UN GLOBAL COMPACT COMMUNICATION ON ENGAGEMENT

KEA'S SUSTAINABILITY REPORT 2016 & 2017

kea
COPENHAGEN SCHOOL OF DESIGN AND TECHNOLOGY

TABLE OF CONTENTS

KNOWLEDGE ALONE IS NOT ENOUGH. YOU NEED SKILLS.

CHAPTER INDEX

FOREWORD

STATEMENT OF CONTINUED SUPPORT TO THE UN GLOBAL COMPACT

BY RECTOR STEEN ENEMARK KILDESGAARD

TO OUR STAKEHOLDERS,
At KEA Copenhagen School of Design and Technology, we are proud members of the world's largest corporate social responsibility and sustainability initiative: the UN Global Compact, and I am pleased to confirm that KEA reaffirms its support of the United Nations Global Compact and its Ten Principles in the areas of Human Rights, Labour, Environment and Anti-Corruption.

A key part of KEA's 2015-2020 strategy is taking responsibility in delivering quality education with a focus on sustainability, and therein has KEA continued its trajectory towards further engagement in even more sustainably oriented activities.

In January 2016 an interdepartmental working group was created to deliver KEA's first Communication on Engagement (COE) report on its sustainable activities for 2014 and 2015 to the UN Global Compact.

During this process with this previous COE report, it became apparent that KEA's initial membership in the CIVIL SOCIETY category did not correspond with KEA's status as a higher education institution. Therefore, KEA has changed its status to an ACADEMIC institution. A change that is well suited for an organisation delivering both higher and further/continuing education in a wide range of offerings within the educational programmes we call DESIGN, TECH, BUILD, DIGITAL and COMPETENCE, as well as in applied research and campus development.

By shifting from the category of CIVIL SOCIETY to ACADEMIC in the UN Global Compact, KEA is able to work directly with education and applied research related to the UN Global Compact principles. The UN Global Compact working group's ambition is to investigate whether KEA should work strategically with the Principles for Responsible Management Education (PRME) initiative, recommended by the UN Global Compact website when categorised as ACADEMIC. Providing access to a wide range of tools and networks, PRME would enhance and strengthen the work we already do within this area at KEA.

With the advent of the UN Sustainable Development Goals (SDGs) in 2015 - the auspicious plan for creating a better planet for us all by 2030 - KEA has the chance to progress even further in terms of working with sustainability in its operations and educational offering, both internally and externally with our stakeholders.

The Sustainable Development Goals will also be a major part of KEA's future work, and in this context the working group will address the possibility of becoming a member of another UN association called the Higher Education Sustainability Initiative (HESI). Here the focus is on how teaching institutions can help achieve the 2030 SDG agenda, which can provide a basis for further enhancing KEA's work with the SDGs and ensure that this work is strategically rooted across KEA.

With this COE we are thus happy to announce KEA's future commitment to the UN Global Compact while also committing to sharing information with our stakeholders using our primary channels of communication.

Steen Enemark Kildesgaard, Rector KEA

WELCOME READERS!

On behalf of all contributors and the working group behind KEA's Commitment On Engagement (COE) report, we hereby take the opportunity to welcome all readers to our collection of stories of passionate and driven teachers, leaders, researchers, administrators and students, whom step by step are exploring the transformational potential of sustainability.

This COE report is the first and most visible result of a interdepartmental campaign for sustainability at KEA. It is written primarily by the working group with assistance from co-writers from across the organisation - enhancing ownership, visibility and impact of the COE.

In the making of this COE, the working group held a series of meetings to collect descriptions of KEA's actions contributing to sustainability, as well as ideas for new activities to inititate, combined with an invitation to join the working group. Several good ideas have come to light and the working group is growing. Clear signs that sustainability, in both our organisation as a whole, and in the educational programmes we offer is becoming manifest.

After the publication of this COE, we will be launching a sustainability network in 2018. The network will create a number of initiatives and projects defined by participants to move KEA even closer to being sustainable, to share knowledge and ignite sustainable development and innovation across disciplines and working environments. Our own expectations are quite ambitious and we hope that the stories you find in this COE can become a common reference and baseline for the development of the upcoming network.

