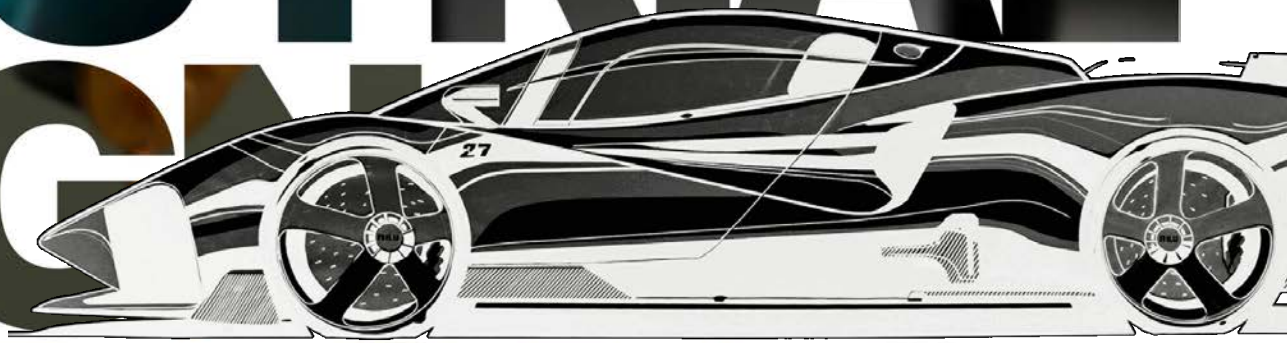
INDUSTRIAL DESIGN PORTFOLIO



"nilu 27", full-scale tape rendering

LEONARD PHILP

STUDY B.A. Industrial Design, HTW Berlin

BASED Berlin, Germany



LEONARD PHILP

I study Industrial Design at HTW Berlin and come to design from a business background, which shapes how I think about products: who uses them, how they are made and how they are sold. Work on Mercedes-Benz campaigns and a summer on the factory floor in Stuttgart sparked my interest in vehicles. Today I design both: mobility concepts and everyday products, and I work from first sketch and tape rendering through CAD to welded, working prototypes, never forgetting costs, planning and realisation.

EDUCATION

2024 – 28	B.A. Industrial Design HTW Berlin
2024	MBA studies, one semester BSP Business School Berlin
Fall 2023	Semester abroad, design minor San Francisco State University
2020 – 24	B.Sc. Int. Business Administration BSP Business School, Hamburg

INTERNATIONAL

2024	Certificate in Int. Business & Trade Greystone College, Vancouver
2019	Europe exchange program Warsaw, Poland
2019	Academic & career preparation CISS at Trinity College, Toronto

EXPERIENCE

2024 – 26	Working student, content management antoni GmbH, Berlin · Mercedes-Benz advertising
2023	Summer job Mercedes-Benz factory, Stuttgart
2023	Int. marketing & branding intern Kaufmeinticket, Amsterdam
2021	Marketing intern W&Z FinTech (Warburg Bank), Hamburg
2018	Intern IADC Int. Airport Design Consulting, Hamburg

TOOLS

Blender · Rhino · Fusion

Photoshop · Illustrator · InDesign

LANGUAGES

German	Native
English	Fluent

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3D MODELLING · RENDERING · LIGHT DESIGN

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02 **STEEL VEHICLE**

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03 **TABLEWARE**

USER RESEARCH · CAD · VACUUM FORMING

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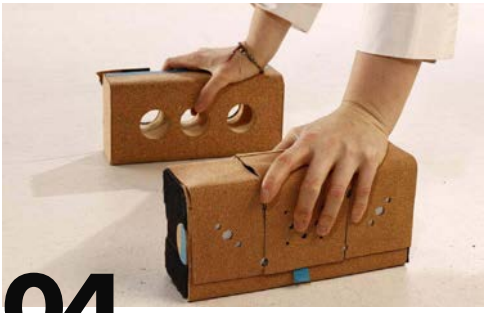

04 **HYBRID YOGA BOX**

WOOD WORKSHOP · CNC MILLING · CORK

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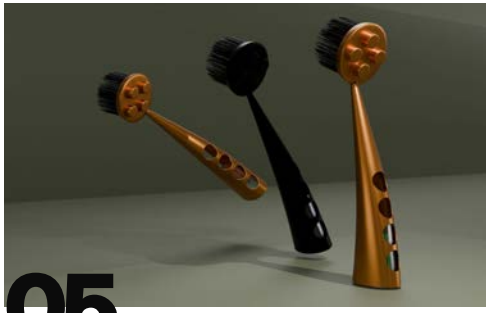

05 **BRUSH_D**

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06 **MIXED PROJECTS**

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07 **SKETCH GALLERY**

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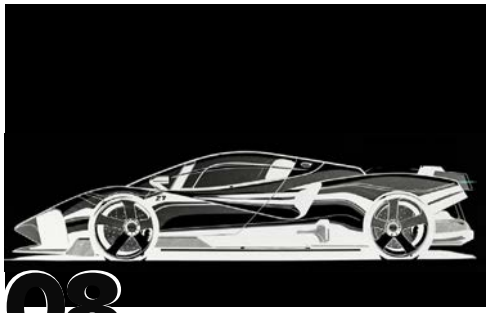


