

2050 My Pod Project

Electric modular vehicle provide a new combined travel option for people who have a long commute time. Improve their travel quality and optimize their combined travel experience.



Module: 6001AAD Concept Delivery

SID: 10635544

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Why design this vehicle ?

Commuting status- Longer and more complex



Rapid expansion

With the rapid expansion of Chinese cities and the rise of urban housing prices, the average commuting time and distance will be longer and more complex.



93% of young people in China's big cities find commuting to be a problem, and nearly 40 percent get severe trouble.

42_{min}

At present, the average commuting time in China is 42 minutes.

Infrastructure



China had the longest High-Speed Railway network in the world, Which is 29,000 kilometers by end of 2018.

Overcrowding Issue



In 2025, 70% of the Chinese population will live in cities, which means 350 million people will be added to the Chinese urban population. This will affect traffic conditions in a significant way.



According to the forecast, the middle class in China would grow to approximately 700 million by 2020.



Under the stress

Middle-class families experiencing housing stress, they may choose to move to the far reaches of a metropolitan area to avoid either overcrowding or overpaying for housing closer to the urban core, causing another form of housing stress: longer commutes to work.

Potential solution

Longer and more complex Journey



Cabin can transfer to high-speed railway automatically to make commute time shorter and certain.

Overcrowding Issue



Commute in a private and relaxing environment.

Why modular like this



?



User Centre

- The transfer process does not User to do any thing
- Personal space
- Maintenance-friendly
- New ownership



Electric Friendly

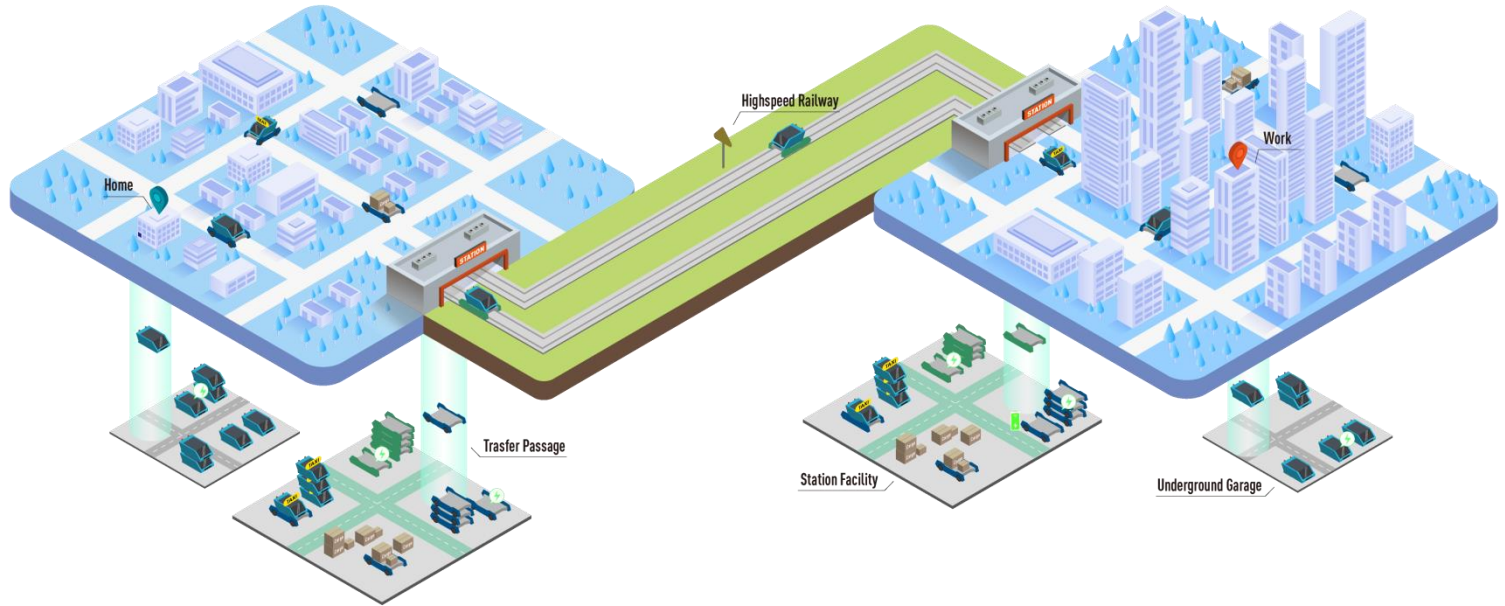
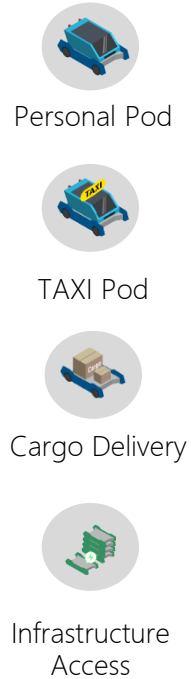
- Quick Battery replace
- Most electric consume at the urban environment



Easy to Switch

- The transfer process is smooth and quiet
- Lower cost

Potential solution



System

- The system will plan the route for the user, which includes the arrangement of when and where to engage with the high-speed railway.
- The system will manage to store and distribute the process of the chassis and vehicles.
- The system is able to connect to vehicles and made the most efficient transport arrangements using data been gathered.

Story board- Work pod

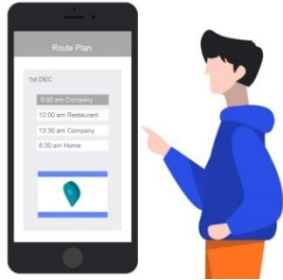


28-55 Working Class

Qualified solicitors; Senior Software Engineer, Finance Director.

Attitudes: Working hard, Treasure time, Productive Efficiency, Striving for excellence.

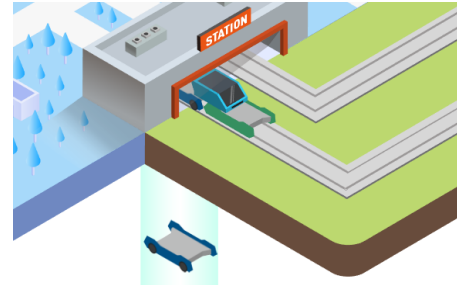
Daily task: They use the vehicle to get to work every day.



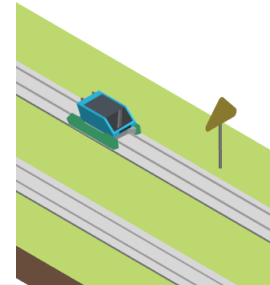
1.Daily planning



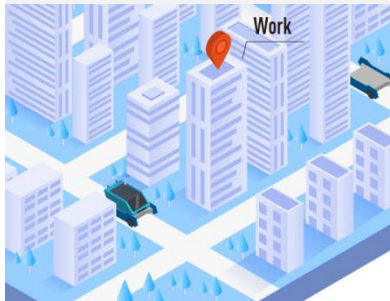
2.To the station



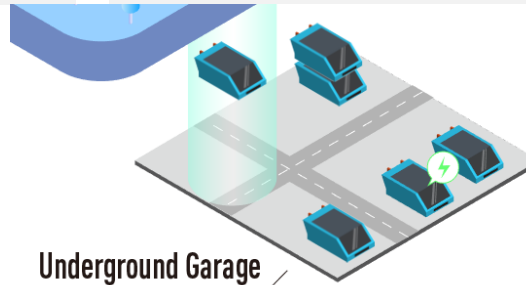
3.Transfer to maglev chassis and High speed travel on railway



5.Transfer back to wheel chassis

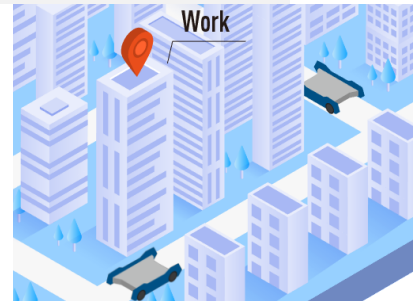


6.To work place



Underground Garage

7.Pod stored in underground garage



8.Chassis running for other task

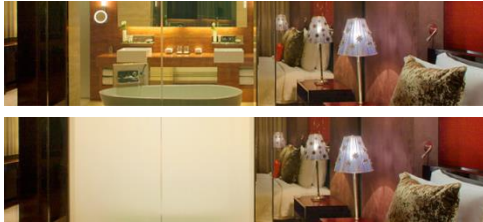
Technical

Electromagnetic Crane



1. Lifting material: Cast ingot, steel scraps, steel ball, steel billets.
2. Wide use in steel plant, smelting plant, waste warehouse.
3. The lifting beam can be parallel with the girder or with a 90-degree angle with the girder.
4. Magnets with the retentive system to hold 10 minutes after power shut.
5. Electrical Weighing System.

Privacy Smart Glass



1. Switchable Privacy Glass turns from clear to opaque in less than 0.1 seconds.
2. The transformation can be triggered via remote controls, movement sensors.
3. Able to transforming a glass partition into an instant backdrop for an HD projector.



Electric drive

Thanks to the battery and motor, Compare to petrol vehicle electric vehicle is quieter and less vibration.



Level 5 Autonomy

That means users only need to input a destination and the vehicle can complete the journey through automatic driving.

Light weight materials



Aluminum



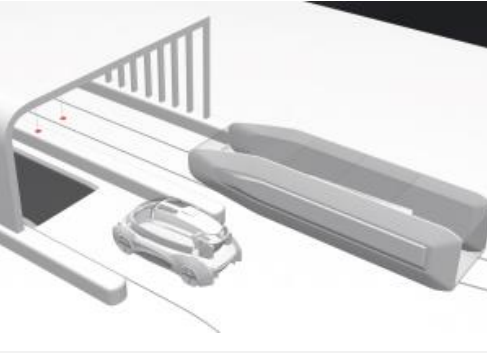
Plastic

Structural materials

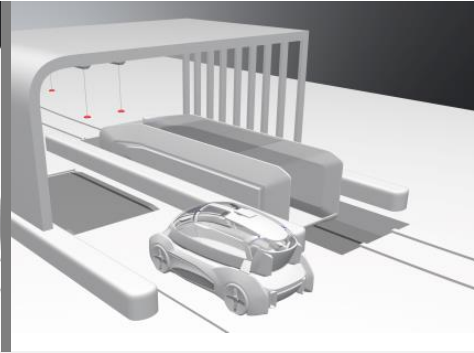


Steel

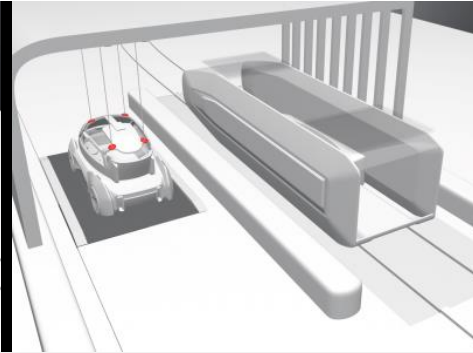
Story Board- Passenger Pod



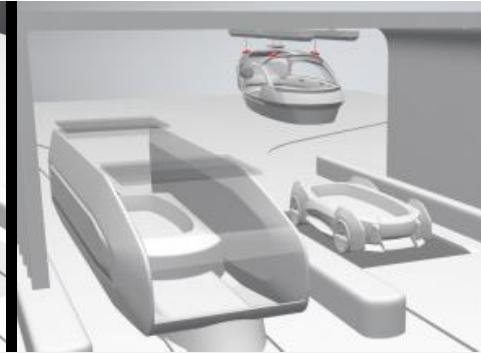
1. Passenger pod and maglev chassis goes into the station.