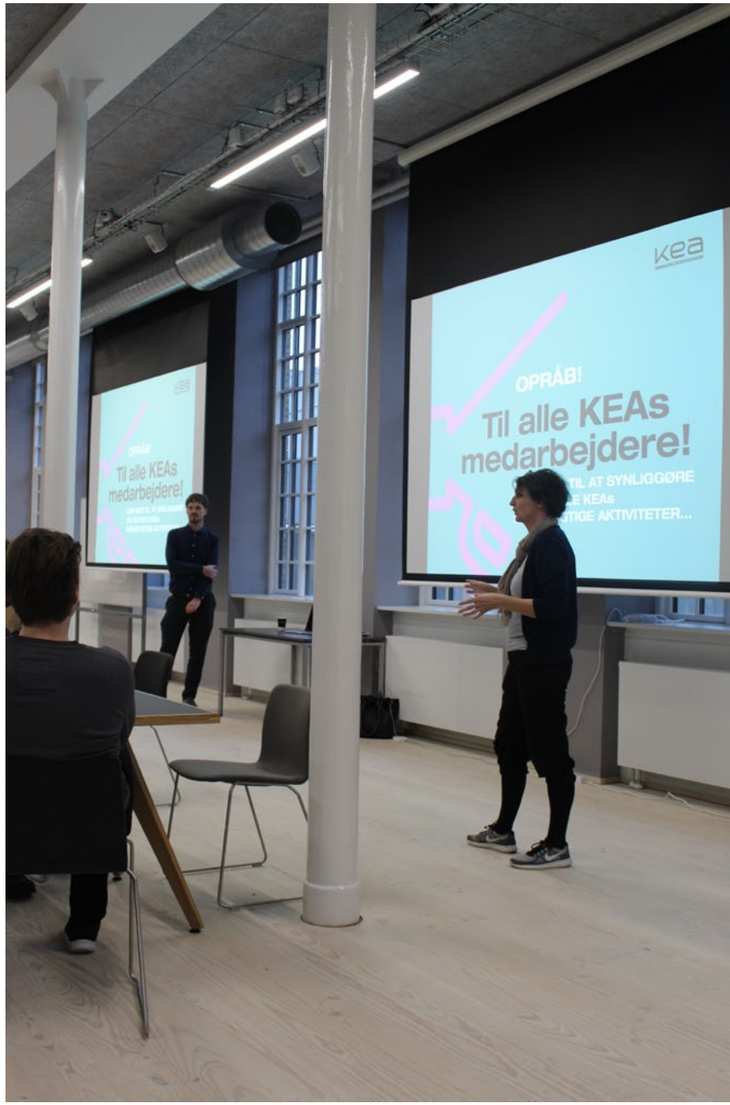
THE GOALS OF KEA'S SUSTAINABILITY NETWORK FOR 2018 AND 2019 ARE TO:

- Further integrate sustainability as a core value in KEA's organisation and work
- Keep KEA up to date with new knowledge, current initiatives, partnerships, etc. about UN Global Compact and sustainability, which may be interesting to partake in and can create value for KEA
- Initiate research and innovation projects in this area and attract funding for KEA's sustainability efforts
- Identify the sustainability-oriented activities already taking place at KEA's different campuses, and work towards setting targets and defining indicators for our future work with sustainability
- Communicate and visualise KEA's commitment to sustainability and results, both internally and externally, creating a common awareness for, and language of sustainability at KEA
- Establish a sustainability network at KEA, so the working group will consist of members from all campuses in the future and the initiative will have a broad commitment and foundation
- Examine the possibility of becoming members both of the Higher Education Sustainability Initiative (HESI), and Principles for Responsible Management Education (PRME) that will hopefully strengthen KEA's engagement with sustainability

In this report we invite you on a journey through KEA's action and outcomes in relation to the UN Global Compact and sustainability. The journey encompasses our Campus, Educations and Research Activities. This showcase of actions and outcomes in 2016/2017 with relation to sustainability in our organisation, also serves as an indicator for growing engagement with sustainability at KEA in general.

Enjoy the ride!
With Regards,

THE WORKING GROUP
Tina Hjort, Julie Kielland, Tue Hylby Lindqvist, Kristian Stephen Søndergaard Storgaard Colvey, Helene Jeune and Annie Toft Pedersen.



