

2021

PORTFOLIO

Transport Design



HARDIT
SAHOTA BA Hons.

“ I’m driven to create new and innovative ideas to solve current an future problems uniquely. This passion for design was what made me push from a young age to study Automotive Design, where I graduated with an Upper-Second class degree from Coventry University [2020]. ”

I am actively seeking creative opportunities to showcase, as well as improve my design skills.

SOFTWARE EXPERIENCE



CONTACT ME

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BRIEF

RESUME

EDUCATION

2016 - 2020
COVENTRY UNIVERSITY - UPPER-SECOND CLASS DEGREE (With Honours)

2015 - 2016
EASTLEIGH COLLEGE - Art & Design Foundation Degree

2013 - 2015
PETER SYMONDS COLLEGE - Fine Art, Product Design, English Language.

EXPERIENCE

2019 - 2020
Social Media Manager - Coventry University Mens' Rugby Union
Volunteering during university.

2017-2018
Social Media Manager - Coventry University Jets American Football
Volunteering during university.

2018 - 2020
Administrative Assistant - Westrow Dental surgery Ltd.
Part-time work during university holidays.

ADDITIONAL SKILLS

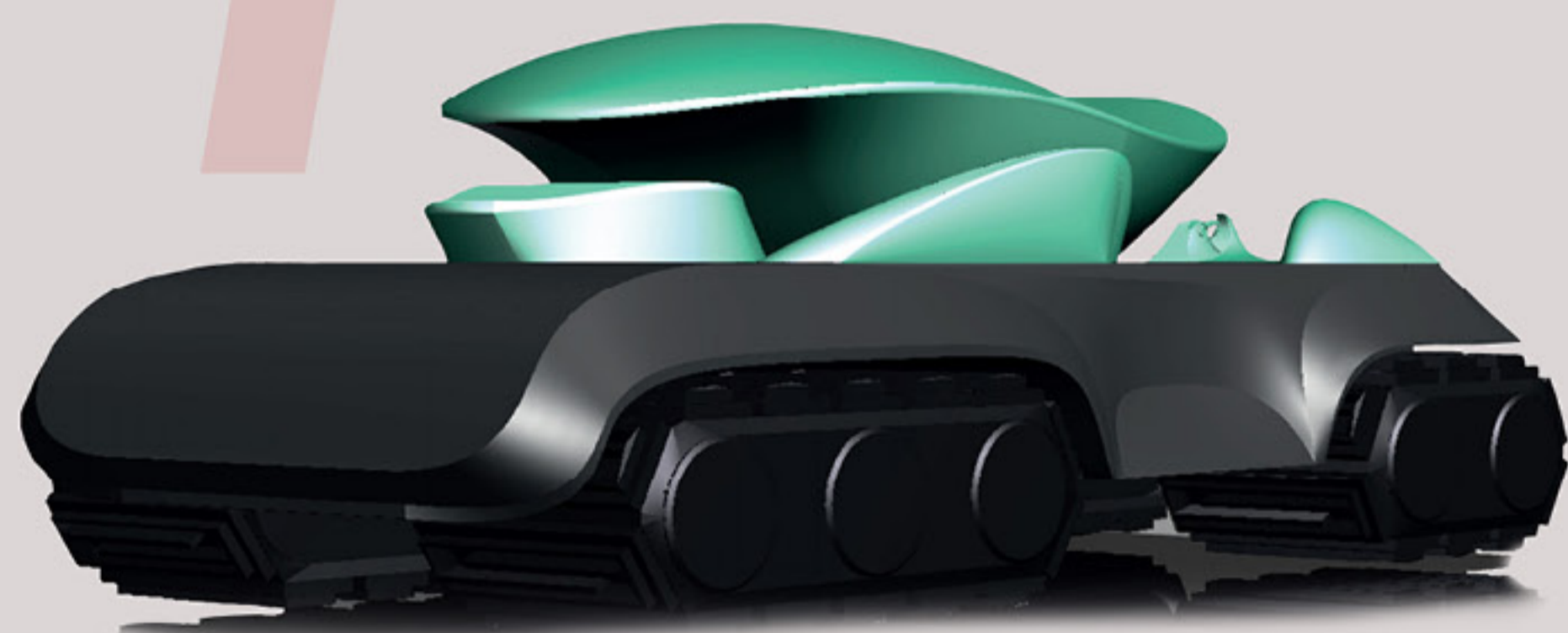
Proficient in Adobe suite
Experience working with Windows and Apple products.

Experience with Autodesk Alias CAD software

English - Fluent
Italian - Beginner
Spanish - Beginner

Represented Coventry University in Rugby Union / League, and American Football

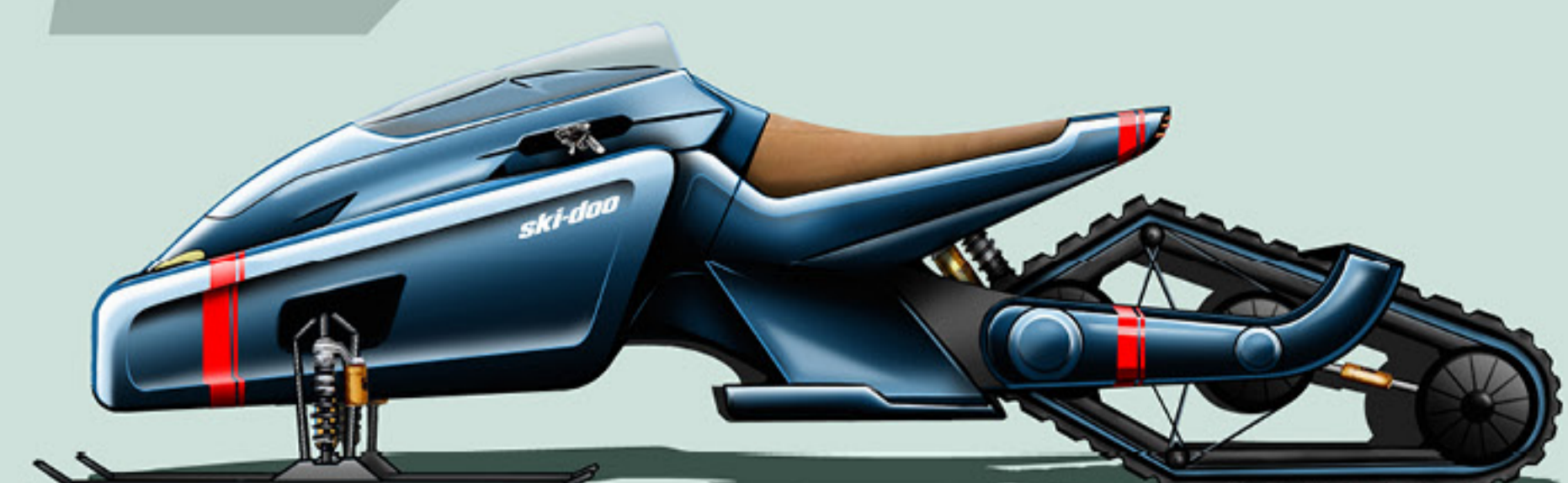
1



AEGIS MINESWEEPER

PORTFOLIO CONTENTS

2



SKIDOO SNOWMOBILE

3



INDIAN MOHAWK

AEGIS

REMOTE CONTROLLED MINESWEEPER
UNIVERSITY THESIS PROJECT



* No access to 3D rendering software due to Covid-19

“AEGIS” CONCEPT

To design a system of vehicles for use in 2035, that makes the process of removing and disposing landmines more efficient.

To drastically reduce the injuries and deaths that currently occur from landmines that are left in the ground post-war.

Minimalist Architecture
Military Tank Proportions

The purchased vehicle could be used along-side humanitarian organisations, such as the HALO TRUST.

They currently have over 8500 employees that manually demine affected areas. This is a non-profit organisation that would benefit from my demining vehicle system being supplied by governments or large benefactors.

The proposed total price of my vehicle would be around 10 Million (USD).



MINESWEEPER MODULE



FIRSTLY, A DRONE IS FLOWN OVER THE TARGETED AREA, IT USES ITS GROUND PENETRATING RADAR TECHNOLOGY TO MAP OUT ALL THE OBJECTS IN THE GROUND THAT ARE CLOSE TO THE SURFACE.

IT SENDS THE DATA BACK TO THE CONTROL PAD AND IT IS THEN MAPPED SO THE OPERATOR CAN REMOVE THE MINES.



THE MINESWEEPER MODULE ATTACHES TO THE MAIN BODY AND IS THEN REMOTELY DRIVEN TO EACH LANDMINE SO IT CAN REMOVE THEM.

ITS EXTENDABLE ARM CAN REACH UP TO 6M AHEAD OF THE NOSE OF THE VEHICLE. THE ARM ALSO HAS SHOCK ABSORPTION TECHNOLOGY THAT ABSORBS THE RECOIL FROM THE BLAST, SOFTENING THE IMPACT ON THE VEHICLE.



THE SPIKE THEN FIRES INTO THE CENTER OF THE MINE - DETONATING IT. THE INSIDE OF THE DOME IS COATED IN A BLAST PROTECTIVE TECHNOLOGY THAT PROTECTS THE STRUCTURAL INTEGRITY OF THE DOME.

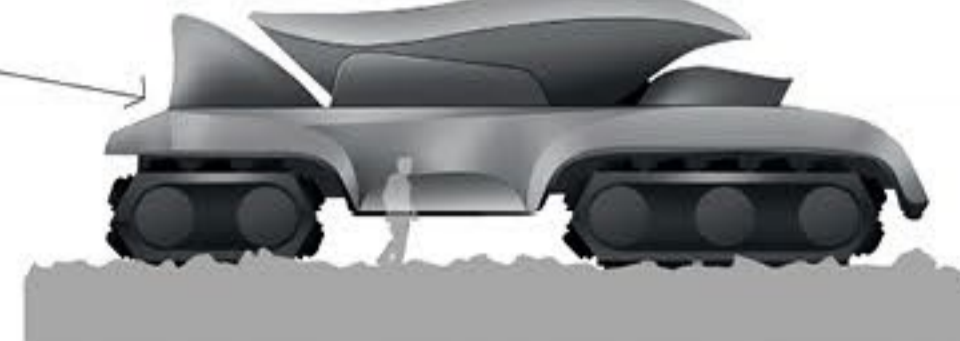
THE ARM THEN GATHERS THE METAL PLASTIC AND DISPOS THEM IN THE BED OF THE VEHICLE - CLEARING THE AREA AS IT GOES ALONG.

FARMING MODULE

THIS MODULE IS THE PEBBLE. IT IS A FARMING FOCUSED DESIGN.

