

DEPARTMENT OF ARCHITECTURE, DESIGN & MEDIA TECHNOLOGY



AALBORG
UNIVERSITY

CREATE

**DEPARTMENT OF
ARCHITECTURE, DESIGN
& MEDIA TECHNOLOGY**

2024

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The cover is a graphic point cloud of landscape modeling made with salt dough transforming a parking lot and four lane road into a green area. The digital processing unfolds a creative landscape.

WELCOME TO CREATE

THE DEPARTMENT OF ARCHITECTURE,
DESIGN AND MEDIA TECHNOLOGY

Create - The Department of Architecture, Design and Media Technology is located in Aalborg and Copenhagen. We are approx 180 employees and Ph.D. students and we are organised in four sections covering a broad range of research areas all concerning technology and ways of developing sustainable and attractive ways of living. We are a part of the Technical Faculty of IT and Design at Aalborg University.

Our department comprises disciplines within architecture, design, media and technology providing the foundation for a powerful new field of research and development of competence within the field of technology and design with a human focus.

We provide teaching programs to about 1200 students and we take pride in educating the future Engineers and Masters of Science supported by state of the art facilities, laboratories, and equipment. Create has two study boards affiliated with the educations of Architecture & Design and Media Technology. They ensure that our students are educated to face the challenges of the future labour market and address the challenges of the future within our common goals of sustainable development.

A liveable and sustainable society

Create's vision is of a liveable and sustainable society for all. Our contribution to this vision is research in and development of human centred design and technology with people. We inves-

tigate the interplay between creativity, users, and technology by conducting research within the fields of architecture, urban design, product development, and media solutions.

Create's mission is to pave the way for new technologies and solutions that contribute to answers for future societal challenges for sustainable and attractive ways of living. We do this in in close collaboration with companies, universities, local authorities, and we participate in both national and international projects. The common focal point is to deliver excellent human design centred technology research.

On March 1, 2025, Create will welcome Lone Malmberg as the new Head of Department. With her experience in strategic development and interdisciplinary collaboration, she will contribute to further enhancing Create's role in architecture, design, and media technology.



HANS JØRGEN ANDERSEN

Head of Department

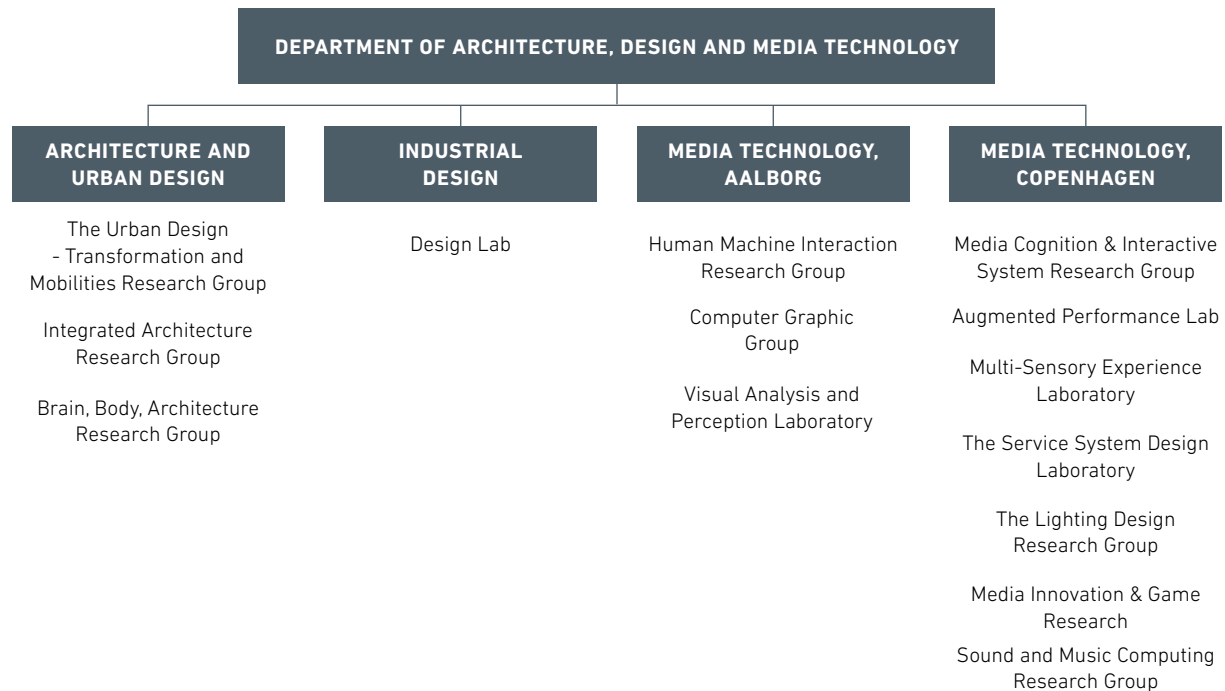
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THE DEPARTMENT OF ARCHITECTURE, DESIGN AND MEDIA TECHNOLOGY

The department's research concentrates on Architecture, Urban Design, Industrial Design and Media technology within areas such as sustainability, robotics, sound and music analysis & processing, light design, game technology, interaction design etc. We conduct our research in close collaboration with a wide range of companies, universities and local authorities, and our researchers participate in both national and international projects. The common focus points of our research are to investigate the interplay between creativity and technology, and to use this interplay to fulfill our ambition of delivering excellent human design centered technology research.

SECTIONS & RESEARCH GROUPS

To meet this vision the department is organised in four sections *Architecture and Urban Design, Industrial Design and Media Technology*, which is situated in Aalborg as well as in Copenhagen. The four sections are further split into thirteen research groups – each consisting of researchers who across sectors and fields of studies cover common ground in terms of their research. All research groups are affiliated with a section, but the members do not necessarily come from the same section – the important thing with a membership is the common research interest. The sections and research groups are presented in the following diagram.





SECTION OF ARCHITECTURE AND URBAN DESIGN

The Architecture and Urban Design section keeps all aspects of the built environment in mind – from the construction of a building's details to the megastructures within the urban landscape. We are concerned with how we can influence the built environment and its development, and how we can create and apply new knowledge across different disciplines within architecture, engineering, and urban design.

Our research and teaching deals in a broad sense with designing the city's spaces and buildings, and we want to discuss and develop the built environment. We are an academic environment that wants to contribute with knowledge that can develop, influence, and critically discuss the sustainable society of the future, and the role that architecture and the built environment play in this.

The section creates the framework for two unique education environments: 'Urban Design' and 'Architectural Engineering' and three innovative research environments: 'Urban Design – Transformation and Mobilities'; 'Integrated

Architecture' and 'Brain, Body & Architecture'.

These environments are at the forefront in their respective fields and deliver a high professional

level through integrated and interdisciplinary architecture and urban design research. Here, we combine design and technology with social science competences. Researchers and students often collaborate with various actors in society to develop new solutions and methods within the built environment.

Users, technology, sustainability, and method

- **Users:** We focus on how architecture affects our body (and vice versa) and on creating a collaborative practice for architecture and urban design that rests on user involvement and co-creation.
- **Technology:** We test and develop, among other things, new building components and new computer-based methods for designing architecture. We also use various tracking technologies to understand urban behavior.
- **Sustainability:** The section's perspective on sustainability covers both social and environmental sustainability. Among other things, we focus on locally based architecture, zero energy buildings and constructions, social inclusion, and climate change.
- **Method:** Our methodological approach rests on the use of several different methods and on the research methods that are part of the architectural and urban design subjects, e.g. drawing and visualization. This enables us to gain knowledge about the built environment through, for example, scenario building and experiments.



LEA HOLST LAURSEN

Head of Section

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RESEARCH GROUPS AND LABS

Urban Design - Transformation and Mobilities

The research group is the only urban design research group in Denmark and we customize interdisciplinary and critical-creative research methods to the specificities of people and places, to inquiry into critical agendas for cities and territories. The group seeks to create knowledge that can influence the creation of sustainable urban futures. The research undertaken critically investigates how these futures, are and for whom. Our dynamic research in the field of urban design is grounded by two key components. Firstly, how can we reimagine our built, lived and experienced environment to create new futures, and secondly, to situate our findings and results through action, in the form of practical design solutions, policies, curatorial experiments and strategies.

The research covers the rapid change of our cities in the post millennium period, focusing on the investigation of different methods and approaches in order to create tools that can support a more sustainable and long-term proof urban development. Our research pays particular attention to the entanglement of the physical and built environment with social, cultural and political aspects of urban life. How commuting, everyday life transport, digital media, new production and consumption patterns have effects beyond mere displacement of people, information and goods. Thus, the networked patterns of contemporary urbanity are sites of social, spatial, cultural, and technological transformation, which is explored in the interdisciplinary research agenda of transforming and mobile cities.

WEB:

www.en.create.aau.dk/research/research-groups/urban-design-transformation-and-mobilities

C-MUS Data Visualization Lab

Transformation and Mobilities has its own lab. The lab is about taking data and display them graphically via maps, tables, dashboards, heat maps, timelines and word clouds etc. In our lab we have a wide range of visualization software as well as a large touch screen where complex data is transformed into the simple to gain new perspectives and insights. The C-MUS lab is home to the newly developed decision-support tool AirMind. Using data visualization, AirMind combines a variety of quantitative, qualitative and visual data from various disciplines to improve the decision-making power of the aviation sector.



Create Integrated Architecture

Create Integrated Architecture regards integrated design as a cornerstone in research, education and practice. The group is critical towards the division of technical and aesthetical mindsets in the building practice and researches to support the integration of all relevant aspects of building also in early design phases. The group works inter-disciplinary often with mixed methods addressing health and well-being, sustainability and tectonics in architecture.

The group applies a human-centered approach to architecture with the aim of enhancing health and quality of life in built environments, researching how people perceive and interact with architectural environments. It researches climate mitigation and adaptation,

architecture as a passive means of comfortable indoor environments, sustainable human activity, fossil free building operation and circular materiality. The group researches tectonics in architecture through experiments and developments related to specific materials, craft-based, industrial- and digital technologies to develop the tactile, acoustic and visual qualities of architecture.

WEB: <https://www.en.create.aau.dk/research/research-groups/create-integrated-architecture>





Brain, Body, Architect Research

BBAR consists of researchers working with inspiration from architecture, neuroscience, urban design, urban mobilities, and sociology in order to explore the basic question: How does the mobile human being experience and sense the contemporary city?

