THE COLLEC TIVE

THE COL LEC TIVE

Team: CIA
The Collective
2019/2020

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Look book

We are The Collective, a
newborn experiment out
of the collusion of Howest
and Volkswagen AG.

A team consisting of IPO, DAE and Devine students,
this year in a double cooperation with a good concept
and polished end product as main goal.

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01

Introduction

Before diving into the Volkswagen project and the working process of the team towards the end result, we present you a short introduction of ourselves.
We are pleased to meet you.

How did we end up here?

The story of the very beginning of our collective adventure.

The idea is simple: put together three creative Howest education programs to think about a business case and see what comes out.

We are two teams of six people, each consisting of two 'Digital Design and Development' students, two 'Industrial Product Design' students and two 'Digital Arts and Entertainment' students. For the second year in a row, Volkswagen AG introduced a case to Howest Kortrijk, challenging the participating students to think about a certain aspect of autonomous driving.

This year it's our turn to show what we can achieve with joined forces. Meet The Collective 2.0!

Team 1, from now on referred to as CIA, with as members:
Marlena Beyer, Giel Rigo, Stijn Stroeckx, Bavo Vanderghote, Kim Jolie & Margot Verbeke.

Team 2, from now on referred to as Ada, with as members:
Louis Heeren, Anthony Van Dosselaer, Simon Wauters, Rob Van Camp, Louise Devolder & Benjamin Ghys.

The entire collective minus the photographer, first week's movienight watching 'Her'.

The first weeks we took the time to get to know each other, the teacher crew and the project, slowly realising the challenge ahead of us. After barbecues, movie nights, games and food meetings we started asking ourselves the first crucial questions: 'What did we get out of the briefing?', 'How are we going to organise and motivate ourselves?', 'What do we want to stand for as a team?', 'What are the keywords of the project?' and eventually the most important ones 'How and where do we get started?'.

WHAT ABOUT US?

We knew about the difference in skills and expertise we all have because of the combined study programs, but we had no idea what everyone was really capable of. To be able to estimate the possibilities and limits of the project, we spent an afternoon showing off our best work to each other. This appeared to be very useful for the future too, because this way we also knew what techniques we could learn from each other.
After that, roles were defined and tasks were assigned within the team. From now on, instead of Marlena, Kim and Giel we were talking to the 'Track-', 'People-' and 'Money Keeper'.

CIA

Another task on the first agenda was the name. We extensively used the rich supply of emojis in Slack to help us in our voting process. We had twelve eligible names including 'PoVWer Rangers', 'The Coactive' and 'Dino Thunder Rangers'. But eventually CIA made the cut, both being the abbreviation of 'Creative in automotive' and implying that we were working with confidential information.

WHAT WILL BE THE WORDS ON THE WALL?

To decide on the most important values of the autonomous driving project we each listed three words that we considered key to the assignment we were given. Next, we explained them plenary, clustering the related concepts. At the end of the day we agreed on four keywords that needed to be considered with every decision to be made: soul, innovation, Volkswagen DNA and connection.

A real agency has achievement awards so we got ourselves the coolest toy cars we could find and started assigning titles. The SUV became the 'explorer of the week', the supercar became the 'creative of the week', the bus became the 'team player of the week' and so on. Talking about motivation!

The making of... The car awards.

Who are we?

Get to know us. The six members of team CIA
and their favorite 'shnacks'.

Team CIA - Kim Jolie, Giel Rigo, Stijn Stroeckx, Bavo Vanderghote, Marlena Beyer & Margot Verbeke

Hi, I am Stijn, a Belgian game developer. Before DAE I graduated high school studying IT. My passions are games and cars, but I am also interested in web development, (game) economy, technology and IT.

In my free time I work on one of my personal projects, play a game or go for a drive. In The Collective I got the role of the 'realist keeper'. My goal is to make our ideas possible, and I give everyone a second opinion when in doubt.

Hey, I am Marlena and here are some facts about me! Grown up with video games, I live my dream as a 2D and 3D game artist.

In the team I take the role as the project manager or in our words 'the keeper of time'. I love dancing (you will not get me off the dancefloor easily), gaming and drawing (what a surprise as a gaming artist) and baking (I make the most delicious cakes!).

Hi, my name is Margot. I am a 24-year-old student at Howest passionate about sustainability, digital innovation and creativity. In The Collective I got the role of strategist with a part time occupation as secretary or 'notes keeper'. Together with Marlena we provide the team's girl power, i.e. the brains of the team ;).

NAME:
Stroeckx Stijn

EDUCATION:
DAE, Digital Arts and Entertainment
(Game development)

IN MY MIND YOU CAN FIND:
Lots of plans, some logical systems for
problems I'm working on, and various
seemingly random information.

FAVORITE SHNACK:
Honey waffles. They are like … waffles, but
with honey in them!!

NAME:
Marlena Beyer

EDUCATION:
DAE, Digital Arts and Entertainment
(Game graphic design)

IN MY MIND YOU CAN FIND:
A systematic chaos out of To-Do,
Not-To-Do and But-I-Would-Really
-Like-To-Do-Instead, mixed with
plans for food for every day in the
next month.

FAVORITE SHNACK:
Snickers, peanutbutter, peanuts with
chocolate or just raw. Peanuts are my drug.

NAME:
Margot Verbeke

EDUCATION:
Commercial Science
Digital Design & Development
(Devine)

IN MY MIND YOU CAN FIND:
My entire agenda, because I keep
forgetting the physical one, my friends
and my 'what now?' future plans.

FAVORITE SHNACK:
Paprika nuts, in my attendance they'll
disappear mysteriously.

NAME:
Kim Jolie

EDUCATION:
Woodworking
& Industrial Product Design (IPD)

IN MY MIND YOU CAN FIND:
Ideas and creations piling up, travel plans that'll get me broke, my infinity to do list, my loving family and so on.

FAVORITE SHNACK:
Steak with pepper sauce and sweet potato fries and a Tripel Karmeliet to drink. All served on the beach with only shorts and flip flops to wear!.

NAME:
Giel Rigo

EDUCATION:
Electro Mechanics
& industrial product design (IPD)

IN MY MIND YOU CAN FIND:
Always dreaming,
always questioning.

FAVORITE SHNACK:
Snack pros don't have favorites.

NAME:
Bavo Vanderghote

EDUCATION:
Digital Design & Development
(Devine)

IN MY MIND YOU CAN FIND:
The weather forecast for Bavo's mind: mostly sunny, high imagination and a slight chance of ingenuity.

FAVORITE SHNACK:
I like both the left and right twix equally. Although, I always start with the right one.

Dad of a 6-month-old badass cute son made with the most lovable and awesome mom. The verteran american football player on the field. Straight forward. Positive and open creative mindset. Dreamer at night and day, lover of the good things in life. The team made me 'people keeper', I am assigned the role of CEO to make sure everybody stays happy and motivated.

How we got from inspirational cats to a solid concept and from strangers to friends.

Hi I'm Giel. I'm 21 years old. I am a very curious person who is always looking for things to get inspired as well as new experiences. In my spare time I like to cook and to be creative. Within the team I am responsible for keeping our costs within the limits, I am called the 'money keeper'.

Hi, I'm Bavo. Professionally, I'm a creative developer, graphic designer and the occasional motionographer. If I could create my own world, it would consist of lights. Lots of lights. Light design and interaction is what I'm really passionate about. My role in The Collective was mainly the 'word keeper'. I made sure we were connected to the outside world.

Milestones

How we got from inspirational cats to a solid concept
and from strangers to friends.

Throughout this book, a second layer of content will be applied using a different styling and layout. This layer will contain personal milestones and insides of the team. The reason for this opening-up is that we want to share not only facts and deliverables, but also how we got to the point we are today: with ups and downs, like every good project.

We started The Collective 2019 not knowing what to expect from the project, the planning and the team. During 16 weeks we got to know each other's strengths and delicacies, learned how to work together as a team towards goals and deadlines and how to cope with unexpected circumstances and setbacks. Complementary to this, we also took the time to clear our heads and let go of the project for a moment. These were the times where team building took place, within and across the teams. The ups and downs that ended up being a significant milestone for the project have been acknowledged, combined and eventually written down in this book for you to read.
This was our journey.

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02

Briefing

This is when and how everything started. Nisan Kucam and Simon Defoort came over to our HQ and provided us with a challenge and design brief that determined the course of this year's Collective.

Problem definition

The problem that VW wanted us to find a solution for.

Autonomous driving is already a big topic in the car industry. This project will look further into the future of autonomous driving and its possibilities.

As the car will not be operated by humans anymore, there will be a wider range of possible interactions with the car and fellow people. Time in the car can be spent differently and the travel experience will change. Therefore car designers face endless new possibilities and need to adapt to an era of entirely new car experiences.

Volkswagen believes that in the future cars will become more than just a vehicle, it will be a character that people will interact and build a relationship with. Volkswagen is looking for this character or soul of the car that fits their image and attracts customers. They want a vehicle that is designed to integrate perfectly into an individual's life. It is our task to find this character, without having to worry about the technical aspects of the car.

The final product should express the aspects of the character in the car's exterior, interior and way of interacting, showcased at the end presentation in January for Volkswagen AG.

Project goals

The purpose of The Collective and the VW challenge.

The main goal of the project is to deliver a finished end product consisting of the interior, exterior and interaction of our car showcased in a coherent presentation. 'Coherent' meaning that the experience and the mood of the character should be translated into everything we show.

Additionally, there are personal project goals within the team too. We want to experience the skills of other study programs and learn from each other. We want to discover the workflow and techniques of our team members and go over the normal curriculum.

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Research

Before diving into the character creation we felt like we needed some background information on the topics. By each digging deeper into a specific field of interest we tried to obtain a valuable collective backpack in order to make thoughtful and well-informed decisions in the future.

Volkswagen AG & VW DNA

What does Volkswagen want to stand for and what do they believe in? Important questions that would provide crucial key values.

SECTOR

This project is situated in the automotive sector. More specifically we can say that it is about the implementation of new technologies in a car, so we are also partly working within the technology sector.

MARKET ANALYSIS

The automotive sector as a whole is undergoing big changes. While the search for a more sustainable future has pushed electric powertrain technology to improve quickly, we are still only at the very start of widespread adoption by customers.

But car manufacturers haven't just been working on electrical engines, technology has also quickly advanced for a much bigger step, replacing the driver. This not only provides convenience since the driver will be able to do other activities in the meantime, but also offers a lot of safety, because humans do make mistakes. Due to the many benefits of autonomous driving, a lot of research is being done, and technology is advancing quickly.

**CAR SPECIFICATIONS
THE NEW VW ID FAMILY**

Volkswagen is building a new image with the new ID family.
Main ID Family identity specifications:

Volkswagen responds with the ID. Family to the future. We can expect these fully electric (still conceptual) cars as early as 2022. The ID. Family is 100% electric. Additionally, this family of cars is equipped with very innovative technologies like voice recognition and autonomous driving[1].

The models that are a member of the ID. Family are the following: ID. Neo, Vizzion, Crozz and Buzz[2]. The new ID. Family of Volkswagen distinguishes itself mainly in the field of technology compared to the current Volkswagens. For example, the batteries are concealed in the floor of the car and are extra flat. This makes the members of the ID. Family extra spacious.

A new image for Volkswagen: the ID Family

1   https://www.dago.nl/volkswagen/nieuws
           /maak-kennis-met-de-volkswagen-id-family/
2   https://www.volkswagen-newsroom.com

Light lines

The LED strips are idenitifiable in all ID. Family concept cars. These LED strips run across the width of the front of the car and wrap around the sides. Besides that they also illuminate the VW logo.

Hexagon shape

The hexagon figure is something that's recognisable in the exterior as well as the interior of the VW cars. On the exterior, the hexagon shape appears as a pattern in the front panel and the rear lights. In the interior this shape is found in the stitching of the car seats and as light patterns on the dashboard[1] .

1   https://www.cardesignnews.com/cars/la-2019 -vw-id-space-vizzion-concept/39677.article https://jalopnik.com/lets-take-a-look-at-the- design-of-the-volkswagen-id3-1837994121 https://www.caricos.com/cars/v/vw/2019_ volkswagen_id_space_vizzion/

Hexagon detail in the backlights

Hexagon pattern in the steering wheel

Hexagon shaped display

Hexagon pattern in the car seating

Front communication panel

The combination of these two features is incorporated in the communication panel. Here they use the hexagon pattern as a base for their lights and communication. The pattern of hexagon figures together creates a communication panel at the front of the car. This honey-comb style pattern is a cue in the design of the ID. Family.
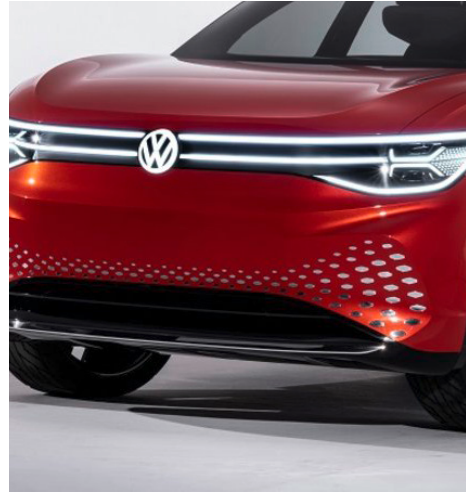
Front hexagon pattern

Front communication panel

Eye-like front light

Eye-like front light

Eye-like front light

Innovative Matrix LED headlights
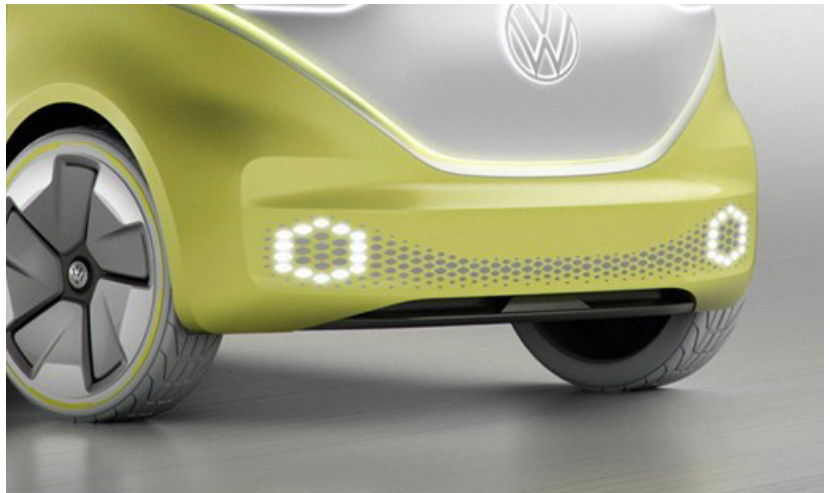
Front lights: the eye

For the front lights of the new ID models the combination of the hexagon shape with the LED lights makes the light resemble the human eye and pupil.

When you get to the ID.3 1ST he wakes up. He recognizes you and greets you with a wink through his Matrix LED headlights. The car always lights up the way in front of you and can adapt perfectly to almost any environment so you can drive even more proactively[1].

1   https://www.volkswagen.be/nl/e-mobility -en-id/id-familie/id.html

Evolution of the grill

When observing the combination of the front lights with the VW logo, the evolution from petrol cars to electric cars can be identified. The logo remains included in the grill of the car and the lights still form a coherent whole with the grill. We can see that these features are an important part of the Volkswagen heritage.

With the new ID. Family they use a LED strip that resembles this iconic feature of the past. Light will become more important in the future. Light will serve the purposes of communication and interaction while bringing the car individually to life[1].

Grill of the VW up until now

Coherent VW Grill

Grill of the ID. Vizzion

This iconic design cue of VW is also used as a marketing item.

Clear blue exterior of the ID3 1ST

Flashy orange in the new ID. Family
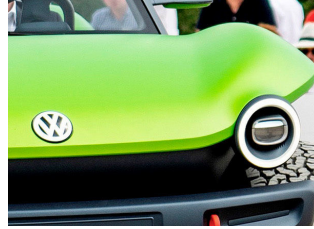
Vivid green of the VW ID Buggy

Youthful colors

The ID. Family has more flair. They got a sparky and young representation.

Roundness of the front nose

The front nose of most of the ID family cars is rounded up to make the perception of the car more soft, gentle and friendly. This change is a part of the rebuilding of the new image. The pictures show the VW Golf versus the VW ID3.
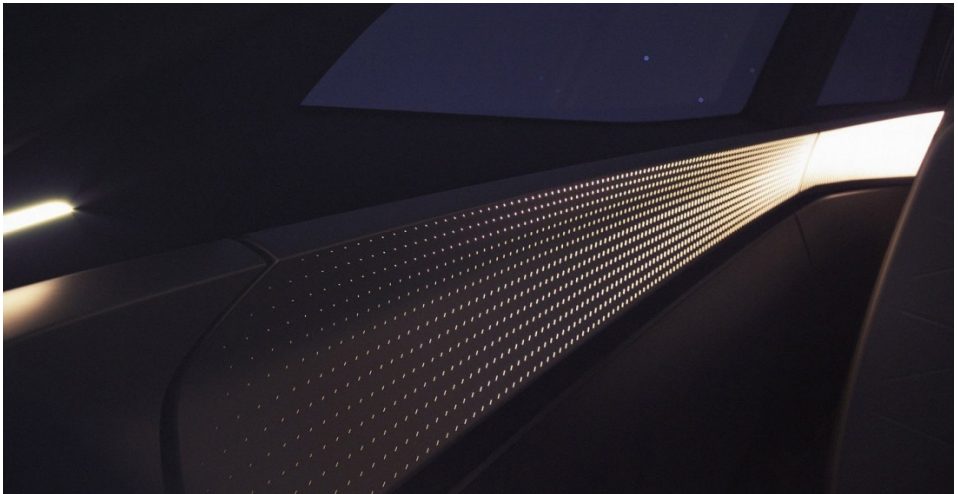

Front nose of the VW ID3

Front nose of the VW Golf

1   https://www.volkswagen-newsroom.com/en/stories/light-years-4088

Interior lights of the VW ID family

Interior light pattern

The interior light patterns communicate and create an convival atmosphere. They want to create less car-like interiors and more modern-day and mobile living room designs. Each object in the interior is designed as if it were an independent piece of furniture. It works as part of the whole, but also on its own[1] .

The iconic C pillar in the ID Buzz
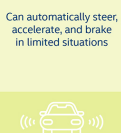

The iconic C-pillar

Wide C pillar
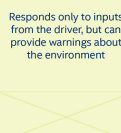
The wide C pillar is an iconic feature of many Volkswagen's exterior car designs. The shape of this pillar has evolved since the previous models and has become a part of the heritage of volkswagen[2].

1   https://www.volkswagen-newsroom.com/en/stories/
         what-makes-the-interior-of-the-id3-so-special-5513
2   https://www.volkswagen-newsroom.com/en/stories/
         design-has-to-be-experienced-with-all-senses-4128

Autonomous driving

So what exactly does autonomous driving mean?
An overview on the different levels and used technology.

THE 6 LEVELS OF
AUTONOMOUS DRIVING

	LØ No Automation	**L1** Driver Assistance	**L2** Partial Automation	**L3** Conditional Automation	**L4** High Automation	**L5** Full Automation
DRIVER	In charge of all the driving	Must do all the driving, but with some basic help in some situations	Must stay fully alert even when vehicle assumes some basic driving tasks	Must be always ready to take over within a specified period of time when the self-driving systems are unable to continue	Can be a passenger who, with notice, can take over driving when the self-driving systems are unable to continue	No human driver required–steering wheel optional–everyone can be a passenger in an L5 vehicle
VEHICLE	Responds only to inputs from the driver, but can provide warnings about the environment	Can provide basic help, such as automatic emergency braking or lane keep support	Can automatically steer, accelerate, and brake in limited situations	Can take full control over steering, acceleration, and braking under certain conditions	Can assume all driving tasks under nearly all conditions without any driver attention	In charge of all the driving and can operate in all environments without need for human intervention

(intel)

The 6 levels of autonomous driving

LEVELS[1]

Level 0:
There is no autonomy, the driver has direct control of everything, there can be basic assistance (ABS, cruise control etc.) but the driver still has to give all input.

Level 1:
The car can now have some basic autonomy. The driver is still driving the car, but the car can assist you or take action in case of an emergency.

Level 2:
The car can now drive itself in some situations like switching lanes on the highway, but the driver still has to be driving at all times.

Level 3:
The car can now drive itself in most situations. The driver can take his hands of the wheel while the car is driving, but has to pay attention and be able to grab the wheel at any time.

Level 4:
The car can now drive you. You can do something else while the car is driving as the car is capable to drive in regular situations. There still has to be a passenger on board that is capable of driving as the car might not be able to -or be allowed to- drive under certain circumstances e.g. a heavy storm.

Level 5:
The car can now drive anyone in any circumstance. You never have to take control and there doesn't even have to be a person present inside the car.

TECHNOLOGY

The automotive sector as a whole is undergoing big changes. While the search for a more sustainable future has pushed electric powertrain technology to improve quickly, we are still only at the very start of a widespread adoption by customers.

Due to the changes in the sector, all major brands are heavily invested in autonomous driving. A car that is capable of driving itself opens up a lot of possibilities. All brands know they have to keep up with the others. Everyone is trying to be the first one to have their technology ready, even if they don't necessarily want to release everything yet.

Since everyone has jumped on the same bandwagon, and many brands are teaming up with common partners, most brands are heading to the same future. While concept cars are typically crazy, futuristic, and vastly different, it seems like most end products are all going to be very similar in terms of features, possibilities, and safety.

Adding a character (a soul) to a car would make it stand out from all other brands. It would provide a different reason to choose a car and being able to bond with a car could even change the view on a car as just an "object".

1   Intel. (2019). Autonomous Driving at Intel [Illustration]. Retrieved from https://newsroom. intel.com/press-kits/autonomous-driving-intel/#gs.l69gvh

Trends

Today's cars are crammed with features to make our life easier and to increase our comfort. Below, we'll list a few of these new technologies that are being implemented in today's cars.

TECH TRENDS

AI

Artificial intelligence in modern cars is mostly present in the form of a voice assistant. They help you do tasks without you having to take your hands off the steering wheel. These assistants learn your personal preferences and adapt to you. On top of that, they also learn from all users, so they get better over time.

AR

Augmented reality helps you navigate the streets more easily. Using overlays on video, they can show you which direction to follow on an intersection or help you find your newly moved brothers house by projecting numbers on the properties.

Interaction

The car reacts to the driver and the passengers appropriately. It knows when you're about to interact with the interface and reacts accordingly, resulting in a calmer look and more delightful experiences. Some cars can also distinguish between driver and passenger and present features accordingly or detect when you want to grab something from another seat and shine some light to help you.

Games

When you're looking to kill some time in your car, you can play some games with the pedals and the steering wheel.

Apps

More and more cars, especially electric ones, come with apps. Your phone becomes the key and the app is your way of interacting with the car. These applications are often packed with features. It shows you details about your vehicle status, allows you to preheat your car in the morning and in some case lets you summon your car.

Autonomy

More and more cars today are level 2 autonomous. They can steer, accelerate and brake automatically within their lane. It does however require active driver supervision which makes the vehicle not fully autonomous. Other autonomy features include:
-        Suggest lane changes to optimize your route
-        Smart summon
-        Take you to an assumed location, based on your calendar
-        Progressive disclosure

The driver's phone will be used as key leading to greater accessibility and fewer hardware complications. The car UI wakes up incrementally, responding to the driver and mimicking the different key positions.

-        Car senses phone presence: screen wakes up showing limited info.
-        Driver gets in and sits down: unlock all features short of driving
-        Brake pedal pressed and shifter moved: engine starts

"Use automation for humans,
not against them"

THE FUTURE OF EXPERIENCES

Automation theater

"Automation-fueled in-person experiences that are also immersive, compelling and magical in their own right."

If you're asking a customer to engage with you or your brand, you need either a super-efficient automated process that is as fast and easy as possible or a compelling and magical experience that customers want to spend time on. If your interaction takes too much time or doesn't appeal to the customer, you will lose his attention very quickly and customer engagement will drop.

Why now?

People are concerned that automation is leading us to a bleak future. One where it replaces human labor. Instead, we should use automation to create magical, human-centered experiences: "use automation for humans, not against them". We are aware of IRL-automated consumerism e.g. Nike's House of Innovation is a store that uses a host of automation tech to deliver an efficient and personalized customer experience. It communicates with its city through people and digital services and stock products based on local shopping trends.

These new technologies intrigue people. They are curious, especially towards robots. So let's celebrate the robots and put them front and center!Consumers have had a glimpse of how automation and magic can be blended. Currently, we have efficient digital services that automate a mundane task. There's a magical feeling you get from auto-savings apps such as digit.

Going further, consumers will expect IRL experiences that offer the same blend of automation and magic. The online expectations will be transferring to the physical world.

Village squared

"Consumers will embrace innovative shared spaces and in-person experiences that help win the growing battle against social atomization and promote social wellbeing"

Connection is a very important factor in people's life. Extra perks that come with it are a sense of community, a feeling of familiarity and a sense of belonging. According to Robert Waldinger's TED Talk[1] "What makes a good life? Lessons from the longest study in happiness.", there's a link between social connection and community on the one hand and happiness levels and longevity on the other. He concludes that good relationships, where you feel like you can really count on the other in times of need, protect our brain and our memories.

Conclusion

Right now there's a glow face epidemic. Humans are addicted to phones. The search for experiences and spaces that reinstate feelings of IRL community will grow.

Social atomization is a rising problem in today's society. People order everything and get it delivered right to their door. Eventually that job will also be taken over by robots. Also, the number of single-person households is rising[2]. People are becoming more and more disconnected.

Last, but not least, there's a trend of post-demographic consumerism[3]. A rising number of consumers sense that there's others of all ages, genders, beliefs and more out there that share their tastes, interests and passions. People will embrace spaces and experiences that throw everyone onto the mix and promote togetherness.

Superhuman resources

"Consumers will demand ethical AI and algorithms that deliver fair and unbiased decisions".

In recent years awareness has been raised about how much our lives are shaped by decisions made by AI and algorithms[4]. However, they can make fallible and biased decisions. For example, Facial recognition software is more reliable on white male faces and amazon's algorithmically-fueled hiring tool is biased against women.

2022: social machines

There's good examples of social machines like an Iphone shaking when you enter an incorrect password. This human touch makes the interaction much more enjoyable. An example of a bad social machine is Clippy, the office assistant. He interrupts you at the wrong moments and doesn't learn. He lacks emotional intelligence. People are hoping to have real conversations with their voice assistant. This already starts happening with Amazon's Alexa. However, we don't need that to have a relationship with technology and to humanize it. People humanize everything.
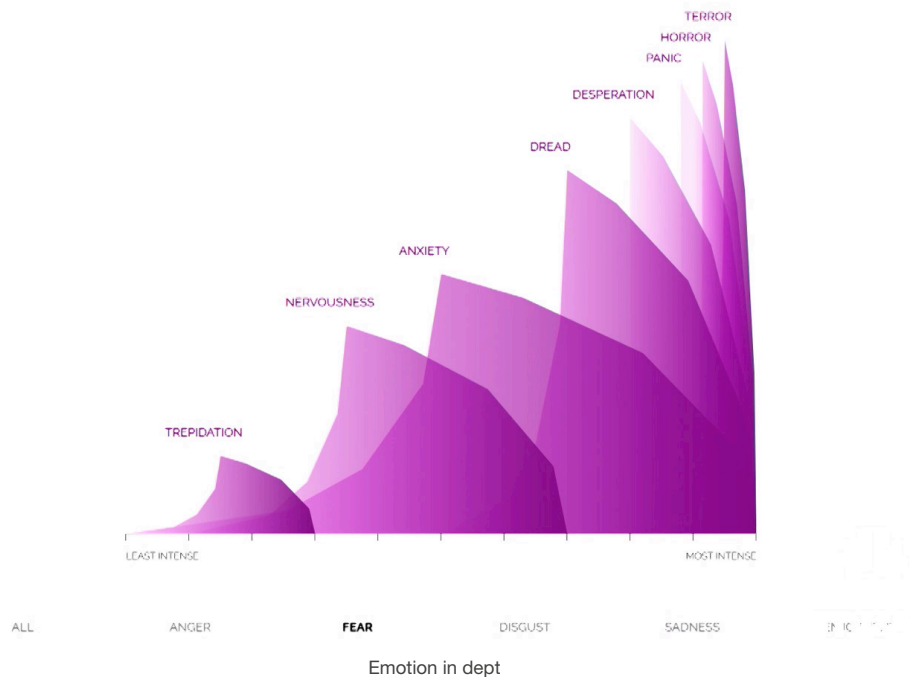
Emotion in dept

"Sometimes machines are going to be better at reading certain aspects of emotion and we'll be better at other aspects of it."