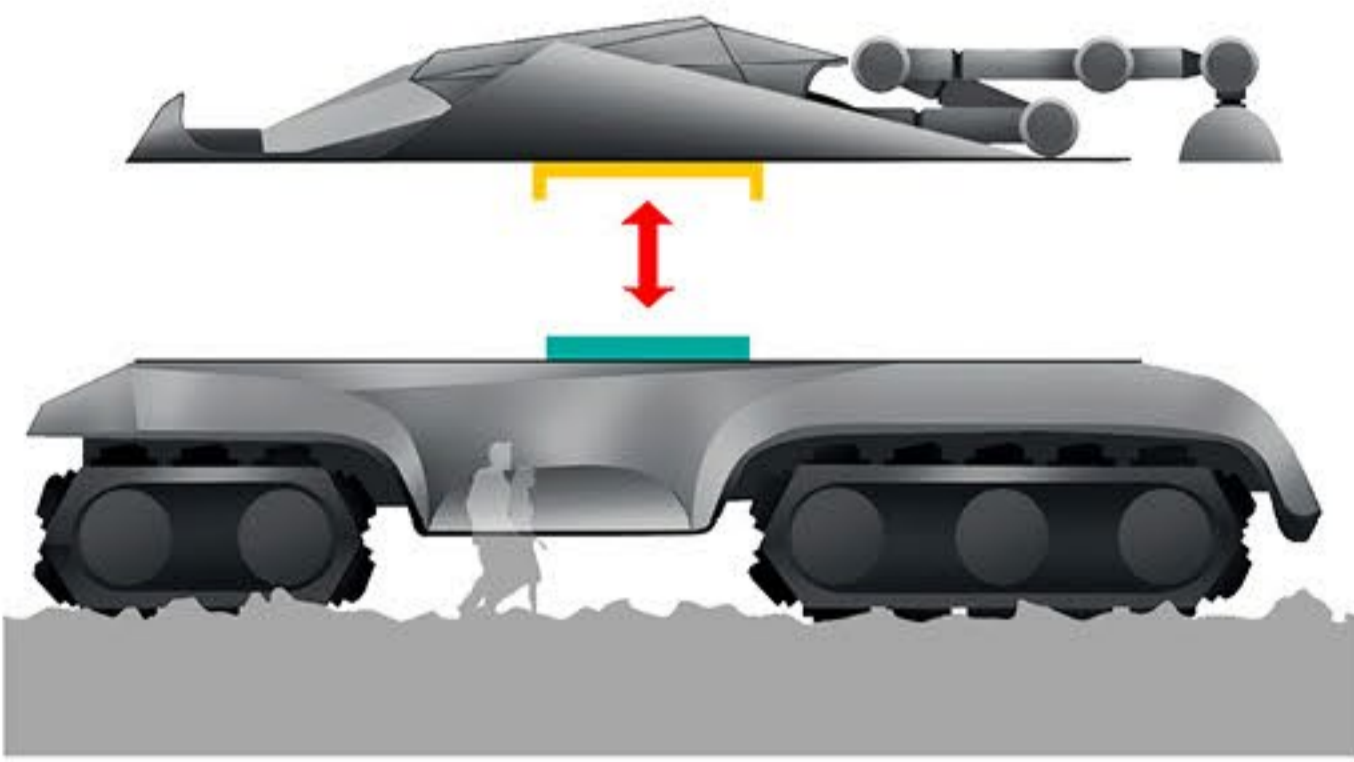
THE ORGANIC SHAPES ARE MUCH LESS EXTREME THAN THE MINESWEEPER. THE SHAPES ARE INSPIRED BY LARGE STONES.

THERE IS A TOW-STYLE HOOK ON THE REAR THAT IS MAINLY FOR LARGE FARMING IMPLEMENTS, SUCH AS THE PLOUGH (PICTURED). ALTHOUGH ANY TOOL CAN BE ATTACHED DEPENDING ON THE NEEDS OF THE VEHICLE.



THE PURPOSE OF THIS MODULE IS THAT AFTER THE MINES ARE ALL CLEARED FROM THE AREA, THE VEHICLE CAN PLOUGH THE AREA, SO THAT THE SOIL CAN BE USED FOR FARMING OF ANY OTHER PURPOSES THAT THE LOCALS REQUIRE. THIS MAKING THE LAND VIABLE AGAIN.

THE UPPER MODULES CONNECT AND DISCONNECT TO THE TRACK SYSTEM IN THE SAME WAY LEGO BLOCKS SLOT INTO EACH OTHER. AS SHOWN BELOW:



The overall removal of landmines is expected to be completed in 1100 YEARS. This estimation is the total length of time if we stopped planting landmines.

The total cost of removing and disposing of all landmines is estimated to range from 50 to 100 BILLION (USD).

The removal of these landmines would drastically improve the living quality and life expectancy of the locals in affected areas. They would be able to focus on brighter futures without the need to worry about landmines.

WORLD MAP - Showing the current landmine count in the top ten most affected countries, shown in red (figures as of 2019). The numbers are in millions.



WHAT IS THE VEHICLE DESIGNED FOR?

SALES - Aimed at Governments.

WHERE - Countries most affected by landmines.

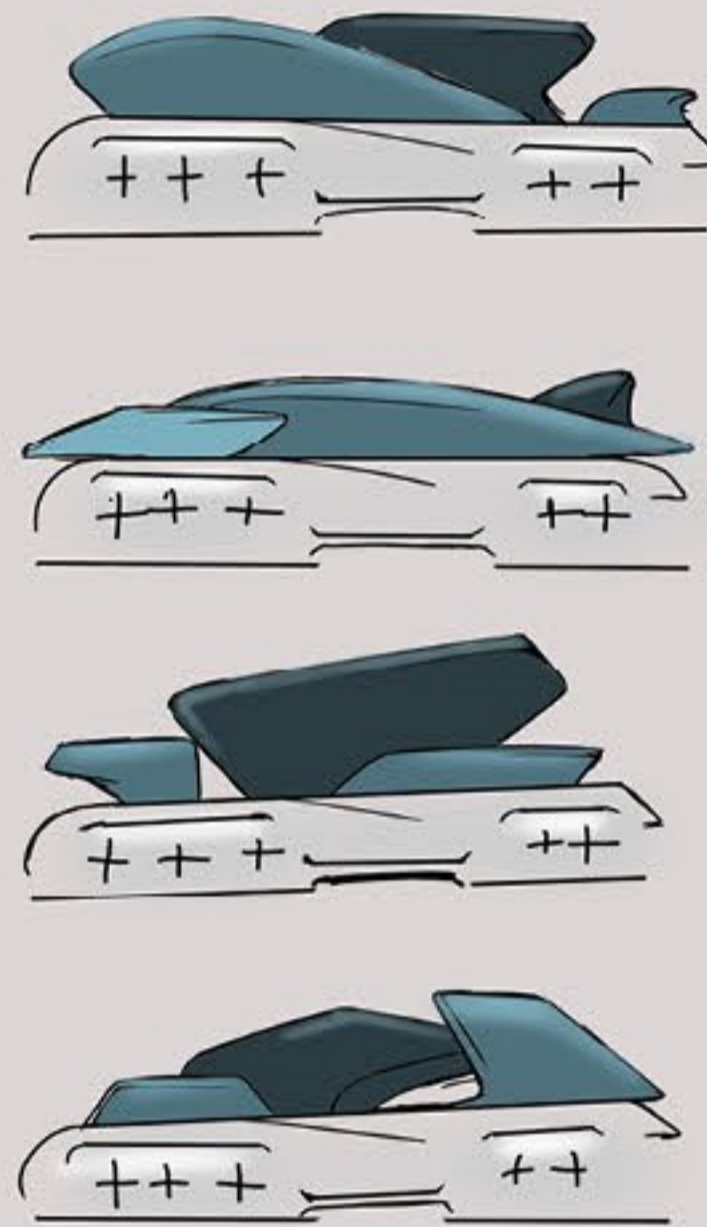
NEEDS - An efficient and effective way of clearing mines.

WHAT FOR - To reduce all mine-related injuries and deaths to zero.