The research group explores how cities and architecture can integrate the built environment with the mobile human being in a socially and mentally sustainable manner. We aim to advance our understanding of how movement within the built environment affects human experience, sensation, health and everyday wellbeing. We believe that relating to the built environment is fundamental to human beings and therefore expressed in both the body, brain, and behaviour. By exploring neuroscientific theory and interdisciplinary methods, we want to highlight how psychobiological and sociocultural approach-

es to urban mobilities can advance the design sciences. Our approach to the interaction between mobile human beings and cities aims to develop new knowledge for the design of future cities and architecture.

WEB: <https://vbn.aau.dk/en/organisations/brain-body-architecture-research>

PROJECT, ARCHITECTURE AND URBAN DESIGN

ARCHITECTURAL RHYTHMS GENERATE QUALITY OF LIFE

Neurons are stimulated by both sensory input from the environment and internal feelings, and these can unconsciously influence each other. We believe the brain is key to understanding how the built environment affects life quality. Neurons communicate through rhythmic impulses that form electrical networks, measurable via an electroencephalograph (EEG), which help maintain memories and link them to physical spaces, making the world familiar. Rhythms, from millisecond neural activities to daily patterns, shape our experiences.

Our research will thus examine how architectural rhythms influence the brain, where joy, connection, and well-being reside. By measuring unconscious brain activity with mobile EEG and Virtual Reality, we can uncover insights beyond what surveys can reveal, providing a deeper understanding of how the built environment impacts us. This project will focus on two related aspects:

- The first aspect leverages a rhythmic phenomenon known as "neural entrainment," which describes how external rhythms synchronize with and influence ongoing brain rhythms.
- The second aspect, using the same technologies, will measure how the memory network responds to landmarks and varying degrees of spatial geometry in a virtual urban environment.

PROJECT PERIOD:

August 2024 - July 2027

FUNDING:

Realdania

TOTAL BUDGET:

4.867.450,46 kr.

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PROJECT, ARCHITECTURE AND URBAN DESIGN

EXCLUSIONARY DESIGN

EXCLUSIONARY DESIGN

– SOCIAL EXCLUSION IN PUBLIC SPACES

The research project explores how homeless and socially vulnerable people are being excluded from public spaces in the city via design of leaning benches, spikes, and other design interventions preventing them from occupying and staying in public spaces. The project also investigates how the exclusion by design connects to new legislation that criminalizes particular behavioral patterns in the city. The project will use ethnographic approaches and design interventions, and the final goal is the creation of a 'dialogue platform' making the problem of exclusion by design visible to citizens, politicians, and urban stakeholders.

PROJECT PERIOD:

January 2021 - December 2024

PROJECT PARTICIPANTS:

Aalborg University, Create / Copenhagen Municipality / Projekt Udenfor / Kompasset / SAND / Foreningen MINORITET

FUNDING:

5.3 Mill DKR, the Velux Foundation, HUMAN Praxis

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SECTION OF INDUSTRIAL DESIGN

The section of Industrial Design researches and teaches design methods, design processes, and design thinking in order to study how design can be a driving force for a sustainable transition. 80% of a product's resource consumption is determined in the design phase. Therefore, design is crucial in the green transition. Our current research focus is on long-lasting products that remain attractive and usable for a long time.

We research and teach design

Design is shaping, method, process, and reflection at the same time. This is what we know as design expertise:

- to be able to see a problem from new angles
- exploratively examine potential solutions through sketches, models, etc., which give shape to a synthesis.

In both research and education, we start with real problems, challenges and opportunities within product and service development. From the initial search phase until there is an overall conceptual design proposal.

Collaboration with companies

We collaborate with companies and external organizations in both research and teaching. This helps to ensure that our research projects and teaching in design are:

- relevant
- connected with reality
- creates new valid knowledge.

Design - and developing design - must make sense for users and customers. They perceive and form an opinion about the products and the solutions that are designed, developed and produced. Therefore, customers and users are a natural part of the companies' business strategy and brand. We take this into account in our holistic approach to design, where we use a user- and context-oriented approach in both our research and teaching.



CHRISTIAN TOLLESTRUP

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RESEARCH GROUP

Design Lab

In the 'Design Lab' research group we use design thinking as driver for sustainable transition. We approach the present challenges of the unsustainable production and consumption patterns with new ground-breaking ideas and approaches.

WEB: www.designlab.aau.dk

Transition towards a more sustainable use of products and circular economy begins in the design process. It is not enough to upcycle or recycle products once they have been discarded.

In the 'Design Lab' group, we do research on how to create products that will solve long-term problems and that people will use, cherish and love. We do research on how to create products, that are not prematurely discarded, because they have become obsolete either functionally, aesthetically or technically. And we test concepts, methods and new systemic approaches to sustainable design, development, materials and production, that can extend products' value and lower their environmental impact.



PROJECT, INDUSTRIAL DESIGN

ZEROWASTE

The vision of ZeroWaste is for Danish companies to produce high-quality products for future needs, without generating waste. The goal of the project is to support manufacturing companies in designing the circular products of tomorrow without waste by holistically rethinking design, materials, production, and business models based on future needs.

During the project period, 500 companies will map their waste and their ZeroWaste potential - and 120 companies will participate in a 1:1 process, where the company and a team of dedicated experts will identify waste minimizing initiatives and take the first steps in implementing them. AAU Design Lab will contribute with design research and experiments in areas such as redesigning for minimized use of resources, designing new products from industrial waste, and creating a second life for end-of-life products at industrial scale.

PROJECT PERIOD:

2024-2028

PARTICIPANTS:

Aalborg University, Danish Technological Institute, and the Danish Industry Foundation

FUNDING:

The Danish Industry Foundation: DKK 24 million (23.485.205,-)

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We will address the waste challenge by bringing together the right design competencies within companies, bridging existing silos in production, product development, and business.



SECTION OF MEDIA TECHNOLOGY, COPENHAGEN

The Media Technology section in Copenhagen, with its five research groups, spans the many facets of interactions between humans and digitality – ranging from direct interactions between humans and technology, to implicit reactive interactions, and to broader perspectives of how technology influence and enhance society.

The section's staff has diverse backgrounds both in terms of expertise as well as cultural, which allows us to explore highly interdisciplinary areas in detail. This is also the reasoning behind our local approach to teaching and researching within STEM, because we welcome Arts, Music and Design whenever applicable.

Direct and Indirect Interactions Between Humans and Computers

We design, develop, and study interactive prototypes which have real-world purposes, including both software and hardware to investigate how we can improve our direct interactions with technology.

We study how virtual realities help in the context of rehabilitation or

how specialized computer games can help train people for real-world problems. Here, we follow a rigorous design-oriented process where we identify the need, design for

that need, build the soft- or hardware, evaluate it with end-users and iterate until the best solution is found.

We look at indirect interactions and adaptive experiences where humans are not directly aware of the interaction, even though brain and muscle activity can be detected. This area of research feeds into the direct interaction as well, thus closing the loop of interactions between humans and technologies.

Designing for Society as a Whole

We examine how technology affects society. We are involved in designing sustainable services for the broader population and managing those services. We are interested in how service design can facilitate exploration, co-creation and empowerment to address broad societal issues and sustainability.

Furthermore, we are involved in designing lighting solutions that meet the needs of end-users through contextual analysis, concept design, prototyping, and evaluation. Here, we bridge knowledge from architecture, engineering, 3D computer graphics and computing technology.



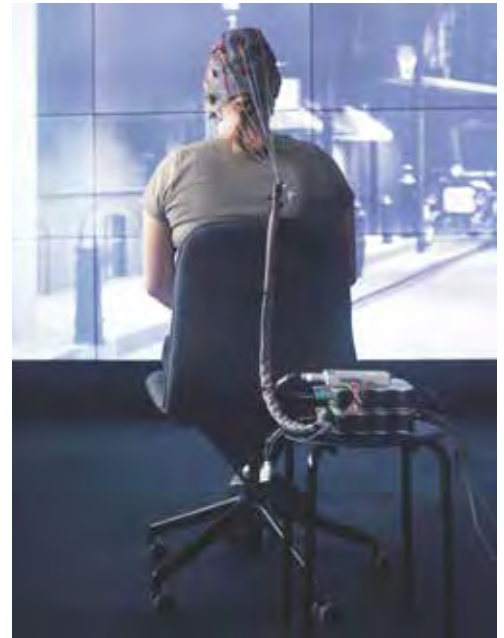
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RESEARCH GROUPS

Media Cognition and Interactive Systems

The Media Cognition and Interactive Systems research group focuses on the development of theoretical and empirical frameworks for the integration of cognition, and technology in order to enhance and understand human experience in interactive and immersive systems. Through international transdisciplinary work in basic and applied research, we bridge qualitative and quantitative methods, improve methodologies, and prospect innovative applications in many different socio-cultural and commercial domains. The group has a laboratory facility in Copenhagen, the Augmented Cognition Laboratory.



Multi-sensory experience Laboratory

The research group work on virtual reality, augmented reality, and multisensory experiences, exploring the combination of different input and output modalities in interactive applications. We are interested in both development of novel hardware and software technologies as well as evaluation of users' experiences. We apply our technologies to health, rehabilitation, training, learning and entertainment. We are particularly interested in researching topics related to sonic interaction design for multimodal environments, simulating walking experiences, sound rendering and spatialization, haptic interfaces, cinematic VR and evaluation of user experience in multimodal environments.

WEB: <https://melcph.create.aau.dk/>

Sound And Music Computing

The Sound and Music Computing (SMC) research group focuses on the aim of understanding, modeling, and improving human interaction with sound and music. SMC is cross-disciplinary and combines engineering, design, signal processing and computer science with music perception, cognition, production and performance. Our research in these areas investigates: sound synthesis, analysis, and processing; new interfaces for musical expression and embodied interaction; physics-based sound synthesis and control; sound for multimodal environments and sonic interaction design; music informatics and machine learning techniques; multimedia programming and the design of novel forms audio and music related technologies.'

WEB: <https://www.en.create.aau.dk/research/research-groups/sound-and-music-computing>

The Service System Design Laboratory

The Service Design Laboratory is dedicated to studying and applying service design, as an exploratory co-creative and empowering approach to address broad issues of societal concern. The laboratories key areas of research are service design management and strategy, civic service design and data driven service design. The three different areas are explored from a methodological perspective, defining methods and tools that can be used in the process of value co-creation and from an infrastructuring perspective, considering the socio-technical ecosystems and interactions that would support the generation of value in services.

