The Academy of Arts, Architecture and Design
Visual Arts – Master's Degree Course in English

Studio of Industrial Design

Master Thesis

By

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HOW THE IMPACT OF THE DENSELY POPULATED URBANIZATION PROCESS WOULD AFFECT OUR MEANS OF TRANSPORTATION?

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ABSTRACT

The topic of the project is about how the impact of the densely populated urbanization process would affect our means of transportation in the future. What kind of changes can we make to create an increasingly more sustainable world that would improve our quality of life? How can we make the time more valuable?

The accelerating global urbanization is causing a lack of space, time, and quality, especially in the megacities. Therefore, the project ‘Switchride’ scenario is set in 2040’s megacities. The concept system is based on demand, electrically powered chassis that can take different switchable bodies depending on the intended use while I choose to focus on a specific field which is the actual need for entertainment & sport. The project ‘Switchride’ is aiming to provide a system that offers for all users to help massive crowds to reach different needs by offering a whole new range of purpose-specific bodies of the vehicle, which the user can pick and book at any given time from the subscription services rather than personally owned ones.

As a future industrial designer, I believe that it is so crucial to explore new ways, rethink our way of consuming and questioning the world surrounding us. Therefore, the project investigates the changing landscape of mobility, growing urbanization and climate change to address these challenges in a more sustainable way and which methods could be used and learned.

Keywords: Time, Everyday Life, Rhythms, Demands of Mobility, Urbanization, Climate Change, Recreation

1. INITIAL THOUGHTS

1.1. Introduction to Relevance Topics and Inspirations

Firstly, I would like to shortly explain how and why I have chosen certain topics for the research process in upcoming pages regarding the main ideas of time and everyday life, urbanization, and climate change. In order to solve these future challenges, the planet can no longer rely exclusively on yesterday's solutions or ways of thinking. One way or another we need to question our way of consuming, producing and how we generally live. Therefore, it has become clear how design potentially can play a major role in this transformation to address these crucial challenges. I deeply believe that the power of storytelling and creating new visions for the future as a tool to will invite people into alternative scenarios.

Our time is more valuable than ever, and now everything has to become knowledgeable, so we can evaluate our time well. However, in that time machines also have started to developing and will be continue. Until now, design education initiatives provided us to create new solutions ''…from Bauhaus to Black Mountain College, and from Global Tools to the Sigma Group. These initiatives have not only helped design evolve, the question itself and push its own boundaries, but also education and learning in general.''(Boelen,2018)[1] They do not only provide new designs but also pushed themselves to create and invite people into alternative scenarios. On the other hand, the industry has an invisible face and we are hiding behind it. We push the television button every day but we are unaware that what is going on. The industry is creating new forms in the background and this world also has smart or watchable interfaces. Moreover, these are coming with various rhythms and patterns and we rename them. However, since machines are controlling us day by day that also brings with its fake news, mental issues and urgency of time. Now the industry is in 4.0, 5 is coming and this time it is moving very subtly. The industry does not use change symbols like a sharp knife this time and does not trigger the mobility of large crowds like a fait accompli. In particular, mobile phones and other bright technology products calmly, and step by step are supposedly let into human lives as if they were their own preferences. But now is the time for learning to learn. We need to understand the age, to learning to learn and to find new ways to tell in the global language. Instead, it is clear that the periods when those who are stuck in car painting with a marker will not have a chance anymore in the future. That's why we need to develop new ways to show ourselves globally. These are the steps of the mobility of industry 5.0, not 4.0.

If the new design type is developing or already developed, how can we spread and expand the design of our products to the world? First of all, it is necessary to make a decision such as being or not being in this system.

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[1] Jan Boelen, Curatorial Statement, 4th İstanbul Design Biennial, *İKSV - A School of School*, http://aschoolofschools.iksv.org/en/#section-new-about-detaillink, searched 20.10.2019.

When we talk about the concepts of time and rhythms for the design field, I think Henri Lefebvre made a significant explanation about these issues. ‘’Rhythm, for Lefebvre, is something inseparable from understanding of time, in particular repetition. It is found in the working of our towns and cities, in urban life and movement through space. Equally, in the collision of natural biological and social timescales, the rhythms of our bodies and society, the analysis of rhythms provides a privileged insight into the question of everyday life.’’(Lefebvre,1992)[2] I think that Time and Attention - Patterns and Rhythms are very noteworthy issues especially nowadays. Industry 4.0 and even 5 the development process makes it very clear. Thanks to the smart systems, these notions are particularly applicable in the home, at work, and on transport environments if we use them effectively. Until now, patterns and rhythms helped us to solve our problems and the mechanism of repetition has allowed us to create and learn some of humankind’s most ambitious achievements, yet it is still often regarded as a minor aesthetic and stigmatized method of learning. Therefore, I will utilize these concepts to measure and evaluate the time notion in my thesis.

Lastly, I believe that it is necessary to find new ways not only to comprehend the measurements of learning to learn to reach new forms in design but also to make recommendations and create new future concepts. The most interesting and exciting projects come from experimenting openly and freely, within a precisely designed framework.

The project will be focus on the need of entertainment & sport which is going to investigates time, people and their dreams and needs. I need to put the people and time into the center of design development. That’s why in my thesis, I try to understand their needs and analyze use cases and consider these challenges in order to the technical, educational and social significance. Regarding my educational background and focuses until now, my thesis will be an intimate study where I will analyze my drive to choosing this topic and how it has led me to create my works.

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[2] Henri Lefebvre, *Rhythmanalaysis: Space, Time, and Everyday Life,* Paris 1992, p.viii.

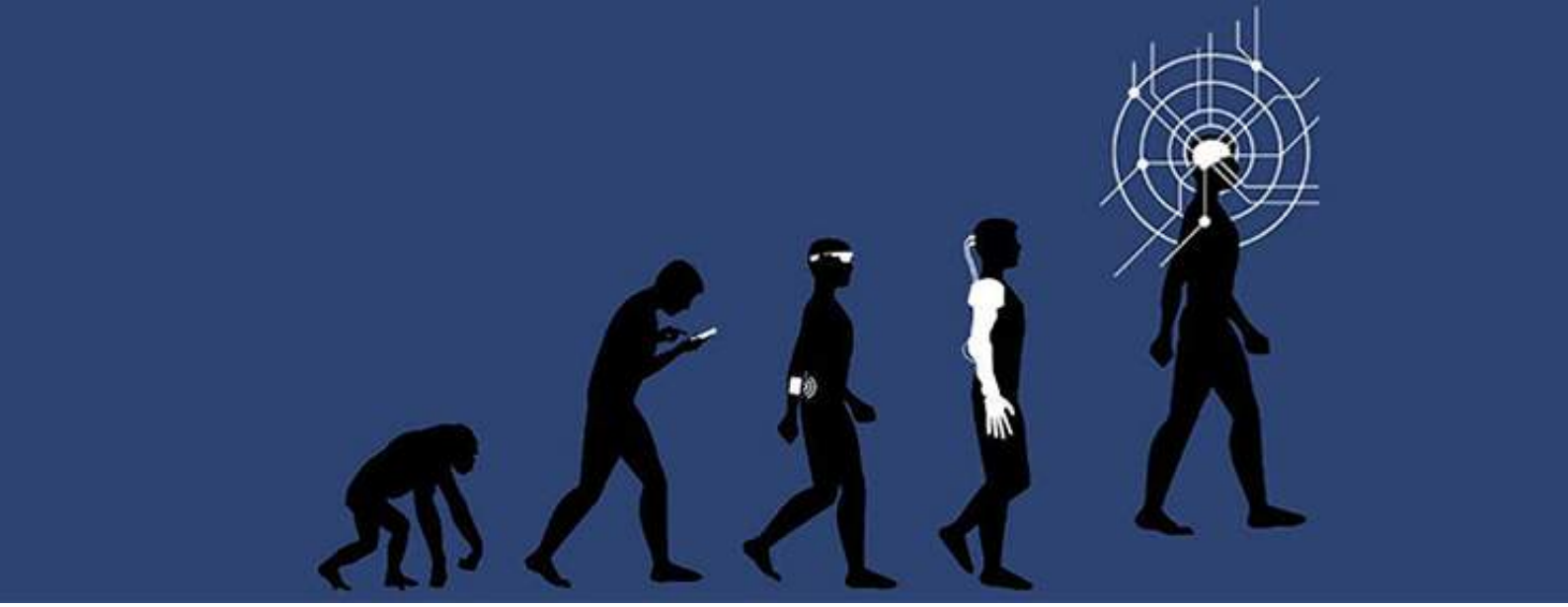

Fig. 1

2. RESEARCH & PROCESS

“How sad to think that nature speaks and mankind doesn’t listen.”

Victor Hugo, 1840

The designer practices time. They design the product to be designed according to the principles of adaptation to life and sustainability rather than consumption. Therefore, expectations are becoming important. All the data which generate the design can be chosen and practiced ‘as possible’ in accordance with the most useful participation. Creating futuristic concepts as a term is like walking on more unknown, dangerous roads. So, we've got to add the known ones to the formula first. We should be asking ourselves what we got. It requires a lot of focus at this point because we can fall into the trap of an individual perspective. So, by saying ' I think ' we can get into trouble. What would it be a good idea for us to do about it? First, we need to utilize resources and analyze how those resources exist. In this way, in the near and medium-term we can make firm steps on how conceptual ones can exist and become accessible in the future.

In my research phase of the thesis, I will first look into the topic of climate change and sustainability because it marks a great chance to rethink and question the world surrounding us. Then I will continue with the research of urbanization and future users in order to get a better understanding of the future concepts and what characterizes it. Furthermore, I will concentrate on the topic of new realities, the critique of everyday life and leisure, to understand how new sustainable approaches could help turn the development around us to see how the design would be influenced by a specific target user group and their needs.

Making this research will allow me to draw final conclusion on how my design could answer the questions. Therefore, I am considering these challenges to explore new ways of moving around would feed into our means of transportation that we live in.

2.1. Climate Change and Sustainability

While such a comprehensive climate change can appear to be an enormous, practically impenetrable challenge, it marks a remarkable chance to reconsider and question the world surrounding us.

How could we make changes to achieve a more sustainable world that at the same time would improve our quality of life, because time is tight and environmental change puts us on such an unforgiving deadline. But we could commit ourselves, tomorrow, new sources of energy based on renewable technologies. And if we did, challenges would still come. If we are serious about incorporating environmental needs into the economy, this means changing everything about one way or another we need to rethink our way of consuming, producing and how we generally live.

‘’The equipment and skills can be used to not only build different cars, and different car components, but to expand public transit and develop new transportation systems.’’(Klein,2014)[3] Furthermore, the obvious challenges like traffic, air pollution, living in megacities have an effect on mental issues. Day by day we want to create some time and explore something meaningful, valuable to relax and escape from some challenges that make us so much more stressful.

Therefore, this thesis will try to consider a different way of thinking, going deep, and questioning our basic needs. I will analyze regarding this background and by looking at how a method for change would allow for creatively new ways to how we are going to transport and find ways to explore new experiences in the future in order to understand users’ needs and dreams.

Fig. 2: Renewable Energy

[3] Naomi Klein *This Changes Everything Capitalism vs. The Climate,* U.S, 2014, p.107.

2.2. Urbanization and Future Users

The growing urbanization resulting in densely populated cities. ‘’… Understanding the key trends in urbanization likely to unfold over the coming years is crucial to the implementation of the 2030 Agenda for Sustainable Development, including Sustainable Development Goal 11, to make cities and human settlements inclusive, safe, resilient and sustainable.’’(United Nations,2018)[4] and they are therefore crucial in the transition into more sustainable ways of living.

Fig. 3: How is the global population distributed across the world

Therefore, we can truly assume that the world population keeps growing in the future. Undoubtedly, since the heart of the urban supply chain is transport networks, the great impact of transportation issues can be seriously impacted if we could not commit ourselves or embrace to create new things to supply new design solutions. ‘’… keeping our cities moving is vital to economic growth, as well as to improving the quality of life and increasing the prosperity and sustainability of our communities.’’(The One Brief,2016)[5] Setting up urban areas need to improve their existing, maturing to keep them moving today while anticipating the requirements of tomorrow. Financing new projects to improve transport environment, connectivity, mobility and network coordination systems, or remarkable significant human basic needs, to address these challenges, long-term planning and investment are crucial to help cities to meet the needs of the future.

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[4] United Nations, Department of Economic and Social Affairs, The Worlds in Cities in 2018, https://www.un.org/en/events/citiesday/assets/pdf/the_worlds_cities_in_2018_data_booklet.pdf , searched 10.12.2020.

[5] The One Brief, Urban Infrastructure: Keeping Economies and People Healthy, https://theonebrief.com/urban-infrastructure-keeping-economies-and-people-healthy/ searched 13.01.2020.

There are numerous challenges caused of course by rapid urbanization not only difficulties but also opportunities come up. Consequently, we need to be creative and work hard to make our cities more efficient, healthier and productive and the people living there, in order to get a better understanding of the future context.

Furthermore, there are many and diverse predictions regarding where humanity will be in the near and far future. ‘’… what are we going to do with ourselves? In a healthy, prosperous and harmonious world, what will demand our attention and ingenuity? This question becomes doubly urgent given the immense new powers that biotechnology and information technology are providing us with. What will we do with all that power?’’(Harari,2011)[6] Harari identifies four future predictions of how technological improvements will influence our lives in the near and far future. He calls attention to the concepts of happiness, immortality, and ultimately giving humans the divine power to create life. Harari predicts that society in the future will go towards a data-centric one, opposed to today’s human-centric.

Fig. 4

In recent years, almost all the secrets of the human gene structure have become known. The chemical and biological factors at the root of our behavior have started to become evident and usable information has been obtained. Sadly, it serves global capital under the name of ‘social engineering’.

In our age, there is a need for intellectuality in every field that requires continuity in social structuring. If our profession is dependent on many social, economic and technical fields, the limits of our enlightenment are expanding to include these fields. But if the rhythm of this field has passed into the hands of the industry and has become a necessary and only way to survive, it is possible to create an environment of anxiety and fear for the future. However, the most accurate action against these aggressive actions of others is not to give up continuity.

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6 Yuval Noah Harari, *Homo Deus: A Brief History of Tomorrow*, Israel, 2015, p.5.

2.3. New Realities and The Critique of Everyday Life

In recent years, the interest and development of technologies that continue to change the world. In our new way of life, thanks to the smart systems and what the control industry calls "now in this order", originality was displaced by mediocrity. The part of this thesis will now have a look into the technological terms and how new technologies allow and impact the human to physically and mentally feel these digital worlds and how future users can live with them.

