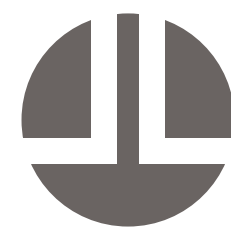




# PORTFOLIO

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## JULIA LINDHAGEN

I'm an outgoing girl with an eye for details. I love design, especially with smart and technical solutions. On my spare time I create as much as possible, both by hand and digitally. I try to be outdoors as much as I can, always with my camera ready for a good shot.

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# 01. MODULAR SHELF

## FURNITURE, FUNCTION AND DESIGN



### THE PROJECT

The scope of this project was to create and produce a furniture for a specific target market, visitors at the Hunt & Gatherer market in Newcastle, Australia. Hunt & Gatherer describes their visitors as: 18-35 years old and interested in handcraft and unique things. I found a study that said that people between 18-35 are the people to tend to move around most and live in small apartments. Therefore I decided to create a modular shelf that could be used for different things such as a clothing hanger, desk, table and shelf, just by changing the level of the shelves. Since my target market tends to move a lot I wanted my furniture to be easily assembled and disassembled by one person, and turned into a flat package.

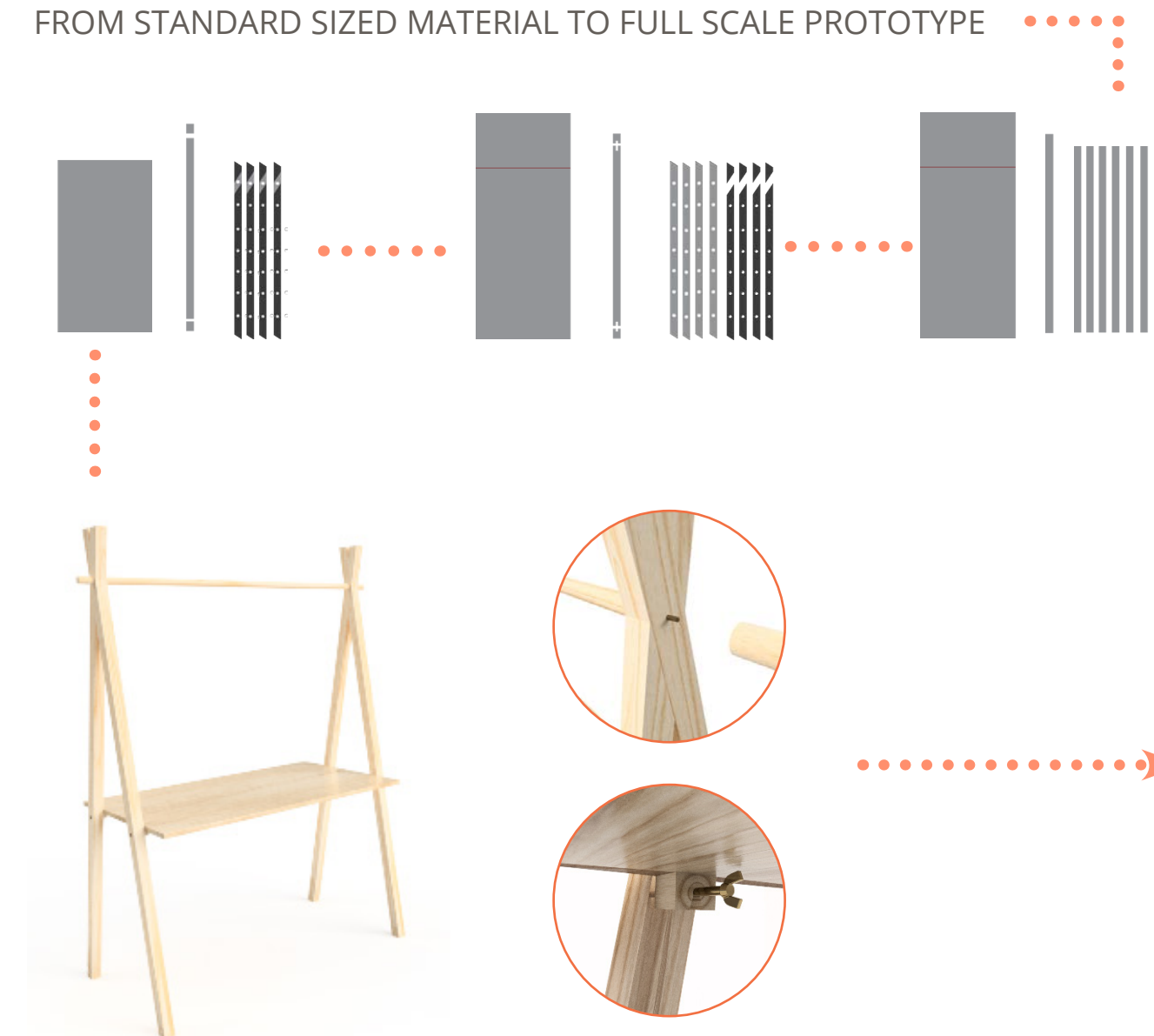
### THE PROCESS

The project contained lots of steps, from idea generation to a finished furniture. I decided to produce one of the possible outcomes of the modular furniture, the desk. The biggest challenge of this project was to construct the furniture to be easy to assemble for one person and still be stable. To achieve this I worked with the ten DFMA principles and put a lot of time planning the production.

The result was a beautiful full scale prototype that was easy to assemble. I was very pleased with the result and actually got it sold.

VIDEO OF MY PROCESS & RESULT: <https://youtube/0ftq2Qi26GA>

FROM STANDARD SIZED MATERIAL TO FULL SCALE PROTOTYPE



Result: Full scale prototype



# 02. FYRTIOFEM

## 3D-PRINTED HINGES FOR FURNITURE



### THE PROJECT OF 45 °

A hinge for furnitures manufactured using only 3D printing. The hinge is printed with a working spring inside. The idea is that this hinge can bring 3D printing into the furniture industry as a fully functioning manufacturing method. The project was done partly in Shanghai, at the Tongji University (College of Innovation & Design) during the spring semester of 2017.

In addition to the hinge we made three types of furnitures to show our concept.

