Long-term Sneakers

Exploring the concept of extending
the lifetime of everyday sneakers

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Project title:
Long-term Sneakers

Design discipline:
Industrial design

Theme:
Sneakers

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Content

About

According to one of the largest sneaker corporations, Nike, the majority of the consumer's sneakers are meant to last between 200 to 300 miles (321-482 km).

In perspective, this means that the average Norwegian office employee, which takes about 5,000 steps a day, will reach about 321km after only 92 days. Hence, if the average employee was to only use sneakers, the sneaker would be replaced four times a year.

(321 km / (5000 steps x 0,7 meters each step) = 91,714 days)

(Nike, 2021)
(Dytt, 2022)

Figure 1.
Collecting box from Fretex
Photo: Mathilde Mortvedt, 2022

On an annual basis, the footwear industry releases 700 million metric tons of carbon dioxide into the environment, making it one of the most polluting industries in the world.

The footwear industry produces 23.5 Billion pairs of shoes every year, which are being used by only 7.6 Billion people. This results in the average annual consumption of three shoes globally. In addition, we all know that most of the shoes being sold globally are bought by industrialized countries, and hence the annual consumption of shoes is effectively much higher.

The overconsumption does not only result in increased shoe production and higher CO2 emissions but will also lead to other environmental damages such as littering and an increase in microplastics.

Approach and context

“According to the U.S. Department of the Interior, Americans throw away at least 300 million pairs of shoes each year. These shoes end up in landfills, where they can take 30 to 40 years to decompose. Ethylene Vinyl Acetate, which usually makes up the midsole of most running shoes, can last for as long as 1,000 years in a landfill.”

- James, B. (2020) Founder and Chief Creative Officer at Concept 21, Footwear.

“The design of everyday things is in great danger of becoming the design of superfluous, overloaded, unnecessary things. .”

- Norman, Don. (2013, s.293) The design of everyday things

Figure 2.
Photo: Jairus Gallimore, unsplash.com

Personal motivation

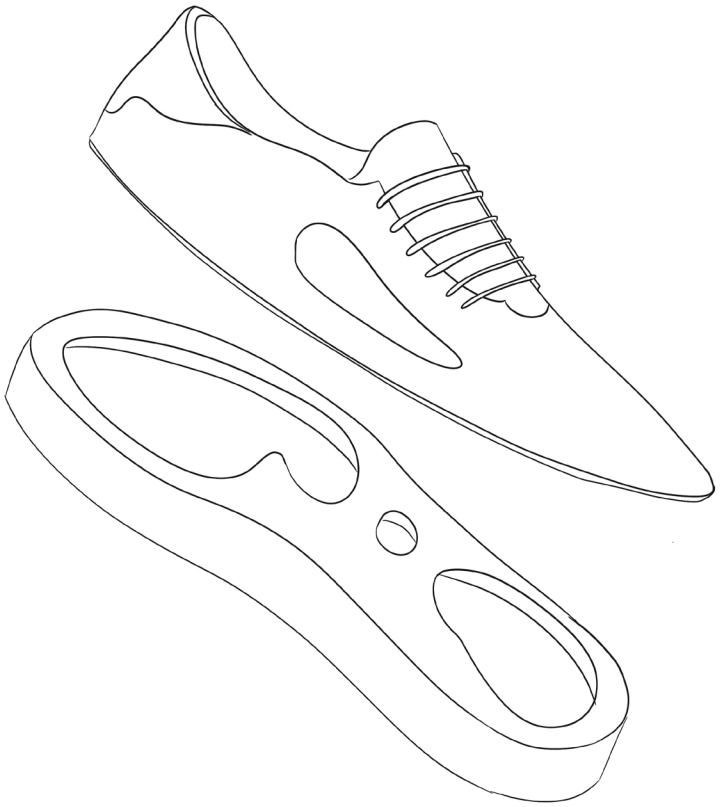
I see the potential of exploring the relationship between sneakers and the users. Not only to look at recycled material and ways to recycle sneakers, but more importantly how to enhance their durability as long as possible which will result in less waste. During my years at AHO, I have gained an interest in sustainability and especially the understanding of how much emissions, energy, and waste are created just by making one product.

There will always be produced products around the world, but it doesn't need to impact the environment as much as it does today. Despite how small the changes could be, I mean that each step towards a more environmentally friendly solution is important.

My motivation for this project is to improve the consumer's attitude toward maintaining and repairing sneakers rather than throwing them away and purchasing new ones. I want to strengthen the consumers' relationship with their products and educate why it is important to take care of the products that you already have.

Outcome

I used this project to explore and develop a well-constructed product that will encourage users to take care of and improve the duration of their sneakers. It will decrease the need for a new pair, and reduce the amount of waste created by high consumption. At the same time, create a modular sneaker where worn-out parts could be replaced, rather than throwing away the whole sneaker.



Methods

Weekly mapping

During my project, I have weekly mapped my findings and insights. This gave me the possibility to take time to reflect and to get a better overview of my process each week. This also allowed others to get a better understanding of my project and made it easier to locate desired information and keep up the progress.

Expert interviews

I saw the need for contacting experts to get important insights.
My knowledge of sneakers was quite low at the start of this project, and by talking to experts I got the validation and facts I needed to go further with my choices. It was important to me to get knowledge from all areas around sneakers, and I did that by talking to designers, cobblers, and potential users.

Diary

By writing a weekly summary, I allowed myself to reflect on and summarize my important thoughts and findings throughout the week. By doing this, I had the accessibility to my raw thought process and it helped me
remember relevant information. This approach gave me a
structure for my thoughts and helped me see what I needed to do over the coming weeks.

Sketching

During my early period of ideation, sketching was my main source
for experimenting with shapes, functions, and details. I found it useful to look at social media and the shoe market to see what is already existing and what kind of aesthetic the user desires today. By combining sketching and exploring, I was able to find a design that stands out from the market today.

Figure 3.
Sketching
Photo: Mathilde Mortvedt, 2022

Workshop

Working alone can sometimes limit the designer's ideas and creativity. It's easy to get tunnel vision, and by having workshops I got some new perspectives and thoughts I had not thought about before.

Live mapping

During this project, I have been using the Giga map Method to get structure in my design process. Each week got a space, where thoughts, ideas, and findings were placed. This approach helped me see my growth through the project, and made it easier for me to have an overview of connections and then locate specific findings more quickly.

Rapid prototyping

By using existing products,
I could rapidly experiment and
test my ideas around function
and also see how some sneakers
are constructed. I also deconstructed
a pair of old sneakers to get insights
and to make my function ideas more
credible.

Rapid ideation

To be able to get effective and rapid
ideation I used mind maps, Post-its,
and a lot of exploring on the web.

With mindmaps, I got myself a better
overview of different topics, existing
functions, esthetics, and more. I was
able to look at the “bigger picture”
and got a better look at how
everything around sneakers could
be assembled.

Research and ideation

During my early research,
I found some questions that I
needed to find the answer to:

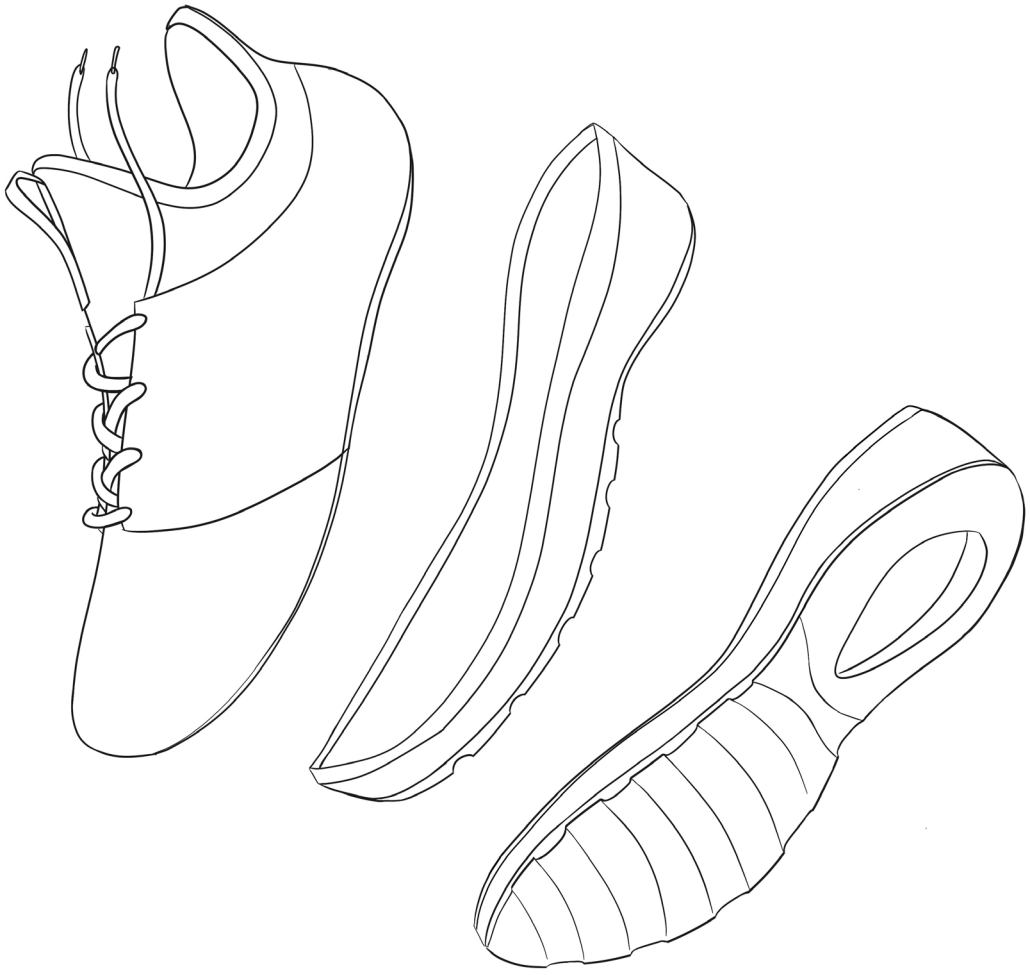
Is it better for the environment to rent
rather than to own clothes?

And if so, how can we rent out shoes?

Is it only the sole that gets broken after
a long time of usage?

Could the user or a cobbler
change the sole to extend the
sneaker's lifetime?

