

Symasya

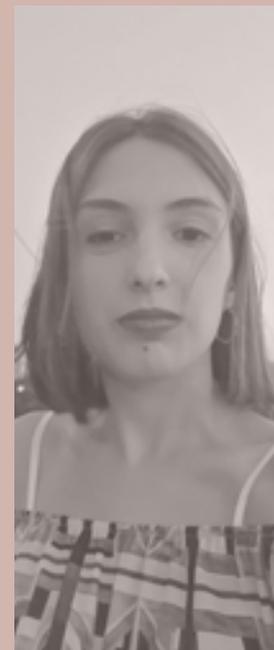
“Embracing Nature”

Symasya

Index

00	Introduction	_____	06
01	Scenario	_____	11
02	Product	_____	25
03	Service	_____	49
04	Brand	_____	79

Let us introduce ourselves



We are the **Meowjito Team**: Glenda Marie Galzote, Elisa Lanfredi, Longyue Huang and Shuming Jin. We are four designers from Italy and China.

Master Course in Product Service System Design, Innovation Studio Course, Politecnico di Milano, A.A. 2020/2021

Symasya

What is Symasya

Symasya is a service system for growing plants indoor. The main idea is to transform the homes in places where plants grow with humans, re-creating the connection between users and Nature. The purpose is then to make people feel a psycho-physical enhancement through the introduction of plants in the house and through taking care of them.



Scenario

San Francisco
in 2036



SF

Why San Francisco?

San Francisco is an important city in California. It gathers the densest and most diversified population, and at the same time faces the huge threat of future climate change. At the same time, it fights against the challenges brought about by climate change with its urban vitality and strong innovation power. Because the whole city advocates a green, low-carbon and sustainable lifestyle, in such a pioneering experimental field for combating climate change, we can freely imagine the lifestyle in the future 2036. At the same time, the technological and conceptual advantages of the city could strongly support us to propose innovative ideas. In San Francisco, there will be full possibilities of future-oriented programs to land in the future.

Homes

How homes will be in the future?

The housing problem

The very first problem we have focused on is the spacing problem. Overpopulation is and will be more and more a problem in the future, especially in the city of San Francisco where the availability of houses has always been a problem, causing the prices of spaces to be among the highest in the US. According to the Next 10 comparative analysis on the "Current state of the California housing market" (Perry et Al, 2020): "To say that California is in a housing crisis is an understatement. California's housing market continues to suffer from a shortage of supply and lingering effects from the housing crash and recession of the last decade." The result is that space is actually the ultimate possession for a Californian (Moore, 2019)

New generations... new homes

The result is that homes are getting smaller and smaller, and this is a trend that is going to deeply affect the future. This is heavily

linked also to the economic situation of the new generations, if our parents could afford big homes the future adults will not be able to do that, both because of the rising prices (caused by the saturated housing market) and the economic situation. New adults will have a lower income, start working later and building their family later, they will get married less, they will make fewer children and their primary need will be to balance work and families. A big house will not be a priority anymore. Besides the practical needs of the new generations, there is going to be a deep mindset shift, making people more conscious about consumption and focusing more on experiences rather than possessions.

The result is that homes in the future are going to be smaller, but will need to be more efficient: flexibility and smartness are going to be the key words for future homes, together with the new practices of self-sustainability, sharing and renting rather than possessing.

Lifestyles

Trends that will be future practices



New economic practices: owning less, consuming less

We are witnessing a perpetual shift from a consumer society to a producer society, where creative producing, making and sharing will outshine consumption, ownership and materialism. (Wevolve, 2013)

DIY lifestyles and self-production

The new practice of producing the products instead of buying is a trend that has shown its popularity especially, it has become not just an economic matter but a way to use money and time in a more creative way.

Sharing and renting culture

Sharing culture will become more and more popular: transportation sharing, home sharing, but also among products. Buying and owning are going to decrease, renting and sharing will be more and more common. (Wevolve, 2013)

Eating habits

A new awareness and a new sensitivity on the environmental cause are widely affecting a new awareness on the quality of the food itself: attention to where the food is produced and how it is another important issue (Bedford, 2018).



Scenario

“Green Haven”

We imagine a future where **digitalization and virtuality** are ordinary and normal aspects of life; where most jobs are remote and digitally based. In 15 years, the environment will slowly start to deteriorate even more so people won't be able to experience nature as we do right now. **Technology** will become part of our daily life as people will rely so much on it that they won't be able to detach themselves from those smart devices. Companies will be more prone to remote working and this will lead to people not being able to distinguish personal life and work life at home; stress will be enhanced by all the technology that we will use and probably lead us to an eventual burnout.

Technostress will indeed become a huge concern in the society, causing an increase in mental diseases and stress among workers. In a city like San Francisco where houses are smaller than the average and the quality of houses is often bad, the situation will be even worse. People will live in smaller and smaller apartments, without gardens or balconies, often without going out of the house, because most jobs are remote or blended (partially remote). This lifestyle based on hyper-digitalization and lack of human interaction, isolation and alienating jobs will make the house a toxic environment, not anymore, a **peaceful refuge**.

How can we make
homes a peaceful
refuge again?

How can we make
people reconnect to
nature to feel better
again?

How can we make
people re-discover
nature?

The opportunities

Psychological benefits

1. Helps to reduce negative emotions



2. Helps to increase positive emotions



Craig, A., Torpy, F., Brennan, J. & Burchett, M. D. (2010)
 Hall, C., Knuth, M. (2019)
 PR Newswire (2015)

Physical benefits

↓60%

Reduce sickness

Adding plants to office settings decreases fatigue, colds, headaches, coughs, sore throats and flu-like symptoms.

↓87%

Used to cure

Patients recovering from surgery, tend to heal better when they recover in a room with plants. Plants are also used to reduce depression and anxiety (Krstic, Z., 2019; Park, S. H. and Mattson, R. H., 2009)

Improve sleeping

There are two ways in which plants can help you get a good night's sleep: by purifying the air in your bedroom and by giving off a scent that helps you relax.

Other benefits

↓60%

Eliminates toxing

Research by NASA revealed that houseplants can remove up to 87 per cent of air toxin in 24 hours (2007). A study from Washington State University found that plants can reduce dust in rooms by as much as 20 percent (Lohr, V., 1996, 1992).

↑20%

Add humidity at home

1 plant for every 3 people improves air quality humidity goes up 20% (Urban Planters).

↓10%

Reduce carbon dioxide levels

indoor plants can help reduce carbon dioxide levels by about 10% in air-conditioned offices, and by about 25% in buildings without air conditioning.

↓50%

Reduce noise levels

A properly designed buffer of trees and shrubs can reduce noise by about five to ten decibels — or about 50 percent as perceived by the human ear, according to the USDA National Agroforestry Center.

The product

Features

Symasya is a modular system for growing plants indoor on the walls. The main idea is to transform the homes in places where plants grow with humans, re-creating the connection between users and Nature. The modular system is designed to allow the users to customize it and adapt it to each kind of room and user's need. The purpose is to give users all the instruments to grow plants, such as soil, lights and tools, but also knowledge and competence.