### MILU 麋鹿

A table that functions both as a dining table and a coffee table. In the upright position it has the height of a dining table, where a family can enjoy a meal. When 45° are turned on each of the table-leg the height is altered so it becomes a coffee table. With the 45° hinge and this simple movement the same furniture can be used for 2 different purposes.



### MAYI 蚂蚁

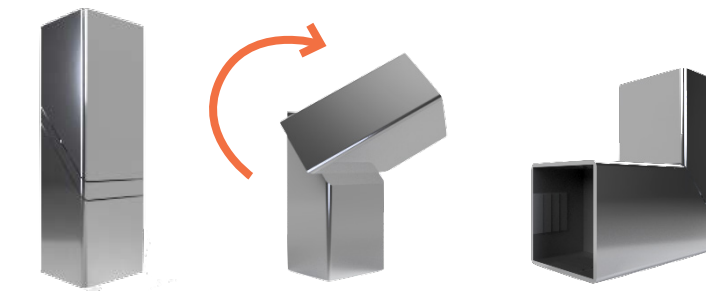
A coffee table that can be stored in an effective way using the 45°. When the hinges are turned the table-legs become parallel with the underside of the table and thus can be stored flatly without taking up unnecessary space.

This furniture also takes advantage of the hinge's ability to be in a 45 degree angled turn, i.e. "half way", with skewed legs. Thanks to the innovative functions of the hinge the legs are kept in the correct position.



### FYRTIOFEM

The final concept is a hinge with a moving and dynamic function. It has an elegant design and can be used for furnitures. The hinge is made in stainless steel and has a polished surface. 45° is created with 3D printing and has a built-in function. Thanks to the additive manufacturing method the whole product can be assembled during printing and has a seamless design.



45° is designed with a minimal and pure feel and suits every environment. Color can also be customized depending on the user's taste.

### MALU 蚂蚁

A shelf that can be converted into a table with two 45°s on each leg. Both hinges are turned simultaneously and thus keeps the table surface horizontal.

In table mode an additional wood plank can be added to maximize the usable surface. The furniture is easily converted back to a shelf again.



# 03. FURA

## WOOD INNOVATION



### TALLSKAV

These crisp-like snacks are made from the juicy inner bark of the pine. The inner bark is a thin layer that lies between the thick outer bark and the actual wood of the tree. This bark is filled with vitamin C and also has cholesterol lowering properties.



### TALLBRYGD

Tallbrygd is a beverage made from the pine needles, dried lingonberries and dried blueberries. All of these ingredients can be found in the Swedish forests and they are also ecological. These are also filled with vitamin C and this beverage contains 6 times the vitamin C than in fresh orange juice.



### TALLCHIPS

These crispy crackers are made of bark flour and other seeds. The bark flour is created from roasting the inner bark and then grinding it to a fine powder. This powder is very rich with vitamins, has low calories and is environmental friendly which makes it an excellent substitute for wheat flour.