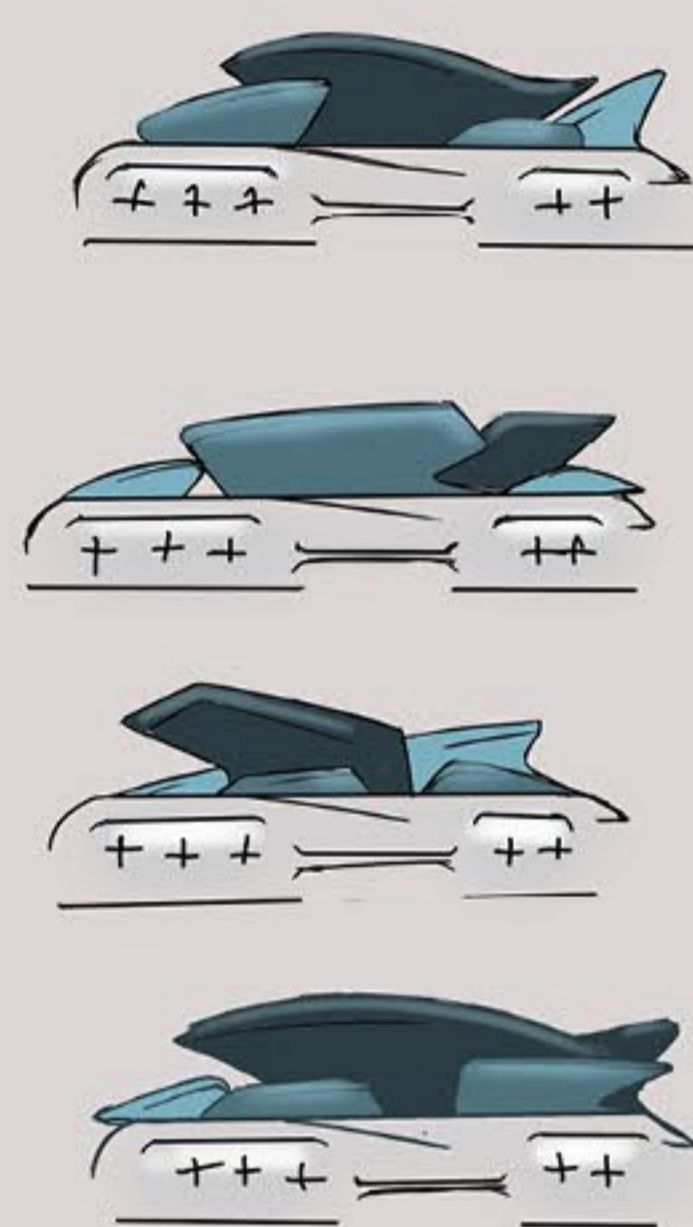
INSPIRATION



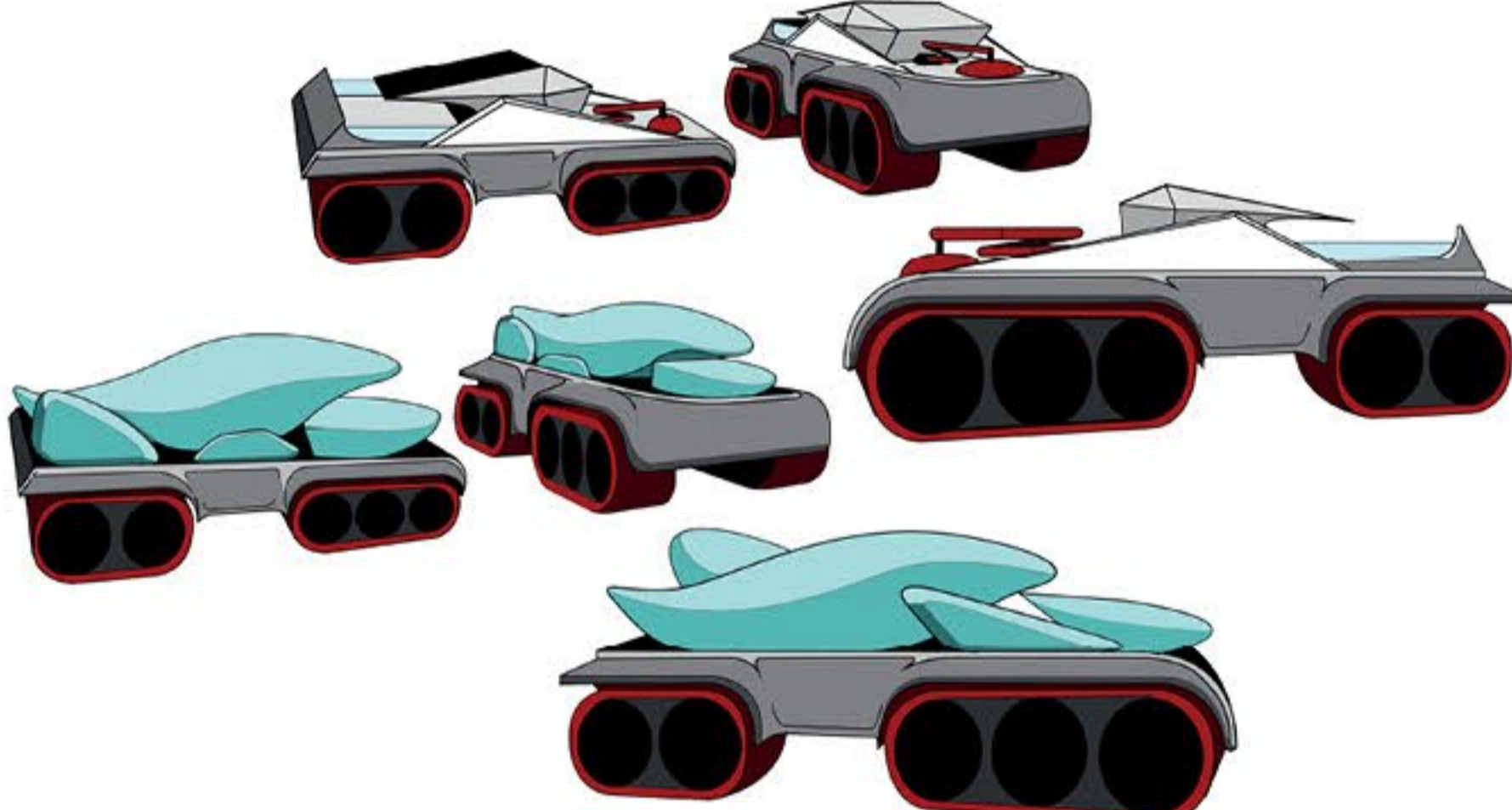
ELEGANT, FLOW, STREAMLINED, BOLD



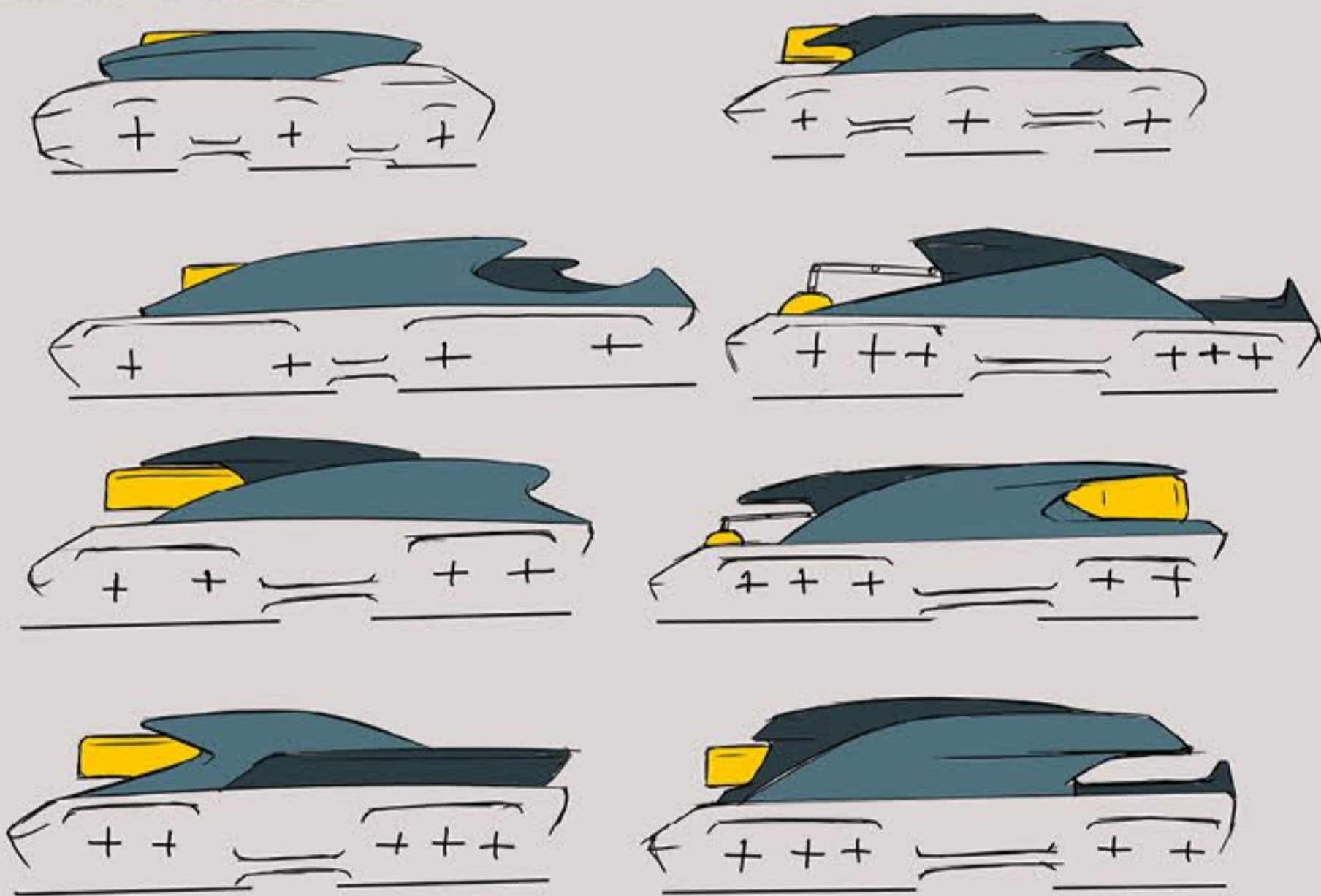
FARMING DESIGN - 'PEBBLE'



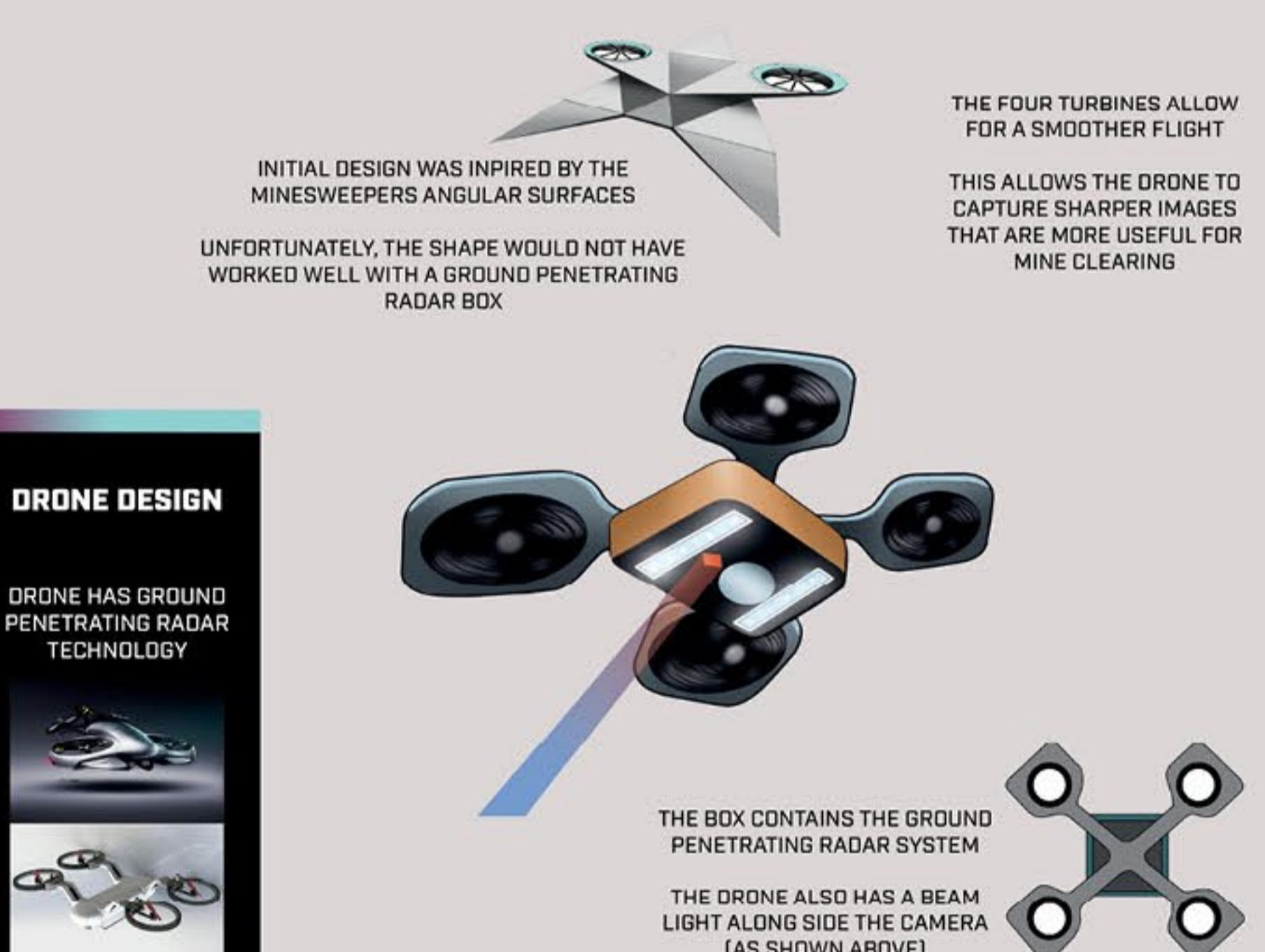
I WILL USE THESE SIMPLE HERO SHAPES WHEN I BEGIN THE CAD MODEL AS ALIAS
I ALSO CREATED UNDERLAYS TO HELP WITH PROPORTIONS WITH MY CAD MODELS