08 **NILU 27**

TAPE RENDERING · TEAM PROJECT

HTW BERLIN · P.22

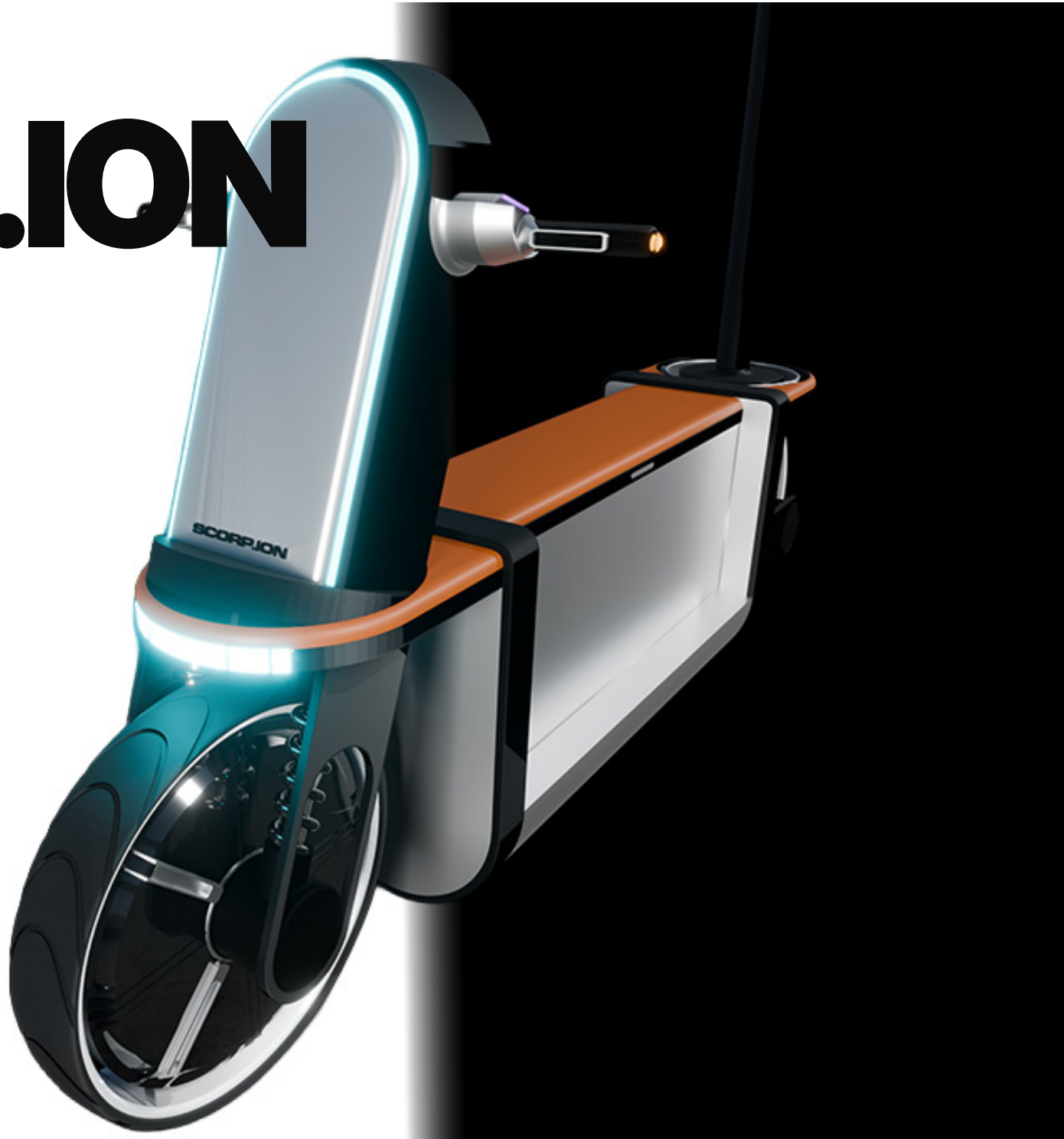
01 ELECTRIC MOPED

SCORP.ION

An electric moped for the city that needs no big battery: its mast connects to the tram's overhead line and draws power straight from the existing network.

WHERE	HTW Berlin · Winter 2025/26
PROJECT	Main project "Battery not included"
SUPERVISION	Dipl.-Ing. Lieke Ypma
DURATION	5 months
METHODS	3D modelling · Rendering
SOFTWARE	Blender Rhino

The brief: an urban vehicle that blends minimalist engineering with technological intelligence and becomes a *sleek lifestyle object*, with effortless speed and practical storage for the city.



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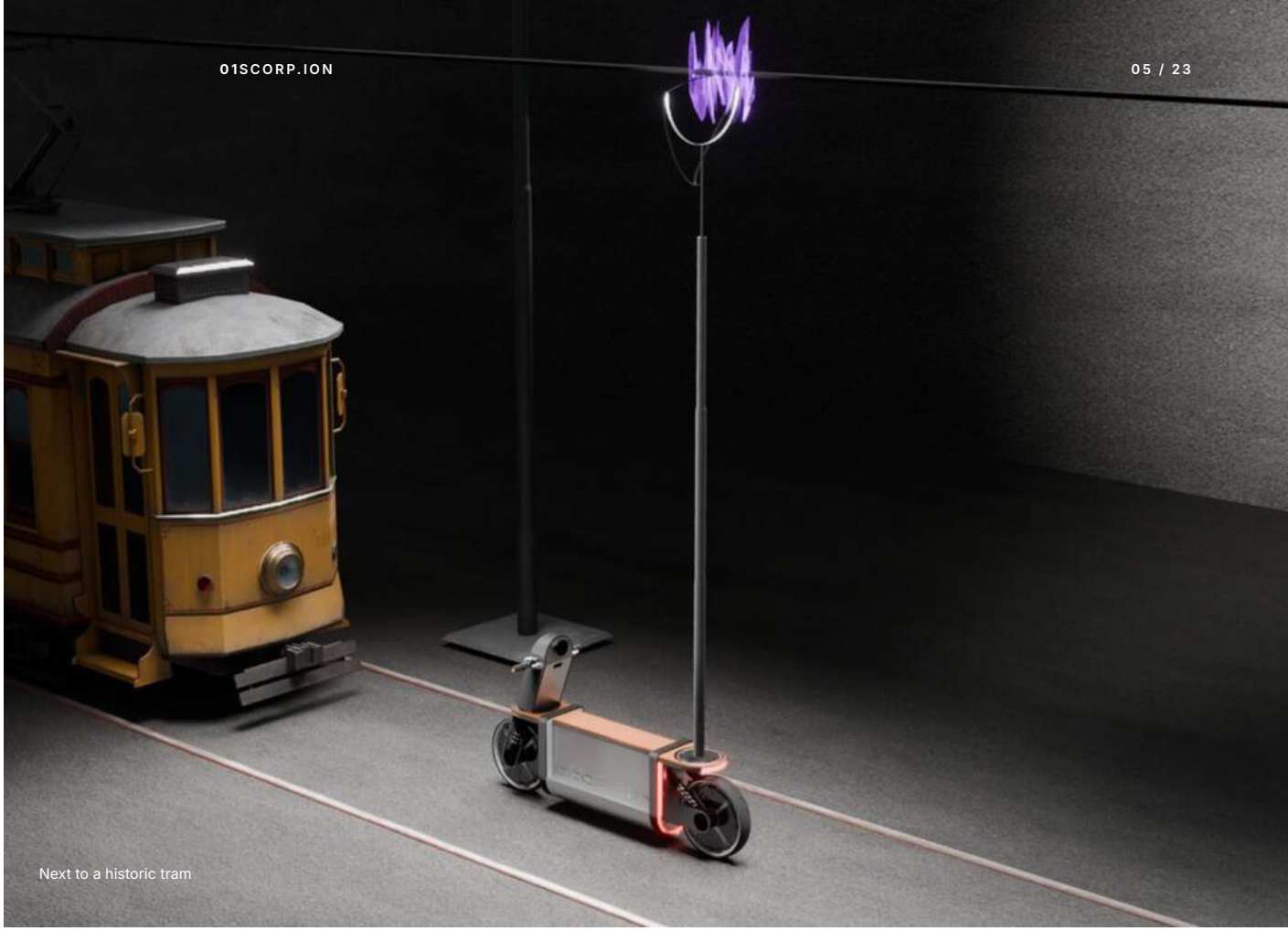
1.1 CONCEPT & FRAME

BATTERY NOT INCLUDED

“Combine the power of public transport with the freedom of individual mobility.”

Scorp.ion is my main project for the brief “Battery not included”. Its guiding line: **the most sustainable way to use a battery is not to use one at all.** Instead of a large battery, Scorp.ion connects to the tram’s overhead line through its raised mast; a small buffer battery bridges the stretches without a line.

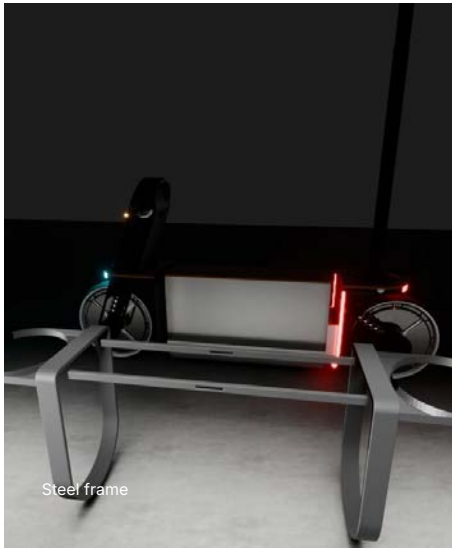
The **steel frame** defines the whole design, and it is where the name comes from: Scorp.ion is named after the scorpion, which returns as the logo on the handlebar switch and as the sculpture in the campaign renders.



Next to a historic tram



Under the overhead line



Steel frame



Scorpion sculpture

1.2 SILHOUETTE

ONE LINE, ONE VOLUME



Side view of the final design: a long, flat deck that seats two people, over a central storage box, framed by the two wheels. Light bands at front and rear make the vehicle readable at night.

