

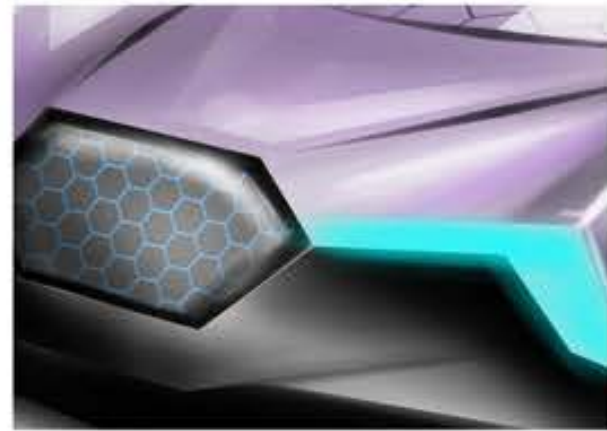
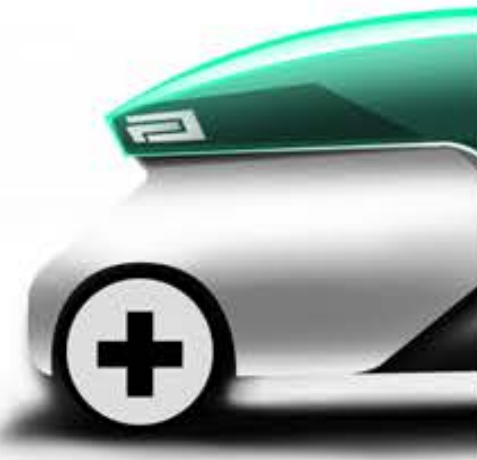