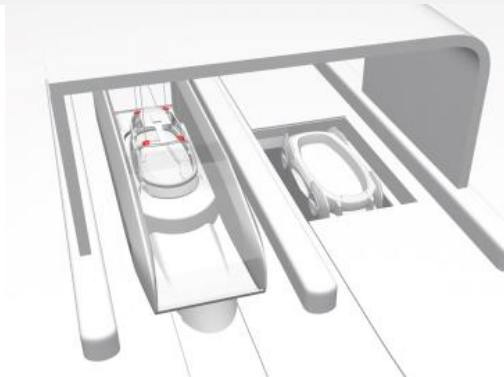
OR Passenger pod goes into the station, maglev chassis lifted to ground level.



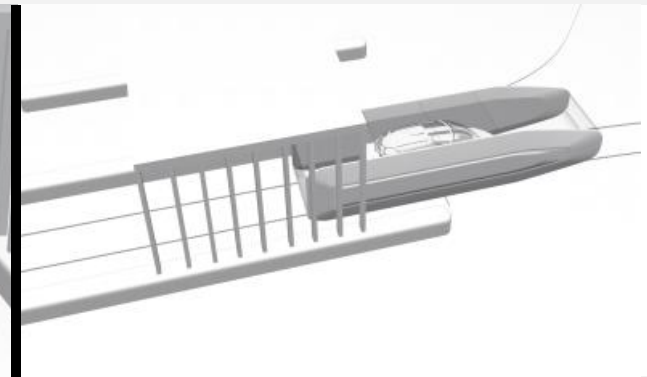
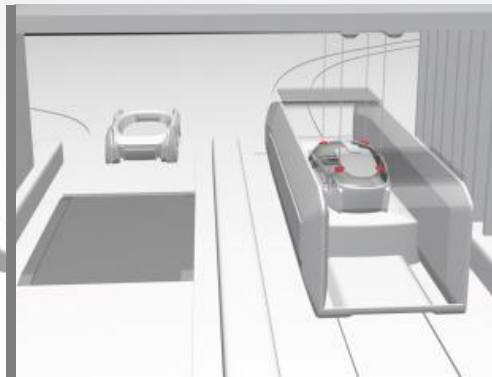
2. Pod engaging with electromagnetic crane.



3. Transferring



4. Pod engaging with maglev chassis, wheeled chassis been stored Or wheeled chassis leave for another job.



5. Passenger travel on the railway in High speed

Story Board-TAXI Pod

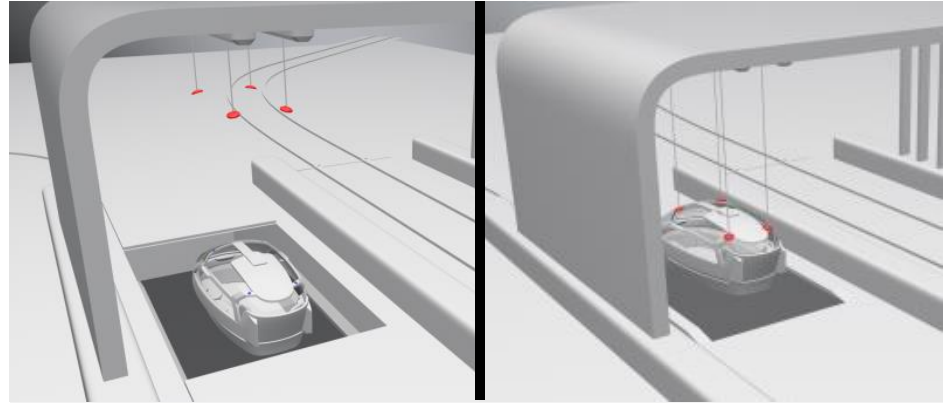


Taxi users and travelers, Young office worker, Tourist

Attitudes: Hassle-free, Want to be secure, Save time, Young, Modern lifestyle, Fast.

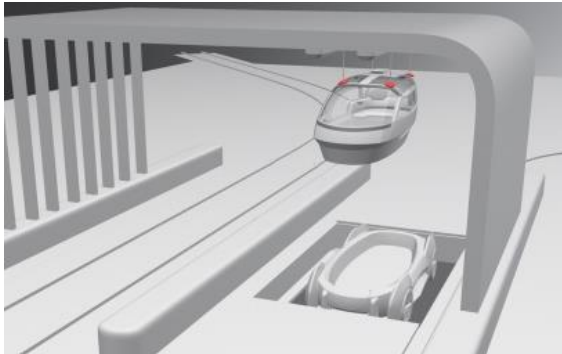
Will give the user a secure and comfortable environment , Appearance is easy to recognize.

- 1.Book a taxi for an early business trip
- 2.Reserve a pickup vehicle for trip from station to hotel

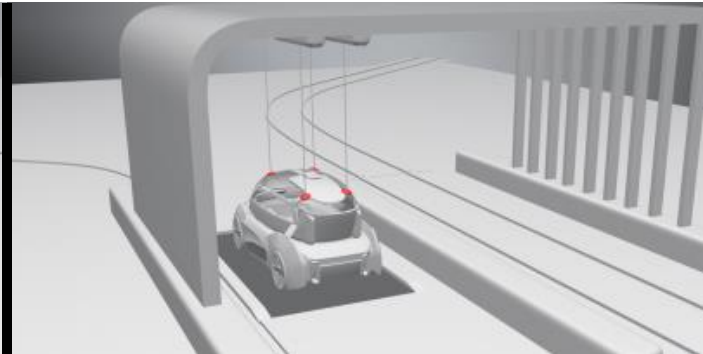


1.Stored TAXI pod has been found and lift to the ground level.

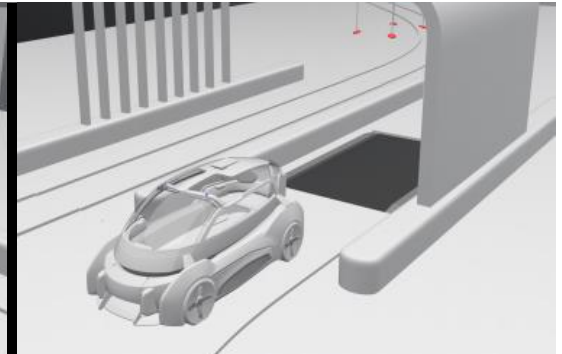
2. Pod engaging with electromagnetic crane.



3.Stored Wheeled chassis been found and lift to the ground level.



4.TAXI pod engaged with wheeled chassis.



5.TAXI pod ready for the passenger.

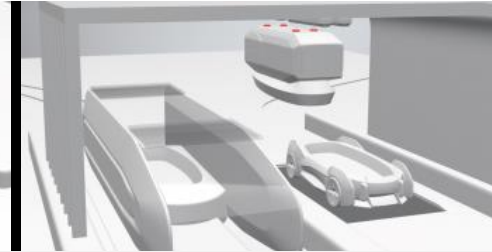
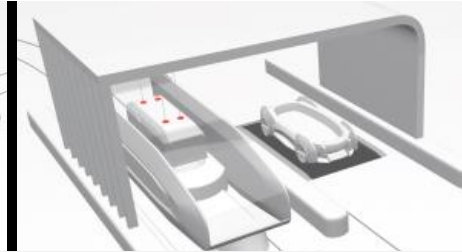
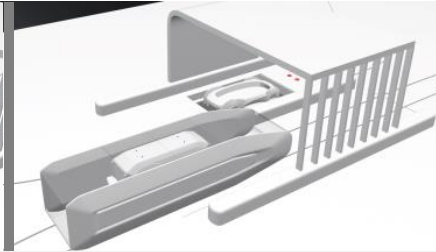
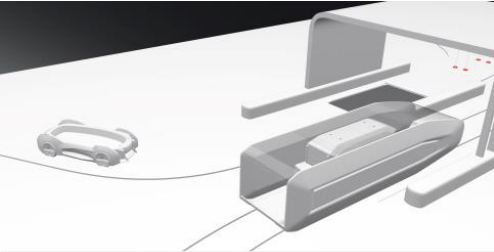
Story board-Cargo



Delivery company

Requirements:

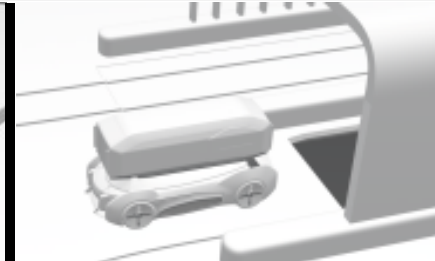
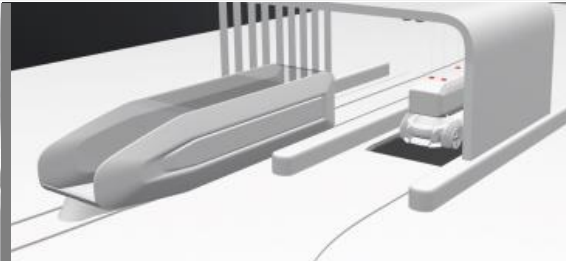
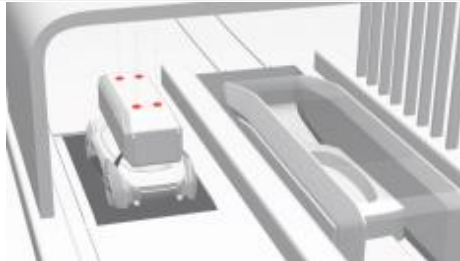
- 1.Safely take the cargo or package from train station to warehouse or package dispatch Centre.
- 2.Improve the transport efficiency of scattered freight demand.
- 3.Need to Deal with the small amount of scattered freight demand at the terminal of the city.



1.Cargo and wheeled chassis coming or wheeled chassis lifted from station

2.Cargo read for transfer

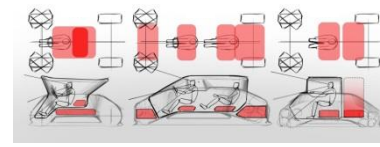
3.Transferring



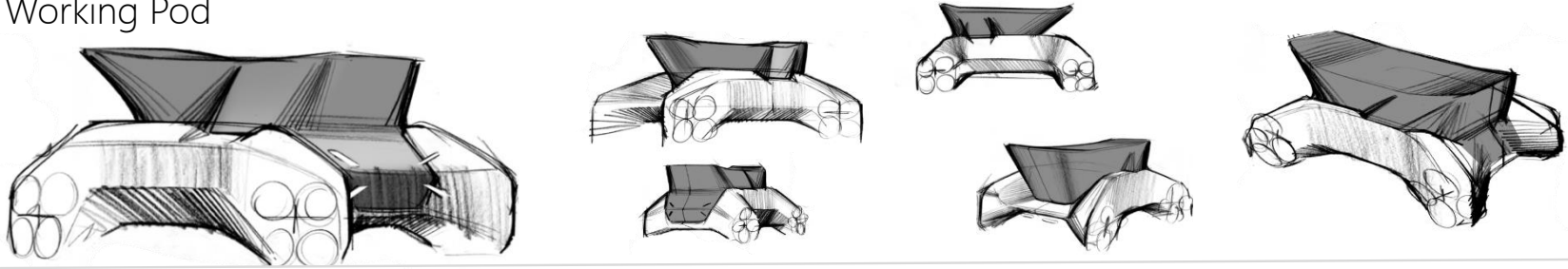
4.Cargo engage with wheeled chassis, Maglev chassis leave or been store in station

