The modern folkhem.

A furniture collection based on Swedish craftsmanship and local production
with a nostalgic and modernist perspective in a contemporary context.

2023

Martina Claesson

FOLKHEM; Furniture Collection

2023, Lund Sweden

Martina Claesson

Degree Project for Master of Fine Arts in Design, Main Field of Study Industrial Design,
from Lund University, School of Industrial Design

Department of Design Sciences

Examiner. Per Liljeqvist, lecturer

Supervisor. Therese Eklund, lecturer

ISRN: LUT-DVIDE/EX--23/50659--SE

LUNDS
UNIVERSITET

Abstract

"Most of Sweden's surface is covered by forest, 68 percent is woodland; the built-up and landscaped land does not make up more than 3 percent of Sweden's total land area. About 50% of the forest land is made of pine (Pinus sylvestris), making it the most common tree species in the country's forests."

In the 70s, a design movement was established in Swedish homes " Svensk fur". It was cheap, honest, robust and simple which Scandinavian design is identified with. After "Svensk fur" was erased and replaced with more exclusive, lightweight and bright woods from being the primary material for furniture and other household items. A cultural phenomenon that disappeared from Swedish heritage and tradition that I want to bring back and illuminate with new eyes and interpretations.

How can I implement a design movement that was current in the 70s that fits into today's standardization and sustainability criteria - what needs to be done differently but still preserve the character that made it so unique and attractive?

By researching Swedish tradition in design history and craftsmanship which is becoming fewer and fewer is my mission to bring back the heritage we once had which are about to leave this generation - if we do not act now.

We are currently facing crises like wars, global conflicts, inflations and lack of raw materials within the countries and high import prices. Which generates overpriced and unaffordable products on the market. I want to design from a long-term perspective and focus on honest, sustainable materials that will last for several generations, by iterating with new solutions to become even more sustainable and practical.

Together with Wigell's chair factory and other local factories, I have been closely involved in the production and got to know the heritage and history they possess by working with skilled craftsmen and being on site and experiencing Swedish craftsmanship down to its roots.

70's "Svensk fur"

1970s IKEA catalogues

Table of contents

The modern folkhem introduction.

Sweden is a heavily forested country, with forests covering approximately 69% of its land area. According to the Swedish Forest Agency, the total forest area in Sweden is around 23 million hectares, with the majority of the forested land owned by private individuals or companies. The forested areas in Sweden are primarily composed of coniferous trees, such as spruce and pine, as well as deciduous trees, such as birch and aspen. The forestry sector is a vital part of Sweden's economy, providing jobs and contributing to the country's export revenues.

Pine, also known as Scots pine (Pinus sylvestris), is one of the most common tree species in the Swedish forest. According to the Swedish Forest Agency, Scots pine covers approximately 26% of the total forest area in Sweden, which is equivalent to around 6 million hectares. This makes Scots pine the second most common tree species in Sweden, after the Norway spruce (Picea abies), which covers around 50% of the forest area. Scots pine is a coniferous evergreen tree that is well-suited to the cold and harsh growing conditions of Sweden, and it is widely used in the production of lumber, pulp, and paper.

Yes, pine is a commonly used wood species in Swedish furniture making, especially for traditional and rustic-style furniture. Pine has a light, pale color and a distinctive grain pattern, which gives it a natural, warm look that is popular in Swedish interior design. Pine is also a relatively soft wood compared to some other hardwood species, which makes it easy to work with and carve into intricate designs. Additionally, pine is an abundant and affordable wood species in Sweden, which has contributed to its popularity in furniture making. Which is a very traditional material that is part of Swedish architecture history and furniture history.

CARBON DIOXIDE EMISSION.

When it comes to carbon dioxide emissions, wood generally has lower emissions compared to concrete and steel. Wood is a renewable resource that absorbs carbon dioxide during its growth, and this carbon is stored in the wood even after it is harvested and processed. As a result, wood products have a lower carbon footprint compared to materials like concrete and steel, which require significant amounts of energy to produce and emit large amounts of carbon dioxide during the manufacturing process.

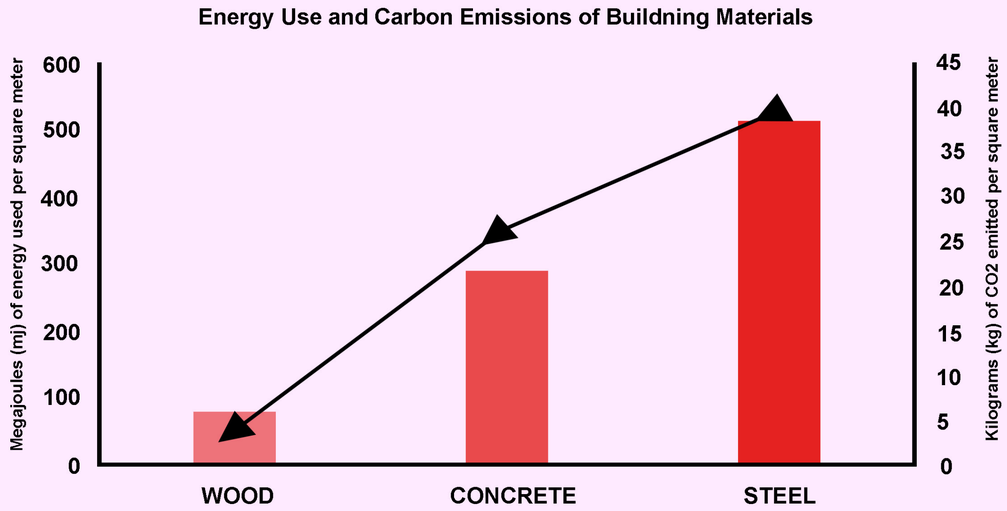
Concrete is made by mixing cement, water, and aggregate materials like sand and gravel. The production of cement is energy-intensive and involves the release of carbon dioxide as a byproduct. The cement industry is responsible for around 8% of global carbon dioxide emissions. Additionally, the use of concrete in construction contributes to embodied carbon emissions, which is the carbon emitted during the manufacturing and transportation of the materials.

Steel production also has a high carbon footprint. Steel is made from iron ore using a process that involves burning coal, which emits carbon dioxide. Like concrete, the use of steel in construction also contributes to embodied carbon emissions.

In summary, wood generally has lower carbon dioxide emissions compared to concrete and steel, making it a more sustainable choice for construction materials. However, the choice of building materials depends on many factors, including the specific needs of the project, the availability of materials, and local building codes and regulations.

"Building with wood has many benefits, such as lowering environmental impact – CO2 emissions can be reduced by up to 75% when comparing against traditional processes with concrete and steel. But often underappreciated, is how it can improve health and wellbeing,"

Sebastian Hernandez



EFFECTS OF WOOD.

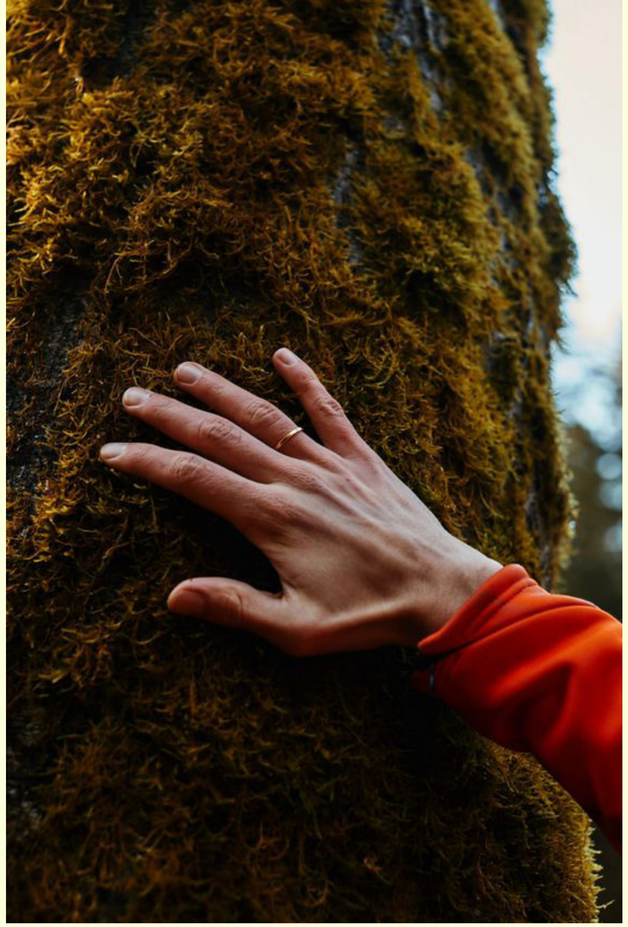
Wood has been used as a building material for millennia, but the biophilic benefits of wood are only recently being studied and understood. While many people agree wood is visually pleasing, researchers are discovering that wood can contribute to the health and well-being of building occupants. In addition to temperature and moisture, indoor air quality is another important factor that affects our physical and mental well-being. Poor indoor air quality can lead to respiratory problems, headaches, fatigue, and other health issues. In healthcare and living environments, it is particularly important to maintain good indoor air quality to support healing and comfort.

Reduce stress, Improve mood, Regulate indoor air humidity & temperature.

Wood has been shown to have a positive impact on indoor air quality. It is a natural material that does not release harmful chemicals into the air as some synthetic materials can. Wood has been found to have a calming effect on people, which can help to reduce stress and promote well-being.

In terms of thermal performance, wood's ability to adsorb and release moisture can help to regulate the temperature and humidity of indoor spaces. This can help to improve energy efficiency and reduce the need for mechanical heating and cooling systems.

The use of wood in interior spaces has many benefits for both physical and mental well-being. As more research is conducted on the performance of buildings, the importance of using natural materials like wood will likely continue to be recognized.



Nature.

Being exposed to nature, including woodlands and forests, has been shown to have a positive effect on mental health and well-being. Spending time in natural environments has been associated with reduced stress, improved mood, and increased cognitive function. Woodlands and forests can also improve air quality by absorbing pollutants and producing oxygen.

Producing a product with FSC certification.

FSC stands for Forest Stewardship Council, which is an international non-profit organization that promotes responsible forest management. FSC certification is a voluntary certification scheme that provides a way to verify that wood products come from well-managed forests that meet rigorous environmental, social, and economic standards.

When a product has FSC certification, it means that the wood used in the product has been sourced from a forest that has been independently certified as meeting FSC standards. The FSC certification process involves an assessment of forest management practices, including the protection of wildlife habitats, the rights of indigenous people, and the economic benefits to local communities. FSC also requires that the wood be traced from the forest to the finished product, ensuring that it has been responsibly sourced throughout the supply chain.

FSC
www.fsc.org

The mark of responsible forestry

FSC® C100100

How to make an FSC certified product, key steps:

1. Identify the FSC-certified wood products you need for your product. The FSC website has a database of certified products and suppliers that can help you find the right material.

2. Buy FSC-certified wood products from a certified supplier. The supplier must be able to provide documentation that proves that the products are FSC certified.

3. Ensure that the wood is tracked and documented throughout the supply chain, from the forest to the finished product. This may require working closely with your suppliers to ensure that the timber is tracked and documented correctly.

4. Follow FSC guidelines for production and manufacturing. FSC has specific guidelines for the production of FSC-certified products, which may include requirements to minimize waste, reduce energy consumption and protect workers' rights.

5. Obtain FSC certification for your product. This may require a third-party audit to verify that your product meets FSC standards and that the wood used in the product is properly tracked and documented.

6. Promote the FSC certification of your product to customers and communicate the benefits of responsible forest management and sustainable production methods.

By following these steps, you have an FSC-certified product that promotes responsible forest management and sustainable production methods.

Brief

The design project is based on designing from old traditional methods which mirror the Swedish heritage likewise ancient materials which have been used in many generations, that are part of Swedish furniture history. I want to stand on the border between traditionally wise of producing long-lasting products and at the same time consider new ways of implementing sustainability in the products today.

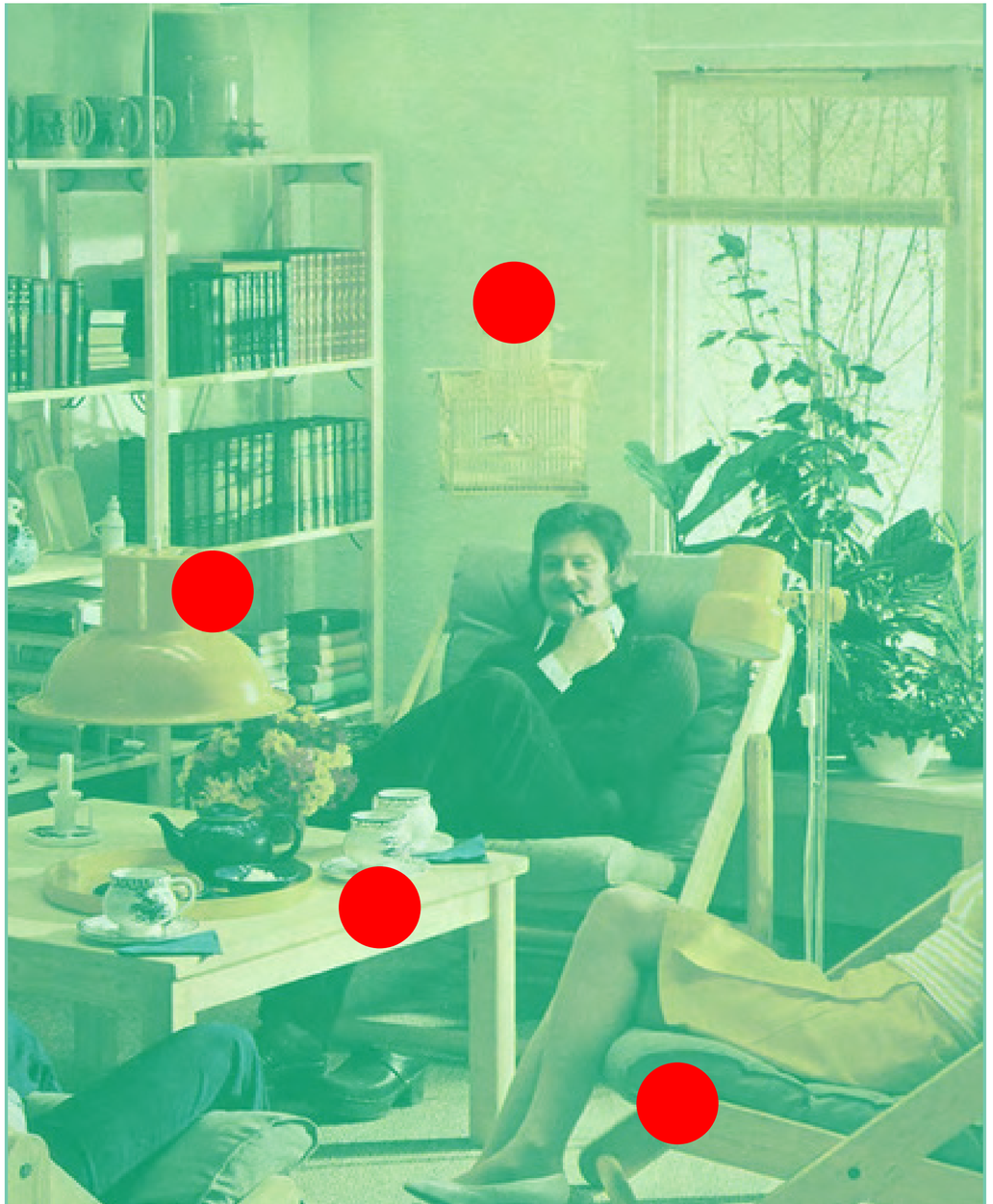
The aim is to combine the aesthetics of Swedish simplicity with a timeless design that can be inherited by many generations, to bring back the value of craftsmanship and local production. At the same time consider the new restrictions and requirements to achieve a sustainable approved product, which is very important today due to the environmental impact.