# PORTFOLIO

NEEL  
UMRIGAR

MIT Institute of Design / Automobile and Transportation Design

contents







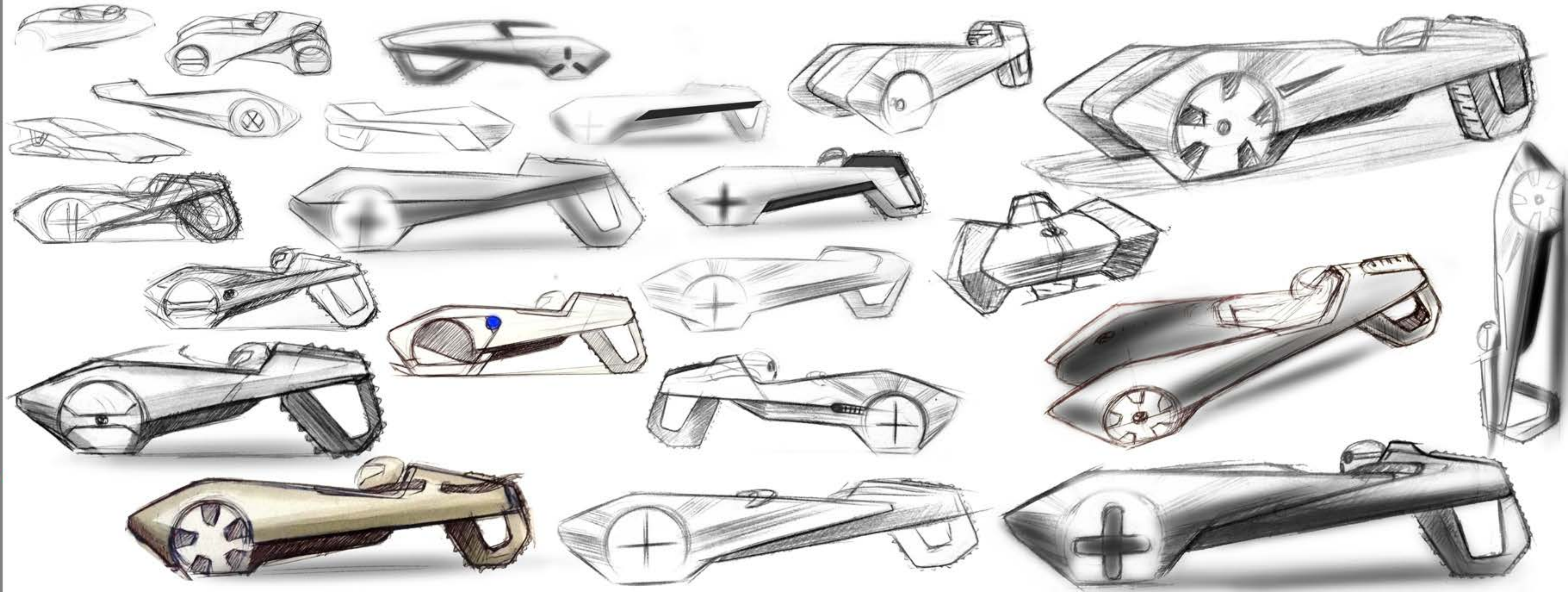
Inspiration



Sketch

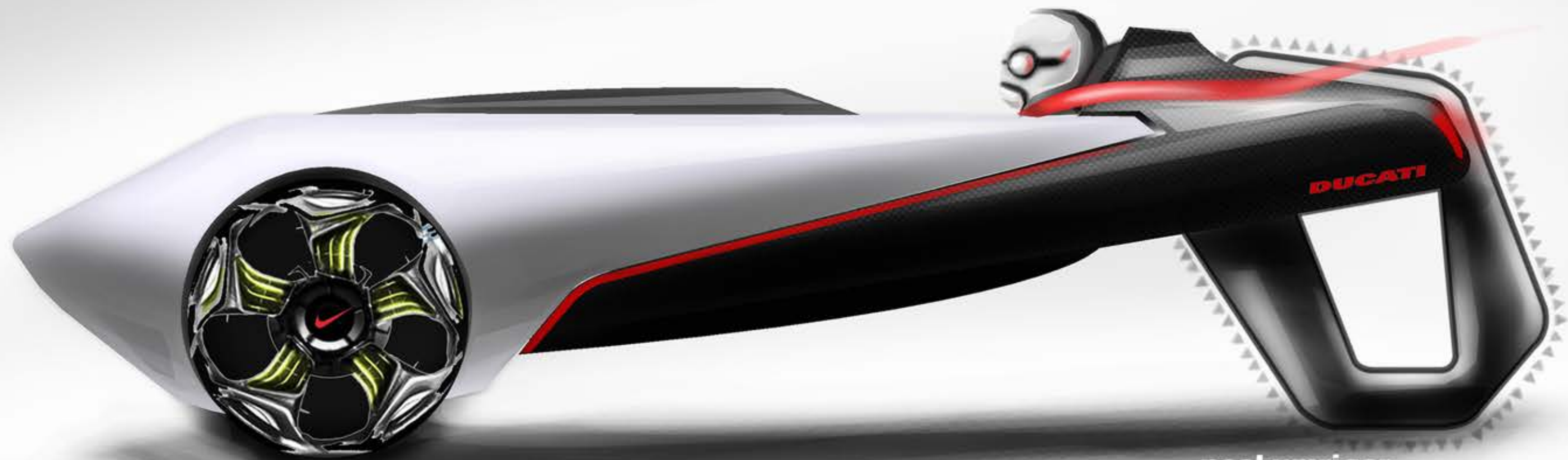




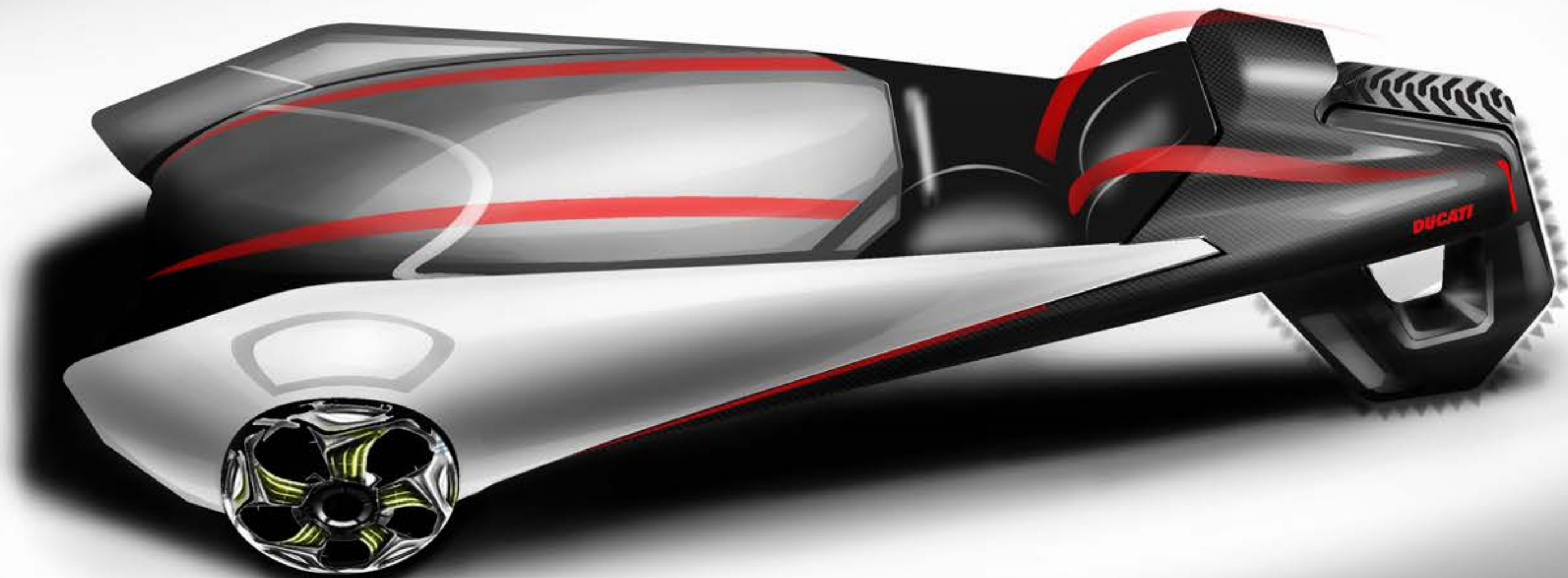


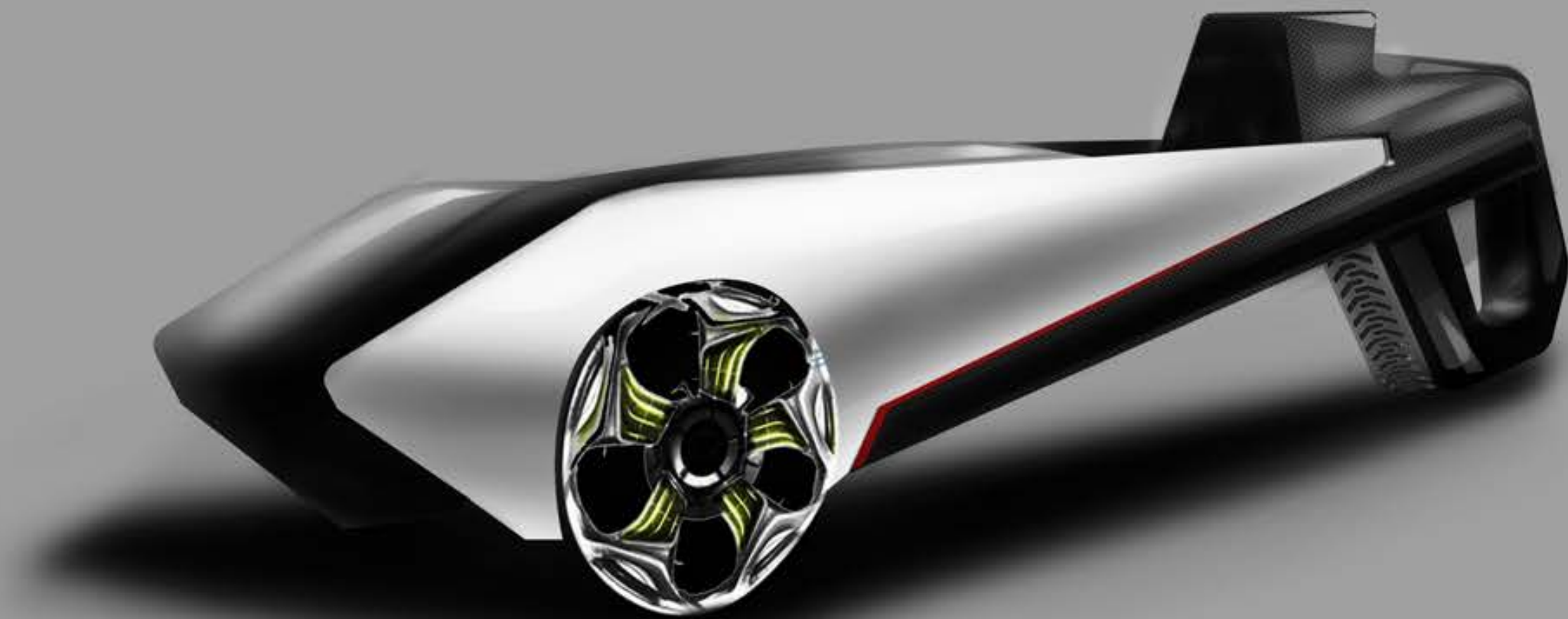


DUCATI



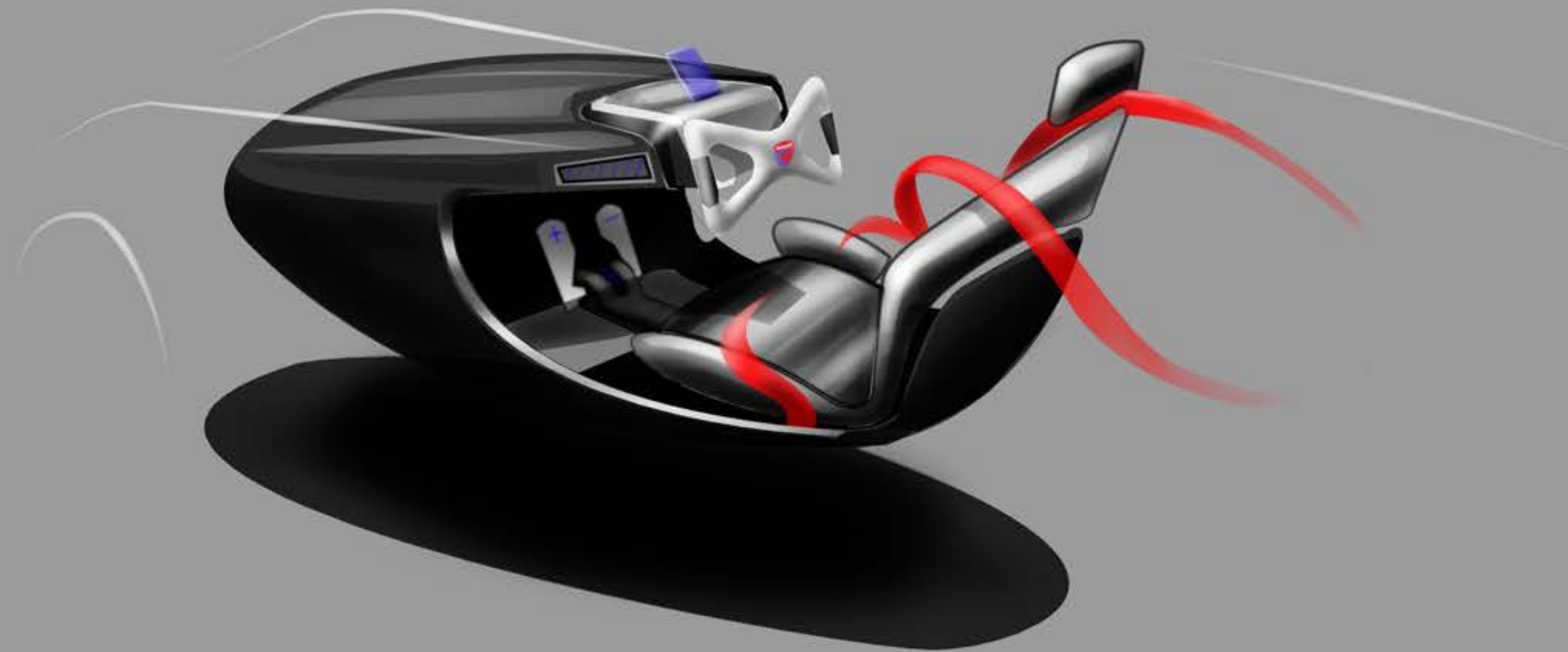
neel umrigar

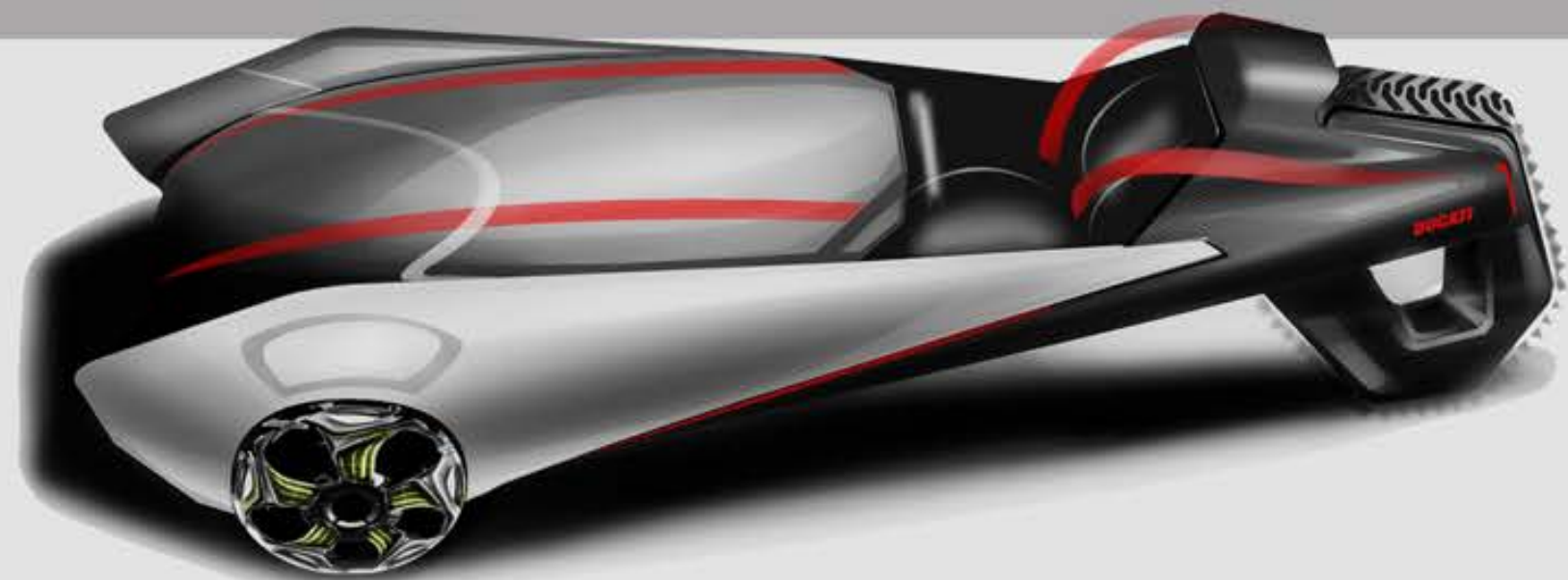




neel umrigar



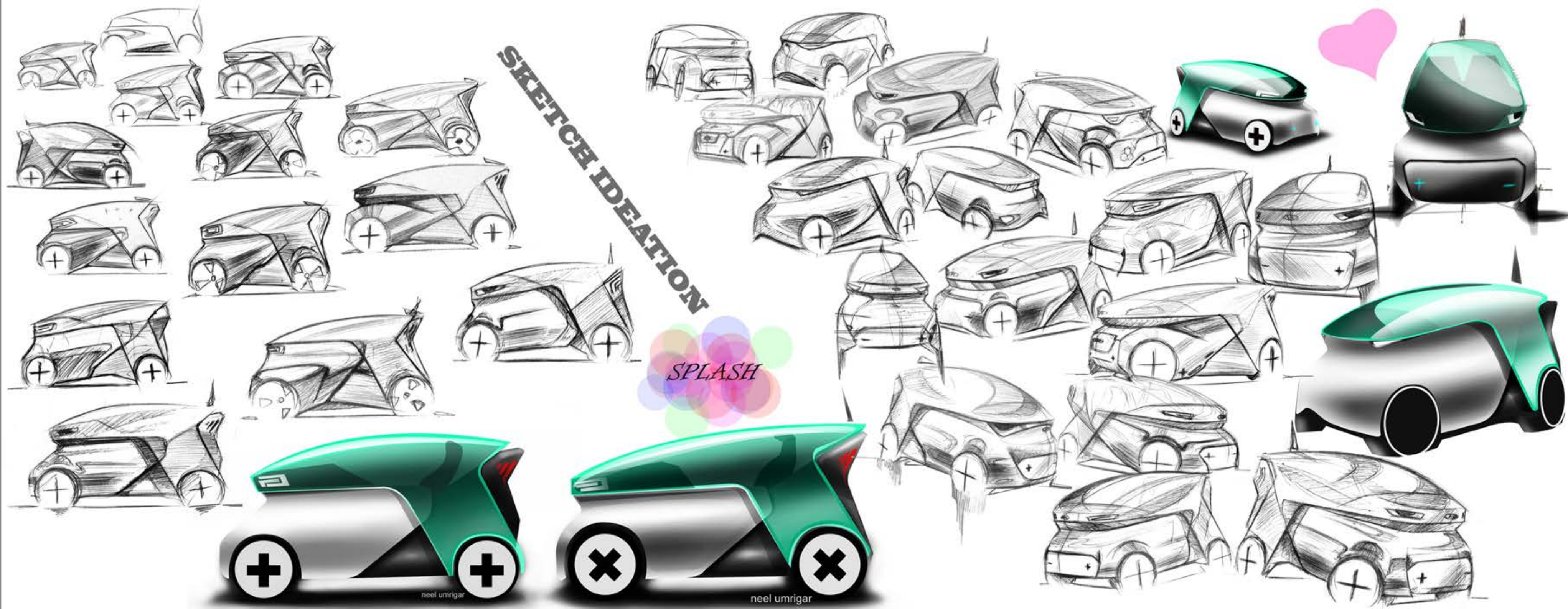




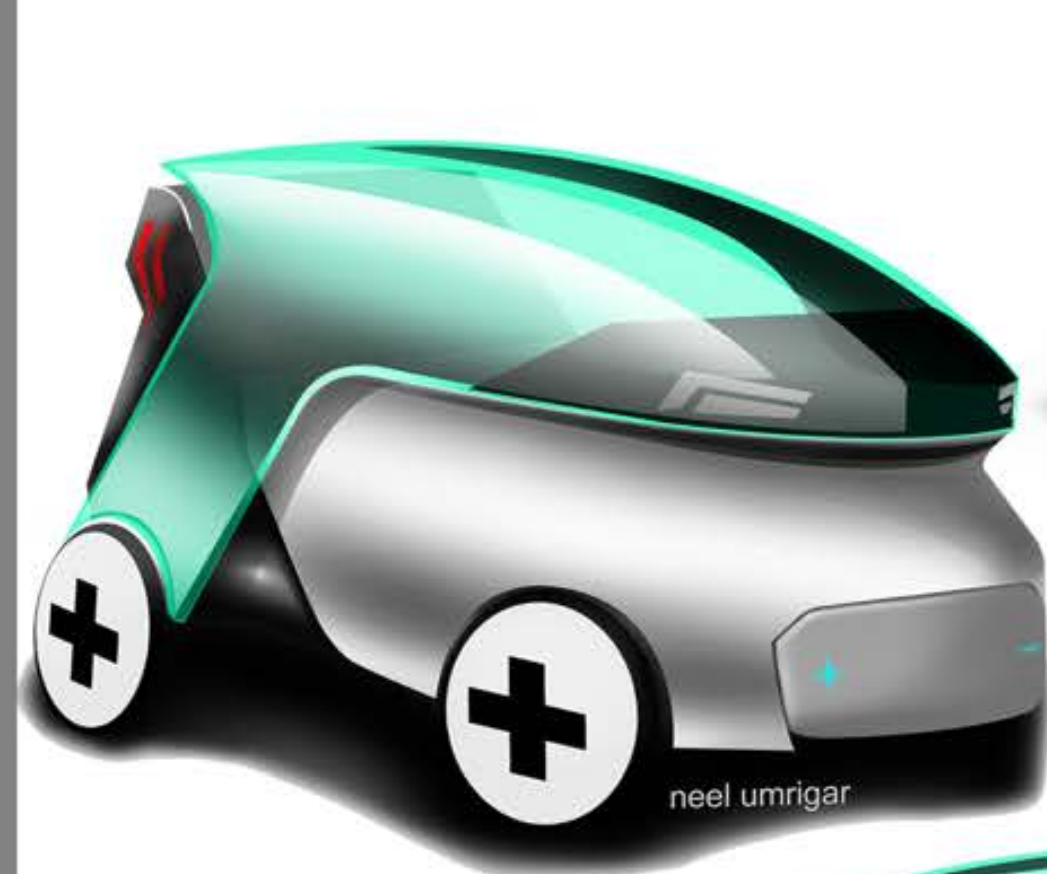




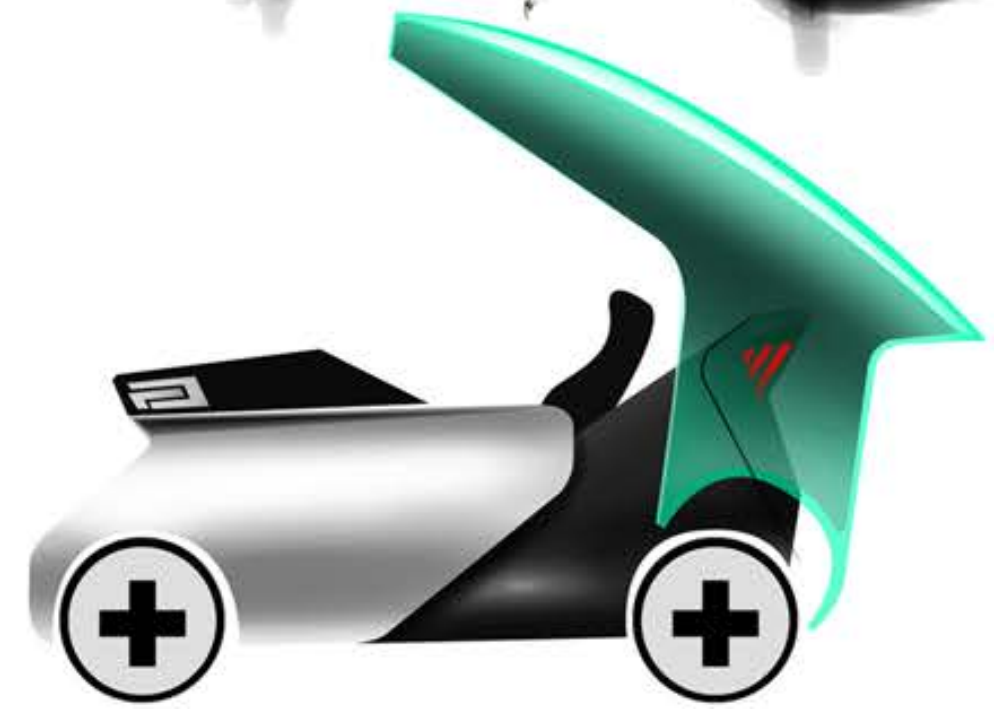
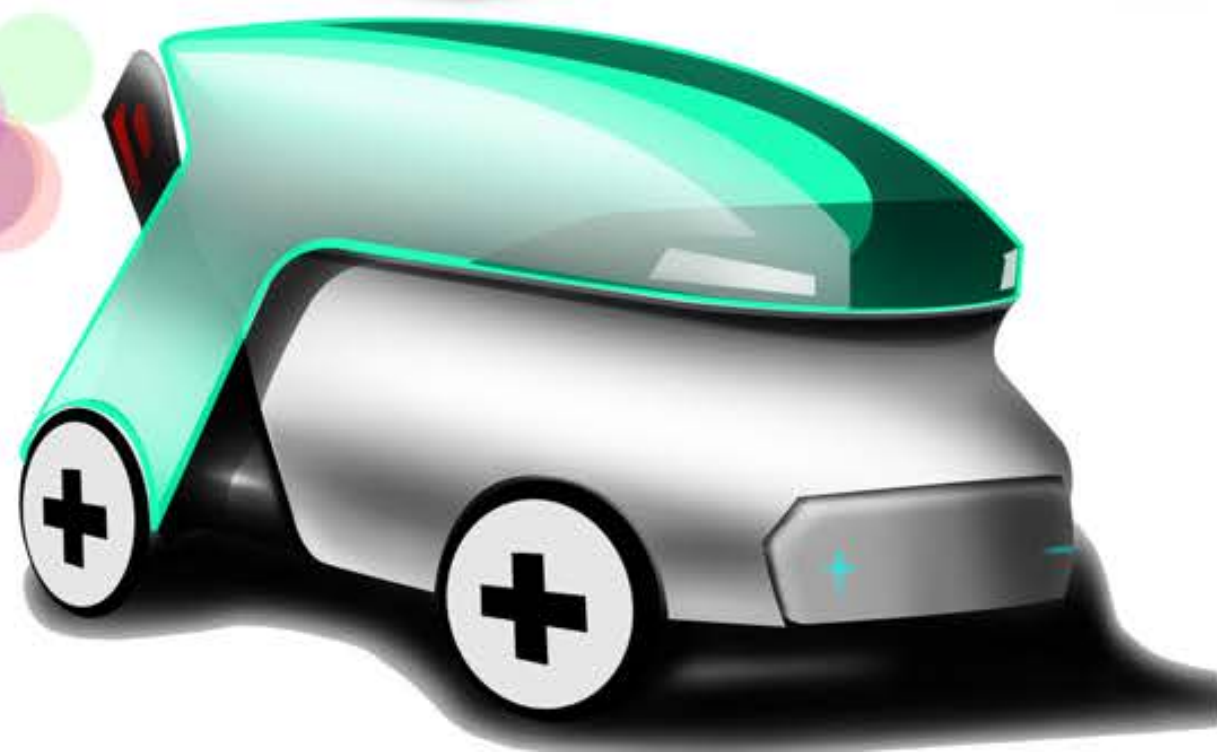
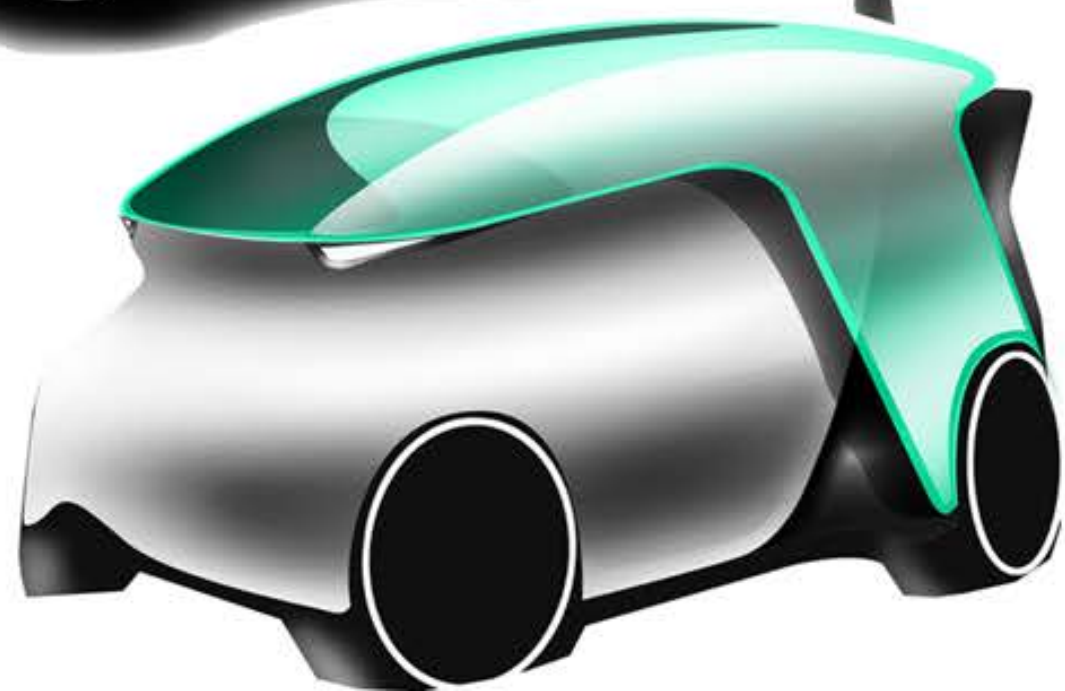
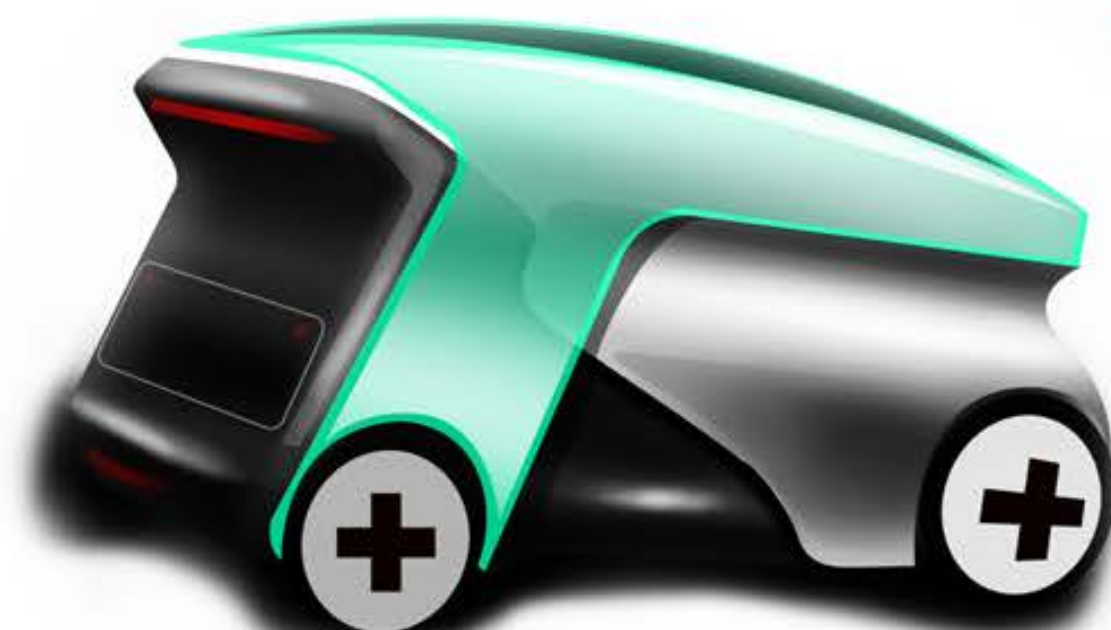
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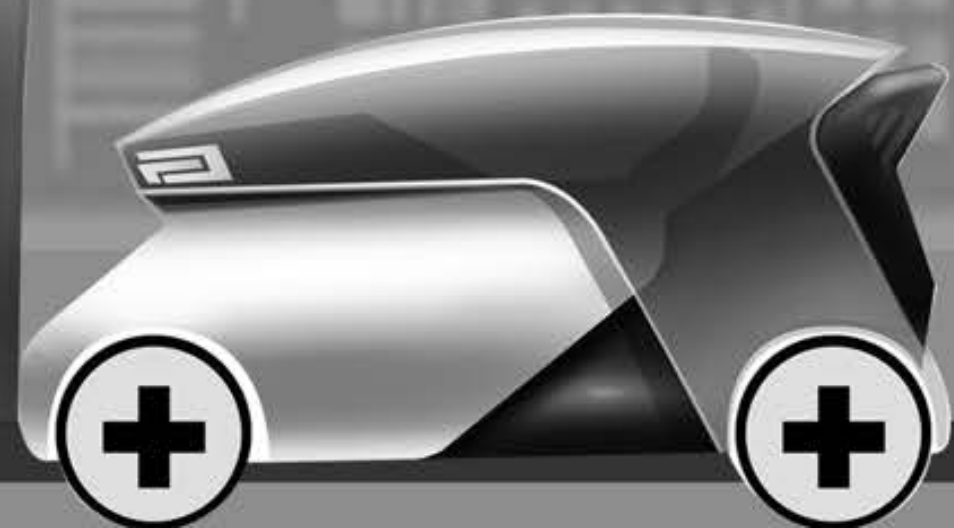


neel umrigar

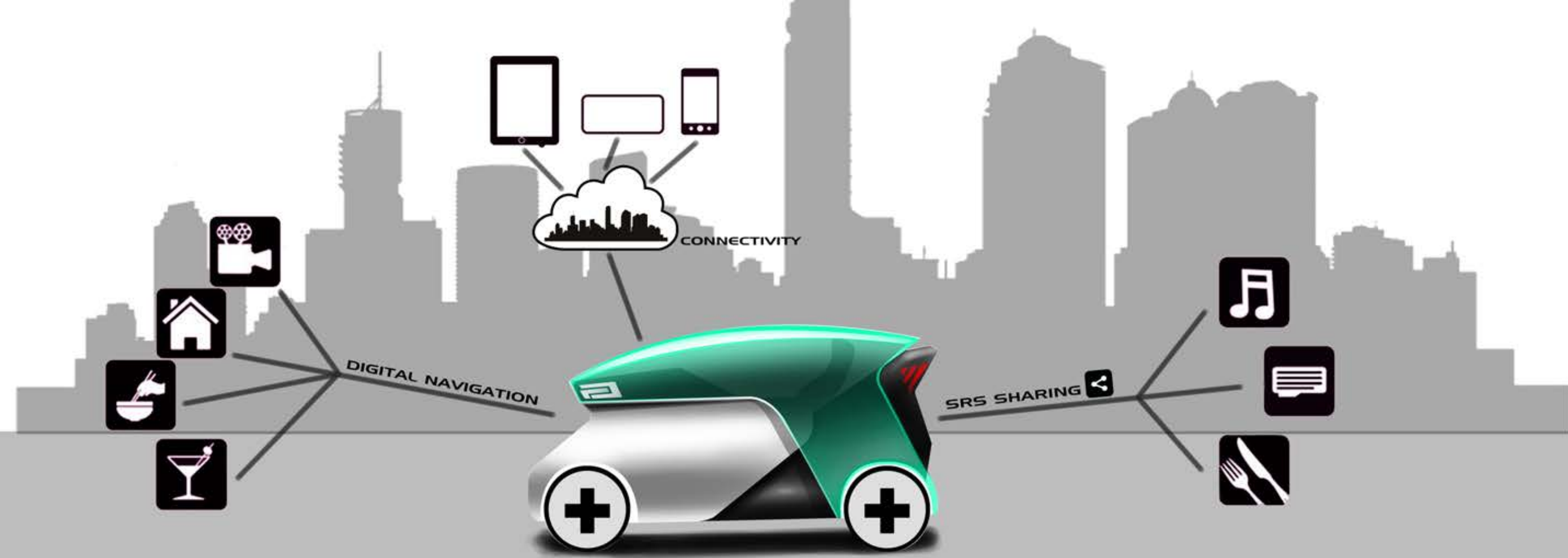




solar charger



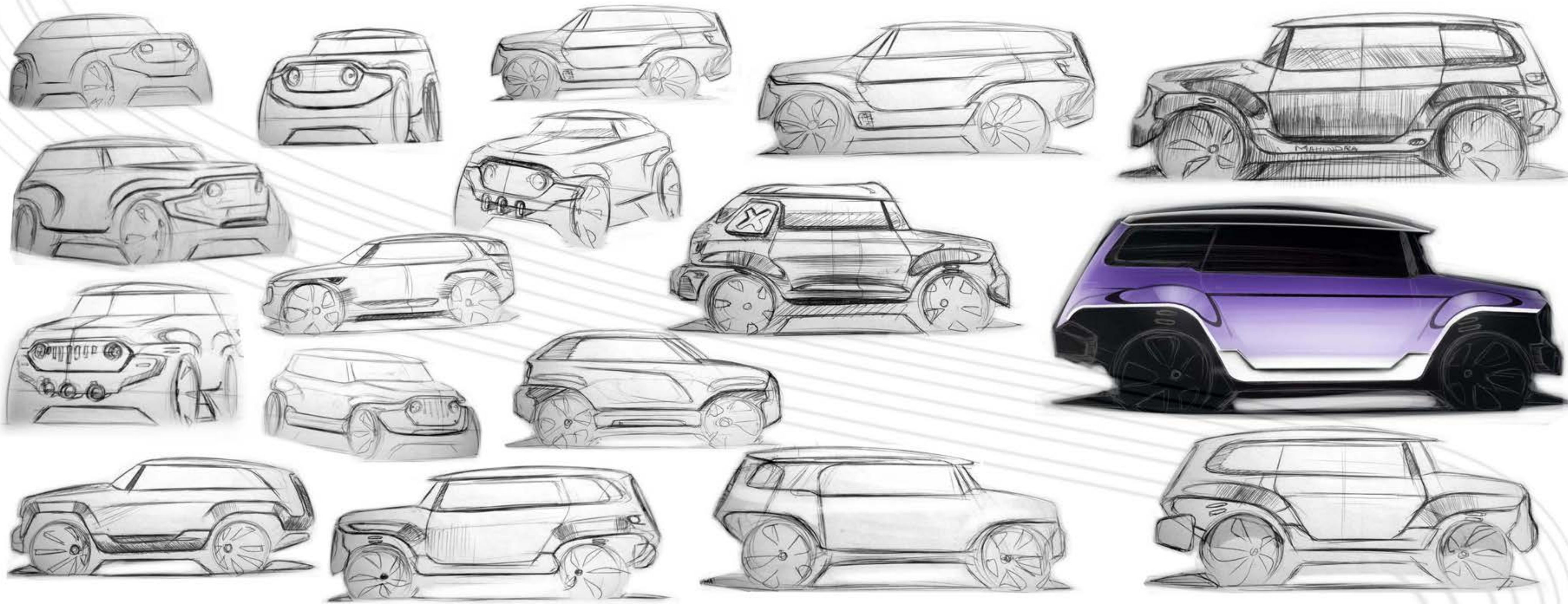




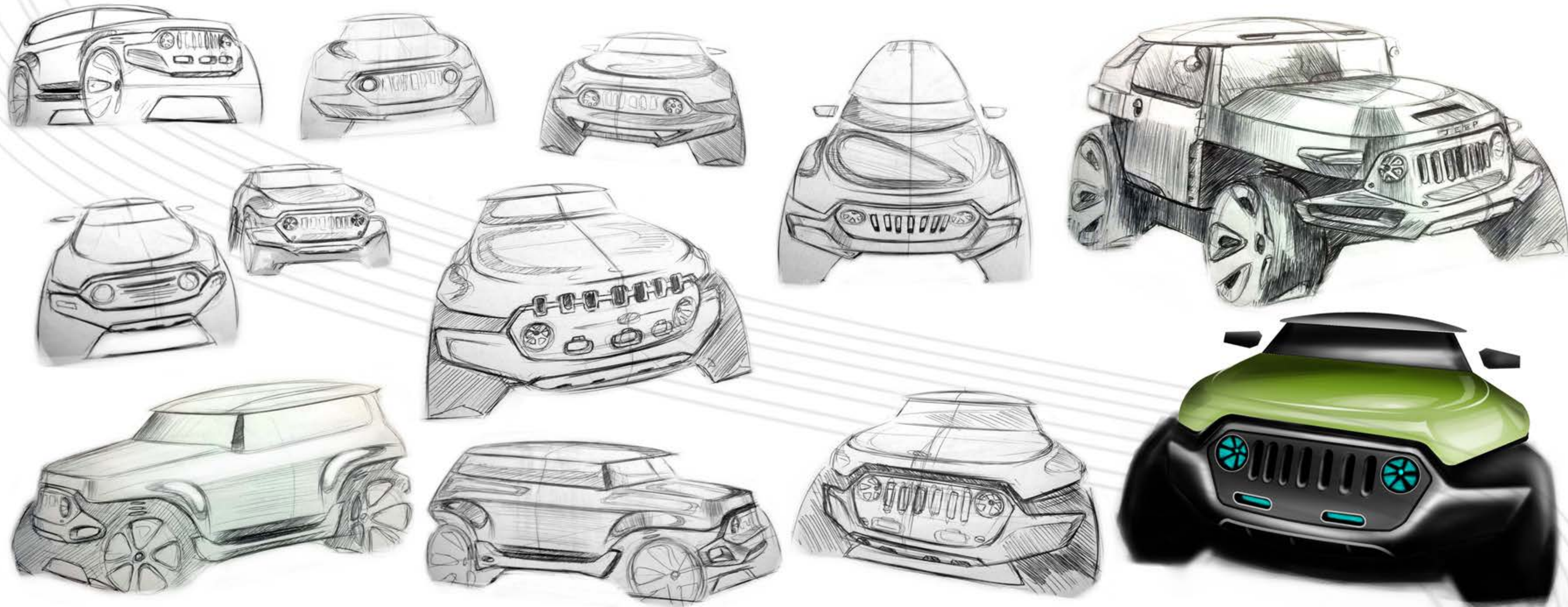


JEEP COMMANDO

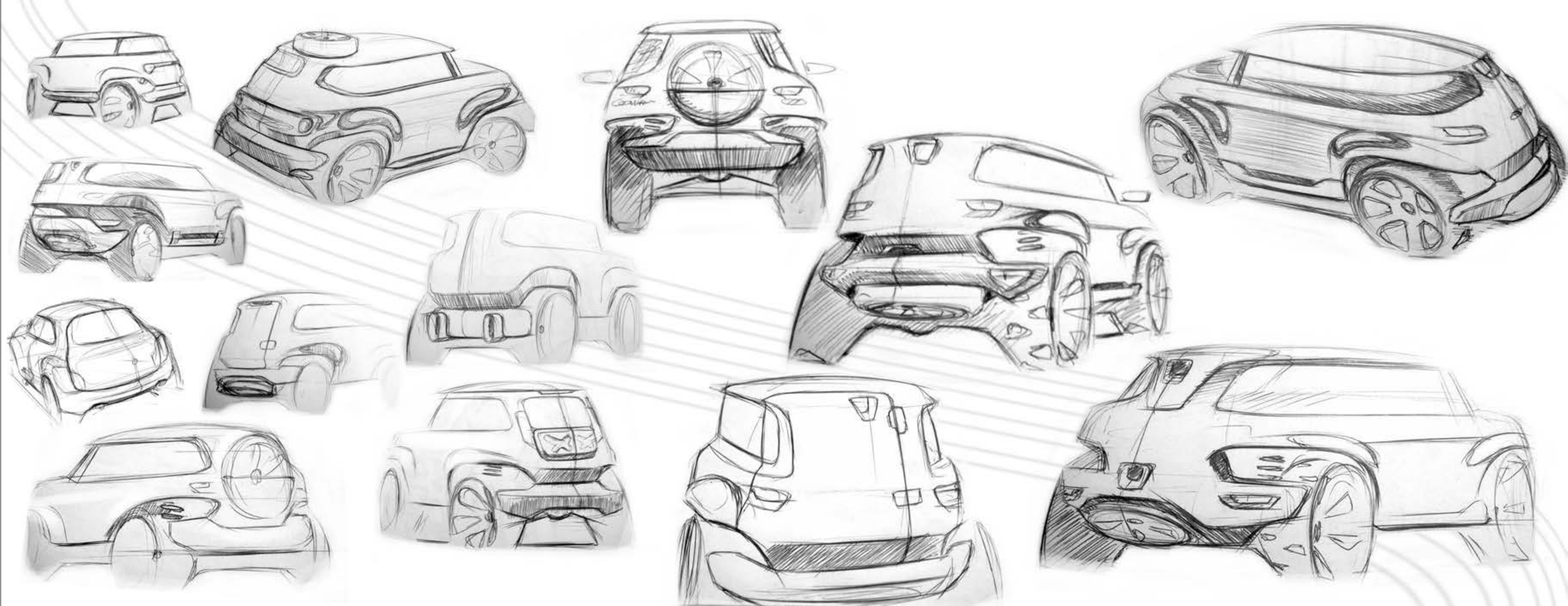






















HYUNDAI

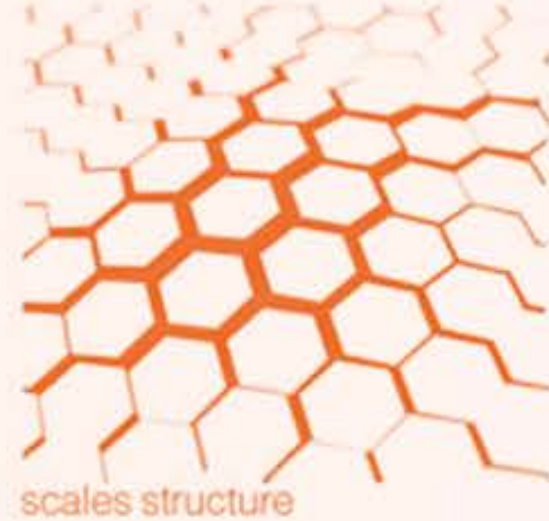
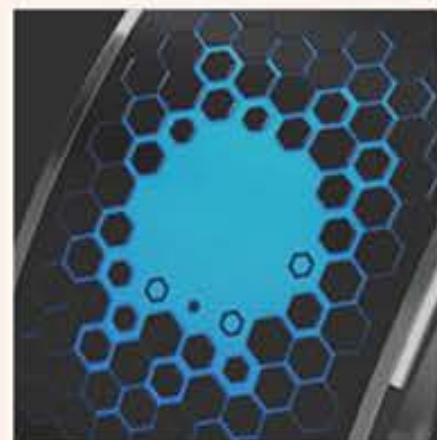
NEXT GENERATION HYUNDAI HYBRID