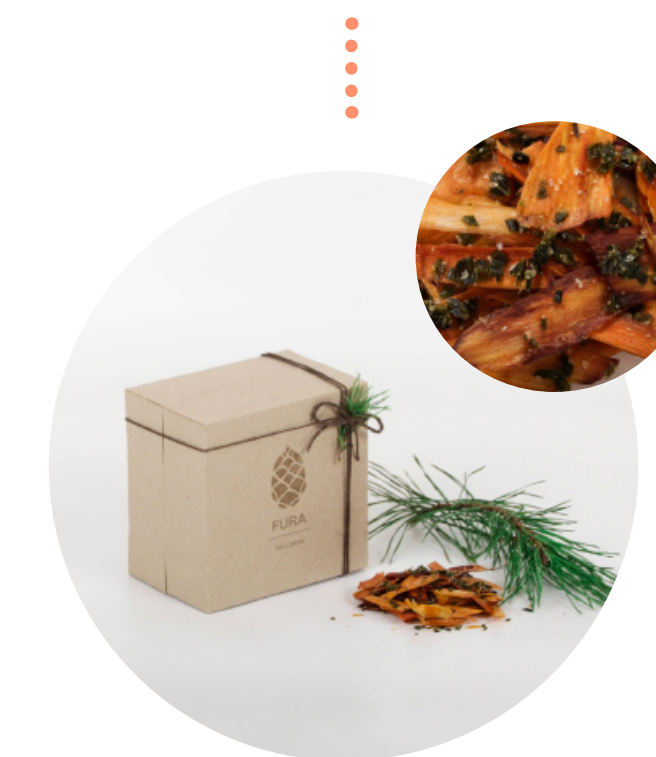


### THE IDEA OF FURA

In the course Wood – Innovation the brief was to create new innovations in groups with wood based products, materials and services. Which area we chose to work with was completely optional. It was important however that the product had a high level of innovation. Our project group decided to design some kind of food or nutrition product with the pine tree as main ingredient.

With the help of established design methods and ideation 3 luxury snack concepts were created. These were Tallskav, Tallbrygd and Tallknäcke.

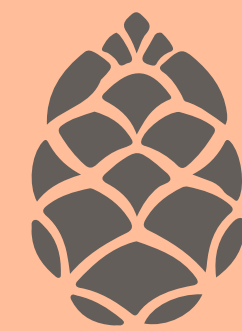
As mentioned before the group prioritized creating actual edible prototypes to show that the concepts are fully feasible and not only conceptual. This meant we had to stroll out in the snow to collect some fresh inner bark from a nearby forest.



The prototype was created by modifying existing teabags where we changed the contents and replaced with our Tallbrygd.



Just as Tallskav these crackers are based on the inner bark of the pine tree. The bark is grinded to a fine powder, so called bark flour, and is then mixed with flour, poppy, sunflower seeds, lentil seeds, salt, rapeseed oil and hot water to make a batter.



FURA

# 04. ONE WAY

## SERVICE DESIGN FOR THE PUBLIC SECTOR

### THE WAY FOR R&S

The goal of this project was to help the organization R&S through service design. R&S helps people with social related problems to manage everyday life. Through interviews, workshops and different visualization methods we helped them to see the problems within the organization.

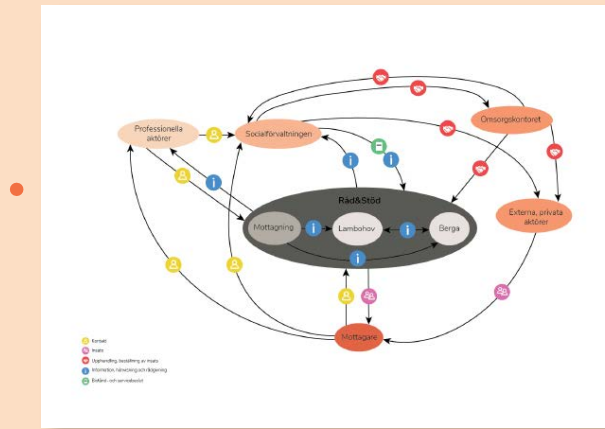
The final result was an additional person that handles the communication through different sectors. We also made a prototype of an app to ease their work with their clients and administration.

