

MA industrial design

UNIT 1

cansu bezmez
18538018

content

connections
open design and manufacture
critical interrogation
design history
designer profiles
physical computing

visions
design poetics
luxury design
creative methods / semiotics

NIO

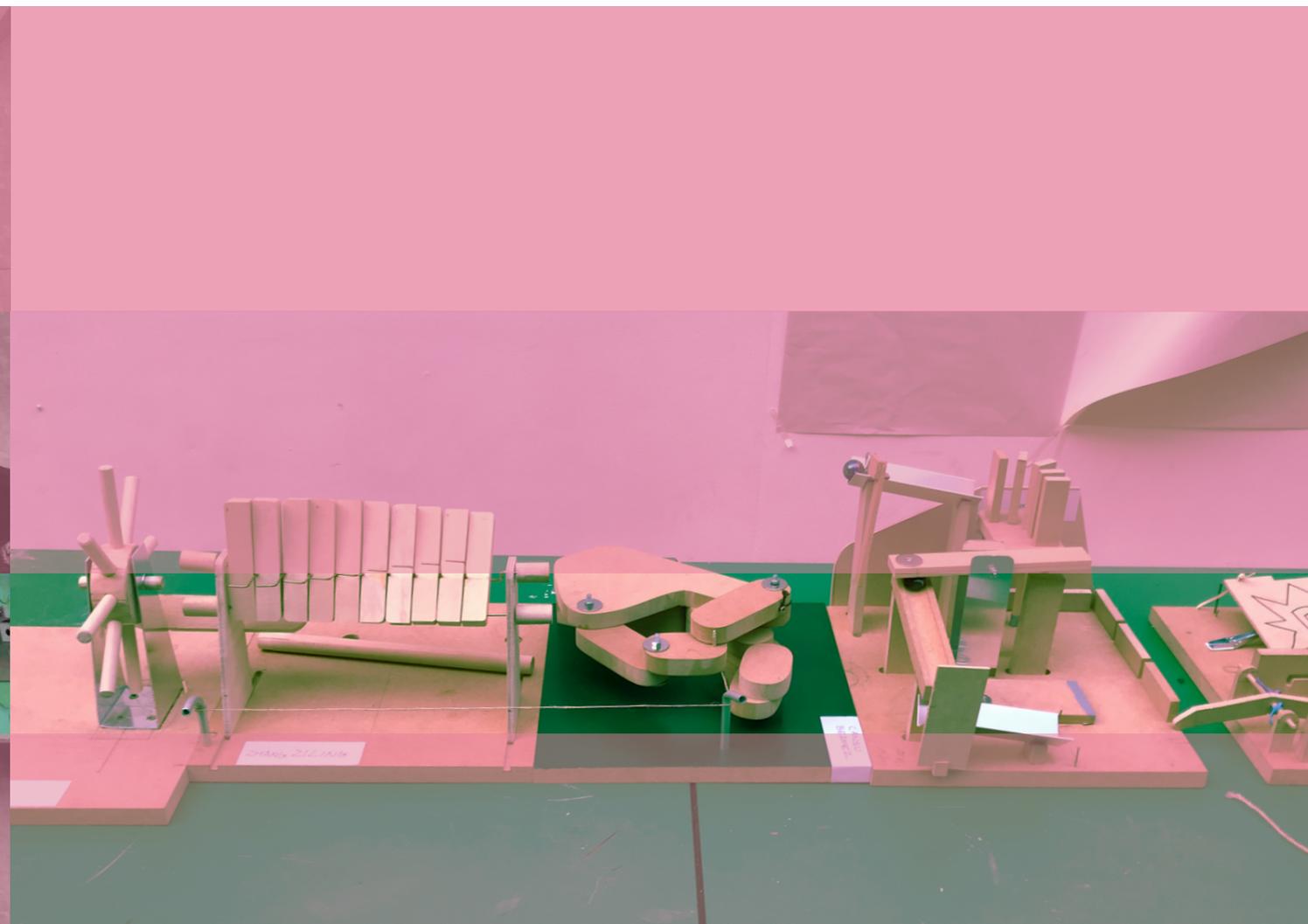
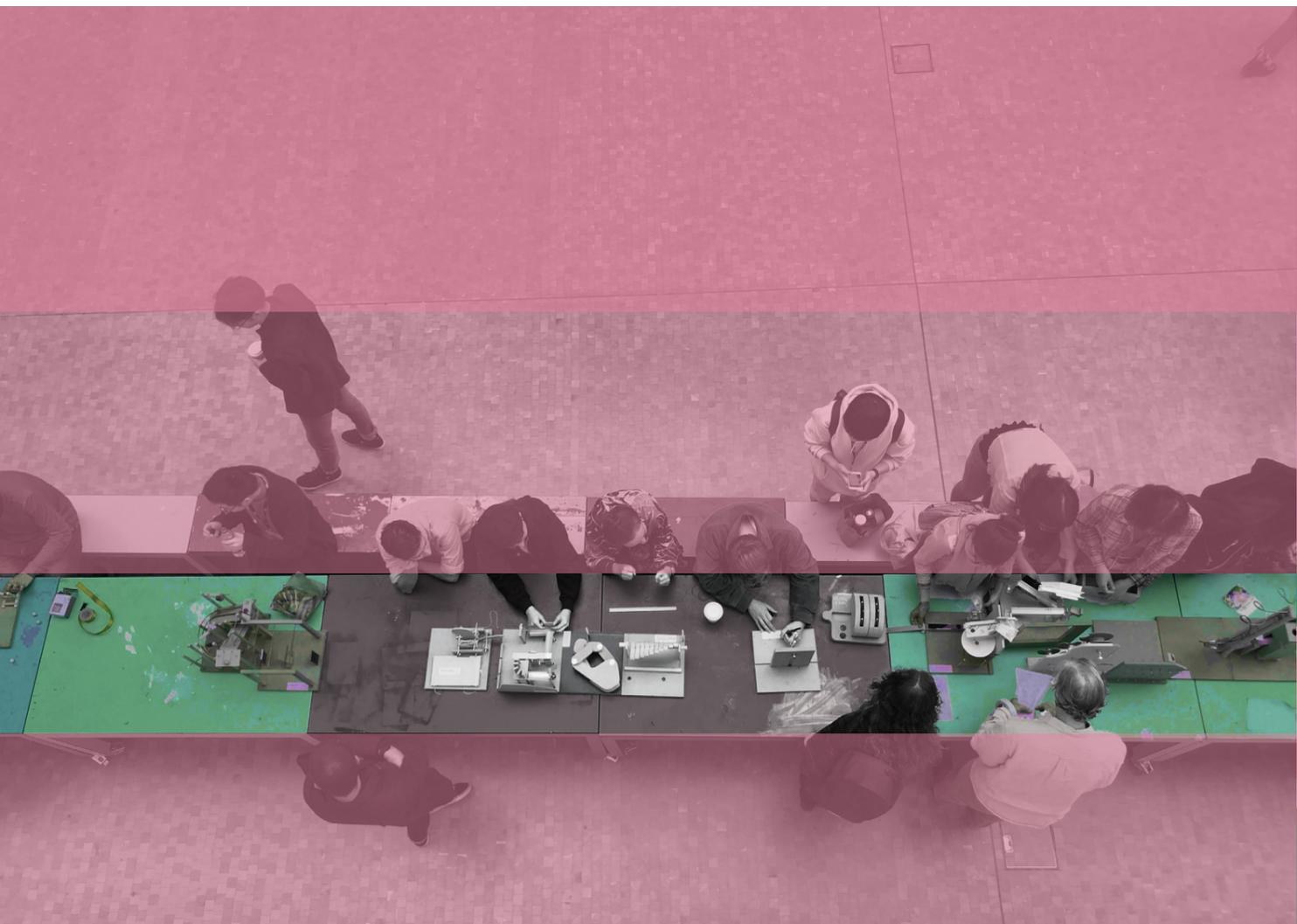
connections

brief

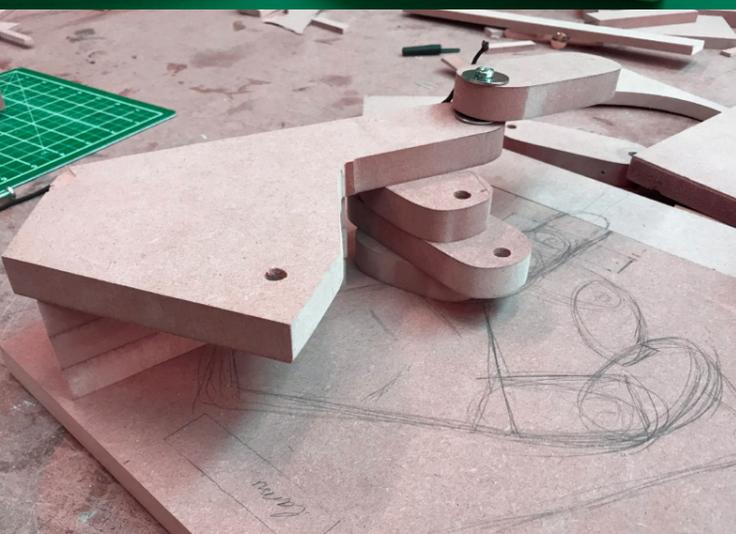
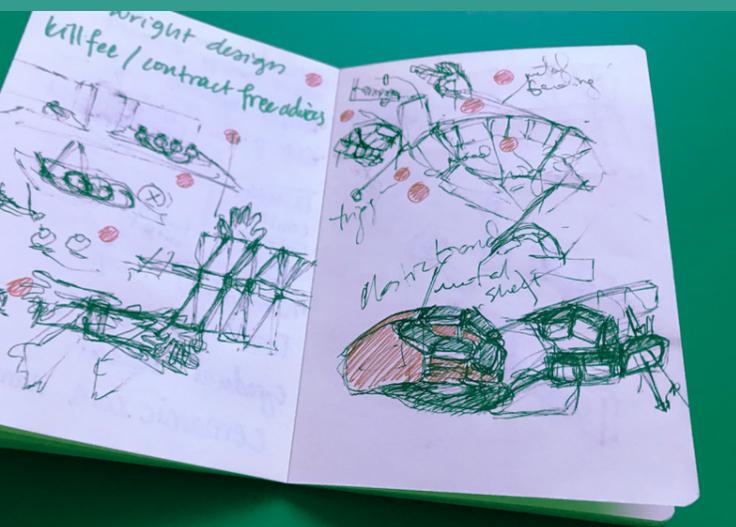
This project's aim is to connect different mechanisms together which are designed by me and my colleagues. One of my colleague initiates a chain reaction by creating a mechanism that trigger a second device created by other colleague, then next one and so on until the final one. The main idea is producing a mechanism using materials and processes accessed in the college workshop.

ideation

My inspiration is one of the gesture people do with their two fingers which are thumb and index finger. I use the idea of the squeezing force of the index finger and triggering of the thumb. In the gesture, the index finger stores the force and the thumb saves and releases the force. Therefore, I wanted to apply this mechanism into my connection project. I start with exploring the force of the hand and how the fingers positioned in the gesture. Then I made sketches to adapt the structure to make it with wood.

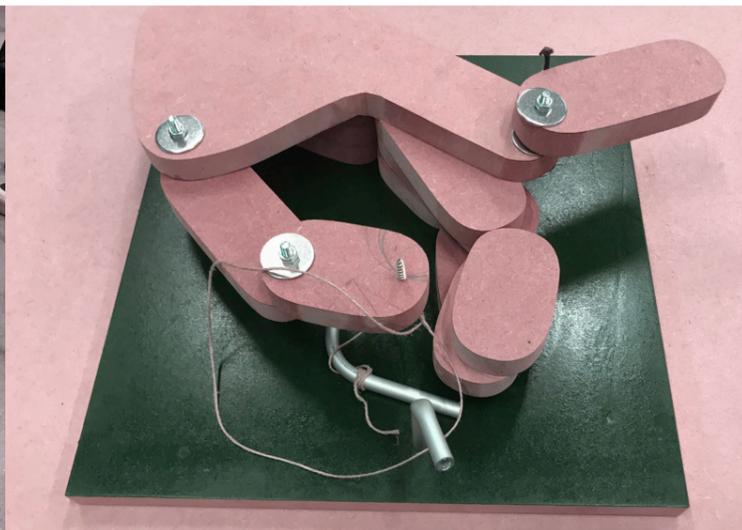
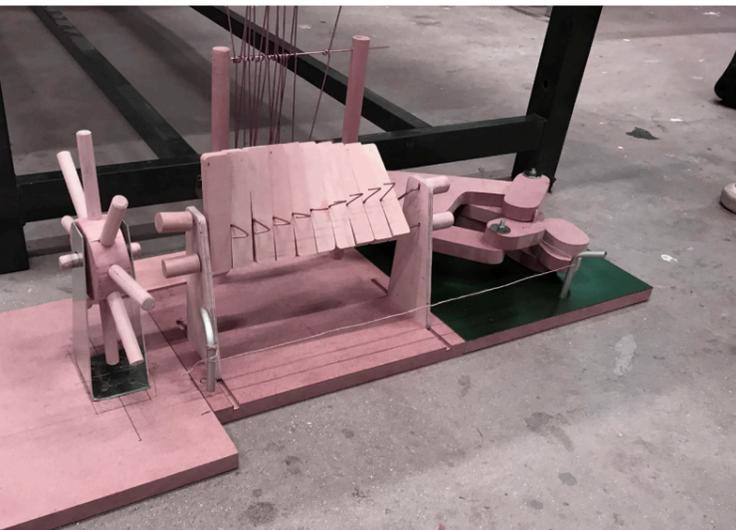


After we agreed with her, I talked with Carla whose project's input was my output. Her mechanism was starting with a ball which was high located and creating a force with potential energy. So we needed to find a way to connect our projects while finding a way to trigger her ball from the base. We made some mock-ups to connect and at the end, we design an 'L' shape trigger which delivers the force of my output to release her ball. We add some metals to find a correct weight to keep the ball in the place but easy to trigger when the force comes. After we decided how to connect our structures we decided on the dimensions and placements of the triggers. After I talked with my connections and got the dimensions that I should follow, I started to do my structure.



model making

Firstly, I made a technical drawing and decided the dimensions of the hand while considering the input and output force placements of the fingers. Then I used MDF to make my model. I used wood saw linear saw machine for the hand and the fingers. Then I used sanding machine to give a shape of a finger. Strategically, I gave some parts movement and made some parts stable. I used screws to connect the pieces. I wanted them to move in a one spot. So I tried to find the correct force for the screws. When I finished making all the pieces, I talked with my connections again to find the correct angle to place my hand. It is provided an 300x300 mm. MDF suited with my connections, in that way, it was much easy to decide on measurements and connect the projects. Then I used wood glue to stick my hand structure but before that I wanted to paint my base. So I made a layout of my hand and then I used spray paint for my base. I also considered how the painting changes the friction of the structure. Then I tried to find a way to store the force for the trigger and I used hair band for it. We made lots of trials with my connections to be sure that it works each time. And then we also tried with the connections which connected with my connections.