CHAPTER INDEX

MOVING CAMPUS INTERNAL OPERATIONS AND COMMUNICATIONS TOWARDS A SUSTAINABLE FUTURE FOLLOWING THE COP REQUIREMENTS

CAMPUS

The campuses, internal operations and services available for students at KEA Copenhagen School of Design and Technology are moving in a more and more sustainable direction. Campus management aims toward more energy efficient operations, Research and Innovation investigates the possible gains of a green organisational transition, the Material Design Lab offers our students the possibility to experiment with bio-based material innovation, and our recruitment campaigns are branding KEA as a stepping stone to change the world for the better. In this section, these themes are explored and described after a brief overview of KEA.

ABOUT KEA

KEA Copenhagen School of Design and Technology is an academy of higher education which offers more than 30 different degree programmes at Bachelor (BA) and Academy Professional (AP) levels, as well as further/continuing educational programmes.

KEA provides higher education that combines theory with practice and has close cooperation with businesses and educational institutions in Denmark and abroad.

KEA offers a wide range of programmes in Danish and/or English within the fields of DESIGN, DIGITAL, BUILD and TECH, as well as COMPETENCE for part-time education. We have students from more than 70 different nations.

KEA is located in Copenhagen with campuses at Guldbergsgade and Prinsesse Charlottes Gade in the Nørrebro area, and Bispevej, Lygten 16 and Lygten 37 campuses in the Bispebjerg area. Our part-time programme campus at Frederikkevej is located in the suburb of Hellerup.

KEA HAS A TOTAL OF:

FULL TIME STUDENTS:
5000+

INTERNATIONAL FULL TIME STUDENTS:
1000+

PART TIME STUDENTS (KEA COMPETENCE):
3000+

EMPLOYEES:
500+

KEA GREEN: GREEN TRANSITION IN THE ORGANISATION

In the first quarter of 2016, a consultant from KEA's Research & Innovation department and the innovation consultant and architect Yodana Thorsdal Santiago, investigated, analysed and conceptualised "KEA Green" – the potential for a sustainable transition at KEA.

Yodana volunteered as an intern and together with the internal consultant, he investigated electricity, water and resource consumption at KEA's campuses, looking for potential ways to limit consumption, and held meetings with Campus Service, KEA Economy and the Directorate of KEA.

This work related most directly to the following principles of the UN Global Compact:

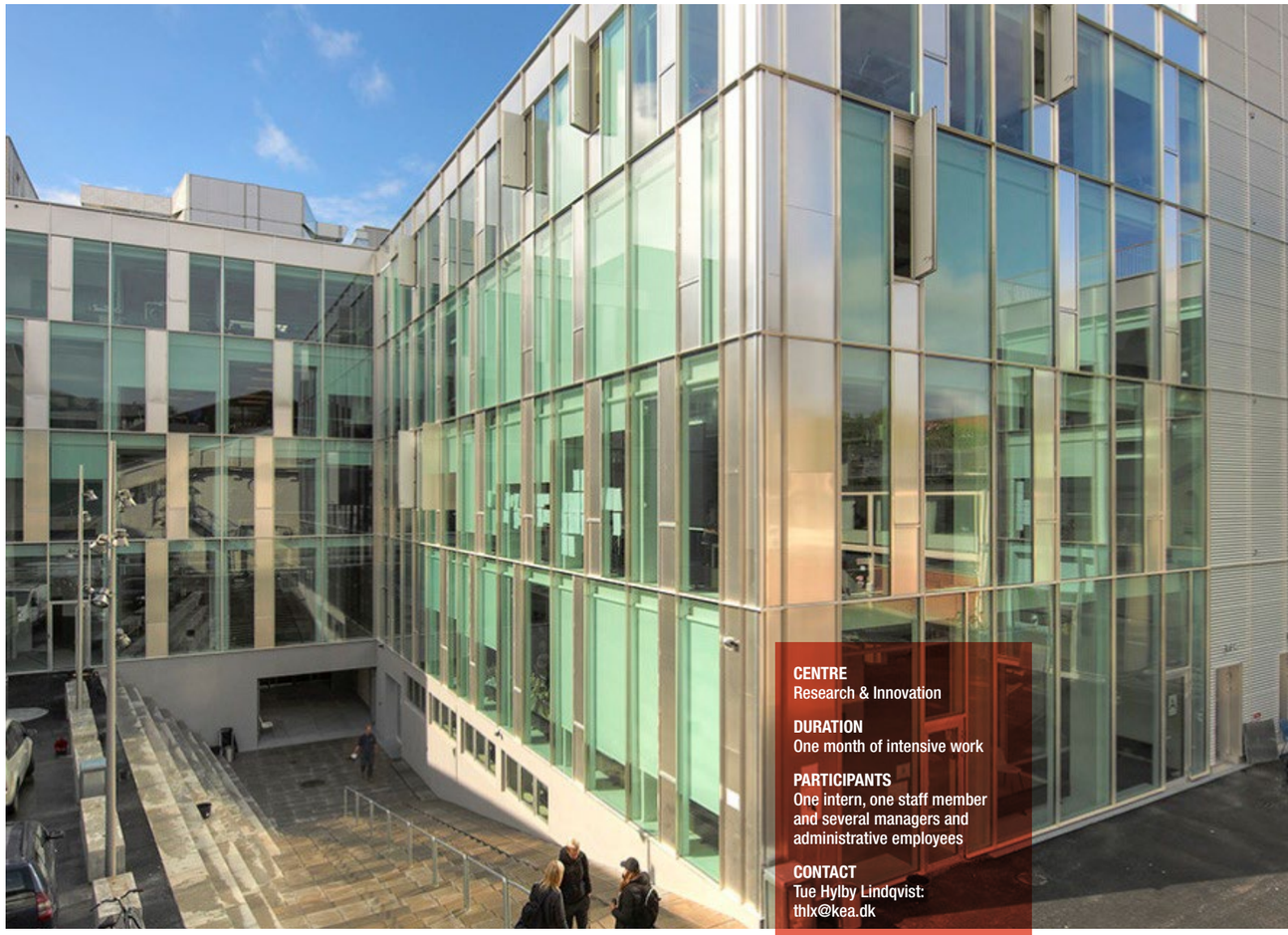
PRINCIPLE 7
Businesses should support a precautionary approach to environmental challenges