### PROCESS & VISUALIZATION

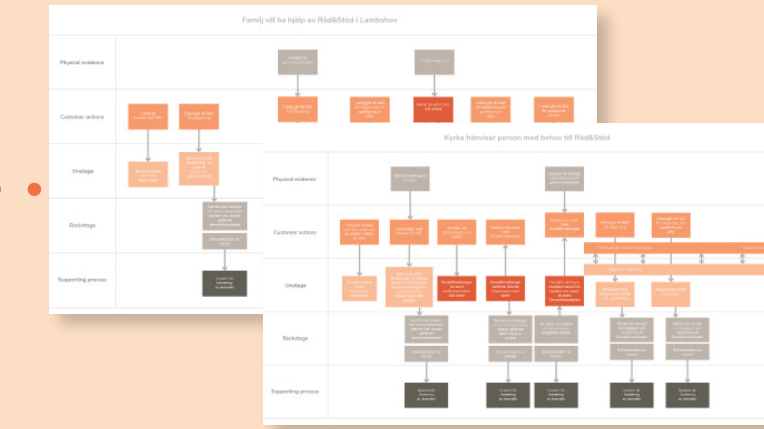
MOODBOARD



ACTORS MAP



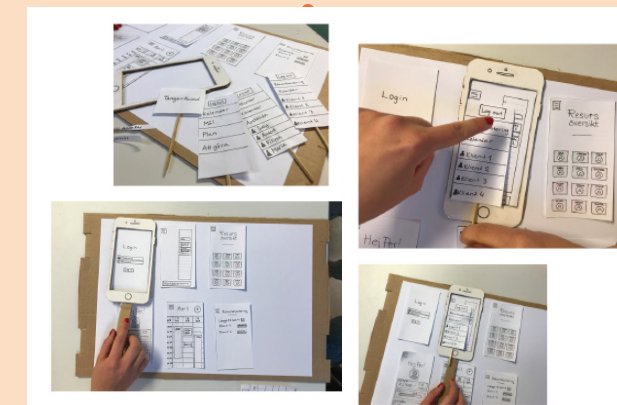
SERVICE BLUEPRINT



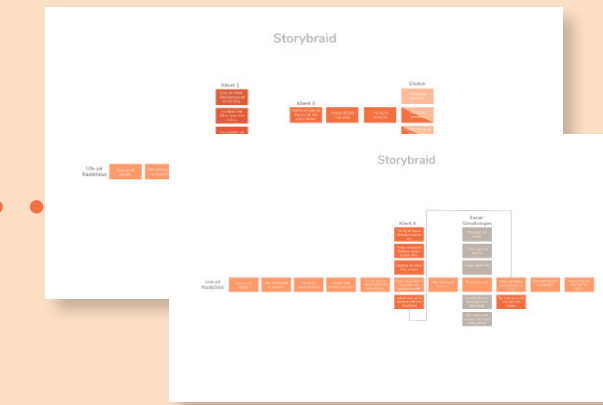
STORYBOARD



WORKSHOP



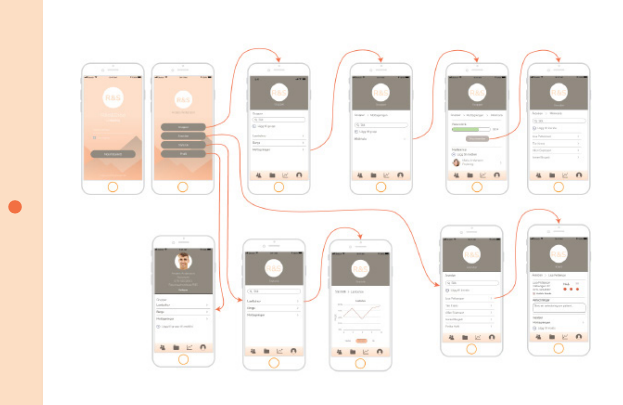
STORYBRAID



DESKTOP WALKTHROUGH



APP PROTOTYPE



# 05. LOTUS

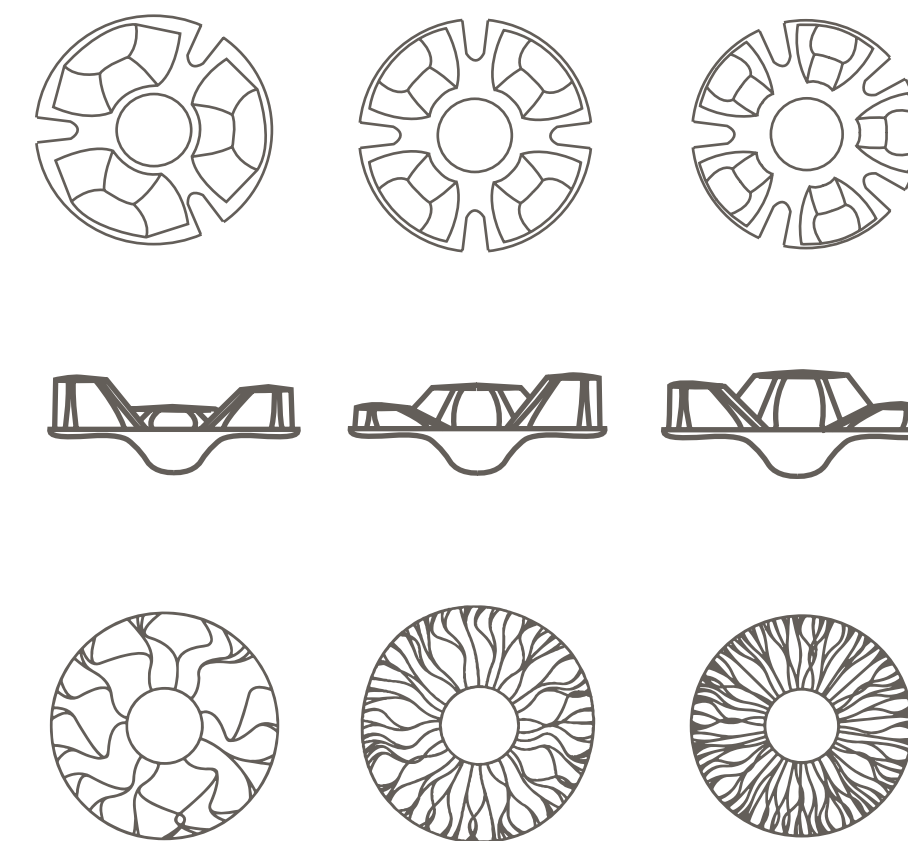
## DESIGN AUTOMATION

### THE MISSION OF LOTUS

The mission of this project was to create a CAD model that is controlled by a number of parameters and generated automatically through a user friendly interface in Excel. Early on we took inspiration from the Lily Pad island by Vincent Callebaut and we made our own version that we call Lotus. The lotus will be seen as a solution to the problems facing our planet today, such as over population and raising sea level.

Our Lotus island is controlled by the following parameters:

- Number of houses and harbours
- Height of the houses
- Number of branches in roof



HOUSES

HIGHT

BRANCHES