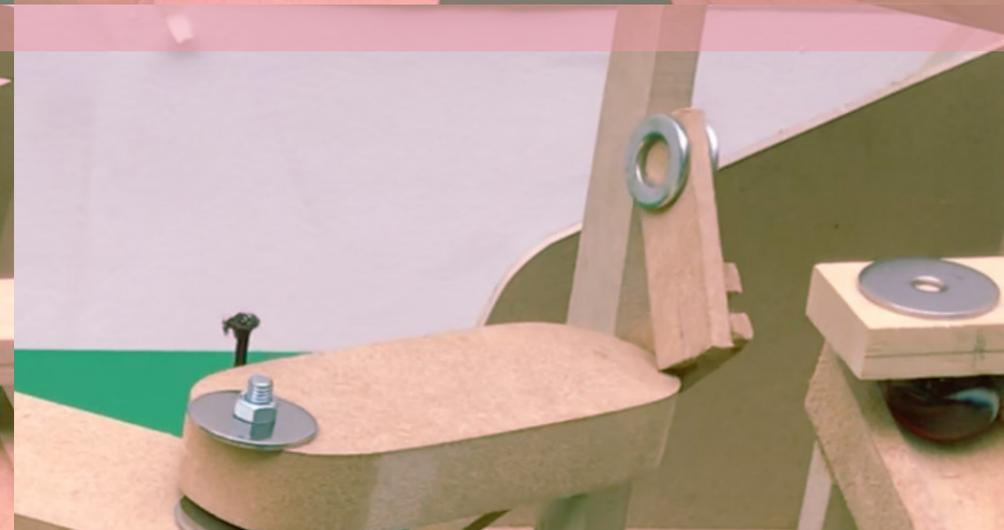


reflection

At the beginning, I generated 3 ideas and try to explore all of their mechanisms. In that way, I had a more chance to learn about different mechanisms and manufacturing processes.

I realised that collaborating with my connections was really important to fix the mechanism correctly so having a good communication with them was one of my prior consideration. As a result we connected perfectly which does not require any further adjustments for wrong placement or triggering.

I became more aware of the workshop space and how should I manage my next prototypes according to there.



open design and manufacture

How Can We Design Locally, Make Globally?

We can see the real and significant consequences of the linear 'make-use-dispose' paradigm that has traditionally existed in the design and manufacturing industries, so what is the alternative? For this brief we design interventions that enable more circular flows of resources or perhaps map opportunities and threats in product development.

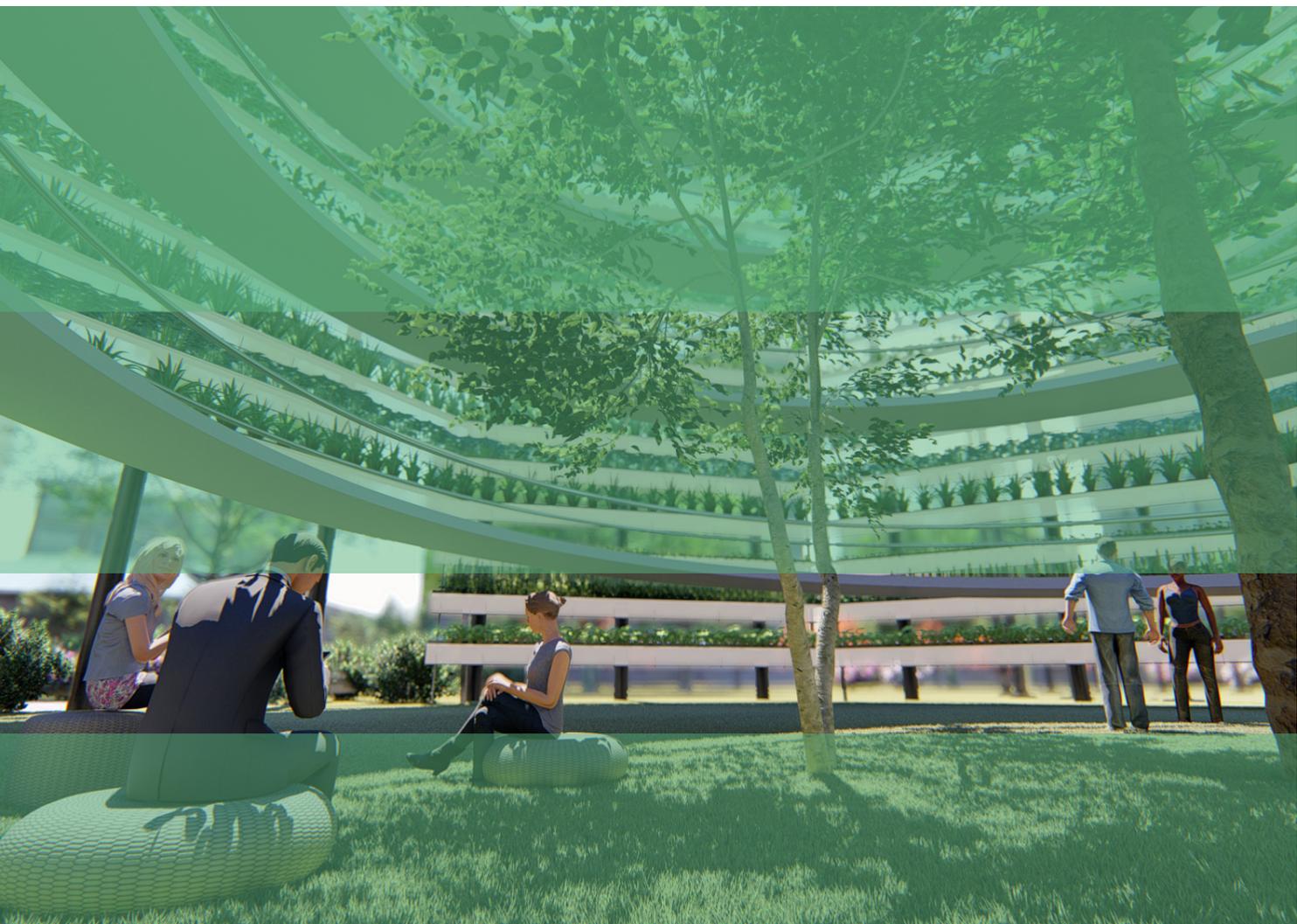
brief

team

ALBERTO GIORDANO
MENGSHI QIU
PRALEKH BHUYAN

aim

In this project, aim was learning in a context of open design, engaging socially responsive thematics, testing learning recognition models in formal and informal learning contexts and being innovative in doing so.



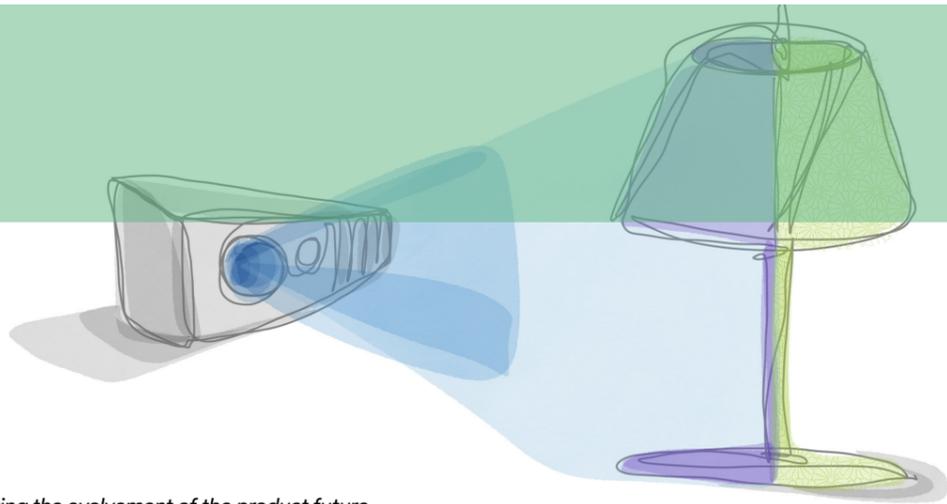


plastic fish with food-based packaging

The plastic waste are travelling to all the world, in the ocean grounds, islands and then coming to your plate with the creatures which eat them.



provocative



projecting the evolvement of the product future

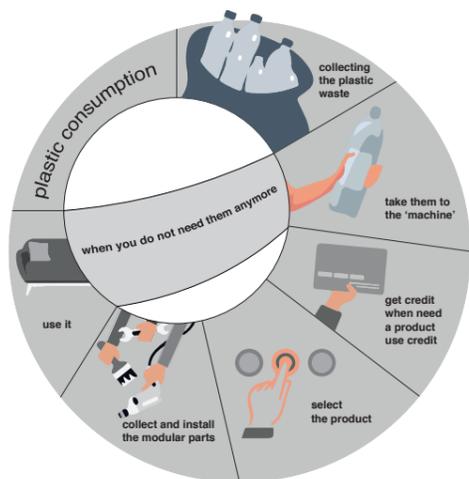
In the visual world, can we change the perception of the luxury desire without wasting any resource or creating any waste.



provocative

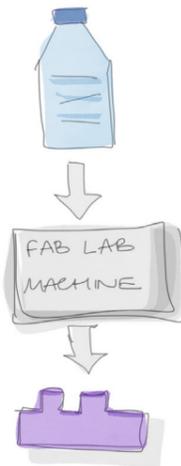


evolving



plastic fab-lab

Can we make a open source plastic workshop to let people use their own plastic and create their products for their needs and reduce and create again.



nature driven



awareness

Then we improved this method and while we were finding design ideas we worked on these ideas and try to combine different ones to work on. In that way while we were designing we had an opportunity for different variations.

After the tutorial we made with Nat Hunter, we realised that we needed more research about circular economy. Although we made a lots of research, because we did not made it for a specific topic, we could not able to connect our story well. But we were not also sure about our design idea to work on. Therefore, we turned back to ideation process again to find more ideas. There was a stop and turning back action in the process but it was needed and we were all in the same page about it. In that way, we explore more ideas and different topics and expand our research.

Then we used the service design tool kit to expand our design process. With other teams we explored the user groups different application areas such as recycling centres, schools, workspaces. It helped us to create the personas and opened our horizon about application spaces. But we did not carry on with this process. It might be more helpful if we would made research according to the outcomes of this method.

ideation

machine room

This place is one of the biggest supportive place for circular economy vision. Moreover, it gives an opportunity to co-making and co-working. The improvement might be making it more approachable for every person who does not have any knowledge about softwares or technicalities.

inspiration trips

Science Museum

As a group when we frustrated, we made a trip to there to both get inspired and relaxed.

Design Museum

We went to the e-waste talk to get more knowledge about it and it's cycle. But it was not what we expected. It was mainly about the designer who was making up-cycle designs out of e-waste.

workshop

We destroyed a 1998 hp printer. It was an amazing experience which helped me a lot to understand better about the production and design process of an industrial product. And I also found a chance to up-cycle the DC motors which I removed from the printer.

field research

We did not make enough field research and interviews. Personally, I was afraid of my english that I would not be able to understand people but with time I feel more comfortable about it. Hopefully, I will be more brave next time. On the other hand, we made a really good information research.



This route map is a first step in a journey to a London where it is commonplace for both businesses and consumers to access services rather than own products...

LONDON'S CIRCULAR ECONOMY ROUTE MAP



renting tools and equipment rather than buying, re-used or adapted materials, recover parts and materials, maximising reuse of unwanted business IT equipment, more stable operating environment for manufacturers, retailers and consumers, post-Brexit economic environment, local authorities

For each of the five focus areas identified in 'Towards a circular economy' - built environment, food, textiles, electricals and plastics - this document goes on to outline: LWARB's vision for a more circular economy for London...

The Mayor of London has varying degrees of influence and powers around economic development, planning, and transport as well as waste...

Local authorities also play a key role in the move to a more circular economy. They have powers around housing, local plan development and implementation...

The decision to refurbish rather than rebuild had a major influence on the embodied carbon impact of the project. More than 80% of the existing building structure and 70% of the facade were retained...

The refit of a Sainsbury's store in Beckton, East London, involved a major reconfiguration of the internal customer areas, including the removal of a number of redundant structural elements...



One of the challenges facing London is to provide access to the housing, business premises and infrastructure that the capital's residents and workers require...

London's higher education community also has a lot to offer here, providing the opportunity to research and test some of the new ideas being developed in the capital...

In particular there is a lack of funding available for circular SMEs who are too small to secure bank finance, have limited cash flow or do not have the high growth rates required to attract venture capital investment...

This is a truly global movement; and because the circular economy embraces new business models that rely on new technology, it has the ability to be active at both the company level and the global corporate level...

Further reducing construction, renovation and demolition waste - 48% of all waste in London comes from construction, renovation and demolition...

ELECTRICALS

Send zero electricals to disposal (landfill or incineration). Act as a regional electricals hub for collection, re-use and recycling. Re-use more electrical gadgets in the capital.

From a consumer perspective the average UK household spends around £800 a year on new electrical and electronic goods. We often demand the newest and fastest gadgets well before the original ones have come to the end of their serviceable lifetime...

The reason for this is depreciation of the assets, hoarding of equipment due to concerns about data security and poor storage of equipment. This is a missed opportunity both for businesses and consumers.

High quality durable products are assumed to have higher costs and lower overall sales. Many IT manufacturers are strongly opposed to providing repair manuals for their products...

Restart Project: The Restart Project is a people-powered platform for change, helping demand emerge for more sustainable, better electronics.

Electrical and Electronic Equipment Sustainability Action Plan (esap): WRAP is working with the electrical and electronic equipment industry using collective action to generate value through sustainability...

Globechain: Globechain is an online re-use platform that connects businesses with charities and other organisations and individuals to enable them to re-use unwanted items.

WRAP: WRAP is working with the electrical and electronic equipment industry using collective action to generate value through sustainability. Their industry-led collaborative framework aims to deliver an industry that has a positive environmental impact...

25% of WEEE can be re-used, UK household spends £800 a year, phones, laptops & white goods, newest and fastest gadget demand, UK purchases about 1.4 million tonnes per year, 40% goes to landfill, less than 10% re-used, complex mix of materials which makes products hard to recycle

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FOOD

FOOD food surplus food waste: A circular economy approach will ensure that food, food surplus and food waste is used to its greatest potential and value.

Over 8 million tonnes of food is consumed in London per year by the city's 8.6 million residents, around one million daily commuters and almost 17 million annual overseas tourists.

Savings from waste prevention are attractive to businesses too. The FoodSave initiative demonstrated savings of up to £6,000 a year for small hospitality/food retail businesses in London by reducing food waste at each stage of food preparation and delivery.

WRAP's mission is to accelerate the move to a sustainable, resource-efficient economy through: re-inventing how we design, produce and sell products; re-thinking how we use and consume products; re-defining what is possible through re-use and recycling.



Food and drink material hierarchy: Prevention, Recycling, Recovery, Disposal. Most preferable option to least preferable option.

FoodSave initiative: A circular economy approach will ensure that food, food surplus and food waste is used to its greatest potential and value.

Food Data Labelling: A circular economy approach will ensure that food, food surplus and food waste is used to its greatest potential and value.

