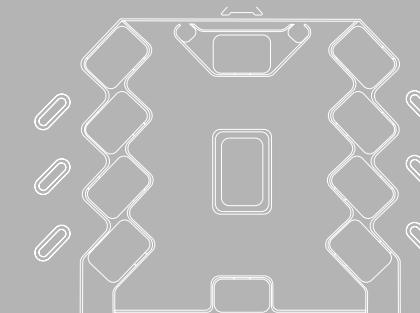
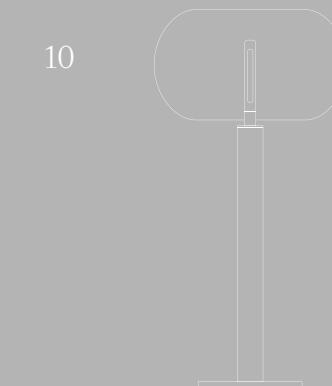
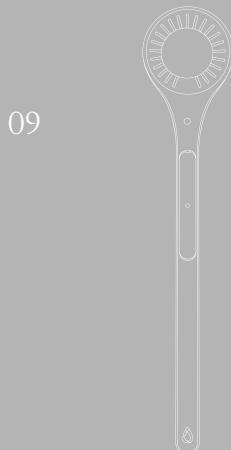
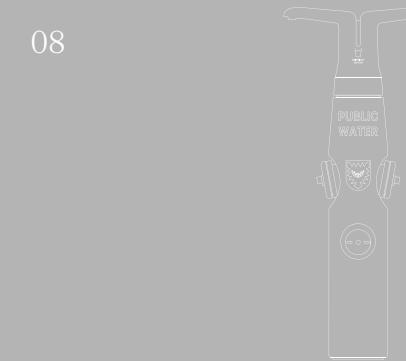
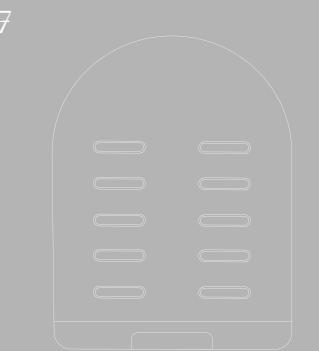
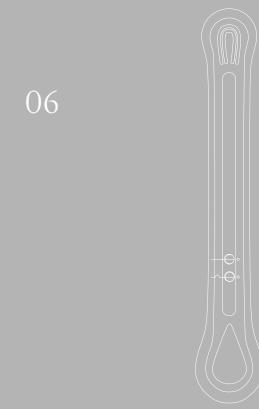
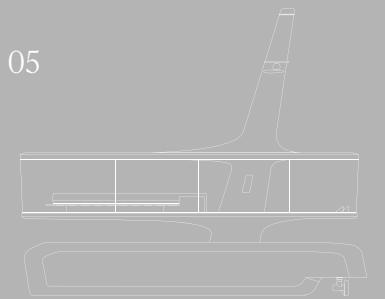
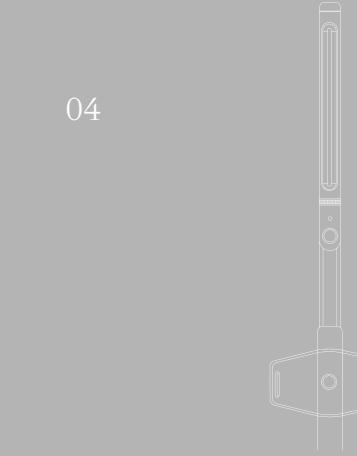
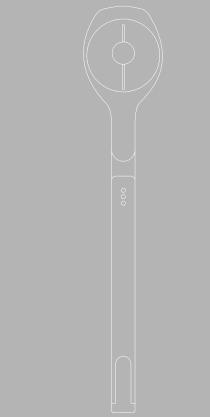
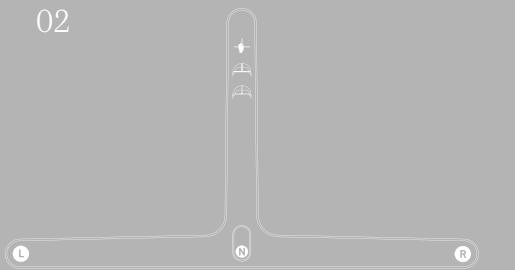
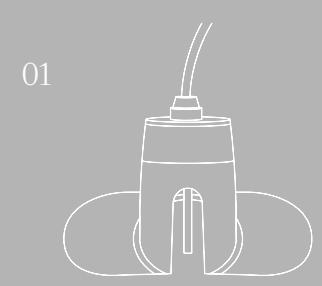


# DESIGNING FUTURE PERSPECTIVES

Industrial Design  
Medical Design M.A.



## Master's Studies Industrial Design

- Medical Design M.A.

DESIGNING THE  
FUTURE REQUIRES  
PROFESSIONALISM



# DESIGNING THE FUTURE REQUIRES PROFESSIONALISM

(01) CEVEC  
P. 6 – 11

(02) POCSI  
P. 12 – 17

(03) BREAZE  
P. 18 – 23

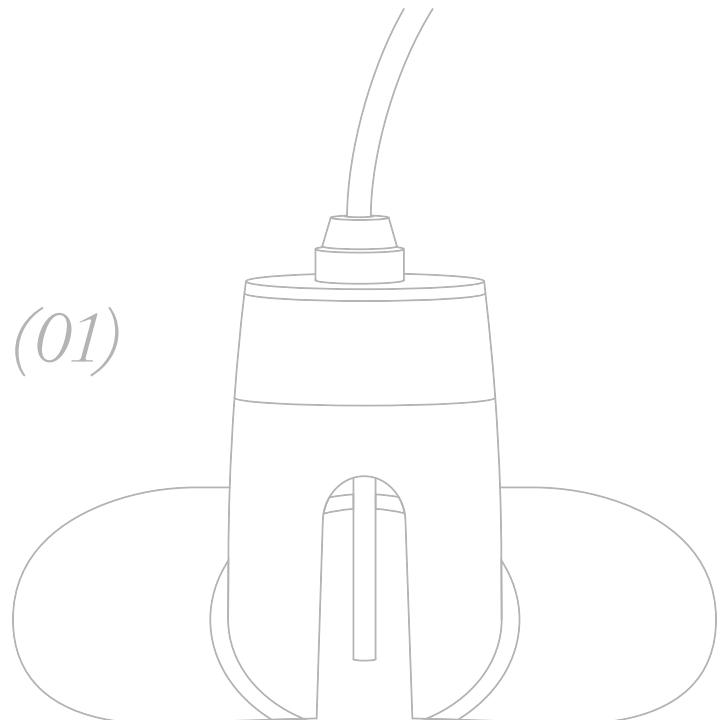
The ability to actively and effectively design perspectives of our future world, ways to sustainability and above all, effectively concretise them, is becoming increasingly important for designers. In the context of transformation processes the design disciplines can play out a great strength and concretise designs, concepts and images that can be used as references for desirable technological, social and cultural change.

This requires a high degree of critical attitude, sensitivity and precision, in short: a professional basic set-up in which conceptual strength, detailing and substance interact at a high level. In the master's program in Industrial Design at the Muthesius University of Fine Arts and Design we teach ways to achieve such a competence profile.

# CEVEC

— Gabriel Müller

“Cevec” enables paramedics to quickly and safely administer medication by inserting a central venous catheter in emergency situations. Its minimal steps and tools ensure a fast application, and the distinguishable equipment makes it easy to use. It considers the specific conditions of emergency situations such as unsteady surroundings, untrained users and time pressure.