### EXECUTION

To achieve our goals, we used different tools. We used CATIA V5 to model the island and create all the parts and surfaces. We used CATIA's own powercopy function to easily instantiate the houses, roof branches and pillars.

The model is generated automatically with VB script and the floors, roof surface and roof pattern are generated through code. For the final touch ups we used Autodesk Fusion 360 to render presentation pictures of the island. After many thousand lines of code we manage to create an autogenerated apartment complex in shape of a Lotus.

VIDEO OF RESULT: <https://youtu.be/nU-dFf4gBzc>



# 06. FLAT GARDENING

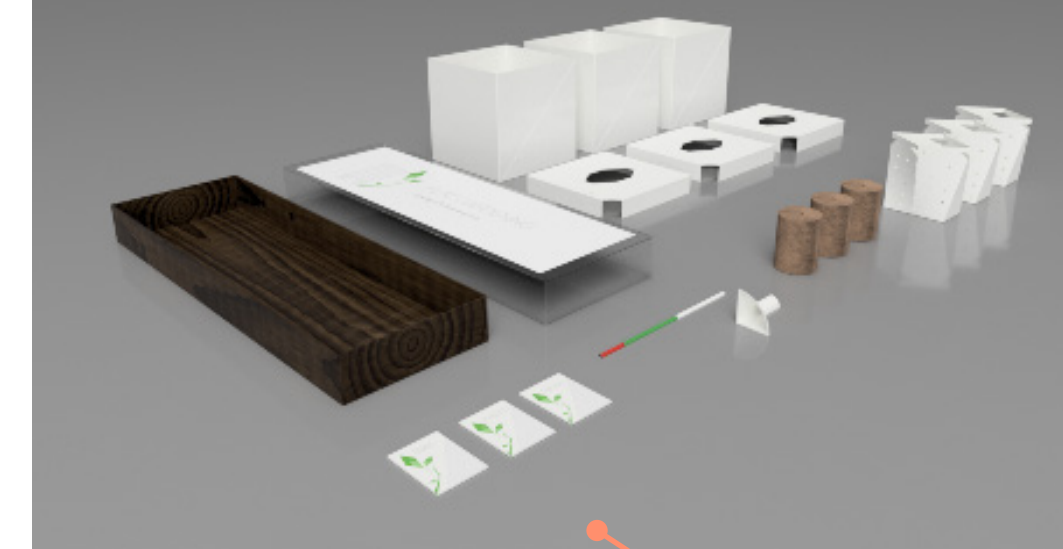
## INDOOR GARDENING PACKAGE

### THE MEANING OF FLAT GARDENING

This is the result of a design course from my studies in Australia. The project was based on self-directed learning and we had to choose the project by our self. I started to look into indoor gardening. Through research I found an article saying that most of the people don't do indoor gardening due to lack of space. Then I decided to combine indoor gardening with origami to create a foldable solution to make people grow more inside.

