



PORTFOLIO

Annabell Völkel | 2026
Product design, Dresden



PROJECTS

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Suitcase printed from post-consumer plastic
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PHILOSOPHY

People complain, but they would rather create workarounds than change a working system. We as designers can **rethink the whole cycle**.

We should **actively listen to users' needs** to actually build what's missing.

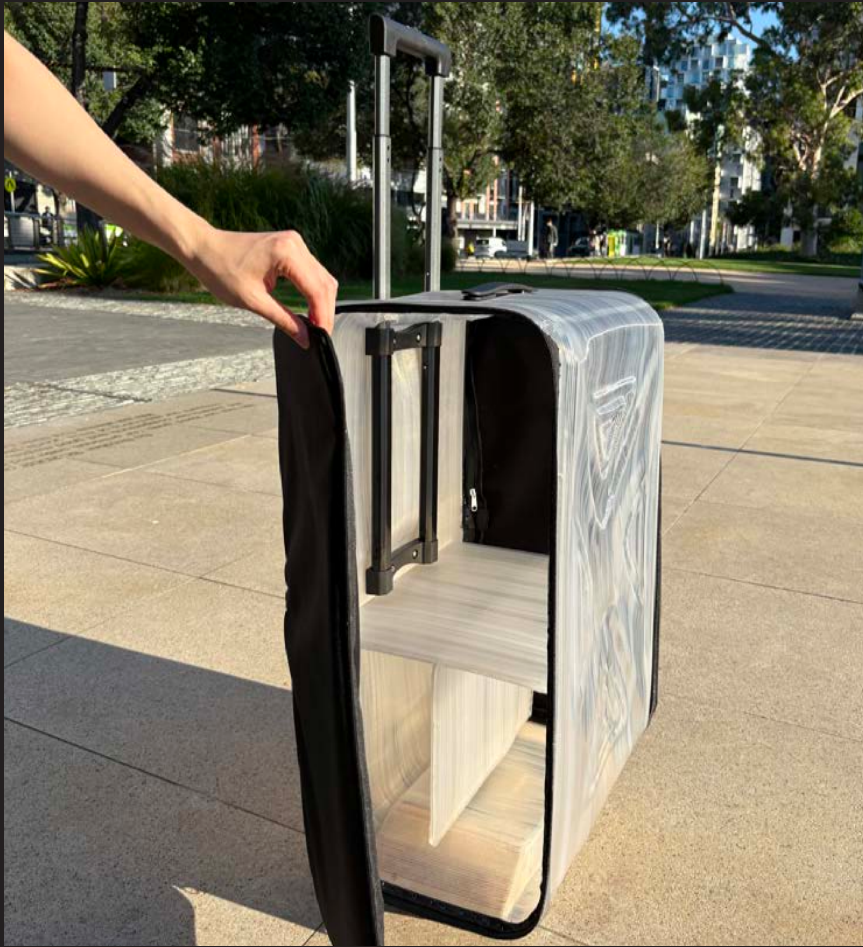
If our work is meant to last, we have to design with modern technology and create cycles. Things should **come apart as easily as they come together**. Everything else is waste on a delay.

I want to be part of teams that **create the best products for our future**. I would be delighted to work with you if we share the same values.





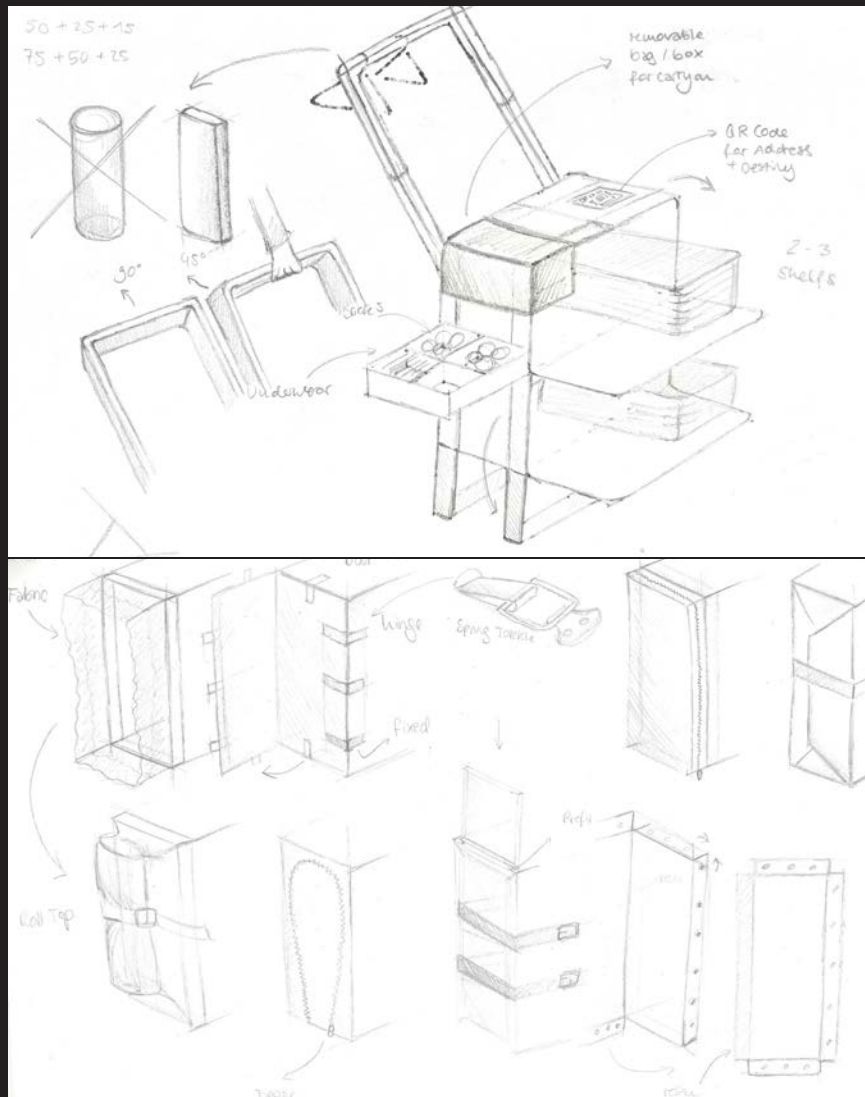
01 POLYMOTION
*Suitcase printed from
post-consumer plastic*