MINESWEEPER DESIGN



INSPIRED BY MODERN ARCHITECTURE - SIMPLE, SLEEK, ANGULAR SHAPES



INITIAL DESIGN WAS INSPIRED BY THE MINESWEEPERS ANGULAR SURFACES

UNFORTUNATELY, THE SHAPE WOULD NOT HAVE WORKED WELL WITH A GROUND PENETRATING RADAR BOX

THE FOUR TURBINES ALLOW FOR A SMOOTHER FLIGHT

THIS ALLOWS THE DRONE TO CAPTURE SHARPER IMAGES THAT ARE MORE USEFUL FOR MINE CLEARING

THE BOX CONTAINS THE GROUND PENETRATING RADAR SYSTEM

THE DRONE ALSO HAS A BEAM LIGHT ALONG SIDE THE CAMERA (AS SHOWN ABOVE)



VEHICLE CONTROL DESIGN

INITIAL DESIGNS

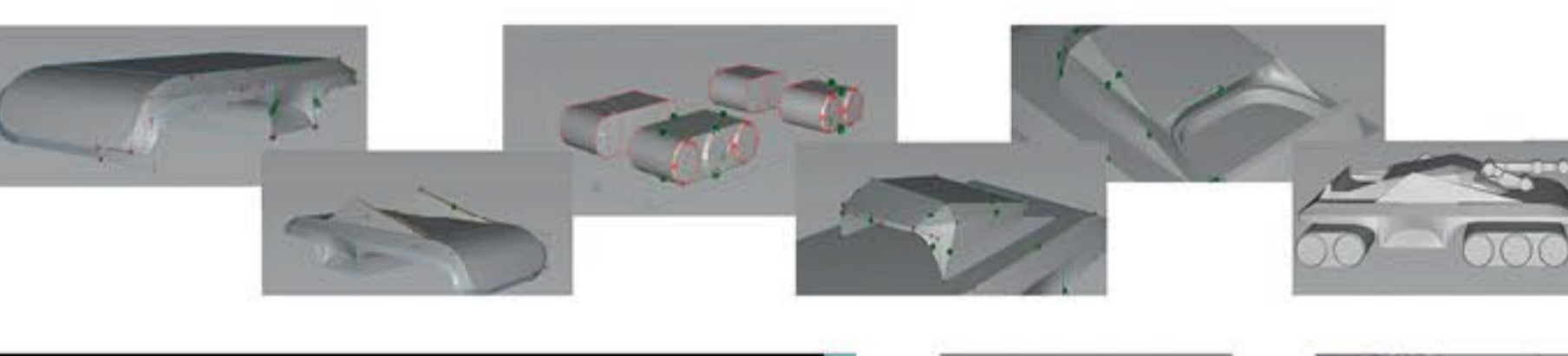
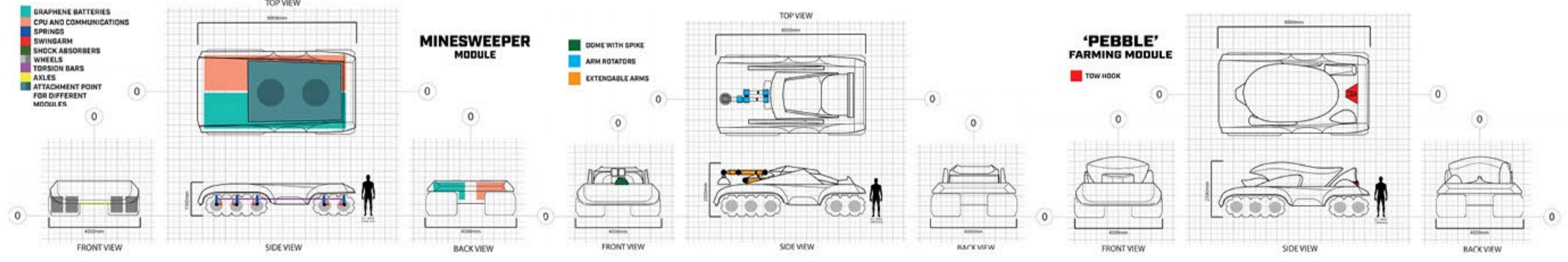


GAME CONSOLE STYLE CONTROLLER

TOGGLE STYLE SWITCHES
POP-UP HOLOGRAPHIC DISPLAY



FINAL DESIGN



ALIAS MODELLING PROGRESSION AND FINAL MODELS



EXTENDABLE ARM THAT COVERS THE LANDMINE AND DESTROYS IT WITHOUT THE NEED FOR HUMAN INTERACTION WITH THE EXPLOSIVE.
THE BLAST IS CONTAINED WITHIN THE DOME.

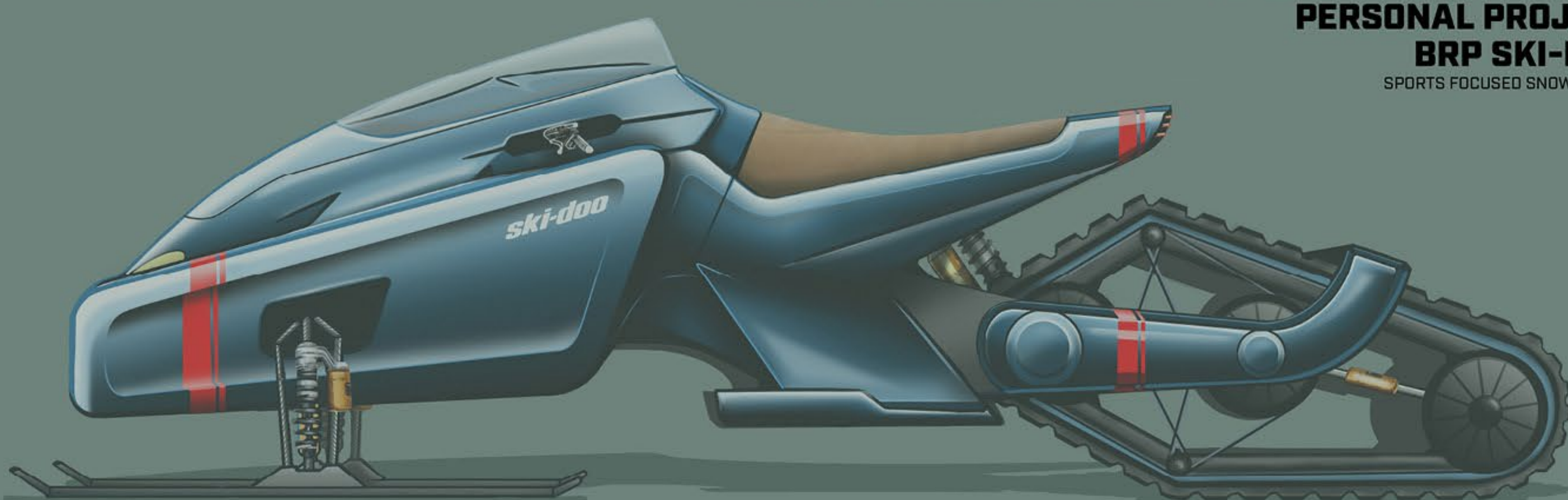
FINAL ALIAS MODELS



THE 'PEBBLE' HAS A MULTI-PURPOSE TOW HOOK AT THE REAR OF THE VEHICLE THAT ALLOWS THE USERS TO ATTACH ANY FARMING IMPLEMENTS THAT THEY NEED.

SNOWMOBILE

PERSONAL PROJECT
BRP SKI-DOO
SPORTS FOCUSED SNOWMOBILE



CONCEPT

SPORTS UTILITY
SNOWMOBILE

2030 Hybrid snowmobile for both sporting and work purposes.

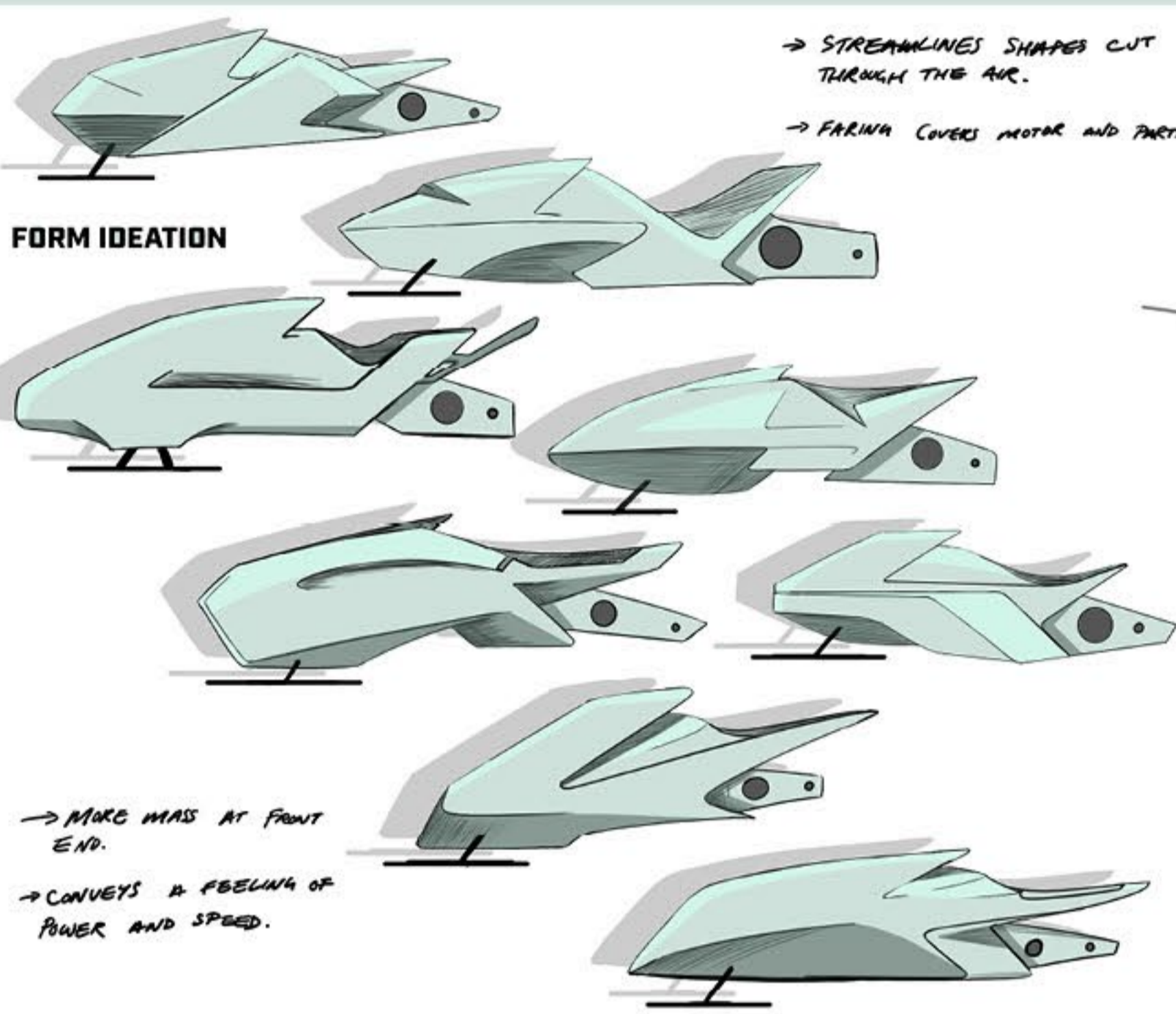
Engine uses electric power as the main source but still has capacity for a smaller gasoline engine when in emergency situations.