WEB: www.servicedesignlab.aau.dk

Augmented Performance Lab

The Augmented Performance Lab investigates performative aspects of interaction design, focusing on how technology can describe and enhance musical performance and expression. One recent direction focuses on Edge Intelligence to develop interactive tools that allow musicians to use gestures and movements to control sound. The lab's technical equipment includes Edge-enabled sensors and GPU/CPU-based AI edge computing platforms. With them, we explore real-time human performances with augmented/hybrid musical instruments, tangible interfaces, reactive surfaces, and 3D spatial interaction. These new technologies can be applied in various fields, such as professional music production and performance, music education, media arts, and therapy and rehabilitation.

WEB: <https://www.en.create.aau.dk/research/labs-and-facilities/augmented-performance-lab>



The Lighting Design Research Group

The research group has as its mission to contribute to new and improved ways to use and perceive light in our daily lives. Current research activities include projects spanning from coloured light in health care, circadian rhythm lighting in old-age homes, public lighting installations for municipalities and schools, smart city applications of dynamic lighting as a scenographic tool, to combining daylight and dynamic artificial lighting to improved motivation, engagement and sustainability in work environments. LiD_RG combines architecture, engineering and technology in a human centric approach to lighting solutions that seek to improve our built environment with applied knowledge of lighting design. Researchers, private business partners, municipalities and graduate students in Lighting Design team up to solve relevant societal problems. In this trans-disciplinary approach, the learning process of analyzing, making, implementing and testing is created in real-life scenarios.

WEB: <https://www.light.aau.dk/>



Media Innovation & Game Research

Me-Ga is a research unit focusing on designing, developing and evaluating innovative media experiences and how to create applied serious games with a purpose e.g. to support motivation, engagement, learning, and communication. We are also at the helm of the Samsung Media Innovation Lab for Education (SMILE Lab), where it is possible to experience and work with the latest technological advances within innovative computational media content and interactive storyworlds. In Me-Ga we ask research questions such as:

- How can one exploit the captivating properties of media innovations and games to engage users, students, and gamers by designing, developing, and evaluating transformative and motivating learning environments?
- How to develop new methods in order to evaluate media innovations and games in an applied context.
- How can one design and implement interactive narratives and storyworlds that adapt to the user in real-time? - And how can such experiences support learning and communication?
- How can our collaboration with the film, TV, animation and gaming industry be used to research and develop novel virtual production techniques and real-time production tools for film, animation and TV?

WEB: <https://me-ga.create.aau.dk>



PROJECT, MEDIA TECHNOLOGY, COPENHAGEN

ART OF DARKNESS AS CULTURAL HERITAGE OF URBAN LANDSCAPE

The Art of Darkness as Cultural Heritage of Urban Landscape (Art of Darkness) project aims to preserve and develop cultural heritage sites throughout Europe with a better understanding of the aesthetic, social, and sustainability values of darkness, which are important to the well-being of humans and nature.

The Europe-wide collaborative network consists of 3 cities, 5 research institutions and 2 societies, which conduct 5 pilot trials in cultural heritage sites in 5 countries.

The methodology of the project is transdisciplinary, participatory, and integrative. Through co-design with local citizens and stakeholders the 5 pilot trials design strategies and solutions will be developed according to the New European Bauhaus values for a more sustainable, aesthetic and socially feasible dark-time experiences at cultural heritage sites.

PROJECT PERIOD:

January 2025 – December 2027

PARTICIPANTS:

Oulu University, Eindhoven University of Technology, Bologna University, Aalborg University, Tallinn University of Technology, Montpellier Municipality, Tallin Municipality, Oulu Municipality, LUCI Association, FLASH Light Art Society of Finland.

FUNDING:

Horizon Europe 3.87 Mio Euro
Department share 638.000 Euro

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*Bispebjerg Bakke, test pilot site
in Copenhagen*

PROJECT, MEDIA TECHNOLOGY, COPENHAGEN

STRATEGIES

STRATEGIES: SUSTAINABLE TRANSITION FOR EUROPE'S GAME INDUSTRIES

STRATEGIES is an EU HORIZON-funded project that supports Europe's game industries in realizing their potential as drivers of sustainable innovation, contributing to achieving the goals of the European Green Deal. Thomas Bjørner from Media Innovation & Game Research (Me-Ga) at Aalborg University is leading work package 7 (WP7) in the project. WP7 provides game designs for communicating the goals of the European Green Deal. Taking a participatory design approach, WP7 will create games that aim to generate new knowledge relating to evaluations of user engagement with sustainability goals.

PROJECT PERIOD:

January 2024 – July 2028.

PARTICIPANTS:

Utrecht University, Manchester Metropolitan University, Cologne Game Lab (TH Köln), Media Innovation & Game Research (Aalborg University), The University of Warsaw, The University of Malta, SpielFabrique, Dutch Game Garden, Goat Gamez, Charles Games, Mighty Boards, Neogames, Possible, Charisma Entertainment, and Plasticity Studios

FUNDING:

Horizon 2023, HORIZON-CL2 (REA): 20,5 Mio. DKK
Department share: 2,1 Mio. DKK

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STRATEGIES: <https://www.strategieshorizon.eu/>

Me-Ga: <https://me-ga.create.aau.dk/>



PROJECT, SERVICE SYSTEMS DESIGN, COPENHAGEN

CLIMABOROUGH

CLIMABOROUGH is an Innovation Action designed to field test the ClimHub, Climate Sandbox and Climate Service concepts within 12 European Cities engaged in their ecological and digital transition. The project aims to enhance traditional urban and spatial planning approaches through data and knowledge based decision making, including climate services co-production for transitions, cross-city and cross-country pilot co-creation as well as the tactical use of public procurement of innovative solutions. The goal is not just to enhance an open set of tools leveraging climate transition in cities, but also to boost the exchange of experimental good practices, experiences and lessons learnt in this field, to help cities meet climate neutrality by 2050.

PROJECT PERIOD:

January 2023 – December 2026

PARTICIPANTS:

The project, coordinated by ANCI Toscana counts on 27 other partners from 15 European countries, including 14 cities and 2 of their agencies.

For more information see:

<https://climaborough.eu/project-partners/>

FUNDING:

€ 11.000.000. CLIMABOROUGH is co-funded by the European Union and CINEA

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Our goal is to empower cities with innovative tools and collaborative practices to achieve climate neutrality by 2050. We aim to enhance urban planning through data-driven decision-making and shared experiences.

SECTION OF MEDIA TECHNOLOGY, AALBORG

The Media Technology section in Aalborg focuses on research within advanced technologies and the interplay between these technologies and people. Research activities cover both basic research, as well as applied research centred around real world problems. We address a variety of problems in different domains, for example the use of robotics, surveillance technologies, and technology in healthcare.

It all starts with technology

At the core of our welfare society stands technology and its interplay with all aspects of life ranging from the production industry, over the public sector to entertainment. Our research falls into three main areas: Computer Graphics, Computer Vision and Human Machine Interaction.

Our research within computer vision has a starting point in math, algorithms and AI. This have traditionally been centered on model-based approaches, but in recent years, data-driven approaches have been equally important. This trend

follows a general trend in computer science and engineering where massive amounts of data and the rise of modern AI have affected many aspects of science.

Within the areas of computer graphics we work with 3D visualization for Virtual and Augmented Reality. Applications from the real world are key and we push our understanding of how the technology is optimized towards the human senses.

The interplay between technology and people

It is critical that technologies and the services they offer are usable by end-users. Moreover, for future technologies and services – for example social robots – the end-users require the technology to operate as expected, which often means similar to how a human would act and respond. One of the important research frontiers within media technology is therefore to understand and develop intuitive and social acceptable solutions for human-machine interaction. Our research in this direction is rooted in both traditional interactions via tablets and smartphones, but also using more advanced platforms like drones and mobile robots.



THOMAS MOESLUND

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RESEARCH GROUPS

Human Machine Interaction

The research group at Create consists of dedicated researchers that investigate challenges regarding cognitive abilities, physical abilities, social rules and practices, as well as environmental parameters that affect or determine human machine interactions. In accordance with AAU's strategy, the team specializes in applied research with relevant regional and national stakeholders in the areas health, robotics, smart learning and spatial interaction.

Over the last years, the group has built up a strong research expertise in interaction with special needs groups like citizens with traumatic or congenital brain damage, dementia, dyslexia, as well as indigenous groups and kindergarten and school children (primary level).

The group explores different technologies like mobile platforms, robots, wearables, eye-tracking, etc. To this end we work closely together with external partners focusing on real world challenges. Our research is related to three specific themes (health, learning, space) but often transcends two or all of these themes for a concrete challenge.

WEB: www.hmi.create.aau.dk



**RES-Q plus - Comprehensive solutions
of healthcare improvement based on
the global Registry of Stroke Care Quality**

The RES-Q+ project is a European initiative focused on enhancing stroke care quality and outcomes across Europe, building on the existing RES-Q, or Registry of Stroke Care Quality, database. RES-Q+ aims to develop tools to improve data collection, such as NLP-based data import from discharge letters and virtual assistants for gathering patient-reported outcomes, as well as tools for analysis, including a virtual assistant-supported intelligent dashboard to help clinicians analyze stroke care and predict patient outcomes. The project encourages widespread participation from healthcare facilities and supports interoperability between registries.

PROJECT PERIOD:

4 year

PARTICIPANTS:

The project is coordinated by a partner from Czechia and co-coordinated by Aalborg University in collaboration with partners from several other countries. Please visit the website for a list of participants.

FUNDING:

European Commission

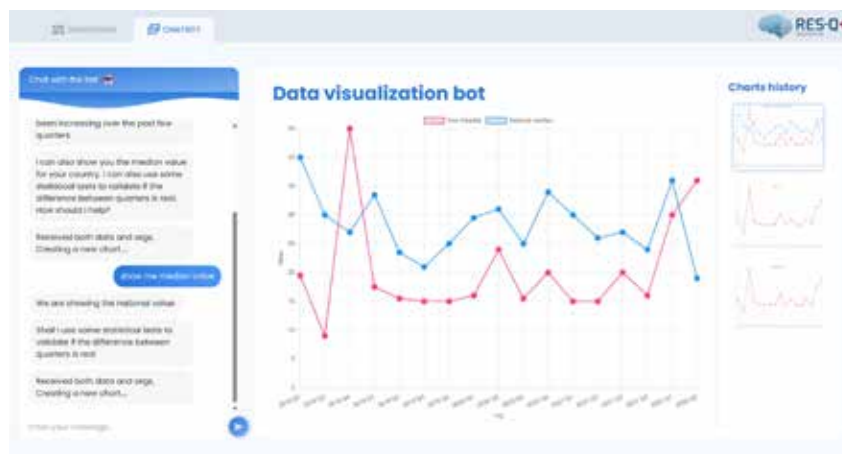
PROGRAMME:

Horizon Europe Research and Innovation Action
Topic: HORIZON-HLTH-2021-TOOL-06-03 Innovative tools for use and re-use of health data (in particular of electronic health records and/or patient registries)

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Computer Graphics Group

Computer graphics is a wide research field which includes not only the generation of all kinds of graphics with all kinds of computers but also user interfaces to interact with computer-generated graphics, image processing, display technologies, and even camera technologies. The computer graphics research group focuses on photorealistic and interactive augmented reality as well as input and output interfaces for virtual reality. We also explore other directions of computer graphics research, for example, architectural visualization, physics-based animation, computer graphics for video games, etc.