2025: machine readable emotion

Machines will start to read emotions. AI will learn from the data that we provide with our body. It will use, among other things, facial recognition, voice, biometrics gestures and gait.

This would enable visions such as Lauren McCarthy's People Keeper to become reality[5]. People Keeper is an app that helps you manage your social life. If we had emotion aware technology, we could track emotional and physical responses to other people. This would help us find our greatest friends and block bad influences.

2030: emotional intelligence

There will be both emotionally intelligent machines and people. Instead of machines that just have IQ (intelligence), we'll have machines that have EQ (emotional intelligence). There will be a growing recognition of the complexity of emotion and that there isn't just one action that follows from emotion, but a number of complicated ones. "Sometimes machines are going to be better at reading certain aspects of emotion and we'll be better at other aspects of it."

Conclusion: In the end, the ideal situation would be that machines and humans come together in some way that will bring both us and machines greater intelligence.

Human reaction to fear

1   TED. (2016, January 25). What makes a good life? Lessons from the longest study on happiness | Robert Waldinger. Retrieved October 6, 2019, from https://www.youtube.com/watch?time_ continue=511&v=8KkKuTCFvzI.

2   Eurostat. (2018, July 6). Rising proportion of single person households in the EU. Retrieved October 6, 2019, from https://ec.europa.eu/ eurostat/web/products-eurostat-news/-/ DDN-20180706-1?inheritRedirect=true.

3   TrendWatching. (2016). POST- DEMOGRAPHIC CONSUMERISM. Retrieved October 6, 2019, from https:// trendwatching.com/trends/ post-demographic-consumerism/.

4   Emotionally intelligent machines and the future. According to Pamela Pavliscak. TNW. (2018, June 1). Pamela Pavliscak (Change Sciences) on Emotionally Intelligent Machines | TNW Conference 2018. Retrieved October 6, 2019, from https://www.youtube.com/ watch?v=b7ivN4hVpRo.

5   People Keeper. pplkpr. (2018). pplkpr. Retrieved October 6, 2019, from http://pplkpr.com/.

Jibo, the social robot

Interactions

Another very important topic as regards to our project is interaction. How will we communicate in the future? What awaits us after computers, phones, bots and AI robots?

Interaction is any kind of communication. Social interactions are dynamic actions between individuals, which are always answered by reactions. This is an important rule for interactions between a human and a machine[1].

Four methods of interacting between a person and a computer are:

GUI: A way to communicate over a graphic user interface, for example over mouse and keyboard.
VUI: Interaction over voice controls.
BCI: This method requires a connection to the human brain, which sends information to the interactable device.
NUI: Short for natural user interface. The way people interact is with natural movements or gestures. This can be for example touch or a three-dimensional spatial input like in VR.

Currently, mostly GUI and VUI are used.

The human interaction is multimodal, which means the communication differs every time. To build a relationship with a machine, the surface must be intelligent adaptive to input, to react to different ways of communication[2].

Additionally to make a computer more likeable, the interaction of the machine should be more active than passive. Good examples for practical machine-human interactions are smart walls, projections that react to interactions or smart watches.

For more socially oriented interactions there are different robots that are already used as fun gadgets or which are used in medical and educational entities. These robots are used differently with children than with adults. While children mostly use robots to play and learn with them, adults use social robots more for organization and information. Some examples of social robots are Jibo[3], a small home device or Robin, a teaching humanoid robot.

1   Hintner, N., Walter, B. (11.03.2018). User Interface Copy – Mit richtigem Webdesign und -inhalten Kunden überzeugen. Retrieved from http://www.allcontentstrategy.at/portfolio/user-interface-copy-mit-richtigem-webdesign-und-inhalten-kunden-ueberzeugen/

2   Ehlert, Patrick: Intelligent User Interfaces. Delft University of Technology, The Netherlands, 2003

3   https://www.jibo.com/

Research

The moment we realised that research was not the way to go for VW and moved up a gear.

After approximately one month we had our first client call of what would turn out a series of weekly virtual appointments. The atmosphere was tense as we were all very nervous to hear what they would think about our iteratively rehearsed presentations on what we did and got so far. With a structured setup, a professional mic and an action plan we were ready for our catch up.

For the entire project, I think this was the most important milestone as we were made clear that this was absolutely not the way to go. Together with the technical limitations of Volkswagen and the change of mentorship, we were dismayed because we did not expect this. After some time of talking and sorting out with each other, we got ourselves back together and summarized the

way to go from here. The client wanted to see experiments and results of creative try-outs instead of research and well thought action plans. A very different mindset of how we've approached assignments so far, but a clear direction for us to start over. The next day we started working on what they asked us to do at top speed and the same evening we sent them our results.

C

04

Concept

In this chapter we are going to explain how we got to our character and concept step by step. Some research was done, brainstorms and experiments took place and eventually decisions were made.

Character archetypes

While looking for a path and direction to start our quest for a soul or a character, we decided to start with an archetype.

WHY A CHARACTER?

Benefits of having a character in the car are basically all about building relationships with the users. Most important is that it will create trust and understanding with the product.Also it will engage the user more. The user will interact more and better.
Besides that it creates an identity for what the product and brand will be known for. Which will lead for reasons to buy.

In the end, we want the user to be triggered emotionally by the car and identify himself with it. This way, the car and even the brand will be remembered by it.

WHAT MAKES A CHARACTER?

A character needs to feel real and human-like. In order to do that it needs to have emotions, learning and adapting abilities and a backstory. The backstory has to exist out of good and bad experiences. It should have something its passionate about. Besides that the user should feel like the car also needs to be taken care of.

After a research in how to create a character we decided that we should start higher than a worked out character. We had to start from an archetype that would fit the brand and the car.

The archetype is the base of a character. A character is more developed. It will evolve together with the user. Creating their story together along the way. Like real humans do.

Out of the 12 common known archetypes[1] we selected 5. After that we tried to define them a little more. We explained our ideas to Volkswagen and let them decide.

The explorer, the creator, the everyman, the jester and the magician. The magician was selected.
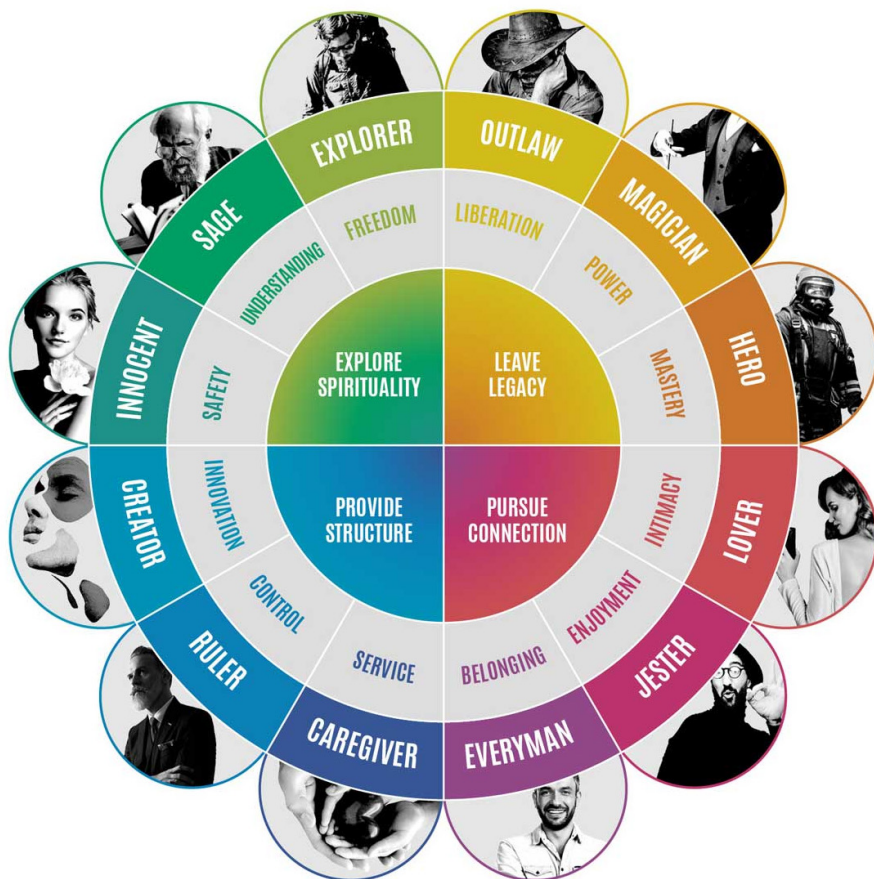
FIVE CHARACTERS

Based on these archetypes we made a selection of the ones we thought matched the Volkswagen image the best. Five were chosen and from here on we split up to dig into this archetype. Eventually we developed the archetypes further until we ended up with five characters with each their own characteristics.

1   Houraghan,S.   (n.d.).   Brand Archetypes: The Definitive Guide [36 Examples]. Retrieved from vw

	The creator	The explorer
Identification		
Slogan	Be different.	Be brave.
Explanation	Always trying to think outside the box. If it hasn't been done before, that just makes it more interesting to do it now. Instead of trying to think of what we know already and where we can go with that, the creator thinks of an ideal situation, and of how can get there. It is eager to learn and never satisfied with his knowledge. The creator is done with following what society expects	The character is curious to explore new ways and doesn't fear anything that is to dangerous. It is adventures out of conviction. It made up its mind and stays with that. With its idealistic mind it tries to convince other people to get the same mindset as it. But it is really focused on his target, which can make it blind to his surroundings. It is very unkonventionelle and does not stick to rules to get to his goal.
...sts/**Backstory**	After scratching many good ideas, because society doesn't believe in it, he is done with following conventional standards.	It steps in the shoes of its dad, but wants to change the way its dad did it. It wants to become a better version of him.
...ecific situation	While everyone is getting stuck thinking of a way to adapt the current line of products to fit the needs of a customer, the creator comes up with a completely new product that matches the customers needs perfectly.	The character wants to go on holiday. Instead of vacations in a 3 star hotel, it just packs its backpack and finds a way to his destination. Instead of hotels it prefers tents and sleeping outside.
...car integration ...ation, exterior, ...erior, features	The creator doesn't need smooth lines, or known shapes all throughout the interior. The armrest doesn't need to be rectangle, it can have a specific inlay for your arm. The inside of the car is full of a RGB LED whiteboards, to inspire you to think creatively. Connected to your smartphone or tablet, it stores all your ideas you create on it.	SUV, goes off-road to put you in a better mood, doesn't have to look beautiful, more important to be solid and durable, Edgy design -> brutish, bulky, sturdy, imposing Interior: safe, but not fancy, necessities, practical

The magician

Everything is possible.

This archetype knows so much it seems as supernatural.
Its goal is to learn as much as possible and make dreams come true. It is a confident, charismatic type and liked by others. Can be very surprising and mysterious sometimes. It likes to see the world change.
You can describe it as a wise grandfather but is open minded.
It is a Know-it-all and always forces its knowledge upon you.
Liked by the ones who want its knowledge, disliked by those who don't. Believes in a better tomorrow.

It knows a lot about everything. Nobody knows where it got its knowledge from but it was gone for years to study on its own.

Someone has a new idea for a product, but doesn't know how to make it work or where to start. The magician has the needed knowledge to make the project happen.

Multifunctional interior -> technically advanced
easily adaptable to the passengers
reassuring
exterior mysterious , minimalistic with deeper meaning
dark purple color

The everyman

Work together.

It believes that everyone has his own qualities without actually not being so different from each other. If everyone started to see that, the world would be a better place, according to it. With including everyone and every opinion, society could become one well-oiled machine where everyone had his own contribution and without any hostility or exclusion. It doesn't see that much difference in talking to the prime minister or talking to his neighbour. It's worst nightmare would be a spread rumour making its entire environment hate it for something that's not true.

It grew up as the youngest child in a family of four. As a child it was already playing the mediator in the bullying of other children. Its forgiving and open personality got it in some uncomfortable situations before where people took advantage of its (sometimes) naive approach.

When asked for help by a beggar in the street, it would do more than what's asked of it. It has the need to make people feel at ease and makes efforts to make this happen. It would ask the beggar to join it on his way this day.

The character could be translated into a medium sized family car because of its care and love for fellow humans. Colors fitting its personality would definitely not be too bright because this would make it stand out, but light and dull to make it fit and almost invisible. The communication of the car would focus on including everyone. A consequence of this could be the conviction of racist or discriminatory remarks.
This inclusion is also translated into the exterior and interior of the car. This should be very accessible for for example wheelchair users and blind people and consisting of features

The jester

Have fun.

This character has the most fun with others. It loves convincing others about fun things and is happy when you're actually having fun doing those activities with it. Its humour is based on imitation and making fun of others. Making sarcastic remarks is one of his top talents. This character is always by your side. If you're having a downer, it's there to pull you up. If you're bored it always has something ready to try out.
Feeling left out, unwanted or bored breaks its heart. It has a hard time understanding negativity and will always try to lift up your mood. Whenever it introduces a new activity, it's going to convince you it will be the most fun you've ever had.

It grew up as the oldest of five, always trying to cheer up its siblings and play games with them.
This character loves all kinds of games. It loves the unexpected and is always on the lookout for new experiences.
Don't judge it till you try it.

Your friend = the character
You planned to meet with your friend for the afternoon, but you're not feeling up to it. You meet him, everything as usual, but everything's going wrong today. You've dropped a glass, burnt your food and your mood plummeted. Your friend notices your bad mood, asks you what's going on, but doesn't pry. What he does do is try to cheer you up and convince you to go do something fun with him. He doesn't give up until there's a smile on your face.

Playful, bold exterior. This character likes to stand out. (Fex. large headlights) It should look like it's always ready to go, excited to do something.
The interior of this car should feel relaxed and welcoming. You should never feel like an outsider in this interior. This interior is always ready to give you a hand. (Fex. features adapted to your needs at that specific time)
This car should cheer you up. Be fun to sit in, get positive feedback. If you're feeling down it might nudge your seat and gives you a hint for something fun to do while driving.
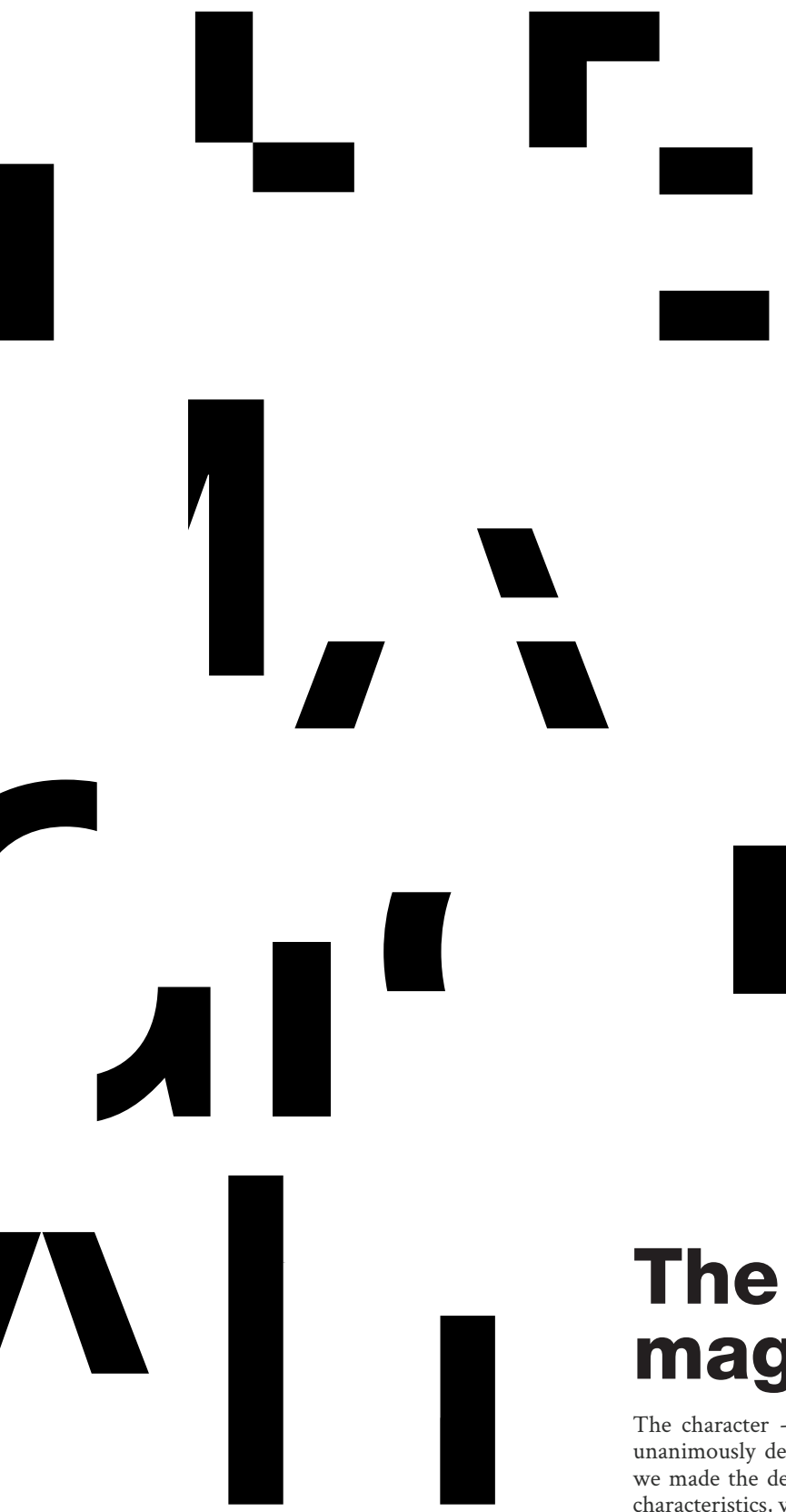
The magician

The character -or soul, as we called it- that we unanimously decided on was the magician. Once we made the decision, we digged deeper into his characteristics, values and goals.

I AM THE MAGICIAN,

I LIVE EVERYWHERE AND NOWHERE AT THE SAME TIME.

SOME WILL CALL ME AN EVIL GENIUS SOME WILL CALL ME A WISE OLD MAN.

BUT THE TRUTH IS:
MY KNOWLEDGE IS BIGGER THAN YOU CAN EVER IMAGINE AND I'M NOT AFRAID OF SHOWING YOU.

I'M NOT HIDING. I'M ALWAYS SEARCHING. I'M ON A NEVER-ENDING SEARCH FOR THE UNKNOWN.

I WILL DO ANYTHING TO LET YOU UNDERSTAND WHAT I LEARNED.

THE MAGICIAN.

MY GOAL IS FOR YOU TO
UNDERSTAND YOUR SURROUNDINGS
AND HANDLE THEM PERFECTLY
TO BE ABLE TO DO EVERYTHING
YOU EVER WANTED.

MY TASK IS TO HELP YOU
FIND YOUR WAY,
BUT IF YOU WON'T BELIEVE ME
I WILL HAVE TO SHOW YOU.

I WILL STAND MY GROUND,
BUT I REASSURE YOU THAT YOU
WILL FEEL SAFE, WELL INFORMED AND
COMFORTABLE.

I AM THE MAGICIAN,
I AM YOUR GUIDE FOR A BETTER
TOMORROW.

The magician extended

After we got the clear definition of our magician we needed to open up this soul and translate its values into materials, colors, architecture and communication.

THE MAGICIAN 1.0

The magician explained through three moodboards.

To describe our character even better, three moodboards were made to show the different aspects of the magician. One moodboard showed materials and colors associated with the magician, one moodboard had the aim of showing the architecture and structure of the character and the last moodboard was all about the communication and the way our magician interacts with others.

Materials & colors

The moodboard exists out of 3 types of samples. Colors, Textures and materials. By making combinations we can get inspired. Al the samples are based on the magician and they should represent him.

Fun note: this shape is based on the VW hexagon shape from the new ID Family.
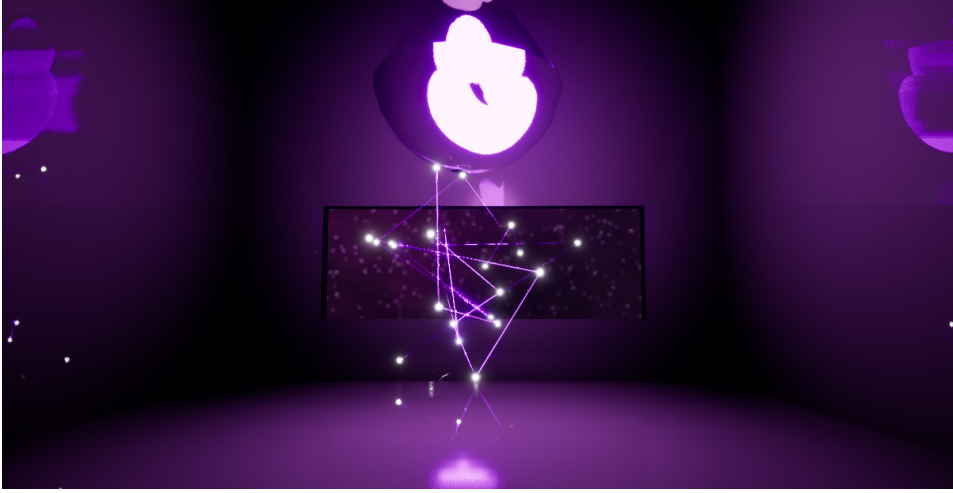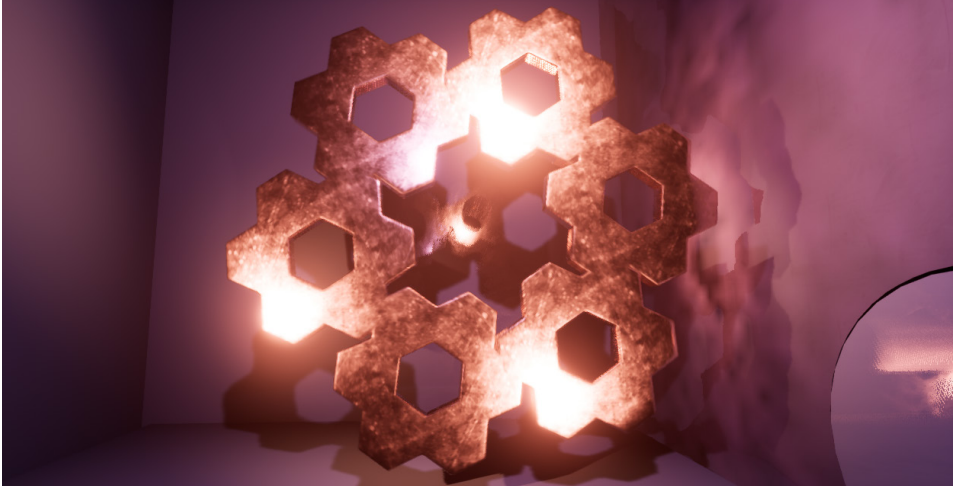
Architecture

The moodboard for architecture should clarify which kind of shapes and patterns the magician has. The whole experience starts in a scene, that the spectator can explore on its own.

The frist room shows balls with a purple and black pattern on them. The balls move diverse up and down. The color of the balls should give the mysterious feeling, that the magician reveals. The movement of the balls define the dynamic aspect of the character.

The second room keeps six golden gear wheels. The golden color is one of the chosen materials. Together with the color that stands for knowledge, we used the gear to symbolise the wisdom of the magician. The more rounded cogwheels represent the character and gives a direction for every shape.

The moving gear opens the gate to the next door, which can be translated to the characteristic of the magician, that he wants to help people with his knowledge and bring them closer to their life goals.

The last room reveals the true magician. The intersecting, constantly changing particle in the middle is the soul of the magician, his true self. The balls stand for the knowledge, which is connected to each other and shows the inner process of the character. The lightbulb above should again demonstrate the knowledge. The whole room expose the mysterious feeling.
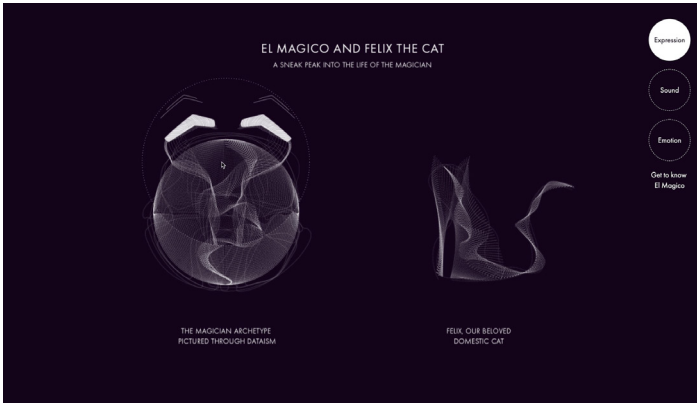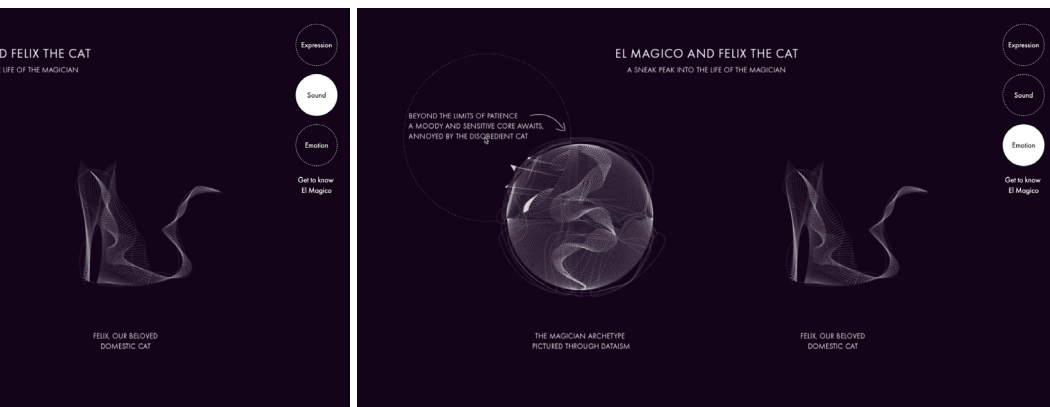
Interaction

The Interaction board clarifies how you interact with the magician and how the magician interacts with the world.