#### So why should you do more indoor gardening?

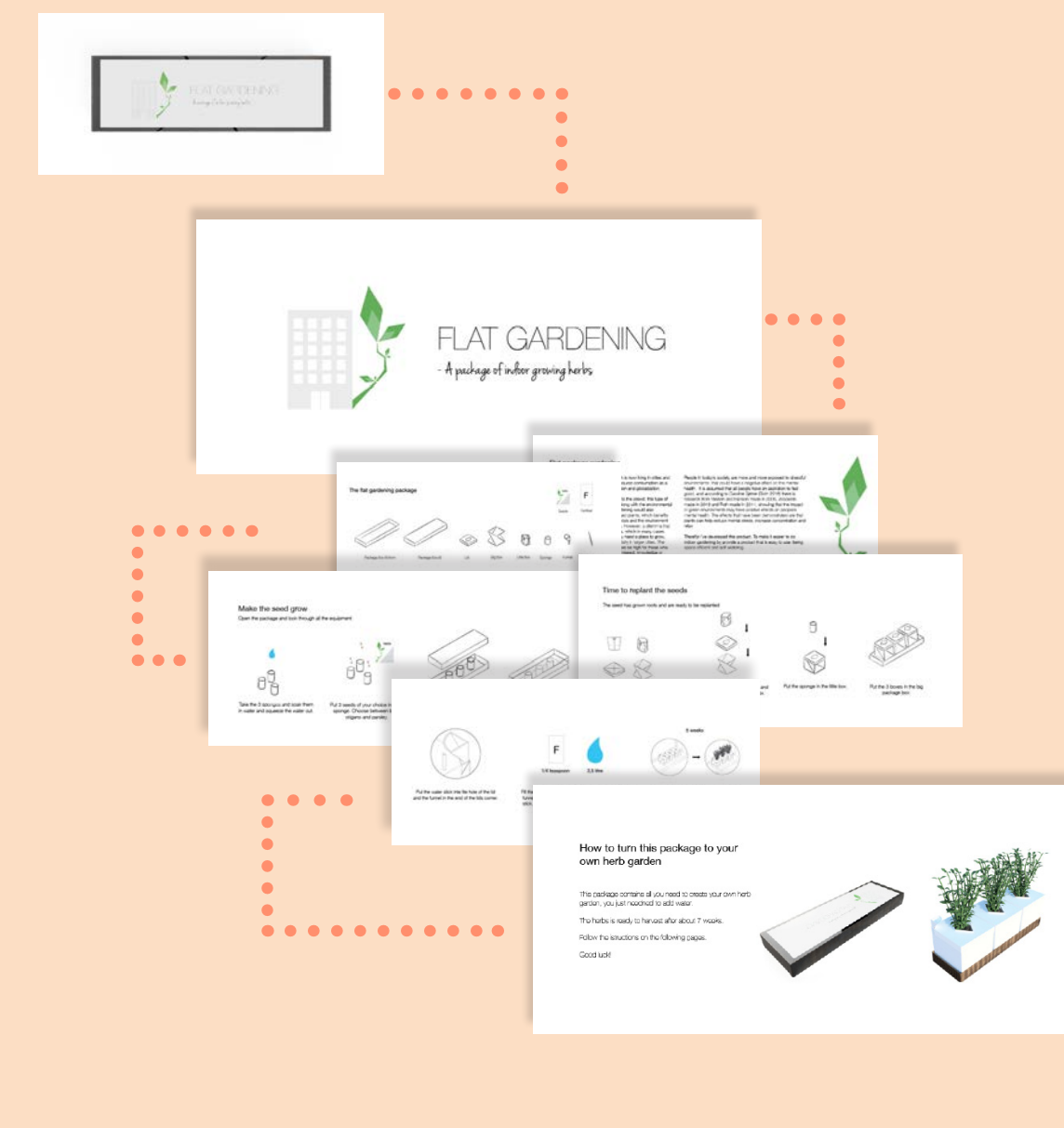
These days a lot of us that doesn't live close to the nature have lost contact with where the food comes from. You see it as something you buy in the shop and never watch the process happen. I think that if we would garden more we would appreciate the food more and the-refor it will be less waste.