‘’THE MODERN ECONOMY GROWS THANKS to our trust in the future and to the willingness of capitalists to reinvest their profits in production. Yet that does not suffice. [...while humankind’s use of energy and raw materials has mushroomed in the last few centuries, the amounts available for our exploitation have actually *increased*.]’’(Harari,2011)[7]

We are in the social media world. It is profoundly changing our behavior, culture and of course art and we are forgetting how to interact, debate or love each other. The digital environment or media has become the communication center of our era and a phenomenon that did not exist until this time in human history. Human beings have not developed a defense mechanism against the data of this new phenomenon. ‘’The remarkable way in which modern techniques have penetrated everyday life has thus introduced into this backward sector the unevenness which characterizes every aspect of our era. These advances, along with their consequences, are provoking new structural conflicts within the concrete life of society. ’’(Lefebvre,1958)[8] and will continue to provoke. ‘’While all these Sapiens have grown increasingly impervious to the whims of nature, they have become ever more subject to the dictates of modern industry and government. The Industrial Revolution opened the way to a long line of experiments in social engineering and an even longer series of unpremeditated changes in daily life and human mentality. ’’(Harari,2011)[9]

In the past, there were methods used to study step by step in broader times when the time and rhythm were quite slow and long. In the 80s, those methods began to leave us. The reason why was the computer and especially with the software was able to simulate it so we stayed a little behind. Because the adoption of the skills in the industry started to be preferred according to speed and numerical multiplicity rather than quality. Thanks to the simulators, we had the chance to test all the parts in one instant. At integration, the mistakes went down to a minimum. The aim of it to make those investments in the long-term was to minimize the mistakes and did not leave any missing space when integrating the parts. Like basic art education. One of the last generations is my age group (if I compare it to my country).

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[7] Yuval Noah Harari, *Sapiens: A Brief History of Humankind*, Israel, 2011, p.329.

[8] Henri Lefebvre, *Critic of Everyday Life I*, Paris 1958, p.8-9.

[9] Yuval Noah Harari, *Sapiens: A Brief History of Humankind*, Israel, 2011, p.347.

Therefore, I believe according to my educational background that is 'fragmented' will be much needed and preferred in the future. The only requirement is going to be not to be too stubborn to meet and use the next generation of digital media. If this stubbornness happens then our knowledge suddenly seems to be nothing more than fossil knowledge. Learning with the participation of simulation and digital media undermines the individual creative process and could turn the designer into personnel. Any segment of the target audience will ultimately be human and will require aesthetic creativity and human hand touch. Then the main industry remains in technology, the subsequent sub-branches need those who learn to improve their hand skills as designers. It is clear that the periods when those who have only developed the learning skill of the industry will not have a chance anymore in the future. That's why we need to develop new ways and improve ourselves to show globally. After all, since there is a general rise in the sub-base, it is necessary to hold on there, which means speaking the language of today.

However, we are learning step by step, especially the countries that have problems in the state settlement that take critical damage and will continue to receive. The digital environment replaces the role of a model of concepts that we lack and gives us orders. Sometimes it comes directly to us and sometimes with sub-messages in a planned way. We are trying to control our gaps professedly with somehow new truths in despair, with desensitization, de-identification, and concepts that are decaying. If the existence of new media is inevitable, the necessity to use it correctly develops alongside its own mistakes. Just like all the other examples that we follow to find the right way after experiencing problems in the spread of all innovations to society like fire, the wheel, writing, cinema, TV, internet and in the present like smart systems. The technological developments we have experienced in the last 10-15 years have reflected the fastest changes in human history. Digital media showed us almost everything it knows, transformed it into a form and sold it. We encountered unprecedented speeds in the field of communication. As we know the latest technology products that after 3 months are turning into trash and will continue like that because rhythm is a real impulse in human nature. Cultures defined differently, but the rhythm did not change if we do not experience a physiological change in the future. However, basic constants must be in our lives. Reality does not change! People think beauty can change according to the person. It actually does not change according to the person. people's perceptions can change over time. Like reality. In fact, these changes are related to the percentage of participation in our lives as they become essential due to our acceptances or dominances while industry takes its own steps.

We can say that we already passed the process of human - machine interaction, now we are talking and living with the times of IoT. (Internet of Things) Machines have experienced and knowledge about human beings due to data which they received from us every moment. The percentage is not bigger yet but more than expected ordinarily. In accordance with this data, I can point out that the probability of the process of the machine - human relationship will be very high. In this circumstance, I am asking myself, how can we take part in the creation of this process as a future industrial designer 20 years later? How can we part of the design process of it, how can we express and state the thesis if the machine creates such a process? We used machines whenever we wanted. If we do not want to buy a car, we do not.

We have preferred it. Are machines going to say or ask or control us, talk to us or even more choose us? Actually, Facebook or Alexa doing it. They're collecting and listening to our data. But what if that is about to change? What if machines are going to react and say that ‘’Hi! I was evaluating your data and according to your lifestyle, you are in need of something like me! If you going to approve that I am coming to you! But the question is can machines choose us? Why do I think that? Because we are giving so much information to these databases and since we will continue to do that, machines will undoubtedly use it and they are already doing it. My current theory and thesis about this topic might go as far as the machine can choose humans. Therefore, it is important to talk about those problems of everyday life and studies have become increasingly important in the field of industrial design.

I analyze these topics in my thesis text until now and to get into my project detail I would like to analyze the actual impact of everyday life and quality of time to make a bridge between all these complex topics and my project to see how the design would be influenced by a specific target user group and their needs.

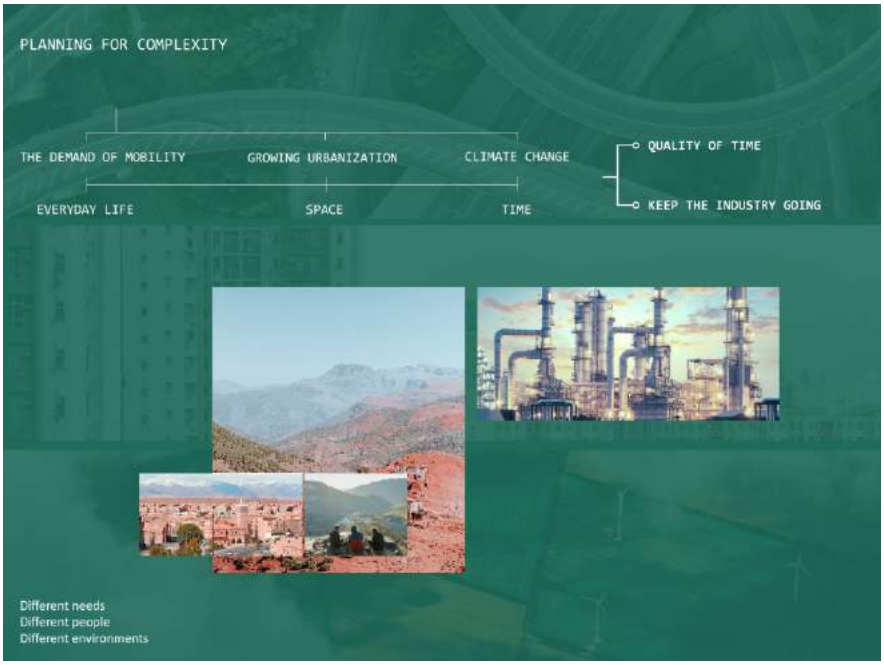
3. DEEPENING IMPACT OF THE NEW MOBILITY

3.1. Analyze the Actual Impact of Everyday Life and Quality of Time

The pandemic situation has changed everything. I had time to observe our basic needs and question the world more deeply in these strange times. This process also has been reflected in my project inevitably and I will try to show my creative process from now in my text.

We are witnessing processes that separate people, such as the pandemic. However, it is inevitable that massive crowds will grow in the needs of sports, entertainment and socialization and be open to new suggestions. I believe such social needs are an important and will improve the quality of life in the next 20 years if we can pay attention and analyze. We can maintain this in a more controlled manner by offering new system proposals in the long-term so we can evaluate our time well. ‘’…new concepts of emergent planning and “planning for complexity” — considering strategies that set up comprehensive community plans to flexibly react to multiple future scenarios. ’’(Schaper,2020)[10] As a designer, we have new missions that need to be analyzed carefully to increase our quality of life.

But now, with the process emerged by the pandemic, I think we have a unique opportunity to adopt new behaviors and expectations especially in the field of design. We can collectively orchestrate strategies to lift us into a new era of purpose-driven improvement.



[10] Oliver Schaper, Defining the Future of Our Cities: Five Areas of Opportunity for a Post-Pandemic World, *https://www.gensler.com/research-insight/blog/defining-future-of-cities-areas-of-opportunity-post-pandemic* , searched 05.08.2020.

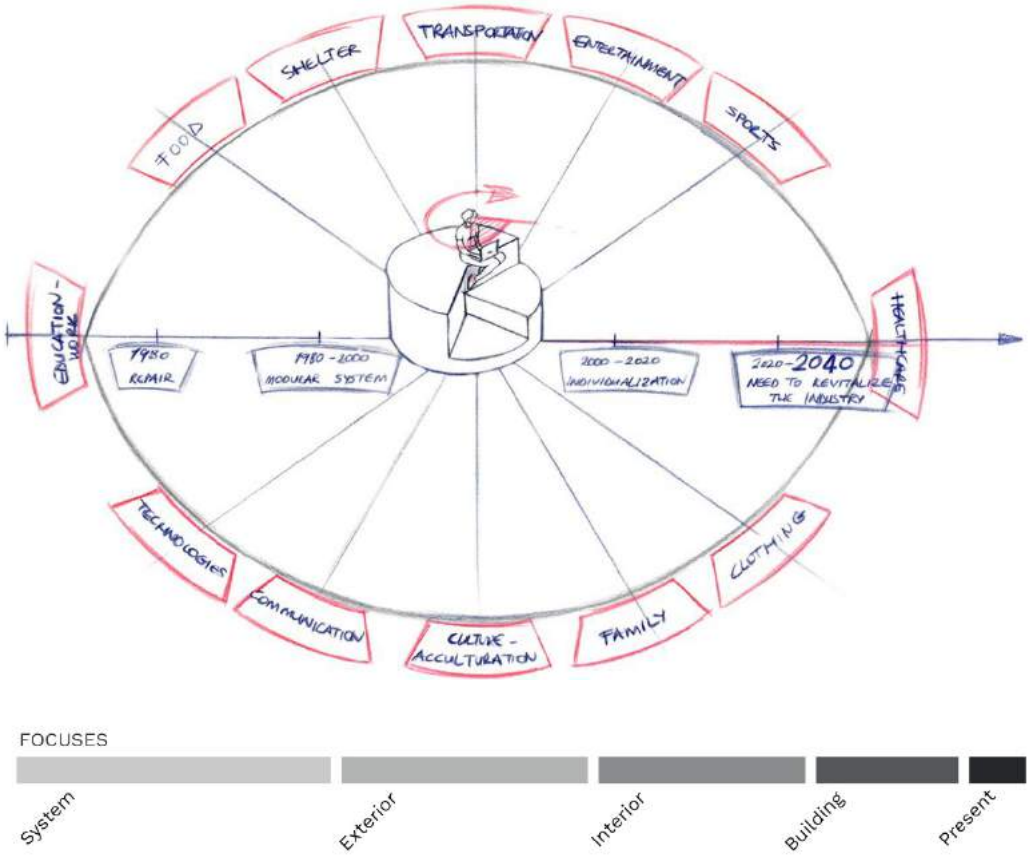
4. CREATIVE DEVELOPMENT

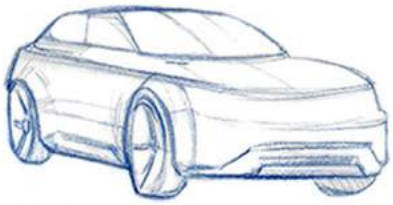
4.1. Project Goals and Visualizing the System Components

In my creative phase of the thesis, I tried to investigate the needs of people in graphs and specified my field to work on.

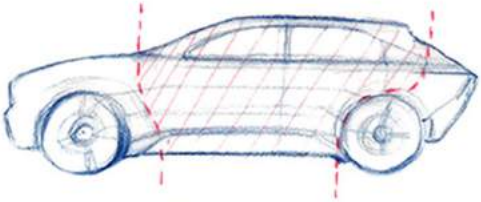
The accelerating global urbanization is causing a lack of space, time, and quality, especially in the megacities. In my thesis project, I am paying attention to these crucial concepts like improving our quality of life and keeping the industry running because we are facing a problem that is called loneliness and cannot find our time rhythm caused by the growing urbanization and technology. Consequently, in the long term, transportation must be optimized, to save time and improve our quality of life. Therefore, transportation will be one of the most appealing needs to reach different solutions.

I choose to focus on a specific field which is the need for entertainment & sport. The project 'Switchride' is set in 2040's megacities to solve tomorrows' challenges and is aiming to provide a system that offers a new chassis platform for all users to help massive crowds to reach different needs by offering a whole new range of purpose-specific bodies of the vehicle which the user can pick and book at any given time rather than personally owned ones. Within this subscription service 'Personal Use' is considered a branch on its own. On the other hand, offering this business model provides an opportunity for wider spectrum bodies of vehicles, which can fulfill a broader range of people's specific needs such as commercial or social solutions purposes. It will be the design of this vehicle, which will be a personal use cases and the focus of this thesis.

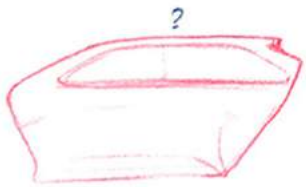




CARS NOW
2020



CARS IN THE FUTURE?



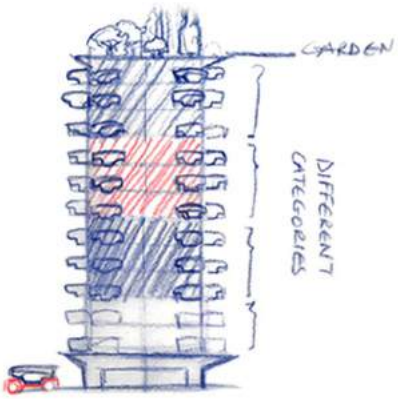
CAR BODIES?

