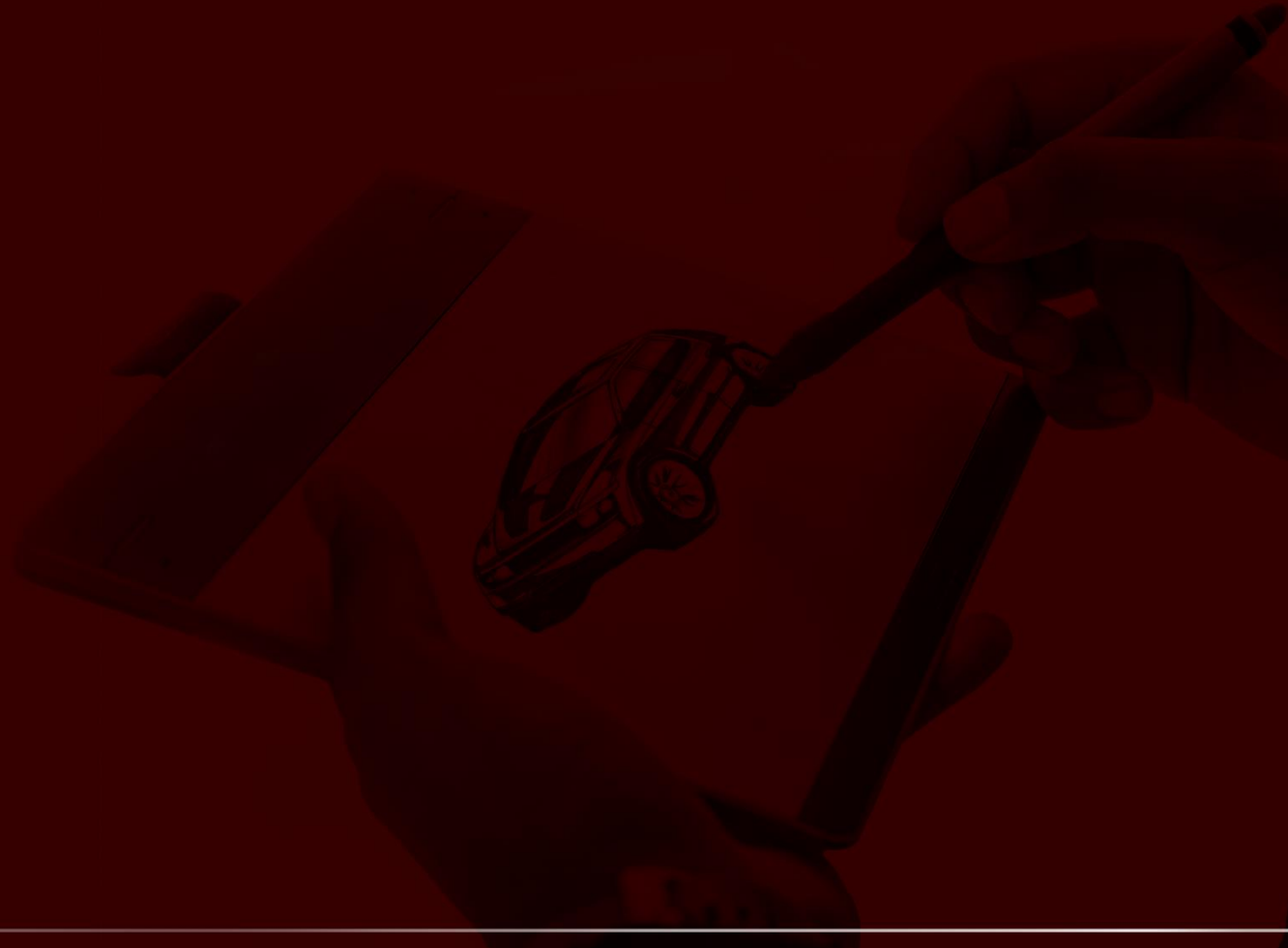




ROHIT KUMAR  
TRANSPORTATION DESIGN PORTFOLIO  
2018



Howdy, I'm Rohit.

I'm an Automobile Design Student,  
from Bangalore, currently  
pursuing my Masters  
in DYPDC, Pune.

I take this as an opportunity  
to showcase my strong points  
as a design student, in  
this journey  
of mine.



“ Design is the way  
out of chaos (cOnFuSiOn) ”

**ROHIT KUMAR**  
TRANSPORTATION DESIGN  
STUDENT

2008



I completed my schooling in Bangalore.  
Have participated in various sketching competitions.  
Used to play as a striker for the Football Team

2008 - 2010



Was part of the college's theater team.  
Took up Science as my core subject,  
which then moved me into taking up Engineering.

2010 - 2014



Took up Mechanical Engineering, Was part of the  
Formula Hybrid SAE team and took part in the 2014 competition in USA.  
Was the Master of ceremonies, for various cultural and technical events held.  
Headed the Art Club and was part of the Core committee, 2014.

NOW



Moved to Pune to pursue my Masters in Automobile Designing.  
Attended Master classes taught by Launchpad Academy and Prof. Koo Sang.

+91 7559372707

rohit.kumar.design12@gmail.com

**Bē** <https://www.behance.net/rohitkumardesign12>

**in** [www.linkedin.com/in/rohitkumardesign12](http://www.linkedin.com/in/rohitkumardesign12)

### SOFTWARE



### SKILLS

UX Design  
Design Thinking  
Technical Knowledge  
Teamwork  
Communication  
Leadership

### INTERESTS

Music Football Current affairs / Blogs

Future Technologies

### LANGUAGES

English  
Tamil  
Hindi  
Kannada





# OVERVIEW



**01** PEUGEOT'S  
HM  
AMBASSEUR

**02** AUTO-  
NOMOUS  
RACER

**03** ELECTRIC  
SMART  
SCOOTER

**04** LOGISTICS  
SYSTEM  
DESIGN

'''



Oh and.. GOTTA HEAD FULL OF IDEAS THAT ARE  
DRIVING ME INSANE  
- BOB DYLAN





"**H**ERE TO STAY"

A new Avatar of The King of Indian roads

Introducing The

**AMBASSADEUR**





# AMBASSADOR THE STORY



**SYMBOL** OF INDIA'S AUTOMOTIVE INDUSTRY.  
MODE OF **MASS TRANSPORT**.  
MOST POPULAR **TAXI** IN INDIA  
DE FACTO '**POLITICIAN'S** PREFERRED CAR'.  
SYMBOL OF **STATUS**.

FROM THE **LANDMASTER** WITH ITS TYPICAL  
1950'S **BRITISH** PROPORTIONS,  
TO THE **NOVA** AND GRAND  
AS WE ALL KNOW TODAY AS THE  
**MODERN AMBASSADOR**.



Hindustan Landmaster  
1954-1958

Hindustan Ambassador MK1  
1958-1962

Hindustan Ambassador MK2  
1962-1975

Hindustan Ambassador MK4  
1979-1990

Hindustan Ambassador Nova  
1990-1999

MOST OF US WILL REMEMBER THE **AMBASSADOR** FONDLY THROUGH A  
**CHILDHOOD** MEMORY IN THE **SPACIOUS** RARE SEAT OR AS A CAR  
SOMEONE IN THE NEIGHBOURHOOD HAD,

IN PRODUCTION SINCE **1958 TO 2014**, WITH  
VERY **FEW** IMPROVEMENTS AND **CHANGES**  
OVER ITS PRODUCTION **LIFETIME**.



**A cut above the rest!**  
**The mark of excellence**  
**"Reach absolutely safe"**  
**"The big size family car"**  
**"Valuewise the wise choice"**  
**"More than just good looks"**  
**"The ideal family car"**  
**"The car to take you places"**





PSA  
GROUPE

PSA - FRENCH MULTINATIONAL MANUFACTURER OF AUTOMOBILES AND MOTORCYCLES SOLD UNDER THE PEUGEOT CITROËN, DS OPEL AND VAUXHALL BRANDS.

PEUGEOT SOCIÉTÉ ANONYME (PSA) IS GEARING UP FOR ITS **SECOND INNINGS** IN INDIA AS IT FIRST ENTERED THE COUNTRY IN THE '90S. PSA **EXITED** THE INDIAN MARKET IN **1997**.



PEUGEOT IS KNOWN AS A VERY **RELIABLE** BRAND, CITING HOW ITS 1950S AND 1960S MODELS ARE STILL RUNNING IN AFRICA AND CUBA IN THE 2010'S.

PEUGEOT RANKED THE SECOND **LOWEST** FOR AVERAGE CO2 **EMISSIONS** AMONG GENERALIST BRANDS IN EUROPE. DURING THE 90'S THEY HAD A COLLABORATION WITH PAL (**PREMIER AUTOMOBILES LIMITED**).