This mood board was an offline web application made with plain javascript in an html canvas. The user can hover over the image to reveal different aspects of the interaction.
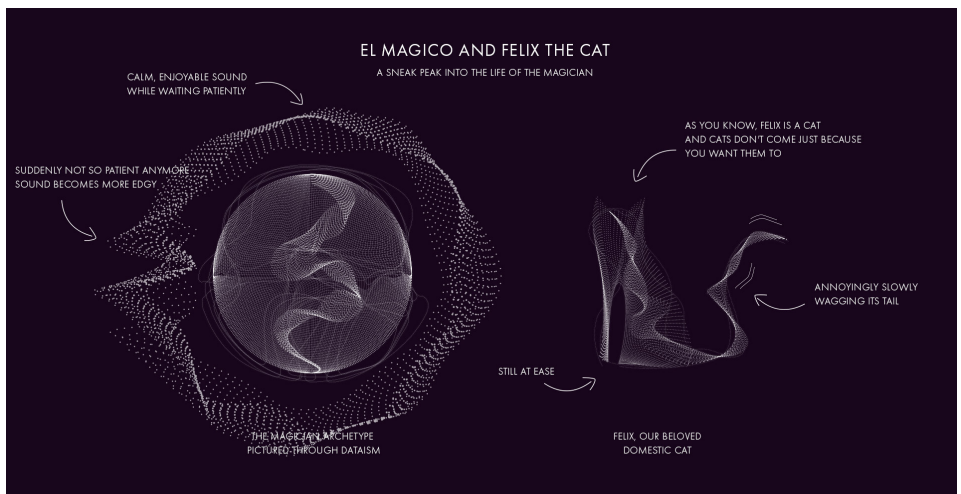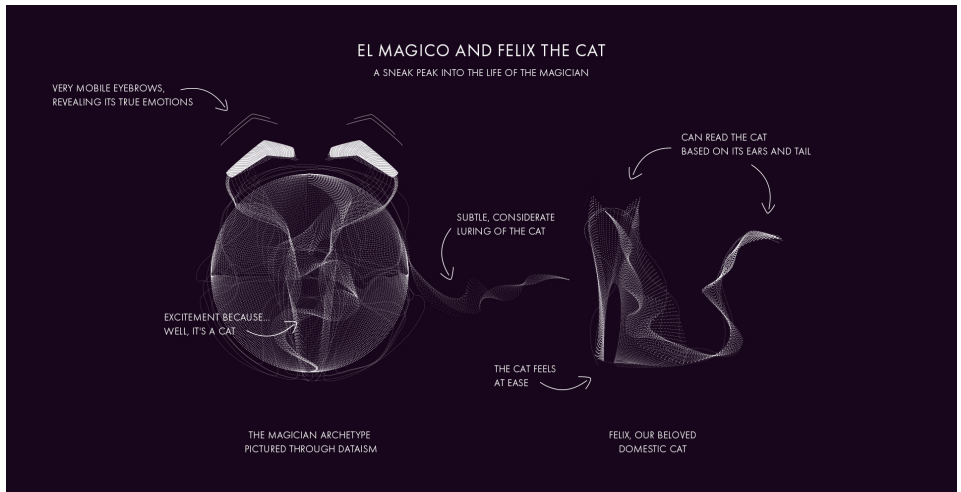
Image 1 - Expression

Our story starts with the Magician meeting the cat. He knows exactly how the cat feels and knows how to react appropriately. Much like its secrets, the magician never reveals his feelings. The character only shows the outside world that that they're allowed to see.

Image 2 - Sound

Felix, being a cat, doesn't fall for the magician's luring and stays still. The magician has an abundance of patience and waits quietly. The characters sounds are very calm and almost relaxing. After a while, with time running out, the magician's patience starts to be drained. A more uncomfortable sound starts to form, but the magician, in control of itself, suppresses it.

Who is the magician really? Defining our character in detail until we knew him like a friend.
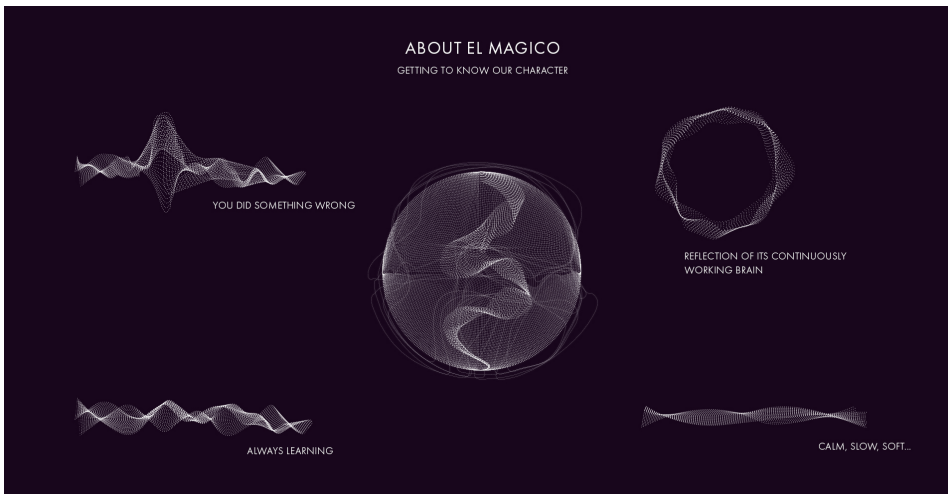
Image 3 - Emotion

After waiting patiently for what felt like many long minutes, Felix walks off. This is the last drop. The magician tried every trick in the book and its patience is completely drained. Beyond the limits of patience, a moody and sensitive core awaits that doesn't need much to go off.

Image 4 - Getting to know the character

This last image shows some abstract visualizations of how the magician experiences and handles certain situations. There was no hover effect on this page.

Character

Who is the magician really?
Defining our character in detail until we knew him like a friend.

The moodboards had given us a more detailed visualisation of the magician, but we've worked on it separately and per study program. We all had the feeling that we still didn't know the magician well enough besides its materials, colors, architecture and interaction. Who was he in his everyday life? What kind of personality was he?

To answer these questions we gathered around the table and started writing down the key values of the magician that we had so far. Next up we added associated words to the key values and discussed these matters. After that some categories were assigned and connections were made between terms. Sometimes we didn't agree, because we all had a different magician in our minds. For this reason this exercise was very valuable as we now had a shared understanding of our character and no contradictions existed anymore. To express these important findings we created four to five scenarios to illustrate the behavior of our magician in different situations and in its environment.

Concept

The magician extended

surprising • Weirdo
structure Quirks mysterious
manipulation
Smarter than you?
important chaos
important Fear MISTAKES
stop improving
erotic

?

Name

Connecting the Dots
Rational
confident independent
FACTS Open minded
charisma
closed personality
wise PATIENT IF USEFUL

can seem

Motivated
Passion VALUES Disikbear
Functional no limits Dynamic
Flexibel
no nonsense
Honesty Dishonty

? Invited Jay Neon

Passion of knowledge to others.
GOALS
Self learning

world improving
Dreams better tomorrow

Backstory RATIONAL
· Experimenting/Learning Kid
· Studying human behaviour (while playing)
· Three study programs
· Teaching other students

without structure normaly.

"A mysterious individual
that takes every opportunity
to inspire and be inspired."

The magician 2.0
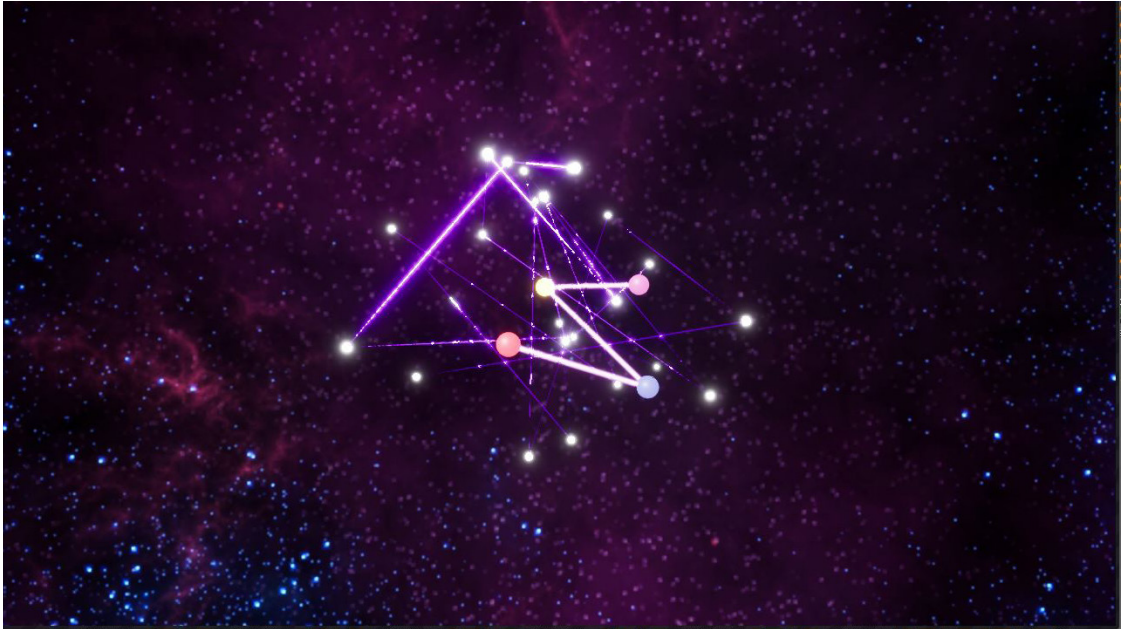
A UE4 3D representation of the mind of our character

Communication room
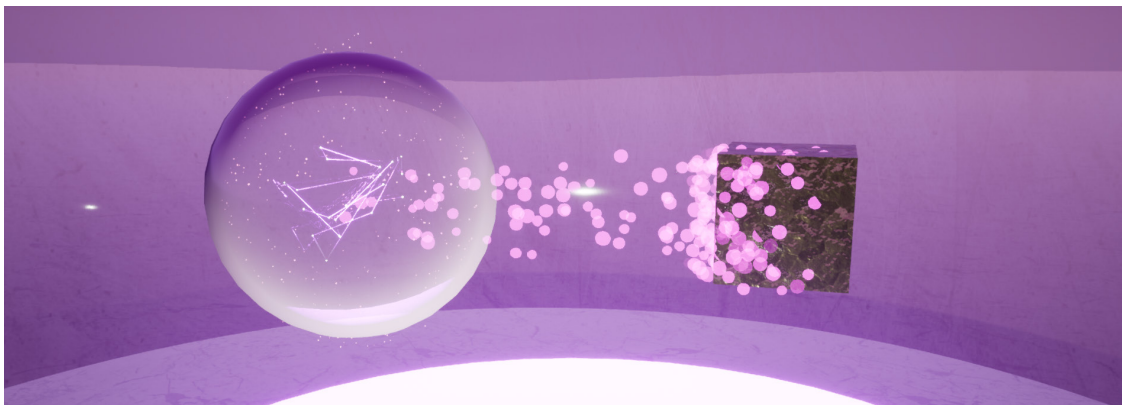
This room represents the way the magician communicates to others. He shares his knowledge and shapes people with it. By pressing a button, you can share knowledge (purple particles) and see how the stream of wisdom flows to another object and stays there. The donut shaped lamp underneath them should show how both objects are connected, plus the joy that the magician feels by sharing his knowledge with his environment.

Together they can create a synergy because of their mutual care. For the walls we used another frosted glass material and the floor is a marble texture. The pink/purple color, gives it a happy but also mysterious feeling.

Environment room

This room shows how the environment sees the magician. First the spectator only sees clouds. You can only vaguely see something sparkling behind it. By moving forward and getting closer to the character he reveals himself until you finally see him clearly. The magician is a very mysterious character that doesn't show his inside easily.

Only if you get to know him better, a light beam falls upon the soul and you will see his inner truth. The dark, purple atmosphere represents the mysterious and unknown sides of the magician. Additionally, the fading clouds upon approaching the soul show a transformational and changing side of the magician.

Interaction room

This concept demonstrates the interaction between the magician and its environment. The soul or character feels joy by motivating and uplifting its surroundings with his knowledge. To show this in an interactive way the player can press a button that makes the spheres and the cat around our soul -the magician- drift upwards.

Furthermore, you can see the knowledge particles around the spheres again. The golden, warm color in the room stands for joy and happiness. Together with the wooden floor it represents another part of the 'magician materials'.
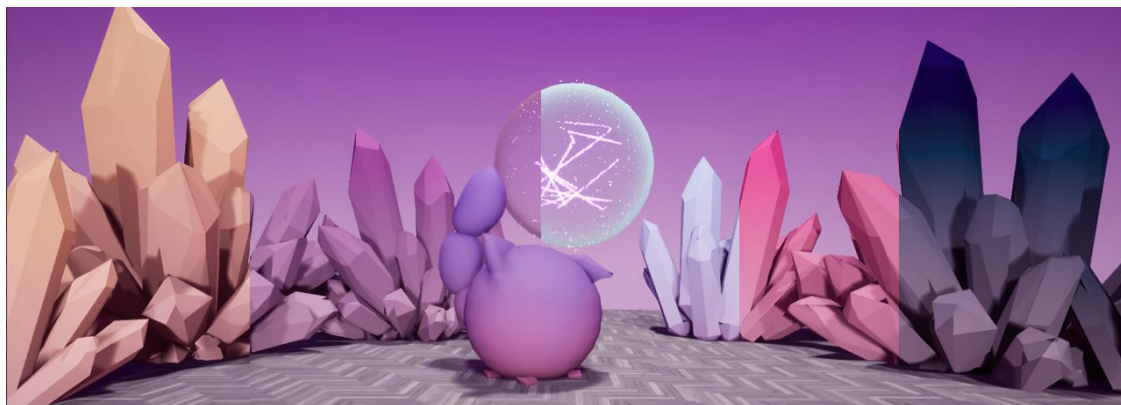
Emotions room

This room illustrates the reactions and different emotions of the magician. By using four different keys, you can change the mood of both the character and the cat. With that, not only the color of the magician changes, but also the color of his environment. There are five emotions with associated colors.

The cat reacts to every change of emotion by showing the feelings in its own way.
The crystals in the environment are another important material to represent the magician character. The gradient color is again an interpretation of the magicians ability to adapt and evolve.

THE MAGICIAN 2.0

The presentation of the mood board was an interactive application made in Unreal Engine 4 to enable the client to discover the character by themselves. Four rooms were made to visualise the overall character. Materials, interactions, colors, shapes and topics gave a direction for the mood of the end product.

In the first level, you dive into the mind of the magician. You start in space, which gives a feeling of a wide range, but has also something mysterious. The mind of the character is a constantly changing construction of connected particles which represent the inner connections of the magician and his thinking process. He tries to solve problems by thinking rationally and by connecting the dots. From this perspective you can click on one of the four static balls, each representing another important topic of the character.

Presentation legend

Magician: The magician is represented by a frosted glass ball. Inside you can see its mind that is represented by glowing changing balls, connected by light beams. Around the ball you notice little round particles that represent the knowledge of the individual.

Cat: The cat is a very simplified object in the mood board that can change materials and colors. It is an extension of the magician and should connect with the spectator in an easy way. It has no face and only communicates through body language, which gives a mysterious feeling.

Furthermore, the cat is of course an element of fun within the concept as we are -almost- all catlovers.

Car features

Up until the point of the presentation we were instructed to think about the character only, without any link to cars or car designs. The first time we started to think about the translation of our character into the car was through a brainstorm on car features. Listing the functions of cars, the properties that could possibly be replaced in the future and the properties that will be persistent we tried to think of how we could enhance or complement these with some 'magic'.

We presented these features using cards and verified their suitability with the client.

A

DASHBOARD
Shapes through surface
for interaction

A

A

HOME
Floor possibilities: carpet, tiles

A

A

EXTERIOR
Interactive exterior:
fex. Door handle

A

A

ASSISTANT
Practical Assistant
to take your most important
belongings everywhere

A
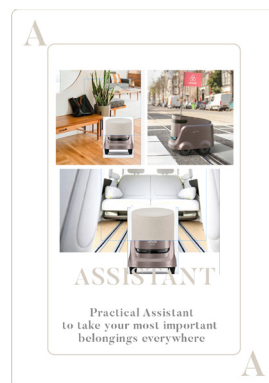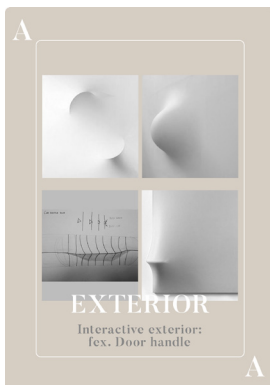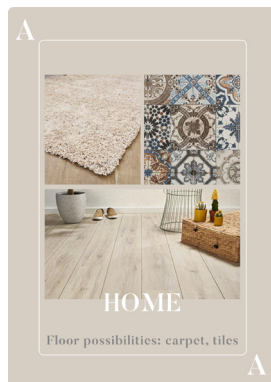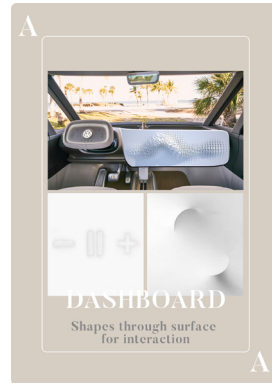
Car features exercise

Conclusion

We got a lot of useful information out of the car features 'workshop'. We prepared the session not only by making the cards as described earlier, but also by providing a 'tape graph' to achieve an efficient and valuable result in as little time as possible.

By starting with our most important ideas and listening to the feedback we were able to cluster subjects and even come up with some next steps. The most important take-away was definitely to stay high up in the cloouds with our ideas, close to our character.

A TEXTILE
Smart textile with con...
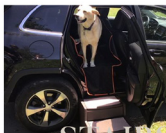
A STAIRS
Little stairs for acces...

A FOOT MASS...
Foot massage in c...

A GESTUR...
Interaction throug...
gesture contro...

A LIG...
Interaction for...

A TEMPERATU...
Seat heating or cooling
for interaction

A RANDOM
Koy fish dashboard projec...
to become at ease

A PETS
Special seats for pets

A TRUNK
Cargo space that is expan...

A
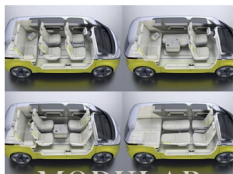
A MODULAR
Towards and apart
for social and personal space
A

A HELPING
Seats to help you stand up
A

A WINDOWS
Interaction with
the interface on the window
A

A

A **GTS**
interio

A **CLEANIN**
Vacuum cleaner for t

A **GLASS RO**
Complete glass cei

A **STORAG**
Use of dead space
personal belongi

A **FOLD BED**
Foldable Bed
A
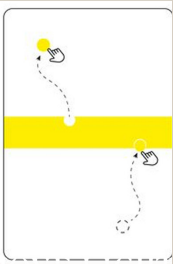
A **MOVE LIGHT**
Interactive light mass
you can drag and move aro

A **L SOFA**
For social interaction
Change into driverseat
Adjustable head rest

A **SHOE CLOSE**
Extra hidden space for sho

A **LED CEILING**
LEDs hidden under surface
A

A **DOORS**
Higher opening of doors
for better accessability
A

A **TEXTURE**
Adjustable texture/
car expression
A

A **(FOOT) PUFF**
Foot rest/Puff to move around
A

Concept

The magician extended

Cat interaction

Half of the team (Margot, Stijn, Bavo) sat down with Simon to discuss one of our main features, the cat. The goal was to make this abstract idea become something real. We discussed whether the magician is the cat or if the cat is only an extension of the magician. There was a brainstorm about how and when the cat should be present and when it should be invisible. On top of that we needed to figure out how this interaction can go both ways. The magician shapes you, but you also influence the magician.

Why a cat?

A cat is a mysterious animal. You don't always know what it's up to and they're often smarter than they seem to be. They're a great addition to the magician's personality.

Cats always land on their feet. This indicates a sense of safety. No matter the situation, you will land back on your feet. They say cats have nine lives. This, again, stands for safety. It also means that the soul of our car might live on in different shells.

In our (Western) society, cats are primarily a domesticated animal. This fits perfectly into the homey feeling that the passengers should feel inside the vehicle. Bonus conclusion: Giel is the only dog- person in Team CIA. Everyone else is a cat lover.

Conclusion

After a lengthy talk, it was time to list some conclusions. First of all, we settled on the cat being the magician in the interior. The vehicle's interaction patterns should act and feel like a cat. There are a few important aspects where this should be resembled.

Movement
Cats are like liquid. Their movements are always liquidy smooth and they always land on their feet. It's all about flow. Our interactive visualisation should feel like a cat moving around smoothly.

Appear - disappear
Our furry, beloved four-footed friends can sometimes disappear from hours on end, until you have some food ready. This principle should be adapted to the users needs. It's invisible when you don't need it but is there when the user wants to interact with it.

Lasers
If you've ever pointed a laser in the same room your cat was in, then you know it's never going to rest until it has caught the laser. This is the main concept for interacting with the car. By pointing around an entity throughout the vehicle, you can control everything inside. This also adds an element of play to the interaction.
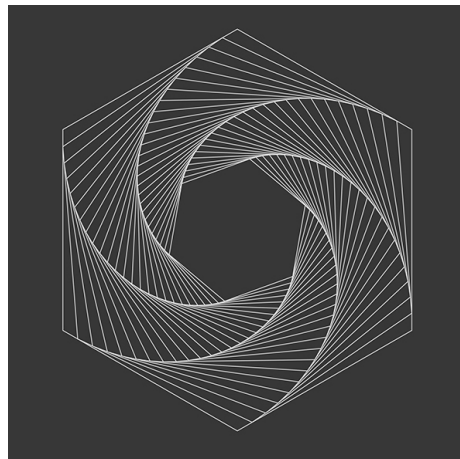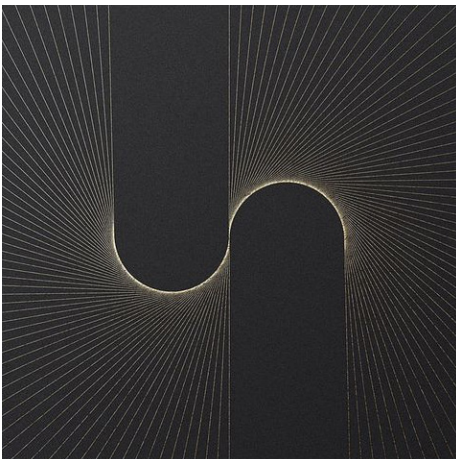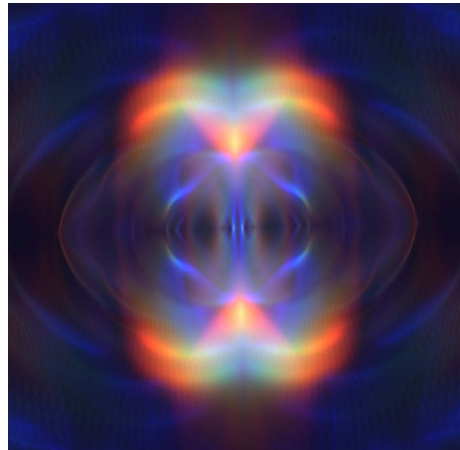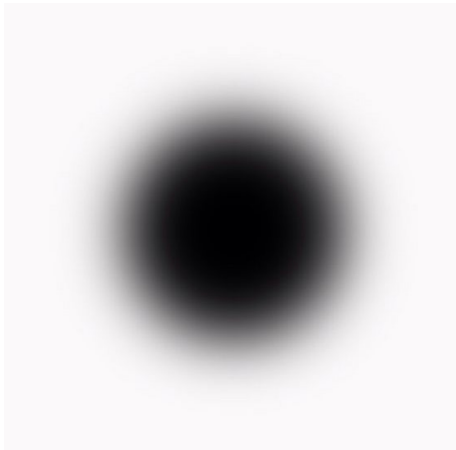
Mysterious Inspiring Evolving Harmony

keywords before
the workshop

Knowledge
Rational
Surprising
Motivating
Positive
Mysterious
Inspiring
Wise/Smart/
Intelligent
Smooth
Harmony

keywords during
the workshop

Mysterious
Inspiring
Harmony
Gradient
Morphing
Impact
Interaction
Subtle
Positive

four keywords as
end result

Mysterious
Inspiring
Evolving
Harmony

THE MAGICIAN 3.0

The feedback for the moodboard was mostly positive. VW liked the interaction and the idea of the different rooms, to explore the magician.

A really important lesson of the workshop was that the end product should not be too concrete. If the product is feasible or not is work of Volkswagen. Ideas and creativity should be free in this project.

But also how useful cooking classes are for this project. Ingredients (ideas) come together and they have to be spiced to become a delicious meal. In the end you do not need many ingredients you just need the right spices.

The eight achieved new keywords for the magician, and the old values that were already defined, had to be merged down to a simpler version. Also, the inspiration boards were too full and not completely fitting.

The question in the end was now, what are the most important key values of the magician. This led us to eight personal thoughts about the character. In the end we summate them to four keywords and their illustrations (see page on the left).

Translating features

The next big step was to go into the development phase. First important step was to translate the cat inspiration into the car together with the morphing idea. New functions and ideas had to be developed and tested. The next phase was all about getting the right features, but also examine if the already existing features are feasible.

Additionally the digital work got more and more important. Because the end product will be in a digital form, it was important to test as early as possible which capabilities the programs have.

We need to stay high up in the clouds with our magician so that we can inspire others with our story.

Experience

We need to stay high up in the clouds with our magician
so that we can inspire others with our story.

After the first presentation and collaborative workshop with our client -Volkswagen designers Simon and Matthieu- we were in a very good place. Everyone was motivated because we finally had a clear vision of what it was that Volkswagen really wanted from us. Before this, there was always the hesitation if the end result should be an actual car, an experience or simply something digital. The thing that became clear to us was that every feature and every part of the design -and therefore also for the end presentation- should be about the feeling and experience that the car would create for us. A good example was when we proposed some accessibility tools for people with reduced mobility. The response to this was that we shouldn't think about these functions and technicalities, but should disguise the support tool as being softly put down into the clouds. The concluding note was to make something that would inspire and trigger VW designers to start working on this car. We needed to stay high up in the clouds with our ideas.

(

05

Development

This chapter is all about 'the making of'. In the previous sections we've explained how we got to the character and the related concept, now we are going to show you how we iterated from our character to a story, features and an actual car design.

Magical features

How did we translate our character into our car and where did the cat go? The process of transforming, morphing and cats explained.

MORPHING

The tactile version of our ideas combined.

First we got to morphing at the workshop with Volkswagen. It was the perfect and logical piece of our magician puzzle that was found, because it matches the transforming, and uplifting spirit.

Next, we tried to implement this morphing idea into the car's exterior and interior. A morphing door handle for example to get on the outside of the car and a morphing dashboard to use inside the car.

In the end we even took it one step further and made our entire interior design concept around the integrated the morphing idea.

Morphing features

The morphing door handle was based on the current Tesla handle that appears when needed and disappears when it is not in use. This hidden affordance is an aspect we wanted to use in combination with the morphing concept. In order to keep the aesthetic power high: each lever, button, touchpad etc. can be hidden until needed.