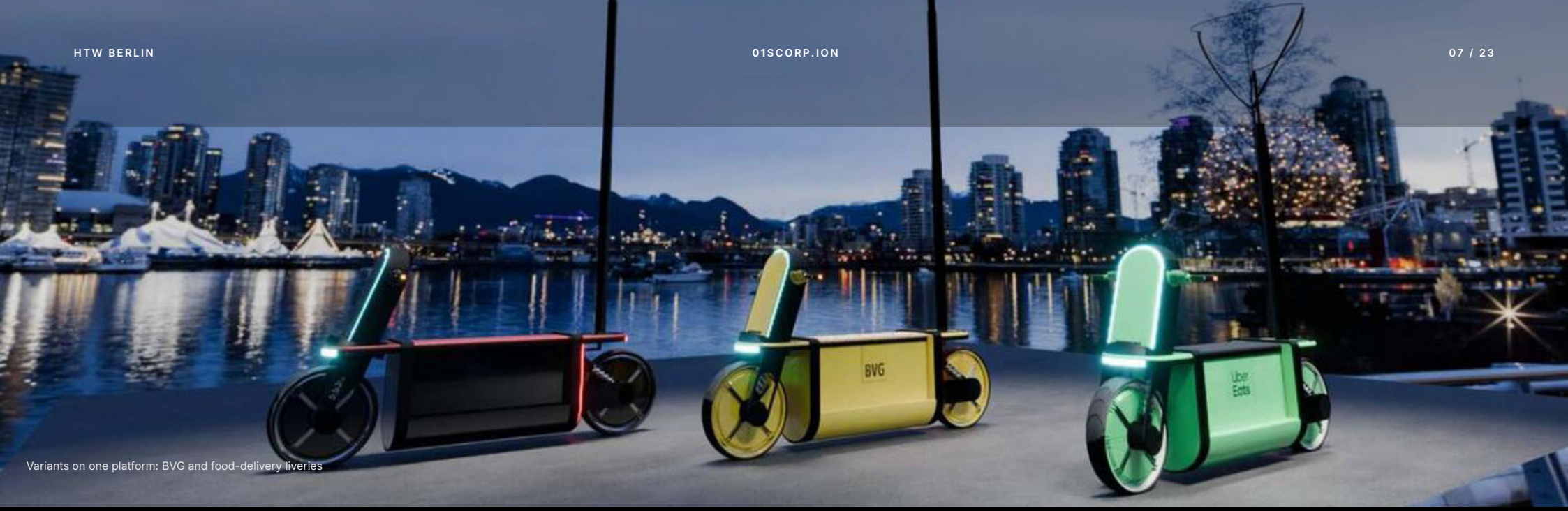
DECK

BAR-END INDICATOR

REAR LIGHT BAND

INTEGRATED STORAGE BOX

ELECTRIC HUB MOTOR



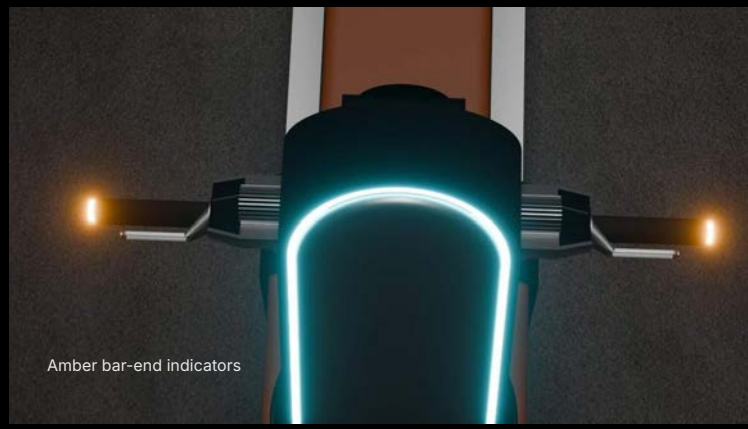
Variants on one platform: BVG and food-delivery liveries



Front: cyan light ring



Rear: light band around the wheel



Amber bar-end indicators

1.3 LIGHT SIGNATURE

RECOGNISABLE AT NIGHT

A cyan ring at the front, a red band around the rear wheel as brake light and amber bar-end indicators. The same platform takes different liveries, e.g. for Berlin's BVG or food couriers.

1.4 MAST & DETAILS

PLUGGED INTO THE LINE

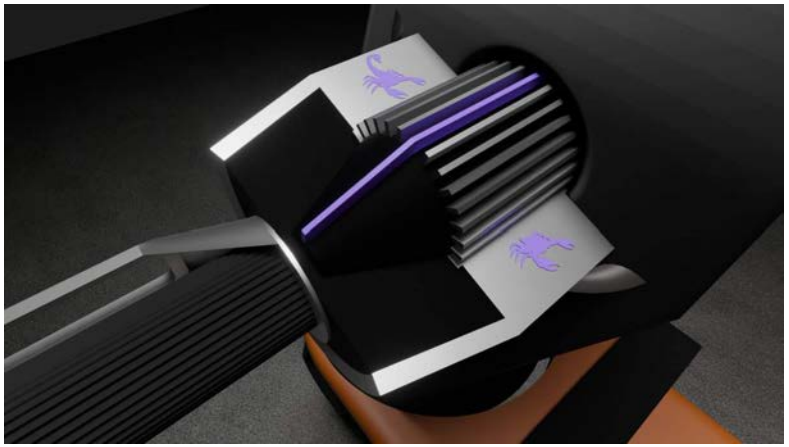
The raised mast is the connection to the tram's overhead line. It sits in a lit ring at the end of the seat on a **flexible mount**: the inner ring tilts, so the mast can follow the line while the moped moves within its lane. On the handlebar, the switch carries the scorpion logo and a small round display shows speed and the charge of the buffer battery.