Peugeot 3hp (1894)



Peugeot 6hp (1898)



Type 125 (1910)



Type 163 (1919-1924)



202 (1930s)



Peugeot 403 (1958)



204 (1969-1971)



Peugeot 504 (1969)



306 (1993-2002)



406 (1997)



307 (2001-2009)



508 (2017)

## THE TIMES OF INDIA



AMBASSADOR BRAND NOW GETS A NEW OWNER IN PEUGEOT

PSA GROUP THE PARENT COMPANY OF PEUGEOT ACQUIRED THE ICONIC AMBASSADOR BRAND IN FEBRUARY 2017 FOR RS 80 CRORE.

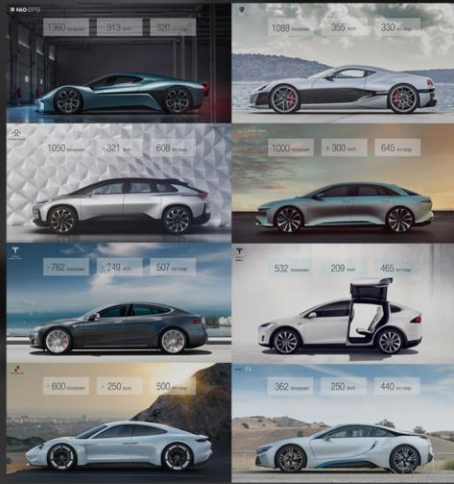
HM HAS EXECUTED AN AGREEMENT WITH PEUGEOT SA FOR THE SALE OF THE AMBASSADOR BRAND, INCLUDING THE TRADEMARKS.

PSA GROUP COULD CONSIDER **REVIVING** THE AMBASSADOR UNDER THE BADGE OF 'PEUGEOT'.

IN ORDER TO CONNECT TO THE INDIAN MARKET ON AN **EMOTIONAL AND REMINISCENT LEVEL**, BEFORE LAUNCHING THE PEUGEOT, CITROEN PRODUCTS.

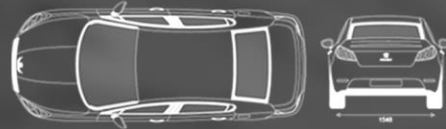
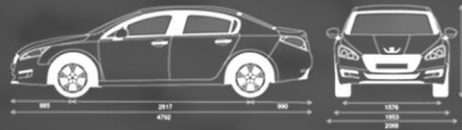






PRICE RANGE: 20 TO 30 LAKHS.

PLATFORM: PEUGEOT 508 PLATFORM.



BENCHMARK: TESLA MODEL 3, LUCID AIR CONCEPT, PORSCHE MISSION E CONCEPT.

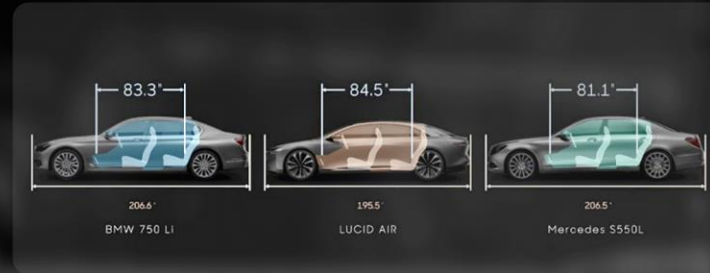


COMPETITORS: SKODA SUPERB, TOYOTA CAMRY, HONDA ACCORD



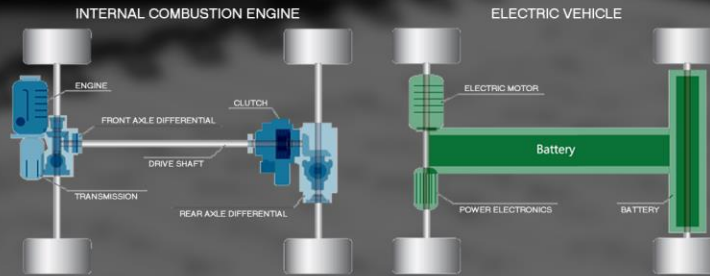
WHY ELECTRIC ?

LOWER CENTRE OF GRAVITY AND NUMBER MOVING PARTS WHEN COMPARED TO THEIR ICE COUNTERPARTS.



INCREASED PASSENGERS SPACE IN THE SAME FOOTPRINT. THE ENERGY DENSITY IN THE BATTERIES HAS INCREASED CONSIDERABLY IN THE LAST DECADE, WHICH HAS INCREASED THE RANGE THAT THE EV'S CAN OFFER.

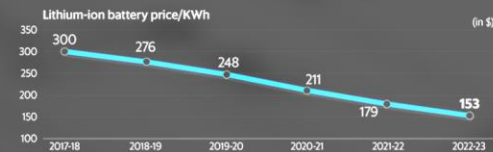
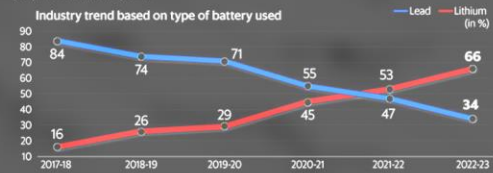
MORE SPACE FOR INTERIORS : THE FIREWALL CAN BE PUSHED FORWARD AS THEY JUST HAVE TO BE PLACED NEAR SPECIFIC COMPONENTS (AC AND THE ELECTRONICS).



LESS EXPENDITURE ON FUEL : GENERALLY 10 TO 20 TIMES LOWER QUITE AND A SMOOTHER RIDE. TAX CREDIT/BENEFITS. REDUCE THE CARBON FOOTPRINT.

Price factor

Use of lithium-ion battery is expected to show significant rise in days to come with the projected fall in its price.



Source: Society of Manufacturers of Electric Vehicles

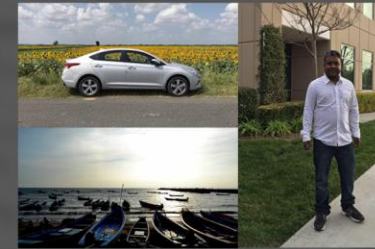
AGE | 32  
OCCUPATION | ARCHITECT  
STATUS | MARRIED/SELF EMPLOYED  
VEHICLE | PREMIER PADMINI AND VW VENTO



PRASHANTH : INDIANS BEING CONSERVATIVE IN THEIR THINKING PROCESS. ARE NOT READY FOR A COMPLETELY AUTONOMOUS EV WORLD. SO KEEPING THE OLD GEAR LEVER FOR EXAMPLE FOR CHANGING THE DIFFERENT MODES ON THE RE-GEN BREAKING INSTEAD AND NOT SWITCHING IT TO NOBS OR STICKS BEHIND THE WHEEL IS THE RIGHT WAY TO GO.

LIKE THAT SEEN IN THE VW E-GOLF (KIA SOUL), WHICH LOOKS SIMILAR TO THE LEVER USED TO CHANGE THE GEAR RATIOS IS THE RIGHT MOVE AHEAD BEFORE THE WHOLE AUTONOMOUS RIDE SHARING ECOSYSTEM KICKS-IN.

AGE | 34  
OCCUPATION | GAME DEVELOPER  
STATUS | MARRIED  
LOCATION | BANGALORE  
VEHICLE | HYUNDAI VERNA



SAM : CONVENTIONAL SHIFT TOWARDS EV'S (LIKE THE VW E-GOLF)

THIS MIGHT BE A BETTER APPROACH THAN TO TAKE A RADICAL SHIFT (LIKE THE TOYOTA CONCEPTS) SEEN IN THE TOKYO MOTOR SHOW.

AGE | 24  
OCCUPATION | SOFTWARE ENGINEER  
STATUS | SINGLE  
LOCATION | HOUSTON, TX  
VEHICLE | AUDI A3



BHAVNA: OF ALL THE ELECTRIC CARS AVAILABLE, UNDOUBTEDLY NISSAN LEAF IS THE CAR THAT'S MOVED A LOT OF PEOPLE TOWARDS THE EVS. THEY BROUGHT IN THE NISSAN LEAF 7YRS AGO.

NOW, EVEN WITH THE 2.0 VERSION, THEY HAVE STILL STUCK TO THEIR VISION TO MAKE THE CAR LOOK MORE LIKE THEIR NORMAL PETROL COUNTERPARTS AND NOT MAKE IT LOOK COMPLETELY MINIMAL AND AUTONOMOUS ROAD THAT THE NEW TESLA IS TAKING. (INDIA NEEDS LEAF AND IT'S NOT READY FOR THE MODEL 3).