Structure

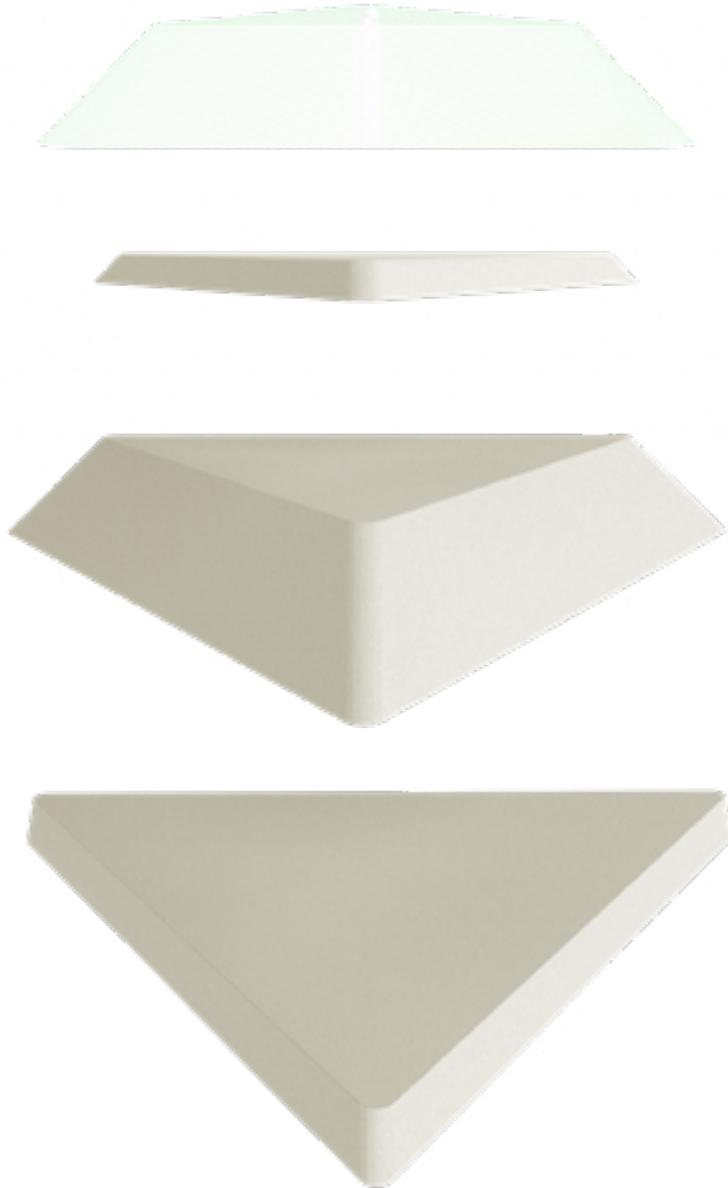
Light modules: joined to the structure. It makes the product suitable for each kind of houses, even when small and with not enough light.

Plant modules: joined to the structure. It is designed to make seeds germinate and grow.

Structure: to attach to the wall with screws, the structure modules are joined together through joints



Plants module



Net

Materials: aliphatic polyester (organic, biodegradable)

Manufacturing: glued

Germination layer

Materials: paper pulp, two parts coir, one part perlite (to make the structure more porous and facilitate water drainage), additional liquid fertilizer (1-2-1 N-P-K).

Manufacturing: mixture, compression and drying

Growth layer

Materials: dry spongy paper pulp, two parts coir, one part perlite

Manufacturing: compression

Base

Materials: paper pulp (with an organic and waterproof coating with wax and starch)

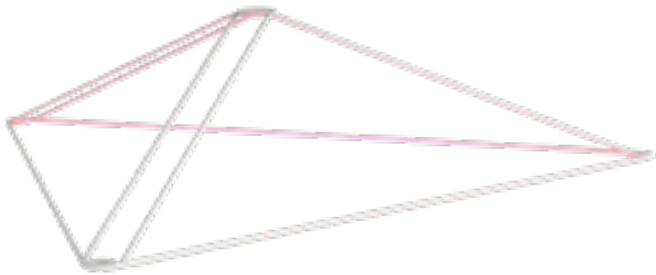
Manufacturing: compression and coating (spraying and brushing)

Light module



Paper cover

Material: paper
Manufacturing: folding



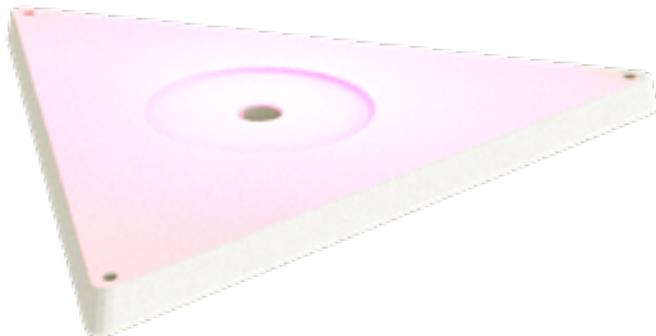
Metal structure

Material: aluminum, screws (steel)
Manufacturing: bending, welding



LED

Components: Led light, timer incorporated, remote control, cables.

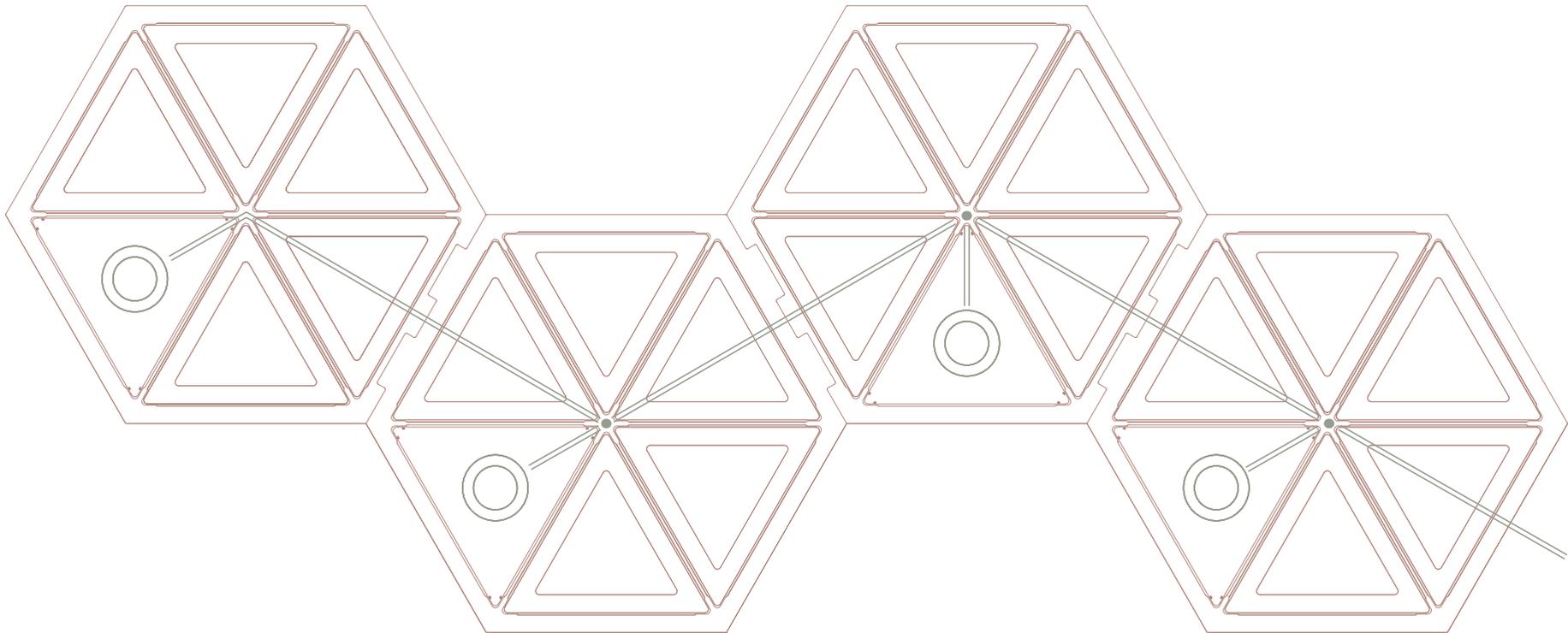


Base

Materials: paper pulp
Manufacturing: compression

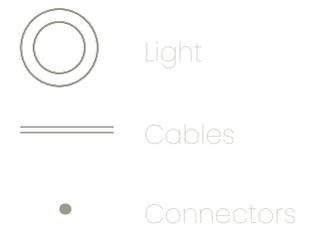
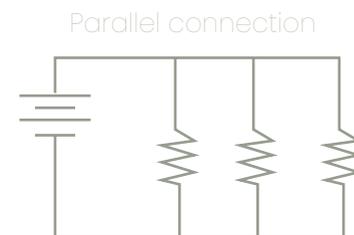
Details