5.Cargo heading to delivery

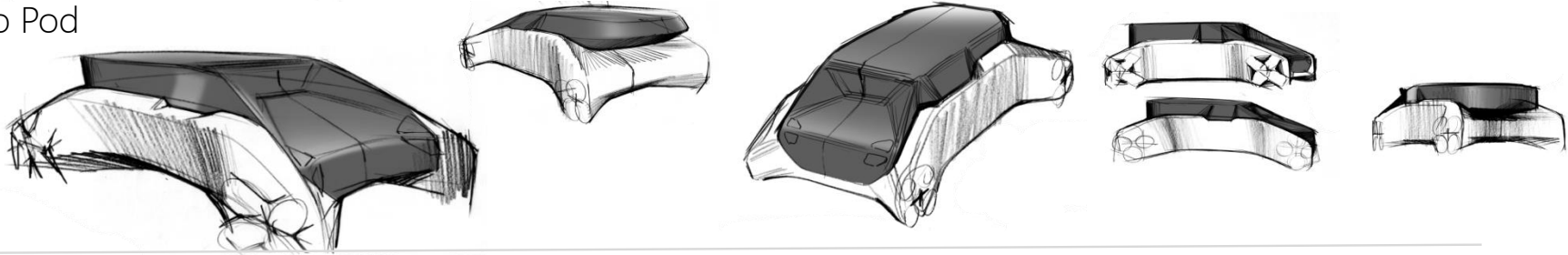
Exterior Design Development



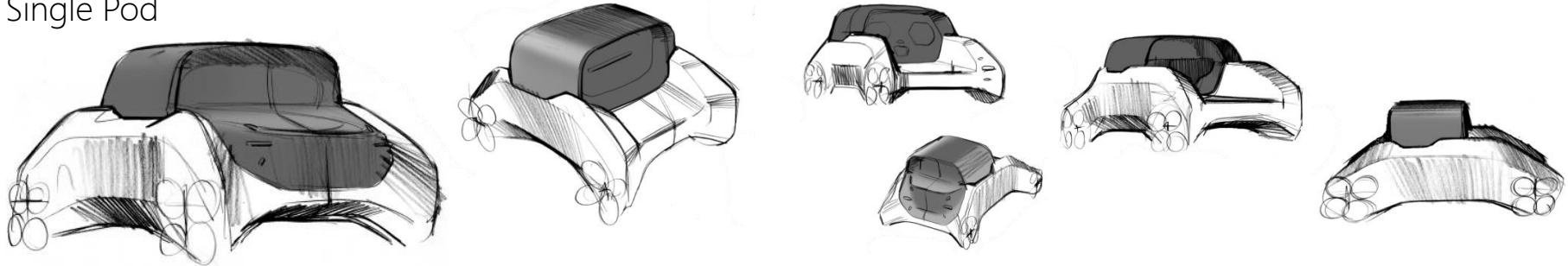
Working Pod



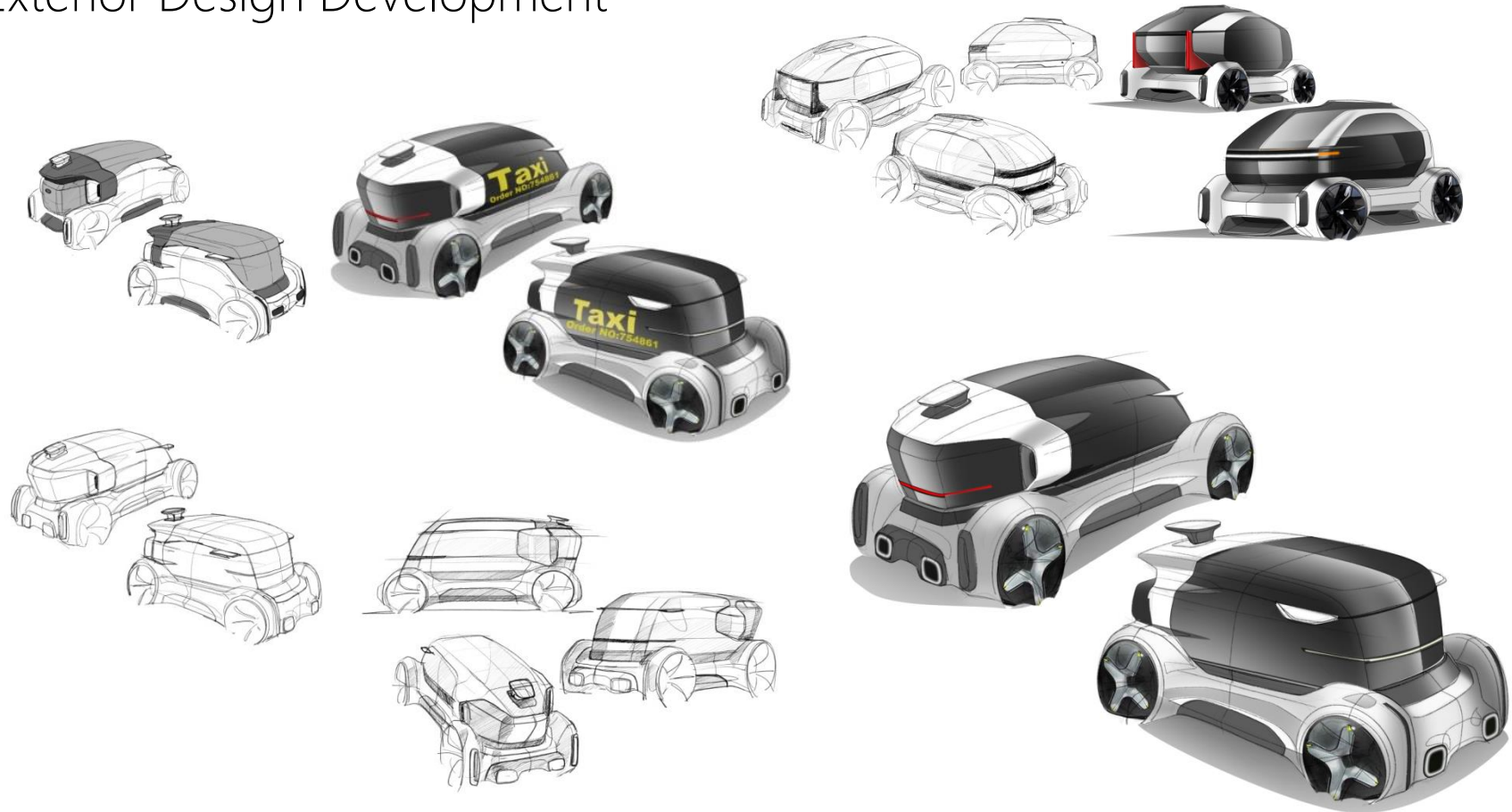
Cargo Pod



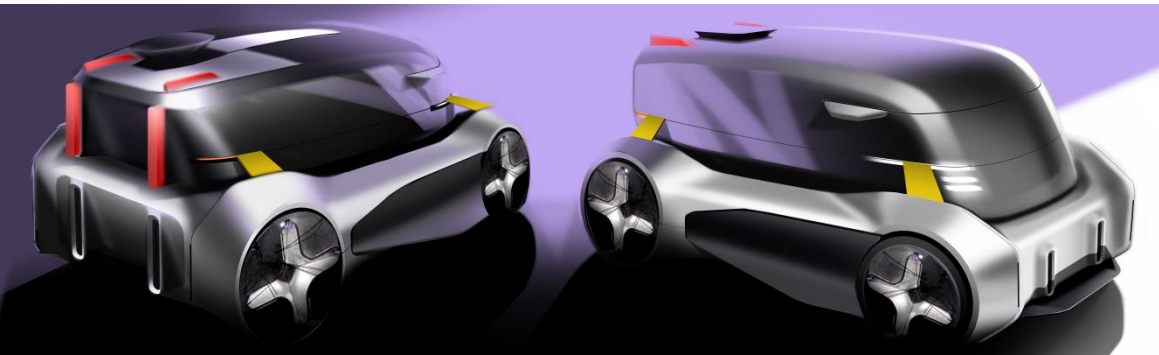
Single Pod



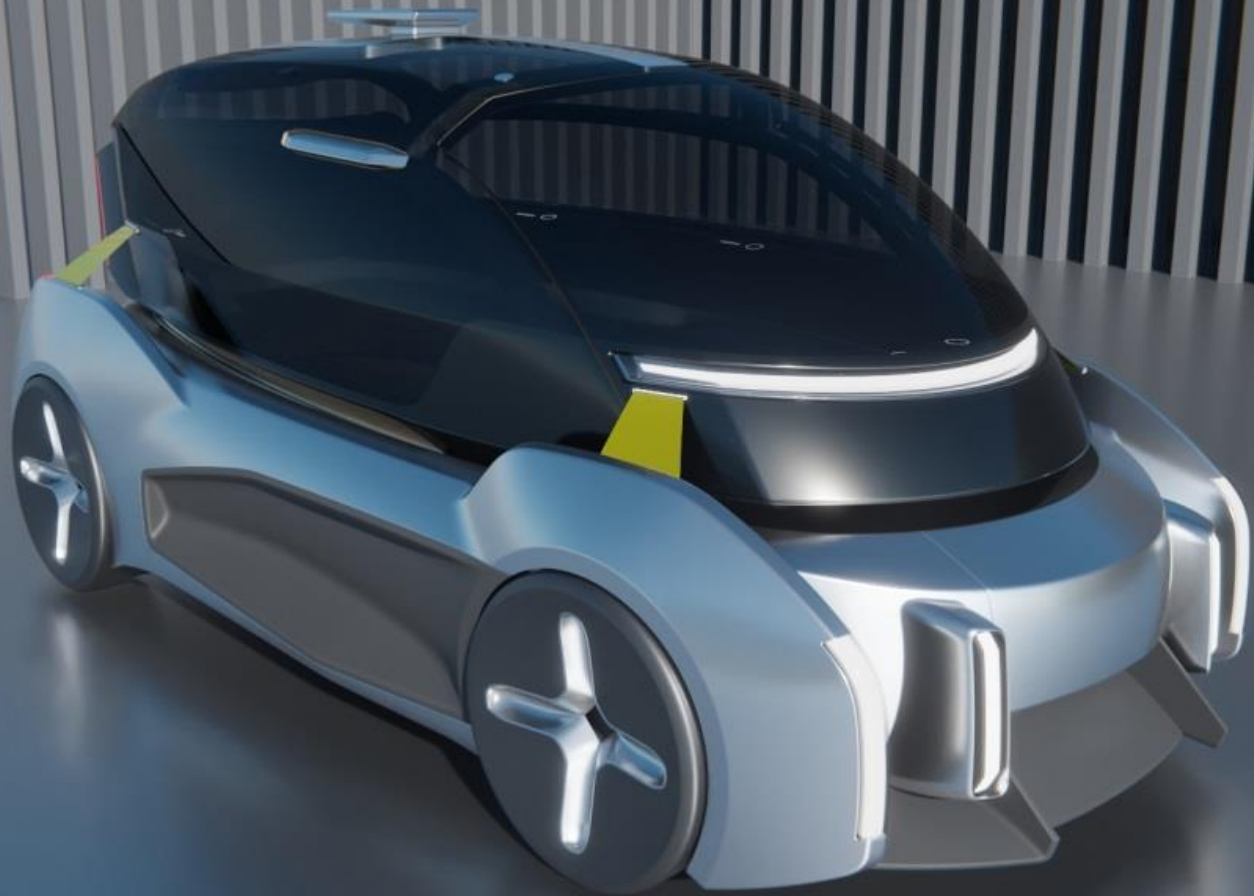
Exterior Design Development