## HYUNDAI HYBRID TECHENOLOGY

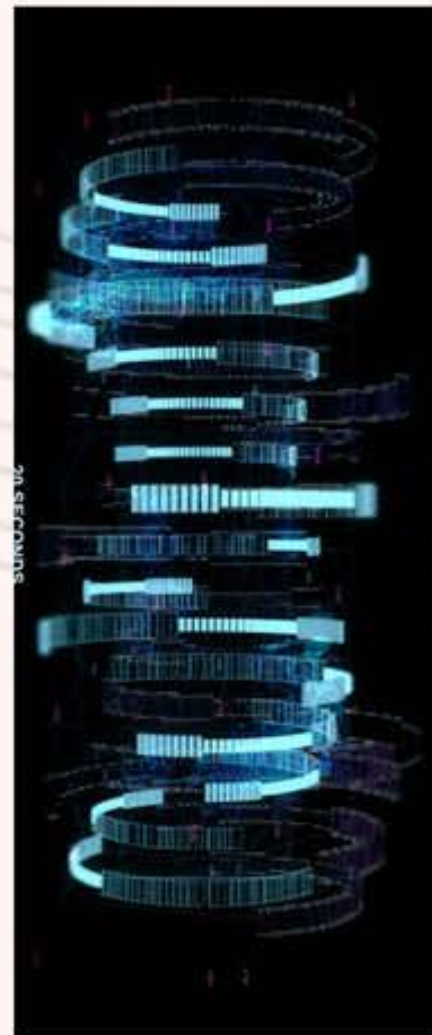


## INSPIRATION



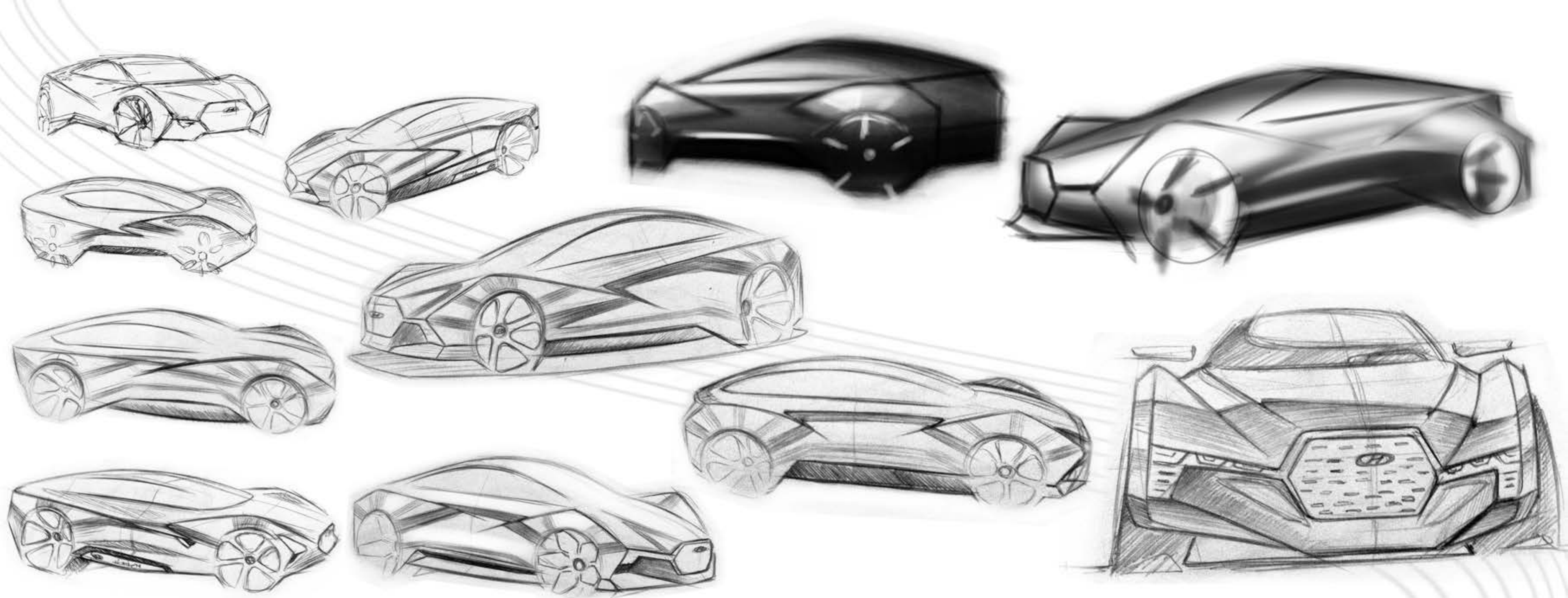
## HYUNDAI FAMILY

## CAR INRRERFACE AND EXPERIENCE

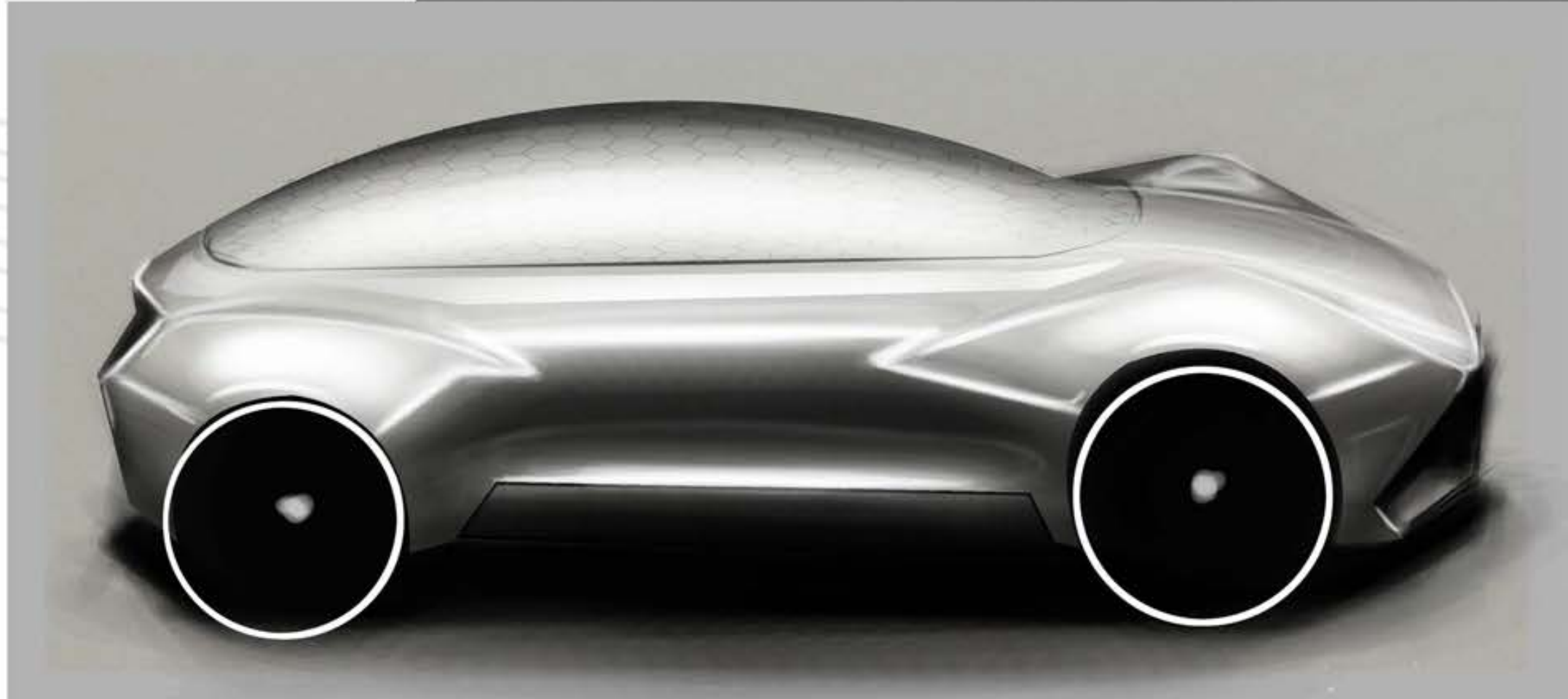
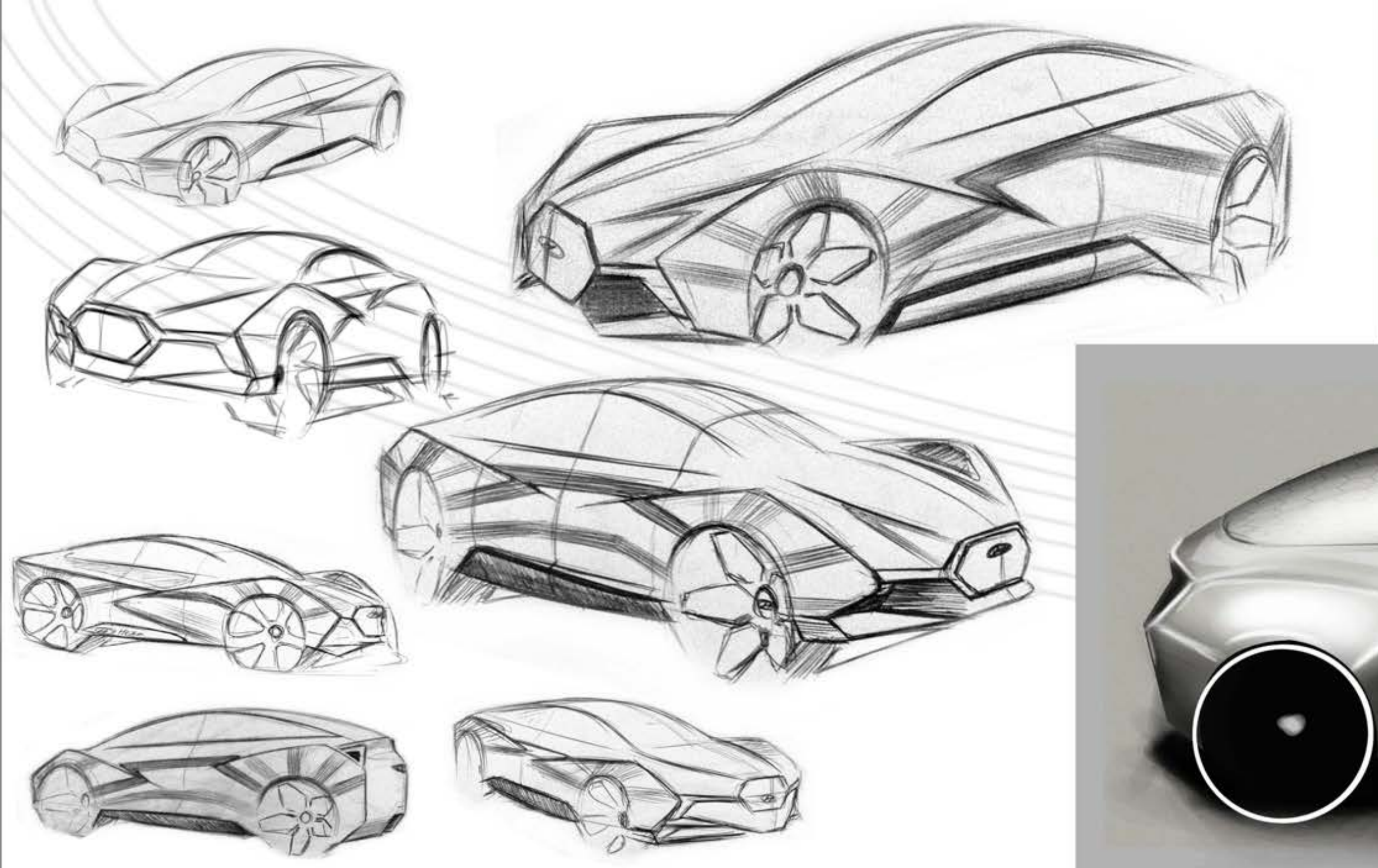


HYUNDAI

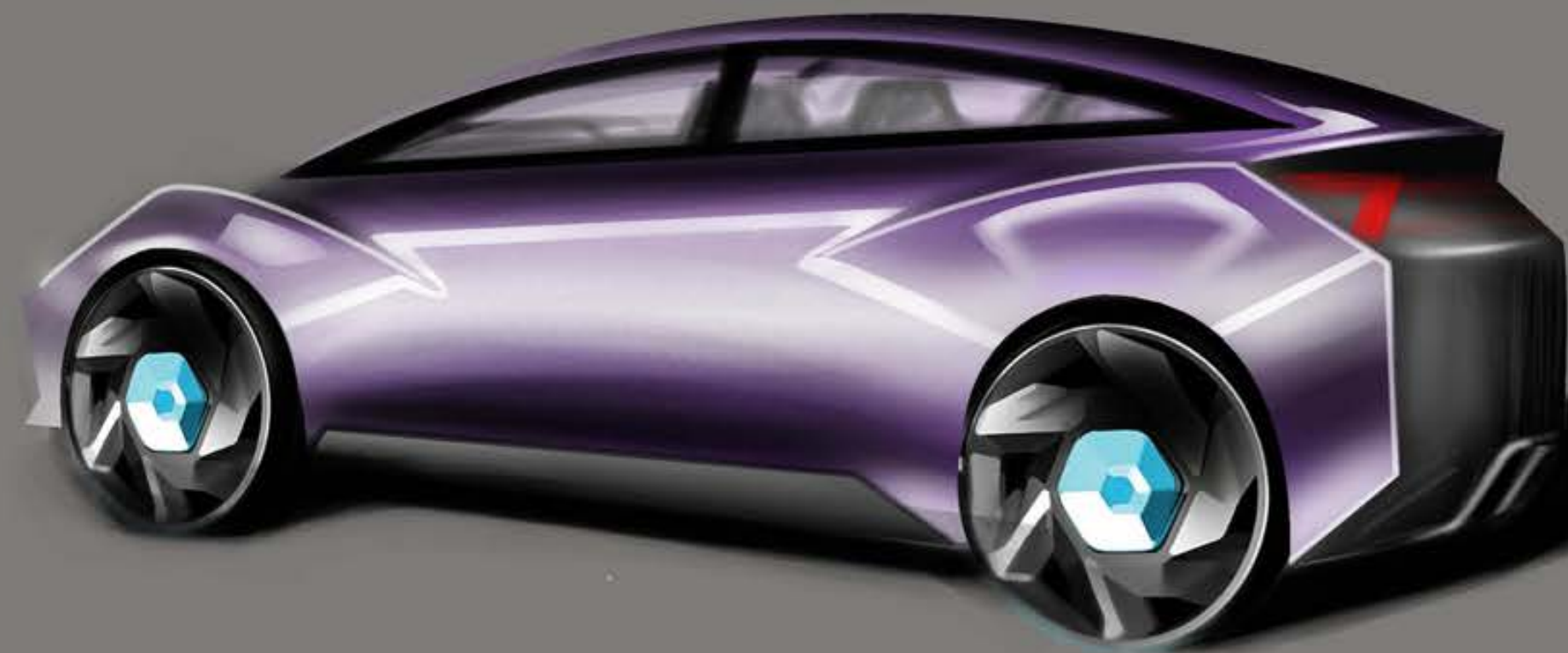
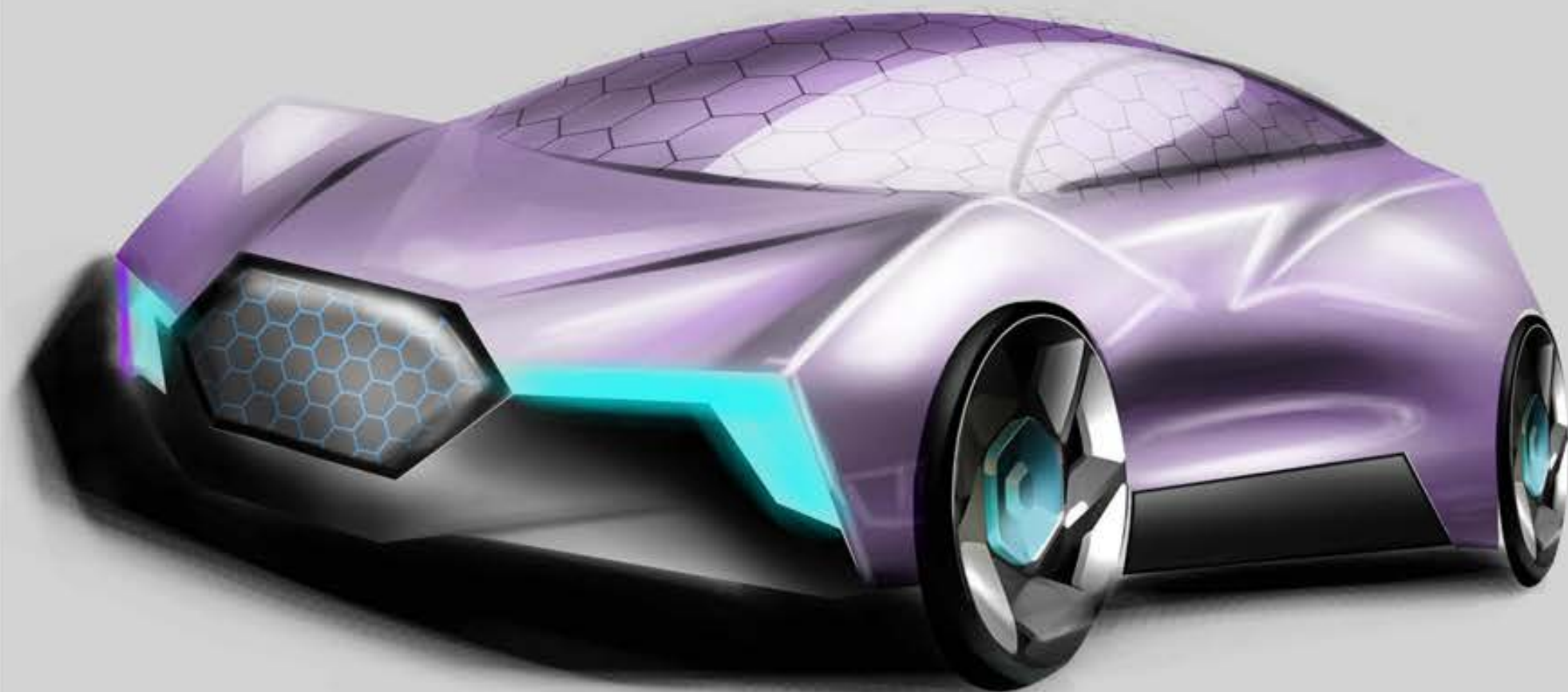












HYUNDAI



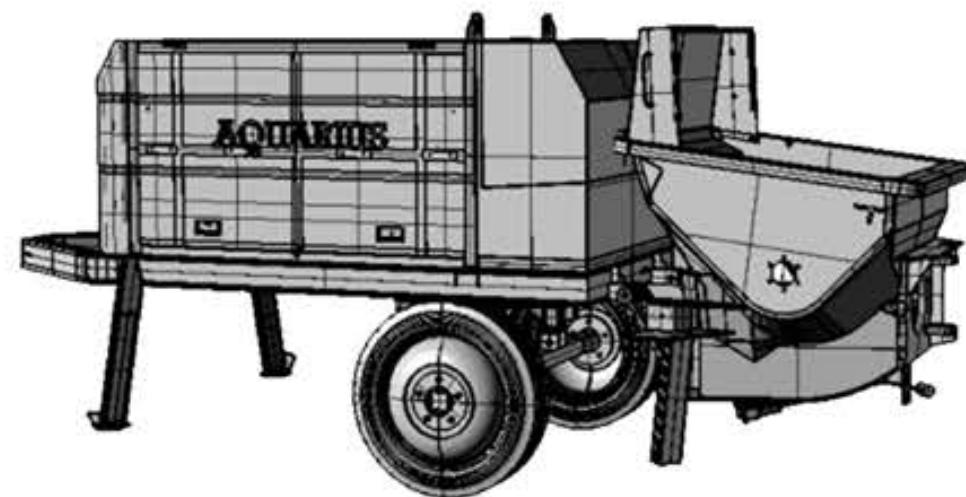
2 month internship project in AUTOMOTIF DESIGN FIRM,PUNE

