement with the clients, it is going to be developed through Facebook and Instagram. As said before, we created a Facebook page to communicate directly with young people on students groups and an Instagram account to visually promote our products.

## **Operational plan**

The activities of Woody are those of a company in the private sector. We build the items thanks to the work of two artisans and we manufacture a finished product which is then transported according to the client's requirements with Emov electric vehicles.

The key aspects of our operational plan are the following:

- Product and services: Online sales, renting and maintenance services.
- Human Resources: The company is founded by 3 partners. We are going to employ two artisans that will be part of the project and we plan to increase this number if the demand increases in the long term.

- Plant and equipment: We have rented a warehouse to build the furniture, all equipped with the necessary accessories to build them.
- Logistics: We work with Emov electric vehicles and public transport.
- Guarantee: There will be an assurance that will cover any damage. Besides, every 2 years a checking and maintenance will be made in order to increase the useful lifetime of the products.

### Financial plan

We calculated the price the customer is willing to pay per month and made sure it was higher than the costs of each product, and the results were the following:

- **Kitchen set** (3 & 6 months): includes 1 table and 4 chairs for respectively €12,2 and €11 per month;
- **Room set basic** (3 & 6 months): includes shelves, bedside table, dirty clothes box for €7,3 and €6,6 respectively per month;
- **Room set full** (3 & 6 months): includes shelves, bedside table, puff or shoe closet, dirty clothes box for €9,5 and €8,5 respectively per month;
- **Individual item small** (1 month): it could be chair, puff, bedside table, dirty clothes box for €2,1 per month;
- **Individual item big** (1 month): it could be table, shelves, shoe closet for €4,8

The initial funding the project needs was calculated in base of several items, such as costs of production until the break even point, such as man hours, tools, workshop rent, salaries and transportation.

The funding needed for the project will be 126421€ and we will use them on the first 18 months of the project, after that the company will generate profits.

First year needs (€)	Second year needs (€)
116136€	10285€

The first year will finish with financial losses of 116.136€ and the second year will finish with 9091,4€ of net profits which will increase over the following years with more products of Woody on the customers flats.

The 9091,4€ represents the gains for the second year, but still, we will need an amount of 10285€ for the first 5 months of year 2 in order to operate.

The initial investments will be recovered at the end of the third year of production. In the future, we plan on having a bigger space to work, higher volume of clients and employ two more artisans.

In terms of revenues and sales, we plan an increase from 5% to 20% in the initial year, according to the volume and periodicity of our potential clients. The total sales for all the products in the initial year is 70.944,1 €. It is also analysed that Woody's Room set full for 6 months will be the most sold product together with the kitchen set for 6 months too. For the second year, sales will still increase up to a total sales of 203775,5€.

The investor is given the chance to get on board of an exciting project that will improve year after year and with a clear target market that will continuously come to Madrid, to either study or work!

## 1. Introduction

### a. Business presentation

The business goal is to create a circular system based on furniture renting. This cycle consists of taking the raw material from broken pallets given by some enterprises that will not be used again. After picking up the material, two woodworkers will help us to create furniture with basic models of furniture pieces that the web page *No-throw design*<sup>1</sup> posts in their platform and also easy structures, because pallets are an easy material to work with in terms of design. This basic furniture is useful for students and young workers that are staying temporarily in Spain.

### b. Team presentation

The business idea has been developed by five students from the EOI (Escuela de Organización Industrial) during the academic year 2018/2019. Two engineers' experts in renewable energies and three sustainable development experts with a clear objective to rise with this business, make the market one more circular step.



Alice, an Italian girl from Turin, studied international business in Spain and lived in different cities, like London and Changsha, China. Now that she is in Madrid finishing the International Master in Sustainable Development and Corporate Responsibility, she faced again the issue of renting a flat and had to buy some furniture for her bedroom. Again, an issue that could be solved by Woody, an easy platform to rent some items for her renting flat because she plans to go back to Italy after finishing her degree.

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<sup>1</sup> <https://nothrowdesign.com/you-make/>



Sara, from Milan, has been studying International Relations in Milan. She is finishing the Sustainable Development and CSR Master and plans to start working in Krakow in August. She was missing some items in her bedroom here in Madrid, and even though they were a bit expensive she bought them. Now she has the problem of selling or giving them away. A platform like Woody could make this process

a lot easier.



Santiago is an Argentinian engineer that studied in Argentina and then came to Spain to specialize his degree with a master in renewable energies. He's now planning to stay in Madrid for some months in case he finds a job. His problem is that most of the flats in Madrid doesn't include furniture inside, so he would buy some items until he has enough money to change into another flat, this

time full equipped like a normal house.



António is from Lisbon, Portugal. He is also an engineer and studied the same Master's degree as Santiago. With his first experience out of Portugal, he rented a bedroom in a shared flat and saw that the furniture in his bedroom could be improved and there was a lack of some furniture. Since he didn't want to spend money, he decided not to buy anything for his bedroom, but with Woody, he's sure that

we would've rented furniture for his period in that apartment.



Carmen is originally from Madrid and now she is moving to Bilbao for 6 months. In this city the problem is similar, most of the flats have not enough furniture or even any inside, so that she would have to buy it and only use it for 6 months. She studied like Sara and Alice the International Master in Sustainable Development and CSR. This gave her a new mentality for being more responsible with nature and

the products that we use. Woody is for her the perfect platform, with an easy platform where



she can rent the items that she would like to have and once she ends her period in Bilbao, give back again those rented items. Even if she has some family coming to visit her, she can rent more products if needed.

## **2. Context and product design**

### **a. The problem and opportunities**

Modern society's demand for material increases every year. Furthermore, with an increasing world population, rising income and industrialization, raw materials are being extracted at an unsustainable rate. The global wood consumption is going to increase to more than 50 percent by 2050. Already, nearly a fifth of the earth's forested areas have been cleared away due to the drastic acceleration of wood consumption and agriculture. Moreover, it can be said that pallets constitute one of the most wasteful usages of wood. This is because nearly half of the hardwood is made either as crates or pallets and they are usually used once and then thrown away (Resource Conservation Alliance, n.d.).

Moreover, Woody will use wasted pallets coming from warehouses around Madrid, apart from recycled pallets that will be bought. Wasted pallets are those pallets that are slightly damaged or incomplete, and are not usable for their initial purpose.

The aim is to create furniture and to extend the furniture's resource useful life as much as possible, in order to tackle pallets waste to reduce its impact on the environment.

It is estimated that in Spain alone, 520.000 tonnes of wood waste (approximately 20 to 35% of this wood is related with pallet waste) were generated in year 2010 (Recytrans, 2013). Woody's mission is to reduce both pallets waste but also furniture waste, by servitizing furniture in order to reduce its waste.

Below are some pictures taken by Woody's founders in Alcobendas industrial center, in order to demonstrate that the pallets are being thrown away and that the issue of pallet waste is real. As there is uncertainty regarding the exact number of pallets thrown away, and

since it varies depending on the company and volumes, we will not rely on the pallets thrown away, but we will buy recycled pallets at a cost of €3 each.



Spain is the OECD country where rents represent the greatest percentage of people's income. In fact, in Spain, almost four out of ten (37%) of the people who rent apartments, spend more than 40% of their salary in paying the rent. Moreover, according to INE (Instituto Nacional de Estadística), wages have only risen a 0,1% in 2017 and according to Fotocasa, the rents have risen 8.9% in the same period (Sánchez & Cantó, 2019). In this case, Woody wants to provide furniture that is accessible for everyone and that has good quality at a low price. We know that Madrid's average flat renting is 1220€ per month and this is why Woody works towards an innovative idea to both help young international people and diminish the consumption of wood, by servitizing furniture. In order to validate this, we decided to analyze and compare our prices with Ikea's prices to see how much it costs to furnish a flat. We did this in order to see whether we can offer a service for young students and workers that has lower price than Ikea.