INTRO

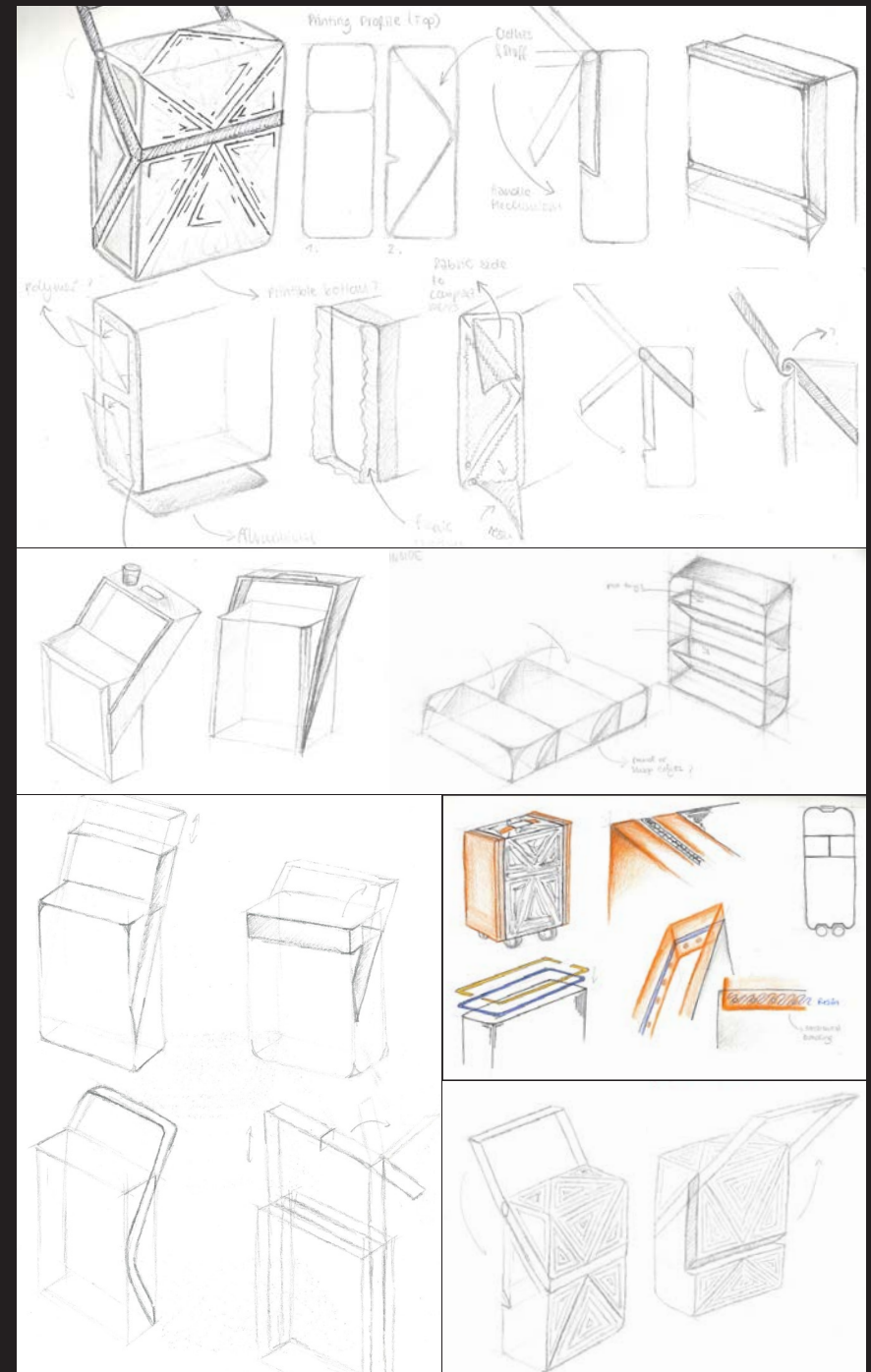
A professor at the Fraunhofer Institute put me in touch with RMIT's Tectonic Formation Lab in Melbourne, where I interned for six months. Next to the lab's projects, I wanted one product of my own, from first idea to working prototype. **I chose a suitcase because mine annoyed me.** POLYMOTION is a 70-litre suitcase, its shell robot-extruded from 100% recycled PETG.