## Awards

- \_ iF Design Student Award
- \_ Core 77 Design Awards Student Notable
- \_ James Dyson Award Winner [Germany and International Top 20]
- \_ Shown at German Design Award Exhibition
- \_ Selection the Dubai Global Grad Show

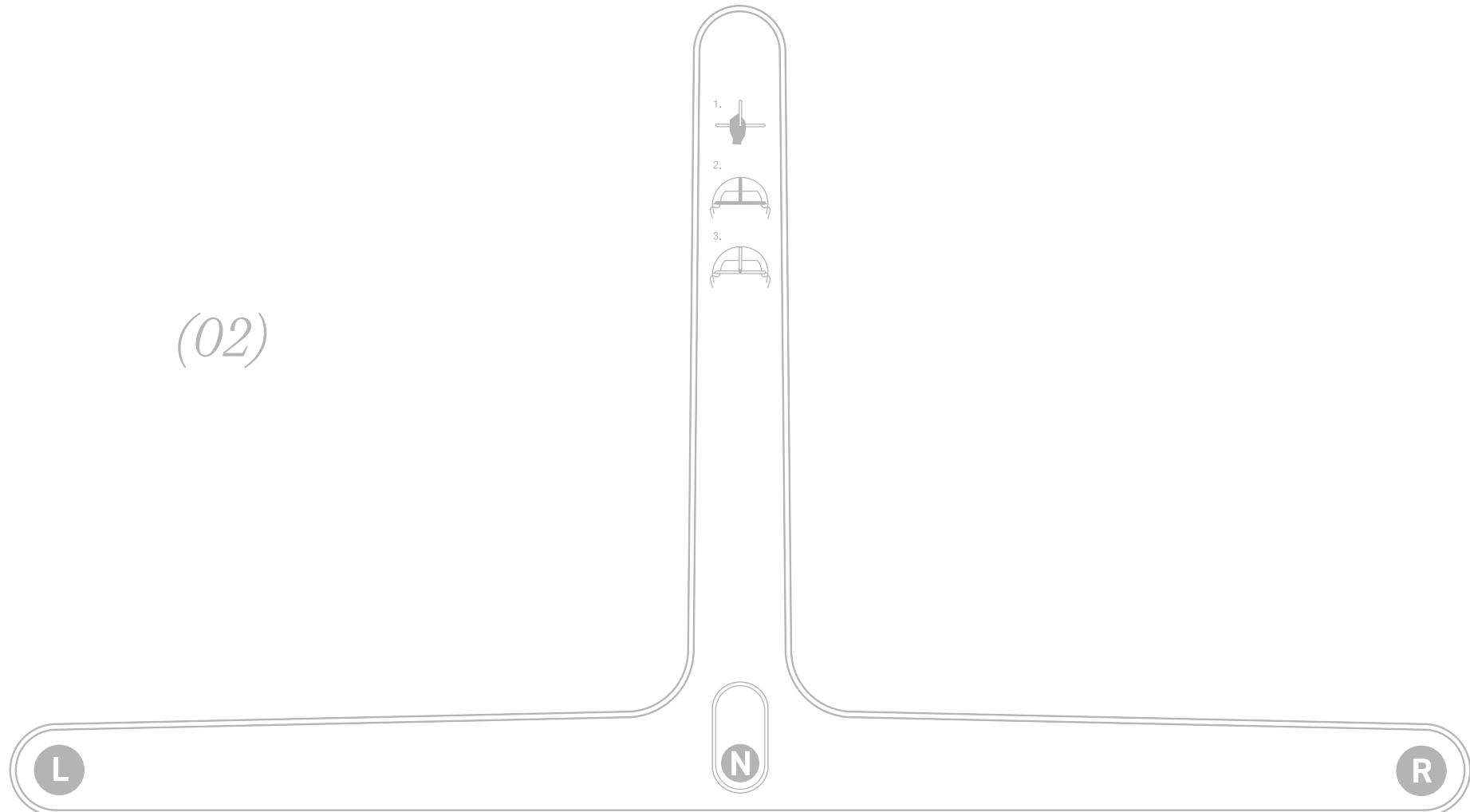




# POCSI

— Paul Ullrich

Stroke diagnostics in emergency services: a stroke damages 1.9M brain cells irreversibly in 1 min. Early treatment is vital, but current MRI diagnosis takes 4 hrs, delaying recovery. "POCSI" enables early on-site stroke diagnosis by EMS, utilizing optoacoustics and AI for efficient diagnosis without image analysis.





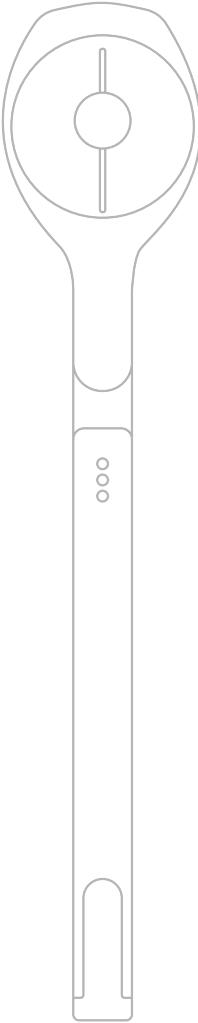


# BREAZE

— Andrea Alvarez Botero

“Breaze” treats Obstructive Sleep Apnea Syndrome, which causes the tongue to fall, thus closing the airways and interrupting sleep. By strengthening muscles in the throat with exercises used in speech therapy, total muscle relaxation is prevented. The device and app offer exercises, visual instructions, performance evaluation and feedback.

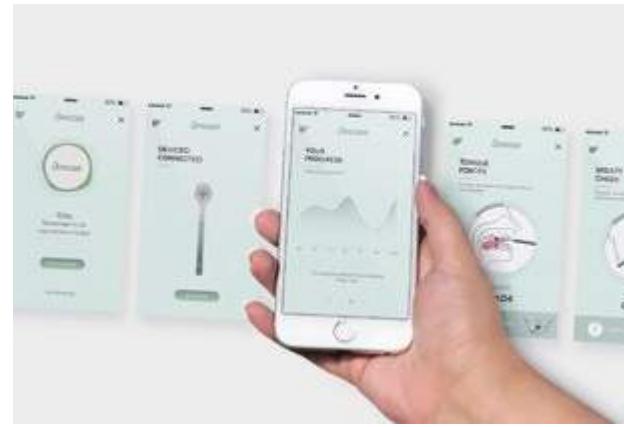
(03)



## Awards

- \_ Main prize of the Mia Seeger Foundation
- \_ Special Mention Students BraunPrize
- \_ Selection the Dubai Global Grad Show





25



26

# DESIGNING FUTURE PERSPECTIVES



# DESIGNING FUTURE PERSPECTIVES: COMPETENCES FOR THE DESIGN (04) OF VISIONARY PROCESSES AND PRODUCT SYSTEMS (05)

PILUM  
P. 28 – 33

(06) PAPER PREGNANCY TEST  
P. 42 – 47

We understand the thematic foundation of medical design as a principle of design beyond the limitations of medical technology and with a special interest in the realization of sustainable living conditions in the sense of “One Health” (human, environment, animal). For this, you develop an expanded understanding of the human being and social constellations.

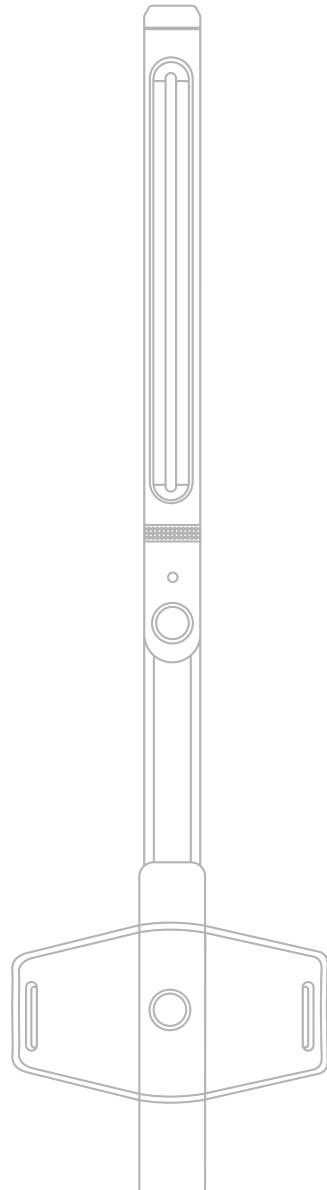
Within the framework of project work, you deepen comprehensively into the thinking, designing and communicating innovative processes, systems and interfaces. And also taking the structure, details and quality of products into consideration, required for circular economy and resource conservation.

The connection with the “Interface Design” master’s degree course also has a unique position and is, in our view particularly trend-setting, since products are increasingly being seen as multi-layered, networked information carriers and interaction mediators.

