



Sunbeam OUTDOOR

Overlanding Blender Design
Fall 2019, 8 Weeks



Project Brief

Sunbeam is addressing a new opportunity space for personal blenders. Design the next generation Sunbeam blender within this opportunity space.



Project Statement

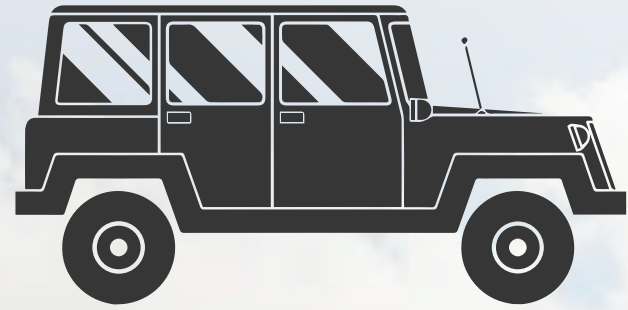
Sunbeam's next generation blender will branch out to the outdoors market - appealing to early adopters within the overlanding opportunity space.

Sunbeam



Sunbeam ^{OUTDOOR}

What is **OVERLANDING?**



MOBILE

An offroad, vehicle-based expedition.



SELF-RELIANT

All necessities for mobile camping contained within the vehicle.



ADVENTURE

Its all about exploration, rather than a destination.





USER



ENVIRONMENT



COMPETITION



- + Collapsible design.
- Too bulky.
- Dated design.
- Fragile construction.



©blendjet™

- + Small form factor.
- Cheap plastic parts.
- Weak power.
- Low battery life.



Design Considerations



DURABLE CONSTRUCTION

The product should stand the test of time for a life lived outdoors.



SMALL FORM FACTOR

The product should be efficiently sized to easily stow away.



BATTERY POWERED

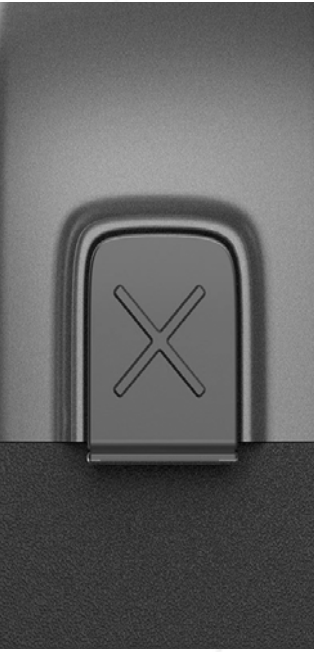
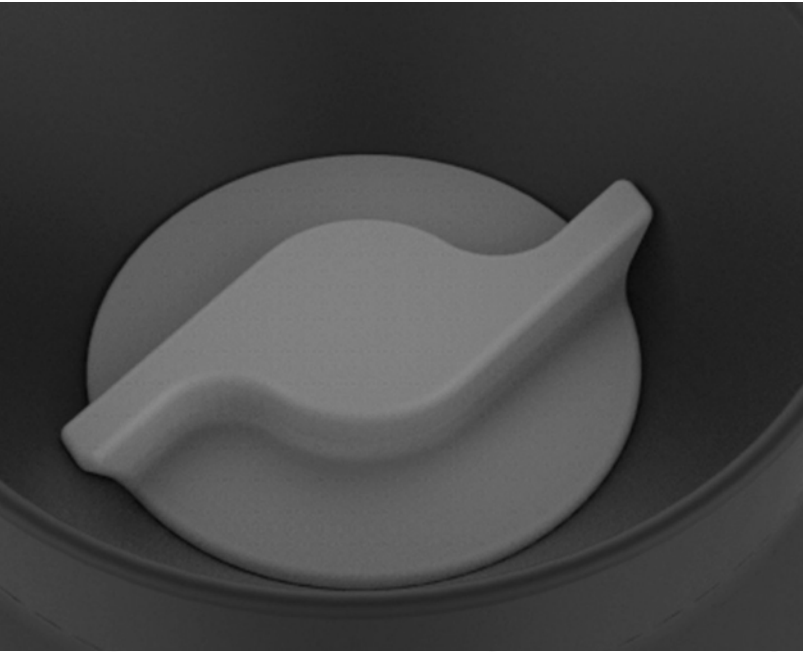
Battery operation is a must for off-grid adventures.

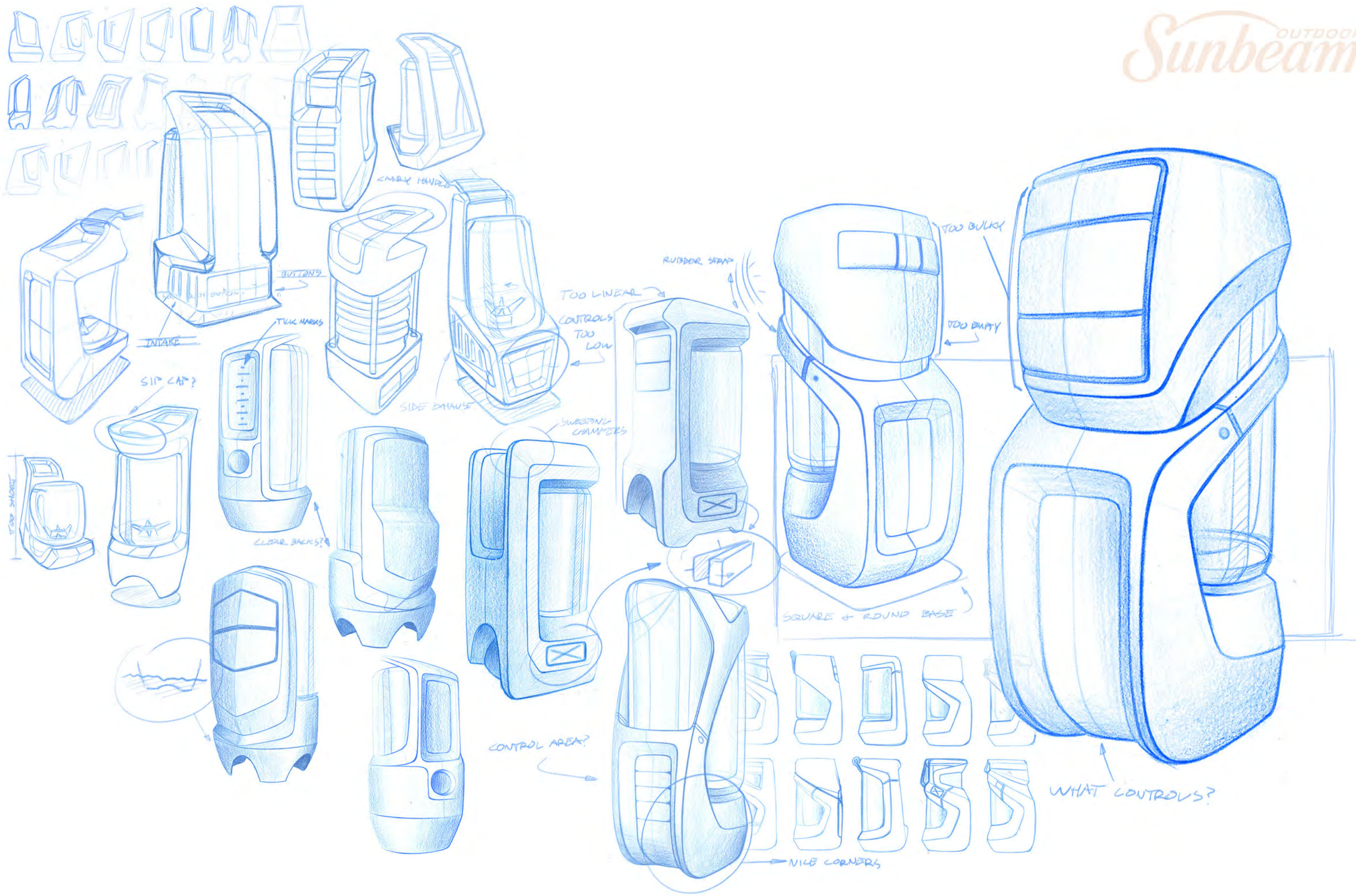


SUFFICIENT POWER

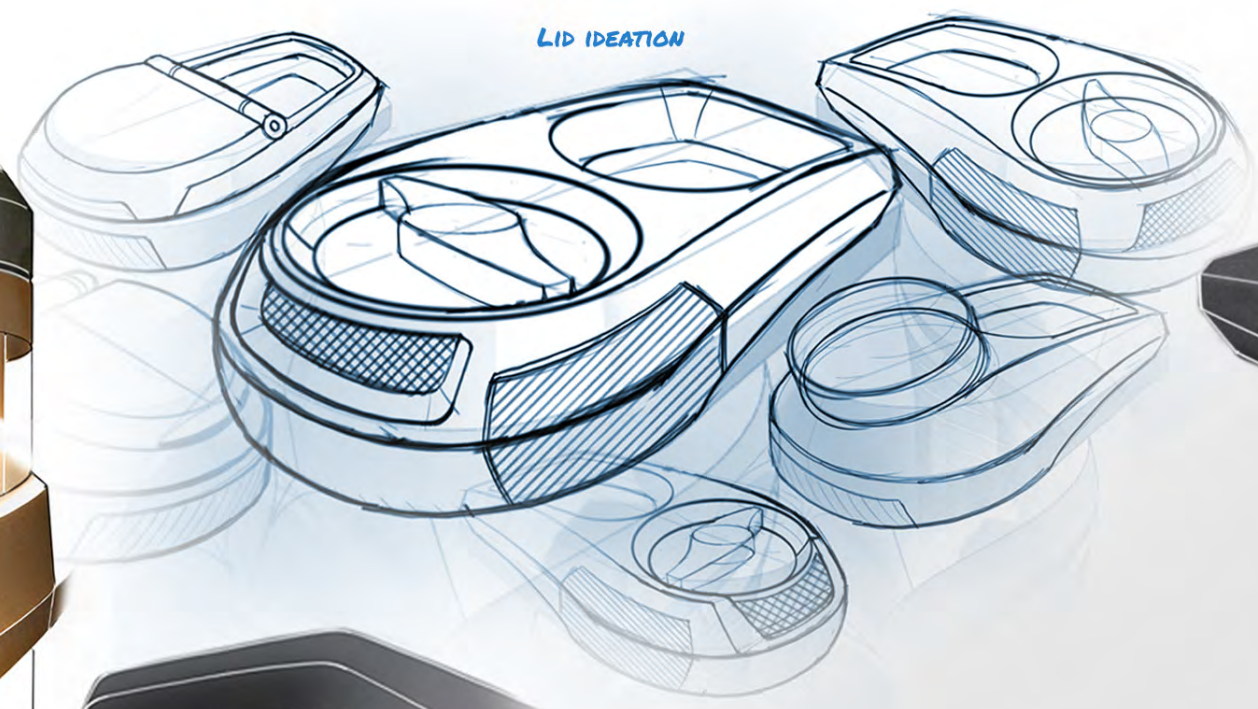
Proper internal space for sufficient drive-train should be allotted.

Design Language

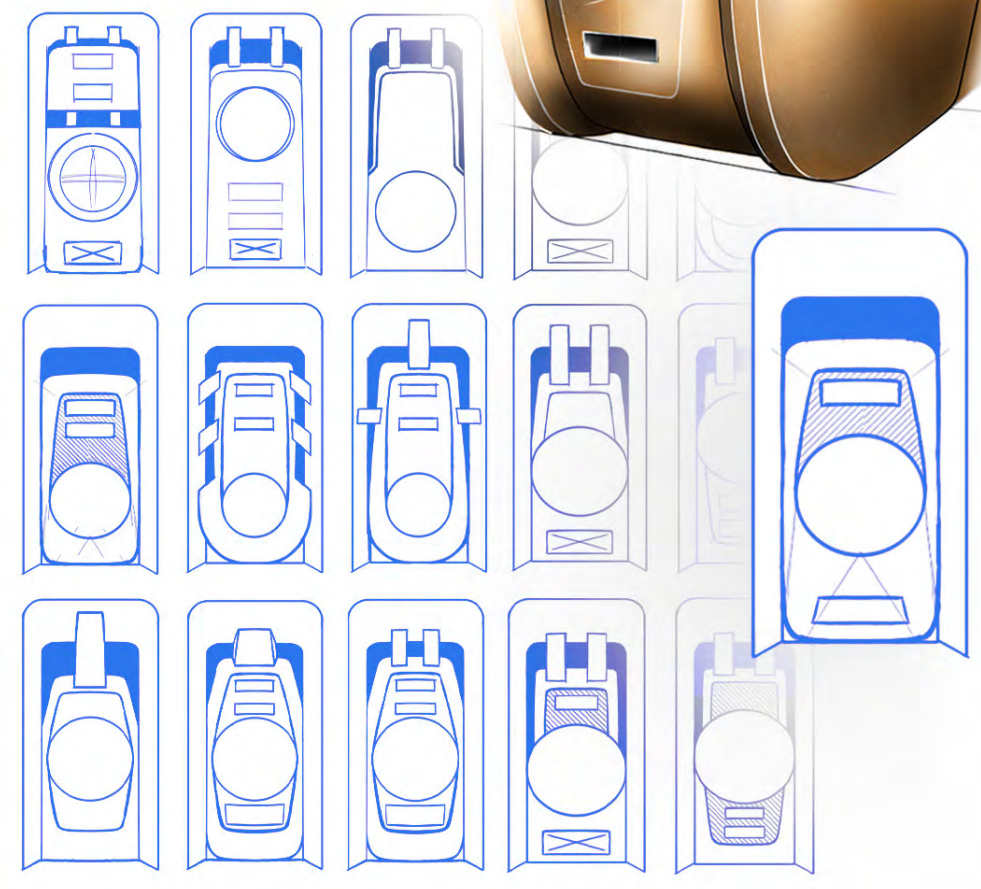


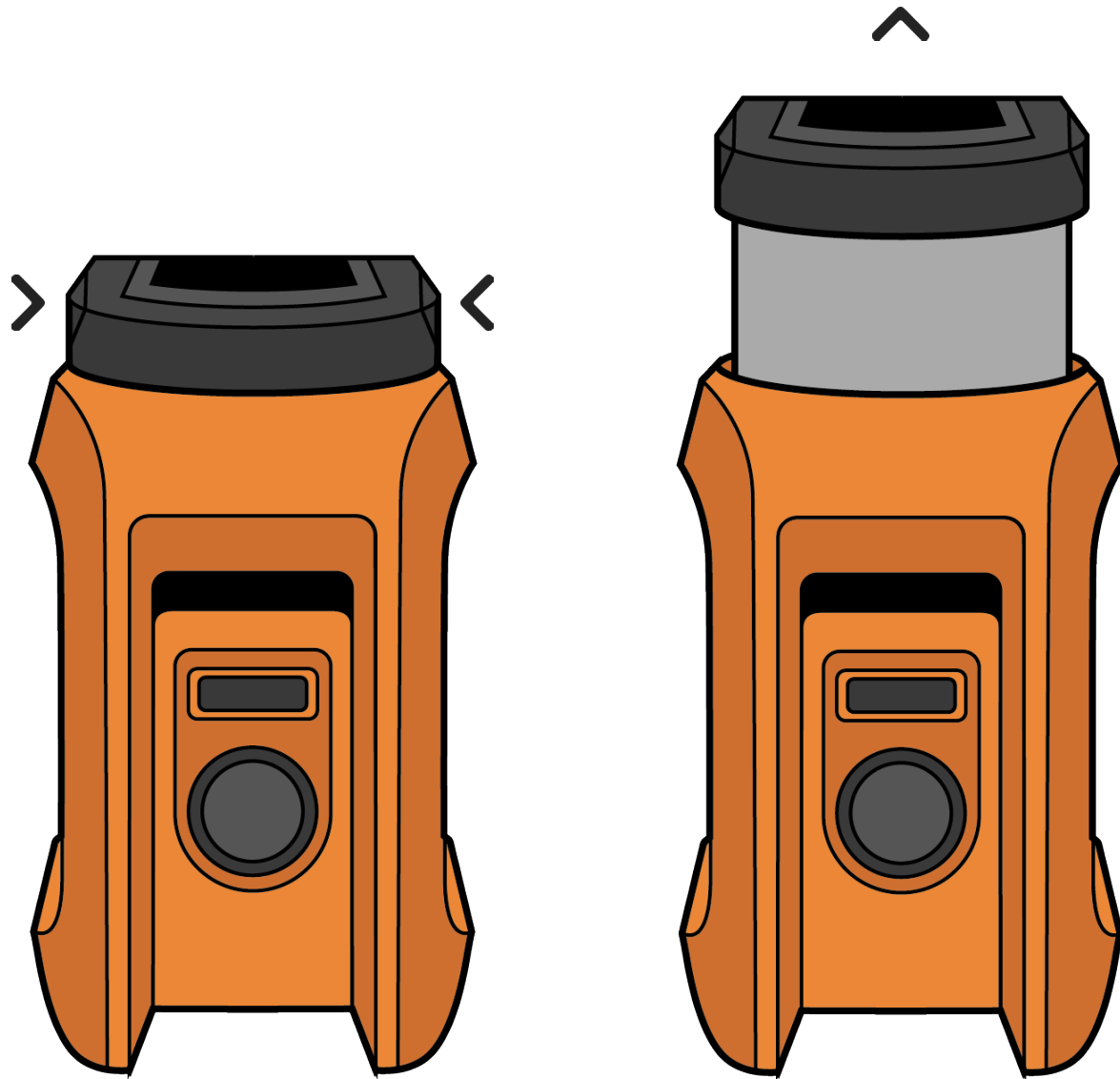


LID IDEATION



CONTROLS IDEATION





TELESCOPING VESSEL

A button-activated expandable form boosts packing efficiency.