Cables and joints



The illustration shows how the different modules structures are joint together. Secondly the thicker lines represents the course of the cables behind the product (hidden) and how those are attached. The cables connection is

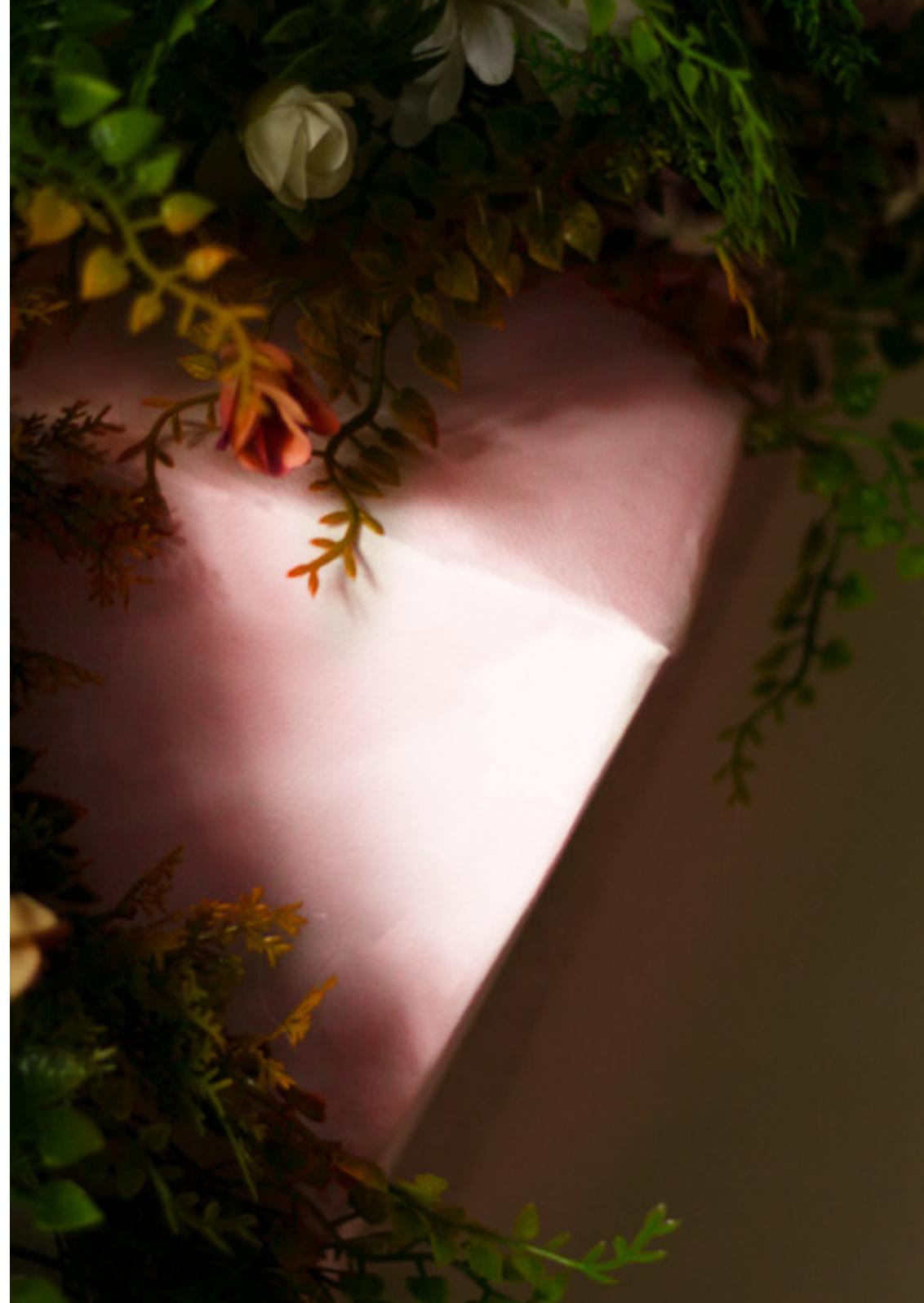
realized through a parallel connection, which allow to light all the lights in the same moment and makes each light module independent (if one is broken the others keep working), differently from the serie connection



Details

Lights

The light module contains a circular LED module. This component makes the product more suitable for the homes with a low illuminations, especially small apartments with small windows. We have chosen LED modules because those are energy saving and contains electric components like the timer and remote control parts. These allow the product to be controlled by the app and to change the colours of the emitted lights according to the need of the plants (**Ref. Annex 1**).



The
usage



Assembly



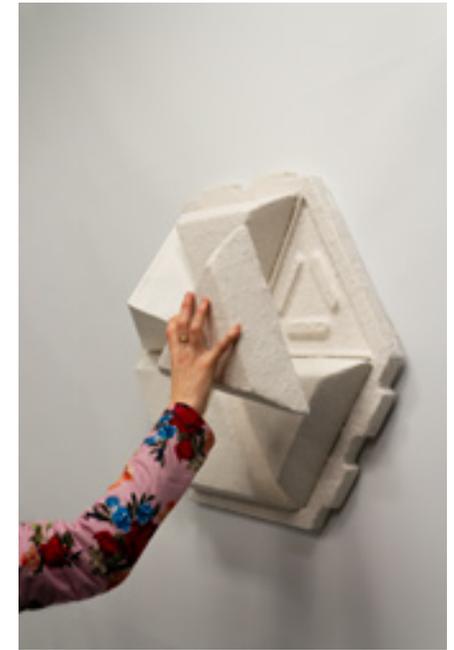
The first step of the assembly is the composition of the pattern of the modules of the hexagonal structures. The different modules can be assembled joining the structures together like a puzzle. Before attaching the structure to the wall the cable system has to be assembled connecting the

cables of the different lights: the shape of the hexagon is designed to hide the cables and the electric components in the back. Once the structure is completed it can be attached to the wall with screws.

Snapping

When the structure is fixed to the wall the user can place the different modules and exchange them as he/she pleases. The modules are designed to snap to the structure, so they are easily removable and exchangeable.

Also when plants are growing the modules can be moved to create different compositions.



Compositions





Care

Symasya is designed to allow every kind of users to enjoy plants and take care of them easily, even those who have no experience and vary low botanic abilities.

The modules contain nutrients and seeds so the only thing that the user has to do is spray the plants according to the need of each plants (indicated by the app). To satisfy every needs of the plants, besides the product itself the user can decide to buy a set of tools useful for taking care of the plants: sprays and trimming scissors.

The service

We provide to users personalized Symasya module customization services through the Symasya APP. At the same time, by inviting experts from botanical organizations to join our online digital community, we build a platform to popularize plant knowledge and environment-friendly concept to fight against the climate change. At the same time, users can also choose to replant plants into nature under our guidance to achieve the aim of recollection with nature.