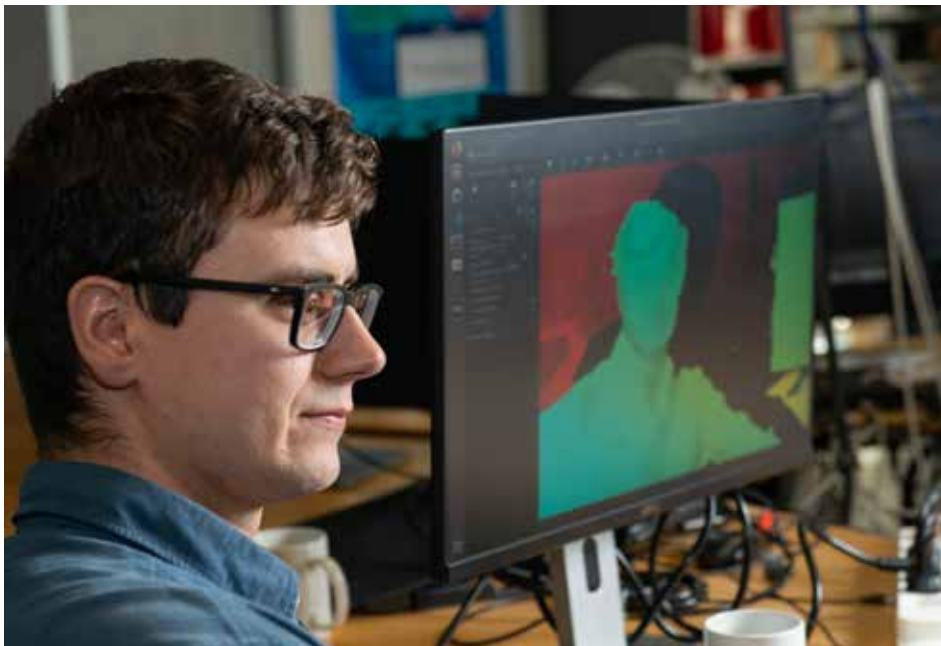
WEB: <https://graphics.create.aau.dk/>



Visual Analysis and Perception

The interest of the research group centers around computer vision and AI. Computer vision is the digital version of human vision, where a camera replaces the eyes and algorithms implemented in software replace the brain. The research field of computer vision is about developing and implementing such algorithms. The ambition is not only to replicate the abilities of human visual perception, but also going beyond

human capabilities for example by seeing in the dark or measuring the actual distance to an object. We are working on many different computer vision and AI topics, where several of them are focused on automatic camera-based analysis of people and their whereabouts. These activities are collected in the Visual Analysis and Perception laboratory.



PROJECT, MEDIA TECHNOLOGY, AALBORG

PIONEER CENTRE FOR AI

PIONEER CENTRE FOR ARTIFICIAL INTELLIGENCE

AI has the potential to transform nearly all aspects of human daily and professional life. The Internet has connected information, and it is searchable. AI will leverage this information to the benefit of companies, governments, interest groups, and, if done in the right way, also to the benefit of the individual human being. It is essential that academia take a leading role in developing AI to balance out the influence of other interests. The overriding idea of this centre is that contemporary AI researchers can only make foundational and methodological progress if challenged by new problem contexts, bigger and more complex data sets, as well as new limitations on the methods and their results, such as preservation of privacy, applicability in a wider context or absence of bias. The focus will be on new foundational mathematical models and algorithms, as well as tools to push the boundaries in a variety of application domains.

PROJECT PERIOD:

November 2021 – December 2031

PARTICIPANTS:

Aalborg University / Aarhus University /
DTU / University of Copenhagen /
IT University of CPH

FUNDING:

Danish National Research Foundation / Novo Nordisk Fonden /
Carlsbergfondet / Villum Fonden / Lundbeckfonden
Partner share: 350 mio kr
Department share: 11.5 mio kr



CONTACT PERSON:

Professor Thomas B. Moeslund
E-mail: tbm@create.aau.dk

FINISHED PHD'S IN 2024



Avishek Das

Design Methodologies
Architectural Design
Processes with Virtual and
Augmented reality: An
Investigation of Architect-
Immersive Technology
Relationship



Ayşegül Özçelik

Collaborative Pathways:
Approaches to Extending
the Lifetime of Connected
Sound Products



Carsten Hvid Nielsen

Ekskluderende design
- Når design skaber
eksklusion



Farzad Saffari

Investigating Novel
Methods and Metrics in
Consumer Neuroscience



Jesper Gaarsdal

Animation Authoring
for Industrial VR
Applications: Integrating
Deep Learning and
Motion Paths



**Kathrine Marie
Shcledermann**

Implementing Circadian
Lighting in a Hospital
and a Nursing Home



Prithvi Ravi Kantan

Orchestrating Motion:
Real-Time Sonification
Tools and Methods to
Support Movement
Rehabilitation



Razvan Paisa

The Musical Touch:
Exploring Vibrotactile
Augmentation of Music
for Cochlear Implant
Users



Rike Neuhoff

Experiments in thinking
otherwise: Embracing
tensions in designing
sustainable futures

PHD

The Department of Architecture, Design and Media Technology is responsible for the doctoral program of Media, Architecture, and Design. Besides this program some PhD students are enrolled in program for Computer Science and Engineering and Electrical and Eletronic Engineering.

THE PHD PROGRAM IN MEDIA, ARCHITECTURE AND DESIGN

The PhD Program in Media, Architecture and Design is a broad, inter-disciplinary program that focuses on design where the end-user and stakeholders have a central role in the research perspectives. Emphasis is placed on architecture, design & media focusing on the technical, social, and aesthetic dimensions. Construction and form of buildings, urban landscapes and spaces as well as design of artefacts, interactive media and art installations are of central concern. Further, emphasis is also on design and technology in the fields of environmental and social sustainability, aesthetics and experiences, interaction design and design media and architecture as tools for local and international development – and for 'a better world'.

THE RESEARCH ENVIRONMENT IS INTERDISCIPLINARY AND PROBLEM-ORIENTED

The research draws on perspectives from engineering research, as well as from relevant design, architecture, media technology, human centered computing, and social research disciplines. As an interdisciplinary and problem-oriented approach, we seek alternatives for solving particular problems within productions, social and public services, buildings, local neighborhoods, cultural enterprises and the urban fabric as such.

THE EDUCATIONS

The Department of Architecture, Design and Media Technology offers a range of Bachelor and Master's educations at Aalborg University in the cities of Aalborg and Copenhagen. On bachelor level, the two educations in *Architecture & Design* and *Medialogy* each provide students with broad competence profiles that allow them to work together with a wide range of industries and professional fields. Having finished one of these two 3-year bachelor's educations, graduates have the option to continue studying on a master's education at the department or elsewhere.

The department's portfolio of master's educations builds naturally on top of the two bachelor educations, spanning in disciplines from Sound and Music Computing over Architecture to Urban Design and Lighting Design. All master educations are grounded in a solid research environment at the department and aim at educating world-class graduates to Danish and the international industries. To support this, the department launched a new diploma engineer programme: Bachelor of Engineering in Artificial Intelligence in 2023. Furthermore, the department is involved in several educations such as: "Robotics", and "Computer Engineering - AI, Vision and Sound".

WEB: www.en.create.aau.dk/studies

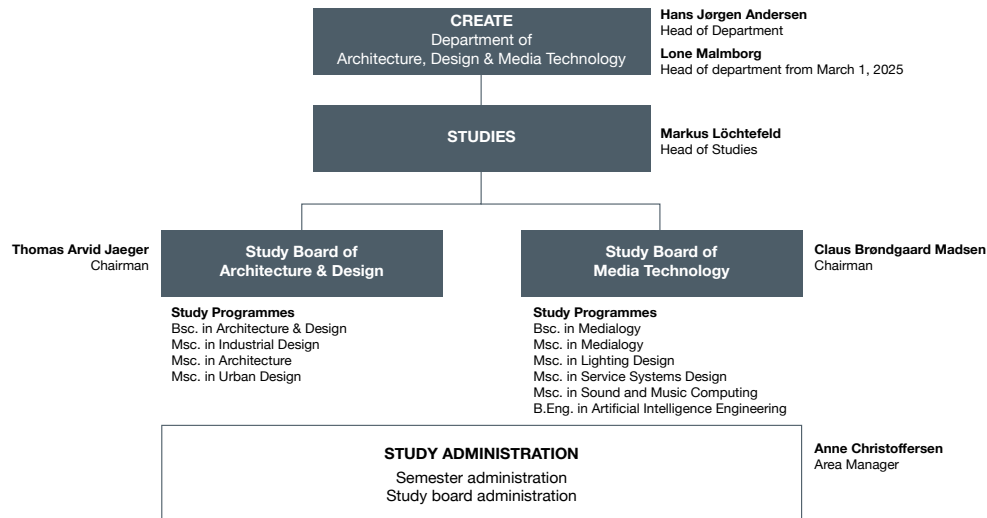


Figure: The portfolio of educations at the department of Architecture, Design and Media Technology is organised in two main groups – each of them maintained by its own Study Board consisting of faculty representatives and student representatives.



BACHELOR'S EDUCATIONS

MEDIALOGY

The Medialogy bachelor's education is based on, among others, the studies of human and computer relations, audio-visual effects, human perception, immersive computer systems and new interfaces. During the span of the education, the students are given a strong technical foundation both in theory and in practice via teaching in for example math, programming and sensor technology. The teaching is applied in the semester projects where the students work together in groups to solve real-life problems.

Besides technical courses such as programming and experimental design, students study areas within perception, interaction design, sound, graphics, games and film – and how computer science plays a part in the media productions both now and in the future.

ARCHITECTURE & DESIGN

The Architecture and Design bachelor's education combines engineering, design, architecture and creativity in a holistic approach that allows students to work across several fields and disciplines. The education is rooted in the Scandinavian tradition and it offers students to choose a specialisation after one year.