DEBRI-PROOF LID

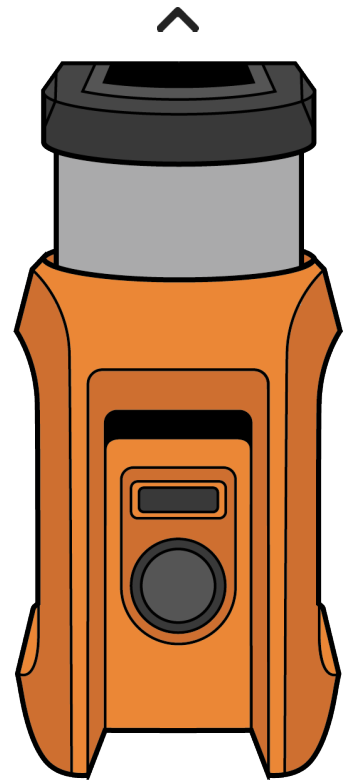
A sliding door on the lid seals from outside dirt and debris.



CLEAN AIRFLOW

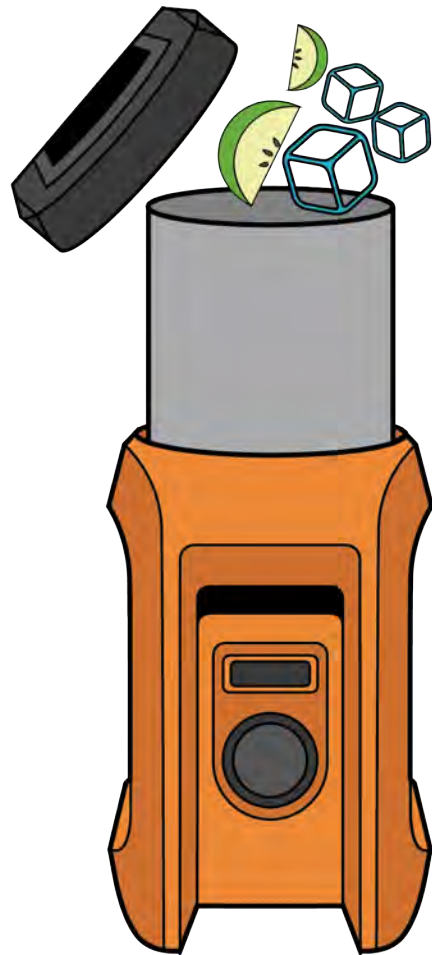
Air intakes from the face, exhausting on bottom, preventing entry of debris.

BLENDER USE



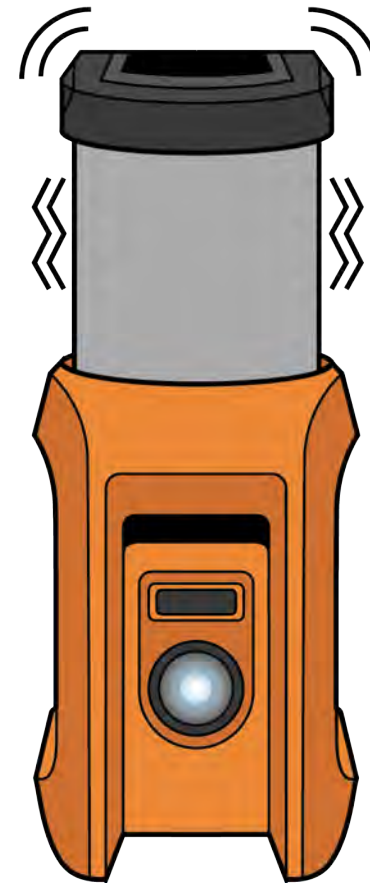
EXTEND

1



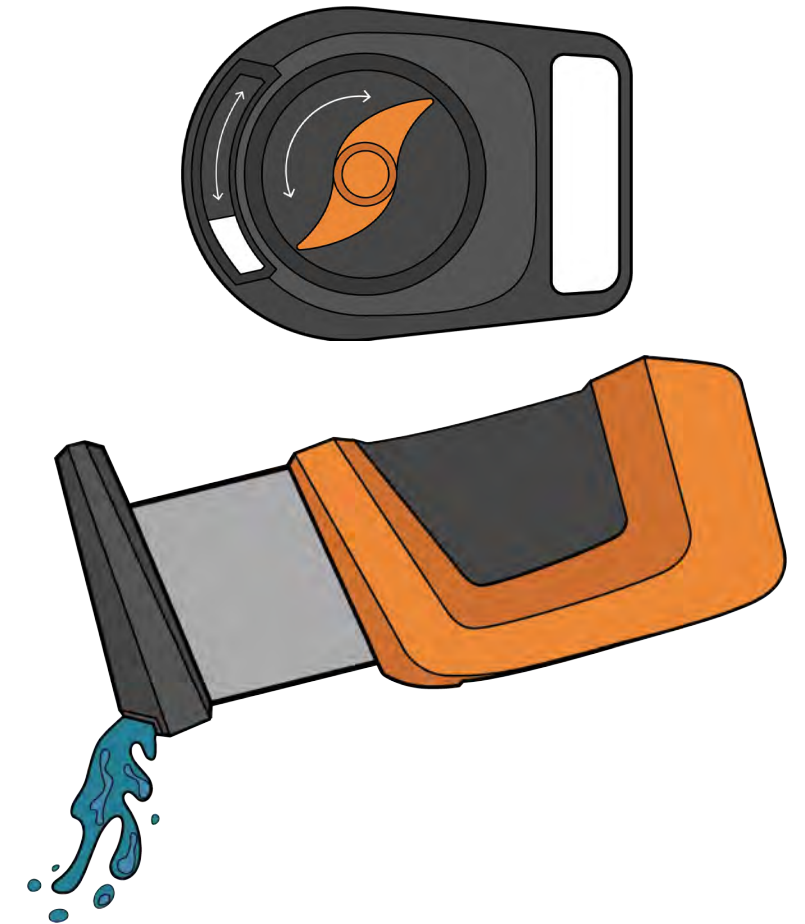
LOAD

2



BLEND

3



POUR

4

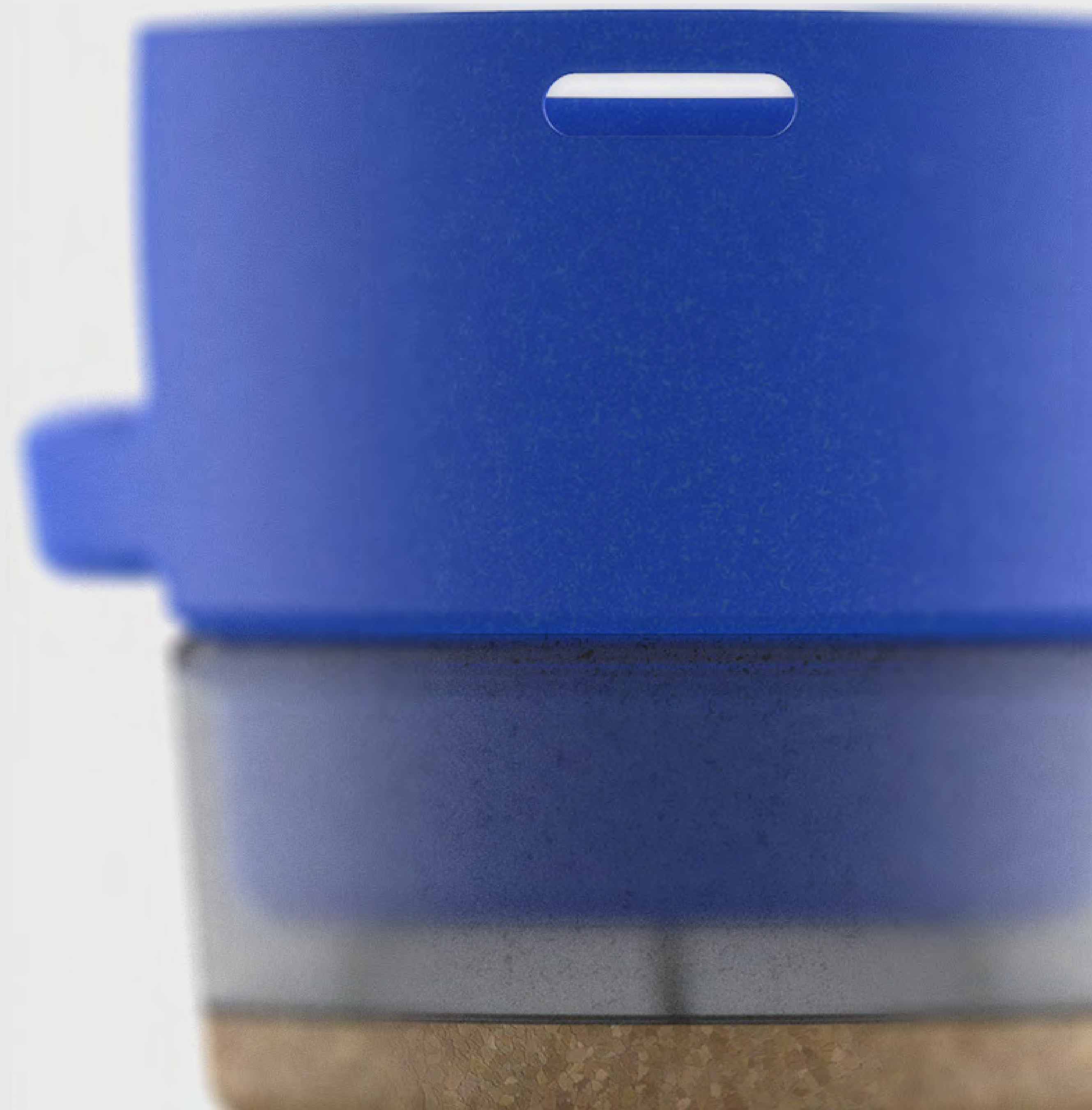






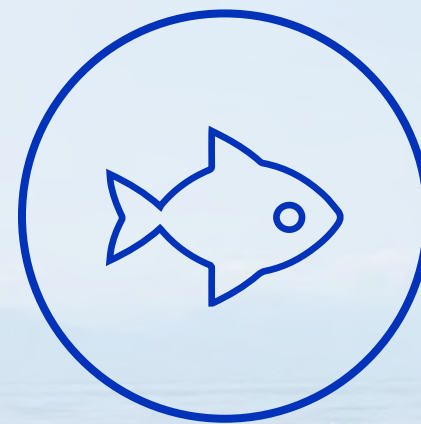
Urban garden planter design.

TROY DUNN
INDUSTRIAL DESIGNER.



The issue

Garbage, primarily plastic, is continually building up in our oceans. Recent estimates put the size of the Great Pacific Garbage Patch at roughly twice the size of Texas.



Wildlife

Because the garbage patch blocks sunlight, **algae is not growing as it should**. With less algae, the entire food chain is experiencing a negative disruption.



The food chain

Ocean wildlife are confusing plastic with food, harming animals and putting a strain on their environments. Because ocean life is eating plastic, **we're eating plastic**.



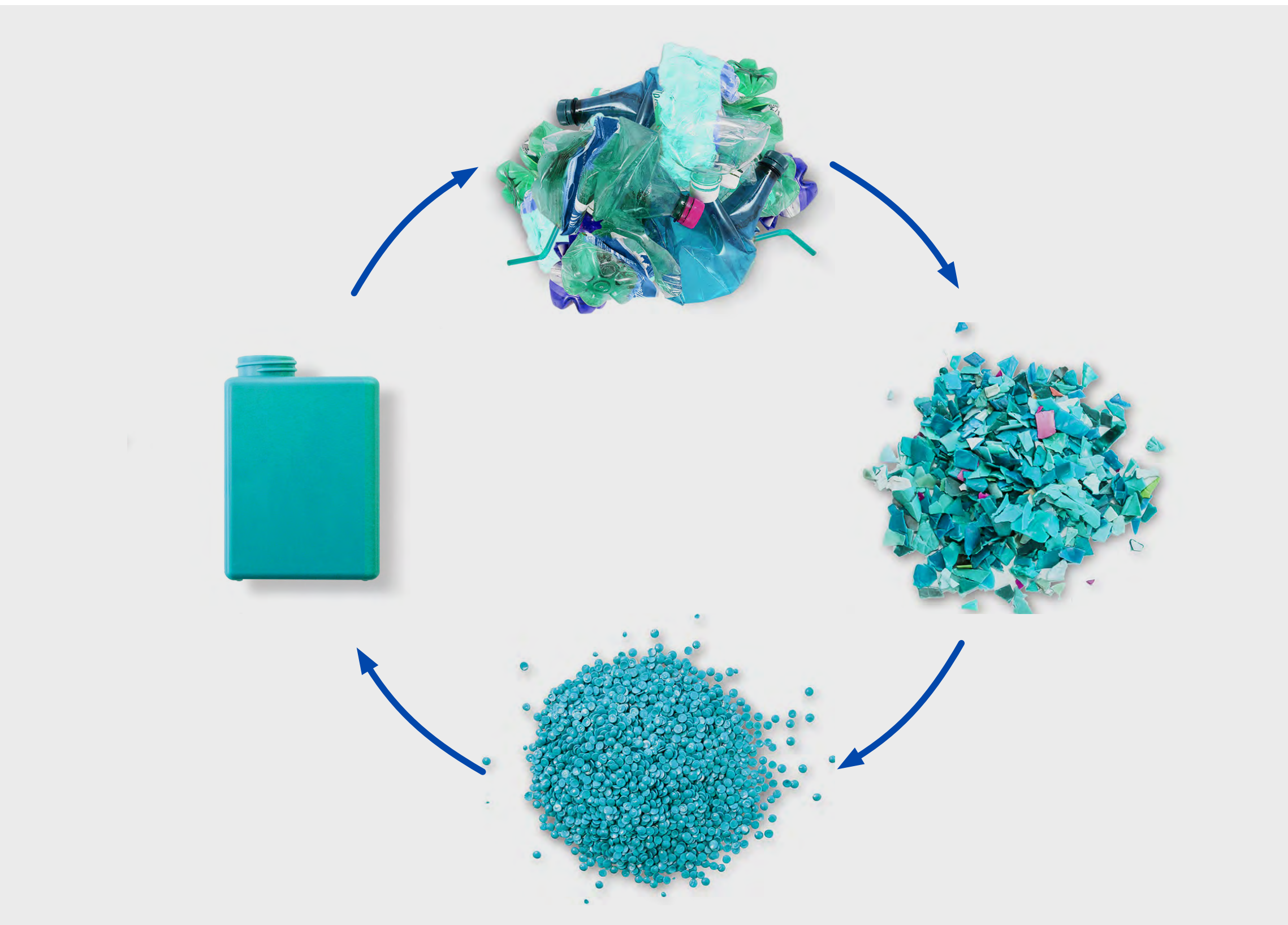
Decomposition

A single, standard sized plastic water bottle can take up to **450 years to fully decompose** in the ocean.



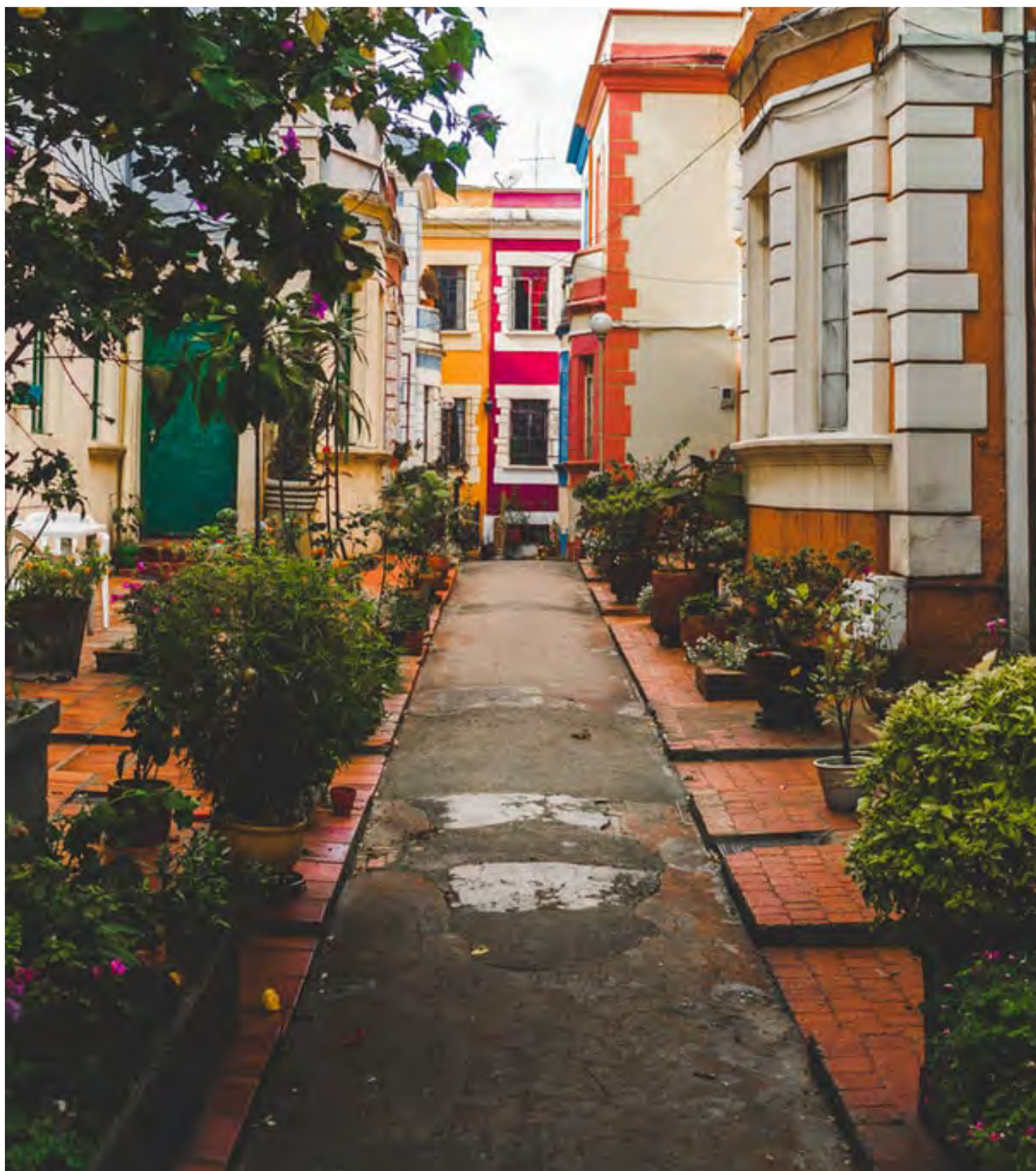
How can we use ocean plastic?