The morphing buttons provide a subtle communication. This reduces the number of stimuli of communication without omitting the function. By lowering the external stimuli, the passenger can relax and enjoy the outside magic.
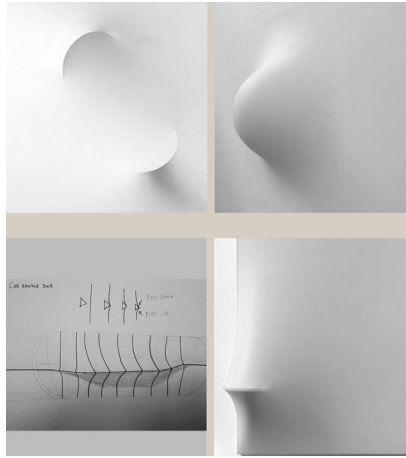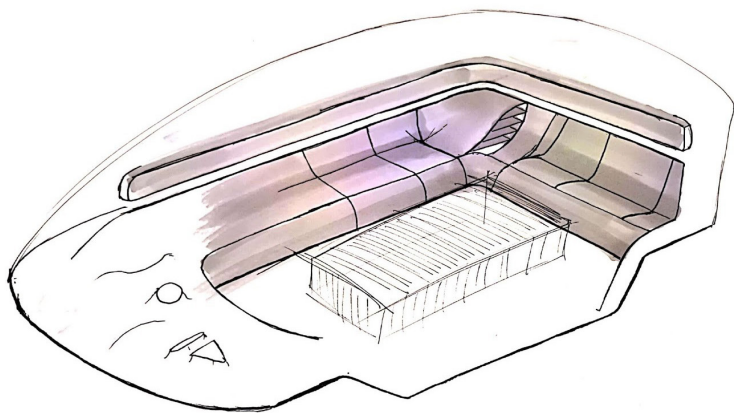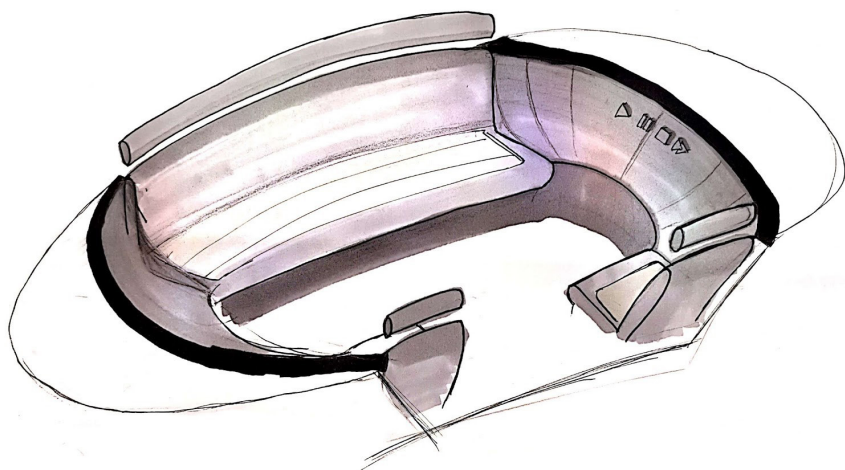
Morphing seats

After experimenting with cloth simulation, moving normal maps and height maps, and paintable world offsets, we decided that blend states (or morph targets) would provide the best results.

This means that for all the morphing elements in the car, we will need to make a morphed and a non morphed version of the same mesh. As long as they have the same topology we can blend between both states, and any state in between. We can also control multiple blend states at once and combine them for a smoother result.

To make sure the feature works properly for our use cases, we tested them on an existing model. In this tech demo, the side of the chair morphs some support elements in the side, and has a 'moving' element at the shoulders.
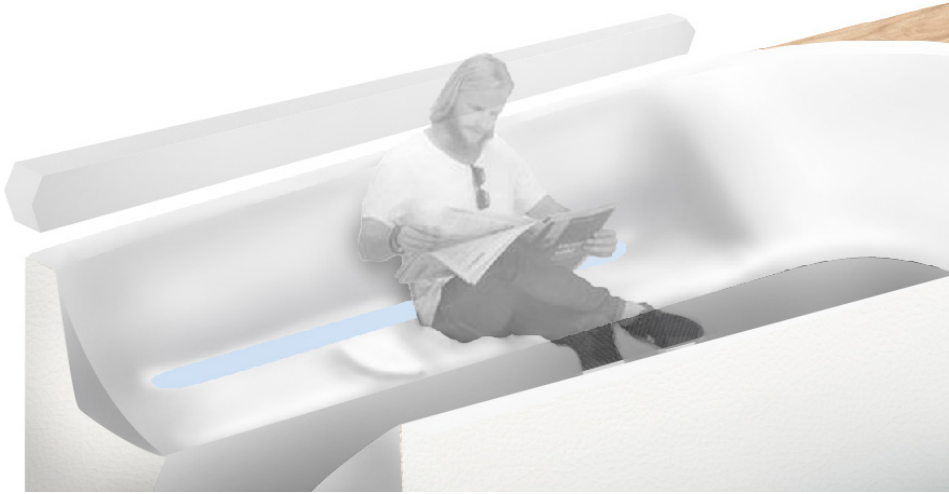
Morphing bench

The morphing idea is not only applicable in the field of communication but also in the field of ergonomics.

The sofa reads the posture of the occupant and adjusts itself so that the person adopts a natural and ergonomic posture. The main idea at this point was to create a bench that would merge based on the amount of people in the car.

If there's enough space we thought of creating an extra morphing interface that appeared within comfortable reach of where you're seated to handle the settings of the car and get the infotainment system.

OUTSIDE MAGIC

The way we want to inspire people to create their own world just like the magician who's aim is to create a better tomorrow.

The outside magic is a special, interactive feature between the passenger and the outside reality. It is controlled via touch and recognises your fingerprint.

With the outside magic it is possible to shape your surroundings like you want it and make it a better, more beautiful world for yourself. The changes on the screen will merge into reality. Every change will be saved, so if you pass the street again you can still see your applied changes. It will be even possible to share your world with other people.

The user can change the blind by swiping it up and down. He can either use one finger to just regulate the size, or two fingers to also change the position.

The "unlock screen" button gives the possibility to interact with the outside objects. It can scan your fingerprint and restore your saved data, which will lead you automatically into your "personal world".

Clickable objects will now be marked. If the passenger clicks on an object, he will receive more information about it and can decide to get more information or change the object.

If the user clicks on transform, a virtuell model of the object will appear on the screen. It is possible now to change color, material or size of it. Also it is possible to exchange the whole object into another object.

After selecting the transformation, it can be applied to just the clicked object or to all objects, which changes all the same objects in your surroundings.

SPRUCE
[genus Picea];

Spruce, genus of about 40 species of evergreen ornamental and timber trees in the conifer family *Pinaceae*, native to the temperate and cold regions of the Northern Hemisphere.

Source: britannica.com

Transform | Read more

Lock Screen

You are in
Marlena's world

SPRUCE
genus Picea];

Apply | Apply to all

Materials
Colors
Objects
Size

Lock Screen

You are in
Marlena's world

SPRUCE
genus Picea];

Apply | Apply to all

Materials
Colors
Objects
Size
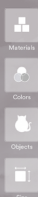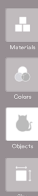
Objects

Holly crystals | Buildings | Ice mountain | LED tubes | +

Lock Screen

You are in
Marlena's world

You are in
Marlena's world

You are in
Marlena's world

You are in
Marlena's world

Bavo and Margot working on the role of the sidekick

THE CAT

Journey from fun extra to inherent part of the car. The cat entity has played an important role in the evolution of our process. It inspired us to think outside the box as regards new means of interaction and ways to build trust between user and car.

The interaction between the passengers and the vehicle is inspired by a cat. It acts as a sidekick that gives you feedback, is there when you need it and is in general nice to have as company. It is comparable to games where some characters have a little helpers that help them with specific tasks.

Sparks, sidekick in Spyro   Aku Aku, Crash Bandicoot

FELIX, OUR BELOVED
DOMESTIC CAT

Phase 1

The cat started off as a fun element -and mysterious animal at the same time- we used to describe the way of interacting with the magician.
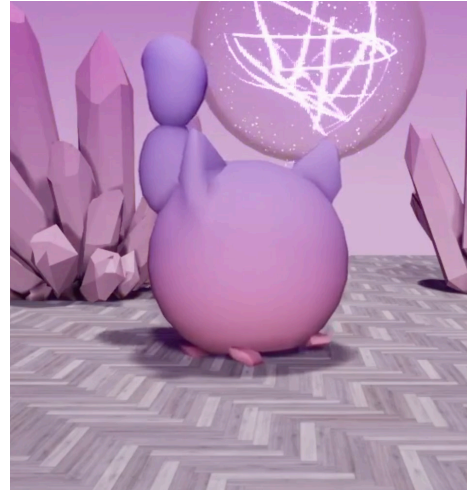
Phase 2

The cat was now an extension of our character the magician, showing the feelings and emotions and being a sidekick.

Important transition since the presentation: we use the movement and behaviour of a cat as an inspiration for further development.

Phase 3

Eventually we removed the illustrated cat and inserted the idea of the cat in the means of interaction. A motion board was made as an abstract and simplified visualisation of the movement of the sidekick.

In the pictures the sidekick is respectively...
- Following the pointer! (you are pointing)
- Minding its own business.
- Investigating oddities.
- Circling a 'device' before accessing it.
- Accessing a 'device'.

Passengers interact with the vehicle by pointing. When pointing around, they guide a lively entity throughout the interior as if they're playing with a cat following a laser. Experimenting with this and racing it through the interior allows for plenty of playful and interactive experiences. Guiding this particle to features inside the car, allows passengers to interact with them. Before accessing the radio control for example, the little entity circles around it, until it gets confirmation to play or mute it or you cancel the action. This is inspired by the carefulness of cats. They approach everything with a sense of suspicion: smell first, do after.
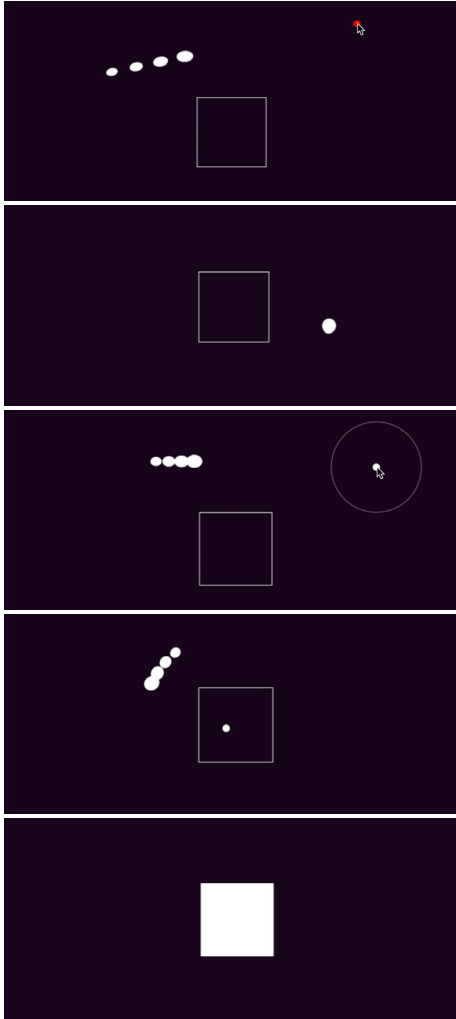
If no one controls the interaction, then the entity lives its own life inside the car. Just like your everyday house cat, it goes to sleep somewhere, does its own thing and disappears until you need it again or he needs you. He never completely disappears and is always ready to welcome you, enforcing the homey feeling.

When the magician's sidekick is minding its own business, it reacts to what is happening in the car.

In a calm atmosphere it will be silent, when there's a lot of energy in the vehicle, it will be more active. On top of that, it will also react to events happening inside the volume. If someone drops their phone for example, curiosity takes over and it will go investigate.

Last, but not least, much like our beloved four-footed friends, it learns your habits and adapts to them.
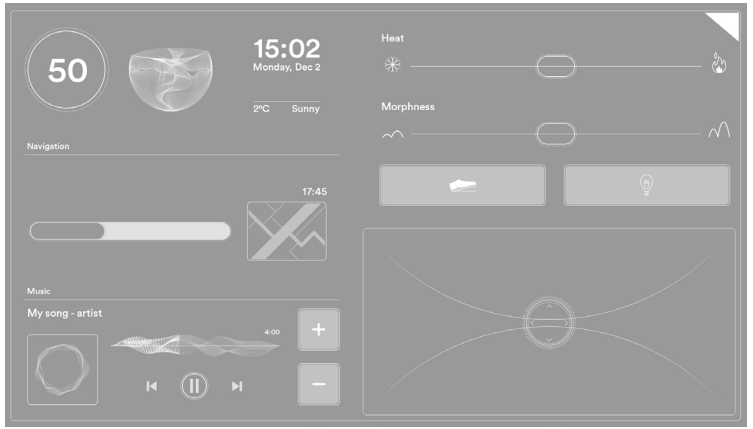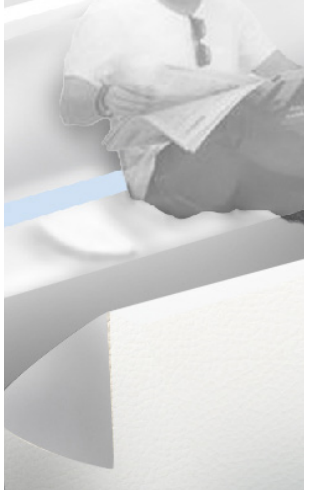
Conclusion

The cat is the inspiration, it's in the way things interact and morph. This was a very important decision. We split up the interaction into the texture inside the interior and the windows. The morphing would only appear in the texture of the bench and walls, as the interfaces -both on the window and next to you- work with touch. The way things morph, move, hover and click are all inspired by a cat. This is where our cat was no longer called the cat, but the inspiration.

- The seat morphs to your body like a cat coming to lay down in your neck or lap.
- The interface and button appear within comfortable range. Double tap to activate.
- The menu or infotainment system appears with functions like general information, heat, morphness etc.
- Heating: spreads slowly -just like a cat - around your body through the seat.
- Select a window in the interface to interact on, a pointer appears in the chosen window.
- Outside magic: unlock to interact, select objects and transform them to cheer up your world.

27 NOV

A decision had to be made on the purpose and use of the cat idea in combination with the specific features.

Cat inspired

A decision had to be made on the purpose and use of the cat idea
in combination with the specific features.

Up until this point the cat has been a cool extra element that fitted perfectly to our magician because of the mystery and elegance of the animal. It had helped us in decision making and inspired us to come up with out of the box ideas. Suddenly we were at a point where this cat was integrated somewhat everywhere and nowhere and we needed to decide what to keep, what to leave and what to adapt. After a good brainstorm it became very clear to us and some structure was added to the cat implementation. Different zones of interaction were assigned and the definition of the cat in our car was renewed. It was a nice thing to realize to know that this entity has transformed with us over the last few weeks and now found its place. The resolution would be to base any form of interaction on for the aspects of the cat. The movement, patience, appearance, smoothness etc. were all included in the way the seat would morph, the door would open, the touch interface's feedback and so on. Just like our magician, the aspect of the cat was now hidden inside and underneath the surface.

Car design

The actual design of the VW CIA car. From morphing seats and
magic eights we slowly but surely got to a harmonious car design.
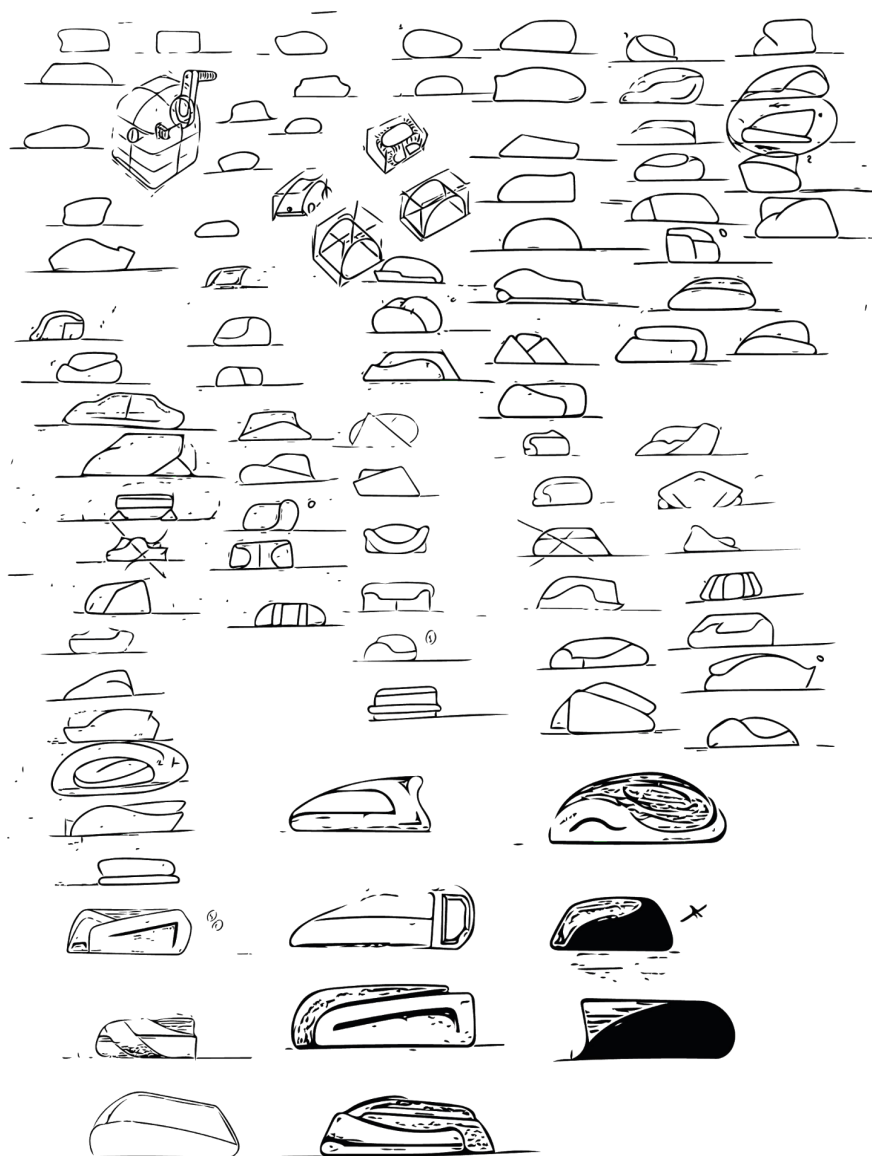
VERSION 1

After our first client presentation we started to experiment with car designing. We started from very basic shapes and concepts to make more mature later on. As many as possible. Quantity over quality. We also started on rough interior sketches and examples. We tried to think in different directions without immediately thinking about functional things like the number of people.
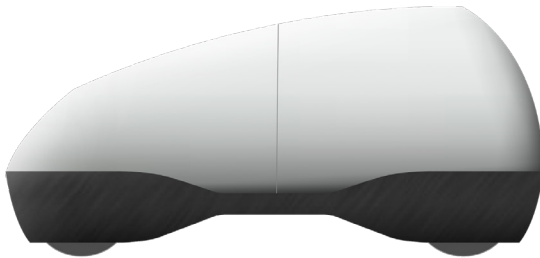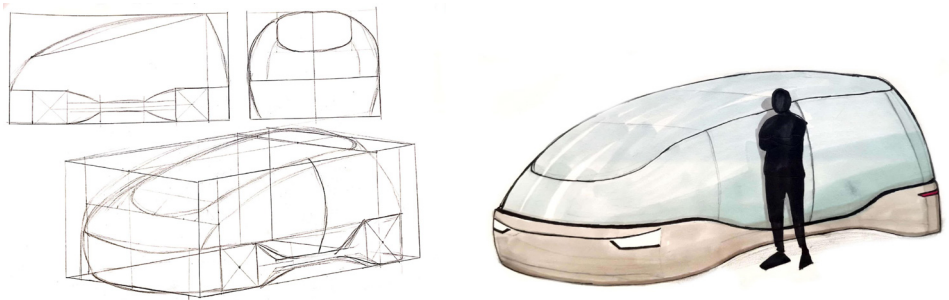
The moment that our product designers could finally get crazy on the first car design and started sketching away.
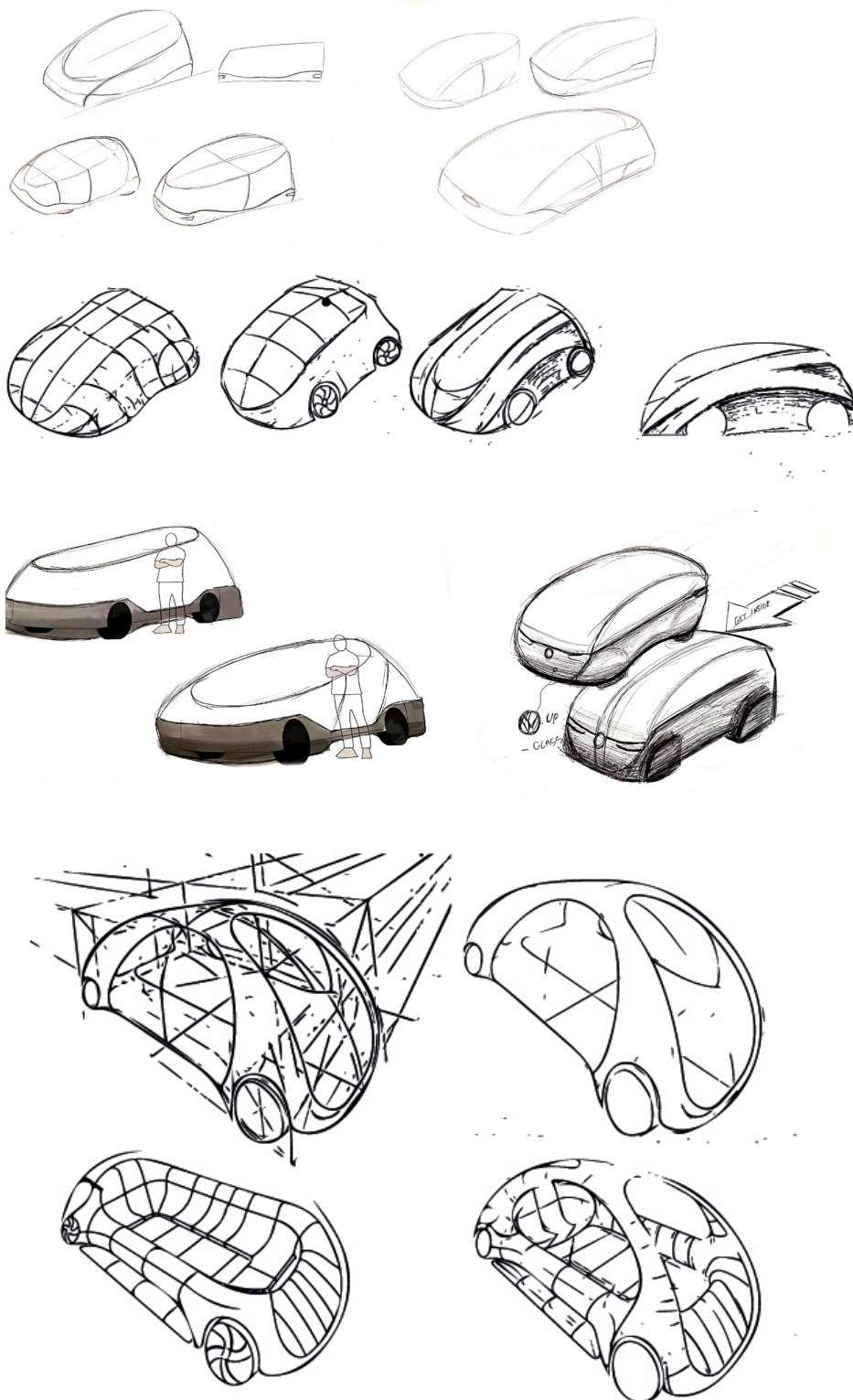
Sketching

The moment that our product designers could finally
get crazy on the first car design and started sketching away.

Suddenly the liberating words came: start sketching. Finally our product designers could dive into the translation from concept to product. As we are no car designers at all, the beginning was tough. Gradually we went from basic shapes to interesting molds and from concepts to tangible interior and exterior. As the days passed by, the car sketching got better and first ideas were visualized. It was great to notice the improved skills and with that the obtaining insights in automotive design.

Magic 8

Create different zones of interaction
by morphing the vehicle

2 x panoramic
view

1 family
sealing

1 panoramic
view + 2 small
views

4 views
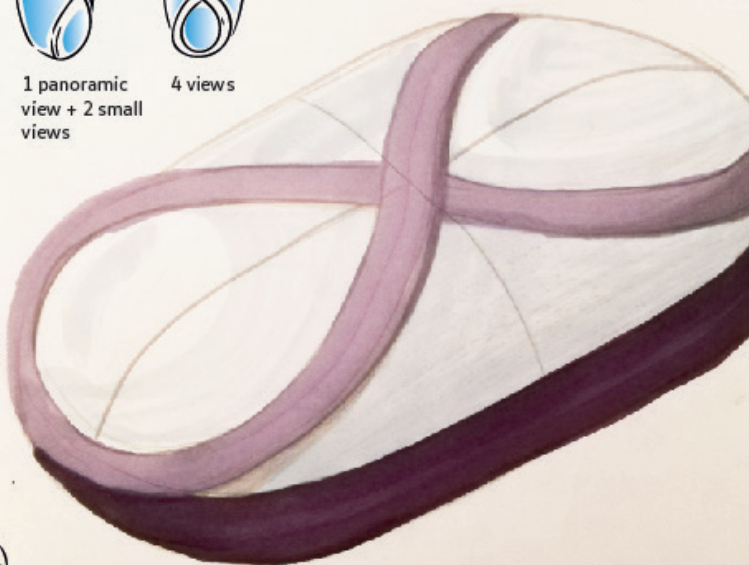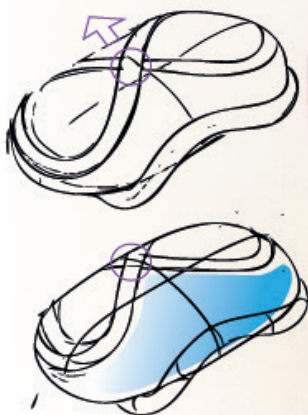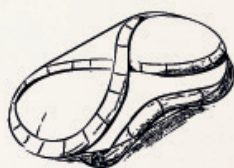
Magic 8 concept

This concept is based to create different "screens" for the outside magic concept. We kept in mind that we are making a vehicle for 4 to 5 people.

To make this feature accessible for all passengers we needed different areas of interaction possible. This concept started from a not feasible concept where the exterior can be changed.

The main round shape can be adapted by moving the crosspoint of the 8, this creates different areas of interaction with different sizes.

Translating from a not feasible concept to a feasible concept and variations of interior designs.

VERSION 2

This concept is a result of the magic 8 concept. By converting this concept to a tangible and realistic vehicle we created this concept vehicle. Transparency is crucial to make the outside magic experience as big as possible. The more you see of the outside world, the more you can adapt to your own wishes to create your own better world.
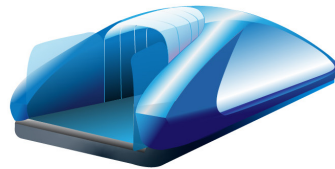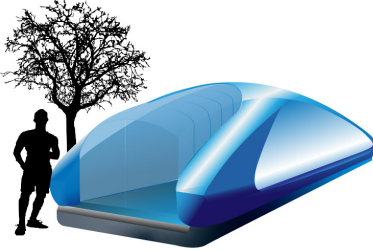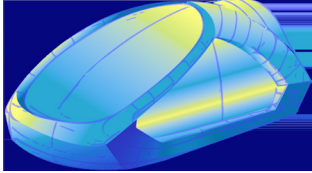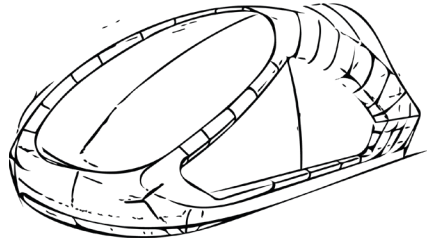
Exterior changes

Entrance at the back:
To make the experience as impactful as possible, passengers enter the vehicle from the rear. They first enter a zone of tranquillity before taking their seats and enjoying their own created world. By placing the entrance at the rear one creates the possibility to design a more streamlined exterior.