Flexible mast mount: the inner ring tilts with the line



Mast in the lit ring



Handlebar switch with scorpion logo



Display: speed



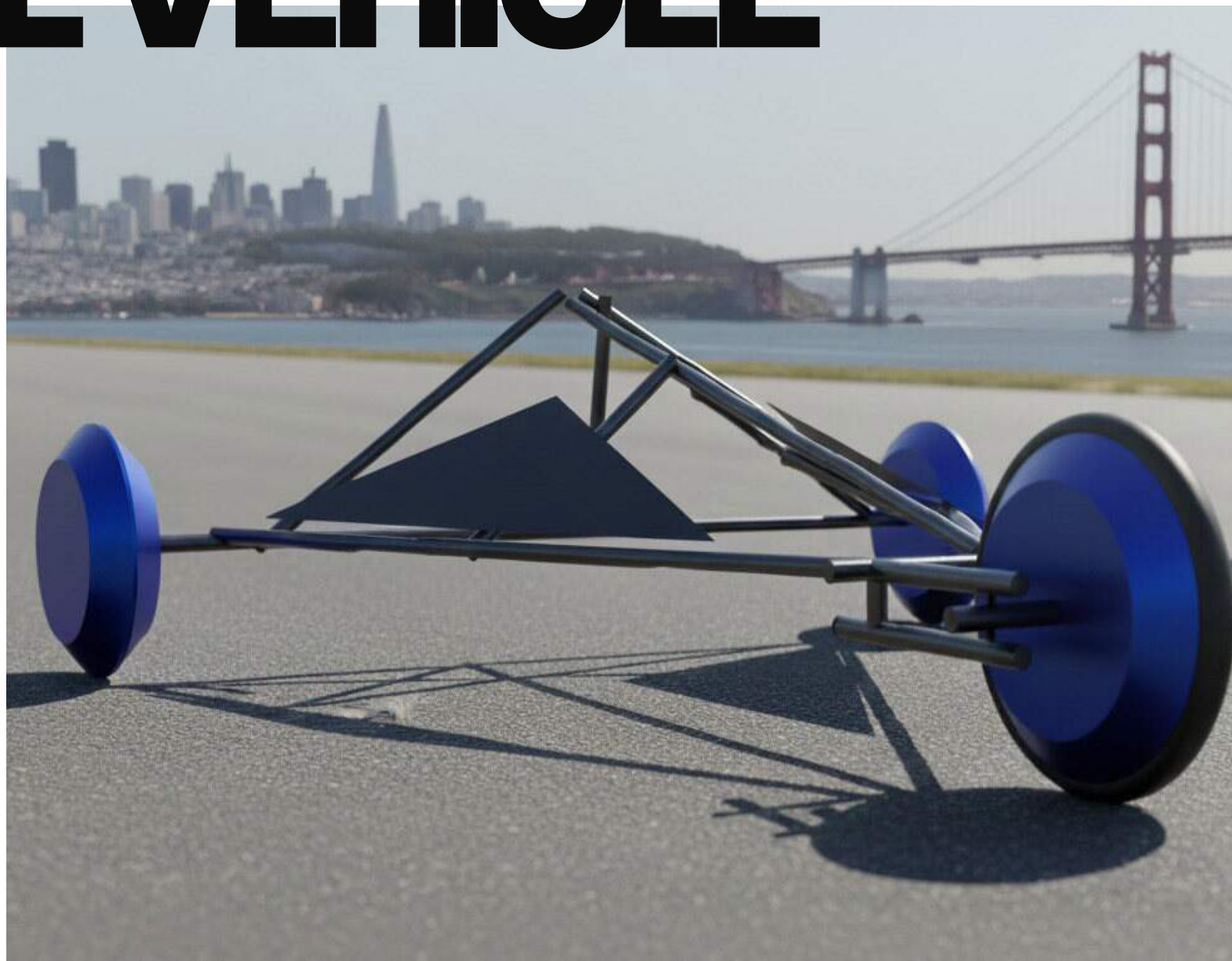
Display: buffer battery

02 CONCEPT TO WORKING VEHICLE

STEEL VEHICLE

A “Gravity Racer”: an unpowered vehicle in which every part, from frame to axle, had to be made of steel.

WHERE	San Francisco State University
DURATION	3 weeks
METHODS	Sketching · CAD · Mock-ups · Welding
SOFTWARE	Fusion

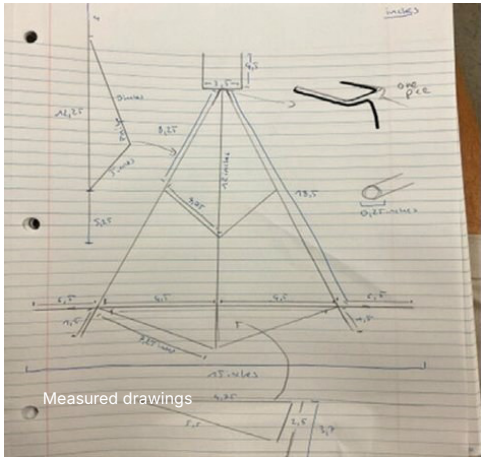


SAN FRANCISCO STATE UNIVERSITY

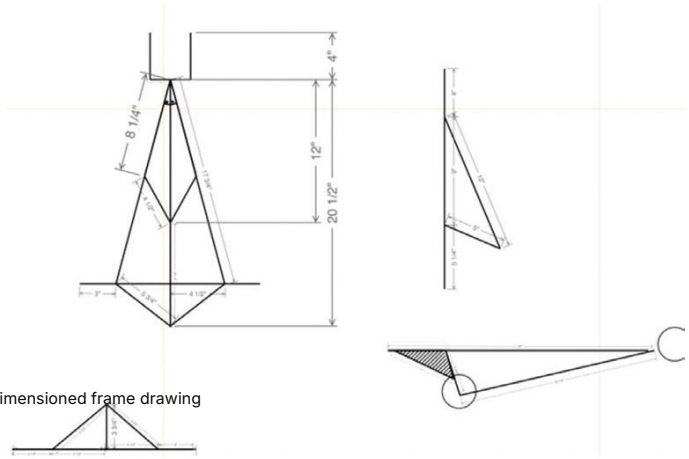
2.1 PROCESS

FROM DRAWING TO WELDED FRAME

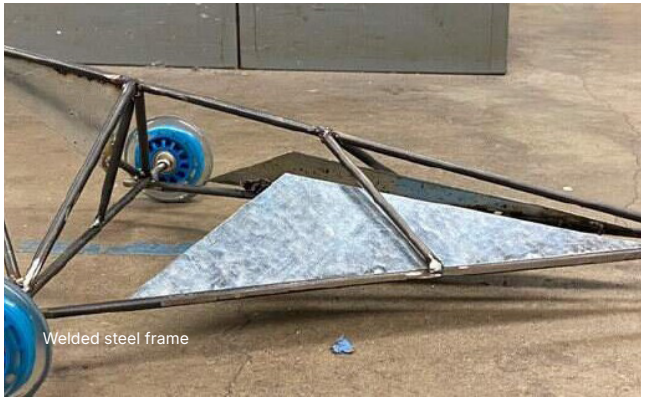
Brief: a vehicle that travels *as far and as straight as possible*, built only from steel. Measured drawings, a CAD model and wood-and-dowel mock-ups tested proportions before any steel was cut; the frame was then welded in the SFSU workshop.



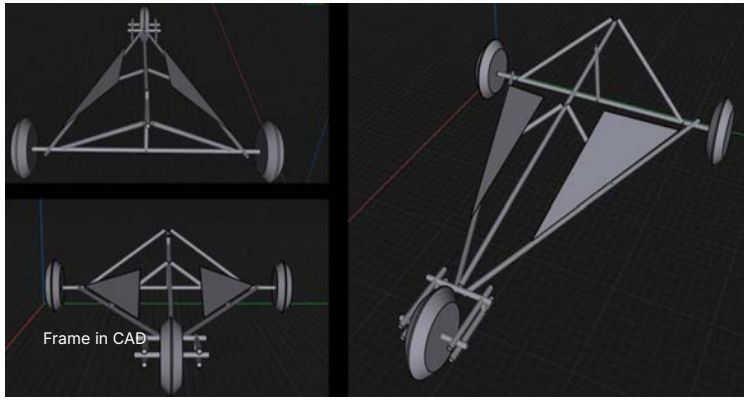
Measured drawings



Dimensioned frame drawing



Welded steel frame



Frame in CAD



Welding in the SFSU workshop



Wood & dowel mock-up

TABLEWARE

A robust lunch set designed around the day of a construction worker: durable, easy to carry and as tough-looking as the tools around it.

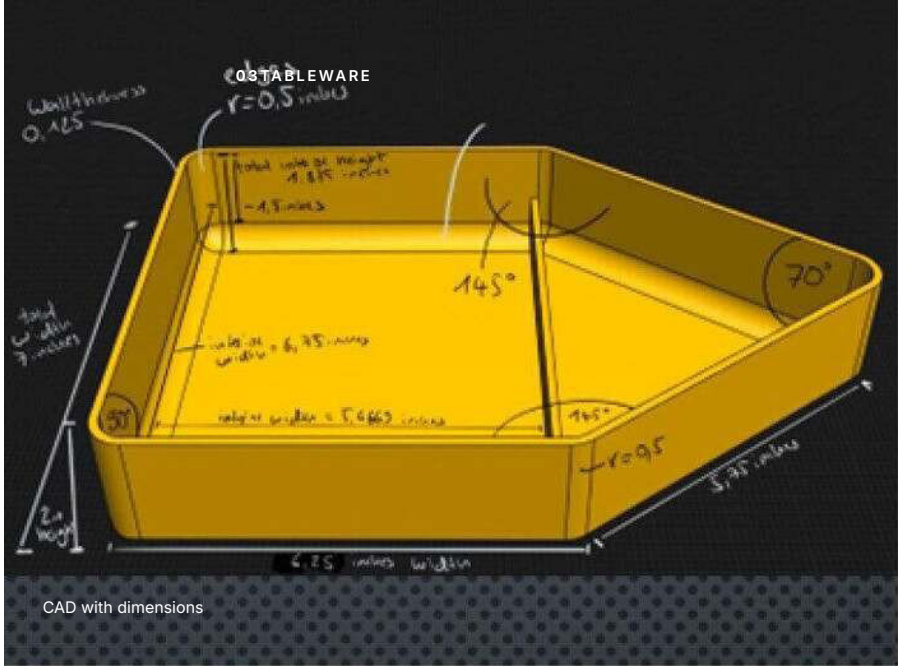
WHERE	San Francisco State University
DURATION	4 weeks
METHODS	Research · Sketching · CAD · Vacuum forming
SOFTWARE	Fusion