The process for recycling ocean plastic is done in four steps, and is actively being done by groups all over the world.



Opportunity: urban gardening

Urban gardening is the practice of cultivating, processing and distributing food in or around urban areas.



Social interaction

People come together, the word is spread.



Value retained

Constant re-use preserves value.



Food deserts

Will be effective where food is scarce.



Urban setting

To be used where natural soil isn't readily available.



Who is going to use it?

Multiple types of users will interact with this product, the design should satisfy the needs of all of them.



Amelia, 38

As a local official at a public health agency, Amelia is looking for a solution to fix the hunger issues in her city. She will be in search of solutions that fall in line with the environmental benefits of a community garden.



James, 55

A distinguished doctor with years of experience in patient health, James is looking to start an outreach program within his hospital. He would like to start a community garden to help people with food insecurities.



Olivia, 28

Olivia is a single mother in a large city, trying to provide the best for her kids. Food insecurity affects her due to the lack of affordable, quality produce in her area. Olivia would benefit from a streamlined community garden local to her.



Susan, 63

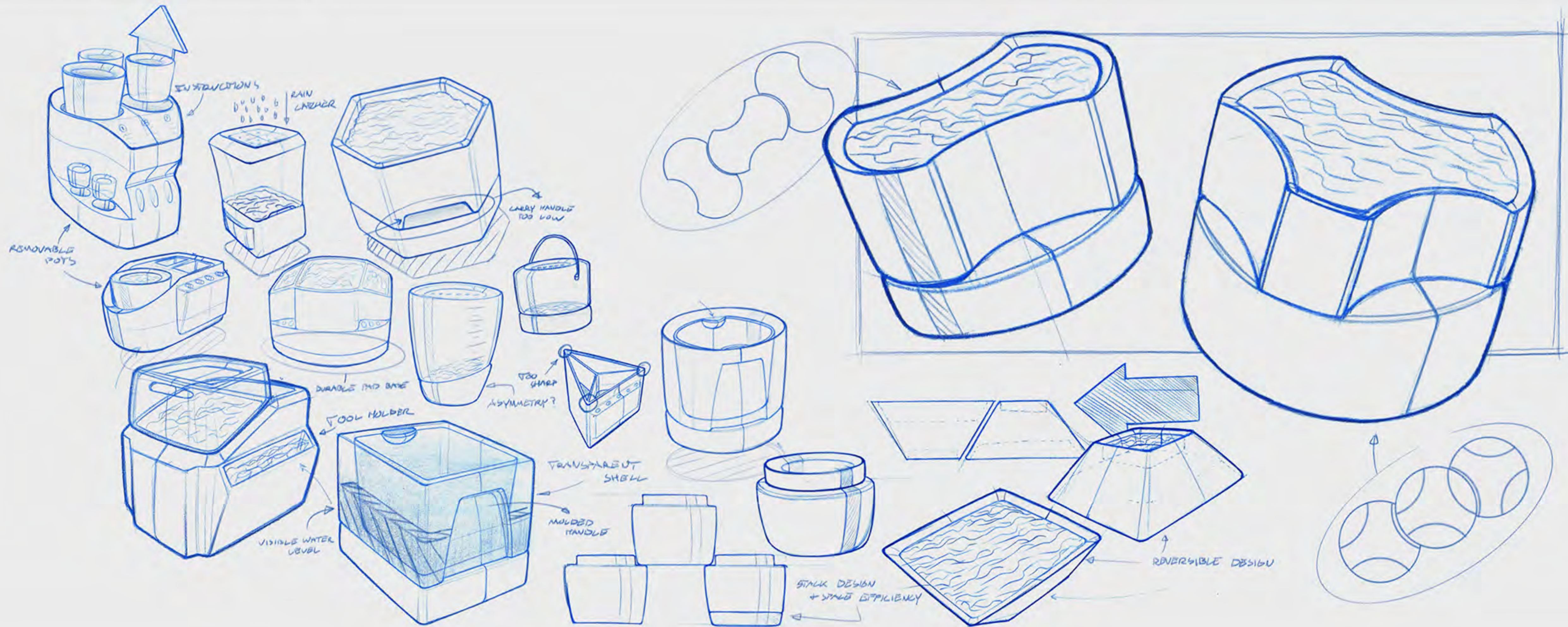
Susan is a long time member of her local community. She feels the need to give back to her community, and help her fellow neighbors when they need it. Susan would use community gardens to benefit others.



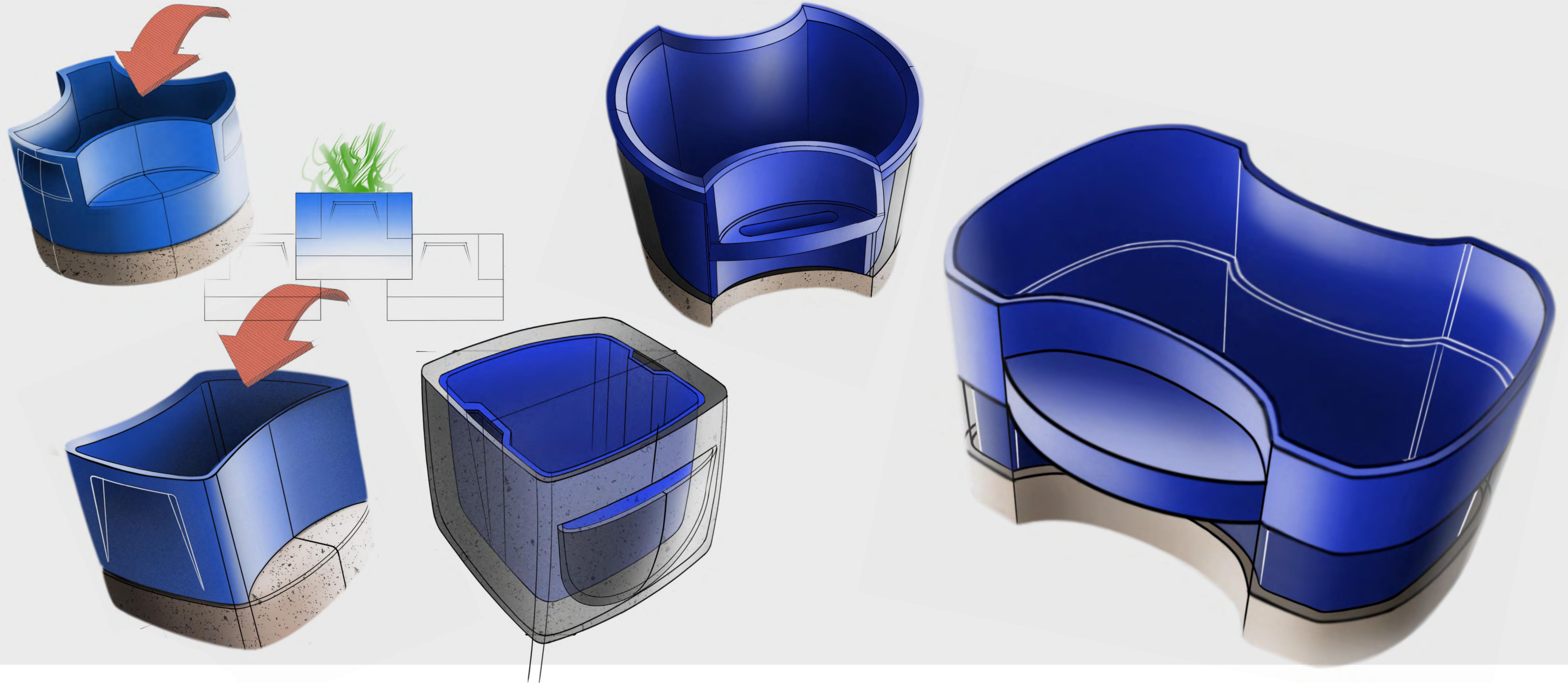
Inspiration board



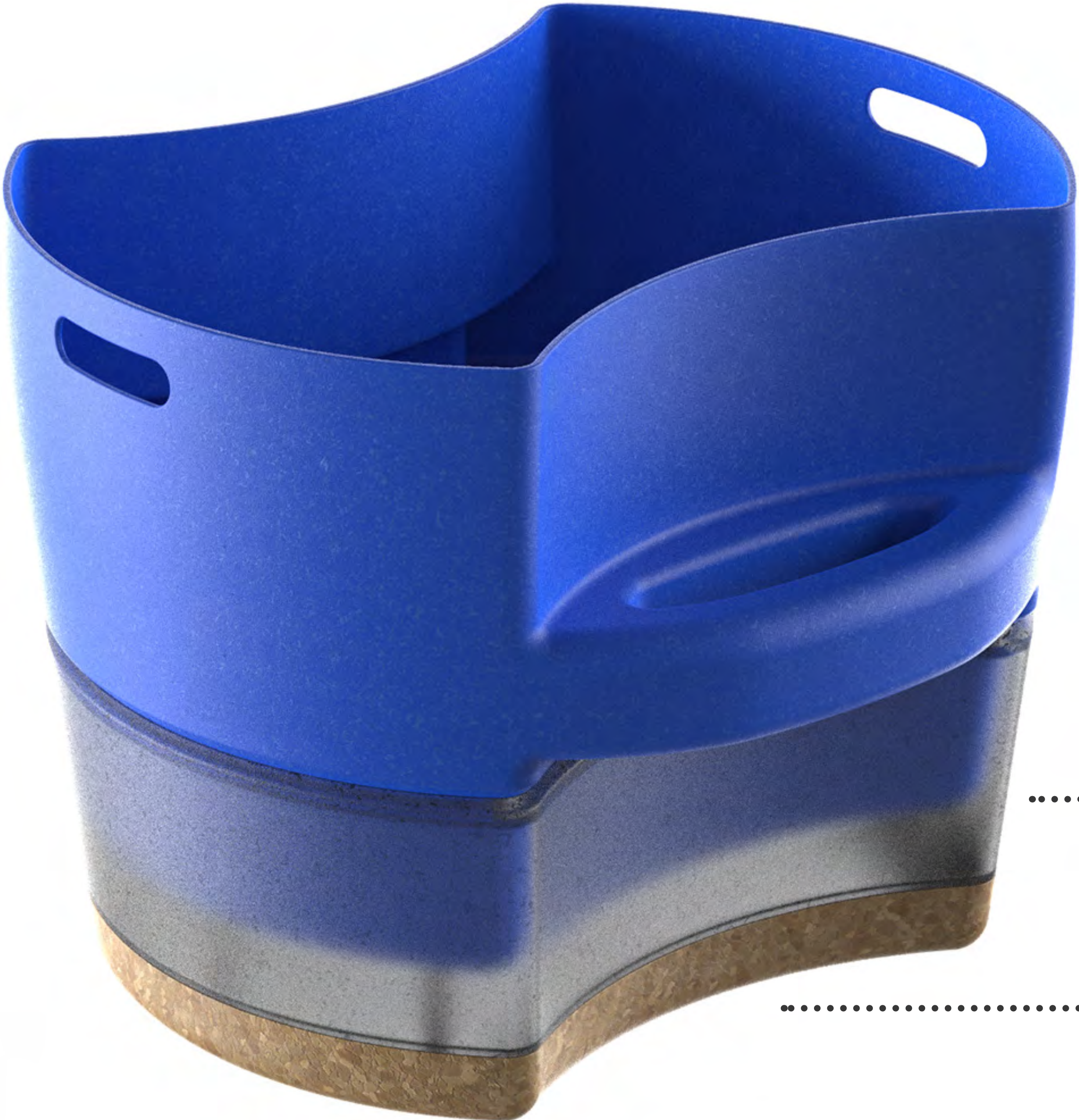
Ideation sketching



Refined concepts



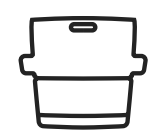
Final concept



..... Soil vessel

..... Water reservoir

..... Synthetic cork base



Exploded view



Soil vessel

A mix of ocean plastics make up the main vessel. Drain holes allow water to drip down to the water reservoir.

Recycled polymer wicks

Waste ABS plastic and AS (acrylonitrile-styrene) are processed to become an absorbent polymer for the planter's wicks, allowing it to water itself.

Water reservoir

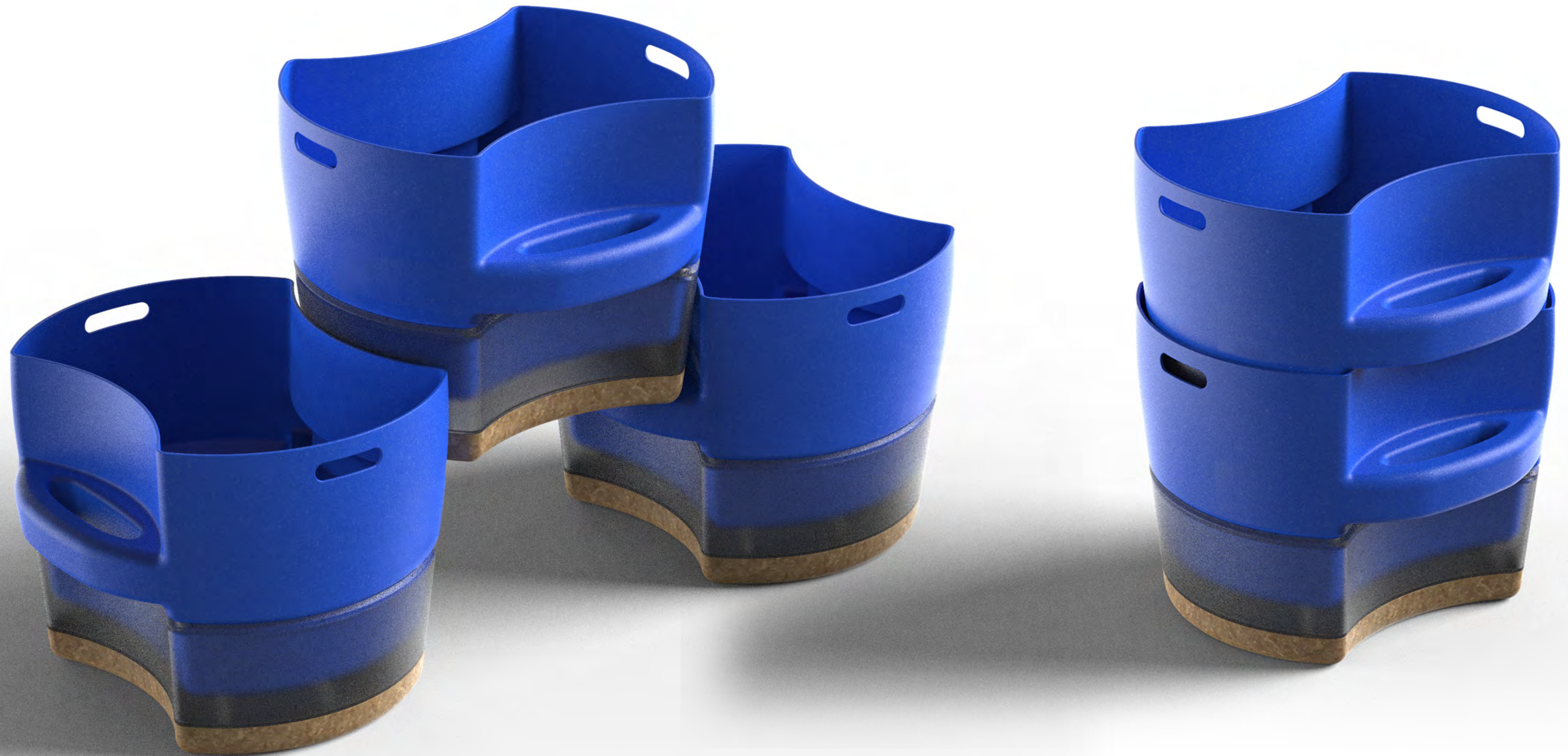
Mixed transparent plastics make up the bottom water vessel of the planter. Users will be able to see the water level, preventing over-watering.

Synthetic cork base

Low density polyethylene is collected from the ocean and can be foamed to create a look-a-like, durable cork material. This aids in preventing wear and tear on concrete.