Hybrid vehicle that improves on usage range in wild and bleak environments.

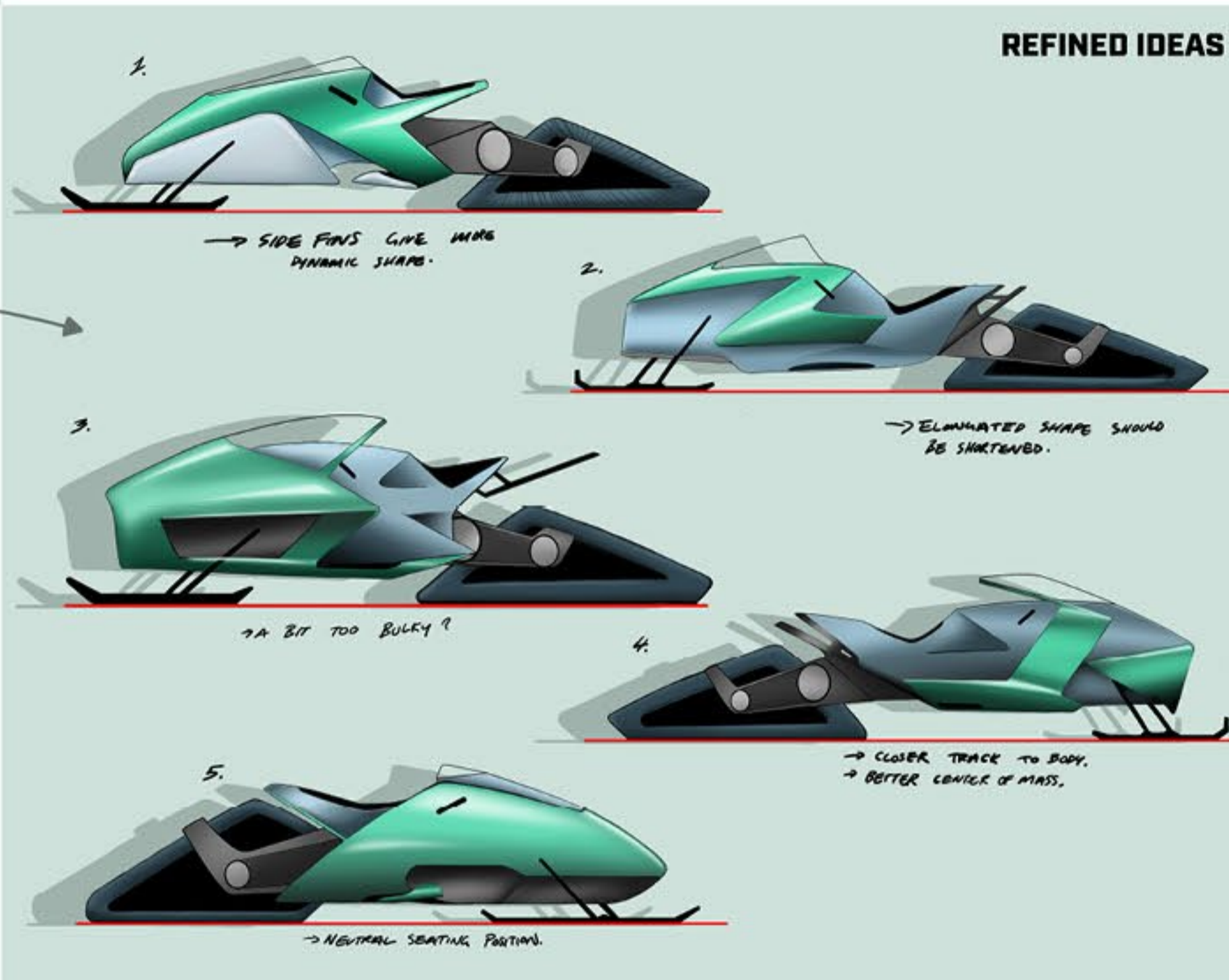
Minimal noise pollution and fuel emissions that do not disrupt animals and their habitats.



INSPIRATION

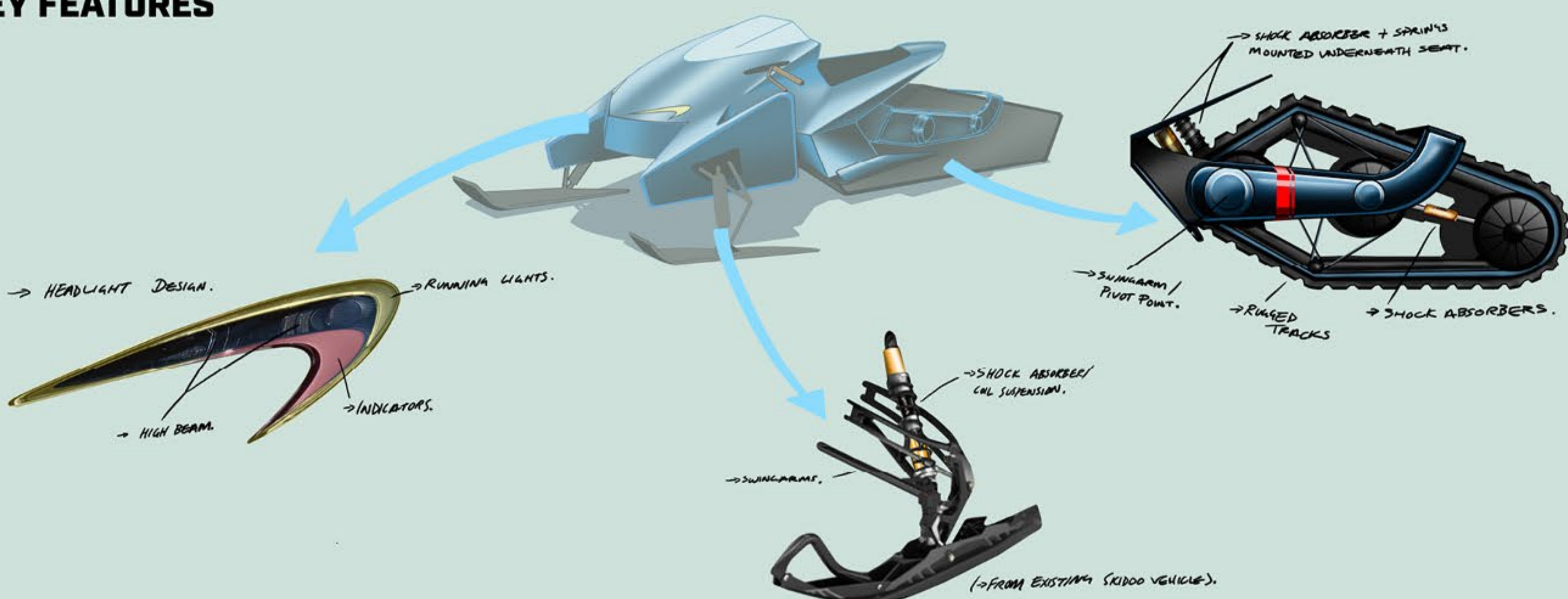


FORM IDEATION

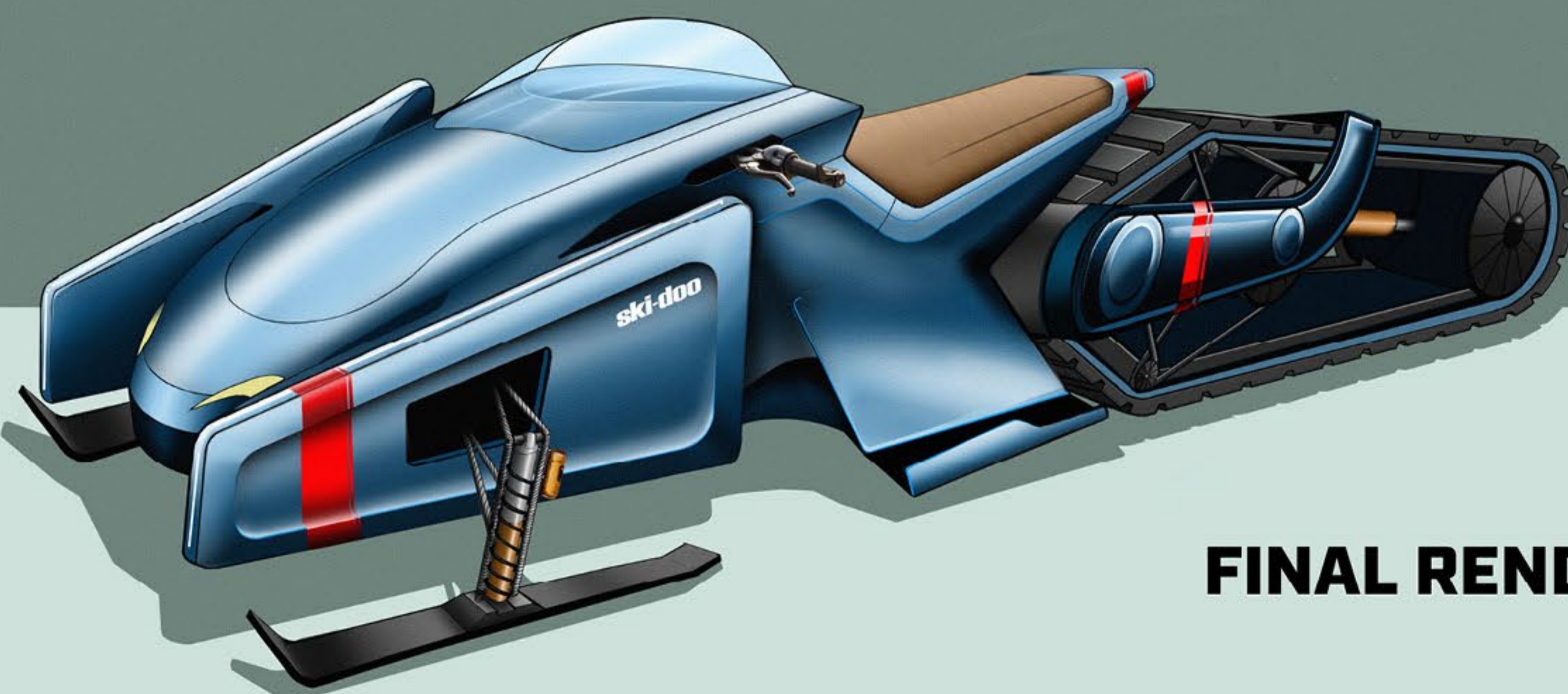
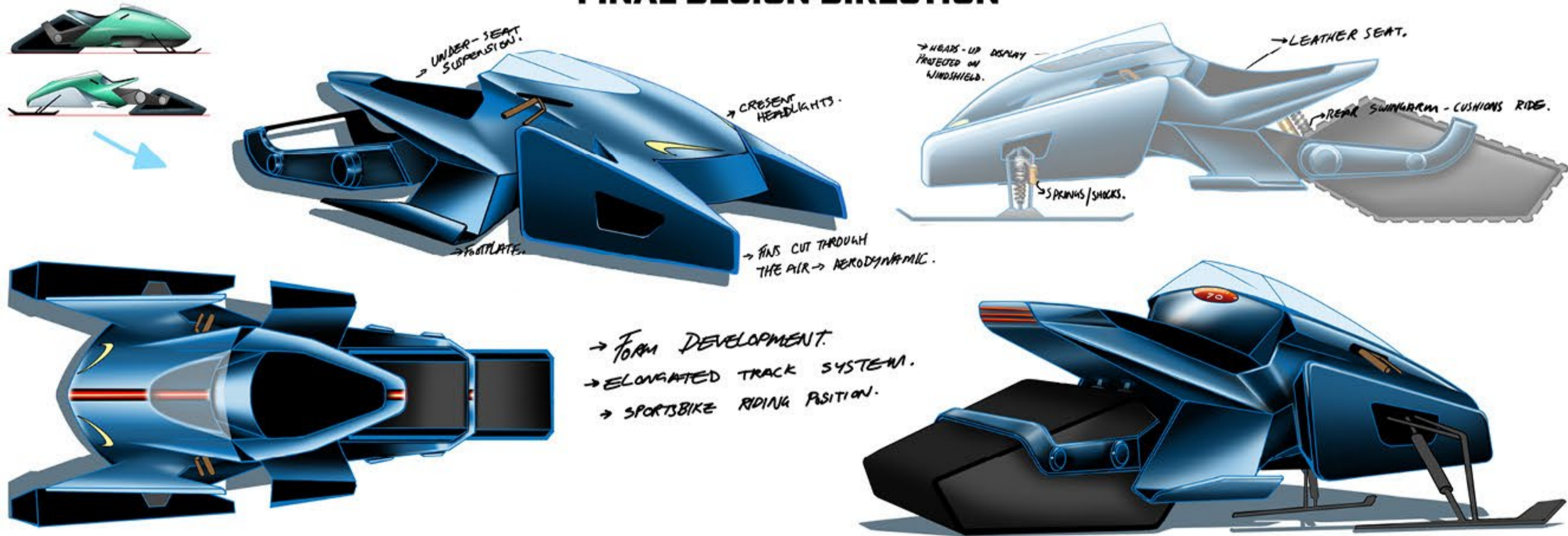