Insert C pillar (icon of Volkswagen)
In order to maintain the VW identity, we chose to use the iconic C pillar that keeps coming back in the VW vehicles.

Streamline exterior design
We chose to give the vehicle a clear direction in terms of streamlining. This ensures a better communication to the outside world and occupants.
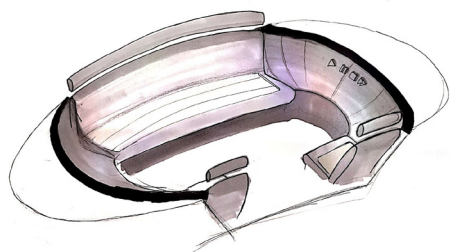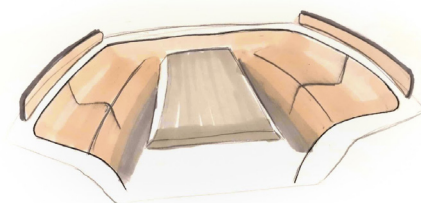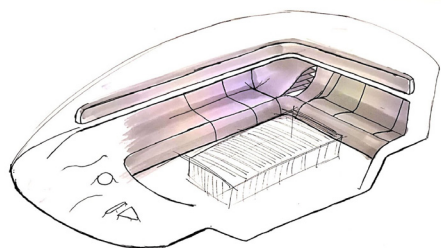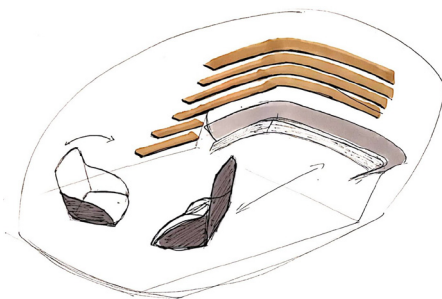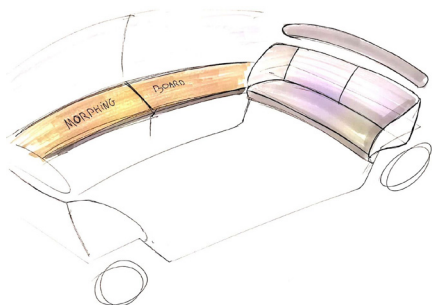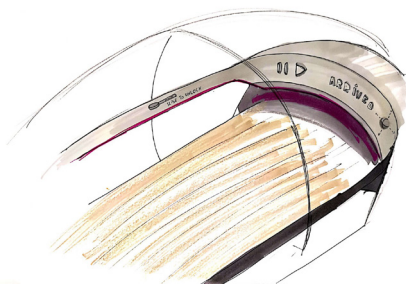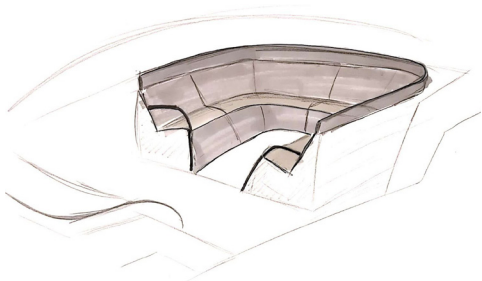
Interior concepts

Bench trials and sketches: shared seats, modular interior, U-shapes and L-shapes, small dining tables etc.

The first client call after the first version, we learned that we had to communicate better. We showed our ideas and Volkswagen did not select any yet. Only interior-wise, they preferred the one with the morphing board flowing into the seats.

Hidden couch

Translation to feasable vehicle

Variations of interior design

1 person

2 people
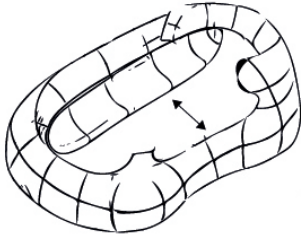
Combination of seats with the interior circle as back support
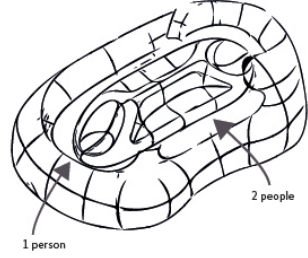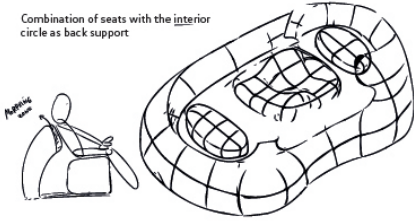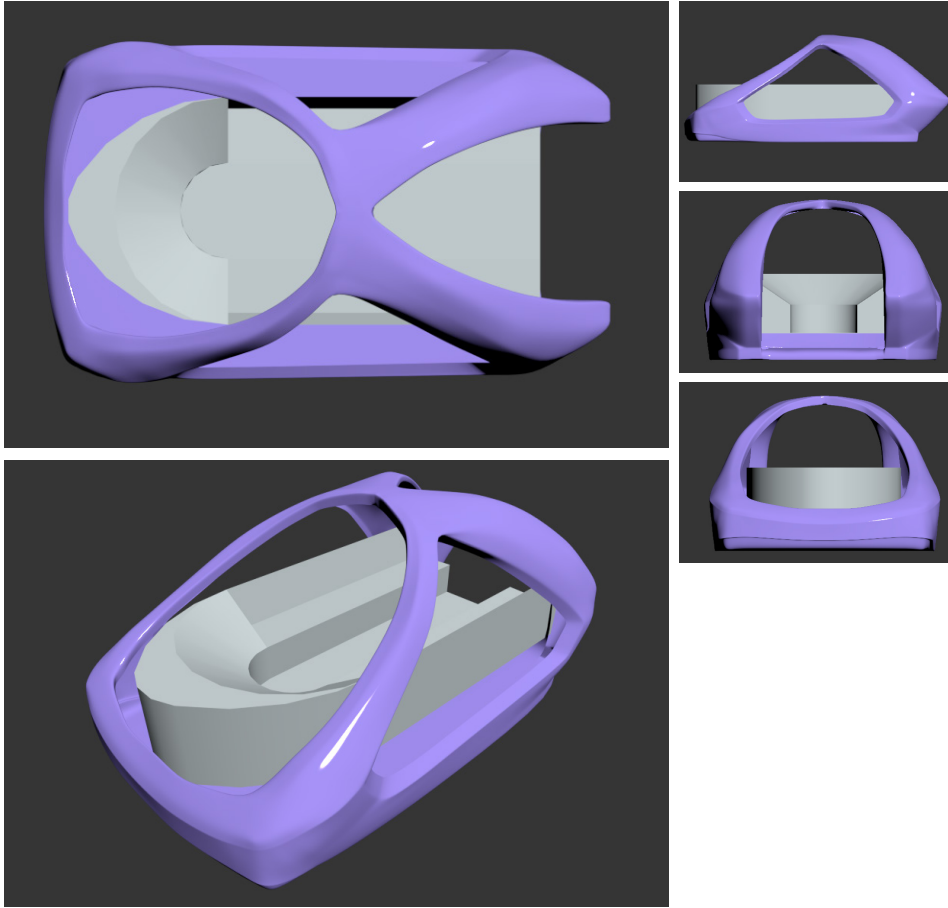
Combining interior and exterior

The continuous interior bench
The continuous seat creates a sense of unity and harmony. This matches perfectly with one of the magician's values.

Big windows
The large windows in the vehicle added extra power to the outside magic concept. We were not allowed to ignore this fact and it has become a demanded one itself.

Low front window
The low window at the front gives an open feeling and gives a sense of direction during the ride.

Round exterior shape
The round exterior had to be adapted as this was not appropriate for the VW identity.

Entrance on the side
Most interior concepts were based on a side entrance. This did not match the exterior and therefore these had to be matched to each other.

Show proportions, add humans & areas
By only drawing the vehicle, the proportions of the vehicle were not clear. By adding recognizable objects or people to the drawings this would become clear.
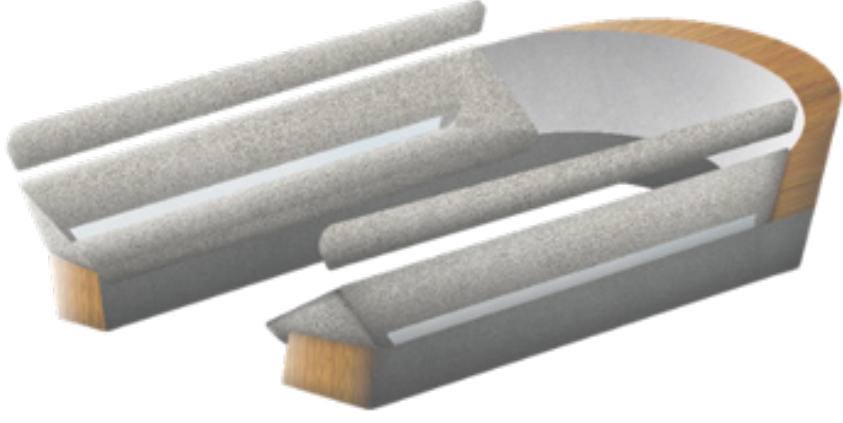
VERSION 3

We made a more mature version of the interior. For the exterior we selected one of the previous models and made it in 3D.

The feedback we got from Volkswagen was that exterior and interior didn't match. Besides that, they thought the front windows where to rounded. We should go further with the design philosophy of the interior. Also we had to show more humans to prove the proportions. The unity between interior and exterior should feel as one.

After the feedback we sent Volkswagen a model with interior and exterior combined. Next to that we changed the glass and made it less round. These models were send so they could give us a drawing as part of the feedback they gave.
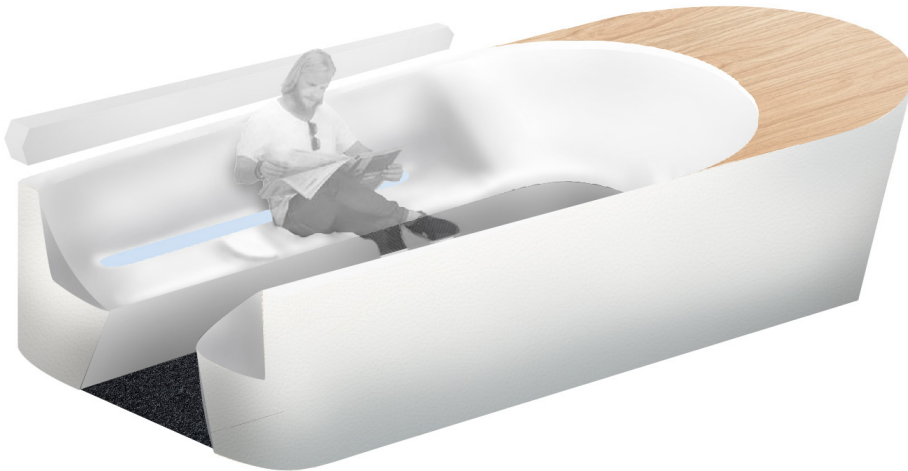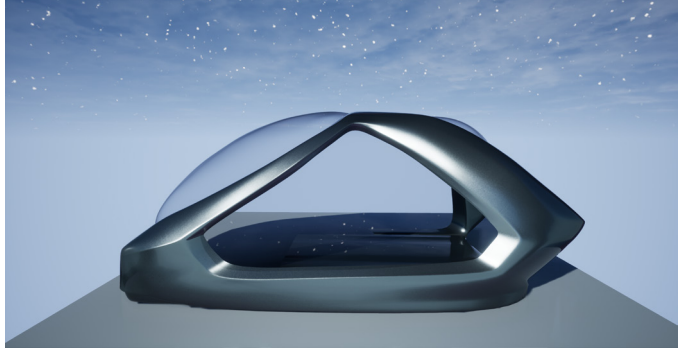
Car model: bulb glass
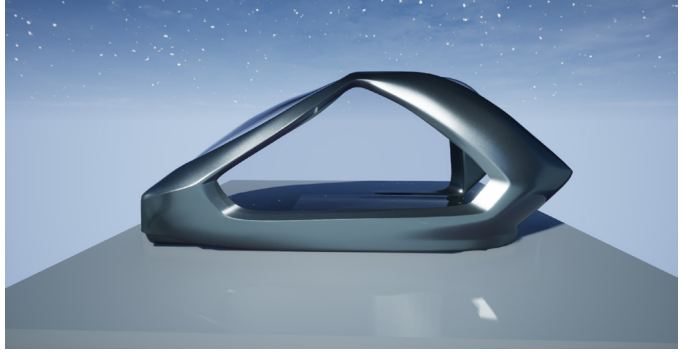
Car model: flat glass
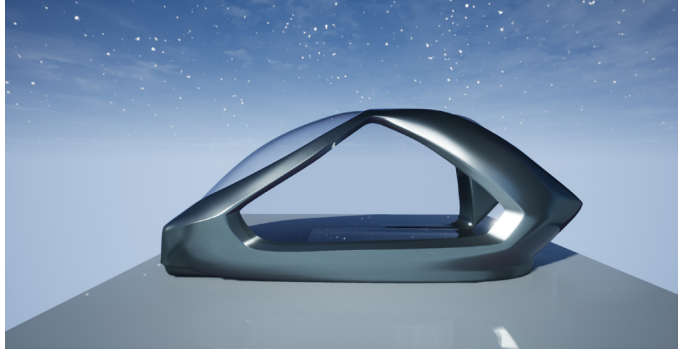
Car model: intermediate glass curve
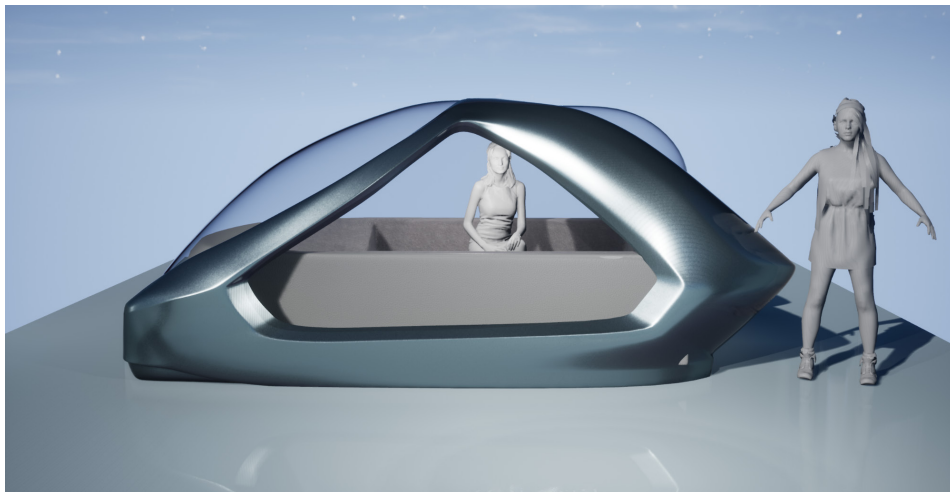
2D Sketches to 3D model
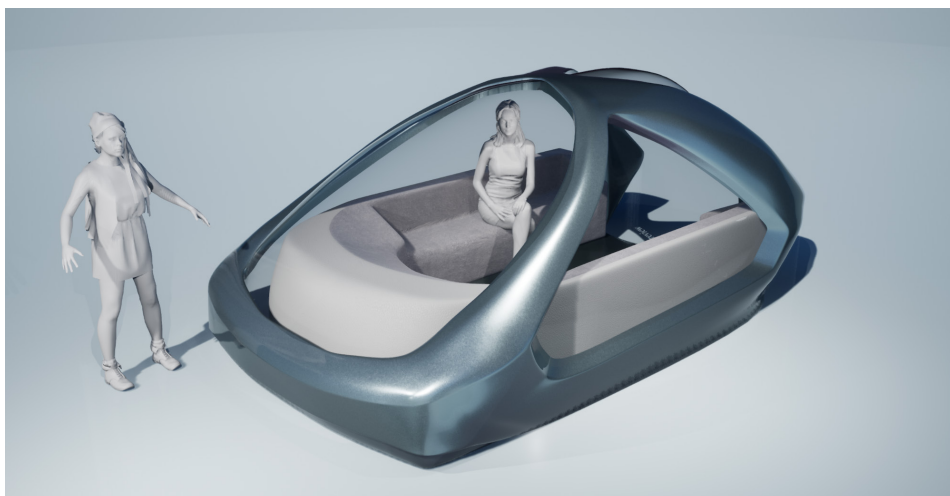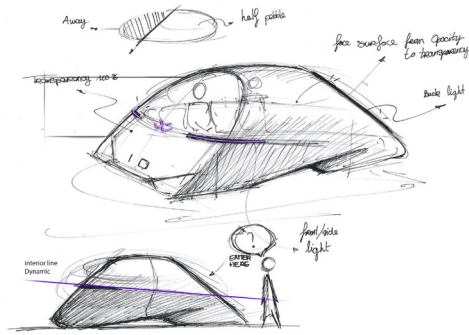
Feedback VW on concept:

They created a new concept from the ground up with our idea in mind.

Aspects of inspiration:
- Front window to the ground
- Line in side view goes downwards from front to back (creates a visible entrance at the backside)
- Exterior line continuous in front window
- Fade in window

VERSION 4

At this stage we received feedback on our exterior concept. We tried to make it work and tried to make it fit the model we had. But eventually we let go of our first design and we chose to restart on the exterior.
We tried out a few new ideas we got. In the new concepts we still use a lot of glass especially in the front. But still we want to enter from the back and to keep the C-pillar.
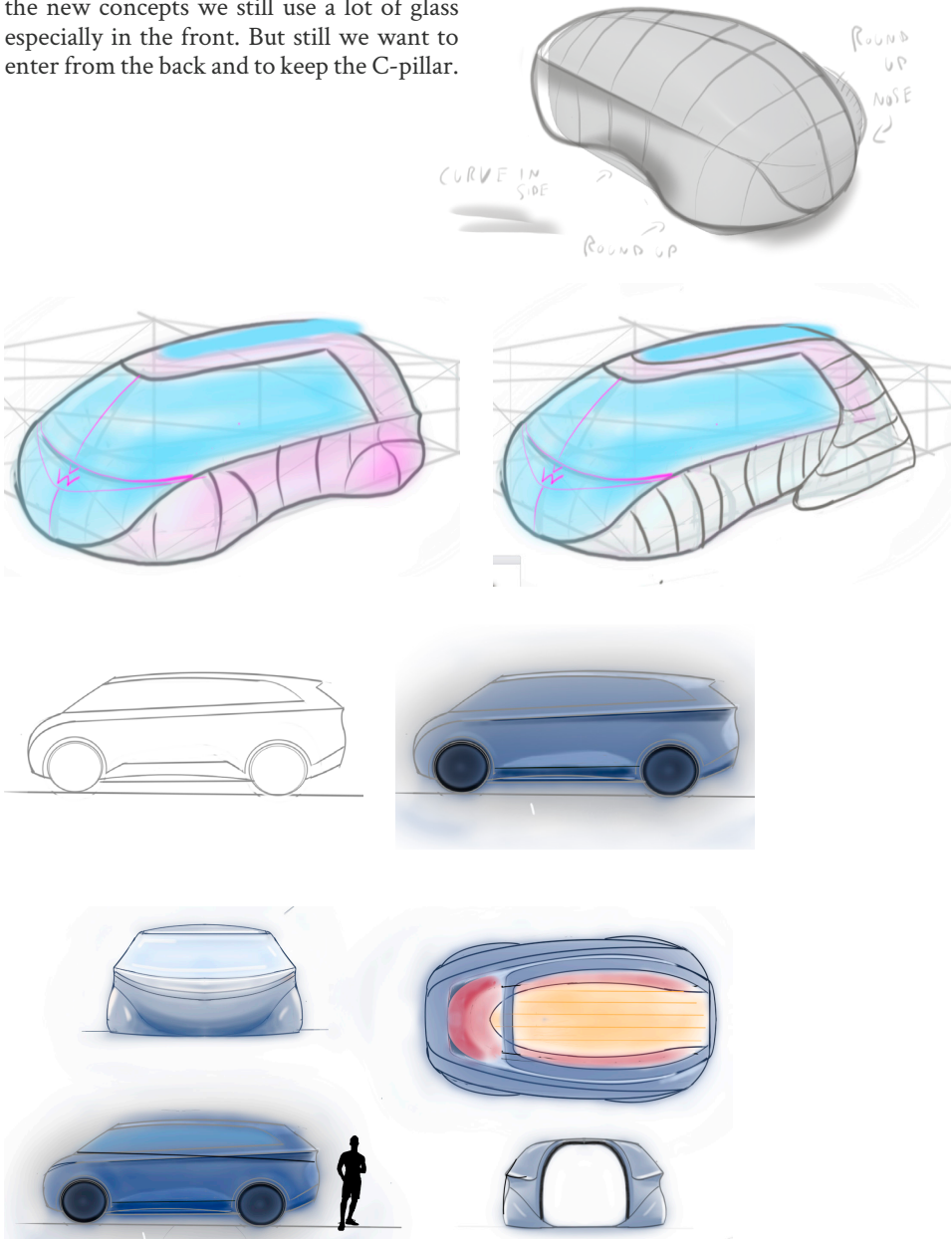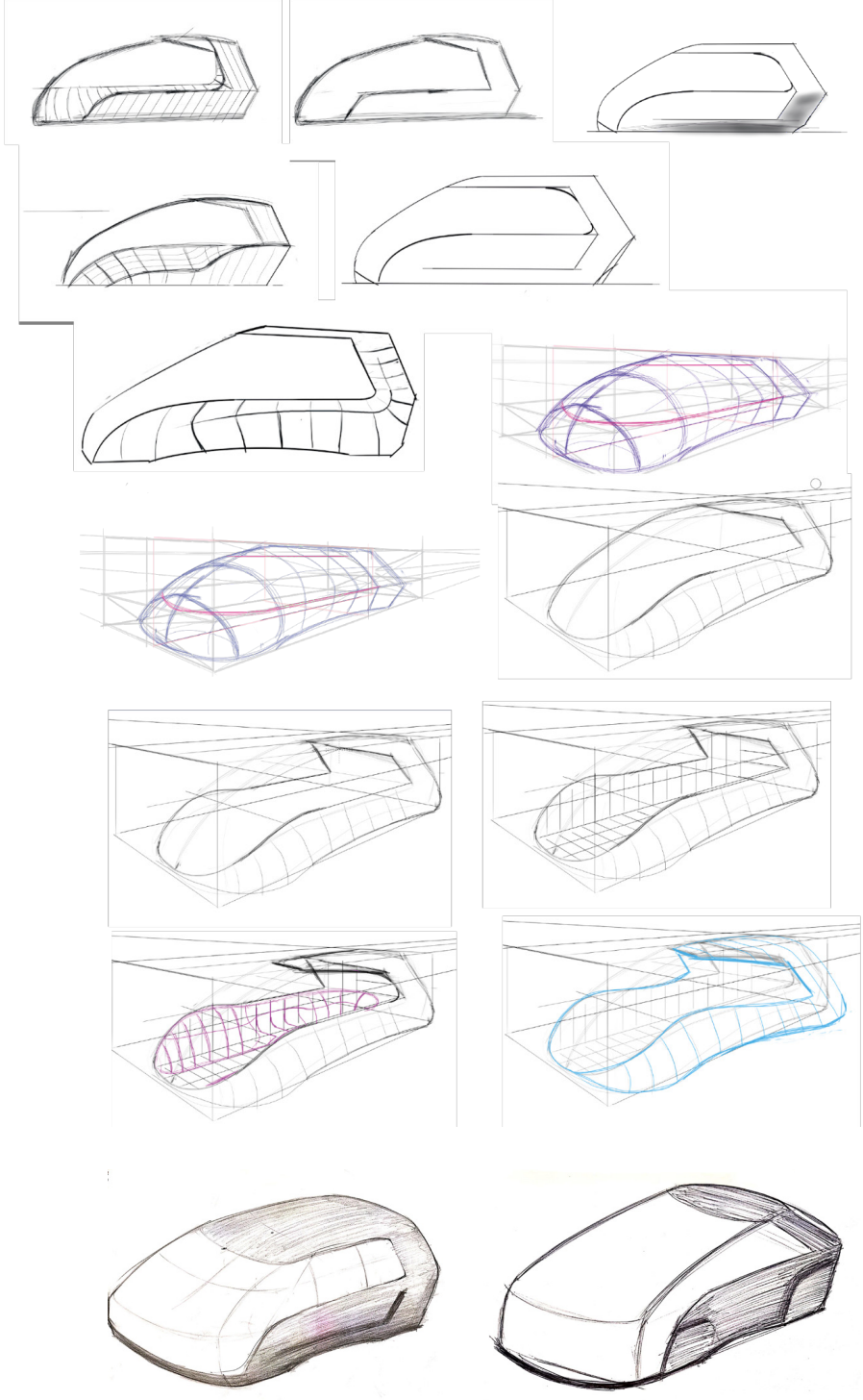
This concept didn't match the VW DNA so
we didn't use this variation.
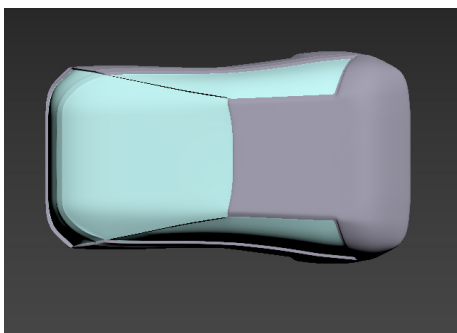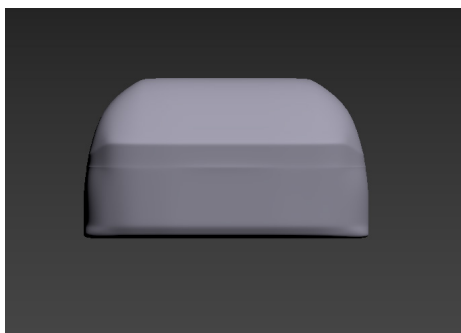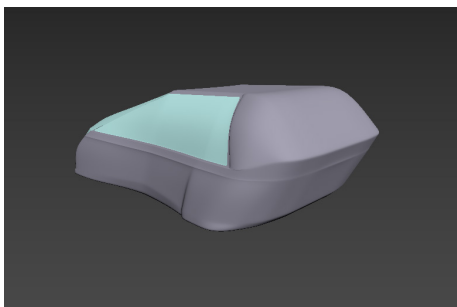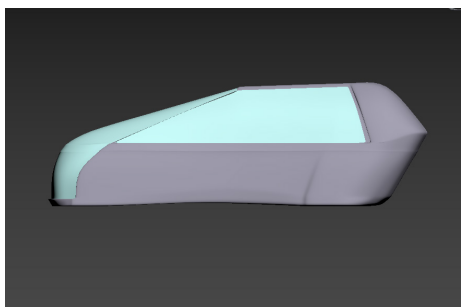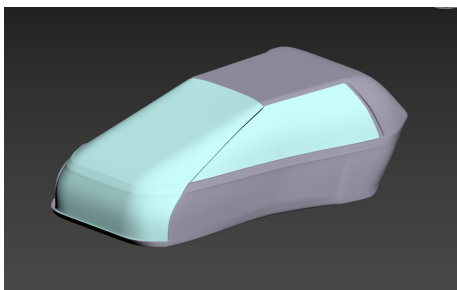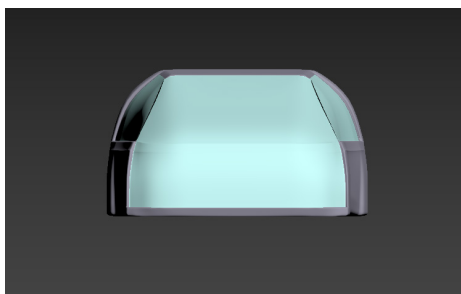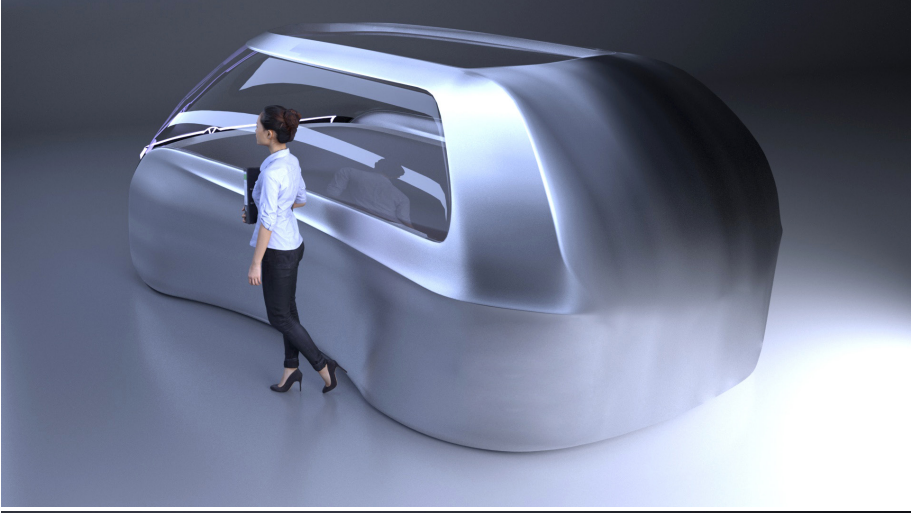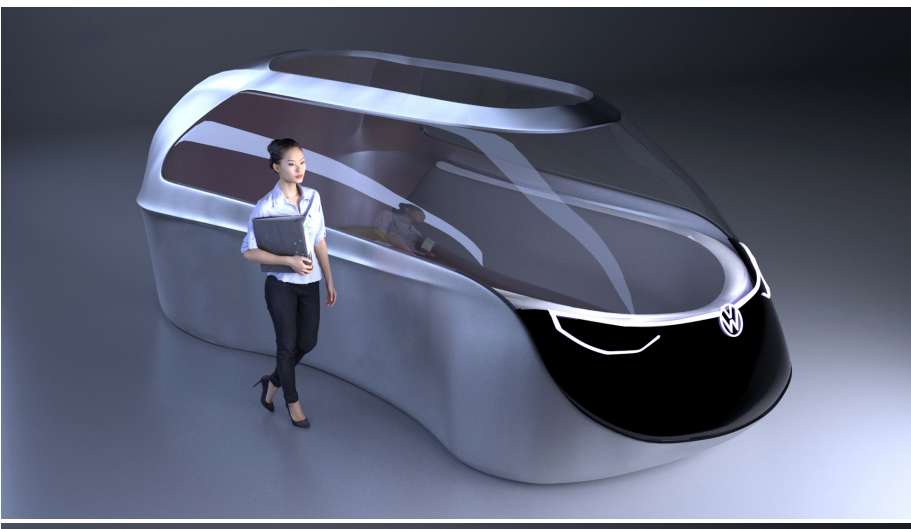
VERSION 5

This new version is based on different parts of the previous versions we made. From the previous versions we decided to go further into 3D.