The specialisation in Architecture and Urban Design offers students a broad professional set of competences that prepares them to work on projects from family housing to large and complex solutions for urban areas.

The specialisation in Industrial Design focuses on the design, construction and production of products to both private and professional users. Emphasis is on designing the right solutions – both in regards to the user and to the use of resources.

BACHELOR OF ENGINEERING

AI ENGINEERING

"Artificial Intelligence Engineering" focuses on developing and applying cutting edge artificial intelligence (AI) to solve challenges of society and industry. It is a 3.5-year Bachelor of Engineering education directly oriented towards employment in the industry or other sectors outside academia after graduation. During the studies students engages in a six-month internship, providing an excellent opportunity to gain practical experience within an actual company. Furthermore,

all projects are industry driven, with courses to support that. This approach ensures that the student not only acquires theoretical knowledge about AI but also actively engages in problem-solving and practical work, addressing a variety of realistic tasks that prepare them for contributing to the field of AI in the industry. AI Engineering stands out as a unique program, offering a comprehensive exploration of technology and products – from conception to implementation.



MASTER'S EDUCATIONS

MEDIALOGY

In the Medialogy master's education, students learn about the science and technology behind groundbreaking interactive digital systems, and they learn to develop computer games, computer-generated 3D-graphics and interactive media products.

Students gain a professional profile directed at both the Danish and international job market, and graduates from the education are known for their skills in designing and programming new, interactive media products and tools, for example, computer games, advanced digital user interfaces, or virtual reality experiences.. Evaluating complex media systems on the basis of tests as well as evaluating technology in relation to user-oriented aspects are also competences that students gain from the Master's education in Medialogy.

Project Example

Join Forces in AstroMath: High School Students Learn 3D Line Parameterization Together

The project investigated how a serious VR game can engage and assist Danish high school students in understanding the mathematical concept of line parameterization in 3D space. Overall, the study suggests that collaborative VR games can enhance student engagement and support learning of complex 3D math concepts while managing cognitive load.

The game is set in a space station and designed for highly asymmetric collaboration. The student immersed in VR must communicate with the students outside VR who hold the manual and perform the necessary calculations.

To evaluate the game's effectiveness, we conducted various tests and focus group interviews were held after the playthrough. Results showed high engagement, with an average score of 4.41 out of 5 on the User Engagement Scale. Cognitive load was rated 2.42 out of 5, but without a standard for interpretation, we cannot say with certainty whether this is low or high.

To evaluate the game's effectiveness, several tests were conducted and focus group interviews were held after playthrough. Results showed high engagement, and the evaluation of the learning outcomes also demonstrated a good understanding. However, further investigation is needed to better understand the influence of previous knowledge.



**STUDENTS:**

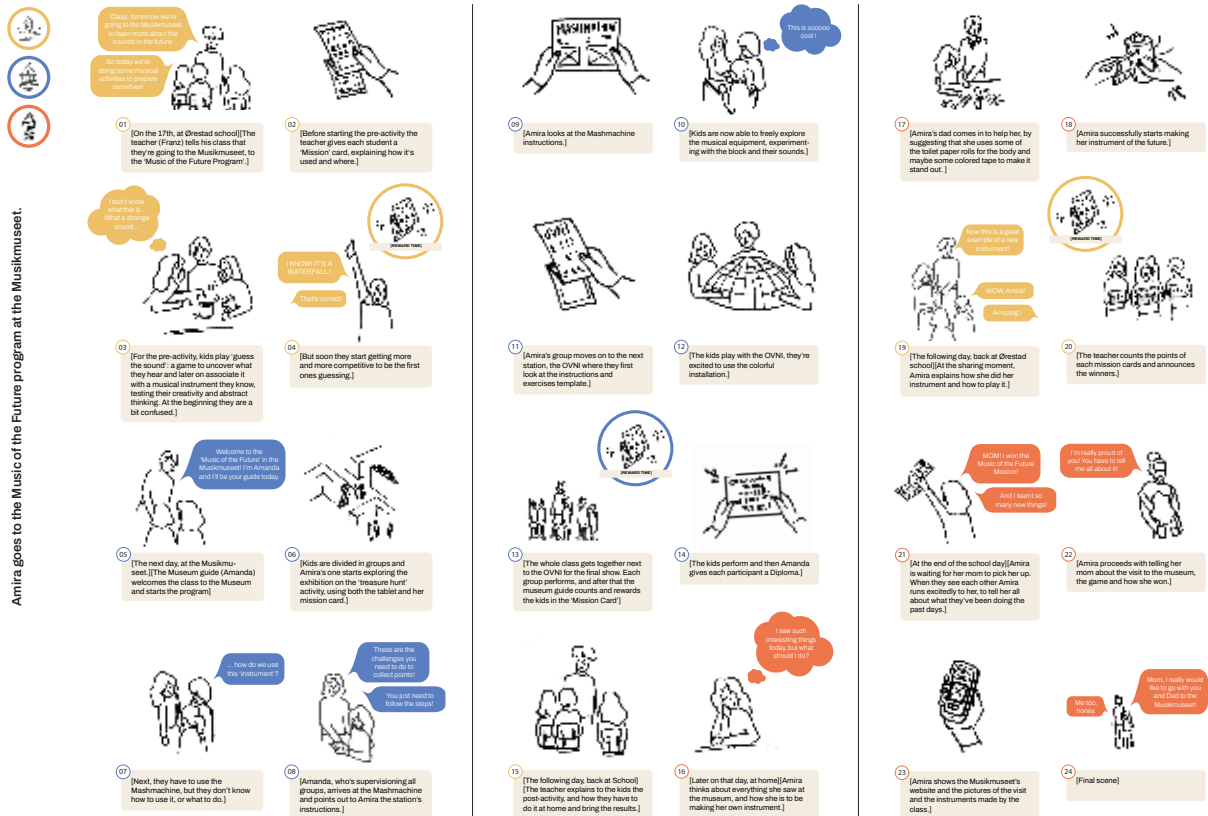
Jacqueline Rae Violet Irena Tully
Julius Ebenau Winther
Krestian Holm Bendixen
Lukas Lund Nysted
Mikkel Andreas Frederik Lau Larsen
Dimitra Liosi

SUPERVISORS:

Olga Timcenko



In a collaboration with a math teacher and his students, we developed a VR installation for teaching variants of an equation of a line in 3D. According to the teacher, this is one of the hardest topics to understand, due to its abstract nature.



SERVICE SYSTEMS DESIGN

At the Service Systems Design Master's education, students learn how to plan and organise people, infrastructure, communication, media and components of a service, in order to improve its quality, the interaction between service provider and customers, and the customers' experience.

Some of the people who pioneered service design drive the education and it is uniquely connected to vibrant communities of entrepreneurs and social innovators in

Denmark and abroad. Graduates from Service Systems Design work for companies such as Danske Bank, Bang & Olufsen, Roche, Fujitsu, Novo Nordisk and they help public organizations such as the Danish Tax Authority, Copenhagen Police, and Copenhagen Healthtech Cluster to provide better and more impactful services.



We wanted to improve the children's experience around the visit to a museum and therefore, we created a service concept, which supports a playful learning experience.

Project Example

Play to Learn – providing a playful learning experience in a museum

The students worked on a service redesign for the Musikmuseet, which connects values, actors and stages. The service concept is called 'Play to Learn', where the aim was to improve the kids' experience around the visit at the museum. It supports a playful learning experience that goes beyond the time spent at the museum.

The service concept 'Play to Learn' are based on children, connectivity, and circularity. It focuses on connecting the stages of a museum visit, including pre-, during and post-visit stages. For instance, the post-visit activities are designed to be carried out at home, allowing children to share their experiences and co-create with their parents. Further, they introduced a paper 'Mission' card to enhance the connectivity between stages. The 'Mission' card is meant to be used by the child in all stages, meaning, pre-, during and post-visit.

STUDENTS:

Anna Baldo, Francisca Melo Palma Salgado Silvano, Isabel Maria Martins Lopes, Maria Boguslawka Krasuska and Marta Giacosa

SUPERVISOR:

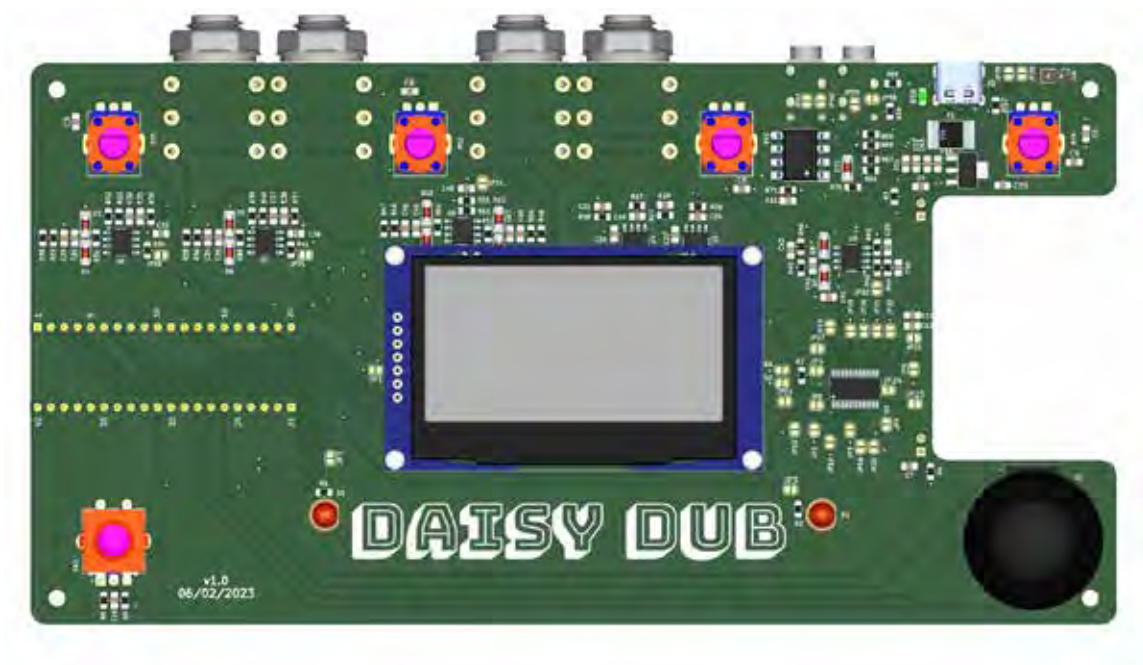
Amalia de Götzen



SOUND AND MUSIC COMPUTING

Graduates from the master's education in Sound and Music Computing are important players in the new information society. Through a combination of practice and theory in subjects such as data modelling, signal processing, pattern recognition, sound technology and -perception, cognition and interactive systems, students obtain a solid background in a fast-growing field.