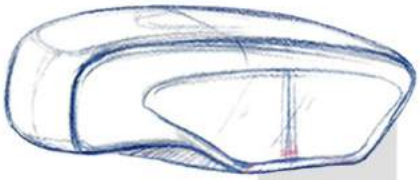
FUTURE
2040

SUBSCRIBED SERVICE

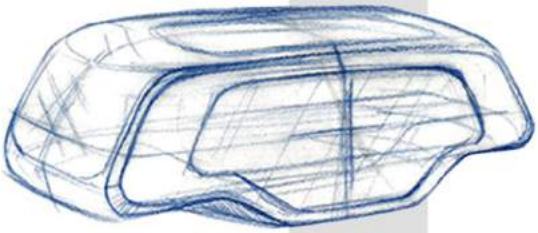
SHARED NEEDS BODIES
EOS

3. SOCIAL SOLUTIONS

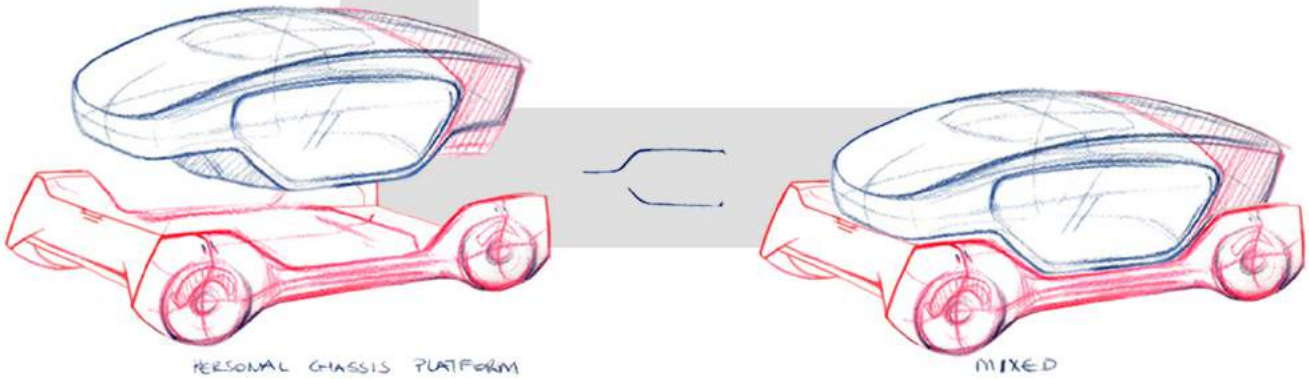




2. COMMERCIAL



1. PERSONAL USE

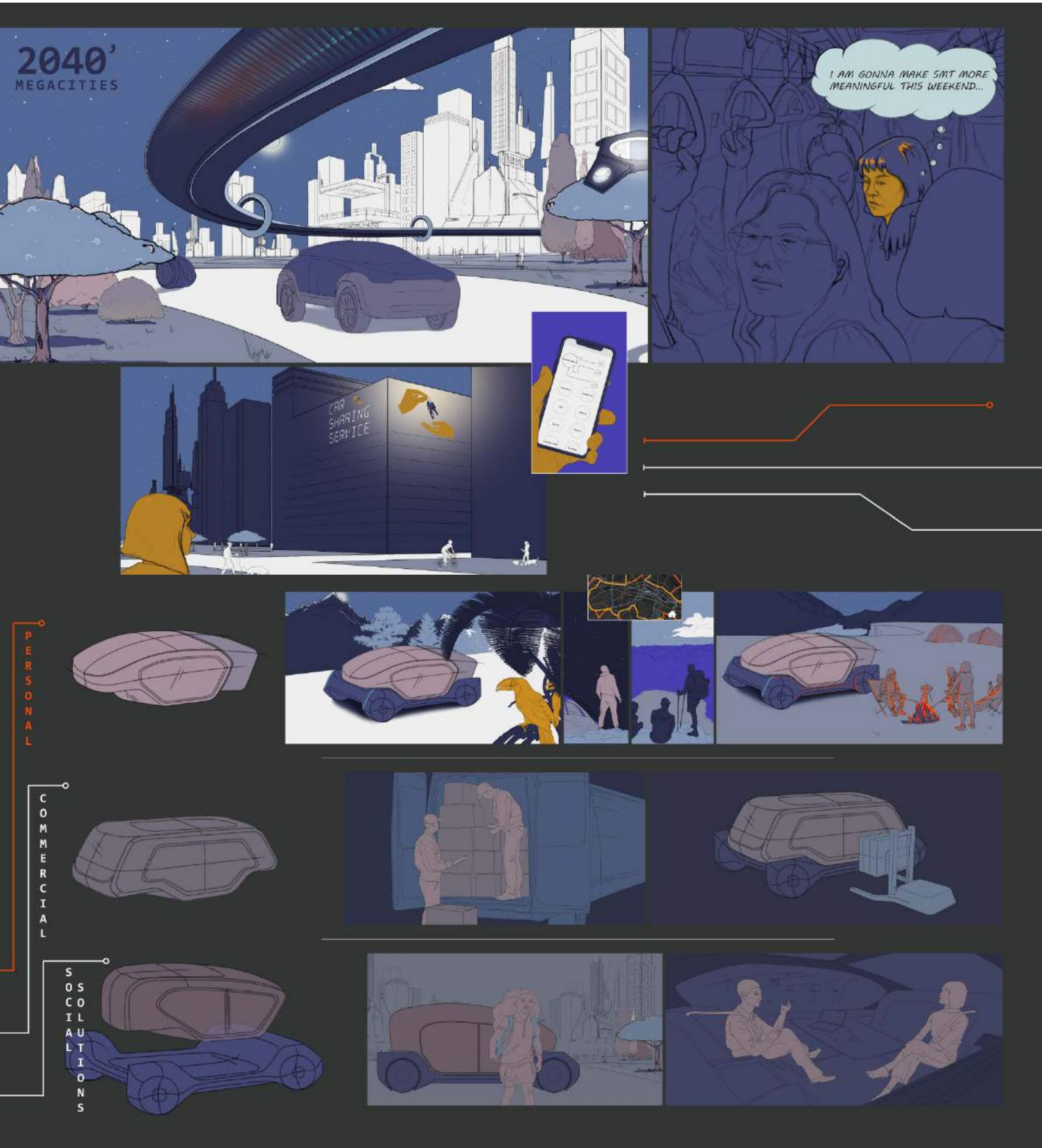


PERSONAL CHASSIS PLATFORM

MIXED

4.2. Storyboards and Service Overview

Making storyboards helping me to explain the scenario and understanding the use cases and their needs. The following storyboard explains how the system works and how people uses the concept. It is demonstrating how people's everyday life can be changed and supported by the different bodies of the vehicle easily.



4.3. Materials

In a globalized world, the role of the personally owned passenger car as the most used way of transport has been changing constantly and attempted to decrease.

Climate change, infrastructure, and new generations will depend on new solutions and are no longer able to adapt to yesterday's private cars in today's world. Minimizing materials' impact is a powerful tool for fighting climate change. Besides, the automotive world has been seeking to find reliable solutions to this problem during recent decades. It is good to be aware of their evolution, as they also have a significant effect on vehicle design and architecture solutions.

Reducing greenhouse gas emissions, alternative power sources such as natural gas, hybrid, and electric motors have launched in the industry and give an excellent example of what the future of cars can develop into. New materials approach and advanced vehicle concept designs like this will develop by feeding each other, at the same time increase the persuasiveness of the concept.

This project enables on-demand, sustainable, and active movement of people and goods and applies an innovative concern to meet the needs of cities. The project ‘Switchride’ is based on a self-driving, electrically powered chassis and a sizable solar-powered roof technology that can take different switchable bodies depending on the needs of people. Moreover, advanced material solutions could be used to the bodies and its interior to make the roads safer for all users, for example, using haptic feedback technology can be applied to detect health conditions.

Fig. 5

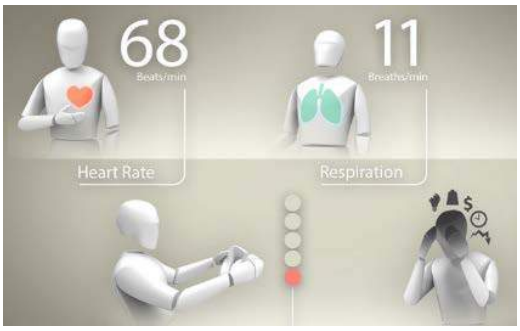


Fig. 6

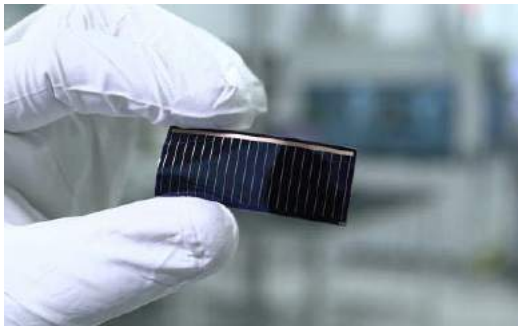


Fig. 7

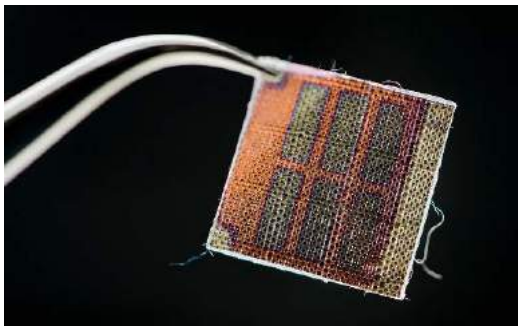


Fig. 8

4.4. Moodboards and Inspirations

With Moodboards I explored the styles, details like colors, technologies and similar systems to my concept I tried to combine with my design. The system components of my concept design were easy to understand and open, but combining the chassis with the body of the vehicle brought me a different type of challenge.

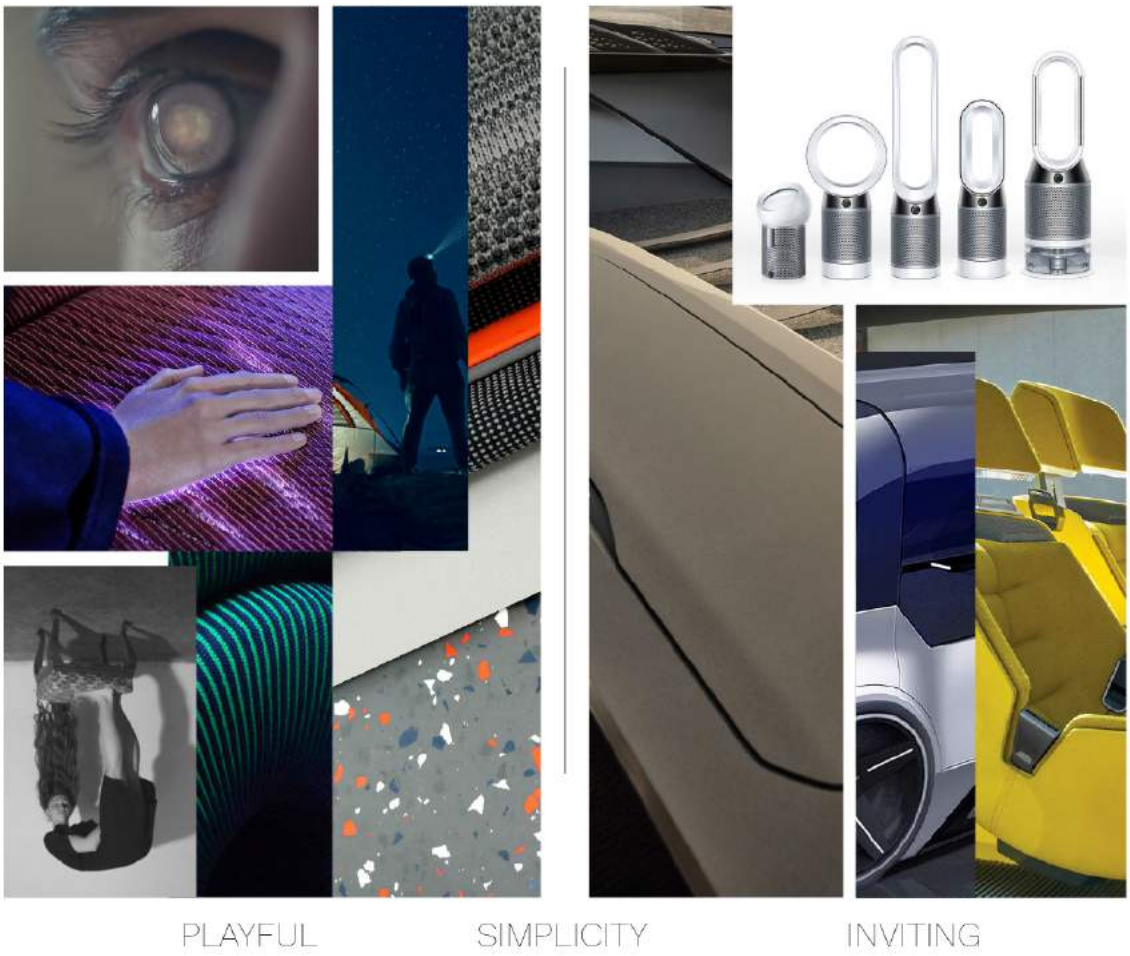
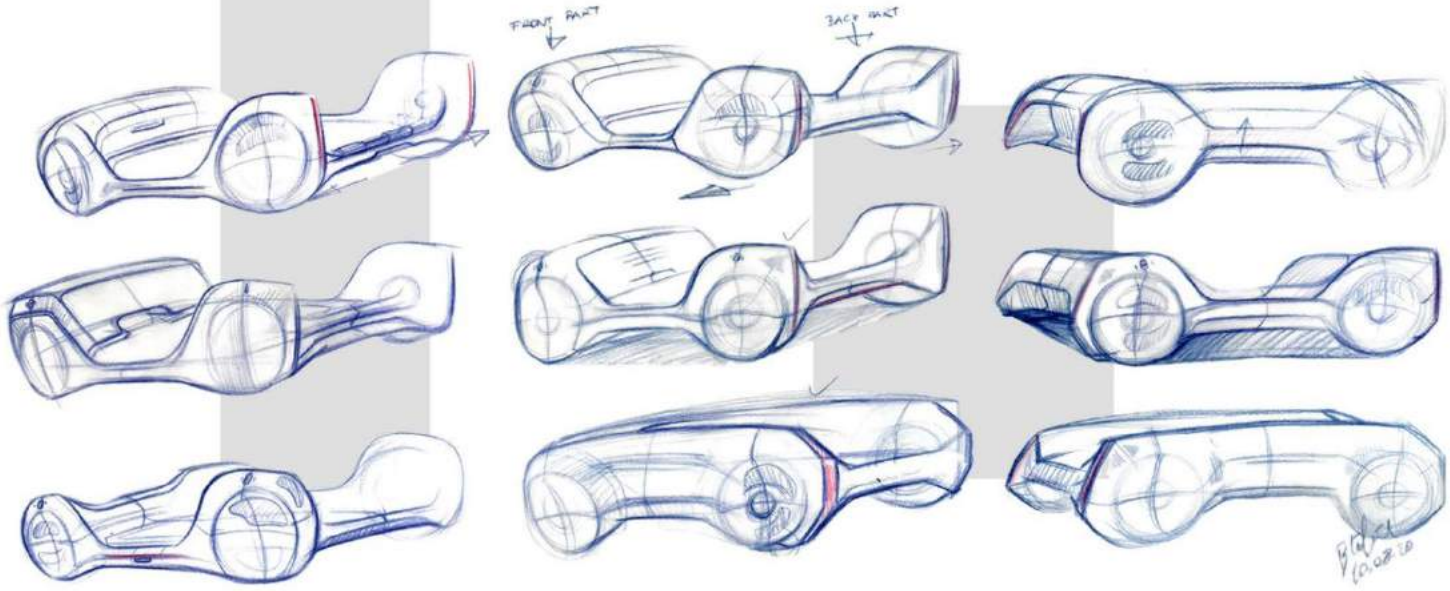
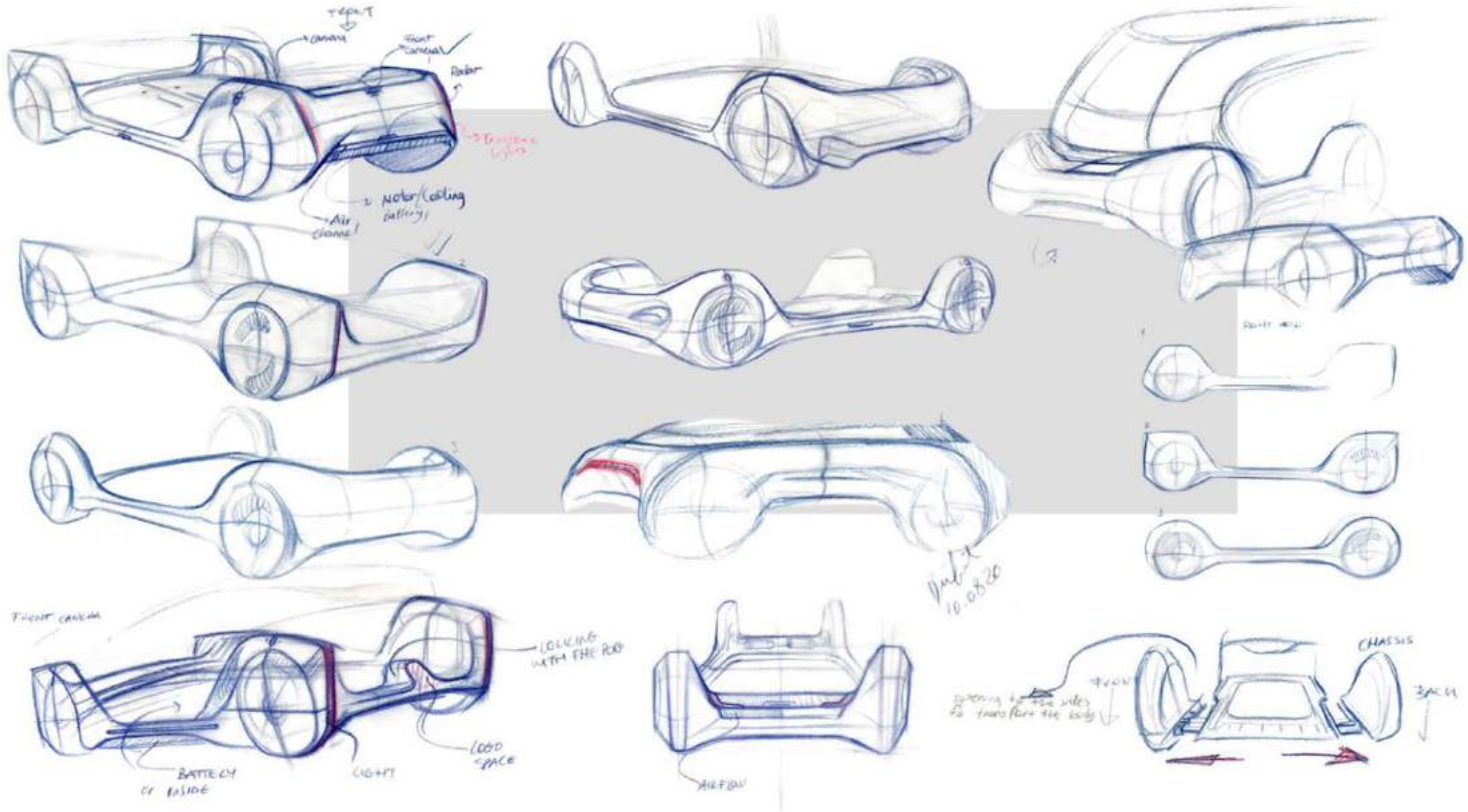