Reduce food waste: A circular economy approach will ensure that food, food surplus and food waste is used to its greatest potential and value.

There are also opportunities for entrepreneurs in this space to set up new businesses that use food surplus and food waste as a resource for a new product...

Quite a lot of the surplus food that farmers, wholesalers, manufacturers and retailers throw away can already be used for animal feed - there are plenty of good examples of food waste being used in this way...

Where efforts higher up the hierarchy have been unsuccessful in managing out food waste, the best outcome both environmentally and financially is for that unavoidable waste to be recycled.

There are also exciting opportunities to use technology to expand our urban growing potential such as aquaponics, vertical growing and soil-less farms.

Reducing household food waste - consumer habits which create food waste are difficult to change. Devising relevant approaches for raising consumer awareness and reducing avoidable food waste.

Consumer habits: Through alternative materials and behavioural options such as in-use, eat, urge, use, plastic packaging is the status quo and perceived as effective, functional and easy.

Consumer behaviour change: Residents should also be encouraged to use products that can be re-used, anaerobically digested, composted or recycled.

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PLASTICS

Plastics are made from oil which has a significant climate impact from its production and when burned in incinerators. Plastics are a huge source of marine pollution.

Oil based causes climate impact from production & burned in incinerators. The Ellen MacArthur Foundation estimates that, if we continue to use plastics in our current linear fashion, the weight of plastic pollution in the sea will be equal to the weight of fish in the world's oceans by 2050.

How can plastic waste be prevented and its incineration reduced? How can the volume of plastics making their way into the Thames and onwards into the world's oceans be stopped?

32% of plastic packaging escapes collection system by damaging the ocean and clogging urban infrastructure. A staggering 32% of plastic packaging escapes collection systems, generating significant economic costs by reducing the productivity of vital natural systems such as the ocean and clogging urban infrastructure.

Overall UK plastic waste is estimated to be around 3.7 million tonnes. Packaging is the main source of this waste, accounting for approximately 2.2 million tonnes (59%), with non-packaging plastic estimated to be 1.5 million tonnes.

Of the 2.2 million tonnes of plastic packaging arising in 2014, 1.5 million tonnes comes from packaging used in the consumer sector (e.g. households) and 0.7 million tonnes is used in the non-consumer sector, which includes commercial and industrial, construction and demolition and agriculture.

All of London's 33 boroughs offer kerbside collection of plastic bottles for recycling, with 29 boroughs also collecting pots, tubs and trays. All boroughs offer some level of advice to residents on what plastics to recycle, supported by the Recycle for London campaign.

Redesign and innovation - without fundamental rethinking, about 30% of plastic packaging will never be re-used or recycled. Re-use - for at least 20% of plastic packaging, re-use provides an economically attractive opportunity.

Promotion of plastic recycling: Further work to promote dry recycling amongst 18-34 year olds in the capital will start in 2017 through the Recycle for London campaign, where possible targeting those in rented households as they regularly move across borough boundaries and would benefit most from consistent services and messages.

Overall UK plastic waste 3.7 million tonnes, 2.2 million tonnes (59%) packaging waste, 1.5 million tonnes non-packaging waste, 0.7 million tonnes packaging used in non-consumer sector, 1.5 million tonnes packaging used in consumer sector, 0.7 million tonnes packaging used in non-consumer sector

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Quality of recycling depends on the quality and uniformity of input. This requires either improved sorting and pre-treatment of waste or enhanced sorted collection.

Pre-treatment of waste or enhanced sorted collection: Products are not standardised and may contain mixes of materials. Reverse logistics require infrastructure and investment.

Material efficiency durability re-usability recyclability: Higher quality, durable and economically recyclable products are assumed to be associated with higher costs, and the additional value created across their lifecycle (e.g. through recyclability) can often not be captured by the designer/producer of the product.

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Plastics
 1.5 Million Tonnes of plastic is used for packaging in the consumer sector.
 30% plastic packaging will never be recycled.
 2.2 million tonnes (59% packaging waste).
 3.7 million tonnes plastic waste in the UK.
 32% of plastic escapes collection system.
 Plastic prices do not reflect the true cost to society.



London wants to recycle 65% of its waste by 2030 and want to have a zero carbon city by 2050.



London believes there is a big opportunity for creating employment through re-manufacturing industry.

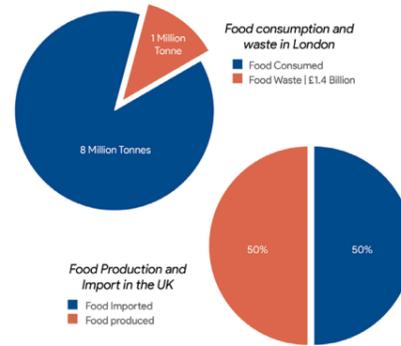


London wants to build prospects that will make businesses see benefit in recovering, re-manufacturing & reselling.



London wants to generate better funds for circular Small and medium-sized enterprises.

London's Targets for the future



Food Industry
 Over 8 million tonnes of food is consumed in London per year by the city. 1 Million tonne end up in trash which is equivalent to £1.4 Billion.
 50% of UK's food is imported from other places. Urban agriculture could reduce import resulting in reduced air pollution & Carbon Emission.

THE FAB CITY MANIFESTO

- 1 ECOLOGICAL**
We take an integrated approach to environmental stewardship, working towards a zero-emission future while also preserving biodiversity, strengthening the resilient cycle, and sustaining natural resources.
- 2 INCLUSIVE**
We promote equitable and inclusive policy co-design, through the development of a Commons Approach, regardless of age, gender, income-levels and capabilities.
- 3 GLOBALISM**
We encourage global knowledge sharing between cities and countries in order to provide access to tools and solutions that could be adapted to local cultures and needs.
- 4 PARTICIPATORY**
We engage with all stakeholders in decision-making processes and empower citizens to take ownership of innovation and change-making.
- 5 ECONOMIC GROWTH & EMPLOYMENT**
We support sustainable urban economic growth by investing in building the skills, infrastructure and policy framework needed for the 21st century, thanks to a thorough consideration of social and environmental externalities and the implementation of the polluter pays principle.
- 6 LOCALLY PRODUCTIVE**
We support the efficient and shared use of all local available resources in a circular economy approach, to build a productive and vibrant city.
- 7 PEOPLE-CENTRED**
We give priority to people and culture over technology, so that the city can become a living and resilient ecosystem. Autonomous vehicles, digital tools, artificial intelligence and robotic machines must be placed at the service of the people's well-being and expectations.
- 8 HOLISTIC**
We address urban issues in all their dimensions and interdependencies to build sustainable, resilient and inclusive cities for everyone.
- 9 OPEN SOURCE PHILOSOPHY**
We foster a Digital Commons approach that adheres to open source principles and values open data. In order to stimulate innovation and develop shared solutions between cities and territories.
- 10 EXPERIMENTAL**
In order to meet the principles just outlined, we actively support the research, experimentation and deployment of innovation which includes but is not limited to: low impact supply chains, distributed production, renewable energy and smart grids; sustainable food and urban agriculture; recycling and reuse of materials; sustainable resource management for energy, food and materials.

FabFarm Vision

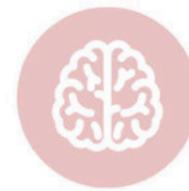
FabFarm Vision is a nature driven service system design which aims to reduce the environmental pollution caused by linear economy and create a better future living with circular economy.



provocative



evolving



awareness



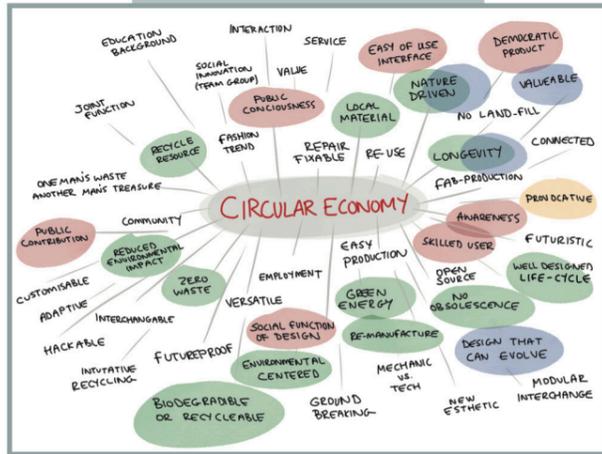
nature driven

- Reducing steps in the recycling process
- Better management of food production and decreased food waste
- Changing eating habits through fabeat
- Opensouce system which can evolve
 - Zero Plastic
 - Up-cycling existing plastic
 - Growth of urban agriculture
 - Creating employment
- Connecting user to the system

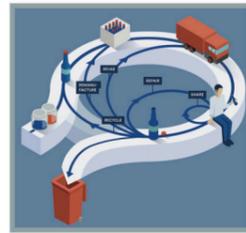


FABFARM vision

ANALYSIS



RESEARCH



Circular Economy

Circular economy minimises waste through reusing, repairing, refurbishing and recycling existing materials and products.

Share
With a shift from ownership of products to their accessibility, more efficient consumption is possible. The sharing of goods (e.g. car-sharing) makes their use more efficient.

Repair
Products are generally less durable and repairable than they were. Enabling and promoting repair, for instance by making spare part, can bring old products back to life.

Remanufacture
Products such as electronic goods can be rebuilt to the original manufacturer specifications using a combination of reused, repaired and new parts.

Recycle
Products such as metals, paper, glass or plastics can be recycled as a source of secondary raw materials.

Reuse
Products such as glass bottles can be reused a large number of times before being discarded.

use of resources

United Kingdom
Separate door-to-door collection
Glass Paper Plastic Metal Biowaste
Mixed door-to-door collection
Glass Paper Plastic Metal Biowaste
Bring points
Glass Paper Plastic Metal Biowaste

Prevention
Preventing waste generation, e.g. by reducing packaging or making products last longer.

Reuse
For instance, reusing packaging through deposit schemes, or remanufacturing electronics.

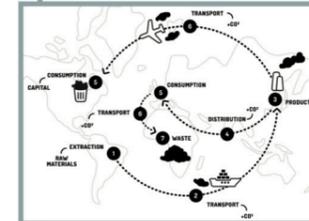
Disposal: Landfilling
'polluter pays' principle. This ensures that the costs of preventing, controlling and cleaning up pollution are reflected in the cost of goods.

Energy-recovery
Burning waste in incinerators; in most cases, the energy produced is used to generate electricity and/or heat.

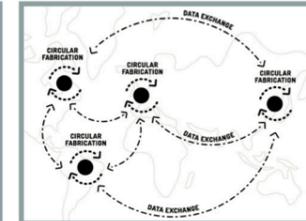


FAB CITY Challenge & Network

In 2014, the then mayor of Barcelona challenged cities to produce everything they consume by 2054. Fab City Global Initiative is enabling this shift away from the industrial paradigm of Product-in Trash-out, by enabling the return of manufacture to cities supported by a Data-in Data-out urban model. It comprises a Network of 28 cities, a core Collective and is governed by a foundation. They are working to make locally productive, globally connected cities and citizens.



Product in / Trash out



Data in / Data out



LONDON'S CIRCULAR ECONOMY ROUTE MAP

"managing supplies of existing resources through re-use and remanufacture"

"recover parts and materials"

"65% recycle by 2030 & zero carbon city by 2050"

"post-Brexit economic environment"

"new business models rely on new technology"

"labelled materials as waste and require re-labelling to facilitate re-use"

food

"8 million tonnes of food consumed in London per year"

"anaerobic digestion facilities"

"reduce food waste"

"community gardening"

"transport reduction urban food growing"

"food data labelling"

plastic

"plastic prices do not reflect the true cost to society"

"1.5 million tones packaging used in consumer sector"

"on the go & take away eateries"

"about 30% of plastic packaging will never be re-used or recycled"

"non-standardised and may contain mixed of materials"

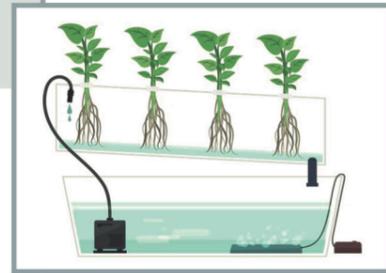
"Overall UK plastic waste 3.7 million tonnes"

"2.2 million tones (59%) packaging waste"

"by damaging the ocean and clogging urban infrastructure"

"32% of plastic packaging escapes collection system"

hydroponic system



Nutrient Film Technique (NFT)

With NFT hydroponic systems, the nutrient solution is pumped into channels that can hold a varied amount of plants. The channels are slightly sloped, so the nutrient solution flows through the channel, over the plant's roots dangling roots, and back into the hydroponic reservoir. NFT hydroponic systems don't often use grow medium and foam net pot inserts are typically used to secure the plant.



material scanner

Hertzstück™
Hertzstück™ is an infrared detector which is used in applications like moisture detection and chemical analysis to reliably detect infrared light. The focal point of the sensor and our concern to it is the future possibilities in scanning and sorting different materials through a personal device as our smartphone.



provocative

An approach that stimulate a user's decision into a pre-determined path.



awareness

An approach the nurtures one's attitude into a distinctive path.



evolving

An approach that make a product grow with trends or sustain the change.



nature-driven

An approach that is driven by the desire of sustaining or enhancing nature.



Tom Wilcox

37 years old
Computer Engineer
Works 9 am. to 5pm.
Buys lunch as take away while working in the office.
Likes to eat different everyday
Buys groceries with maximum date
Although not on his shopping list still prefers buy one-get one deals
Goes to park with kids on weekends.
Curious about electronical stuff and loves repairing things.
"I want to leave a good and healthy living environment for my kids."



Natasha Wilcox

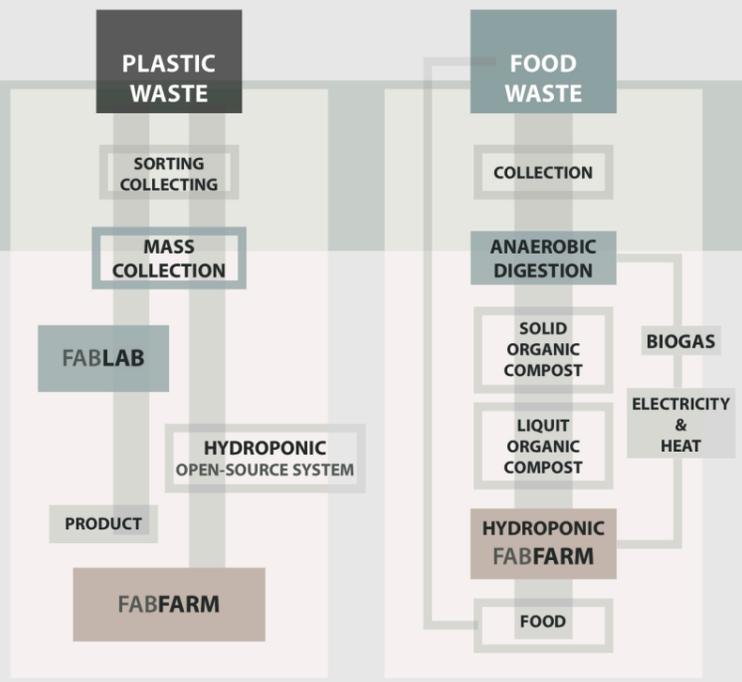
33 years old
Full time Housewife
Married
Likes DIY art and craft
Mother of a teenage girl and baby boy toddler
Cooks breakfast, snacks and dinner for family members
Cooks at least two different foods in a day
Likes gardening and wants to make children involved
"I want to provide all the necessary nutrients for my children's development"

Group C
Alberto Giordano
Cansu Bezmec
Pralek Bhuyan
Mengshi Qiu



FABFARM vision

FabFarm Vision is a nature driven service system design which aims to reduce the environmental pollution caused by linear economy and create a better future living with circular economy.