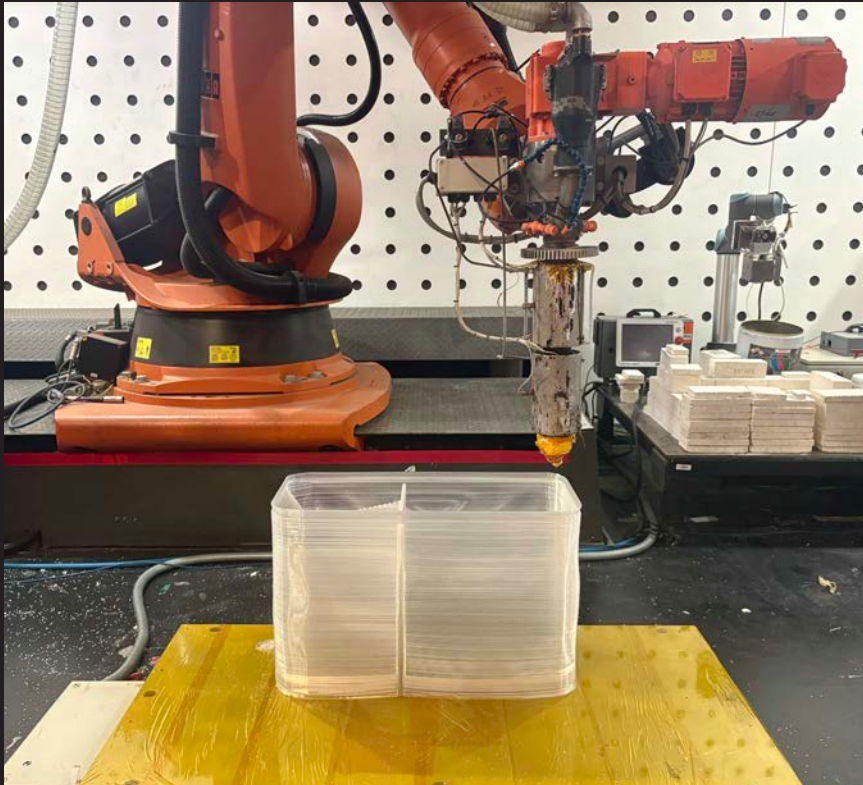




SKETCHES

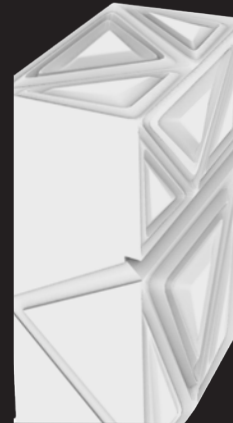
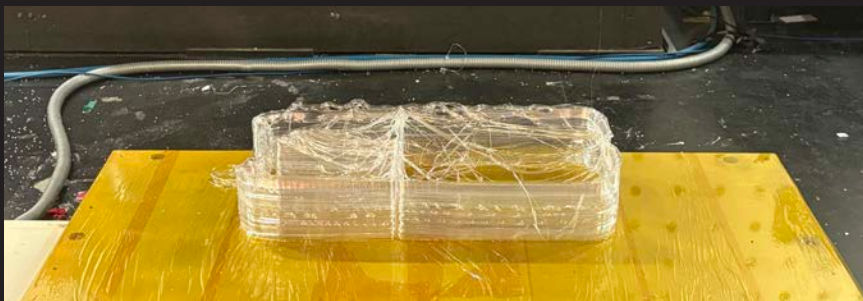
Several directions preceded this one: inflatable modules, a shelf rack so you never unpack, an algorithmically shaped shell, a one-kilo Dyneema bag. Dyneema lost on cost and bonding. Resin barely adheres to it. Never unpacking made it into the final case, but other properties took priority.





3D PRINT

The shell is 3 to 4 mm of extruded polymer. The $0^\circ/90^\circ$ direction carries bending, the $\pm 45^\circ$ absorbs the shear and torsion of being dropped and tipped. Every print, the test pieces included, was made from the lab's own failed prints, reggranulated.



PARAMETRIC SURFACE

The triangular relief is not decoration. Flat panels concentrate load at the corners. The folded surface spreads it across the whole wall. That is what lets the shell stay this thin.



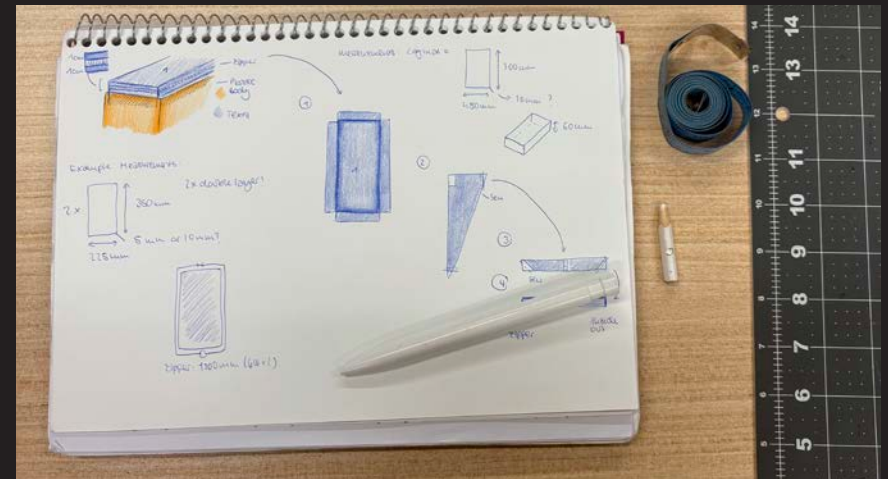


CONSTRUCTION

Load-bearing casters clamp into a channel printed into the base. The channel could not be printed as drawn: the extruder needs a surface to land on. So I printed it closed, then cut and sanded the seat by hand until the wheels sat flush.

CLOSING

The case closes with two sewn side modules, stiffened with board. The outer fabric was chosen for travel. It is abrasion-resistant and dimensionally stable, so the sides hold their shape instead of collapsing when the case is empty. I sewed three test versions before this one.





LEARNINGS

The prototype was meant to be laminated. But lamination bonds a second material to the shell, and PETG only goes back into the loop if nothing else is bonded to it. I dropped the lamination against advice. Six months taught me to start printing earlier. The full-size model told me more in one afternoon than the small prototypes had in weeks.



OUTCOME

A thin shell still wants stiffening, and every method I found breaks the material loop. That is the part I have not solved. Wall thickness turned out to matter more than any other variable I changed. I load-tested the bare printed body and **shipped the case from Melbourne to Germany as checked luggage**. It arrived with two small fractures at the bottom sides, and nothing else had moved.