UNPACKED

PARTS

FINISHED PRODUCT



### PRODUCT & INSTRUCTIONS

So the result is a box with 19 pieces you will need to do indoor gardening with the technique hydroponics. Hydroponics make it possible to grow plants with only water, no soil needed. The box contain all you need, boxes to contain water, seeds, instructions about how to grow and more. One thing that make this product specie is the foldable boxes reduce the volume of the product with 80% when folded. The product is designed to fit mail measurements, to make be able to send it to your love ones far away or as a perfect gift to a dinner party. Combined with this product you can sign up for a service and subscribe for new seeds to be sent to your apartment.



# 07. RE-DESIGN

## THE NEW HUSQVARNA SEWING MACHINE



### THE RE-DESIGN PROJECT

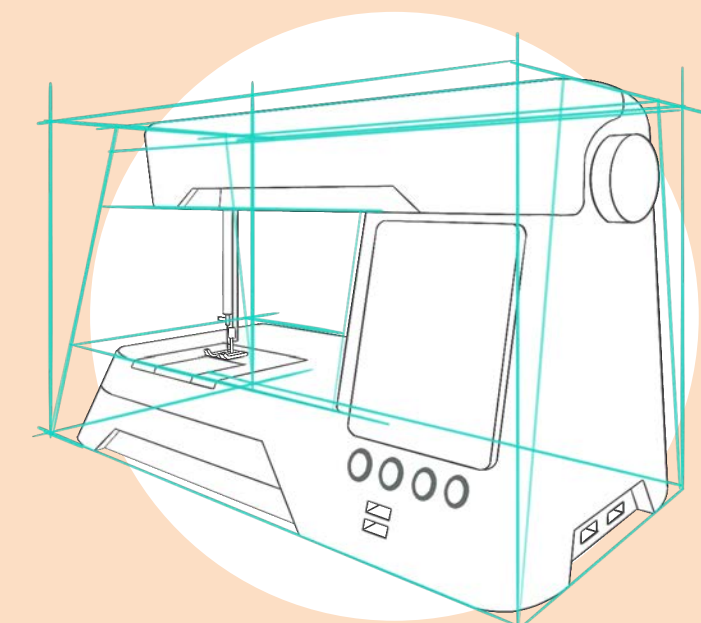
In the course of Product Visualization our mission was to re-design a product of our own choice. I decided to re-design a sewing machine for Husqvarna with focus on the younger market. My goal was to create a sewing machine with new innovative features and modern design. It should be easy to carry and to use both inside and outside.

Through my process I used ideation sketching, handmade renderings and TechClay to visualize my concept.