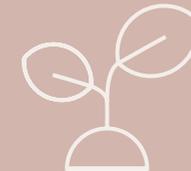
Product



Users



APP

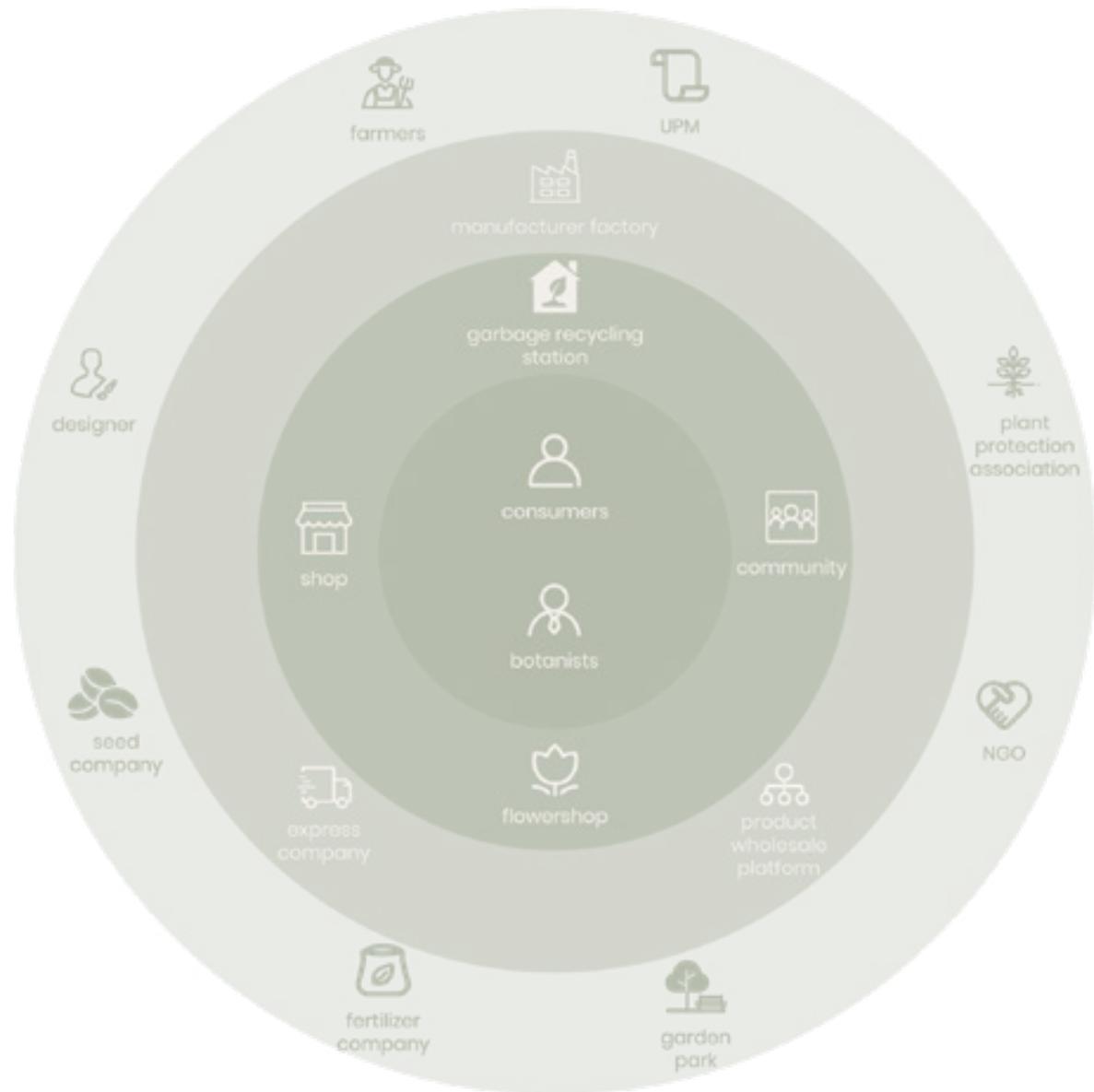


Botanic organizations

Stakeholders map

We analyzed all stakeholders of the product. The product-related stakeholders are analyzed from the three dimensions of before use, during use, and after use. In this stakeholder map, the closer part of the stakeholder is to the center, the closer the relationship with the product itself and the consumer, and the closer to the outer layer, the closer to the source of inspiration and social support from the product.

At the same time, we divided the stakeholders into three levels. The first level is those who directly use the product, the second level is the product manufacturer, and the third level is those who help the product and provide inspiration for the product.



Inspirations



By investigating the stakeholders, we have identified several of them who can help us build this service ecosystem, and highlighted them in the map.

It is botanists and their botanical organizations that provide aesthetic inspiration and reliable expertise for our product. At the same time, under the guidance of their knowledge, the seed companies make a reasonable mix and send the matched seeds to the factory. Through the knowledge provided by botanists, we will select some suitable plants that can be made into modules and grown indoors. Because of these reasonable combinations, our products can make people happy and relieve stress.

With the help of botanists, after we have obtained a reasonable product mix, we send it to our factory for production and manufacturing, and with the help of upm, we produce green and environmentally friendly products. At the same time, it is sold to consumers through the distribution of the platform.

How to get it



Consumers can not only buy our products from their communities or offline plant shops, but they can also order our products through digital platforms and get more personalized product services.

When the user orders the product, a special courier company will deliver the product to the user's home and guide the installation. When the plants grow to a certain extent in the user's home, we can also help the user to transfer the plants to nature, forming a reconnection with nature.



Seeds companies

At the same time, Symasya develops close cooperation with seed companies, and the seed companies provide us with corresponding seed raw materials. Through our technical research, we can transform the seeds into specially made paper through technical means, and at the same time add some nutrients into the paper, so that the seeds can grow directly without the need of soil. It only needs enough light and enough water for the seeds to grow from the paper. Our product cooperation can also bring more profits to seed companies, help them promote some ecological concepts, and help them resist the impact of climate change on the economic income of agricultural-related companies.