Annually, Denmark exports sound and music products for over €2 billion such as hearing aids, multimedia productions, music equipment, communication technology, hi-fi equipment, games development and measuring equipment, etc.



Project Example

Daisy Dub – the ultimate hardware platform for sound effects and synthesis

The students had a clear ambition to create the ultimate hardware development platform for sound effects and synthesis, making it easier for anyone to delve into sound and music. Their vision resulted in Daisy Dub, a customizable and programmable open-source solution with a straightforward setup that offers many functionalities within sound and music. Daisy Dub simplifies creating sound effects and synthesizers in traditional programming languages, enabling users to transfer their sound effects and synthesizers from the computer to the stage.

Daisy Dub alleviates the challenge, making it easier and straightforward for musicians to create unlimited sound effects and synthesizers. Daisy Dub uses a new microprocessor specifically designed for music, and the students designed the board of Daisy Dub with musicians in mind, emphasizing ergonomics, versatility, and simplicity.

Their primary focus was creating an enjoyable, functional user experience that fosters flow and intuitive interaction.

STUDENTS:

Leo Fogadić
Oliver Bjørk Winkel
Rasmus Emil Refstrup Kjærbo

SUPERVISOR:

Stefania Serafin



We wanted to create the best open platform for real-time audio processing and synthesis, making it easier for anyone to delve into the world of sound and music computing.

LIGHTING DESIGN

In recent years, lighting technology has undergone a revolution, including intelligent and interactive control of light in rooms. Moreover, new lighting technologies and use of interactive screens are becoming increasingly visible in the public space. Therefore, professional and highly educated lighting designers are sought after. Companies are

looking for people who understand lighting design, who are able to work with existing technologies and develop new and smart solutions.

The Master's education in Lighting Design is a cross-disciplinary and international program based in a special Danish and Nordic tradition for light perception. Focus is on how the technical qualities of light and materials are applied in order to promote comfort and aesthetics.

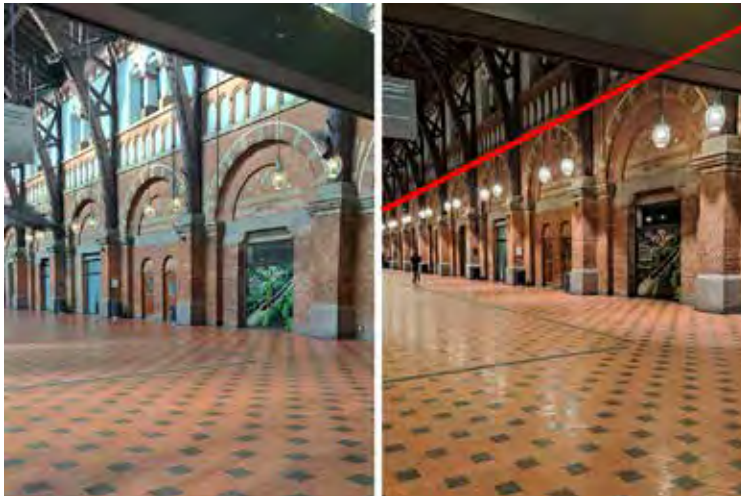
Project Example

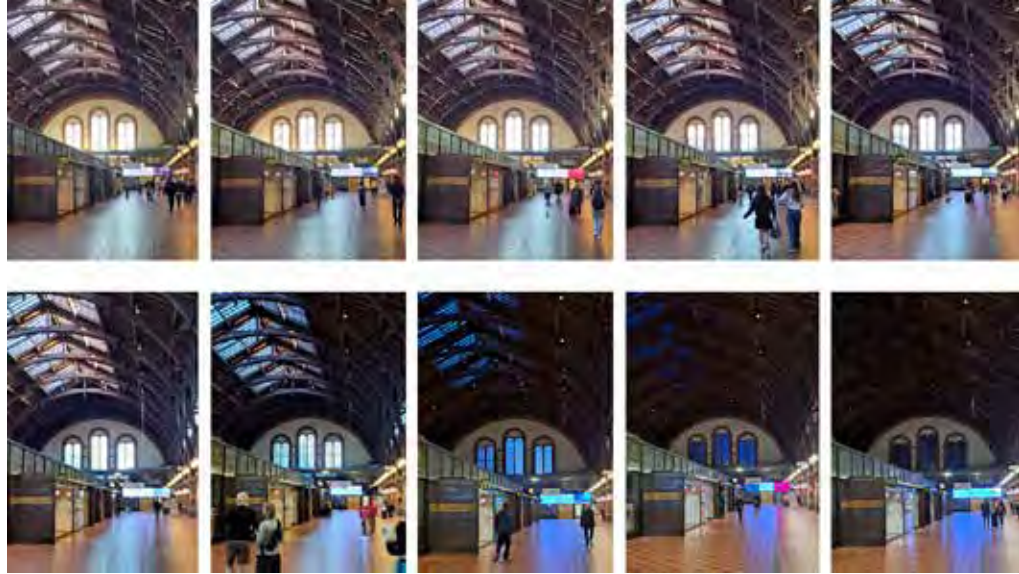
Cultural Heritage Lighting:

Copenhagen Central Station, a case-study

This master thesis delves into a thorough analysis of how to study cultural heritage buildings, with the intention of creating a lighting design accordingly to their prestige, history and meaning. The analysis covers three fields of knowledge: Architecture, engineering, and anthropology, and it is applied to a real case-study, Copenhagen Central Station.

The findings after applying this analysis, allowed to confirm that daylight is the core of this project for appreciating the station at its greatness. This led to the necessity of creating a lighting design that will:





- Support the light transition from daylight to nighttime so the building's expression can be valued at its maximum, for more hours.
- Highlight the windows area since they carry meaningful symbolism that belongs to the story of the building and its Danish romanticism architectural movement.
- Improve the perception of the interior hall to achieve a sense of unity, helping people connect with the station and its history like happens during daytime, evoking the same feelings of security and reassurance over the ones observing and experiencing the room.

This specific case-study reflects a good example of social sustainability. The revision of the lighting of Central Station, allowed to propose an assessment with a potential solution that not only abides

to improve the encouragement of people to use public transportation, but also to revalidate the meaning of this building within the Danish society. This project invites us also to discuss light in terms of heritage.

STUDENTS:

Julieta Cignacco

SUPERVISOR:

Ellen Kathrine Hansen



I wanted to create a lighting design that reflects the prestige, history, and significance of cultural heritage buildings by thoroughly analysing them.

INDUSTRIAL DESIGN

The Master's programme in Industrial Design focuses on an integrated process of concept design, construction and product development. Aesthetical competencies and creativity in the design development process are combined with knowledge of construction, product development, ergonomics, materials, environment, design management and economy.

With a Master's degree in Industrial Design, students gain an understanding of product design and business perspectives. Graduates from Industrial Design are capable of combining solutions and products that are innovative as well as functional.



Project Example

Pullit - a device for the real world of nursing

The students took on the challenge of creating a simple assistive, low cost, high impact device targeted at nurses filling and emptying large syringes. The objective was to prevent severe finger pain, sick leave, surgery and early retirement of nurses doing repetitive extraction and injection with 50mL syringes. Problems that infer a 2.46 billion DKK cost a year. The project result was the proposal Pullit, a simple device that nudges an ergonomic grip that lower the risk of injuries. It shifts the strain from a few fingers to both hands and larger muscle groups, providing relief from and prevention of musculoskeletal disorders in the fingers and wrist. Remedying the tendency of unhealthy work environment for the nurses, Pullit enhances their professional appearance and comfort, while elevating patient safety and time-efficiency, allocating more time to tending to the patient. The tool seamlessly integrates into their current workflow by blending in with the 50 mL syringe, offering free movement and no distractions with minimal interactions, thus ensuring a quick adoption.

Creating a simple low-cost solution that would actually be adopted in the everyday routines of professional nurses requires in depth, hand-on prototyping with the stakeholders. And this is exactly what the students did: through more than 50 3D printed prototypes they continuously developed through several shorter trial periods in hospital wards. The real aim was to ensure adoption and long-term value, not just brief testing of a single situation.

This objective of real-life impact and interest was confirmed when the thesis project ended with a requested purchase of 20 units from a department manager, to be shipped the day after final exam.

STUDENTS:

Sophia Rytter Møller

Kamilla Strand-Holm Schmidt

“

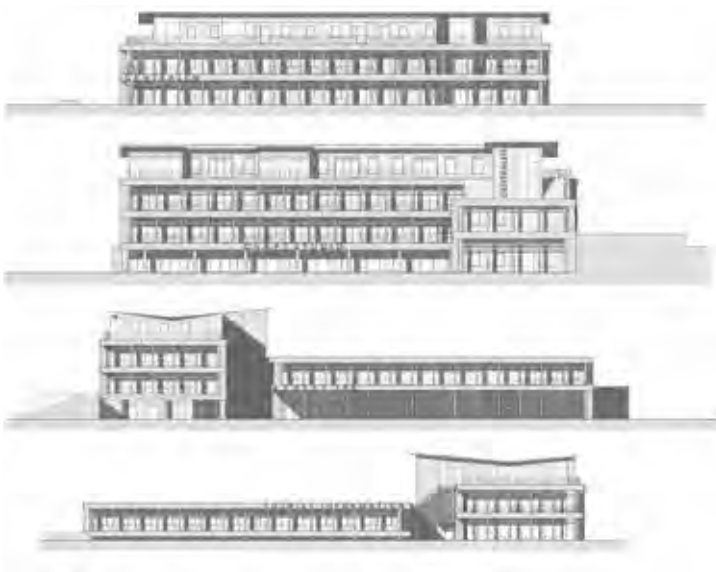
I extract between 50-100 syringes a day. I have had surgery on both hands, and it mainly comes from the fact that I have extracted large syringes. It has definitely changed my quality of life.

Lise, Anaesthesiology Nurse



ARCHITECTURE

At the Master's education in Architecture, the Nordic context is the point of departure for exploring the intersection of architecture and engineering in a local and a global perspective. Sustainability and tectonics are central and interlinked fields of importance in this regard, as the students challenge and develop the social, environmental and economic role of architecture towards an enhancement of the built environment. In doing so, the students integrate a multitude of aesthetic, functional, constructive, contextual, material, and environmental aspects of architectural space while exploring its relation to and influence on our health and well-being in a problem-based learning environment. Hence, with a foundation in an intersection of theories, methods and experiments pertaining to architecture and engineering, the Master's education in Architecture ensures an interdisciplinary and international competence profile.