After researching the issue, Woody sees some great opportunities to enter the market of recycled wood pallets.

Opportunities include the circular economy, as the European commission launched an action plan to shift to a more circular economy with the aim of developing a sustainable,

resource efficient and low carbon economy. In the case of pallets, this sector is already in a good place as they have high rates of recycling and there are many pallets that are not being used to its maximum potential (United Nations, 2016).

Woody's circular economy plan will create value, as wood is becoming more scarce and pallets are not being used to its maximum extent.

By recycling, remanufacturing and refurbishing, Woody has the opportunity to allow value recovery, job creation and economic growth.

Woody wants to act locally but think globally, as the problem of wood waste is not just a local issue, but it's a worldwide issue.

Another opportunity for Woody will be the fact that there is an increase on the cost of disposal. Woody will be giving a biomass company pallets that cannot be recycled and furniture that has reached its useful end life. This means Woody will have double revenue; one from the servitization of the furniture and the other one from the disposal, and since the cost of disposal is increasing, there will be an increase in revenue.

There is a market opportunity for Woody as the majority of Spanish people consider that a product impact on the environment is important and Woody is thriving to have as less impact on the environment as possible, by implementing circular economy. Furthermore, there is growing importance for the environment and growing understanding about the consequences. (The Gallup Organisation, 2009, p.14).

## **b. The product**

The products developed will be wooden furniture for the house. This furniture will be made exclusively with wood pallets by using recycled pallets in order to create new furniture with it. Every two years after the furniture is rented, Woody will provide a maintenance service in order to check the quality of the furniture and make sure that it is in good condition.

The furniture will be rented out to customers for a short, medium or long-term period. Repairs will be made to fix the furniture in case of need, to then rent it to the next customer.

Furthermore, in order to recycle the wood pallets and to provide the best design, Woody will need to employ local artisans. Local artisans will work in our workshop depending on the amount of furniture demand. This is to say that they can be working from once a week to five days a week, depending on the volume of pallets of which we have availability and the demand of the customers. We are planning on employing at first, two local artisans. They will also be responsible for the maintenance.

Pallets that are collected or bought and that cannot be used for the purpose of creating furniture, will be sent to a biomass company and the same will be applied for Woody's old furniture that cannot be rented anymore.

The products Woody will be renting are: tables, chairs, shelves, shoe closet, bedside tables, box for dirty clothes, puff. Woody will just provide the structure of the products, with no added textiles.

Our products will allow customers that are renting an unfurnished house (just with an equipped kitchen) to have a new and sustainable option to find furniture for the time frame they choose or to add some furniture that was missing from the house. With Woody, we want to servitize furniture to use it for as long as possible by tackling the problems of pollution by creating new furniture and the exploitation of forests.

The basic renting prices are 3 and 6 months for sets. In case a customer would like to rent the product for more than 6 months, for example 9 months, the prices will be calculated by using the price for 6 months rent plus 3 months rent, and so on.

The sets are the following:

- Kitchen set (3 and 6 months) which includes: table and four chairs.
- The room set basic (3 and 6 months) includes: shelves, bedside table and dirty clothes basket.
- The room set full (3 and 6 months) includes: shelves, bedside table, puff or shoe closet and dirty clothes basket.

In case a customer would like to rent the items individually, the minimum rent period for single items is of 1 month. The customer can decide whether to rent one item or more items, for as long as they need it. Moreover, all the individual small items have the same prices and all the individual big items have the same prices. They include:

- Individual (small), which includes the small items such as: chair, puff, bedside table, dirty clothes basket.
- Individual (big), which includes the big items such as: table, shelves and shoe closet.

Woody wants to base the payment method on the pay for use system: this means that consumers have access to all of our products, but they just pay for the usage. For example, if they decide to rent a table for 3 months, they will be only paying the table for the 3 months of rent, without any subscription cost. The customers will just be charged for the usage of the furniture rented instead of paying extras while not using Woody's services.

### **c. The market**

The European wooden packaging and pallet industry used more than 20 million m<sup>3</sup> of sawnwood in 2015, accounting for more than 20% of total sawnwood production. Data from the European Federation for Manufacturers of Wooden Packaging (FEFPEB), records data from 15 countries, including Spain, and it shows that the number of pallets increased from 339 million units in 2006, to 371 million units in 2010, to 401 million units in 2013 (United Nations, 2016).

According to INE (Instituto Nacional de Estadística), the manufacture of new pallets amounted to more than 51 million pallet units in 2016, which was 4% more than in 2015 (FEDEMCO, 2018).

According to a study published by Idealista, the flats in the market that are rented without furniture are approximately 39,2% less expensive than those furnished. Moreover, the unfurnished flats accounts for roughly 30,6% in Spain. Within 30% of homes for rent offered without furniture, two types of home exist: 21,4% of flats are rented with the equipped kitchen (with refrigerator, washing machine and stoves at






least) and the remaining 9,2% has no furniture at all. Talking about Madrid specifically, it is the capital city with the most percentage of apartments without furniture on the market; 50% of them are unfurnished (Idealista News, 2018).

What Woody wants to target, are the flats with at least an equipped kitchen, as we will not offer yet furniture for the kitchen, just appliances.

In order to see whether Woody has a market, we have to analyze the market size for our potential customers. The age group from 20 to 34 years living in Madrid, represents 15% of the population. From this 15%, the 50% live alone, so these are our possible customers. Moreover, out of the potential customers that live alone, the 70% pays a rent (Comunidad de Madrid, n.d.).

Flats with furniture represents half of the flats rented, thus, Woody is going to try to reach the 10 percent of this potential market, which represents 7875 possible clients.

#### d. Competitors

Competitors summary					
Company	<b>Home essentials</b> 	<b>IKEA</b> 	<b>L'estoc</b> 	<b>ReDecorArt</b> 	<b>Camaleonico</b> 
Products	Furniture and electrodomes tics	Furniture	Eco design furniture	Eco design furniture	Furniture
Location	Madrid	Global	Barcelona	Barcelona	Madrid
Distributi on	Spain	Globally	Barcelona	E-commerce for all Spain.	Madrid
Pallets recycling	No	No	Yes	Yes	No
Renting	Yes	Yes, new plan	No	Yes, only for events	Yes, only for events

Home Essentials is a Spanish company based in Madrid. They dedicate to rent furniture, electrodomeestics and various products for the house. Their business model centers around renting, as Woody does, but they do not rent recycled wood furniture. Home Essentials have sets of furniture as Woody has and short, medium and long period for the rentals (Home Essentials, ©2019).

L'estoc is a company located in Barcelona which produces eco-designed furniture for the house. They are a sustainable company that also have some designs made from wooden pallets, but they only sell their products with no option of renting them (L'estoc, ©2019).

ReDecorArt is also based in Barcelona. This is an online platform that brings together eco design furniture brands. ReDecorArt distributes all of its products throughout Spain and this is the reason why we identified it as a competitor for Woody (ReDecorArt).

Camaleonico is a startup based in Madrid. This company designs furniture and has the option of renting some products for events (Camaleonico).