# PILUM

— Konstantin Wolf

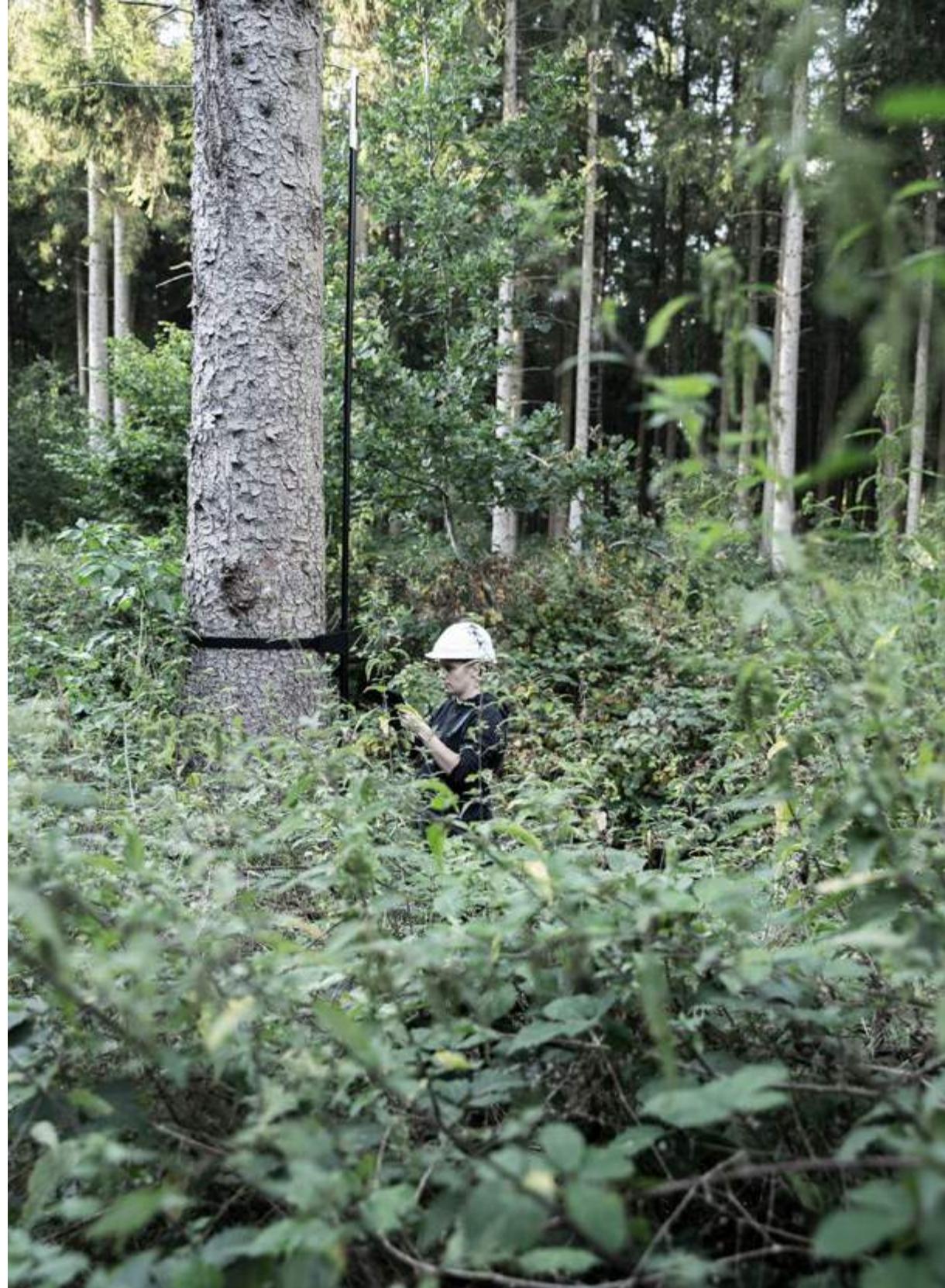
(04)



“PILUM” is a rod sensor which is used in forestry to refine and monitor forest protection measurement. By analysing pheromones and resin particles of bark beetles in the air it provides precise data on the pest’s location and behavior during its reproductive cycle. This data is available on a publicly accessible app, enabling informed forest treatment.

Awards

\_ iF Design Student Award

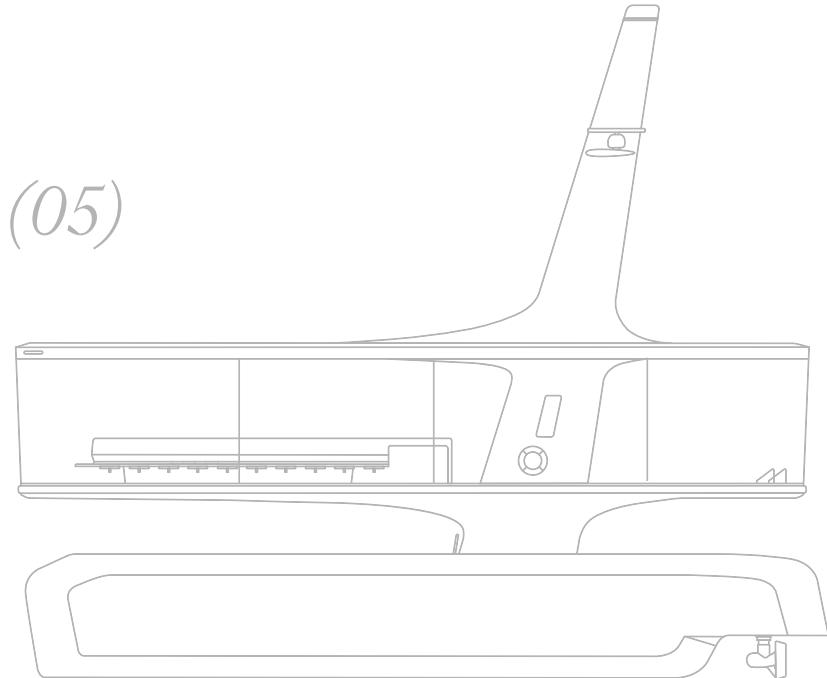




# CAPTN

— Simeon Ortmüller, Tobias Gehrke, Yigang Shen,  
Vincent Steinhart-Besser, Jingyue Chen

“CAPTN” short for Clean Autonomous Public Transport Network visualizes and utilizing water–land mobility chains not only in Kiel but in every major coast city. Master students of Muthesius University of Fine Arts and Design developed this multi-awarded project. Numerous follow-up projects like “Wavelap”, a test-ferry are united under the CAPTN initiative.



(05)

## Awards

- \_ Main prize VDID Newcomers' Award (Winner)
- \_ Lucky Strike Junior Designer Award
- \_ DDC University Award Silver
- \_ Nomination for the Federal Ecodesign Award
- \_ Recognition by the Mia Seeger Foundation
- \_ Selection for the Dubai Global Grad Show



23

F2 Reventlow - Wellington

F2 Reventlow - Wellington

19.00

Kiel

RIGHT WAY

F2 Wellington I: In 6 min  
F2 Wellington I: 20:30  
F2 Wellington I: 20:48



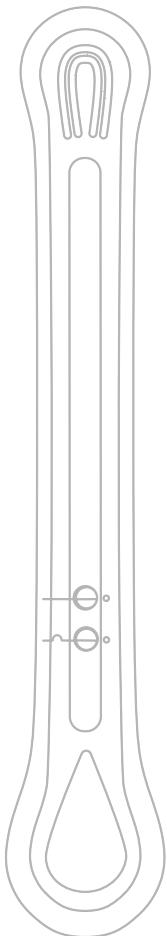


# PAPER PREGNANCY TEST

— Yue Zhao

Million tons of plastic waste through pregnancy tests are the last thing people want to think of when using them. The “Paper Pregnancy Test” is a disposable, plastic-free product made of recycled paper. The test function is as simple as conventional ones: hold the test strip in the urine stream and wait for the result to appear as stripes.

(06)



Awards

\_ Winner of the Federal Ecodesign Award  
\_ Recognition of the Mia Seeger Foundation





# DESIGN AND RESEARCH

# DESIGN AND RESEARCH (07)

CLAIR TRAM  
P. 52 – 57

The supervision of project work with us is individual and far-reaching. Students move in a distinctly networked context both inside and outside the university. In Kiel we are surrounded by outstanding research activities in which we participate, e.g. in the CAPTN Initiative or in the Cluster of Excellence “Precision Medicine in Chronic Inflammation”.

We continuously address the connections and interactions between research and design in varying interdisciplinary project formats. In the research project “Sustainable Mobility Transformation” we were funded by the EKSH for a longer period of time. ([www.muthesius-mobility-project.de](http://www.muthesius-mobility-project.de))

We establish research assistants, as recently in the area of “Materials and Sustainability”. Cooperations and exchange programmes exist with TU Delft, NCKU Tainan and Kobe Design University, among others.

