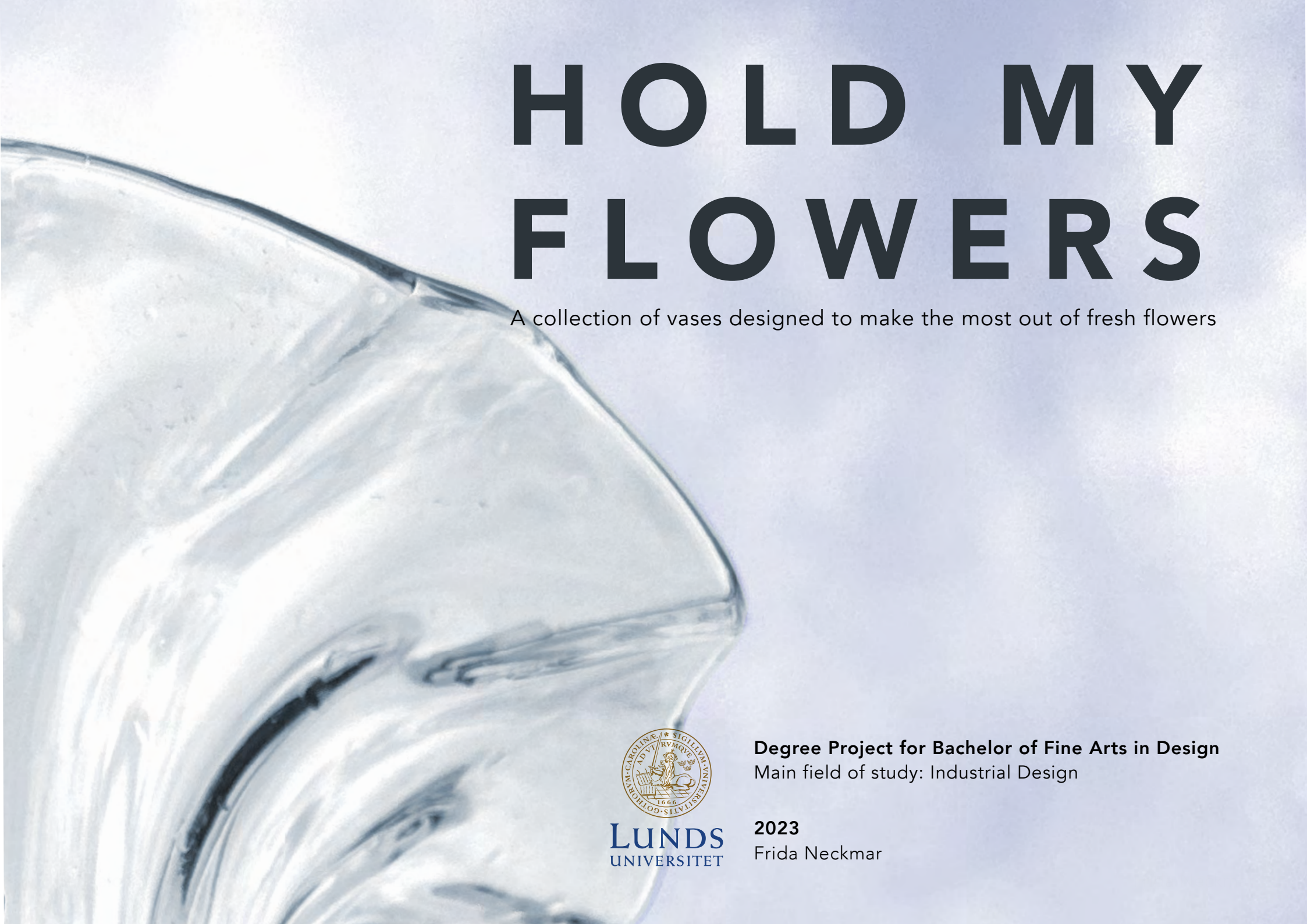

HOLD MY FLOWERS

A collection of vases designed to make the most out of fresh flowers

LUNDS UNIVERSITET

Degree Project for Bachelor of Fine Arts in Design
Main field of study: Industrial Design

2023

Frida Neckmar

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Degree Project for Bachelor of Fine Arts in Design
Main field of study: Industrial Design

From Lund University School of Industrial Design,
Department of Design Sciences

Project Supervisor: Senior Lecturer **Charlotte Sjödell**

Examiner: Professor **Claus-Christian Eckhardt**

Course Supervisors: Professor **Claus-Christian Eckhardt**, Senior Lecturer **Charlotte Sjödell**, Lecturer **Anna Persson,** Senior Lecturer **Jasjit Singh**

Collaboration partner: Blomsterpigan AB

2023

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ABSTRACT

This Bachelor's degree project investigates how precious fresh-cut flowers self sustainably can be arranged to be fully showcased and make them come into their own. Inspired by nature's organic shapes and emphasising functionality, the project concludes a series of carefully designed modular vases. The different concepts have one thing in common: the focus to make the most out of the flowers. These vases are intended to enhance the presentation of flowers in various interior settings.

Keywords: Vases, interior design, modularity, fresh flowers

Frida Neckmar

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INTRODUCTION

METHOD

The design process for this project is rooted in comprehensive research, incorporating extensive readings, user feedback, and expert consultation. Ongoing discussions with Blomsterpigan, the supervisor and classmates played a vital role in shaping decisions throughout the project.

The final product is a culmination of research and idea development, achieved through activities such as sketching, mockups, material testing, and both physical and digital prototyping. Iterative iterations enabled refinement and optimization, ultimately leading to the realization of the design.

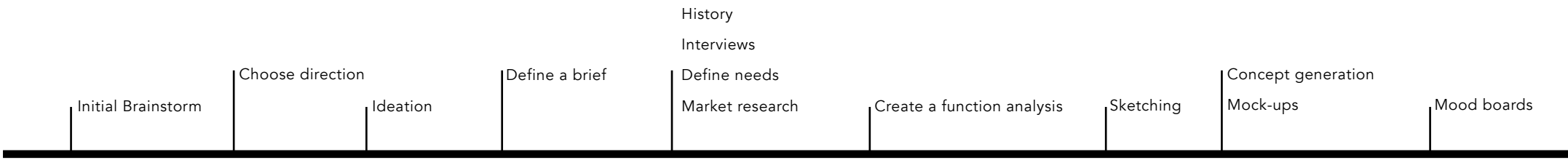
Throughout this project, I strived to follow the traditional design methodology. As my project resulted in four distinct yet interconnected vases, I will present the processes and concepts separately within this documentation. These concepts developed in parallel, with me working on them simultaneously, and influencing each other along the way. In this documentation, I will showcase them in different sections to highlight their individual progression and contributions.

ACKNOWLEDGEMENTS

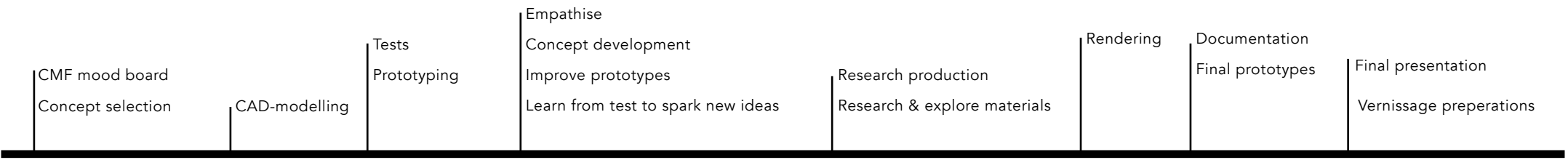
I would like to express my gratitude to Lund University School of Industrial Design for providing the platform to carry out this project. I am sincerely thankful to **Charlotte Sjödell** for her guidance and supervision, along with the other supervisors who contributed to the project. I would also like to extend my appreciation to my classmates, the workshop staff for their support throughout the process and to Ioana-Manuela Cotae for introducing me to the clay printer. A special thank you goes to Blomsterpigan for their invaluable assistance and collaboration.

THANK YOU!

TIME

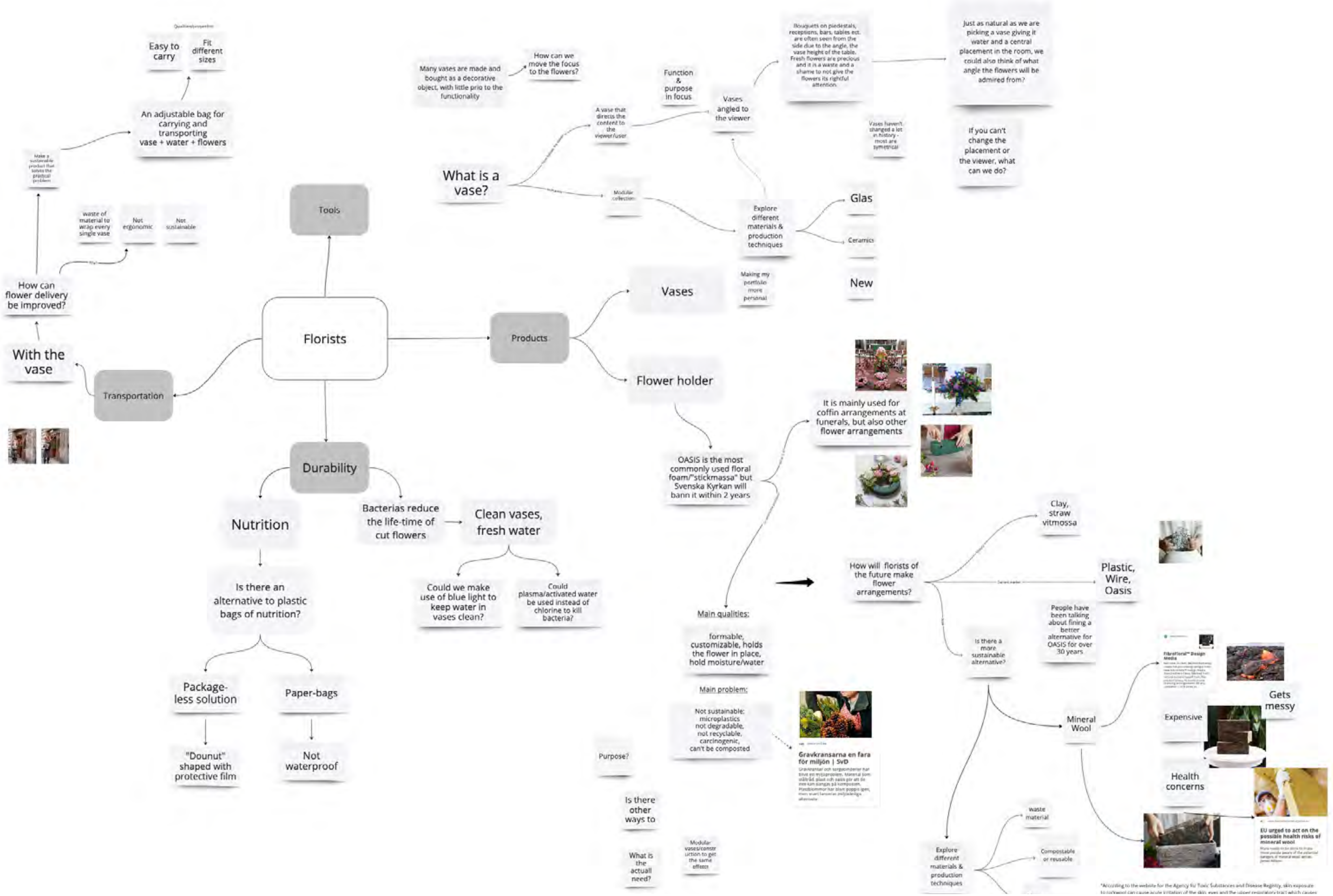

Initial Brainstorm
Choose direction
Ideation
Define a brief
History
Interviews
Define needs
Market research
Create a function analysis
Sketching
Concept generation
Mock-ups
Mood boards

PLAN


CMF mood board
Concept selection
CAD-modelling
Tests
Prototyping
Empathise
Concept development
Improve prototypes
Learn from test to spark new ideas
Research production
Research & explore materials
Rendering
Documentation
Final prototypes
Final presentation
Vernissage preperations

INITIAL BRAINSTORM

For this degree project, I wanted to work with something that was close to heart. Therefore I started with myself, what interests me and problems that I have come across that I was interested in finding a solution for. All ideas naturally seemed to evolved around flowers or florists, which is a part of my heritage. I had ideas regarding everything from making flower delivery more ergonomic to finding a more durable material that could be used instead of Oasis. I ended up going in the direction of flower holders/vases that solves specific needs.


Florists
Tools
Products
Transportation
Durability
Vases
Flower holder
What is a vase?
Many vases are made and bought as a decorative object, with little prio to the functionality
How can we move the focus to the flowers?
Function & purpose in focus
Vases angled to the viewer
Explore different materials & production techniques
Glas
Ceramics
New
Making my portfolio more personal
Just as natural as we are picking a vase giving it water and a central placement in the room, we could also think of what angle the flowers will be admired from?
If you can't change the placement or the viewer, what can we do?
With the vase
How can flower delivery be improved?
An adjustable bag for carrying and transporting vase + water + flowers
Easy to carry
Fit different sizes
waste of material to wrap every single vase
Not ergonomic
Not sustainable
Nutrition
Is there an alternative to plastic bags of nutrition?
Package-less solution
Paper-bags
"Dounut" shaped with protective film
Not waterproof
Bacterias reduce the life-time of cut flowers
Clean vases, fresh water
Could we make use of blue light to keep water in vases clean?
Could plasma/activated water be used instead of chlorine to kill bacteria?
OASIS is the most commonly used floral foam/"stickmassa" but Svenska Kyrkan will bann it within 2 years
It is mainly used for coffin arrangements at funerals, but also other flower arrangements
Main qualities:
formable, customizable, holds the flower in place, hold moisture/water
Main problem:
Not sustainable: microplastics not degradable, not recyclable, carcinogenic, can't be composted
Gravkransarna en fara för miljön | SvD
How will florists of the future make flower arrangements?
Clay, straw vitmossa
Plastic, Wire, Oasis
People have been talking about fining a better alternative for OASIS for over 30 years
Is there a more sustainable alternative?
Mineral Wool
Expensive
Gets messy
Health concerns
EU urged to act on the possible health risks of mineral wool
Explore different materials & production techniques
waste material
Compostable or reusable
Purpose?
Is there other ways to
What is the actuall need?
Modular vases/construction to get the same effect

MOTIVATION

HERITAGE

Growing up surrounded by florists, flowers, and vases in my parents' flower shop in Malmö, I have had the opportunity to witness numerous discussions and complaints about the functionality of vases and other products. Recognizing the valuable insights, experiences, and understanding I have gained, I made the decision to channel my passion into creating my bachelor project centered around the flower business. This choice allowed me to leverage my personal connection and expertise in order to address the challenges and explore innovative solutions within this industry.

BACKGROUND

Despite the vast array of vases available worldwide, one would assume that there must be some that are already considered “perfect.” However, in my experience and interviews with florists, none have discovered such a vase. Different vases are often designed for specific purposes, some purely for aesthetic decoration, while others prioritize functionality, often tailored to a specific flower or purpose. Although certain vases are cherished and valued, they all possess shortcomings that could be improved upon or lack desirable features.