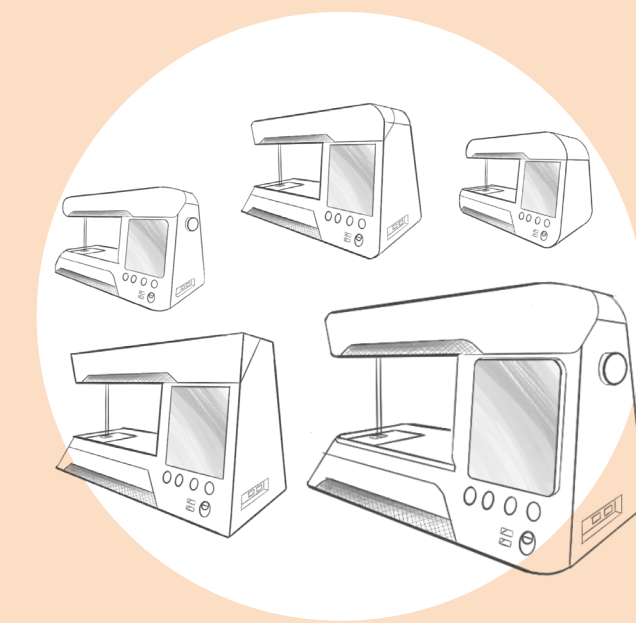
### IDEATION AND SKETCHING



BASIC SHAPES



OVERALL DESIGN



DETAILD DESIGN

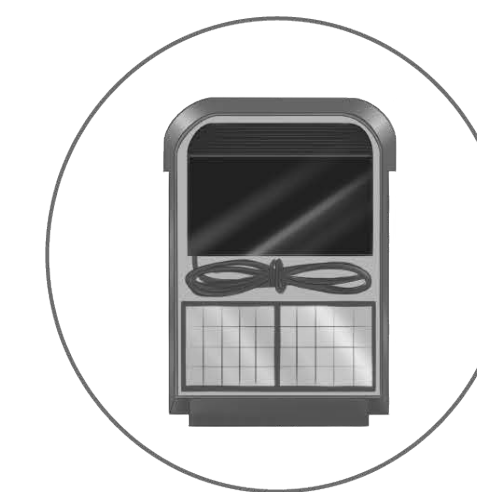


TECH CLAY

### ● HAND-MADE RENDERINGS



### ● EXPLANATION OF CONCEPT



Box for storage

Space for solar cells, pedal and cables

Solar cells for charging

Tip-up lid

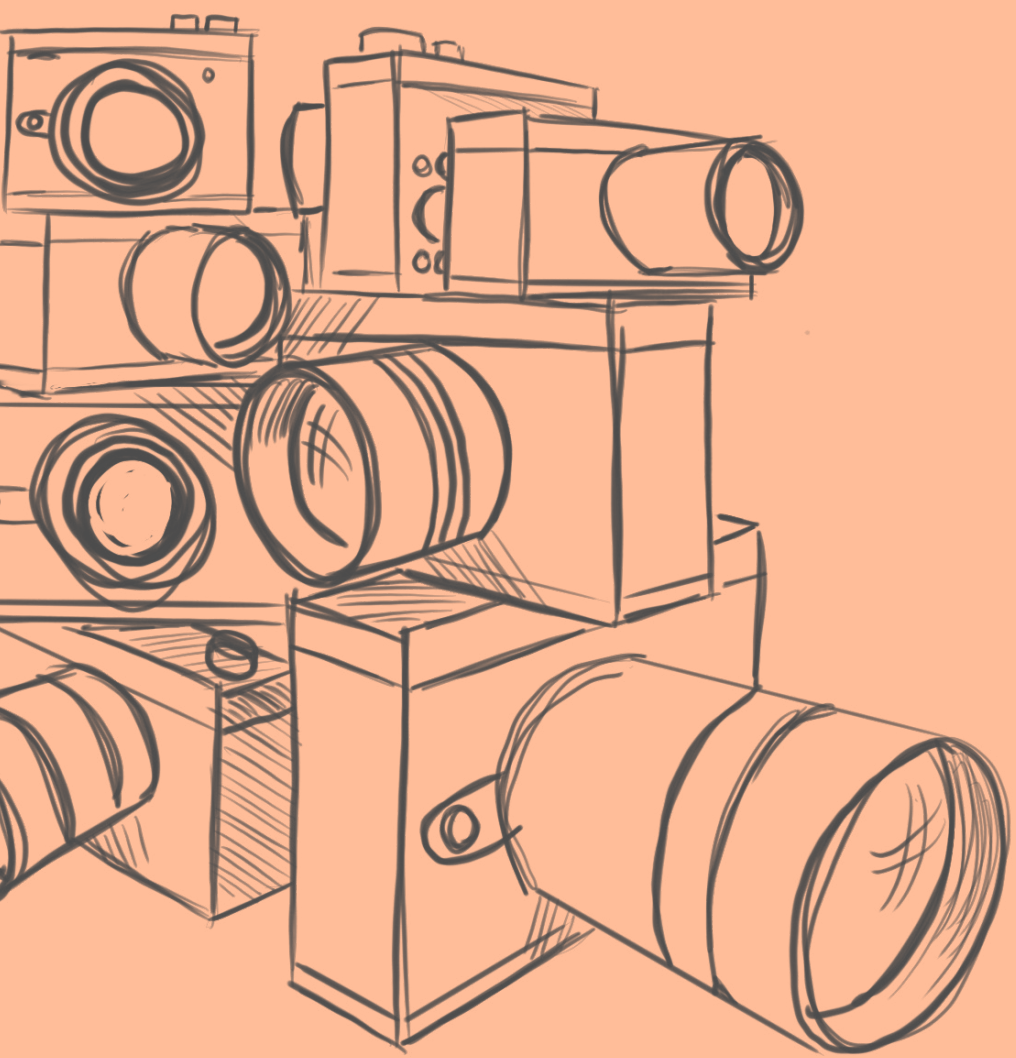


Touchscreen

Buttons

USB for graphic material

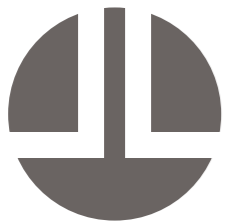
# 08. ALL ABOUT CREATIVITY



## A CREATIVE MIND

I love to be creative in all kinds of ways, in my spare time all always try to improve myself in my hobbies while having great time. Here is some results of two of my biggest hobbies, sketching and photography, ENJOY!





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