# PERSONA

WHITE-COLLAR JOB

COMPOSED

TAKE CONTROL

WORKAHOLIC

CORPORATE LAWYER

ESTABLISHED

AGE 36

WELL GROOMED



HARVEY SPECTER



## DESIGN INSPIRATION



BJARKE INGELS  
SLOPED LINES



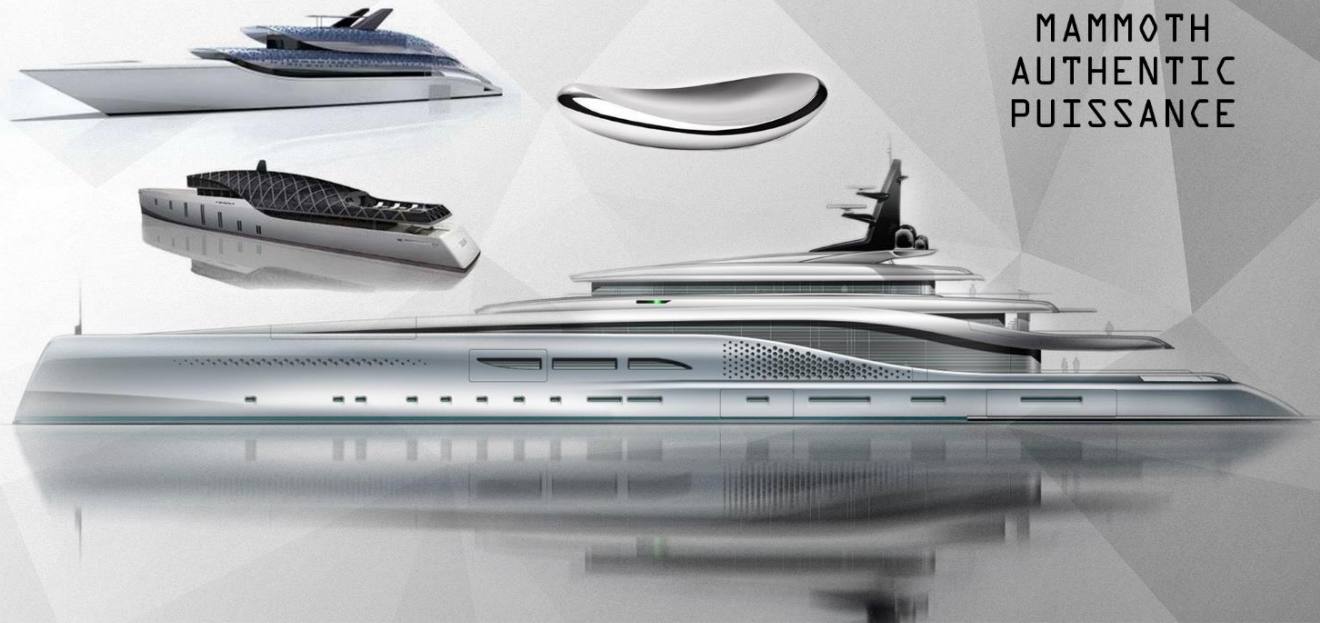
RENAULT EZ-GO  
TOYOTA - UBER  
IDEO (DESIGN FIRM)



REAR INSPIRATION  
JAGUAR XJ

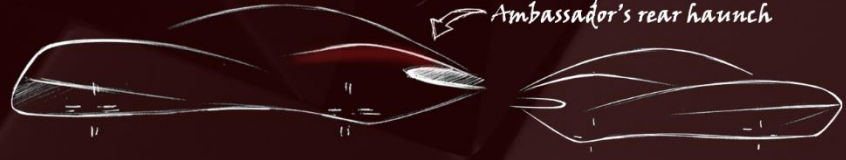
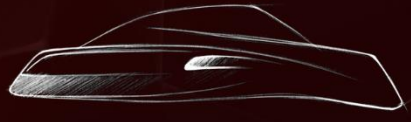
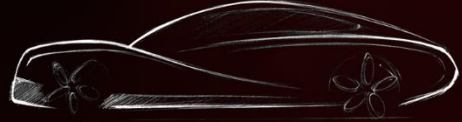


INSPIRATION FOR DETAILS  
HONDA EV CONCEPT  
CITROEN SM  
KIA SOUL EV

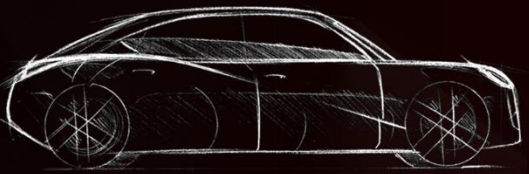


MAMMOTH  
AUTHENTIC  
PUISSANCE

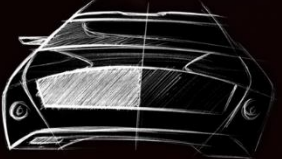
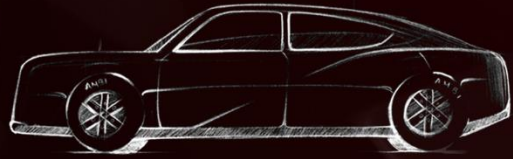




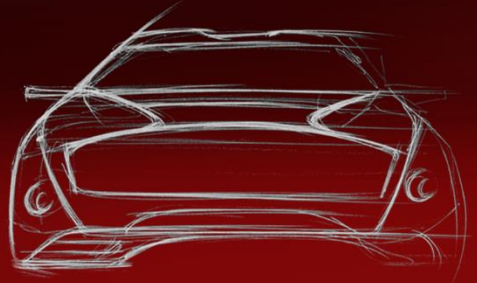
Retaining Ambassador's rear haunch



Selected key form



Pronounced BONE line



Oceanco's Stiletto superyacht concept  
STILETTO DF069







KA 04 UH 80 AK

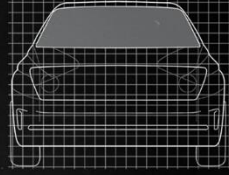
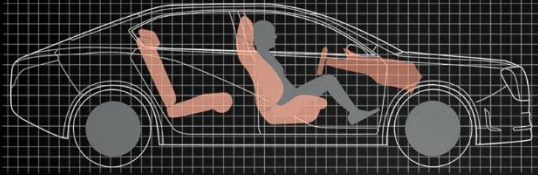






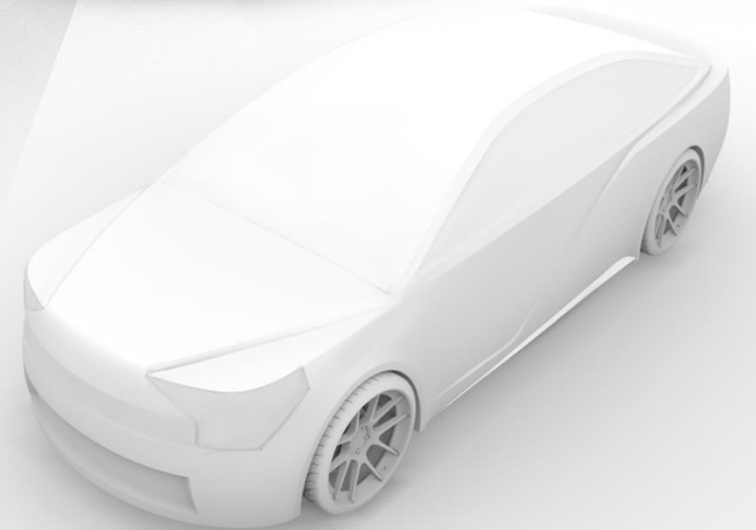
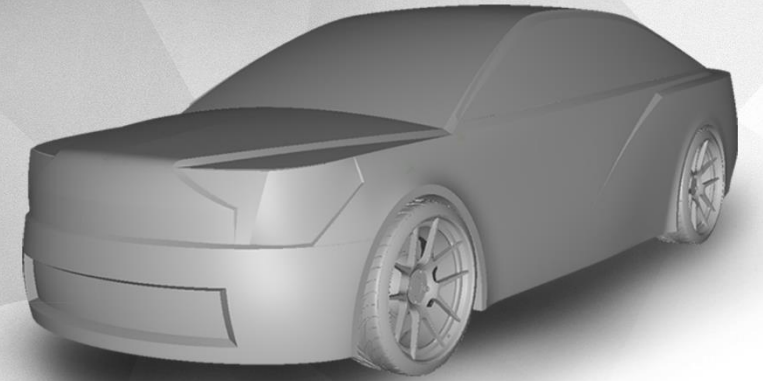
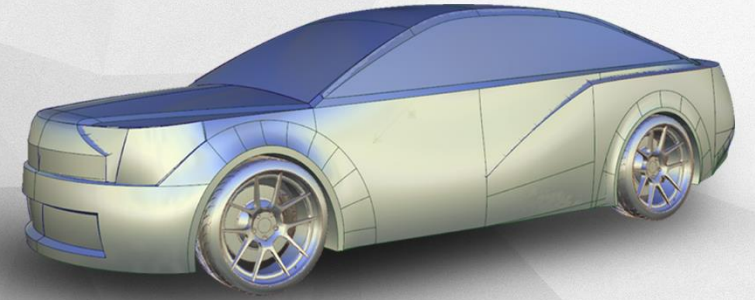
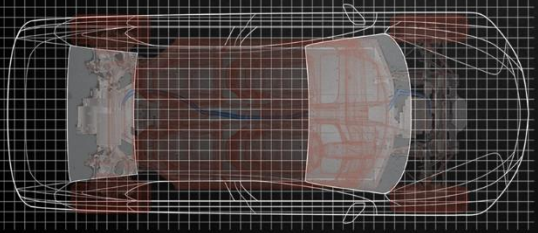