DOMESTIC BIN

The users put their waste in the bins which are separated for different materials

The number of bins can increase depending on the type of material consumption.

The users can refer to the scanner to identify unknow material.

PUBLIC BIN

When the domestic bin is filled, the user collect the bin and put it in the machine and before that they are gonna scan their ID and the material they are putting in.

The scanned data gets uploaded to the platform.

The users receive credits depending on their waste management as well as their waste contribution. When they separate the materials in detail, they receive more credits.

COLLECTING SERVICE

The aim is to make users to collect and use their own waste in Fabs and reduce the need for mass transportation of the waste.

The separated materials are collected by fabfarms and fablabs.

For the mass recycling production, recycling center collects the assigned materials.

RECYCLING CENTER

FabFarms collect the food waste to produce biogas and hydroponic system nutrients. For the open source hydroponic system they use the recycled plastic which are collected by the consumers.

Users can volunteer to the FabFarm or FabLab Production to get more credits for their consumptions. However, they can also contribute with collecting materials.

FabLab collects the separated materials and produces the modular pieces for hydroponic system. Design of the system can be evolve depending on the needs and production methods.

The aim is to include all the local people into the platform while improving the production and consumption management.

With the knowledge of every local user consumption amount, the management of production increases to decrease the waste.

With the hourly credit system, it is aimed to make users motivated to get involve in the process. Users are able to use the fab facilities and buy fab products from FabShop with their contribution hour credits.

The contribution to FabFarm or FabLabs is increased or when users bring their waste to Fabs, they earn more credit.

FabEat aims improving eating behaviours with healthier foods while reducing the take-away and fast food eating habits and waste.

With the online-fab-platform, users, FabFarms, FabLabs can able to see the distribution of the separated waste.

In the FabWaste Tab, users can search material collections for their FabLab or FabFarm projects and reserve them with their credit to use.

LOCAL WASTE
Welcome FAB CITIZEN!
Can you feel the connection?

Find your local fab

FABPROFILE

FABFARM

FABLAB

FABEAT

FABSHOP

FABPROFILE

786 hours contribution

Tom Wilcox

37 years old
Computer Engineer
4 Members of Family

Barford House
Pritchard's Rd
London E2 9BJ

FABLAB
Your recycled plastic 3D printed bins are ready!

FABFARM
You can collect your weekly shopping items, here and there!

183 hours contribution

247 hours service credit

FABLAB
Computer Engineer
Technical Volunteer
614-55 Cambridge
35 Cambridge Cms E2 9DQ
(Free Time Contribution Service)

830 hours contribution

539 hours service credit

FABWASTE

Search material...

Results for HDPE

Closest to / E2 9BJ Weekly / One Time /

At least / 3 kg. (5 bins) Mixed / Sorted /

Similar Suggestions /

You can find more than **100** recycled materials

4 kg. (6 bins)
Volunteer sorting available
plastic & glass
Scheduled collecting weekly morning
Machine Room / E2 9DA

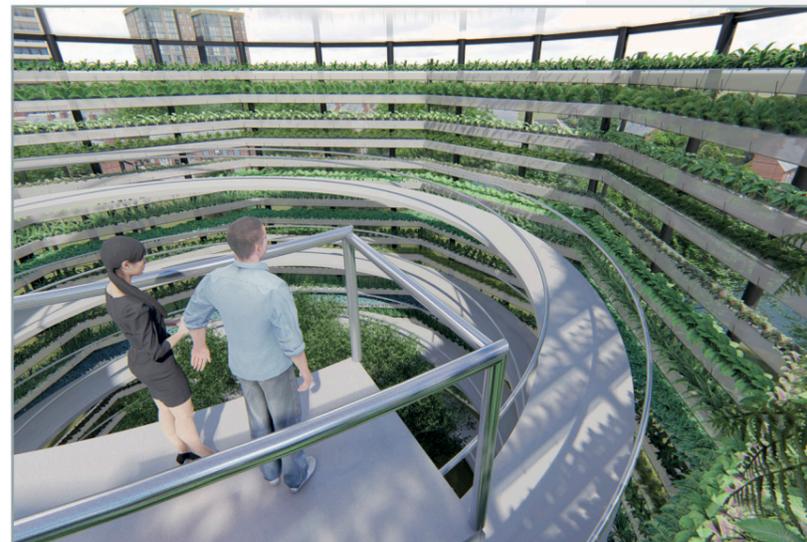
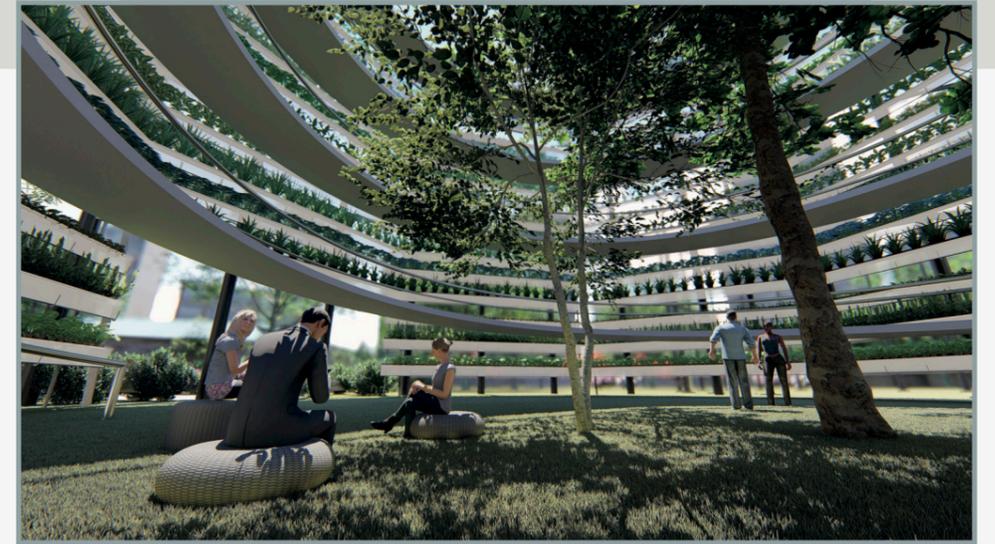
7 kg. (11 bins)
Volunteer sorting available
e-waste & HDPE
Machine Room / E2 9DA

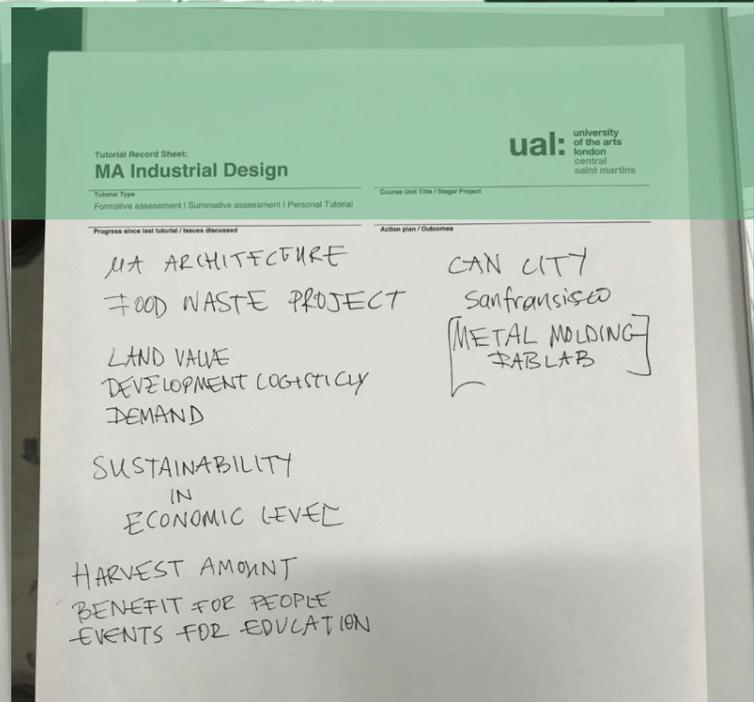
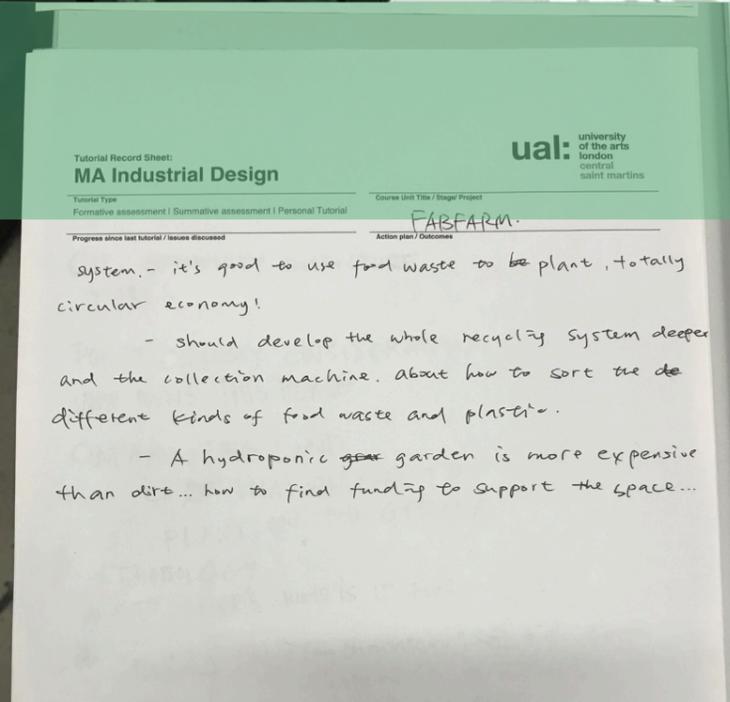
5 kg. (8 bins)
No volunteer available
Machine Room / E2 9DA

RESERVED



FABFARM
vision





Feedbacks

There were really good constructive feedbacks about our project. One of the feedback came from an architecture student who gave a lots of information and knowledge that we can discuss to improve our project. They were contained budget solutions, place and area problems which requires different kind of diplomacies and legal issues.

Circular economy was the best topic, I have ever experienced in unit 1. Before I came to master course I had not have enough hope about Earth and to be frank I was expecting something extraordinary phenomena to happen to save the world and my hope was in other planets to start over. But I realised that this world might still can be saved. We keep evolving and developing as a human kind. We invent, design, consume new things in a new ways but we cannot manage to keep pace with the results of them all the time and having troubles to balance the pros and cons of them. This project gave me thoughts and new hopes about balancing these problems.

As a group project, it taught me a lots of things about teamwork. Firstly, I learned a really good approaches to explain the thoughts and how to make positive or negative comments without losing the group dynamics. In our group, we managed our skills and knowledge according to the subject really well. Moreover, we also succeeded in empowering them. We added and fixed the things when the other team member having problems about something. I realised that good communication is one of the biggest thing to collaborate and finish things nicely. Every person made a contribution from the beginning to the end. We managed the things we should work together and individually. We separated the tasks according to the dimension. Therefore, everybody had a determined knowledge of what to do. As an outcome, I experienced my friends' designer personality really good and had a better idea about how might be contribute each others thoughts and designs. For sure because of the different cultural and educational differences we sometimes had problems about understanding but managed to figure it out with calm and communication. What I enjoyed the most is we had different skills but related brains. Therefore, I feel evolved both with this topic of circular economy and the collaboration with my teammates.

reflection



critical interrogation

team

ANDREA JOSE CASTRO TEJADA / jewelry design

HAIMING LI / furniture design

JOSH COTTON / material futures

MENGSHI QIU / industrial design

TANVI JAIN / material futures

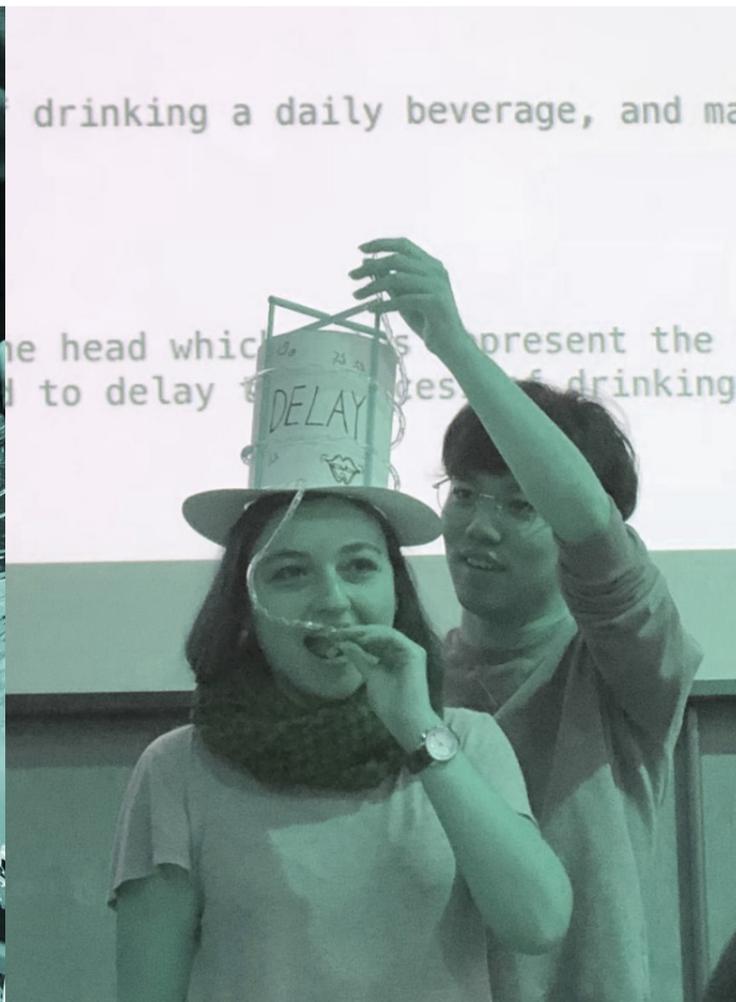
YIZHEN GAN / industrial design

Our first assignment was to bring one photo which represents the extremity of something. I found out that while people are eating things, they have a desire to talk at the same time. Because of the human physiology, it is not a safe and healthy thing to do both actions at the same time. Therefore I took a picture of one of my colleague to represent my idea about extreme desire to talk while eating.

brief

Identifying an extreme desire which must engage with an intimate interaction. We were free to do every kind of topic from individual to collective, from taboo to socially accepted, from extinct, currently existing or future fantastic. As a group, it was asked to design a manifestation of this desire, which is exposed in a final exhibition at the end. Therefore, we needed to adopt our design intervention or language to an appropriate object, experience, image, video or performance and this should communicate the context and specificities of our extreme desire.