This got me into researching the requirements and demands which are current within the furniture industry, so I can design from a contemporary perspective and at the same time involve the heritage of Swedish design history.

My goal is to design a new folkhem home series of furniture that symbolizes the aesthetics of the period when pine was the most common material in Swedish homes. furniture that was more characteristically remarkable than others from a typical Swedish home at that time.

What about the lounge chair with a footrest? which identifies itself as a focal point in homes in the past. When this design movement moved on to another, did we suddenly prioritize differently, or what made us change course?

I want to bring back the "fjällstuge" armchair, the centerpiece of the home that provides long comfortable sitting together with a book, or in a social setting with your friends who are over for dinner and want to continue the evening into the late hours.



“If the circular economy was dominant in our society, how would our furniture be constructed?”

”With a retro perspective on design that has been and an aware-ness of today’s design challenges, how can design unite and revive two different centuries of society?”

Brief

The armchair shall be robust with honest raw material, repairable, and easy to upcycle and renovate.
I also want to implement flat packable construction that is assembled and disassembled to prevent damage during transportation and maximize the volume of each delivery so each product takes up less space in the vehicle. It will open up more possibilities and availability to refurbish, restore and replace worn parts of the furniture over time as the furniture has been used for many years.

What should be considered to increase the value of the product and create a bond between the consumer and the product, a feeling of participation and creation when using? a sense of participation and creation in use? It is to activate and engage the person by involving them in the assembling phase. It will increase the understanding of the product's construction and a value that rewards when the product is assembled and ready to use.

When I think of a product line of furniture, I always count on light sources. To create a cozy atmosphere that contributes to a homely feeling, light is needed. That is why the furniture collection will contain a lounge chair together with a footrest, mirror, and a lighting source that has the flexibility to adapt to the interior needs.
Glassmaking has also been a large industry in Sweden, likewise, woodworking, which we are mostly associated with.

Since I want to bring back the heritage we once had and take care of the ones who are left. Was that an obvious choice to recreate some of the materials that were common in the past, such as glass and pine in my furniture collection? And most importantly, get to know the people who are responsible for all these craft factories around Sweden, to get a bigger picture of when the factory was founded and the history behind the company which has formed them into what they are today.

That is why I wanted to involve people with knowledge within the field other than myself in this project to hear their thoughts on how the design movement has changed over the last century. Which gives me a broader perspective and better conditions to design something to last. I want the furniture to be a long-term investment for the consumer but also for the next generation, which can be passed down and used in several different ways and contexts hereafter.

Design Visions & Principles

My design vision and evaluation behind the design choices are based on eco-design principles which makes me design from a constant focus on developing a product that will not only be a new piece of furniture on the market, it needs to have a bigger purpose and an understanding of the market strategy to design something better for the environment and to the consumer.

01
Be truly useful

There are so many useless designs on the market today, which are uncomfortable and being replaced by the next trends season. I want to make sure my designs are about to last during the trend shifts and are changeable and adaptable to their surroundings. And contribute to a homely feeling with many conceivable scenarios.

02
Clarity in design

There should be no doubt about what the product is intended for and how the user can interact with it and use it. A clear construction that speaks for purpose and ease of use.

03
Personality

Functionality is primarily important when designing a product, but I think it is equally important to have a clear personality when it comes to appearance. Since I design a furniture collection, it is that important that they interact with each other and speak the same language

04
Made from good and honest materials, age with beauty and have minimal enviorment impact

The aging of the material is important when it comes to long-lasting design. That is why I picked pine which becomes even more beautiful with time, the color becoming darker and more visible grains. When the leather is worn changes the character and comfort for longer use. Glas stays glamorous for many generations and creates naturally diffusing shades when it comes to glass lamps.

05
Constructed by durability

The design must last for a long time, also resist trends and maintain the standard for a qualitative product. That is why I prioritize simplicity, robust construction, durable materials, and high-quality craftsmanship.

06
Be packaged for minimal enviromental transport impact and damage

I am considering flat pack products in my collection, based on large volumes when transporting and difficult shipping of old pine classics. I want to make it more accessible for consumers to buy massive and sustainable products today.

07
Be easy for the user to assemble

My design should be so easy to understand how to assemble, so from the first impression you get a clear picture of how it should be done. Of course, detailed instructions are included. I want the assembly part to be a wonderful experience and create a bond between the furniture and the user. Increase the value of the investment for the consumer.

08
Be easily repaired by replaceable components

The furniture's components must be universal and easy to replace if necessary.

09
Be easily recycable into key materials

Each component should be easy to recycle and take apart from each other for a more sustainable and easier way to manage and sustain.

Research.

The 70s

Sweden enjoyed a significant advantage over other nations due to its industry and infrastructure being mostly unscathed by the war. From the end of World War II to the early 1970s, Sweden experienced a period of sustained economic growth, commonly known as "the record years" or "the golden years".

During the 1960s, Sweden witnessed exceptional economic growth, and by 1970, it had become the fourth wealthiest country globally, trailing only Switzerland, the United States, and Luxembourg.

The Swedish furniture industry was also booming, and designers and manufacturers were competing with each other. The post-war period saw the emergence of an unimaginable number of furniture workshops and small factories producing new designs every year. For example, Tibro, a small town in west Sweden, had over a hundred furniture manufacturers by the 1950s, with a population of only 8,000. Similar statistics could be found across Sweden, with thousands of different designs being produced each year. The booming economy was used by the leadership of the social democrats to finance increasingly large-scale efforts to reduce the disparity between the living conditions of the rural and urban populace, and between the rich and poor.

The building projects undertaken during this time sought to alleviate poverty and overcrowding by bringing people closer together. Additionally, municipalities were merged, and the industry was streamlined through a gradual structural transformation that concentrated operations on a larger scale, leading to corporate mergers and the closure of unprofitable activities.

"In the book "Svenska möbler: Folkhemsform i ull, jakaranda, furu och bok 1949–1970." Describes the definition of the culmination of the Swedish folkhem, which was essentially a welfare state that aimed to improve living standards and distribute welfare evenly among its citizens.This period marked a new phase in Sweden's nation-building, known as the 'folkhem period.'
The furniture produced during this era was intended for both domestic and public spaces, such as hospitals, workplaces, and schools. Folkhem, literally meaning 'people's home', is a Swedish term for what is otherwise designated as Swedish welfare.
While the efforts to promote equality and rationalization were successful, it also became apparent during this time how they were impacting construction, industrial production, and the general mood of the country.

During the 1960s, the strongest companies in Sweden became even more dominant, leading to a monopoly in some industries, such as construction. This was evident in the Miljonprogrammet, or Million Programme, which was a major building project that aimed to construct one million new homes between 1965 and 1974. This project resulted in standardized, large-scale high-rise buildings located away from the city centers, which are now considered dull and characterized by repetitive gray concrete architecture. Architects were required to conform to the production chain and follow strict regulations, resulting in limited creativity and variety in design.

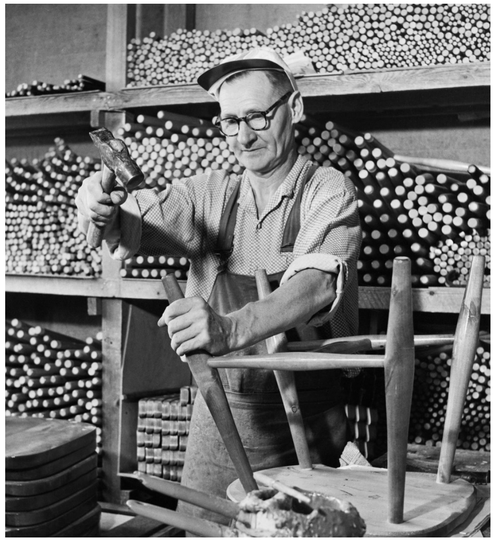
While the Million Programme did result in the construction of many standardized high-rise apartment blocks, it also included a significant proportion of smaller homes, both detached and semi-detached. Additionally, many of the large-scale suburban areas that were built during this period, such as Hammarkullen, Rosengård, and Tensta, were designed to be safe for children and included well-equipped apartments with carefully planned floor plans. These areas were also often located away from heavy traffic and included green spaces, making them desirable places to live for many families.

Skånska Cementgjuteriet, now known as Skanska, was one of the largest construction companies in Sweden and played a major role in the Million Programme. Gustavsberg, a company that produced bathroom fixtures and ceramics, also benefited greatly from the housing boom. Electrolux, a manufacturer of appliances such as refrigerators, washing machines, and vacuum cleaners, was also a major player in the Swedish economy during this time. In addition, the widespread adoption of standardized chipboards in interiors and furniture frames helped to streamline production and reduce costs.

Local production in Småland

In western Småland, it is one of Sweden's strongest regions for entrepreneurship, characterized by many small businesses and low unemployment. Entrepreneurship has long been an important part of the regional identity and has become a natural career path for many. Entrepreneurship has often been associated with the free church tradition in the area.

Agriculture has been limited by the poor soils but has instead fostered creativity and alternative sources of income. Industrial metallurgy has been present since the 1600s and 1700s. The forests, which were rich in pine, beech, and birch, gave rise to the production of bentwood chairs, which became an important sideline for farmers. Craftsmanship developed, and on many farms, they started to engage in decorative woodworking. The railway and electricity led to the development of communication and production methods, even in rural areas, which led to an increase in small industries in several sectors, including mechanical engineering, rubber, textiles, and leather. In the first half of the 20th century, the furniture industry became the most prominent industry in the Värnamo area.



A.B. Nässjö Stolfabrik was a furniture manufacturing company located in Småland, Sweden. The company specialized in the production of chairs and other wooden furniture and was known for its high-quality craftsmanship and innovative designs.

The company was founded in 1912 by Karl Malmsten, a prominent Swedish furniture designer and architect. Malmsten's vision was to create furniture that was both functional and aesthetically pleasing, using traditional woodworking techniques and materials.

A.B. Nässjö Stolfabrik quickly gained a reputation for producing high-quality chairs and other furniture pieces and became a leading manufacturer in the Swedish furniture industry. The company's success was due in part to its focus on quality craftsmanship and attention to detail, as well as its willingness to experiment with new materials and designs.

Over the years, A.B. Nässjö Stolfabrik produced a wide range of furniture pieces, including chairs, tables, and cabinets. The company's designs were influenced by a variety of styles, including traditional Scandinavian design, Art Deco, and Bauhaus.

Today, A.B. Nässjö Stolfabrik is no longer in operation, but its legacy lives on in the many chairs and other furniture pieces that it produced over the years. Many of these pieces are now considered iconic examples of Swedish design and are highly sought after by collectors and design enthusiasts around the world.

A.B. Nässjö Chairfactory in Småland
Photographed around - 1932

Local production in Småland

One of the most important advantages of local production in Småland is the close cooperation between companies and suppliers in the region. This enables greater flexibility and innovation in production processes and can lead to more efficient use of resources and a reduced environmental footprint.

Therefore, Småland has a successful history of production and craftsmanship that is still running but has scaled down over time to a drastic reduction in local production. I have collaborated with these companies during the project, Orranäs glasbruk, Wigell's chair factory, and Kallfedt's Leather.

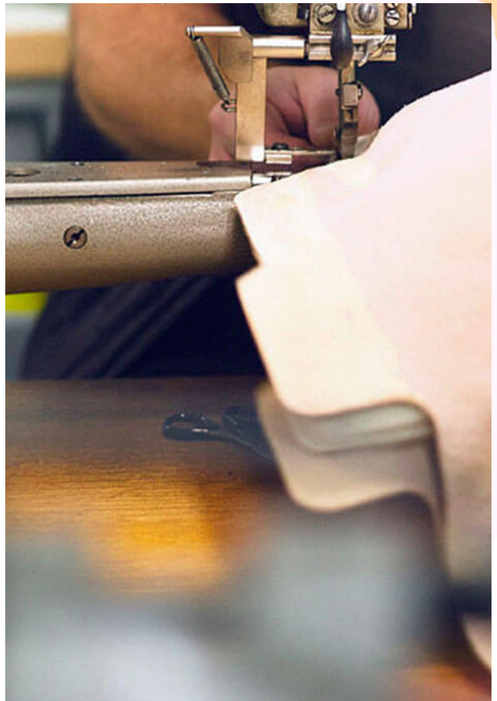
ORRANÄS GLAS FACTORY.

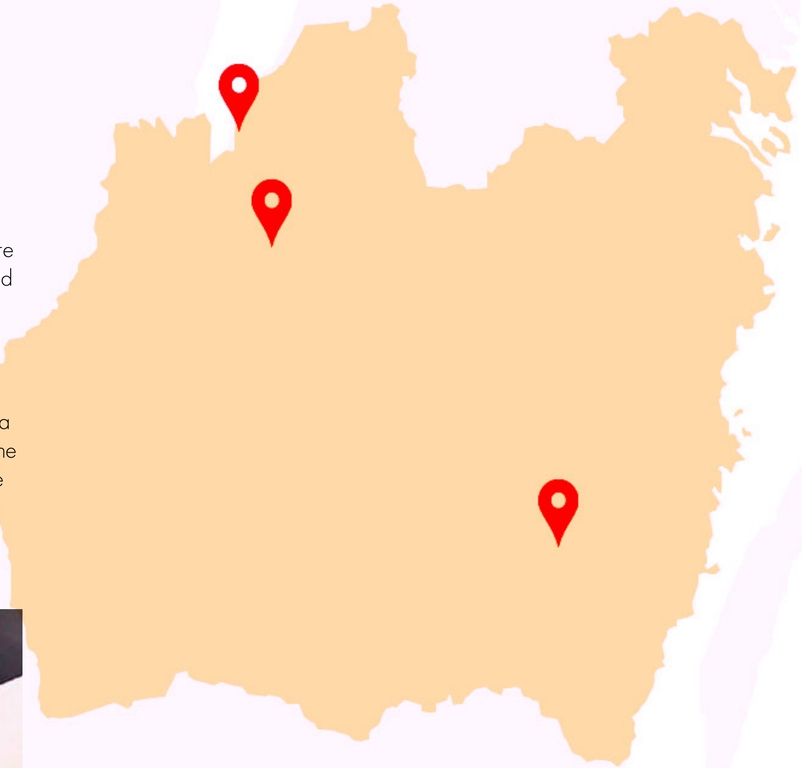
Orranäs Glass Factory is a smaller glasswork that is located in Småland, in the village of Orrefors. It was founded in 1962 by two former employees of Orrefors Kosta Boda AB and has a focus on producing smaller series of handcrafted glassware with unique designs.

WIGELLS CHAIR FACTORY.