Fig. 9



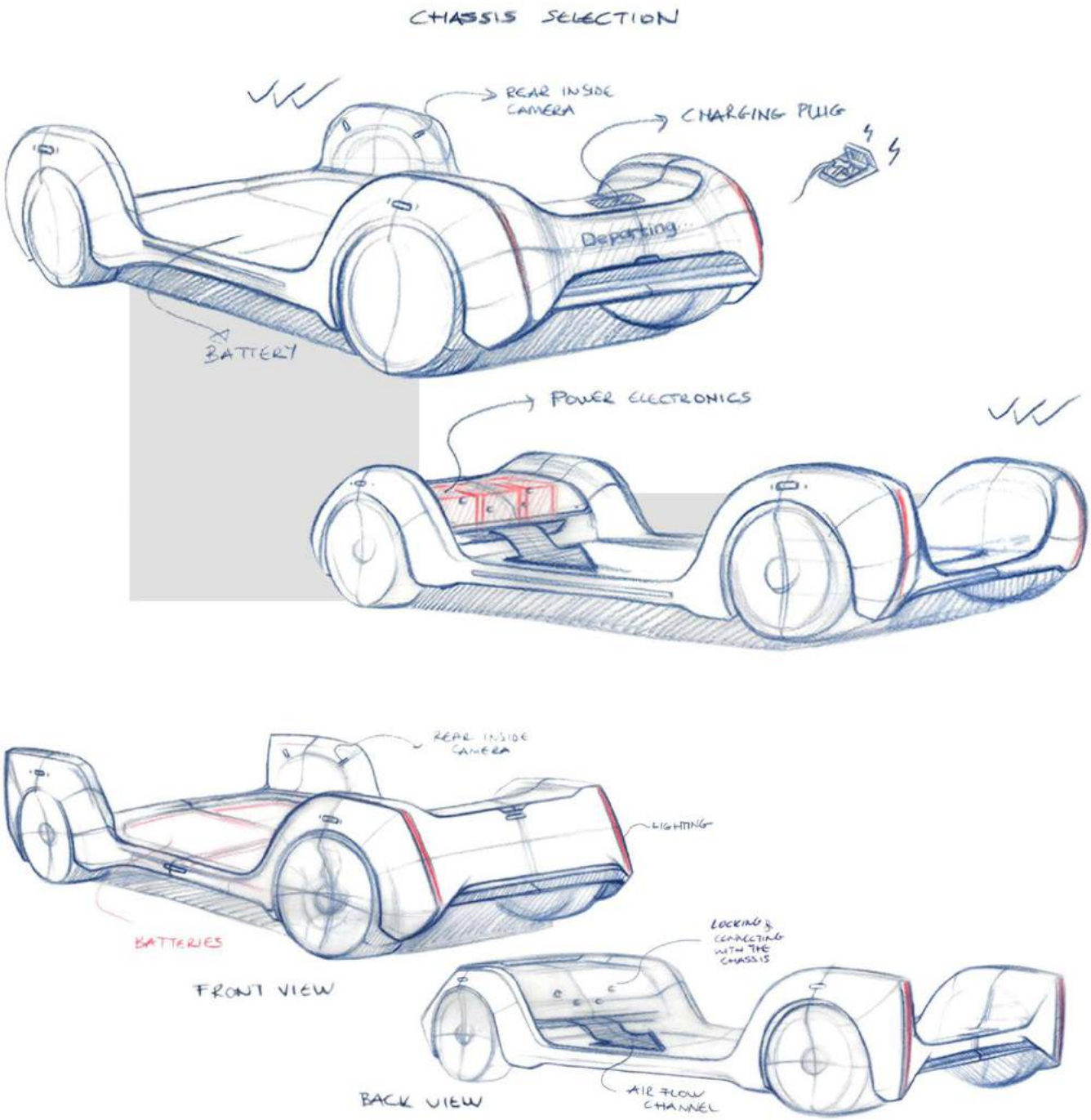
4.5. Initial Sketches for the Chassis and the Main Body of the Vehicle

The project ‘Switchride’ hereby links the digital world with real obstacles, in order to create new notions of what a travel experience could be in the future. I am offering a chassis platform system that makes it possible to remove the uncertainties between 2020 and 2040. The concept system is proposing to outfit with the other bodies of the vehicle depending on the occasion. Furthermore, the project investigates how subscription-based services could help the needs of people and the future needs of more sustainable and more compatible experiences while questioning time, space, and everyday life.



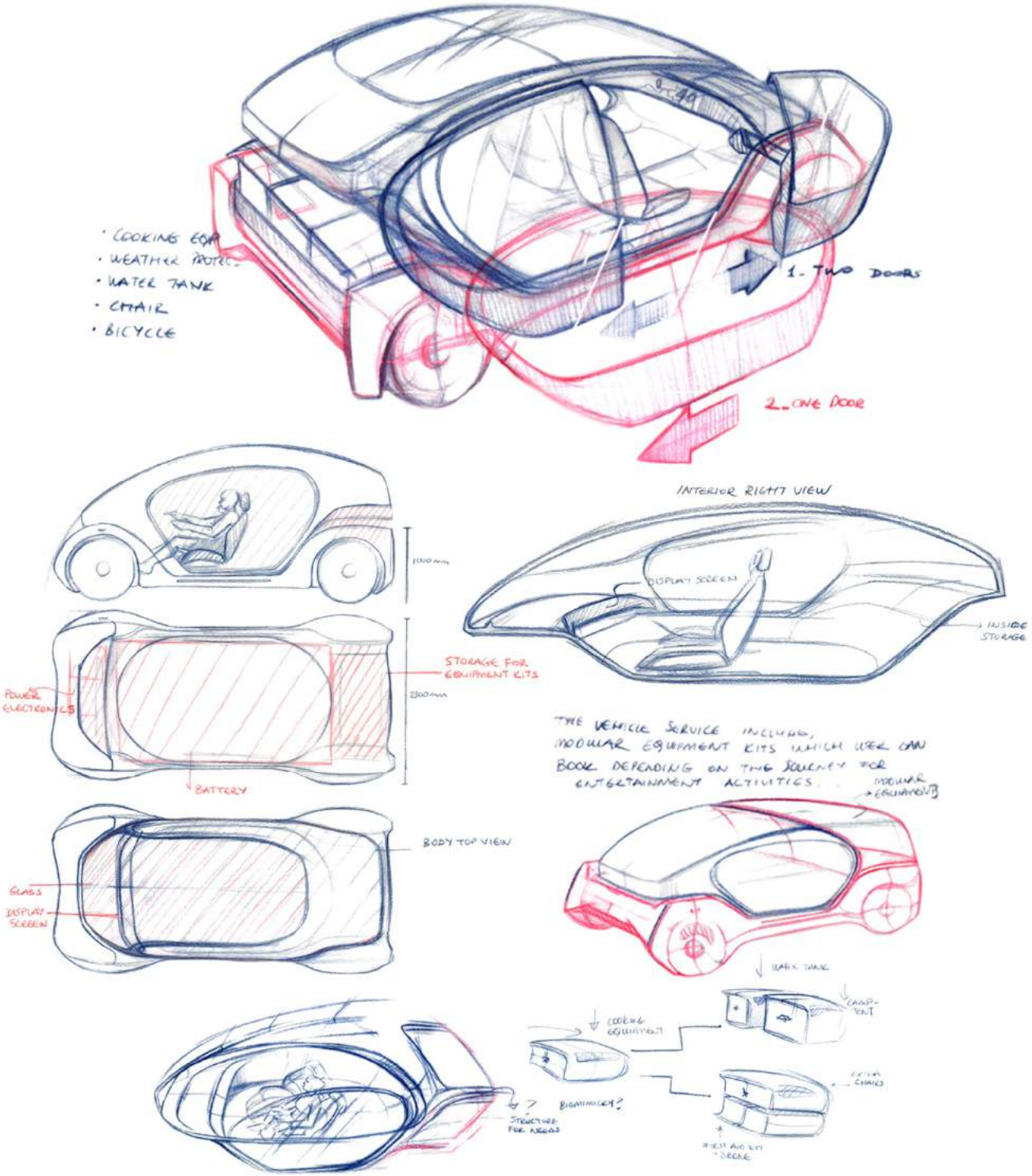
The ideation took its starting point by classic pen-and-paper sketching. Since the concept is partly about proposing a chassis base, the intention was to implement the clarity and simplicity in the early stages of the ideation. The original design structure was born while sketching basic shapes like squares and ovals. Naturally, the sketching stage took more time to be able to make my decisions right. The aim here was to provide the balance between the back and front part of the chassis and distinguish them.

Today, we are living in a time that is fragmented and limited and open to meet new challenges. However, the masses need to understand, experience the new proposals to engage the world in the future. There is no doubt that among the masses, some of the most important needs of future megacities will be recreation, entertainment, and sports fields while tackling these challenges. The essential part here is that proposing future concepts should help us not to bring any new worries, obligations, or necessities.



The term is used as a means of personal transportation for shorter trips and activities such as camping, going to the beach, personal active mobile sports, or personal workplaces.