VEHICLE BLUEPRINT AND TECHNICAL PACKAGING



PEUGEOT'S  
PF3 PLATFORM

DIMENSIONS  
Wheelbase - 2,817mm  
Length - 4,792mm  
Width - 1,853mm  
Height - 1,456mm



AUTONOMOUS RACER AND  
RACING SCENARIO 2030

🕒 6 WEEKS



RACING TO BRING A DAY WHEN **ELECTRIC** CARS ARE THE NORM  
ON OUR ROADS.  
LEADING THE WAY TOWARDS A SAFE AND CLEANER FUTURE,  
WHERE THE **AI** AND **HUMAN** WORK IN **SYNERGY**.





### Analogy

Car with all the tech in it is the **Yin** and **Yang** is the **Human** who shapes and gives it a purpose.

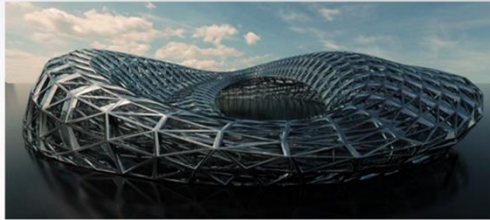


Like Yin-Yang everything has a seed of the **opposite**.  
Not total opposites but **relative** to each other.



Darth **Vader** has a seed of **goodness** and **Luke** has the potential to **follow** his father to the dark side.

**Yin (AI)** - challenge for AI is to get machines do our educated **guesswork** for us, at a scale and level of **precision** we couldn't manage as humans on our own.



**Yang (Human)** - by contrast would play the role of the truth teller, guarantor and **mediator**, the one bringing two parties together to forge the best **decision**.

'YIN-YANG' - THE PRINCIPLE IS THAT ALL THINGS EXIST AS INSEPARABLE AND CONTRADICTORY **OPPOSITES**.



### RACE SCENARIO

Induction Powered Stadium, Illustration

Alongside being a competitive and an exciting racing series, event's main AIM is to promote the use of AI enabled EVs – bringing forward the day when AI controlled electric cars are the norm on our roads and leading the way towards a CLEANER and safer FUTURE.

Mahindra  
ELECTRIC

24  
LE MANS

WORLD'S OLDEST ACTIVE SPORT | SINCE 1923 | ENDURANCE RACING

Using the Le Mans as the THEME would show how the AI systems built by the different teams are able to engage and alter the course of the race and it would break the MYTH's surrounding the reliability of EV's. This would also encourage people in doubt to adopt AUTONOMOUS Vehicles.

#### EVENT

The race consists of approximately 10 teams, each having two drivers (Human and AI). Most components on the cars are standardised across all teams. Different aspects of the race, from the qualifiers is accounted for based on a points table.

#### VEHICLE ARCHITECTURE INSPIRATION



TIMELESS RACER - DANIEL SIMON



MAZDA RT24-P LE MANS RACER



BRAND INSPIRATION  
SPAWN  
PIONEER  
COSMIC  
REVIVE



The race lasts almost 50mins.  
Track is around 2.5km in length.



The battery that powers the cars.  
is also identical for all teams.







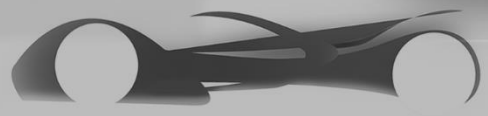
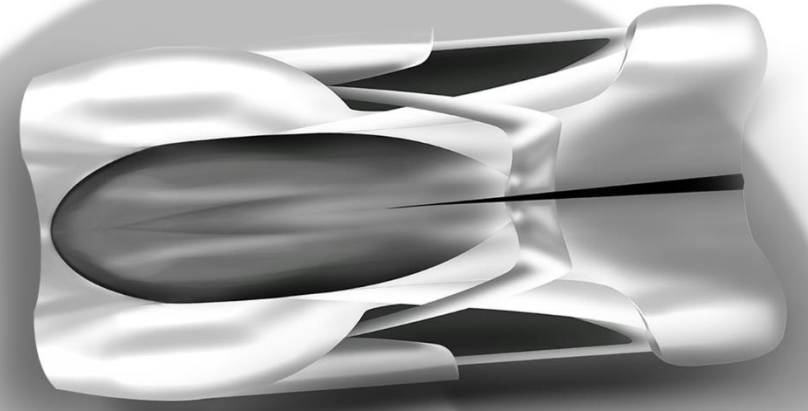
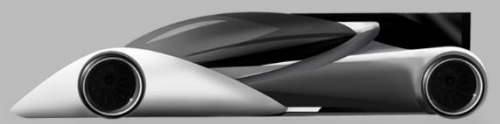
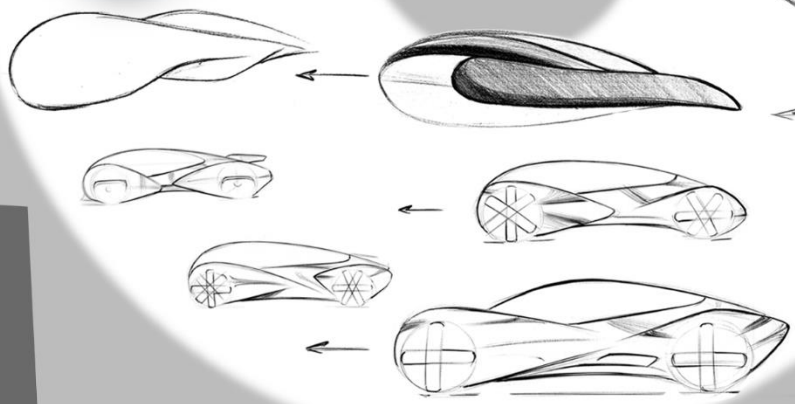
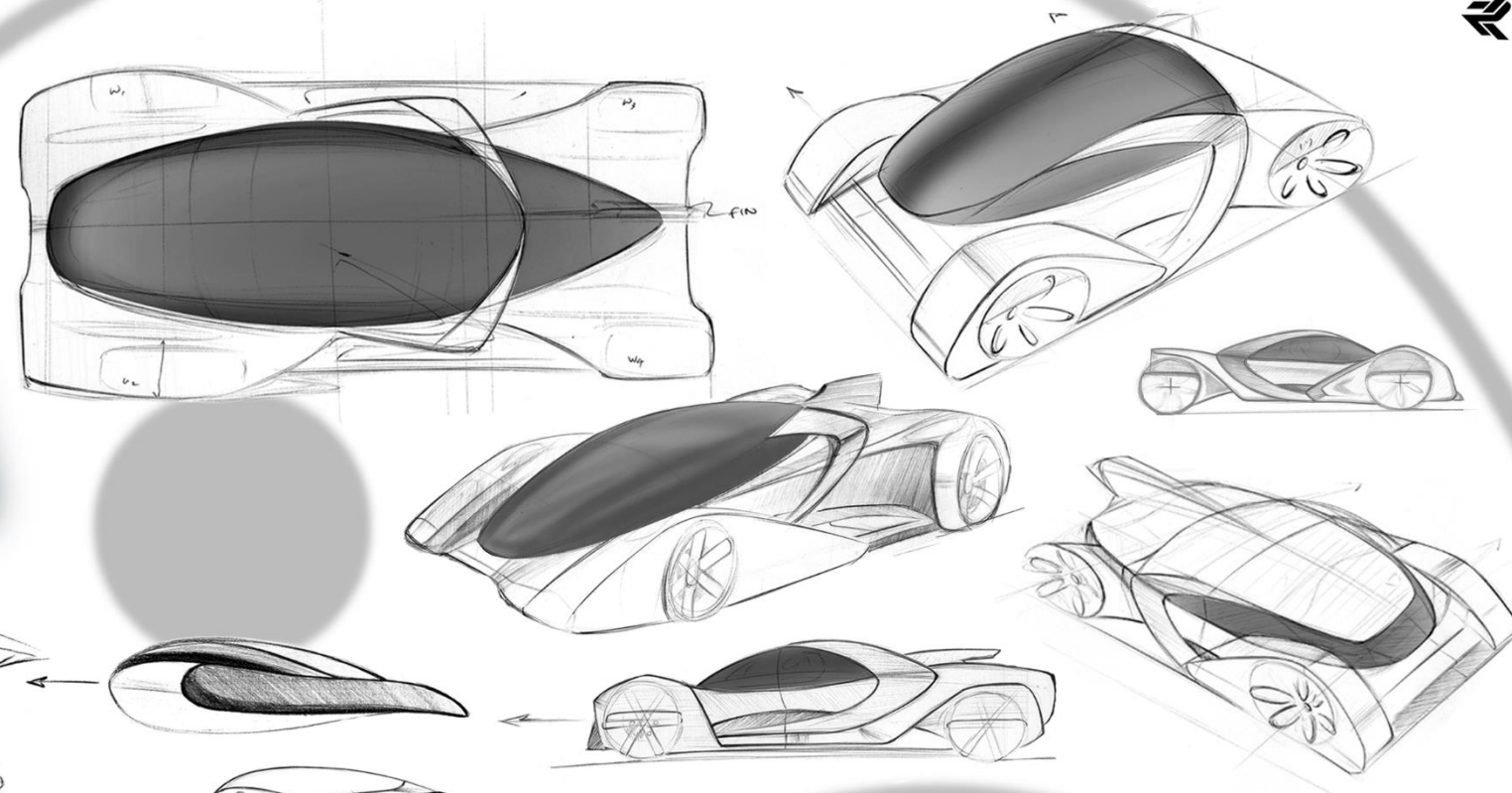
RACE SCENARIO BOARD