REFINED IDEAS

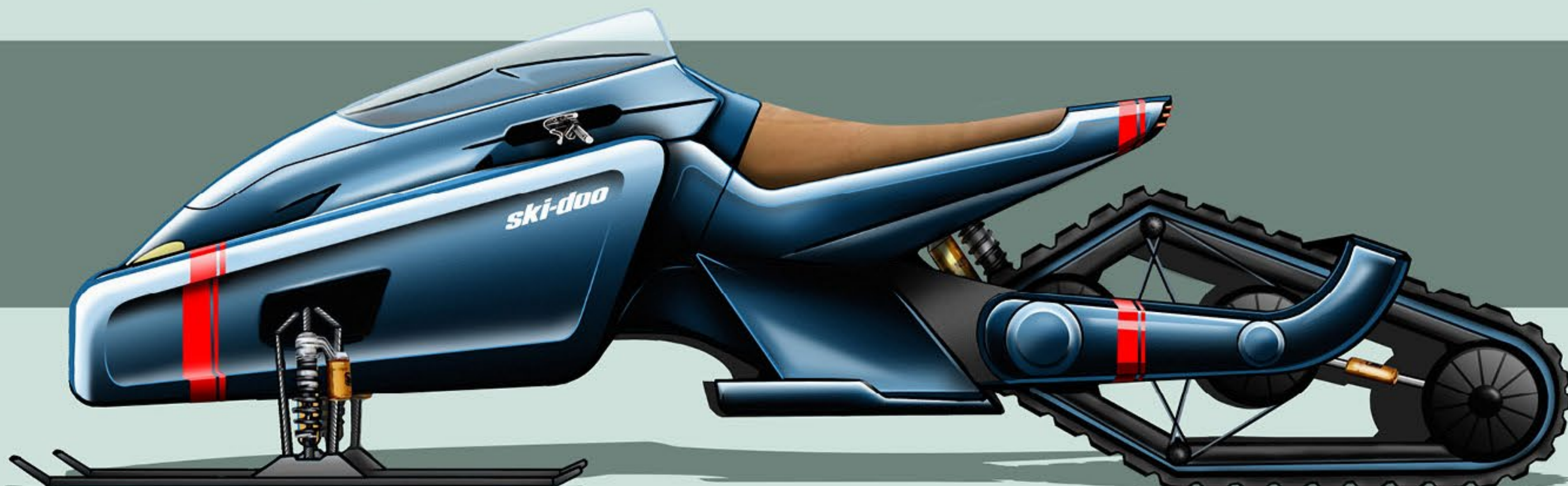
KEY FEATURES



FINAL DESIGN DIRECTION



FINAL RENDERS



MOHAWK

2040 INDIAN MOTORCYCLE

PERSONAL PROJECT



2040 INDIAN MOHAWK



CONCEPT

2040 ELECTRIC MOTORCYCLE.

2 Front wheels, 1 Rear. The front wheels will lean when the handlebars turn.

Self balancing technologies using gyroscopes that allow the bike to maintain stability and reduce the chance of a crash.

Race inspired cruiser.

INSPIRED BY THE 1920 INDIAN DAYTONA RACER MOTORCYCLE AND ITS LOW-SLUNG FORM.

AN ELECTRIC SPORTS CRUISER AIMED AT YOUNG ADULTS IN 2040. POWERED BY ELECTRICITY FROM RENEWABLE POWER SOURCES WHICH ALLOWS THE BIKE TO BECOME AS ECOFRIENDLY AS POSSIBLE, YET RETAINING SUPERBIKE LEVEL PERFORMANCE.



1920 DAYTONA RACER

2019 FTR 1200 S



DESIGN LANGUAGE

LONG
LOW
SLEEK
STREAMLINED
MINIMAL
ELEGANT



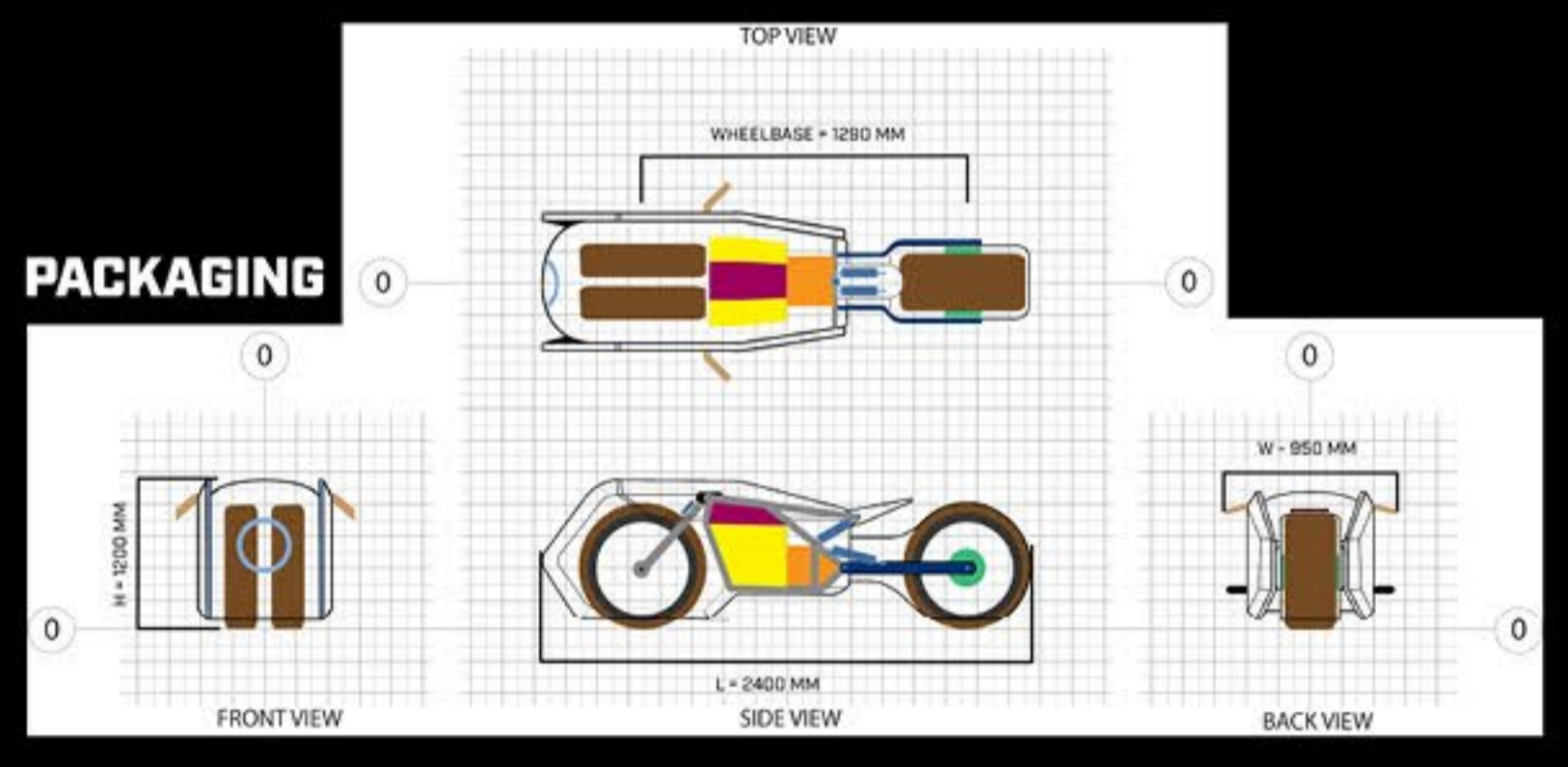
INSPIRATION

- SWINGARMS
- IN WHEEL MOTOR
- WHEELS / TIRES
- FRONT LIGHTS
- REAR LIGHT
- ECU BOX
- SUSPENSION
- LITHIUM ION BATTERIES
- BATTERY COOLING FANS
- HANDLEBARS
- FRAME