PRINCIPLE 8
Undertaking initiatives to promote greater environmental responsibility

PRINCIPLE 9
Encourage the development and diffusion of environmentally friendly technologies

Analysing the consumption, the results were rather mysterious as there were huge cost differences for energy at KEA's varying campuses. It also became clear that there was potential for probable savings on the heating bill of about 10-20 percent annually. An interesting observation was that, until that point, there had been no systematic cooperation between KEA Economy and Campus Service and thus no relation between the economic bottom line and the environmental/energy bottom line in the organisation... this has since been changed.

The work with "KEA Green" concluded in some suggestions for future activities for green and sustainable transition at KEA, for example, establishing a funding scheme based on monetary savings from energy efficiency, streamlining in order to initiate new sustainable initiatives in the organisation, and engaging student entrepreneurship. Other suggestions, such as the establishment of a working group for sustainability from a cross-section from KEA and the green transition has lived on and is maturing via the work on this report and it's planned impacts.



CENTRE
Research & Innovation

DURATION
One month of intensive work

PARTICIPANTS
One intern, one staff member and several managers and administrative employees

CONTACT
Tue Hylby Lindqvist:
thlx@kea.dk

FACILITIES AND MAINTENANCE

KEA's Campus Service aims at minimising energy and resource consumption, while creating good study and work environments. To this end, several activities aimed at enhancing this have been carried out in 2016 and 2017.

Campus Service's overall aim is to cut 2 percent of electricity and heat consumption annually in all of KEA's buildings. This is fairly straightforward when the building mass is stable, but KEA is an organisation under constant change also in relation to its use of buildings. Thus, it becomes more difficult to measure and keep track of energy consumption both when former campuses sites are swapped for new ones, and during the process of renovating existing buildings. Both activities have been carried out in 2016-2017, where several smaller campuses have been relocated to a new larger campus adjacent to KEA's largest campus at Guldbergsgade, Nørrebro, and extensive renovation has been carried out at the Prinsesse Charlottes Gade Campus.

In 2017, KEA Campus Service entered into a new consultancy agreement which enables us to monitor KEA's water and heat consumption on an hourly basis at all campus locations. This allows us to quickly spot, for instance, a toilet running over. Extensive work has begun to visualise, via flow chart, all the locations. This will provide a better overview and a greater chance of spotting any waste of resources.