# (08) WATRePUBLIC

P. 58 – 63

SPRITZE? SPRITZER!  
P. 64 – 69

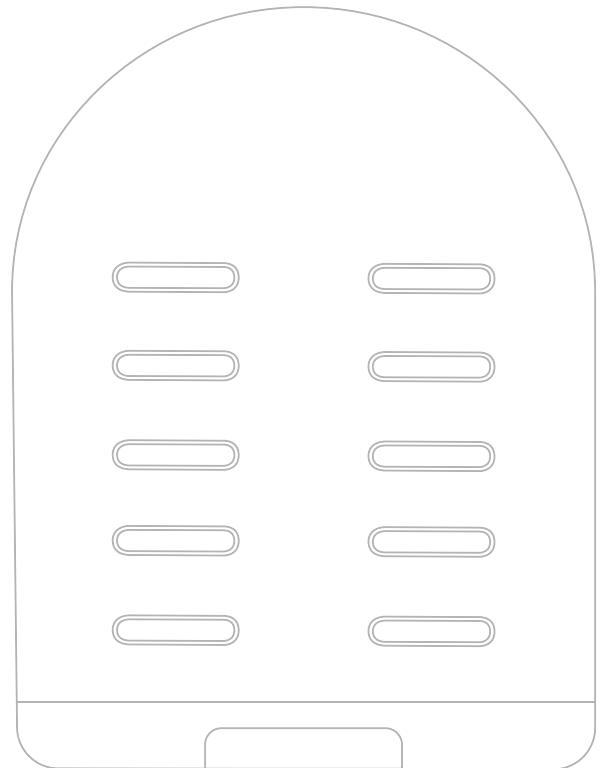
# (09)

# CLAIR TRAM

— Erik Mantz-Hansen

“Clair Tram” is a new tram design proposal for Kiel with a focus on air quality and hygiene. It features an air purification system, antimicrobial interior materials, and OLED screens displaying real-time air quality. It challenges common associations with public transportation.

(07)



Awards

\_ Selected Work, Covid 19 Call Dubai Global Grad Show





# WATERePUBLIC

— Jadwiga Slezak

“WATERePUBLIC” repurposes fire hydrants as universal water sources for people and animals, promoting community participation, sustainability, and enhancing quality of life.

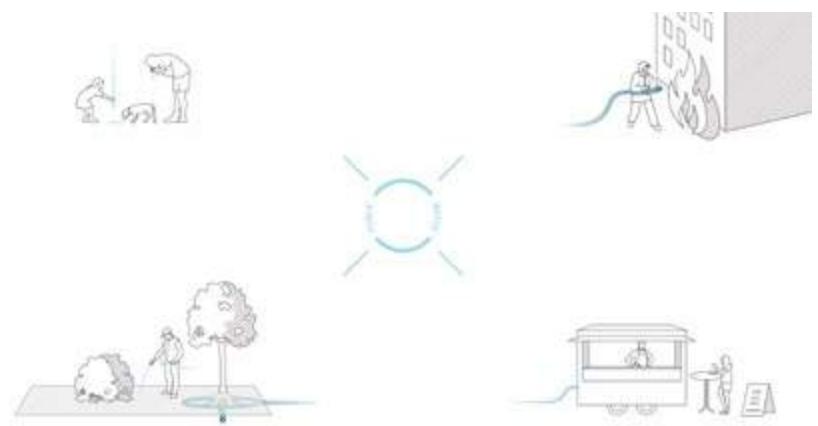
Setting a sign that public spaces have to be rethought in times of climate change, it provides constant access to water for green spaces, offices and citizens, without the need for standpipes or transport.

(08)



Awards

- \_ Main prize at the BraunPrize
- \_ Lucky Strike Junior Designer Award
- \_ Recognition of the Mia Seeger Foundation





65

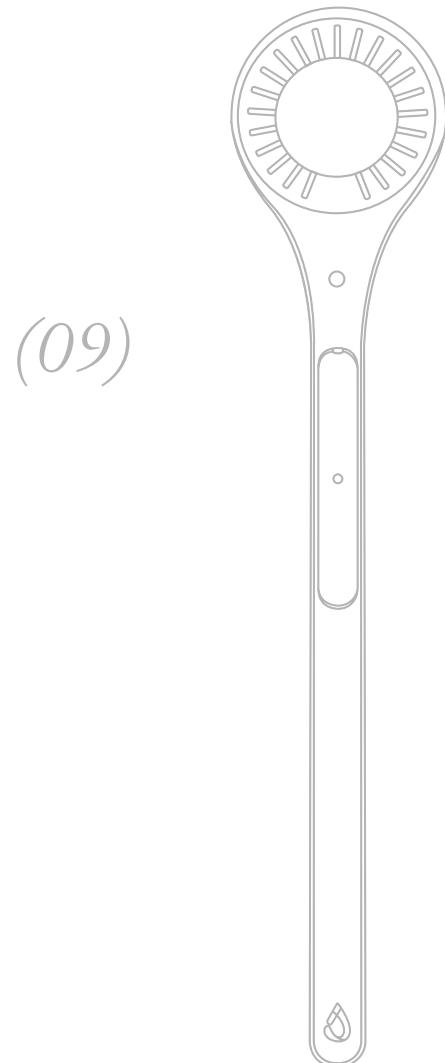


66

# SPRITZE? SPRITZER!

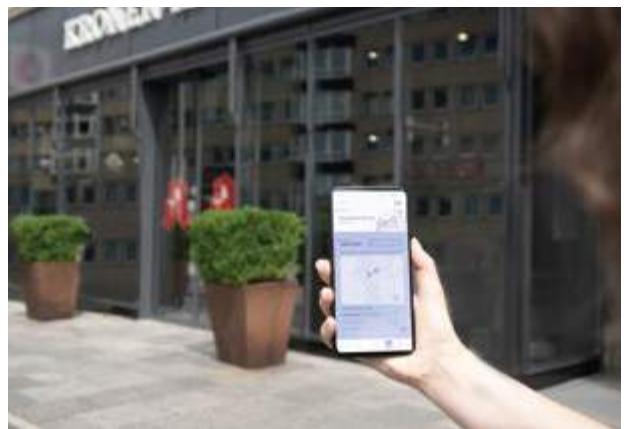
— Julia Berg, Paul Ullrich

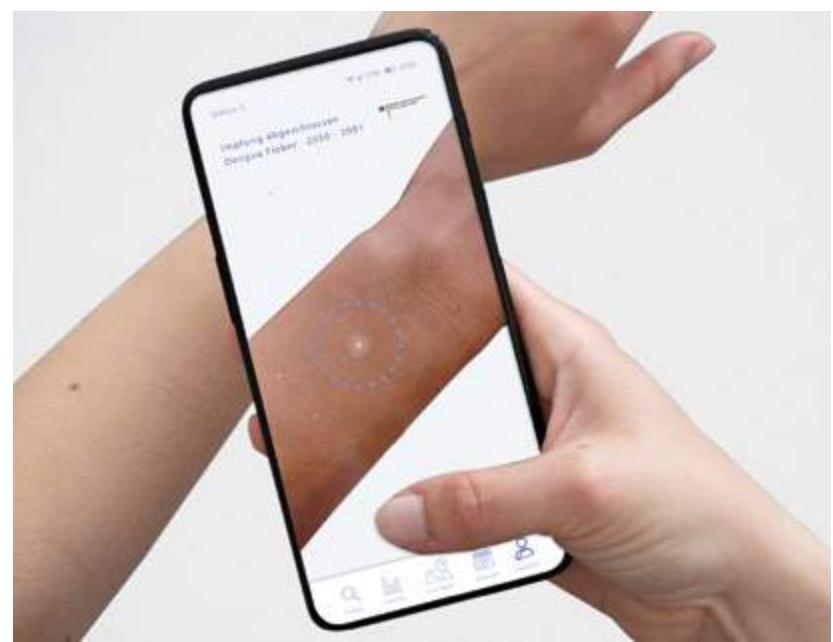
“SPRITZE? SPRITZER!” proposes contactless vaccination in pharmacies using a targeted spray of vaccine with a carrier substance to reduce costs, challenges, and waste during pandemics. It also establishes a regulated supply for regular booster vaccinations and vaccinations against new pathogens.



Awards

\_ Elected to the Top 150 of the Dubai Global Grad Show





UNDERSTAND NEW.  
DESIGN WITH  
COURAGE.

# UNDERSTAND NEW. DESIGN (10) WITH COURAGE.

(11) CARBON CAPTURE  
P. 80 – 85

HEALTH HUB  
P. 86 – 89 (12)

HUGU  
P. 74 – 79

We offer profound access to knowledge and questions of the “Health and Life Sciences” within the framework of our studies. On the other hand, students work on many related topics of the future human living environment and social change.