3.1 PROCESS

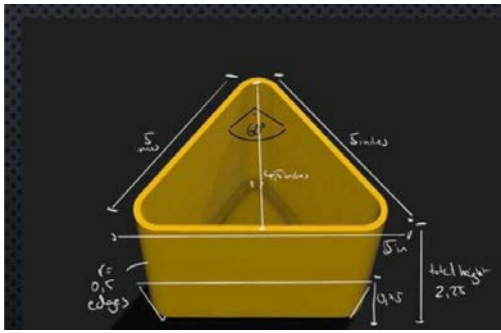
MOULDED IN SAFETY YELLOW

The project started from a persona: Bob, a construction worker whose lunch break happens on the tailgate of a pick-up. Sketches tested stacking, grip and size; the final shapes were modelled in CAD, milled as wooden moulds, vacuum-formed and spray-finished in safety yellow.



CAD with dimensions







Sketches & mood



Vacuum forming



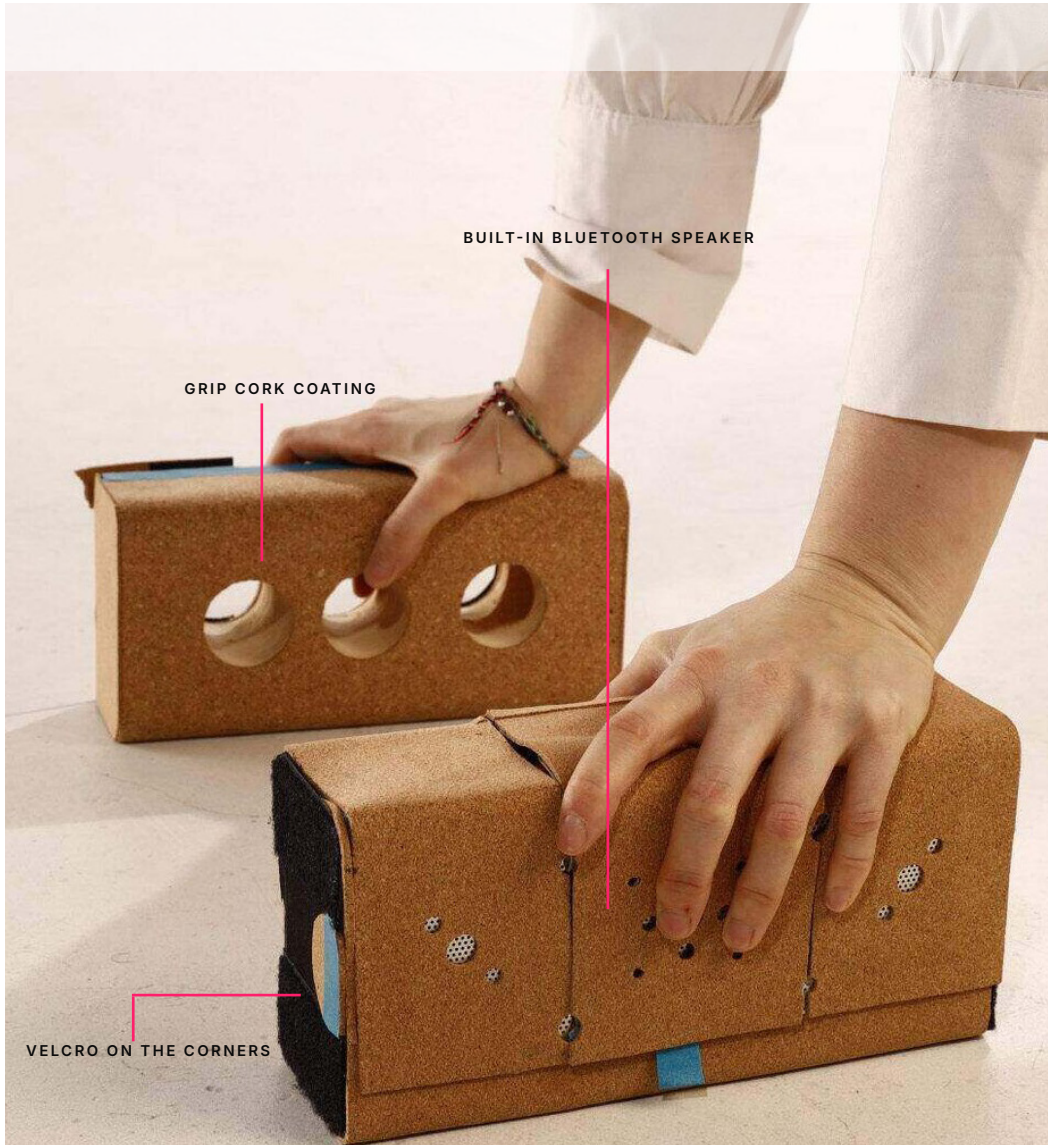
Spray finish

HYBRID YOGA BOX

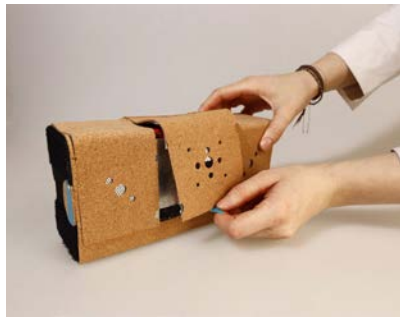
A dual-use yoga block that merges natural craftsmanship with technology.

WHERE	HTW Berlin
DURATION	1 month
MATERIALS	Wood · Cork · Electronics
METHODS	CNC milling · Model making

A CNC-milled wooden core wrapped in high-grip cork houses a Bluetooth speaker; a companion box stores a water bottle, and Velcro snaps both units together.









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BRUSH_D

The modular dish brush: a kitchen accessory worth leaving out, with an integrated soap tank, replaceable heads and its own drying stand.

WHERE	HTW Berlin, Prof. S. Feucht
PROJECT	BBB, Berliner Besen und Bürsten
SEMESTER	Summer 2026
DURATION	1.5 months
SOFTWARE	Rhino Blender



Three versions, one modular system

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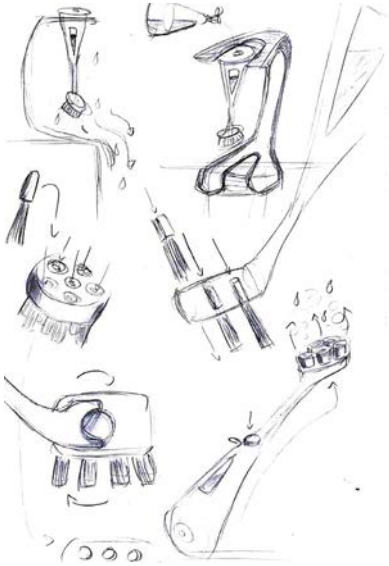
5.1 FEATURES