Final concept



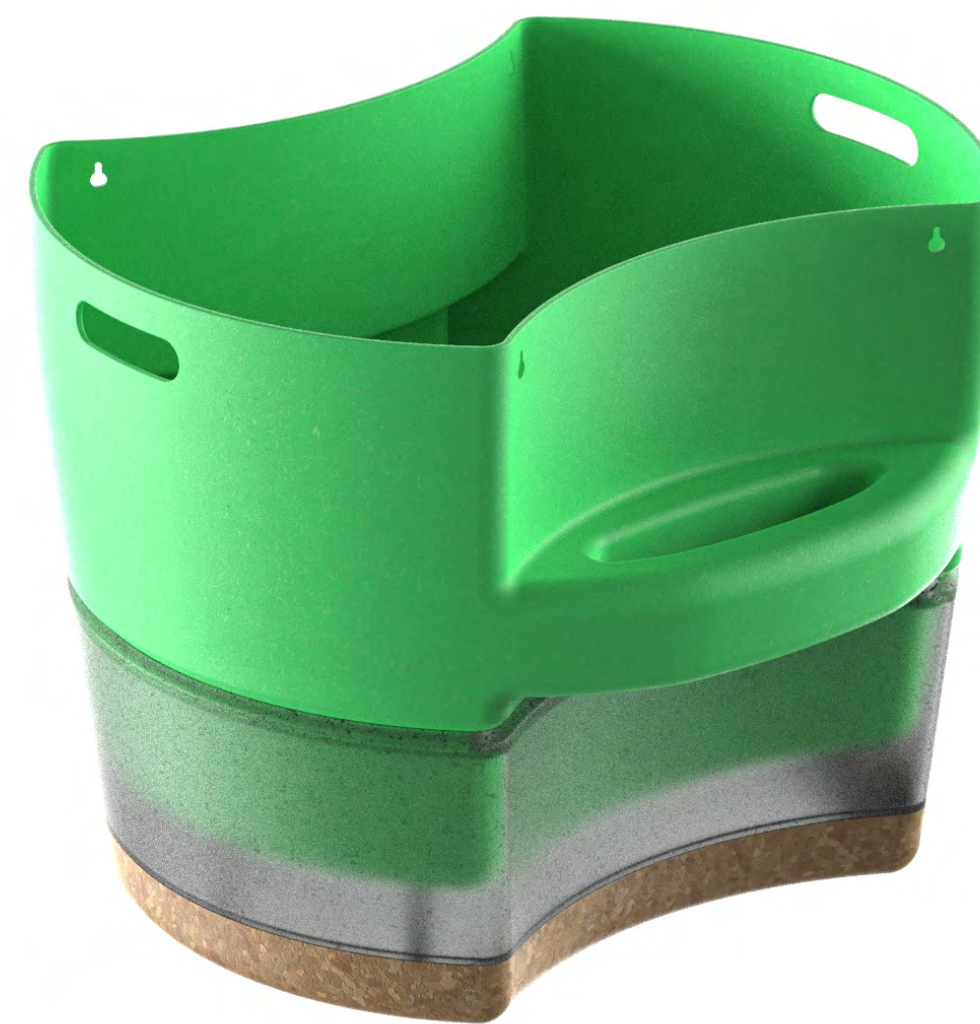
Final concept colorways



pacific blue



mending red



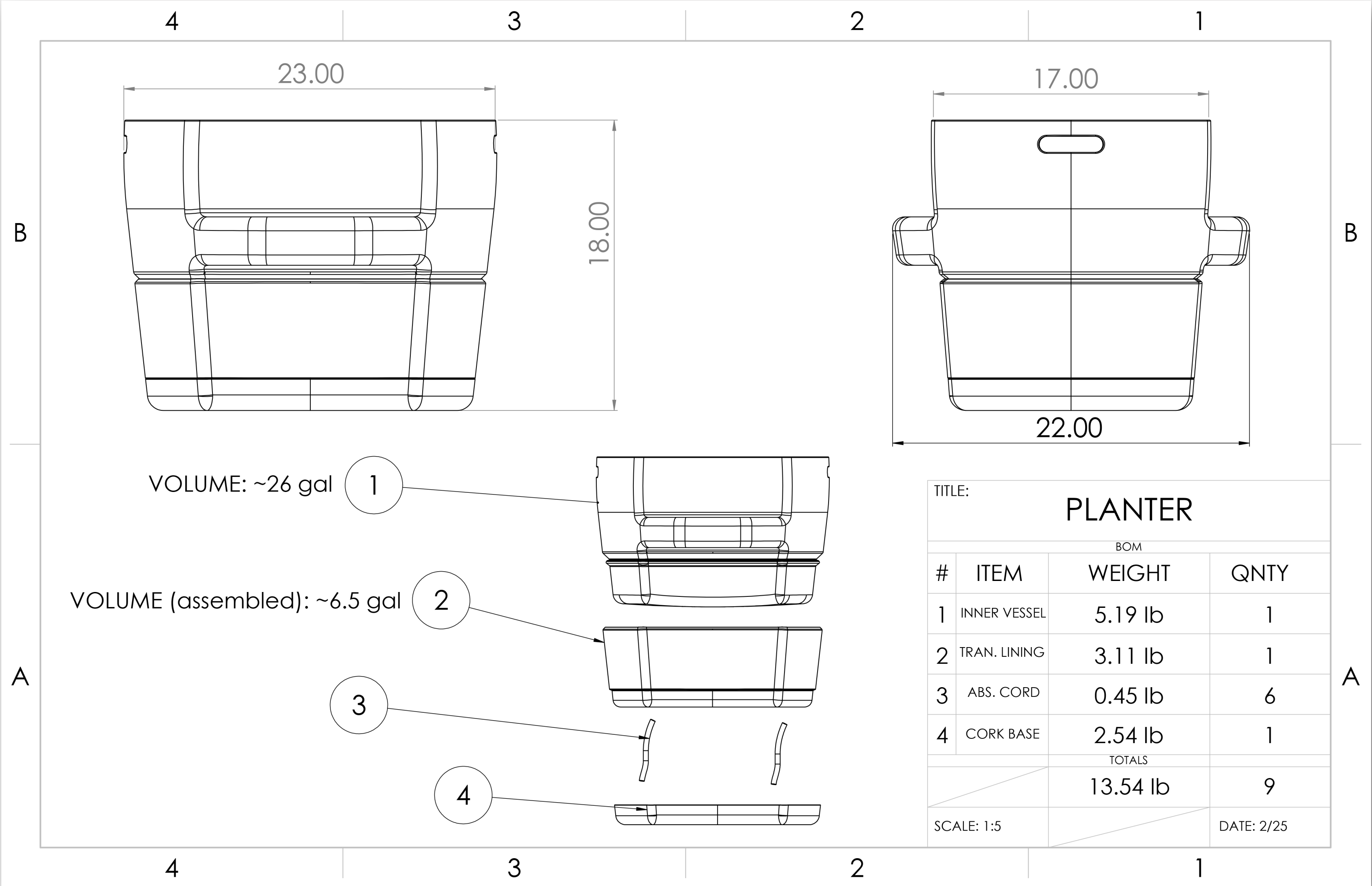
terrestrial green



delicate lilac



Technical drawings





TROY DUNN
INDUSTRIAL DESIGNER.

KICKER

Automotive audio junior studio project.

Spring 2020, 8 Weeks

THE PROBLEM...

As future automotive design and technologies become more complex, the installation process for Kicker products becomes more complicated. As a result, accessibility to aspiring users is being cut short.





PROJECT GOALS

Using upcoming innovations in the car audio market, this is a modular solution that will be easier to install in any car and support the lifestyle of the aspiring DIY'er.

01

EASIER INSTALL

02

APPEAL TO THE ASPIRING DIY'ER

03

PROMOTE UPGRADEABILITY

TARGET USERS: **THE ASPIRING DIY'ER**



LUKE, 26
ASPIRING DIY'ER

- Lives in a large city, doesn't have access to a garage/shop with tools.
- Loves to solve problems, or improve things to make life easier.
- Wants to stand out and add a touch of personality to everything.
- Is dedicated to *his* brand.
- Is always looking to learn new skills.



EMMA, 23
ASPIRING DIY'ER

- Lives in a small town, doesn't have access to tools/resources large city stores would provide.
- A crafty person, always looking for a new project.
- Consistently wants to improve herself, or her belongings.
- Is an early adopter of new products/technology.
- Is always looking to learn new skills.

CHOOSING THE RIGHT SOUND SYSTEM...

THE OPTIONS

1 TIER ENTRY LEVEL



2 TIER INTERMEDIATE



3 TIER EXPERT LEVEL



- What will fit in my car?
- What parts do I need?
- How do I install it?
- What is my goal?
- What do I need to install a sound system?
- Can I get help buying these parts?

HOW COMPLICATED IS INSTALLING AN AUDIO SYSTEM TODAY?

BENCHMARKING SYSTEM INSTALLS

TIER 1 ENTRY LEVEL

- AT LEAST 26 STEPS
- 4 - 5 HOURS OF WORK
- 30 - 40 COMPONENT OPTIONS
- NO UNIVERSAL CAR COMPATIBILITY

DIFFICULTY:
COMPLEX

TIER 2 INTERMEDIATE

- AT LEAST 35 STEPS
- 30 - 40 HOURS OF WORK
- HUNDREDS OF COMPONENT OPTIONS
- NO UNIVERSAL CAR COMPATIBILITY

DIFFICULTY:
EXCESSIVELY COMPLEX

TIER 3 EXPERT LEVEL

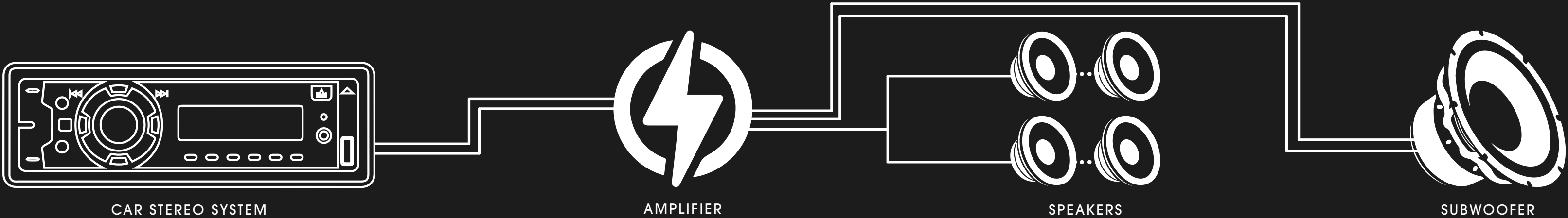
- HUNDREDS OF STEPS
- HUNDREDS OF HOURS OF WORK
- HUNDREDS OF COMPONENT OPTIONS
- NO UNIVERSAL CAR COMPATIBILITY

DIFFICULTY:
EXTREMELY COMPLEX

Entry level for car audio is **too complex**, and the installation process for audio systems is **lengthy** and **complicated**. New users often turn away because of they are overwhelmed.

EXISTING SOUND SYSTEM PAIN POINTS

PAIN POINTS



- MUST BE REMOVED ON INSTALL
- COMPLEX ON NEWER CARS
- CABLE ROUTING

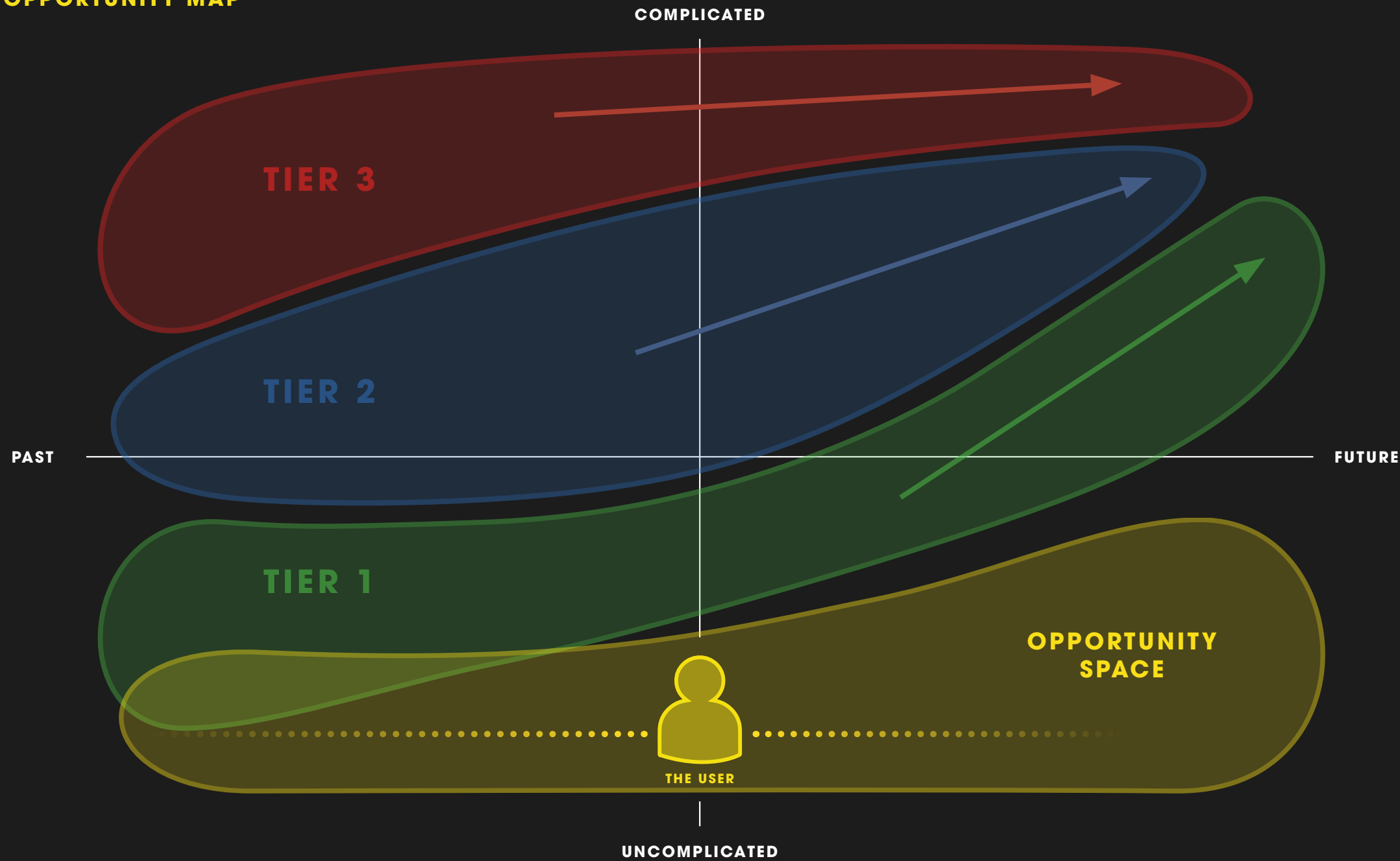
- TOO MANY OPTIONS
- NO UNIVERSAL MOUNTING
- LOTS OF CABLES

- MUST DISASSEMBLE CAR
- COMPATIBILITY
- TOO MANY OPTIONS

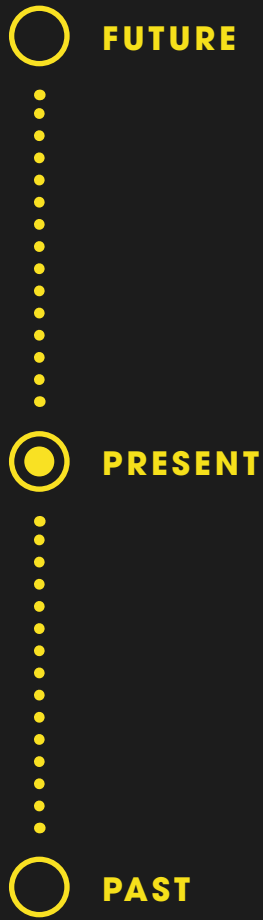
- LARGE FOOTPRINT
- CABLE ROUTING
- TOO MANY OPTIONS

THE FUTURE OF AUTO TECH AND AFTERMARKET CAR AUDIO

OPPORTUNITY MAP




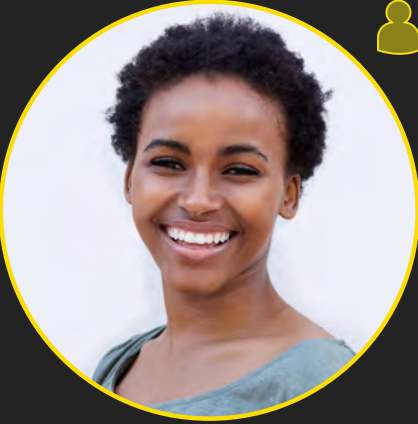


AUTO TECH



Automotive technology will continue to innovate in ways that make integration of aftermarket car audio more complicated. **The solution will be an integrable product compatible with future auto innovation.**