In 2017, the ventilation system at Princesse Charlottes Gade 38 was fit with A+ energy certified ventilation filters, replacing the filters previously installed without a classification, resulting in cost savings of 1-2 % in electricity consumption. It is our plan to check all the ventilation filters at all of KEA's locations for energy classification.

The heat station at the Lygten 16 Campus was renovated in 2017, eliminating considerable water loss due to leakage.

Approx. 60% of KEA's ventilation installations have been fitted with EC engines consuming 10-15% less power than a conventional electrically driven engine. In 2017, three old belt-driven installations at Campus Lygten 16 were replaced by EC engines, and it is the intention to replace all current ventilation engines with EC engines.

MORE ENERGY MEASURES ARE IN THE PIPELINE FOR 2018:

Previously, heat stations at KEA's campus locations were not properly shut down for the summer. As of 2018 all installations will be turned off properly from the beginning of May to mid October. This procedure will reduce the heat consumption by 0.5-1%.

A new energy project will be started in 2018 regarding heating control and specific heating sources at the Princesse Charlottes Gade 38 Campus.

Most of KEA's light sources are still of conventional variety – old light sources with high power consumption. The library at Guldbergsgade 29N is one of the students' favourite work places and the lighting equipment is of varying quality. Therefore, a complete replacement of current light fittings with new LEDs is planned for 2018, and thus we expect a clear improvement in lighting and a drop of up to 50% of the power consumption.

HOUSING

KEA Housing offers accommodation to our international students. We practice non-discriminatory administration and allocation of rooms. When matching roommates we also consciously mix together students from different national, educational and gender backgrounds. With this, we aim to heighten the cross cultural experience, understanding and competencies of our students in a broad sense.

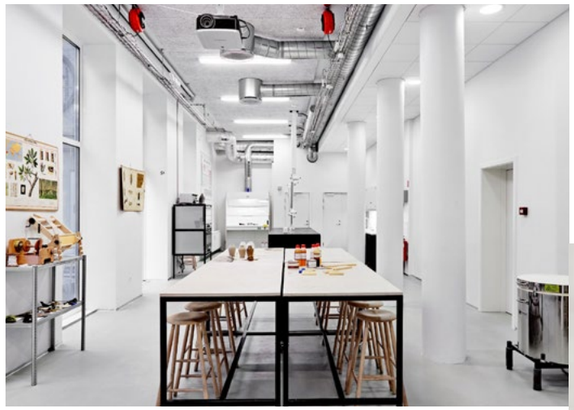
MAKERLAB

KEA's prototype engineering shop, Makerlab, focuses on the reuse of material and waste sorting. Its 3D printers use bio-plastic (PLA) only, and Makerlab is working on reusing excess ink from textile printers for silk-screen printing.

MATERIAL DESIGN LAB

The Material Design Lab is an interdisciplinary space where science and design meet in the exploration and understanding of materials. As innovation lies in interdisciplinary collaborations, Material Design Lab therefore makes an effort to work with a variety of professionals both from research sciences and industry.

Material Design Lab consists of The Box, The Lab and The Library



THE BOX
- is a walk-in expandable box that contains an exhibition of raw materials. It is the starting point to a basic understanding of the 'raw ingredients' before they are processed and mixed. It is place where it is possible to study fibre before it is spun, learn about the steps from extraction of crude oil to the production of plastic granulate or compare an oak log with a plank of pine.