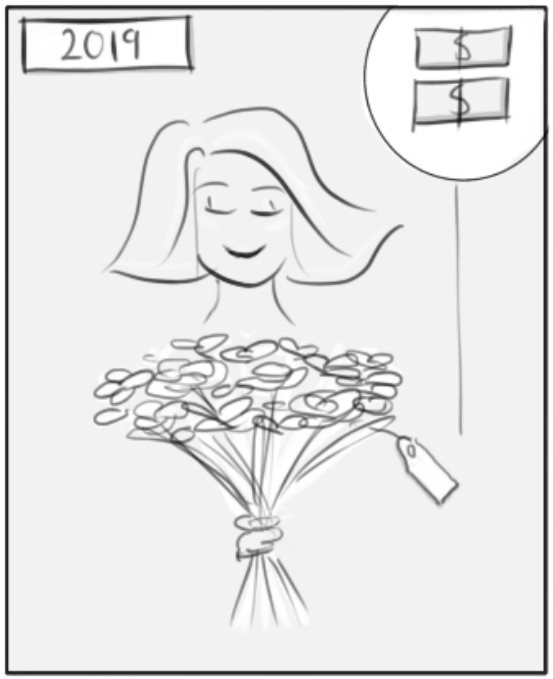
HISTORY

In Holland, during the early to mid-1600s, the Dutch tulip bulb market bubble, also known as tulipmania, was one of the most famous market bubbles and crashes of all time. Speculation drove the value of tulip bulbs to extremes. At the market's peak, the rarest tulip bulbs traded for as much as six times the average person's annual salary, according to Hayes, A. (2022). Tulipmania: About the Dutch Tulip Bulb Market Bubble, Investopedia. This made the tulip a true symbol of wealth and is the backround to the iconic tulip vases that where created to make the most out of the flowers.

I am not mentioning this because I believe that the Tulipmania is on it's way back or that people are less likley to buy fresh flowers due to the raised prices, but that flowers' status symbol have increased and that I spot a trend thatpeo-ple want to get the most value of their buys and enjoy their bouques to the fullest.

MOTIVATION

Cut flowers in Sweden are more expensive than ever due to the recent years' turbulence with the pandemic, war, inflation, economic downturn, and high electricity prices. Florist Johanna Neckmar testifies that the prices of certain flower varieties have more than doubled, which means that consumers now get almost half as many flowers for the same amount of money they received just a couple of years ago.



THE RISING PRICES AND GROWING INTEREST IN RESPONSIBLE OWNERSHIP CREATE A FAVORABLE MARKET OPPORTUNITY FOR PRODUCTS THAT ENHANCE THE LIFESPAN AND VISUAL APPEAL OF FRESH CUT FLOWERS

Maximizing Value

Hence, I have resolved to dedicate my bachelor's project to develope a series of vases that showcase the flowers in their full glory and provide the viewer with the opportunity to have the best experience and impact from their precious blooms. As a result, the product will become resource-efficient and, therefore, economical for both the wallet and the environment.

BRIEF

How can precious fresh cut flowers selfsustainably be arranged to be fully showcased and make them come into their own?

OPPORTUNITIES

Through my research, I found 4 opportunities and uses in different settings that would be interesting to investigate. I came to the conclusion: my goal was to create a collection of that satisfies the main desires of fresh flowers in different settings in an efficient way

How can a bouquet be showcased from its most beautiful angle?

How can short flowers be arranged effortlessly?

How can we double up the value of flowers to get the same effect?

How can a flower holder showcase the precious flowers in an honourable way?

TILTED

PRESENTED IN ALL ITS GLORY

How can a bouquet be showcased from its most beautiful angle?

FOR:
BOUQUETS (SPIRAL BOUND)
AVRAGE HEIGHT FLOWERS
FREASH CUT FLOWERS

WHERE:
RECEPTIONS
SIDEBOARDS
HALWAYS

CHALLANGES/GOALS:
BE EASY TO CLEAN
SPREAD THE STEAMS
KEEP THE SHAPE OF THE BOUQUET
ALLOW SUPPORT
BE ERGONOMIC
ALLOW THE FLOWERS TO NATURALLY LAY IN FAVORABLE ANGLE
CAN THE VASE ALSO STAND STRAIGHT?

BENEFITS:
DISPLAY THE BOUQUET FROM IT'S MOST BEAUTIFUL ANGLE

PROPORTIONS

BALANCING VASE SIZE WITH FLOWER SIZE

Achieving a harmonious balance between vase size and flower size is crucial for creating an aesthetically pleasing floral arrangement. What is the proportions between the flowers and the vases that make the arrangement visually appealing?

General

The size of the vase should be proportional to the size of the flowers that is intended to be arranged. Large flowers, such as sunflowers or hydrangeas, suits a vase with a wider opening and a bit more volume. For smaller, delicate flowers like roses or lilies, vase with a more slender profile is usually prefered.

The height and length of the intended flowers is important to take into consideration. The vase should be tall enough to support the stems and allow the blooms to extend gracefully above the rim. Vases that are too short can overcrowd the flowers or make them appear squished.

Balance of Mass

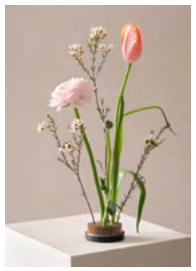
The visual weight and mass of both the vase and the flowers. A substantial, heavy vase, it can accommodate larger, fuller arrangements. In contrast, delicate, lightweight vases are better suited for smaller, daintier bouquets.

> "To make the flowers the main character, the vase should be around 1/3rd of the length of the steams "
> - Johanna Neckmar

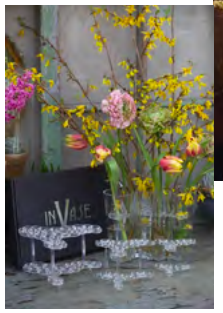
The golden ratio

The golden ratio, approximately 1.618, is a mathematical proportion used in design for aesthetic purposes. The book The Golden Ratio: The Story of Phi, the World's Most Astonishing Number by Livio, M. (2002) Crown, suggests that objects look visually pleasing when their length is 1.618 times their width or height. This ratio creates balance and harmony in design compositions and is widely applied in various design disciplines. Therefore, it is also used when creating flower arrangements and combining flowers and vases.

MARKET RESEARCH




INSATS

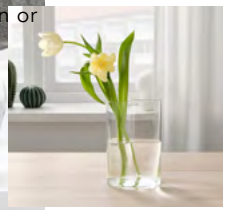



Svensk Tenn


Gry wide by Cooee Design


"Difficult to clean. Idea is good, but not the function or usability."

Chilifrukt by Ikea



AZYMETRIC

"Only works by it-self with more than a bunch of tulips"


"Difficult to arrange flowers in"

Ebon by Orrefors

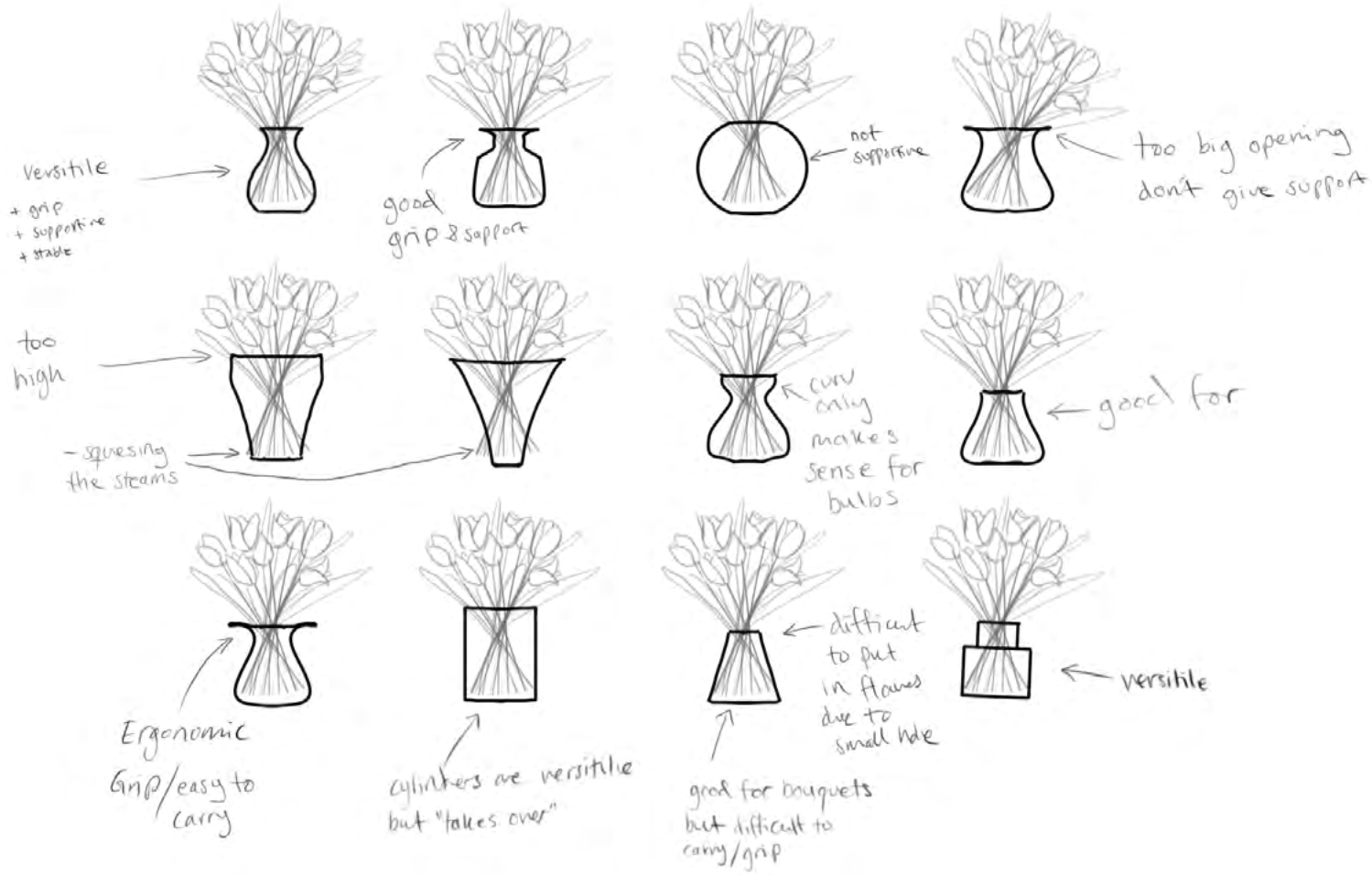

"The concave irragularities are interferring with the steams"

Squeeze by Orrefors

TILTED




INTERVIEWS



To acquire a comprehensive understanding of the desired attributes in a bouquet vase, I conducted interviews with various seasoned florists from both Malmö and Stockholm. Through these interactions, I sought insights regarding their preferences, whether they had any favored options, and their perspectives on prevalent vase silhouettes.

Although I personally have some experience in the field, this process of engaging with industry professionals enriched my knowledge and provided me with a refined and more lucid comprehension of the desired characteristics.

FUNCTION ANALYSIS

Requirements			
Arrange	Cut flowers	MF	
Keep	Flower fresh	N	A week
Allow	Room temperature	N	
Hold	Water	N	
Be	Easy to clean	N	
Fit	To environment	D	Over waist level placement
Be	Production friendly	D	
Be	Durable	D	
Be	Recyclable	D	
Be	Ergonomic	D	Grip, carry-able
Be	Flexible	D	Multifunctional
Suit	Bouquets	D	Spiral bound
Protect	Surrounding	D	
Be	Independent of	D	String, Oasis
Be	Visually appealing	D	Timeless
Spread	The stems	D	In a favorable angle
Provide	Support	D	To the steams and flowers

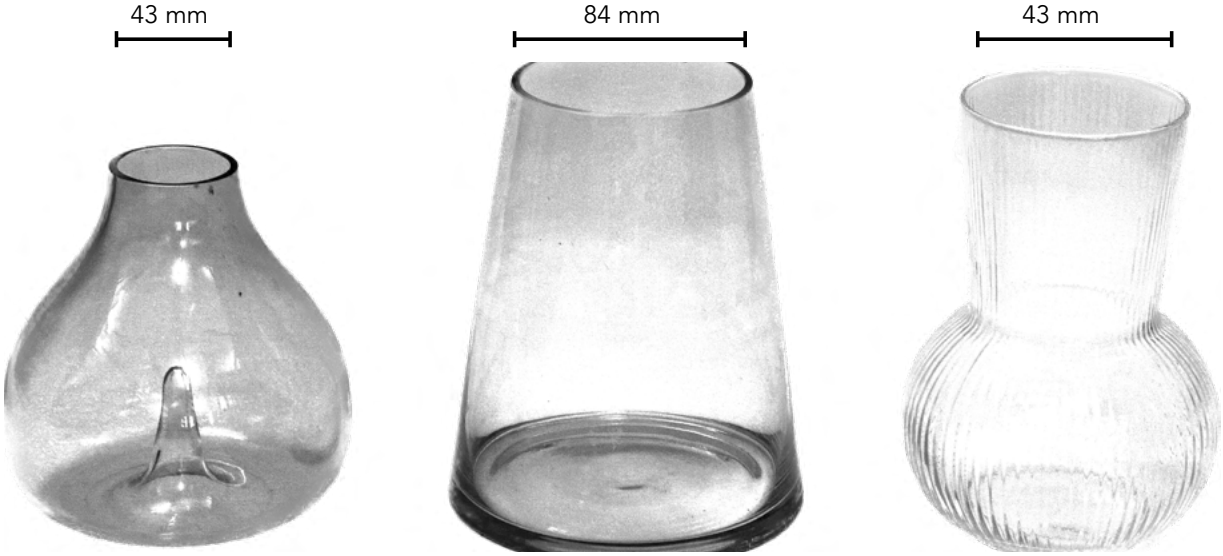
SKETCHES & MOCK UPS

I explored various options for a tilted vase and ultimately arrived at the conclusion that I desired a versatile vase that could be positioned both upright and at an angle, allowing for adjustable arrangements.

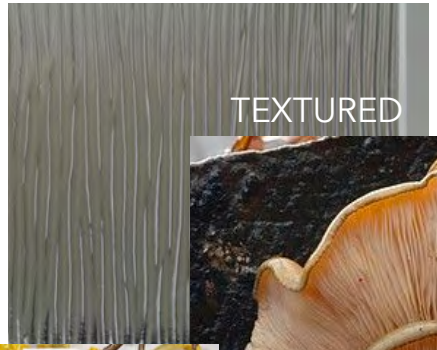
I 3D printed an asymmetrical mock-up of the vase, designed to embrace the bouquet in the desired manner, complete with a supportive hill inside to hold the stems. This prototype featured two flat angles that enabled it to stand upright as well. However, upon testing, I discovered that it did not possess the desired functionalities. Moreover, I realized that making the necessary improvements would inevitably compromise other desired functionalities, leading to negative consequences.

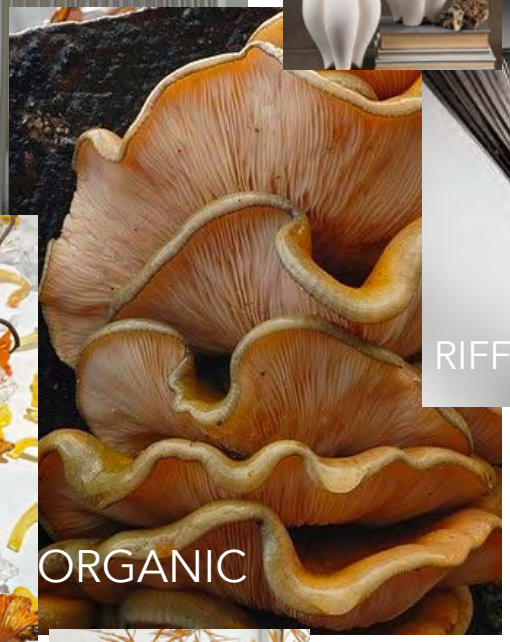
DIMENTIONS

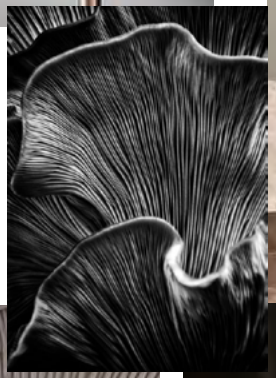
The initial measurements were determined by assessing various vases that fulfilled similar requirements. For instance, I examined a vase with an 85mm diameter hole/waist, which was slightly larger than necessary, and another one with a 45mm diameter hole, which proved to be a bit too tight (making it challenging to insert the bouquet stems without squeezing them). Consequently, I initially opted for a 62mm diameter. However, through experimentation and adjustments, I discovered that a slightly larger hole would not compromise the bouquet's support while significantly enhancing usability. As a result, the final diameter was settled at 75mm. The same procedure, teasting and tweaking, was done with all de dimentions and angles.