20-KILOWATT-HOUR BATTERIES PRODUCE A RANGE OF AROUND 250 MILES ON A FULL CHARGE

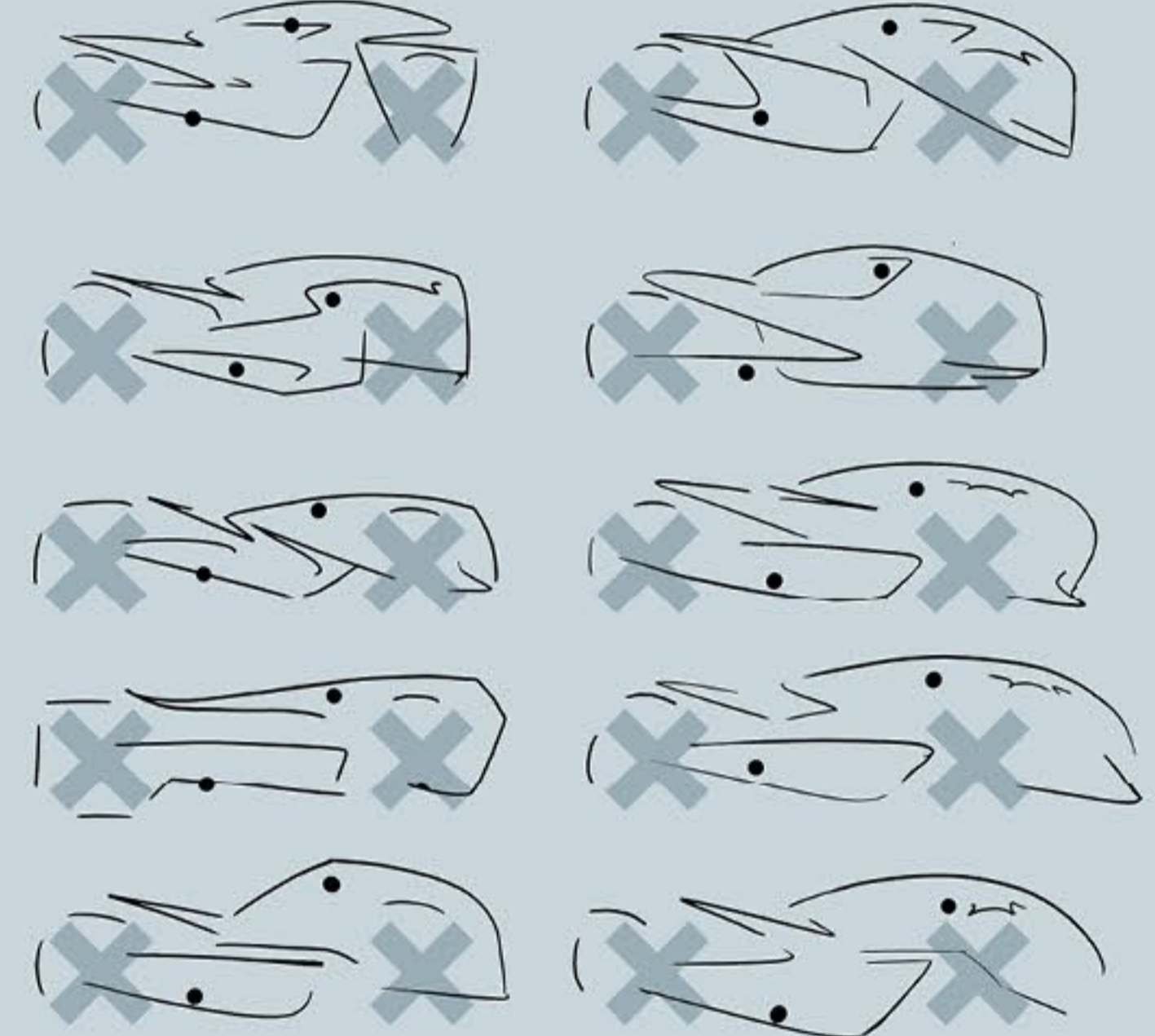
THE TWIN FRONT WHEELS ALLOW FOR EASIER MOBILITY, STABILITY AND MORE ACUTE LEAN ANGLE

SIZE DIMENSIONS BASED ON THE 2019 HARLEY DAVIDSON ROAD KING

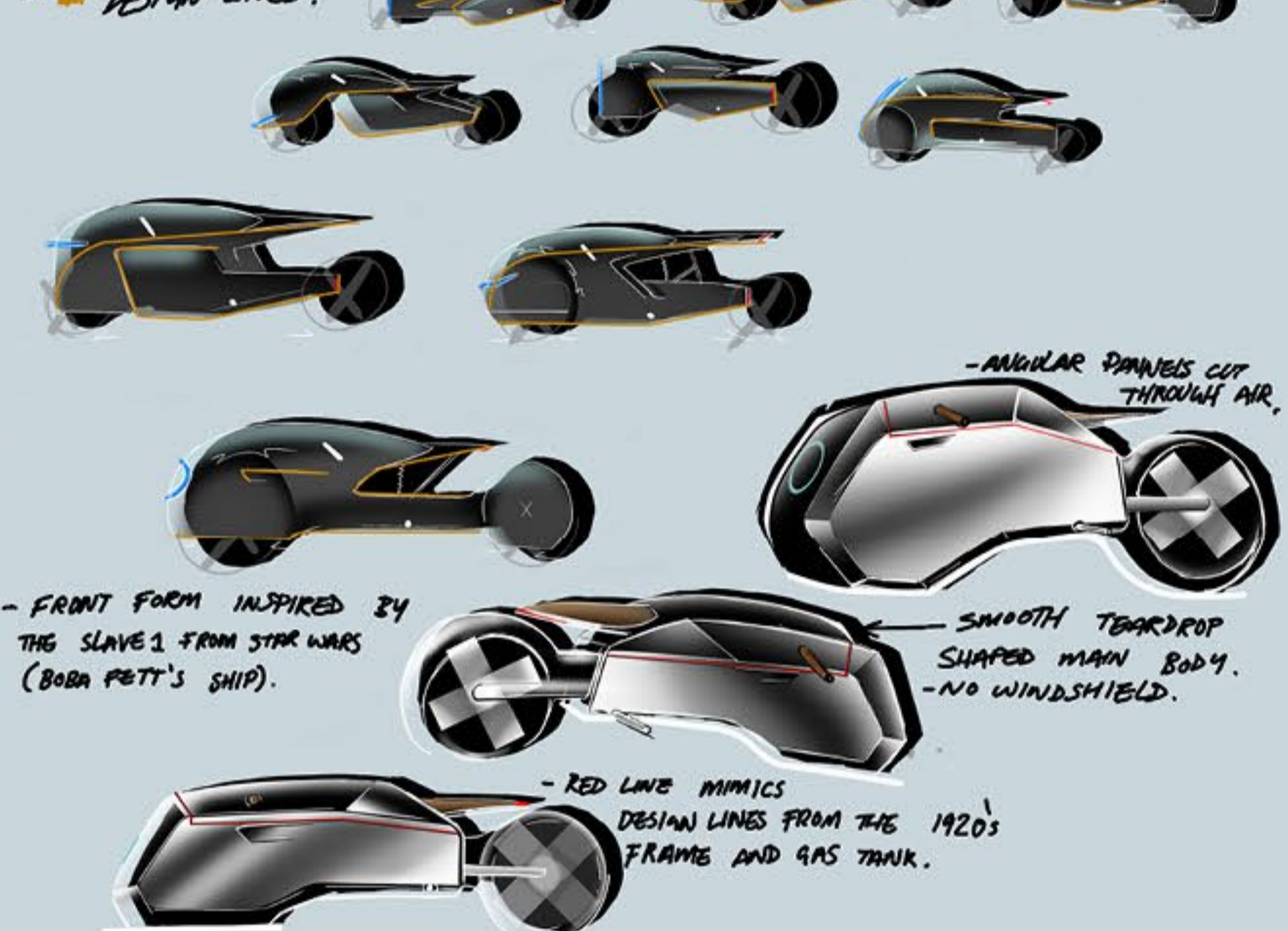


→ QUICK FORM DEVELOPMENT.