The company was founded in 1868 by the brothers Emil and Carl Wigell and is one of the oldest furniture manufacturers, over 150 years the company has lived on with generational changes with different owners over the years.

The 1870s was at a stage when society shifted from agriculture to industrial society. After two years with a machine park of muscle power and treadle lathes, the business moved from Lyckås to Malmbäck to use the water power from the community's stream.





KALLFELDTS LEATHER.

For more than 30 years, Kallfeldts Läderfabrik has manufactured leather goods. Today, the factory does much more than that but still with the same craftsmanship and the desire to create good things together with their customers.

"Knowledge, curiosity, and the desire to find new ways of doing things make us unique in the industry. We care about Swedish craftsmanship and we are proud that all our production is in Småland." - Johan Stockholm Many production technical problems have been solved in collaboration with the skilled staff. Verk produces everything from seat cushions, furniture paws, and labels at Kallfeldts Läderfabrik.

”A PIECE OF FURNITURE SHOULD EXPRESS SOMETHING”

”EN MÖBEL SKA UTTRYCKA NÅGOT”

; Quoted by the furniture designer Carl Malmsten.

HONEST MATERIAL, CLEAN LINES & SIMPLICITY

Swedish design in the 70s was characterized by functionalism and simplicity, with a focus on minimalism and clean lines. Furniture and home decor designs often featured light-colored woods, such as beech and birch, and a lack of ornamental details.

Pine wood furniture has been popular in Sweden for centuries, as pine is a common wood species in the country's forests and has been used for furniture making since the Middle Ages.

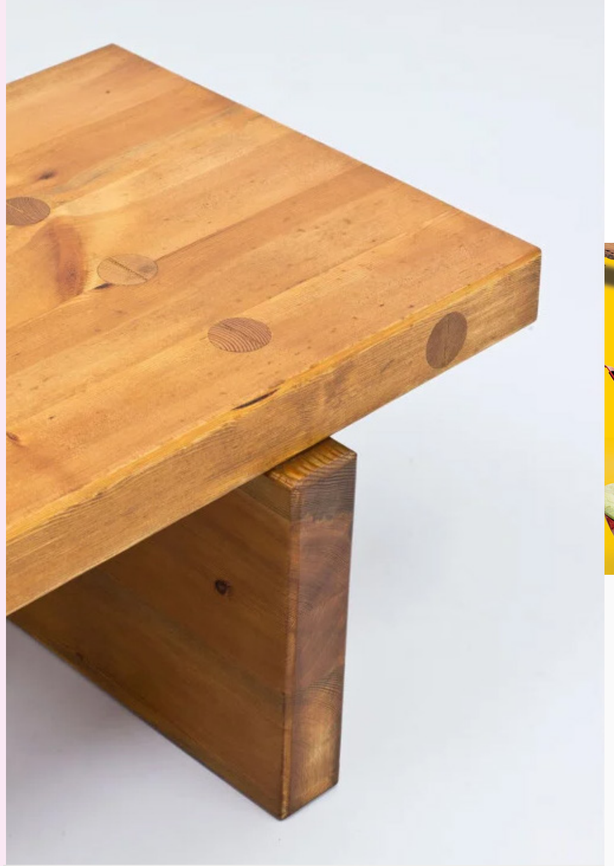
However, the popularity of pine wood furniture in Sweden saw a significant increase in the 19th century due to changes in technology and manufacturing processes that made it easier to produce furniture at scale. This led to an increase in demand for affordable and practical furniture, and pine wood was a popular choice due to its abundance and affordability.

In the mid-20th century, the popularity of pine wood furniture in Sweden further increased due to the rise of Scandinavian design, which emphasized simplicity, functionality, and the use of natural materials. Pinewood was a favored material in this style due to its light color, natural grain, and durability. Today, pine wood furniture remains a popular choice in Sweden and continues to be a staple of Scandinavian design.

SVENSK FUR.

Another important aspect of the 1970s design movement in Sweden was the focus on sustainability and environmental responsibility. This was a response to the growing awareness of the impact that human activity was having on the environment, and designers sought to create products and structures that were both functional and environmentally friendly. That was why this movement "Svensk Fur" became associated by that time, the renewable resource that could be sustainably harvested.

The 1970s design movement in Sweden also saw a focus on simplicity and functionality in design. This meant creating products that were easy to use and had a clear purpose, without unnecessary ornamentation or decoration. The emphasis was on creating objects that were both beautiful and useful, and that fit seamlessly into the natural environment.
Overall, the 1970s design movement in Sweden was a response to the changing cultural and environmental landscape of the time. The focus on natural materials like Svensk Fur, sustainability, and simplicity in design was a reflection of a growing awareness of the need to live in harmony with the natural world, and it had a lasting impact on the design world that coming back on the market again.

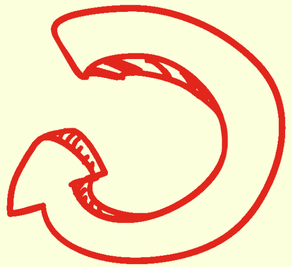


After reading "Svenska 70-talsmöbler," I was inspired to incorporate some of the design elements from that era into my design. I loved the clean lines and simple shapes of the furniture pieces featured in the book, as well as the use of natural materials like wood and leather. That became the features I kept during the whole ideating process when designing.

WHAT IS THE DIFFERENCE BETWEEN A LINEAR FURNITURE AND A CIRCULAR?

Traditionally, public furniture is manufactured and sold according to a linear business model where raw materials such as wood, wool, and metal are produced, transported, and processed into materials and components that are then used to produce furniture. The furniture is then sold to a customer who handles and maintains the furniture until it is disposed of and eventually energy- or material-recycled.

With circular furniture flows, we mean production and consumption systems where furniture or parts of furniture are reused and/or repaired to come back into the system at different stages. Material recycling can be such a return, but the idea is to make the loops in the system as short as possible to preserve as much of the value that has already been worked into the product. This is the foundation of the concept of circular economy. One hope is that these shorter loops also increase the environmental, economic, and social sustainability of the system. This can be done by reducing the use of natural resources, lowering the total cost of furniture handling, or creating local jobs.



THE FUTURE OF CIRCULAR ECONOMY.

The future of the circular economy looks promising as there is increasing awareness and commitment to sustainable practices across various industries and governments. A circular economy refers to a regenerative system that minimizes waste, retains the value of resources, and reduces the consumption of raw materials.

Several trends suggest that circular economy practices will continue to grow and become more widespread. These trends include:

Increasing demand for sustainable products:
Consumers are becoming more conscious of their environmental impact and are seeking products that are made sustainably and have a positive impact on the environment. This trend is driving companies to adopt circular practices to meet the growing demand for sustainable products.

Government support:
Governments around the world are implementing policies and regulations that encourage circular economy practices, such as product design for recyclability, extended producer responsibility, and waste reduction targets.

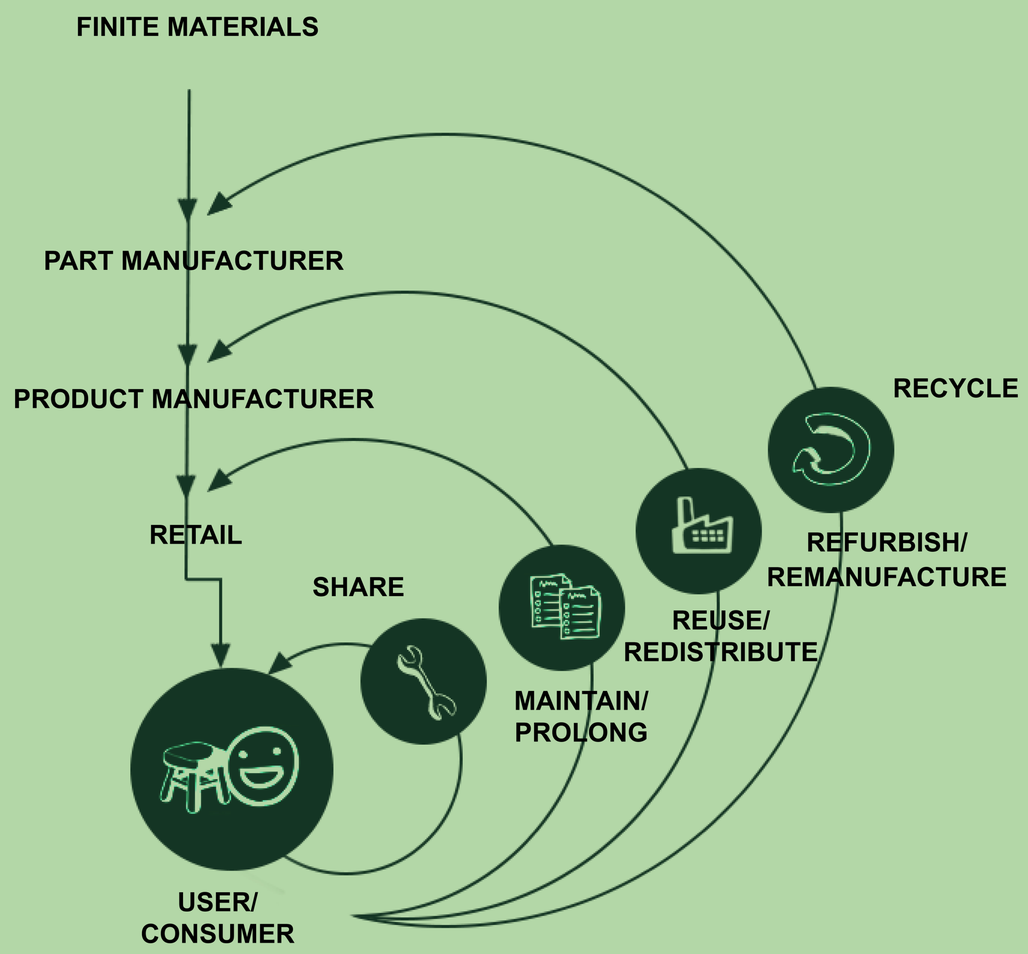
Technological advancements:
The development of new technologies such as artificial intelligence, blockchain, and the Internet of Things are enabling more efficient use of resources and better tracking and monitoring of material flows, which can support circular economy practices.

Collaborative efforts:
Collaboration among stakeholders, such as governments, companies, and non-governmental organizations, is essential to achieving a circular economy. Many partnerships and collaborations are being formed to drive progress toward circular economy goals.

Circularity; loop system.

The future is circular economy, that's why I thought it was important to consider the loop system of how to prolong each product to improve its reusability.

I have done an illustration that describes the loop system on how I would like my products to be maintained and recycled properly to expand the lifespan of each product - all the way from the locally harvested wood to the consumer in different levels.



During the research phase, I was interested in investigating circularity within the furniture industry to get a greater picture and understanding of what orientations exist when it comes to the circular approach. I decided to focus on three different companies: **TAKT**, **NORNORM**, and **MATER Design.** My first impression was that they had the same business model but with different focus areas. I investigated time researching their web pages to find data to collect and compare them with each other. I took some time to identify four categories that I was able to fill in with my findings about their business model for more easy comparison. I decided to make mind maps with the same structure for each of them, to collect data and categorize my findings in four different sections which show their differences and their commonness for each of the brands.

I started to look into their graphic loop chain which tells a lot about their cognitive process and knowledge within the circular economy definition, how their process looks step by step, which I call the product life cycle. I also evaluated the criteria of design principles the companies are carefully following to identify themself as a circular business - eco-design principles. They all process their furniture in different ways to prevent high emissions and I wanted to categorize them to get a bigger picture of how they handle the furniture - furniture handling. The supply chain was tricky to compare since one of the brands is only focusing on subscription-based business and the other for private consumers which did not differ too much from each other, so I kept it separate - supply chain and subscription base.

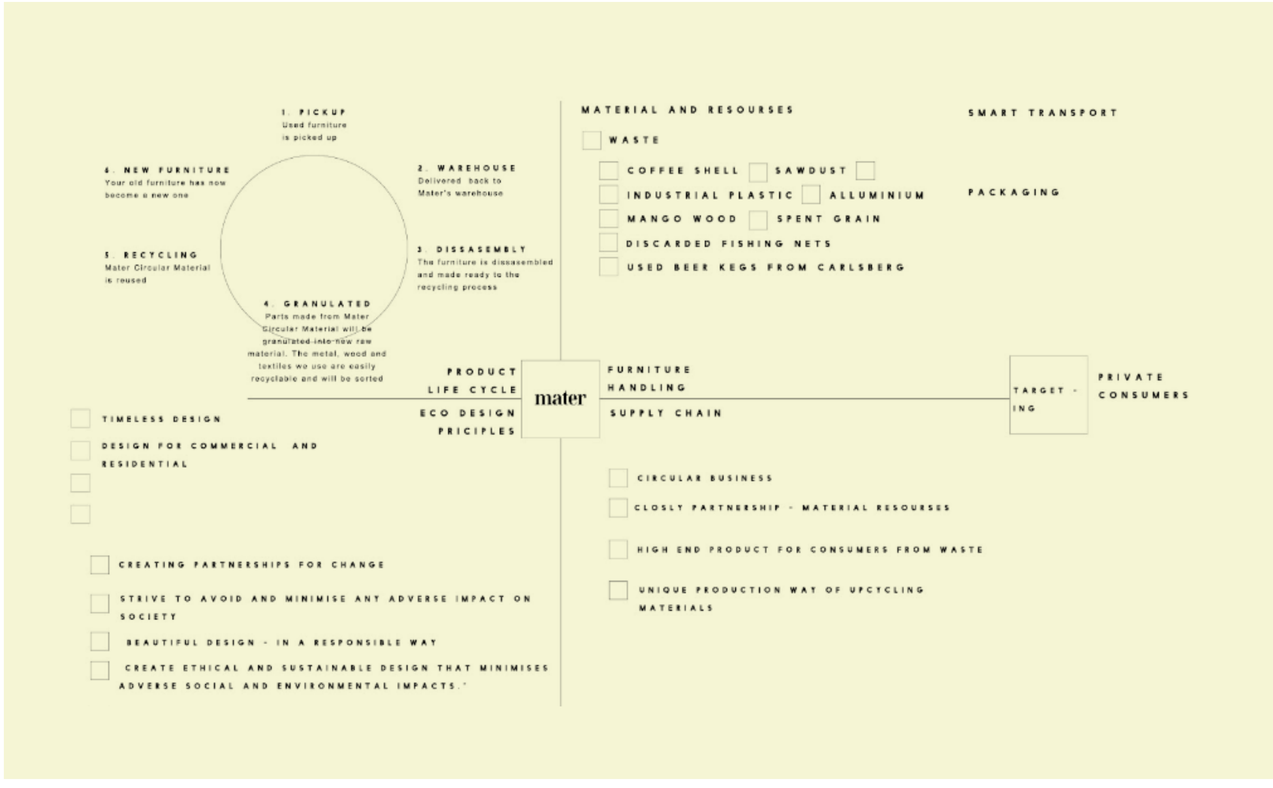
mater

TAKT NORNORM

SUMMERY OF FINDINGS.

Brand Analysis

Product life cycle - is in all terms very different from each other. **TAKT** is explaining its circular approach in three ways of taking care of the product. By being good at separating the materials and recycling properly, being better at repairing or updating to allowed uses, and being best at reusing without modification. **NORNORM** is focusing on the lifecycle of how to extend life without making it into the trash. Subscribing and refurbishing can keep materials in life and use and it can always be useful to someone else when someone needs to update their own business within the office and public spaces environment.