What differentiates Woody from the competitors is that Woody wants to create a servitized renting service of wooden furniture, based on a circular economy system, while also reducing material waste. The added value of Woody compared to the competitors is that it will continue using the same furniture for its useful life in order to keep it in the cycle as long as possible. Moreover, Woody's service will be very easy to use as the customer will just need to choose the product or products they want to rent and we will take care of all the logistics from the delivery to the return of the furniture. Just one click away!

We believe that the competitor which treathenes Woody the most is Home Essentials, as they provide a renting service and are a well known company being around for many years and they are the only ones that rent furniture for the house in Madrid.

Ikea can be a competitor for Woody as well, because of their positive reputation amongst young people, of its competitive prices and more differentiation in their products. In fact, Ikea is starting to servitize furniture and their plan to rent furniture is already in act in

Sweden, Holland, Switzerland and Poland. They will implement the renting plan in all of their 30 markets by 2020 (ABC Economía, 2019).

### **3. Business Model**

#### **a) Clients**

Woody's service is addressed to international students and international young professionals and also students and young professionals from other parts of Spain, that moved from their hometowns to Madrid for academic and professional reasons. They are looking for a shared apartment to rent as they will stay in Madrid for a limited amount of time. Because of this reason, they don't want to buy brand new furniture that they will have to sell or throw away after their stay.

As there is a huge variety of international young people moving to Madrid, we identified four main profiles that match with our potential clients.

##### **Profile 1:**

The first client is a Spanish student coming from Barcelona. He is moving to start his Bachelor's degree in Business Administration in Madrid. He found an apartment in the Chamberí area that he will share with other four guys. Since he doesn't have a job yet, his family is financially supporting him. Therefore, he doesn't want to spend a lot of money on decoration and on furniture for the flat.

##### **Profile 2:**

The second client is a French student coming to Madrid for the Erasmus program. She is going to stay for six months, and she also found a flat shared with six other people. As the house will be messy and chaotic, she doesn't want to buy any kind of furniture for the common areas, but she knows for sure that she will need some extra furniture to make her room more comfortable and cozy. She thinks that renting furniture can be the best solutions as she doesn't have to worry about selling it at the end of her program.



**Profile 3:**

The third client is a young Polish woman that just graduated from her Master's degree and is going to start her first internship in Madrid. She recently finished her Master's in Mechanical Engineering and she will start a six months internship in a consultancy. Her internship contract lasts just for six months, but she hopes she can stay longer working in Madrid. As she has no guarantees at the moment, she is renting a room in an apartment in the center, shared with another friend from home. She is tired of living in a too rustic student apartment, so she would like to get some decoration for her room and for the living room. She doesn't want to spend her first salary entirely on furniture, so she is looking for alternative ways to get it. As her friend thinks the same about this, they are available to share the cost of it.

**Profile 4:**

The fourth client is a Chilean guy that is moving from Valparaiso to Madrid to start his first job. After a one year internship in the CSR department of a company in Valparaiso, he got a job offer in a fashion company in Madrid. He has to move during summer, so he has already found a small flat to rent. This flat comes with really basic furniture, so he already took into account the fact that he will need to furnish it. Since he is really concerned about material waste and all issues related to the environment, he doesn't want to buy new furniture for a flat that he is just renting.

All of our potential clients, in general, are looking for a cost effective solution that would make their moving to Madrid easier.

**b) Customer journey**

Hereunder, we will explain the customer journey that leads our potential clients to get engaged to our service. Since our clients are part of almost the same generation and share almost the same age, values and concerns (such as concerns for money and for the environment), we believe that their journey will be very similar.

The starting point of their journey is when they finally decide to come to Madrid to work or study. They realize they will leave home for a long period and have to look for an accommodation as soon as possible. As all young people, they start from the Internet, looking for the cheapest offers without forgetting quality.

Therefore, they start to look on Facebook groups and university platforms. As soon as their research starts, they realize that many of the flats they find come without furniture or with very basic furniture. This is a big issue as they cannot move taking furniture from home with them. Here is when, among all the offers and advices on the Internet, they find Woody: an easy-to-use platform that offers a renting furniture service, providing good quality for reasonable prices. This is exactly what can help them during their moving. At the same time, they cross check the other “more known” channels that they know, such as Ikea. Confronting the prices, they actually realize that they offer the same or little higher prices, but here is when they realize what is Woody’s advantage. In fact, included in the final renting price, there is the furniture transportation to their houses and maintenance service. In this way, they wouldn’t have to worry about the entire logistic phase. They are also surprised to see that there are no asterisks and small prints at the end of the offers. They just have to choose and select the preferred set on the website or on the App and just wait for it to be delivered at home. They find reasonable the fact that they will have to pay a little deposit to Woody, that will be given back at the end of the contract.

After the positive user experience, and after taking a little time to think about the possible options, they finally decide to go for Woody: they considered all the pros and cons, also maybe discussing it with their families, and they believe that Woody is the best choice. It is the only service in Madrid that can help them through all the journey and make their moving easier. As they don’t have long term plans and they will maybe be moving again in the future, they are reassured that at the end of their experience they can always give back their furniture without being worried about it. The online payment process is very simple: at the purchase moment, they pay 50% of the total price of the set, plus a deposit that amounts to a month of rent. This deposit will be returned at the end of the renting period if there were no damages to the furniture. The missing 50% of the price of the set will be taken automatically from their accounts the last day of the last month of rent.

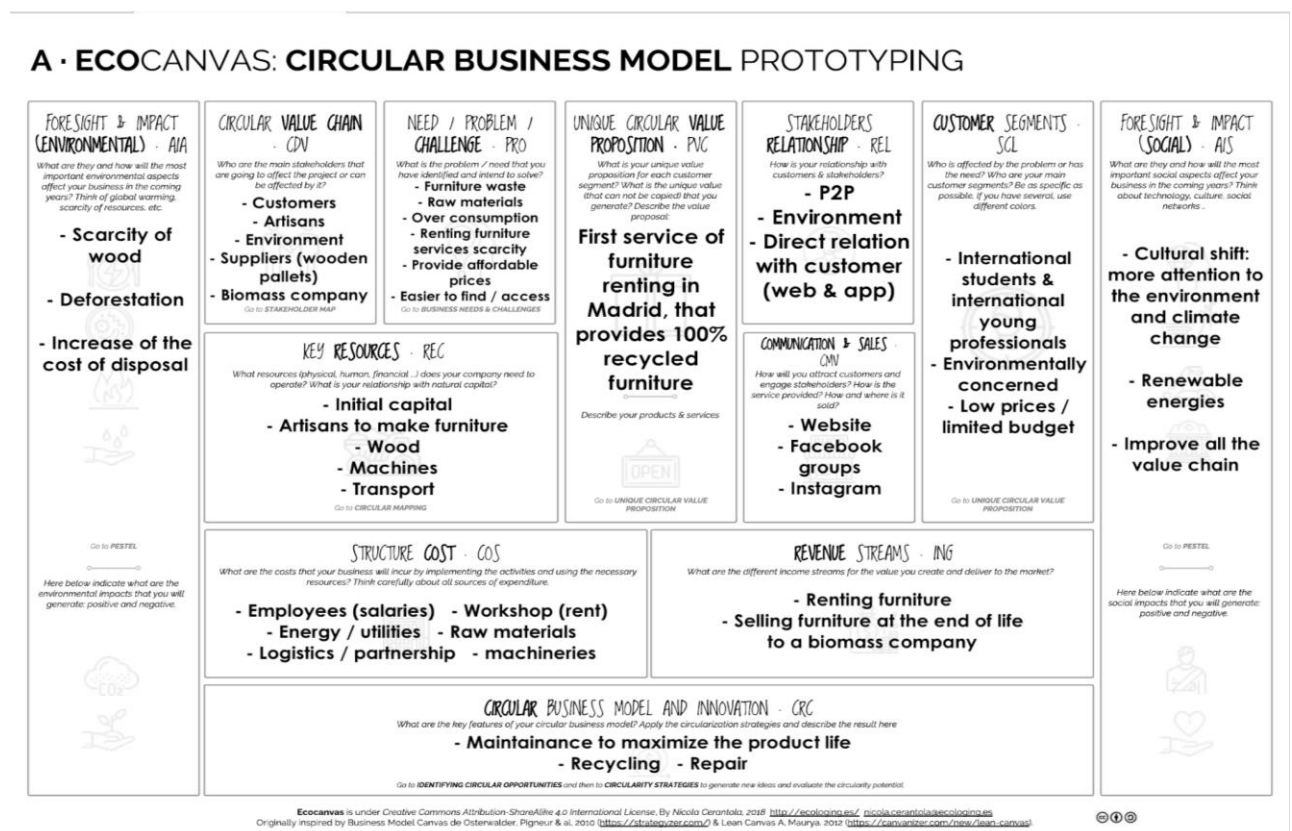
When they finally arrive to Madrid, Woody’s furniture is delivered with Emov electric vehicles as programmed at their new flat. The furniture is exactly as it was shown in the