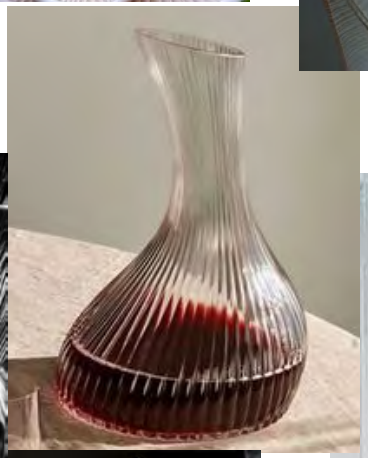


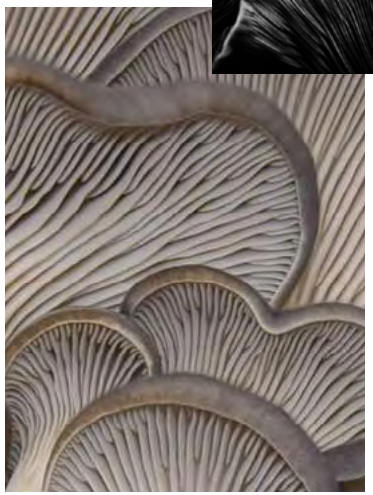
MOOD BOARD

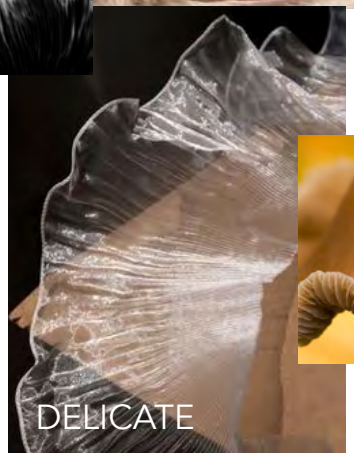


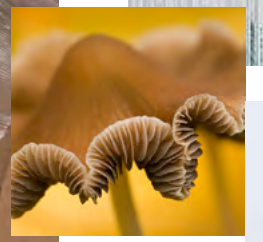












DEVELOPED MOOD BOARD

To make it clearer to the producers I was asking questions to, I made my mood board clearer by dividing the inspiration into different cathegories; form, colour & surface/texture.

FORM

SURFACE/TEXTURE

COLOUR

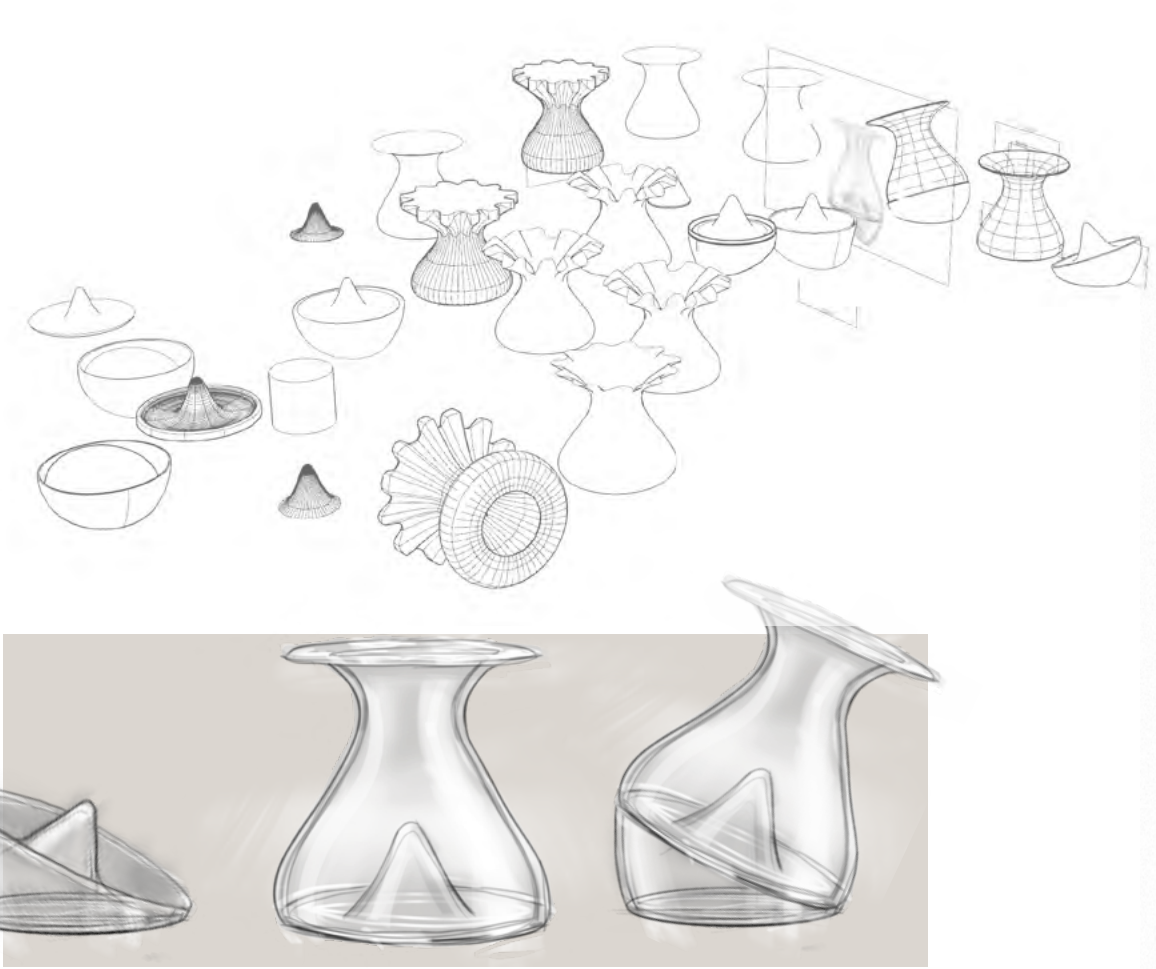
TESTS

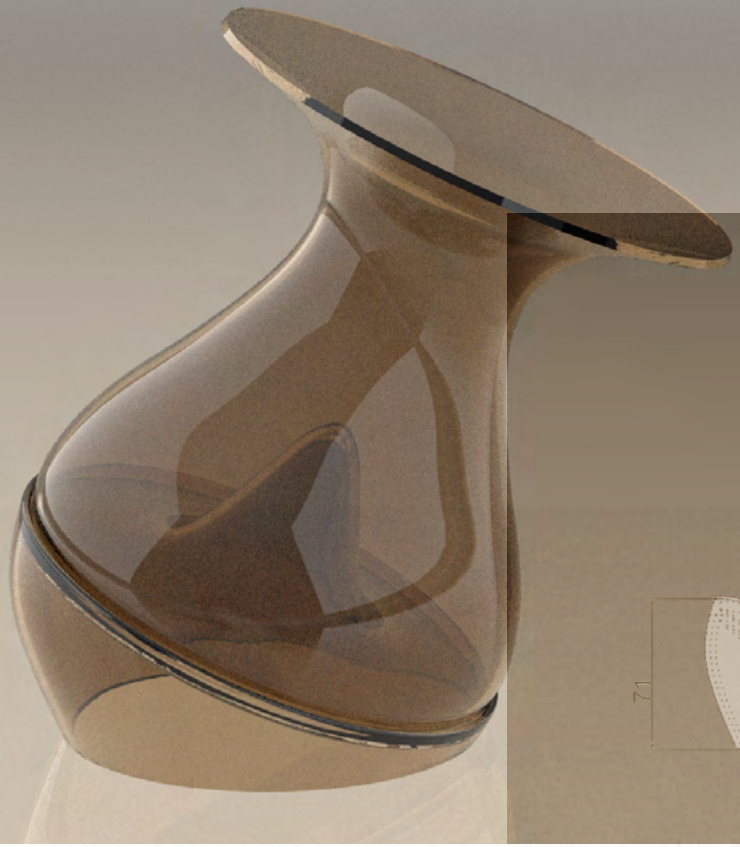
To develop the concept of the Tilted Vase, I had to figure out the ideal angle the vase should be tilted in. This was made by tilting a vase on an above-mid-waist high sideboard, viewing in average eye level from a distance of 3 meters. 25° became the final preferred angle, as seen in the pictures above.

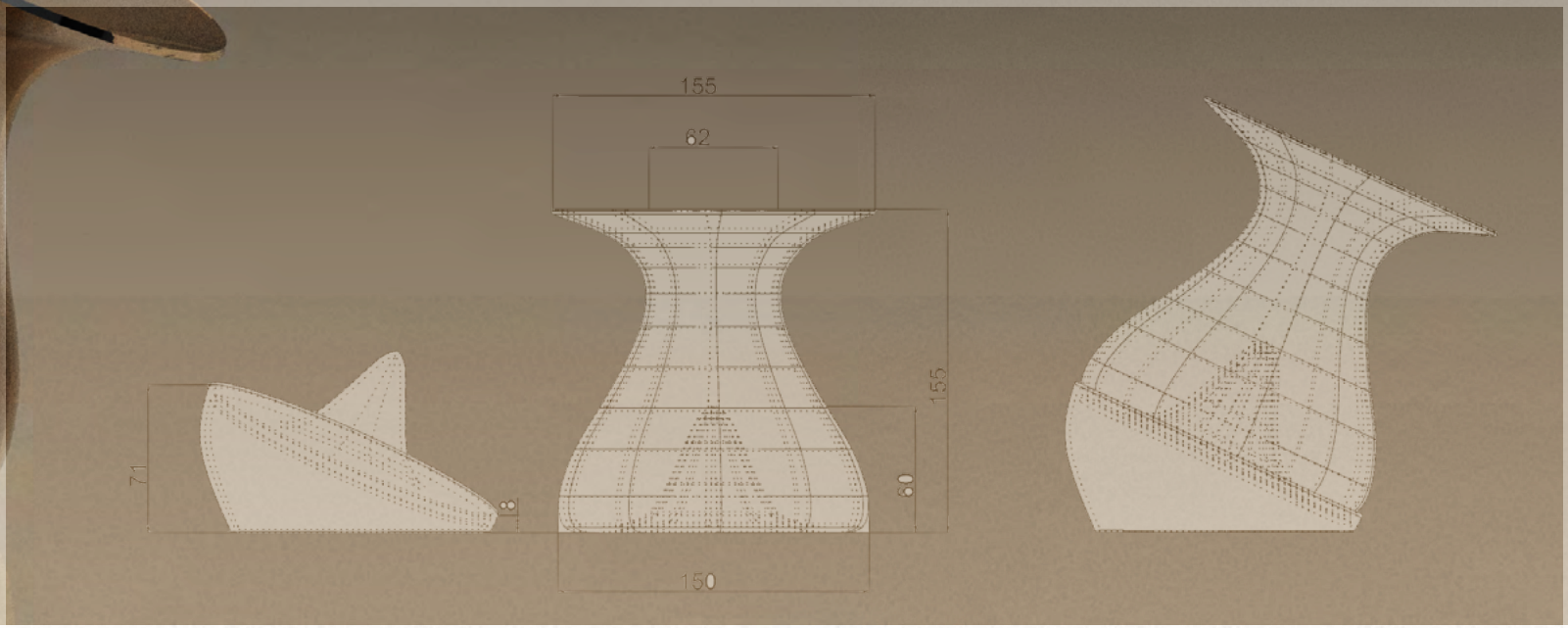
During these tests, I realised some issues, and missassumptions about what would be crucial and learned what was important to create stability. What I did not think about is that a bouquet that is tilted easily gets oval instead of round since there is nothing that separates the steams. What surprises me was how stable the vase itself became with water inside and how little angle was needed to make a big difference.

1ST CONCEPT

This concept emerged through the atttempt to create the florists favourite bouquet-vase, according to the comments from my interviews, together with the desire to stear the flowers towards the viewer for a maximised effect. My aim was to create an "ideal" bouquet vase without compromising functionality or aesthetics, leading me to develop a two-piece product that excels both independently and when combined. The unique feature is the bottom plate that allows the vase to securely be tilted to the viewer's direction to enable the viewer to see the flowers from its most beautiful angle, even on higher tables.

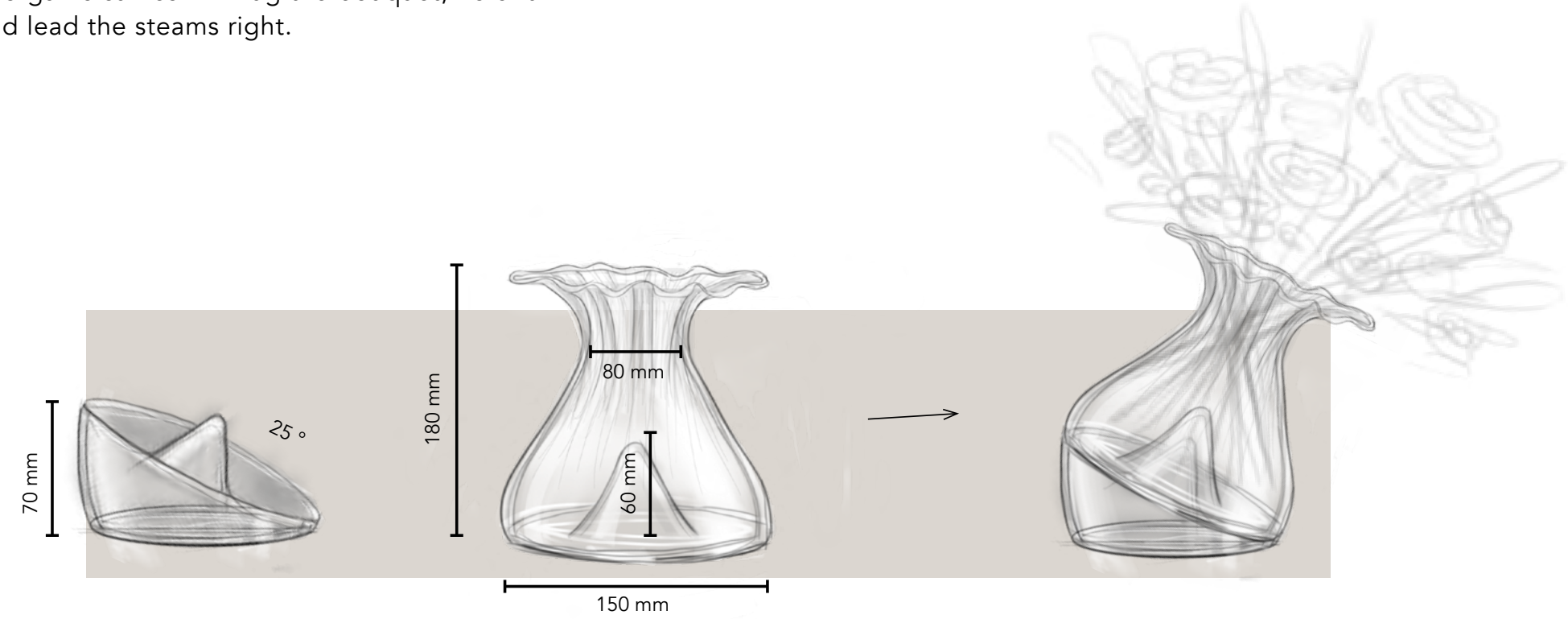





155
62
155
71
8
60
150

2ND CONCEPT

I added a wavy, mushroom inspired neck to improve the form and the support for the flowers. The idea is that the organic curves will hug the bouquet, hold it in place and lead the steams right.