How they are handling their product is different from each other. **TAKT** is focusing on honest materials such as wood, keeping it clean, and promoting flat packaging for reducing carbon emissions through transportation. **NORNORM** has a similar approach but does not mention too much; they have considered materials and sustainable solutions for reducing the impact on the environment. **MATER design** is more into the upcycling and transformation of waste into something useful and beautiful, by putting a lot of resources into production it is their mission to produce and design furniture in another way than we are used to today.

SUMMERY OF FINDINGS.

TAKT.

Based on my interest in creating a product for the home commercially, I contacted TAKT which is a Danish furniture company that has a circular business model that they are strongly connected to. I visited Martin Qvist Lorensen, who is the Co-founder at TAKT, in their showroom in Copenhagen for an interview.

We mainly discussed the circular loop chain, how to become even more circular as a brand, and where it potentially can have a bigger impact on the circularity. I asked Martin;

“Have you come across an area of interest where you can see a lack of circularity within your business model?”

Martin replied; that they are working frequently to develop and improve their identity as a circular furniture company, such as implementing a platform to take back or return their product if they are no longer in use. Like offering a service where the company can buy back the furniture, so they have the opportunity to restore the furniture to its original standard and sell them.

Closing the loop, even more, will bring greater benefits to consumers and also to the company. It will lead to a more reliable business and at the same time create more opportunities to renovate to a high standard or properly recycle the material.

When it comes to designing furniture to be disassembled for a flatpack delivery option, I had some questions about their approach and success in achieving a strong concept with good usability.

When designing and constructing furniture to be assembled and disassembled - What is the key to making it easy for users to do the job?

Martin replied; the simplicity of the furniture should be easy to understand at first glance. It must be readable and easy to understand how it is constructed without instruction.

When we develop a new product, it is important to us that the furniture is high-end with a carefully designed expression that does not visually look flatpack. The furniture should not be compressed by the volume, material, and durable construction but to keep the standard and be classified as a standard product that the user can interact with and feel part of the process while installing the furniture in their own home.

When I was visiting the showroom - we had time to look at their collection and took a closer look at some of their types of furniture and how they have been constructed and designed - Which made me inspired to design something according to our common philology and vision towards a more circular society.
It was a valuable meeting and I hope to get in touch with them again in the future.

Ideation.

Moodboard

This moodboard gives a sense of a Scandinavian traditional design heritage where the rawness and clean lines are recognizable. The larger dimensions touch on the Brutalism design movement that was popular in the 1960s and 1970s. I want to maintain the simplicity with a touch of the rawness and robust brutalism was known for e.g. I have included nostalgic pictures from IKEA's product catalog from the 70s, which show my interest in reviving an old design language that is based on Swedish design principles, simplicity, functionality, and minimalism.

Strategically, it has been challenging to prevent complexity in the joinery design. The more addressed functions it will have, the more complex it will become. I have also tried to achieve at least an interesting piece of furniture with stucco and a lot of craftsmanship behind it.

Since Swedish labor is very expensive compared to other countries around the world, have I tried to reduce the working time behind the design to minimize the additional costs incurred in more complex construction.

Making that decision also reduces complex manufacturing methods that require the carpenters to have access to, for example, advanced CNC milling machines and other expensive woodworking machines. This will make it easier to find carpenters where the furniture can be produced, it will automatically open up for more choices and flexibility when it comes to production.

I concluded what are important elements for the furniture and which key points they should contain and have in common.

Everything should be made from solid wood, in this case, solid pinewood. Why that is important because I want a highly durable natural look that comes from its unique grain patterns and color variations. Solid wood can be finished with stains, paints, or clear coatings to protect the wood and enhance its appearance. It is also possible to be carved, shaped, and joined to create intricate designs and functional structures. Solid wood refers to wood that is made entirely out of a single piece of lumber, rather than being made of various pieces of wood glued or laminated together.

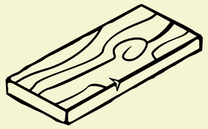
Pine is classified as a softwood rather than hardwood, softwoods come from coniferous trees, which are typically evergreen and have needles instead of leaves. Pinewood has the characteristics of being lightweight, easy to work with, and affordable, Which is important to my design.

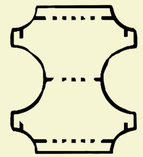
Leather is considered to be a desirable material for several reasons such as its durability, the material can withstand wear and tear over time, and resistance to scratches, punctures, and tearing. A natural material that can conform to the body's shape, providing a comfortable and supportive feel when it comes to furniture. Leather has a classic, timeless look that is often associated with luxury and quality. Since my vision is to design a modern classic, there was no doubt to address leather in the product. It also has some sustainable aspects when it comes to sourcing responsibly, it is biodegradable and can last for many years, reducing the need for frequent replacements.

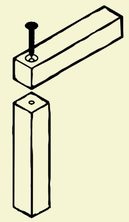
The quality and environmental impact of the leather can vary depending on how it is produced and processed. Some leather manufacturing methods can be harmful to the environment and workers involved in the process. Therefore, it is important to consider the ethical and environmental consequences of leather production when making purchasing decisions. That is why it is necessary to cooperate with certified leather industries that are local and work with Vegetable tanning of leather, this means that the leather should be tested to not reach limit values for harmful substances.

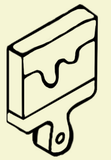
Simple joinery which consists of universal screws that are easy to get access to, will provide an easier refinishing which could be done by a carpenter and yourself. It should be joined by furniture button hex keys that have a universal standard that could be assembled by Allen keys. All metal parts that hold the furniture together must be easily disassembled from the wooden structure to easily recycle the material properly.

The treatment of the wood must be natural and environmentally safe with strong protection, based on a simple application, and easy to maintain for a long time.





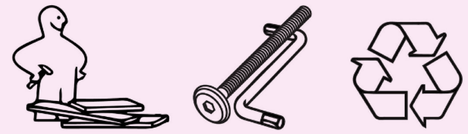


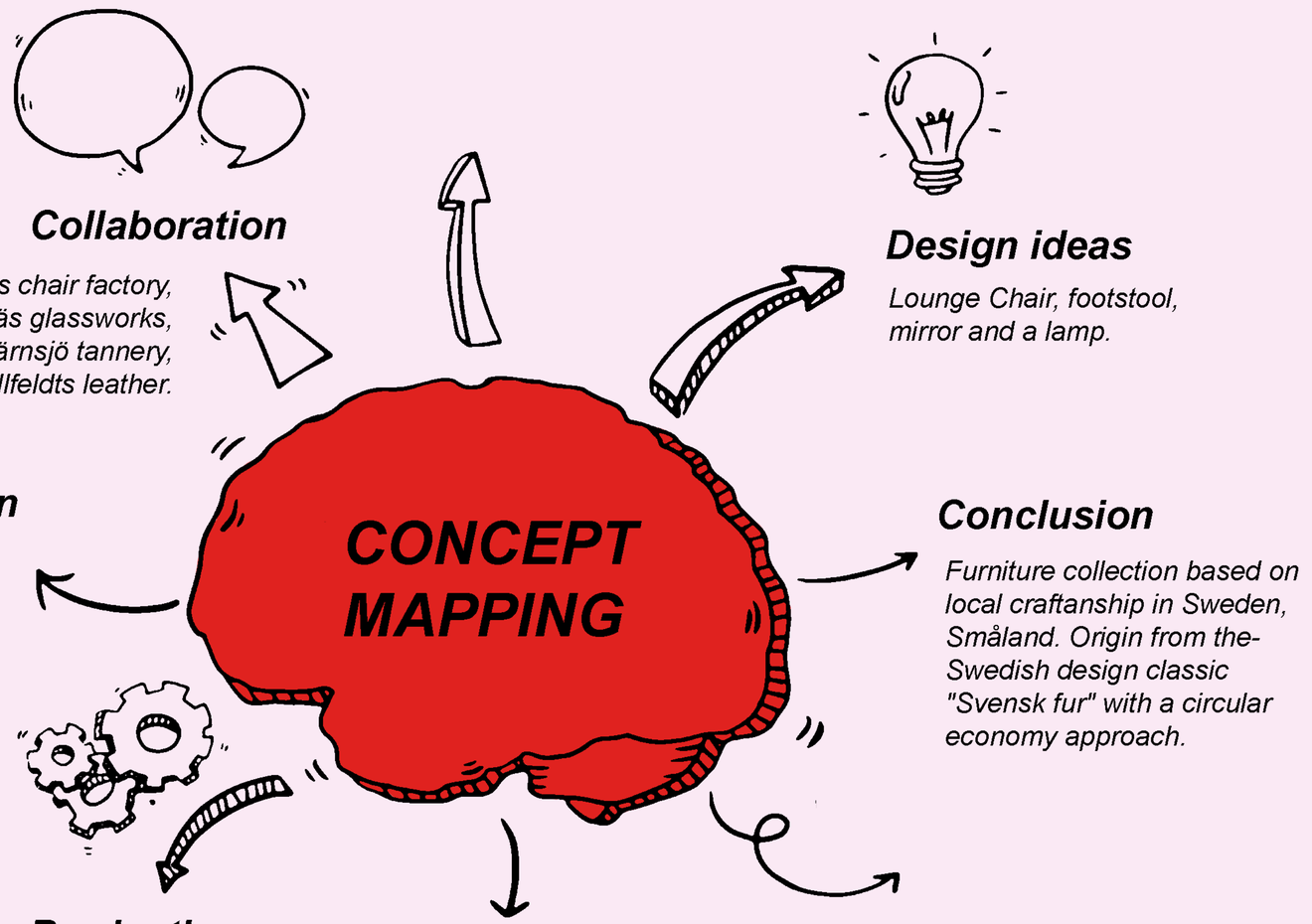


MASSIVE BUT FLATPACK.

I questioned myself if it's even possible to compete with design classics that have been alive for so long and still are desirable and well-designed by iconic designers from the past. For example, the first Federica lounge chair that was designed by Børge Mogensen. And the third one was designed by Karin Moberg in the 1970's as part of the IKEA collection.

I asked myself if I could do something that approached a more sustainable way of maintaining the furniture, by addressing the design to be flat packable furniture, which is very uncommon when it comes to a lounge chair that is made out of massive wood. I will provide more accessible furniture in that category when it can be made flat will the maintenance and transportation become much easier for everyone in the supply chain.





Collaboration

Wigells chair factory,
Orranäs glassworks,
Tärnsjö tannery,
Kallfeldts leather.

Design ideas

Lounge Chair, footstool,
mirror and a lamp.

Construction

Disassemble, assemble,
refurbish able, recyclable,
flat packable,

Conclusion

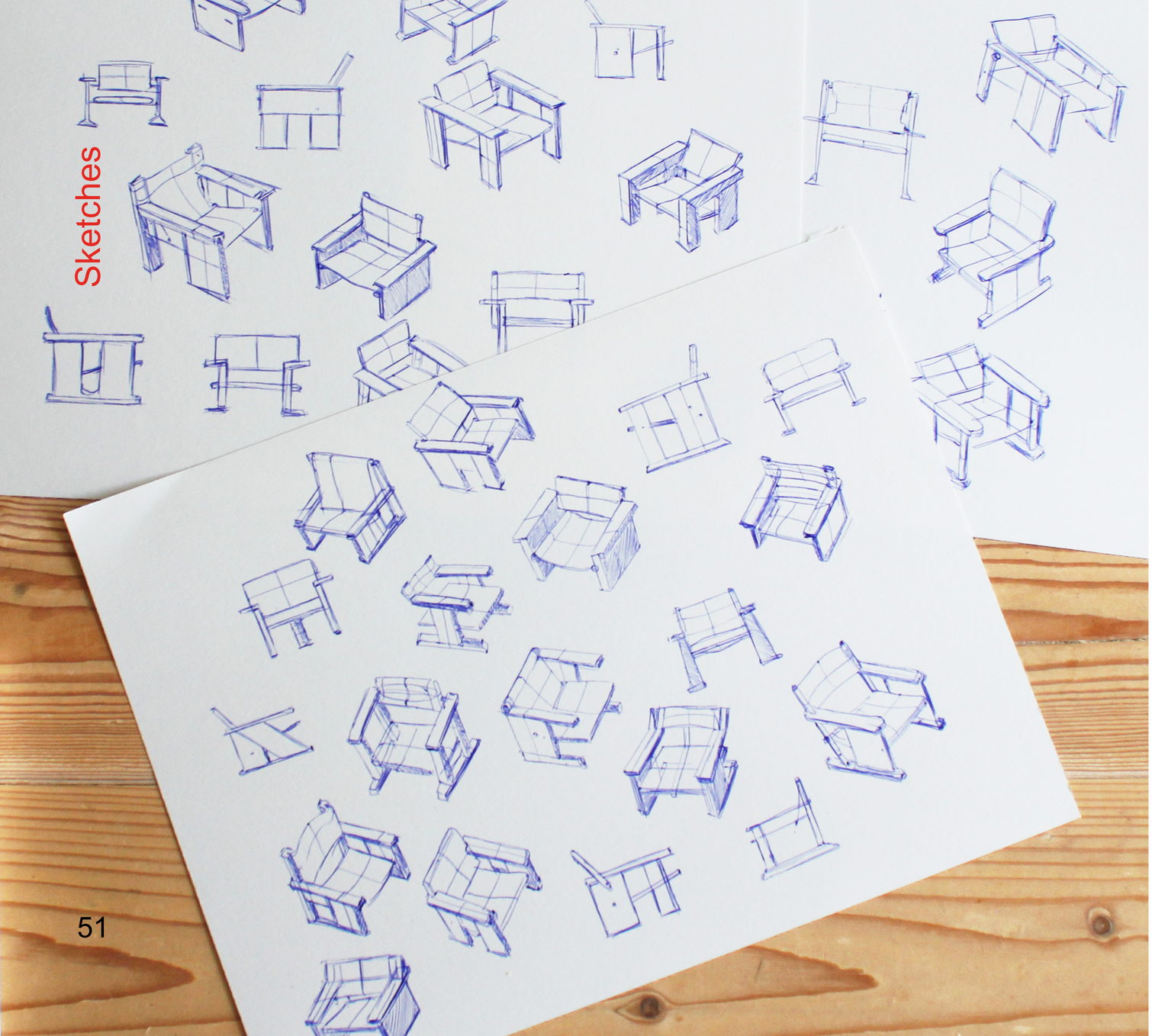
Furniture collection based on local craftanship in Sweden, Småland. Origin from the-Swedish design classic "Svensk fur" with a circular economy approach.

Production

Local Sawmill, wood factory,
Glassworks and leather tannery.

Materials

Pine wood, Leather,
Metal joinery and Glass.



Lounge Chair.

My choice of aesthetics and design began to evolve while studying old classic design and new modern simplicity in design and architecture. I explored the movement and dynamics of the furniture with different characteristics and design expressions to reach a design I was satisfied with. I made the decision quite early on to maintain the volume, with large visible areas that emphasize the pine and keep the design language clear and simple.