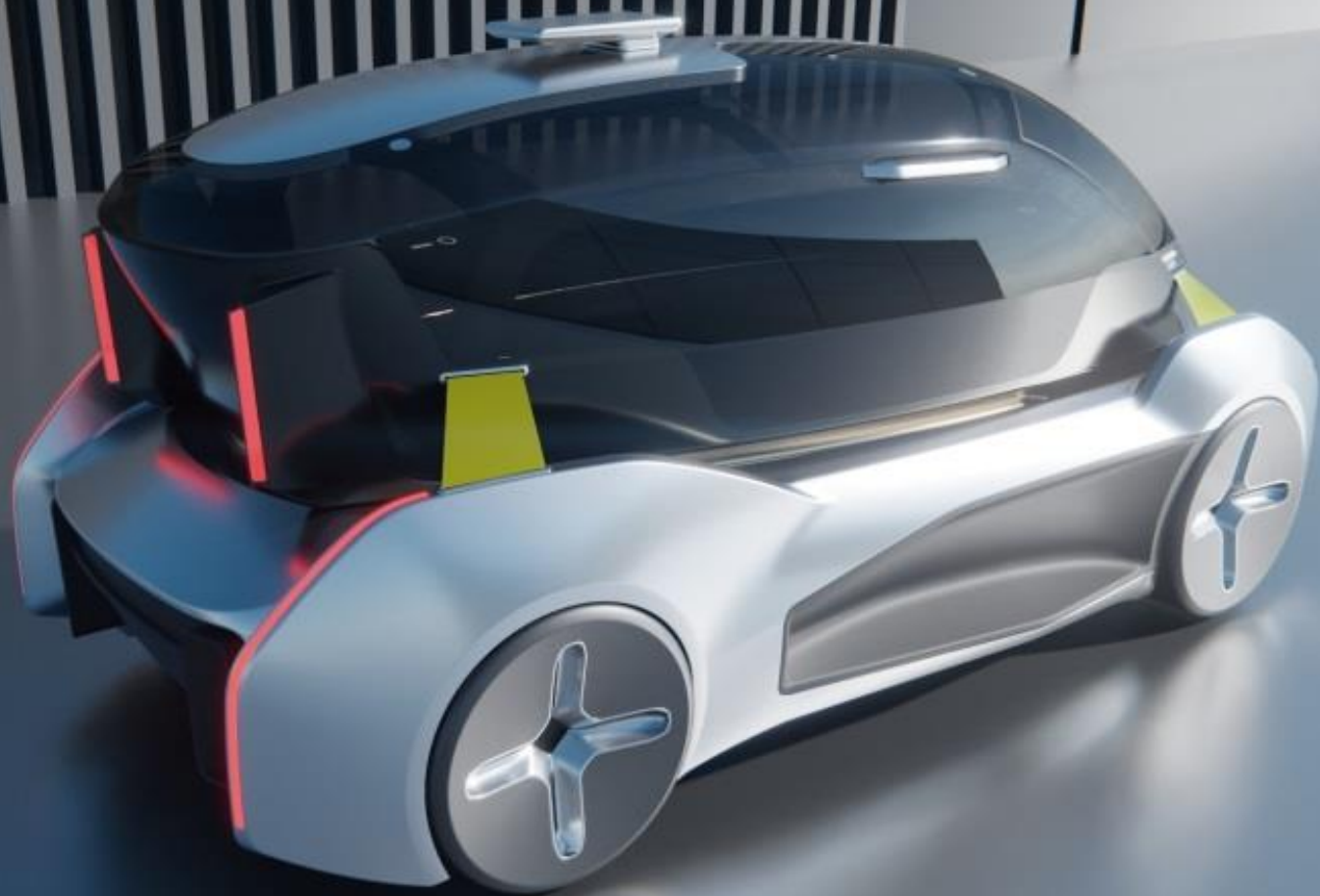
Exterior Design Development



Final Design



Final Design



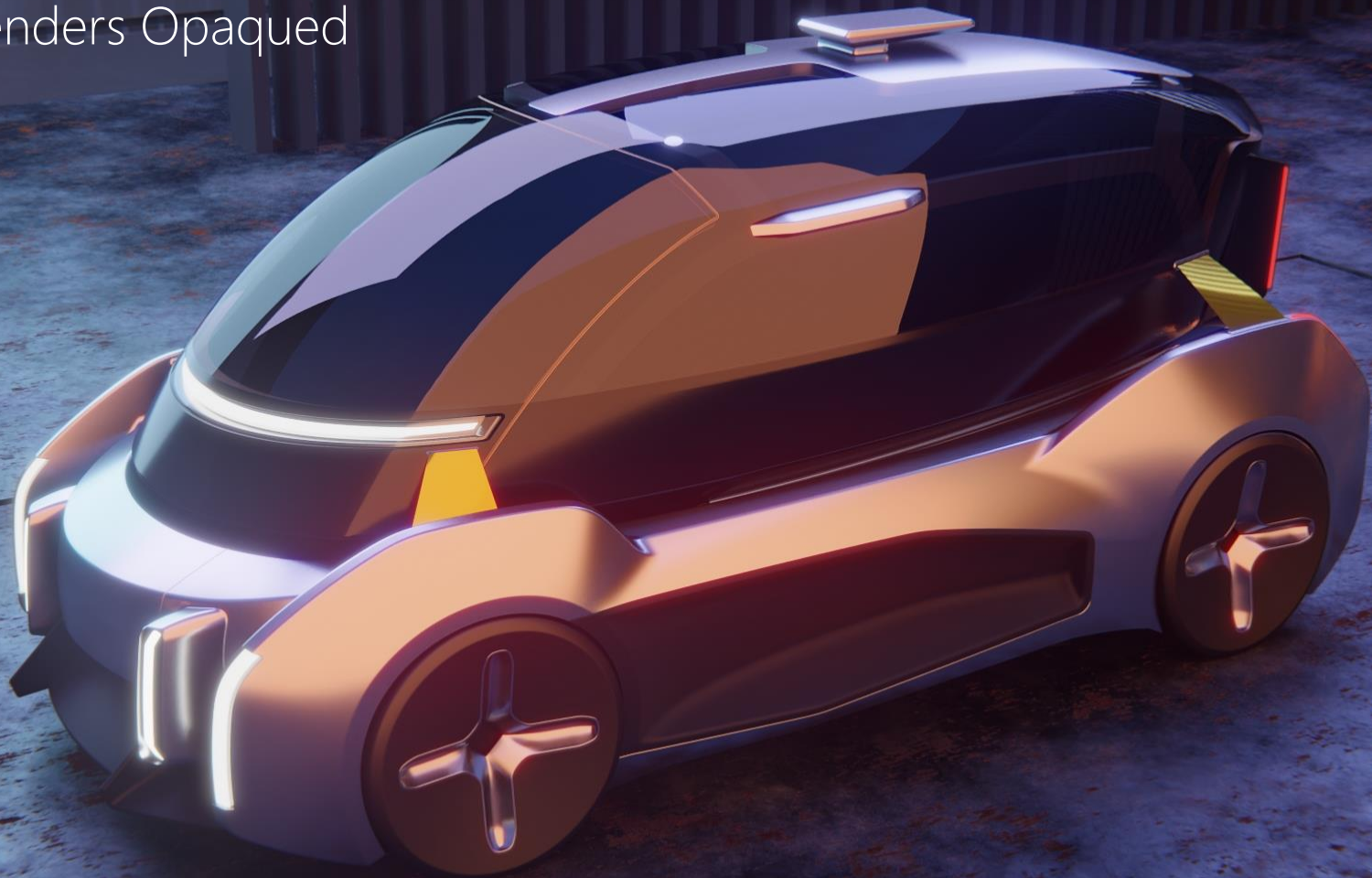
Final Design



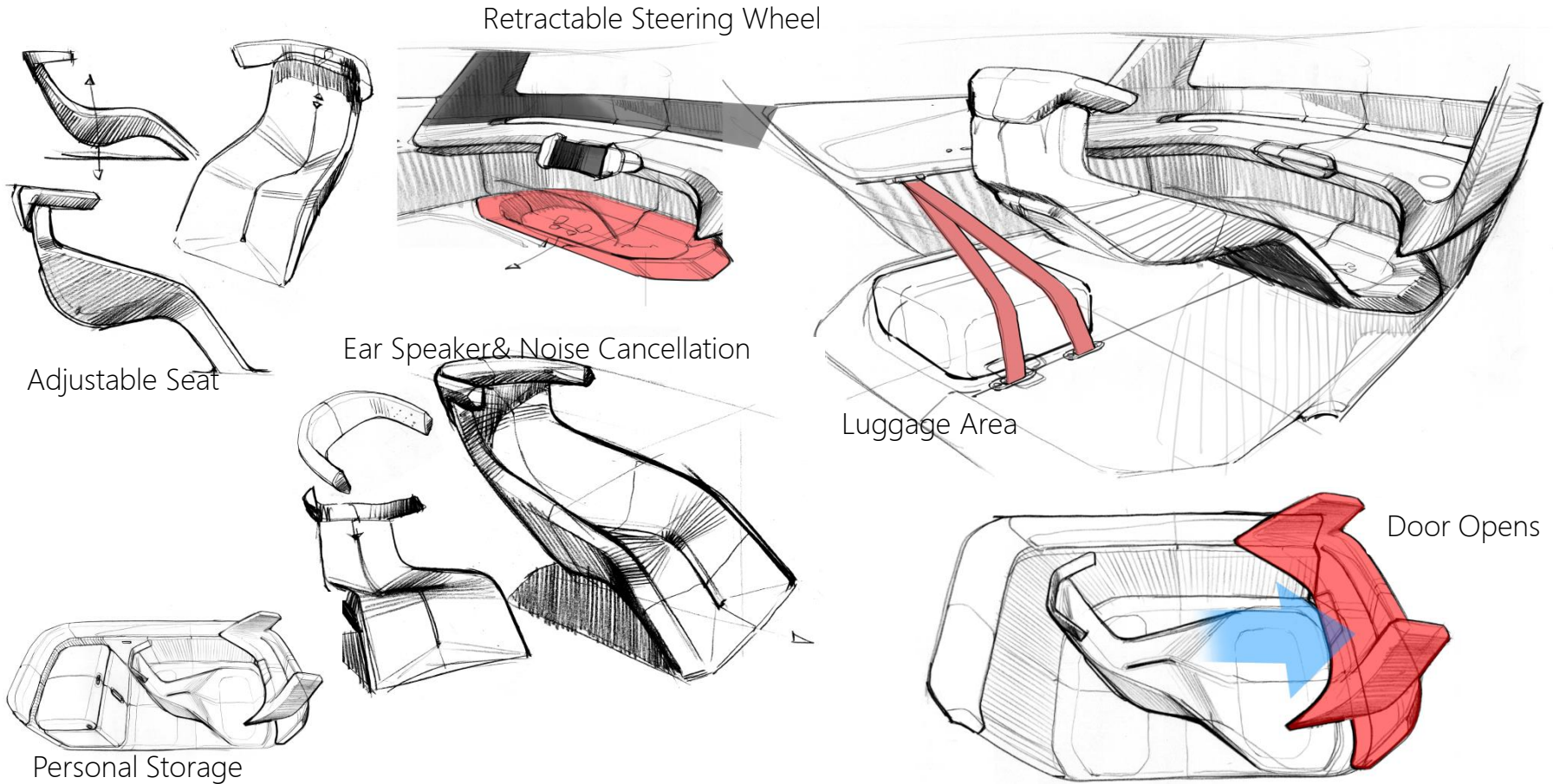
Hero Renders



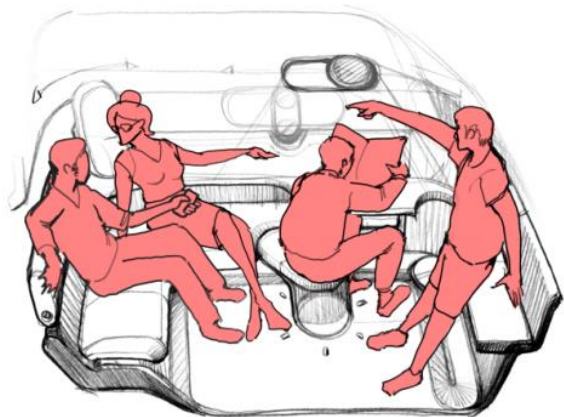
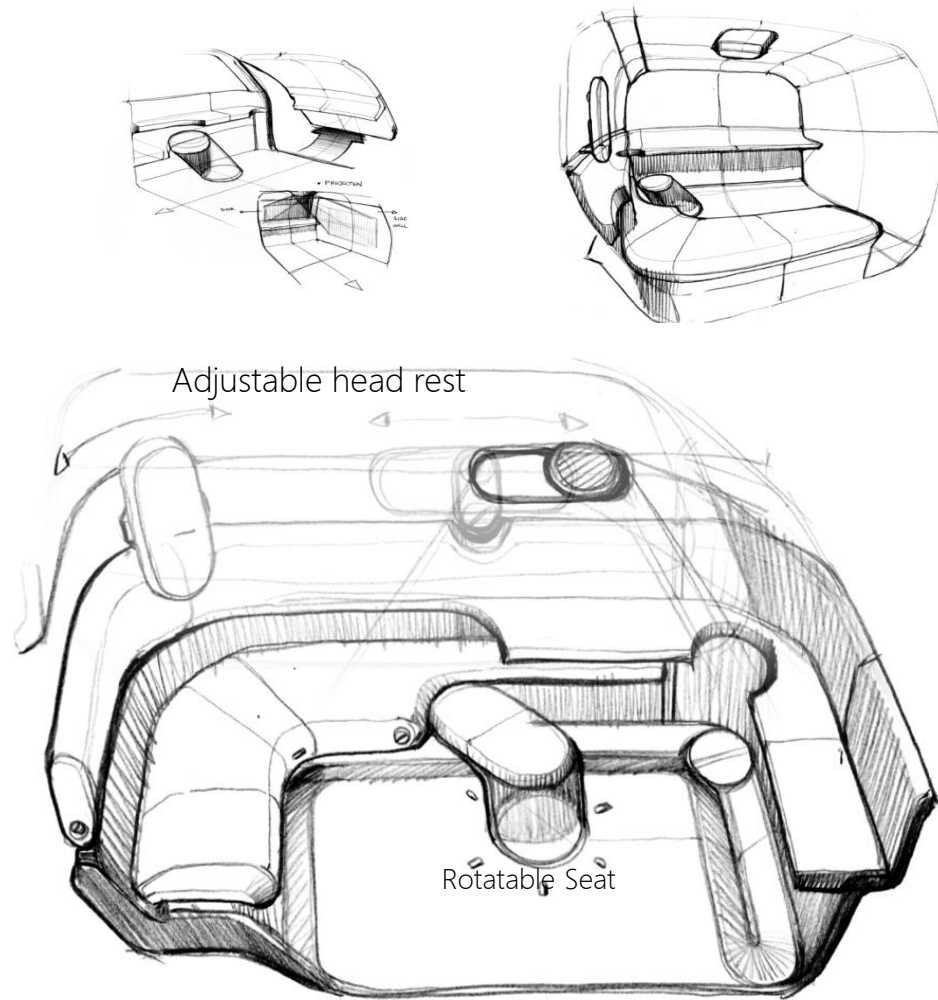
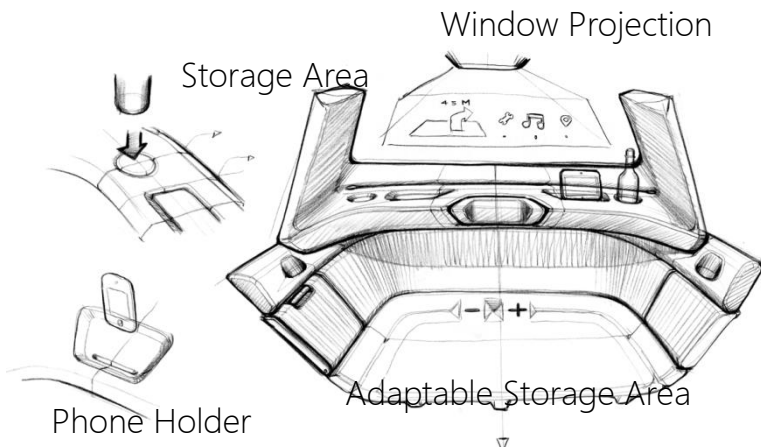
Hero Renders Opaqued