TILTED

Engenieerd to make the most out of spiral bound bouquets

Ergonomic

Tilts the vase 25°

Waist to squeese in the right place

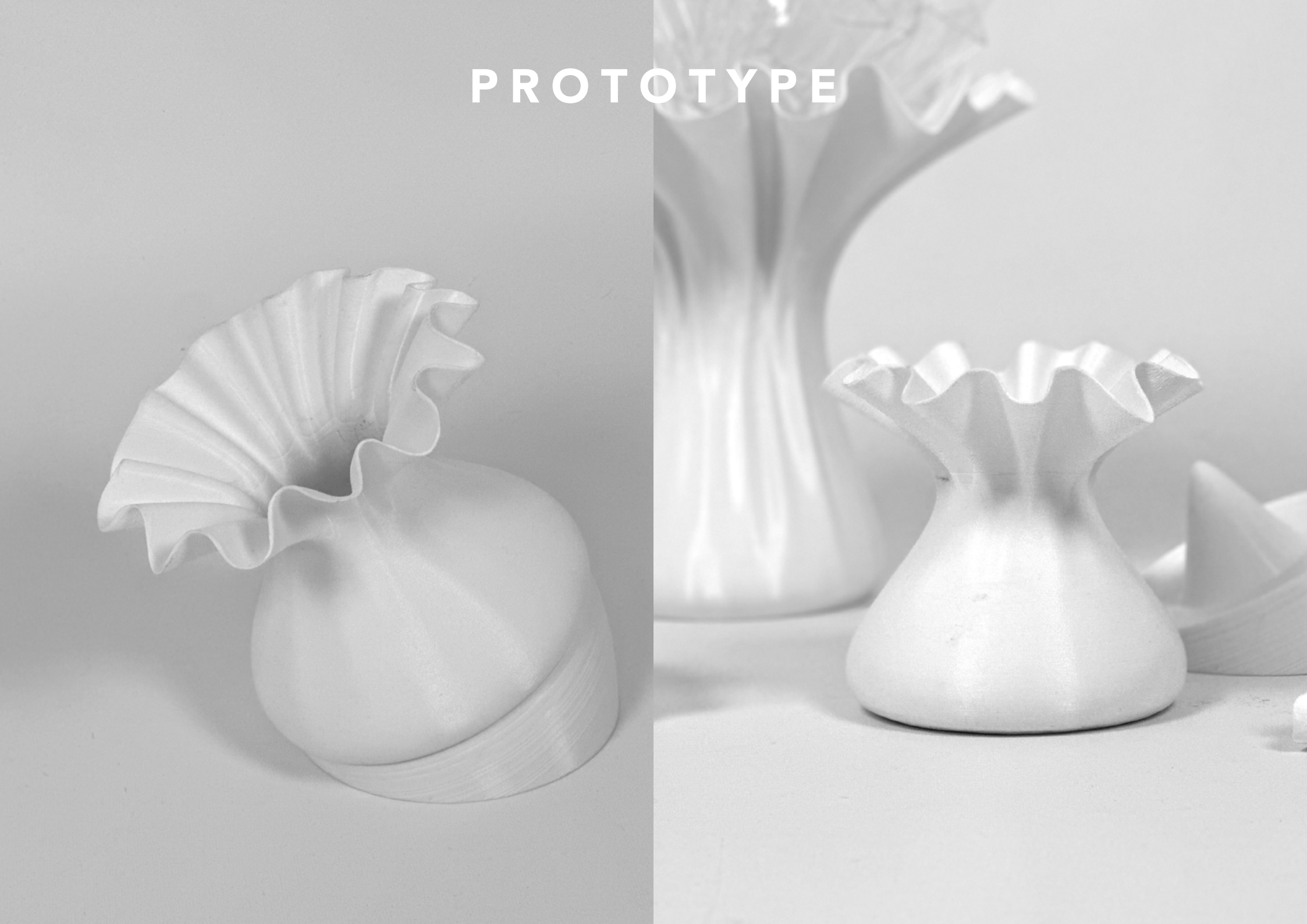
Stabilizes the steams

Neck provides support

Good waterlevel

Texture trial

PROTOTYPE



TESTS

RENDERS

PROCESS

After a meeting with the glass blowers, I realized that making both the vase and the bottom in glass could be too expensive in a smaller production Also, putting a glass vase with water and flowers on top of another glass bottom can feel too delicate and could create an unsafe feeling. This made me look into other materials. Since the products are for natural materials (flowers) I want it to be made in a natural, durable material. So I looked into wood, cork and clay for this.

I came to an agreement with the glassblowers from Bergdala Glasbruk that they would do the vase by hand, since creating a complex mould could be too difficult. After a lot of experimenting, trial and error, we got a prototype. Unfortunatley, the result of it was not meeting my expectations.

RESULT

3 attempts of vases survived the free glass blowing, but only one with an indent bottom. I decided to use this one, although it was the one that was the most far away from my desired form, since it had the possibility to become a tilted vase. After consultation and testing, I realised that this vase was better than expected, althogh it was a bit different from my initial design.

EXHIBITION

At the exhibition, when it all came together, I was satisfied with the result after all. Although the vase turned out a bit smaller than I desired, it did its job and the shape hugged the bouquet nicely in the right places. I would have prefered to do a custom bottom plate in wood or cork, but the bottom was to asymetrical, so I settled with a bottom in clay. A problem I realised after a few days, was that since the vase was tilted and it didn't hold much water, the water level was too low too quickly... This problem could be easily fixed by making the bottom slightly larger. Other than that, I am happy with how it turned out.

MODULAR

LOW ARRANGEMENTS

How can short flowers be arranged effortlessly?

Does not hold a lot of water

Difficult to clean

FOR:
SHORT FLOWERS
GARDEN FLOWERS
BROKEN STEAMS
SHORTENED STEAMS

WHERE:
DINNER TABLES
COFFETABLES
BOOK-SHELVES
WINDOW SHELVES

CHALLANGES/GOALS:
THE FORM SHOULD ENABLE MASS-PRO-DUCTION
BE EASY TO CLEAN
HOLD ENOUGH WATER FOR THE FLOWERS TO LAST MINIMUM A WEEK
ALLOW THE FLOWERS TO NATURALLY LAY IN FAVORABLE ANGLE

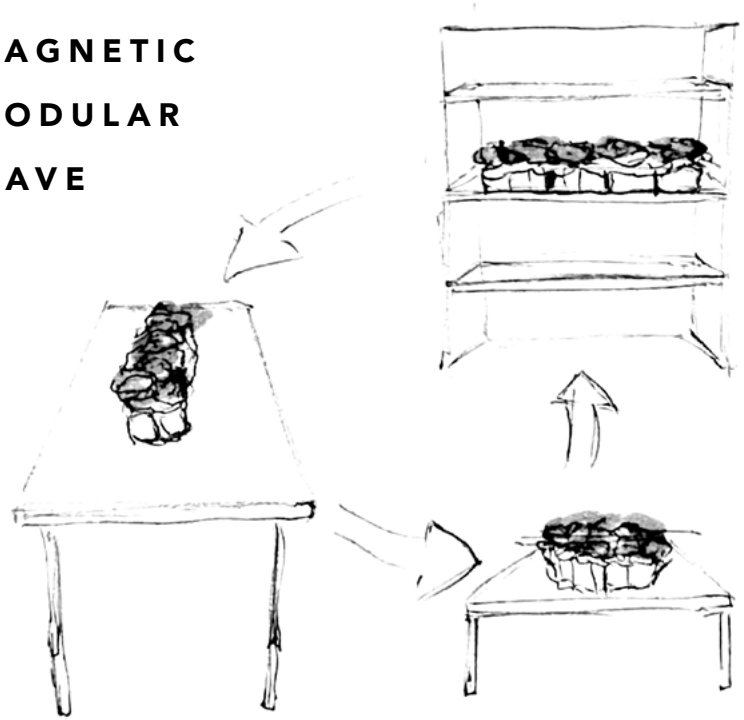
BENEFITS:
WHEN A BOUQUET STARTS TO LOOK TIRED, THE STEAMS CAN BE SHORT-ENED AND BE ARRANGED IN A SMALLER VASE TO PROLONG ITS LIFE.
LOW TABLE DECORATIONS DON'T INTERFEAR WITH THE DINNER

1ST CONCEPT

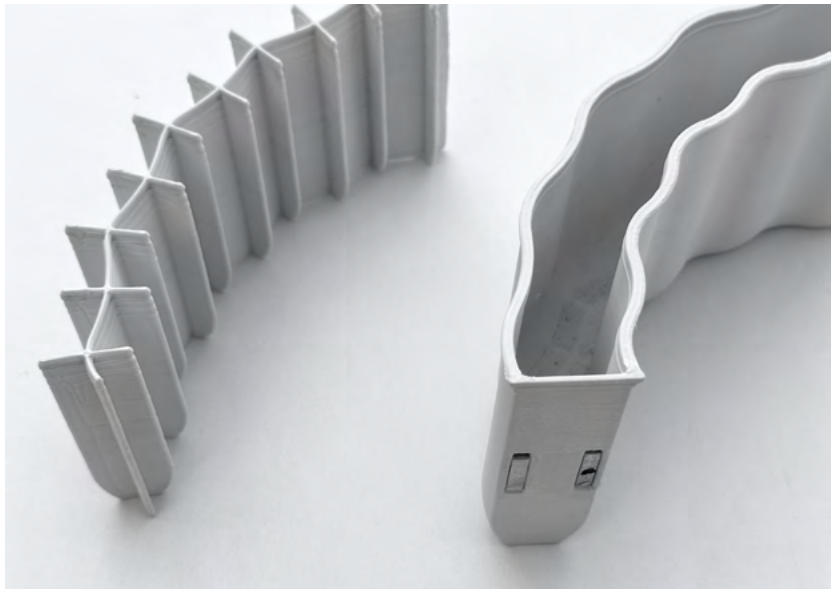
MAGNETIC

MODULAR

WAVE



Four identical vases that can be combined in different ways to fit different placements and situations



I have had this concept in mind for a long time, so I was eager to try it out. The arrangement of the concept in both a circular and wave pattern worked effectively, creating the desired effect. However, the main challenge revolved around the magnets and their arrangement to accommodate assemblies in different directions. To overcome this, I placed two magnets on each end. The design remained simple and symmetrical, with straight walls, a slightly bevelled bottom, a wave pattern, and an edge for material stability, allowing the grid insert and magnet placement.

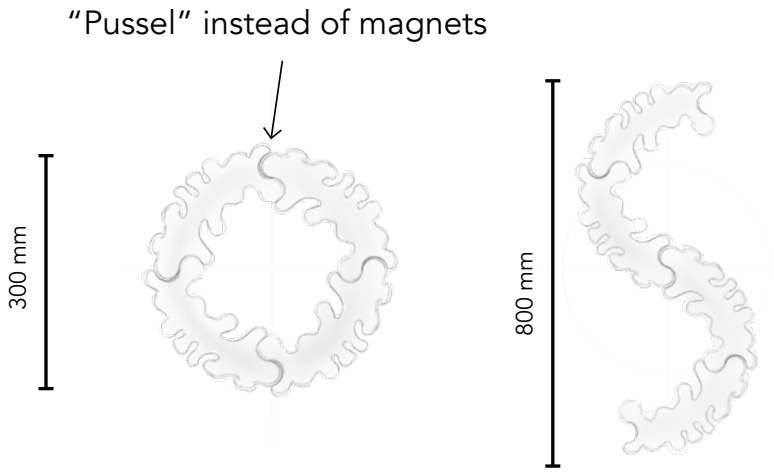
TEST

With grid insert

Without grid insert

One aspect I wasn't entirely satisfied with was the use of magnets. While they provided a satisfying and user-friendly snapping effect during assembly, embedding magnets into a recyclable material is not sustainable. Additionally, magnets tend to oxidize, making durability a concern. Initially, I had hoped to avoid using a grid insert due to the numerous separate pieces it entailed, but upon testing, I realized that some form of stabilization and separation for the streams was necessary given this design. So, back to the sketchbook...