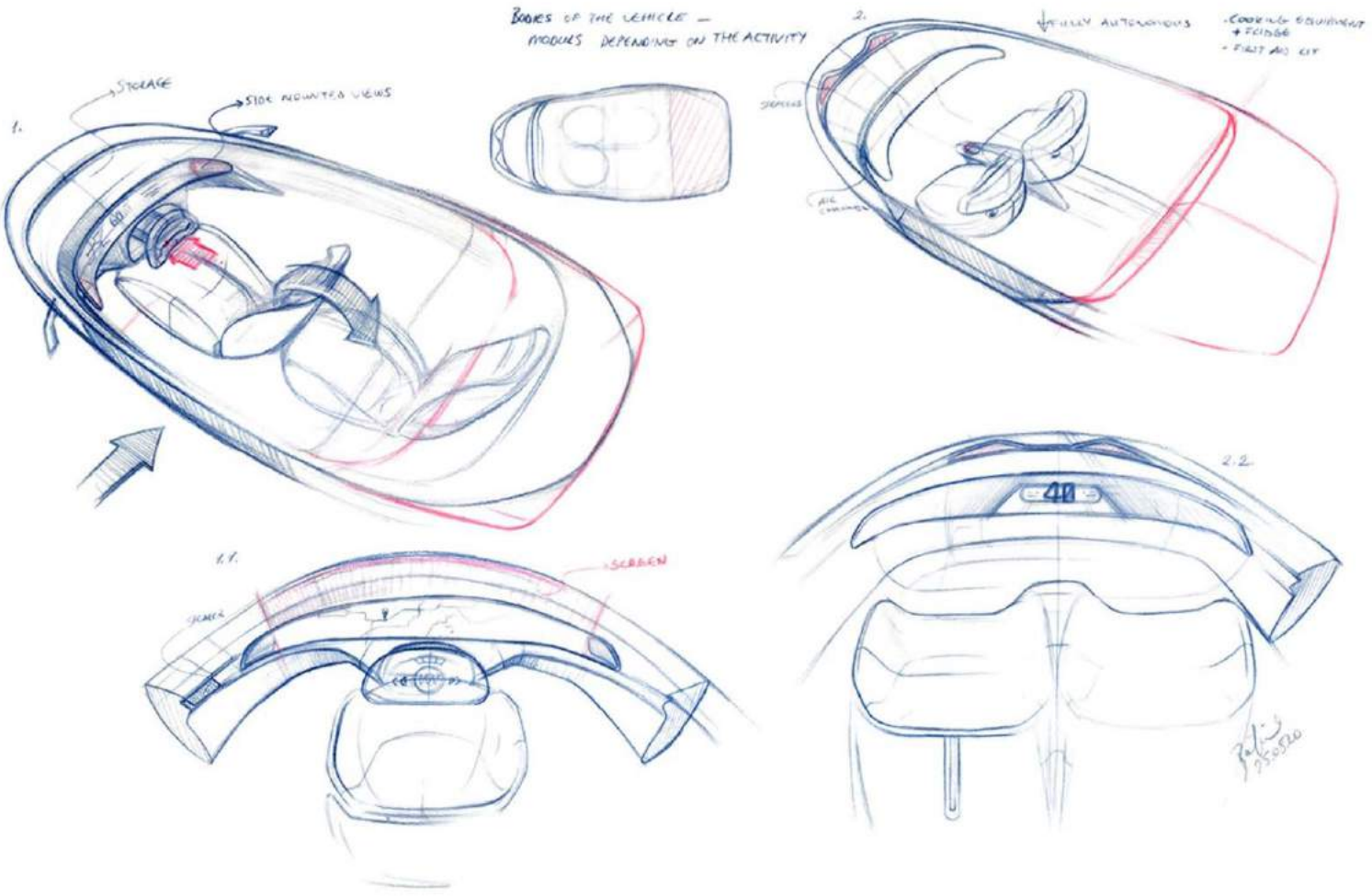
From here on the ideation was focused on exploring the layout of the interior. When booking the personal use cabin of the vehicle, the service includes modular equipment kits which users can reserve depending on their activities. Different module kits or individual needs were not sketched in detail on purpose at this stage. However, the idea behind the concept for the kits is that creating an external structure which is attached and integrated to the cabin. Therefore, as seen in the storyboard, the users can book the types of equipment and attach them to the cabin easily depending on their needs and the next journey. Those could be weather protection, water tank, cooking equipment, extra chairs, first aid kit, camping tent, and fridge, etc. The initial interior sketching process was started at the same time as the exterior. I tried to find the best selection shape for the body of the vehicle 'the cabin'.

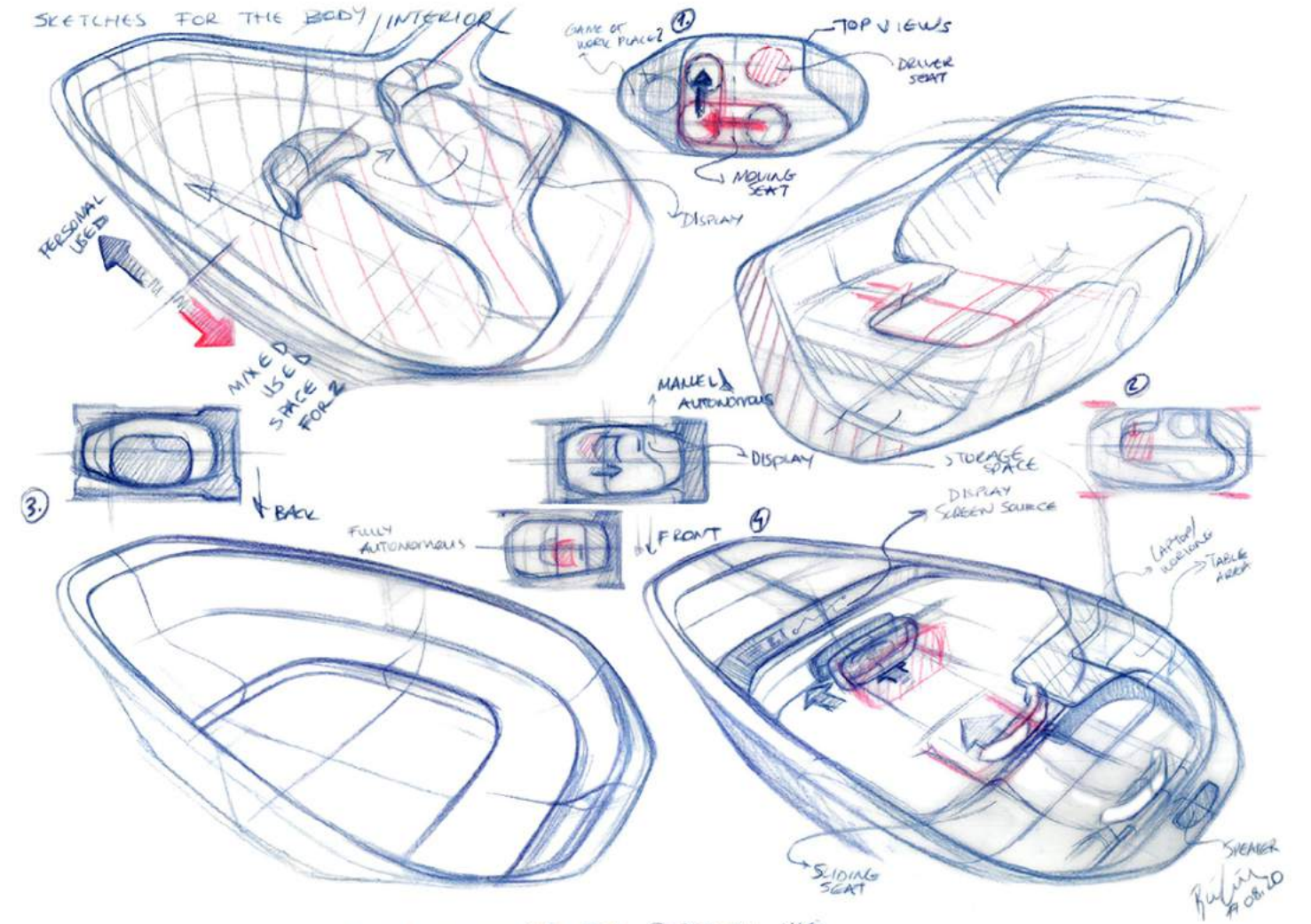


The interior design was following the development of the chassis exterior. It was arranged to fit a standing person inside (180 cm in height). This decision allows me to make the entrance more open and give the interior a spacious feeling, which allows the users can move freely. The interior was designed to serve as a 1 or 2-person relaxing living space and build their activities. The generation Y, Z, and Gen Alpha will be the target group who want to make their time more valuable and create their own rhythms. It was found that it would be useful to have a small entrance space from both sides, which would allow the user to walk straight into the vehicle.

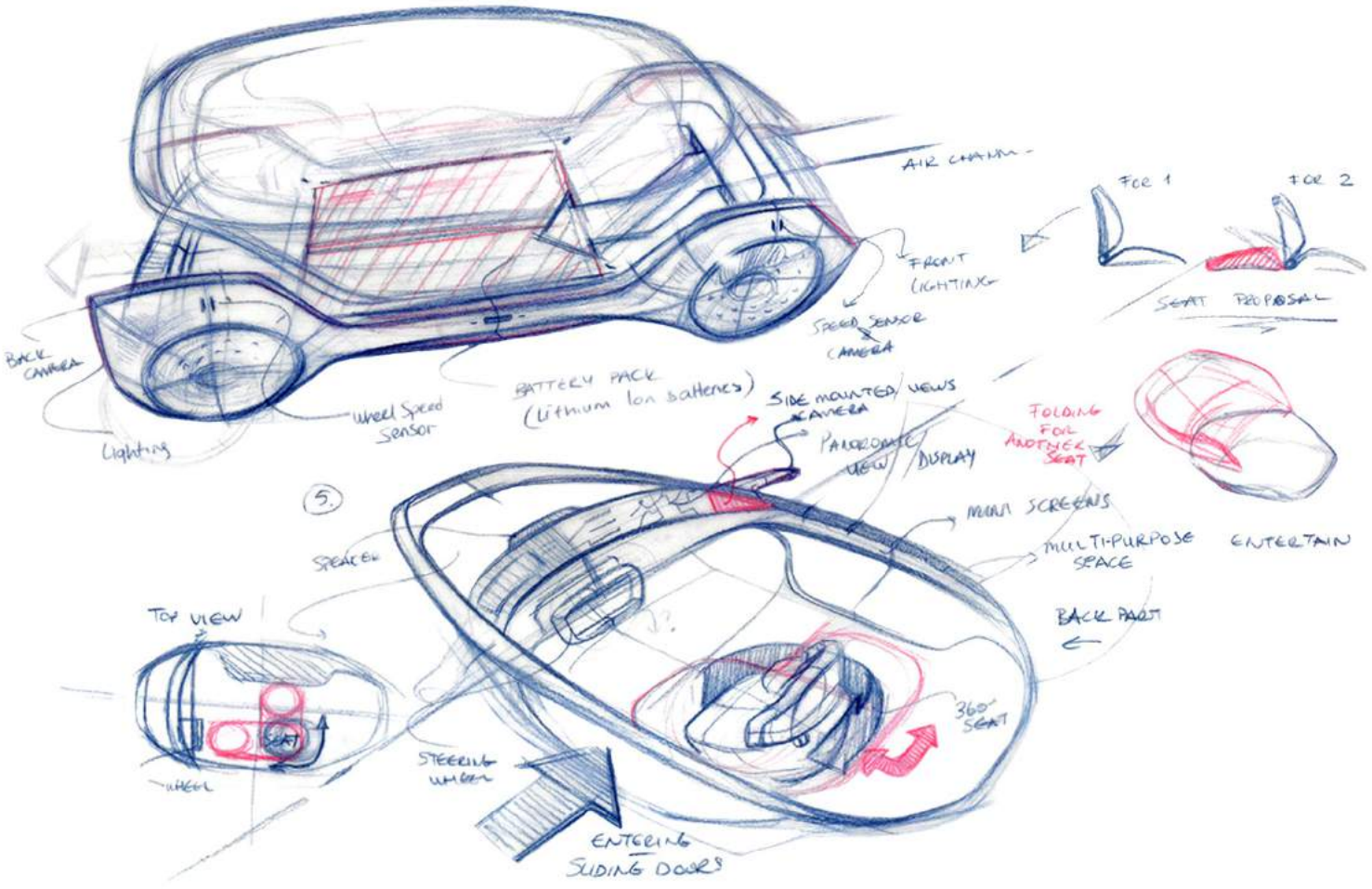
Regarding the subscribed-service building and its infrastructure, users can follow instructions by using an app in which customers, whether private individuals or companies, can easily register and choose their personal transport, commercial, or social needs. We can see that some companies are already introduced a similar system for example Mercedes Benz, Volvo, and so on.

Fig. 10





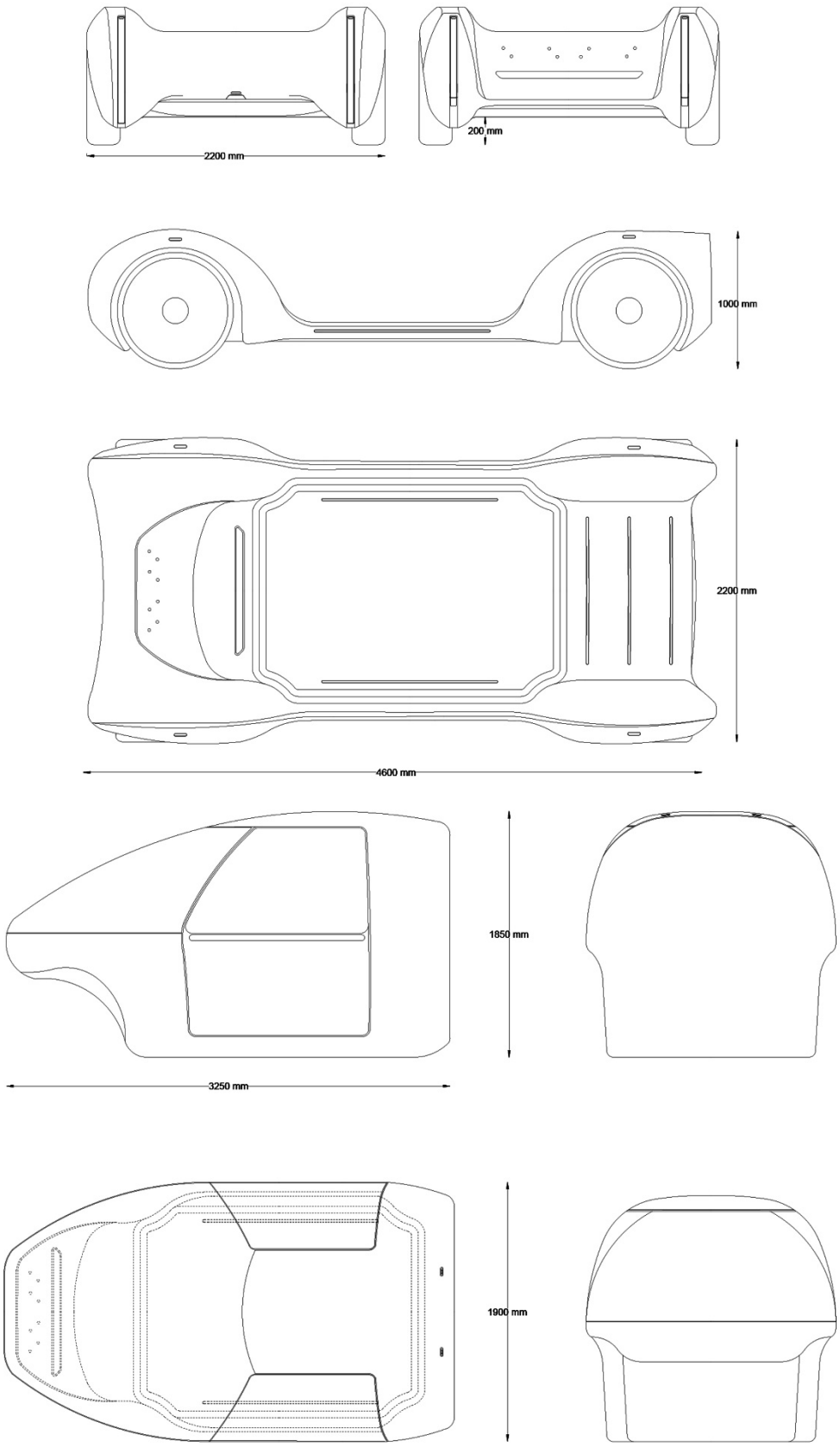
INITIAL INTERIOR SKETCHES FOR PERSONAL USE