Interior- Previous Work Pod



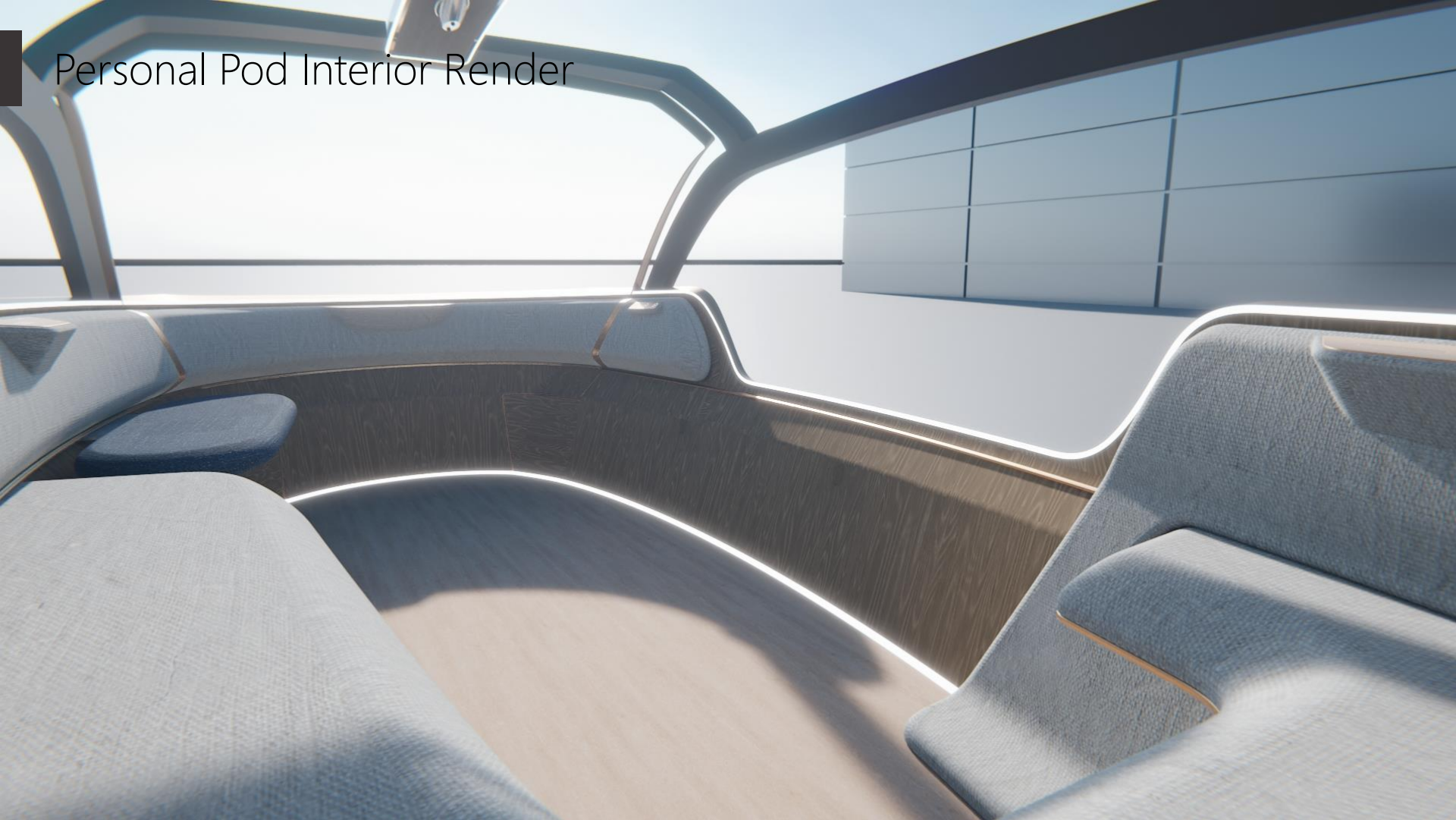
Interior Development



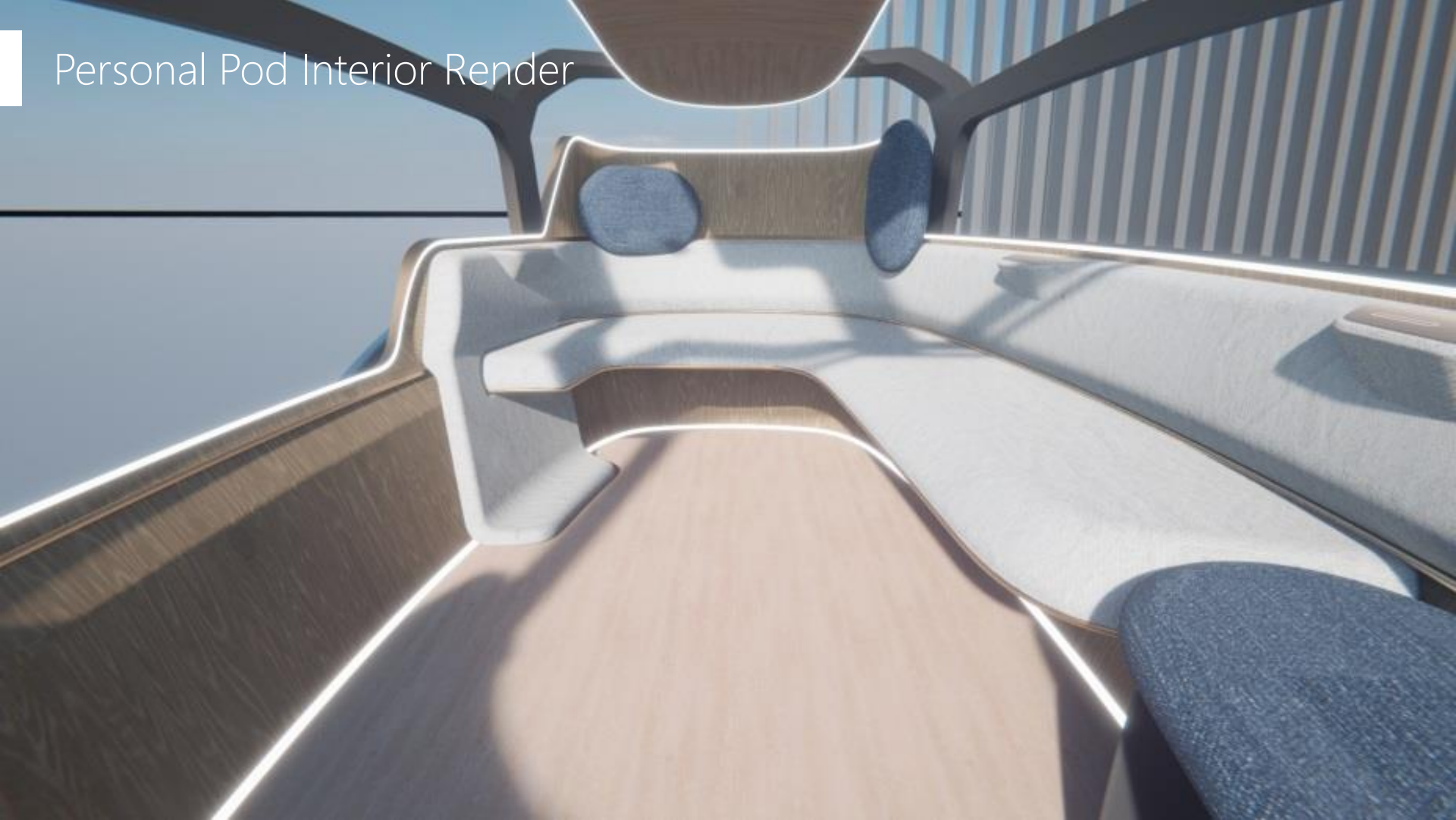
Interior Development- Personal Pod



Personal Pod Interior Render



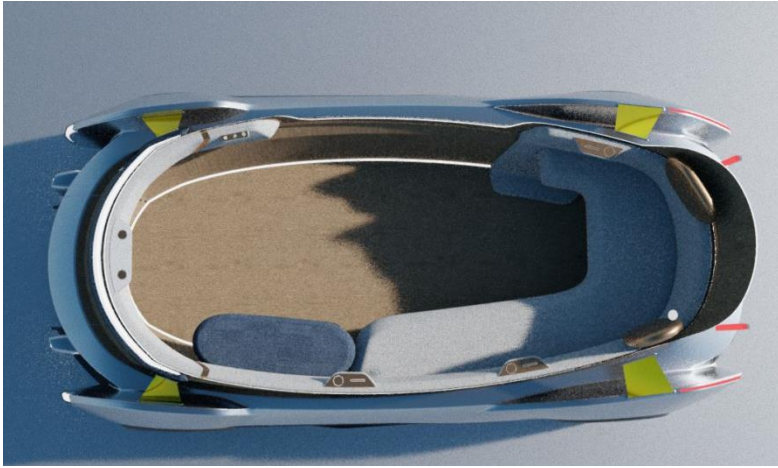
Personal Pod Interior Render