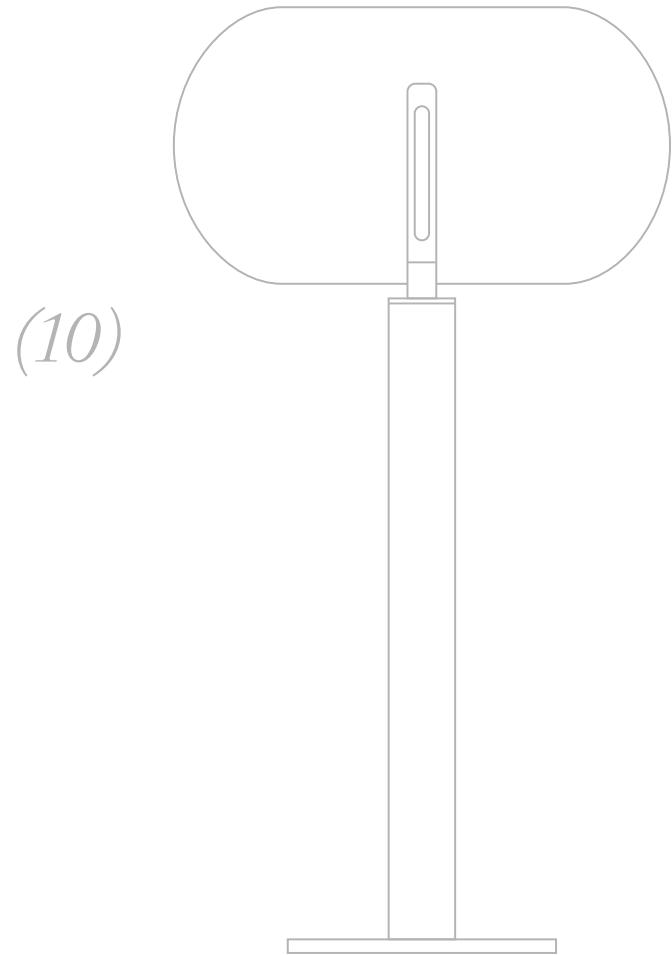
The focus here is on issues of the environment and sustainability, public and private space, mobility and logistics, questions of future human images and new technologies. We are very interested in critically questioning established patterns of thought and breaking new ground. Courage for experimental openness, willingness to take risks and radicality are concerns, to which we would like to motivate you as designers.

Courage pays off: works of students have not only won a large number of important national and international prizes and awards in recent years. Our graduates have also been able to successfully establish themselves professionally in a wide variety of contexts.

# HUGU

— Qianhui Zhou

Late detection and misdiagnosis burden women in breast cancer diagnosis. “HUGU” applies soft robotics and embedded photoacoustic imaging to create a more comfortable experience. It is pressed against the upper body like a cushion and has AI support for diagnosis and monitoring.







# CARBON CAPTURE

— Erik Mantz-Hansen, John Hayden, Paul Ullrich,  
Feidi Hu, Kalina Kondeva

Captured CO<sub>2</sub> can prolong the shelf life of fresh produce. Filters store and release CO<sub>2</sub> via UV light in an integrated storage system with an atmosphere control unit that creates an ideal CO<sub>2</sub>-enriched atmosphere for vegetables and fruits. This can promote a sustainable and healthy plant-based diet. (Cooperation M.A. Interface Design, Prof. Frank Jacob)

(11)



## Awards

- \_ Selection the Dubai Global Grad Show
- \_ Siemens Home Appliances Design Award Finalist

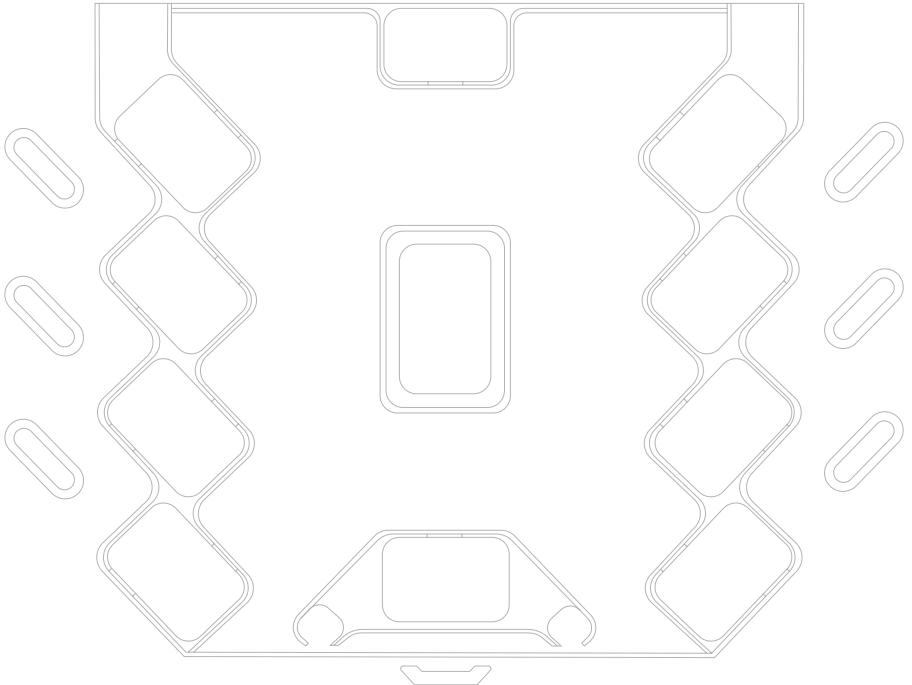




# HEALTH HUB

– Felicitas Muschalla, Peiqi Ma, Jadwiga Slezak

(12)



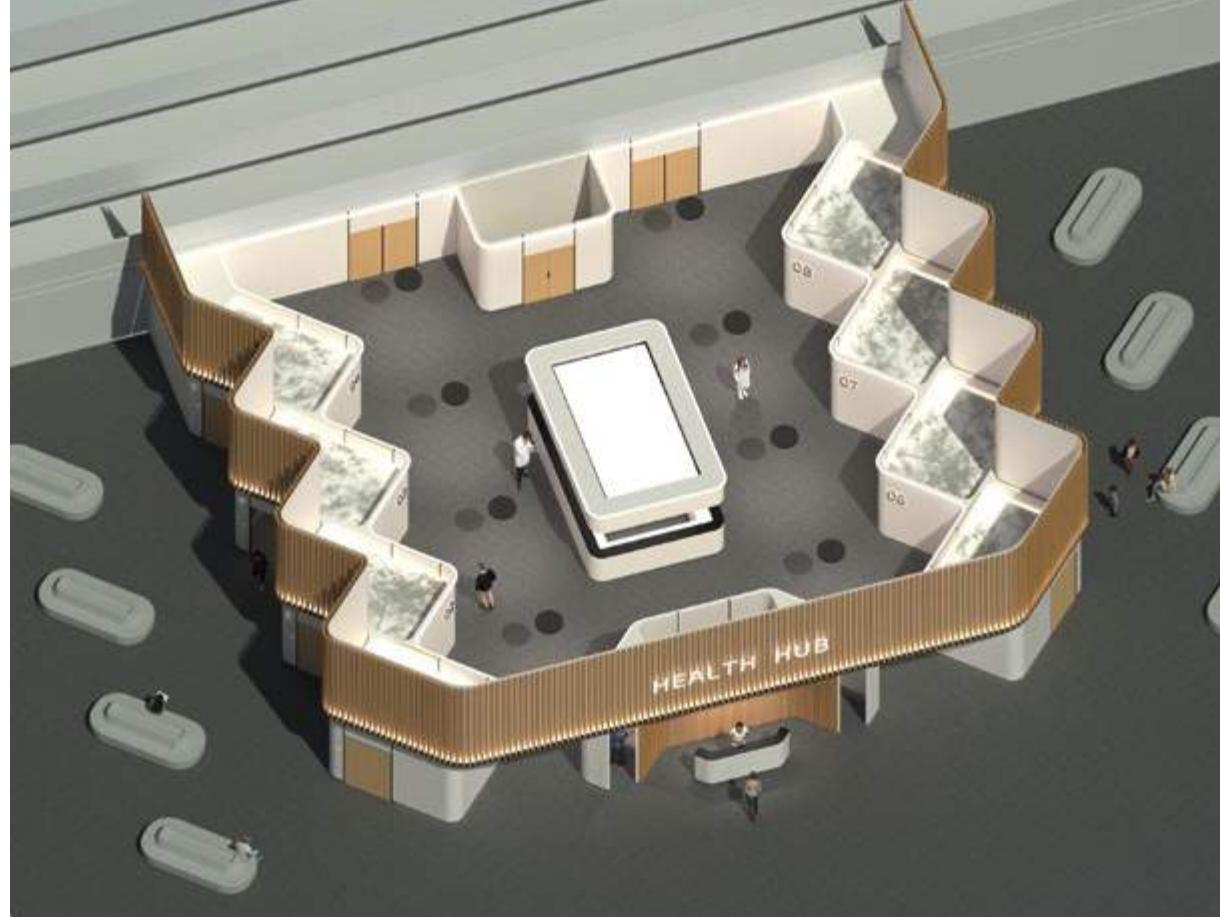
“HEALTH HUB” – Using AI to optimize patient management in A&E departments, prioritizing urgent cases. The “Health Hub” improves resource allocation in hospitals’ Accident & Emergency rooms. It addresses overcrowding, lack of transparency, connectivity issues, and poor waiting areas.