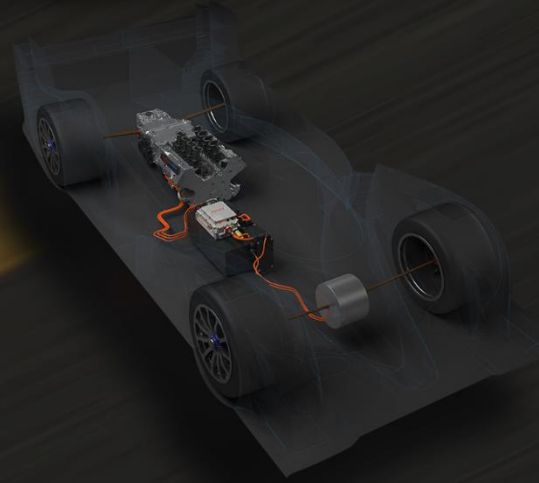
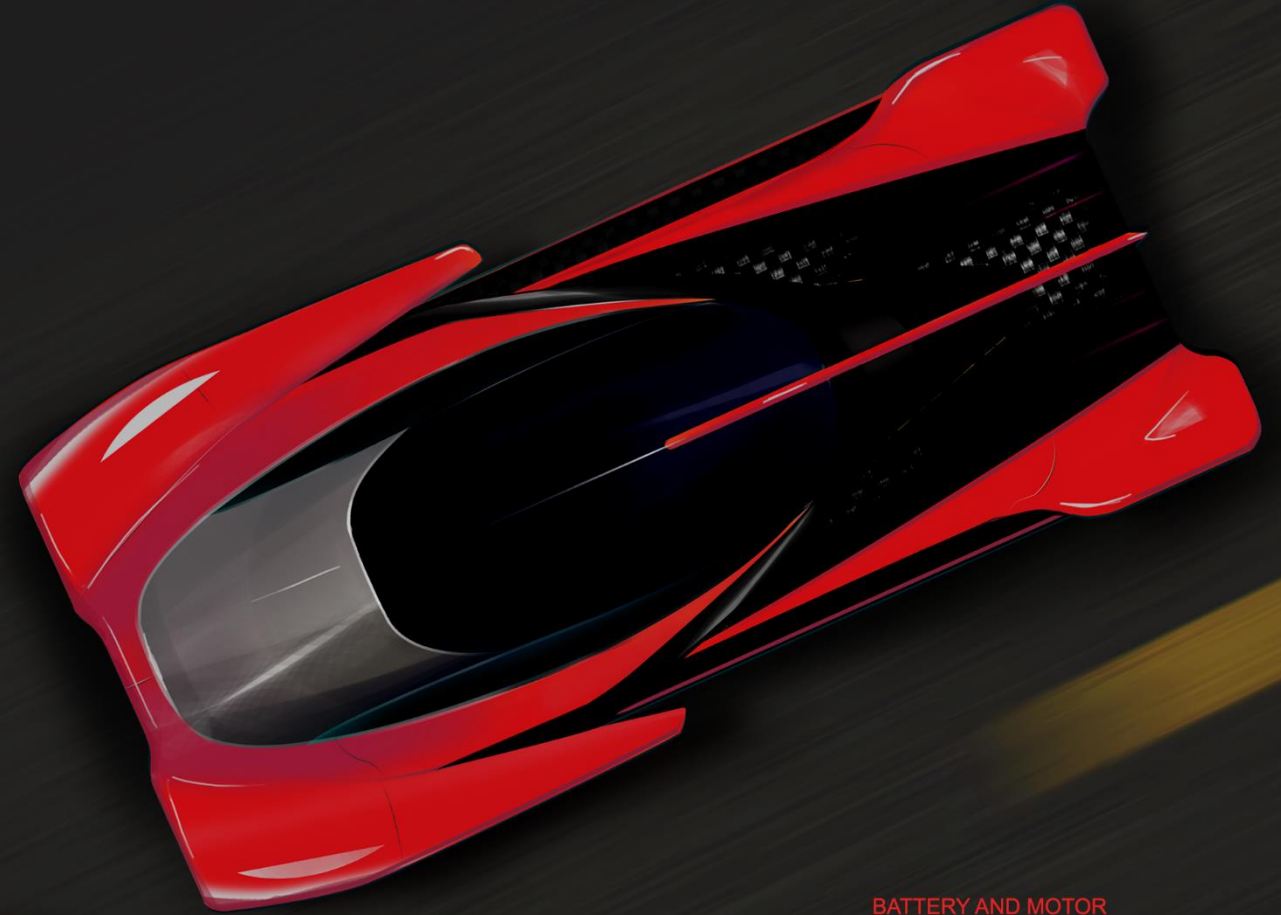
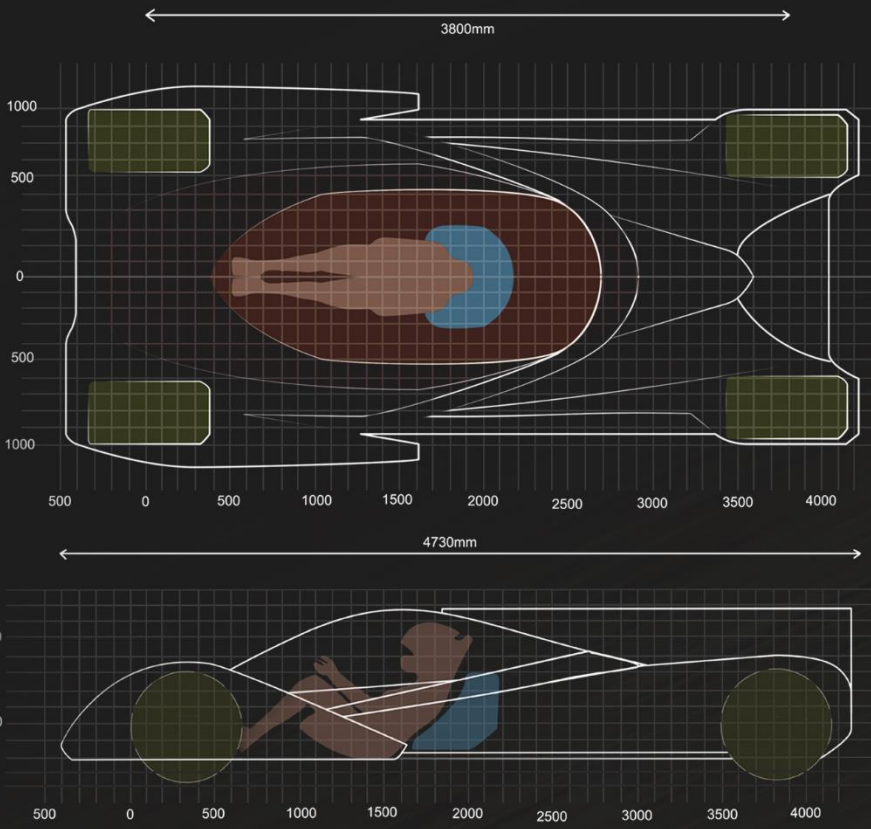
BRAND BOARD