Personal Pod Interior Render



Personal Pod Interior Details

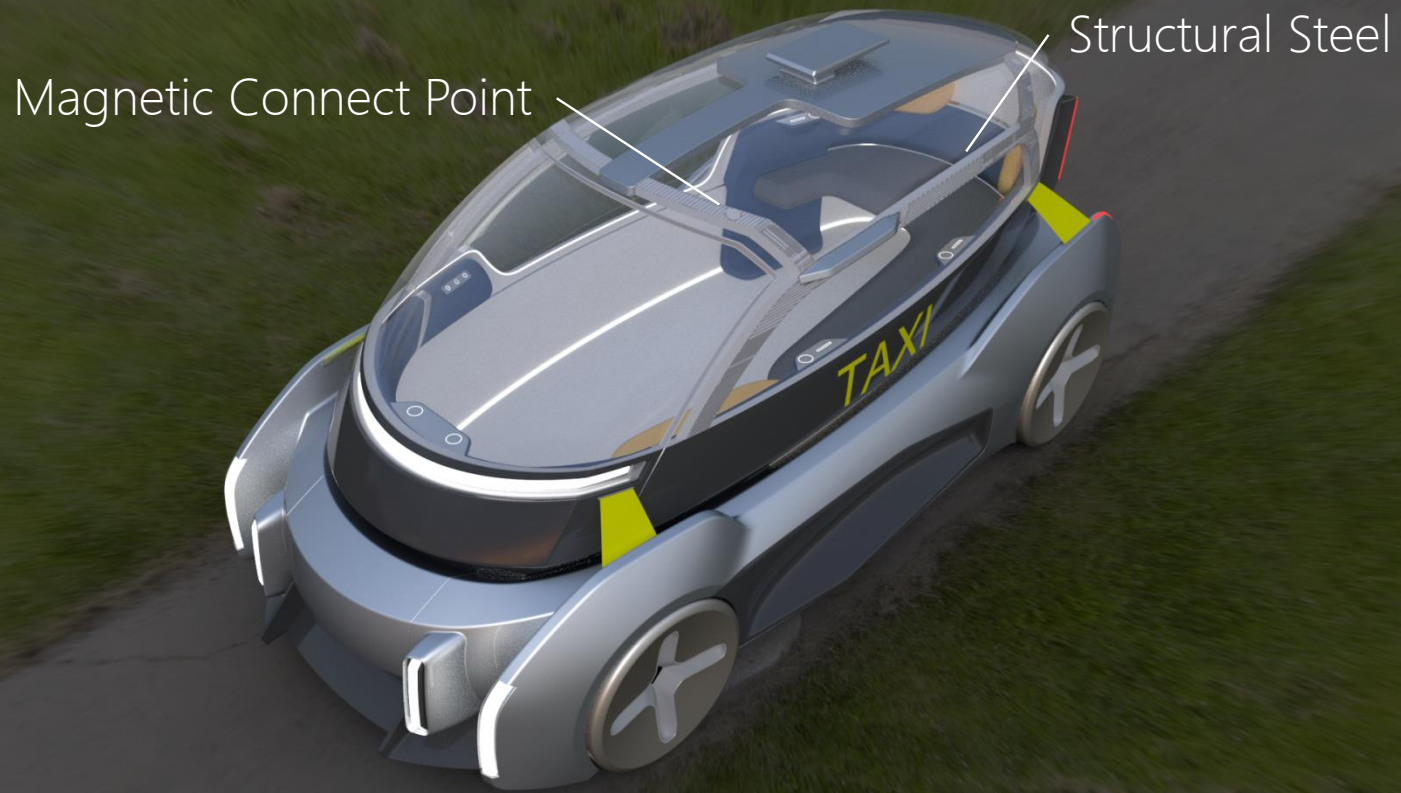


Control Panel

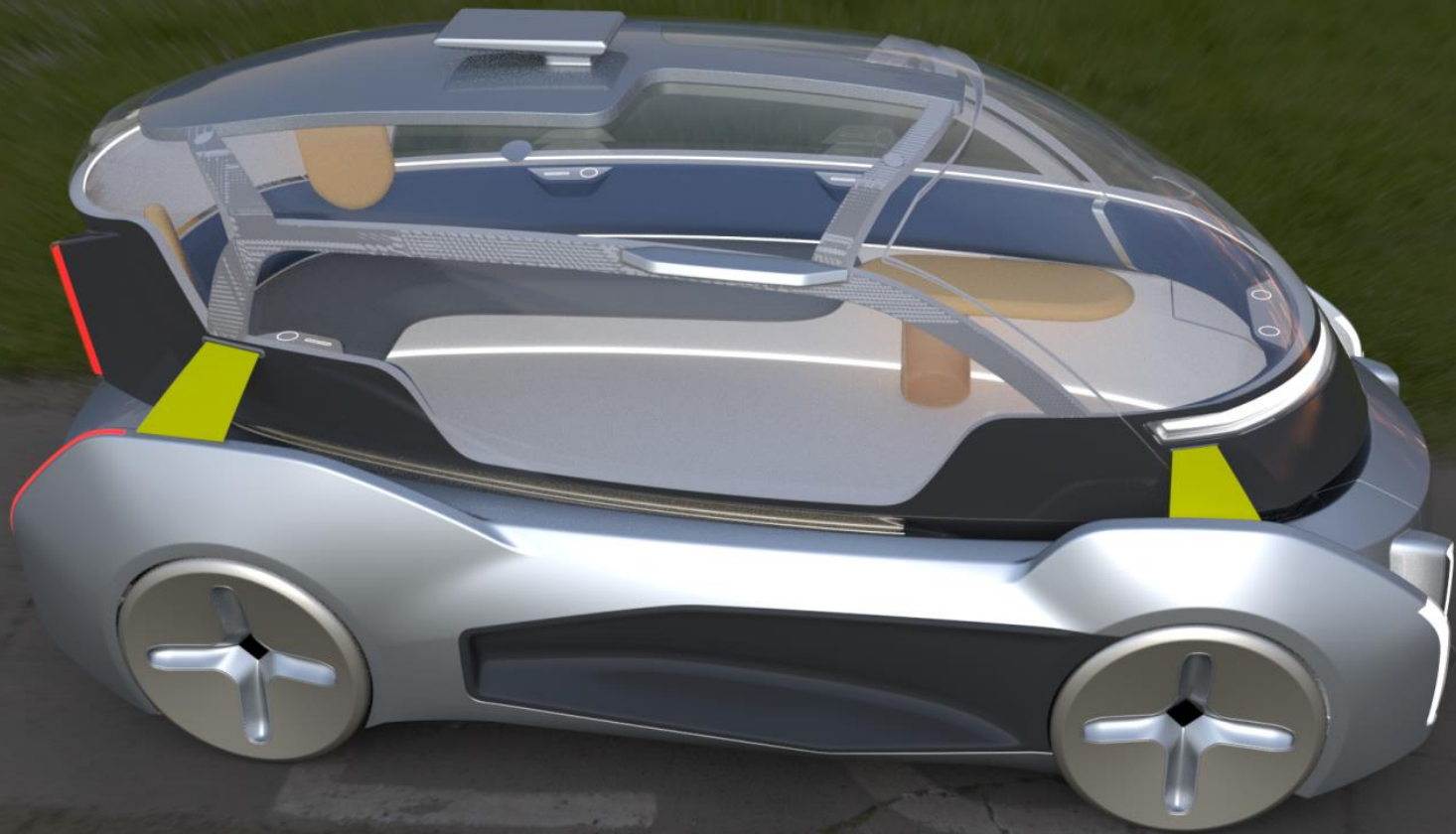


Cup Holder And Phone Holder

TAXI Pod



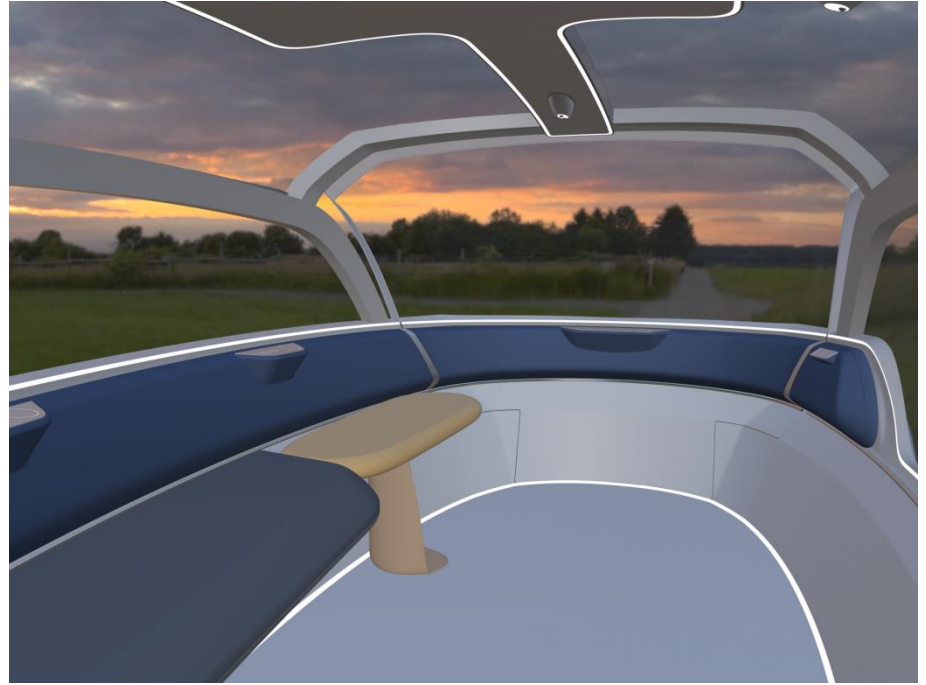
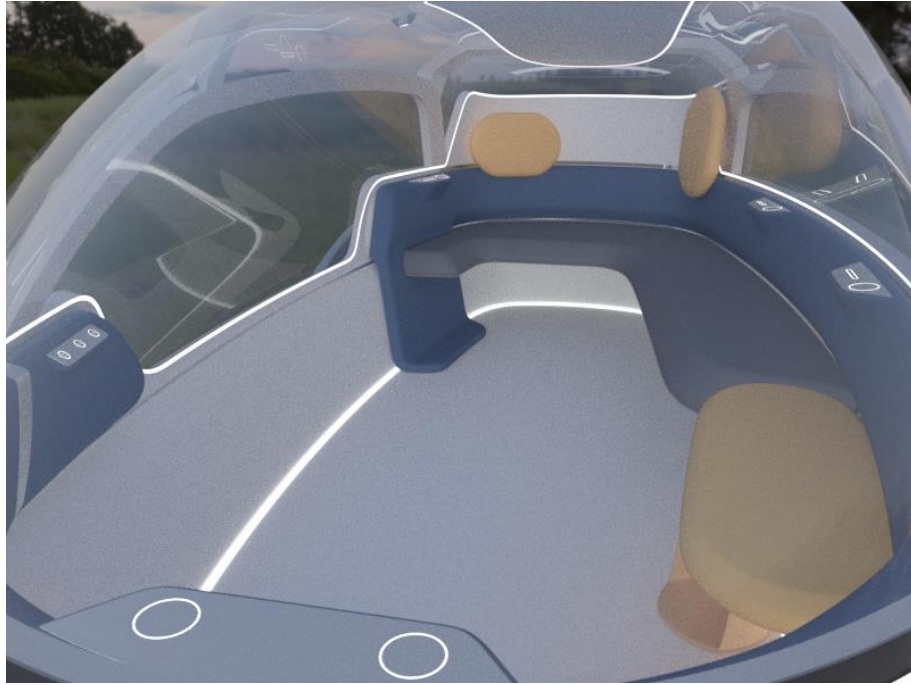
TAXI Pod