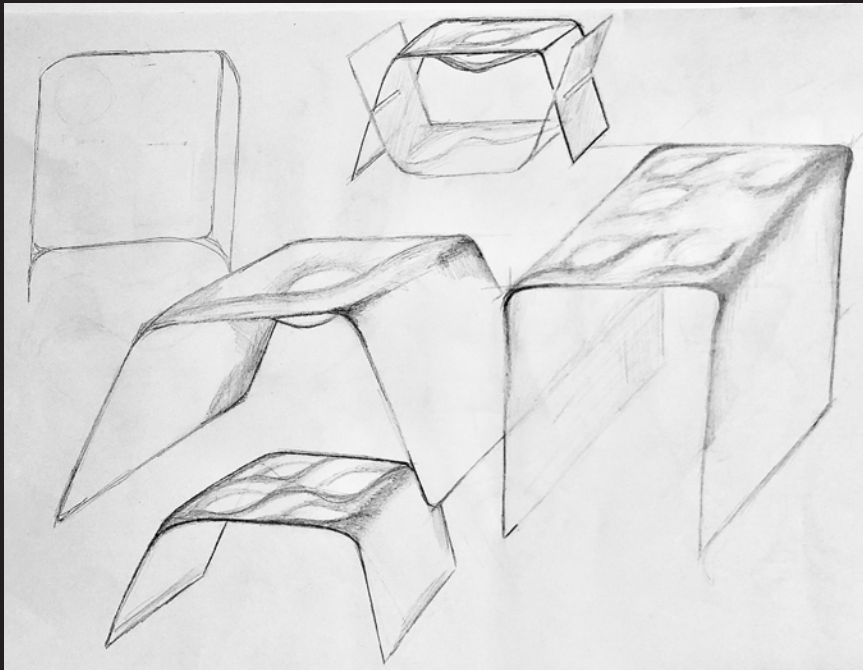
02 ONDELLE
3D Veneer Table

10/2024 - 01/2025, Solo Project
Company Project with **DANZER** GmbH, Dresden



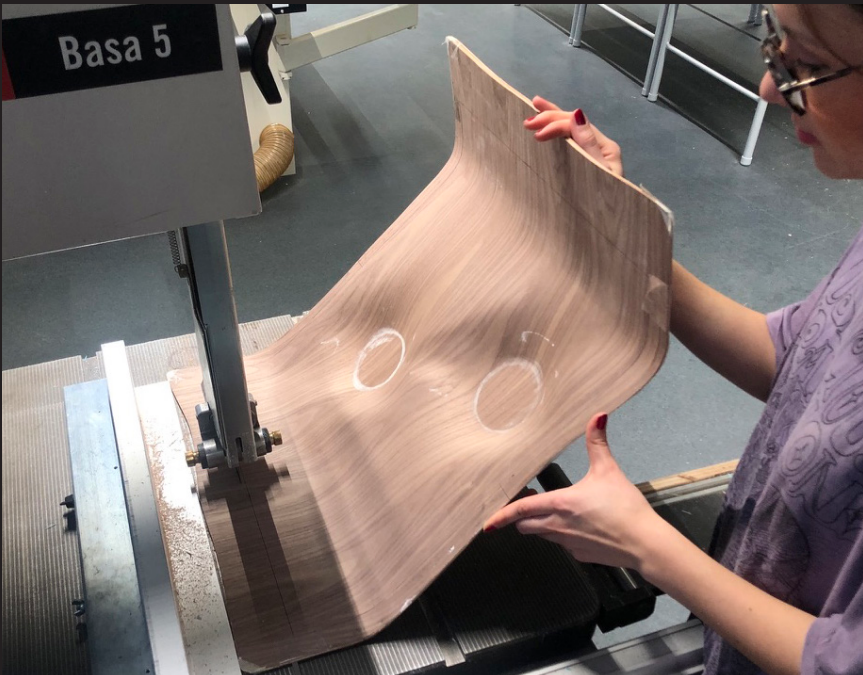
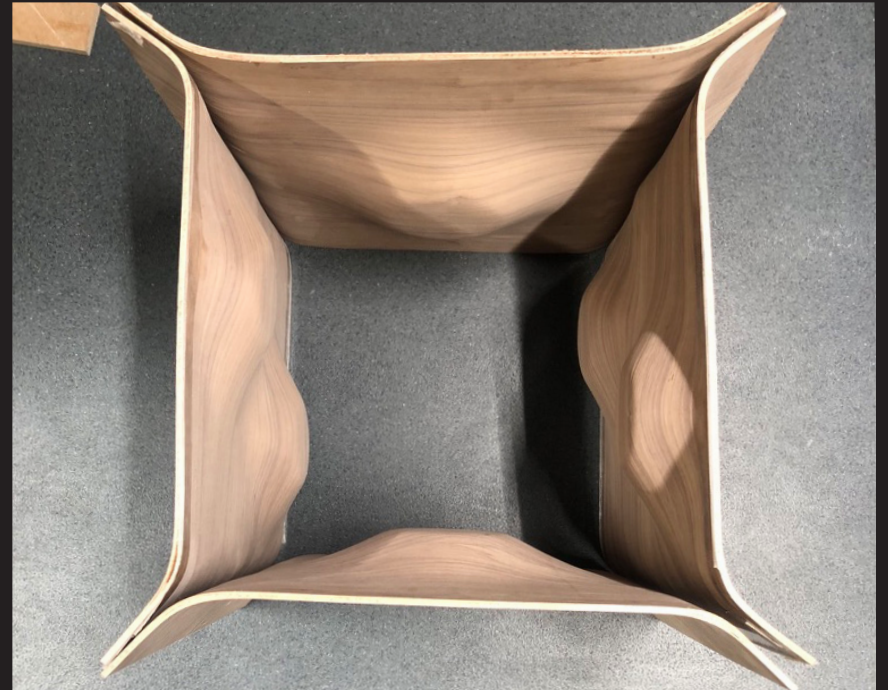
DESIGN

Danzer's 3D veneer can be pressed into double curves without cracking, which ordinary veneer cannot. I used that for indentations in the tabletop. A bowl or a glass sits in the surface instead of on it. The grain runs through the curve unbroken.



CONSTRUCTION

The four modular panels are made of four-layer pressed veneer. The fiber orientation of the outer layers is the same, ensuring a light, stable construction. The panels are connected in tension with U-profiles made of 0.8 mm thick stainless steel. This creates a secure, durable and detachable connection.





MANUFACTURING

Four layers of veneer are vacuum-pressed onto a mould, with a convex surface that minimises wrinkles and facilitates demoulding. The modular design enables custom-specific configurations.



LEARNINGS

What I would change: the mould angle, from 55° to 45°. And I would use more plaster moulds, to vary the surface far more. I learned that wood glue was enough and the epoxy wasn't necessary.