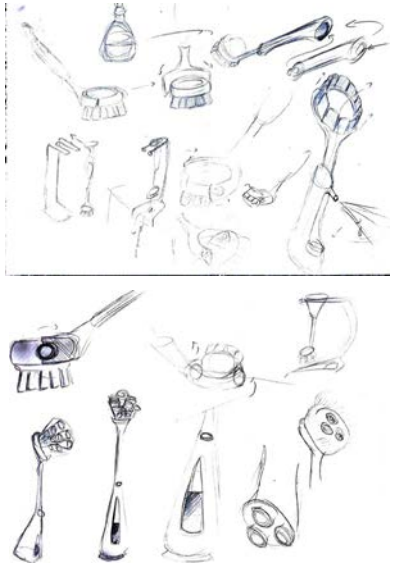
THREE IDEAS IN ONE OBJECT

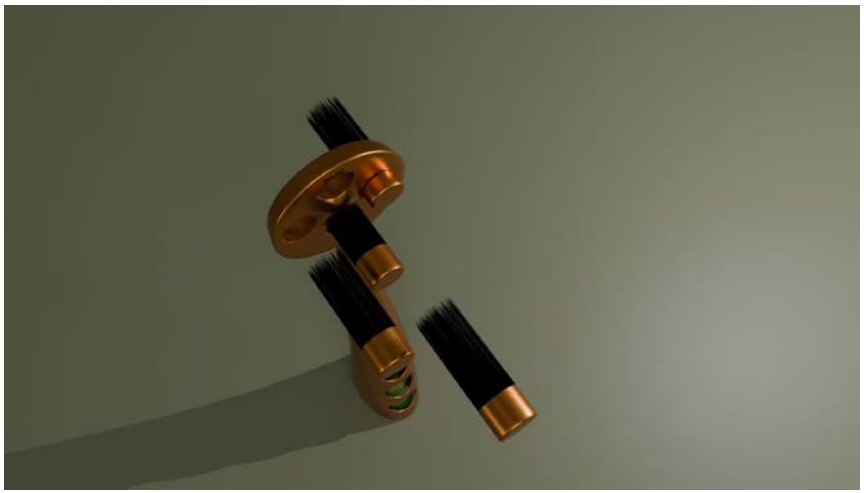


01 INTEGRATED SOAP DISPENSER

A detergent tank in the handle replaces the plastic bottle. Round portholes show the fill level, and a button releases just the right amount of soap.

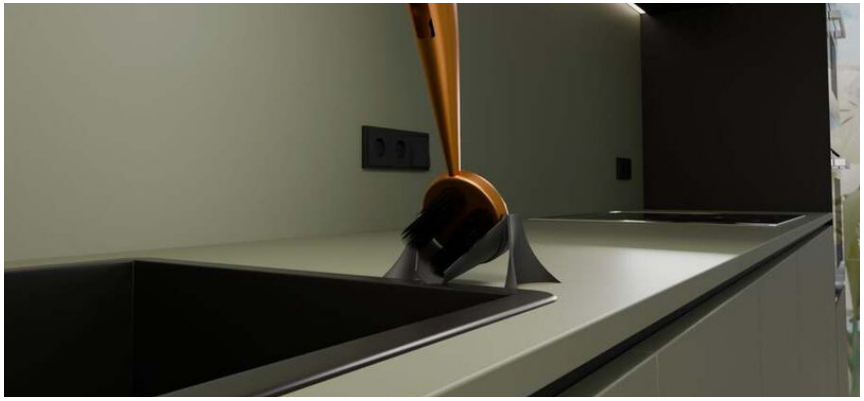






02 MODULAR HEADS

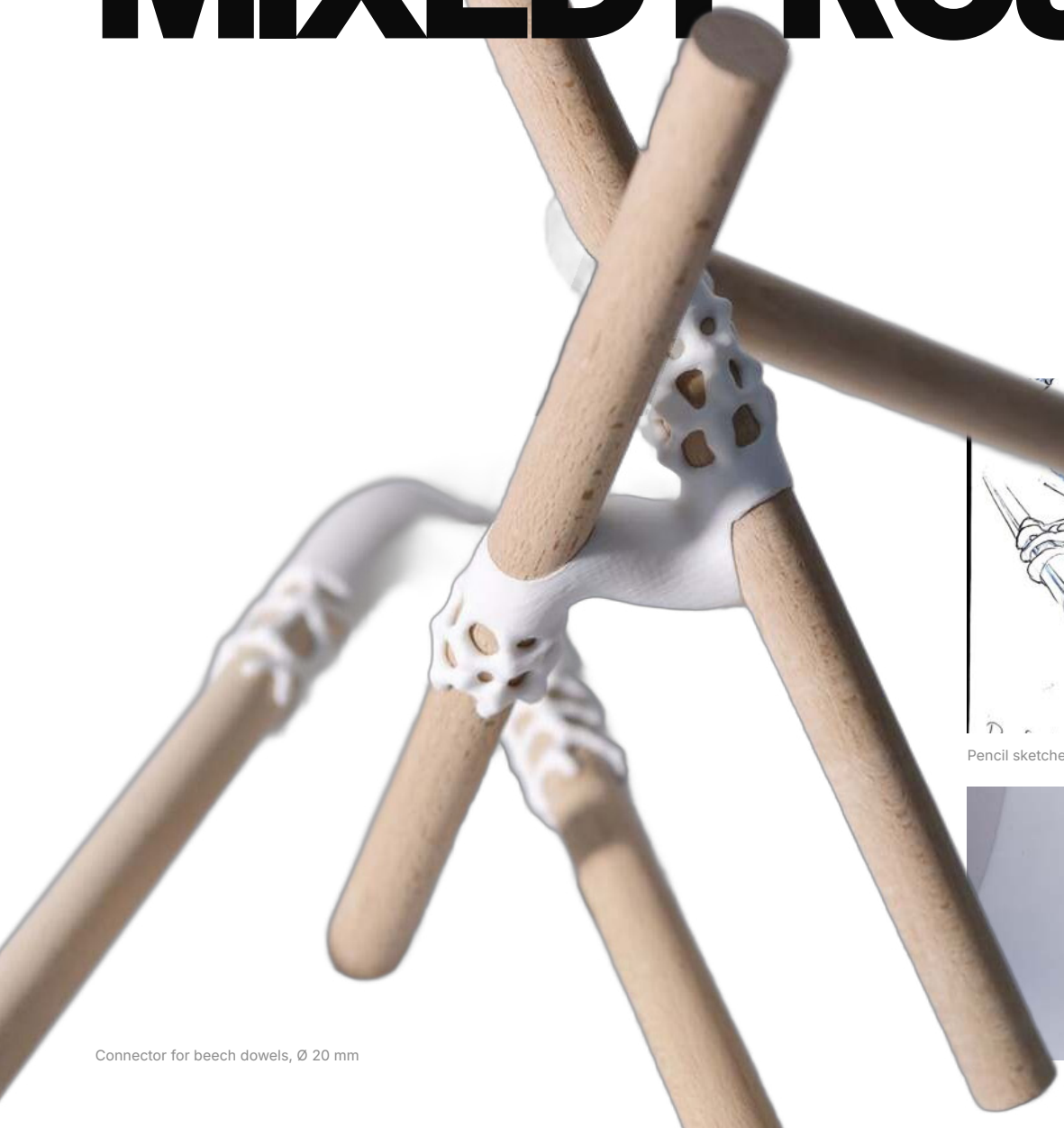
Individually replaceable brush heads snap into place, so the handle lasts and only the worn part is changed.



03 SMART DRYING STAND

The stand holds the brush upside down, protects the bristles and lets water drain straight into the sink.

MIXED PROJECTS



Connector for beech dowels, Ø 20 mm

6.1 DESIGN BASICS 3

PERFECT CONNECTIONS

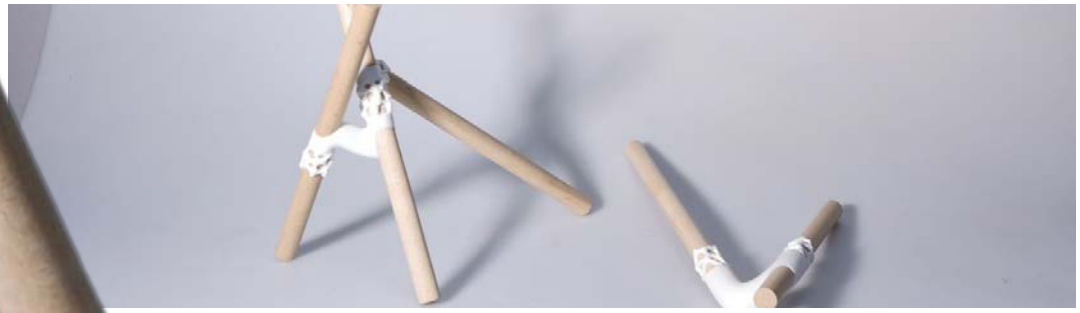
A connector for beech dowels, generated in Grasshopper to wrap the dowels with only the material it needs. The result is an organic, grown-looking lattice, in versions for two and three dowels.