Project Example

Centralen - Sustainable Transformation of 20th Century Building Stock

This thesis explores a sustainable transformation of a 20th-century postal service building in Hillerød, aiming to create a new residential neighborhood and cultural area that re-connects with the city fabric. The building tradition of the 20th century, rooted in postwar principles, brings both qualities and challenges. Modern transformations face significant obstacles, including high operational energy, rigid structures, and poor indoor environmental conditions due to hazardous materials.

The project investigates how to balance the material impact of the transformation while addressing thermal challenges inherent in 20th-century building practices. A life cycle assessment is utilized to evaluate the impacts of various materials, aiming to achieve an optimal balance between operational energy and material impact, while preserving the narrative and cultural values of the Postal Service Building.

STUDENTS:

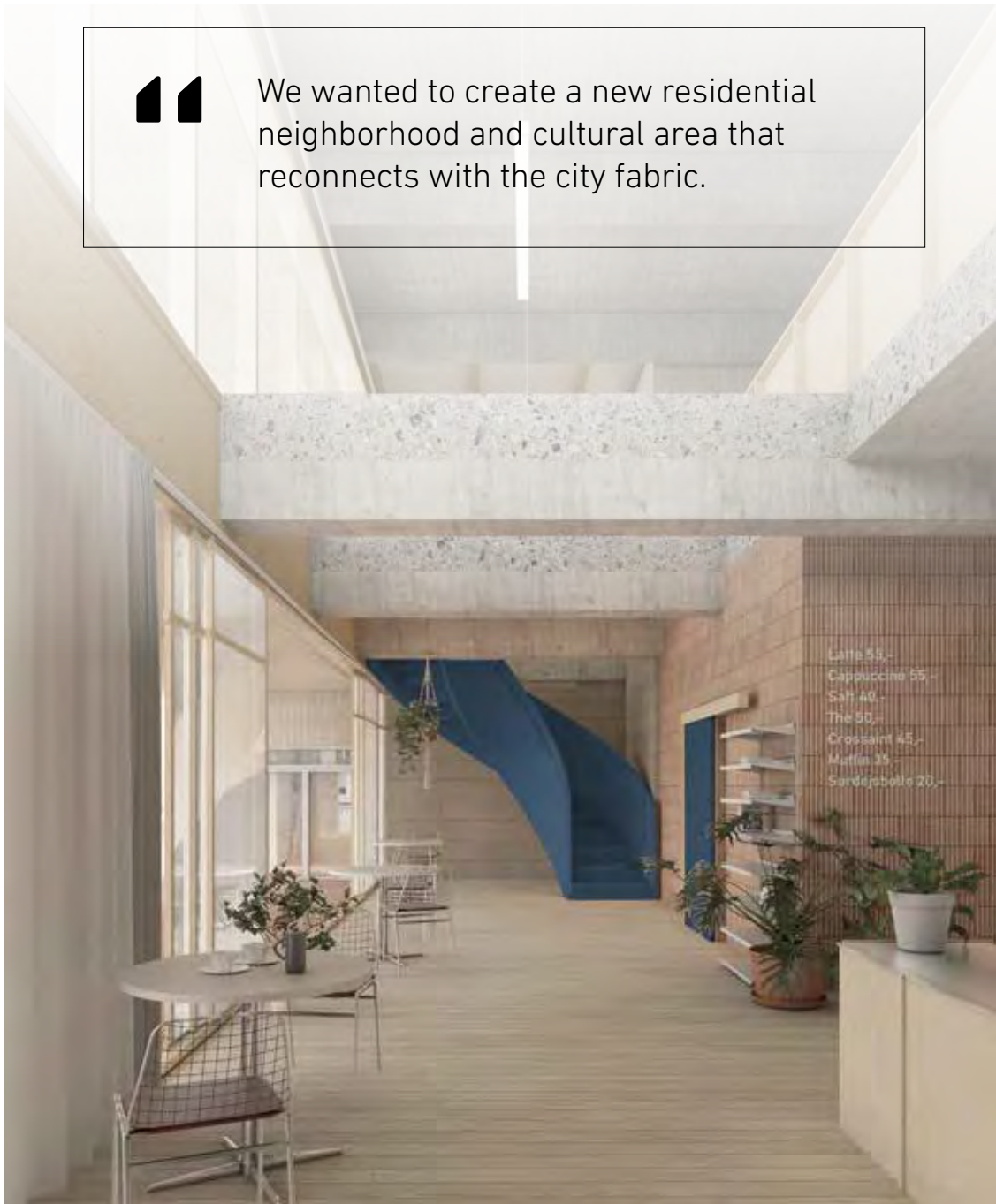
Signe Glud
Frederik Jordan Jensen

SUPERVISOR:

Luis Santos



We wanted to create a new residential neighborhood and cultural area that reconnects with the city fabric.



URBAN DESIGN

At the master's program in Urban Design, students work with challenges related to urban development and urban planning to help shape cities, creating new spaces for people, and new ways of moving around these cities. The master's program in Urban Design focuses on designing cities for and with people. Students gain expertise in creating safe, fair, inclusive, and diverse cities and urban areas. They solve problems related to climate change, sustainability, urban growth/shrinkage, and social challenges. There are two ways to become an urban designer: either through an MSc in Engineering or an MSc in Technology, depending on the student's bachelor's degree.

Project Example

Out of (urban) order

This thesis explores responsible urban design with a focus on Refshaleøen, an industrial port in Copenhagen. It examines the societal and environmental impacts of local design choices, addressing Refshaleøen's uncertain future.

The study analyzes urban development dynamics, balancing human and non-human agents, including industrial nature, local communities, and cultural environments. It contributes to the general discussion on urban development in industrial areas with site-specific findings.

Advocating for a paradigm shift in urban planning, the thesis emphasizes ecological considerations and local community empowerment while respecting the existing environment. It proposes nature plots, preserving environments instead of buildings, and activating local agents in shaping the city. The goal is to set a precedent for future projects.

Central to this thesis is defining 'responsible' urban planning in the Anthropocene era, highlighting the need for dynamic, adaptive, and flexible models over rigid planning. It argues that Refshaleøen can be a flagship of responsible urbanism.

STUDENTS:

Emma Thompson
Johan Forget
Mathilde Christensen

SUPERVISOR:

Tina Vestermann Olsen





We aim to show how Refshaleøen can become a model of responsible urbanism that respects the environment and empowers local communities.



URBAN ARCHITECTURE

Præriehusene - Development of Christiania Downtown

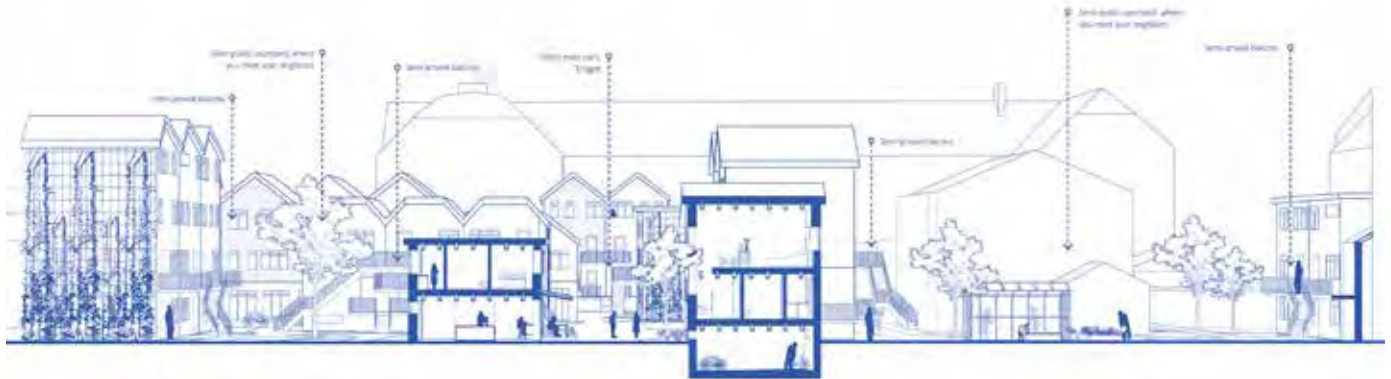
Præriehusene is a pioneer project within social housing in Denmark. The project involves great integration of user participation and a deep understanding of an area that exudes history and a strong community developed through generations.

The new homes challenge the traditional way of thinking and the strict, uniform dwellings which are typically associated with social housing. The project represents creativity, a sense of belonging and the possibility to put one's identity in the home.

The dwelling must be able to accommodate the different family formations and living arrangements that exist in today's society and do away with the idea of the nuclear family which is no longer the norm.

STUDENTS:

Andrea Marie Kjærsgaard
Frederik Elbro
Michelle Neumann





We wanted the dwellings to reflect the different family formations that exist in today's society.



DESIGNING FOR THE VISUALLY IMPAIRED

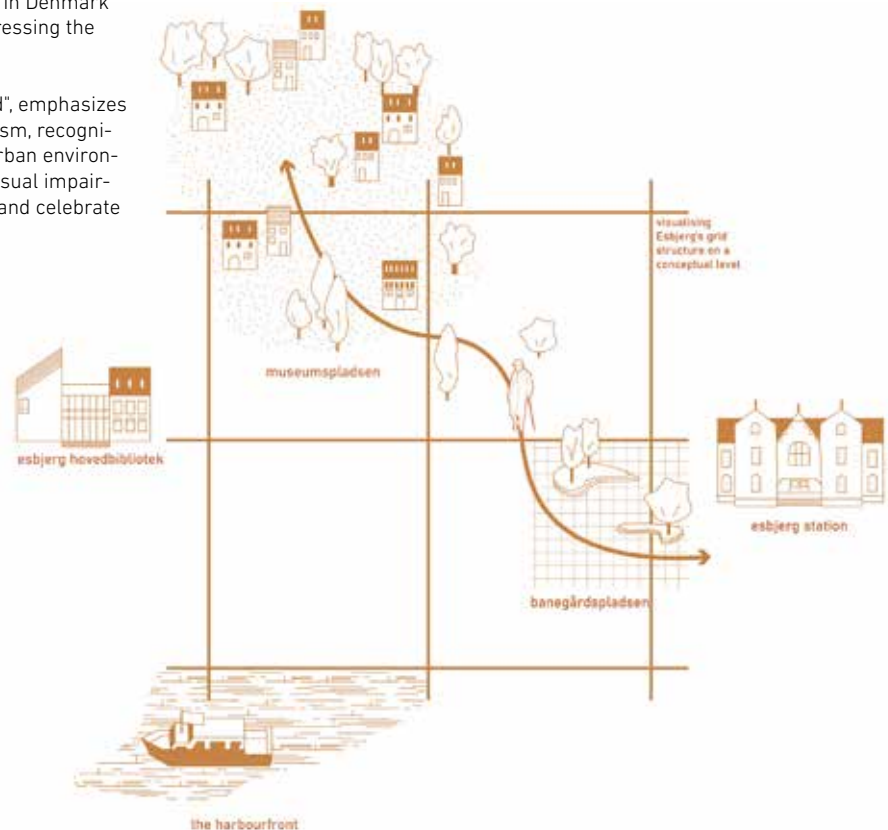
This master's thesis focuses on inclusivity in Esbjerg's city center, including Banegårdspladsen and Museumspladsen to attract a diverse range of people.