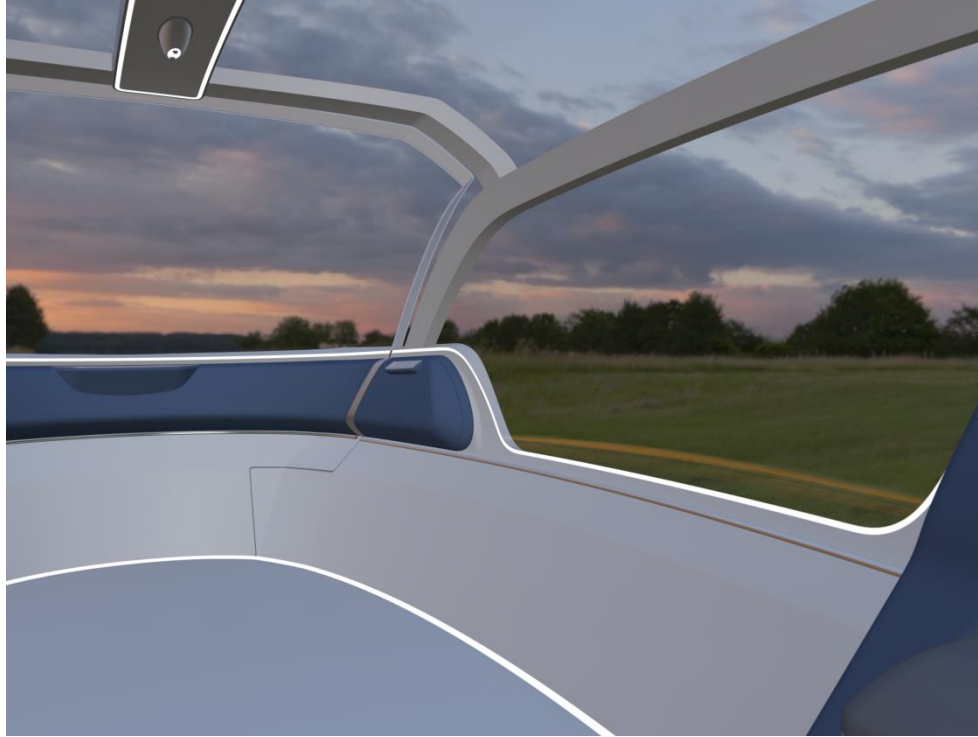
Door Opens



Interior- Taxi Pod



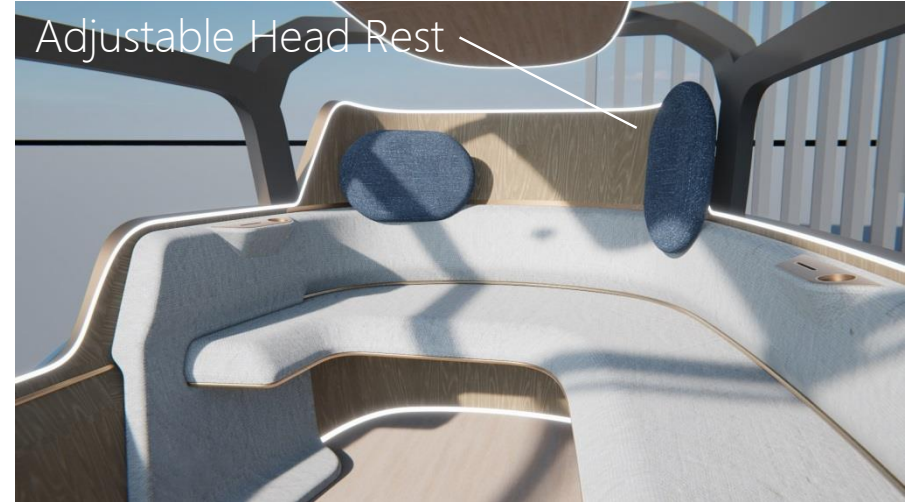
Interior- Taxi Pod



Control Panel

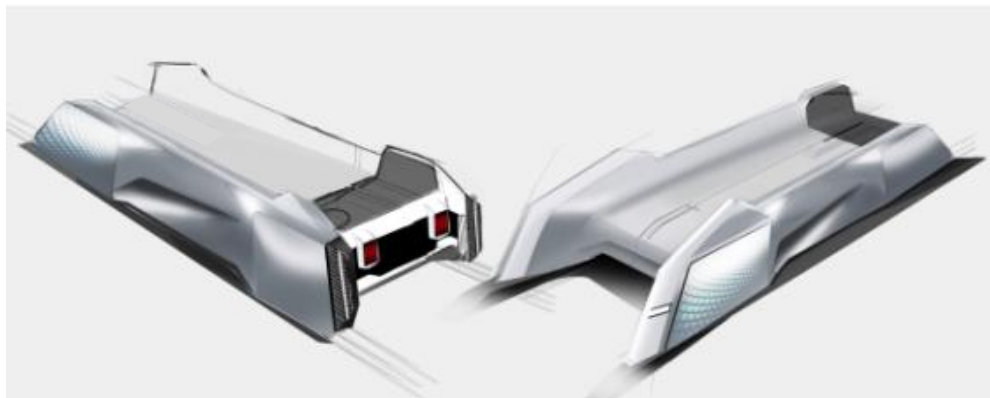
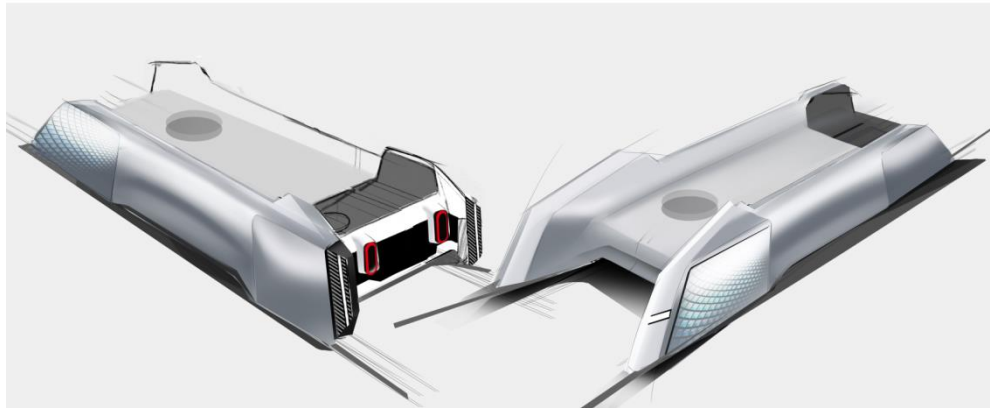


Interior Features

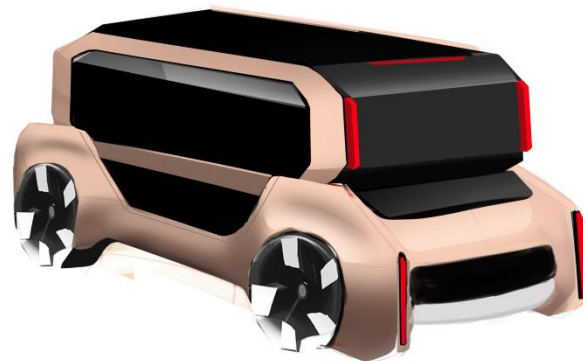
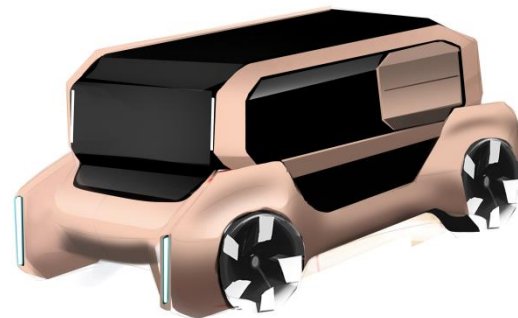


Distinguish TAXI Pod and Personal Pod by the cool tone and warm tone.