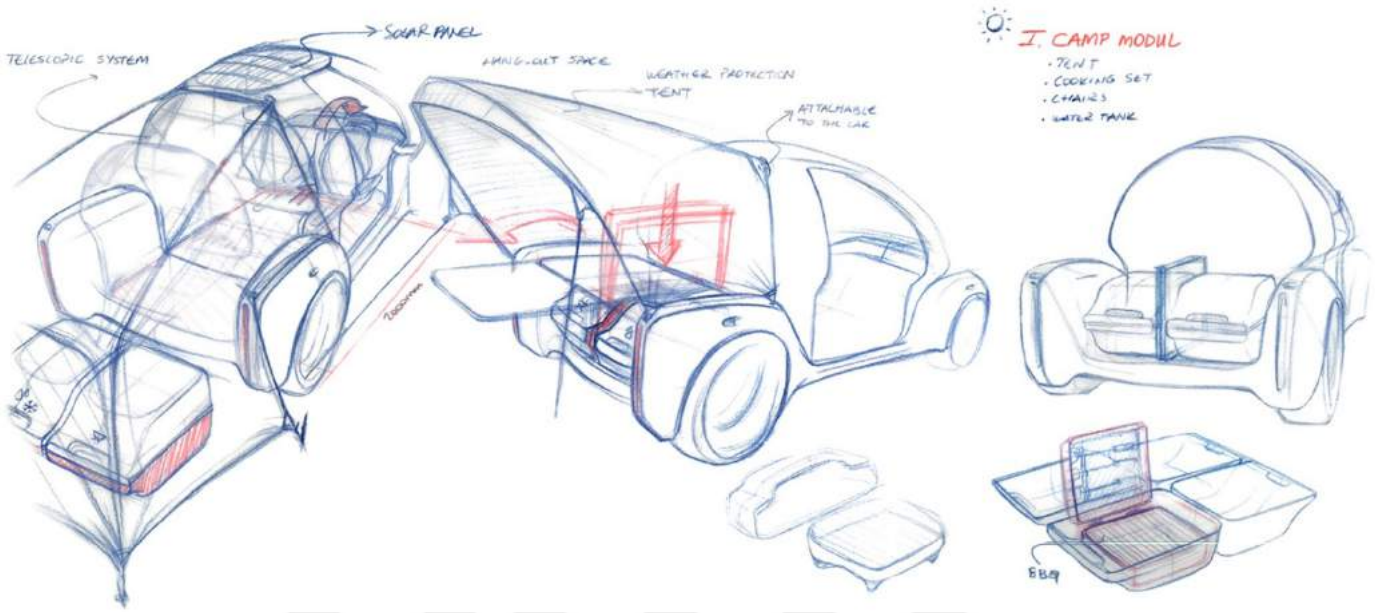
5. RESULTS

5.1. CAD Modelling

Chassis Platform and Cabin Technical Drawing

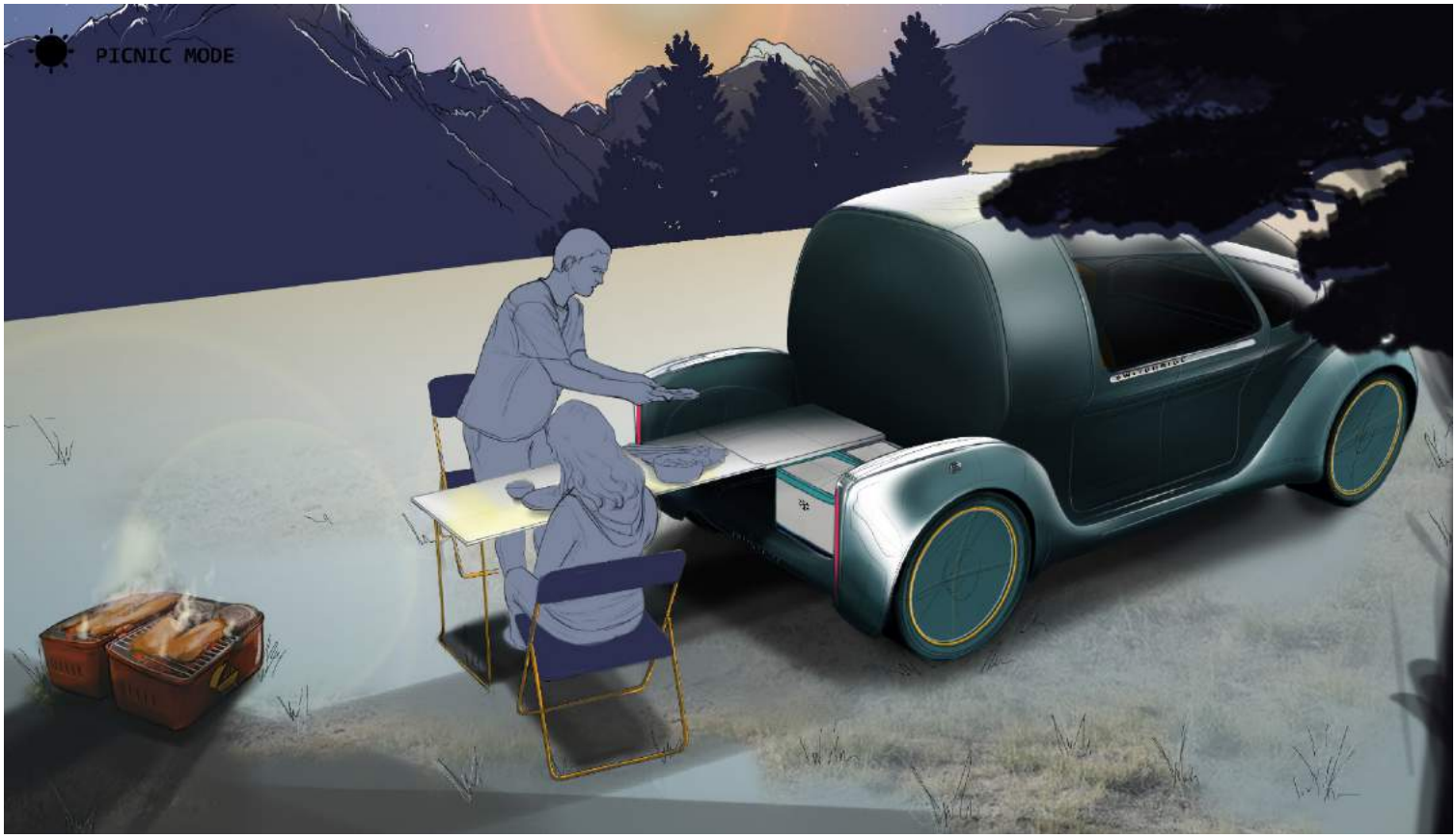


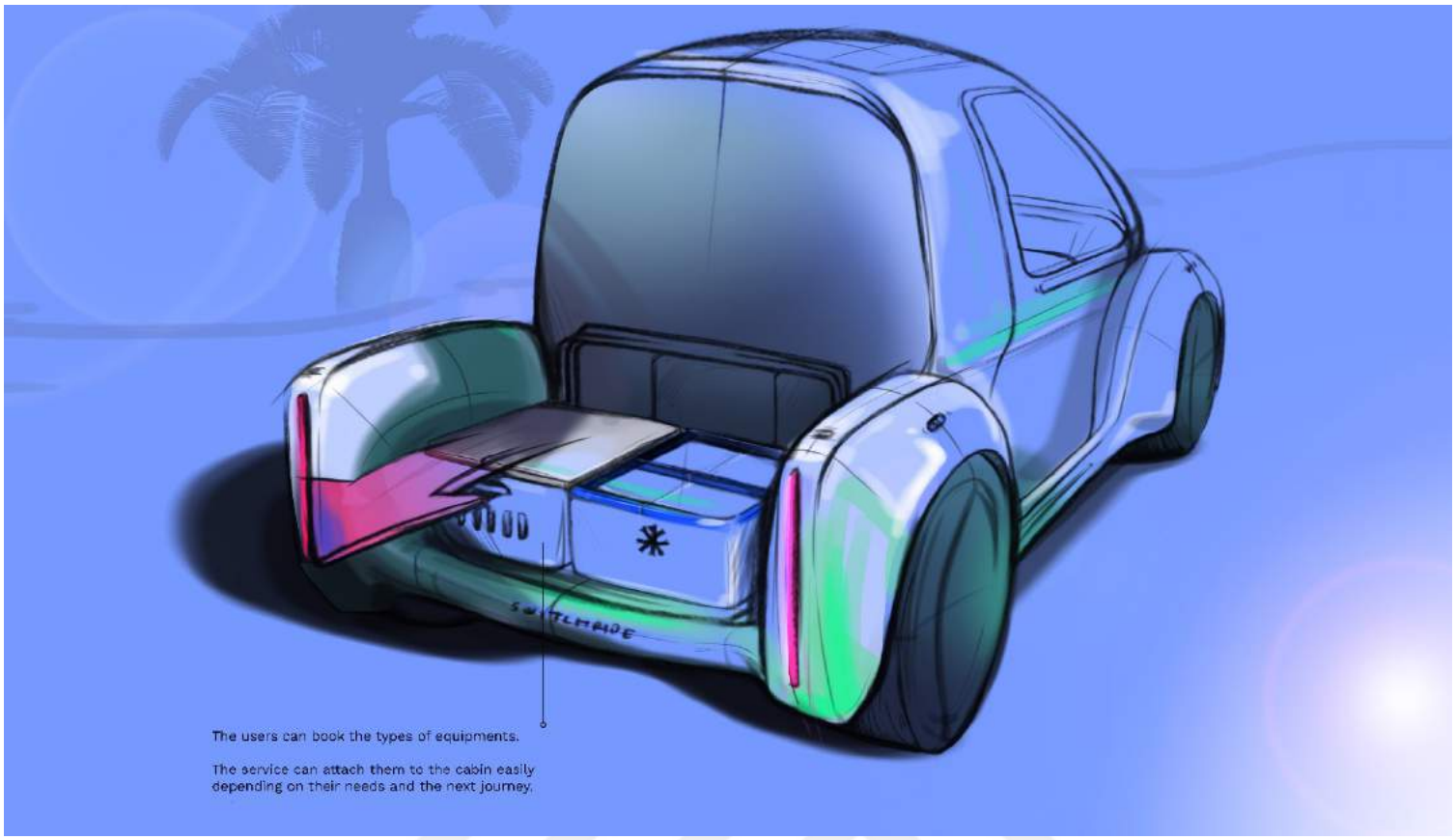
5.2. Context Renderings

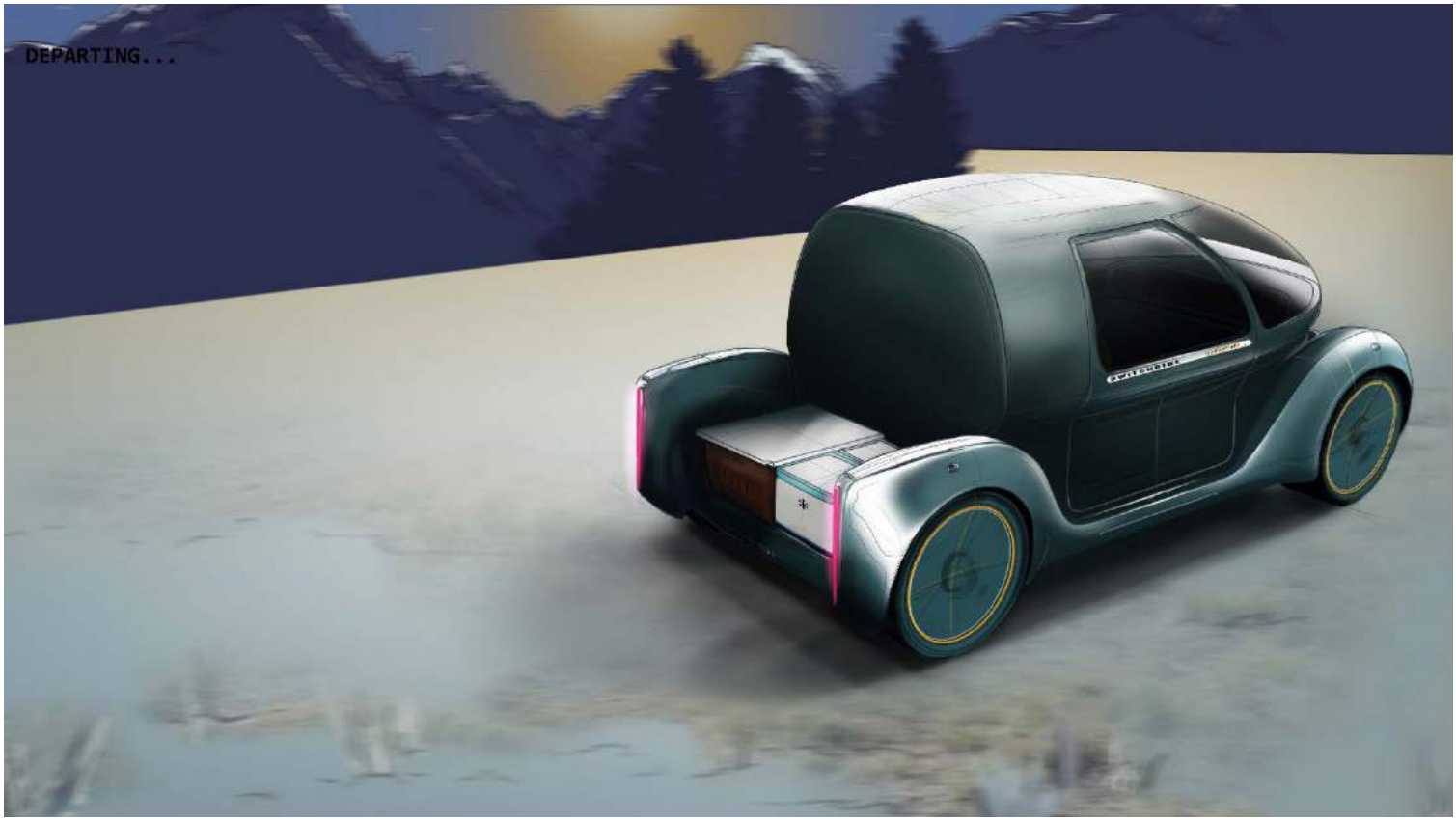


I tried to emphasize the concept of the camping, picnic module and cinema module.