Project brief

Design concrete pump of all three series for  
AQUARIUS

## Existing design study

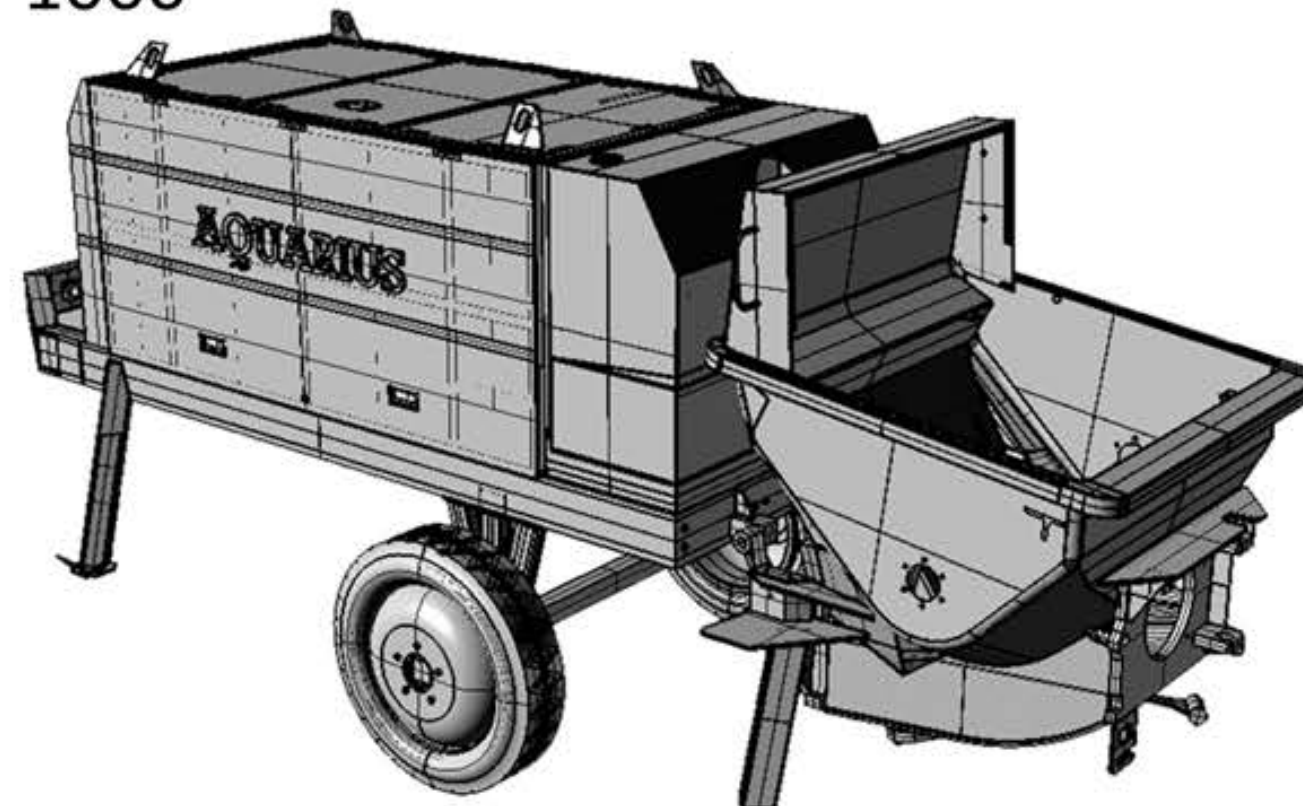
700



OVER ALL  
LENGTH 2123mm  
WIDTH 1050mm  
HEIGHT 870mm

DOOR SIZE  
LENGTH 1525mm  
HEIGHT 870mm

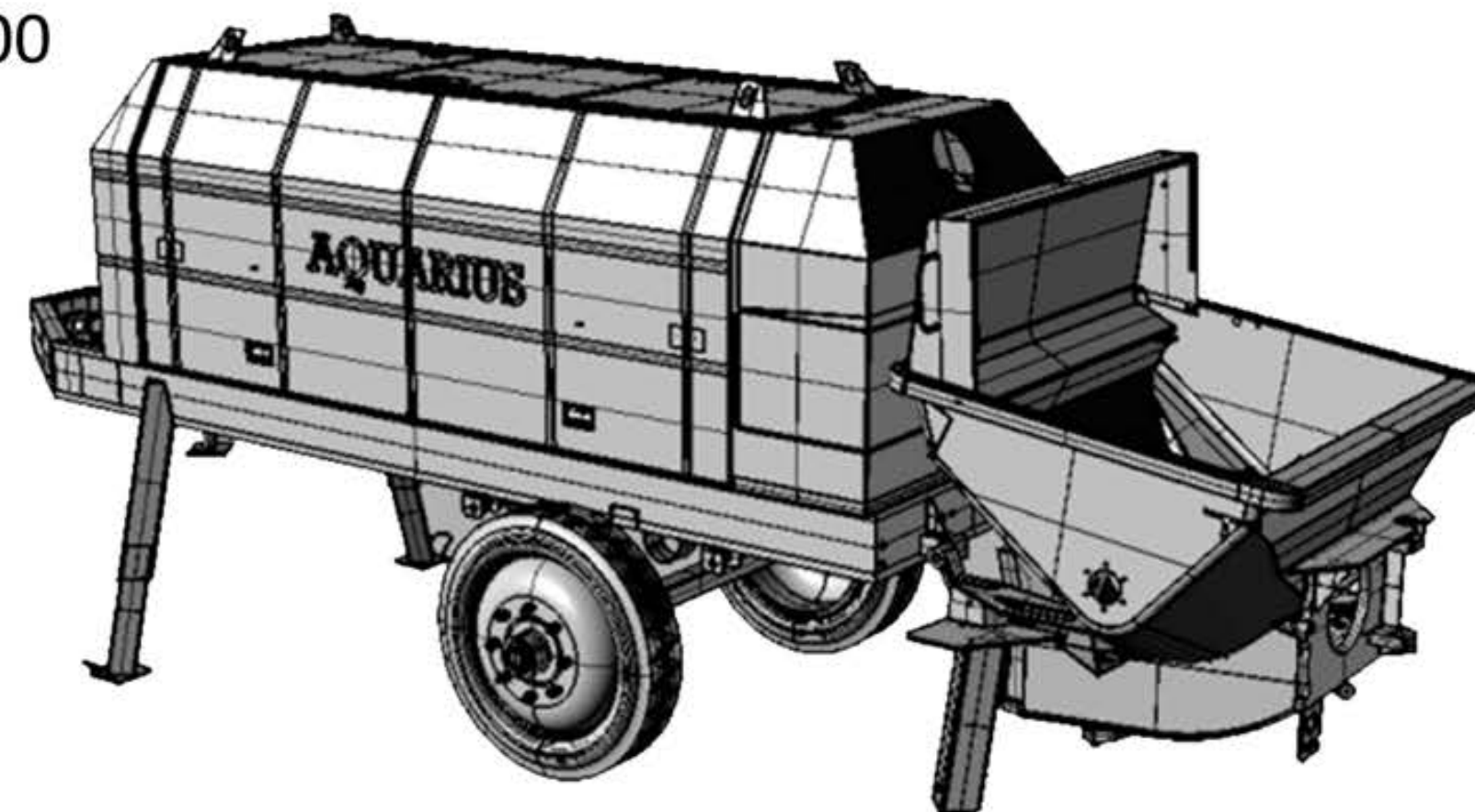
1000



OVER ALL  
LENGTH 2420mm  
WIDTH 1090mm  
HEIGHT 872mm

DOOR SIZE  
LENGTH 1733mm  
HEIGHT 872mm

1400



OVER ALL  
LENGTH 3070mm  
WIDTH 1164mm  
HEIGHT 1010mm

DOOR SIZE  
LENGTH 2420mm  
HEIGHT 1010mm



## User survey and analysis



700 series pump is smaller and compact  
1400 series pumps are large and spacious than  
700 and 1000 series.



All the pump controlling units are under a body.  
Every time operator has to duck under a door and  
operate a pump.



In the 1400 series, it is large and has tall  
door, operator face difficulty to open and  
close the door.



Hopper cover dose not give enough protection, an operator has using jute  
or plastic cover to protect a body.

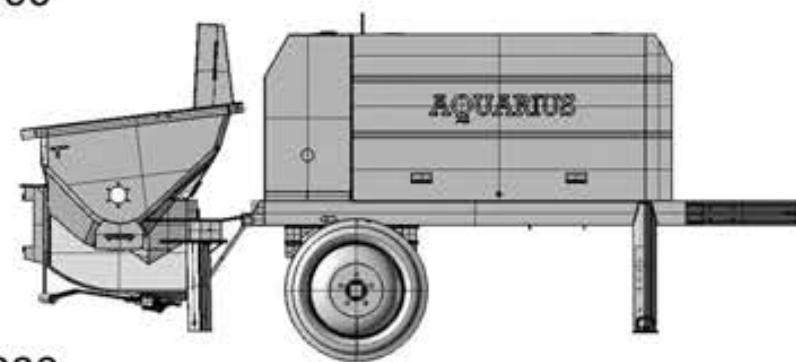


Example of some other rough use

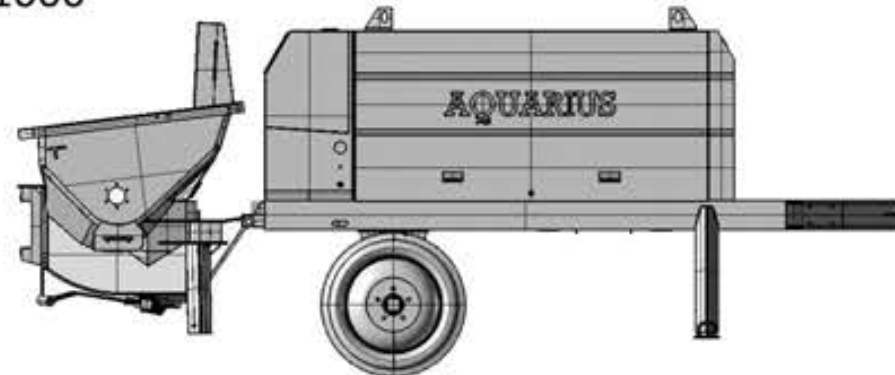


# Modularity options

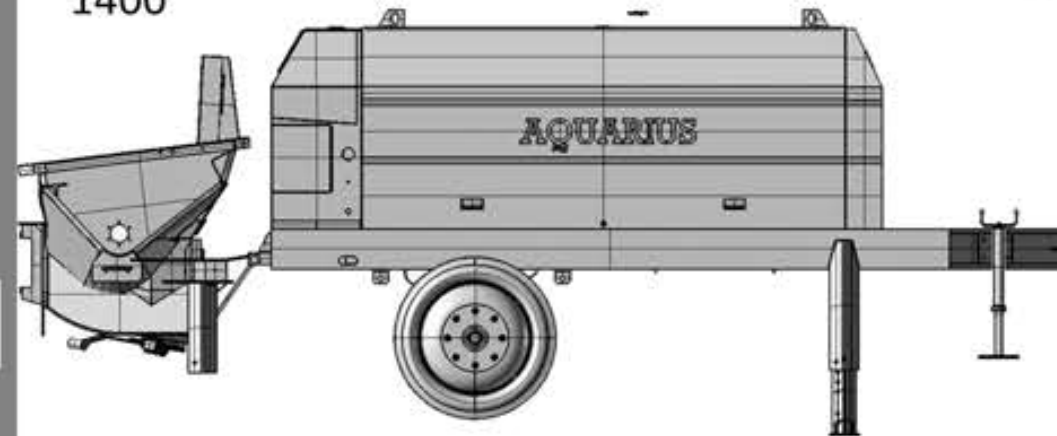
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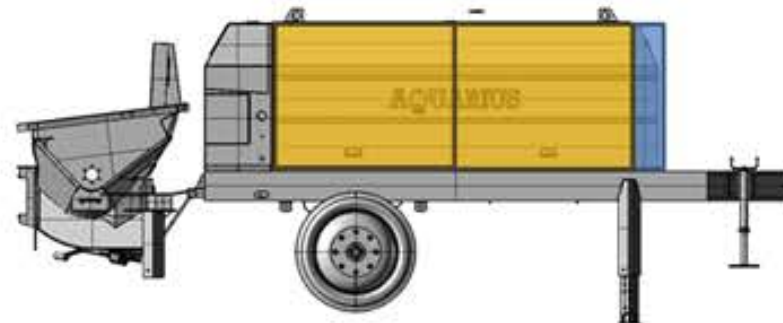
1000



1400

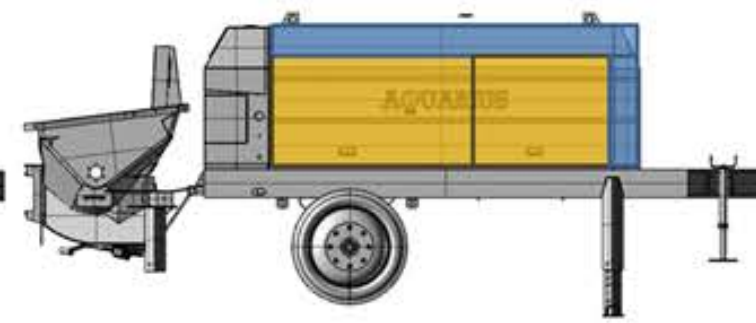
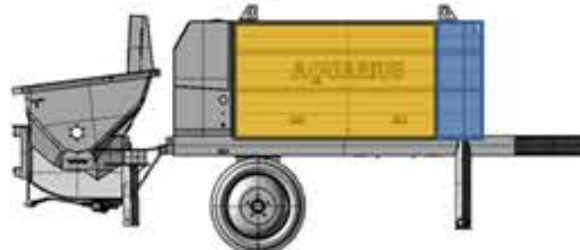


concept 1



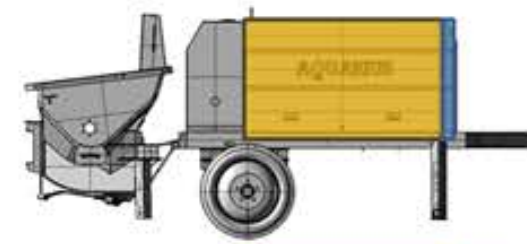
700 and 1000 series can have common door panel where 1000 series will have larger fixed panel in front.  
1400 series will have different door panel while keeping same design intent.

concept 2



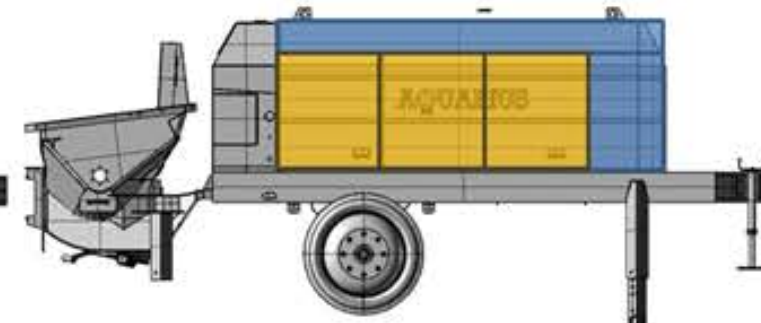
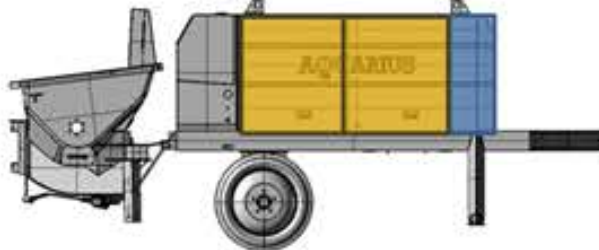
All three series have same door panel where 1400 series will have a one extra door panel of different size.

concept 3



700 and 1000 series have to increase a door height up to 70mm where 1400 series has to reduce a height up to 70 mm for same door height for all series.

concept 4



In this option 700 and 1000 series will have two door panels where 1400 series will have three door panels.



## Mood board

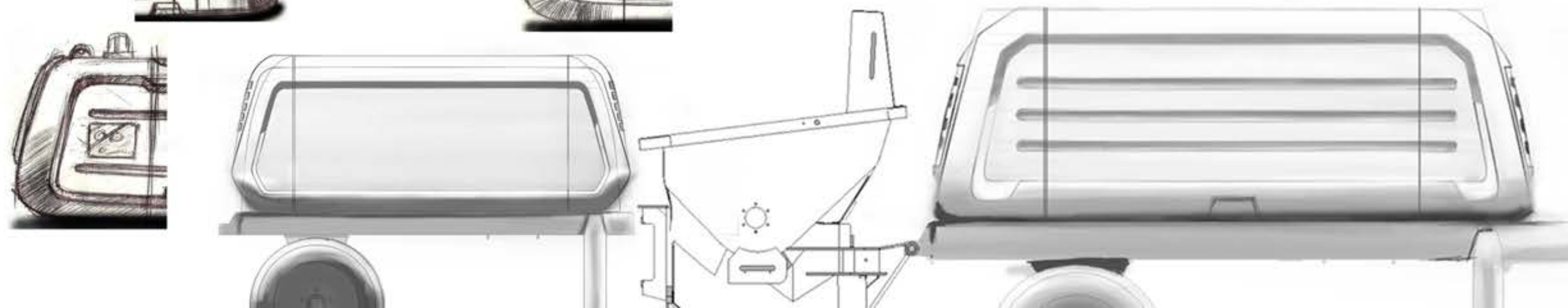
Rugged



## Initial ideation



Masculine,  
futuristic





3D volume By using modularity concept 3,all series pump have same size door panel



700



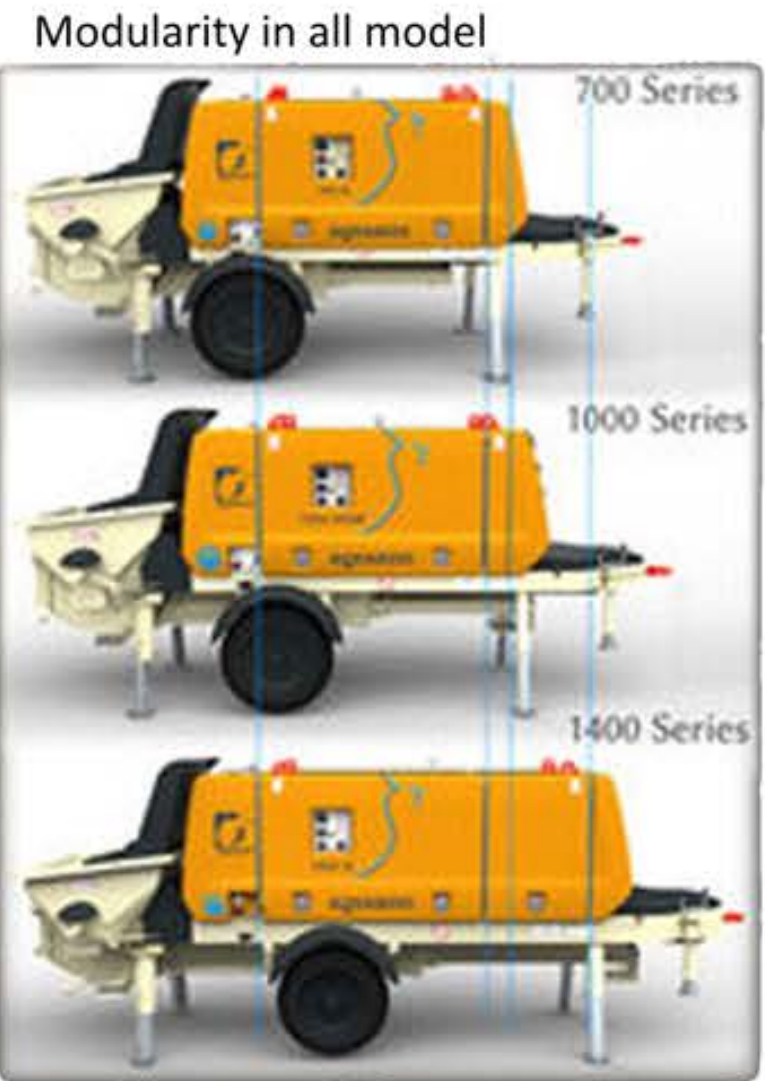
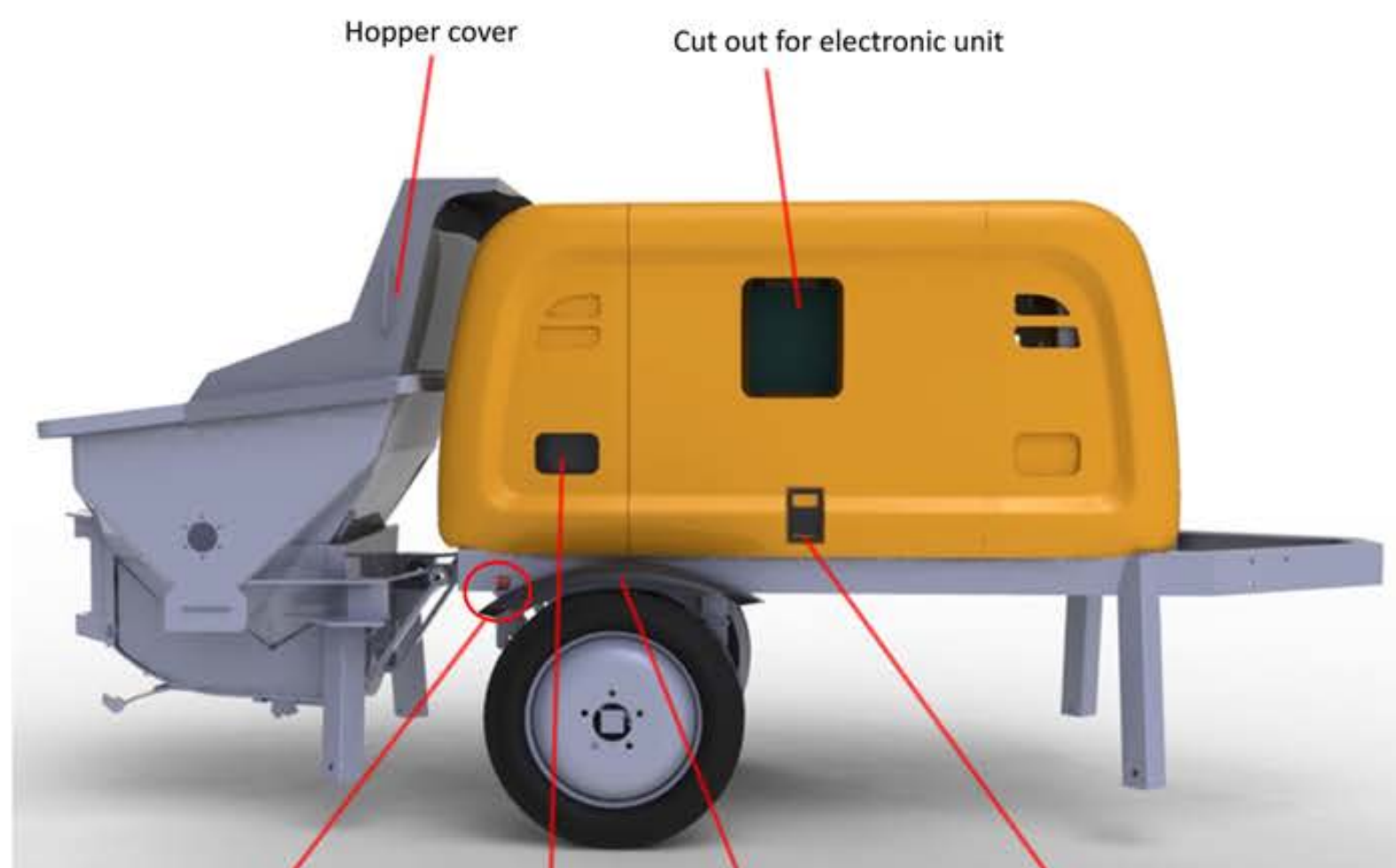
1000



1400







Final production



## High Speed Rail Interior

6- month internship work at TATA Elxsi,  
Bangalore



## Users

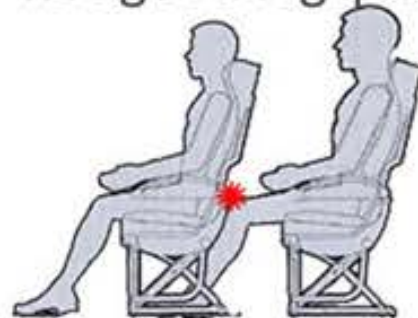


Businessmen  
Familise  
Childrens  
Old people  
etc.