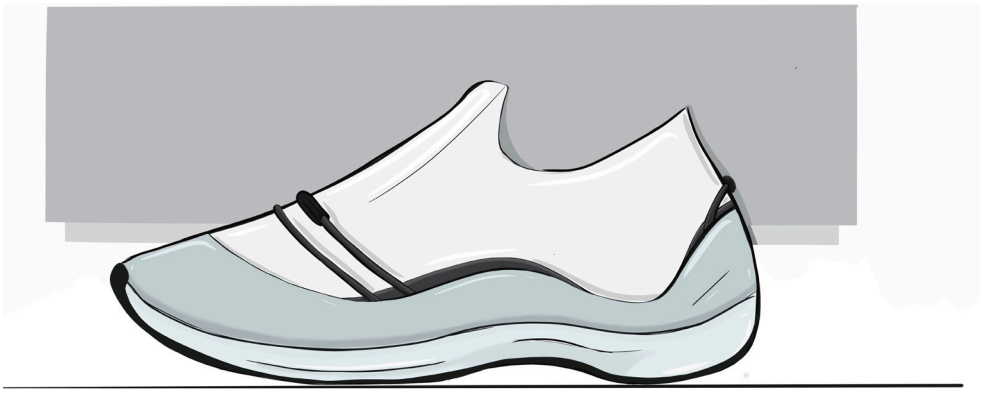
Could the upper part of the sneaker
be easy to clean and repair?



Wear and tear

Where do the wears and tears happen around the sneaker?

To get a bigger understanding of what and where the tears on the sneaker happen most often, I collected sources and mapped them out. By doing this I saw that different areas on the sneaker were more difficult than others to fix. For example, the sole and the mid-part of the sole often can't be fixed and needs to be changed. Tears around the upper part were more simple for the user to fix, either with products they already have at home (needle and thread, glue…) or buy products to reappearance.



The wear and tear on your running shoes are greatly affected by your running style, weight, amount of training, and the surface you train on.

The heel cap

- Typically firmer than the rest of the shoe (often plastic).
- Ensures better grip and support for heel and Achilles.
- If you do not tie up the shoelaces when you take off your sneakers, this part will quickly wear out.

A **worn insole** can create friction, chafing can come from poor fit or inadequate tying of shoes.

Wear and tear **inside** the sneaker can reduce the shoe's grip on the foot.

Hole in **front** due to the small space for toes.

Midsole (shoe comfort + shock absorber)

- The molecules get flatter after each use.
- The molecules use approx. 24 hours to straighten before they can again provide proper shock absorption.
- Gets wrinkle lines as a result of wear.
- Often made with the material called EVA.

Wear on the material around the **ankle**

- Wear on the seam
- The foam may appear

Outsole (thin made of rubber on the underside)
Is the first to show signs of wear
A worn outsole can reduce the attachment with the surface

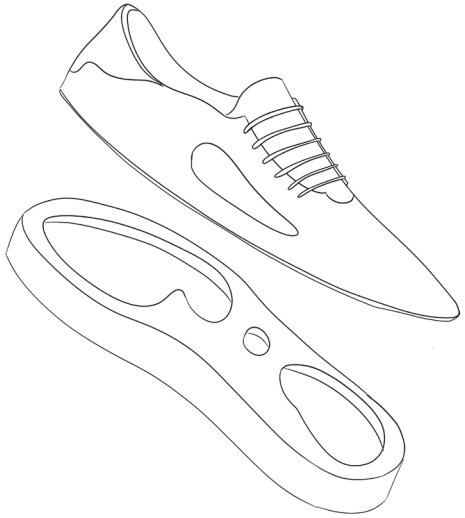
Existing products

By looking at existing products on the market, I was able to get some inspiration, as well as educate myself on the current products.

What possibilities does the user have to fix their sneakers, and whether or not there is a gap within the market. During this exploration, I found some solutions for the consumer to buy soles themself but they were often made out of rubber and they are also without any certainty of their quality. Some online services also offered to change soles, but it was often as expensive as buying new sneakers.

Insights: Changing the sole could be quite expensive. And by buying “do-it-your-self” soles, the user often had to deconstruct and attach the sole themself with glue. This could be quite difficult and could increase the risk of damaging the user’s health and hands. Because of the uncertainty related to the quality of the soles, physical damage to the user can occur if the sole doesn’t absorb the shocks during use. Uneven soles could also create strain on the consumer, and create long-term physical damage.

Existing products
Figure 4.
Photo: Mathilde O. Mortvedt, 2022



Different ways of assembling the sole

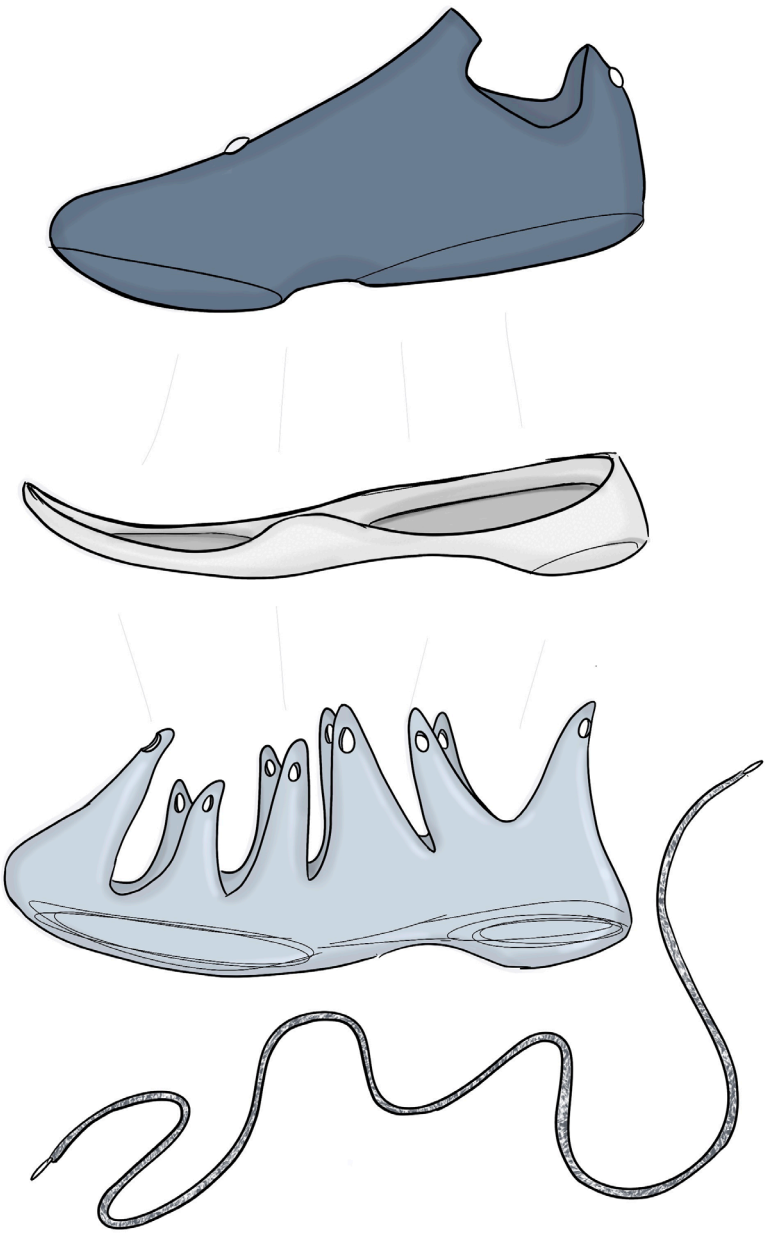
Existing ways of mounting soles today are few but effective. The most common ways to assemble sneakers are:

Molded / Direct injection
With this process, the whole shoe or a part of the shoe gets molded with one material. By molding the sole, the production can mold the component directly on the other part to reduce production time and avoid the use of glue.

Sewn-in-Sock / Ströbel
Here the upper part is attached to the insole with a locking machine, that creates a “sock”. The last part is mounted by force lasting. With this process, the sneaker is roughed on the areas where the outsole has to be cemented with glue and pressed.

This type of mounting makes it very difficult and often impossible to change the sole, and can be very energy draining and chemical non-environmental friendly.

I looked at a non-sneaker method called “Welted” where the cobbler stitches the parts together either by hand or by machine. This is a common way of making, among other things, good quality hiking shoes, Oxford´s or Derby. This mounting method enables the cobbler to replace the sole and it’s often done on high-end/ expensive shoes. The negatives are that it needs to be assembled by a cobbler and the service takes often a long time and has a high cost.



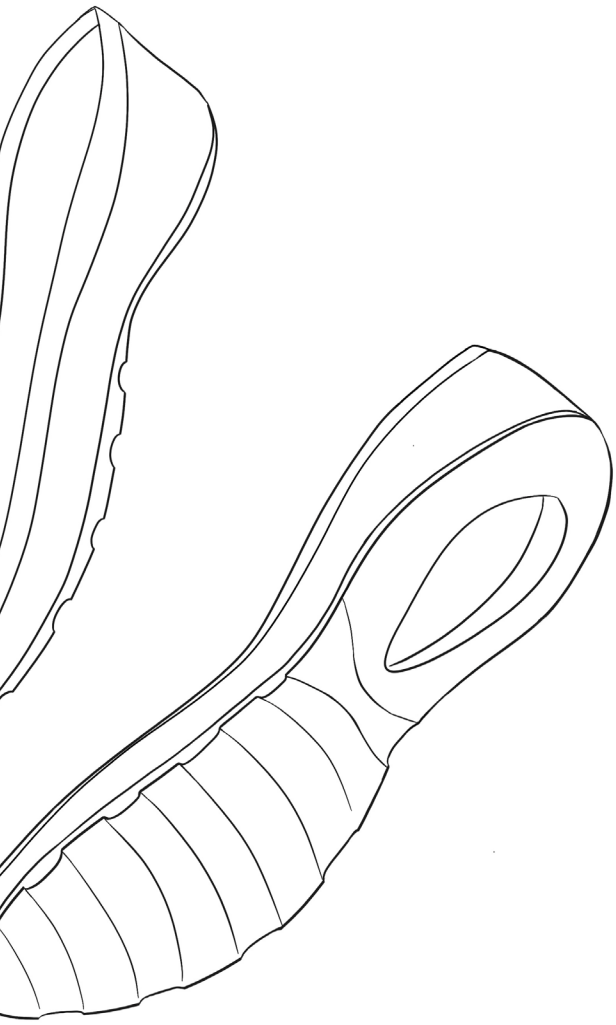
Renting vs. owning sneakers?