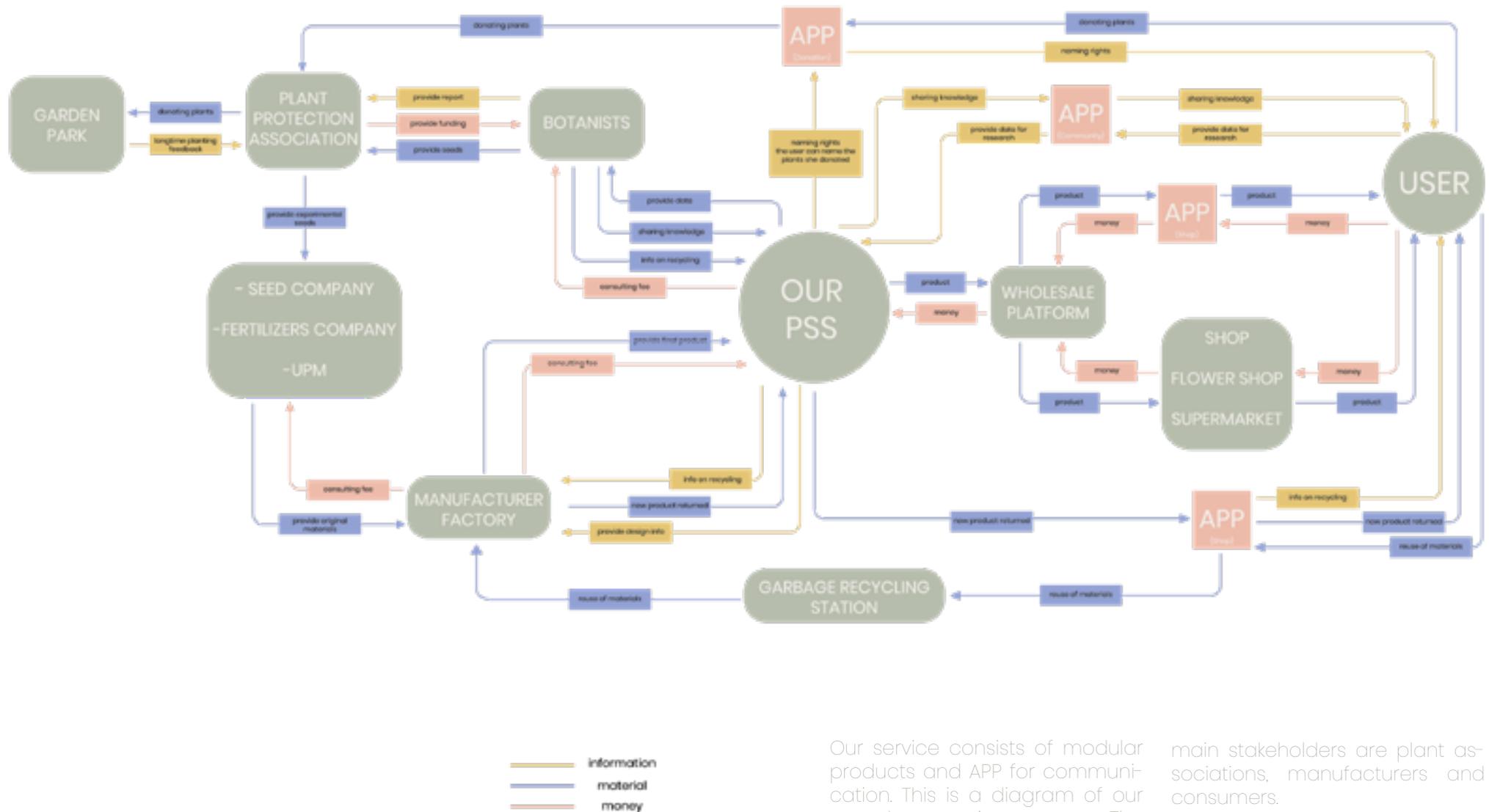


Botanic organiza- tions

There are many such plant environmental protection organizations in California. They actively disseminate plant knowledge to the outside world. At the same time, they also need a certain amount of funding to maintain their organization operations. We cooperate with such organizations, they provide knowledge for our community, and the funds we sell products help them maintain community development. This just confirms our product philosophy, to communicate with nature.

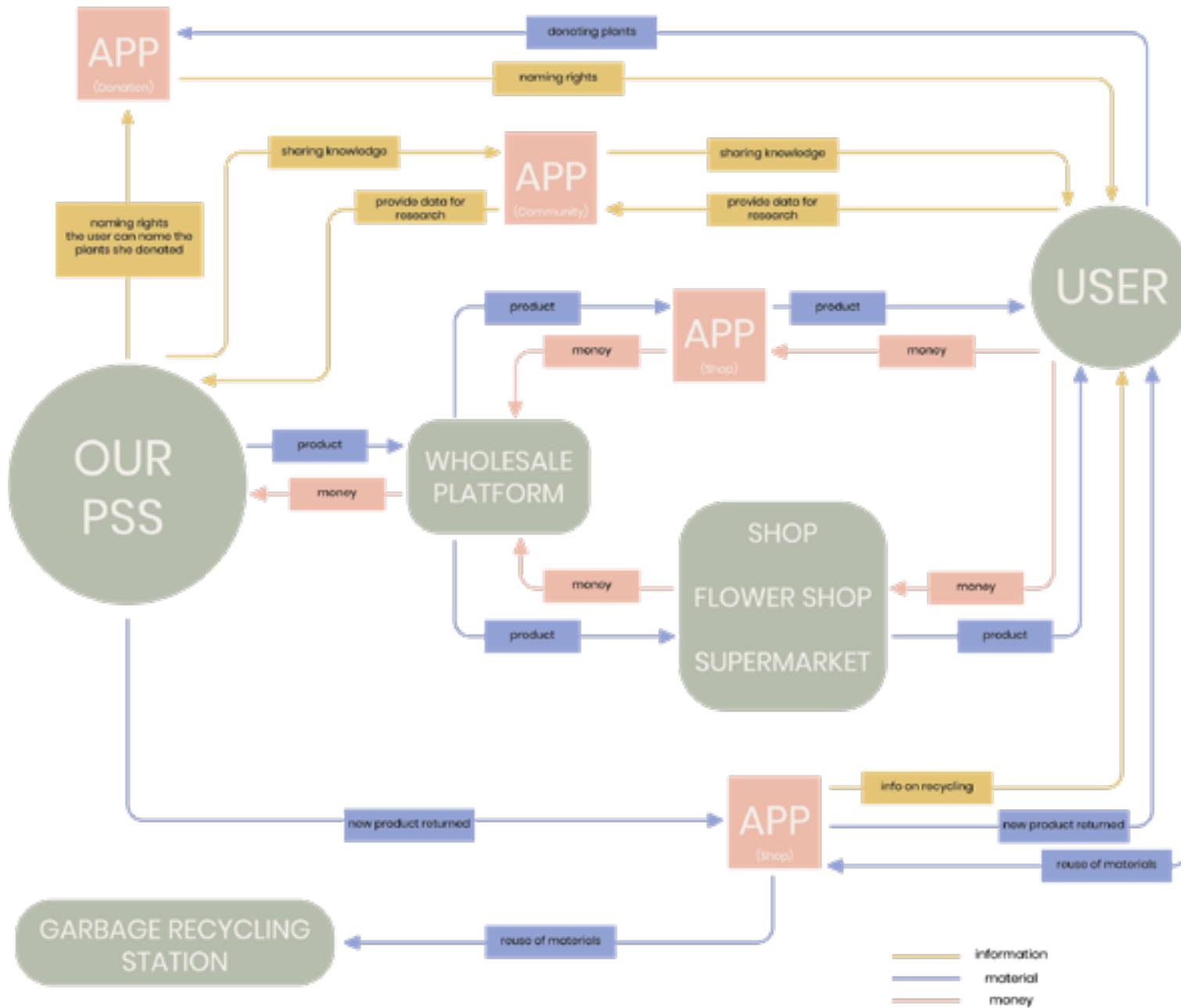
Some examples of organizations we would cooperate with are California Botanical Society (Calbotsoc.org), BGCI, Botanic gardens conversations international (www.bgci.org).