03 PRECARE

A portable kit for early detection



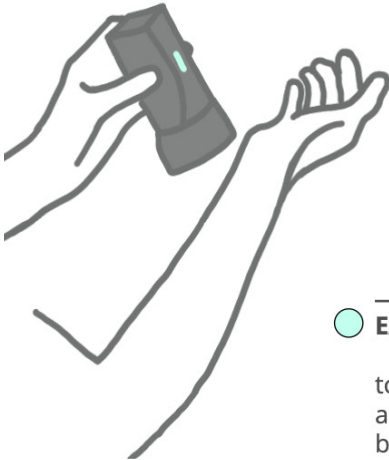
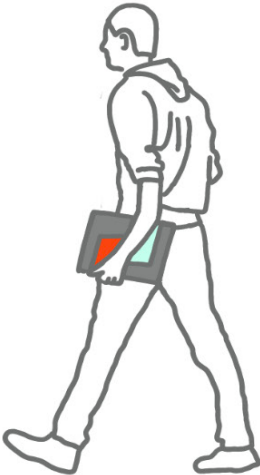
03/2025 - 07/2025
RIMOWA Design Competition 2025, HTW Dresden
Team: Alima Wassermann and Annabell Völkel
my role: Research, Concept, Prototype, Branding

INTRO

PreCare started with the need to help young women get to know their own bodies. Research widened it: **screening fails before it starts**. We found three barriers: the **taboo** around talking about cancer, **no access** to services in regions without specialists, and an unresolved scientific debate about **mammography** that leaves people unsure whether to go at all.

MOBILE KIT

which makes preventive check-ups independently of a hospital and important for regions with weak medical infrastructure

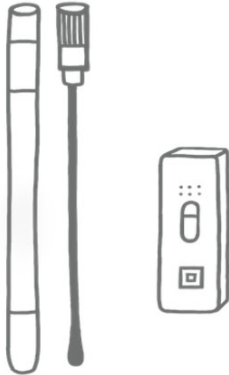


EARLY DETECTION

to increase chances of recovery and maintain health despite a busy schedule

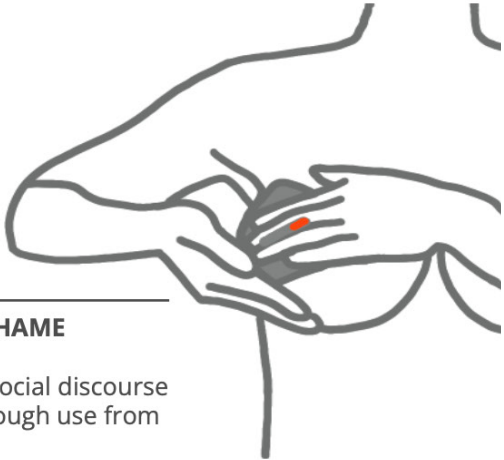
TEST KIT

test yourself for diseases that are associated with embarrassment, for example: HIV test



SHARING SYSTEM

in cooperation with pharmacies users can borrow and return the kit for a flat fee