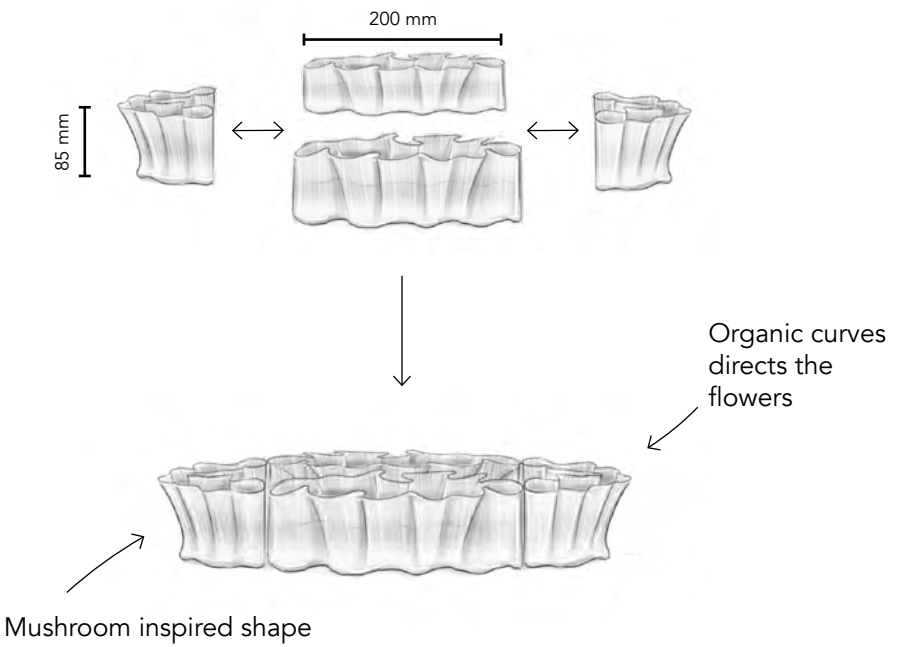
2ND CONCEPT



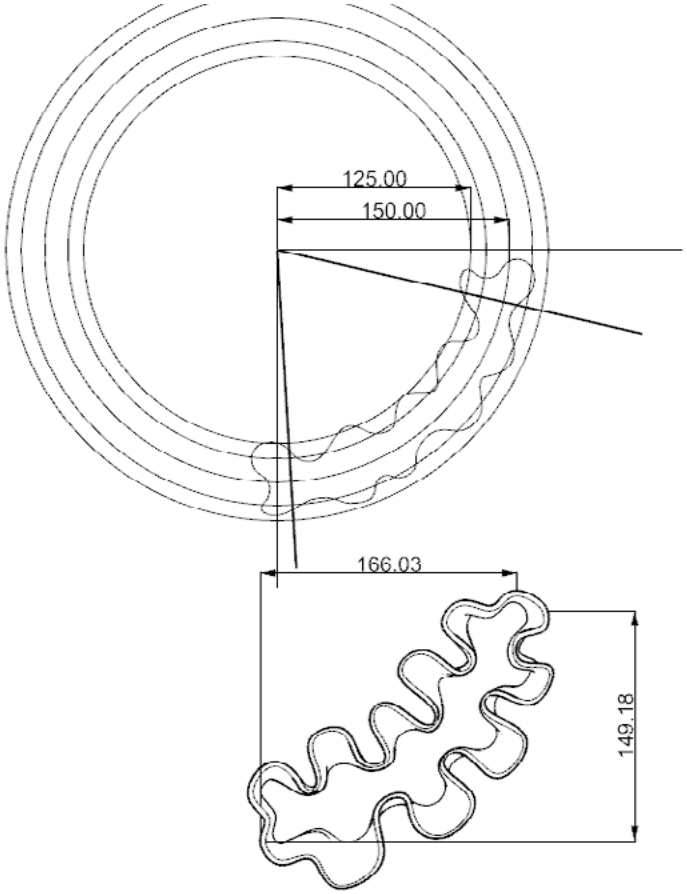
AZYMETRIC

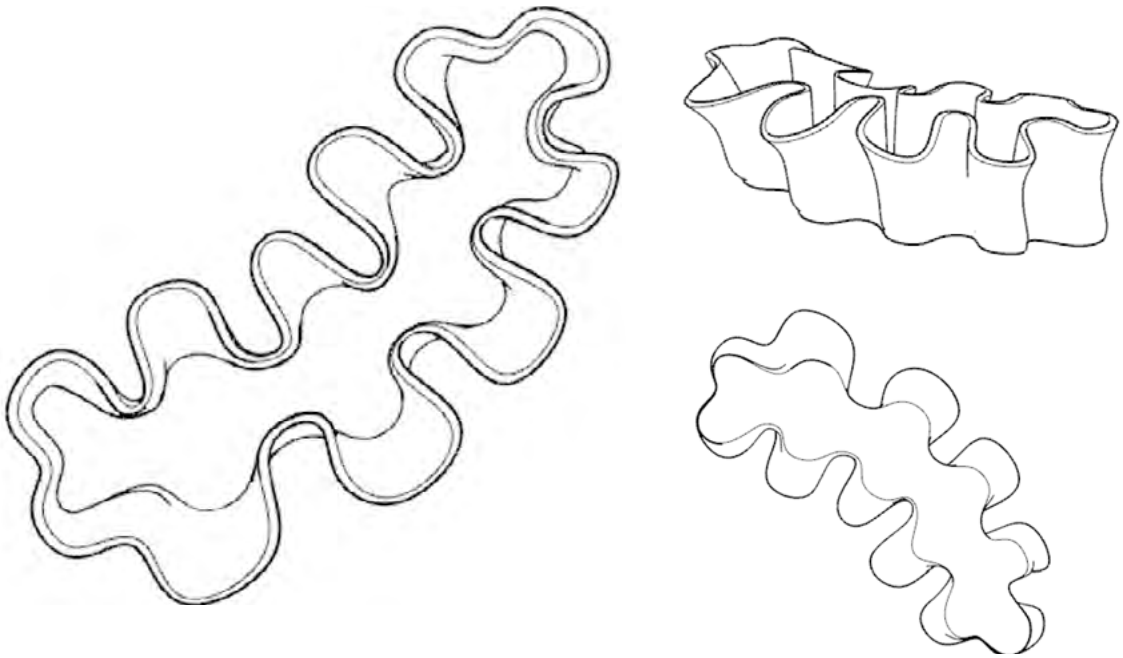
MODULAR

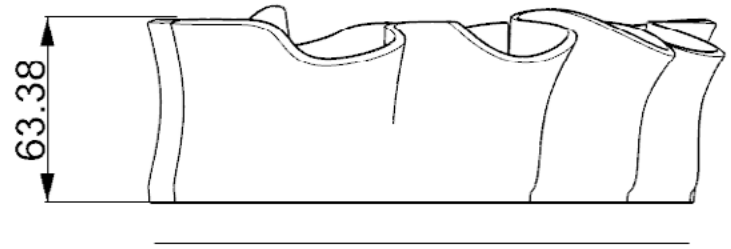
PUSSLE



MEASUREMENTS

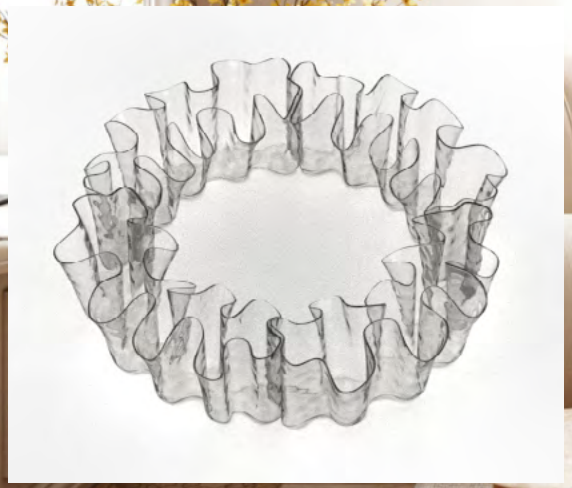






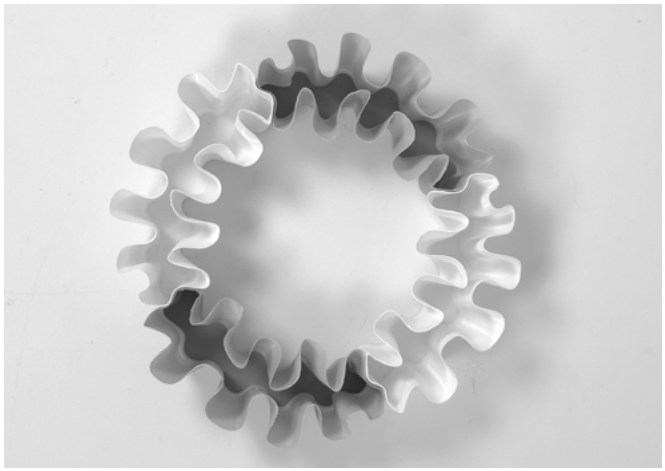
RENDERS

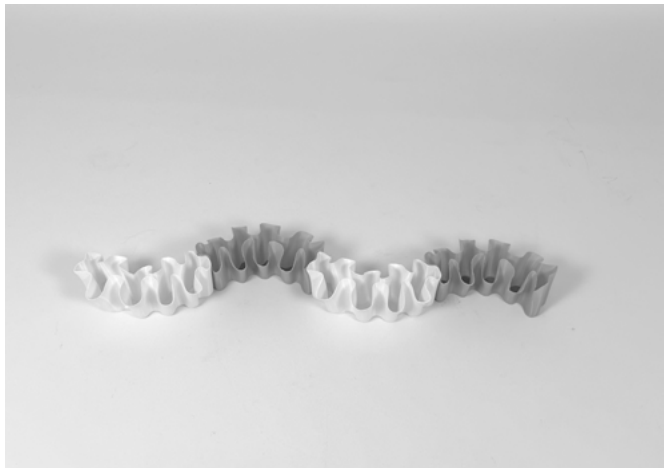
DINNER TABLES



COFFEE TABLES

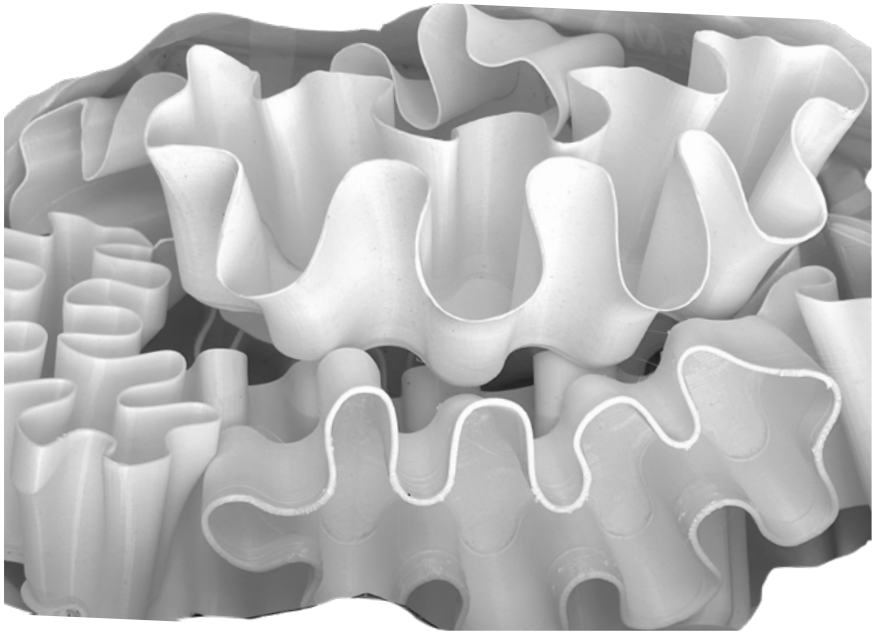
PROTOTYPES & TESTS

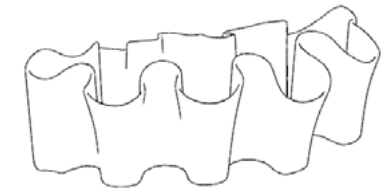


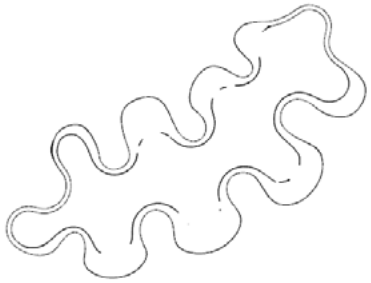


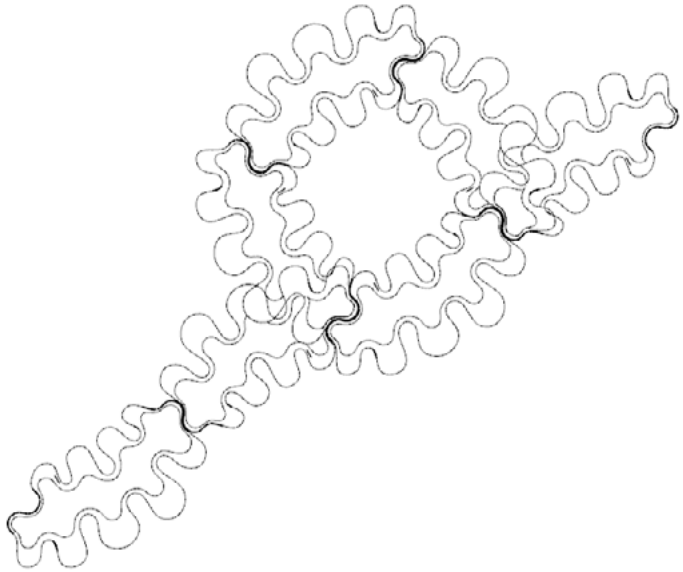

IMPROVEMENTS

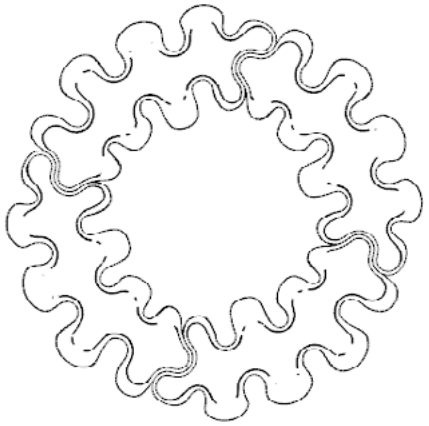
After successfully testing several prototypes of my second concept, I identified a few minor adjustments that I wanted to make. Consequently, I decided to start from scratch and remodel it. The primary focus was on improving the intersections and creating smoother curves and lines. Additionally, I considered the production method for the final prototype, likely to be 3D printing, and kept the angles within the appropriate boundaries.

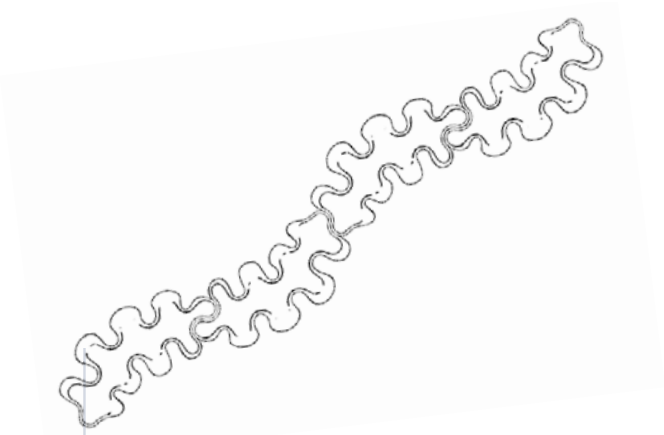


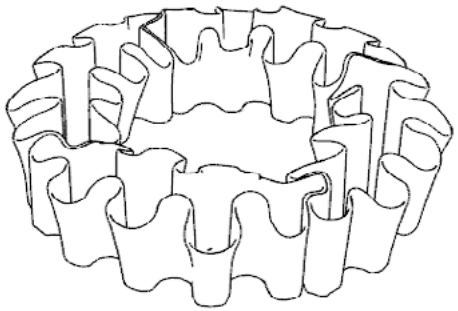


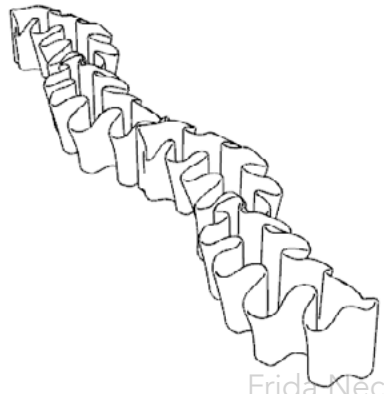




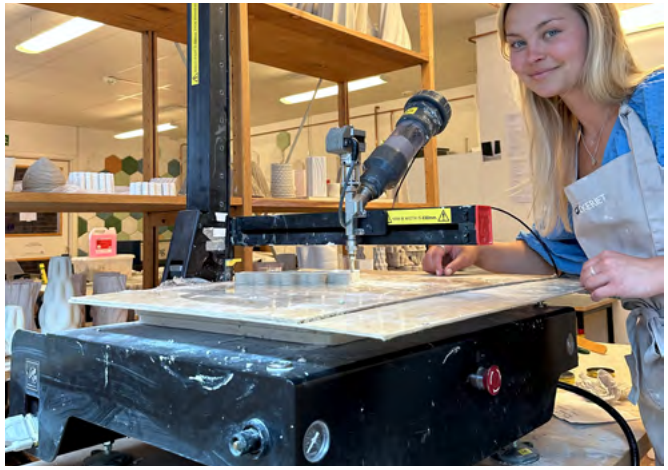




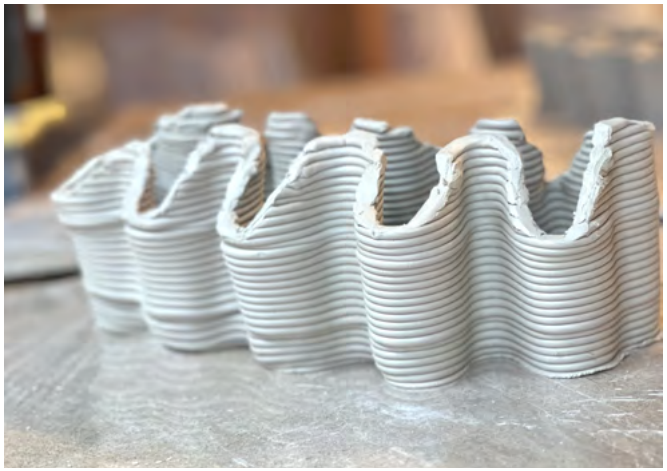




PROCESS








Different clay consistency, different nozzles and settings had a big impact on the result. Airbubbles made several “explode” on the ends, which made me try to fix the edge back with my hands. This gave a very satisfying result and made me realise that I don’t have to settle for the edge and limitations the 3D printer gives me, I can modify it by hand while the clay is wet. After 4 wall trials, I realized that I couldn’t add a bottom afterwards, so in my two last attempts, I printed directly onto rolled clay and then cut off the excess afterwards. It took 6 trials to get a satisfying result.