Pencil sketches



Marker sketches



Variants for two and three dowels

6.2 SUSTAINABLE DESIGN 2

PRODUCT ANALYSIS: DETAIL SANDER

With Konstantin Weilinger. Every part was analysed for repairability, materials and manufacturing, with the findings laser-engraved into the frame.



Findings engraved into the frame



Two boards with the disassembled sander



Vacuum-formed inlay



Model with cocktail glass

6.3 DESIGN BASICS 3

YELLOW SUPERPRESS

A mechanical citrus press for professional bars. Instead of pressing down, it presses *sideways*, so lemons are squeezed with much less force: one-handed and without electricity. The glass stands directly beneath the press for clean, fast work, and a small inlet holds a second glass for seeds and pulp. Sketches explored containers, cones and stools; three CAD variants traced the form from a small table on legs to one continuous curved surface.

Prof. Franziska Schuh · Dipl.-Des. Peggy Truxa · Prof. Jan Vietze · Summer 2025



Rendering at the bar counter

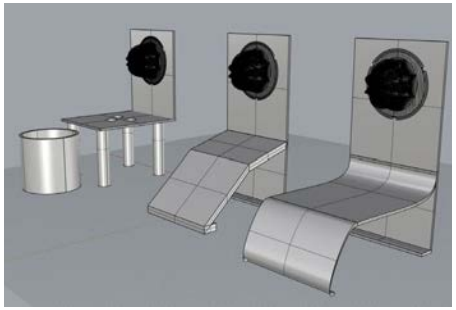


Sketches





Kitchen



Three CAD variants

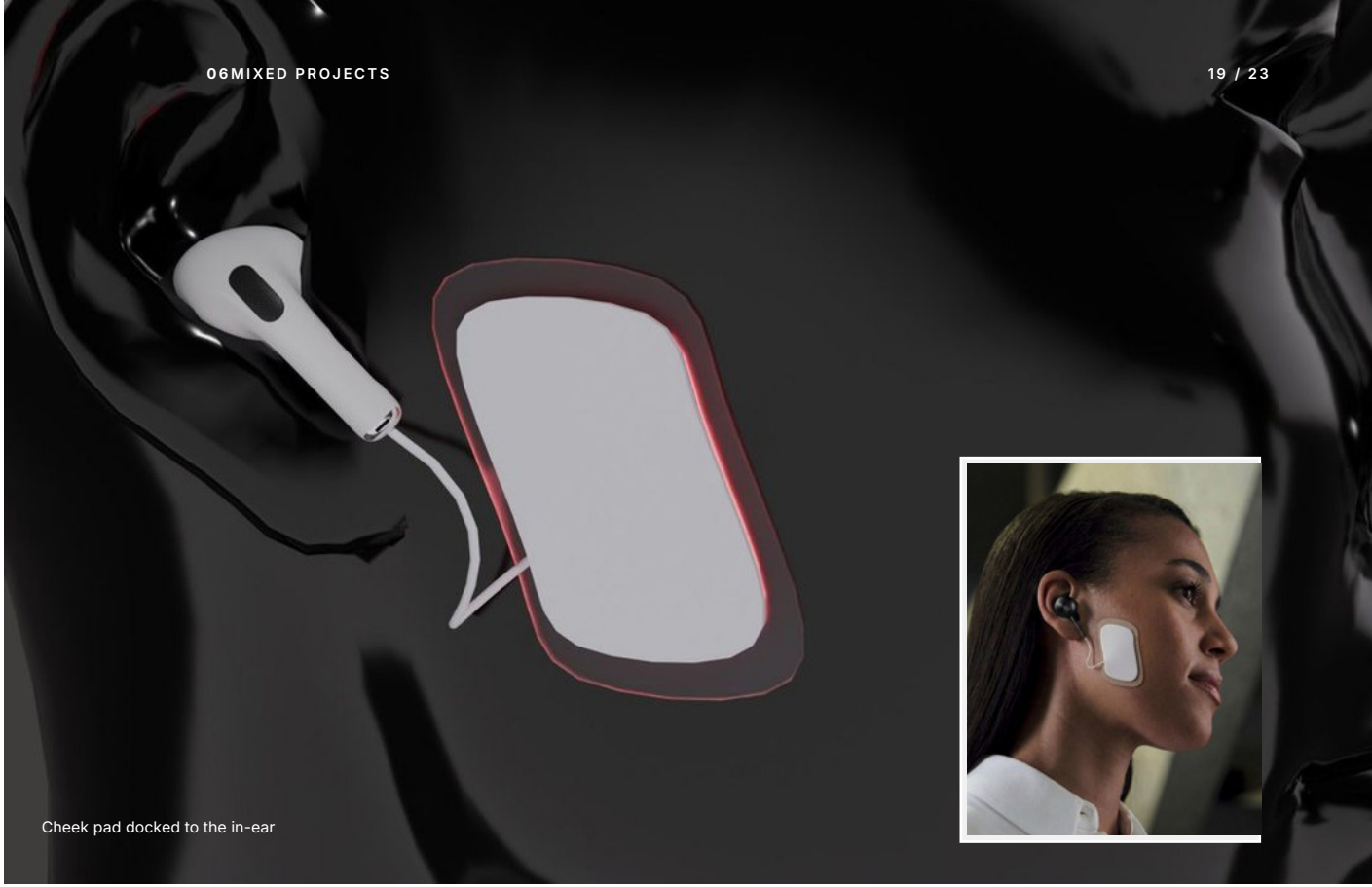
6.4 DESIGN PROJECT 2 · CHARITÉ

MASSEO

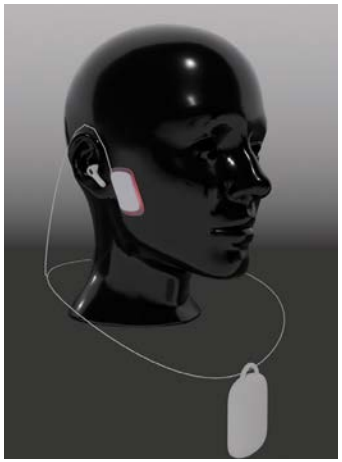
An add-on for wireless in-ears that turns a bruxism guard into a *lifestyle product*. A medical silicone pad on the cheek reads the masseter muscle via EMG and relaxes it with short bursts of heat and vibration. It draws power from the earbud through a flexible cable; at night a magnetic range-extender battery takes over, and an iOS app logs the clenching.