Before we started, we made a small talk with my teammates to get to know each other well. One of my teammate asked each of us our strong skills and interests to how to contribute to the project. I think it was a clever question to ask before we started. It helped us a lot in the research part.



ideation

As a start, we put all our extreme desire ideas on the table and discuss each of their opportunities as a design concept. Then we made brainstorming about new subjects and combination of the subjects. I struggled to explain my idea, and I was about to give up. But one of my teammate pushed me to explain the idea. I was not able to explain my idea. But I tried in the critics we had with tutors. With the tutors help, I managed to explain my idea. I realised that I should have made more research about the idea to explain it more clearly which was delayed gratification. At the end, we choose to idea to work on with. We gave each other time to explore these two ideas into in a design concept. It was really productive because in that way we were able to see which idea has a better opportunity to work on. With this method, it was east to pick the topic we want to work on.

We decided on the topic we made a comprehensive research. We separated the research area according to our interests and skills. Therefore, the skill analysis, we made at the beginning, was really helpful. We went to a buddhist centre which is related with our topic and because one of my team mates has a special interest with these kind of mental exercises we had a chance to widen our research in a different level.

After the individual research, we presented each other all the interesting things we found according to the subject and then made a presentation for the tutors. It was nice to made a presentation to each other because in that way all the team members were able to know about every part of the subject and it was much easier to explain in the tutorial.

mock-up

After the tutorial we started making mock-ups and creating the story behind it. At the beginning, we could not manage to tasking on each person that's why we decided to try individually. But as a good result, although we were working individually because we were in the same place, we found a way to combine our ideas and work together. As a bonus we also learned more about each others skills in more detailed. We used plastic tubes, metal wires, white cardboard to make our mock-up. We separated the work load according to our teammates interests and skills. Testing the mock-up was really fun but we realised at the presentation that we could not manage to create the story behind it well. I realised that we needed a better communication.

We started with the idea of delayed gratification. Questioned how people's behaviours change according to the capitalism and technology. These days people have less patient to wait and they become easily change mood because of it. The demand for faster things become more common and turn into a race. Asking for fast food, fast fashion, fast information to get... We discuss the idea of remembering things. With the Internet, everything, all the world knowledge is under one phone. When people want to learn something or are not able to remember something, they just google it. We are losing the skill of remembering things and it's pleasure. Most importantly, because of the fastest demands we do not recognise the pleasure of things and jumping one to another. The idea of writing a letter was one of the idea we found out that the pure way of communicating with others. Today's world everything people want to say is under their fingers. Therefore we wanted to provoke this feeling of delayed gratification. Then we realised that to provoke this idea we used the opposite subject of it and started to think about instant gratification. We focused on Instagram and Tinder to explain better. Because these are the things that we consume information without thinking each of the action we made. And wanted to analyse the scrolling and swiping gestures with a story.

The workshop which was created by the tutors was really helpful to think and discuss about our topic and the story behind it and helped us to see from a different angle if we asked the correct questions. Therefore, we wrote down lots of open questions about delayed gratification and picked the ones which are going to be helpful for our idea development. It also helped with our communication problem because we found the correct questions, discuss about them and decide on the story which changed from delayed gratification to instant gratification.

FINGERING DESIRES MANIFESTO

The extreme desire to know instantly

How are cellphones affecting our desires and pleasures?
 How do phones make people to spend so much time?
 Why do we get so much gratification by using them?
 Is it because we cannot resist sharing or learning new information?
 Is there any limit for our brain to scroll so much information in our phones?
 What kind of satisfaction we are having that reduces the idea of thinking?
 Is the Internet turning us to a passive learners?

Think, feel, remember...

Think about the biggest park in London...
 What was the name of it?

What happens if you can not remember?
 What kind of things do you start to catch from your brain?
 Are you gonna start to think about your memories?
 The moment you first hear it...
 Or the last or first time you went there...
 Or the moment you enjoy or suffer most in there...
 Is it helpful to remember who did you go there with?
 Or maybe you remember that song...

How else can you get this information?

NOW... Ask to google or instagram or facebook

***And possibly, all the memories you have... might be in the Cloud.
 So now, you do not even need to remember...***

just open your phone and start to scroll your life...

Less brain effort and more physical activities for your fingers
 It feels healthier than thinking

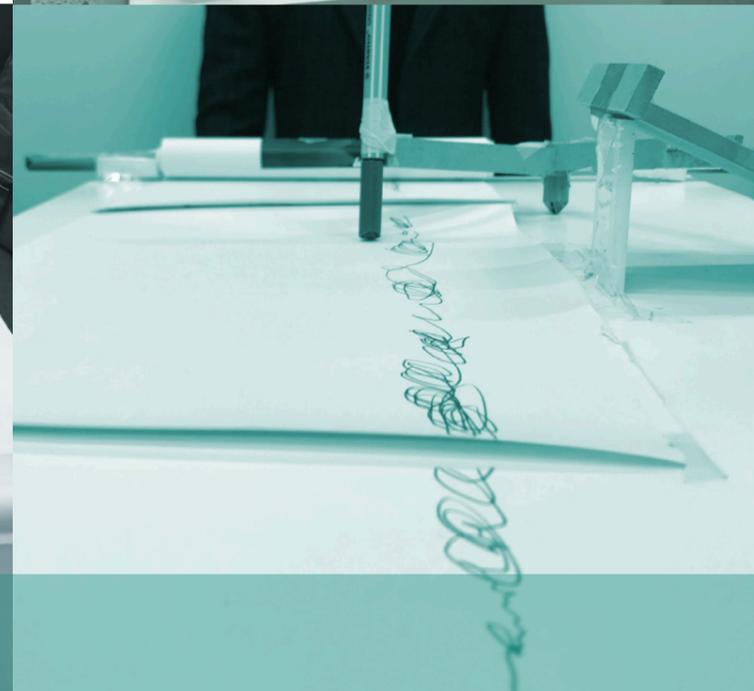
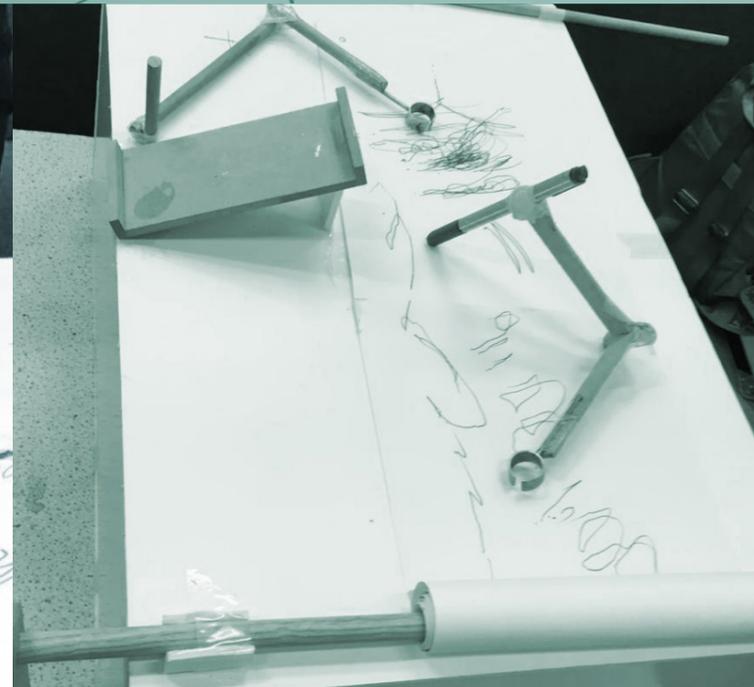
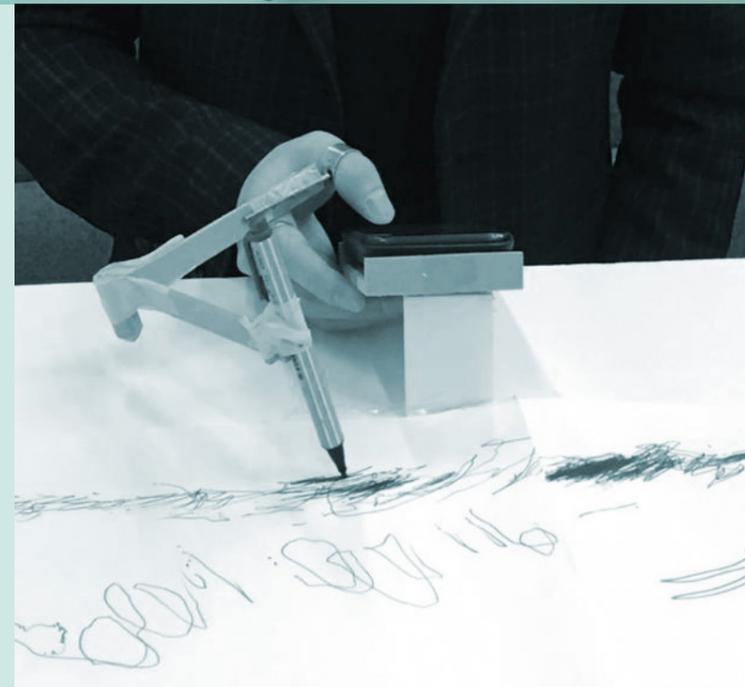
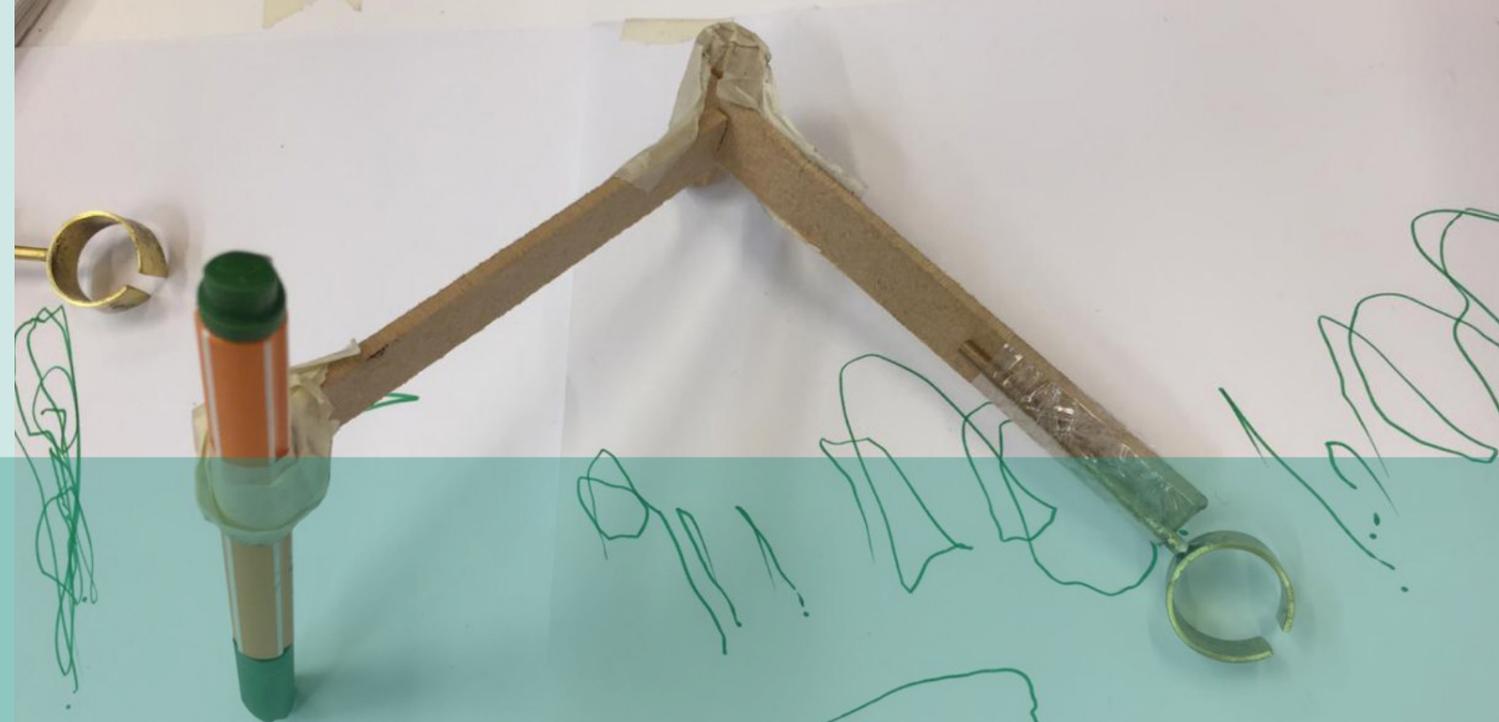
Think, feel, remember your physical movements created by scrolling your phone...

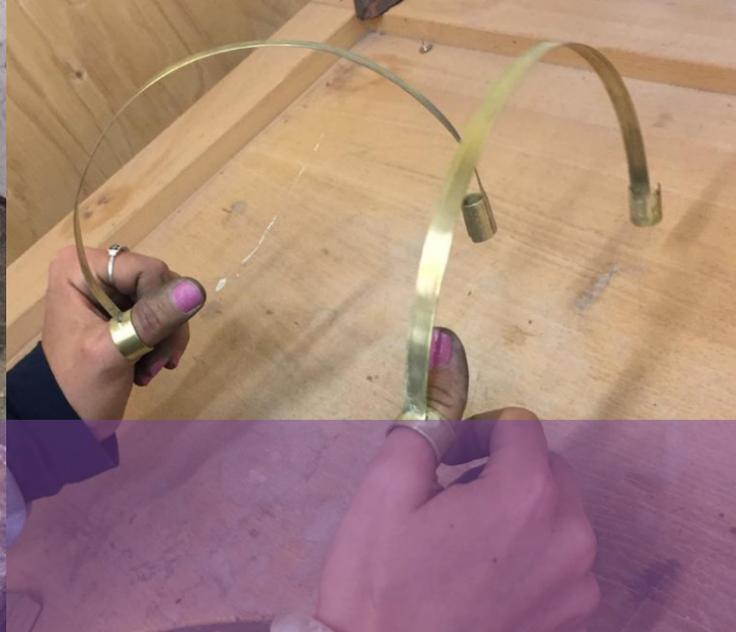
*And we are going to give you a chance to think about it
 Can you scroll more than 4.4 zettabytes of information?
 Your brain can.
 Let's print all of it and see...*

modelling & testing

Then we made another mock-up which represented our improved idea. We combined our skills from jewellery, furniture, material and product knowledge. It was much more faster and easier to make the mock-up this time because we learned how to work from the first time. We tested each of the elements we needed. Our main element was the rings we design to draw the data which represents finger gestures. Secondly, we worked on the main structure. Before we made the final model, we tried the layout of the system with white cardboards. We tried different positions for the user and the machine controller. When we decided on the each elements we started doing the final model. For the rings we bended brass and soldered the parts. For the printing machine we used MDF and solid wood and painted with acrylic. Then we made finger which represents the crystal ball with clay and painted with acrylic. For the poster holder and the seats, we used solid wood and fabric.