## Current scenario



not good legspace



Good legspace



Luggage space



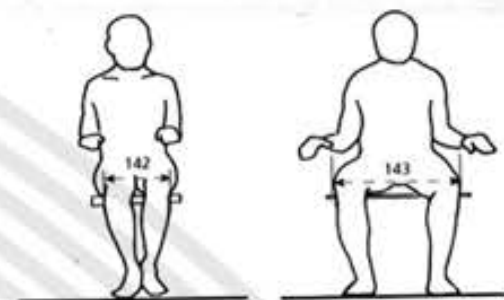
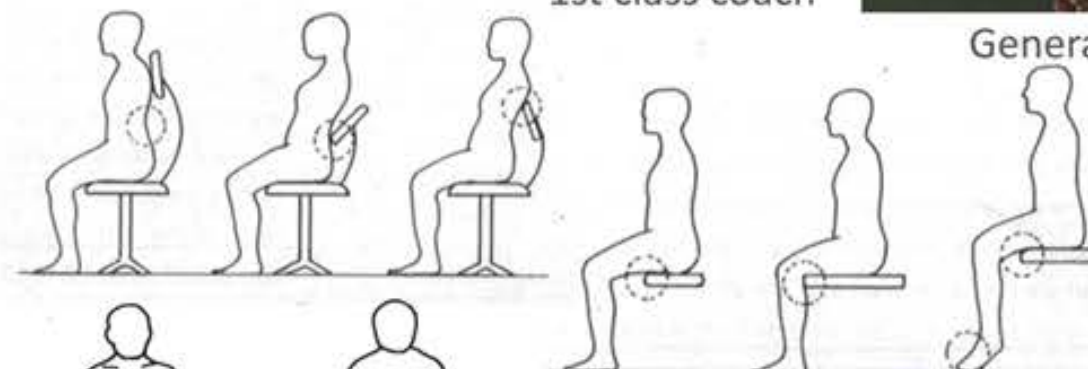
## Ergonomic



1st class coach



General class coach



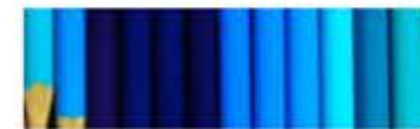
Problems faced due to mismatch of human body and seating



correct posion of seating while travelling



## General class coach seat ideations



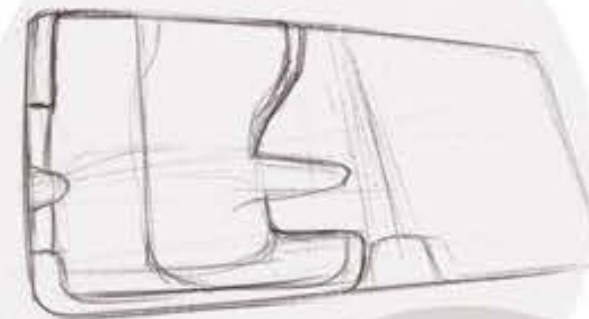
Harmony



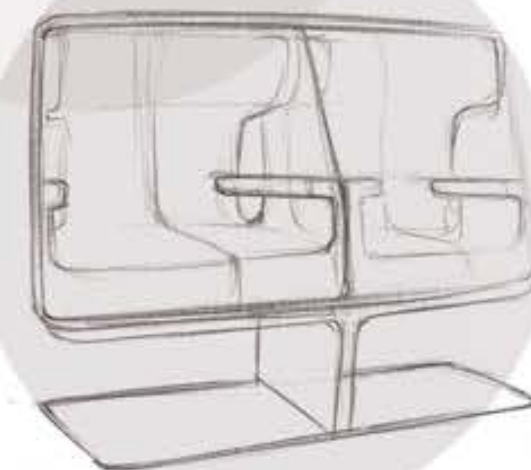
Club



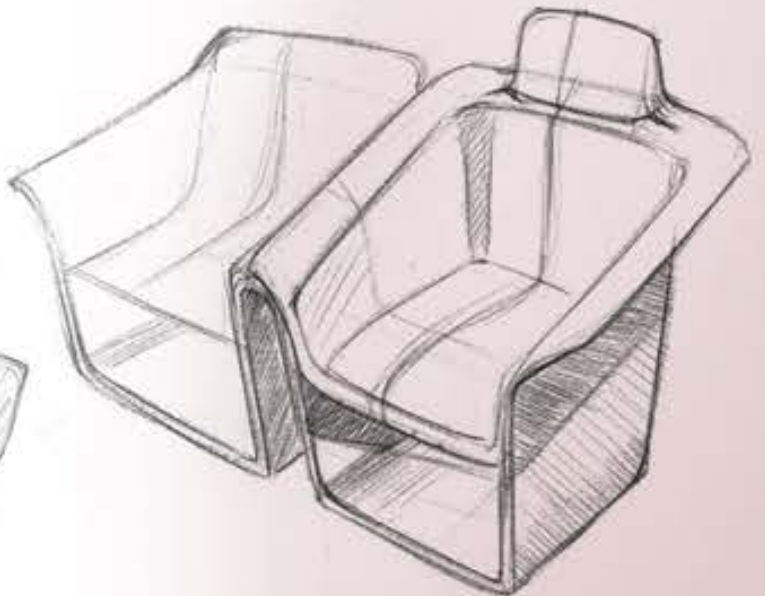
Simple



Good Idea as single frame seats

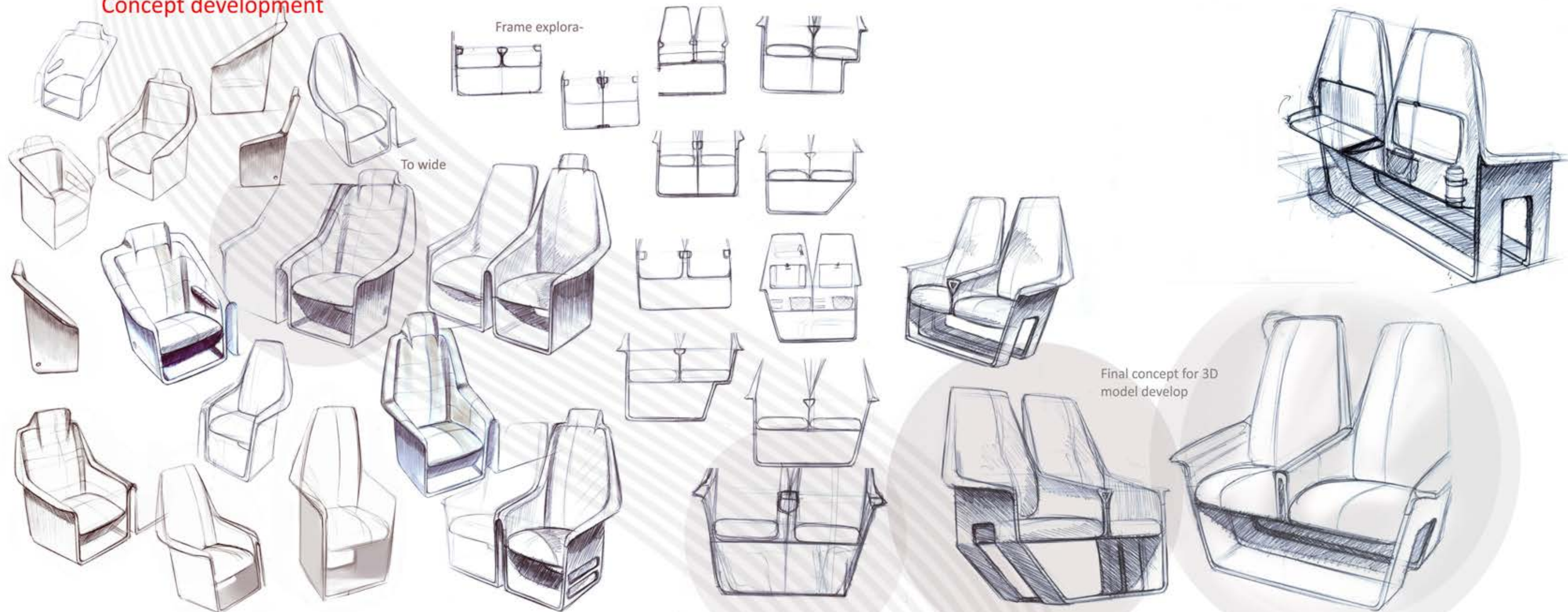


Final concept





## Concept development





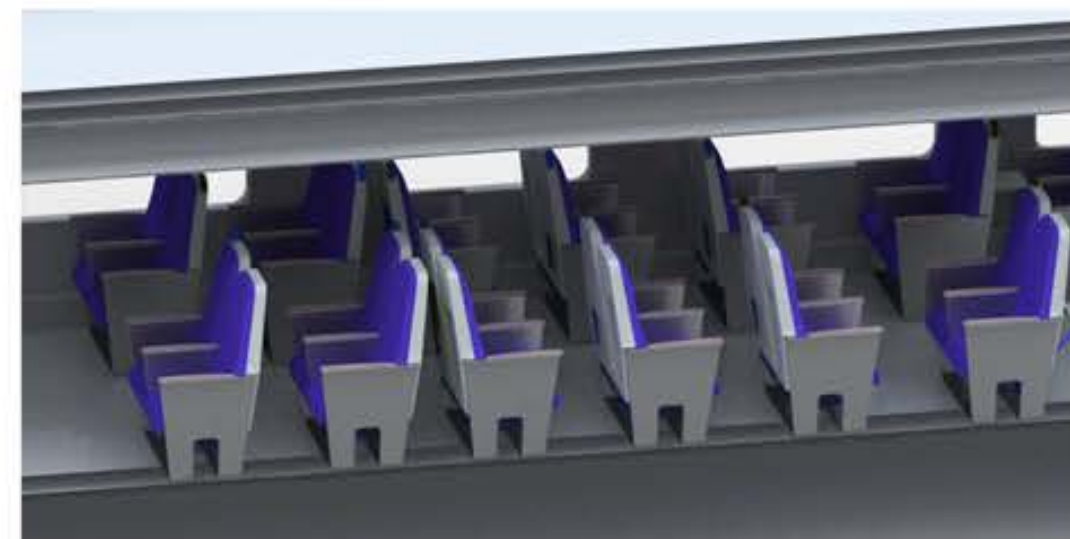


3D model and renders



Coach layout and renders

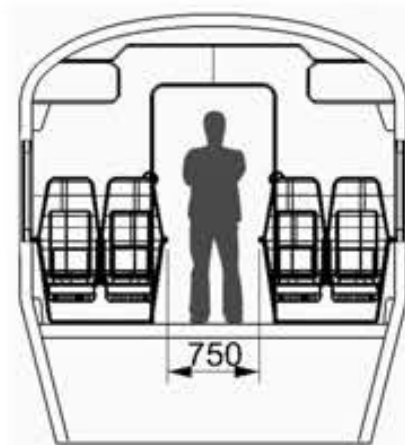
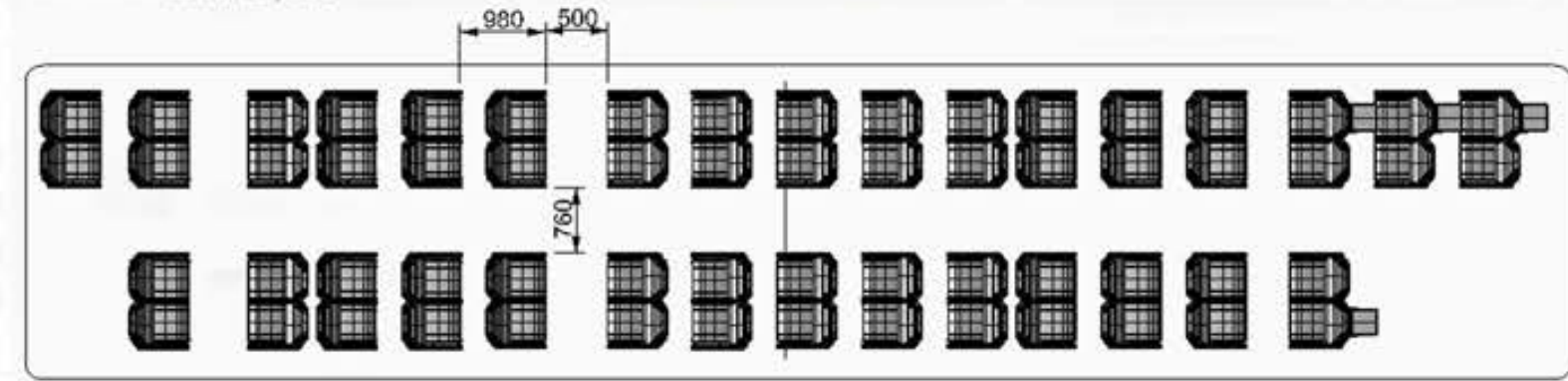
Detail



Coach renders

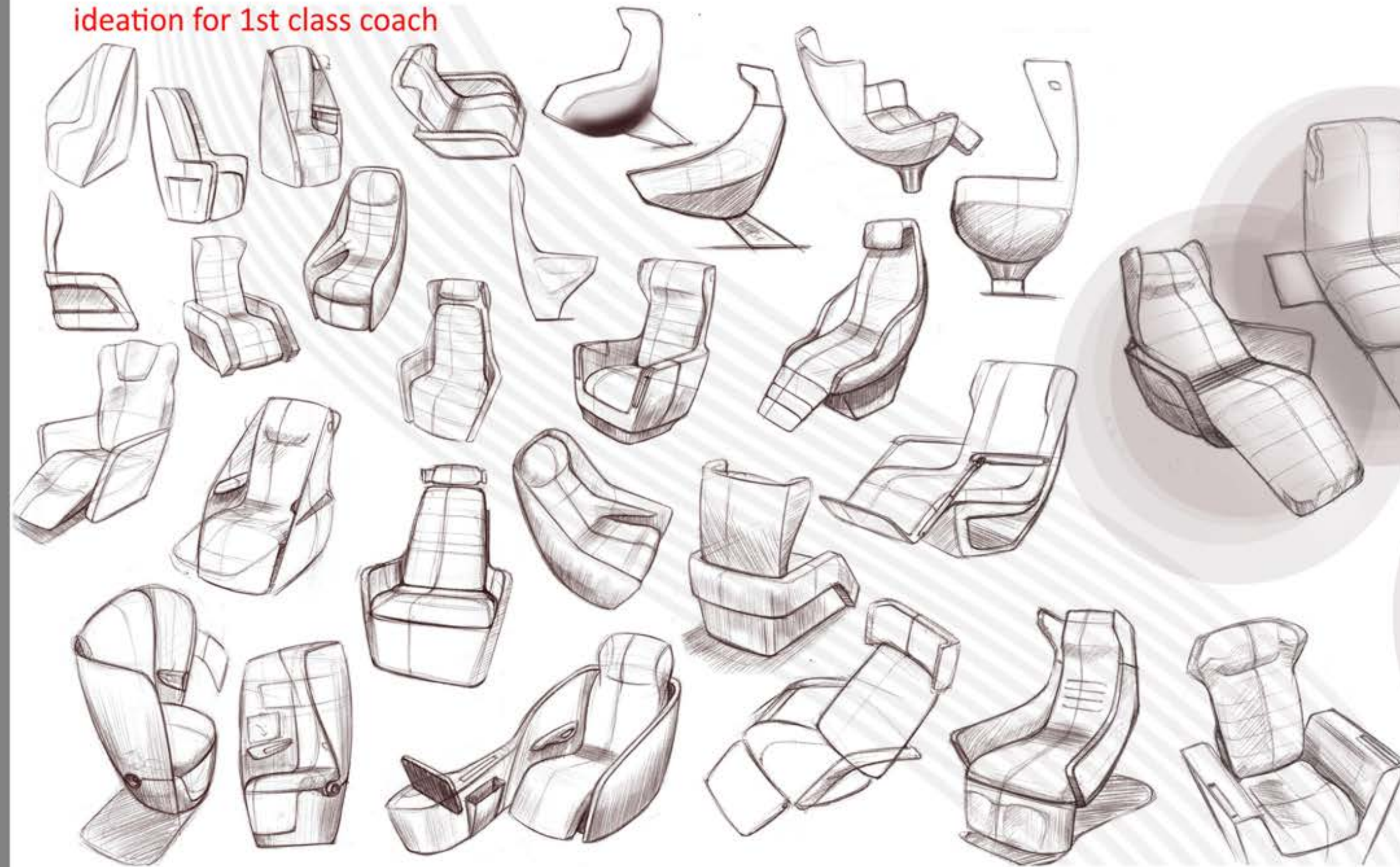


Coach layout

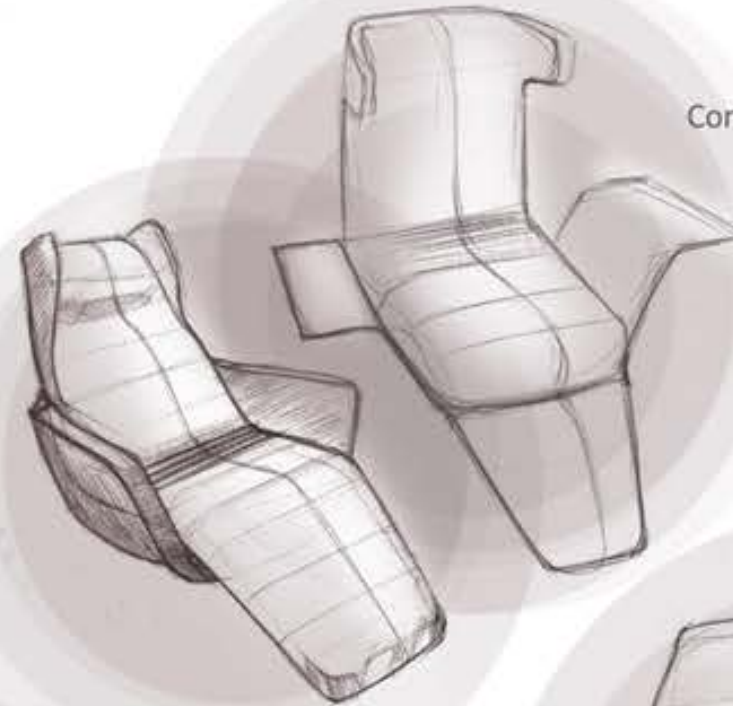




## Ideation for 1st class coach



Concept 1



Luxury



Dynamic



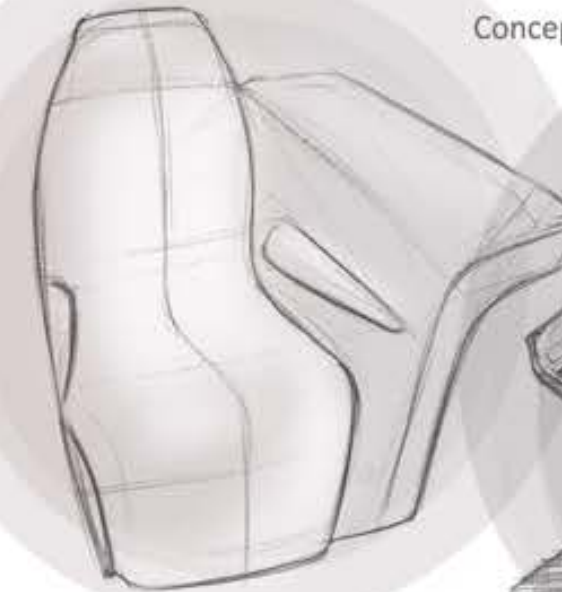
Spacious



## Mood board



Concept 2





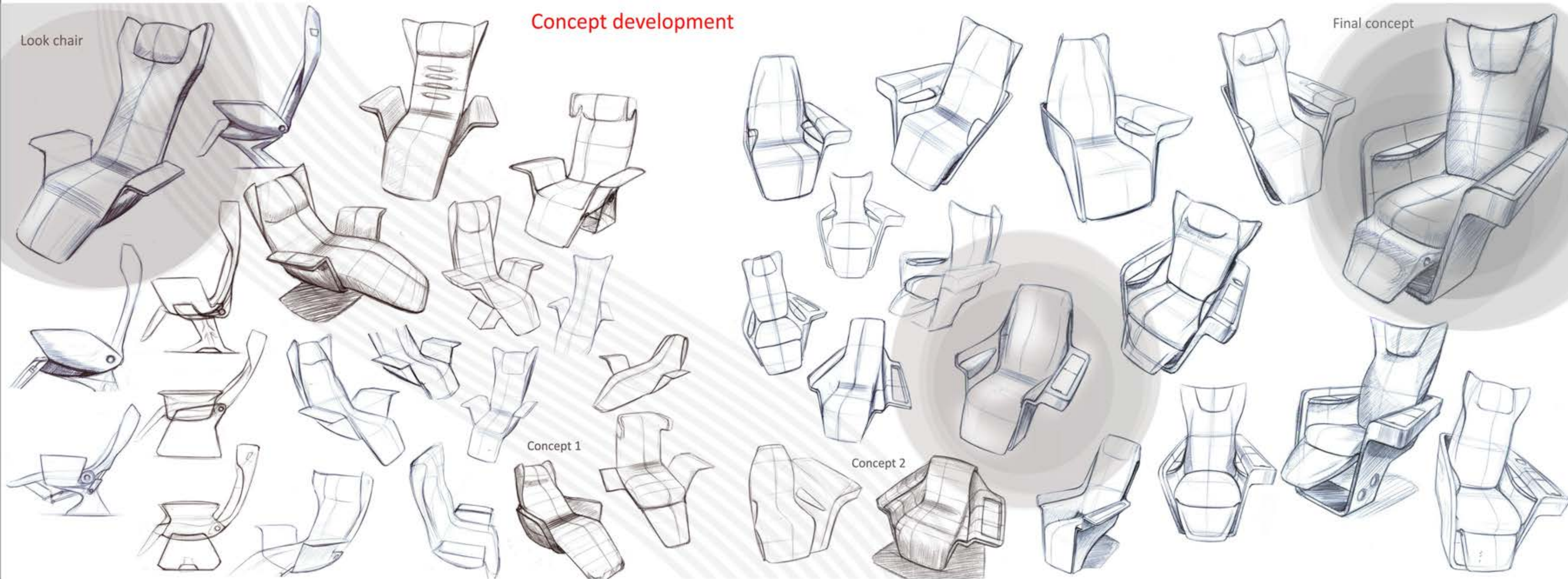
Look chair

## Concept development

Final concept

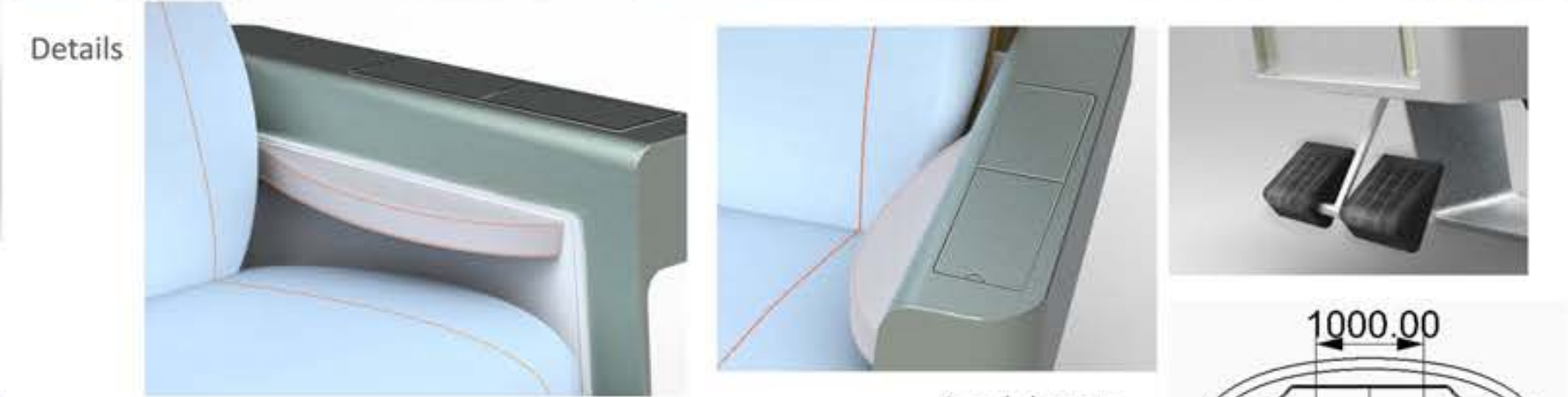
Concept 1

Concept 2

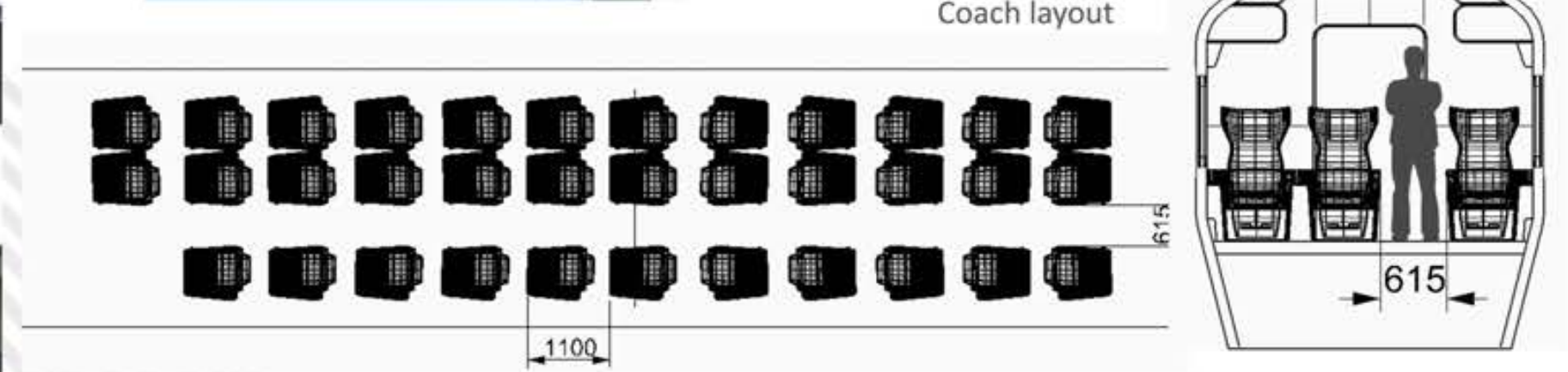
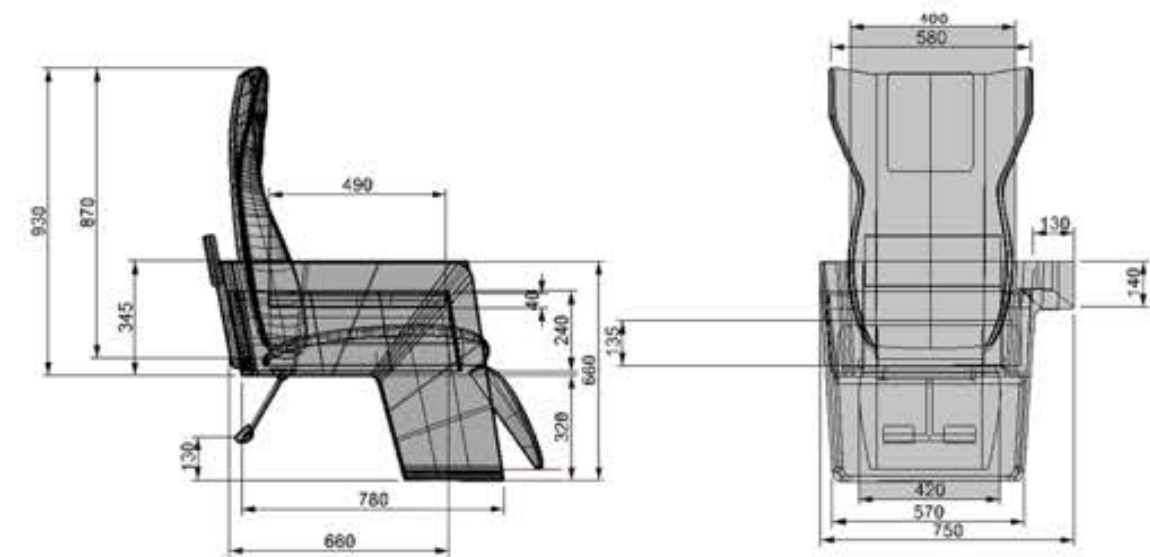