DESIGN BOARD







**BATTERY AND MOTOR**

Battery - Williams-developed battery  
 Battery weight - 350kg  
 Total weight with driver and ballast - 800kg  
 0-100kmh in less than three seconds  
 Powertrain - 6-phase unit with 2 transmission  
 Peak Power - 250 kW

**RACE LIMITATIONS**

Permitted energy regen - 150kW  
 Max Power output - 200kW

**CHASIS AND MATERIALS**

Carbon fibre and Aluminium structure  
 Materials - Kevlar and Carbon fiber  
 Sculpted 18" Michelin





# RACE TRACK ILLUSTRATION



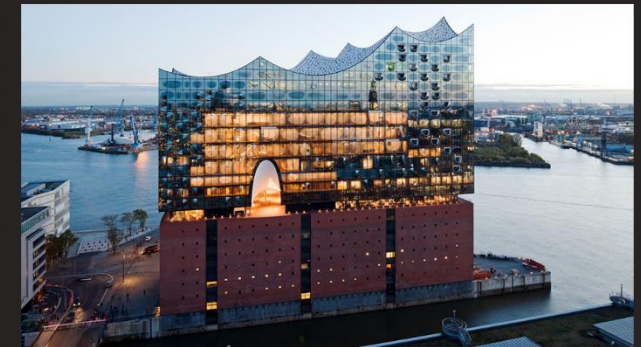
# DESIGN INSPIRATION



The **Elbphilharmonie**, Grand Hall. Heart of the Elbphilharmonie places audience no further than 30 metres from the conductor, breaking down barriers between musicians and audience members.



The concert Foyers have **interlaced staircases**.





ELECTRIC  
SMART SCOOTER

🕒 4 WEEKS



?

MINIMALISM HAS EVOLVED FROM A FORM OF REBELLION AGAINST THE CLUTTERED AND GAUDY STYLES OF YESTERYEAR.

CURRENTLY, DESIGN MINIMALISM IS ALL THE RAGE. THERE IS A VOID IN THE MARKET FOR A MINIMAL ELECTRIC SCOOTER.







POST THE SECOND WORLD WAR ITALY, UNITED KINGDOM AND GERMANY HAVE INFLUENCED THE MOTOR SCOOTER DESIGN.



THE GLOBAL POPULARITY OF SCOOTERS DATES FROM THE **POST-WORLD WAR II**.

IN 1894, HILDEBRAND AND WOLFMULLER PRODUCED THE FIRST MOTORCYCLE THAT WAS AVAILABLE FOR PURCHASE.

SINCE THE INTRODUCTION OF AUTO-FAUTEUIL IN 1902, THERE WAS SHIFT IN TREND. TRADITIONAL SADDLE WAS REPLACED BY **STEP-THROUGH** MOTORCYCLES.

THE **MOTOPED** WHICH ENTERED PRODUCTION IN 1915, IS BELIEVED TO BE THE FIRST MOTOR SCOOTER.

ONCE **SALSBURY** ENTERED THE MARKET, THE FOCUS SHIFTED IN MAKING THE MOTOR SCOOTER APPEALING TO BOTH MALE AND **FEMALE** CUSTOMERS.



“DESIGN AN ALL ELECTRIC MOTOR SCOOTER WHICH COMPETES WITH THE LIKES OF VESPA IN THE INDIAN MARKET WITH A BUDGET OF 1-1.2L”



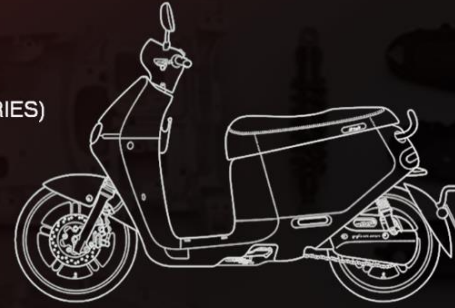




## BENCHMARK AND MARKET PLACEMENT STUDY



**APPROXIMATION**  
 WEIGHT: 140KG (WITH BATTERIES)  
 WHEEL BASE: 1406mm  
 SEAT HEIGHT: 770mm  
 TRUNK SIZE: 25L  
 LENGTH: 18800mm  
 WIDTH: 670mm  
 HEIGHT: 1090mm



## BUILDING AN ECOSYSTEM

BUILDING AN ECOSYSTEM WOULD BE VITAL. WITH A STRUCTURED PLAN TO SET UP CHARGING POINTS IN THE CITY. THE WORKING CLASS WHO SPEND ALMOST 9HRS IN AN OFFICE COULD USE THE TIME TO JUICE UP THE BIKE. THIS WOULD PREVENT THE EV'S TO LOAD UP THE GRID DURING THE PEAK HOURS.

## USER RESEARCH COMPILED SURVEY RESULTS



## PERSONA

FICTIONAL CHARACTERS. CREATED BASED ON MY RESEARCH TO REPRESENT DIFFERENT USER TYPES THAT MIGHT USE THE BIKE. ALSO TO HELP UNDERSTAND THE USER NEEDS, EXPERIENCES, BEHAVIOURS AND GOALS.

### ACCEPTABLE TIME FOR A COMPLETE CHARGE?

- OVERNIGHT CHARGING
- 3-4HRS
- 5HRS



### THOUGHTS ON THE STORAGE SPACE PROVIDED BELOW THE SEAT

- ELEMINTATE THE STORAGE SPACE FOR A MORE ERGONOMIC VEHICLE.
- PARTITIONED SPACE AND AN OUTWARD HELMET LOCK.
- ROOM FOR A FULL FACED HELMET.
- MORE BATTERIES THERE FOR A HIGHER RANGE.

### HOW MUCH WOULD YOU MISS THE SOUND OF A MOTOR SCOOTER?

- PREFER A SILENT RIDE.
- WOULD LIKE AN ARTIFICIALLY GENERATED SOUND.
- FIND THE SOUND OF AN EV FUNNY.
- WOULDN'T RIDE ONE IF IT DIDN'T MAKE A ROAR.

### HAVE YOU USED AN ELECTRIC BIKE BEFORE?

- YES
- NO

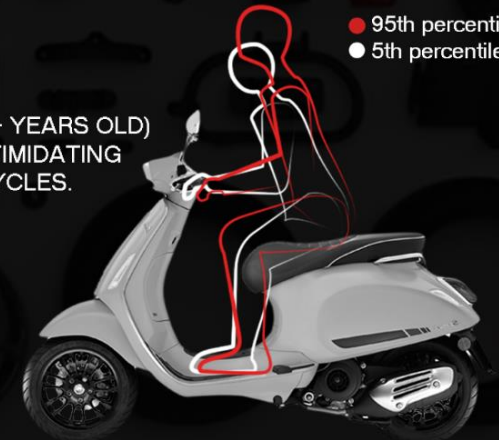


## TARGET AGE GROUP

YOUNG CUSTOMERS (20+ YEARS OLD) SCOOTERS ARE LESS INTIMIDATING COMPARED TO MOTORCYCLES.

## REFERENCE

SEATING POSTURE  
 STORAGE SPACE  
 PREMIUM SEGMENT (1.2)