Service-system

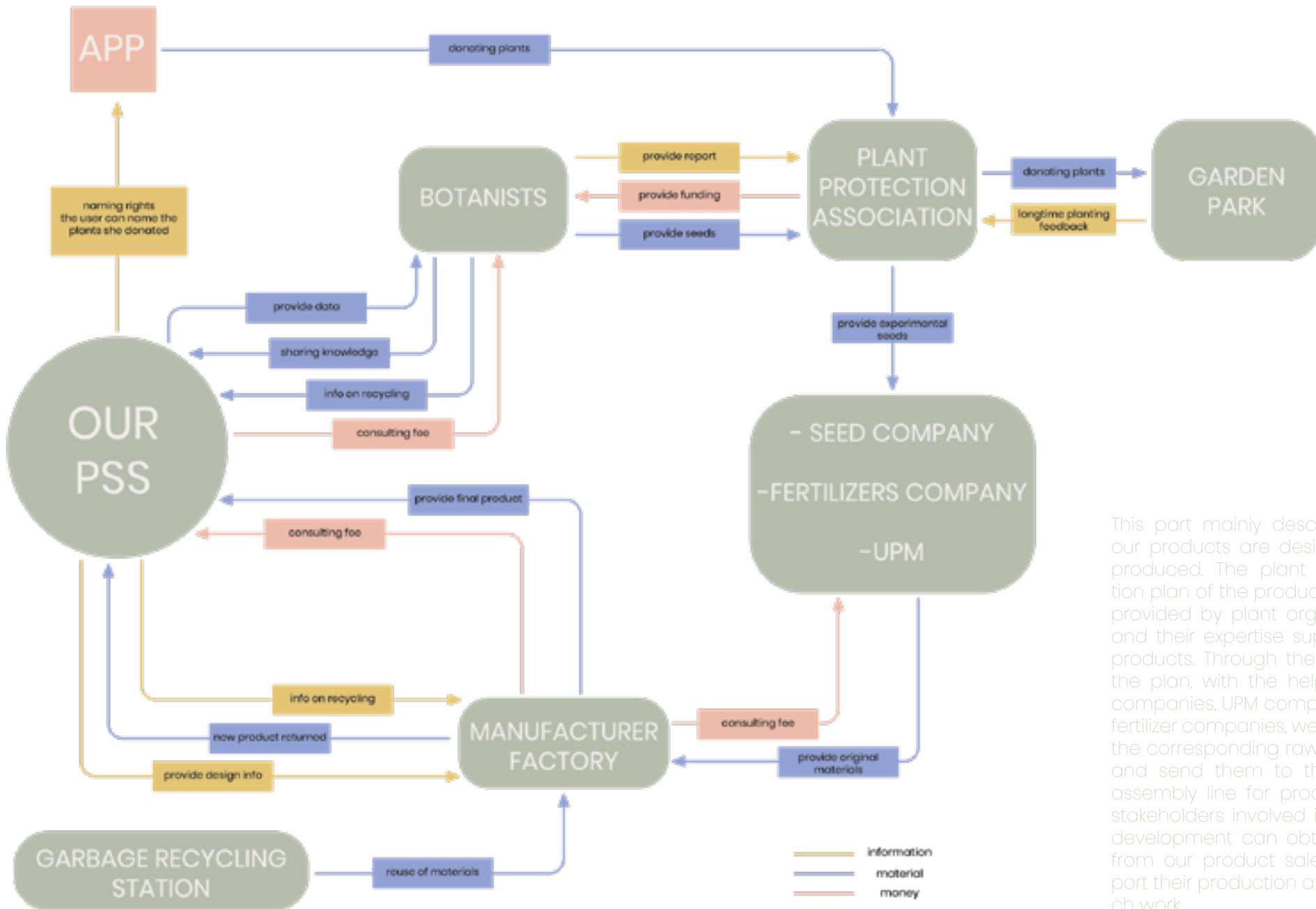


Our service consists of modular products and APP for communication. This is a diagram of our complete service system. The

main stakeholders are plant associations, manufacturers and consumers.



This is the part of the system diagram that is mainly related to consumers. Consumers mainly purchase corresponding product modules through our APP. They can search for and order the corresponding product module from our product APP. You can also join the plant exchange community to learn more about plants. In the exchange community, botanists play the role of knowledge disseminators. They will interact with plant lovers through chats and messages.



This part mainly describes how our products are designed and produced. The plant combination plan of the product is mainly provided by plant organizations, and their expertise supports our products. Through the review of the plan, with the help of seed companies, UPM companies and fertilizer companies, we purchase the corresponding raw materials and send them to the factory assembly line for production. All stakeholders involved in product development can obtain profits from our product sales to support their production and research work.