FINISH & RESULT

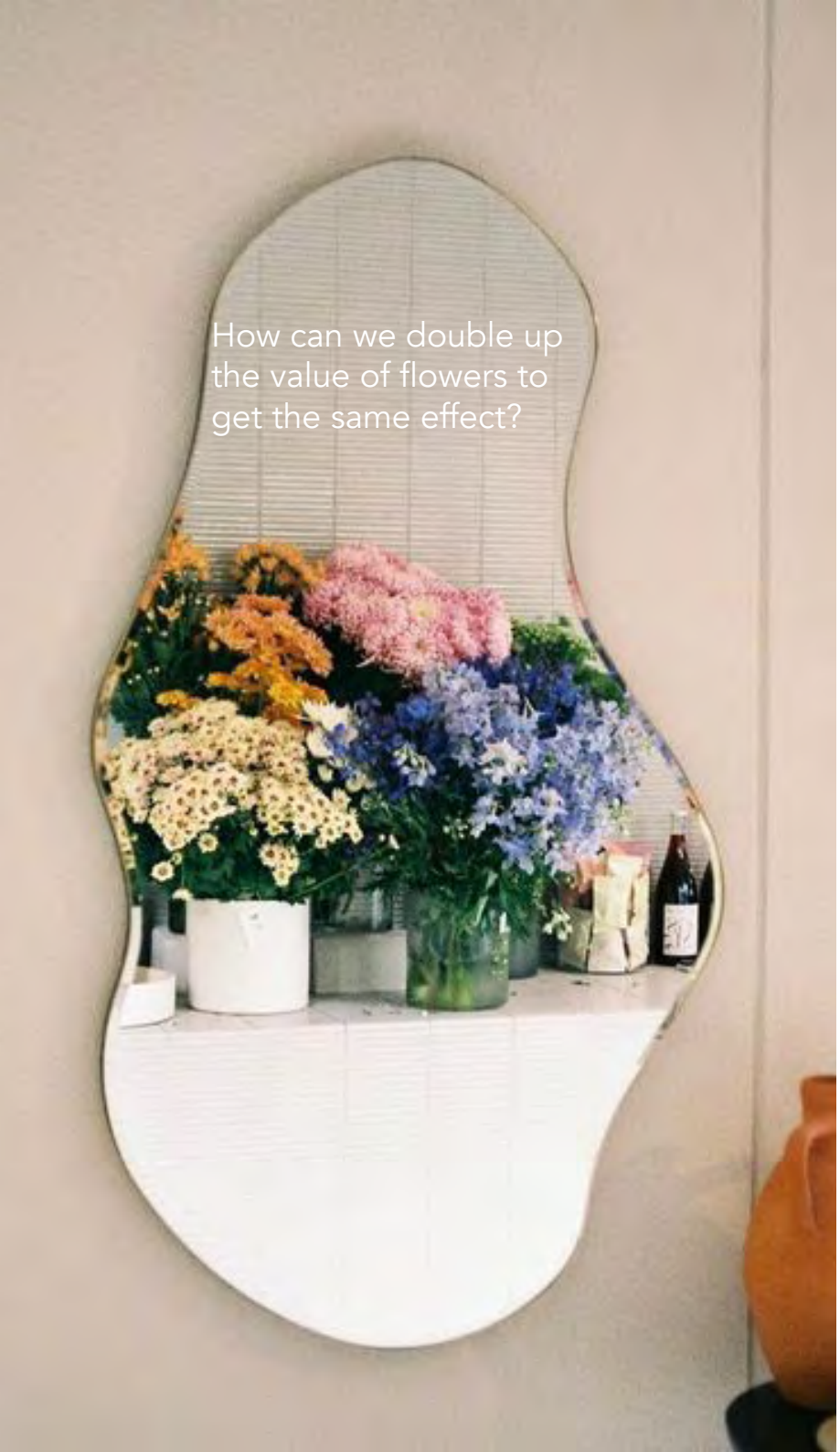





The finish took many more hours than I could imagine. After adjusting the edges by hand, drying and sanding, it went into the kiln. First 24 hours to harden, and then 36 hours after glazeing. What I did not take into consideration, is that it shrinks. So the end results where smaller than my initial design. If I would do this again, I would scale it up, especiallly the walls. Also, to have more margins in the pussle parts, where the ends meet, since the clay has it's own life. But, although I have never worked with clay before and the time was very limited, I ended up with two waterproof, functioning, prototypes, which I am proud of.

EXHIBITION

DOUBLE UP



MIRROR VASE

FOR:
REGULAR FLOWERS
GARDEN FLOWERS
SMALL AMOUNT

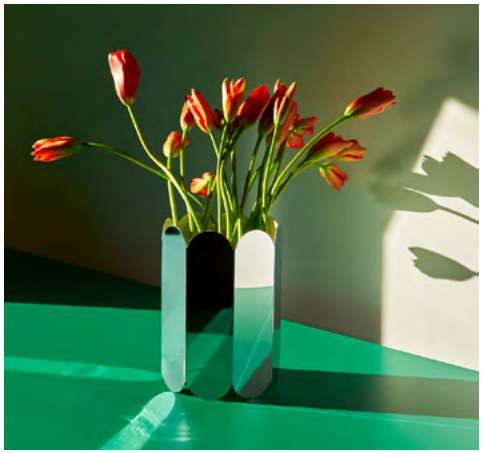
WHERE:
ALL MIRRORS

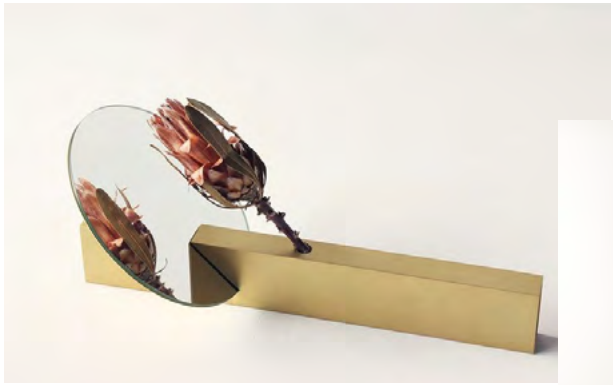
CHALLANGES/GOALS:
THE FORM SHOULD ENABLE
MASS-PRODUCTION
BE EASY TO CLEAN
HOLD ENOUGH WATER FOR THE
FLOWERS TO LAST MINIMUM A WEEK
ALLOW THE FLOWERS TO NATURALLY
LAY IN FAVORABLE ANGLE

BENEFITS:
DOUBLES UP THE BOUQUET
SAVES RESOURCES

Frida Neckmar

RESEARCH





TESTS

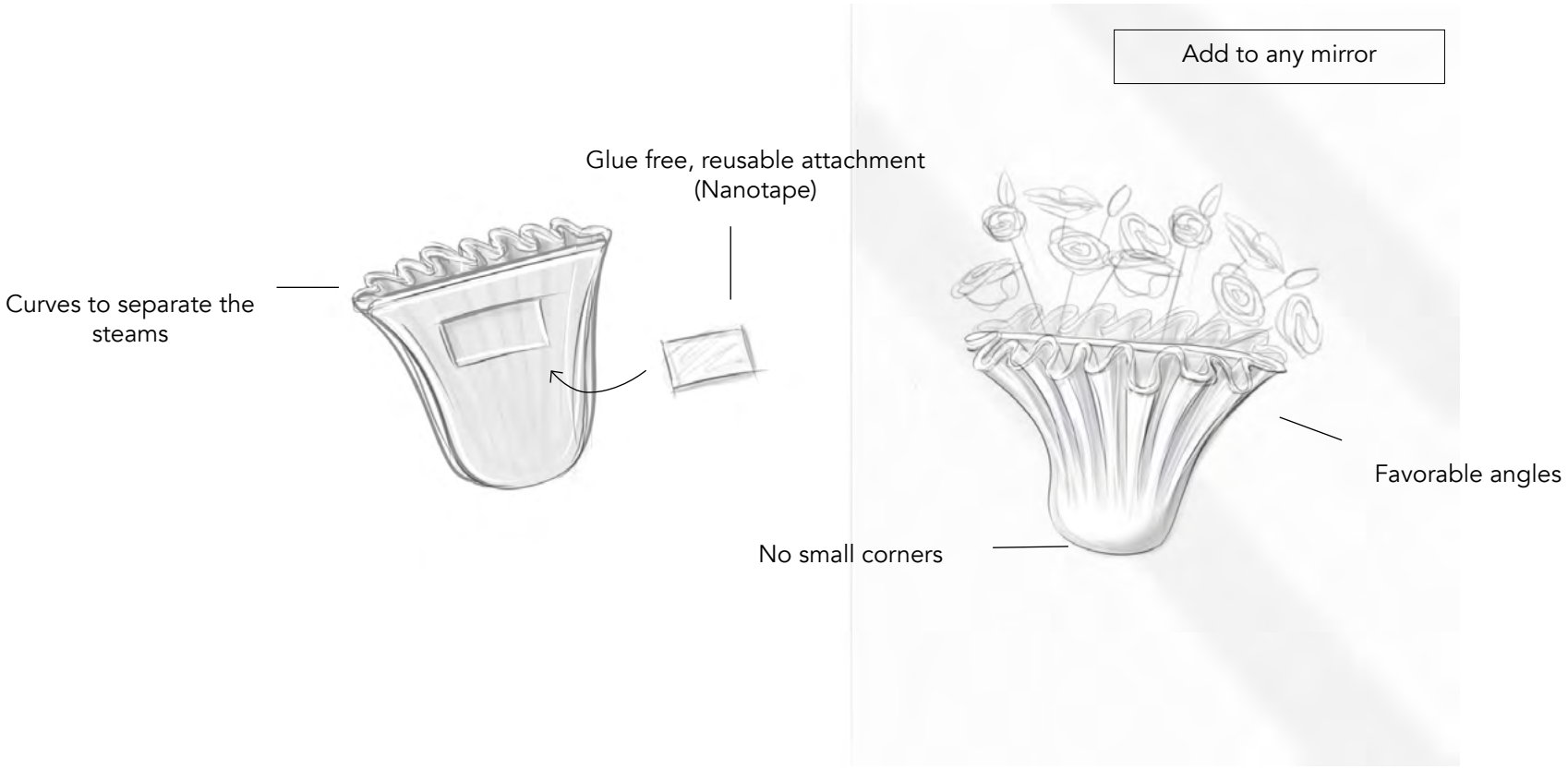




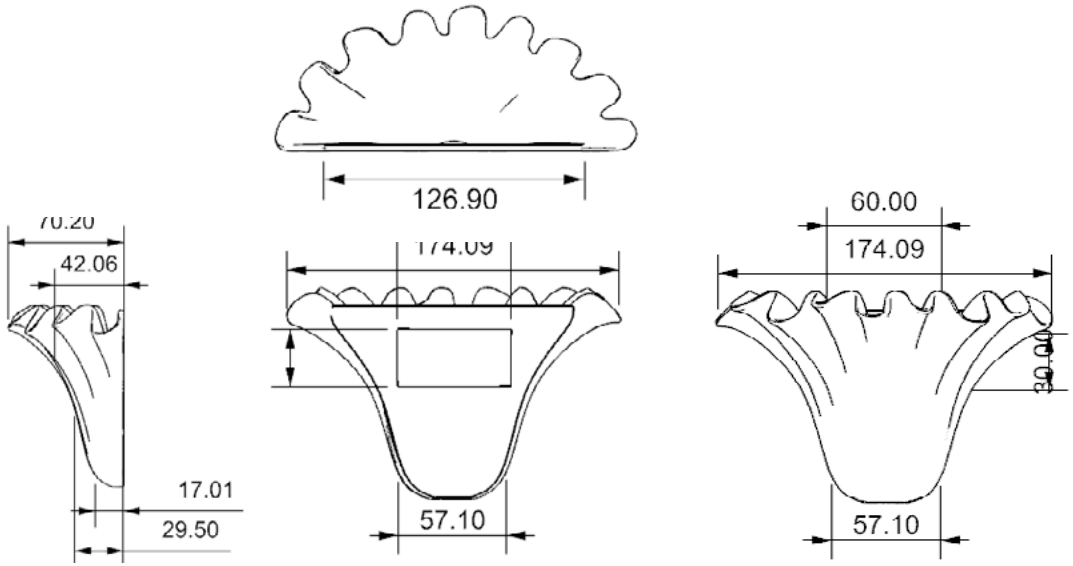


The initial idea was to use magnets, which worked well, except for the fact that the **magnets** had to be put behind the mirror aswell as inserted and glued in the vase. The magnets where also sensetive to weight and easily slipped so sillicone had to be added on the surface. I was pretty satisfied with the result of the concept, but not with the technical solution since it was not as recycleable, magnets and glue are not sustainable and the set up was not as smooth and flexible as I wished, so I started exploring other solutions.

CONCEPT


Add to any mirror
Glue free, reusable attachment
(Nanotape)
Curves to separate the
steams
Favorable angles
No small corners

3D MODELLING



RENDER

PROTOTYPE

IMPROVEMENTS

I remodelled the vase and made some improvements to the design. I also wanted to improve the finish of the vase and looked into different materials. Glass was unfortunately not an option, so I was looking into transparent 3D prints instead.

The transparent resin print was supposed to be optical/see-through, but the result wasn't transparent. It had a not-so-flattering green/yellow tone, so I ended up spray-painting it white instead. The finish was very smooth, almost looked like porcelain and it was waterproof.

I liked the finish of the transparent pet filament print as well, and the way it caught light was similar to frosted glass, but I didn't have time to make it waterproof in time for the exhibition.






TRANSPARENT RESIN PRINT

TRANSPARENT PET FILAMENT PRINT

RESULT

Overall, I was very happy with the functionality and result. I got a big effect with just a few flowers, it was easy to arrange, set up and the vase truly spread the flowers as desired. The only down side is that it doesn't hold a lot of water and that the nano-tape is almost too strong, so it takes a little bit of power to take it off. For future developments, I will try to make this vase in different materials, such as slip-cast porcelain.

CHANTERELLE

CENTERPIECE

How can a flower holder showcase the precious flowers in a honourable way?

FOR:
LONG FLOWERS
FRENCH TULIPS

WHERE:
CENTER TABLES
PILLARTABLES
WINDOW DISPLAYS

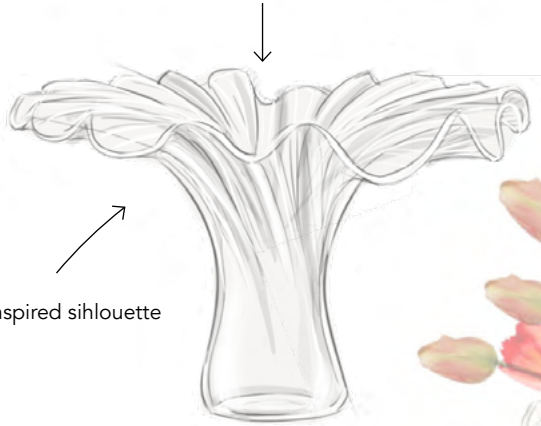
CHALLANGES/GOALS:
BE EASY TO CLEAN
HOLD ENOUGH WATER FOR THE FLOWERS TO LAST MINIMUM A WEEK
ALLOW THE FLOWERS TO NATURALLY LAY IN FAVORABLE ANGLE
SUPPORT AND SPREAD THE FLOWERS

BENEFITS:
EASY TO ARRANGE
BIG IMPACT
FLOWERS IN CENTER

IDEATION

After some doodles and quick sketches, I found a mushroom-like shape that I really liked and that also fitted my mood board well. The shape "follows funcion" in the sense that it supports the flowers from the bottom, through the waist and even holds the most tired flowers in place. The instert on the top separates the flowers in the right angles. The combination enables anyone to effortlessly create an effectfull flower arrangement with just a few flowers.