A study made by the Finnish scientific journal “Environmental Research Letters” has researched the environmental impact of five different methods of using clothes. They found out that because of shipping, packaging, and cleaning, garments that you use often are more environmentally friendly own compared to rent.

Hence, I went further with the idea that the user would own the modular sneaker. By making this decision, I focused on designing a modular sneaker that could decrease the amount of waste and increase the use of other components.

Desireability

Because of my focus on improving consumers' material waste, the sneakers will need to be more durable, easy to replace worn parts and hence extend the life span of the sneaker. And when I say sneakers, I mean sneakers with shock-absorbent soles. For the user to be willing to use the sneakers for several years, it is key to create a certain connection or desirability to the product.



Why should the user get a connection with my product?

What creates a personal belonging to products?

Interviews

Designer at Adidas

The designer at Adidas has given me meaningful insights and knowledge about the technical parts of a sneaker. How they are produced, the economics, and the logistics. Beyond the technicality, the designer verified my thoughts on the sneaker market, its functions, and what to think about regarding the choice of material.

During our first talk, the designer was positive about my plans of creating a modular sole. However, to make the concept possible I needed to be aware of the logistics and the processes. If I wanted to create a modular sneaker for a larger company, the logistics could prove to be the main obstacle rather than the design.

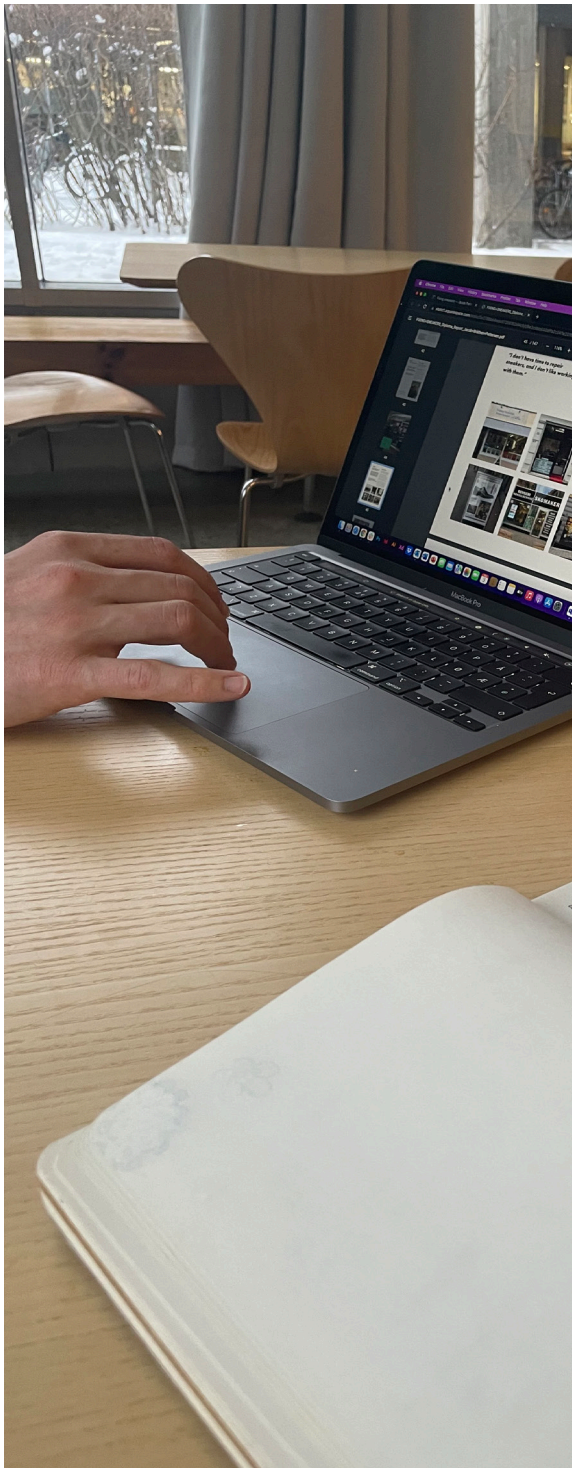
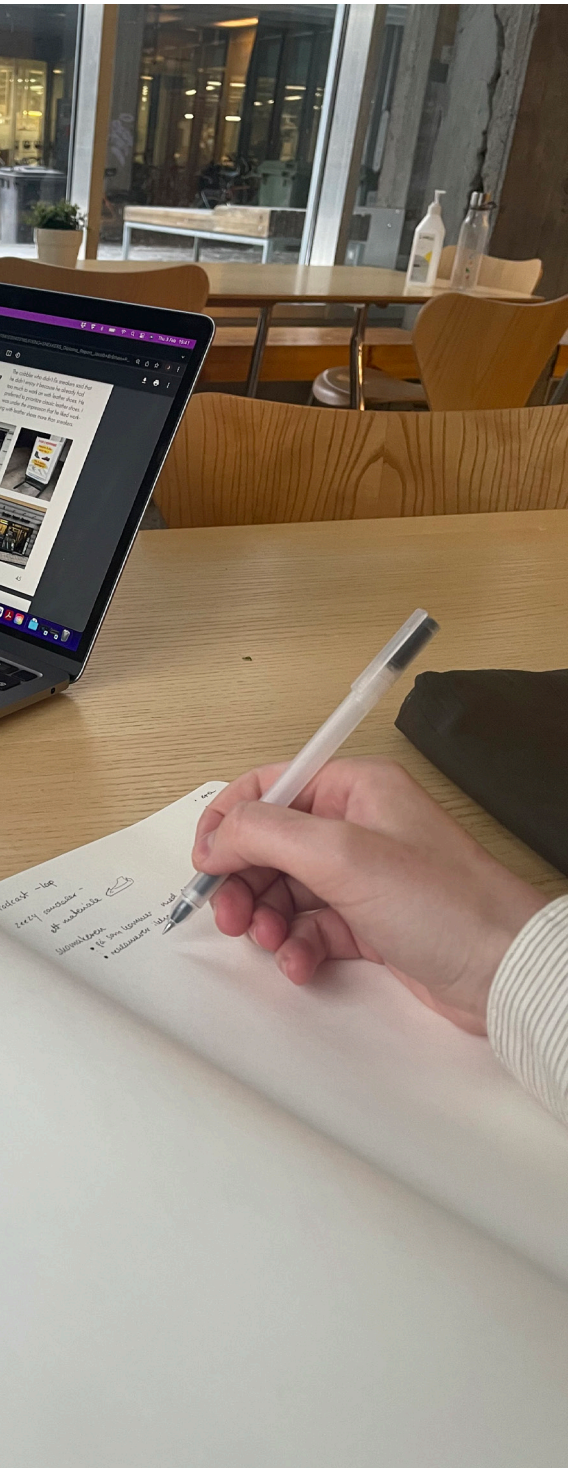


Figure 5.
Photo: Mathilde O. Mortvedt, 2022



Cobbler, majorstuen

I needed to interview a cobbler to be more aware of the limitations and possibilities of implementing cobblers in my service.
I tried to locate a cobbler with knowledge of sneakers and found a cobbler who produces shoes themselves. Unfortunately, he didn't repair sneakers that often and told me he was quite skeptical about replacing worn soles on sneakers. Many of the soles are molded into the upper part, and most sneakers today take too much time and effort to be worth repairing.

The cobbler told me that it all depends on how the sole is implemented to the upper part and that the simpler components on the sole, the better. Some sneakers have "special" materials/ components within the sole, such as injected air.
This will complicate the processes for the cobbler, and again make it more time-consuming and hence reduce the likelihood of repairing the sole.

Jacob Pettersen, former AHO student, written the diploma ”Fixing sneakers”.

Jacob Pettersen is a former AHO student who wrote a diploma about repairing sneakers. During his diploma, he talked with many cobblers and users around Oslo, and during our interview, he shared information about how he experienced people’s attitudes toward maintaining sneakers and the use of the cobbler’s services.

Figure 6.
Photo: Mathilde O. Mortvedt, 2022

Insights

Pettersen`s impression of young sneaker users was that they like their sneakers to look new, or clean. New-looking sneakers could express a person's "wealth", especially if the sneakers are in the color white.

Users don't like services where you need to do too much effort yourself, and | Pettersen's impression was that users think it is too much hassle to use the cobbler's services.

Many consumers don't know that some cobblers can fix sneakers and they are often reluctant to seek its services as they are insecure about the costs of the cobbler's services.

Based on Pettersen's findings, he argued that if the quality of the sneaker is high, the higher the probability that the user will take care of the sneakers.

Explore function

By drawing simple illustrations on post-its I allowed myself to be creative, explore, and to maintain a simplistic design. Just by doing these simple sketches, I managed to create 30 interesting ways of mounting the sole to the sneaker.

Figure 7.
Photo: Mathilde O. Mortvedt, 2022

Deconstructing sneakers

“Deconstructing a sneaker can be quite difficult... “

By deconstructing a sneaker, I got to experience how difficult this process could be for a consumer without any experience. Also by doing this I got the opportunity to experiment with functions and ideas on a one-to-one scale.

To deconstruct the sneakers was not easy. Even though the sneaker had been worn for over three years, it was still difficult. Since the sole was glued and molded into the upper part, I wasn’t able to take them apart. Not even submerging them in hot water helped, despite reading about this online. Eventually, I had to cut the sneaker apart, and then I sewed the inner sole onto the upper part, to create a sneaker without a sole.

Figure 8, 9 & 10.
Wear and tear around the heel and the front
Photos: Mathilde O. Mortvedt, 2022

Before cutting, I analyzed the wear and tear on the materials. The upper part was knitted in a pattern which made the material less durable.
On the front, there was a tear where the big toe is positioned. The material on the back of the upper part was a stretchy, thin material, and the usage had created gaps/holes between the sole and the upper part. Other than that, the shoe was not too damaged (other than color reduction, and some small tears around the shoe).

The reason I chose these particular sneakers for my deconstruction was that the upper material and color looked tired and worn out. The rubber parts didn't express quality, and I just didn't like the design anymore. The sneakers had a tired look, and also felt tired when I used them. However, the major reason for me to select these shoes was that the sole didn't give me the support that I needed and therefore I saw no reason to keep them.