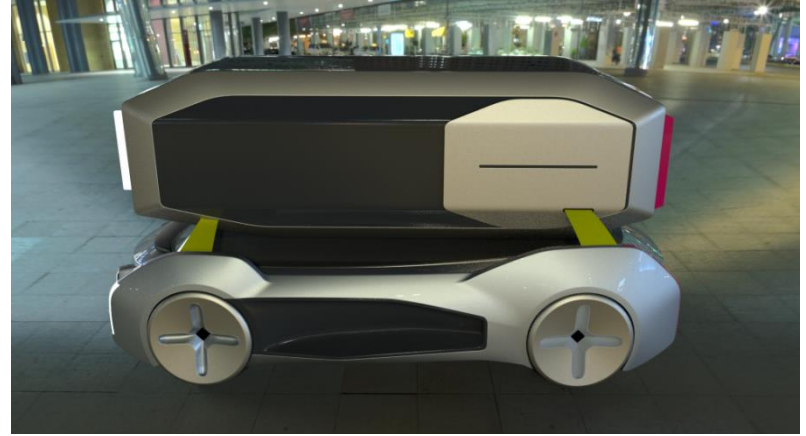
Maglev Chassis



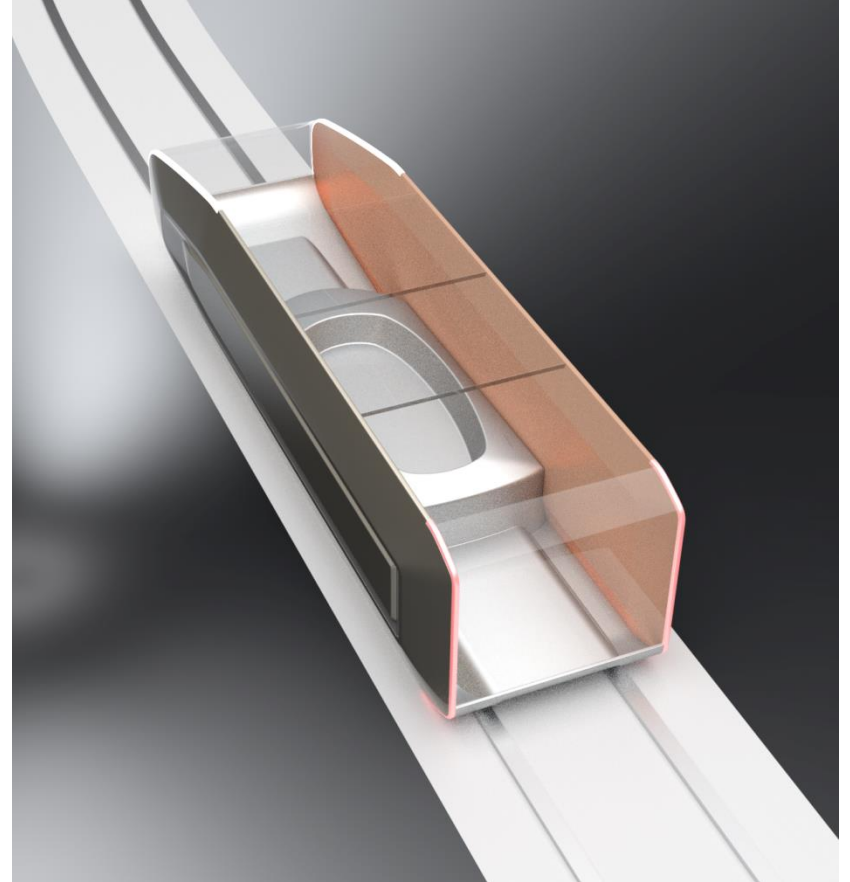
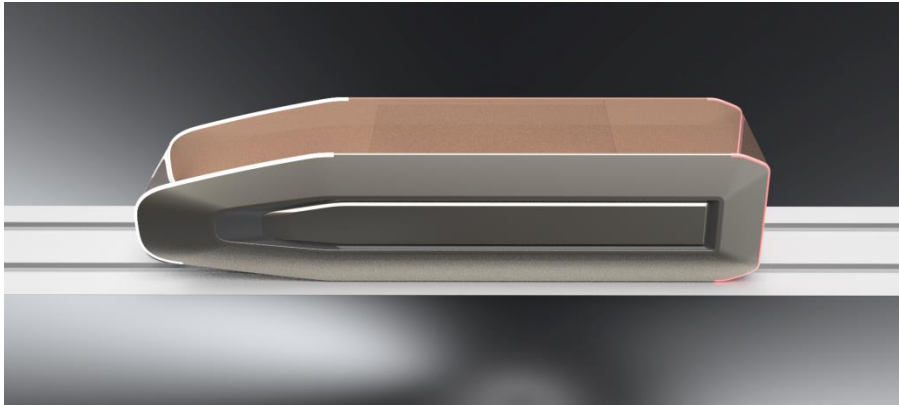
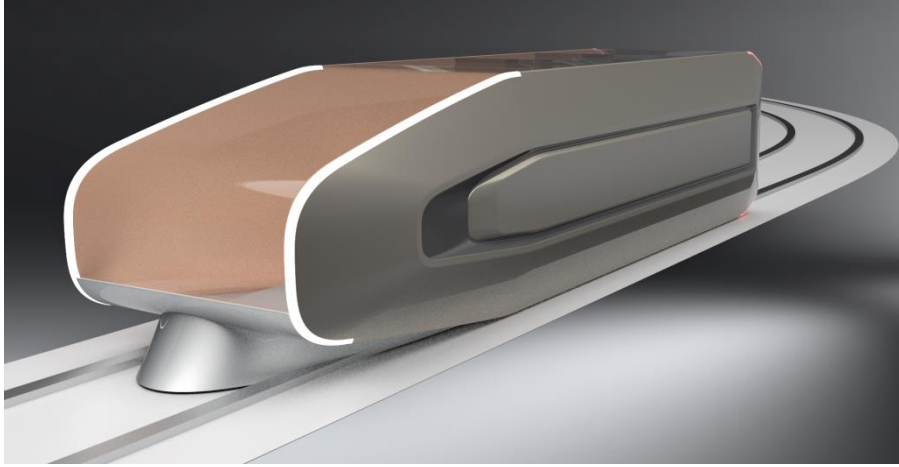
Cargo Pod



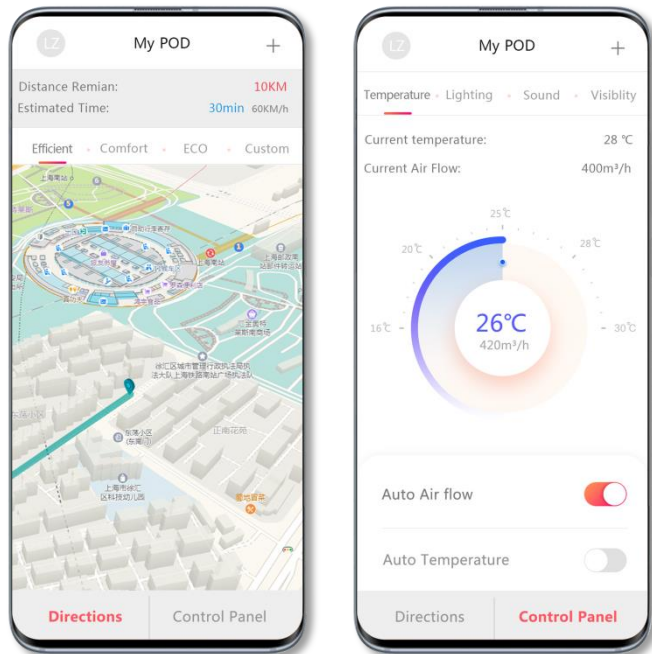
Cargo Pod



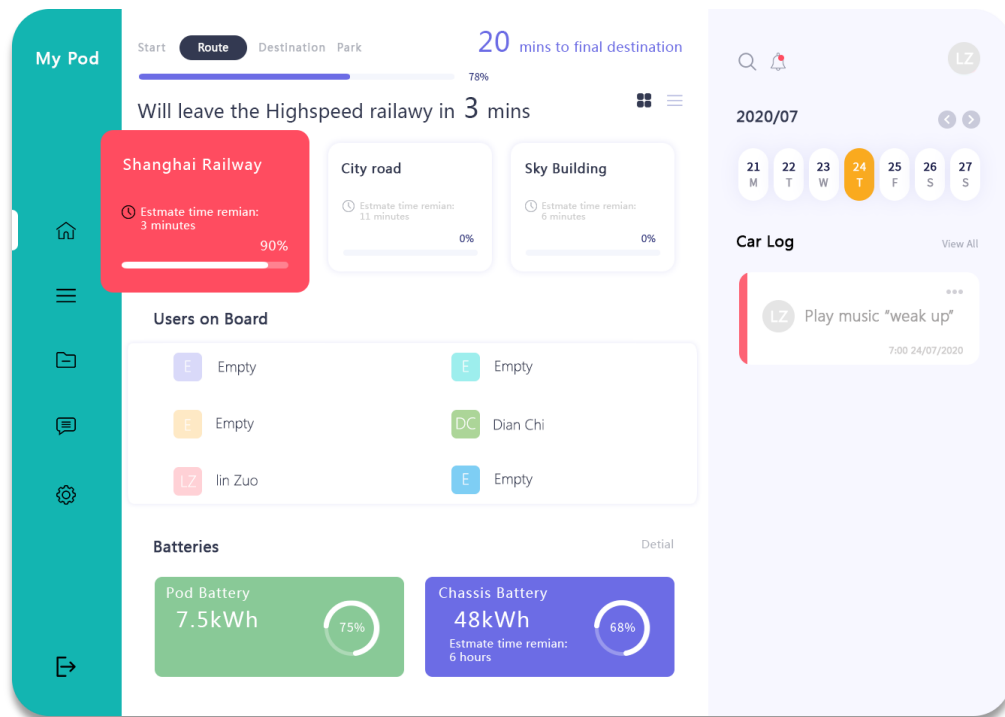
Maglev Chassis



HMI



Smartphone Interface



HMI-Main-Screen

HMI



Package

- 97.5%ile Dutch Male
- 2.5%ile Chinese Female
- In wheel
- Cabin battery
- Door Connector
- Chassis
- Chassis
- Front Door
- Magnet Connect point
- Seat
- Passenger Pod

Dimensions: L4800, W2200, H2200

Propulsion system battery: 70kWh(In chassis)

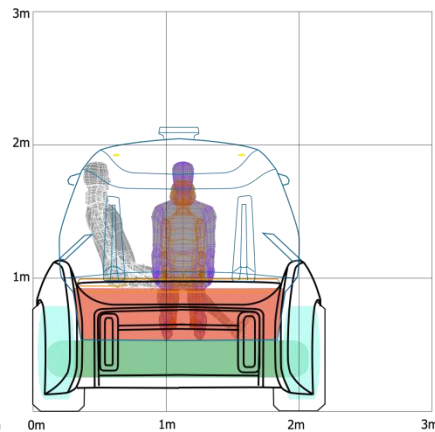
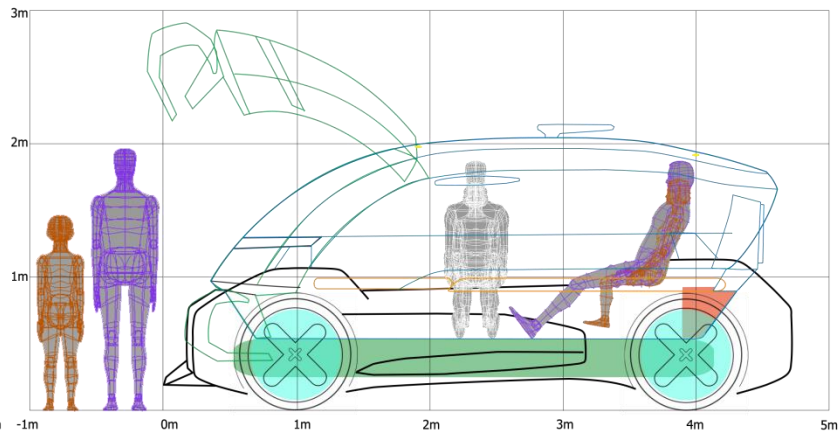
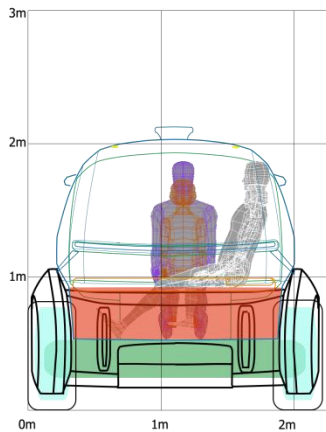
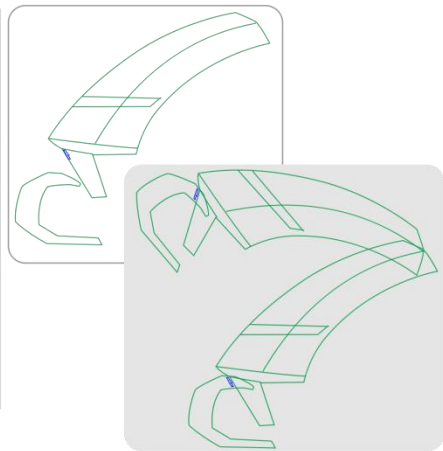
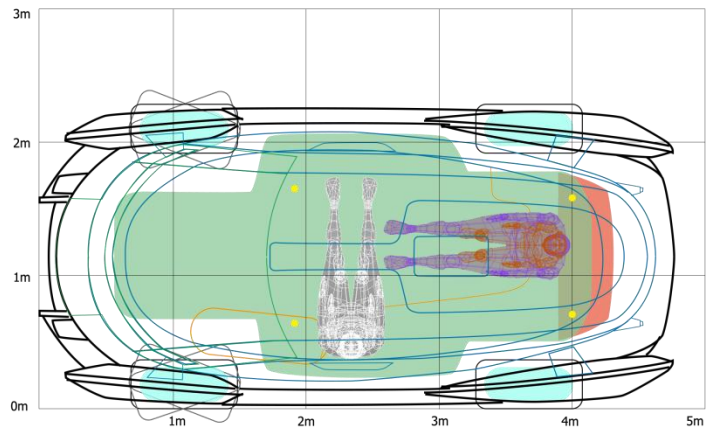
Electronic system battery: 10kWh(In cabin)

Motor: In wheel motor 92kw×2(rear), 74kw×2(Front)

Cabin transfer type: Electromagnetic suspension (EMS)

Range: 500km

Entrance: Front entrance



Many Thanks

2050 My Pod Project



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Student name: Zhou Li