We managed to make interior and exterior as one. The car is more streamlined and has a soft appearance. Because of the dynamic line we create a more dynamic feeling with a more inviting feeling of entering from the back. The car also has a more solid muscular base which represents safety. Besides that, we added a black fading on the window in the front this is representing mysteriousness and the reserved personality of the magician.

For the interior we used lights underneath the seats which provides a feeling of flying seats. This represent the uplifting and inspirational character also the seats are rounded into the wall of the car to give more welcoming feeling when entering the car. When we showed this model to Volkswagen at the second client presentation. They liked the fact that we made big progression within a small amount of time. But still they said this model is not finished yet. The lines in the back are not controlled and the back isn't finished yet. There is still allot work to be done but we are on the right way.
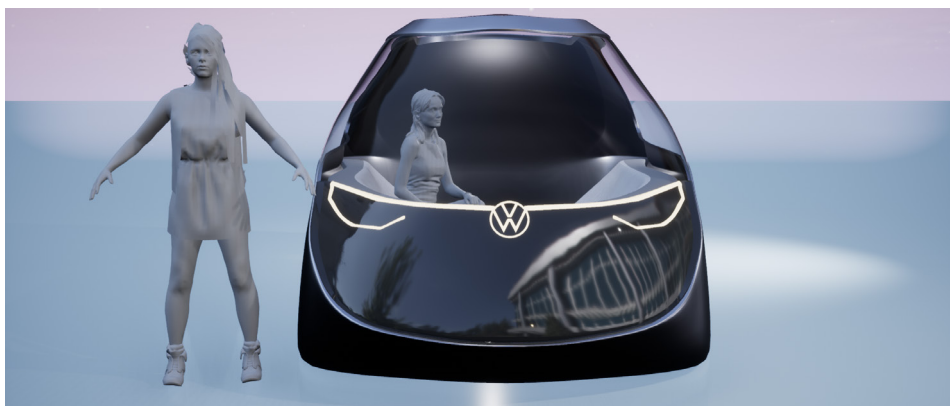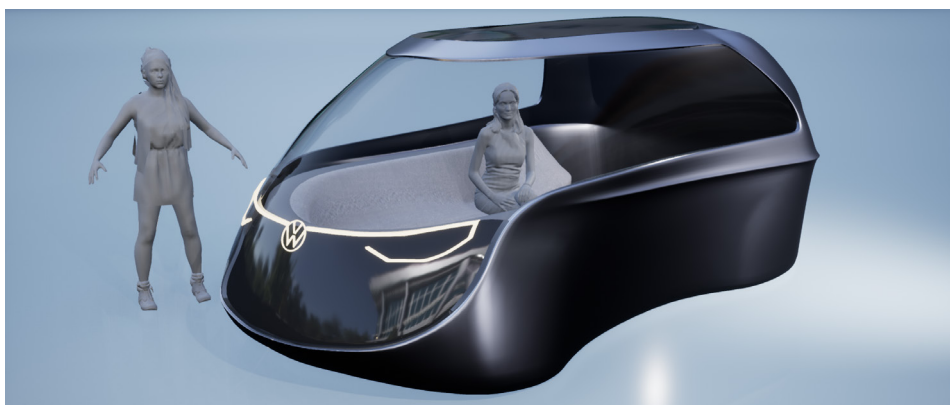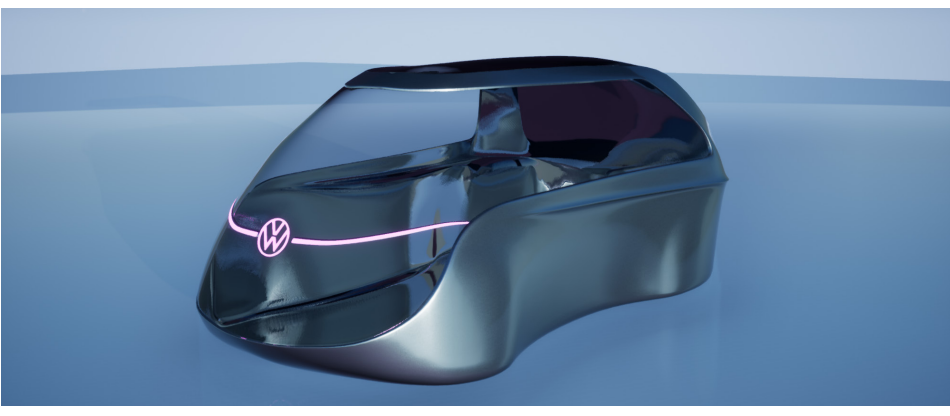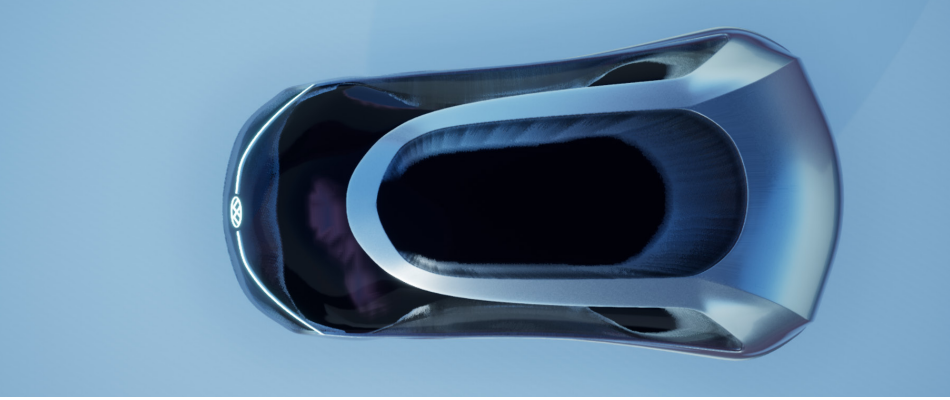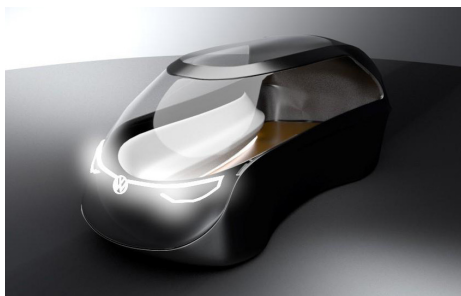
VERSION 6
INTRODUCING OUR CAR DESIGN

A streamlined concept where transparency and harmony are central. The harmony between the interior and exterior stands out and the soft appearance of the vehicle ensures pleasant communication with the outside world.
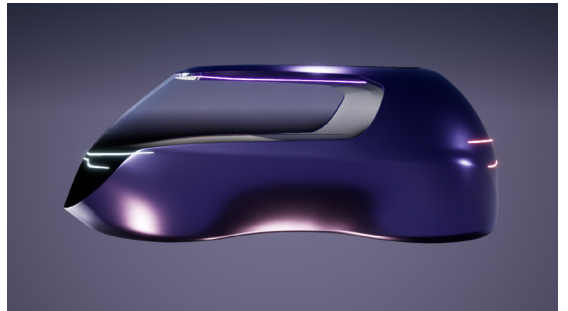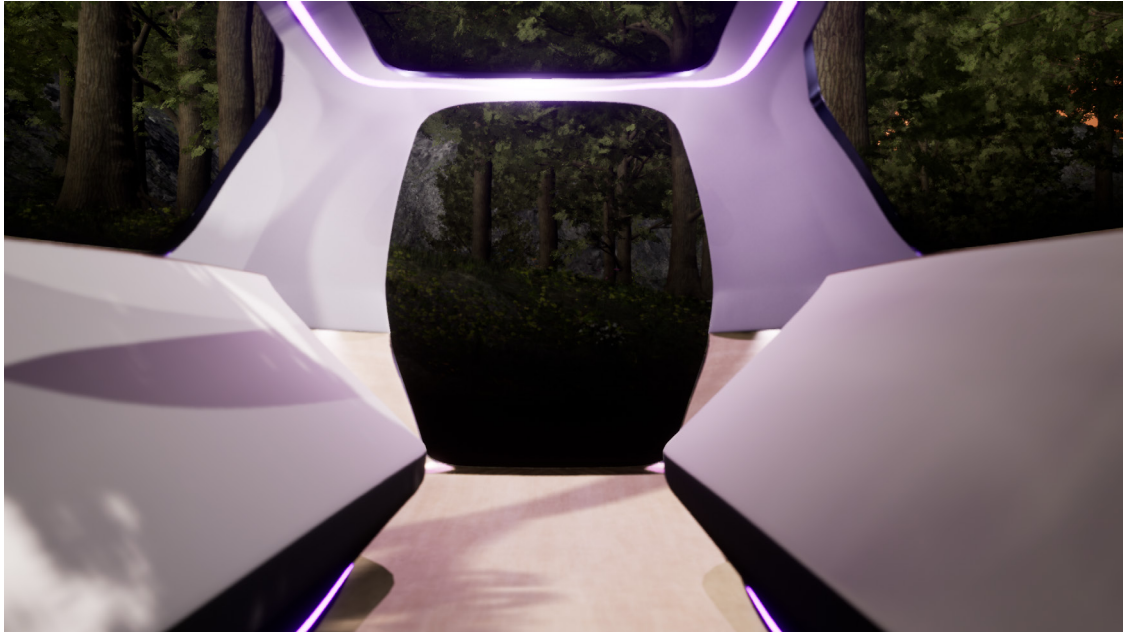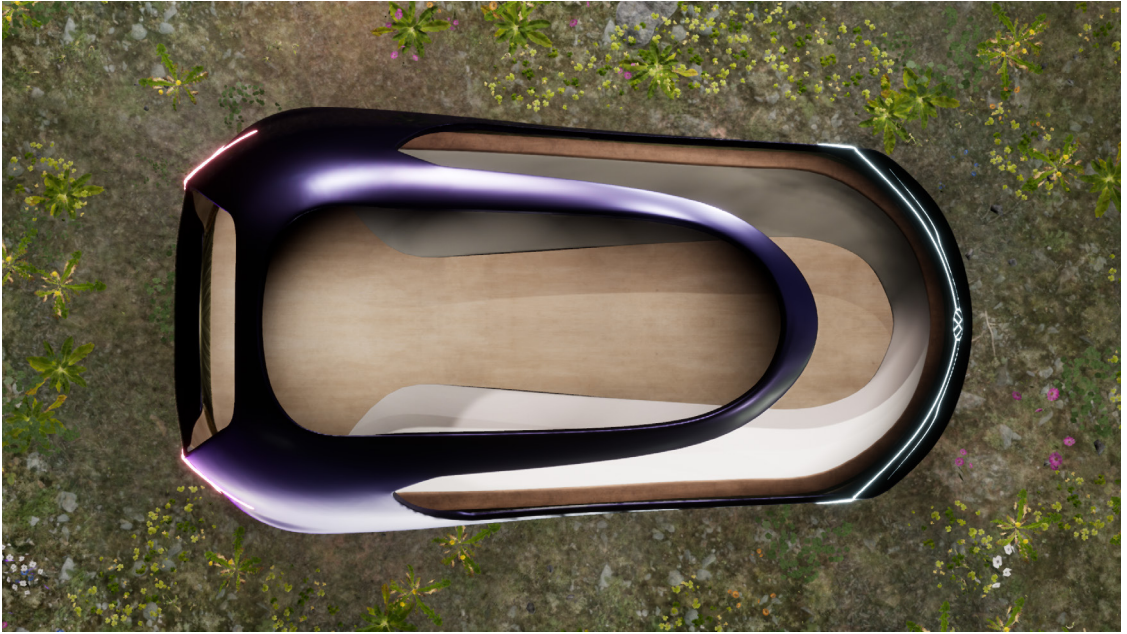
After the client presentation we worked further on the model. We tried to make the model more mature and made a back door and backlights. Listening to the feedback, we made the dynamic lines more controlled, more continuous and we created more dept in the base of the car.

For the interior we created some lights in the back to try to communicate the space left for luggage. In the client call we showed this to Volkswagen. They were happy with the result but still thought it wasn't finished. Again they gave us feedback through drawings and we implemented their notes.
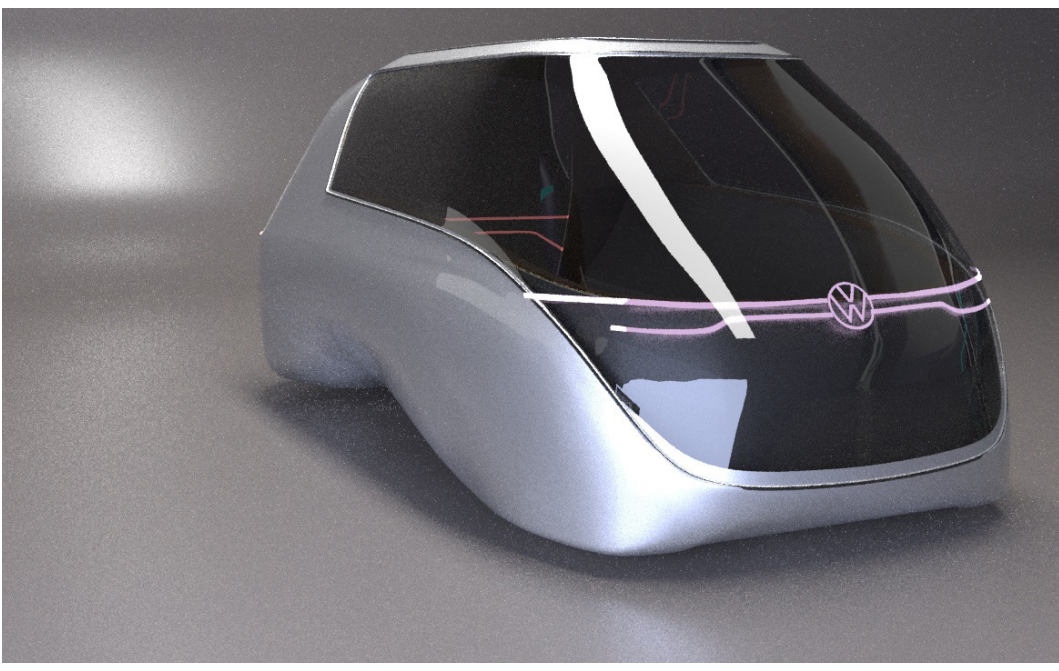
VERSION 7

With the final feedback we got from Volkswagen we worked out 2 different models. The first one with the complete implementation of the feedback they gave. In the second one we tried to make a model that would define our style more by combining their notes with ours.

With the feedback of version 6 we made the necessary adjustments:

Making the nose of the vehicle less pointy. Reducing the round shape. More emotion and expression in the flank of the vehicle. Coherent and sharper corners of the window on the c-pillar.
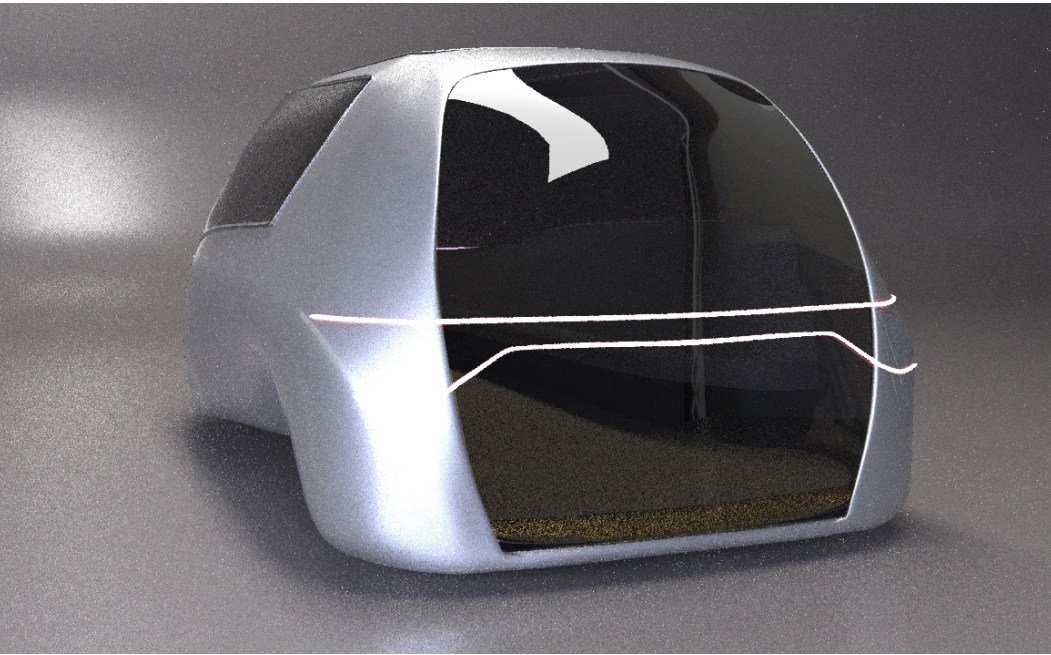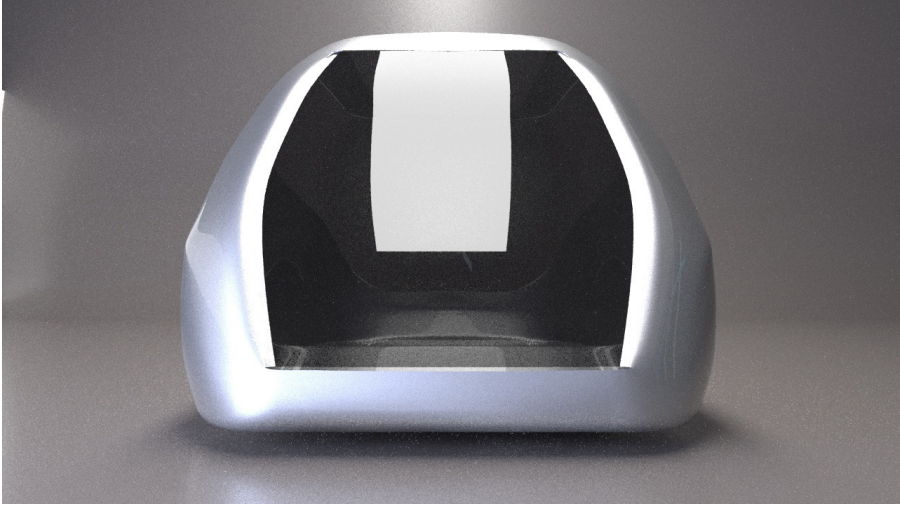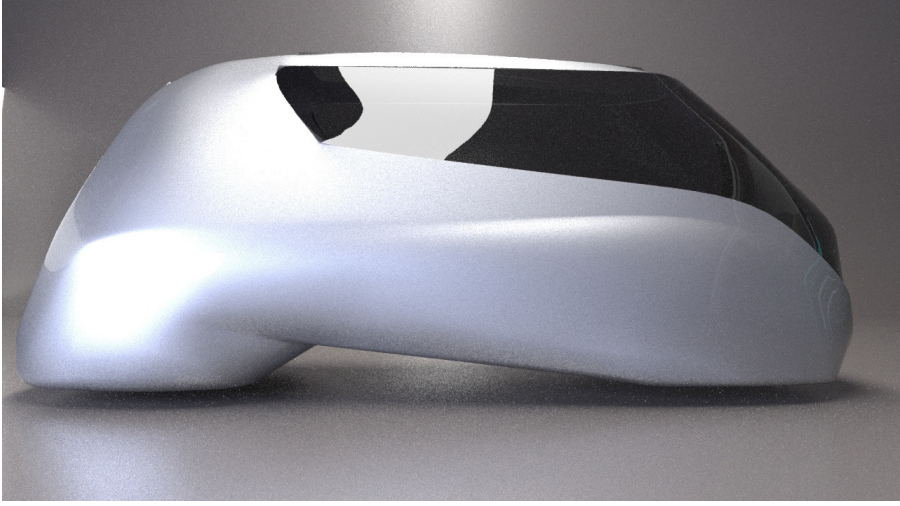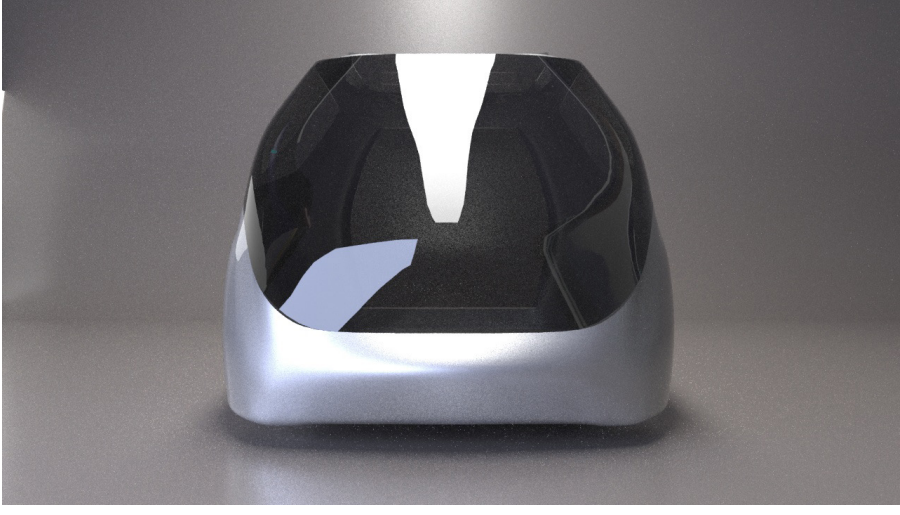
Car model based on feedback notes

To get a clear picture on the feedback notes and sketches of Volkswagen designers Simon and Matthieu, we made a 3D-model with their modifications. This allowed us to make better choices on what we wanted to implement and what not. The most important changes were the high belly of the car with the straight diagonal line going to the back wheels and the firmer shapes instead of rounded ones.
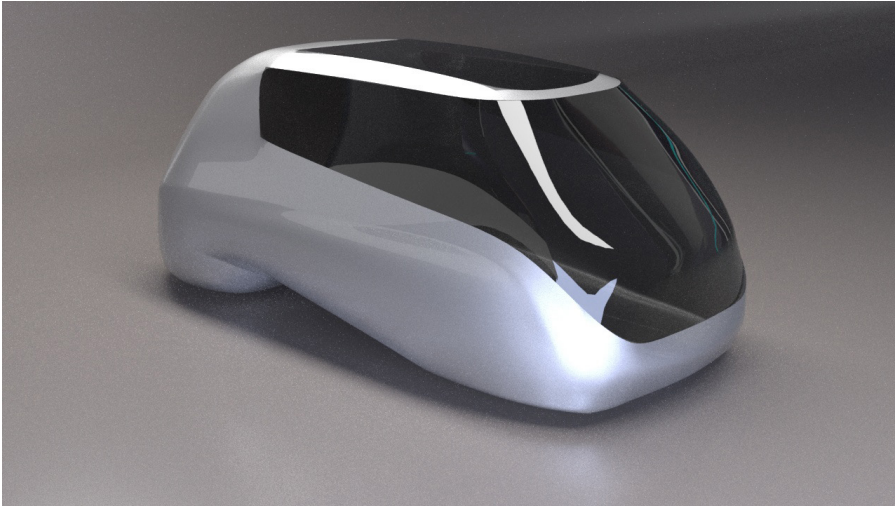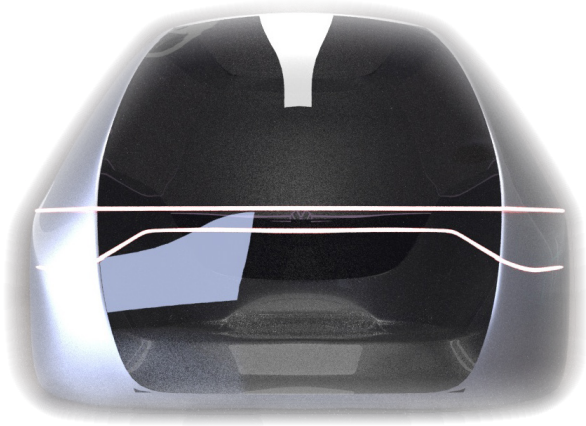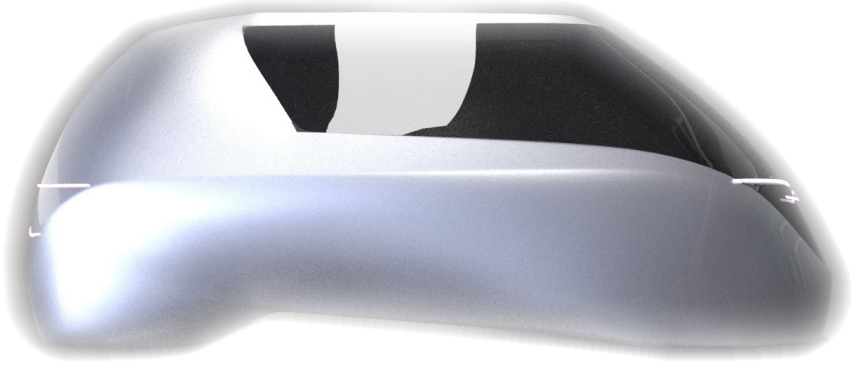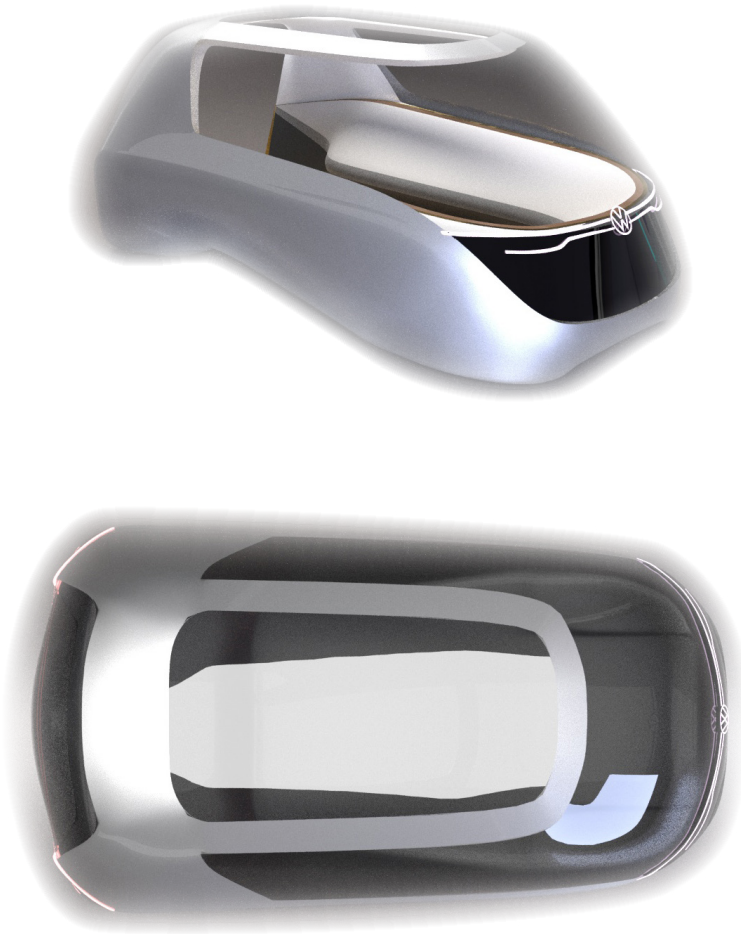
CIA car model with adjustments

Combination of our car model with feedback of VW. The main things we got out of their feedback was to make the direction more clear through more and better controlled dynamic lines. We made our lines less flowy. This fits the Volkswagen image better.