Rough prototyping

The tools that I used during this exploration were 3Dpen, rope, rubber bands, needle, and thread. The 3Dpen allowed me to print directly on the existing parts, without spending too much time on the computer and waiting for them to be finished printed on a machine. The results were quite rough in design, but it was fast and visually descriptive. What I learned during this exploration, was that the front and the back of the sneaker were the areas that carried the heaviest load. To get a firm grip on the upper part, the shape needed to cover a certain amount of surface. I also used a sock as a cover, to see how much of the griping/ connection areas could be removed before it let go.
The experimentation confirmed my thoughts about the possibilities, and these were valuable insights that I could take with me to the next step.

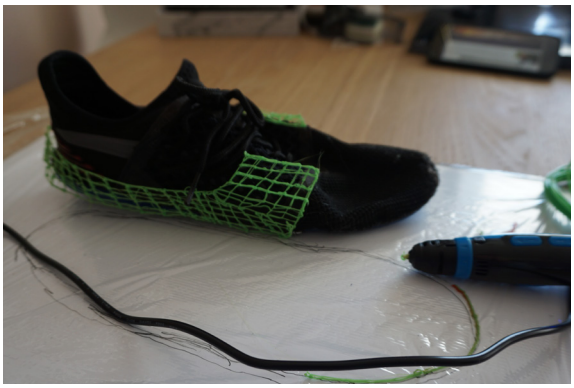







Figure 11, 12, 13, 14, 15, 16, 17 & 18.
Prototyping
Photos: Mathilde O. Mortvedt, 2022

Requirements

I created some requirements for my product, which enabled me to get a focused direction and take decisions more quickly.

Must

- User friendly
- Upper part
    - Durable material
    - Washable
- Possibility to change parts
- Possibility to change laces
- Unisex look
- Upper part
    - Minimalistic design as a base

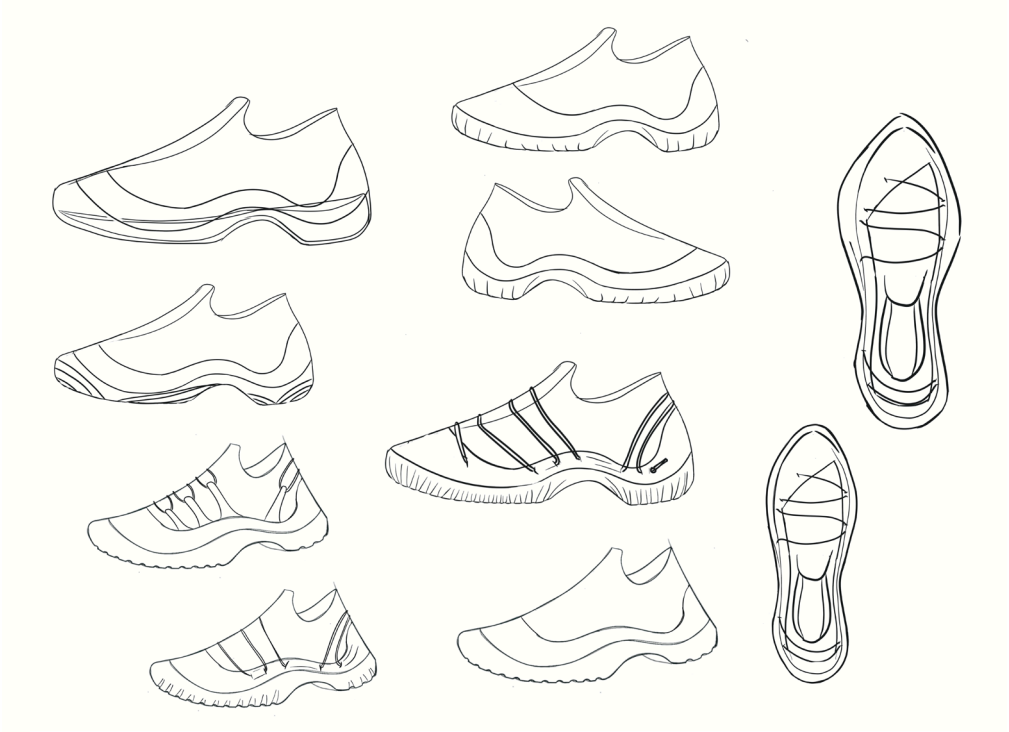
Should

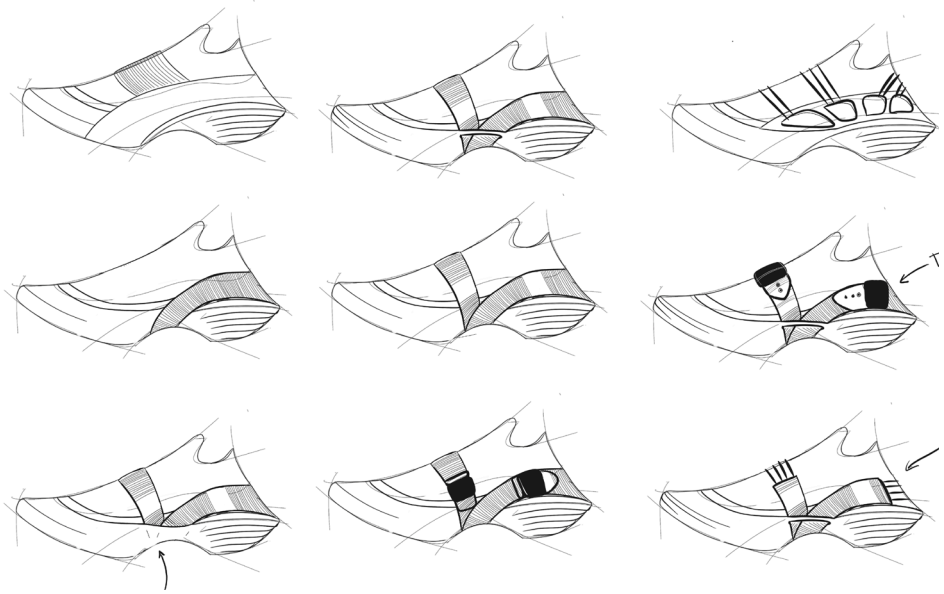
- Simple to repair holes
- Recyclable materials
- Possible to recycle
- Reflect on the brand's identity
- Simple maintenance
- Create a connection between the sneakers and the user

Could

- Personalized options
    - Color
    - Shape
    - Material
- Color options
- Possibility to change functions by season
- Waterproof materials

Sketching





Consepts

I chose to create four different concepts. I went from existing methods of mounting soles, too more explorative ways.

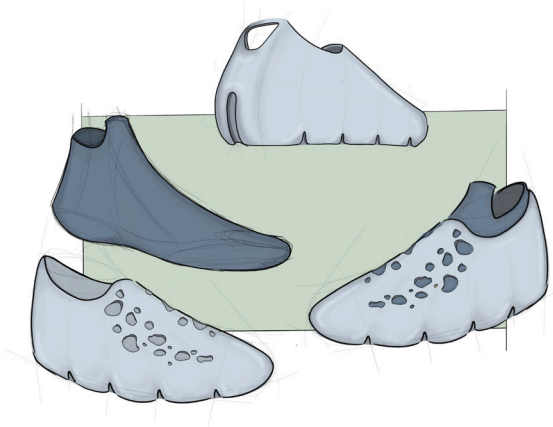
I used the same color palette to avoid favoritism around color, and I also created concepts with minimalistic design to avoid creating something solid and fixed.

1. Fold

Three parts
Can be changed by the user

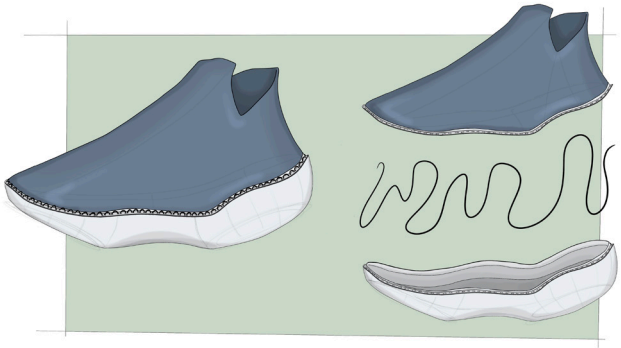
2.Ski

Inspired by Skis
Technical solution



3.Sock

Two parts
Can be changed by the user



4. Welted

Hand/machine sown
Needs a cobbler

Workshop

After creating five concepts, I arranged a workshop with three fellow design students. With them, I reflected on each concept and discuss which qualities to improve and how to strengthen the relationship between the user and their sneakers.

During my workshop I wanted the participants to be free to use their creativity and focus more on the mounting methods rather than the shape and design of the sneaker. The reason that I created four concepts, was to widen the horizon for both myself and the participants.

By doing a workshop I wanted to explore the term desirability around sneakers, and as well get feedback and ideation around my four concepts. I divided the workshop into two parts. Firstly the participants got the task to explore and talk about the desirability of sneakers. During this task, the participants used post-it notes and wrote down words and sentences around the theme. I showcased four sneakers with different esthetics, to give the participants examples.

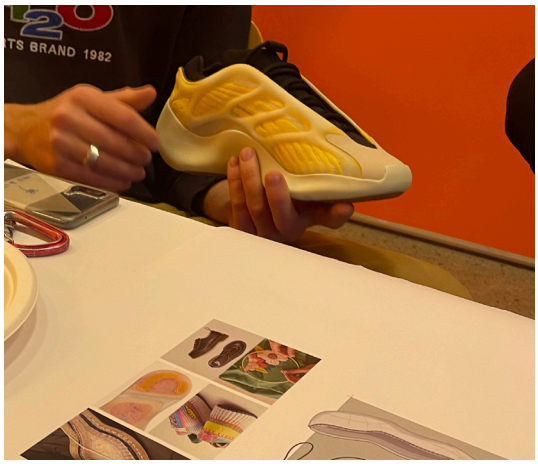


Figure 19 & 20.
Workshop
Photos: Mathilde O. Mortvedt, 2022

Figure 21.
Workshop
Photos: Mathilde O. Mortvedt, 2022

"The effect of cleaning sneakers isn't as satisfying as cleaning leather shoes. Leather shoes look almost new after cleaning. Sneakers never look fully cleaned."