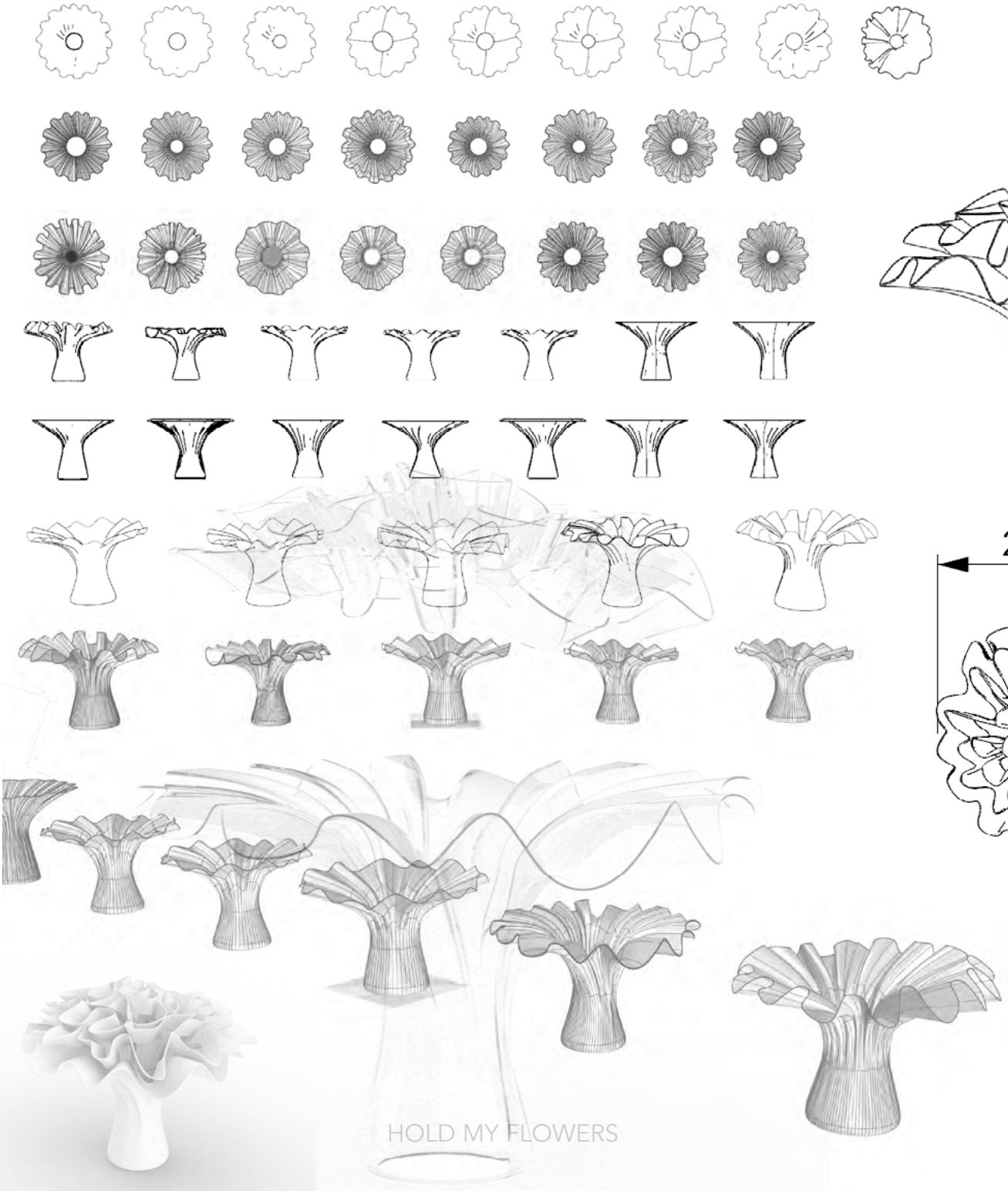
Lid/insert

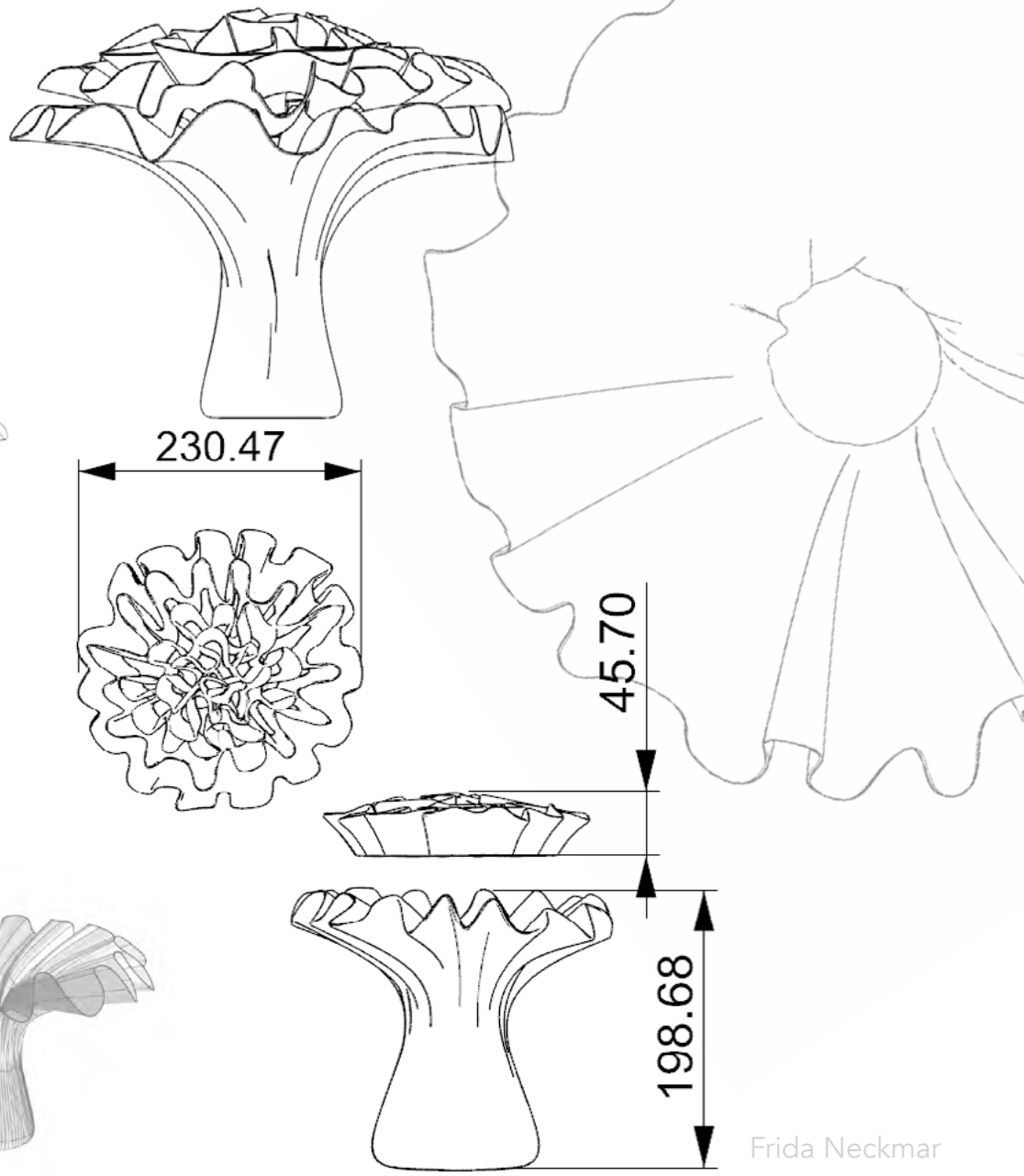


Mushroom inspired sihlouette

I had many complex ideas for this modular "center piece" vase, but most of the initial concepts created some contradicting problems or did not fit my function analysis well enough, so I settled for a two-piece design. Simple, but I got worried that it would be to complex to manufacture due to the organic shapes. Next step is to 3D-model it, do tests, improve the shape and understand how it can be produced.

MODELING





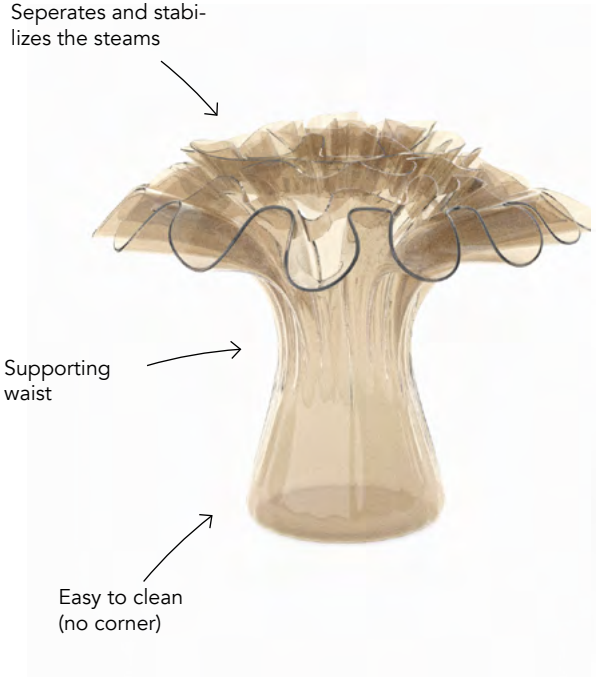
Frida Neckmar

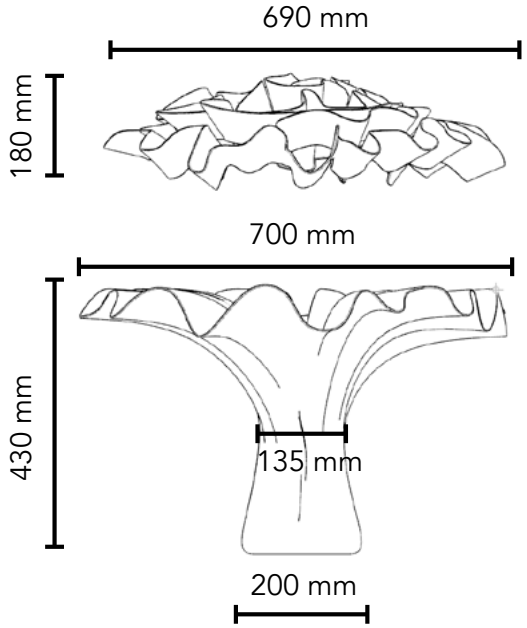
RENDERS

CMF EXPLORATION

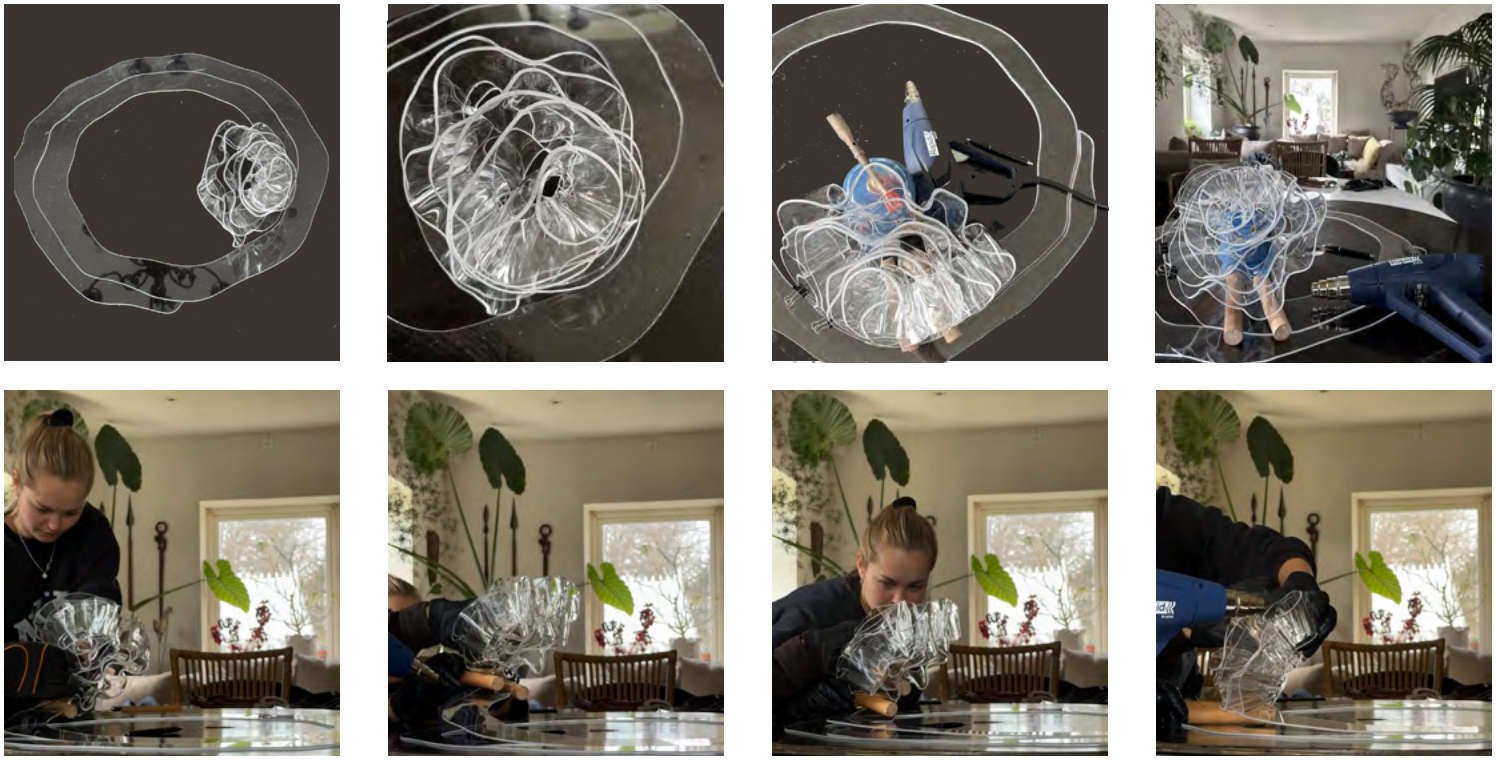
CONCEPT

A wide vase perfect for tulips. The holes in the lid supports, directs and separates the flowers to get the most effect.





PROCESS



The prototype of the “lid” was made by hand by heating acrylic plastic in an organic way to create holes in the right angles to separate flowers in the desired way.

PROTOTYPE

TESTS

NO LID: A BUNCH OF TULIPS

TEST

WITH LID: FEW LONG FLOWERS

PRODUCTION

The glassblowers from Bergdala Glasbruk embarked on a journey of trying various hand techniques to create a vase, considering the challenges of producing a complex mold. Through extensive experimentation, trial and error, we finally obtained two vases of this modell. However, the outcome did not meet my expectations or design, but they where still beautiful in their own way.

In the end, together with the experts, we came to the conclusion that for the future production, we need to come up with an innovative mold.

I chose the vase with the largest neck (to the right) to create the lid. I started with laser cutting 3mm acrylic in a spiral. Then, while heating and bending the acrylic in organic waves, I created a jig on the go, to make it easier and get the right size and angles for the holes. In the end, I tried it on the vase, heated and made adjustments to make it fit perfectly.

RESULT

EXHIBITION

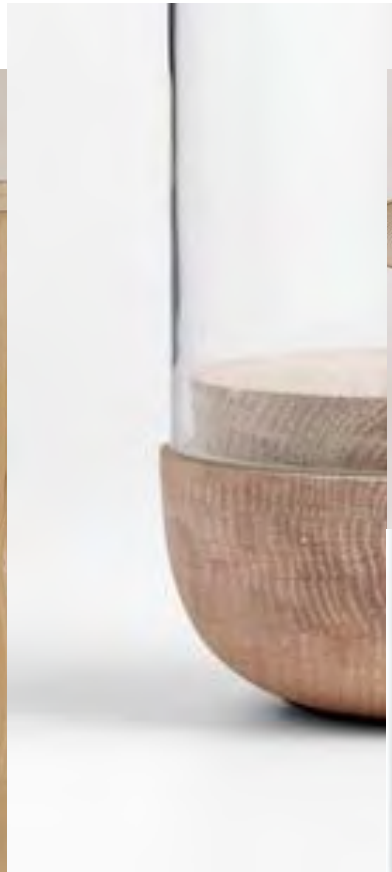
The center piece “Chantarelle” righfull stole the show on the exhibition, as it was supposed to. I was very happy that it was most visitors favourite and created the intended effect. It was effortless to make the arrangement with long, thin steams. For a more minimalistic look, I would have used only lilies, which I think suits it best.