MACRO-MOMENTS

MICRO-MOMENTS

ACTIONS

Line of interactions

FRONTSTAGE ACTIONS

TOUCH POINT

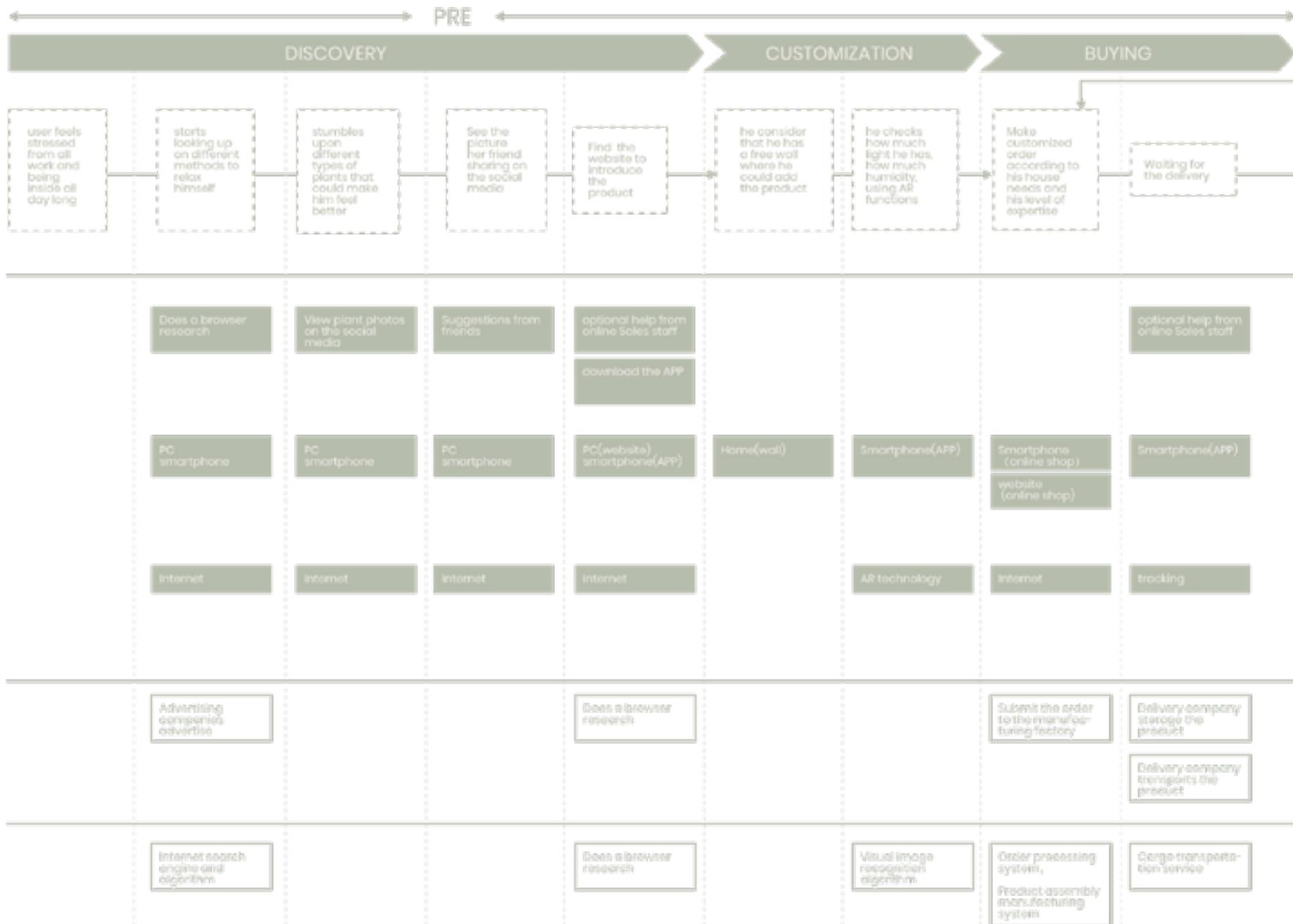
TECHNOLOGY

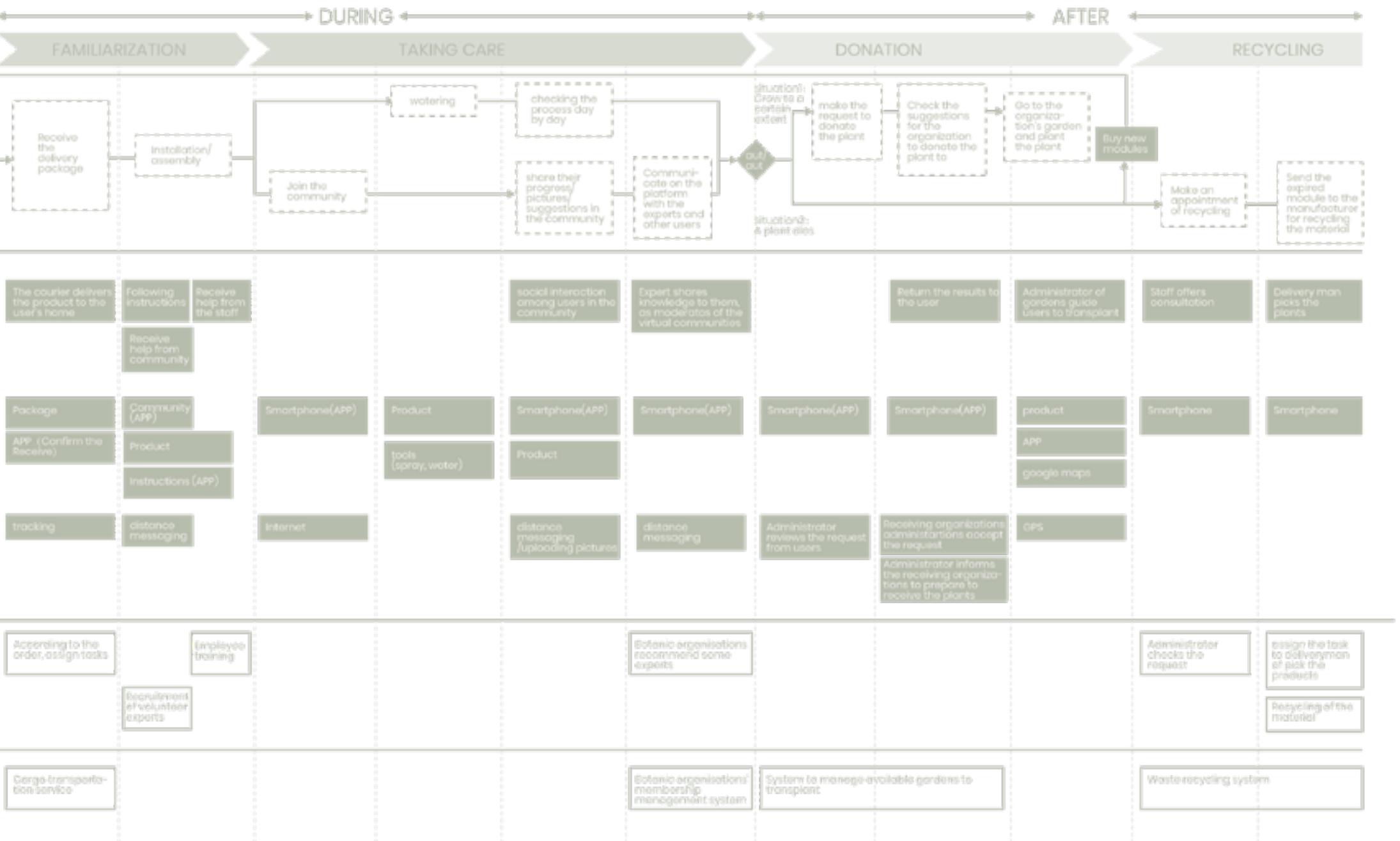
Line of visibility

BACKSTAGE ACTIONS

Line of interaction

SUPPORT PROCESS

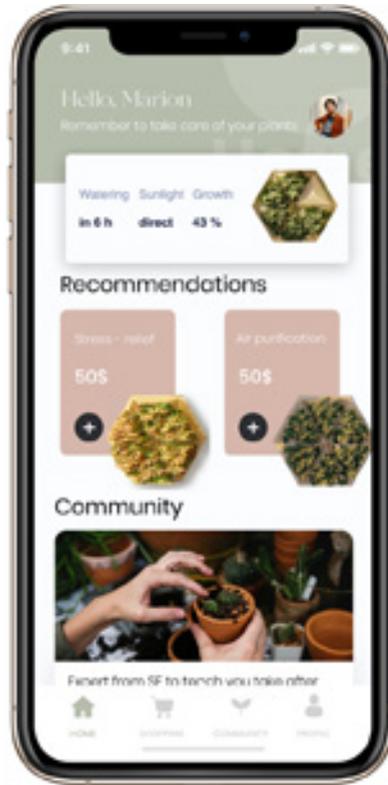




APP

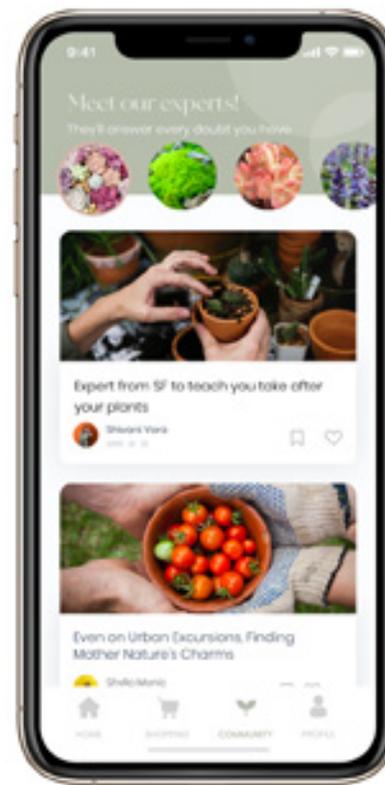


Landing page



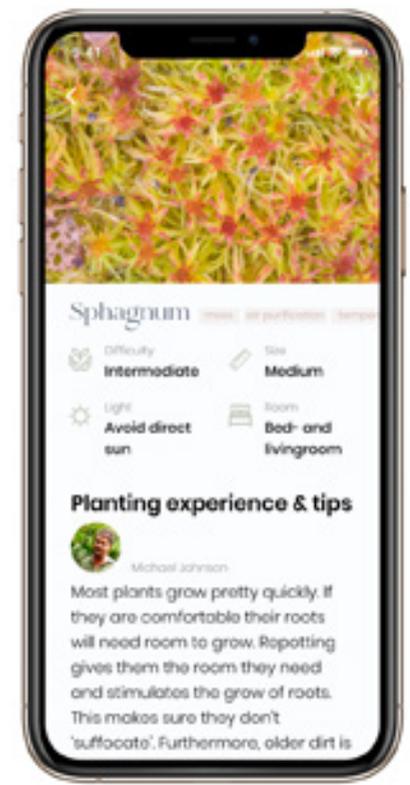
Homepage

Different services of the app



Community page

In the communities users and experts share advices and opportunities



Plants detail

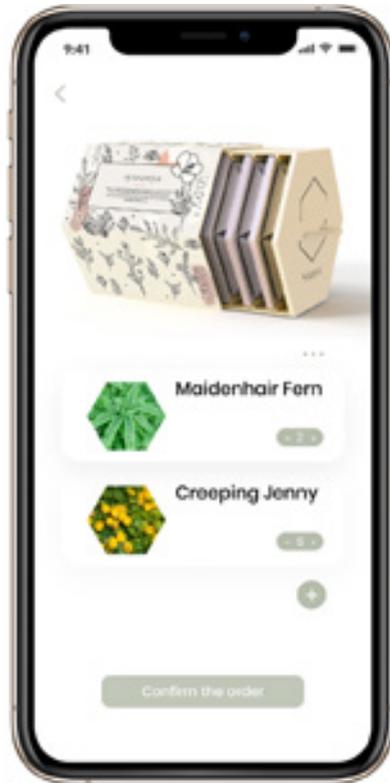
The app can help users to take care of the plants, with details and advices