## Final coach layout and interior

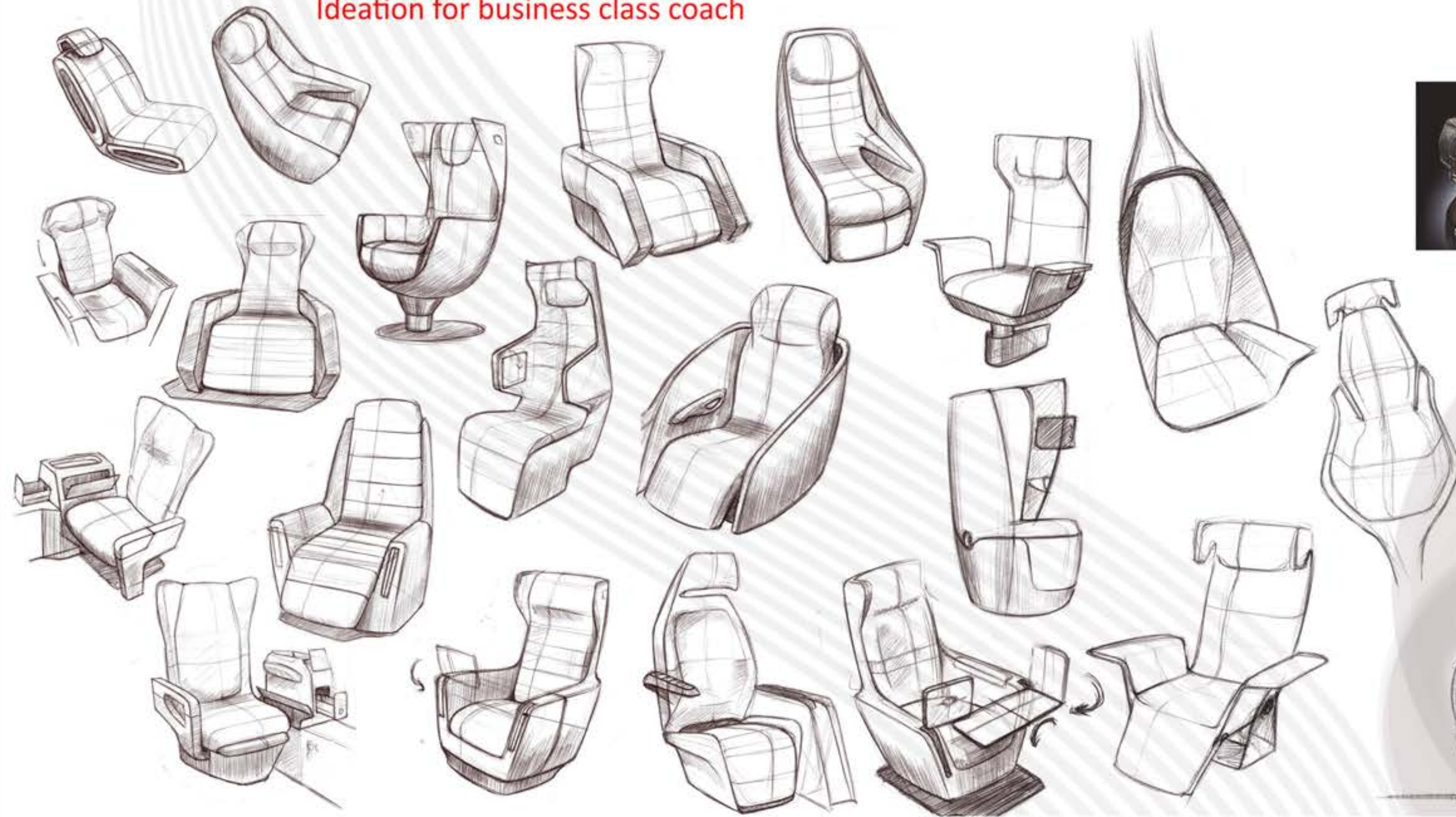


## Dimensions





## Ideation for business class coach



Quality



Royal

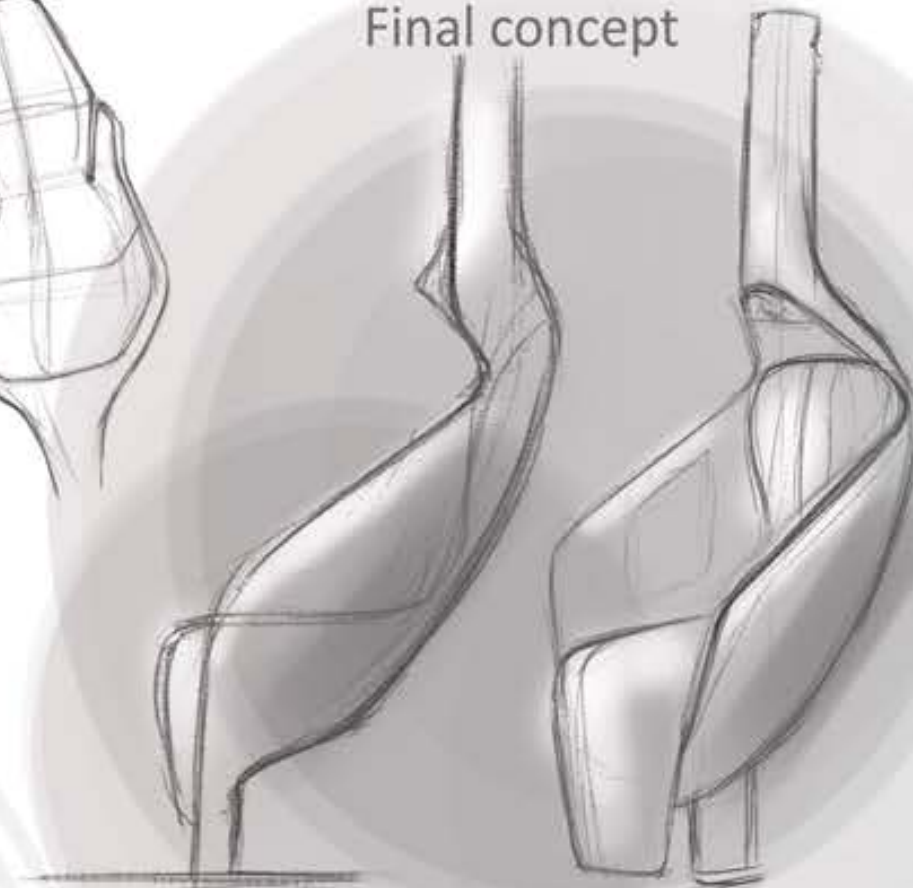


sophistication



precious

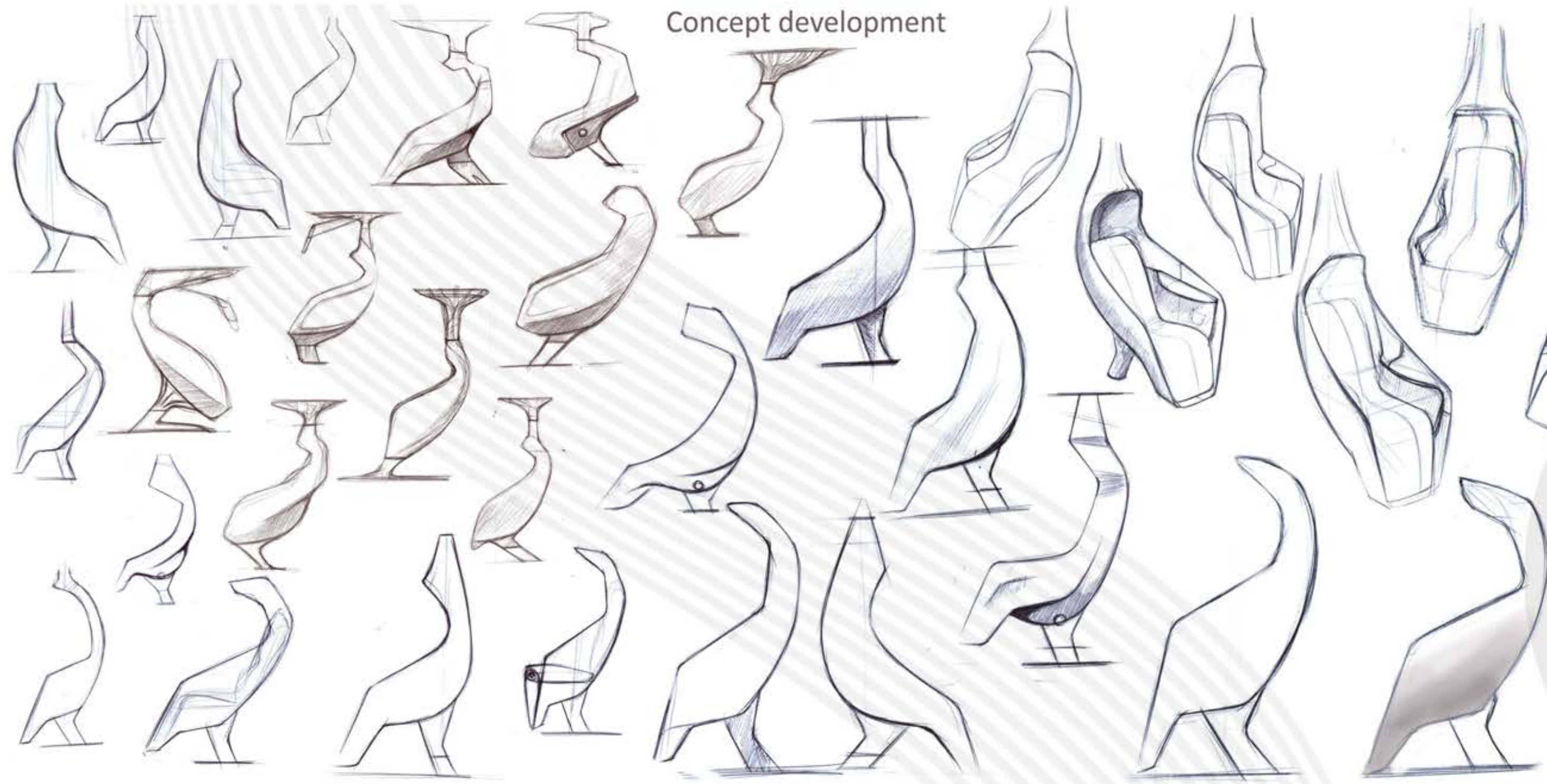
## Final concept





Concept development

Final concept

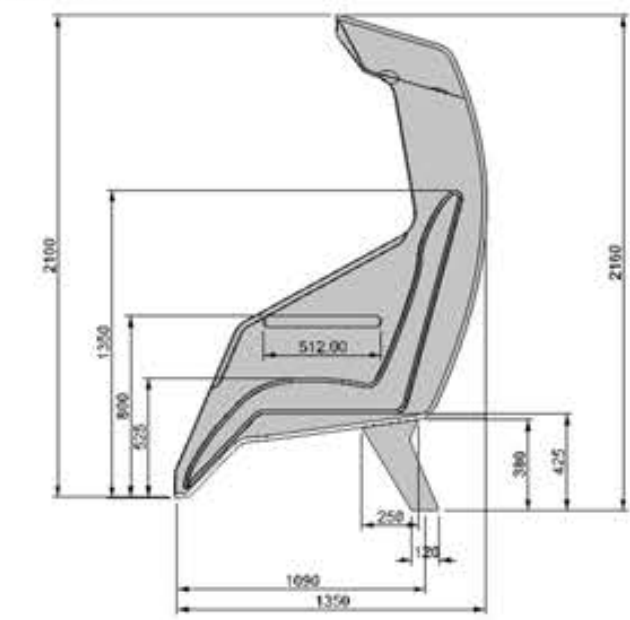
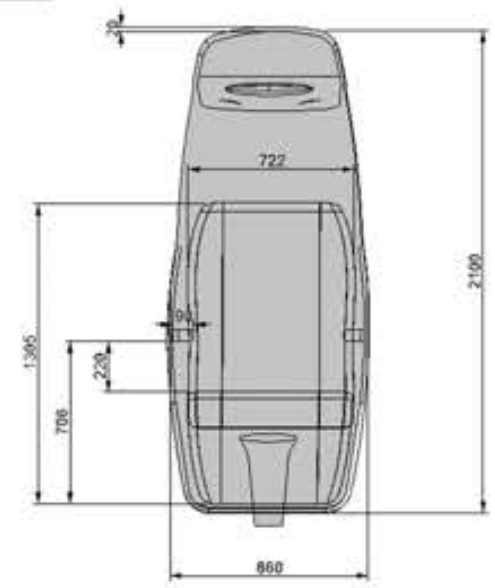




# Final seat and coach layout renders



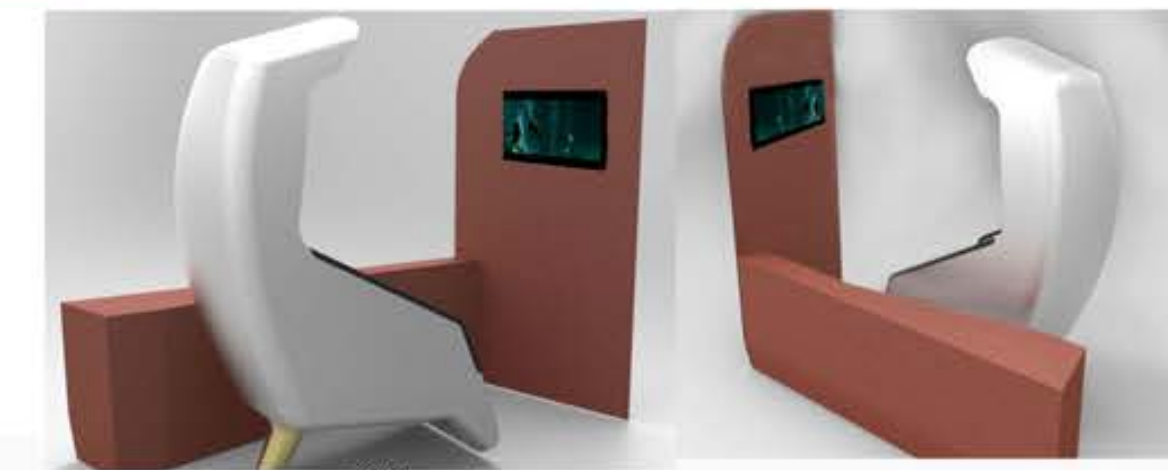
Dimensions



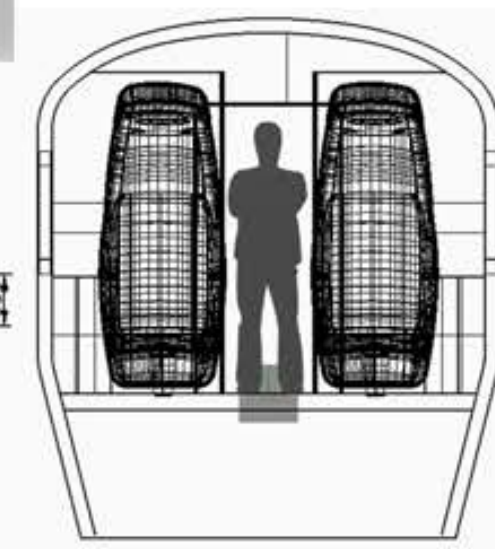
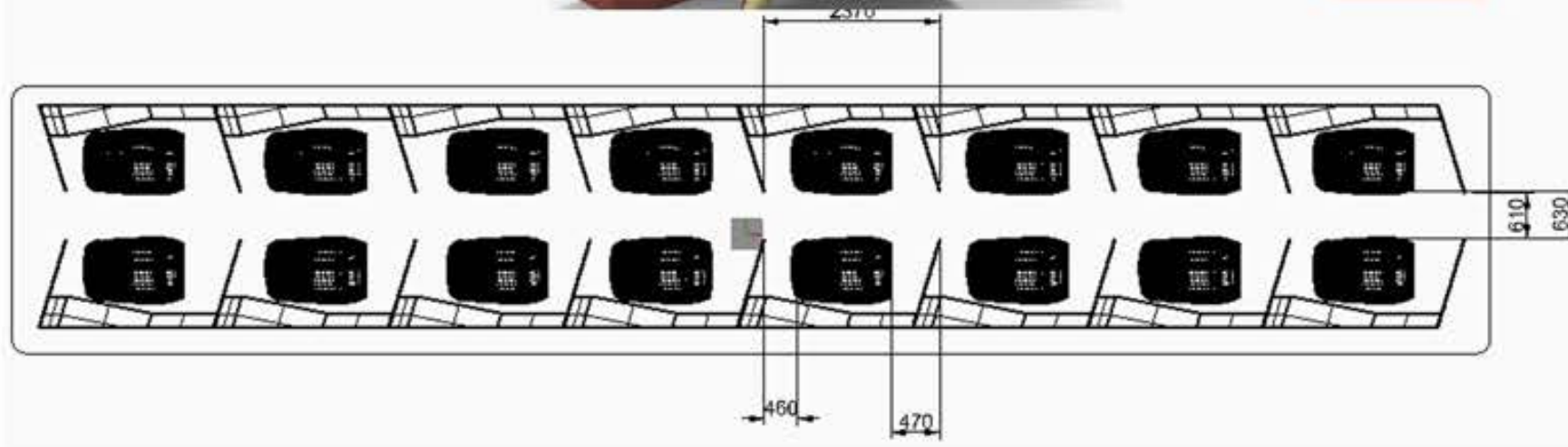
Coach



Unit

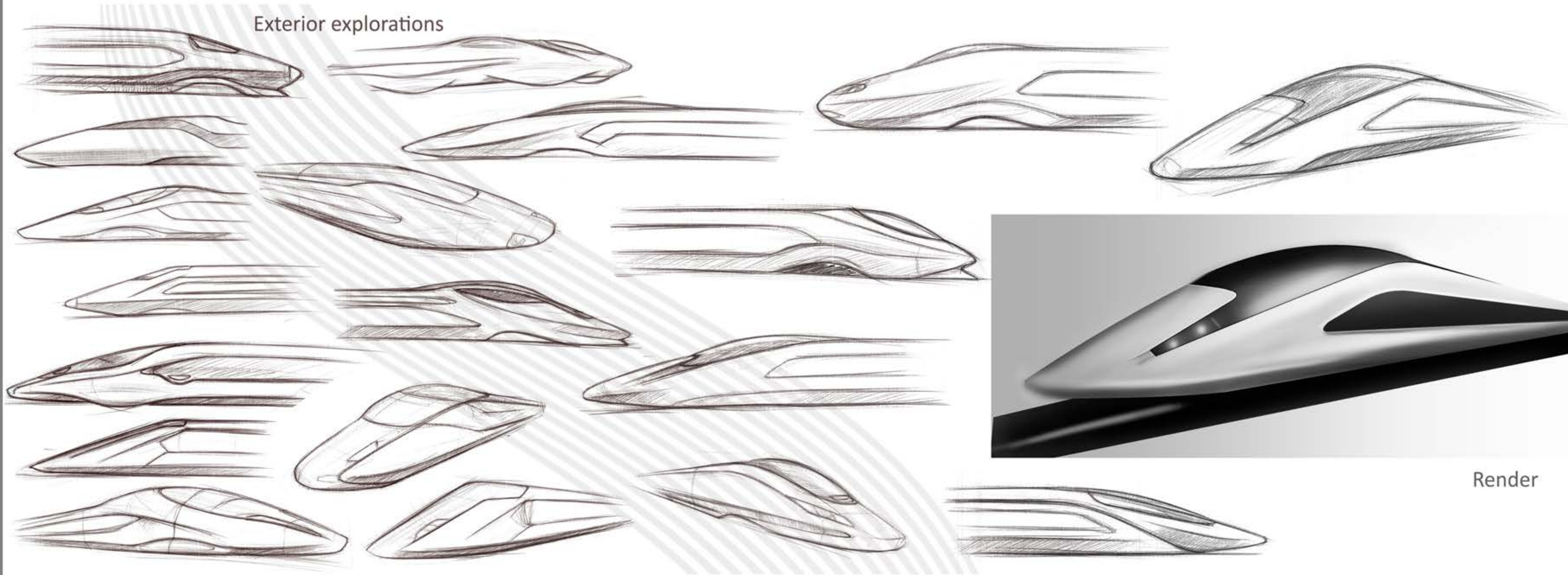


Coach layout





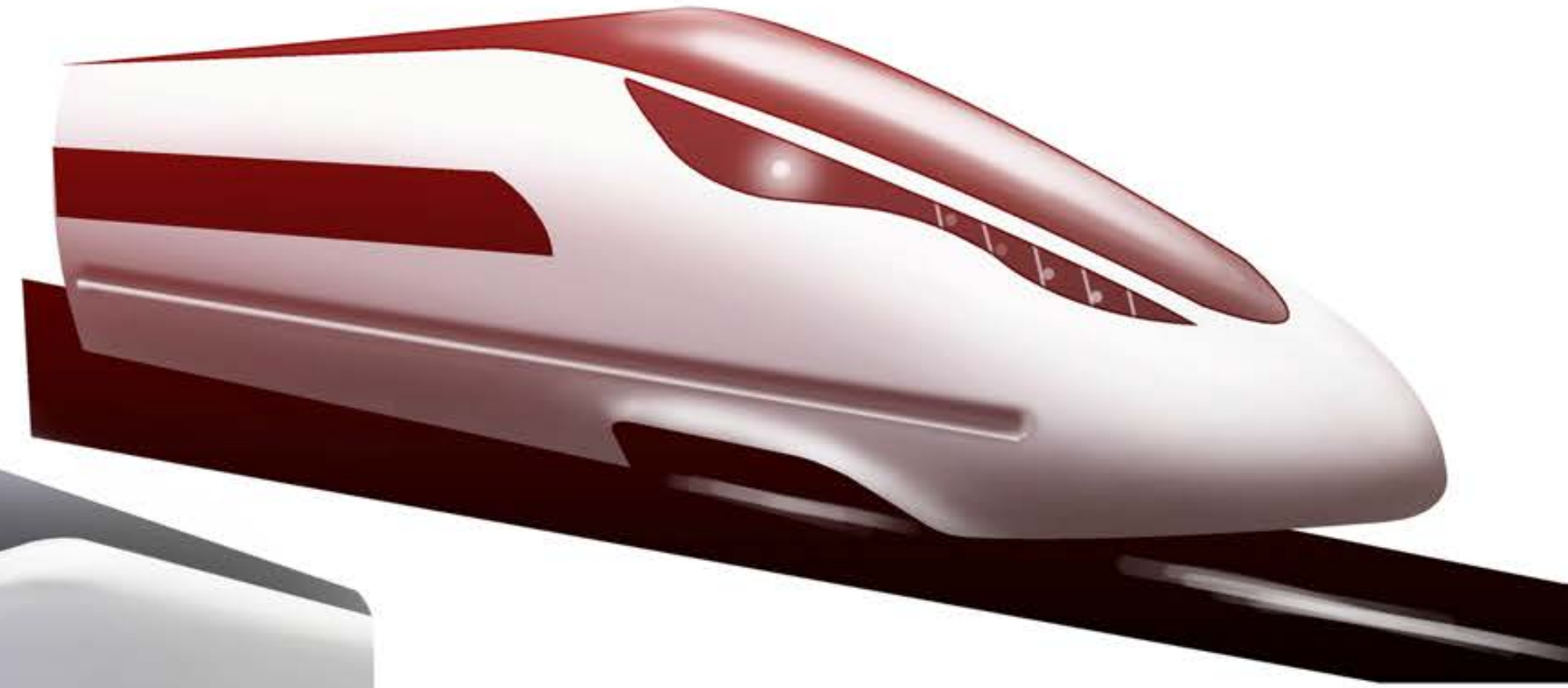
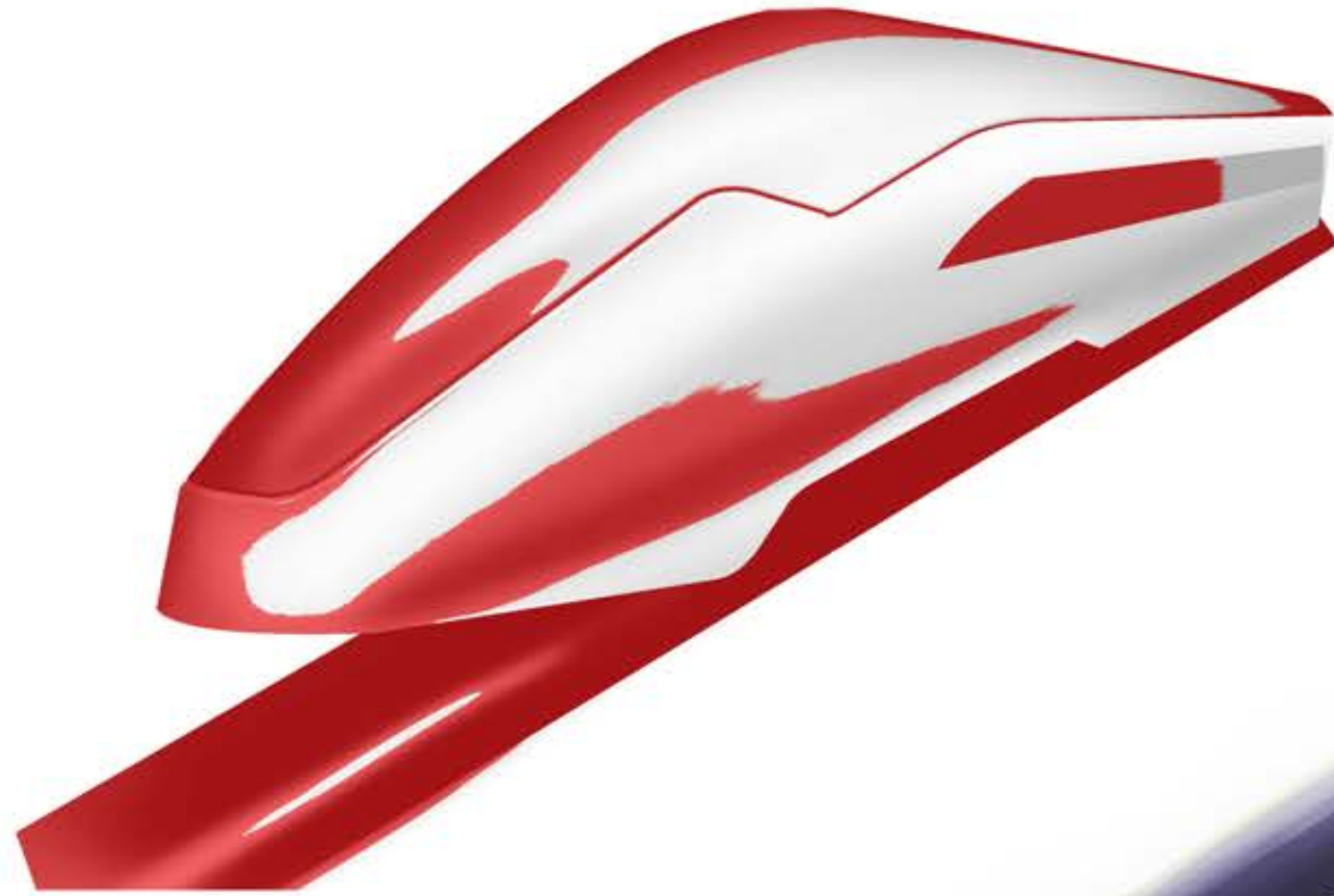
Exterior explorations