By implementing a new room structure, centralizing treatment equipment, and integrating digital and analog information, the “Health Hub” minimizes waiting times and deploys staff efficiently.

Awards

\_ Selected for the Top 150 of the Dubai Global Grad Show





EXHIBITIONS,<sup>(1)</sup>  
<sup>(2)</sup> INFOGRAPHICS,  
EXPERIMENTS &  
PROTOTYPES,<sup>(3)</sup> SITE  
VISITS<sup>(4)</sup>

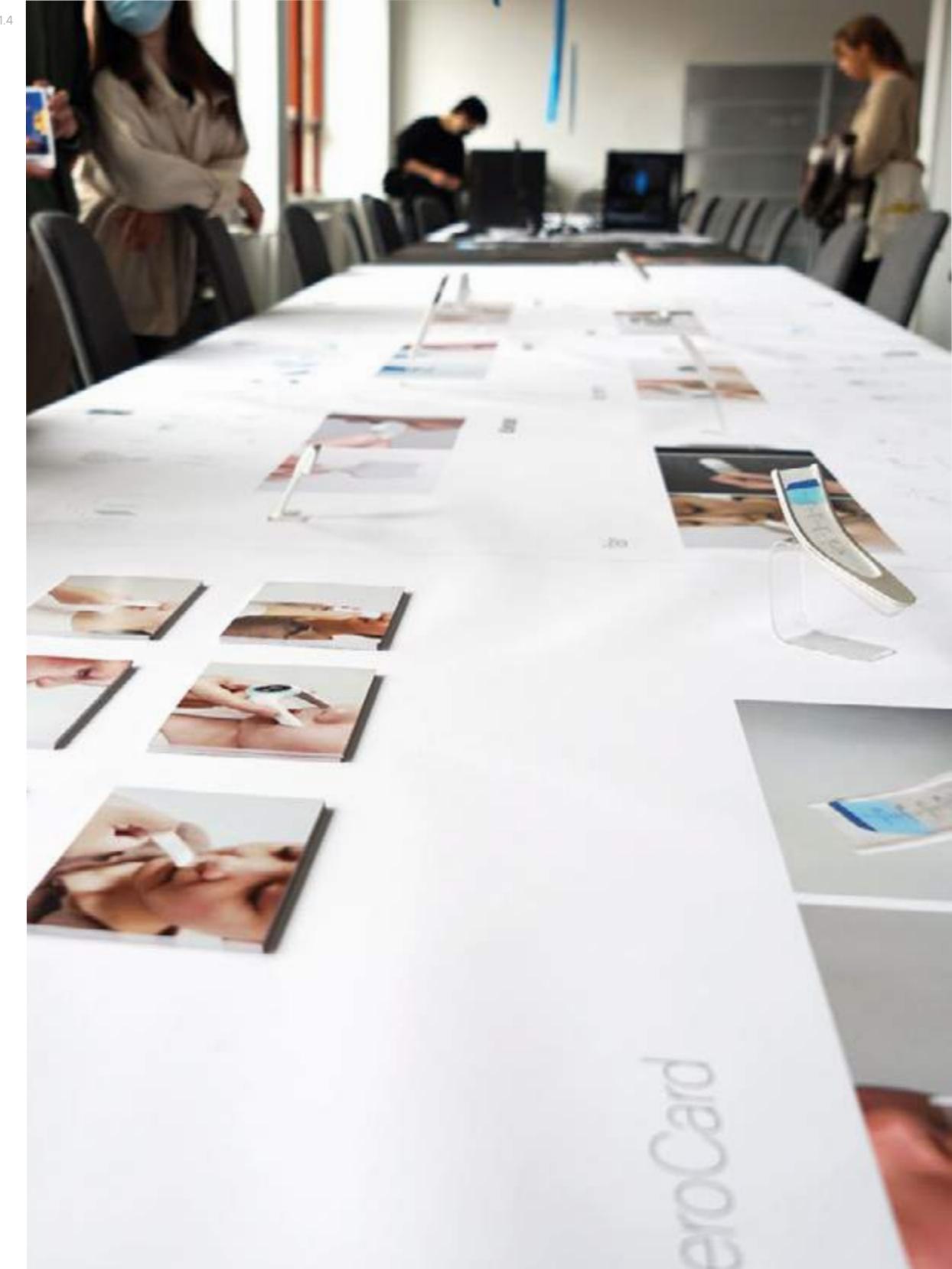


1.1

- 1.1 Annual exhibit
- 1.2 Designers – Next Pandemic ([www.nextpandemic.de](http://www.nextpandemic.de))
- 1.3 Annual exhibit in Master's Studio
- 1.4 Annual exhibit
- 1.5 Digital exhibition space
- 1.6 Digital exhibition space
- 1.7 Exhibition of student project  
– Janine Dasbeck, Future of Ultrasound Examination









1.5



1.6

BRUNNEN  
Unterstützt Ihre Kommunikation  
in der Sprachgasse



Active Case



Freeze Plus



Arbeitsplatz-Ruhezeit:  
Die Hände  
sind auf dem Tisch  
oder auf dem Stuhl  
oder auf dem Tisch  
oder auf dem Stuhl