Before I showed my concepts, one of the designers suggested that it would be nice to have different soles to change too. This way, you could use them in different weather conditions.

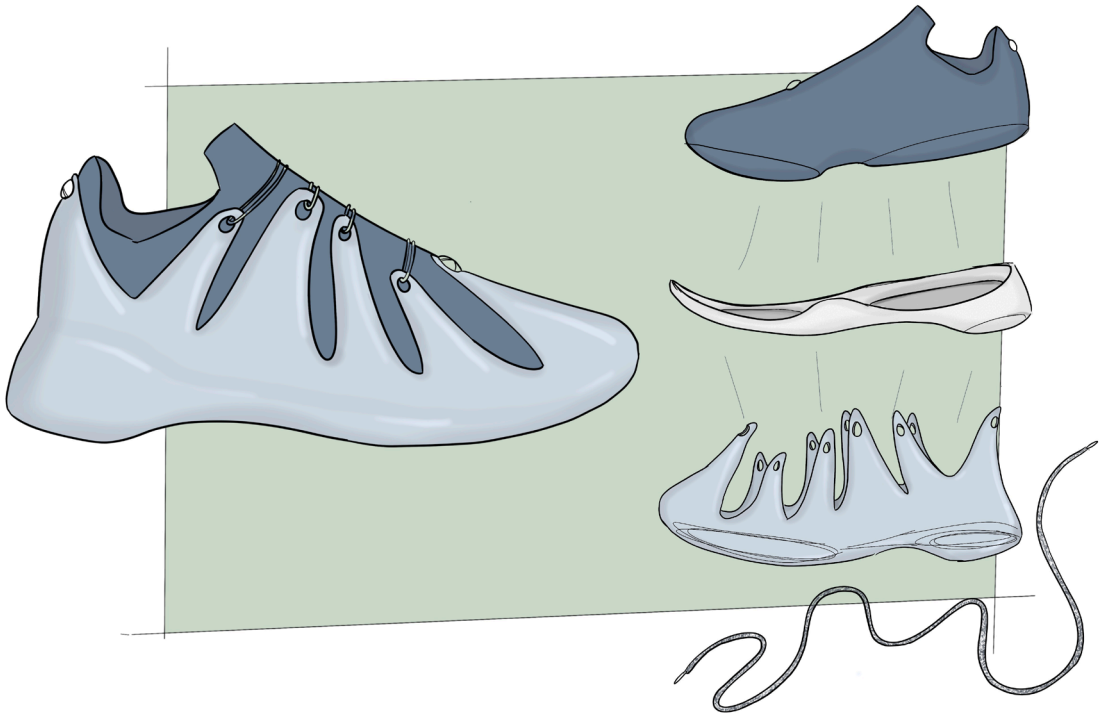
Secondly, the participants were shown my concepts. They all agreed that they liked the concept of "Folding" best. This was in line with my thoughts and research so far, and I also saw the most potential in this design to create something original.

On the contrary, they all agreed that the concept "Welted" would be difficult to implement in the consumer's life. This as the too the threshold to change sole at a cobbler is too high. While the concept "Ski" and "Sock" had too many elements on a designer level.

Chosen direction

I chose to go further with the concept fold and the concept sock. This is as I saw the most potential within the two, and they are also possible to create them as a modular product that the user can change.

With these concepts, the user can change the shock absorbent part easily, and they are also able to adapt the sneaker for different conditions.



“Design is really an act of communication, which means having a deep understanding of the person with whom the designer is communicating.”

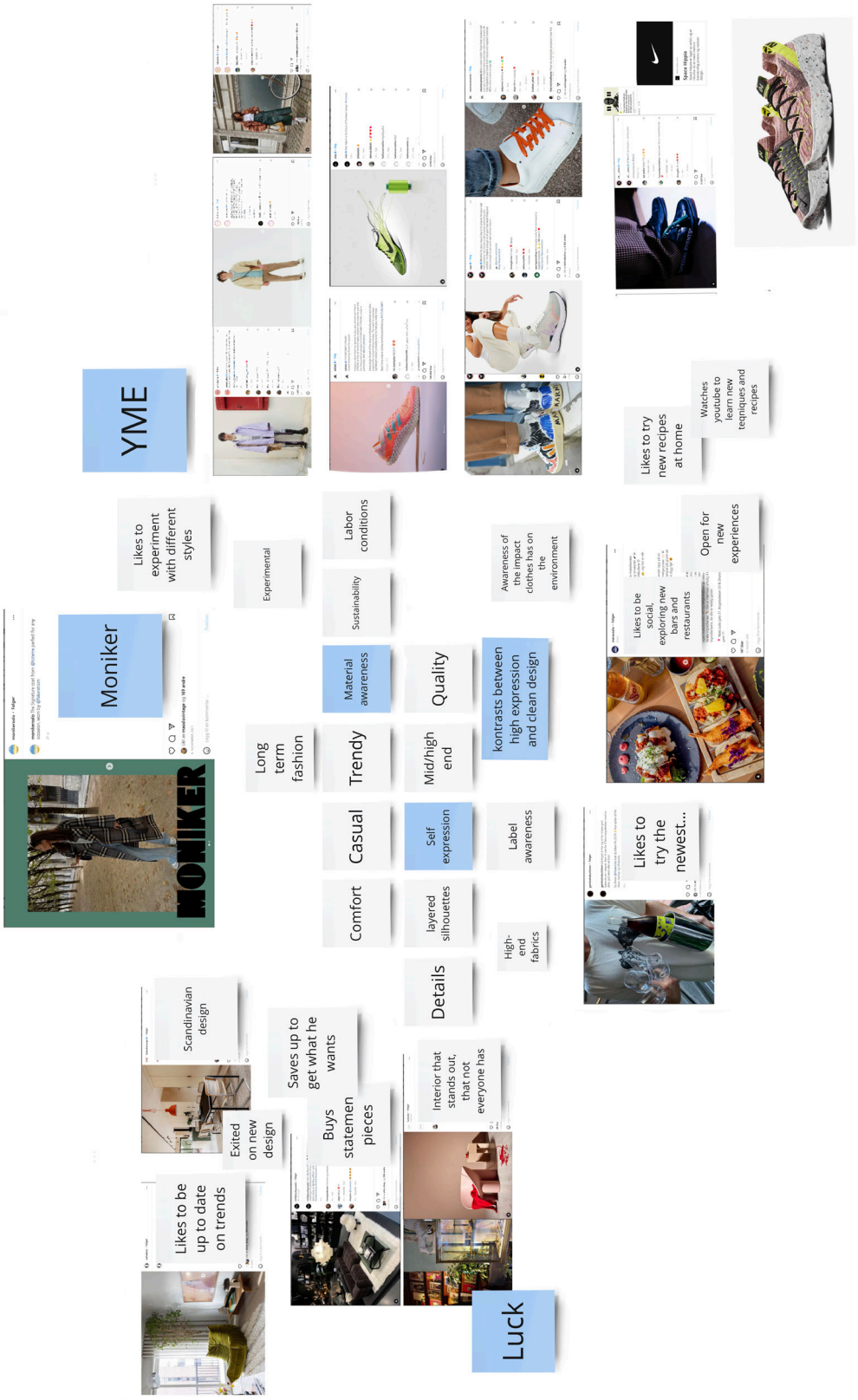
- Norman, Don. (2002) The design of everyday things

Moodboard

To get a better understanding of the characteristics of the potential user, I created two Moodboards and a persona. One mood board with words and one with illustrations. The words are based on discussions around my concept.

With my mood board consisting of illustrations, you get to know my persona “Anders”. Anders lives in the city and likes to explore new trends whether it’s fashion or food. He is a person who likes to show his personality through his clothes and likes to have unique and original items that not everyone has. Anders likes to have statement pieces mixed with minimalistic designs but is aware of the environmental impact clothes have and he tries to buy items of good quality.

I find that the user`s lifestyles and their fashion are more relevant than the user base age. Fashion has no age, hence, I ruled out this variable.



Mood board - potential user
Figure 22.
Screenshots of instagram account, @meravoslo, @gamleskobutikken @luckoslo, @millaboutiqueoslo, @bobedrenorge, @oslodeco, @monikeroslo, @ymeuniverse, @veja, @stressoslo, @iittala, @holzweiler (2020)