The users can book the types of equipment. The service can attach them to the cabin easily depending on their needs and the next journey.

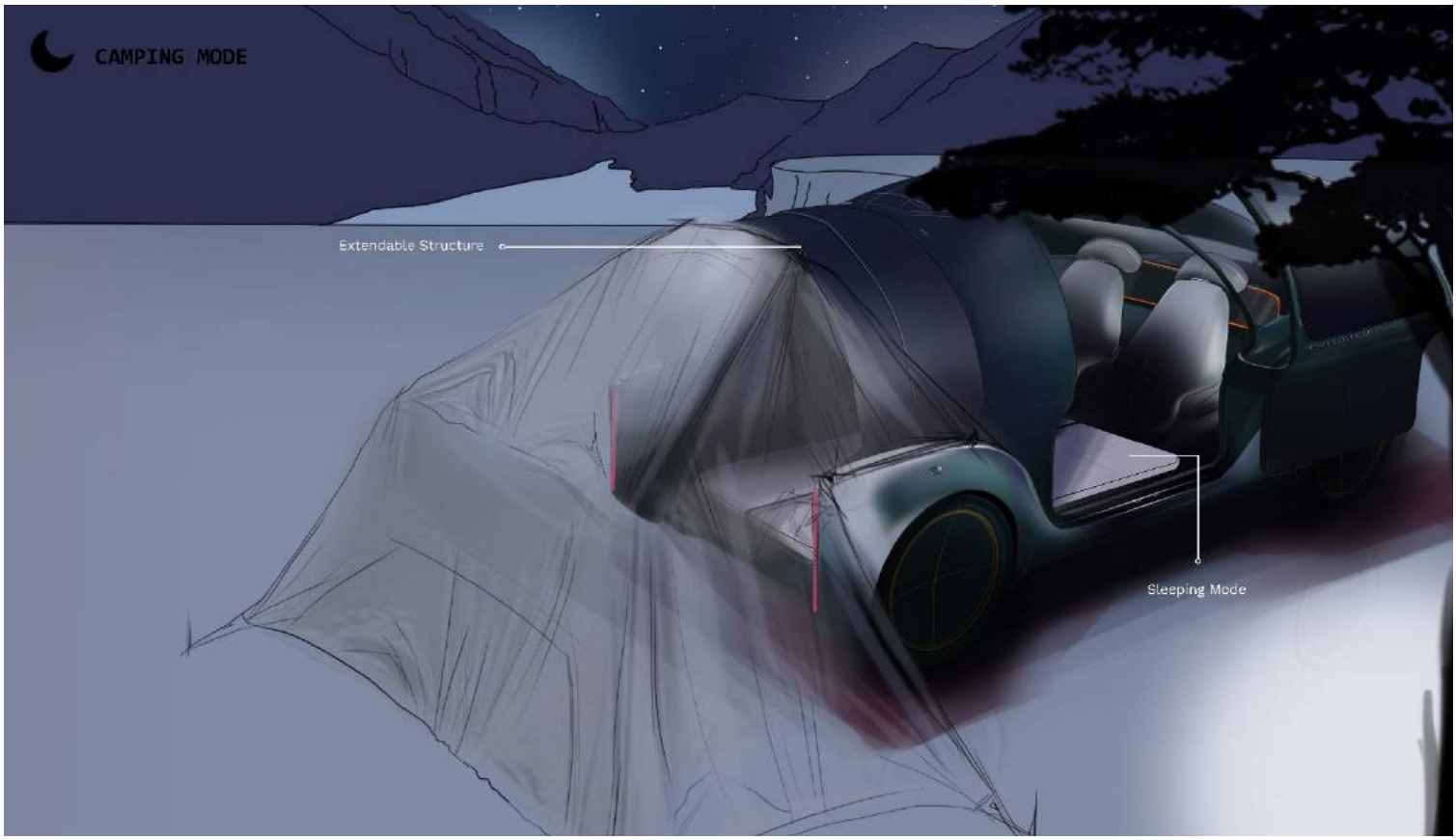



The users can book the types of equipments.
The service can attach them to the cabin easily depending on their needs and the next journey.


DEPARTING...

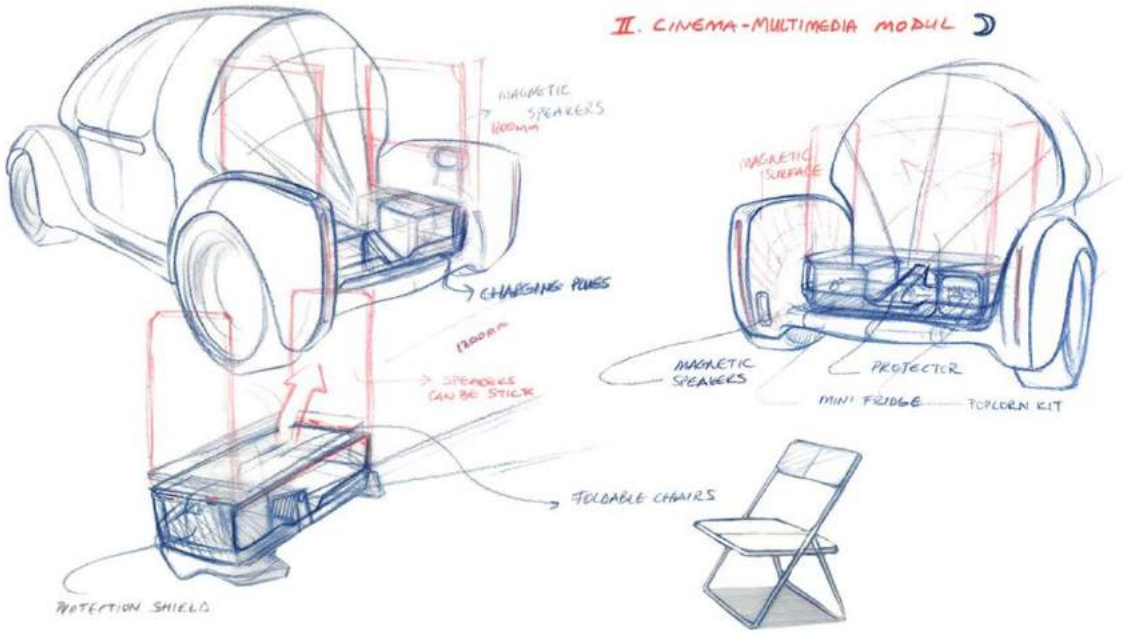
I focused to work on basic needs in the picnic mode which are cooking equipment, table, and chairs, tent, and fridge for their foods and drink.

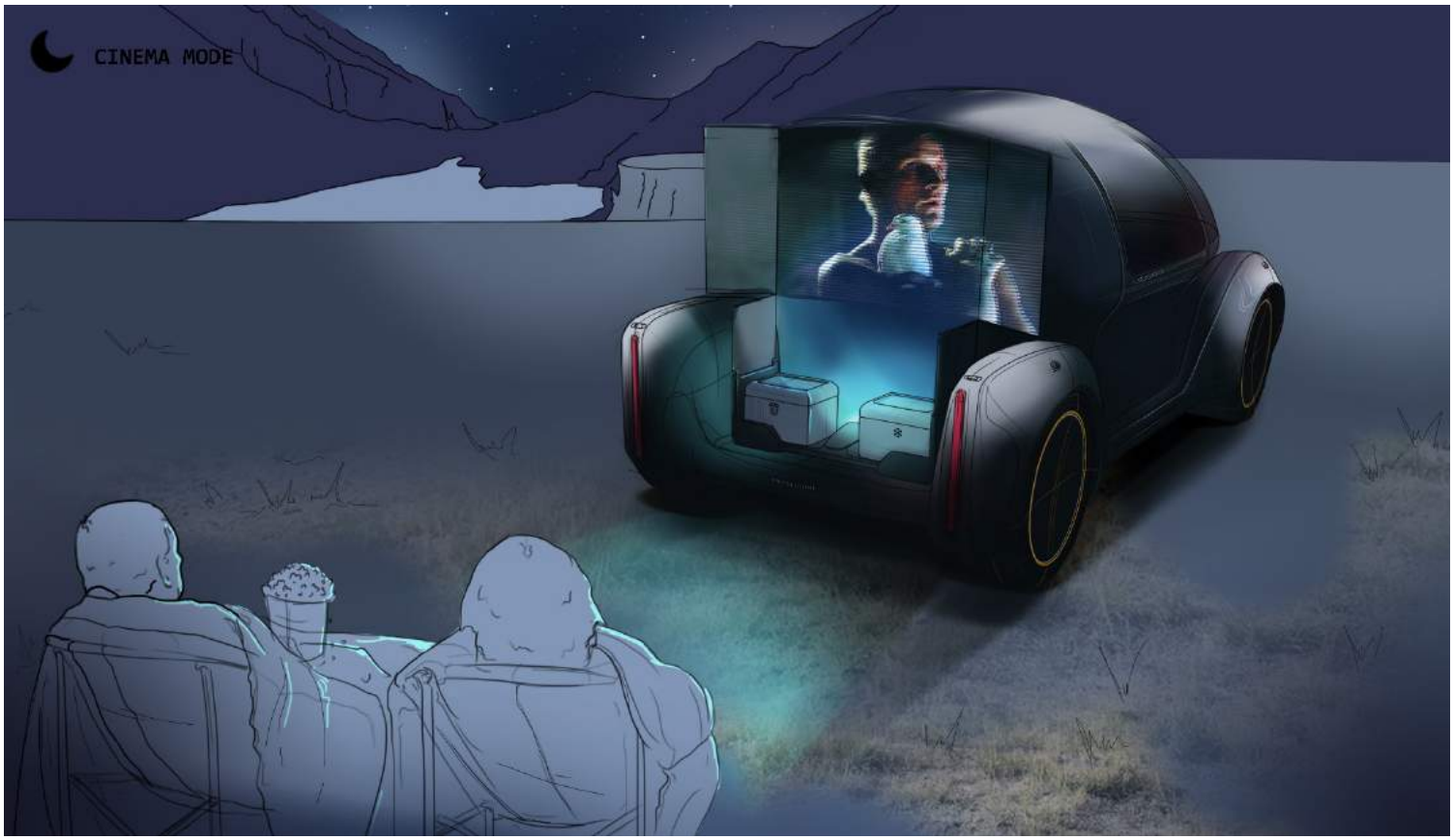
Moreover, in this Switcride's cabin module has an extendable structure at the back which can be open remotely if the user wants to stay in nature. The extra tent can be attached to the cabin to create a more open-air space and close the area while sleeping.