As I processed my ideas it came very naturally that I started working with layers of wood which I found out was very interesting and unique. Where there was tenderness to work with the grain directions of the wood in the furniture, I considered it to become one of the main features of the furniture to evolve in the rest of the collection.

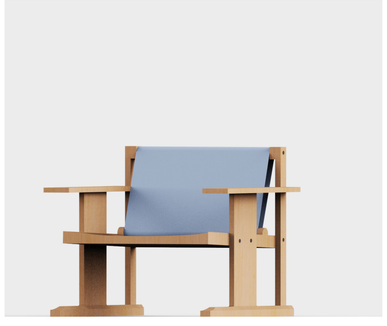
Footrest.

The footrest must have certain similarities that make them work well together and also have other functions even if the footstool is not used in conjunction with the armchair. I would also like to address the flexibility and modularity that provides a variety of areas of use.

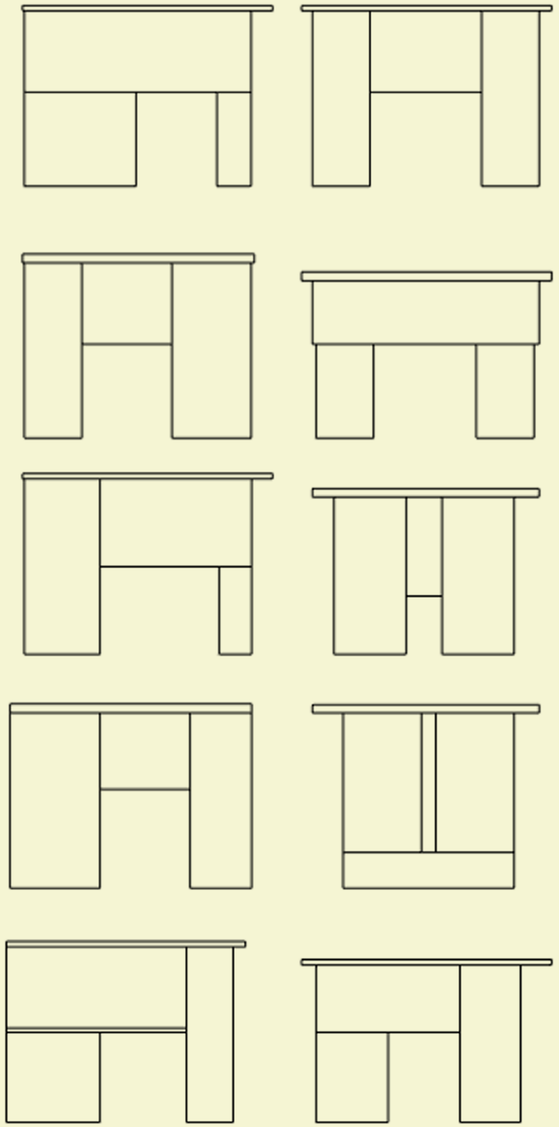
I selected some designs that I want to further develop and evaluate through 3D modeling and visualization of materials and tactility. I started by having an idea that didn't match my vision, the design was too weak and flimsy and would be too complex to assemble by yourself.

The robust, strong, and chunky construction I wanted was developed with simple boards that are aligned in different directions with both load-bearing leather in the seat and backrest.

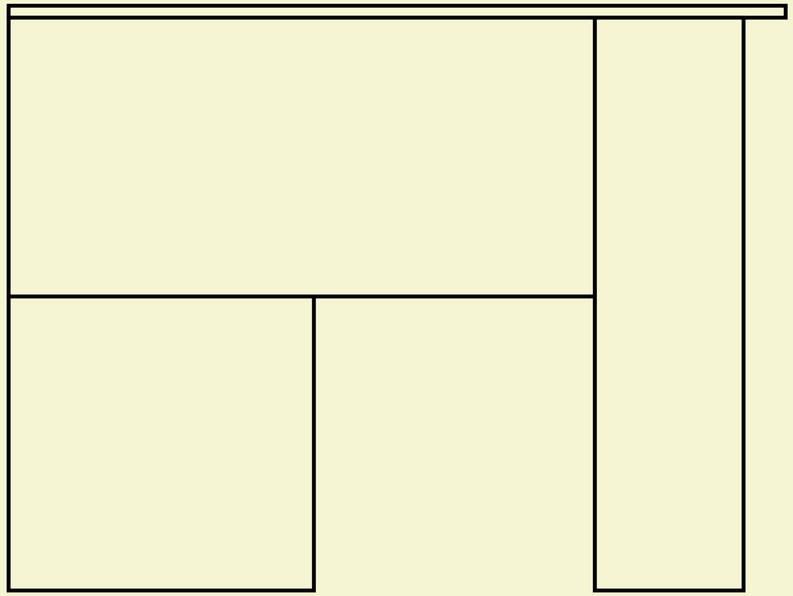
I found out that this design principle became the most interesting. I sketched different versions of that type of design to reach a balance between the armchair and the footrest.



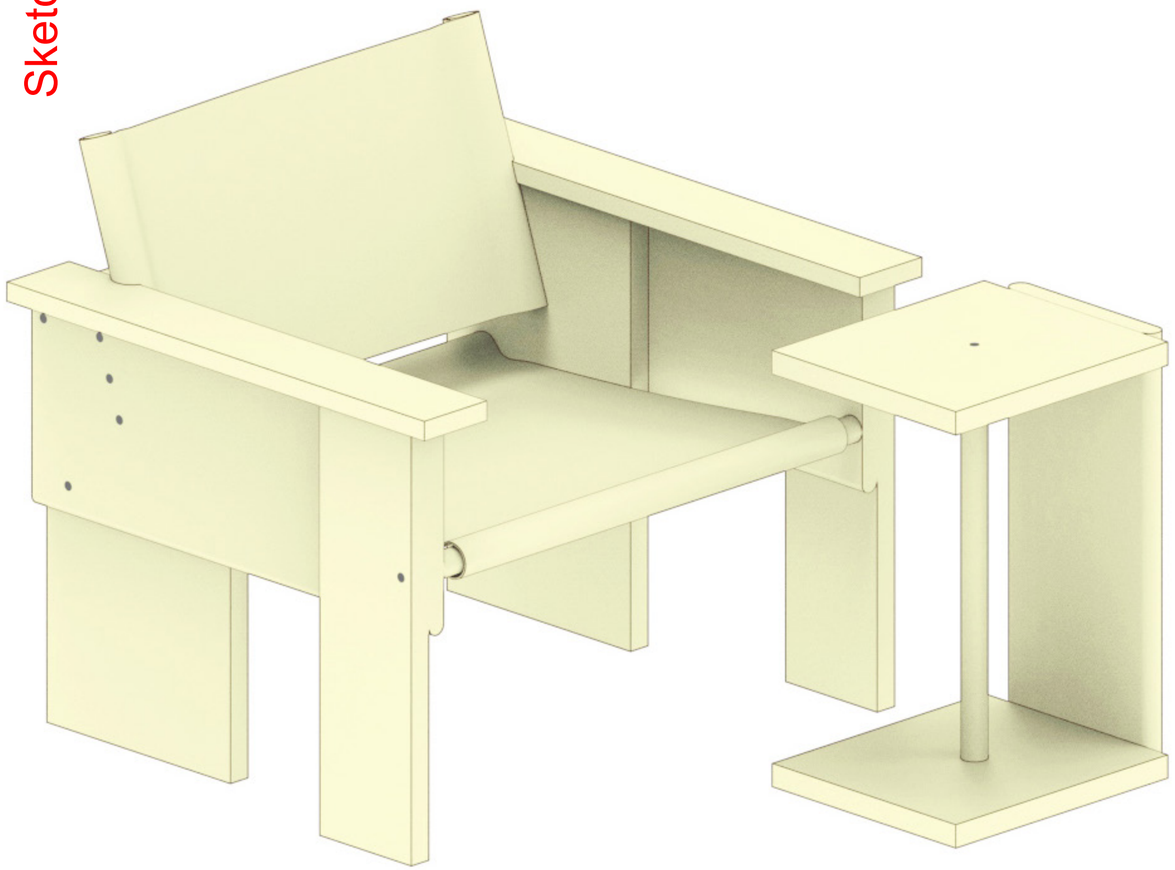
Sketches

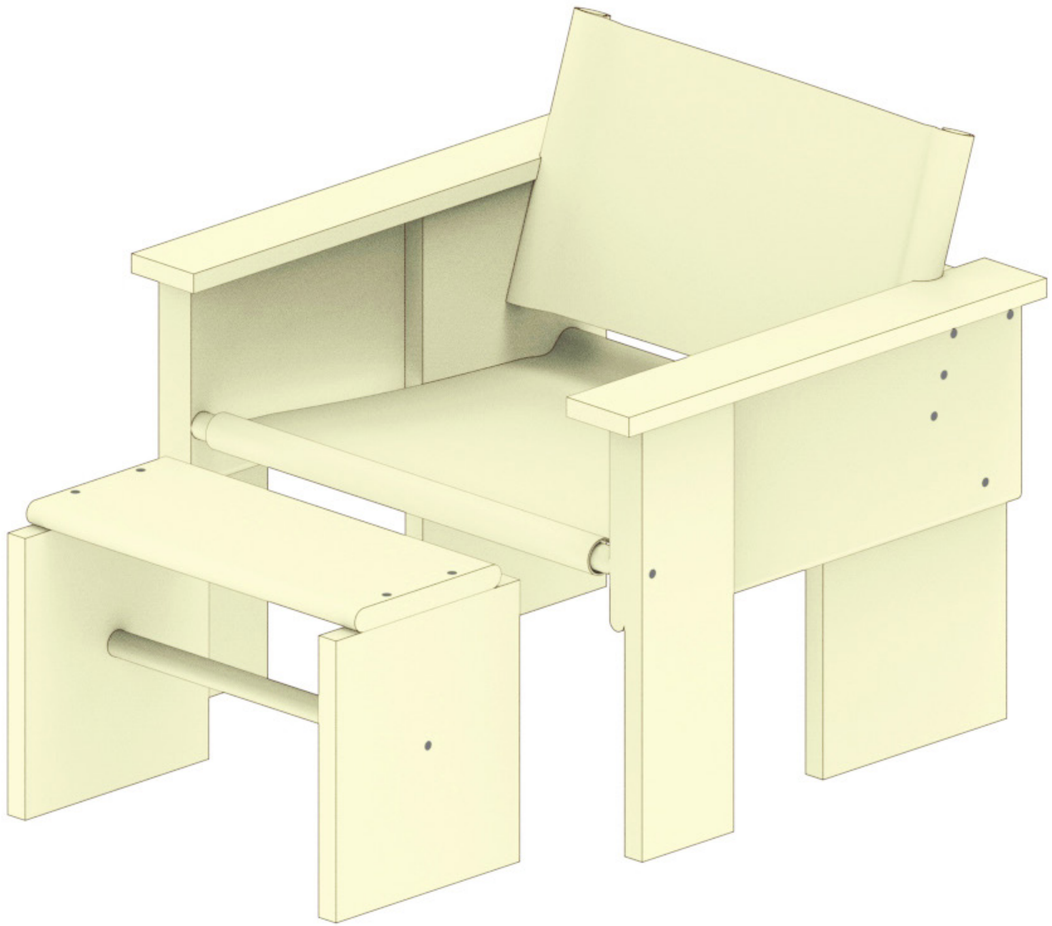


I liked the simplicity of laying the wood in different directions and elaborating on dimensions and the graphic silhouette, which will become one of the main features of the design. The benefit of working simple with easy joinery is that it will decrease the amount of working hours and doesn't require any advanced manufacturing, I don't need to cut down on materials which will result in a more solid, robust, and qualitative product.



I like the fact of playing with the grains in different directions which was possible by layering the wood on top of each other to increase the movement and dynamic of the wood grains.





Sketches

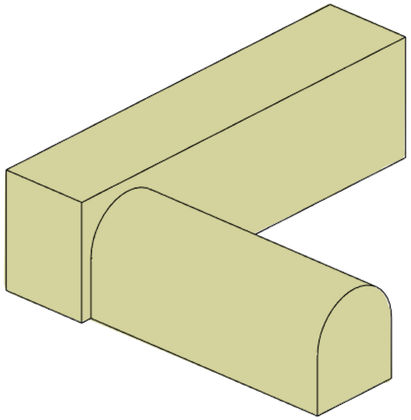
Glas Lamp.

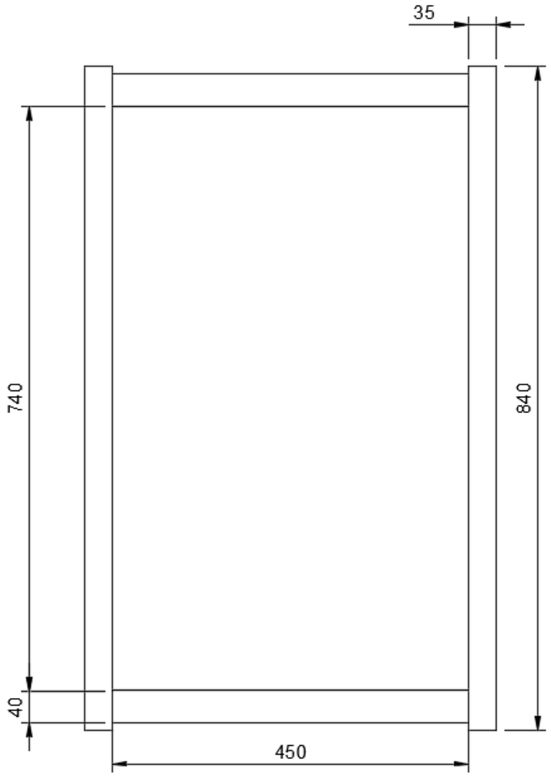
The round sphere speaks for its simplicity and clear shape, but that is also often a good choice for glassblowing because it allows for a more even distribution of heat and pressure during the blowing process. This can help ensure that the glass is shaped evenly and avoids any weak spots or stress points that could cause the glass to crack or break.

It could also be easily addressed in a rotational wood mold, which could decrease the time of producing the lamp shades.

Mirror.

The mirror is an imitation of the others' rounded corners together with the sharp ones. It is what will set the design language and become the main character trait.





Design Development.