Render



Train exterior exploration renders





## Live project - Styling of SAE SUPRA RACING CAR In collabration with MIT Engineering collage, Pune.

Group project

MITID - Neel Umrigar, Praveen K (styling and rendering)

MIT Engg. - Team Acceleracers (engineering, modeling and manufacturing)

Winner of Best Design Award 2012, The event held in Buddha international circuit,  
New Delhi, India.



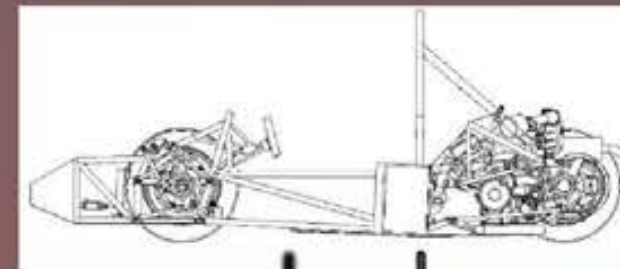
Research



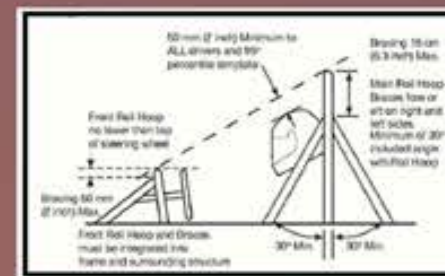
Current cars



Engineering



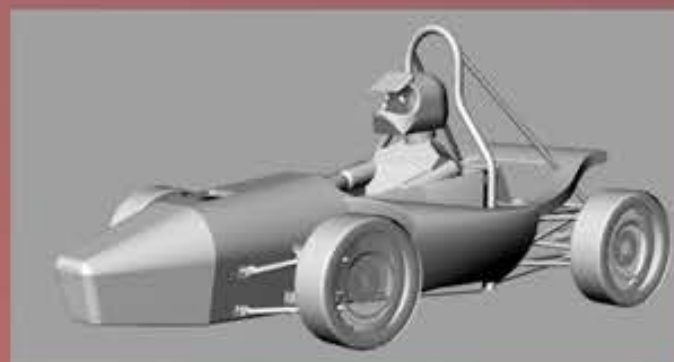
Rules



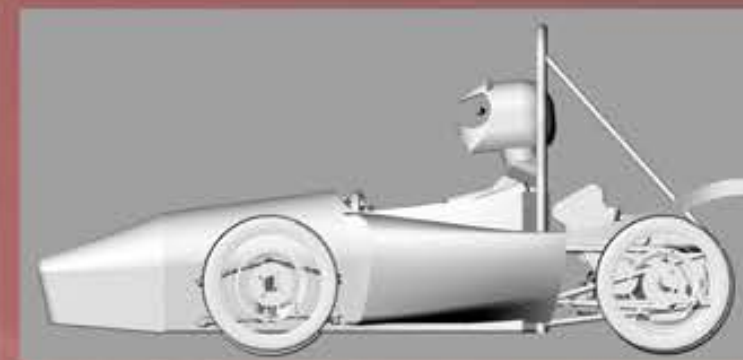
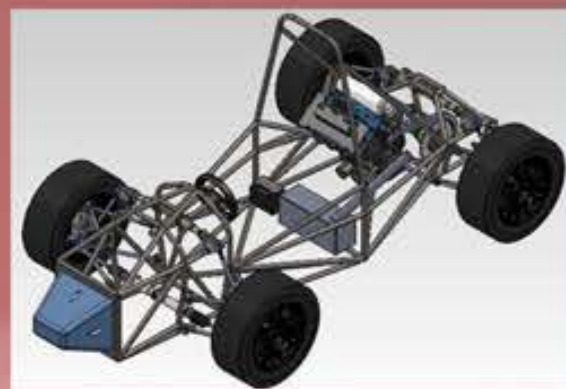
Styling



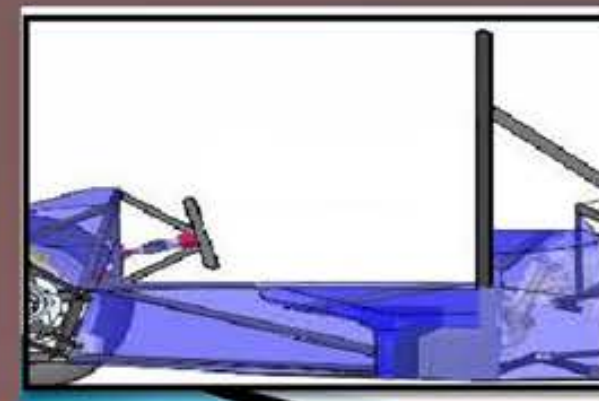
Last year racing car of team Acceleracers



Started with basic study of frame structure and dimensions of the car.



Understanding driver's position and steering wheel angle.

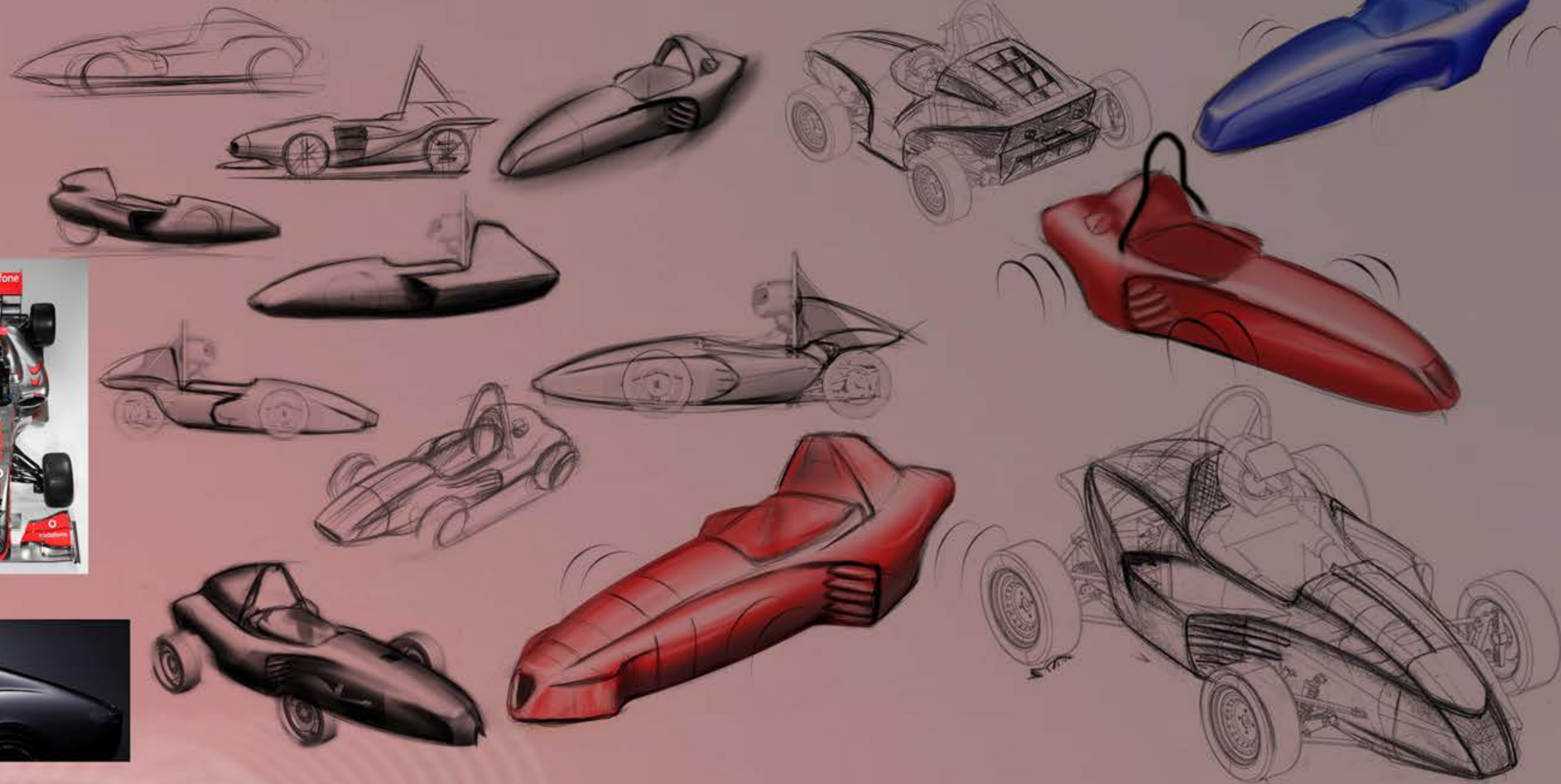




## Inspirations

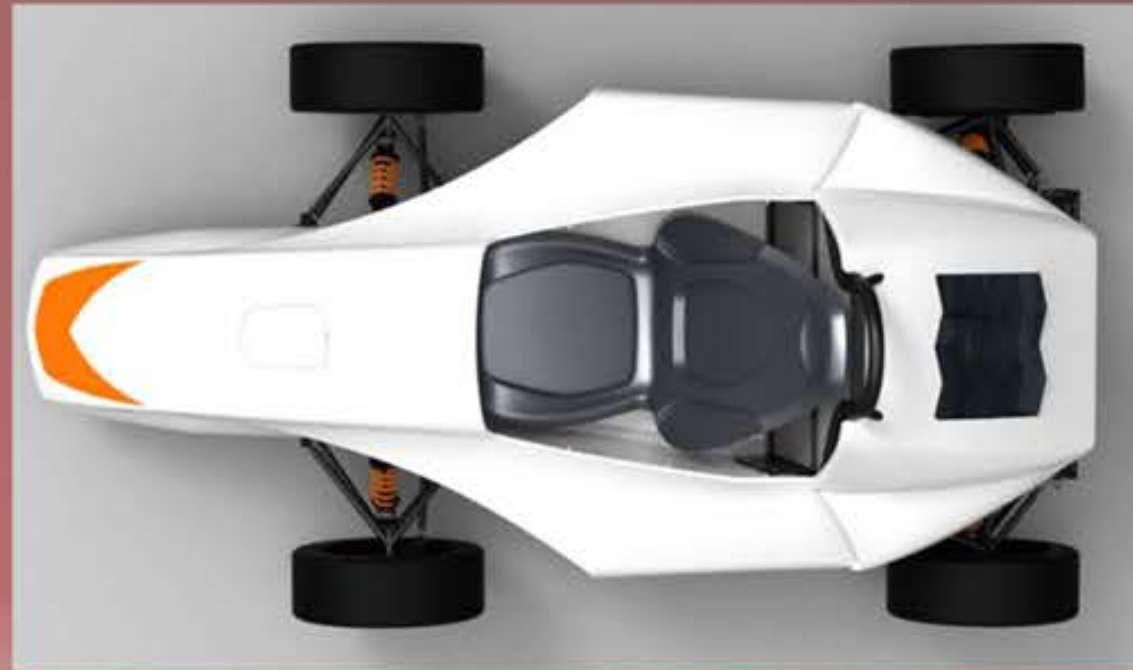
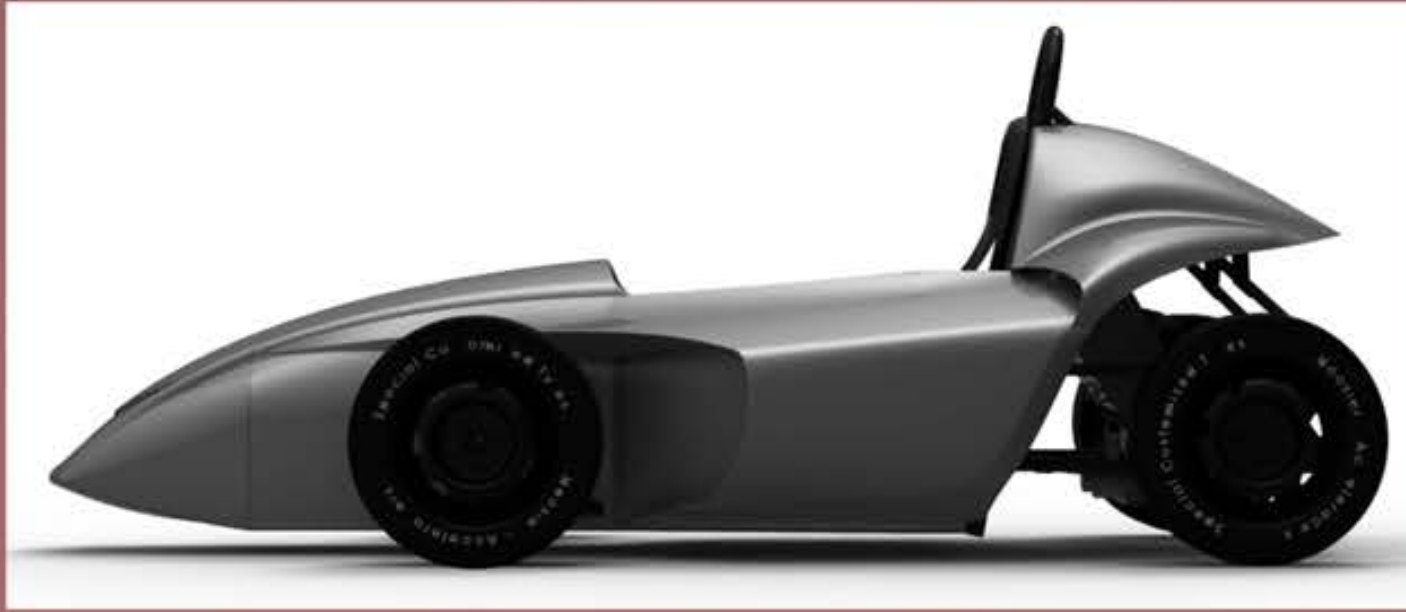


## Ideation





Final 3D model and rendering





Final finished car

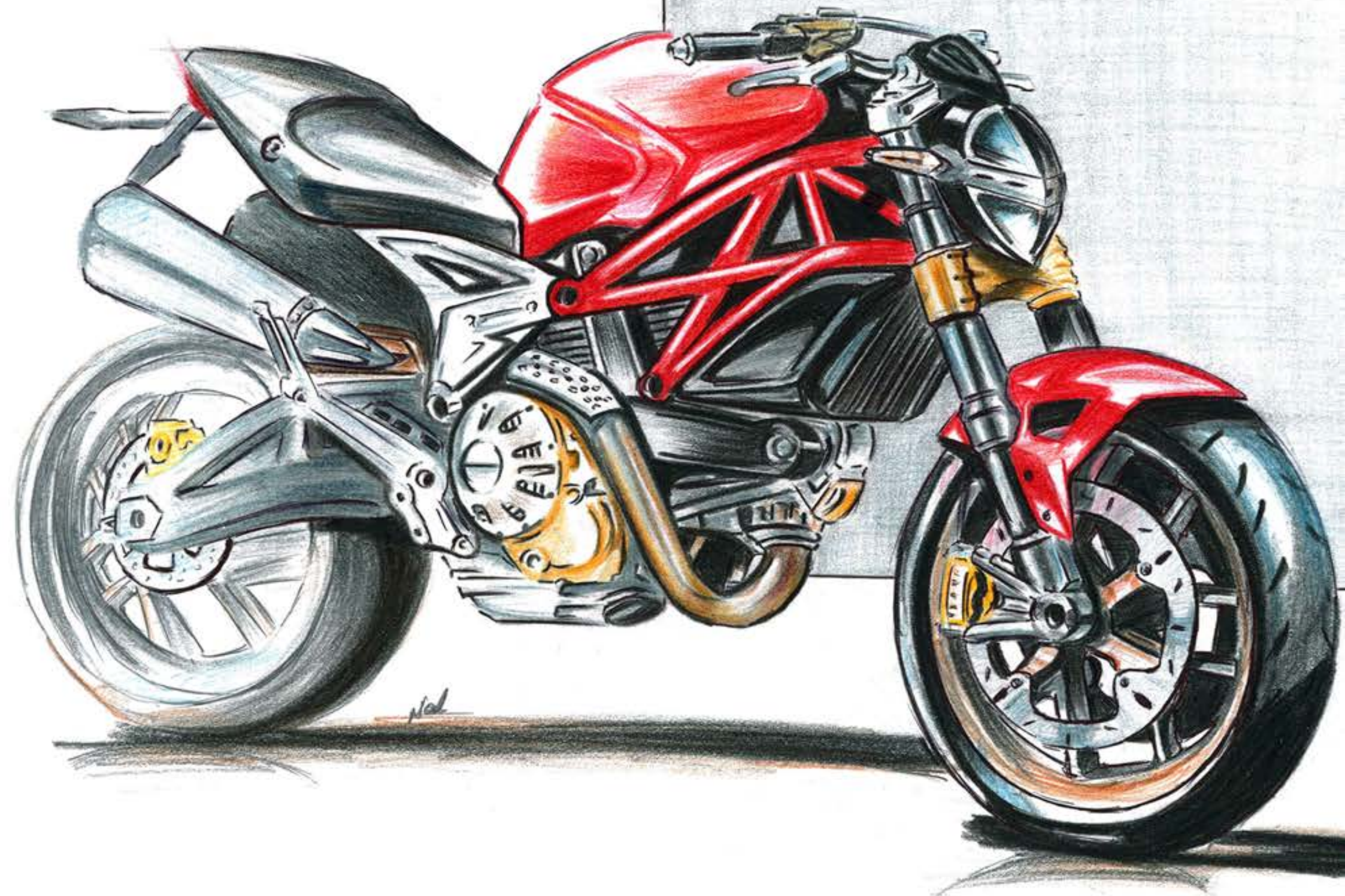
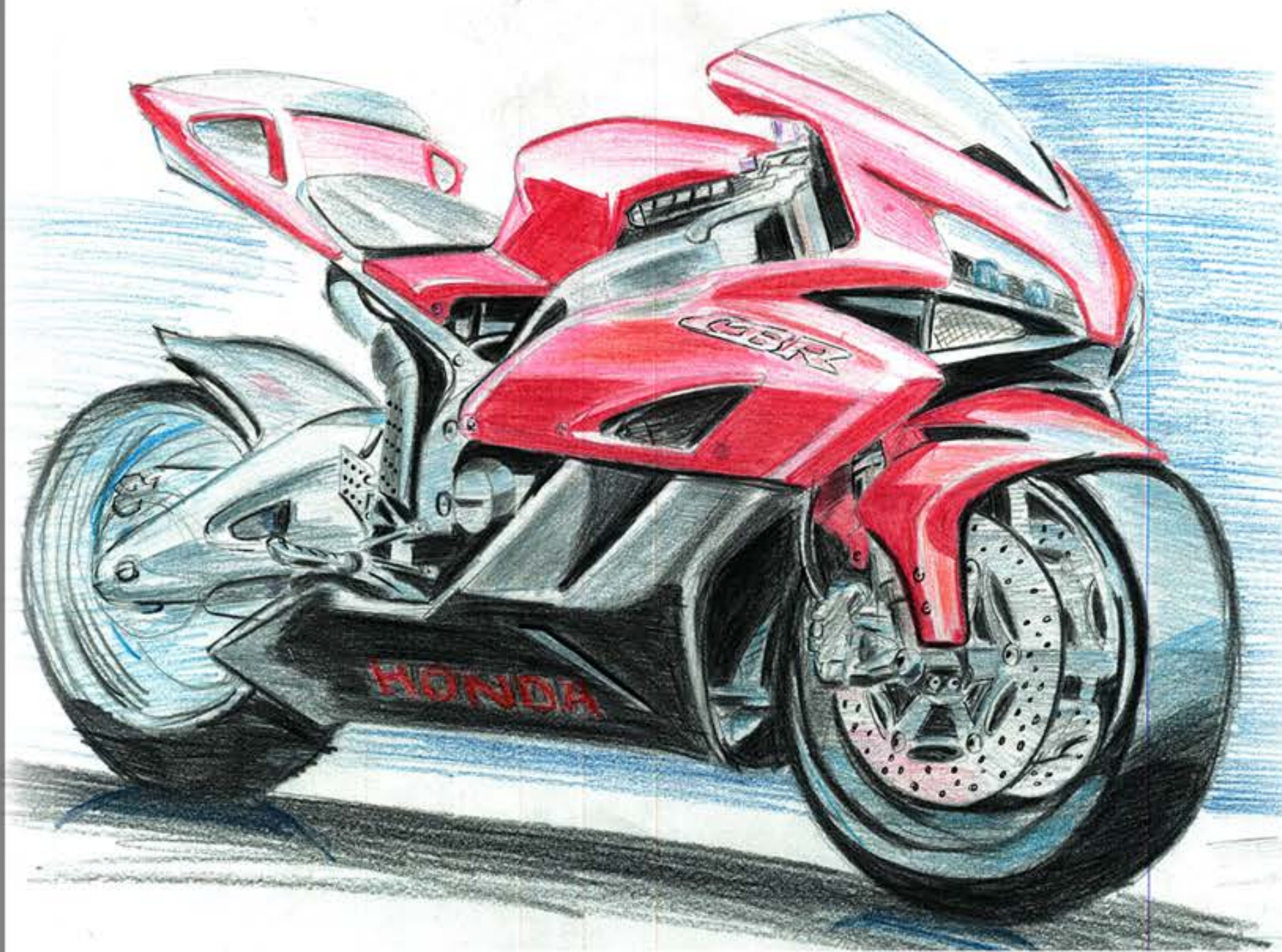