Our car is a bit more rounded. In the side view we can see that we lowered the belly in comparison to the feedback. The back side is a bit wider. The front reaches a bit lower and the windows are bigger because of our window interaction.
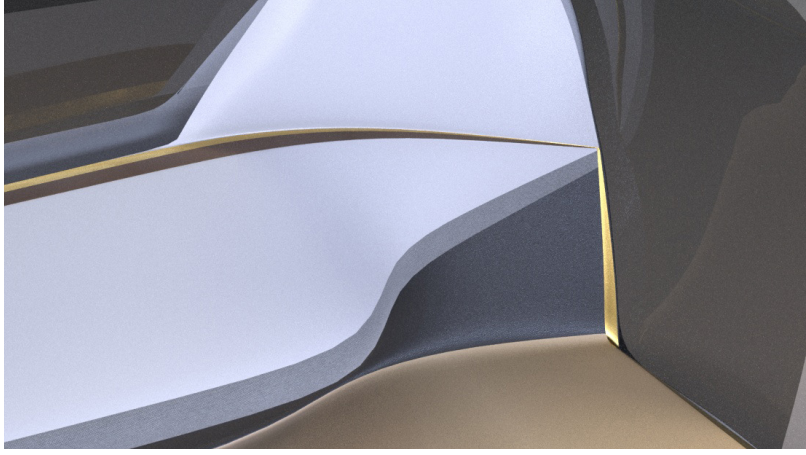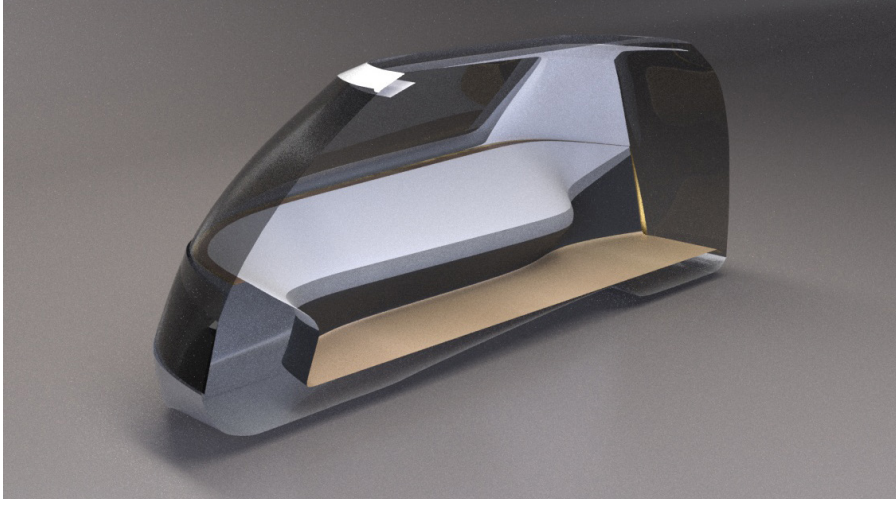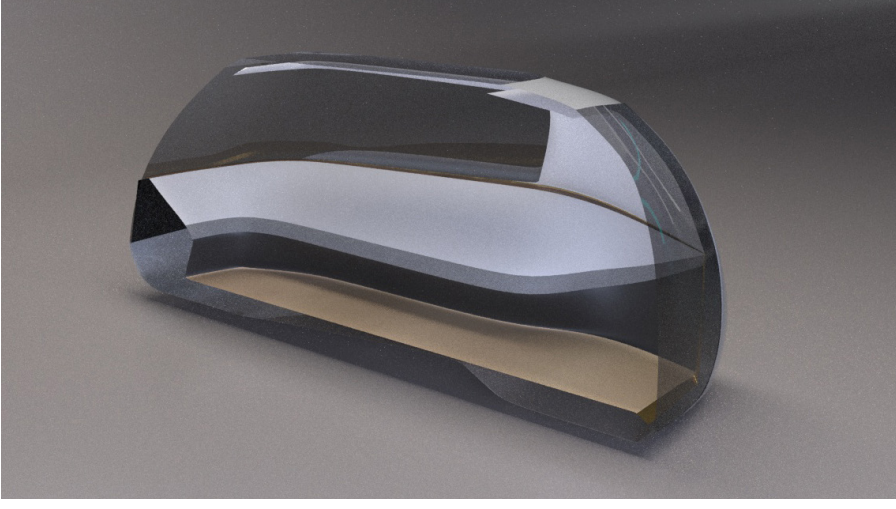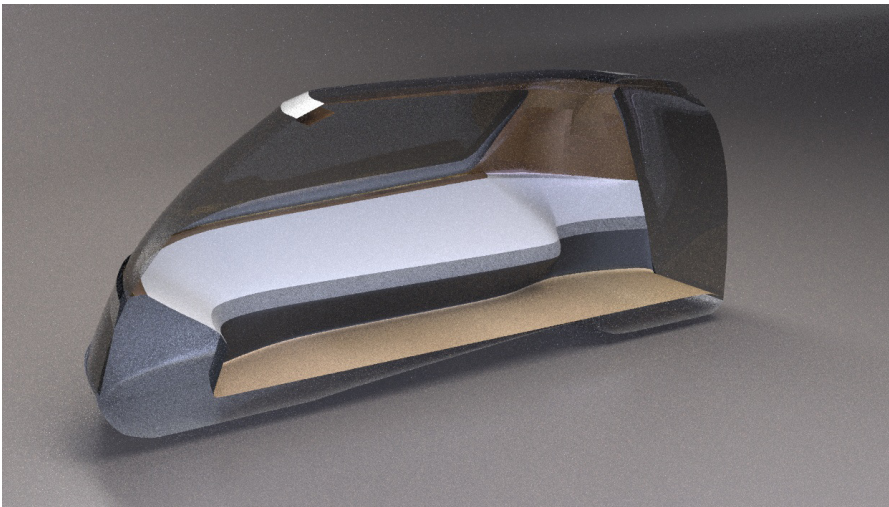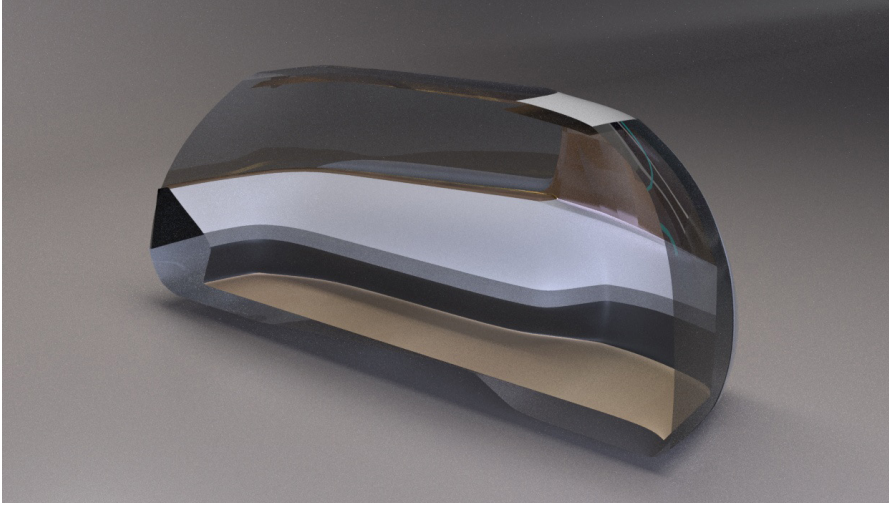
Interior morph seat trials

One of the feedback notes we got from Simon and Matthieu was about the morphing bench. Taking into account their comments we tried to take the morphing one step further and make the bench 'one' with the walls and the interior of the car. The two trials we did, can be seen in the pictures. After reviewing this new interior and considering our time schedule we decided not to go for the extending of the bench and made our bench end with a curve and smoothly into the walls of the car.
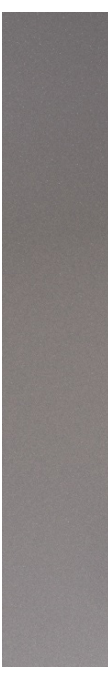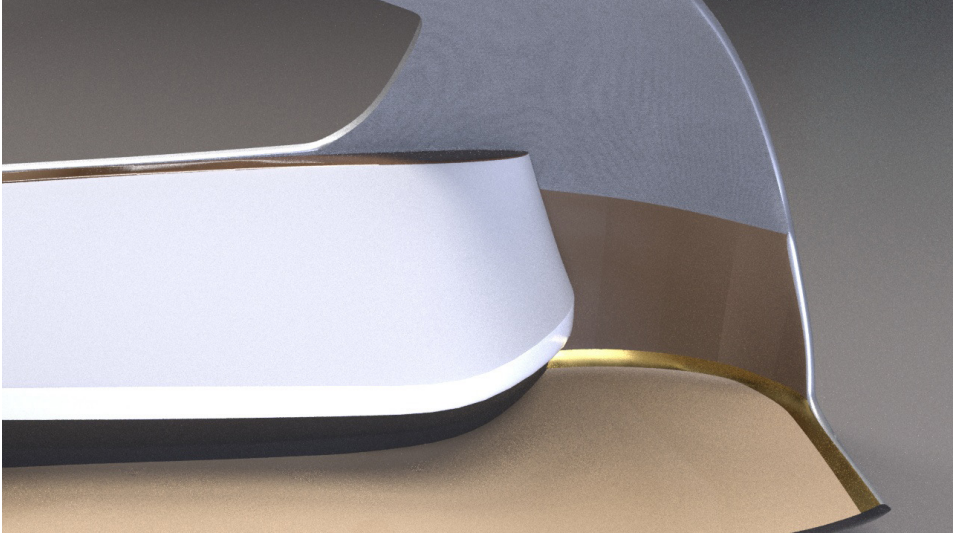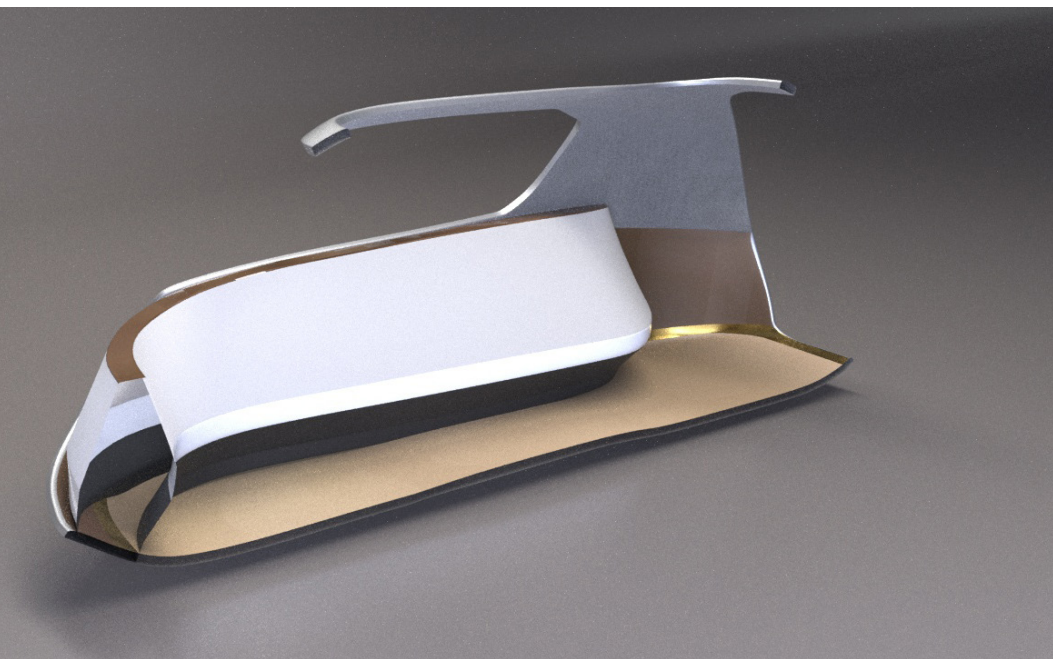
VERSION 8: FINAL FINAL VERSION

The car we have now is the result of many iterations and different approaches of our character. It's a tighter design. With a clear sense of direction.

First we decided on the features that would represent the magician the most. After choosing them we decided on the volume/ capacity of the car so we would stay on the same line. We started to work parallel: interior and exterior apart. To pitch them to the team and teachers and go back again to work on it. After a while the interior and exterior got combined and evaluated. Everything was a loose puzzle piece. The only thing left to do was make the puzzle. Only, the pieces didn't fit properly. We started all over to combine them and let the whole car feel as one.

Once we got the feeling the car design concept was fitting together, we started finetuning the concept to a more mature design.

We wanted a design that would have as much impact as possible without being too intimidating. The solid base gives a sense of security, strength and presence. But when looking for the 2nd time the strong impression is just a façade of the more empathizing and protecting magician. Showing too many emotions to the outside is not the first priority our character.

The dynamic lines of the car making the direction clear but also invite you to enter from the back. It's a big spacious car that is easily accessible.

When walking inside the magician you get a more homecoming feeling, like you know the car and the car knows you. We want you to feel like you want to take of your shoes and jump in the interior. Enter and it will open up to you.

When you want to sit down, the seats morph to a fitting seat. It recognizes you, just like you recognize him. It's a way of representing emotion of the magician. The harmony of the round bench should feel like a family table sharing your experiences together with people you know, facing each other and being comfortable.

But when being alone there is still a sense of connection with the car. The space is yours and you can have the full experience of the car. The shape of the benches is made slightly facing frontward so you still have can enjoy the view and get inspired.

Beneath the seats there are some lights, representing the uplifting character of the magician. The lights in the back indicate there is some space for putting your personal belongings.
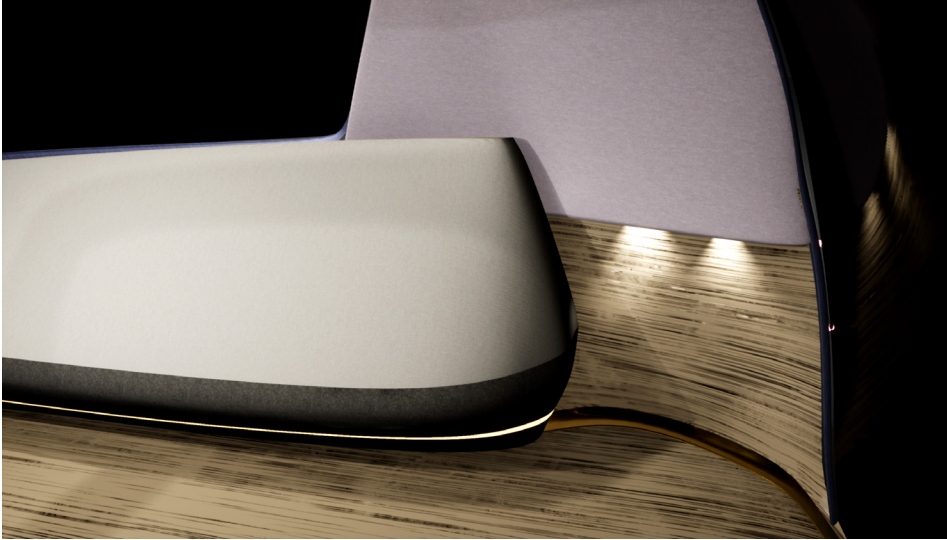
The real experience is on the inside.
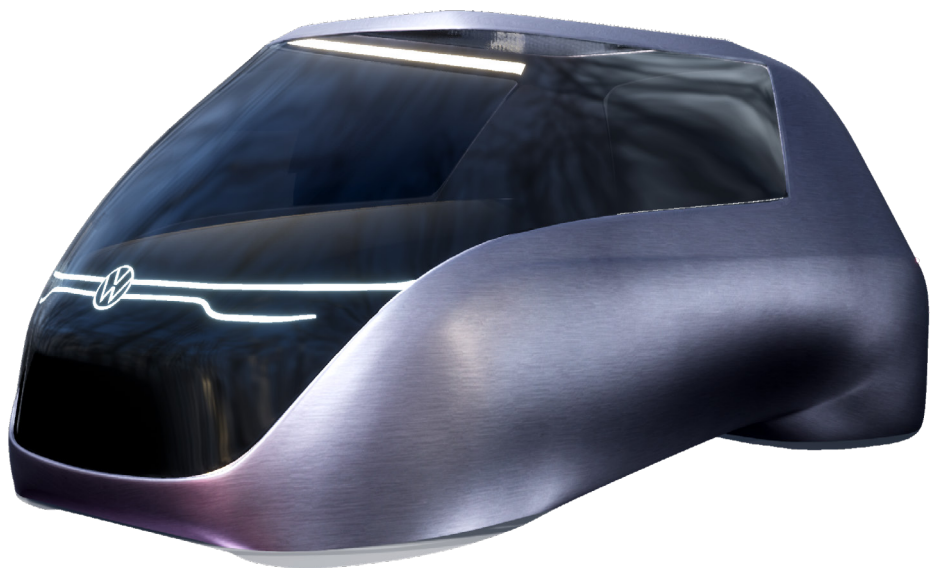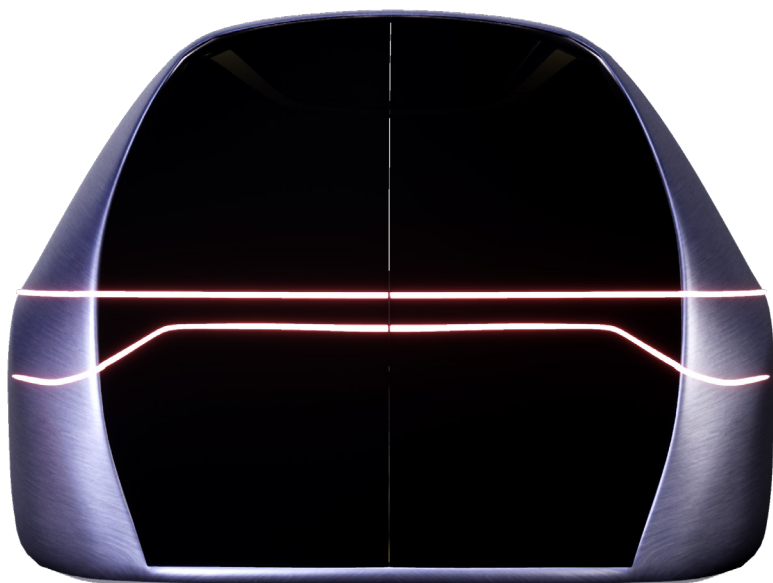
Main storyline

Long before the end presentation we knew that the story that we were going to tell, would be of major importance, so we started early on the focus points.

FIRST STORYLINE

Based on the four key words that we retrieved from our magician, we started brainstorming on what 'mysterious', 'inspiring', 'evolving' and 'harmony' meant to us. These personal stories helped us create real experiences that we then translated into a storyboard.

A movie was going to be presented at the end presentation for Volkswagen. Partly because we want to make people get the experience and partly because the project had to be sharable inside Volkswagen too. The main ideas were the need for a plot that eventually became the contrast between the in-car experience and the real world, the importance of an element of gamification in the movie and the aspect of human emotion.

This was also the starting point to come up with the decision on the magical features.
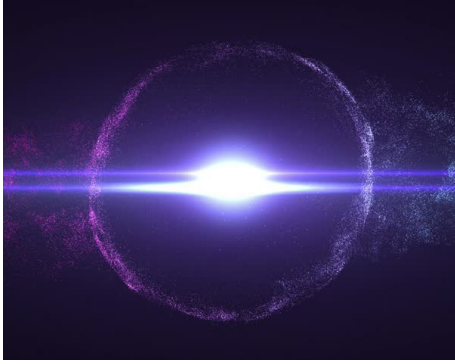
Part 1. "space"

We are in space. We see two particles floating around in space. They fly around a center-point and are coming closer until they collide with each other. The particles transform into a light-source. The light-source is slightly transforming into the silhouette of the car.The silhouette gets darker and "space" will transform into a very dark tunnel. The car is driving in the tunnel and sometimes a little bit of the car gets revealed by light reflection in the tunnel.

Feelings: Mysterious, building tension, curious.

Part 2. "the forest"

A short shot of the car leaving the tunnel very fast.

We are now driving true the woods. It's a misty environment. There are no other cars. We will get detail shots of some parts of the car. But without revealing too much. Some shots of the environment and some top-views of the road. There will be many views from inside of the car.
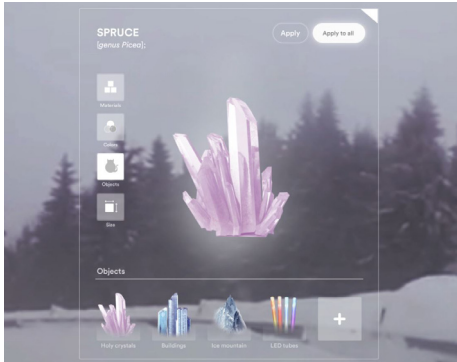
Feelings: mysterious, peaceful.

Part 3. "the suburbs"

The passenger will start to see more and more houses and eventually drive into the suburbs. (It's in the far future, so futuristic elements will be in there).

Feelings: giving the watcher something they can enjoy but not overload them with outside action.

Part 4. "The interaction"

The passenger will get into an interaction with the features inside of the car. It's a gameplay in a looped environment until the player is ready.

Feelings: the watcher/player will get to know the car.

The brainstorm on the storyline was one where we had a collective aha-moment. We got ourselves a goal.

Part 5. "the city"

In our story the car is driving to a destination in the futuristic city. There are many highly futuristic elements. We drive through a greener city with buildings in between instead of the other way around. The city should be We use music to make the feelings come out even better.

Part 6. "the get out"

The passenger is getting out at his destination. But when he opens the door, he will see the same building but in the near future. When he gets out, we will look at the car passenger walking to the building. Over his shoulder, we see a glance of the car. The car is closing and makes a closing noise. The passenger is laughing. The feeling he gets should represent "good old magician".

Feelings: the watcher of the video will realize that it wasn't in the far future but the car made the experience like that.

Storyline

The brainstorm on the storyline was one where we had a collective aha-moment. We got ourselves a goal.

This milestone was absolutely an important one for the further development of our process. By combining personal stories about what 'evolving' meant to us, about what elements the word 'mysterious' evoked, how we imagined the word 'harmony' and what 'inspired' us. These words four values we chose to be our key pillars.

How did we want our audience to feel this way? What could we use to make this happen. By putting all of our personal experience together and adding gamification elements, the decibels of our meeting went up. We got excited and started throwing in new ideas, the crazier the better. This was a good brainstorm. We separated the feasible ideas from the too

extreme ones and got the whole team together, hoping that our enthusiasm would be contagious. Luckily, we all agreed on the plot story and even came up with car features that would help us tell this story. This day was important, because it was the first time that we actually thought of ways to express and translate our project at the end presentation for VW.

FIRST LANDSCAPE SCENES

The focus in the end presentation lays in three different environment settings. Forest, village and city. To already explore the mood we want to achieve and try out different setting ideas, we create three different scenes in Unreal Engine 4 for testing.

All scenes should combine the mysterious feeling of the magician, paired with the moodset of a clear sunrise.

Scene One:
Street through a mountain forest

The gloomy morning effect is really clear in this one. The scene looks harmonic and quaint. It can be used as a base, but for the end result it needs to be bigger and leads into the urban area.

Scene Two:
Mountain forest leads into a village

The scene is too dark and too mysterious. The village leads into the valley, but the sunlight is covered by mountains. The scene would create a better mood if it would go from a darker place into a lighter landscape.
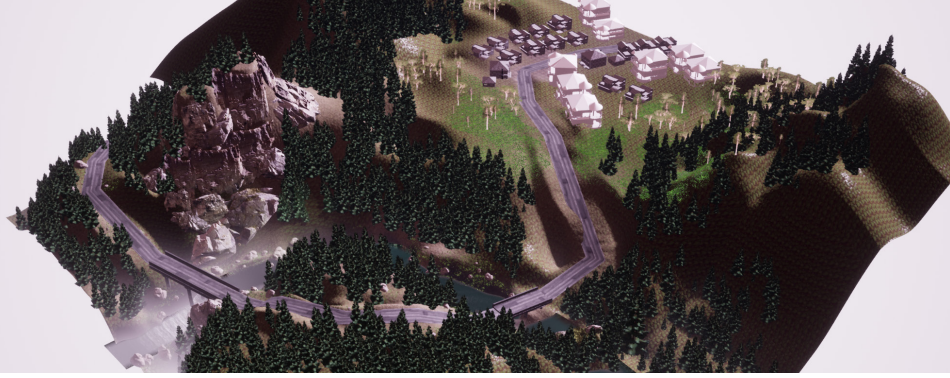
Scene Three:
Mountain forest with a river that leads into the village

The environment leads from dark to light. Although it does not go from the mountain into the valley. The river is a nice accent in the landscape and another good metaphor for the magician. The transition from forest to urban area is good. The lighting could be stronger and more colorful.