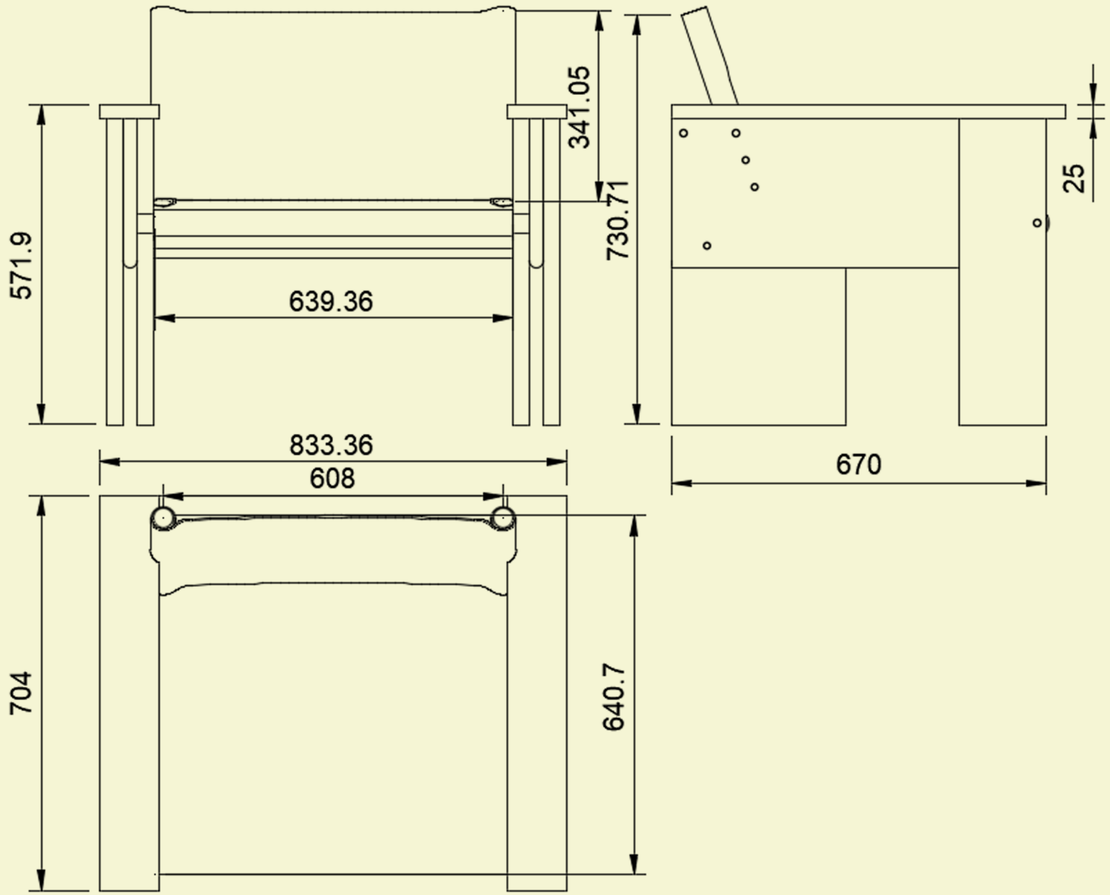
Prototyping/ Mockuping

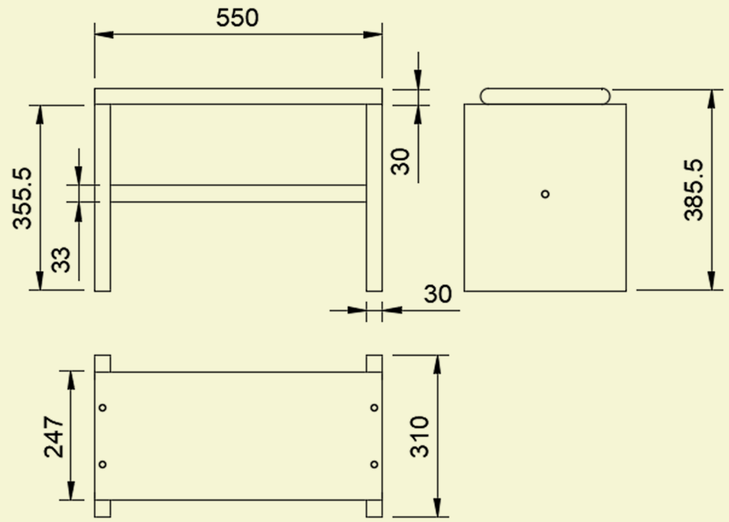
I made the models of the chair very roughly to evaluate the size and volume of the wood. I printed out small-scale models to show Wigells my design so we could discuss and draw conclusions about what works and what doesn't, as a basis for discussion.

In order to experience and make decisions, I chose to 3D print in a transparent material to get a sense of the shape and lightness of the lampshade. At the same time explore different sizes and curvatures of the round shapes.

I tested the curved and soft corners to see how they work together with a sharper and more aggressive shape.

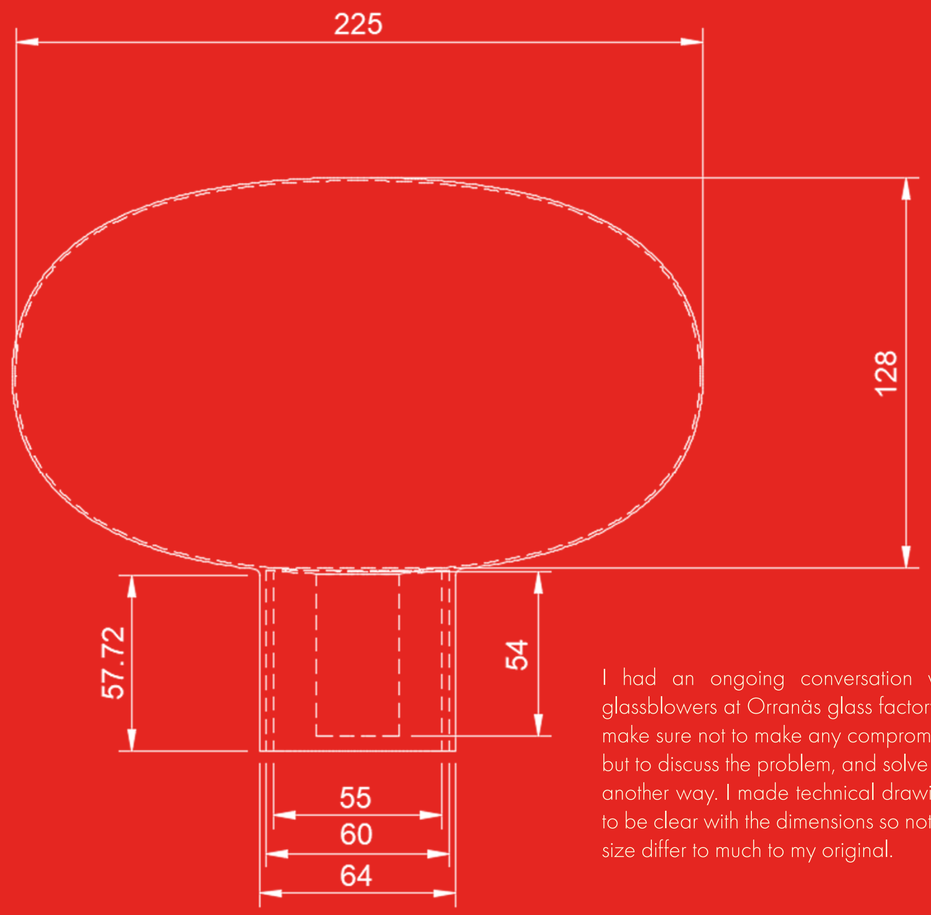
Technical drawings



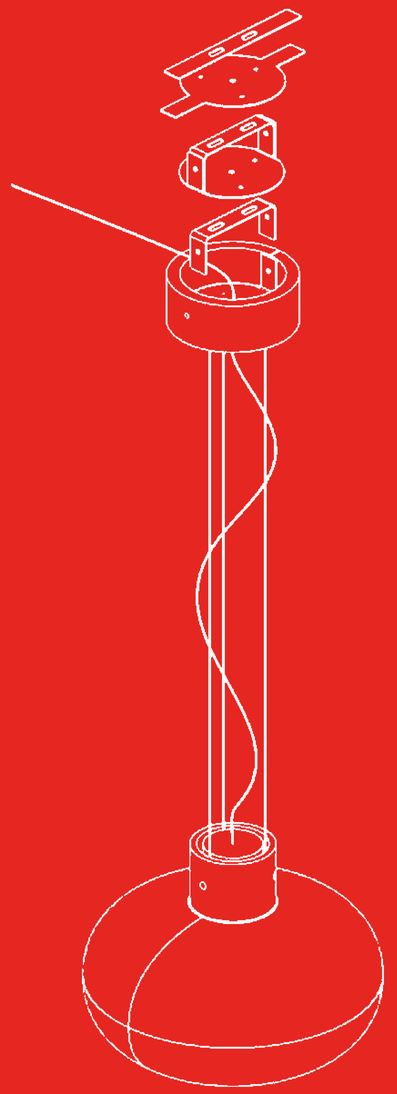


I worked a lot with the silhouettes together to get a nice balance between their different building blocks to create a harmonious distribution of the surfaces. the size was developed while I was working on the graphic silhouette, with inspiration from classic lounge chairs and their sizes. I wanted the lounge chair to be wide and spacious. To be able to crawl up and get the legs up in a tailor's position, for a longer sitting. Footrest has an oblong shape to provide plenty of space for the legs. It also gives flexibility and a decent height to a side table if you turn it 90 degrees.

Technical drawings



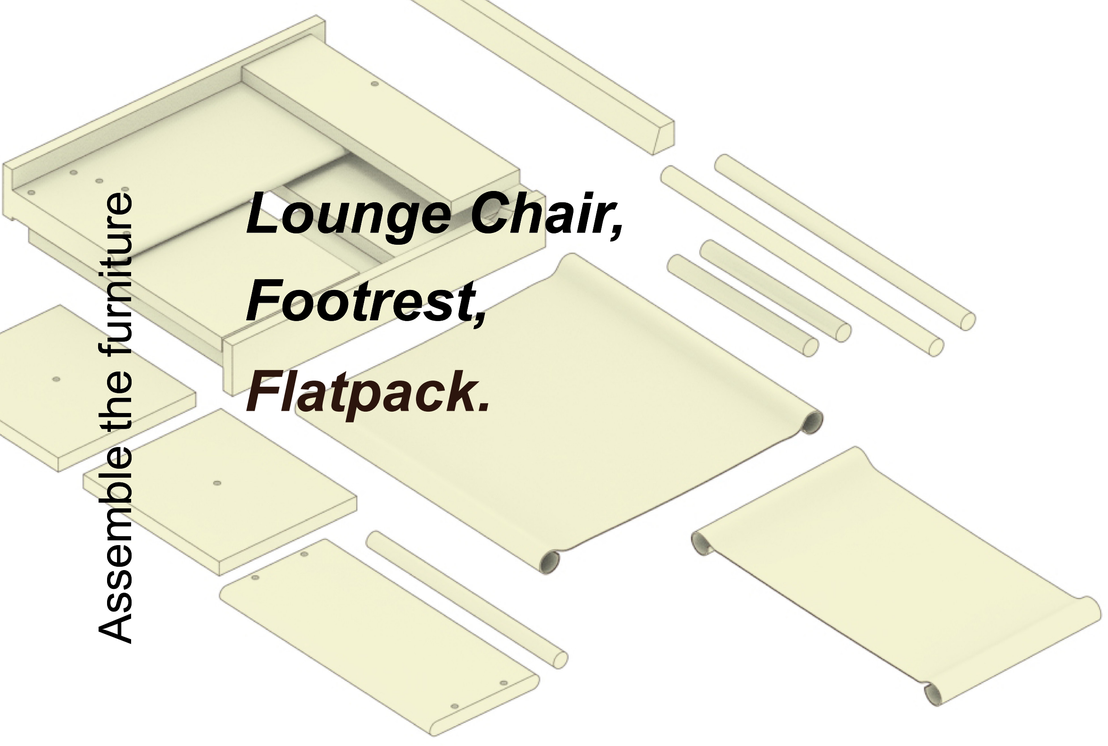
I had an ongoing conversation with glassblowers at Orranäs glass factory to make sure not to make any compromises but to discuss the problem, and solve it in another way. I made technical drawings to be clear with the dimensions so not the size differ to much to my original.



Exploded view of all components for the lamp, The hand-blown glass shade, light bulb, wooden cover for the socket which is enclosed in the glass shade attached with three screws through the glass, three pieces of wire for a lighter impression which is attached to the wooden cable cover, where the cable goes though with a simple ceiling bracket.

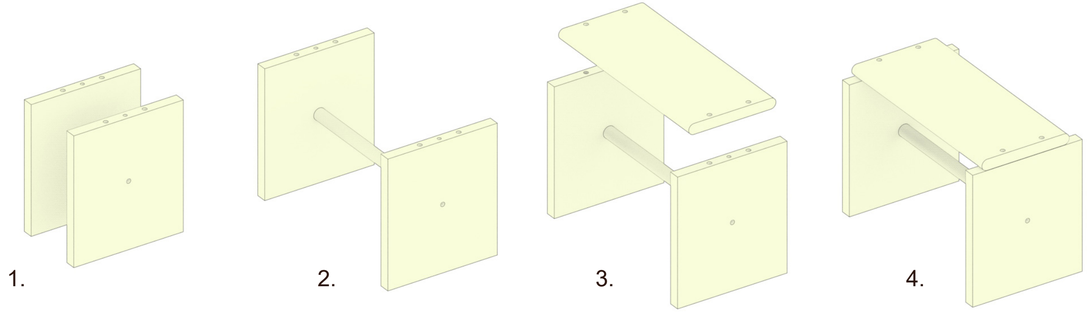
Assemble the furniture

Lounge Chair, Footrest, Flatpack.

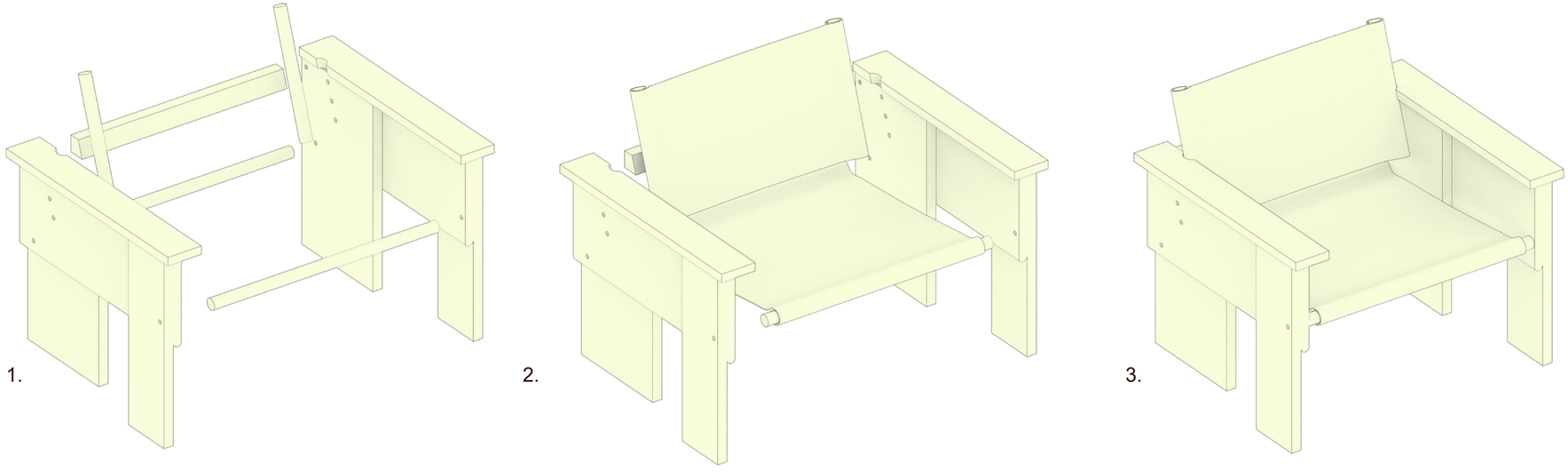


I tried to use as few assembly steps as possible to prevent complexity and improve the handling experience. The footrest only has six screws for mounting, one on each side for stabilization held together by a round rod, and two on each side for mounting of the seat.