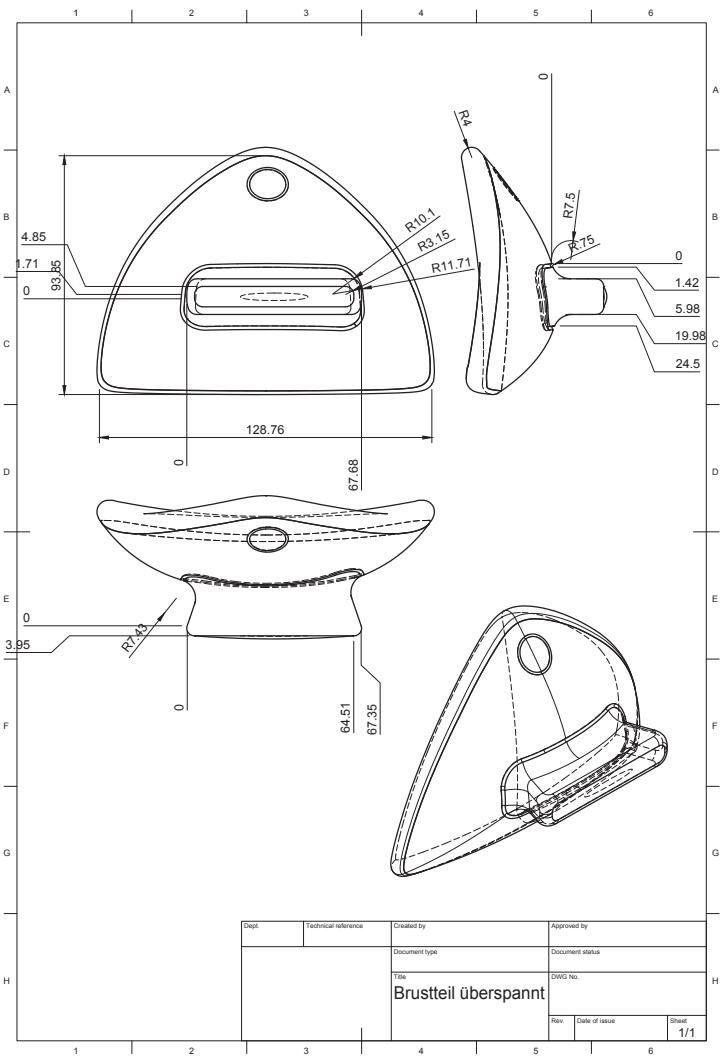


REMOVING SHAME

encouraging social discourse discretion through use from home

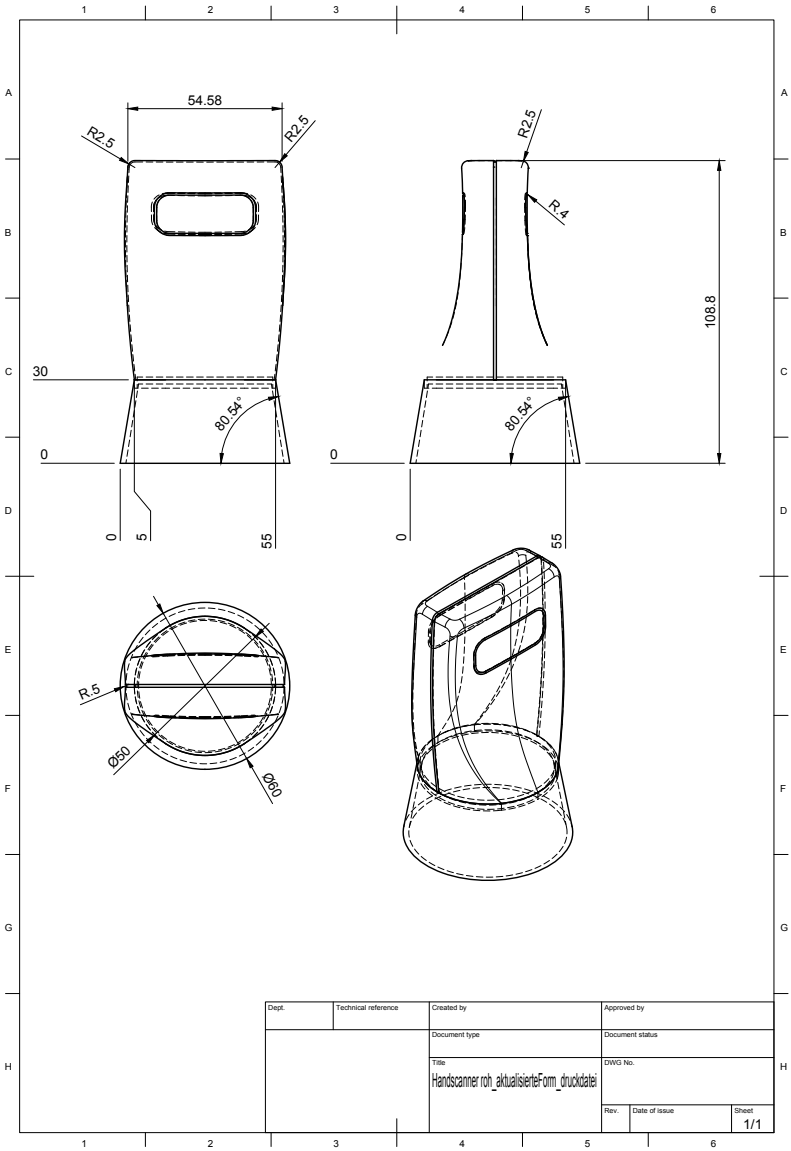
CONCEPT

PreCare is two handheld instruments and an app for skin and breast self-screening. It is borrowed from a pharmacy for a flat fee and used at home, by anyone in the household. The device does not diagnose. It tells you one thing: whether to see a doctor.



BREAST CARE

The device scans the breast tissue segment by segment and creates a three-dimensional image of the examined area with its integrated transducer. The scanning process is shown in the app.



SKIN SCANNER

The dermatoscope takes a high-resolution image of the skin surface and saves it in the app. This image data is forwarded to the app, which can evaluate the data using AI-supported software. The user then receives an initial assessment.





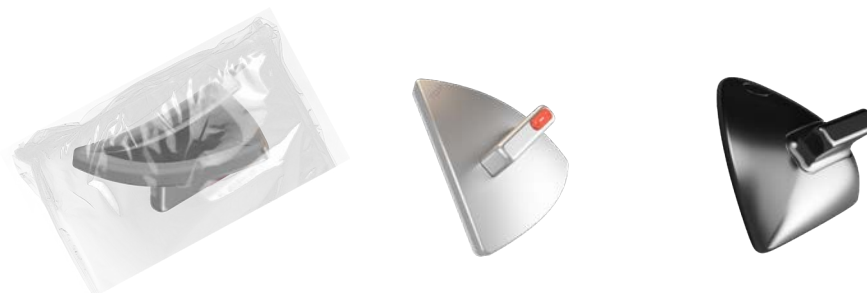
Renderings with KeyShot



Early prototypes in blue foam



Form studies, week 2



LEARNINGS

Renderings say nothing about how a device sits in a hand, so we cut every version in foam and passed it around. Ten students and lecturers tested them, across ages and hand sizes. Not patients, which is the limit of this test. We kept the asymmetry and moved the button where the hand expected it. Next time I would build **more variants** and test with **experts and hospitals early on.**



04 PALO
Rollable Table



INTRO

I wanted to improve eating outdoors. The hard part is that people want to travel light. PALO had to **add value, not effort**. What is missing out there is a stable surface. It unrolls into a dining surface for four to six people, packs to 45 × 16 cm and weighs 2.8 kg. Its **adjustable height and width** allow it to adapt to different group sizes.





CONSTRUCTION

On site, the picnic roll is simply unrolled. Powder-coated aluminium U-profiles are attached along the sides of the wooden tabletop to provide structural rigidity. Their varying lengths clearly indicate the order in which they should be installed.



CORNER MODULES

The system is complemented by 3D-printed PLA corner modules, precisely designed to fit the connection points. These stabilise the corners and keep the construction at right angles. Adjustable tension straps with carabiners prevent the table from twisting sideways.



PROTOTYPE

The prototype uses laser-cut MDF strips joined with Cordura fabric and reinforced by 3D-printed PLA side profiles. Testing showed that corner angle brackets and cross-bracing are necessary to maintain right angles and prevent parallelogram deformation.

MANUFACTURING

Paulownia slats (45 × 4 cm), sanded, oiled for outdoor use and chamfered so nothing splinters near food. The fibres are soft, so only sharp tools cut them cleanly. Standard aluminium U-profiles (10 × 15 × 1 mm) stiffen the sides. Aligning them across all three height settings took the longest; otherwise the table buckles.



LEARNINGS

I set PALO up outdoors again and again, on my own, loading it in different ways. It held better than I expected, except in the middle: under a heavy load the surface bends and needs one more support from below. It has not been tested with a group of six.