SOLUTION: A NEW TIER

TIER
0
ENTRY LEVEL



ASPIRING DIY'ER ASPIRING DIY'ER

TIER
1
~~ENTRY LEVEL~~
NOVICE LEVEL



NOVICE DIY'ER

TIER
2
INTERMEDIATE



SEASONED DIY'ER

TIER
3
EXPERT LEVEL

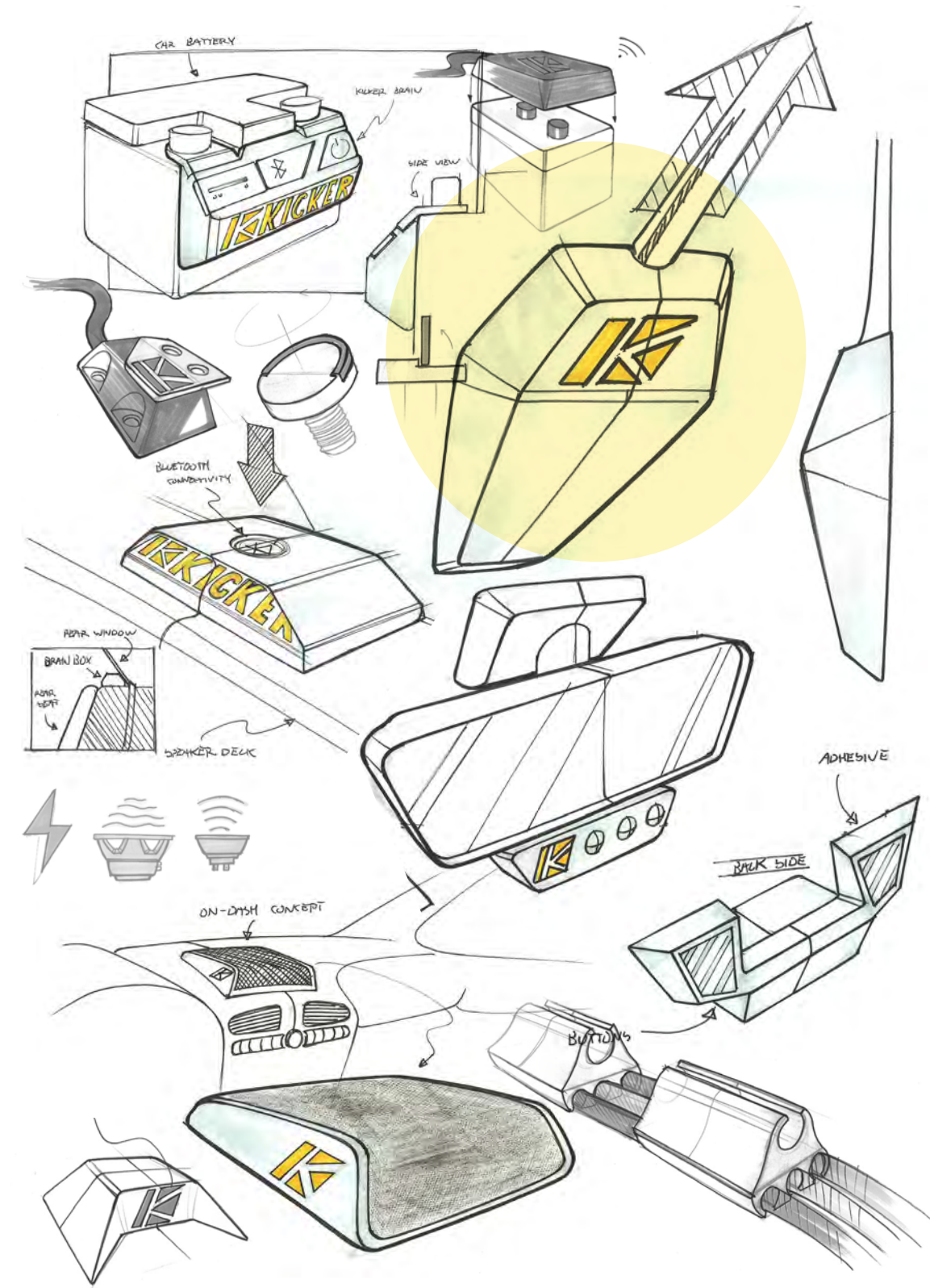


PRO DIY'ER

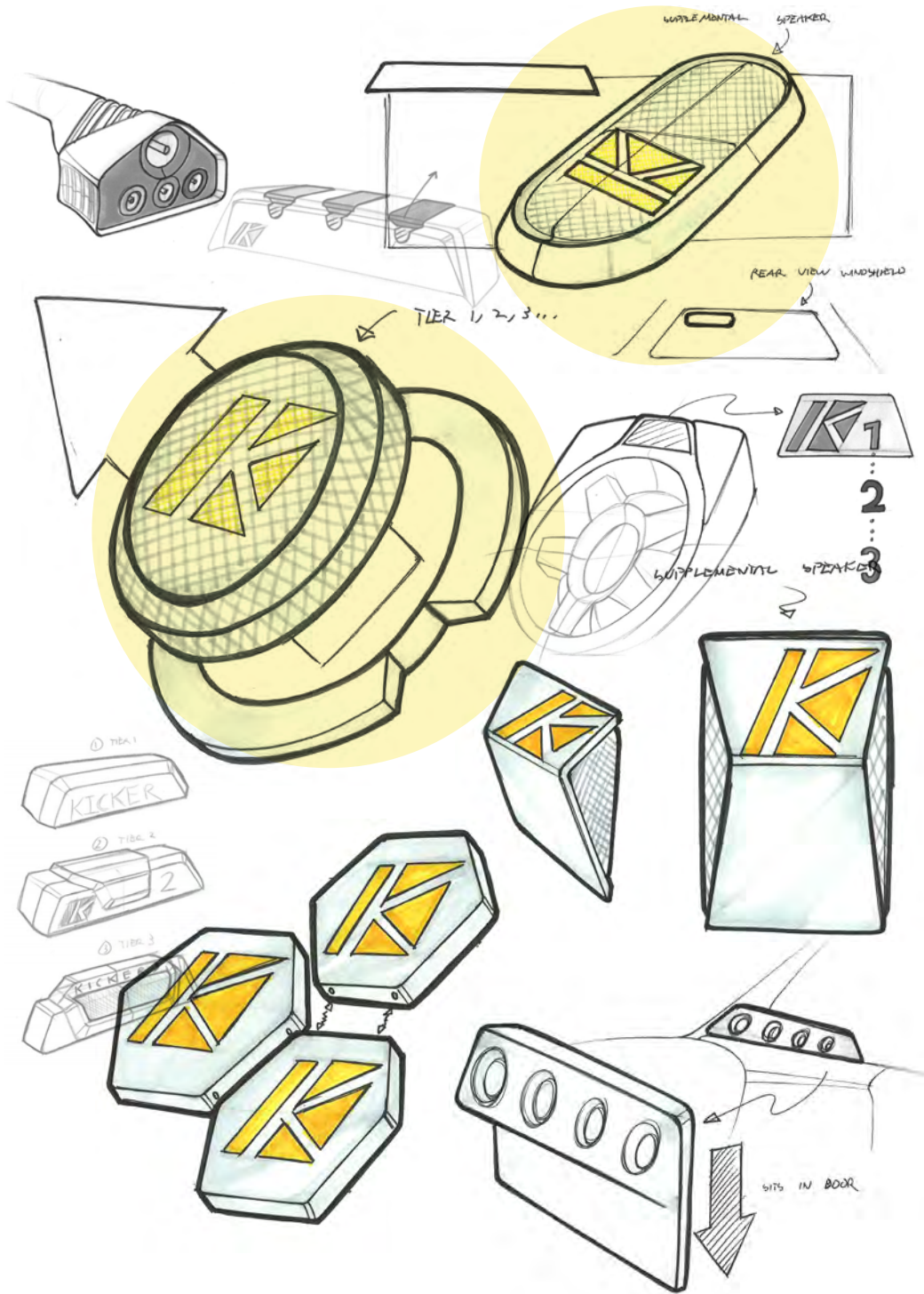
KICKER needs a new entry level line of products that engages the aspiring DIY'er, and provides an easy path of upgradeability in the future.

EXPLORATION THUMBNAIL SKETCHING

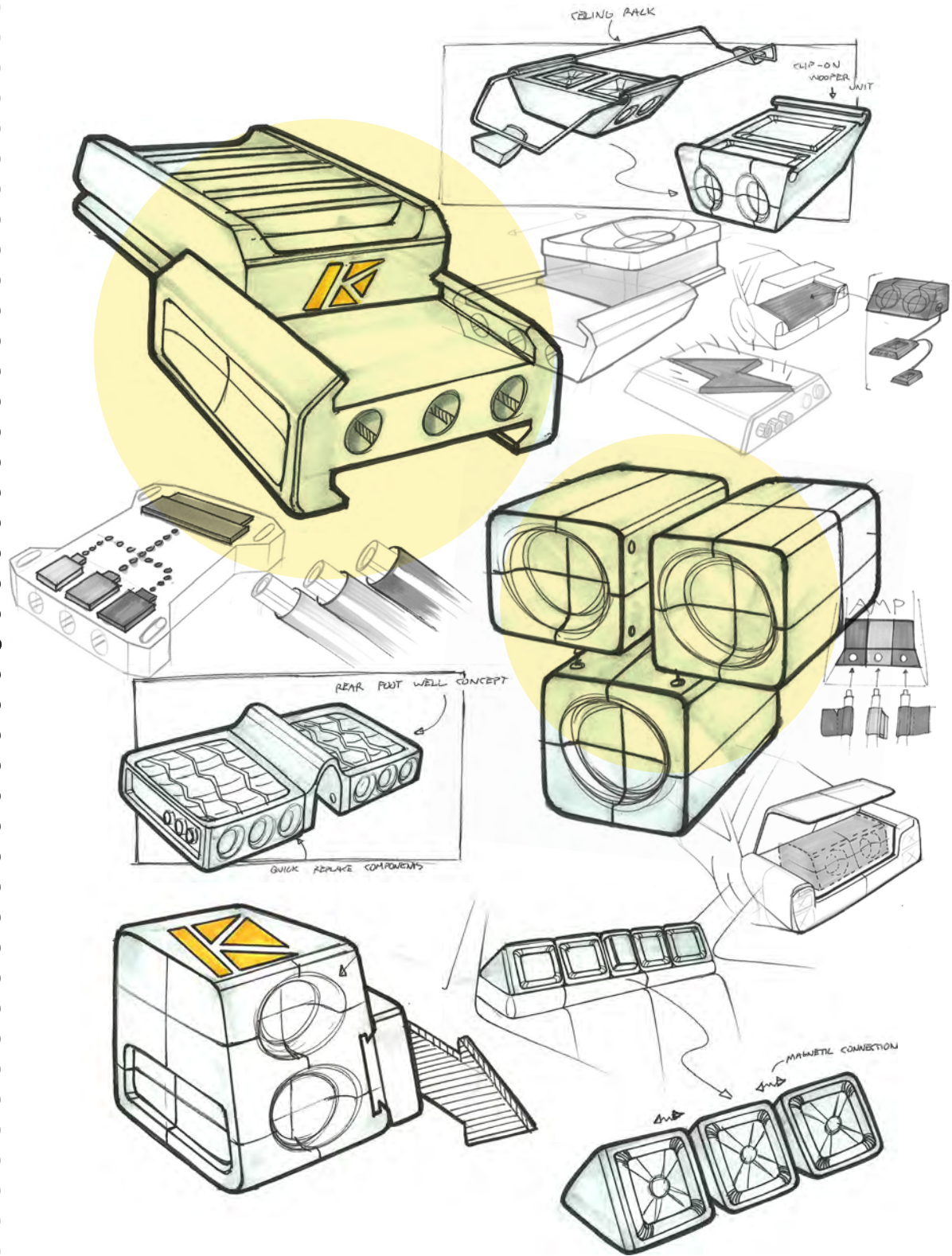
CENTRALIZED UNIT



SPEAKERS



SUB/AMP

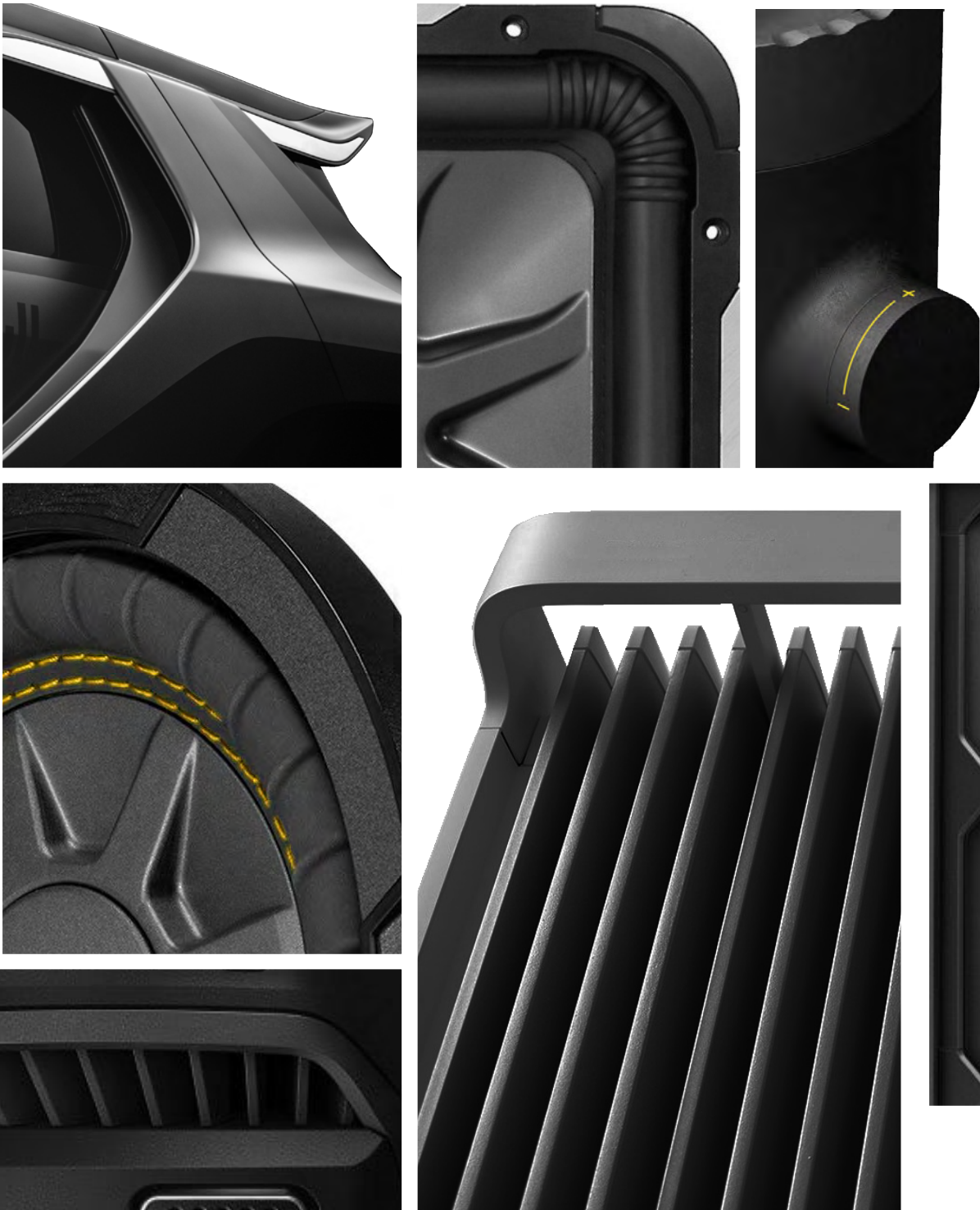


APPLYING AN AESTHETIC - “THE FUTURE OF KICKER”

FUTURISTIC



ANGULAR



FUNCTIONAL



SKETCH RENDERINGS - ALL COMPONENTS

MODULAR AMP



KICKER BRAIN BOX



SUPP. SPEAKERS



MODULAR SUB



SKETCH RENDERING - MODULAR SUB+AMP

SUB + AMP



NEW TIER 0 COMPONENTS

KICKER needs a **new entry level** line of products that promotes upgradeability and **engages the aspiring DIY'er**.



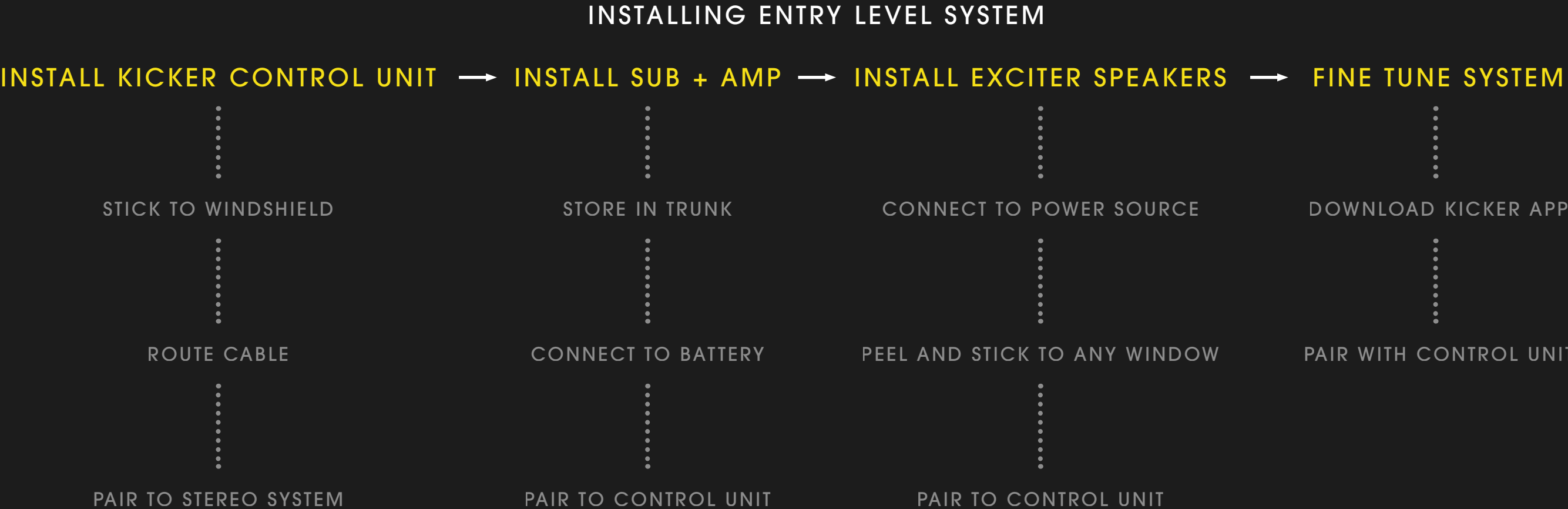
DOES IT SOLVE THE PROBLEM?

BENCHMARKING TIER 0

TIER
0
ENTRY LEVEL

- ONLY 15 STEPS
- 1 - 2 HOURS OF WORK
- ALL COMPONENTS COMPATIBLE
- COMPATIBLE WITH ALL MODERN CARS

DIFFICULTY:
EASY



The re-defined entry level 'Tier 0' enables aspiring DIY'ers by being greatly simplified, provides an easy path for upgradeability, and is compatible with the future of automotive technology.

KICKER PHONE APP: A SUPPORTING ROLE



SYSTEM AUTO TUNING

An auto-tune function quickly adjusts the system's audio settings to best fit a user's vehicle.



COMMUNITY FEEDBACK

Comparable stats and downloadable sound profiles allow Kicker customers to connect with each other and compete!