Touch auf Arbeitsplatte  
oder auf Stuhl



Touch auf Arbeitsplatte  
oder auf Stuhl



Hand - Arbeitsschritt  
oder auf Stuhl



Hand - Arbeitsschritt  
oder auf Stuhl

Über den Arbeitsplatz oder  
auf Arbeitsplatte

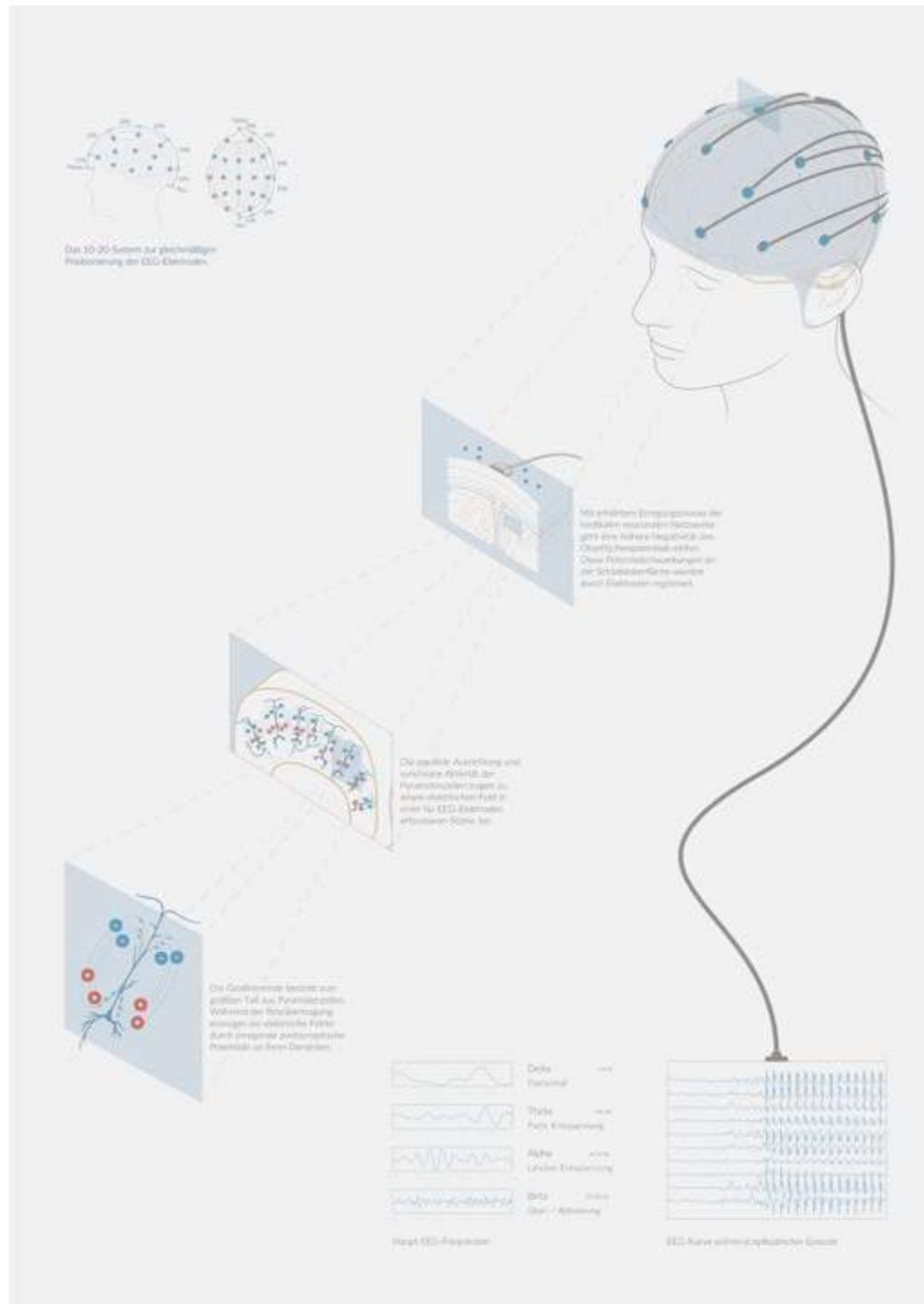
Über den Arbeitsplatz oder  
auf Arbeitsplatte

Über den Arbeitsplatz oder  
auf Arbeitsplatte



Arbeitszeitplus





2.8

Visualising complex technologies – Olga Schikurski

2.9

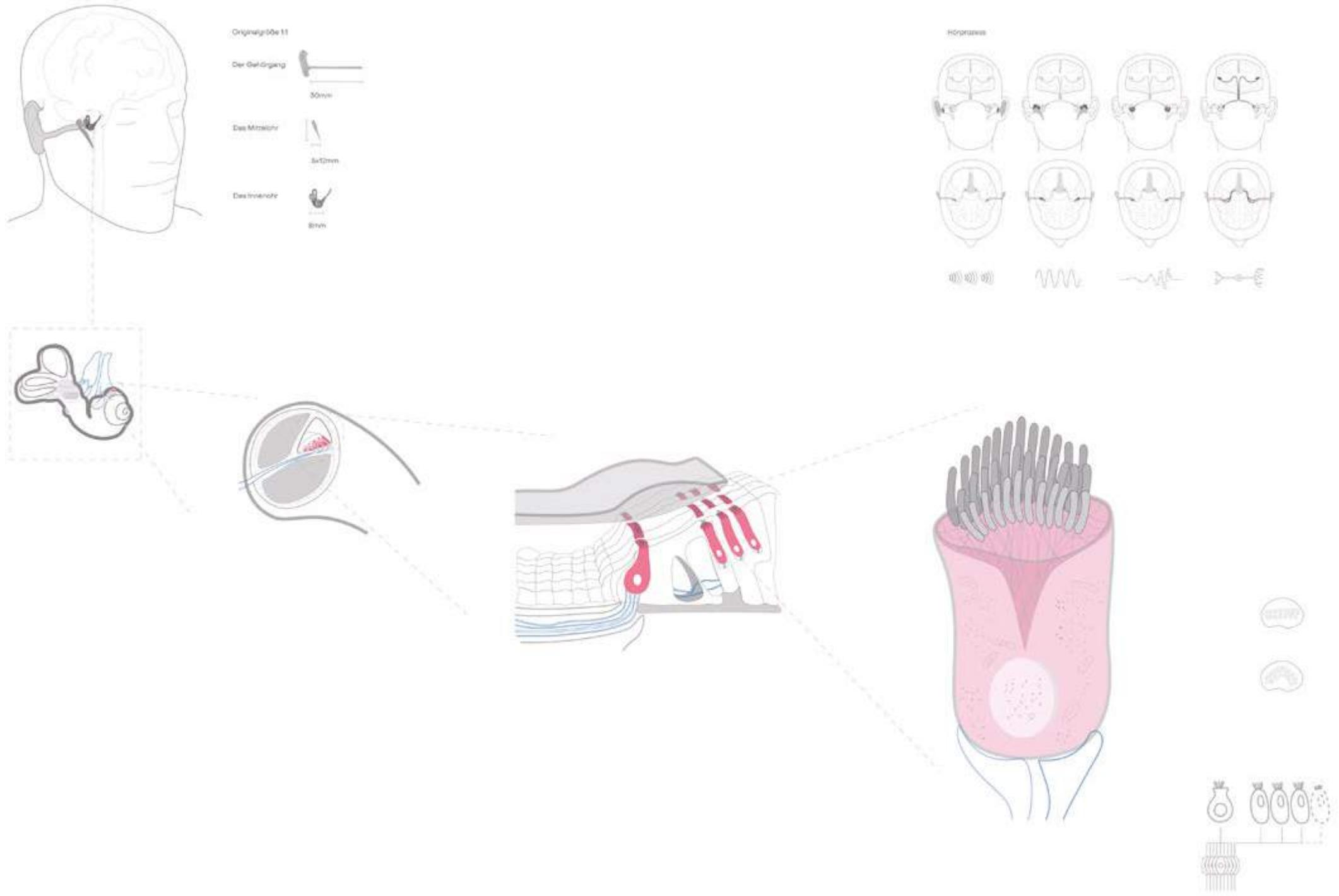
Visualising complex human functions – Siyuan Wang

2.10

Visualisation of the use process of a hypothetical product – Bo Kong

2.11

Key image of the use process – Bo Kong



01



02



03



04



2.10



2.11



3.12

- 3.12 Detail-oriented CAD modelling
- 3.13 Disassembling bluetooth headphones
- 3.14 VR of the interior of an autonomous ferry (CAPTN)
- 3.15 Casting silicon – plastics workshop
- 3.16 Prototyping scenario with human
- 3.17 Sketch of an alternative design concept
- 3.18 Technical prototype for process tests
  - Intelligent adaptive staircase: Benjamin Overhoff, Aaron Burau, Matthias Seesko
- 3.19 Prototyping a beating heart with arduino
  - Leon Held, M.A. Interface Design
- 3.21



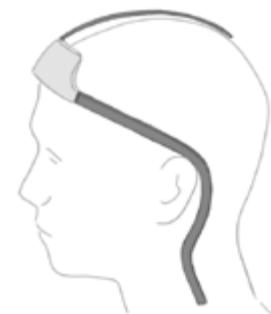




3.15



3.16



3.17



3.18



3.19



3.20





4.22

- 4.22 Student documents of how surgical tool is cleaned and sorted with the help of robots  
4.23 Storage of surgical tool - UKSH



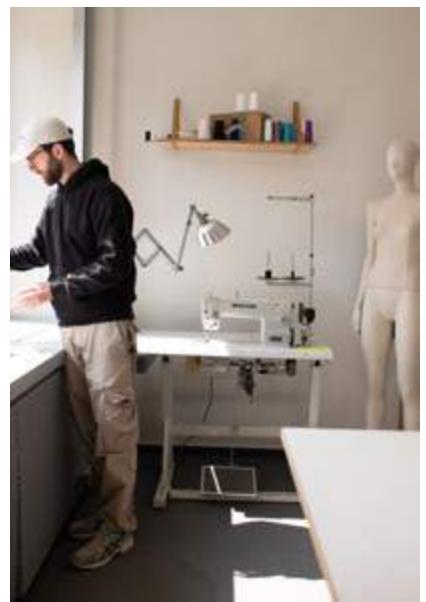
# WORKSHOPS

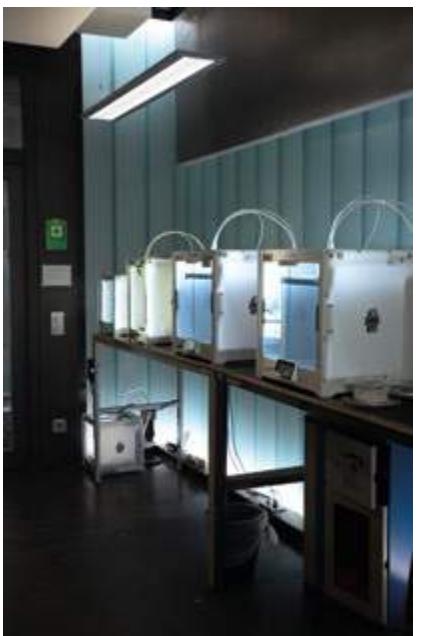
- Medical Design M.A.