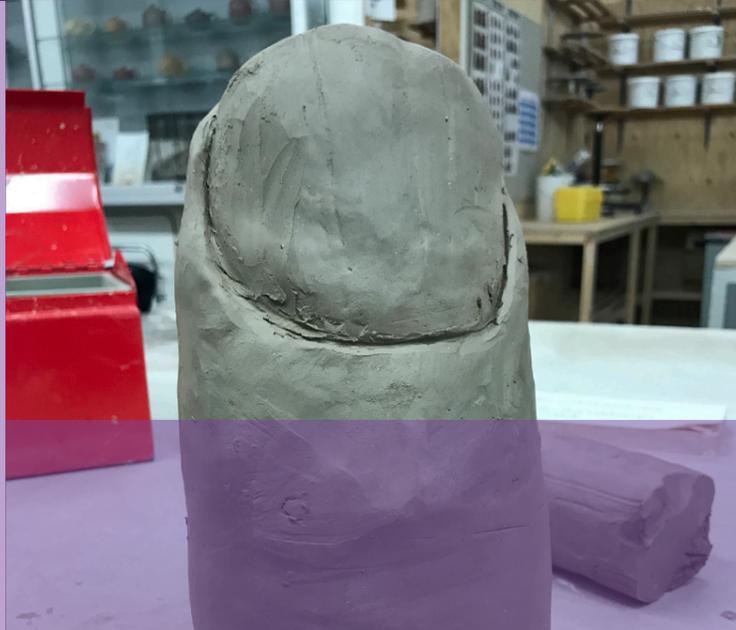
While making the models, we gave each of us a task. When I realised that some of us cannot catch the schedule well, I did back up plans to recover. I talked with my friends about it and to able to do the backup plans, I gave them deadlines before the exhibition. Actually, I realised that not the backup plan but the idea of talking with them to give them a deadline was really motivated them to finish. It was a good experience to use it in the future for group projects.





We used jewellery workshop to make the gesture ring which is made of brass. We bended and soldered. We picked this material because it is flexible enough to give the motion but hard enough to move randomly.

For the crystal ball finger, we used clay and after it dried we painted with golden acrylic paint. We picked clay to get more details and acrylic paint to avoid cracks.



To hang our poster we used solid wood and used screws for connections. I used the 45 degree cutting machine for the first time which was shown by my teammate. It is really useful for precise prototyping which is in the material futures workshop. For the finger table, we used trashed woods to work so it was made of both MDF and solid wood. For the chairs we up-cycled the exhibition stands and shorten their legs for ergonomics. Then we covered the chairs and the table with black and grey fabric.



performance

We created an experience for the user and made a performance. In the performance there were two cards that user can prefer which were Tinder and Instagram. According to the user's preference, we opened the application from the phone and made them put the pencil ring on. While the user using the application, the machine's handle was turning the paper to draw the data. After one minute usage, the roll teller stoped the user and the cutter cut the paper and gave it to the scroller teller for the reading. Then the user and the scroll teller sit in front of the golden finger for telling what kind of a scroller the user is.

CURIOUS STALKER

I can connect with the channel of your scrolling. They tell me you are a curious stalker out there on social media. You might not be mindful of your fingering exercise. Did you know that you just walked 1.2 meters with your fingers; you're as fast as crossing over 45 scrolls per minute! You're scrolling with intent and the desire to stalk, filled by envy and driven by vanity. You spend hours checking out your ex's new lover. My advice to you is detach yourself from other peoples' lives and concentrate more on becoming acquainted with your real friends rather than their digital facades.

AMATEUR

I can connect with the channel of your scrolling. They tell me you are an amateur in this digital world; you are slow and steady in this high-speed digital era. Did you know you only walked 0.7 meters with your fingers as opposed to people crossing 2 meters; you're as slow as crossing just 25 scrolls per minute! You're interested in learning a thing or two while secretly checking out the content of your friends without them knowing. My advice to you is to keep yourself balanced like this and don't let peer pressure drive you. You're doing good my mate. I have just told you what your cards have told me, nothing less and nothing more. Take this card with you, my child. What you do with this is up to you.

EXTREME SWIPER

You might not be mindful of your fingering exercise. Did you know that you just walked 2 meters with your fingers; you're as fast as crossing over 50 swipes per minute! You swipe to your way driven by lust and your personal arousal. You chase the thrill of multiple short-term flings and are hooked on digital platforms at all times But be careful, my child. The idea of instant gratification, might swipe out and kill romance out of your life. My advice to you is try to make more personal connections, go out there and explore the real world choices.

SMOOTH OPERATOR

You might not be mindful of your fingering exercise. Did you know that you just walked 1.5 meters with your fingers; you're as fast as crossing over 38 swipes per minute! You are a smooth operator. Your approach is calculated. You're popular on social media platforms, eager to gain a lot of success with many different mates. You're biased to believe in that attractive people are intelligent and trustworthy. My advice to you is cut down your options, overloading yourself with choices often leads to not making any decisions at all.

reflection

One of the most important thing I experience was making a back-up plans to avoid anxiety and arguments about the process. Because as a team we were not always agree on the same way to manage things and I realised that I was spending so much energy to find the middle way. Sometimes my colleagues were avoid listening others. Therefore, although they choose another path to work on, I always made back-up plans with my colleagues who thought the same with me and we presented to the group. In that way, we avoid arguments and able to manage the discussions more efficient. Moreover, I realised that although they were not with the same page with me after I finished my tasks, I tried my ideas to present to them. I realised that when they see the concrete idea, they were more tent to except it. It was a really nice project to work with different disciplines because each of us had a different way of working, and although at the beginning it was a little bit messy, I realised that when we manage to combine them correctly we did an amazing project together.



design history



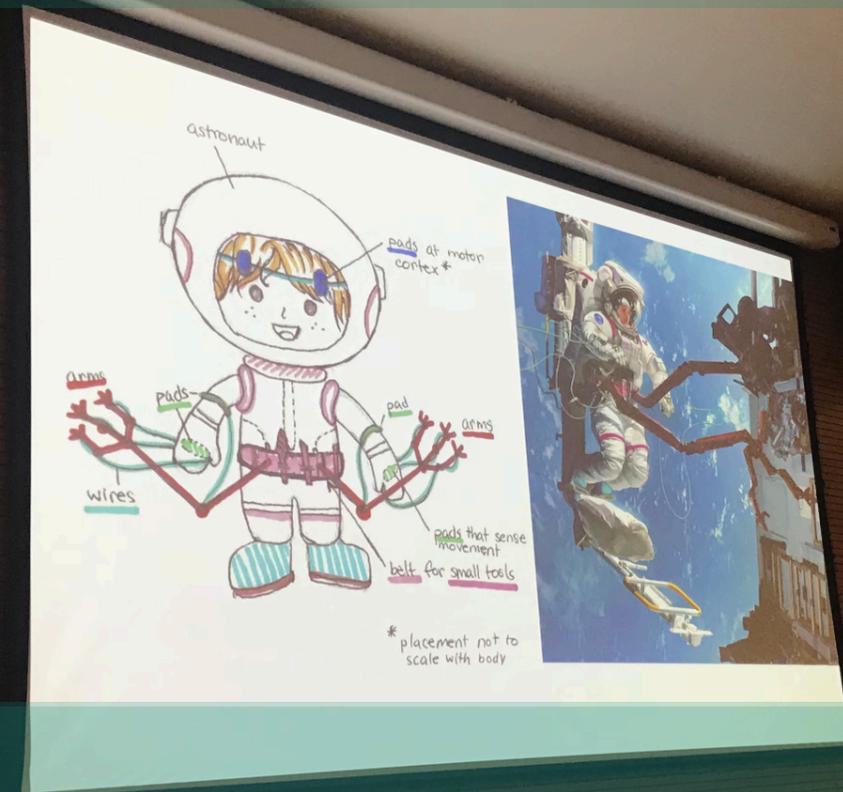
designer

I presented Ece Yalim who is an industrial product designer located in Ankara. She sees the product both with the functionality and funny ways. I picked her because the way she picks the ordinary objects and turns them into something playful and functional way. Her inspiration is Bauhaus movement and she says that she always finds something out from this movement. I also like her way of playing with colour and modularity.

In my presentation, I realised that I could not understand the purpose of the presentation well. When we started the discussions, I realised what kind of presentation I should have done. It should have contained more information about her inspirations and influences. Because she was my tutor in university, I could have had an interview to get more knowledge about these and answer more efficiently to the brief questions.

reflection

After the first activity, I understood the task well and I really like the idea about comparisons and discussions about different designers and their works. It was really nice to compare and explore different designer perspectives. I explored how the nurture and nature of the people effect their designs. It was like a painter influences such as when we think about cubism it was occurred after the atom bomb because people started to think about how we made of from small atoms. Therefore, in these presentations, I had a chance to make a cause and effect relation. Moreover, I also realised that I should make more research about different designers and their influences same as I did with the painters.

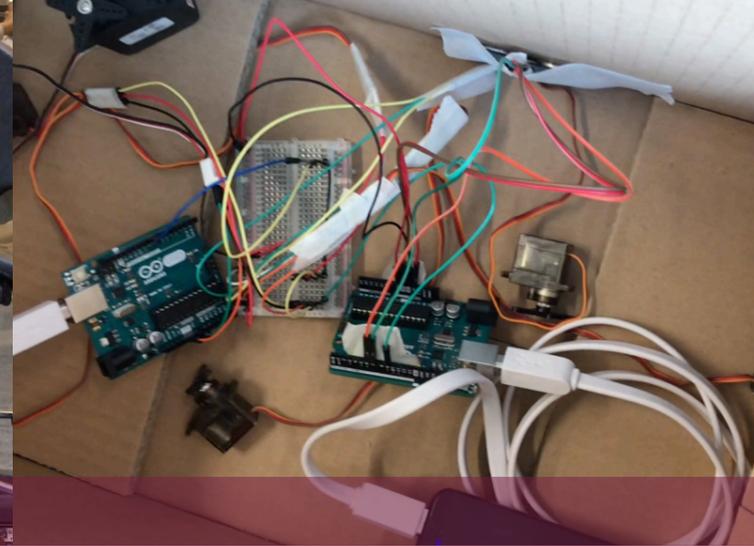


designer profiles

I had a chance to listen variety of designers, their influences and their works. But most importantly, I had a chance to understand and see the reflection of their personal profiles to their works.

reflection

One of my favourite talk was with Dominic Wilcox who has a poetic design perspective. Before the presentation, I did not have a strong idea about poetic design, I mostly saw it as a provocative art but after I had a chance to see the influences and the background of it, I saw into more deeply. My biggest interest was how he worked with the kids and turn their imagination and creativity into products. Because I have a big interest to work with and for kids, It was a really good exploration that how he works with them. I also had a chance to ask him some questions after the talk about his works and It helped me to connect his personality and his works more accurately.

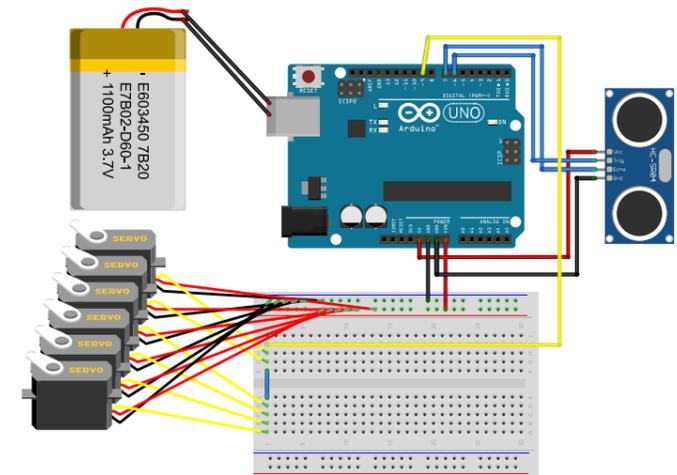


process

We revised an open source code and diagram for our circuit. Our input was ultrasonic sensor which sent data when the distance is 50 cm. or less. Our outputs were servo motors which starts to rotate randomly according to the input. We used a cardboard box and open a circles for ultrasonic sensor. Then put all the circuit with an external battery inside the box. We used paper tape to make sure all the jumpers we were connected.

tools

Arduino Uno
Servo Motor x6
External Battery
HC-SR04 Ultrasonic Sensor
Breadboard
Jumpers
Cardboard Box



idea

The idea was creating a mysteries box which gets activated when someone approaches. When this happens, the servo motors starts to move and give a motion of something alive. And make people curious about the index of the box.

reflection

Ideation process was really fun and I collaborated well with my colleagues. Because I had experience with Arduino, I helped my colleagues to give the basic knowledge and explain the process in detail. We planned our process well and finished in time which we decided.

physical computing

WHERE DOES SUSTAINABILITY BEGIN / END ?

WHEN DOES SUSTAINABILITY BECOME EMBARRASSING ?

WHY DOES ANYTHING NEED TO BE BUILT PERMINENTLY ?

WHAT IF THERE WAS NO SUSTAINABILITY ?

visions

performance

Bahbak Hashemi-Nezhad assigned us to write down questions about sustainability in cards. Then we mixed the question cards with other groups. The task was to make a performance according to the cards we took from other groups. With the combination of these questions, we designed a long distance relationship chairs. Two of us act like a chair and two of us was the lovers. According to their conversation about their sexual desires and imaginative actions, we used our hands as a chair arms and touched the lovers. We created some fantasy tools which were made of paper.

reflection

It was a really funny experience and open my vision and helped me to explain myself more clearly without being shy. I was not sure about my limits about the conversations and actions in CSM but it helped me to think however I want with confidence. On the other hand, I realised that I should have taken more notes and photos to document better for this course.





design poetics

idea

This is a letter mixer:
mix the letters / then order the letters to create words / then sentences /
then paragraphs / then chapters / then create the stories / then mix the
letters again

reflection

Ralph Ball made a presentation about design poetics. It helped me to
give a name and categorise these kind of designs. Although I always
see these kind of designs, I did not know the background story and it's
methods to explain and do it by conscious. I also realised that Dominic
Wilcox's designs are in this category. After this presentation, I am more
conscious about different languages and meanings in design.
For the model, I used clamp to immobilise the pages and cut it out with
craft knife. And for the mixer I used metal wire and wood stick. I realised
that I should have documented also the actions while I was cutting or
sticking the wires to the wood.