photos on the website and the quality is excellent. They can finally start to use it. Because the furniture is brand new, they do not need to use the maintenance service, but they have the contact number of it in case of need.

At the end of the renting period, Woody's recollection service is activated and two Woody's employees will arrive with Emov electric vehicles to pick up the furniture rented from their flats. After checking the conditions of the furniture, the deposit is given back to them.

Finally, thanks to their continuous connection with the world through social media, they will recommend Woody to their friends, give positive and enthusiast reviews and share their great experience. In this way, it is guaranteed that Woody will continue to improve and grow.

### c) Business model - Ecocanvas



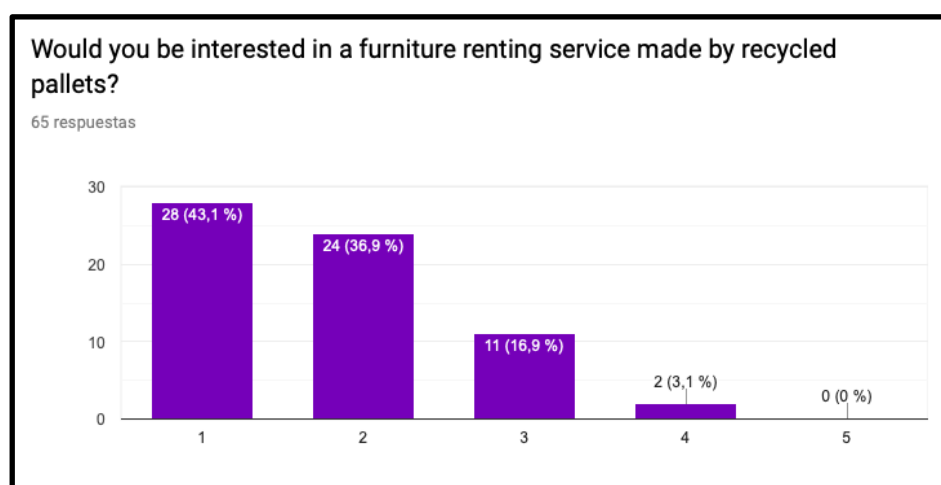
The Ecocanvas was made in order to validate Woody's business model and to analyze it from a circular economy point of view. It shows all the business model and the

#### 4. Business Idea Validation

A survey, sent to 65 people was conducted in order to validate our business idea. The survey was sent exclusively to potential customers of Woody; international students, young workers staying a limited amount of time in Madrid, but not from Madrid itself. It helps us to analyze whether our target market would use our service, whether they are concerned about the environment, which product would they prefer; an individual item or sets of furniture and so on. All the questions in the survey were specific in order for us to change or correct the business model and idea depending on the demand and needs of potential customers. In total, the survey had 7 questions and all the charts with the results, are represented below the explanation.

The survey included a small introducing talking about Woody and the business idea. This was for the surveyed people to understand what we are doing. Starting on with the first question, we asked the surveyed people whether they would be interested in our service. The possible answers were choosing between a range of 1 to 5, 1 being yes and 5 being no. From the result (check chart below) we can say that the majority of the surveyed said that they are interested, having just 2 people out of the 65 responses which are not quite interested.

##### Question 1.

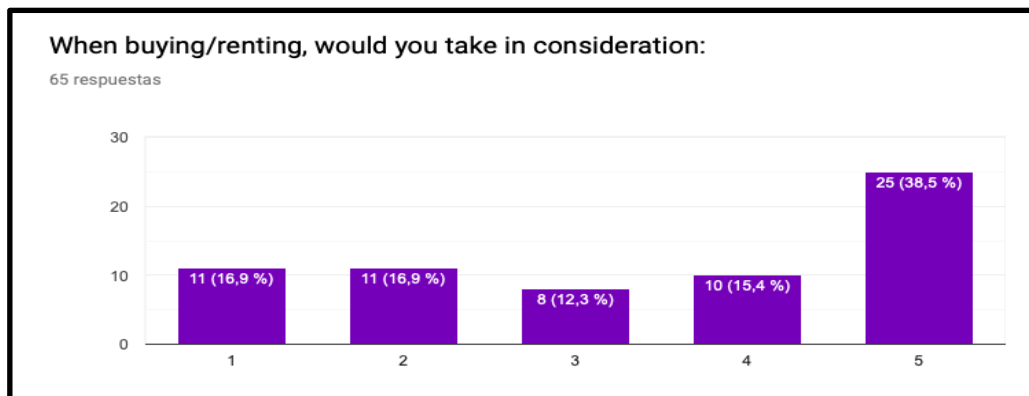


*(Legend: 1 meaning "yes" and 5 meaning "no")*

Another important aspect was what people considered the most when choosing a product, whether their decision tended more towards the price or their concern for the environment. In this way, we could analyze whether a sustainable service can be

implemented. From the results, we can see that most surveyed people are leaning towards the concern about the environment, rather than the price itself. This shows an opportunity for Woody, as more people are becoming more aware of the negative effects on the environment and are starting to choose products depending on whether they affect the environment or not. The chart below shows the results from this question.

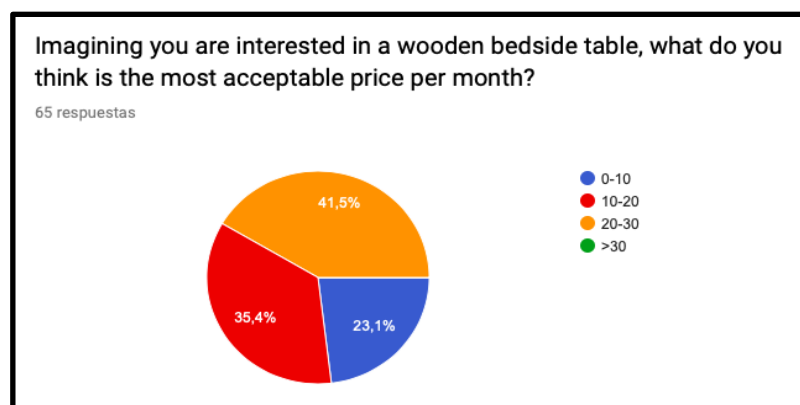
### Question 2.