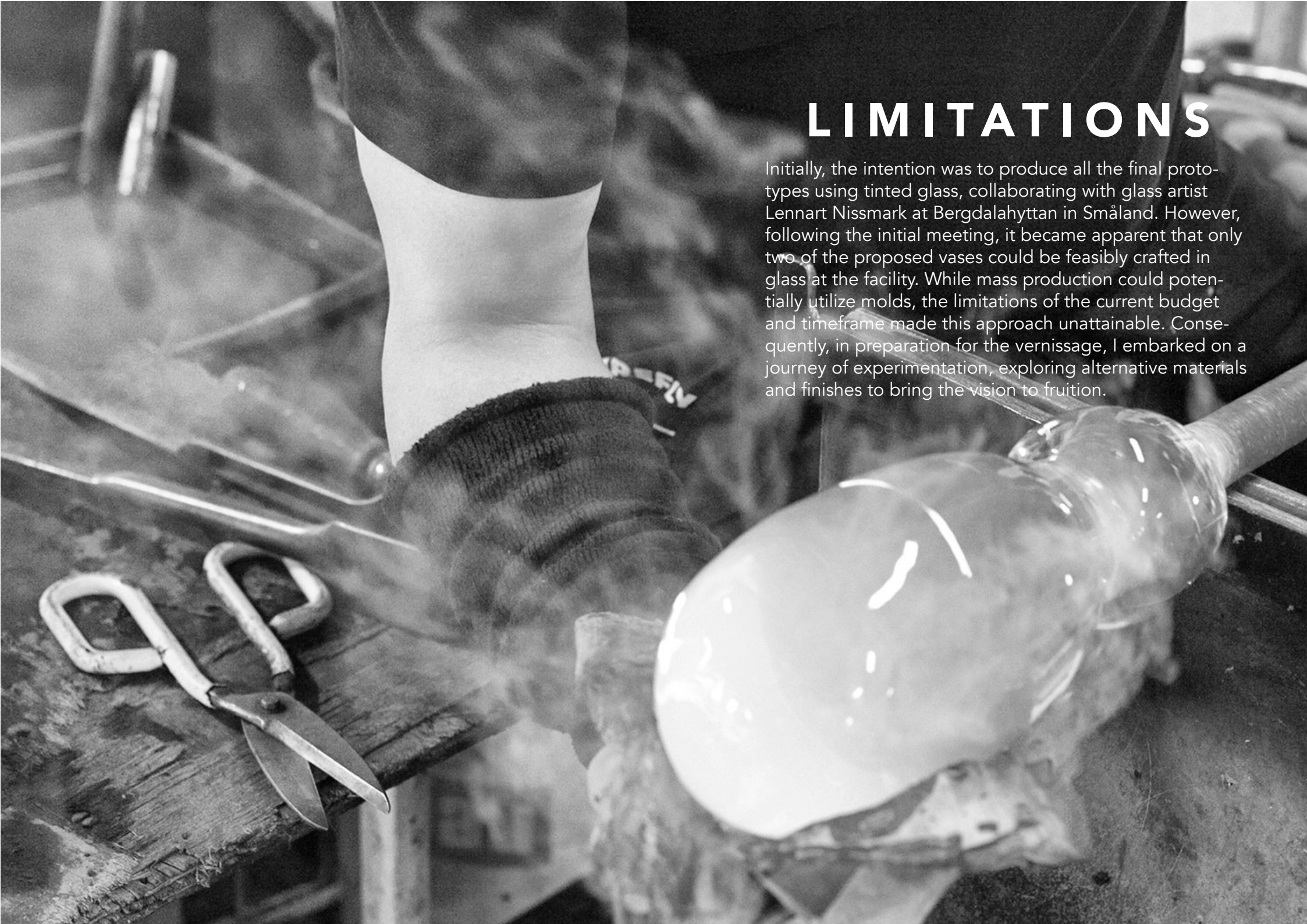
ANALYSIS

CMF

The preferred material for producing this series would be glass, as it offers both functionality and an aesthetic appeal that complements the desired visual expression. Glass possesses desirable features such as durability, light-transmitting properties, ease of cleaning, and visibility of cleanliness. In fact, according to my interviews, glass was the most favored material for vases. Moreover, glass is a timeless and traditional classic material. However, to create a more humble and cohesive look in conjunction with light wood, I envision producing the series with a warm, brown, or smoky tint. This choice would enhance its overall appeal.

Initially, my intention was to have all the vases made from the same material. However, due to the complexity of the shapes involved, I had to reconsider and instead embrace the opportunity to explore new materials and production methods. These include clay printing, porcelain casting, translucent plastic printing, acrylic plastic shaping, and wood turning on a lathe. Unfortunately, it was not possible to achieve a final prototypes with the desired CMF (Color, Material, and Finish) for this deadline.



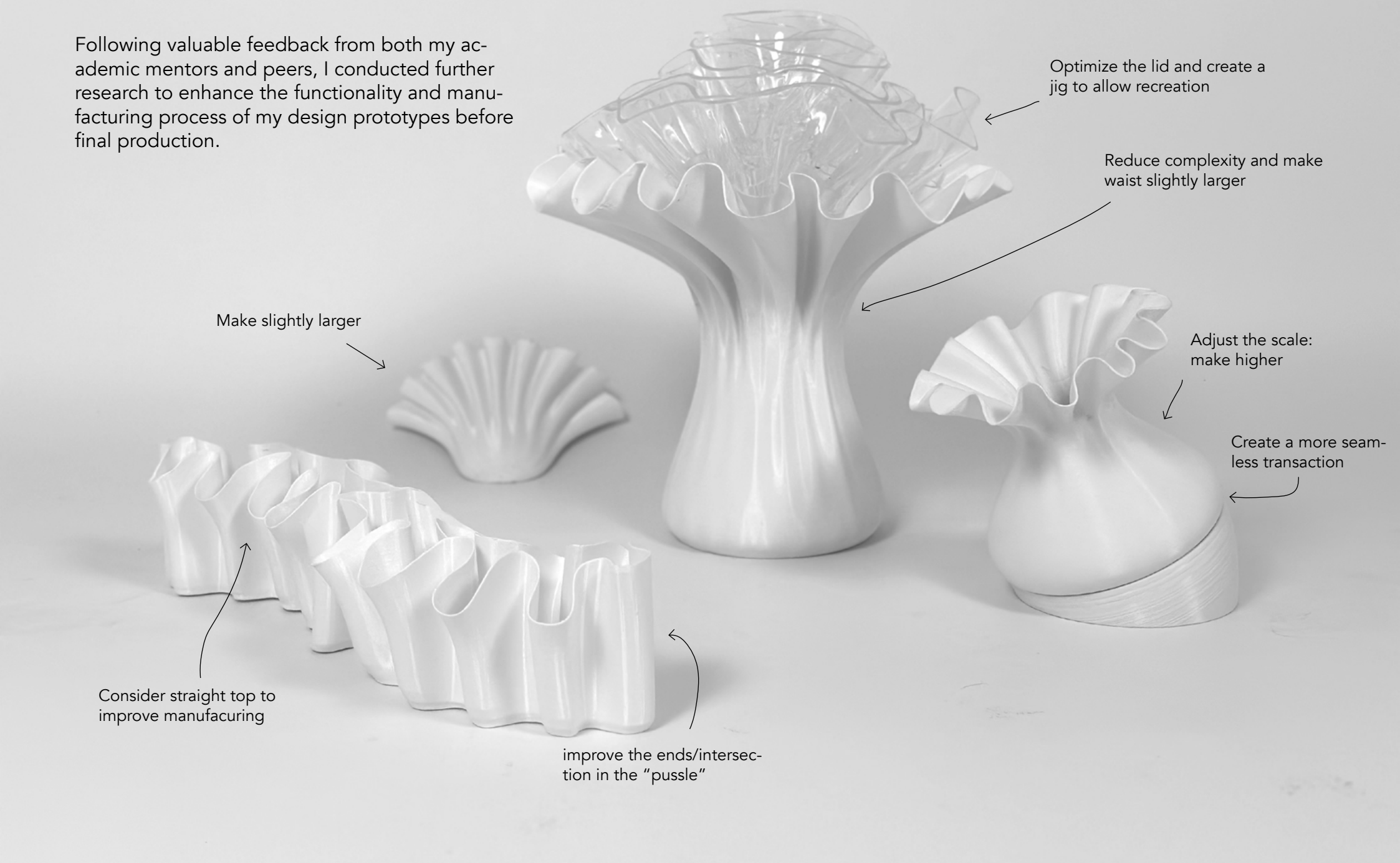


LIMITATIONS

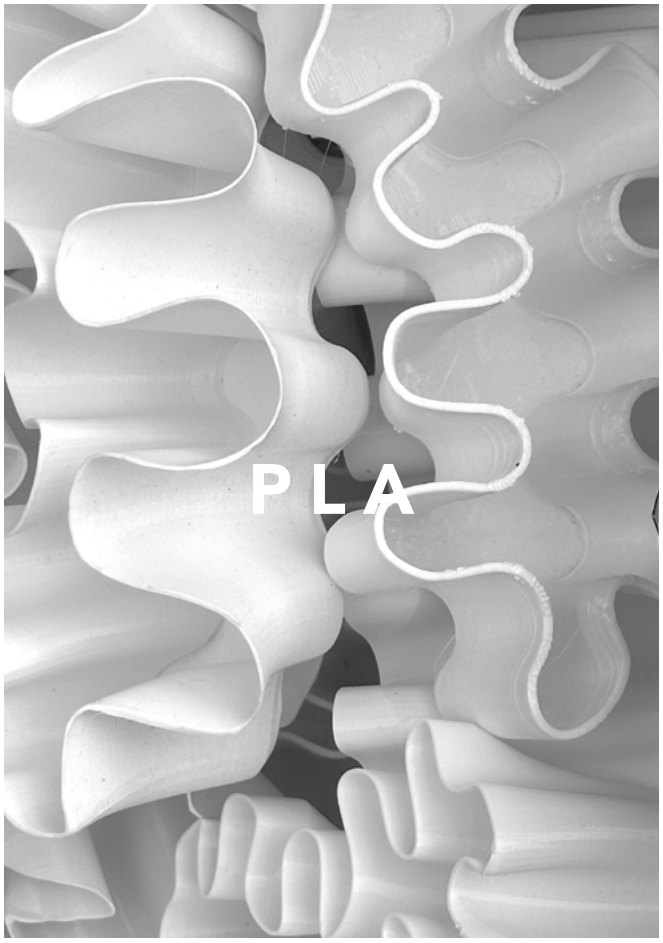
Initially, the intention was to produce all the final prototypes using tinted glass, collaborating with glass artist Lennart Nissmark at Bergdalahyttan in Småland. However, following the initial meeting, it became apparent that only two of the proposed vases could be feasibly crafted in glass at the facility. While mass production could potentially utilize molds, the limitations of the current budget and timeframe made this approach unattainable. Consequently, in preparation for the vernissage, I embarked on a journey of experimentation, exploring alternative materials and finishes to bring the vision to fruition.

IMPROVEMENTS

Following valuable feedback from both my academic mentors and peers, I conducted further research to enhance the functionality and manufacturing process of my design prototypes before final production.

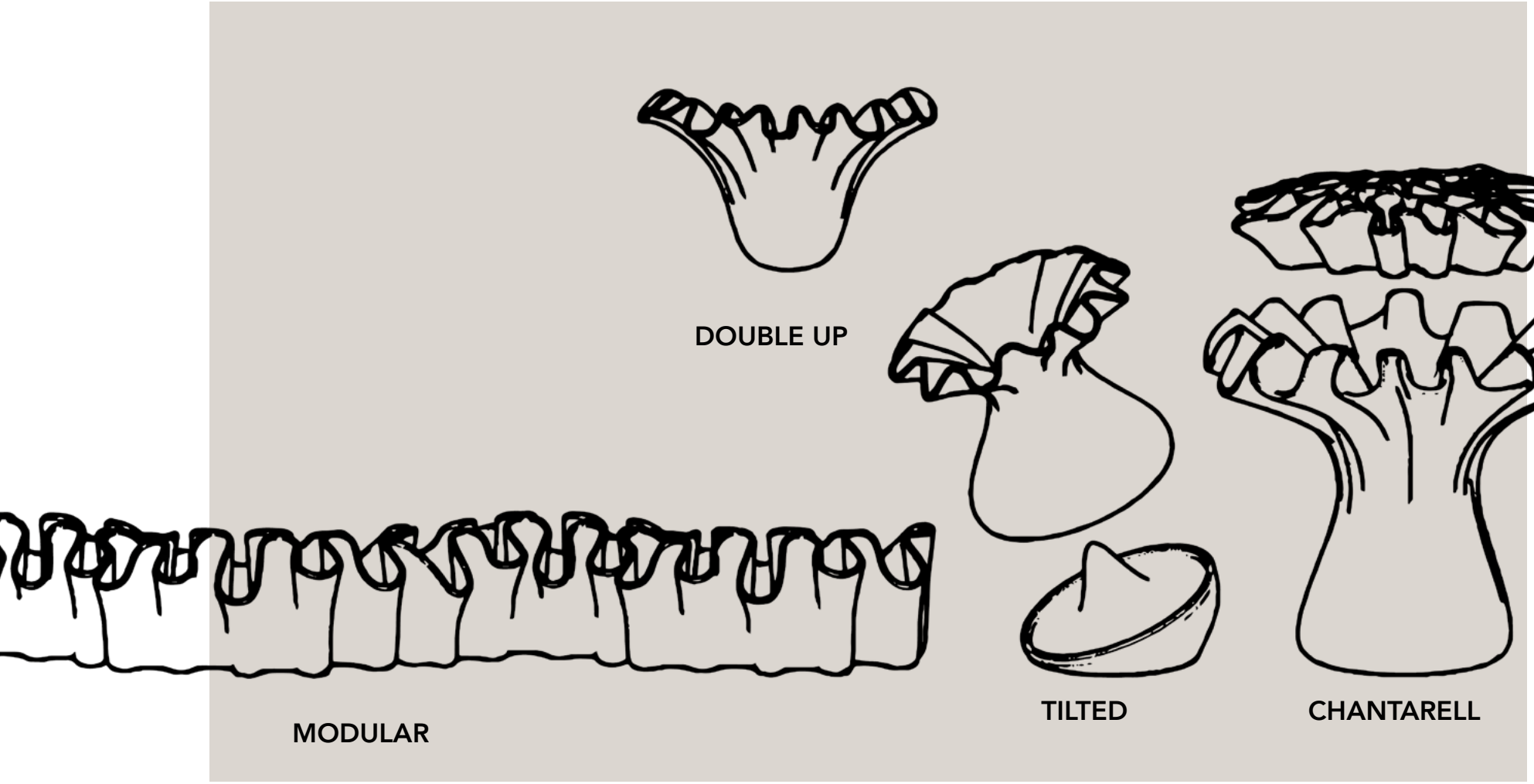


MATERIAL



While doing this project, I gained a lot of understanding of materials, modern and anchient production methods. I looked into alternative materials as part of the project's overarching objectives of material experimentation and learning. As an example, I learned a lot about the limitations to glass and the different alternatives of producing glass objects. Also, I advanced my knowledge in 3D-printing with filament. Furthermore, 3D-printed clay piqued my interest, since I wanted to get away from using plastic. Although it was very difficult to get started and took many hours of trial, error and after treatment, I am very happy that I finally got to try it out. This approach gave me the opportunity to leverage the most suitable production method for the shape, which is different for each concept, while expanding my knowledge and understanding of diverse material properties.

SUMMARY



IMAGES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photography by Rebecca Thuss
(2023-03-02)


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INTERVIEWS

Göran Carlberg, Florist & owner of the flowershop flower-shop Bloomster, Stockholm, Sweden
Johanna Neckmar, Florist & owner of the flowershop Blom-sterpigan, Malmö, Sweden
Jaqueline Folkesson, Florist at Blomsterpigan, Malmö, Sweden
Anna Nord, Florist at Blomsterpigan, Malmö, Sweden
Malin Hammar, Florist at Blomsterpigan, Malmö, Sweden

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Author Last Name, First Initial. (Year). Title of the Paper. Journal Name, Volume(Issue), Page range. DOI/URL

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HOLD MY FLOWERS