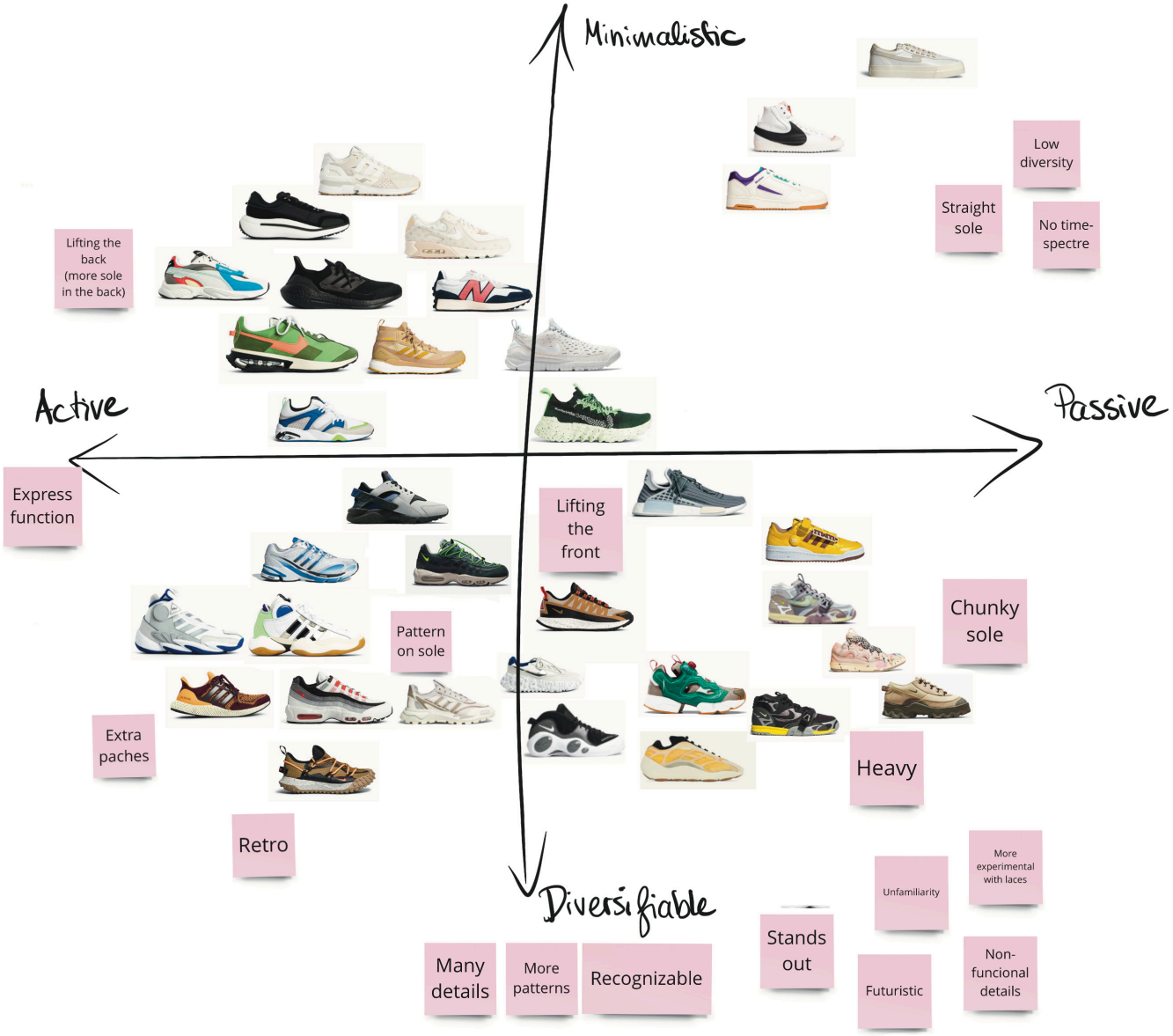
Positioning

By categorizing different types of sneakers, I was able to evaluate and make a reasonable choice about where to place my developing design.

Because of my chosen user group, I placed sneakers from the popular, high-end, Norwegian store Yme on a scatter plot based on esthetics and silhouettes. On the x-axis, the sneakers are rated from active to passive, and on the y-axis from minimalistic to diversifiable.

Then I categorized some areas on the scatter plot with different characteristics of the sneakers, and then I located the areas where I saw the most potential in the existing market.

I chose to position my sneaker where It should be minimalistic, and passive, but still have a character so that people remember and recognize the sneaker.



Positioning
Figure 23.
Screenshots from YME.com

Choice of material

After exploring materials, I decided to use TPU.

TPU is a type of plastic, or polyurethane to be more specific, and is considered to have elastic properties, be resistant to oil and grease, and can be transparent. Adidas has made a sneaker called “Futurecraft.Loop”, where they utilize TPU as the only material and it is based on recycled ocean plastic in the upper part of the shoe.

With my sneaker, I will use TPU sourced from ocean plastic, on all parts except the shock absorbent part, which will need to be light and bouncy. By using ocean plastic, I was inspired by waves and their uneven forms and patterns. The waves in the sole created an unfamiliar but minimalistic look. Which created interesting shapes around the sole. Also, I tried to create a form that looks unique from different angles.

(Adidas, 2019)

Figure 24.
Photo: ADIDAS

Figure 25.
Sneaker-night at Nationalmuseet
Photos: Mathilde O. Mortvedt, 2022

Sneaker-night at Nationalmuseet

Figuer 26, 27 28.
Sneaker-night at Nationalmuseet
Photos: Mathilde O. Mortvedt, 2022

This was a night where the audience got to see a documentary about Norwegian sneaker history and how the US sneaker culture entered Norway.

After the documentary, four profiles within the sneaker environment had a panel discussion around sneakers identity, how they think about people storing rather than wearing sneakers, and how they saw the sneaker culture was evolving. Here, the focus was not only on collecting but also on how they were used.

Insights:

Looks back to the days when sneaker collections were more exclusive and often only available in physical stores.
“The nostalgia has disappeared…”
- Morten Sørensen, YME

” I started to use sneakers to differentiate myself from others. But I had to work hard to get certain pairs of sneakers.” - Morten Sørensen, YME

” Mostly, white sneakers get putten away when they start to become grey.”
- Hanna Helsø, Sneakercollecter

” Norwegian sneaker enthusiasts got their sneaker interest often from music, sports, friends, family, or fashion.”
- Morten Sørensen, YME

” The older I get, the more I focused on comfort rather than the newest trend.”
- Morten Sørensen, YME

Nike, Glueless ISPA Link Trainers

At a late stage in my project (01.05.22), Nike announced their new concept "glueless ISPA Link trainers" where the sneaker is composed without glue and doesn't require heating/cooling processes.

Compared to Nike's new sneaker, I differentiate my project by material, esthetic look, and the amount of material that needs to be changed most frequently is less apparent with my design.

I find it very positive that Nike has launched this new project, as it validates my own project and its function, and as they also see that the market desires more sustainable solutions.

(Dezeen, 2020)

Figure 29.
Photo: NIKE

Exploring the fold function - mockup

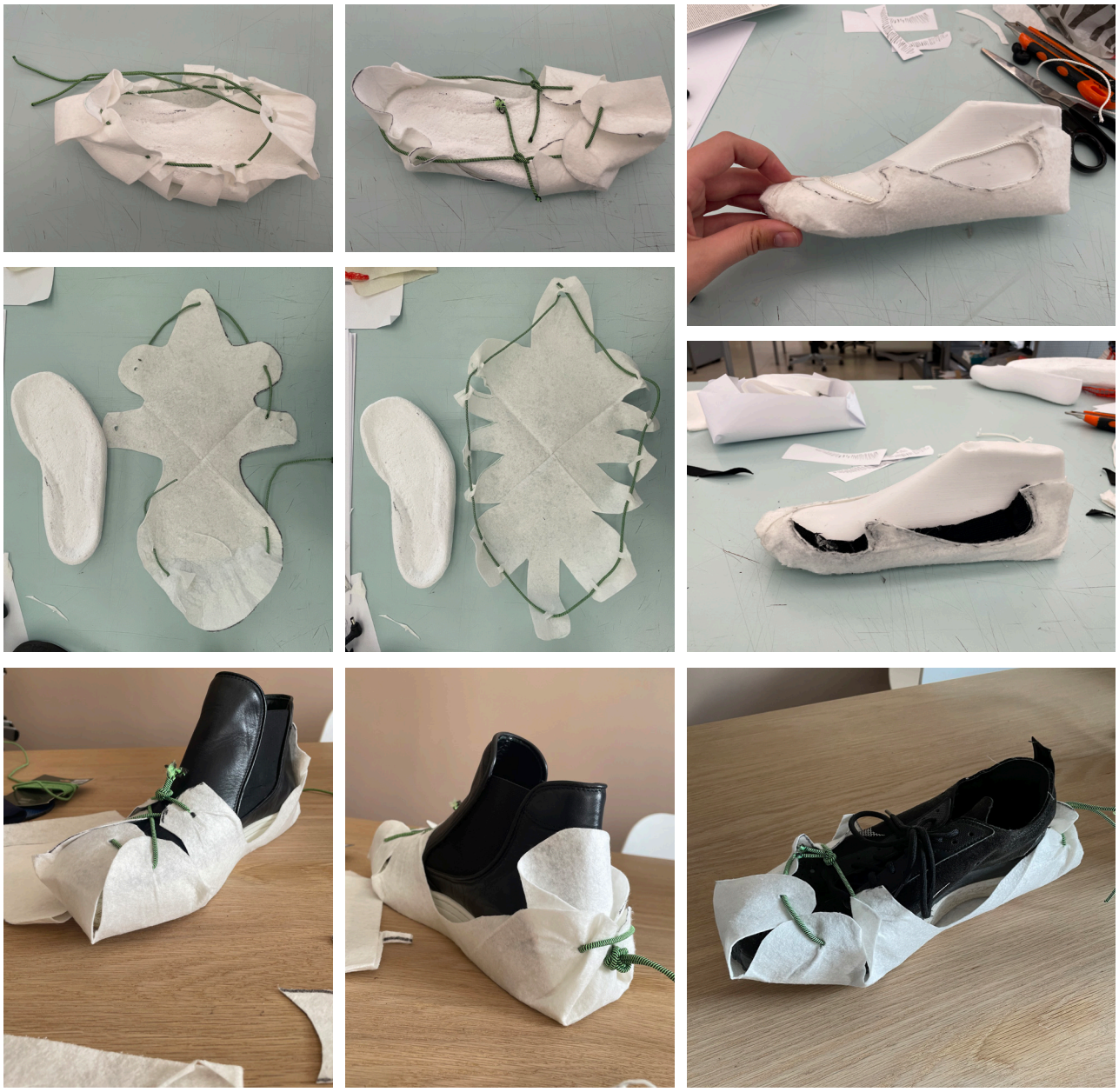


Figure 30, 31, 32, 33, 34, 35, 36, 37, 38.
Photos: Mathilde O. Mortvedt, 2022

I was inspired by how Vikings made their shoes out of leather and I liked the thought of a flexible material. By using TPU I could get the flexibility and the durability that I needed. With simple prototypes, I saw that the shape of the folding part needed to be curved over the upper part to avoid dirt and small parts to get inside the sneaker.

During this experimentation, I also played with the thought of adding elastic bands around the folding part. However, I choose laces instead because it is much simpler to replace compared to bands when they are worn out.

Printing shapes and functions

When I got some idea of what I wanted my sneaker to look like, I printed some 1:3 samples to get a better view of volume. lines and how it looked functional. It is very different to see the shape physically, and it got easier to locate lines and volumes that didn't work.

By printing, I could also verify the shape of my 1:1 model, and was able to get feedback more easily from others.