(Legend: 1 meaning “price” and 5 meaning “environment”)

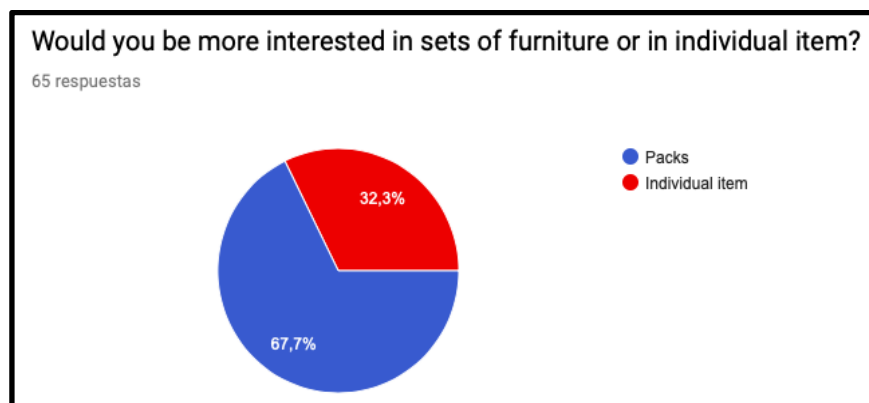
The survey also included a question for the surveyed person to tell us what price they would accept for a bedside table per month. We were very surprised to see that the majority (41,5%) accepted a price between 20-30€ per month, which means that people are willing to pay a higher price for eco-friendly products. This shows that if people like the idea, they have concern for the environment and understand deeply what we want to achieve, potential clients can accept to pay a higher amount of money. This conclusion was made because three different options were provided: 0-10€, 10-20€, 20-30€ and >30€. The surveyed people had the option of choosing the lowest price (0-10), but the majority still chose a higher price because of the concern for the environment and probably the comfort of the service itself.

### Question 3.



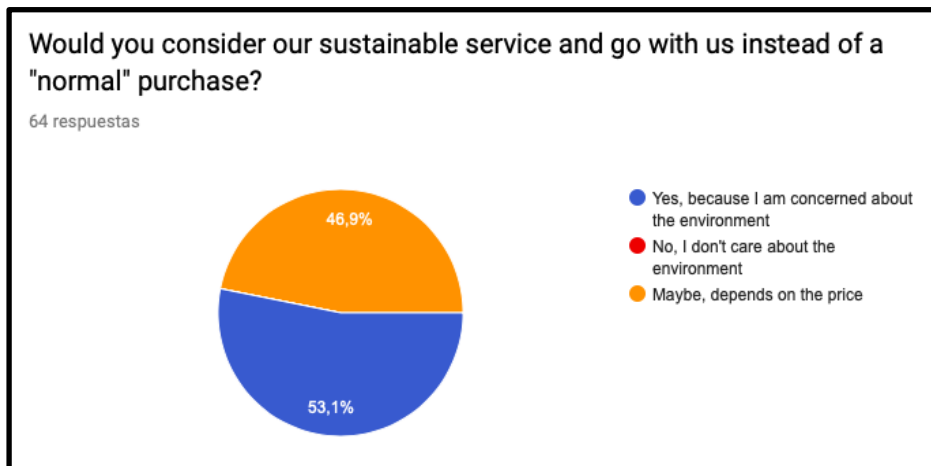
From the results gathered from question number 4, we had to make some changes in our business idea: since the majority of the surveyed preferred sets of furniture rather than individual items, we decided to include 3 types of furniture sets, for the kitchen and room. Furthermore, some people still answered that they preferred individual items over sets of furniture (even though it was the minority) but we still added the option of renting single items for a period of minimum 1 month.

#### Question 4.



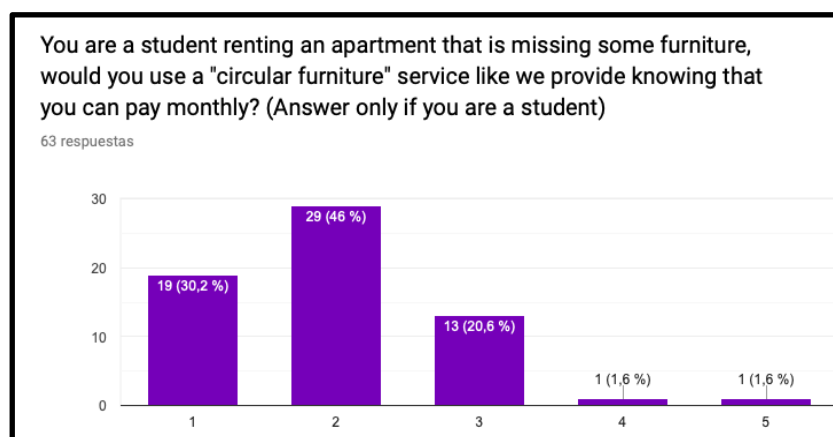
In order to see what people think about our sustainable service and especially the rent of furniture, we asked them whether they would consider using Woody's service rather than buying furniture from a non-sustainable company. This is to see whether customers want to rent furniture instead of buying it. From the results, we saw that people would use it because they do care about the environment, but we also saw that they were uncertain and the decision would depend on the price. Taking into account this, we tried to offer our service at a minimal cost, in order to comply with the needs of our potential customers.

#### Question 5.



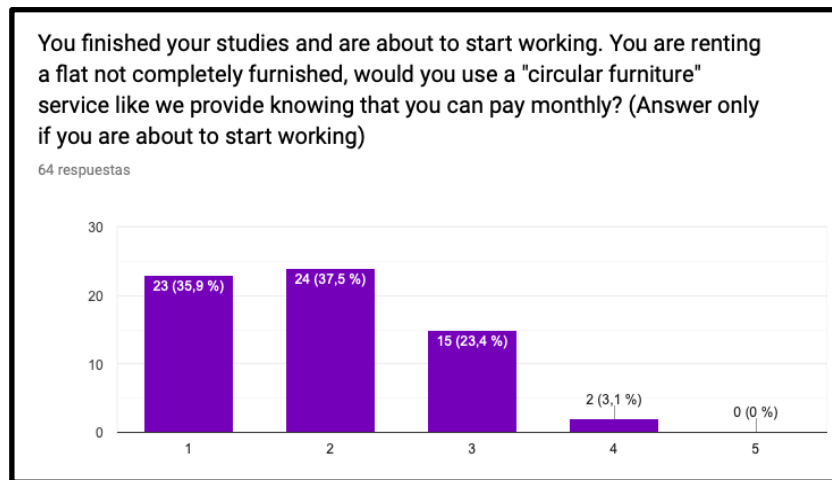
The last two questions were specific for the target market, as we asked the same question the first one, but in these last two cases, we wanted them to answer from their own point of view in their specific situation. We saw that most people answered both questions 6 and 7, which means that they are students that are about to enter the workforce. An important point that we analyzed from the survey, is that the young workers would be more sure about using our service compared to students.

#### Question 6.



*(Legend: 1 meaning "yes" and 5 meaning "no")*

#### Question 7.



*(Legend: 1 meaning "yes" and 5 meaning "no")*

In conclusion, we can say that the survey really helped us to modify and create a business idea that can be feasible for our target market. This is because we based it on the response we had from the survey, and interviews we had with friends that found themselves in the situation of moving to an apartment in a new city, facing the challenge of having to buy new furniture and leaving it behind or throwing it away when leaving.