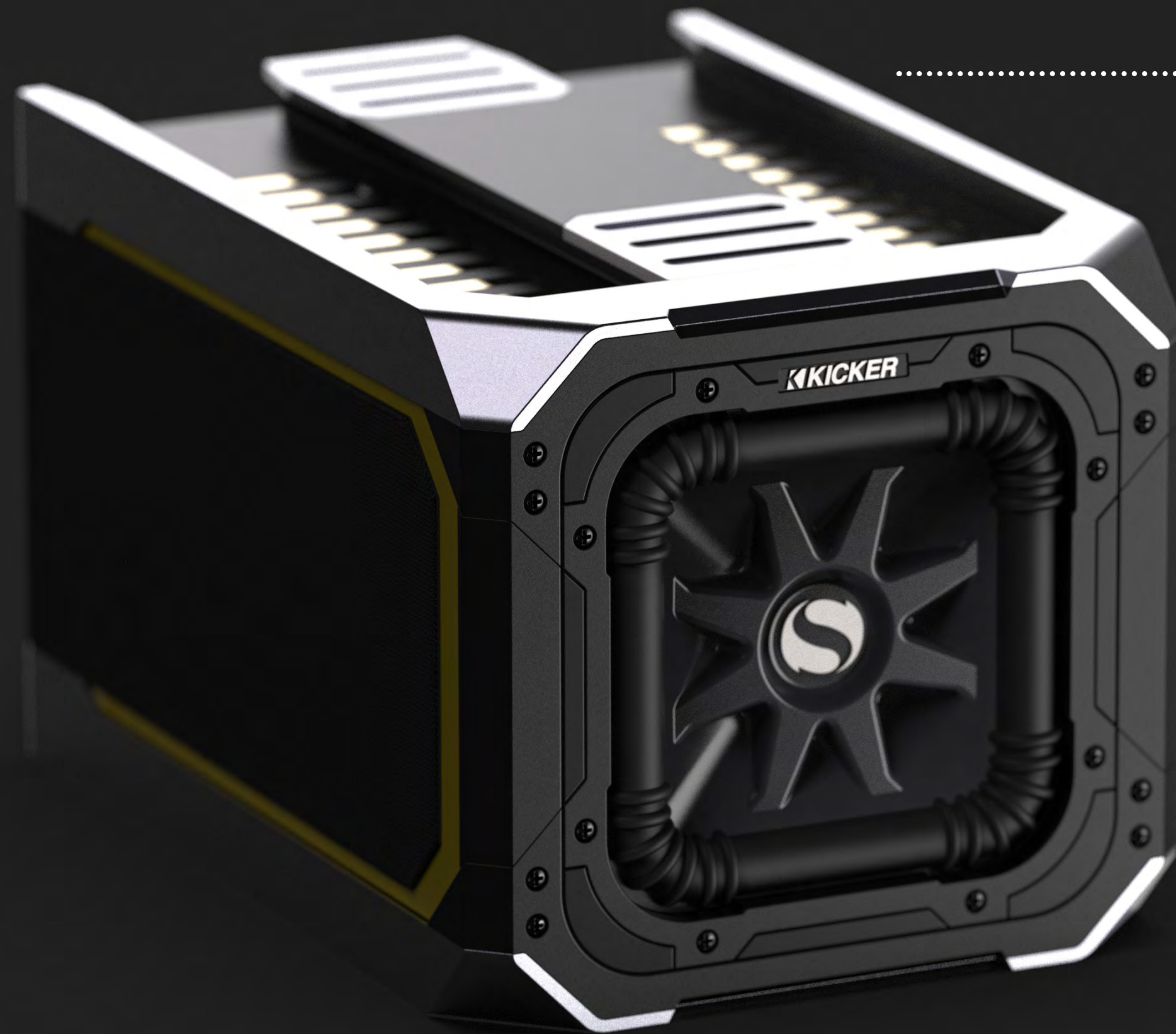
DIGITAL SYSTEM BUILDER

Furthering the ease of component selection, users can digitally "build" their system before purchasing.



THE UPGRADE BUTTON

The Kicker App recognizes the parts in your system, and will recommend the appropriate upgrade at the press of a button!



..... POWERED RAIL SYSTEM

..... KICKER 6.5" L7 SUB



..... AMPLIFIER


..... SUBWOOFER ENCLOSURE




KICKER



BASS BOOST

0  11

GAIN

0  11

LPF

50  200

01/02



KICKER BRAIN BOX

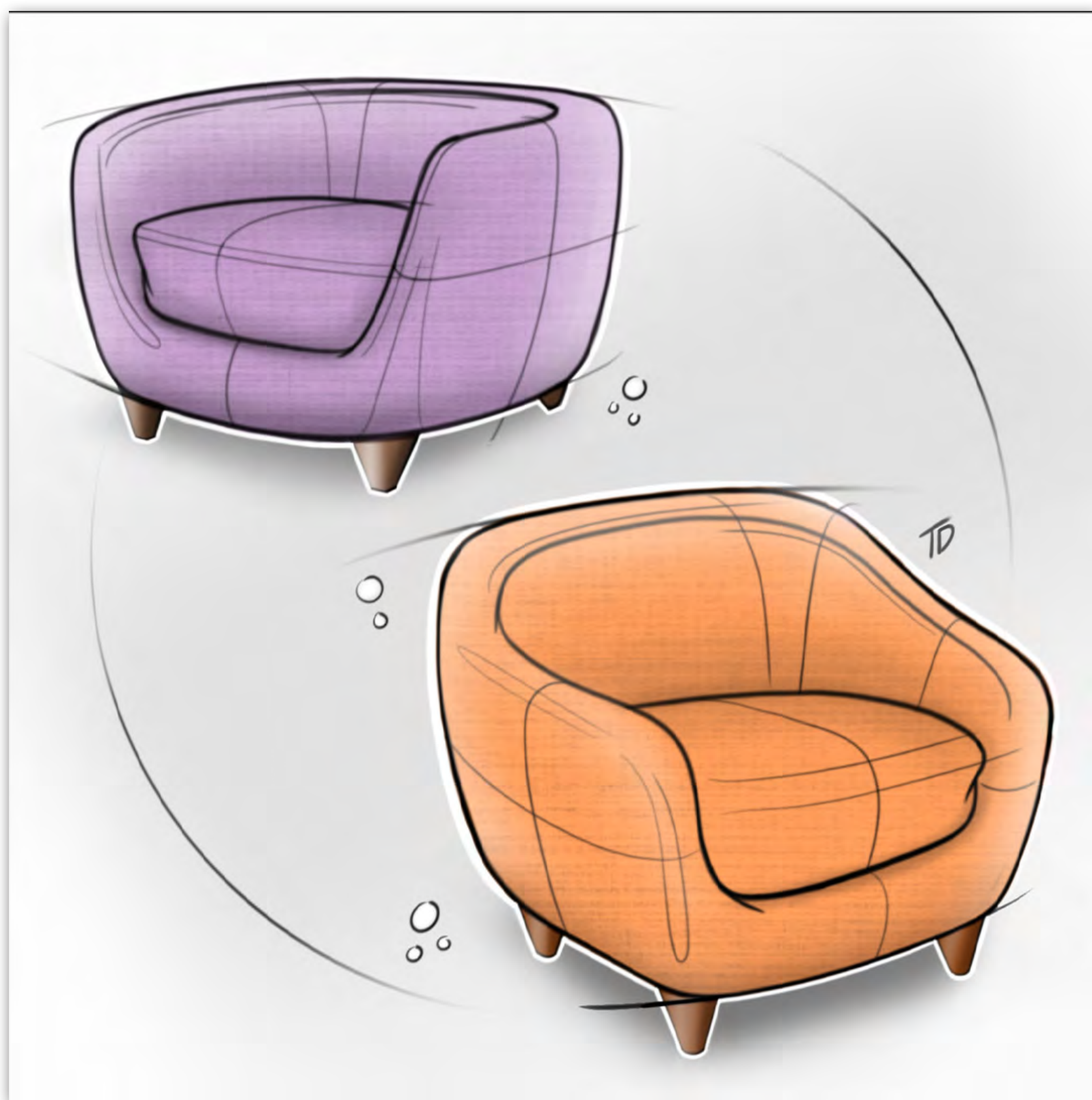


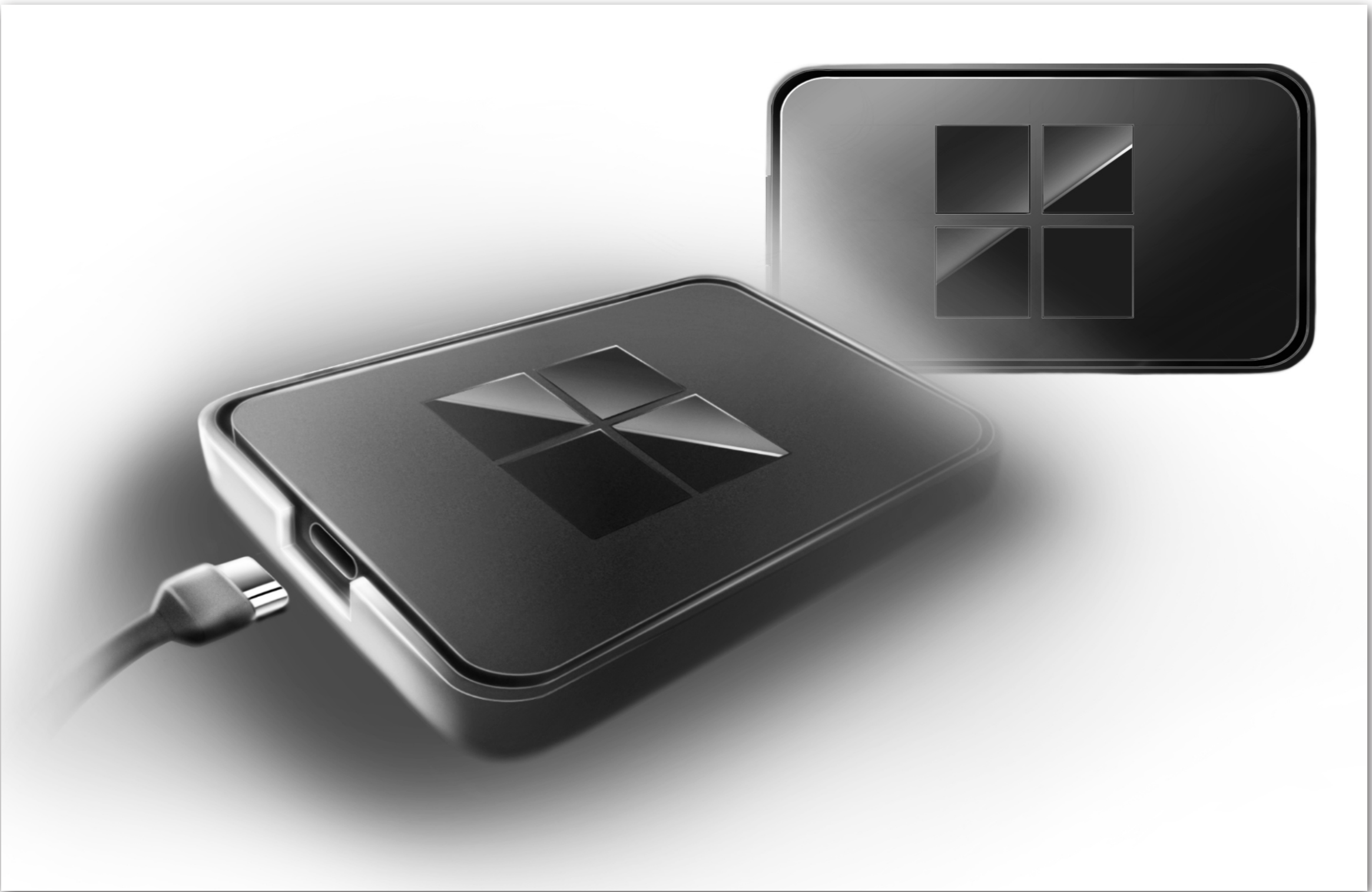
..... PEEL AND STICK PAD

..... POWER ON / BT CONTROL

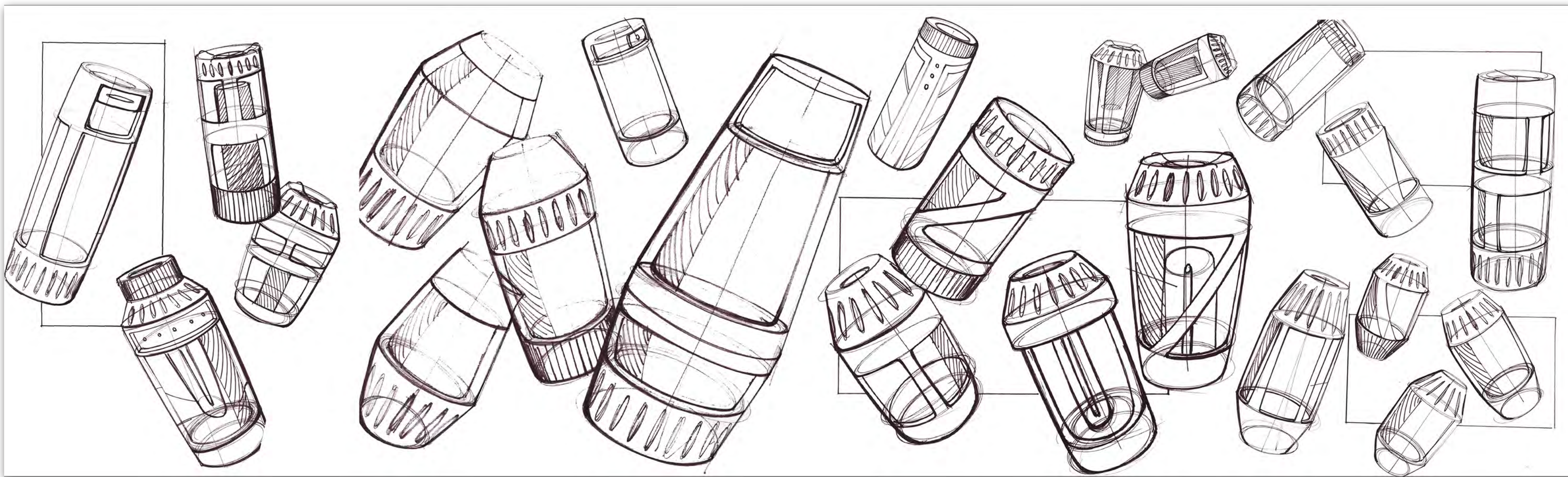
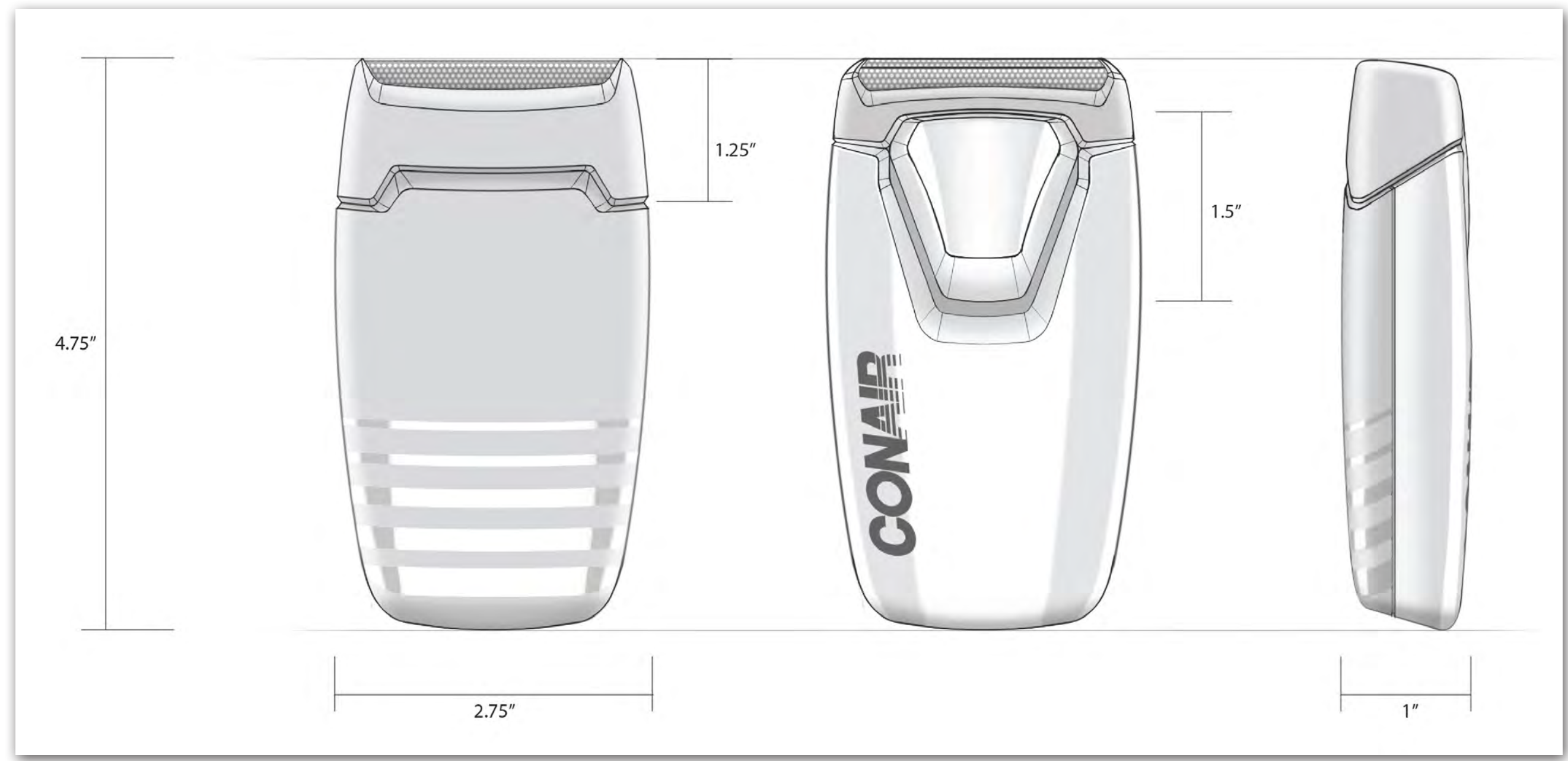
EXCITER SPEAKERS