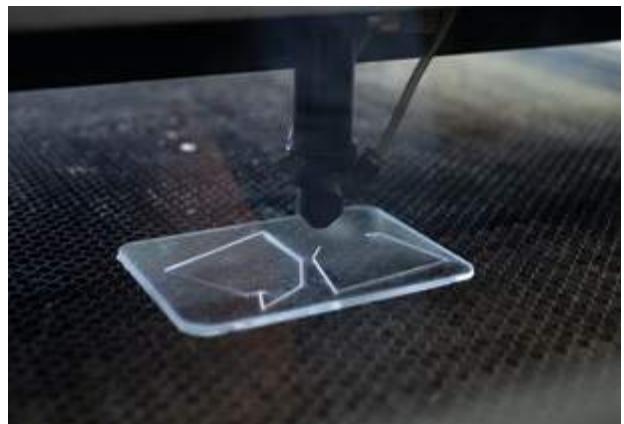
The new workshop building is the central location of the Muthesius University of Fine Arts and Design. Experiments and realisations in different contexts are possible here. The wood, metal and plastic workshops provide classical work processes as well as the latest CNC and rapid-prototyping technologies. Moreover, this building houses the library, the graphics, print and ceramics workshops, the computer lab, the interface prototyping workshop and the material research lab.

- Interface Prototyping
- Wood Workshop
- Metal Workshop
- Plastics Workshop
- Rapid Prototyping
- Library
- Ceramics Workshop
- Print Workshop
- Material Research Lab









# COURSE OFFER

- Medical Design M.A.

- Basics of Medicine – Prof. Dr. Dieter Siebrecht
- Anatomy
- Design Theory
- Sociology
- Product Planning
- User Research
- Aesthetics
- Service Design
- Design Management
- Creative Suite + After Effect
- Advanced CAD (SolidWorks)
- Human Computer Interaction
- Material & Sustainability

The range of courses includes an in-depth spectrum of specialist knowledge, methods and techniques with which creative action and critical reflective competence are individually developed. This also includes courses offered by the Institutes of Art, Design and Media Studies and the Centre for Media.

The 1st semester is a basic semester for the development of strategies of information transfer and process- and context-oriented design. It also forms the basis for developing the ability to “re-understand” when defining project topics.

The course of study in the following semesters within the framework of the inter-semester “Master Studio” is optionally individual or group-oriented, interested in relevant future and research questions, internationally oriented (including cooperation with the TU Delft) and interdisciplinary. For the final thesis project, there is the possibility of already working out the theoretical and conceptual foundations in the 3rd semester (1-year thesis).

# APPLICATION

- Interested? Then apply now!

The master's study programme begins in the summer term and the winter term and is designed as a four-year course including the thesis. There are two dates for applications: for the winter term, 15th May, for the summer term, 15th November.

Questions can also be addressed to Prof. Detlef Rhein: [rhein@muthesius.de](mailto:rhein@muthesius.de)

All further information can be found at:

- [EN.MUTHESIUS-KUNSTHOCHSCHULE.DE/APPLICATIONS/](http://EN.MUTHESIUS-KUNSTHOCHSCHULE.DE/APPLICATIONS/)
- [MUTHESIUS-KUNSTHOCHSCHULE.DE/DER-WEG-INS-STUDIUM/](http://MUTHESIUS-KUNSTHOCHSCHULE.DE/DER-WEG-INS-STUDIUM/)



# IMPRINT

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Medical Design M.A.

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## • *Die Gestaltung der Zukunft braucht Professionalität*

Die Befähigung, Perspektiven unserer zukünftigen Lebenswelt und Wege zur Nachhaltigkeit aktiv gestalterisch und vor allem wirksam konkretisieren zu können, wird für Designer\*innen immer wichtiger.

Im Kontext der Transformationsprozesse können die gestalterischen Disziplinen eine große Stärke ausspielen und Entwürfe, Konzepte und Bilder konkretisieren, die sich als Referenzen für wünschenswerten technologischen, sozialen und kulturellen Wandel verstehen. Dafür ist ein hohes Maß an kritischer Haltung, Sensibilität und Genauigkeit erforderlich.

Kurzum: eine professionelle Grundaufstellung, in der Konzeptstärke, Detaillierung und Substanz auf hohem Niveau zusammenspielen. Im Masterstudium Industriedesign an der Muthesius Kunsthochschule vermitteln wir Wege zu einem solchen Kompetenzprofil.

## • *Designing Future Perspectives: Kompetenzen für das Design visionärer Prozesse und Produktsysteme*

Wir verstehen die thematische Grundierung des Medical Design als entwerferisches Handlungsprinzip jenseits der Begrenzungen der Medizintechnik und mit einem besonderen Interesse an der Realisierung nachhaltiger Lebensbedingungen im Sinne eines „One Health“ (Mensch, Umwelt, Tier).

Sie erarbeiten sich hierfür ein erweitertes Verständnis vom Menschen und sozialer Konstellationen. Sie vertiefen sich im Rahmen der Projektarbeit umfassend in das Denken, Gestalten und Vermitteln von innovativen Prozessen, Systemen und Schnittstellen. Und: Immer auch in die Struktur, Details und die Qualität von Produkten unter Berücksichtigung der Anforderungen der Kreislaufwirtschaft und Ressourcenschonung.

Die Verbindung mit dem Masterstudiengang „Interface Design“ hat darüber hinaus eine Alleinstellung und ist aus unserer Sicht besonders richtungsweisend, da Produkte zunehmend als vielschichtige, vernetzte Informationsträger und Interaktionsvermittler zu verstehen sind.

## • *Design und Forschung*

Die Betreuung der Projektarbeit ist bei uns individuell und weitreichend. Studierende bewegen sich bei uns in einem ausgeprägt vernetzten Kontext innerhalb und außerhalb der Hochschule.

In Kiel sind wir von herausragenden Forschungsaktivitäten umgeben, an denen wir teilhaben, z.B. in der CAPTN Initiative oder im Exzellenzcluster „Precision Medicine in Chronic Inflammation“.

Mit den Verbindungen und Wechselwirkungen zwischen Forschung und Design setzen wir uns kontinuierlich in variierenden, interdisziplinär angelegten Projektformaten auseinander. Bei dem Forschungsprojekt „Nachhaltige Mobilitätstransformation“

wurden wir durch die EKSH über einen längeren Zeitraum gefördert ([www.muthesius-mobility-project.de](http://www.muthesius-mobility-project.de)). Wir etablieren wissenschaftliche Mitarbeiter\*innen, wie jüngst im Bereich „Material und Nachhaltigkeit“. Kooperationen und Austauschprogramme bestehen u.a. mit der TU Delft, der NCKU Tainan und der Kobe Design University.

## • *Neu verstehen. Mit Mut gestalten.*

Wir bieten im Rahmen des Studiums einen profunden Zugang zu Wissen und Fragen der „Health and Life Sciences“. Andererseits arbeiten die Studierenden an vielen verwandten und zumeist eigenständig definierten Themen der zukünftigen menschlichen Lebenswelt und des gesellschaftlichen Wandels. Schwerpunkte sind hierbei Fragen der Umwelt und Nachhaltigkeit, des öffentlichen und privaten Raums, der Mobilität und Logistik, Fragen zukünftiger Menschenbilder und neuer Technologien.

Wir sind sehr daran interessiert, etablierte Denkmuster kritisch zu hinterfragen und neue Wege zu beschreiten. Mut zu experimenteller Offenheit, Risikobereitschaft und Radikalität sind Anliegen, zu denen wir Sie als Gestalter und Gestalterin motivieren möchten.

Der Mut lohnt sich: Arbeiten der Studierenden haben in den letzten Jahren nicht nur eine Vielzahl bedeutender nationaler und internationaler Preise und Auszeichnungen gewonnen. Unsere Absolvent\*innen haben sich mittlerweile in unterschiedlichsten Kontexten auch sehr erfolgreich etablieren können.