We were glad for the results obtained, because we saw that young people do really care about the environment and are leaning towards projects that are sustainable.

## 5. Planning

### a. Marketing plan

In order to design our marketing plan, we need to analyze and use the 4Ps method: product (already explained), place, price and promotion.

- **Product**

Again, Woody applies the concept of circular economy into the furniture business. By buying and collecting recycled and broken wood pallets, we create furniture based on this product. With the pallet structure it is easy to modify and build furniture items with basic structures. After treating and cleaning the wood, we offer different renting services options depending on the time needed: 1, 3 or 6 months. Once the pallet or the item is no longer useful, it will be given to a biomass company located in Madrid (name of company) that will take care of the material.



The products Woody is going to offer are:

- Kitchen table
- Chair
- Shelves
- Bedside table
- Basket (dirty clothes)
- Puff
- Shoe shelf

The products are going to be sold in three different sets or each item alone, that will be the following ones:

**Kitchen set:** One table, four chairs;

**Room set basic:** One shelf, one bedside table and one basket;

**Room set full:** One shelf, one bedside table, one shoe closet and one basket;

**Individual items:** Chair, puff, bedside table, dirty clothes box, table, shelves, shoe closet.

- **Place**

As international students based in Madrid, we decided that this city could be the best environment where to start our project.

A capital city like Madrid welcomes annually lots of international Erasmus students and young workers that are looking for shared flats to rent. After analysing the real estate market, we could see that there was a real niche to start and implement our project. In fact, 50% of the rented flats in Madrid come without furniture, and the total budget to buy new items can be very high. Moreover, students and young workers that aim to continue moving in different countries are not interested in buying furniture that they have to sell or throw away at the end of their stay.

Using a website is nowadays the best way to sell, especially for young people that do not have the time to go to stores and also because they can see all the furniture before they go to live to Madrid.

Our products fits perfectly to be sold on a website, because with the measurements and the pictures of the different furniture the customer will be able to see if it fits on their flat or not.

Woody will offer different sets of furniture for the house and also the service of the transportation from our workshop to the customer flat. This service is really important because in most cases the customer does not have a car in Madrid.

The transportation will be done with electric vans, the idea is to make a partnership with one of the electric car sharing companies that operates in Madrid.

- **Price**

In order to satisfy every client's needs, Woody offers different ranges of prices based on the renting time. We created three sets of furniture, the Kitchen set, the Room set (full) and the Room set (basic). These sets are offered for both 3 and 6 months, and the prices vary based on time.

Finally, we also considered the option of renting individual items: in fact, there is the possibility that clients need just a single item of furniture, that can be rented just monthly. We offer a small and a big individual set, depending on the number of pallets needed to build the item.

Those months (1, 3 and 6) are the basic services we provide. We chose this time lap because is the average rotation of the flats, but in case you would like to rent the furniture for more months, for example 9 months, you will just have to add the price for the 6 months and the price for the 3 months of the type of furniture needed (sets or individual).

The price depends on two different factors. The first one is how much it cost Woody to produce each item. The other factor to take into account is the price the customer is willing to pay for our service.

Costs:

The costs we took into account are divided in two different groups. The first type of costs are the production ones, those are man hours and the raw material. The other type we have to add the transport cost, the rotation costs and refurbishing costs.

Both cost have to be prorated within ten year that is the useful life of the product.

Price the customer is willing to pay:

The price the customer is willing to pay is based on the survey. They would pay a maximum of 30 euros per month. So with that maximum and the cost of production we established the following prices:

Product	Price	Cost	Gross Margin	Time to repay (Months)
Kitchen set (3 MONTHS)	12.20 €	123.18 €	-910%	10
Kitchen set (6 MONTHS)	10.98 €	123.18 €	-1022%	11
Room set Basic (3 MONTHS)	7.32 €	60.09 €	-721%	8
Room set Basic (6 MONTHS)	6.59 €	60.09 €	-812%	9
Room set Full (3 MONTHS)	9.46 €	84.15 €	-789%	9
Room set Full (6 MONTHS)	8.51 €	84.15 €	-888%	10
Individual item small (1 MONTH)	2.14 €	21.02 €	-885%	10
Individual item big (1 MONTH)	4.78 €	39.04 €	-717%	8

- **Promotion**

Since our customer segment will be composed by young people, social networks represent the best platform to communicate our project, increase the brand visibility and expand to new potential clients. Initially, we plan to start promoting our project on Facebook and Instagram, with original and attractive accounts, explaining how Woody started and why. We will also include the services that they can rent and the different discounts.

On Facebook, for example, we aim to share posts on Facebook groups, so that many people that are about to move can get to know our service. Just on those Facebook renting flats or rooms groups there are over 300.000 members. When the company will start to generate enough cash, we will be able to afford to buy Facebook ads.

Instagram will be a good asset for getting customers to know the company. Also, when Woody will start to generate cash flow, paying influencers will be a real possibility.

Using a good SEO strategy on search engines will be the other strategic tool available. The only cost is the person that does it and there is no additional cost. Afterwards, we will be able also to pay for Google ads.

Finally, in the long term, we plan to start posting ads on renting websites, such as Idealista and Fotocasa. For example, since the cost of posting an ad on Idealista is around 7 euros, we estimated that we will be able to afford this kind of paid advertisement after the first operational year.