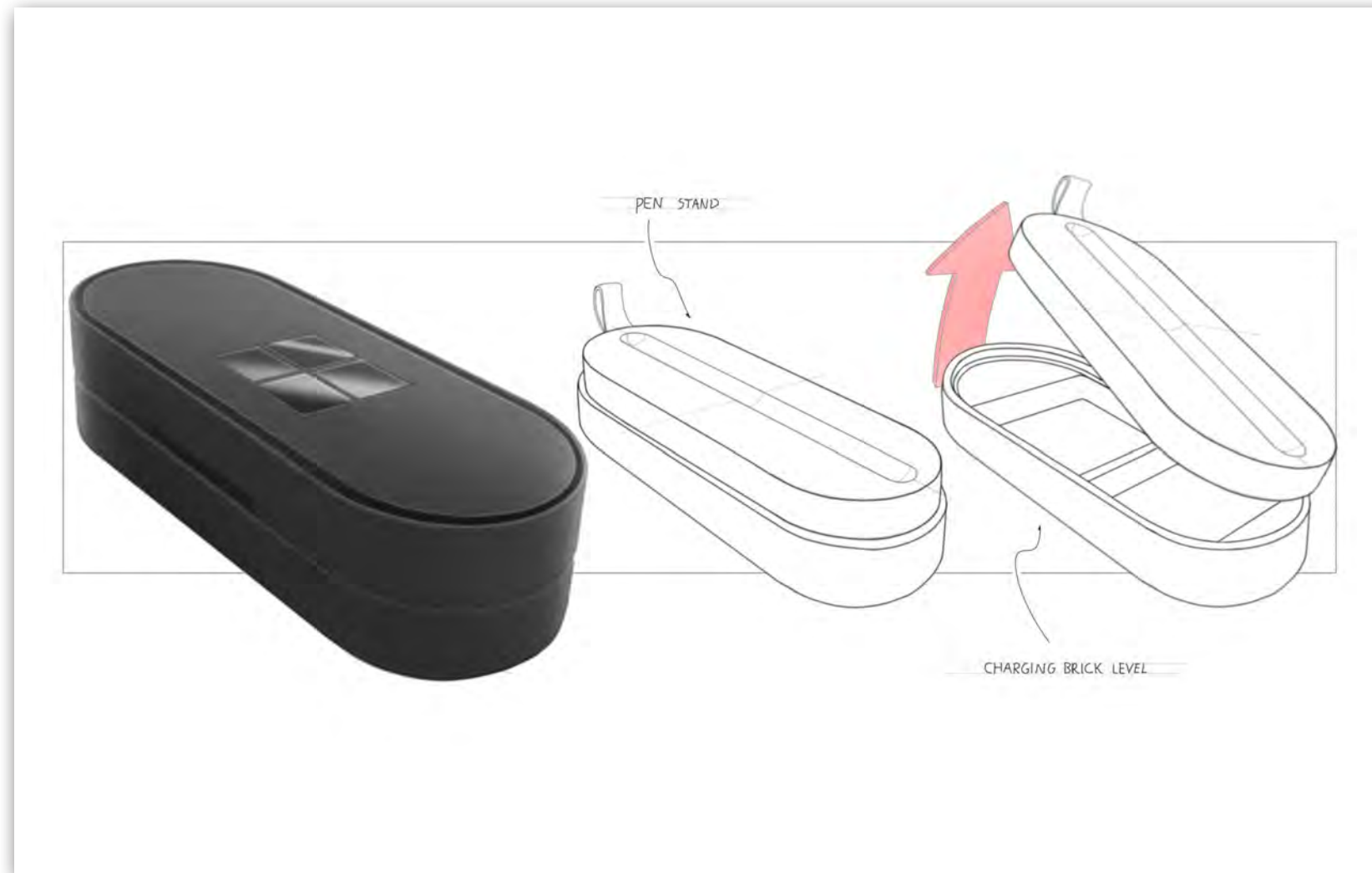
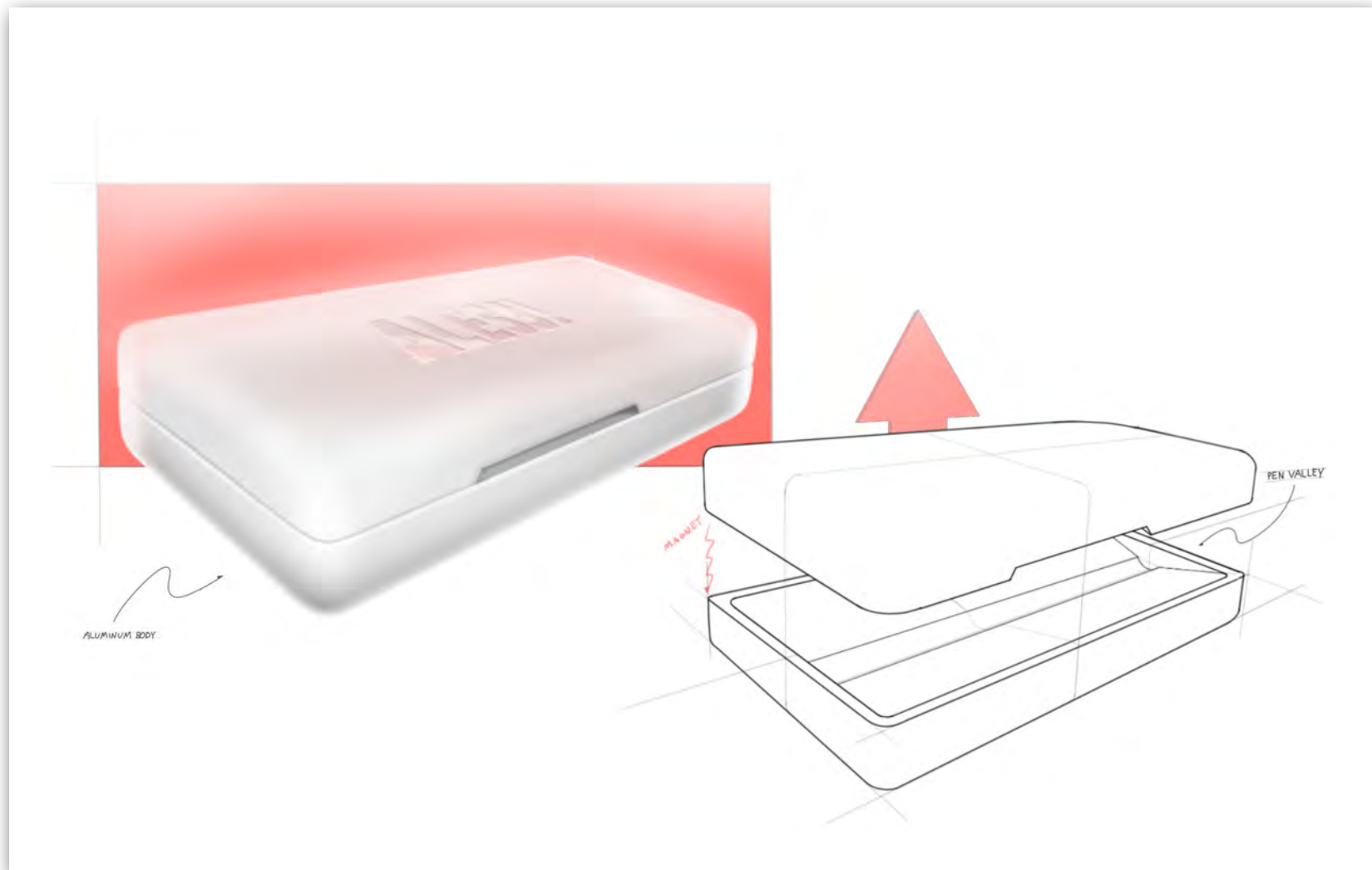
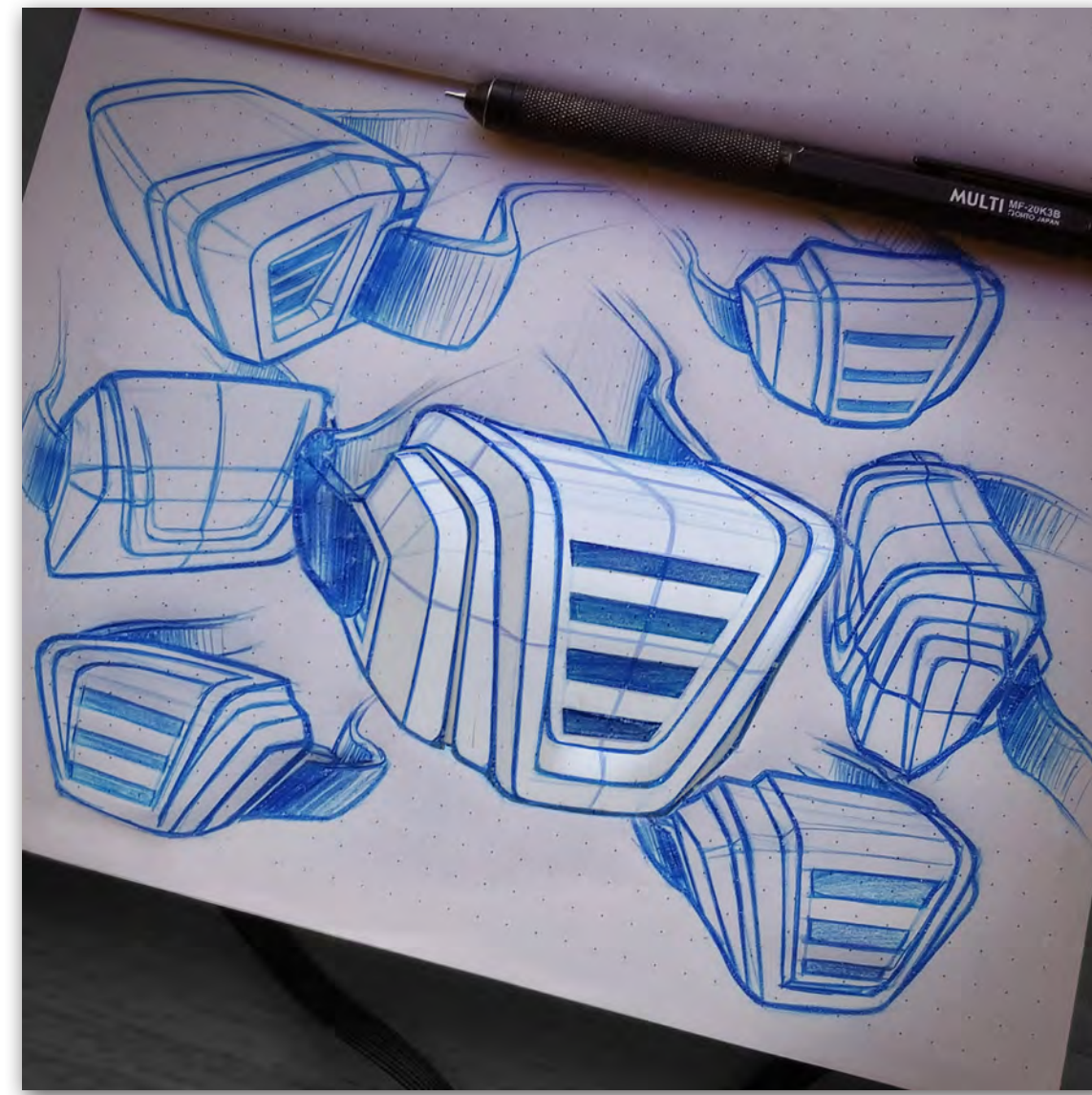
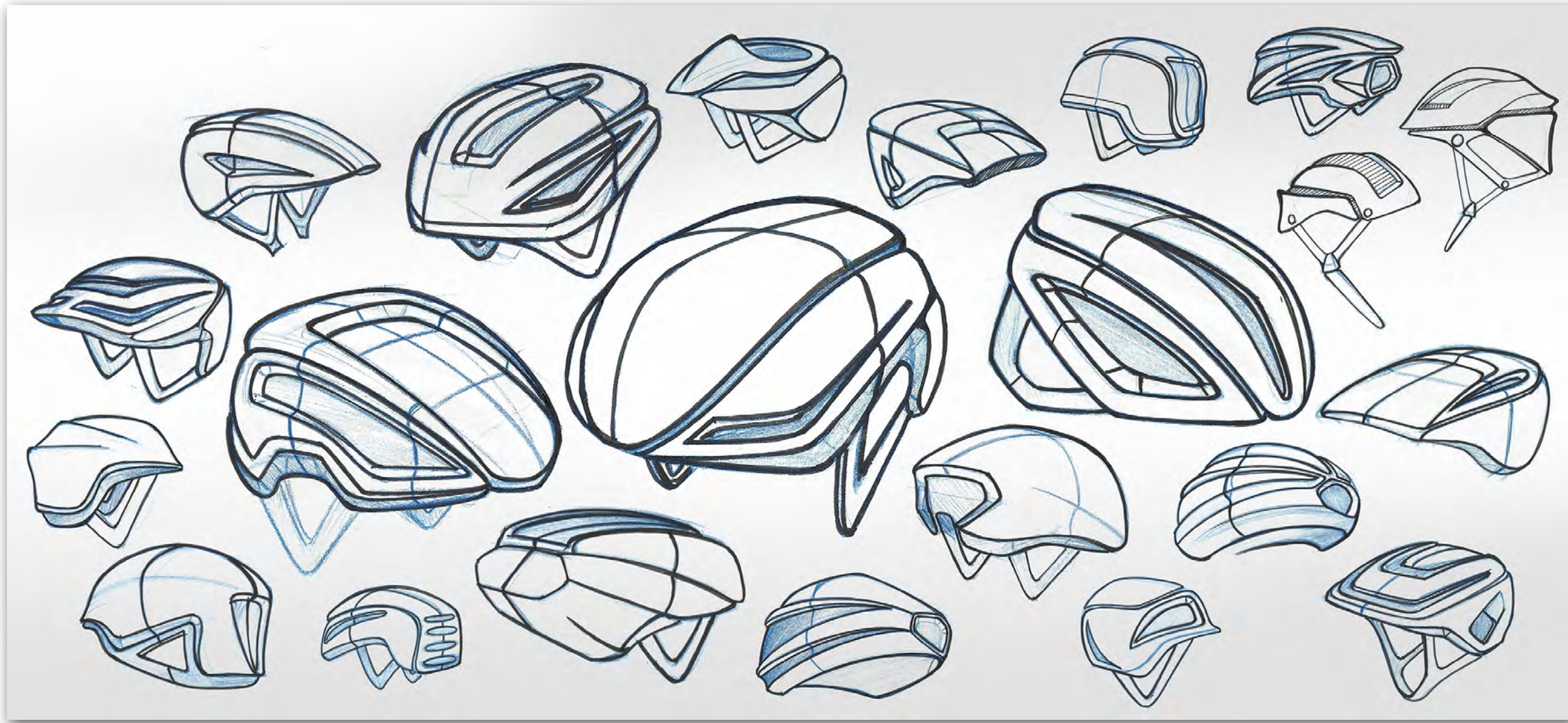
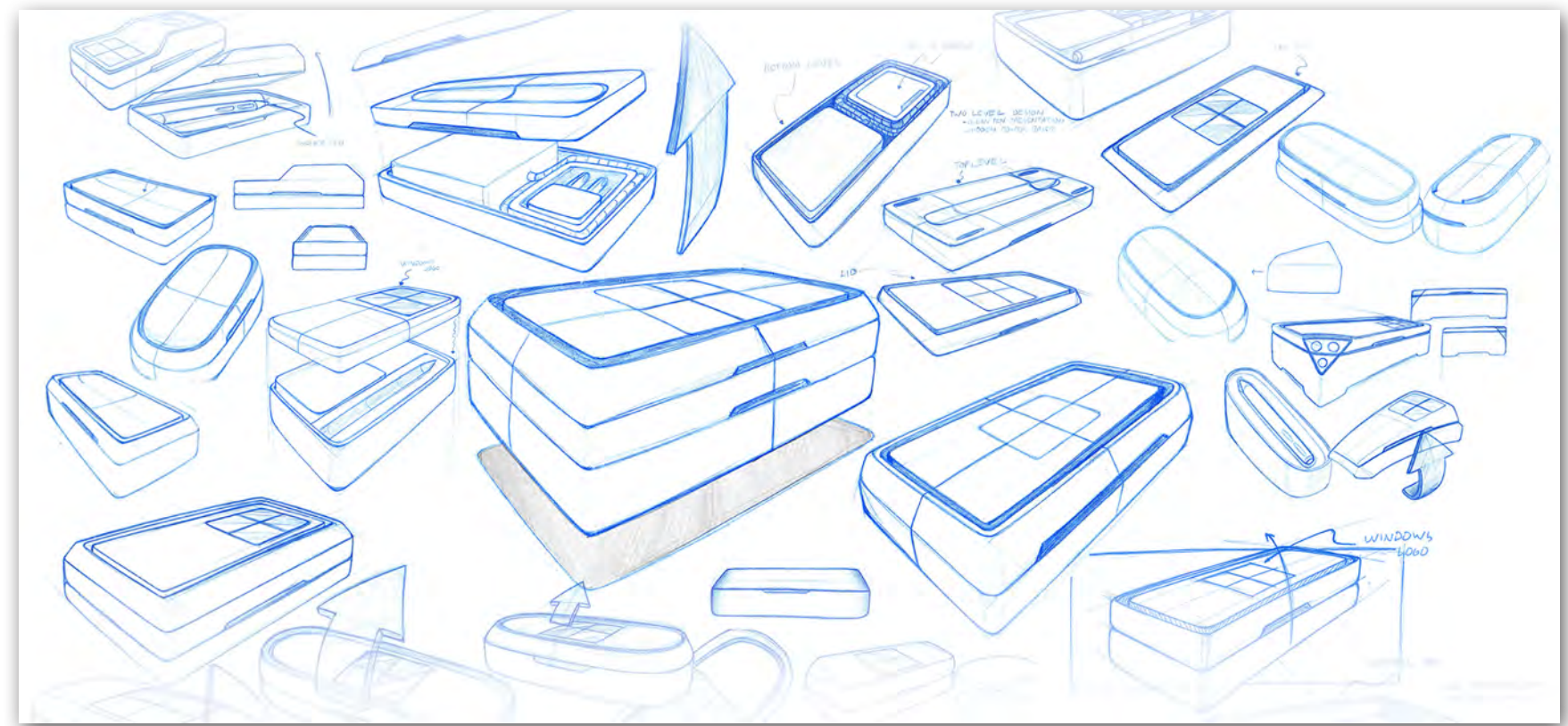
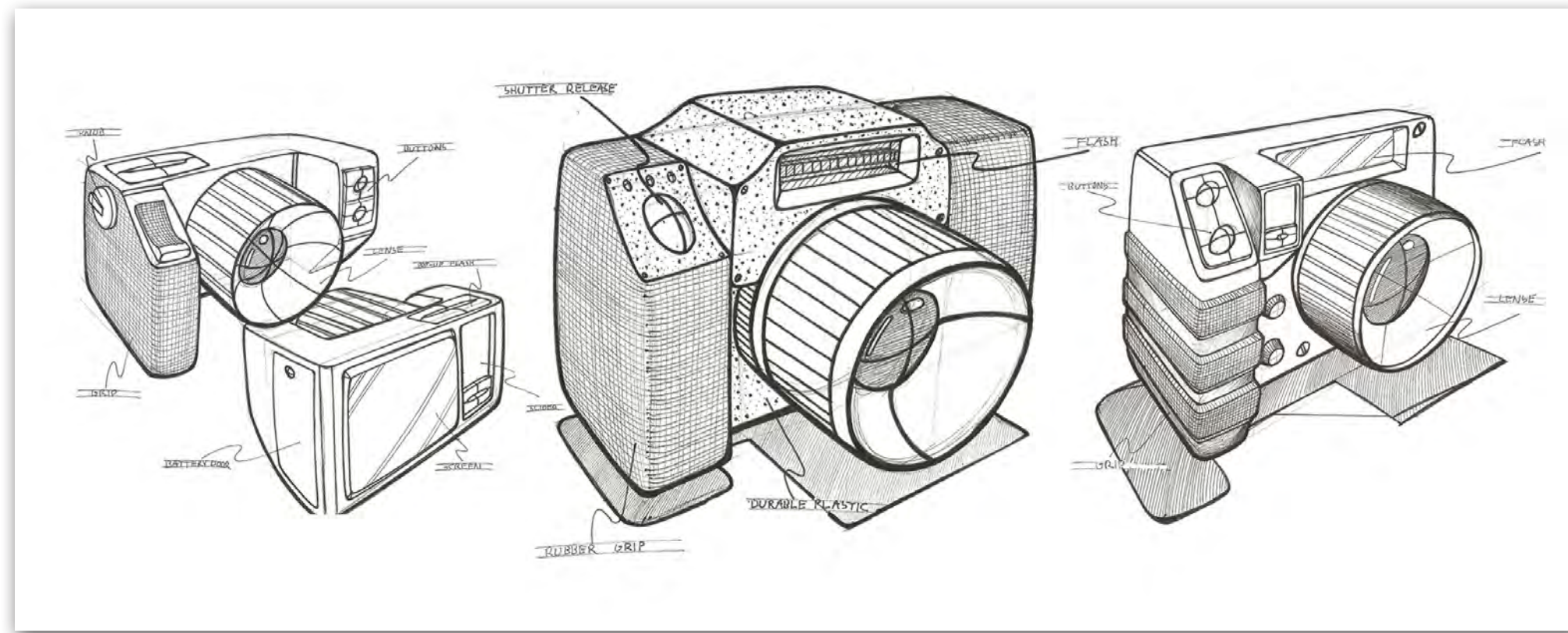
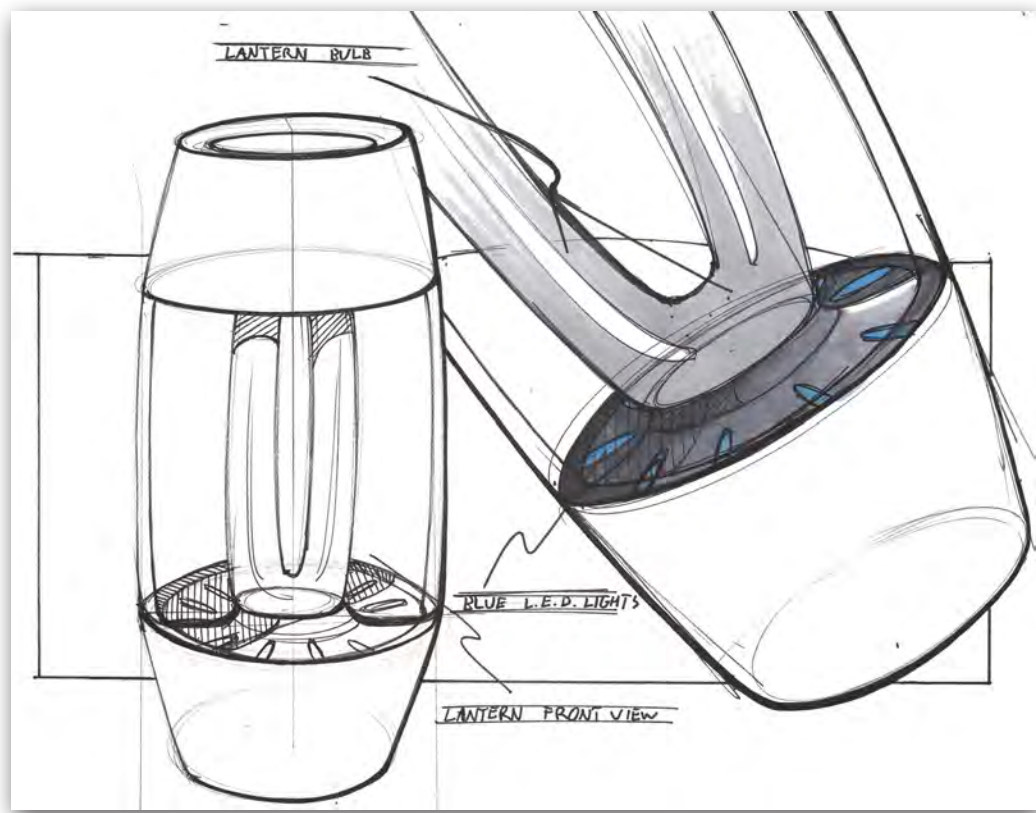