For the final result the landscape has to take parts from all three demo reels. The mood should be a nice warm morning, but still mysterious with fog in the air. The car should pass a river, while it is driving from the mountain into the valley. To create a nice transition should the track go from a darker place into a light scene.
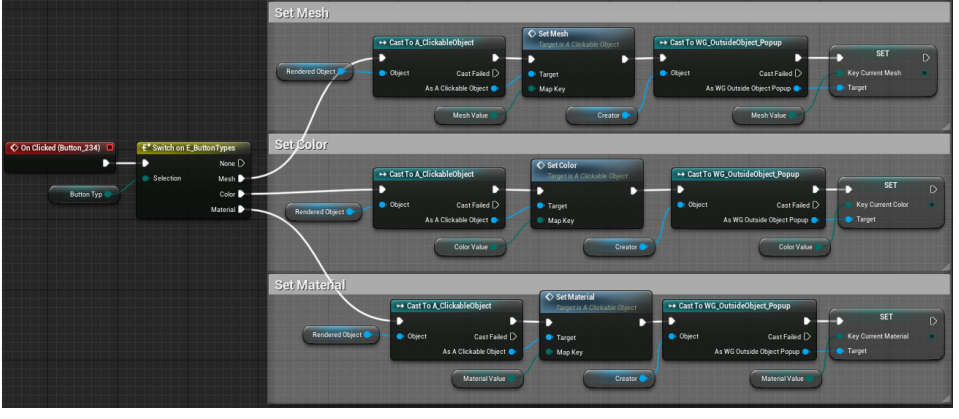
FIRST INTERACTION DEMO

We had a demo version of how we wanted things to look and work as regards to our interaction. The main idea was to take everyday objects and change them into another object, another material, make them bigger or smaller.

Our Unreal genius Stijn spent a lot of time on making an interactive demo where users can select an object and change it into something they want. Together with Volkswagen we thought that the transformation from a normal to a greener city would be the most interesting and VW related instead of changing everyday objects into magical, fantasy ones.
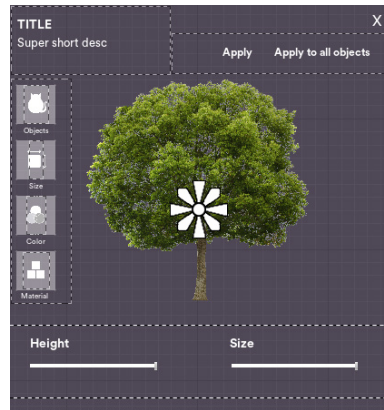
Development
Main storyline

END MOVIE DEMO SCENE

According to the previously explained storyline, the film starts in a dark tunnel. Once the vehicle reaches the end, it enters a mysterious forest. It's dawn, the road is covered in fog and the trees wave silently in the wind. The vehicle passes through this beautiful part of nature on its way to the city.

This part of the cinematic focuses on the exterior placed in an environment. After leaving the tunnel, we should feel mysteriousness, representing the feel of the magician. It also serves as a benchmark of nature and how beautiful the world can be. This allows the story to relate to this scenery when the environment changes to a more urban area.

Shots

Shot 01a: The cinematic picks up at the start of the forest scene. After exiting the tunnel, the car finds itself surrounded by nature.

Shot 02: As the viewer enjoys the landscape, the vehicle drives by. This gives them their first good look at the complete exterior. Later on in this shot, the rear outline of the car is presented.

Shot 03: A closeup of the front, highlighting the headlights with a dawn sky shining through the windows. The attentive viewer might also have a peak at the interior.

Shot 04: Next, a top view is presented from between the crowns, showing off the glass roof and allowing a good first look at the interior layout.

Shot 05a: In the last shot of the forest scene, the vehicle moves towards the viewer, presenting the full car from one of its best angles.

Shot 05b: To end the cinematic, the car drives off past the camera. The city awaits.

Feedback

The atmosphere throughout the cinematic isn't quite right. It should feel way more mysterious. Adding fog could help a lot with this. The car should still be the center of attention and not feel like an afterthought.

The lighting of the car has to be spot on. Some areas appear very dark. The lighting setup should be adjusted so that no areas are black. Nothing is ever completely black.

The grass is a little noisy and some plants only appear after a while. This affects the realism negatively.
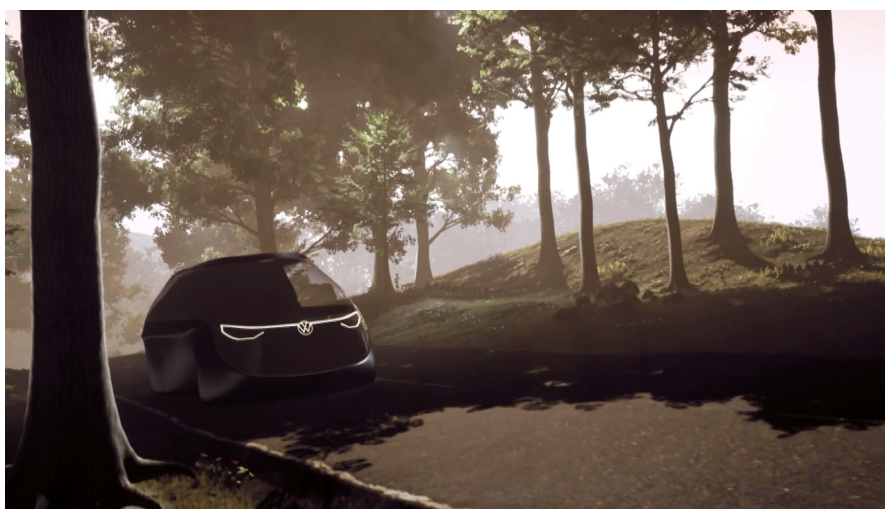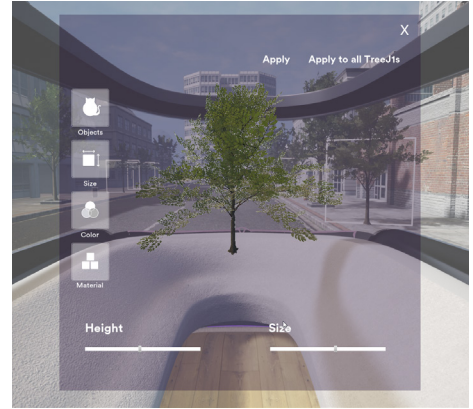
Interaction demo

After the forest the car drives into the city. In this part the focus of the story shifts from the exterior to the interior, and the features of the car.

At this moment we created a tech demo to show how the outside magic feature works. While the car is driving through an urban city, objects that can be selected are highlighted with selection boxes. Once selected, an interface opens that allows the user to customize this object.

Inside the interface, a variety of options are given, allowing the user to change the colour, material, size, height or even change it into a different object. The system is made to support changing these parameters on all objects, and makes it easy to add more objects or parameters to the system. When the user has finished customizing the object, he can apply the changes to that specific object, or to all of these objects in the world.

For the tech demo, we applied the system to the benches and trash bins found on the sidewalk, users could choose between these objects and trees, with various exemplary materials and colours, showing that all of the functionality for this feature is working.
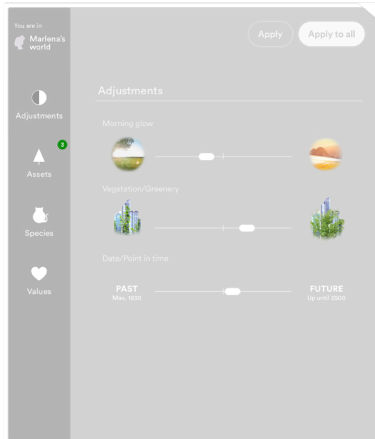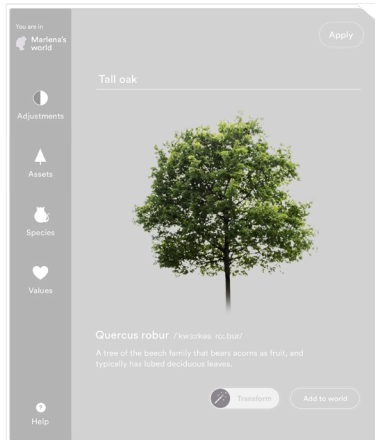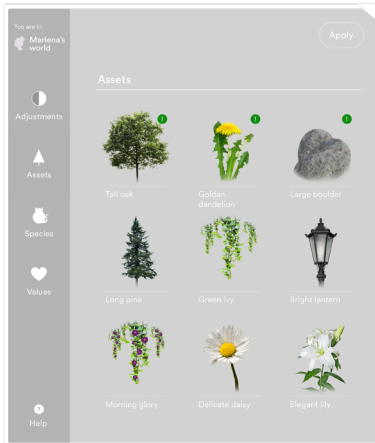
Further on in the project the interface became a tool that allowed you to make the world greener with a prettier glow and even changeable time settings. Besides that, objects as trees were saved while driving through the forest to enable you to use these to create a greener city later on.

What's next for this part?

With the system for the feature working, we can start dressing up the city and apply this system to all objects that make sense to be customizable. With the system we are also able to have different options available for different objects.

But the magician doesn't just facilitate making the world better, or more individual. The magician is always looking to help you build a better world by sharing his knowledge with you. In the final demo, the magician will guide you through the interface and give his recommendation for the best changes to make to each object. These hints will be given with particles surrounding the best choices, which we can implement once the world for this part is complete.

A well prepared presentation, a less prepared call and an evaluation, the ingredients needed for some mixed feelings.

Evaluation

A well prepared presentation, a less prepared call and an evaluation,
the ingredients needed for some mixed feelings.

Tuesday the 12th of December was another day marked red in our Collective agenda. The first big presentation with the aim of giving an impression on how our end product was going to look like. A lot was at stake this day, as we were going to be evaluated by our teachers, by the client Volkswagen and even by ourselves through a peer-to-peer evaluation.

For the content of the presentation we were torn between pleasing the client and showcasing how our end product was going to look like or pleasing the teachers by explaining our gained skills and process steps. Therefore, we decided to combine these two into a milestone journey, the same way as we do in this book. Important feedback was the lack of 'magician feeling' in our presentation. We got all the ingredients, but now we needed to make a mesmerizing and compelling dish with them. An issue we acknowledged and so did Volkswagen. After a less coherent presentation via Skype, we got a clear message from Wolfsburg through our grades. We were kind of disappointed to say the least which caused some mixed feelings.

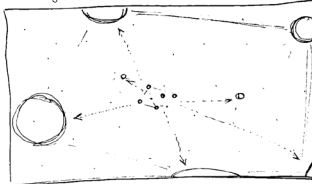STORYBOARD · MAGICIAN LAYER PEAK HOLE
(& personal stuff)
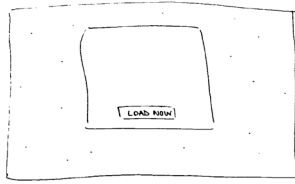
SCENE 1 - LOAD WORLD

- START SCREEN : BG · SPACE (MOVES)
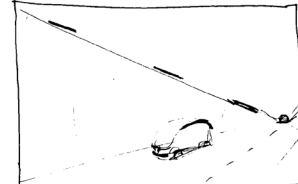- MAGICIAN   VI
  - LOAD WORLD BTN
  - TEXT ? NO.

SCENE 2 - BLACK HOLE SOUL

- SOUL IMAGE + PARTICLES
- PARTICLES CIRCLING
- CIRCLING IN SILHOUETTE OF CAR → SHAPE
- CAMERA MOVES CLOSER TO PARTICLES
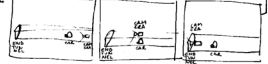- WHEN PARTICLES REACH CAMERA
  → LIGHTER
- UNTIL FLASH

FLASH

- WORDS POPPING UP FLOATING AROUND
- MORE CONNECTIONS & DOTS

↳ SAME PRINCIPLES OF DOOR OPENING ?

SCENE 3 - TUNNEL SILHOUETTE

- BUILDUP → SILHOUETTE TO REFLECTIONS
- CONSTANT LIGHT INTERVAL
- BEGINNING : LIGHTS ON OF CAR
- DIFFERENT CAMERA ANGLES
- WALLS OF TUNNEL
  - FADING (ROUNDED WALLS)
  - & LINES

FLASH

- DATA OF LIGHTS
- ROAD HE'S TAKING
- VISITORS TODAY IN TUNNEL
- AMOUNT OF LIGHT
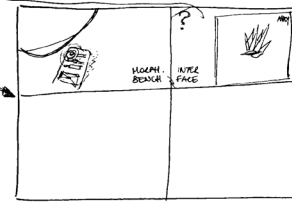- MOOD CAR
- SKELETON OF TUNNEL

END OF THE TUNNEL FOREST WITH BRIGHT LIGHT

SCENE 4 - CITYSCAPE

INSIDE
- MORPHING
- INTERFACE : CHANGING

BRIDGE FROM DISTANCE
TRANSITION ?

VIEW FROM SIDEWALK
HIGH FLYING
OUTSIDE   INTERSECTION

SWITCH BETWEEN

MORPH · BENCH   INTER · FACE

INSIDE

- MENU MORPHING OUT OF BENCH
- INTERFACE : THINGS HAPPEN & WORLD CHANGES
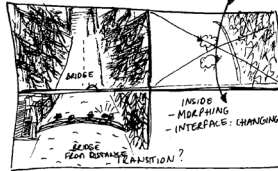
- BETTER TOMORROW
  - GREENER ENVIRONMENT
  - SOCIAL ASPECT ?

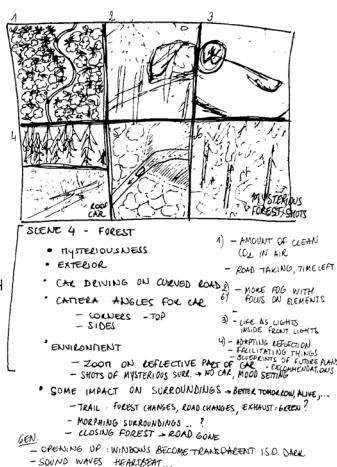- VISIONARY IN TRAFFIC (EXCHANGE KNOWLEDGE!) INFO ON VISIONARY, CONNECT & EXCHANGE

- SHIELDS UP WHEN GOING TO CITY → IN REFLECTION WE CAN SEE CITYSCAPE

- TO CITY : GO OVER BRIDGE TO CITY
- SHOTS FROM DISTANCE : SEE GREEN BRIDGE W/CAR DRIVING
- OVER BRIDGE : BUILDING BLOCKS
  ↳ CHANGE THESE
    DRIVE AROUND CORNER
    WHERE CITY HAS BEEN
    CHANGED ALREADY

GO INTO CAR SHOT

- DETAILS INTERIOR : MORPH.
- PART OF ANIMATED INTERFACE

TAKE ONE, CHANGE ALL
OTHER, CHANGE ALL
↳ SEE CITY CHANGING

SCENE 4 - FOREST

- MYSTERIOUSNESS
- EXTERIOR
- CAR DRIVING ON CURVED ROAD
- CAMERA ANGLES FOR CAR
  - CORNERS - TOP
  - SIDES
- ENVIRONMENT
  - ZOOM ON REFLECTIVE PART OF CAR
  - SHOTS OF MYSTERIOUS SURR. → NO CAR, MOOD SETTING
- SOME IMPACT ON SURROUNDINGS → BETTER TOMORROW, ALIVE, ...
  - TRAIL : FOREST CHANGES, ROAD CHANGES, EXHAUST → GREEN ?
  - MORPHING SURROUNDINGS .. ?
  - CLOSING FOREST → ROAD GONE

GEN.
- OPENING UP : WINDOWS BECOME TRANSPARENT I.S.O. DARK
- SOUND WAVES, HEARTBEAT...

1) → AMOUNT OF CLEAN CO_2 IN AIR
2) → ROAD TAKING, TIME LEFT
6) → MORE FOG WITH FOUS ON ELEMENTS
3) → LINE AS LIGHTS INSIDE FRONT LIGHTS
4) → MORPHING REFLECTION
  - FACILITATING THINGS
  - SEGMENTS OF FUTURE PLANS
  - RECOMMENDATIONS

END SCENE
- GET OUT OF CAR : DOOR OPEN & SEE WORLD
- CHILD HAPPY FACE, GRANDMA HAPPY FACE
- VISITS GRANDMA IN OTHER TOWN
- SOUND FADES A BIT : MORE ENVIRONMENT ~~SOU~~ NOICE

→ NEW SOUND OF ELECTRIC CARS IN STORY (SUBTLE)

- THEY MEET SOMEWHERE IN THE CITY
  - STATION
  - IN FRONT OF APPARTMENT
  - PARKING

- CHILD LOOKS BACK OVER SHOULDER
- ANGLE CAMERA FROM INSIDE CAR
  - DOORS CLOSE
  - WE SEE THE PEOPLE AS PARTICLES / AS SOULS .

MUSIC CREATION

To express the message of our movie better we needed some music. After an arguably reasonable attempt at producing our own music, it was clear that we needed professional help. This would lift the entire movie to a higher level.

We worked together with a friend of ours to create the exact musical sequence we wanted that matched our storyline. Starting off slow, the tunnel scene had to be sleek and subtle, while the forest scene had to be very open and peaceful. Then on the bridge, We started to build some tension for the magic moment of the movie. Next, as we enter the city, we are greeted by a happy, uplifting beat to showcase the Magician's most prominent feature, the outside magic. Finally, we ended the movie with a bang, followed by silence, allowing you to take a moment to take it all in.

FINAL STORY: 2ND LAYER

Having had the first big presentation we got a lot of unanswered feedback which we started to structurize carefully. Some remarks were small and relatively easy to fix, others were big ones that required our full attention and an open mind. Our story needed to be way more thought through to be able to give spectators the experience and feeling that we want them to have. We know all the things the magician stands for, but how do we communicate these?

To answer this crucial issue we started our 'new storyline'-brainstorm by erasing everything we decided up until now from our minds and asked ourselves the question: what is the most important message that we want to bring?

Gradually a new story was built with a very important addition: a double movie layer. Through a 'peephole' into this mystery layer we would give our spectators the feeling of attaining knowledge, discovering data and getting closer to the magician. This experience would become even stronger when they would be the ones that are handling the 'peephole'-controller.

Development
Main storyline

C
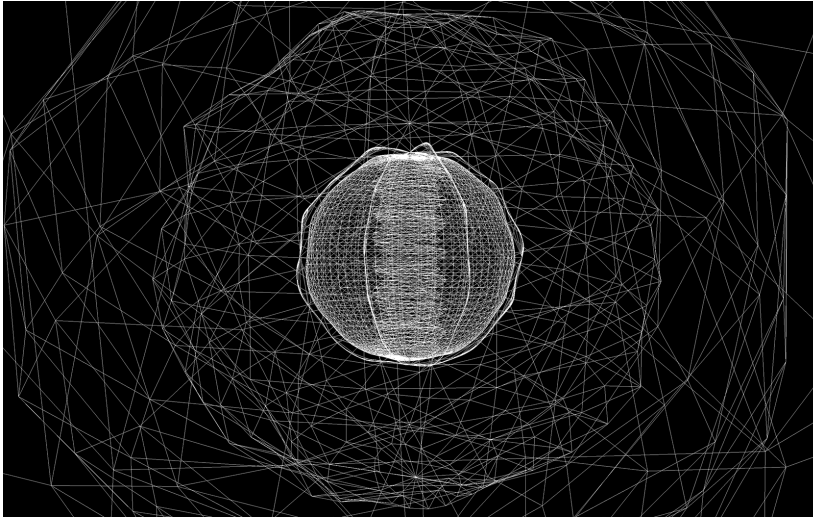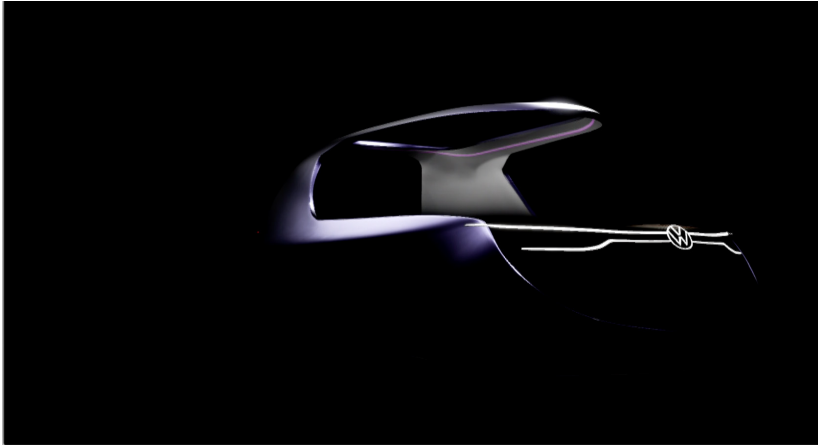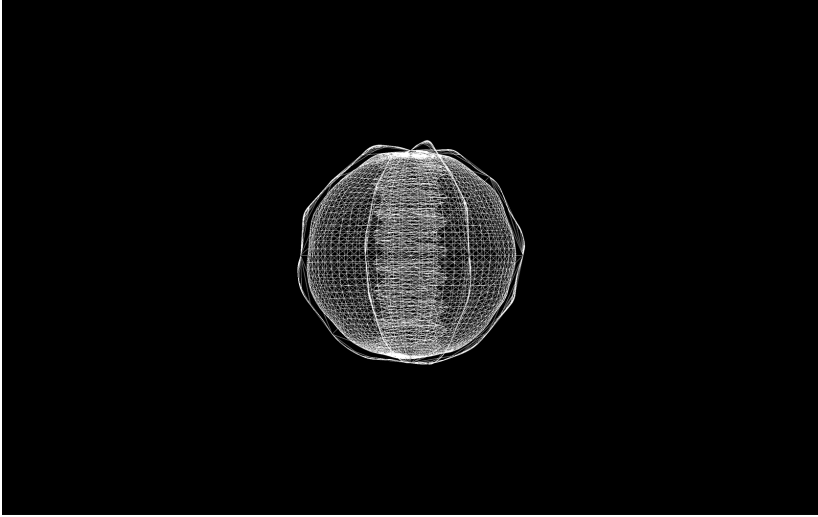
06

Final
presentation

Then suddenly we only had two more
weeks before the end presentation. The date
that seemed like in the remote future, our
deadline, was finally here! Good planning,
trust and communication had been very
important these last few weeks to get us to
the result we can proudly present you today.

Roadmap :

9:00
Pick up stuff for presentation

10:00
Everyone @ Budascoop, Start & test

10:01
Expo + Decoration + plants / table

11:00
Everyone @ Hall 5, Repetition

12:00
Everyone & Dries and Kim @ Hall 5, General
repetition + Feedback

15:30
Changing clothes

16:15
Welcoming the guests

16:25
Bavo @ Hall 5, Music / screen ready.

16:30
Bring guests to hall 5 (dividing places)

16:36
Bavo @ Hall 5, Lightman Ready
(last person to go in / close door)
Presentation guys ready.

16:40
Hall 5, Presentation Start

17:15
Walking public to mini expo. Explanation.

17:17
Hall 5, Cleaning the cinema

17:20
Explaining at expo, helping, answering
questions, offering drinks to public.

17:50
Bring guests to IDC. 30 min walk.

17:51
Rest @ Budascoop, Cleaning mini expo,
tables, drinks…

18:30
Everyone @ IDC, Start Team ADA

End product presentation

For the end presentation we really wanted our visitors to go home rather with a feeling and a memory than with something tangible. The focus of our presentation was on the experience.

INTRO

The presentation was held at Budascoop. They made sure that we could use room five, which was our favorite location for the end presentation ever since the beginning. The reason for this was that the cinema has a lot of added value to the experience we want our spectators to have.

A short presentation was provided with information on our process, our character and our end product. Next, we showed them our end product: a short film about the car with the magician incorporated into everything, from surroundings to music.

After that, we guided our visitors towards the bar of Budascoop where we set up a mini-expo. Information was laid down and the things we did in the past weeks were set up so that people could play, read or ask things.

SNEAK PEEK

Some captured moments and emotions of our presentation. We had an -almost- filled cinema hall, which was not that difficult because of its small size. But the people who came were mostly close friends who had no idea what we had been doing the past few months and were really interested in what we had to say.

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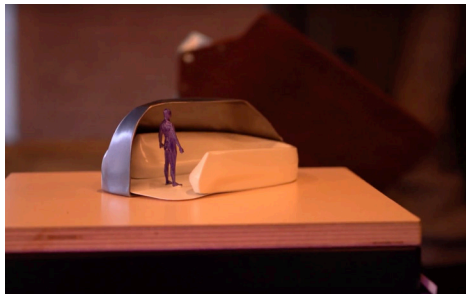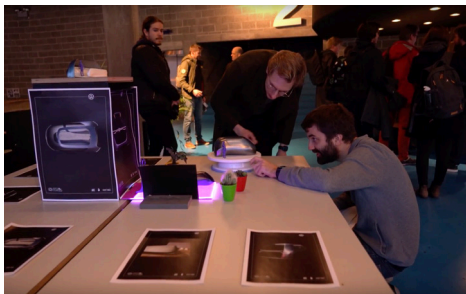
07

Look book

An extra chapter to end the book on a high note. We definitely had some fun this semester experimenting, networking, getting inspired and from time to time relaxing. After all, we did spend sixteen weeks together with strangers and created something totally new from scratch. How did we do this?
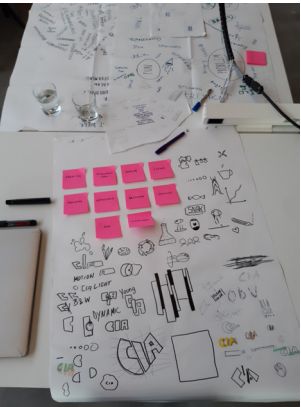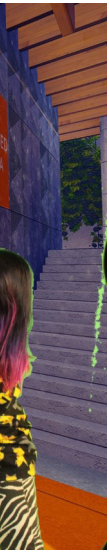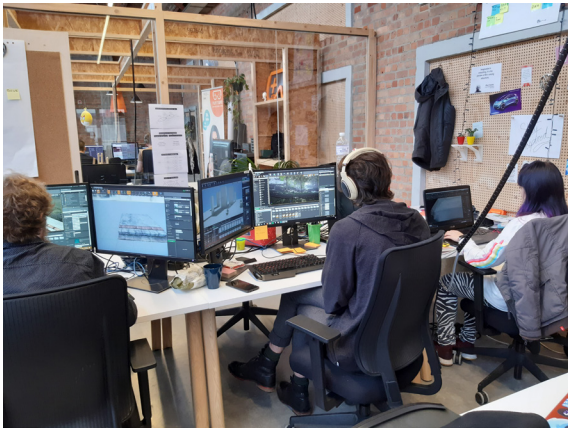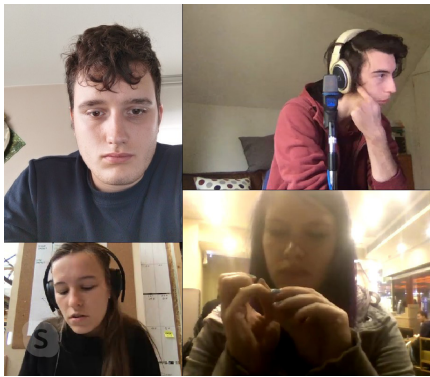
Entire Collective team: team Ada & team CIA

Team CIA

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