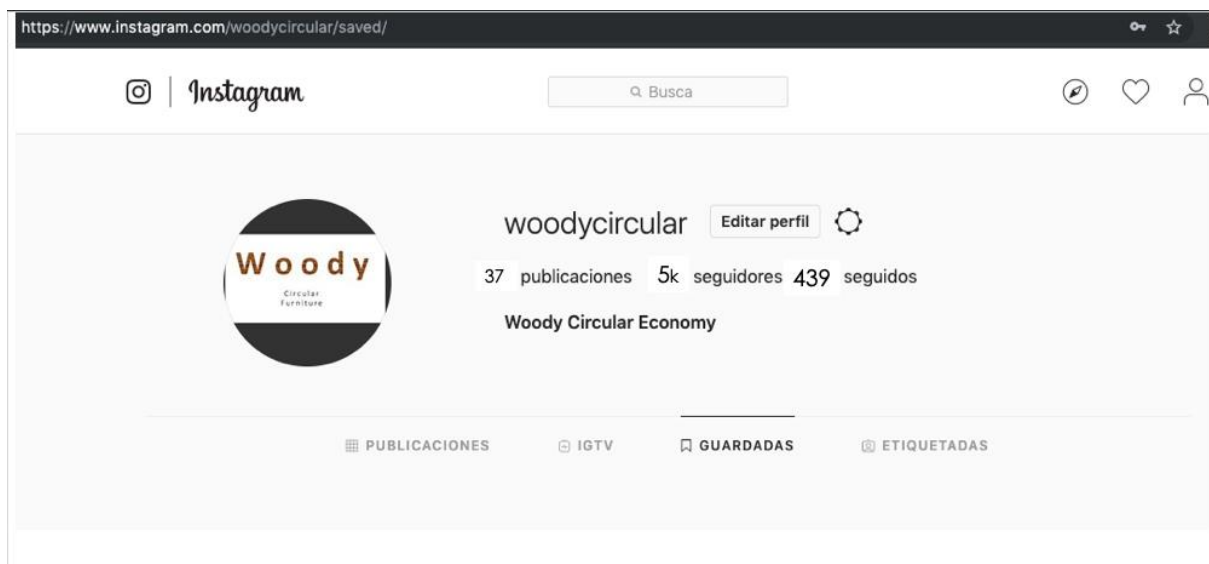
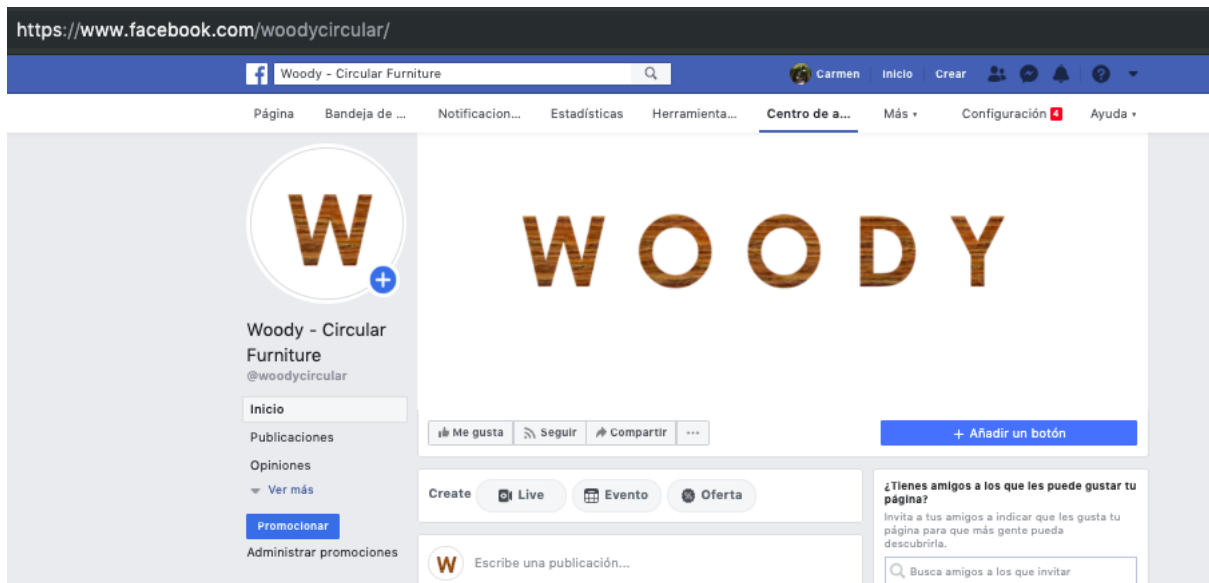
Acquisition cost of a client: It will be calculated in base to the hours that one of the partners spends working on acquiring new clients. The projected time it will be spent on marketing activities will be half of the shift. And the estimated amount of new customers per month will be 50. So with a salary of 1000 euros per month the cost of acquiring a new customer is 10 euros.

Free promotion channels	Paid promotion channels
<ul style="list-style-type: none"> <li>• Posts on Facebook groups</li> <li>• Posts on our Instagram account</li> <li>• SEO strategy for search engines</li> <li>• University platforms</li> </ul>	<ul style="list-style-type: none"> <li>• Facebook and Google ads</li> <li>• Influencers</li> <li>• Ads on renting flats or rooms platforms (Idealista, Fotocasa, etc)</li> </ul>

The SWOT analysis have been made in order to analyze which are our strengths, opportunities, weaknesses and threats. Moreover, it helps to examine the opportunities with the threats that the business is facing.

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Competitive prices</li> <li>• Innovative idea</li> <li>• Pay-per-use, no subscription fee</li> <li>• Eco-friendly products</li> <li>• Online shopping/one click purchase</li> <li>• Shipping and assembly in all Madrid</li> </ul>	<ul style="list-style-type: none"> <li>• New company, no brand image yet</li> <li>• New entrants</li> <li>• Little differentiation of products</li> <li>• Only e-commerce</li> <li>• Virtual payment only</li> <li>• No option of buying the furniture</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Few direct competitors</li> <li>• Emerging need for renting furniture</li> <li>• Laws supporting circular economy projects</li> <li>• Increased awareness</li> <li>• Online selling always more popular</li> </ul>	<ul style="list-style-type: none"> <li>• Increased prices for online shopping</li> <li>• Second hand markets</li> <li>• Big players entering in the renting market</li> </ul>

**Platforms:**





# Woody

Circular Furniture



Room Set Full ( 6 months )  
54,60 €



Room set Full  
28,50 €



Room Set Basic ( 6 months )  
40,80 €



Room Set basic  
25,50 €

## Marketing objectives

**Sales objectives:** The sales objective will be in base of our capacity to hire handicraftsman, the capacity of the workshop we are going to rent and the wood we are going to be able to get. The market is way bigger than our possibilities to produce, at least at the beginning.

**Size of the market:** In order to see whether Woody has a market, we have to analyze the market size for our potential customers. The age group from 20 to 34 years living in Madrid, represents 15% of the population. From this 15%, the 50% live alone, so these are our possible customers. Moreover, out of the potential customers that live alone, the 70% pays a rent (Comunidad de Madrid, n.d.).

Flats with furniture represents half of the flats rented, thus, Woody is going to try to reach the 10 percent of this potential market, which represents 7875 possible clients.

## b. Operational plan

Our operational plan was created in order to optimise as much as possible the customer's purchase. To describe better how Woody works, we can divide our operational plan in three parts: the materials, the workshop and the website, this last one already known. In order to

operate, Woody will have a full equipped workshop where our carpenters can work and our pallets and future can be stored.

We will start with our source of raw material. One of our goals is to reduce the waste that pallets create, so we thought on getting our material from the ones that produce this waste. Our primary source of pallets are going to be the factories that produce pallets. We are going to buy recycled pallets about to be recovered monthly, for 3€ each unit.

Also, due to our location, we went to the industrial area of Alcobendas. After talking with the factories, they agreed on giving us the pallets, which allows us to receive pallets for free and have a circular furniture process as we can recycle some of those pallets.

Our main source of raw material would be the purchase of recycled pallets and the free ones given by the industrial area in Alcobendas. These two sources of pallets allow us to have a continuous flow of pallets and production of furniture.

According to our values and to our strategy, we want our transport to be sustainable, as well as all the other processes, so we decided to use the EMOV service, that provide a shared service of electric vehicles. This transportation service costs 59€ per day (with toll prices included), with enough space to fit 14 pallets and with a battery of 170 kilometers, that allows 5 trips to Alcobendas, and deposit 60 pallets in our shop where our carpenters will have the possibility to create per day.

Our workshop will be located in the industrial part just outside the center of Madrid, close to our customers, close to the pallets source and also close to the handicraftsman. This workshop will be the place where our artisans can turn pallets into pieces of furniture and where all the pallets can be stored.

Woody is going to hire 2 artisans who will be paid 15€ per hour (Tamal diseño & madera) and we will provide them access to equipment and machinery such as drills, hammers and other tools they will need to work, which had the global cost of 330€ per artisan. After the furniture is ready to be delivered, the EMOV van will go to the workshop to pick up the furniture and go to drop it and install it in the client's flats. We consider a 10 kilometers radius of travels between the workshop and the possible destinations, which will give us 5 houses per day ran just by one car.

After the creation of the product, it's time to talk about our showroom. For a better and easier visibility, we created a website to present our furniture and to tell the story and the goals of Woody. In this website, the client can see the sets available and do their

purchases in a simple and intuitive way, with all the renting options available. The website will also provide all contact in case the client has any questions or reclamation.