05 BelAir

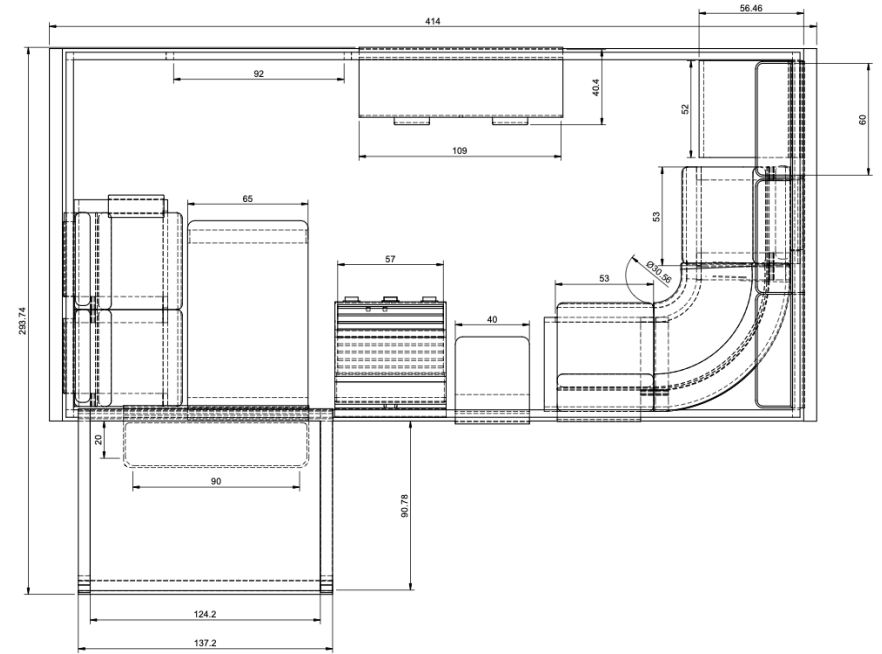
*A balcony you don't have to
drill into*

03/2025 - 07/2025, Solo project



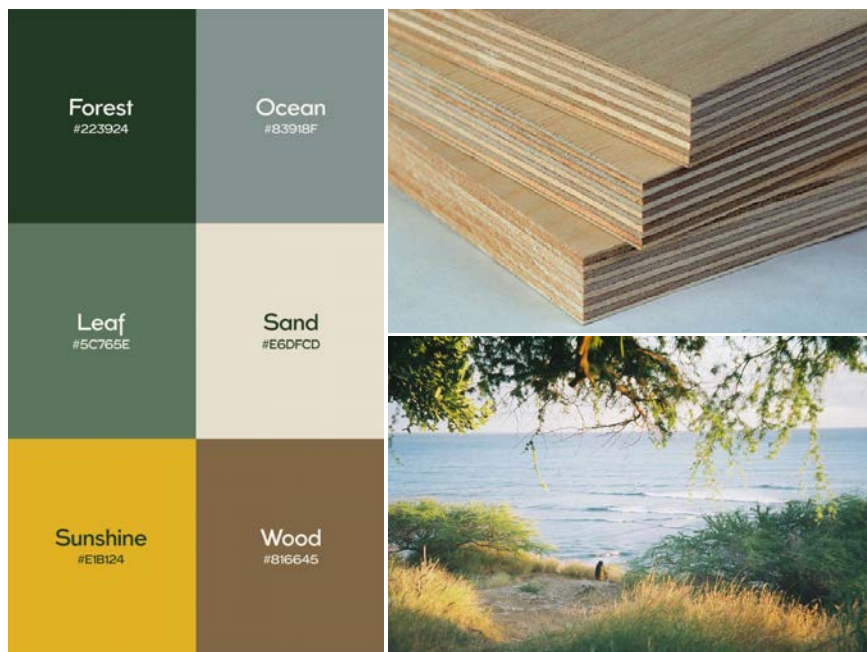
INTRO

My own balcony had turned into unused space. A rented balcony comes with one rule: **change nothing about the building.** BelAir is an aluminium rail frame that assembles without drilling, with modules (seating, tables, grill, laundry line, planters, a solar parasol) that attach anywhere along it.



SYSTEM

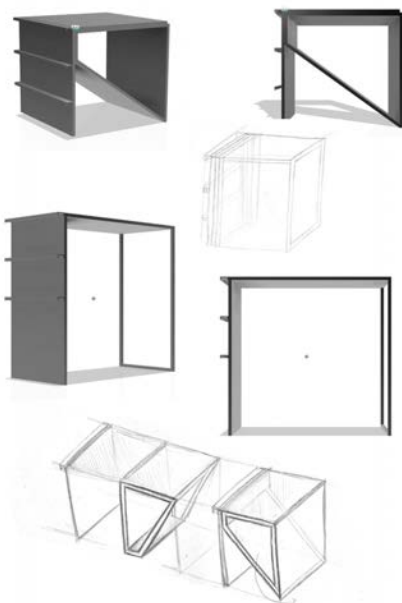
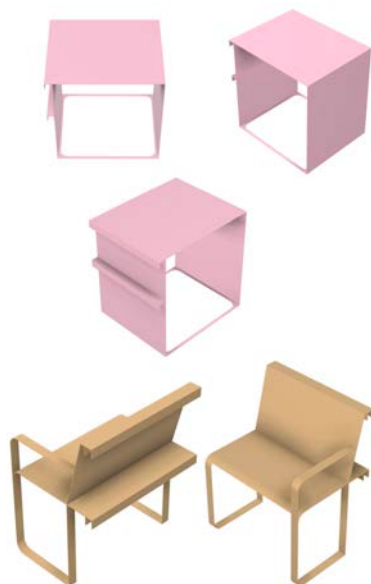
One frame, adjustable in length, and ten different modules that attach anywhere on it. Seat and table heights adjust. It is made for people who move often, and who can no longer push furniture around, and so stop using the balcony at all.



MATERIAL

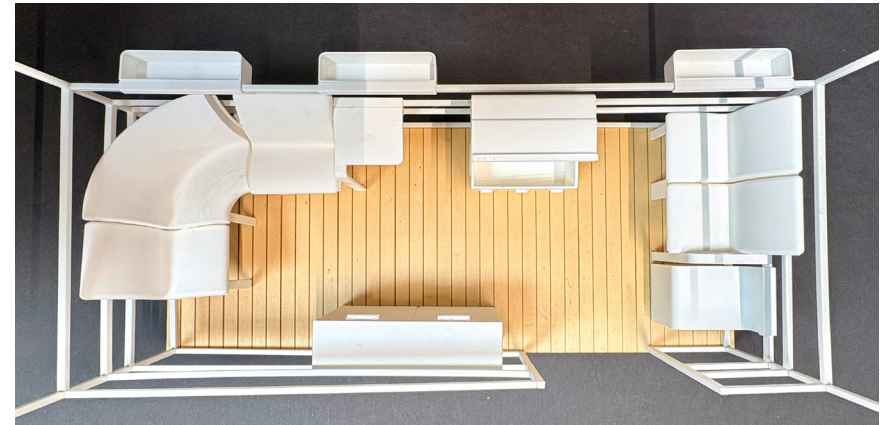
Recycled aluminium for the frame and **Poly-wood** for every surface, a board made from recycled plastic that is itself recyclable. The **Sunbrella** covers unzip and wash. Nothing is glued, so nothing ends up as waste that cannot be separated again. The colours are warm and earthy, to work against the frame rather than with it.