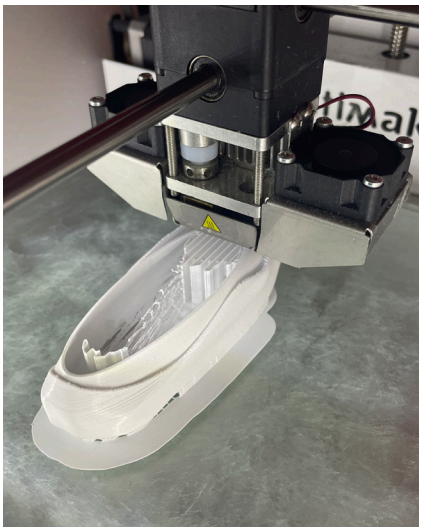


Figure 39, 40, 41, 42, 43, 44.
Photos: Mathilde O. Mortvedt, 2022

Figure 45, 46.
Photos: Mathilde O. Mortvedt, 2022

During this project, I have become more observant of sneakers around me, and also how they form during movement. On the right, you can see me moving my foot forward while wearing sneakers. The sneaker creates a fold on each side, and it made me think that my design will probably do the same thing.
This can create some irrational moments for the user, among other things like getting stones inside the folding or damaging the material more quickly.

Because of this insight, I decided to create holes in the folding part. This enables the user to tie the sole on for a better fit for his/her foot. I was also considering a pattern in the fold to create a grip, however, with more holes, the sneaker would absorb more dirt and water which could damage the experience of use for the user.

I wasn't able to test this function after I had printed my product, and I need to let this be part of further development.

Final design

Figure 47.
Render: Mathilde O. Mortvedt, 2022

Figure 48.
Render: Mathilde O. Mortvedt, 2022

Foldin

Foldin is a modular sneaker, with three main components. The upper sock, the shock absorbent sole, and the outer sole which hold everything together with laces and also provide grip. By making the sneaker modular, the user can replace the worn-out part and avoid throwing the whole shoe. Since it consists of loose components, the different parts could easily be sorted and recycled.

Modular parts

The shape of the front tip makes it possible for the user to have space around their toes, and one can at the same time tighten the grip around the upper part.
The sole is made out of an elastic material and has a pattern of holes around the product.
The holes allow the user to assemble the laces in any way that suits the user the most, both comfortably and aesthetically.

The shock-absorbent innersole is created to form around the under part of the foot. This is to reduce friction and to create a bouncy and comfortable feel when used. Since this is the part that gets the most changed, the user can easily remove the part without any tools.

Figure 49.
Render: Mathilde O. Mortvedt, 2022

Figure 50.
Render: Mathilde O. Mortvedt, 2022

Reflect your personality

The user has the opportunity to choose colors for the different parts to highlight their personality, and when needed patches to repair wear and tear around the sneaker can also be purchased.

I chose to include colorful versions of the product, which signal that the part has a special function. It makes the product interesting and different and is easier to identify by others.

Render: Mathilde O. Mortvedt, 2022

Figure 51.
Render: Mathilde O. Mortvedt, 2022

The service

Often companies start with a low distribution when they present an unfamiliar product. They do this to see how the market reacts and make the product more familiar to the skeptical buyer for the next round.

I see my sneaker to be presented in this way and to give each pair an identifying code. After the user has purchased the sneakers, they can register the production number on the shoe brand's website, and track down their purchase history for the next parts. Only owners of these shoes get notified when their news about the sneaker, and are the only ones that can buy replacement parts with the code.

Code placed on the sole and the upper part.
Figure 52.
Render: Mathilde O. Mortvedt, 2022

Figure 53.
Render: Mathilde O. Mortvedt, 2022

With implementing a service to the product, I saw an opportunity for creating a platform where the user can get an overview of their purchases, and track how many steps they have taken with this certain pair of shoes, through the app.

With this service, the user can get notifications when it's time to change the mid part, and notify if they need some patches or new parts. There is also a limitation on how many times you can purchase new parts each year, the amount depends on the part.

By bringing a platform to the concept, the brand could implement more pairs from their line and create a place where the user could have a digital sneaker closet where they could buy new parts, get news on launches, and give each other tips.

The parts that get broken, can be sent by mail or be placed in a delivery box at the brand's store.

Logo

Due to the time at hand, and the very time-consuming process of creating a physical product, I did not prioritize creating a logo. As I wanted to create a logo that reflected this project's values, I did not have the time to create a worthy logo to represent my design. Hence, I will develop a meaningful logo after this project.

The values behind the logo should represent the material and functionality behind the product.

These are some of the buzzwords which fit the description of my logo: Ocean plastic, recycling, modularity, statement.

Print - function model
Figure 54.
Photo: Mathilde O. Mortvedt

Recycle parts

As a way to avoid inhouse recycling for the brands, I see a possibility to use I:CO or another service that the company could send used materials to.I:CO, short for I:Collect, is a respected global solutions provider and innovator for collection, reuse, and recycling of used clothing and shoes. They collect through their partner locations around the world, carefully sort the items, and either reuse or recycle them.

At present, they collect clothing and shoes in more than 60 countries, and they collaborate with companies such as Vagabond, Arket, HM, and more.

(I:CO, 2022)

Figure 55.
Photo: I:CO

Let's talk business

With this project, we can't avoid talking about the economics of my solution. The whole product would cost between NOK 2,000-3,000, but after the first purchase, the price for replacement parts would have a lower price. Because of this reason, the product represents more its focus on reducing material waste, rather than profits.

This is a product a company can earn a certain level of income, but the message Foldin gives has a higher value for the consumer as well as for the producer.

Based on the rising trend of slow fashion and buying used clothes, I see my product to be a good representation of how sneakers could be made in the future.

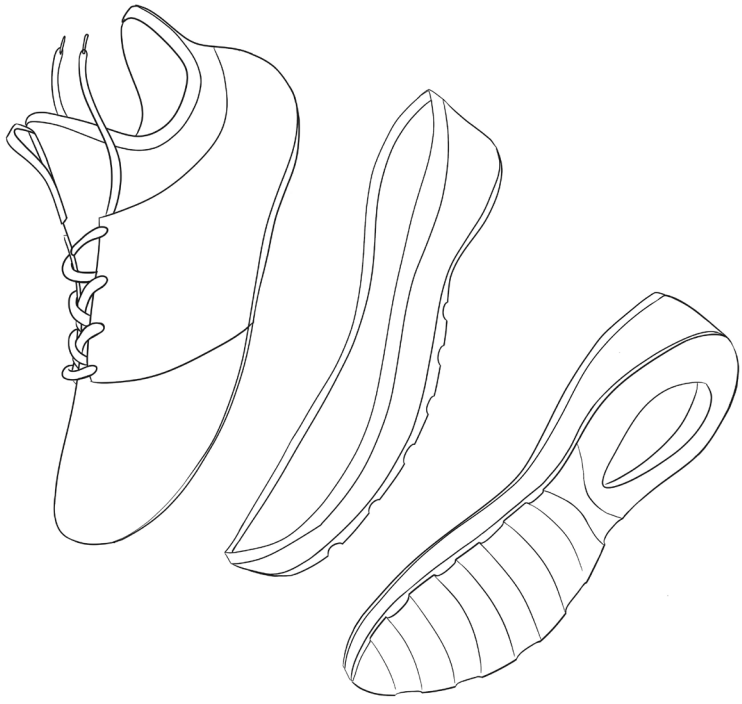


Figure 56.
Photo: Mathilde O. Mortvedt

Wear and tear

As I learned at the very beginning of this project, the different areas on the sneaker wear and tear differently. I suggest therefore to create some decorative patches to fix outer holes by ironing on patches. I also suggest offering patches for inside the upper part.

Since the sneaker is modular, the user can easily take the components apart and simplistically clean each part. The upper part, for example, can be washed in the washing machine.

Feedbacks

Employer at sneaker-store Stress

I got a review of my sneaker by an employee at one of the most popular sneaker stores in Oslo, Stress.
We went through various of my models and some of the printed renderings.
The person I talked to had worked at Stress for four years and had since he was little been interested in sneakers.
When I told him about my project, he got quite positive and told me that he was fond of both its function and the design.

“Looks minimalistic, but with character. Timeless silhouette.”

He confirmed that the design and f unction are very relevant and that the sneaker would make the buyer more aware of the large environmental impact that sneakers have. He supported my theory that the consumers are starting to move toward quality shoes rather than quantity, and he believed that my design would suit well for the market.

When we talked about my thoughts about service, he confirmed the high relevance of giving the user customization around the sneaker.

“That’s just what people want! They are missing the experience and the relation between the user and the sneakers.”

Just what I wanted to achieve with this project.

Interview at sneaker-store ”Stress”
Figure 57 & 58.
Photo: Mathilde O. Mortvedt

Designer at Adidas

I revisited the designer at Adidas to display my final product. He verified my choices around material, functions, and design. He agreed that the design would be much welcomed in today's market, and he also thought it has a clear identity.

Sneaker enthusiasts

Insights from talking to potential users:
One person saw the bubbles to be more feminine than unisex, but after looking at the renderings, he changed his mind. The person also thought the sneaker looked too chunky at the front, but again changed their mind when they saw the physical model.

In general, the bold colors were well appreciated, and many said that it suited its functionality.

The idea that you could replace worn parts, rather than having to buy a whole new sneaker was a strong positive element for making the sneaker even more attractive.

Sneaker enthusiasts - Survey

During my last project week, I contacted a Facebook group called “Sneakers Norge”, where I shared a survey where I wanted to get their opinions on my design and who they thought the target group would be.

There were in total 24 sneaker enthusiasts who responded to my survey. 13 persons were quite positive about the sneaker’s aesthetic, while 7 persons thought it looked too massive and strange. Keep in mind that the respondents who didn’t like the esthetic, in general also preferred a more traditional design on their sneakers.

When I asked about who they thought the sneakers would suit, there were several who thought it would fit someone sporty or a sneaker enthusiast with personalized style. 88% thought the sneaker looked unisex and liked the color yellow and the black sneaker.

With this survey, I got confirmed that the design doesn’t fit everyone, but more importantly that it would fit my chosen user group.

Figure 55
Render: Mathilde O. Mortvedt, 2022

Further development

With my product and the potential of creating a service to connect the user to the product through personalization, and to promote replacement and repairs, rather than a “use and throw” mentality. I see the potential to increase the interest and awareness of how to take care of sneakers and buy sneakers that have a significantly longer lifetime than the current products available in the current market.

Enable the consumer to personalize the sneakers with color and patches, will also make them feel attached to the product and increase their willingness to take more care of it. This will result in a positive effect, where people will feel good about also having a positive environmental impact.

As this is a student project, I did not have the funds, equipment, or the opportunity to create a fully functional prototype that could be tested on the consumers.