We'll also be in social networks such as Instagram and Facebook, where the clients can check our products and be redirected to our website. Our visibility in social media can also show people our design making processes and the impact we have on the environment.

Despite our service to the clients, Woody also has another way to make profit and to close the production system in order to be sustainable. Since our pallets come from an industrial center, it is likeable that some of them are not in good condition and not able to be recovered, so we are able to sell those pallets to a biomass companies. Considering the location, we went to the Mostoles District Heating runned by Veolia and they'll buy our unusable pallets for 40€ a ton, which means 40€ for 40 pallets. This is a way to make profit and to reach our objectives of closing the circular cycle.

### **c. Financial plan**

#### **i. Optimistic hypothesis**

To start the financial plan, the first thing we did was find the price the customer would be able to pay and that would cover our costs and generate a profit. We did this by taking into account two different types of costs. The first one is the production cost, that includes raw material, handicraft man hours and transportation. The other costs are the one that are going to take place during the useful life of the product, such as transportation from one flat to another or for maintenance, or refurbished. Once the prices are defined, sales predictions are determined. Two different hypothesis has been developed, one realistic and one optimistic. We use the same selling prices of the products and services but different sales estimation.

The useful life of a wood furniture is approximately 10 years with maintenance every two years, so the costs will be at the beginning of the useful life but the prices are per month, that means that after the product is repaid, it all be profits for Woody.



Product	Price	Cost	Gross Margin	Tiempo to repay (Months)
Kitchen set (3 MONTHS)	12.20 €	123.18 €	-910%	10
Kitchen set (6 MONTHS)	10.98 €	123.18 €	-1022%	11
Room set Basic (3 MONTHS)	7.32 €	60.09 €	-721%	8
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Individual item small (1 MONTH)	2.14 €	21.02 €	-885%	10
Individual item big (1 MONTH)	4.78 €	39.04 €	-717%	8

Cost:

TABLA COSTES DIRECTOS		Costes de producción				Costes de reparación y transporte a lo largo de su vida útil	
	ARTICULO	Transporte (viajes)	N palets	N clavos	Horas empleadas	Transportes por año	Arreglos por año
KITCHEN SET	Mesa		3	25	2		
	silla (4x)	2	8	36	4	2	0.5
ROOM SET (BASIC)	Estantería		2	9	1		
	Mesa de noche	2	1	12	1		
	ropa sucia		2	8	1	2	0.5
ROOM SET (FULL)	Estantería		2	9	1		
	Mesa de noche		1	12	1		
	Puff/zapatero	2	3	20	1		
	ropa sucia		2	8	1	2	0.5
Individual small (monthly)	X	2	2	8	1	0.5	0.5
individual big (monthly)	X	2	3	12	2	0.5	0.5

Coste	Unidad	Precio (€)
Coste transporte	Viaje	15
Precio palet	Pallets	3
Precio x clavos	Clavo	0,003
precio x hora	Hora	15

	Cierre 1º Ejerc. 2019/2020		Cierre 2º Ejerc. 2020/2021	
Ventas Previstas (Ingresos)	102,066.1 €	100%	293,168.5 €	100%
Crecimiento de las Ventas			187.2%	
Margen Bruto s/ Ventas	-54,173.9 €	-53%	126,219.7 €	43%
EBITDA	-133,013.9 €	-130%	50,379.7 €	17%
EBIT (o BAI)	-133,145.9 €	-130%	50,247.7 €	17%
Beneficio Neto s/ Ventas	-133,145.9 €	-130%	37,685.7 €	13%
Cash-Flow Económico	-133,013.9 €	NS	37,817.7 €	13%

### Break even point:

The break even point will occur on the 16<sup>th</sup> month of the project.

	Cierre 1º Ejerc. 2019/2020	Cierre 2º Ejerc. 2020/2021
Punto de Equilibrio (Umbral de Rentabilidad o Break Event Point)	-148,786.7 €	176,459.0 €

### Cash flow:

As it is shown on the chart below, there will be a need of financing for the first 15 months, and the break even point will be on the 16<sup>th</sup> month of the project.

Month	Year 1	Year 2
July	- 19,722 €	- 2,747 €
August	- 16,615 €	- 1,486 €
Septmber	- 15,354 €	- 225 €
October	- 14,094 €	1,035 €
November	- 12,833 €	2,296 €
December	- 11,572 €	3,557 €
January	- 10,311 €	4,818 €
February	- 9,051 €	6,078 €
March	- 7,790 €	7,339 €
April	- 6,529 €	8,600 €
May	- 5,268 €	9,861 €
June	- 4,008 €	11,121 €
Total	- 133,146 €	50,248 €

## ii. Realistic hypothesis

The optimistic hypothesis was made with an increase of the sales in an average of 50%.

	Cierre 1º Ejerc. 2019/2020		Cierre 2º Ejerc. 2020/2021	
Ventas Previstas (Ingresos)	70,944.1 €	100%	203,775.5 €	100%
Crecimiento de las Ventas			187.2%	
Margen Bruto s/ Ventas	-37,296.8 €	-53%	88,093.9 €	43%
EBITDA	-116,136.8 €	-164%	12,253.9 €	6%
EBIT (o BAI)	-116,268.8 €	-164%	12,121.9 €	6%
Beneficio Neto s/ Ventas	-116,268.8 €	-164%	9,091.4 €	4%
Cash-Flow Económico	-116,136.8 €	NS	9,223.4 €	5%

### Break even point:

	Cierre 1º Ejerc. 2019/2020	Cierre 2º Ejerc. 2020/2021
Punto de Equilibrio (Umbral de Rentabilidad o Break Event Point)	-150,216.6 €	175,735.5 €

### Cash flow:

As it is shown on the chart below, there will be a need of financing for the first 18 months.

Month	Year 1	Year 2
July	- 16,526 €	- 3,810 €
August	- 13,449 €	- 2,933 €
Septmber	- 12,573 €	- 2,057 €
October	- 11,696 €	- 1,181 €
November	- 10,820 €	- 304 €
December	- 9,944 €	572 €
January	- 9,068 €	1,448 €
February	- 8,191 €	2,325 €
March	- 7,315 €	3,201 €
April	- 6,439 €	4,077 €
May	- 5,562 €	4,954 €
June	- 4,686 €	5,830 €
<b>Total</b>	<b>- 116,269 €</b>	<b>12,122 €</b>

## 6. Conclusion

With the analysis reported in this document, we demonstrated how the business model created by Woody is feasible both to be implemented elsewhere and to be successful. Thanks to the market research and to the validation process, we can gladly say that there is a market for Woody to enter. Moreover, people are more and more accepting and interested in projects based on circular economy and servitization.

First of all, the financial plan proves that in the realistic hypothesis Woody can become profitable in the short term. This means that, with an initial investment, in 18 months the investors can start to have returns on their investment. Because Woody was born as a start up project, we believe that this result is very encouraging and positive.

Secondly, Woody provides a service that is still very weak and not spread worldwide. As it helps all young people that have to deal every day with a more globalized world - where moving between countries is nowadays the reality and where salaries can be limited -, Woody creates a useful and competitive service.

Also, since we believe in the success that Woody can reach, we also believe that Woody is a replicable model. In fact, due to the large amount of potential clients that it can engage, a renting service of recycled furniture can be implemented in many other cities - cities that attract international students and offer opportunities to young professionals from different countries.

Finally, woody offers a service that makes easier and cheaper for a young professional/student while making a good for the world, all of this in a profitable way.

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