Skills



Rendering





INSPIRATION

SWORDFISH

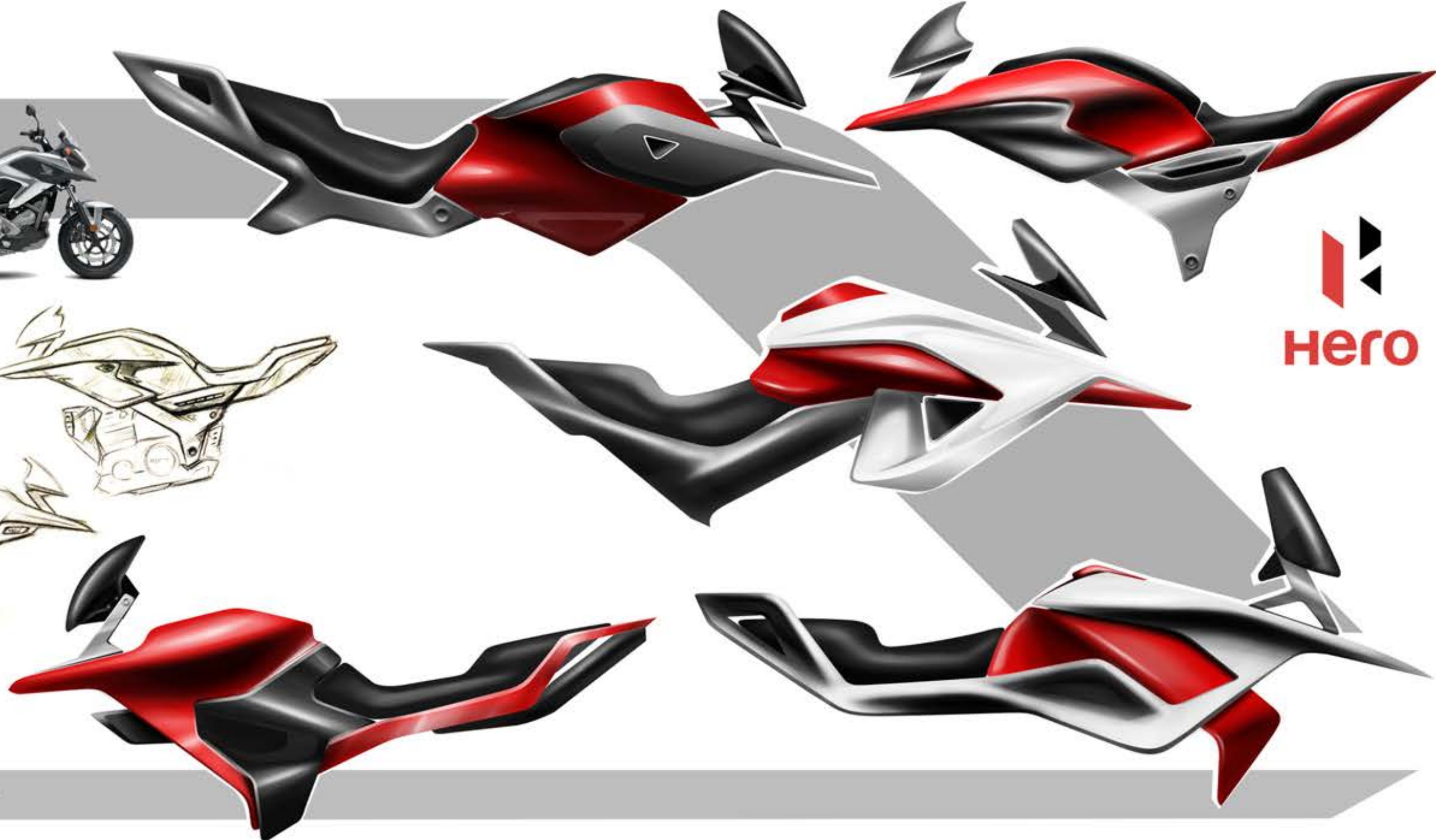


POLYGON FORM

BENCHMARK



PERSONAL  
PROJECT



  
Hero



PERSONAL  
PROJECT





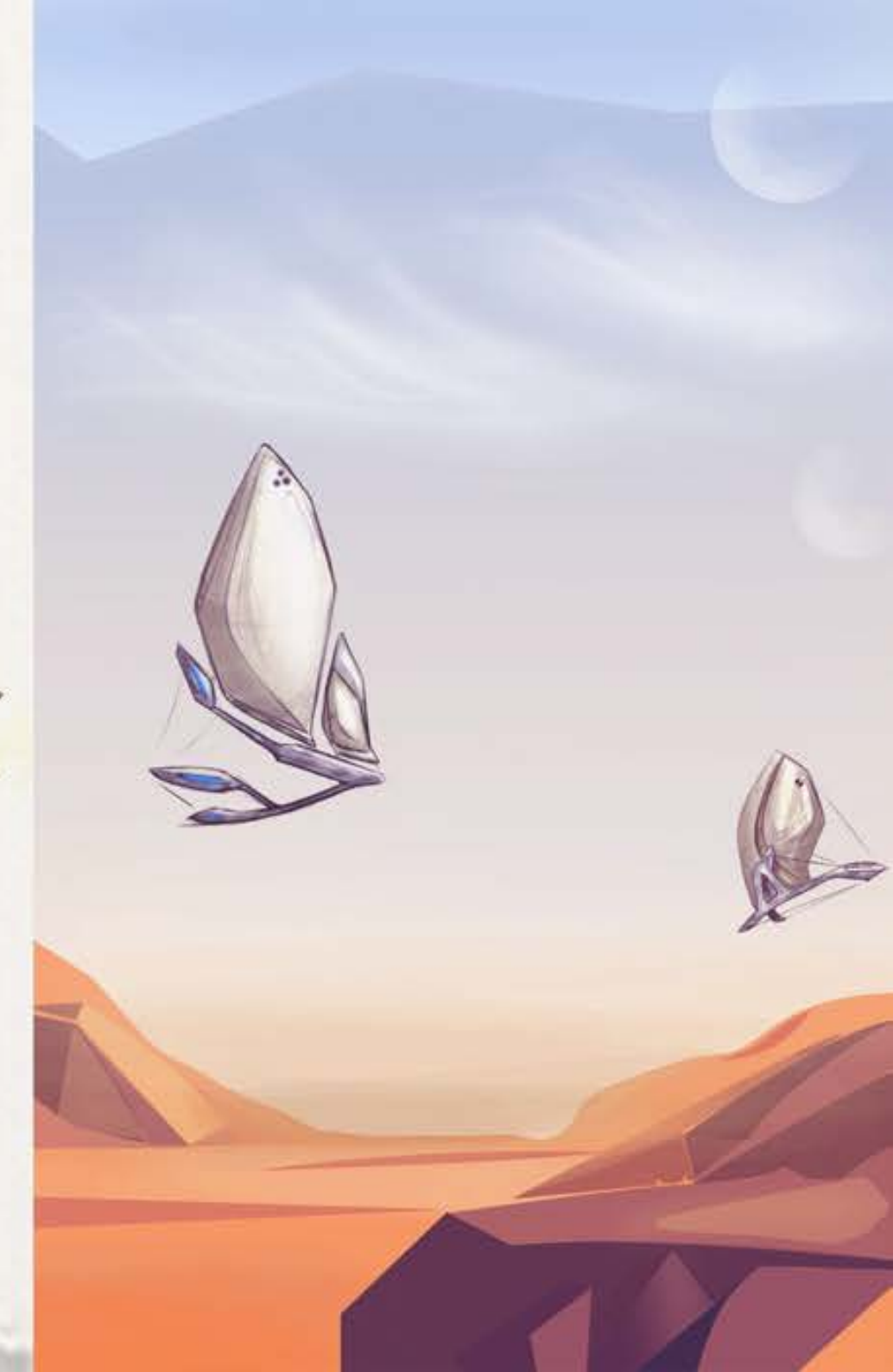
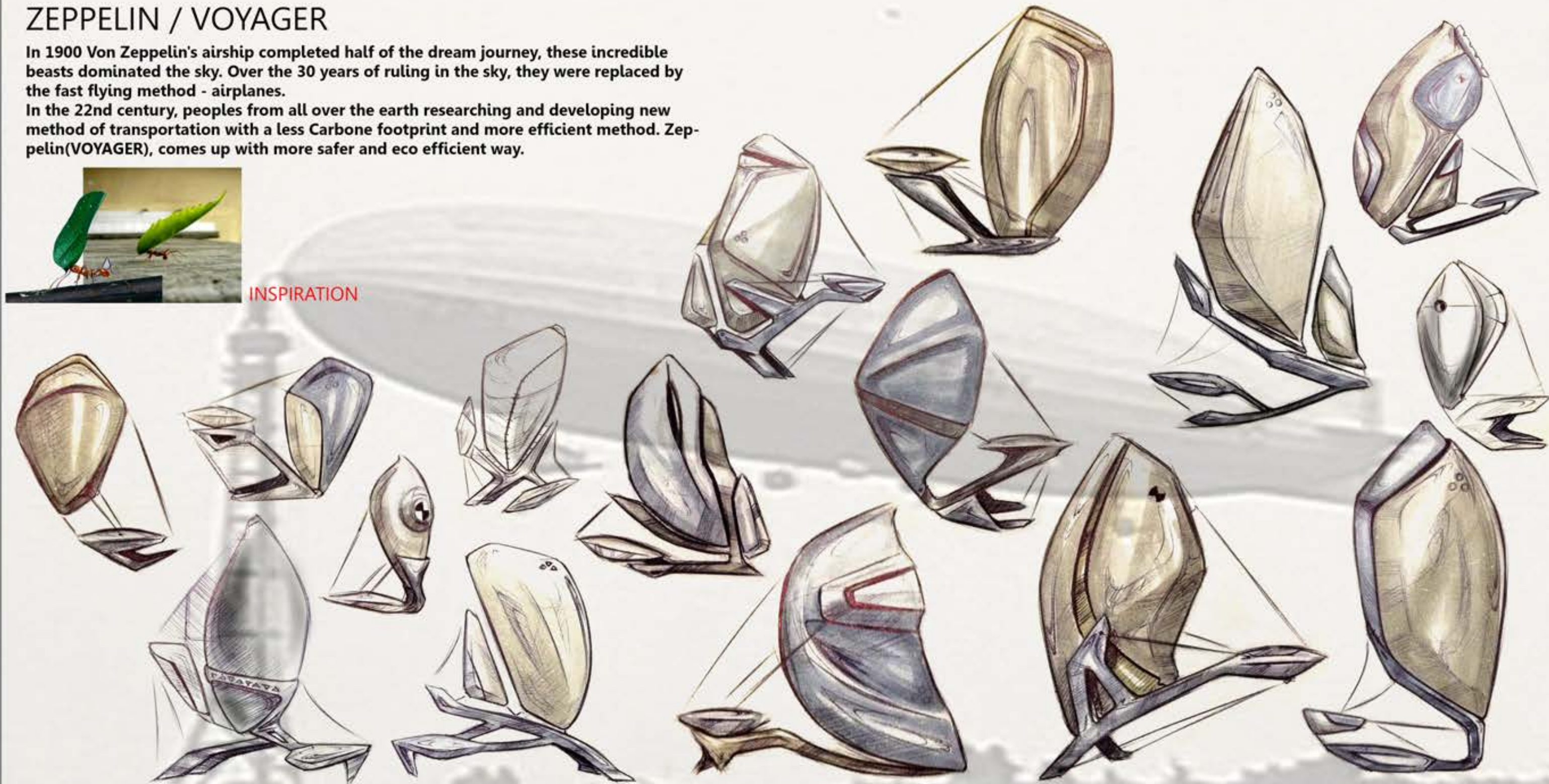
# ZEPPELIN / VOYAGER

In 1900 Von Zeppelin's airship completed half of the dream journey, these incredible beasts dominated the sky. Over the 30 years of ruling in the sky, they were replaced by the fast flying method - airplanes.

In the 22nd century, peoples from all over the earth researching and developing new method of transportation with a less Carbone footprint and more efficient method. Zep-pelin(VOYAGER), comes up with more safer and eco efficient way.



INSPIRATION



PERSONAL  
PROJECT



Rendering





Rendering





Rendering





Rendering



POLO

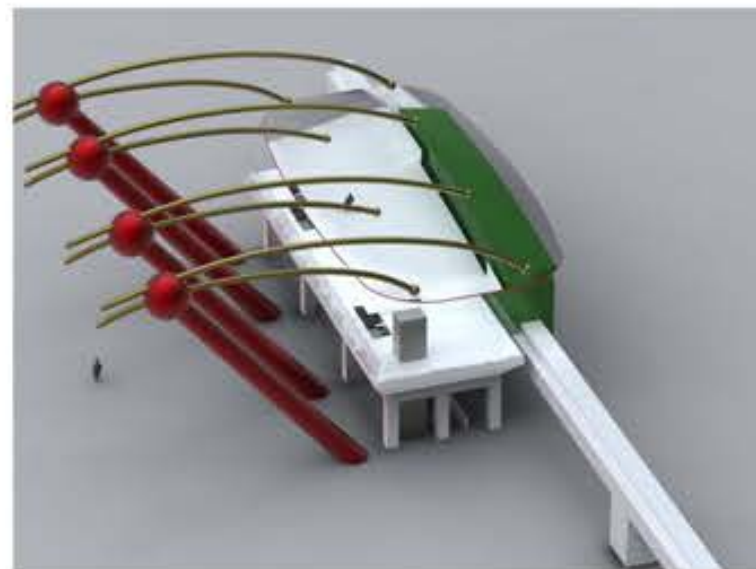
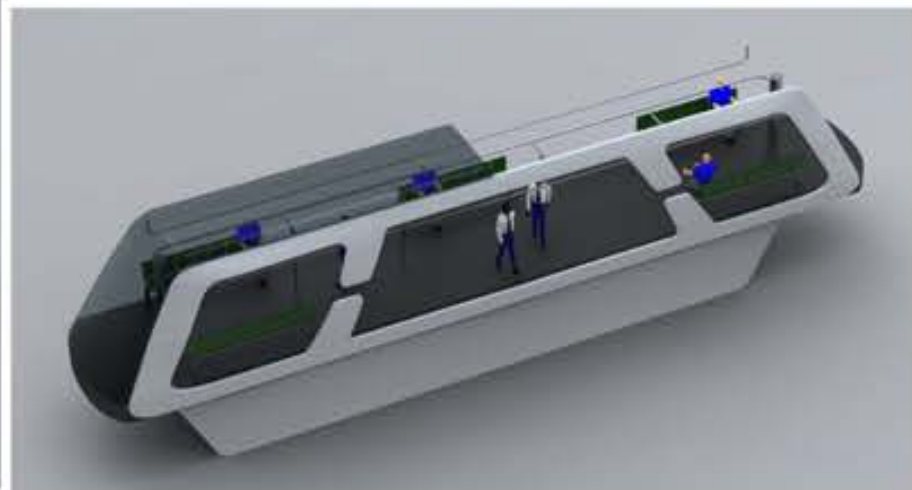
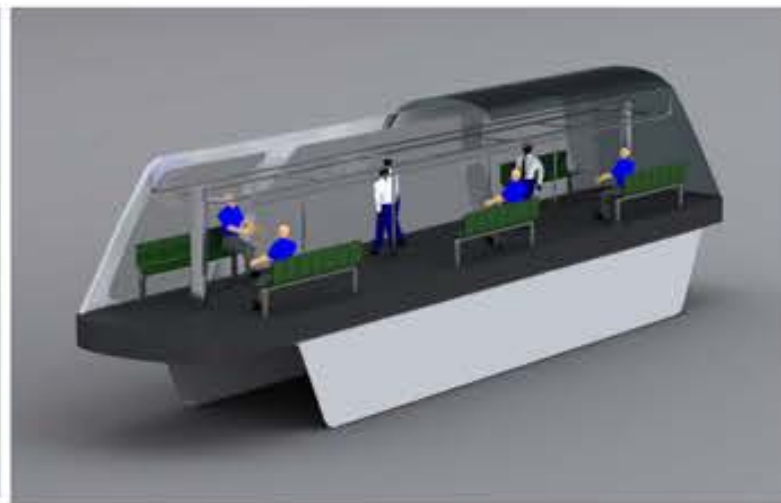
MK1



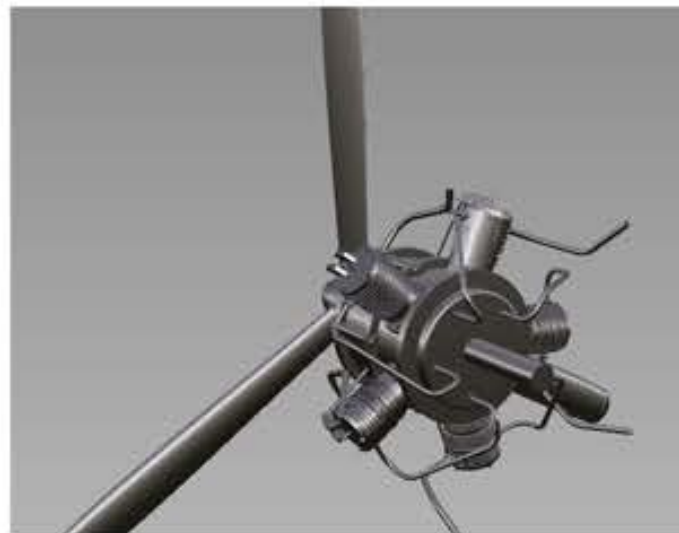
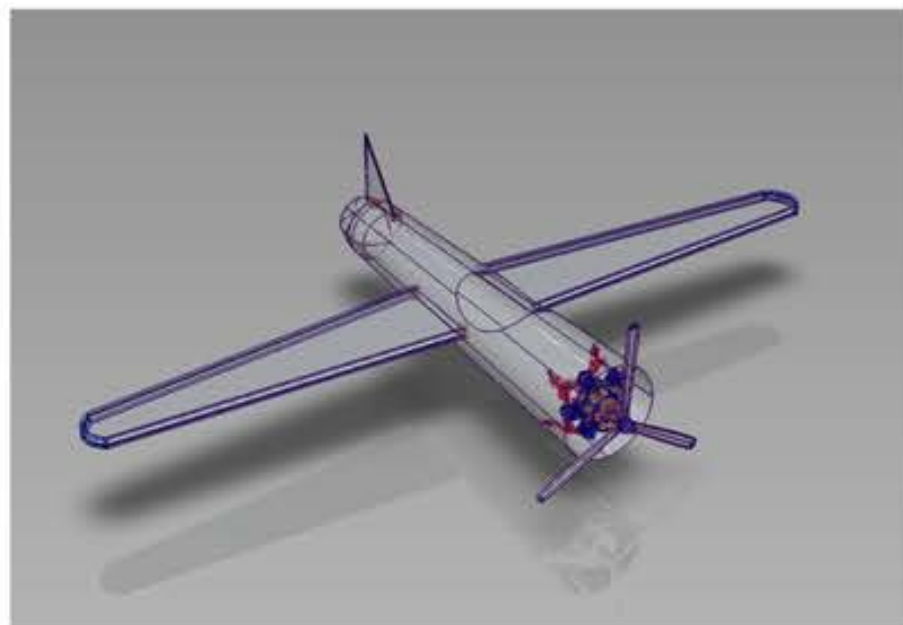
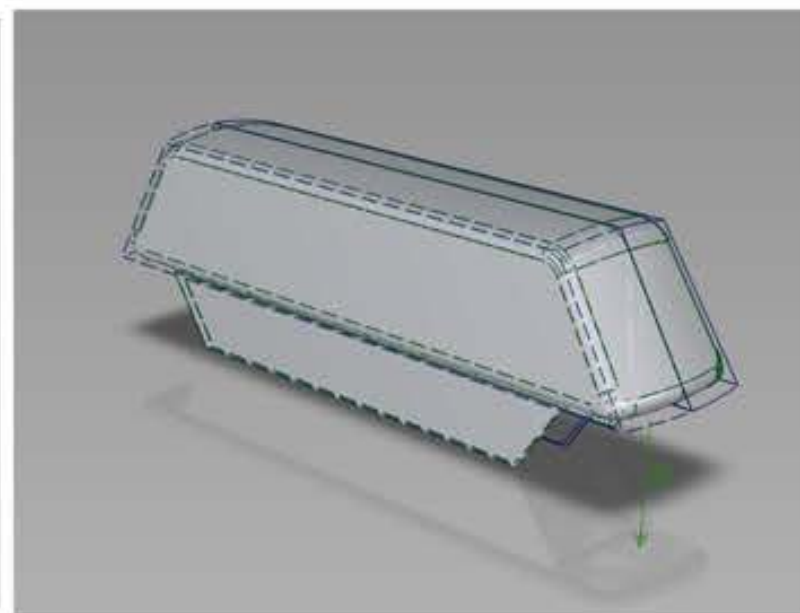
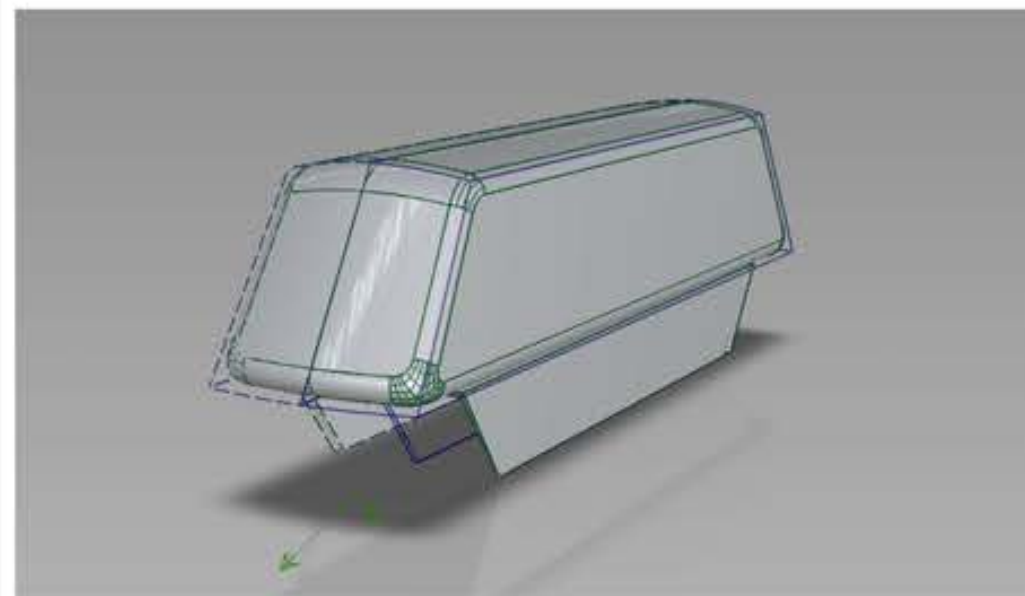




rahino modeling



alias modeling



3D  
modeling



## Experience and Achievements

- 2012- 6 months Diploma Project Internship at **TATA Elxsi**.  
(working on High speed rail for Europe.)
- 2012- 2 months Internship at **Automotif**,Pune.  
(working live project on concret pump.)
- 2012- Working live project STYLING SAE SUPRA RACING CAR  
in collabration with MIT collage of engineering,Pune.  
(Winner of Best Design Award 2012, event held at  
Buddha international circuit, New Delhi, India.)
- 2011- Attending Automotive Design and Styling workshop at  
ARAI.
- 2013- Award for Best Student in Transportation Design for Batch 2011-13.

## Education

- 2010-2013: Post Graduate Diploma in Transportation Design  
MIT Institute of Design,Pune.
- 2005-2009: Bachelor of Automobile Engineering  
L.D.Collage of Engineering,Gujarat University,Ahmedabad.



## Neel umrigar

Transportation design student  
contect

(+91) 9898319420

(+91) 94274 69136

email

[Neelumrigar@gmail.com](mailto:Neelumrigar@gmail.com)

for online portfolio;

<http://umrigarneel.blogspot.in/>

<http://issuu.com/neelumrigar/docs/issuu>

## skills

hand sketching,rendering  
digital sketching,rendering  
drypestal and marker techniques  
automotive clay  
polystyrene foam  
wood and metal

## languages

English  
Gujarati  
Hindi

## softwares

photoshop  
sktchbook pro  
rhinoceros 3d modeling  
autodesk alias  
key short



**Thank You**