Prof. Pelin Celik · with Charité dental clinic · Summer 2026

CHARITÉ
UNIVERSITÄTSMEDIZIN BERLIN



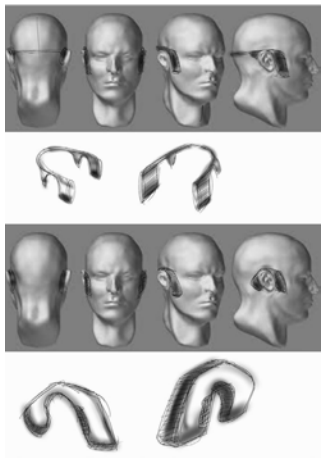
Cheek pad docked to the in-ear



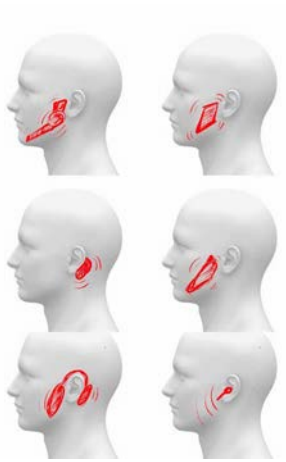
Night mode with battery



Exploded view: pad, heating foil, board, case



Form studies



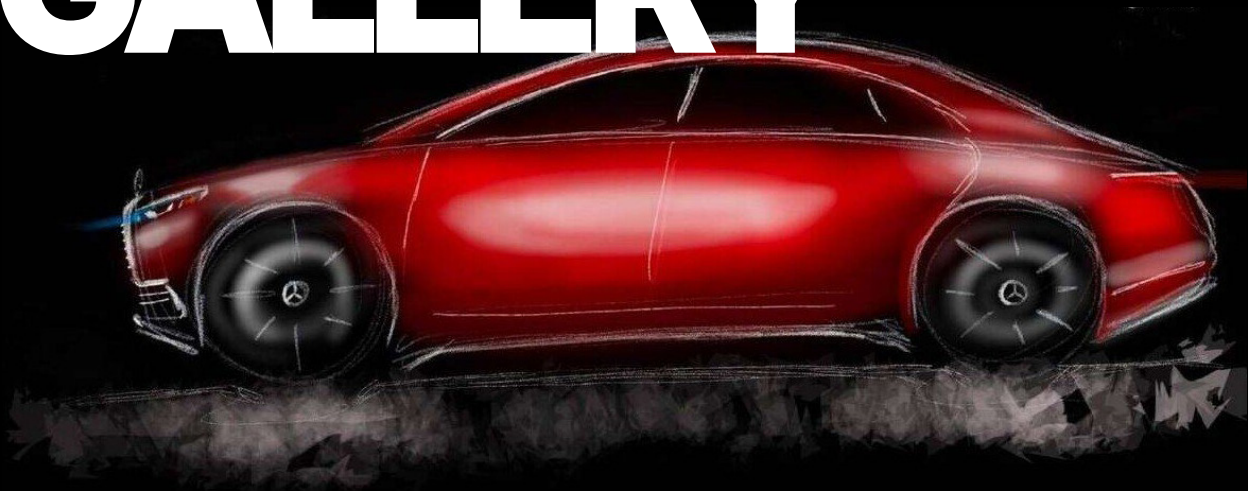
Pad position on the masseter

SKETCH GALLERY

Car sketches from recent years, drawn digitally and by hand: studies of proportion, stance, surfaces and light signatures.

MEDIA — Digital · Marker · Pencil

SOFTWARE — Photoshop, Procreate



Mercedes-Benz side view, digital

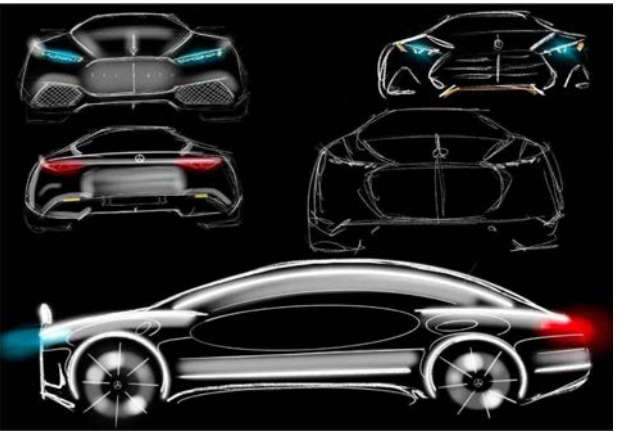


BMW study, digital

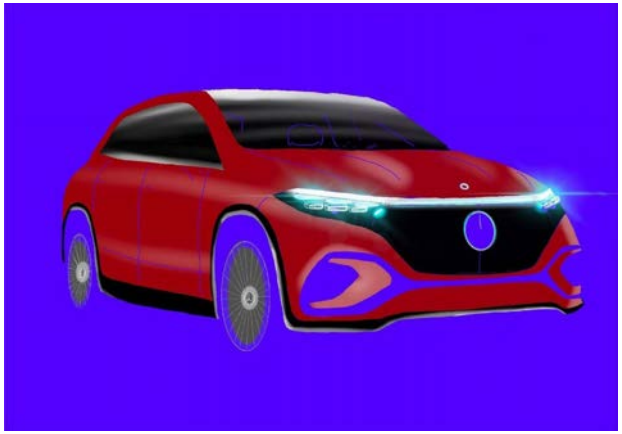


Mercedes-Benz sedan, digital

7.1 DIGITAL, MARKER & PENCIL



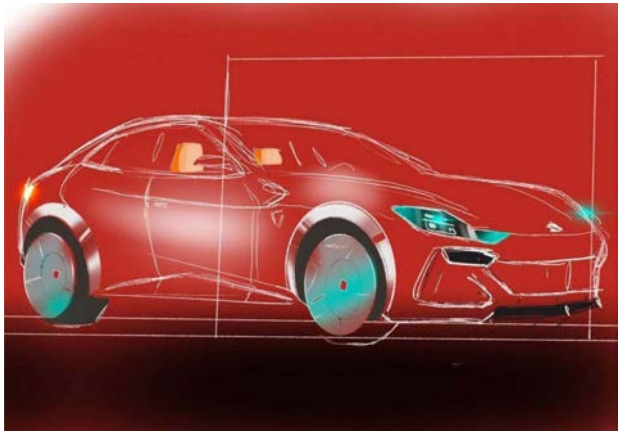
Mercedes-Benz front, rear & side views



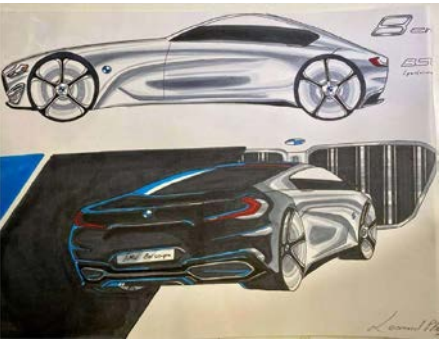
Mercedes-Benz EQA study, digital



Mercedes-Benz rear, digital



SUV study, digital



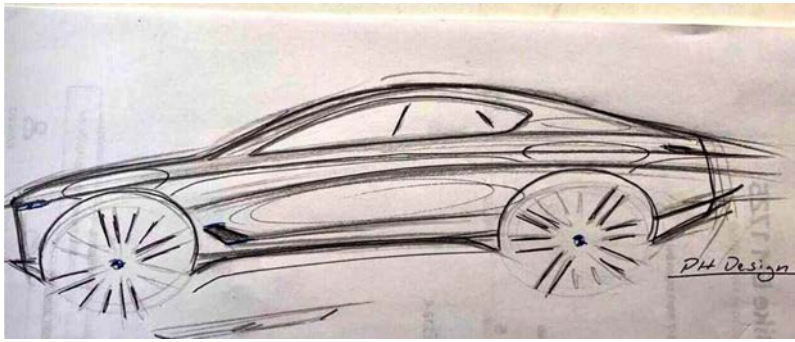
BMW 8 Series Coupé, side & rear



BMW X5 concept



Mercedes-Benz S-Class Cabriolet



Coupé side view, pencil

NILU 27



Built layer by layer on stretched paper: every surface, shadow and highlight is laid by hand with tape in different widths and tones, then refined line by line to capture the light and form of the car.

PROJECT	“nilu 27”, sports car side view
TECHNIQUE	Full-scale tape rendering
TEAM	Team of three, with Alp Ömer Özbek & Carl Schüring
COURSE	Rendering seminar, Prof. Gerhard Friedrich, Summer 2025
DURATION	1 week

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● CONTACT

LET'S TALK.

BASED IN Berlin, Germany

INSTAGRAM @advanced_transportdesign

Leonard Philp

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SCAN FOR MORE WORK