- 95th percentile male
- 5th percentile female

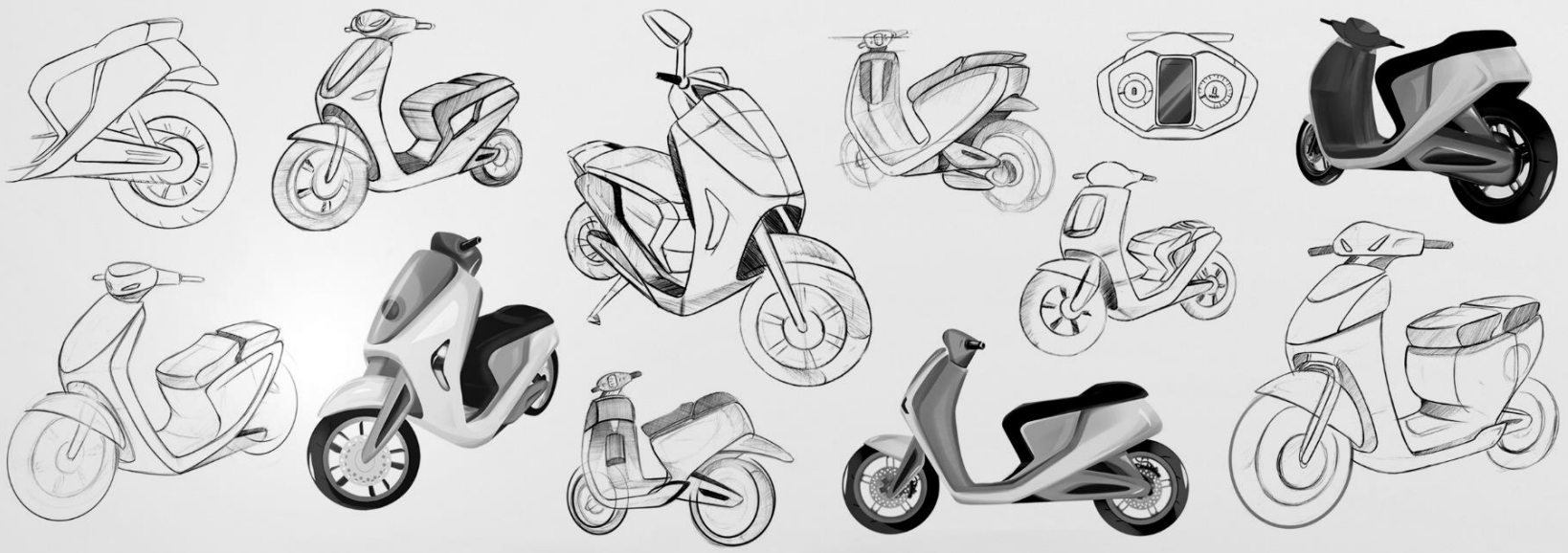




USER PERSONA  
AND  
DESIGN LANGUAGE



NANCY IS AN ASPIRING MBA GRADUATE WHO IS CURRENTLY WORKING TOWARDS A PROMOTION AT HER FIRM. SHE IS AN EXTROVERT AND PREFERS BEING ENGAGED IN SOCIAL GATHERINGS DURING THE WEEKENDS. SHE IS VERY PASSIONATE ABOUT DANCE AND SPENDS AN HOUR BUILDING HERSELF AND RELAX.



**BRAKES AND SUSPENSION**  
220mm front and back plate brakes.  
Suspension obligations are taken care of by adjustable forks in advance and a double spring setup at the back.

**MATERIALS USED**  
Aluminum forks heavier Mellow Steel.  
High Density Polyethylene.  
Magnesium Alloy.  
Foam and Cloth.

120 km on a solitary charge.  
Recharges 80% of its ability in less than an hour.  
60,000 km at 100% usage.  
In-house Battery administration framework.  
Battery pack - 3 KW.

**POWERTRAIN AND DRIVE MECHANISM**  
Platinum energy of 15 KW.  
Top speed 110kmph.  
7 KW PMDC motor.  
Drive mechanism: Belt drive.

120KM ON A SOLITARY CHARGE  
RECHARGES UPTO 80% IN <1HR  
BATTERY PACK: 3KW  
200MM FRONT AND BACK PLATE BRAKES  
7" SMART TOUCHSCREEN  
TOP SPEED 110KMPH  
DRIVE MECHANISM - BELT DRIVE  
7KW PMDC MOTOR  
HEIGHT 1090MM  
WHEELBASE 1306MM  
LENGTH 2180MM





ONE LAKH ONLY  
STARTING MSRP

50  
CITY

60  
HWY

[Colours](#) [Gallery](#) [Warrenty](#) [Design](#) [Performance](#) [Technology](#) [Safety](#) [Trims](#) [Offers](#) | [Shopping Tools](#)

BUILD YOURS

GET A QUOTE



# MAGNETE

Silence is golden







TOYOTA

LOGISTICS  
SYSTEM DESIGN



THINK ABOUT THE POSSIBILITY OF A **DIRECT DELIVERY** TO CUSTOMERS, BY **REINVENTING**  
THE IDEA OF THE TRADITIONAL **SUPPLY CHAIN**,  
WHICH WOULD OPTIMISE THE **LAST MILE** EACH PACKAGE TRAVELS BY CREATING A **LOGISTIC SOLUTION**  
THAT IS **FAST, SUSTAINABLE**, AND MOST OF ALL **REVOLUTIONARY**.





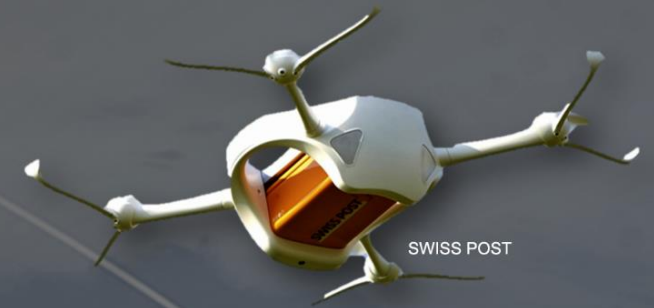
# SYSTEM DESIGN - CONCEPT

## DESIGN BRIEF

Think about the possibilities of direct delivery to customers, by reinventing the idea of the traditional supply chain. It is time to revamp the package delivery industry by considering how you would optimise the last mile each package travels by creating a logistic solution that is fast, sustainable and most of all revolutionary."

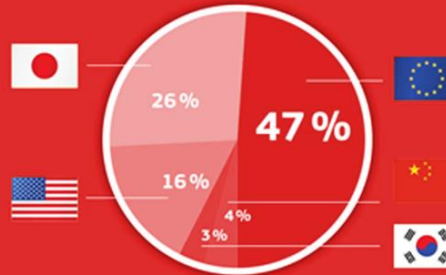


**TOYOTA**  
Toyota Logistic Design  
Competition 2017



## SCENARIO DESIGN - EU SCENARIO AND REGULATIONS

"European transport companies" are leading innovators. In 2015 they invested €45 bn in industrial R&D, equal to 47% of the world share", well ahead of Japanese and American companies.



Road – Lorries can now operate in countries other than their country of registration.

Air – "Open skies" agreement. Single European Sky - a legislative framework for European aviation.

Rail – A licensed rail company can now offer its services anywhere in the EU.

Maritime – 40% of freight within Europe is shipped by sea.



Transport accounts for 13% of the total household expenditure.



The Mobility sector employs more than 11 million people, accounting for 5% of the total employment.



New registrations of plug-in electric passenger cars  
2011 vs 2016 - 9,426 vs 157,564



Number of publicly accessible electric charging positions.  
2011 vs 2016 - 3,895 vs 91,519

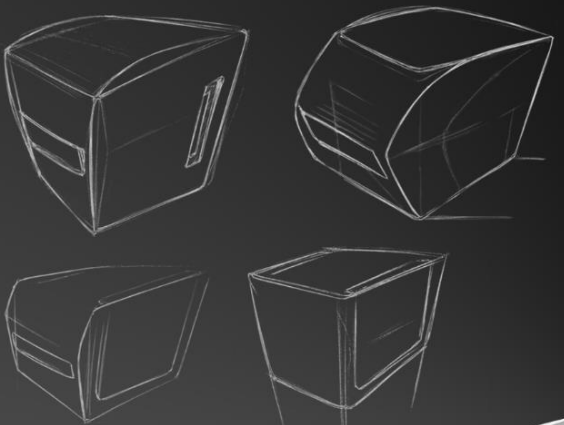




# SCENARIO DEVELOPMENT

## SCENARIO

EV vehicles dominate the cityscape. Allowing the local taxi's to avail incentives in helping with the freight transport. The taxi's connect with the end user and also interconnected with each other. Thus, reducing the risks of hacking the drones, reducing the flight time and increasing the range.



## IDEATION - POD

Carries the package that needs to be delivered.  
Max payload - 10kgs  
Material of choice - Carbon fibre and Duraluim.



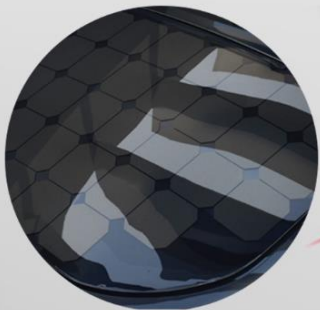
Display for welcome note and emergency

Accelerometer / gyroscope housing

Indicator when in flight  
Induction coil to recharge while docked



Design Inspiration from the Toyota Concept-i



## INDUCTIVE PANEL

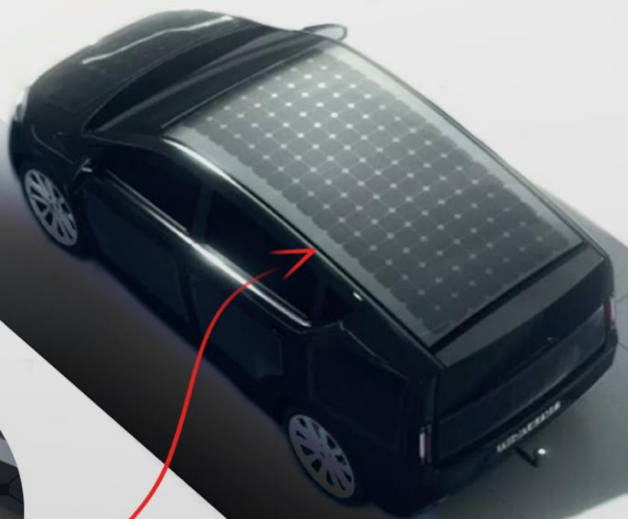
The vehicle owner can earn incentives, by just installing the inductive charging enabled roof.