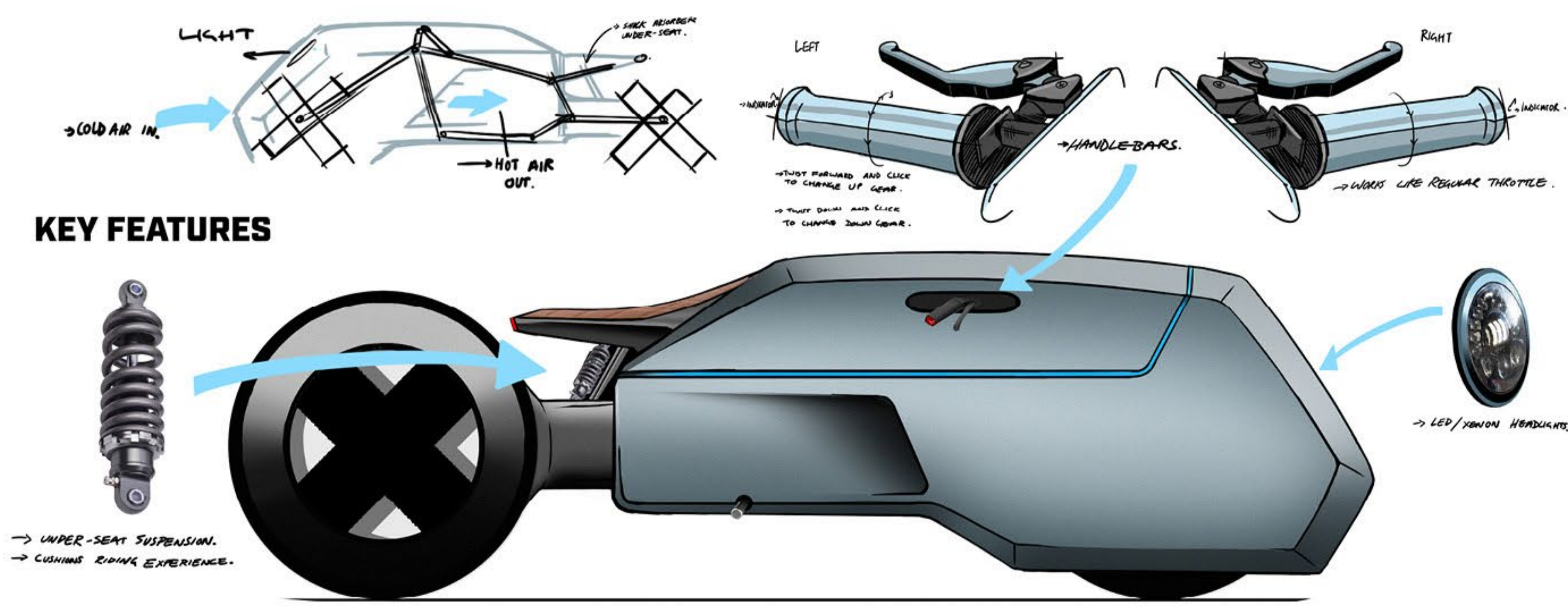
DESIGN IDEATION



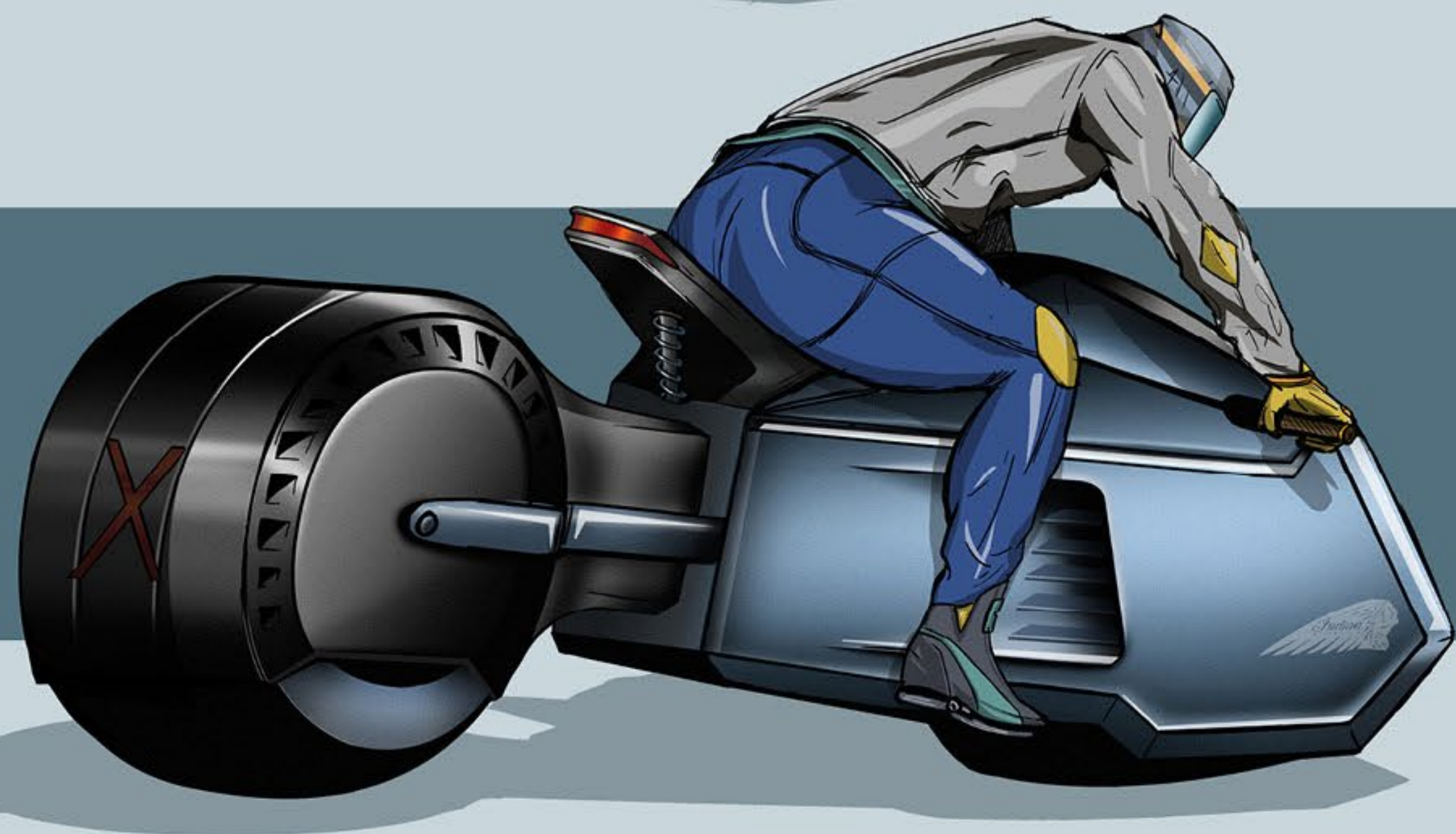
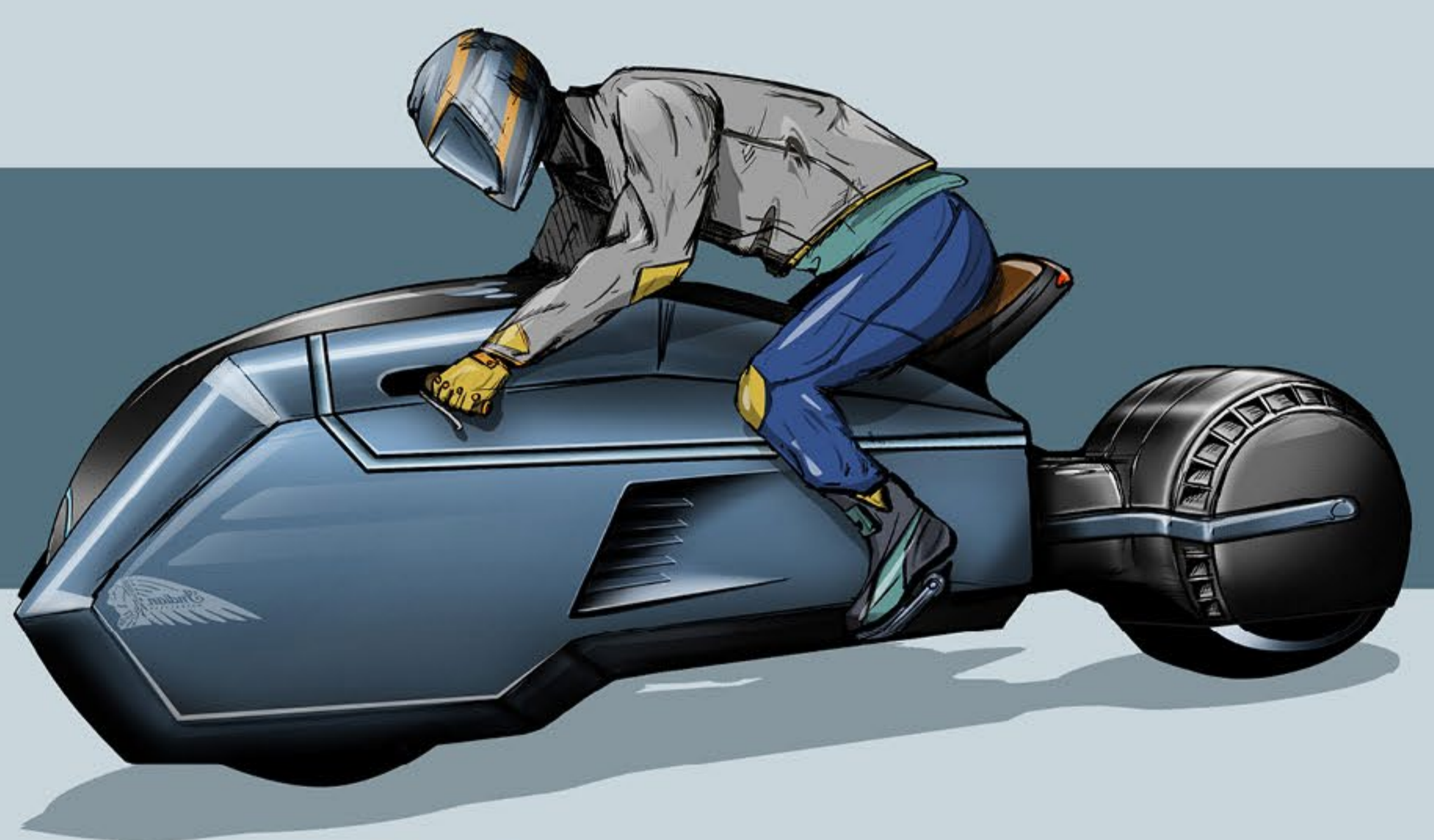
DESIGN LINES.



KEY FEATURES



FINAL RENDERS



**Thank you for viewing
my portfolio!**

Hardit Sahota
harditsahota@gmail.com

HARDIT SAHOTA

FULL NAME: Hardit Kartar Singh Sahota

harditsahota@gmail.com
<https://www.linkedin.com/in/harditsahota/>
<https://www.behance.net/HYP3R1ON>

EDUCATION

- Coventry University** 2016 – 2020
BA (Hons) Automotive Design
- Graduated with an Upper-Second Class Degree
 - Completed additional modules – Biomimicry in design, Intermediate Italian, Beginners Spanish.
- Eastleigh College, Eastleigh** 2015 – 2016
- Passed Foundation Art and Design Diploma

VOLUNTEERING EXPERIENCE

- Administrative Assistant, Westrow Dental Surgery Ltd** Sept 2018 – Present
- Involved financial data processing, professional correspondence and online information retrieval.
 - Enhanced my proficiency in Excel.
 - Created posters to inform clients of relevant changes to the business' services.
- Visual Media Manager – Coventry University Men's Rugby Union** Sept 2019 – March 2020
- Created digital advertisements using Adobe photoshop and Adobe Illustrator.
 - Promoted club events and fixtures through social media channels (Facebook, Instagram, Twitter).
 - Filmed and edited university sports fixtures and posted them to a club YouTube channel I had created, aimed at showing new and prospective students university sports.
 - **An extra-curricular position held during my final year of university.**
- Visual Media Manager – Coventry University Jets American Football Team** Sept 2017 – March 2018
- Created digital advertisements using Adobe photoshop and Adobe Illustrator.
- Promoted club events and fixtures through social media channels (Facebook, Instagram, Twitter).
 - Helped to promote the sport through thousands of post views, which helped double the club's members and make the team Coventry University's largest club.
 - **An extra-curricular position held during my Second year of university.**

WORK EXPERIENCE ROLES

- General Camp Councillor** June 2017 – August 2017
Located in Fishkill, New York – Summer camp that allowed children aged 11 to 16, from low-income households to enjoy a stress-free summer holiday.
- Was responsible for a group of 12 young teenagers (aged 15-16).
 - Helped to bring them out of their shells, and mould them into young gentlemen.
 - Ensured they had the most enjoyable summer camp experience possible.
 - Taught the basics of Rugby Union.
- Internship, LAP Architects** June 2012 – August 2012
Chelmsford, UK
- Applied through high school to gain relevant work experience prior to attending Sixth form.
 - Gained initial knowledge and experience with 3D CAD software.
 - Gained a brief insight into the design industry.

ADDITIONAL SKILLS, ACTIVITIES AND AWARDS

- Represented Coventry University sports teams – Men's Rugby Union, Men's Rugby league and American Football.
- Proficient in Adobe Suite. Most confident in Photoshop, Illustrator and InDesign.
- Experienced in 3D CAD software – Autodesk Alias Automotive.
- High level hand sketching and rendering abilities.
- IT skills: Proficient with Excel & Microsoft Office Software.
- Remote work: Experienced with Microsoft Teams, Zoom & Skype Business.
- Permitted to work in the UK, being a UK resident & national.
- Have worked in New York, USA and was issued with a social security number.

Dear Sir/ Madam,

My name is Hardit Sahota and I am a recent graduate from Coventry University (UK), graduating in Automotive Design – May 2020.

From a young age I have always been fascinated with design. It all started when a family friend revealed to me that there were specific groups of people who had designed the products that I loved and one day I too could be one of those designers. Since that time, my fiery passion for becoming a designer made me push to attend university and ultimately graduate from a course I loved.

I am very ambitious by nature, and constantly thinking about what the future of design will be and how I will leave my mark on the design world. I love most areas of Industrial Design but mainly the Automotive and Fashion design industries. My goal as a designer is to create beautiful yet functional products that help to improve the lives of its users, weather they know it or not.

I would class myself as a hands-on designer meaning as well as designing in 2D, I also greatly enjoy working with my hands and translating my designs to 3D forms. I am actively seeking creative opportunities to showcase these skills.

Outside of design, I have been an avid sportsman from a young age. Firstly, playing field hockey and then transitioning to play rugby union as I got older. I feel that my experiences in competitive team environments have allowed me to develop key teamwork and leadership skills, that I feel will be a great help to me in industry.

Thank you for your consideration and I look forward to hearing back from you.

Kind regards

Hardit K S Sahota

BA (Hons)