APP



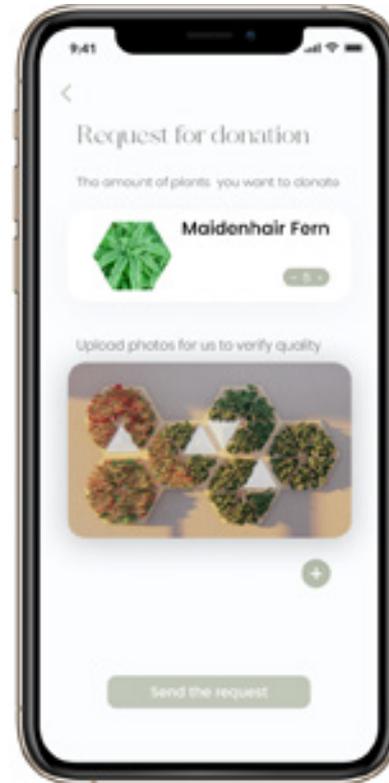
Shopping page

The app simulates how the product and different plants fit in the user's house



Shopping page

Order and selection of plants



Donation page

The user can make request to donate a plant, checking the availability of organizations

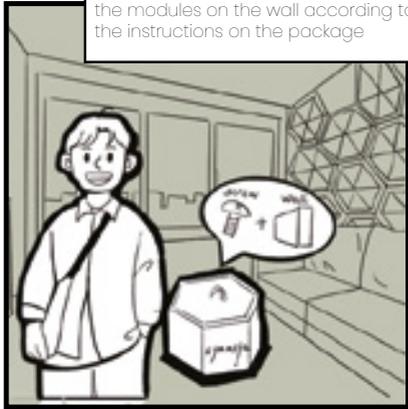


Donation page

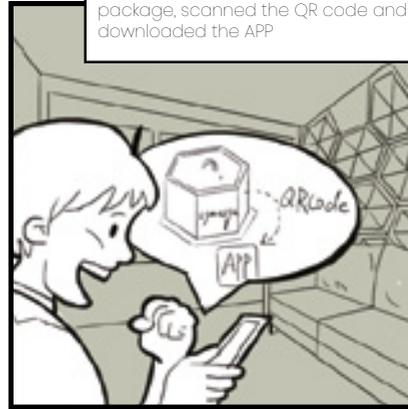
Selection of the place to donate and where to bring the plant

Service

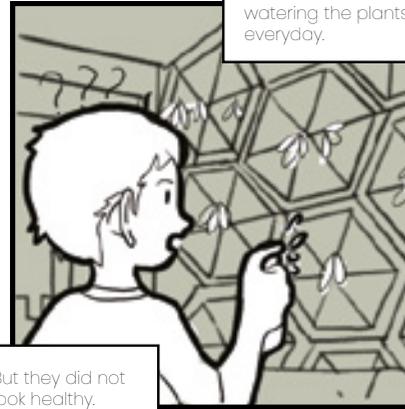
Jack received Symasya, he installed the modules on the wall according to the instructions on the package



Jack followed the instructions on the package, scanned the QR code and downloaded the APP



Jack continued on watering the plants everyday.



But they did not look healthy.



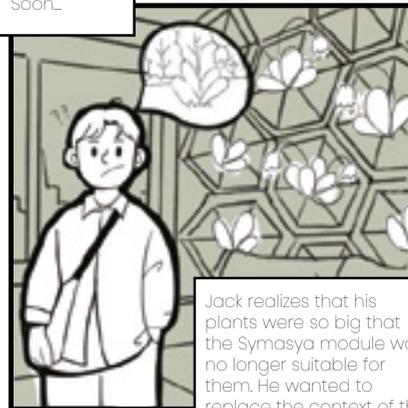
Jack talked with the experts on the APP. They suggested him that he should irradiate the plants with some red light, which will help the plants grow healthier.

Jack took experts advices.



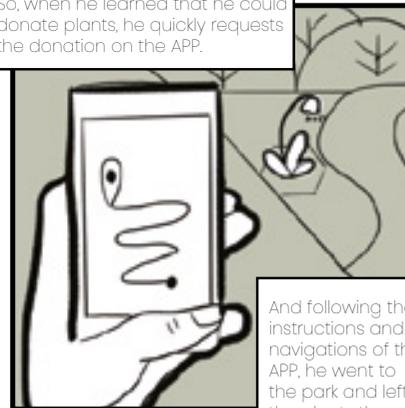
His plants became very healthy, he happily shared photos of plants on the APP.

Soon_

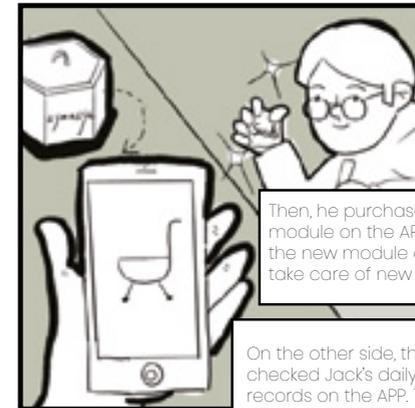


Jack realizes that his plants were so big that the Symasya module was no longer suitable for them. He wanted to replace the context of the plants and replaced them with new modules with new plants.

So, when he learned that he could donate plants, he quickly requests the donation on the APP.



And following the instructions and navigations of the APP, he went to the park and left the plants there.



Then, he purchased a new module on the APP. He received the new module and started to take care of new plants.

On the other side, the experts checked Jack's daily planting records on the APP. These records helped them successfully complete the research on genetically modified seeds.

Our brand

“Embracing Nature”

The brand of Symasya is aimed to create an elegant and dreamy image, on a visual and linguistic point of view, recalling the idea of Nature in its higher form. The poetic idea of connecting with Nature and perceive a spiritual enhancement.

Moodboard



Sym /
together

/Asya
to ease

Name

The name Symasya is a neologism created ad-hoc to represent this idea. The prefix Sym- in greek means "together", it is used in words like "Symbiosis". The word "Asya-" is a verb of the fictional language Quenya (high elvish) created by J.R.R. Tolkien, it means "to ease, to comfort", the usage of this language is not casual: in narrative the Elves have a deep connection with Nature, their culture is profoundly attached to it, so using a word from their language means highlighting this connection. The word created "Symasya" then represent the idea of a bond with Nature that has the purpose to bring benefits to people.

Brand

Logo

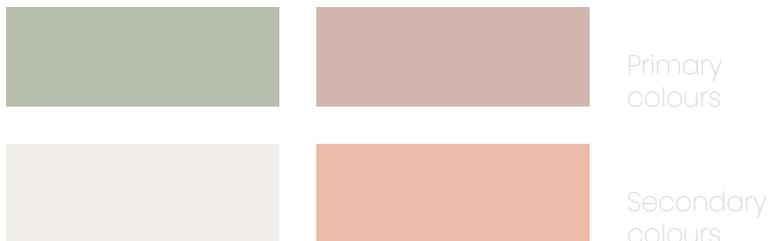


shape of the product

Letter S

Logo

Colours palette



Typography

AaBbCc

Bon Voyage regular
Primary Font

AaBbCc

Poppins thin
Secondary Font

Packaging

Product and kit for plants care





POLITECNICO
MILANO 1863



Project realized for the course of
Innovation Studio during the Master
in **Product Service System Design** at
Politecnico di Milano

by Glenda Marie Galzote, Longyue
Huang, Elisa Lanfredi and Shuming Jin