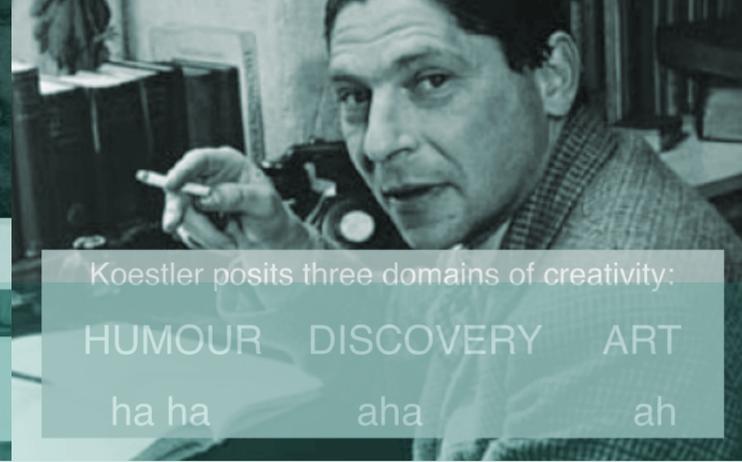


THE GOOD LIFE

美好生活

16 GATES of EXCLUSION

16 排他性之门



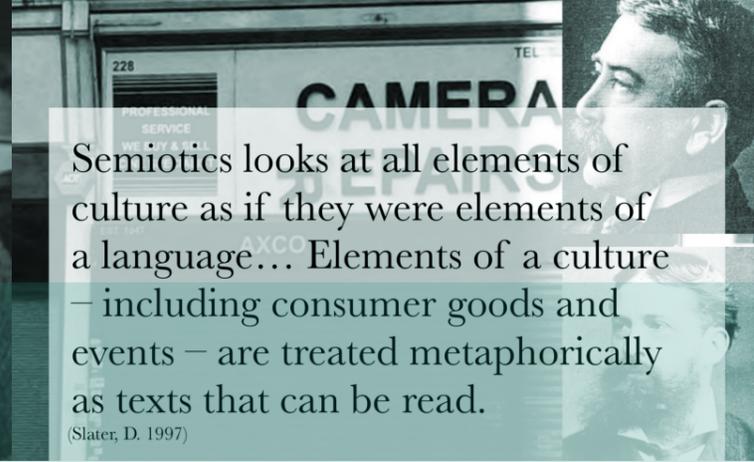
Koestler posits three domains of creativity:

HUMOUR DISCOVERY ART

ha ha

aha

ah



Semiotics looks at all elements of culture as if they were elements of a language... Elements of a culture – including consumer goods and events – are treated metaphorically as texts that can be read.

(Slater, D. 1997)

luxury design

creative methods semiotics

Price
Expertise of the Chef
Personal story
Techno-magic
The Maker's Mark

Shamanism
The Auteur
The Natural
Time
Provenance / exoticism

reflection

I changed my perception about luxury design significantly after the presentation. I was not into luxury design before this. Because I thought that it was something that only money can buy and for the personal interests. But I realised that it is some kind of a chemical reaction in the brain that might give that luxury impression with anything. Therefore, it can be occur in every kind of design category. Thanks to Nick Rhodes, now I have better discussions about this topic. Moreover, I really liked the gates subject about this luxury design feeling and it helped me to explore this notion more deeply.

“the relating of things or ideas that were previously unrelated.”

reflection

In this session, I learned how to name and categorise different way of design methods. It opened my horizon about understanding the methods to apply to the design process and helped me to design things with the more strong backgrounds. Moreover, in the future, in my designs I will always think about these backgrounds and try to use or create new ones. Some methods that I liked and felt that closer to my design perspective are connecting gestures, making familiar. In semiotics, I learned how to connect and differentiate denotation, connotation, myth and metaphor. In that way, I can now realise the different languages in design.

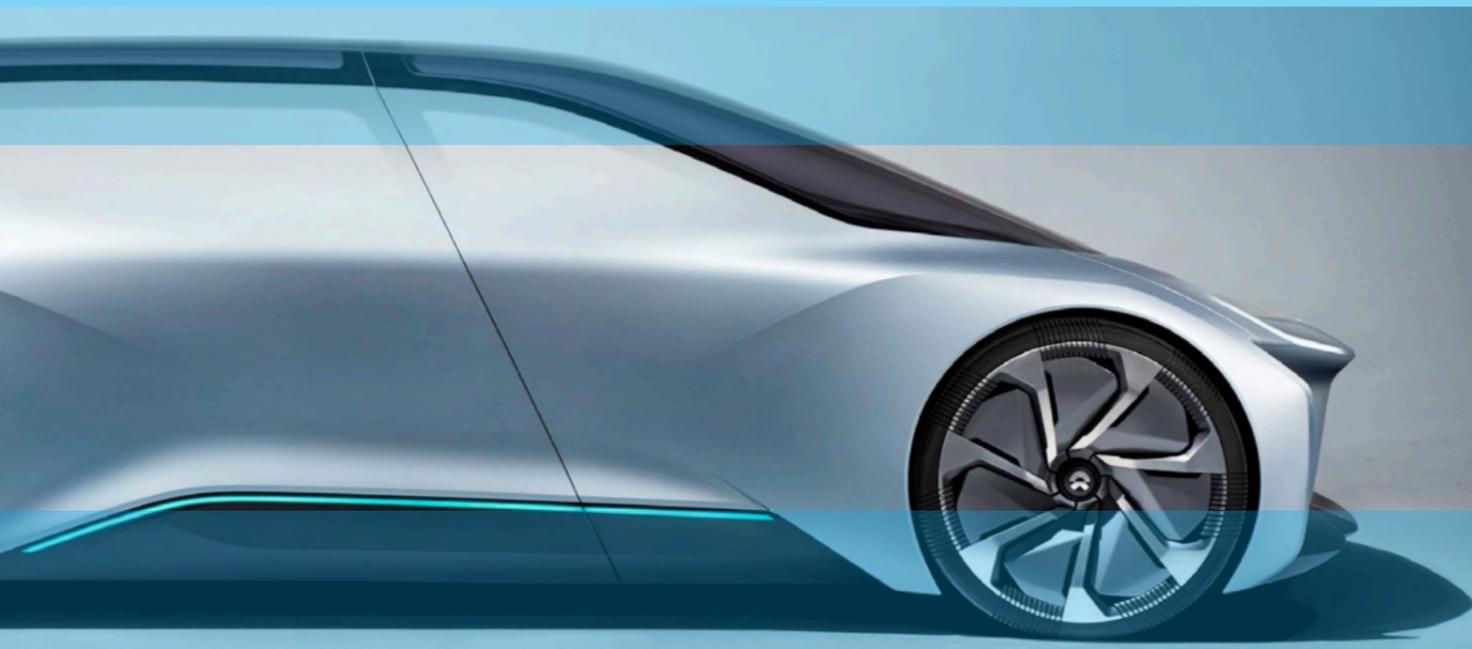
background

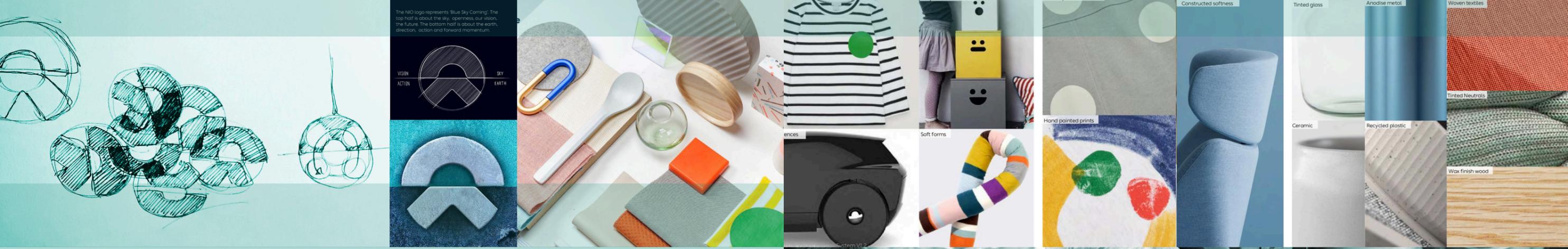
The NIO brand represents a new day. It's a symbol of our vision for a brighter tomorrow and for blue skies, as well as our commitment to positive change. NIO's Chinese name is Weilai, which translates as: "Blue Sky Coming".

NIO is a next generation car brand with the aspiration To Shape A Joyful Lifestyle for Our Users. NIO exists to make a positive impact in the lives of their users, shaping a joyful lifestyle filled with moments of ease, excitement, freedom, reassurance and recognition. Most importantly, NIO is a journey that is meant to be shared; NIO's entire enterprise model is built on the involvement, inspiration and ideas of every user.

brief

**Design a new product for the NIO Life range of products celebrating the brands core values and aspirations:
Products that enable a smart, sustainable and joyful life for our users beyond the car.**





inspiration

My starting point was the sky not as an object but as a subject. In the brief, I inspired from their vision and action representation of the logo. In my design I used the blue sky as a scene which is the place that kids will play in the future. I also blended their expression about life: Life is food, music, exploration. Life is being together, living well, learning. Life is where you go, how you dress, the joy you feel.



Story telling robot help children learn

In an eight-week trial, Tega read picture books to children aged from 4-6 years. MIT team found out that all the children who played with Tega had improved vocabularies. Their error rate on a vocabulary test dropped by 23 per cent.

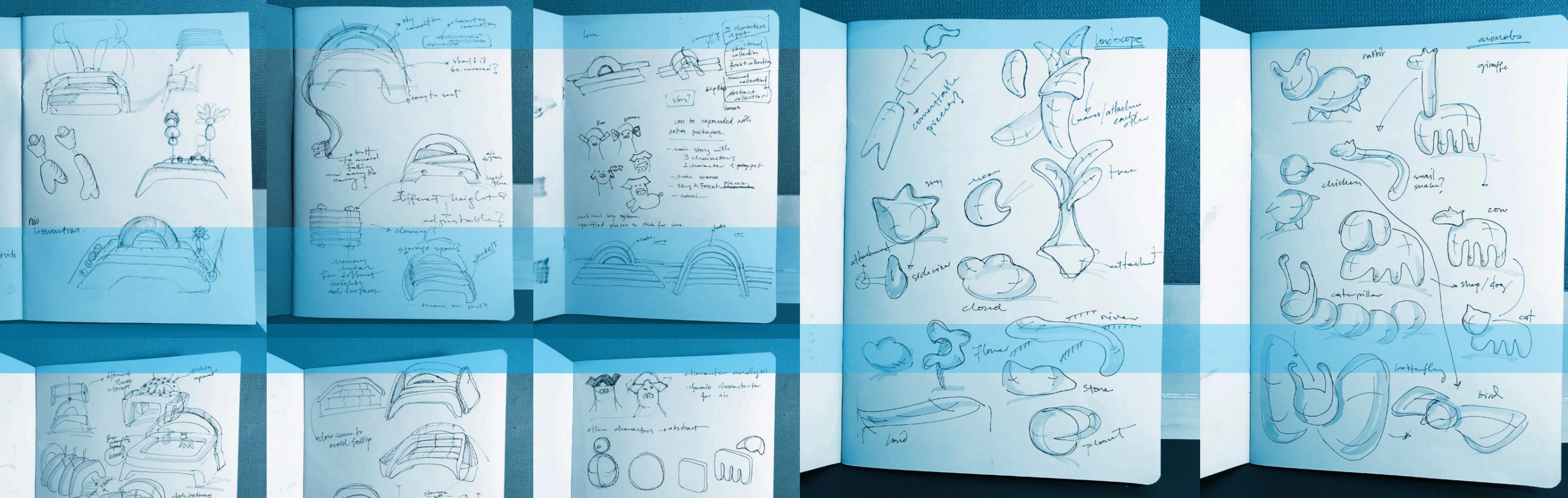
New Scientist / 23 February 2019



research

"Cookie sheets make awesome backseat desks for kids. The raised edges keep crayons from rolling off and the metallic surface is super for playing magnetic games and puzzles of all kinds. In this pin, Cultivated Lives shares how cookie-tray desks are great for coloring and sticker play."

"Sometimes I quizz him, sometimes he quizzes me, sometimes he would ask for a hint and I would hand him the card so that he can count the items on the back of the card."



First Presentation

In the presentation I tried to explain the main features of the product and benefits for both children and parents. I offered that their artificial intelligence NOMI might also collaborate with them to improve the story and the experience they would.

ideation

From my research I realised that parents are having trouble to focus on driving while they are with their kids. Kids get distracted easily and want attention all the time in their car seats. Therefore, I focused on this problem and try to explore it. I came up with an idea that kids can play with it while they are on the car seat or at home. I tried to create a scene which reflects the idea of sky and the earth and called it SkyLand. I tried different surfaces to connect the playing objects and the SkyLand. Characters: I tried to keep them as abstract as possible to let kids to use their own imagination for their stories. Moreover, I sketched them modular to connect different pieces to make different objects and characters.