My model is created through the use of a printer, which would not be the preferred production method. Instead, the upper part would be woven with durable threads and the sole would be cast. The sole would consist of a material that would be more flexible than my print, and it would also be more like the TPU which can be found in the “Adidas.Loop”.

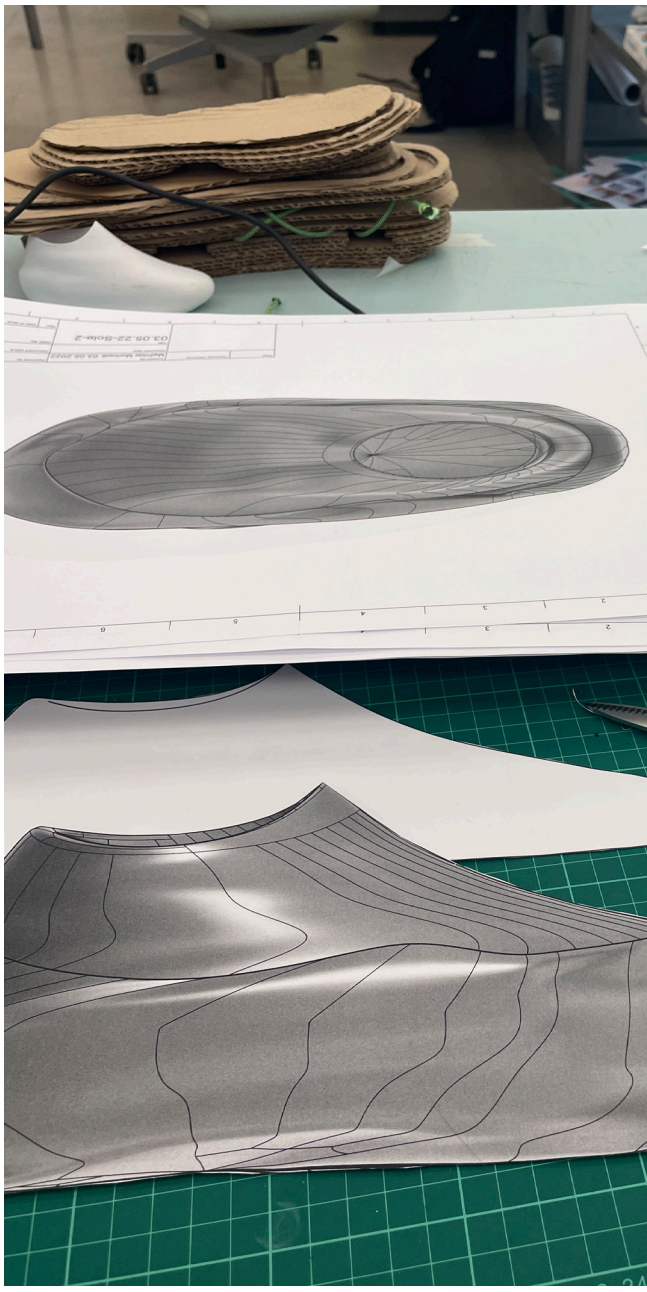


Figure 56
Render: Mathilde O. Mortvedt, 2022

Reflections on the project

During this project, I have learned a lot about sneakers, both on a technical level but also about their design. When I initiated on the project, I had very limited knowledge about sneakers, and no lead on how the solution would look like. Nevertheless, I must say that I am pleased with the overall achieved result. I have enjoyed the very steep learning curve which lasted throughout the whole project. Also, I got the opportunity to speak with many important and interesting people within sneaker design both within corporations as well as from the sneaker community. I was always met with positive reactions and by positive people.

I must say that if I were to change something during my project, it would be to contact more experts through other communication sources than email. When I sent requests for interviews through email, there was easier for the recipient to avoid answering, compared to for example calling them. Unfortunately, I did not realise this until late in the project.

One of my goals throughout this project was to design a realistic product with sustainability in mind. With my limited sources of technical measurements and production, I see my project to be as realistic and verified as possible for a student with the resources at hand to create.

I am pleased with how my product turned out and hope this project can inspire both consumers, but more importantly, brands to open their eyes and gain new perspectives to find more sustainable solutions and push toward a better tomorrow.

In the end, I would like to say that I have enjoyed my last semester at AHO, and I wish to thank my supervisor Steinar Killi for all his knowledge and support which was much appreciated through a stressful, but joyful semester.

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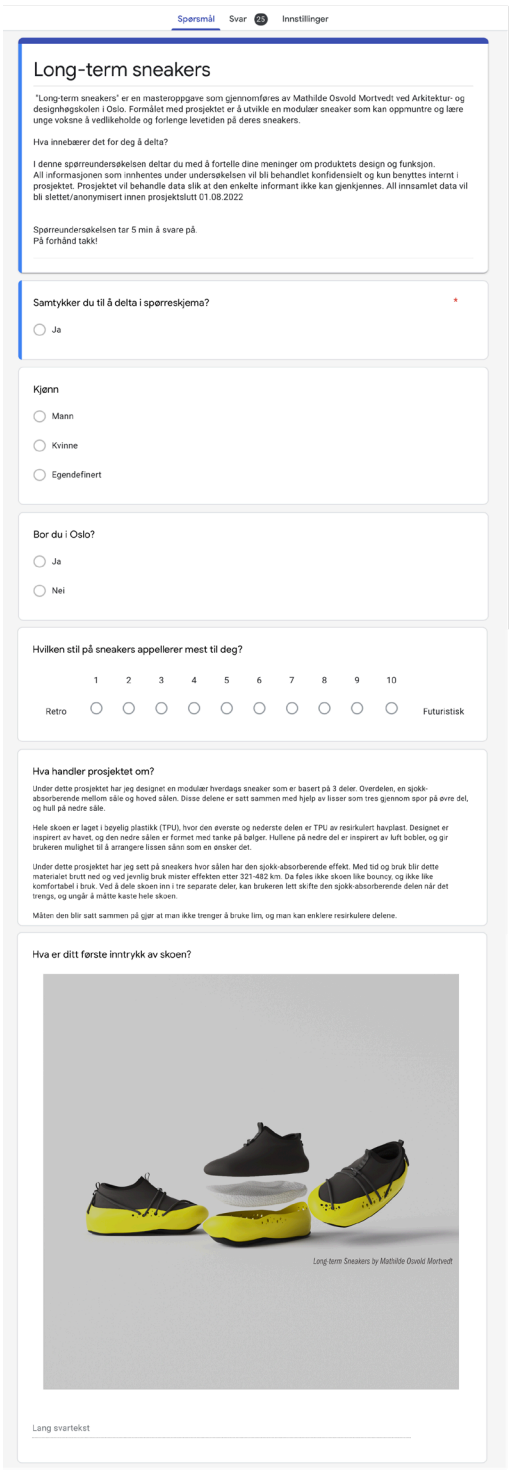
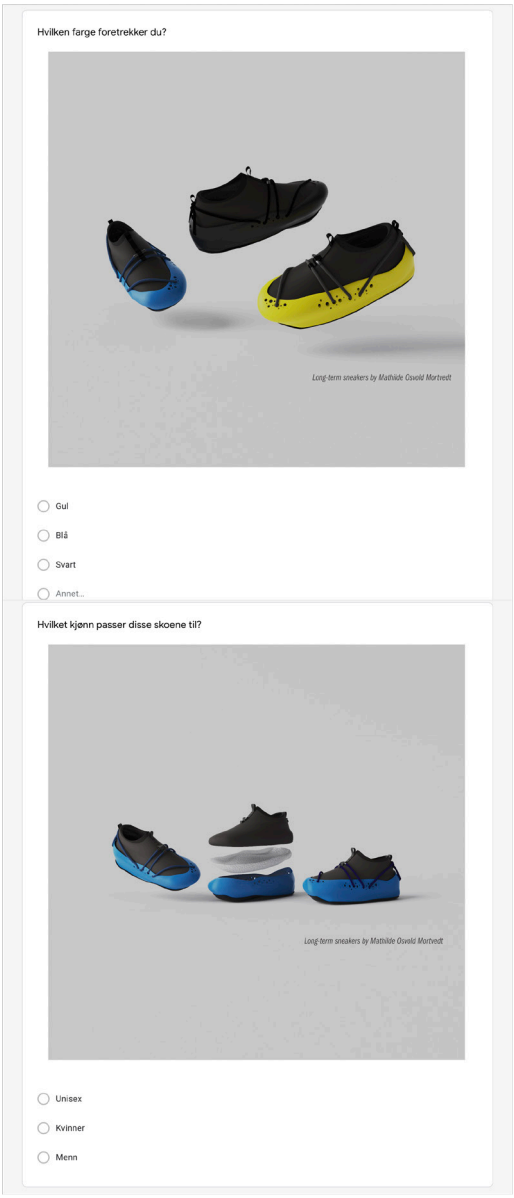
Attachments

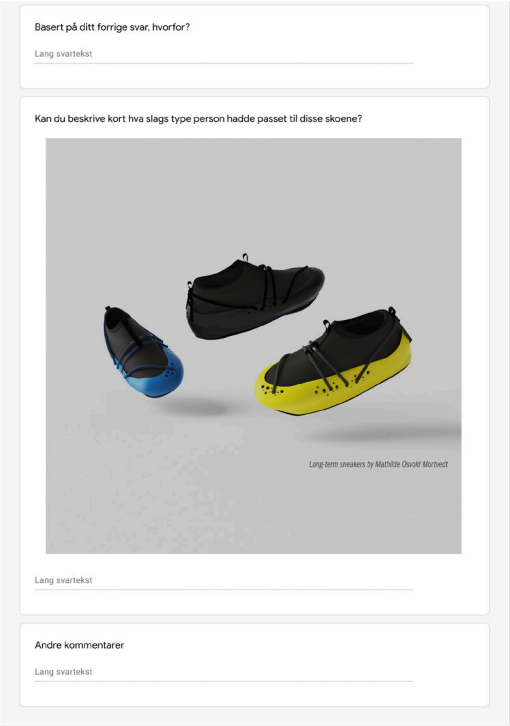
Attachment 1.



Attachment 2.



Attachment 1, 2 & 3.
Survey about sneaker enthusiast's first impression of my sneaker.
(From 2022.16 May to 2022.19 May.)



Attachment 3.

Long-term Sneakers

Exploring the concept of extending
the lifetime of everyday sneakers

By Mathilde Osvold Mortvedt