Same for the armchair, the chair frame is joined together and comes in one piece, with two screws on each side of the seat holding the body together with two round bars. The backrest has three on each side to increase stability and with more support the two bars are inserted into the armrest. Another wooden bar is joined with two screws behind the backrest to ensure the load is not on the very back point.



1. 2. 3. 4.



1. 2. 3.

Rubio Monocoat.

Rubio Monocoat is a brand of natural oil-based wood finishes that are used to protect and enhance the natural beauty of wood surfaces. Rubio Monocoat finishes are unique in that they only require a single application, which penetrates the wood fibers and molecularly bonds with them to create a durable and long-lasting finish. This process is achieved through the use of molecular bonding technology, which allows the finish to adhere to the wood without forming a surface film.

In addition to providing protection against moisture, stains, and wear, Rubio Monocoat finishes come in a wide range of colors and can be used to create a variety of effects, from a natural matte finish to a high-gloss sheen. They are also environmentally friendly, contain no VOCs or harmful chemicals, and are easy to maintain and repair.

0% VOC

When researching durable stains and wood treatment,
I wasn't convinced which type of treatment would be the best option. Until I came across a stand at a fair in Copenhagen where they were promoting their products and explaining the good effect and easy application. I got in touch with Lars, one of the dealers in Sweden who gave me an informative introduction and showed me the approach and answered questions that would lead me forward in the design process.

Material Exploration

Exploring different stained wood and colored leather has opened up different impressions and aesthetics. The contrast between the warm tones of the wood and the light shades of the leather creates a striking visual effect. Whether I was working with soft pastels or bold, saturated colors, it was possible to explore the level of depth and richness that draws the eye's attention to the right balance I was searching for.

Material Exploration

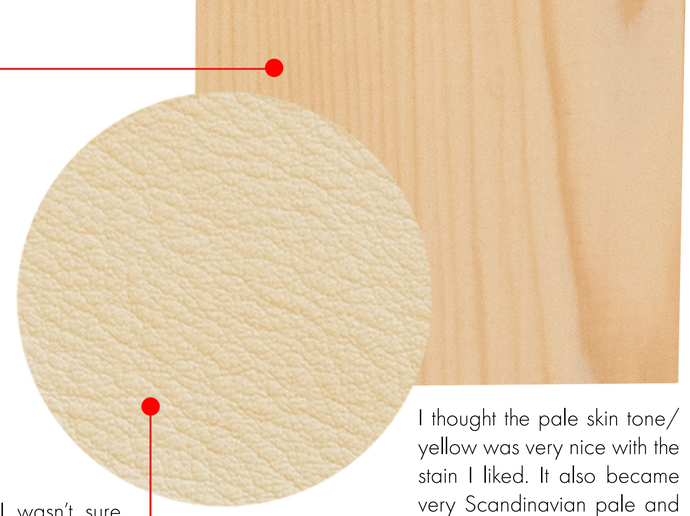
Darker/
Antique

Light/
Pale

STAINS.

When I did my research, I was pretty sure I wanted the wood to look aged, like adding a darker pigmentation to make the furniture feel old and rustic. The pine ages and become a darker tone by itself

I decided to try a more pale pigment, that prevents an intense yellow tone that comes naturally with aging. One of them had a red tone which I liked and since red has stronger pigment than yellow the layering turns out to be more of a warm brown which I wanted.



I thought the pale skin tone/ yellow was very nice with the stain I liked. It also became very Scandinavian pale and soft together which will represent well my furniture.

At an early stage, I wasn't sure whether to go for a more traditional red-toned leather or be bold with more modern trendy pale pastel colors to reflect today's trends. I was given lots of leather samples to test different combinations.

Leather color scheme.

Samples from Sörensen leather.

Execution.

Swedish pine produced by Säters steam saw located in Dalarnas municipality.

Säters Ångsåg is a company that produces high-quality pine timber. The raw materials used are mainly large pine logs, known as Säter-block and "Knivfura", which are transformed into high-quality furniture and panel materials.

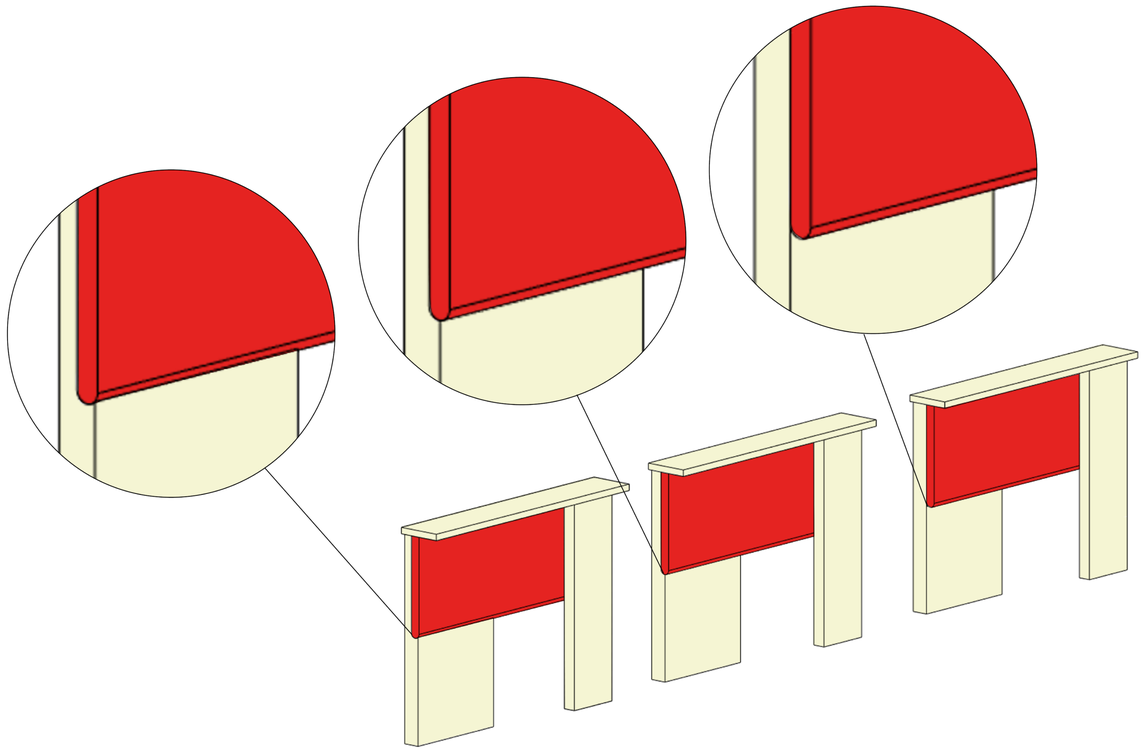
The company uses a sawing technique known as a "ramsåg," which is suitable for fine raw materials and helps to maximize the production of sideboards. Most of the products are sold in Scandinavia, but some are exported to England, Spain, and the Middle East.

By being the recipient of the most valuable logs from a logging operation, Säters Ångsåg ensures that the value of these logs is fully utilized which ensures less waste material. The high-quality raw materials are transformed by Säters Ångsåg into furniture, internal trim, panels, and linings that are durable and of exceptional quality. I am happy to have worked with such a good business that processes the material from cutting forest material to utility material in an exceptional way.

When I was commissioned to design and manufacture furniture, I carefully considered various aspects that would contribute to an efficient and streamlined production process. After careful evaluation, I consciously decided to adopt a simple manufacturing process to produce the furniture collection, aiming to optimize the working time and simplify the construction of each part. Everything is made from simple manufacturing such as glue binding wood, which is trilled and manually cutted so the right dimensions, and machine lathed wood. And drilled where the wood is to be attached to each other.

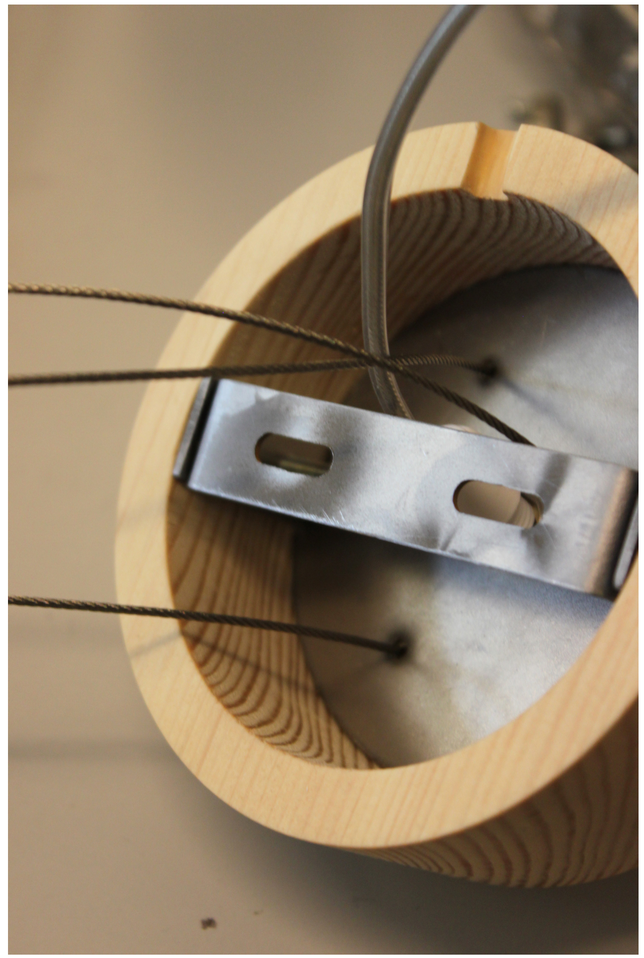
During the development with Wigells, I already had the vision from the beginning to insert the laying wood profile which is highlighted in red for the back legs to make the wooden frame a little flatter.
It turned out to be difficult because the wood intend to move and the glue joints will crack if the wood has no space to move. My conclusion is that it will be even better without the counters-inking and It will also saves more working time and processing of the furniture.

SIMPLIFICATION SMARTER AND LOOKING BETTER.



AT WIGELLS CHAIR FACTORY.

Together with one of Wigell's employed product developers, we worked together to reach a well-designed and high-end first prototype in every sense of the word. Which was well succeded and developed into a high-quality product with impressive craftsmanship by the craftsmen at Wigells.



Process photos from the making of mirror frame and lamp cover.

Glas Lamp.

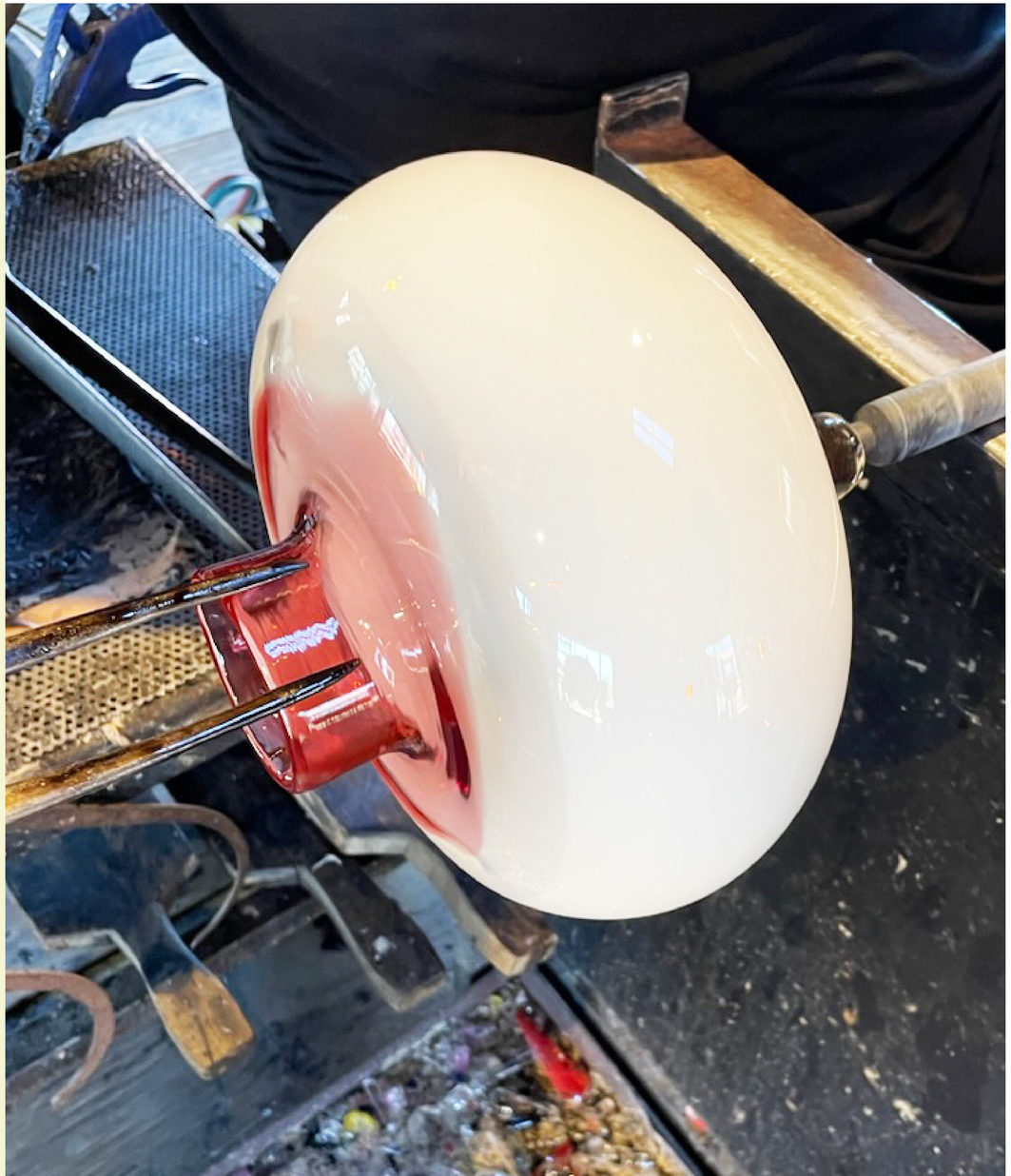
ORRANÄS GLAS FACTORY.

My collaboration with the glass factory was probably about learning the glassblowing process and working alongside skilled artists to create my own work. There is something very special about being able to create something with your own hands, and the art of glass blowing offers endless possibilities. One of the most interesting aspects of glassblowing is the precision and skill required to create each piece. The glass must be heated to the right temperature and the artist must work quickly to shape it before it cools and hardens.

Amy Krüger helped me develop my design at Orranäs Glasfabrik by sculpting it by hand and tried to follow my sketches as well as possible. To avoid spending time making molds for the glass bladder, I decided to let Amy make it by hand for the first real prototype in glass. I got three glass screens from the one hour Amy worked for me. The result was not quite what I expected, but once I processed it, I was happy with the result after all.

I had a conversation with Anders Raad who is based in Copenhagen and works as a glassblower. I was in his studio because I needed help drilling holes in the glass, Amy recommended him and he welcomed me with open arms. We talked about what people consider unique and desirable today when it comes to glass creatures. The handmade "imperfect" object is what our eyes are drawn to. When everything is symmetrical and nothing deviates, we don't notice it in the same way as something that is considered asymmetrical. He said that as glassblowers we always strive for perfection, which is within our practice and skill.