DESIGN

I assumed a rail system would simplify the design. It did the opposite. A strict 90-degree grid organises components well and produces furniture nobody wants to sit on. I softened everything the frame did not dictate: rounded edges, fuller volumes, warmer surfaces. A **survey** on which modules people actually need **shaped the set**.



MODELS

A laser-cut pre-model checked proportions against a real balcony footprint. The whole system followed at 1:10 in printed PLA, sanded, filled and sprayed. Insert parts got extra clearance because the printer is less accurate than the file. The first lacquer left the surface uneven. I stripped it and sprayed two coats of a better one.



06 TIVO
Detachable Series

04/2026 - 07/2026,
Cooperation Project, **Deutsche Werkstätten Hellerau**,
Team: Rebecca Grosch and Annabell Völkel
my role: Concept, Design, Prototype

INTRO

A semester cooperation with Deutsche Werkstätten Hellerau, framed as a study to design new furniture for the company. We began with its history, with **Franz Ehrlich**'s functional furniture as our reference. Part of my family once worked in production there.



CONCEPT

TIVO is built on **detachable** plug-in and **tension** joints. It can be assembled, taken apart and transported flat. The connections are left visible and became the defining feature.



MODULAR

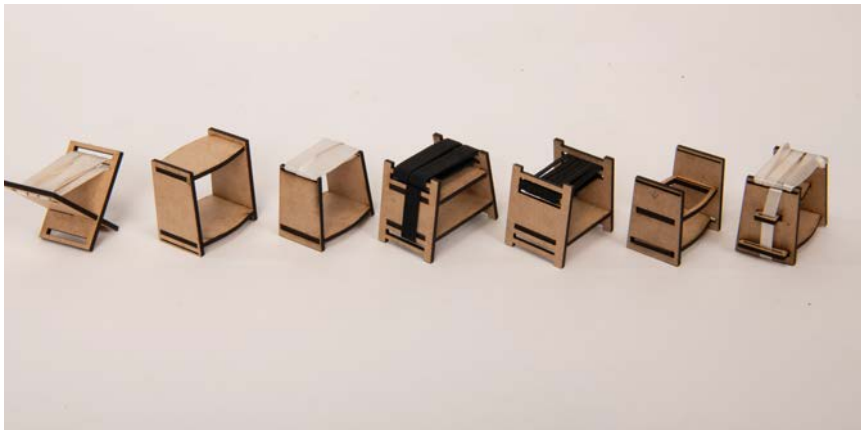
The system enables a variety of configurations and can be used as seating, storage, or shelving. The knock-down construction is well suited to changing living environments and temporary housing situations.



ASSEMBLE

The stool can be assembled easily and without the need for tools. The two side panels and the two seat panels intuitively slot together. Their different widths mean there is only one correct configuration. And the stool is cut from the offcuts of the shelf sides.





PROTOTYPES

Early shelf prototypes tested the connections, side panels and strap routing. They showed that **stability comes from tension** between the sides. Ultimately, these models helped refine material thickness, proportions, and tension, leading to a softer, less technical design language.



LEARNINGS

Stability comes from the straps. Next would be two bands instead of one in the shelf. One band around the outside and one diagonal, so the tension closes into a loop and slackens less over the distance. The base connection is still a ratchet. It is stable, but heavy and bulky.

We presented TIVO to Deutsche Werkstätten **at their summer festival** in August 2026.

07 ONCE

Medical Documentation Device





20 + INTERVIEWS

We started by talking to nurses. In our interviews, nurses estimated that they spend up to half a shift writing the same information down twice. **ONCE digitises handwritten notes** at the point of care and files them automatically.



YETI

ONCE was my first of three semesters in YETI, a Dresden entrepreneurship scholarship of eighteen months including **three interdisciplinary teams** for a **full semester each**. What I took from it is one habit: ask the actual user first, then follow up on the answer instead of accepting it.



ONCE Team : Annabell Völkel, Jonathan Luzius, Jeremy Wosniczak, Fahim S. Anoy

MY ROLE

I ran the **user research**: 20 interviews with local hospitals before a single sketch. From those I **mapped the opportunity areas**, then built the brand and the working prototype. The direction never came in one moment. Every interview sharpened the next.



08 elevait

Access rights for construction documentation



03/2025 - 09/2025, Industry Project with **elevait GmbH**,
Dresden, YETI Team: Civil Engineering, Psychology,
Industrial Engineering, Business, my role: Research,
Concept, Interface



Team : Floris Anders, Justin Biegel, Annabell Völkel, Georg Krause, Luca Finger

INDUSTRY PROJECT

In my second semester, YETI paired us with elevait, who brought the problem. elevait digitises construction documentation, but who may open which drawing is still decided in spreadsheets.



DESIGN THINKING

We **interviewed 30 people** across the industry (Deutsche Bahn, the City of Dresden, architects, engineers) and found project managers with **access to files they should never have opened**. The interviews got me far enough to design something that really helps the people who use it.



SOLUTION

Our **five disciplines** worked remarkably well together. We built a role-based permission interface. You choose the role, the system grants what that role needs to see and nothing else. The work is confidential and is not shown here.



AV Portfolio

ANNABELL VÖLKE

Product designer

B.A. Design for Product and Communication,
HTW Dresden, expected graduation 03/2027

SKILLS

UX/UI & Prototyping

Design Thinking, Wireframing, Interactive
Prototypes (Adobe XD/Figma/ Lovable), User
Research, Usability Testing, Physical
Computing

Software

Rhino, Autodesk Fusion 360, Adobe Creative
Cloud, Video Editing & Motion Design, Basic
JavaScript, Arduino, Microsoft Office

Languages

German (**native**) | English (**C1**) | French (**B2**)

Personal Strengths

leadership, teamwork, communication,
persistence

Interests

17+ years violin, orchestra, film shooting/
editing, outdoor sports

CONTACT

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