## WORKFLOW

Drone leaves the home station and navigates along the optimal route.  
Real time position of the package is made available to the end user.  
Vehicle docking is done based on the vehicle travelling closest to the location.  
Drone begins re-charge once it rests on the roof top of the vehicle.  
The drone then lifts off from the roof and moves to the delivery location.  
Once the package (drone) arrives at the doorstep or the updated location.  
An OTP is sent to the customer which authorises the customer to open the pod.

## DRONES CAN BECOME PART OF THE INFRASTRUCTURE

Once the drone teams up with the local taxi providers, it can be used to help with sending real time updates about the traffic.  
They would eliminate the need for the user to be present at the residence at the time of delivery as the drones can interpret the cellular and wifi signals to determine user's location.  
They can be used for surveillance.





**ABOUT**

The competition consists of a variety of Static and Dynamic events.



Throughout the event students assume the role of a design team engaged to create a prototype vehicle.

Teams demonstrate their creativity and project management skills, as well as their vehicle's performance and durability.

**TECHNICAL SPECIFICATIONS**

**ENGINE**

Engine used - 220cc DTSI engine of Bajaj  
Max operating voltage 300V  
Engine displacement volume <250cc

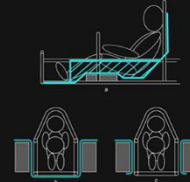
**BATTERY**

Battery used - Reva Battery  
Battery type -Lithium Polymer  
Battery weight - 23kg  
No of cells - 300

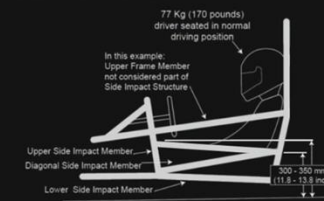
**MATERIALS USED**

Fibreglass - Body of the car  
Primary structure - Mild steel tubing

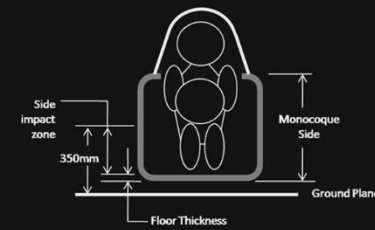
**FIREWALL CONFIGURATIONS**



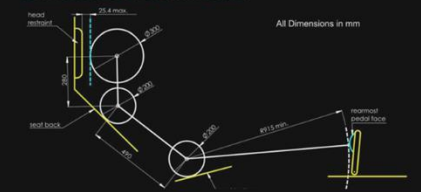
**SIDE IMPACT STRUCTURE**



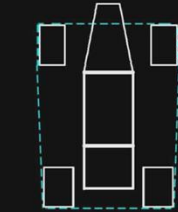
**SIDE IMPACT ZONE DEFINITION FOR A MONOCOQUE**



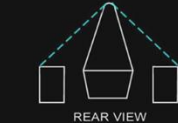
**95TH PERCENTILE MALE WITH HELMET**



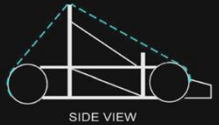
All Dimensions in mm



PLAN VIEW



REAR VIEW



SIDE VIEW

**DIMENSIONS**

Ground Clearance >25.4mm  
Wheels >8"  
Wheelbase >1524mm  
Smaller track - 75% of larger



**ACHIEVEMENTS**

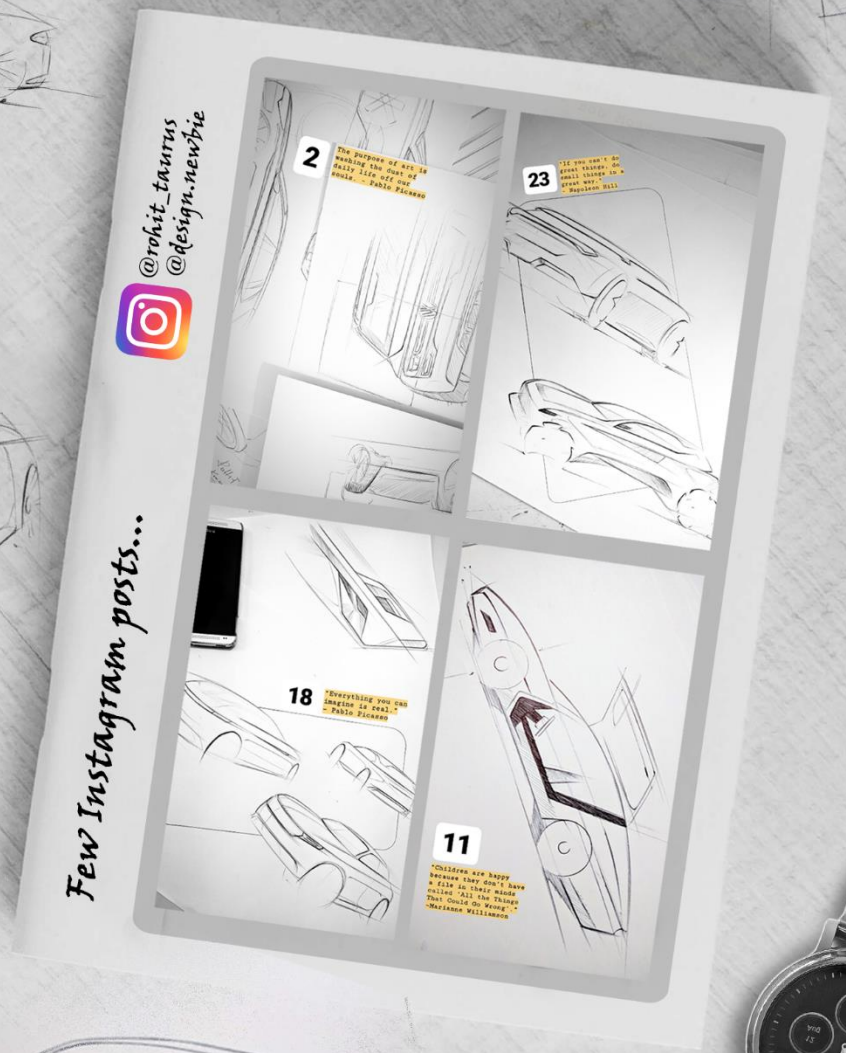
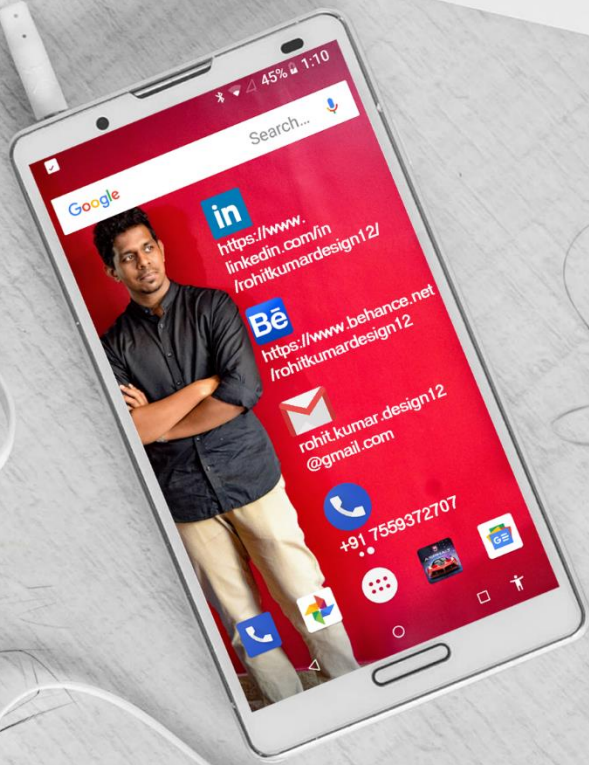
- WE RECEIVED THE FAN FAVOURITE AWARD FOR THE YEAR 2014. TEAM CHIMERA / DHWANI RACING (NMIT AND RV COLLEGE), BANGALORE.
- WAS AMONG THE 14 PEOPLE WHO WENT TO NEW HAMPSHIRE, USA TO REPRESENT INDIA.

**GALLERY**  
GARAGE | TECHNICAL INSPECTION





"When a device as simple as a door has to come with an instruction manual, even a one-word manual. Then it is a failure, poorly designed."  
- Don Norman



Few Instagram posts...

Thanks for your Time.