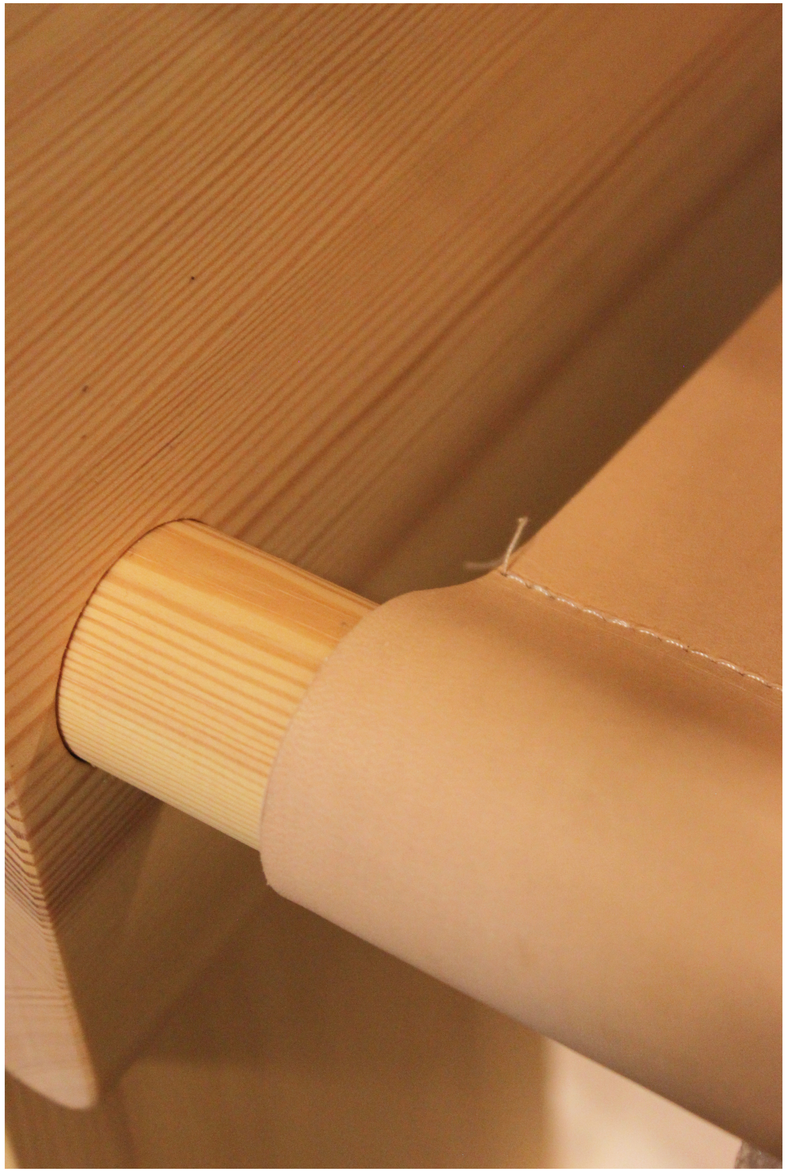
Everything he does is perfect when it comes to symmetrical shapes that can be rotated in a shape, he has recently experienced the popularity of asymmetrical shapes when customers ask for them and when they just look at them in the store. It has returned to the trend where crafts and imperfection are something people want.



Result.

CLOSE UP.

CLOSE UP.



CLOSE UP.

Reflection.

Reflection

During my design journey, I had the privilege of collaborating with local craftsmen in the Småland forests, where the essence of craftsmanship and tradition has shaped our heritage and defined the distinctiveness of Swedish design. It was crucial for me to reconnect with our roots, exploring who we are, where we come from, and how local businesses operate in a globalized world. A key focus was to create something deeply rooted in the Swedish design legacy, particularly using the local material that once held exclusivity—pine wood.

Through my extensive research, I discovered a significant shift from the 1970s until today in terms of interior design and furniture materials. Pine, which used to dominate during the 70s, has been largely replaced by oak and beech as the preferred woods in today's market. This trend has financial and sustainability implications. Oak and beech are generally pricier than pine. Pine, being a softwood, is more abundant, grows faster, and has a shorter harvesting cycle compared to hardwoods like oak and beech. These factors contribute to lower production costs and subsequently lower prices for pine.

Once the core design was established, the finer details emerged and were determined during the furniture's development. Dialogues and visits to Wigell's chair factory played a crucial role in making decisions. Working alongside skilled craftsmen made communication easy, allowing my ideas and designs to be realized without extensive revisions. Each design project involves a learning process, and throughout this endeavor, I gained insights into effective communication, collaboration, and bringing ideas to life through sketches, prototypes, technical drawings, and other means of conveying concepts.

As the design process progressed, my collection of pine furniture expanded to encompass four distinct pieces. While delving into past interior items, I sought a harmonious tone and aesthetic reminiscent of the 70s design movement. Drawing inspiration from this era, I embarked on my own contemporary interpretation that straddles the line between current design philosophies. I relished the challenge of melding two different decades to weave a narrative about our journey from the past to the present. I placed significant emphasis on reflecting a retrospective sentiment and nurturing nostalgia through my research, while also addressing the necessary sustainability requirements that designers should adhere to.

The scarcity of pine furniture in recent decades has generated increased demand today, resulting in higher prices at auctions compared to their original sale value. It is unclear whether this nostalgia-driven demand stems from a greater yearning for peace and a sense of belonging to Swedish traditions, a heightened interest in craftsmanship and sustainability, or a stronger need for emotional attachment to the objects that surround us in our homes.

We seem to be moving towards a trajectory that embraces a deeper appreciation for long-lasting design and a connection to the objects we own. We have returned to solid ground to analyze what truly matters in design, including craftsmanship, local production, locally sourced materials, tradition, and heritage.

My design influences stem from a mindset and strategy prevalent during a time when advanced machinery was less accessible, and simplicity was synonymous with beauty. While the current trend pushes the boundaries of technology to create intricate and innovative forms, we should not overlook the significance of investing time and energy into the small, simple elements that are easier for both craftsmen and consumers to grasp.

Designing something that is simultaneously simple, compelling, and aesthetically pleasing is more challenging than designing something complex and innovative. This pursuit of simplicity and beauty in materials led me to allow wood to be wood without unnecessary complications. Nostalgia played a vital role in reminding me of the project's essence and purpose.

I experimented with numerous iterations and ideas at the project's outset, pushing myself to explore different designs and features. This process allowed me to gauge whether I was headed in the right direction or not. I granted myself the freedom to test various styles and expressions that gradually evolved into a manifestation of my vision. My design principles remained straightforward, involving research phases that encompassed delving into Swedish design history, studying articles on the circular economy, researching brands with a circular approach, exploring the history of Swedish craftsmanship, and forging collaborations with local craft companies in Sweden—all while iterating ideas and mapping out each phase.

Reflection

Given my goal of transforming my design concept into a high-quality product within a short timeframe, I prioritized craftsmanship and execution to achieve a premium end result. The majority of time was dedicated to development and fine-tuning until the product met the standards and quality I envisioned.

The aesthetic and ethical aspects of the design drew inspiration from traditional design practices and craftsmanship, which have gradually diminished with the rise of globalization. Therefore, it felt natural to reference old design traditions, particularly our wooden heritage, which is closely intertwined with Swedish design. Instead of replicating old designs in modern homes, which continue to exist through the second-hand market, I aspired to create something new and contemporary with a touch of classic spirit. Reflecting on Swedish heritage in contemporary society has revitalized the values of craftsmanship and sustainable materials, leading to a noticeable surge in the design market today.

I contemplated what truly mattered in the past when it came to furniture and their role within our homes. I valued simplicity, including ease of production, durable materials, robustness, wear resistance, the utilization of pine—an abundant and cost-effective wood with excellent properties—and an honest and clear design language.

Regarding long-lasting design, I aimed to incorporate sustainability by implementing a practical approach to maintain the furniture and extend its lifespan. This involved easy disassembly and the ability to replace damaged or worn-out parts. For example, in the development of the lounge chair, I prioritized creating an accessible method to ensure the furniture remained in top condition, while also making solid and sustainable furniture more readily available to consumers.

The final outcome of my project aligns well with my goals and aspirations. Everything unfolded as I had imagined, and the quality and level of detail surpassed my expectations, leaving me highly satisfied. However, the schedule did not unfold exactly as planned, as the factory faced competing tasks throughout the project, which I understood.

If there were room for improvement in the design, I would have liked to incorporate the knockdown feature into the footrest as well. Due to time constraints, the lounge chair became flat-packed as required, but the footrest remained non-disassemblable. During the development of the glass lamp, glass experts cautioned against drilling holes in the glass due to its fragility, which could lead to damage and an increased risk of breakage, rendering the glass unusable. While I appreciated the visibility of the joinery, the added cost and higher risk prompted me to reconsider and seek a simpler solution.

Thanks to everyone involved!

It has been a pleasant design journey.

Reference List

Sources

1. Mixed forest or monoculture: A question of definition exemplified by data from the Swedish National Forest Inventory (NFI) Dr Jonas Fridman
https://www.ksla.se/wp-content/uploads/2013/04/Jonas-Fridman.pdf
(2013)

2. Webiste; Article
https://www.forest2market.com/blog/wood-construction-good-for-communities-good-for-the-environment
(2017)

3. Website; Article
https://www.naturallywood.com/wood-performance/health/
(2023)

4. Book; Svenska möbler. Folkhemsform i ull, jakaranda, furu och bok 1949-1970 Author Andreas Siesing.

5.
https://orranasglasbruk.se/

6.
https://www.kallfeldtslader.se/

7.
https://brodernawigellsstolfabrik.se/om-oss/

8. Website; WWF Swe
https://www.wwf.se/skog/varlden/fsc/?gclid=CjwKCAjwp6CkBhB_EiwAIQVyxSYTnq1bKKXUU_iM5gdeS2wTgQJsfi6HCI08M7xpvVe6btuhiO8qrRoCt74QAvD_BwE

9.
Book; Svenska 70-talsmöbler. Author Andreas Siesing.
(2021)

10. Fletcher, L. 2022, "Where Expectations Live", Canadian Interiors, vol. 59, no. 5, pp. 40-45.

11.
Suandi, M.E.M. et al. (2022) 'A Review on Sustainability Characteristics Development for Wooden Furniture Design', SUSTAINABILITY, 14(14), p. 8748. doi:10.3390/su14148748.

12. Ahn, N. et al. (2022) 'Circular economy in mass timber construction: State-of-the-art, gaps and pressing research needs', Journal of Building Engineering, 53. doi:10.1016/j.jobe.2022.104562

13. https://nornorm.com/

14. https://taktcph.com/

8. https://materdesign.com/pages/sustainability

Reference List

Pictures

1.
https://ikeamuseum.com/sv/utforska/ikea-katalogen/1976-ikea-katalogen/

2. Fine art photography Fog over the forest by Javier Pardina
https://www.europosters.se/art-photo/fog-over-the-forest-v65291

3. https://ikeamuseum.com/sv/utforska/ikea-katalogen/1974-ikea-katalogen/

4. https://www.friendsoffriends.com/profiles/shinrin-yoku-is-the-japanese-therapy-inviting-you-to-bath-in-a-forest/

5. https://www.pinterest.se/pin/367536019597290042/

6. https://ikeamuseum.com/sv/utforska/ikea-katalogen/1974-ikea-katalogen/

7. https://www.boktugg.se/bok/9789173538251

8. https://www.allmannyttan.se/historia/tidslinje/

9. Sawmills in the Vislanda tract, Småland., A pictorial work about Småland / photo: Erik Liljeroth ; text: Brother Olsson; caption: Gunnar Franzén; with the participation of P. G. Vejde; with an introduction by Pär Lagerkvist Malmö : Allhem, 1954

10. Interior Nässjö Stolfabrik, A pictorial work about Småland / photo: Erik Liljeroth ; text: Brother Olsson; caption: Gunnar Franzén; with the participation of P. G. Vejde; with an introduction by Pär Lagerkvist Malmö : Allhem, 1954

11. furniture industry, Småland, Karl H Hernried's archive acc. No. 1943/144-145, 1953/098, 1977/108, 1990/005

12. https://www.thefutureislocal.se/suppliers/kallfeldts-lader

13. https://orranasglasbruk.se/

14. https://www.design-market.eu/en/188537-vintage-solid-pine-bench-by-roland-wilhelmsson-for-karl-andersson-sons-sweden-1970s.html?redirected=true

15. Interior with stereo system, photographer Granath, Karl-Erik.
https://digitaltmuseum.org/021017027020/interior-med-stereoanlaggning

16. https://taktcph.com/

17. Interior Nässjö Stolfabrik, A pictorial work about Småland / photo: Erik Liljeroth ; text: Brother Olsson; caption: Gunnar Franzén; with the participation of P. G. Vejde; with an introduction by Pär Lagerkvist Malmö : Allhem, 1954

18. furniture industry, Småland, Karl H Hernried's archive acc. No. 1943/144-145, 1953/098, 1977/108, 1990/005

19. furniture industry, Småland, Karl H Hernried's archive acc. No. 1943/144-145, 1953/098, 1977/108, 1990/005

20. https://www.thefutureislocal.se/suppliers/kallfeldts-lader

21. https://orranasglasbruk.se/

22.
https://www.design-market.eu/en/188537-vintage-solid-pine-bench-by-roland-wilhelmsson-for-karl-andersson-sons-sweden-1970s.html?redirected=true

23. Interior with stereo system, photographer Granath, Karl-Erik.
https://digitaltmuseum.org/021017027020/interior-med-stereoanlaggning

24. https://taktcph.com/

25.
.https://www.bukowskis.com/sv/lots/817725-yngve-ekstrom-fatolj-och-fotpall-swedese-1970-tal

26.https://www.bukowskis.com/sv/auctions/584/498-axel-einar-hjorth-soffa-sandhamn-nordiska-kompaniet-ca-1929

27. https://formdesigncenter.com/en/exhibition/london-design-fair-2019

Reference List

Pictures

28.
https://schalling.se/furniture/seating/dining-chairs/125159/borge-mogensen-chairs

29. https://verk.se/sv/produkter/sittmobler/bankar/bank-v-lf-01/

30. https://trendenser.se/2021/05/inredningsnyheter-v-17-2021/

31.
https://www.google.se/search?q=hay%20rittfeldt%20crate%20lounge&tbm=isch&hl=sv&tbs=rimg:Ca4c-ZMYFhocYW31FqxahRDnsgIOCgIIABAAKAE6BAgBEAHAAgDYAgDgAgA&sa=X&ved=0CBwQuIIBahcKEwi4ndGk0uP_AhUAAAAAHQAAAAAQCQ&biw=2053&bih=1067#imgrc=Ylw-JAJwYZc8fM

32.
https://ikeamuseum.com/en/explore/ikea-catalogue/1976-ikea-catalogue/

33.
https://www.instagram.com/normal_object_factory/

34.
https://www.dominoantik.se/products/kopia-av-bordslampa-i-bakelit-1940-tal-nr-b84