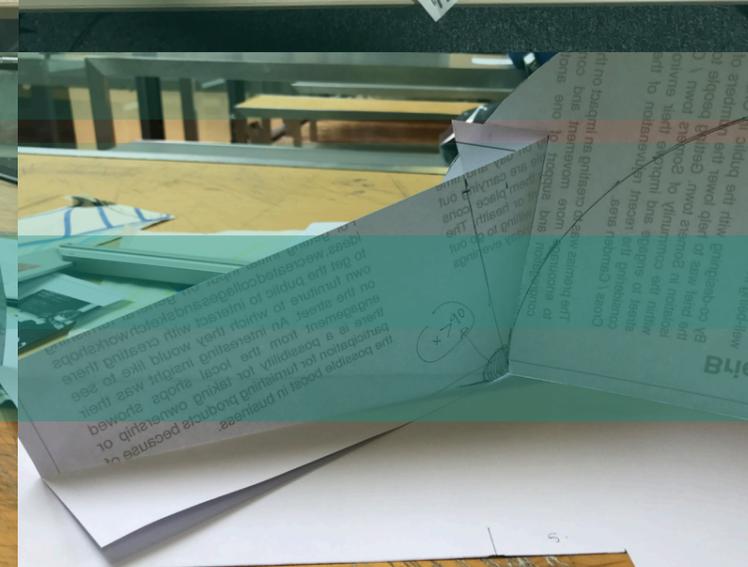
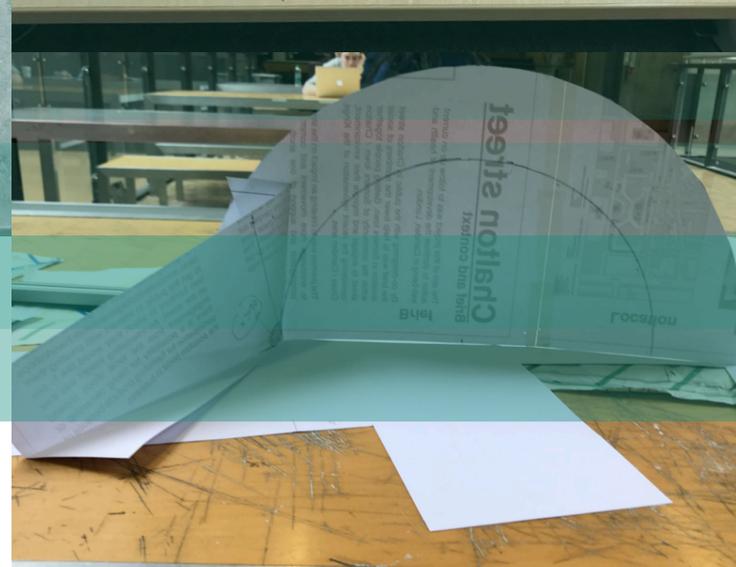
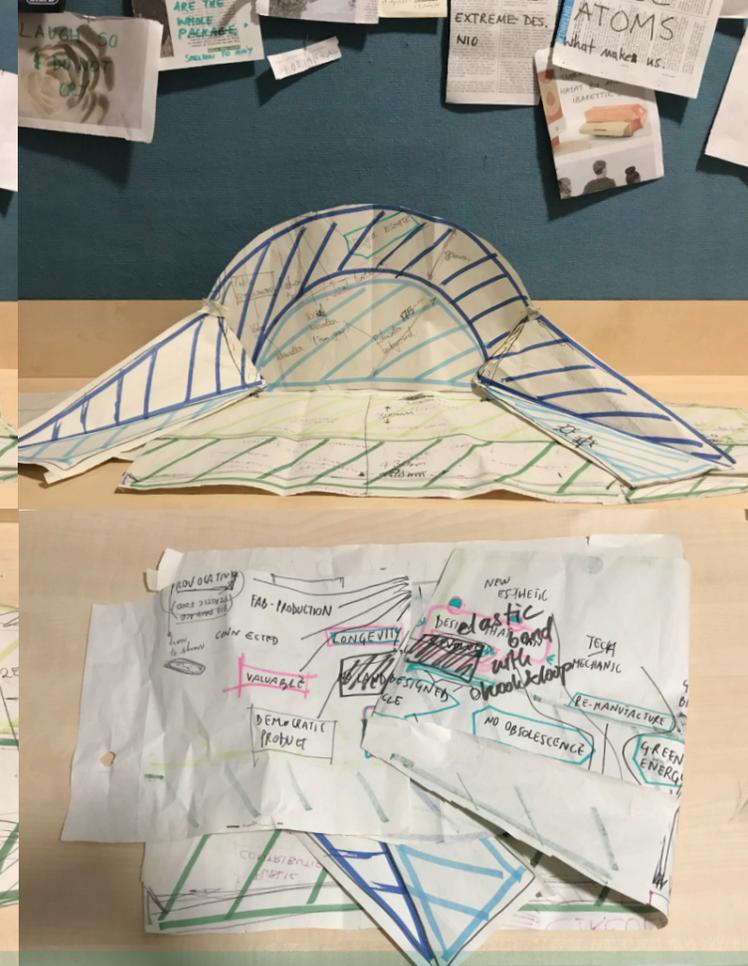
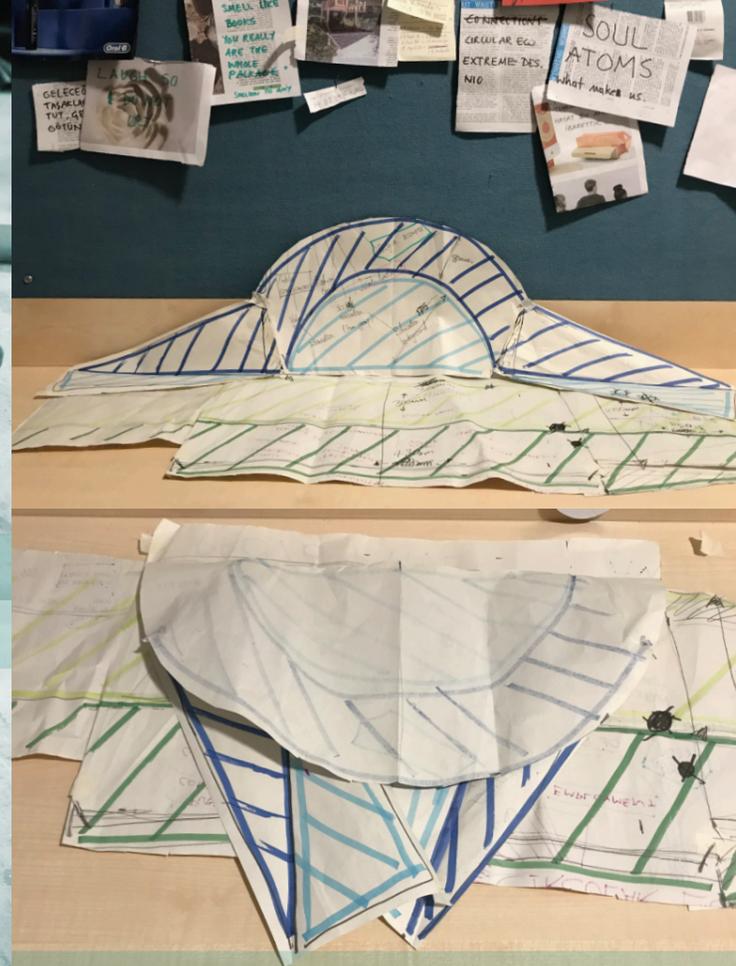
SkyLand

A product which enables kids to tell their own story.



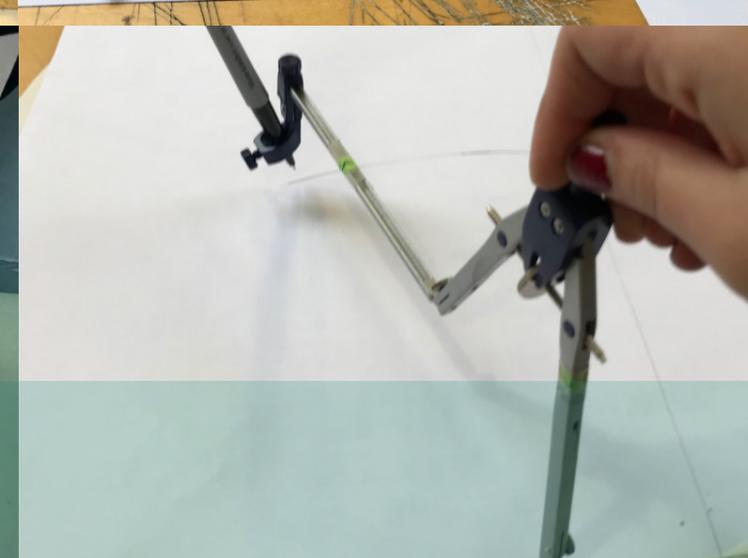
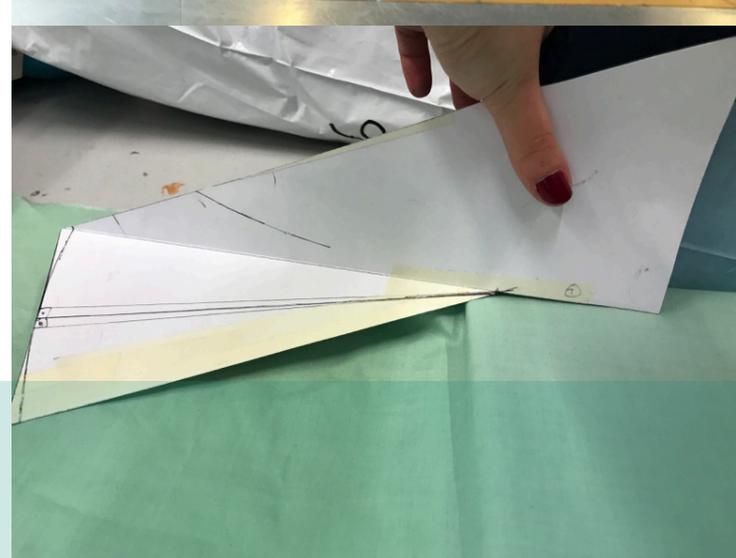
According to the story kids/parents/Nomi told, kids can create their own characters and attach to their skyland. Nomi can interact with kids by telling them stories.





mock-up

For the first mock-ups I used clay to find out the correct form for the SkyLand. I chose this material because it is easy to shape, fix and change. After I decide on the relative form I used paper. Paper was really easy to try different angles and determine the dimensions. Clay and paper saved my time and helped me to find the correct form and dimensions.



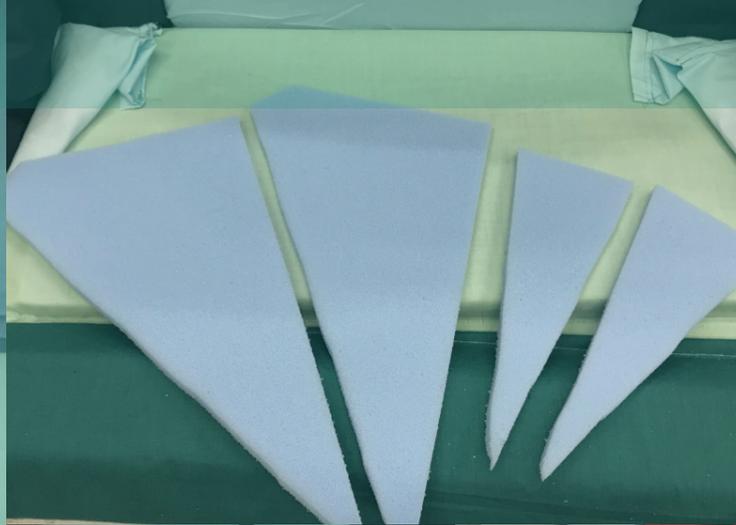
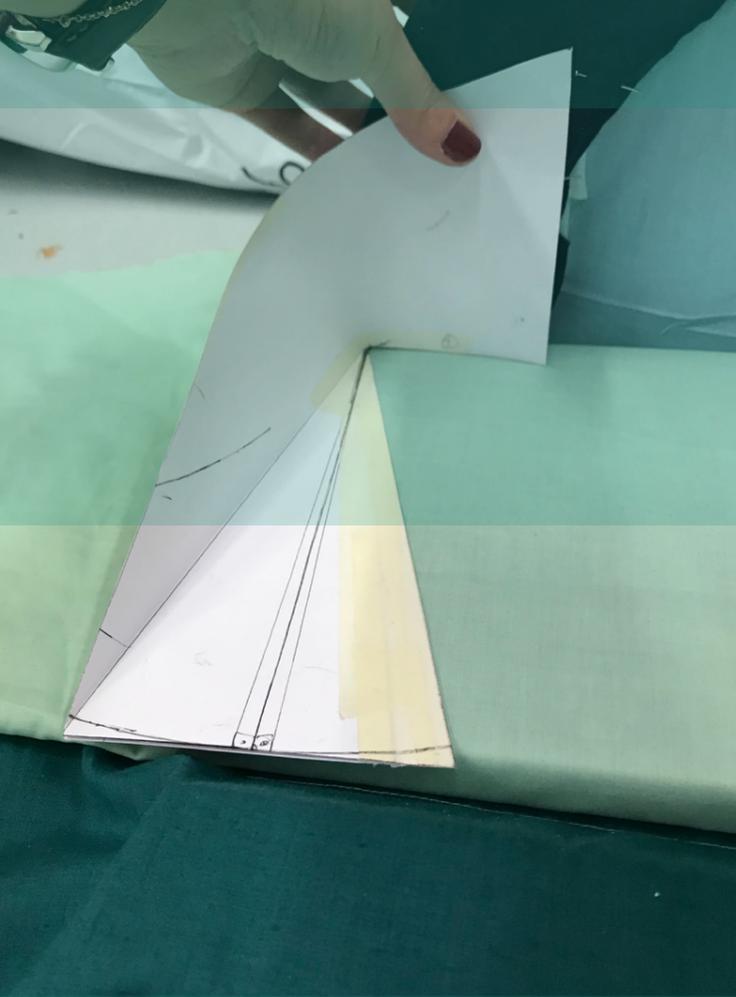
model making

It was my first time to use fabric for a main material in a project. While I was trying to design the product, I struggled because I was not sure how the material would react and what can or cant do with it. Thats why I used a different method than I normally use and worked on the prototype directly and design the product in process. After I decided on the colours I went to fabric shop and bought cotton fabric which is easy to work on and ordered polyurethane for the structure. I used polyurethane because it is easy to shape and lightweight. But I realised later that I am allergic to it so it was little bit hard to work on. One of my colleague taught me how to use sewing machine. Then I cut the fabric pieces according to my paper model. Paper layout was really helpful to manage sewing process. I went through step by step and in each step if I had something that I did not like or thought that might be better in another way, I changed. It cost me so much time but because I did not had experience before I thought that it was the best way to do it.

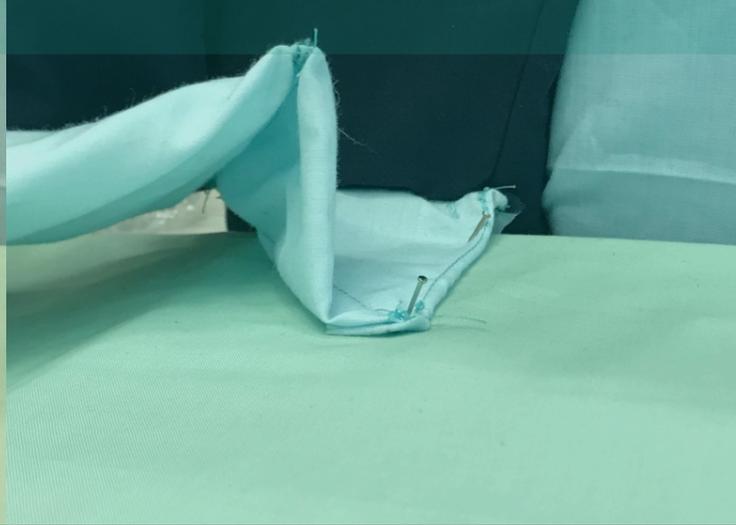


My starting point with the colours were NIO's blues and greens. Then I tried to combine them with bright colours to get the kids attention.





I cut out the polyurethane and sewed inside the fabric. At the beginning, I tried to sew the fabric and then placed the polyurethane but then I realised that it was much easier and faster to sew them together to be more precise and fast. Moreover, sewing curved layout was a big challenge for me, I tried different technics, then I found the best I can and best for my product.



I experimented different sawing and layout technics to make a rotating part. The object and characters were the most scary part of sewing, I tried machine sewing, hand sewing, fabric glue, super glue.



Strategically I left them at the end of the project, because they were taking so much time. I realised that it was a good idea because with time, I gained better sewing skills and managed to do them better I guess.



At the beginning of this project, I struggled so much to adopt myself to design something which was almost opposite direction of circular economy idea. I questioned a lot the consumption of today's world and could not find a light to work on. The idea of designing something which only can be bought by money was too strange to my evolved design perspective. But after I studied more on the NIO's brief, I found a way to combine my designer notion and their company vision. NIO has a vision for bright futures for a better world and living. When I thought about 'Blue Sky Coming', I asked the question of who is this sentence for and what does it refer to. The future is for the next generations for the kids. Therefore, I wanted to do something about kids who might make the blue sky come and create a better living for everyone.

As I mentioned before I changed my design method to design while prototyping. That's why I deeply focused on documenting my process to understand how to make it work. Sewing was really good and fun experience for me to learn but it was time consuming. I still need to work on characters, scenario and some design details such as holding and storing details.

I think I managed to design a product which is related with the client's brief, however, I could not manage my time properly to finish everything I wanted. Maybe I should have asked for less things and made a better working plan. Although I planned most of the things, sewing took my time so much but of course it was new for me and I am glad that I gained a new skill.