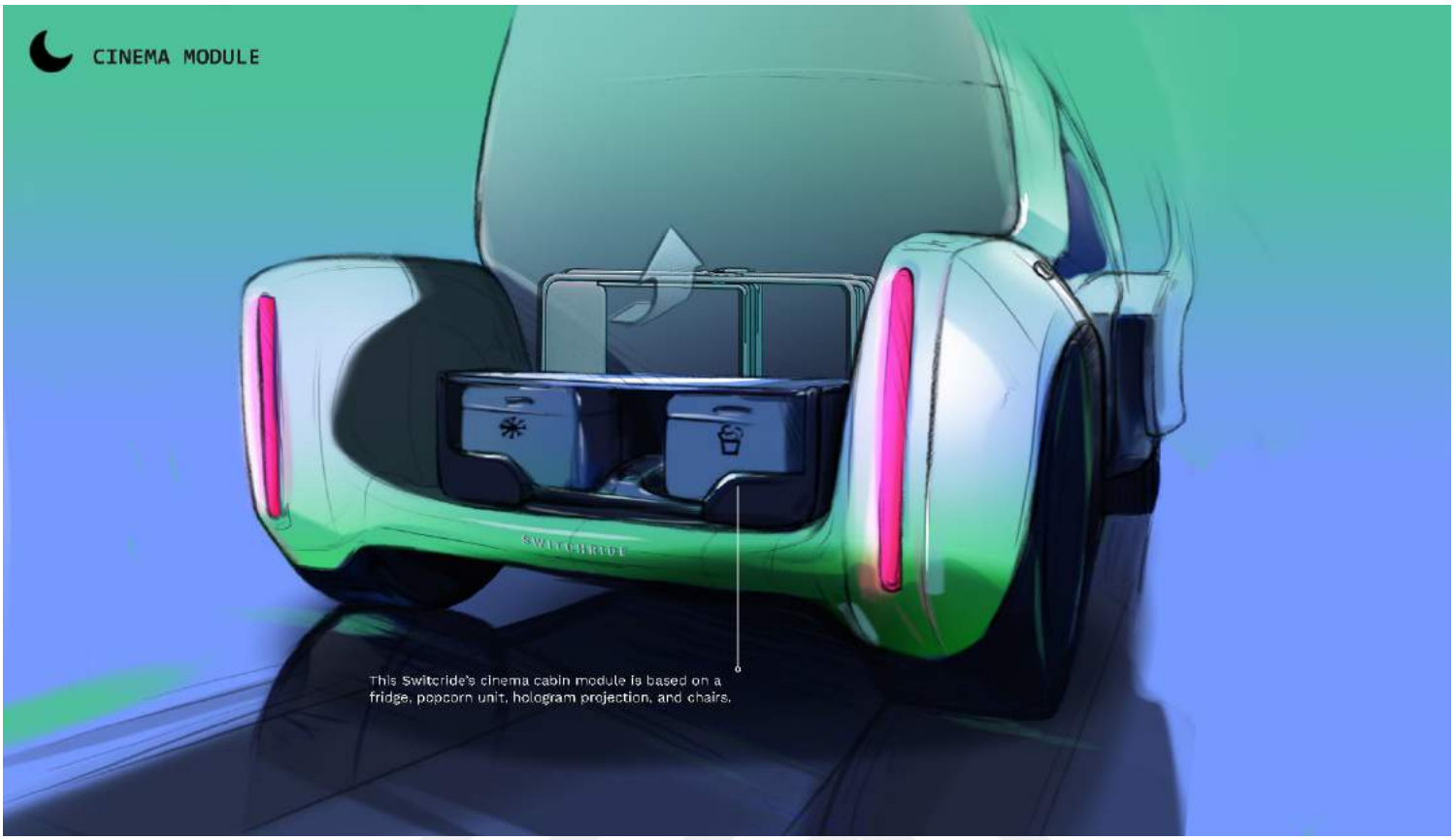


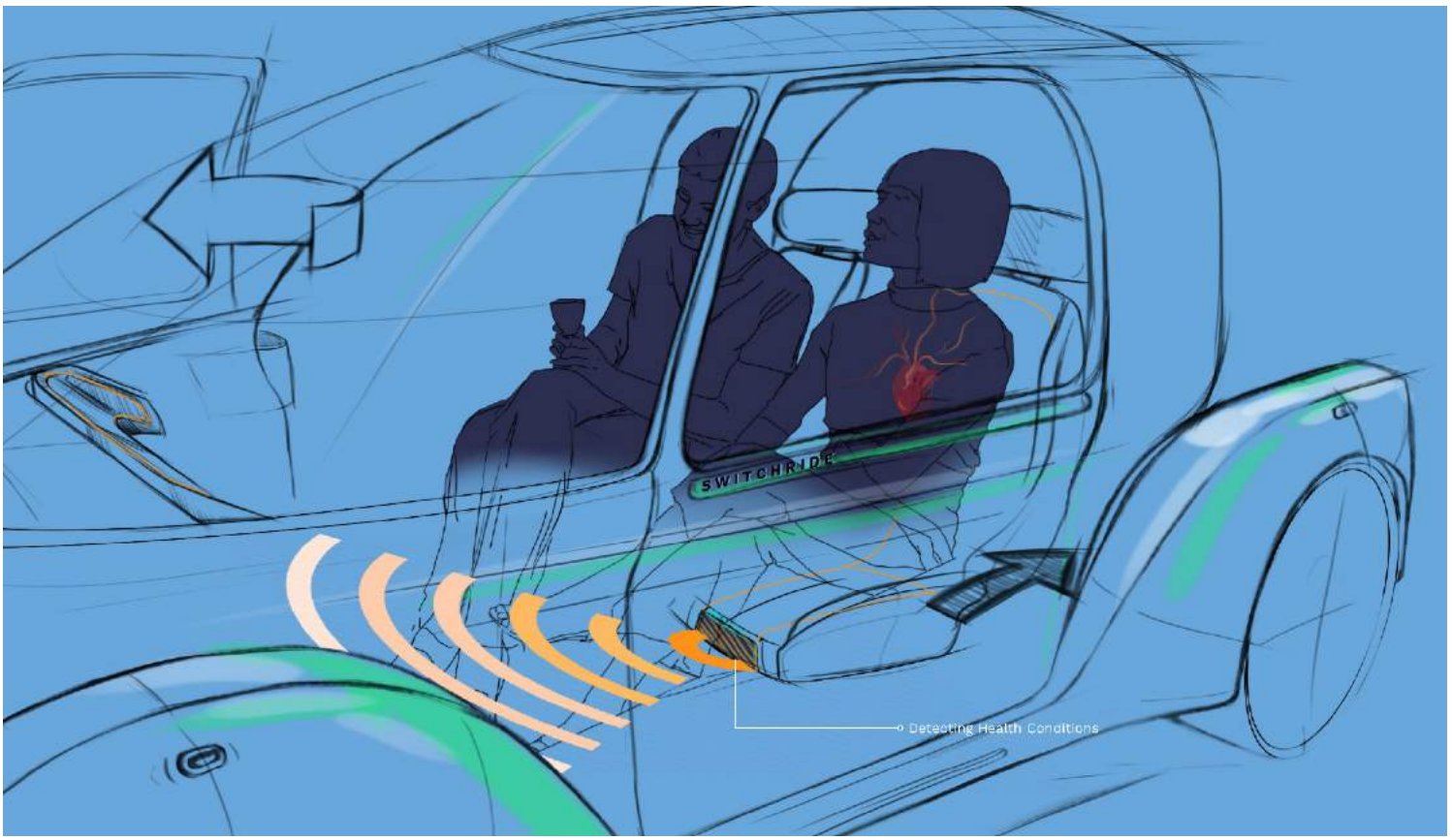
This Switcride's cinema cabin module is based on mini fridge, popcorn unit, hologram projection, speakers and chairs. The structure of the cinema module is designed to be foldable and changeable to be able to create an atmosphere while supporting the hologram projection.

Thanks to modular structures and smart systems that can accelerate production, we can produce these modules with 3D printers. Modules might be useful to another user can be stored and reused or recycled. While creating the modules, I tried to create internal structures based on the possible designs of this possible equipment.

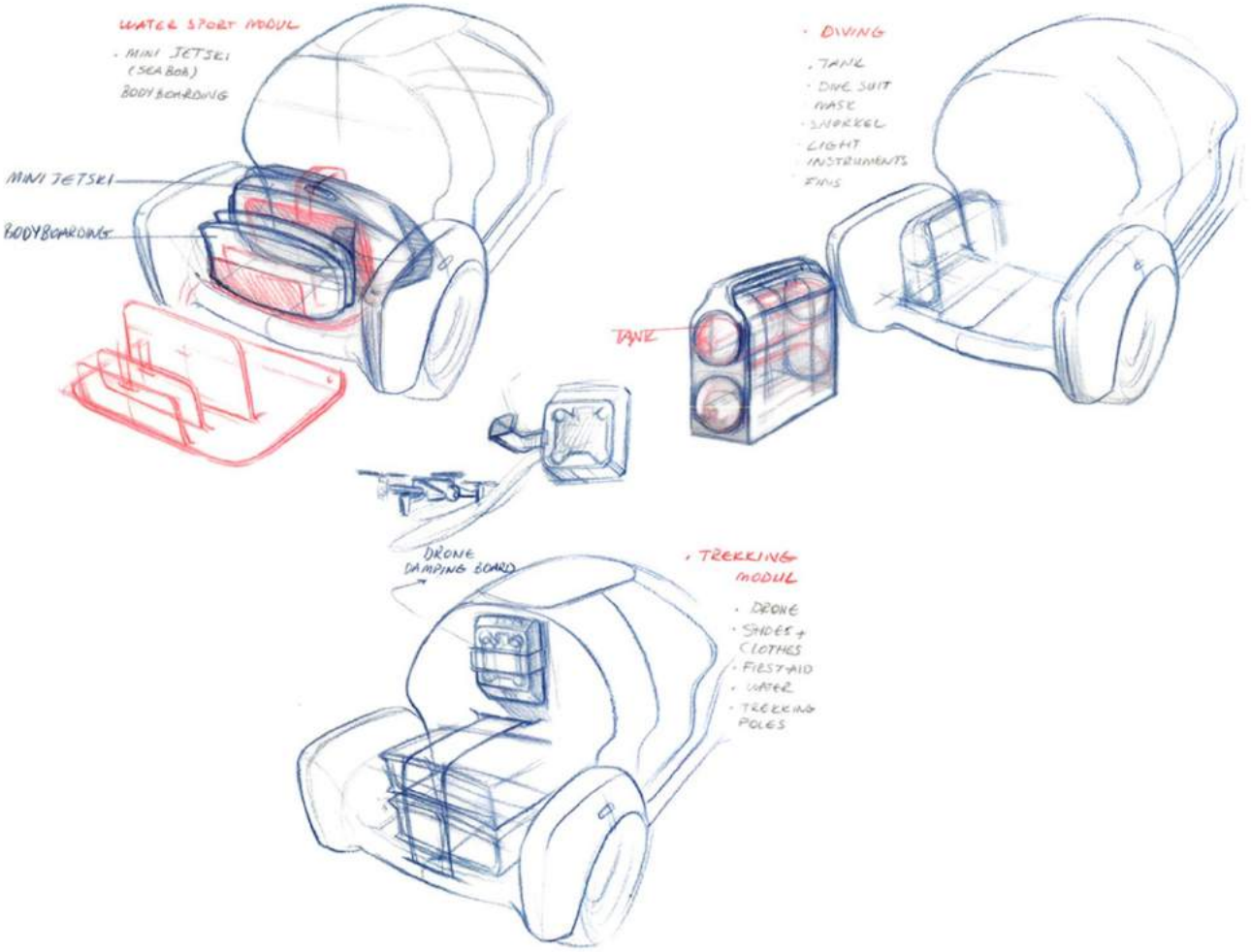


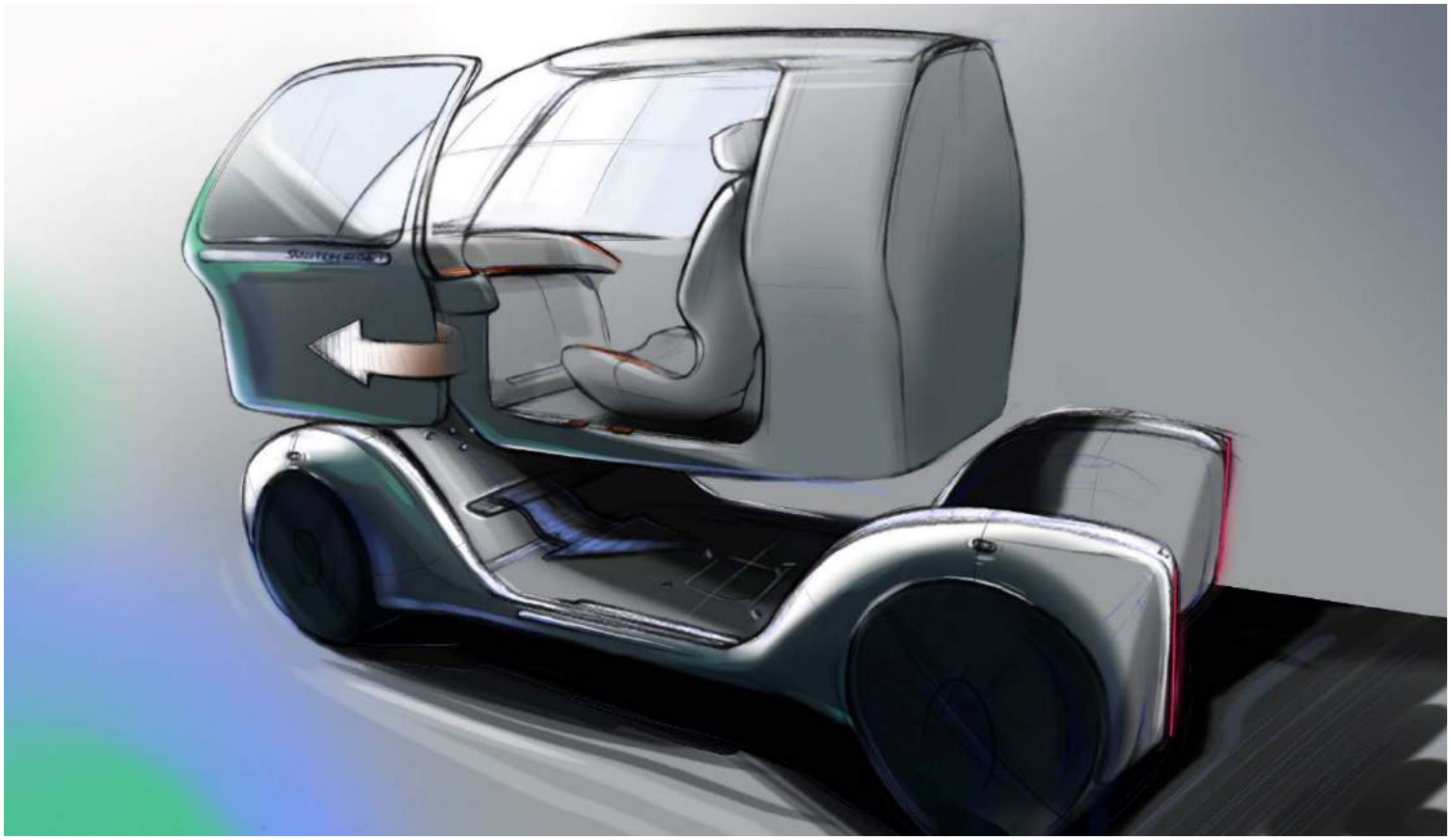



CINEMA MODULE
This Switcride's cinema cabin module is based on a fridge, popcorn unit, hologram projection, and chairs.


SWITCHRIDE
Detecting Health Conditions

III . SPORT MODUL





6. CONCLUSION

6.1. Project Outcome and Personal Learnings

Throughout the creation of this thesis, several learnings, different views of perspectives and insights have been gained. The main goals and wishes specified at the beginning of the project can be said to be achieved considerably.

At the beginning of this project, my point of view was too specific but I learned to develop my insights into another level. My workload had to change in the midst of the process, and there were sometimes dark times. However, I managed to motivate myself in the creative process, and raise my skill level, and learn new things. During the creative process, both traditional tools like, sketching, Photoshop, and CAD modeling and digital tools were used to explore form, function, and overall experience. Furthermore, 3D software models were used to validate proportions, scale, and concept principles. I only would have liked to be able to go more into depth with the interior and system interface parts of the experience. On the other hand, due to the time limitations, the design and system proposal had to have first priority throughout the project.

Proposing a future context, as in the case of this thesis, is inviting people to seek future designs in-depth and explore their new rhythms. As a designer, I believe we could find new solutions to improve the efficiency of other types of vehicles as well by taking advantage of that approach. I am hoping that this thesis context will follow and develop around it.

I believe that the point of view that I mentioned above will take forward and support me in the field of design for the rest of my life.

7. APPENDICES

7.1. UN sustainability Goals

In this last phase of the thesis, I wanted to show The United Nations universal 17 goal list also known as The Sustainable Development Goals which was set in 2015 as a universal call by 2030. The role of the list was to serve as a source of inspiration and a basis to keep the industry running in a more sustainable way from the beginning of my diploma process.

7. Affordable and Clean Energy

By proposing the subscribed system, we can collectively share and experience different types of needs in a more economical way. The project wants to provide clean energy by using technologies like solar panels and battery electric-based chassis delivers zero-local-emissions mobility.

9. Industry, Innovation and Infrastructure

The concept brings innovative switchable bodies of the vehicle and infrastructure together. The project is aimed to sustain the industry, by offering on-demand and actual needs bodies of the vehicle to fulfill the needs of cities.

12. Responsible Consumption and Production

The service users will allow you to support responsible consumption automatically by choosing a shared technical platform. Using the promising advanced technologies in the production process will improve the quality of urban life and develop the economy.

Fig. 11: UN Sustainability Goals

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8.2. List of Figures