As we live longer, more people experience vision impairments, increasing the need for cities to support the independence and inclusion of those who are blind or visually impaired. The project tackles the lack of inclusive urban spaces in Denmark and raises awareness and understanding by addressing the challenges faced in urban settings.

The proposal, "Designing for the Visually Impaired", emphasizes creating inclusive spaces through sensory urbanism, recognition, and co-housing principles. It explores how urban environments can validate the presence of people with visual impairments, foster social interaction, reduce isolation, and celebrate community diversity.

STUDENT

Cindy Tuyen Cat Nguyen





For me, this marks a significant stride toward a more inclusive and dynamic Esbjerg.



THE ADMINISTRATIVE TECHNICAL STAFF

ADMINISTRATION

The administration at CREATE supports the work of the academic staff and the students and is called the Technical Administrative Staff, in daily speech TAP. The administration consists of many types of teams and staff: Leaders, department team, study team, financial team, and workshop team.

The tasks are manifold, but the ambition is the same: To deliver the best possible service for students, academic staff, and external partners.

ADMINISTRATION TASKS:

Department team:

- Employment of academic staff, PhDs and administrative staff, holiday and sick leave administration
- Coordination of events at the department, i.e. graduation events, conferences and seminars

Study team:

- Scheduling and planning of courses and exams
- Booking of rooms for teaching and managing group areas
- Administration of educations and students' courses and studies

Financial team:

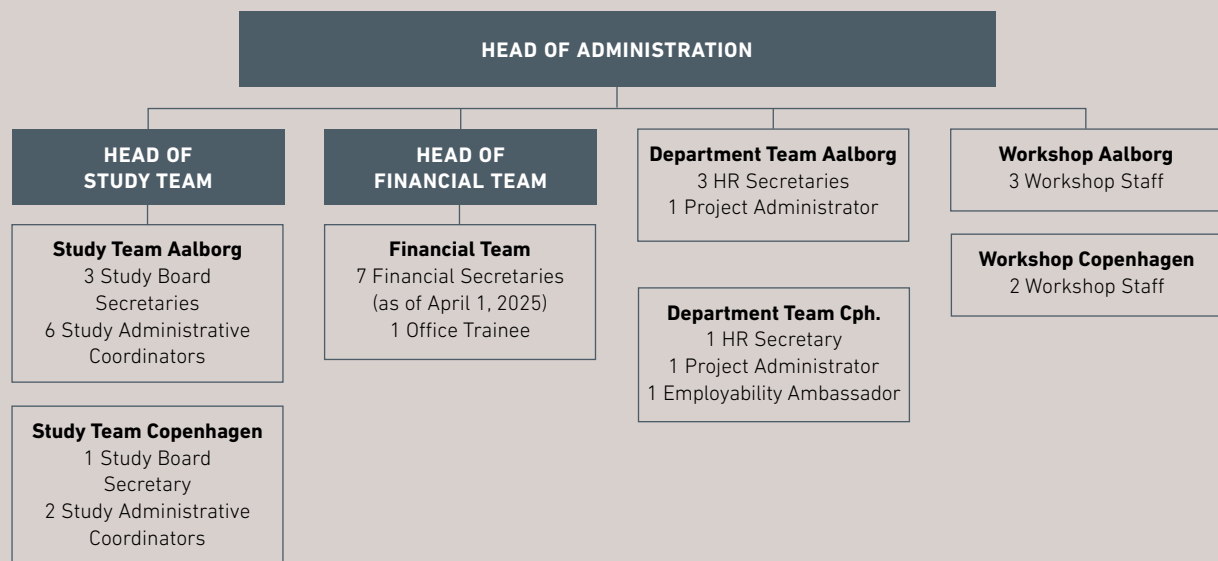
- Budgeting and accounting of daily operating finances
- Operating project finances

Workshop team:

- Workshop assistance to researchers and students
- Maintaining and renewing workshop machines

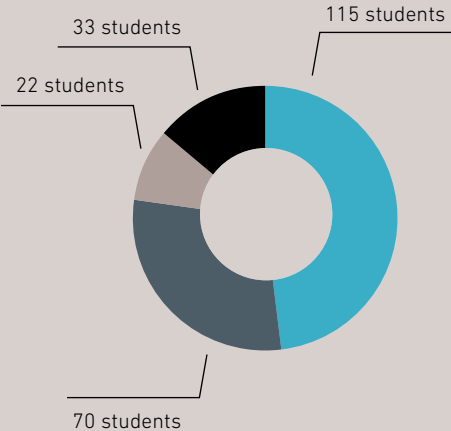






LENE GRUNDAHL
Head of administration
lgru@create.aau.dk



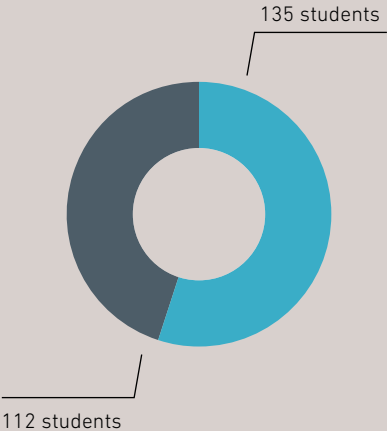
KEY FIGURES 2024



STUDENT INTAKE (BSC) 2023



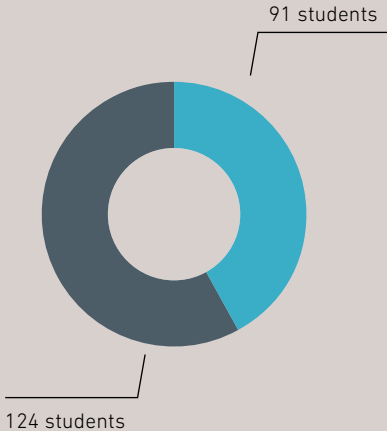
-  Bachelor of Engineering in AI Engineering
-  Medialogy Aalborg
-  Medialogy Copenhagen
-  Architecture and Design



STUDENT INTAKE (MSC) 2024



-  Architecture and Design educations (AAL)
-  Media technology educations (AAL+KBH)

GRADUATED STUDENTS 2024



-  Architecture and Design educations (AAL)
-  Media technology educations (AAL+KBH)

STAFF

Technical and administrative staff: 35 persons
Scientific staff: 147 researchers
Total numbers of employees at the department: 182

TURNOVER

Total Turnover: 170 Mio DKK

PUBLICATIONS 2024

Peer-reviewed: 182
Publications in total: 249

ONGOING PROJECTS IN 2024

| FUNDING BODIES | NUMBER OF PROJECT | TURNOVER T. DKK |
|--|-------------------|-----------------|
| Danish government | 43 | 5.634 |
| Danish municipalities | 14 | 2.794 |
| Danish private foundations and organisations | 29 | 11.731 |
| Danish private companies | 8 | 782 |
| European projects | 34 | 8.789 |
| Public foreign funds | 3 | 485 |
| Private foreign funds | 3 | 15 |
| Total | 134 | 30.230 |

HIGHLIGHTS OF THE YEAR

In 2024 Aalborg City welcomed a new city architect: **Jens Rex Christensen**, an alumnus of Aalborg University with a Master's degree in Urban Design. He is the second city architect from Aalborg University. **Anne Mette Boye**, the City Architect of Aarhus, also holds a degree in Urban Design from AAU.

CREATE students from the Medialogy programme, together with Software students, won third place in the international Brain-Computer Interface Hackathon. The competition focused on development of technology, which uses brain signals to control e.g. robots and computer systems, with potential in fields such as medicine and game development.

A group of **first-semester students**, together with their supervisor **Carlos Diaz**, won the award for Best Paper at the GoodIT conference. The students developed a game to raise awareness of hate crimes against the LGBTQ+ community in Denmark and presented their project so well that they won the prize for Best Paper.

Lars Brorson Fich was honored with the Packness Prize 2024 alongside journalist Birgitte Sonne Kristensen. They received the award at Kunsten Museum of Modern Art in recognition of their efforts to promote architectural debate in Northern Jutland.

Linda Nhu Laursen won the Kamma Prize 2024 which recognizes women who have made a significant difference in their field.

Neelu Madan received the Spar Nord Foundation's Research Award and a grant of 250,000 kroner for her PhD project and research in artificial intelligence and the use of video surveillance. Her work contributes to solutions addressing issues such as preventing drowning accidents in Aalborg Harbor.

Bastian Ilse Hougaard and **Hendrik Knoche** received the Best Paper Award. The paper "Aiming, Pointing, Steering: A Core Task Analysis Framework for Gameplay" was awarded out of 15 other honorable mentions. **Prithvi Ravi Kantan**, **Sofia Dahl** and **Erika G. Spaich** received the Best Student Paper Award. **Joel Peter Weber Letkemann** received the Inter Circle U. Prize for inter- and transdisciplinary research. **Galadielle Humblot-Renaux** received the Outstanding Contribution in Reviewing award. **Luis Filipe dos Santos** received the AAU Pedagogy Prize 2024. **George Palamas** and **Anca-Simona Horvath** received the Best Paper Award at the 29th Conference of Computer-Aided Architectural Design in Asia. **Prithvi Ravi Kantan**, **Sofia Dahl**, **Helle Rovsing Møller Jørgensen** and **Erika G. Spaich** were nominated for Best Posters. Their abstract was shortlisted among 12 of 340 total submissions for the Best Posters contest held during the Neurosciences and Music - VIII conference.

Teachers of the year 2024 was awarded to:

- **Andreas Møgelmoose**
- **Asbjørn Christian Carstens**

CONTACT INFORMATION

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Head of Department

Hans Jørgen Andersen
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hja@create.aau.dk

Head of Department

(from March 1, 2025)
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