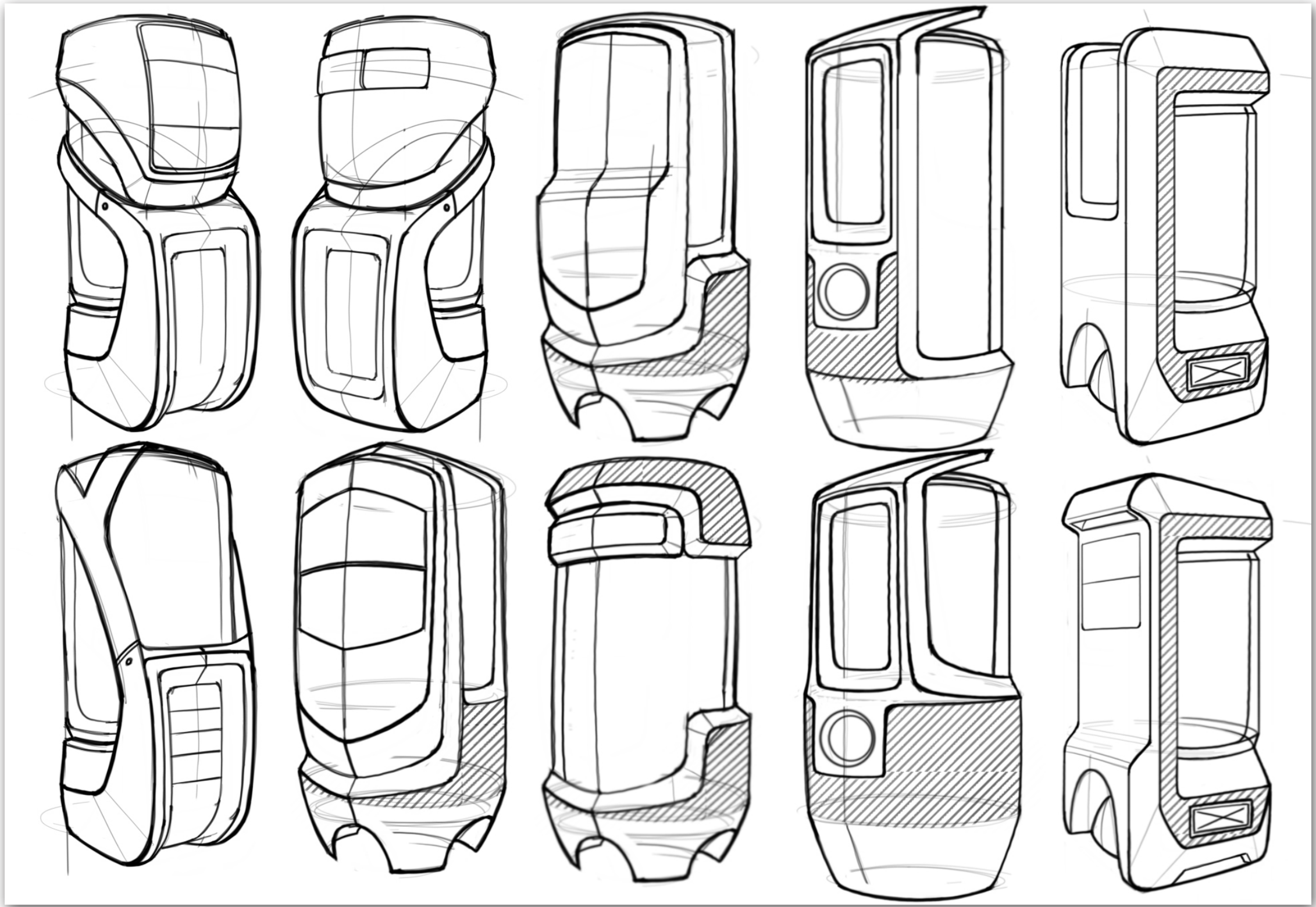
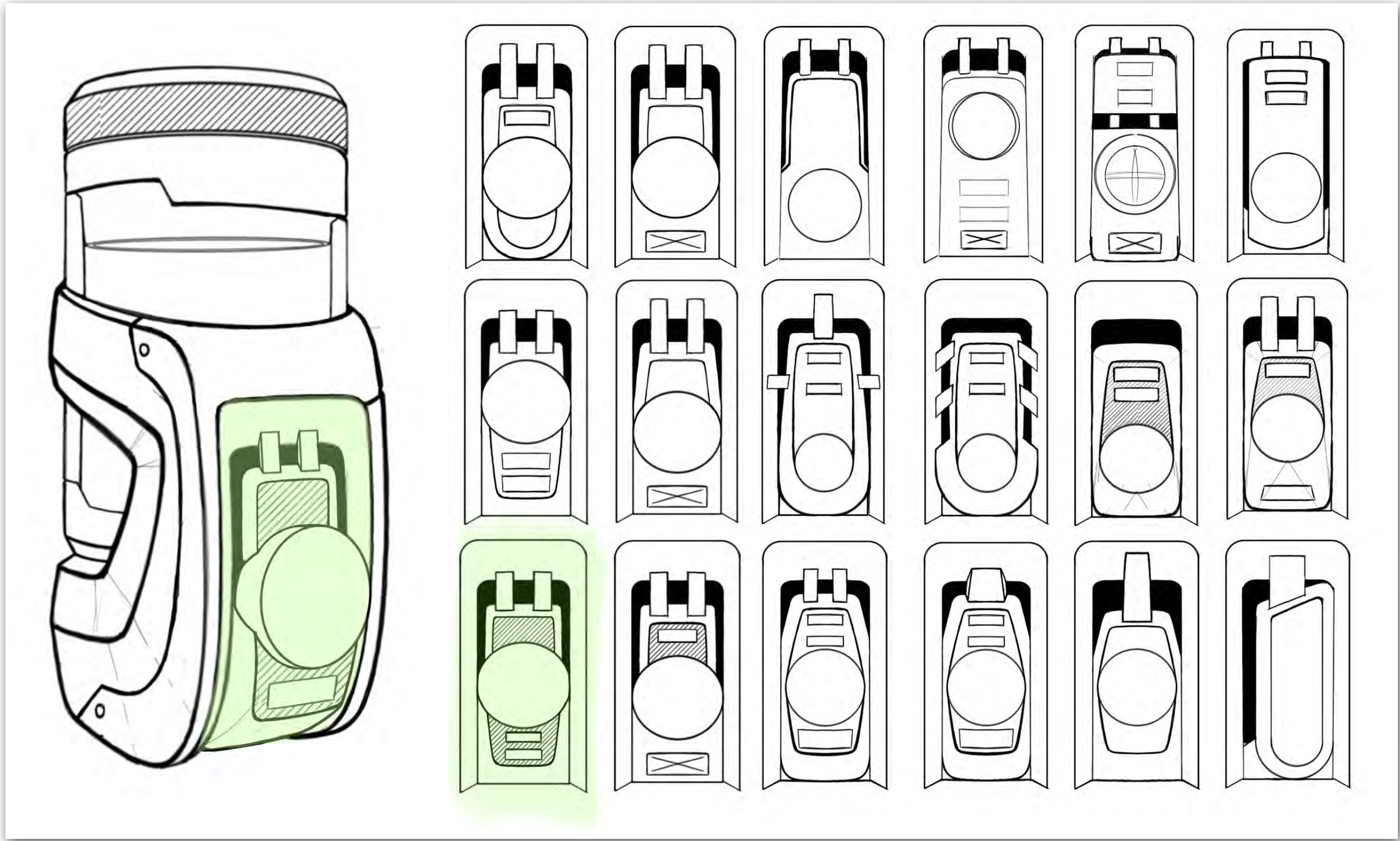
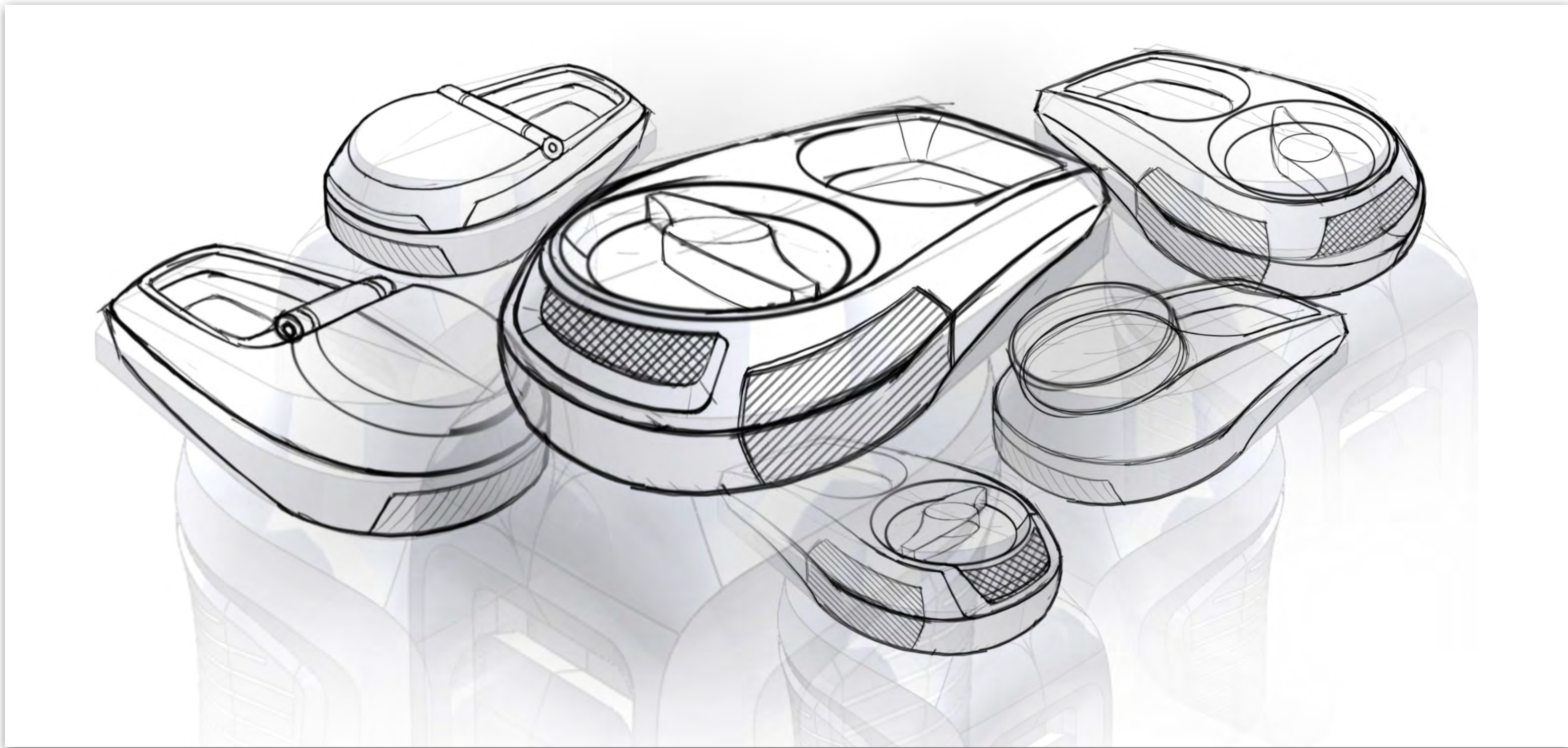












Thank you!

Troy Dunn

913 - 645 - 9448

troydunn92@gmail.com