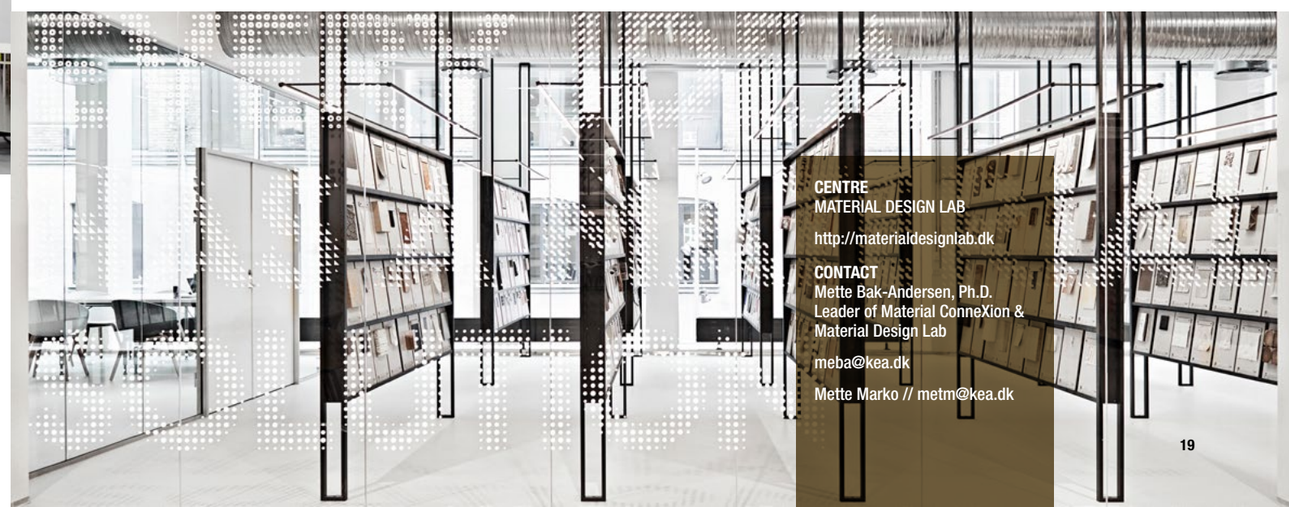
THE LAB
- itself is the heart of Material Design Lab and resembles a hybrid between a design prototyping workshop, a scientific laboratory and an industrial kitchen. It is a space designed for materials to be tested, manipulated, refined and potentially, for new ones to be created.

THE LIBRARY
- is the Material ConneXion Copenhagen collection containing 1500 material samples, as well as access to an online database providing detailed information on over 7500 materials. The library also holds a wide range of books on materials relating to design and architecture. Material ConneXion is a part of a network of over 20 libraries located all around the world, in locations such as New York, Bangkok, Bilbao, Milan, Skövde, and Tokyo.

At KEA, a large part of the educational programmes focus on designing the physical world. The Material Design Lab provides the facilities for hands-on material teaching. The students will be the future professionals tasked with creating our buildings, our products, our clothes and jewellery etc. The material can, to a great extent, be seen as the DNA of a product. It is what defines both the tactile and technical properties, and therefore largely determines the production method and the environmental impact. Qualities such as innovation and sustainability are not additives that can be injected by a technician into a product at the last minute, so if it is not originally designed to be sustainable, it most likely never will be. Therefore, it is essential for the students to understand production and sustainability in order for them to understand materials.

EXAMPLES OF PROJECTS AND COLLABORATION IN MATERIAL DESIGN LAB:

- MATERIAL DESIGN LAB AT DESIGN MUSEUM DANMARK
- PRECIOUS PLASTIC
- BIOMIMICRY IN MATERIAL DESIGN (A collaboration with Biomimicry Institute)
- CRASH COURSE IN THE FUTURE OF MATERIALS & DESIGN (Summer school)



CENTRE
MATERIAL DESIGN LAB

http://materialdesignlab.dk

CONTACT
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Leader of Material ConneXion &
Material Design Lab

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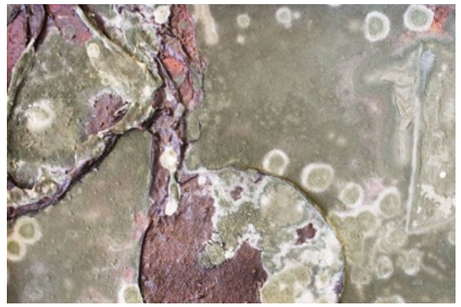


CRASH COURSE IN THE FUTURE OF MATERIALS & DESIGN

Mette Marko // metm@kea.dk

This summer school was held at KEA in August 2017. It was a 7 day summer school covering the areas of how to work with materials in the future.

There are things that data and theory cannot teach you! This summer school is about knowing it for yourself. From craft to synthetic biology, it guides you through hands-on experiences were you will learn about making materials and design.

This short course is placed in a transdisciplinary field between art, technology and natural science. We will explore the making of things in a future where there are a lack of resources, emerging new technologies and requirements for products to fit in to a Circular Economy.

This is what a dedicated participant will get out of the course:

- An understanding of how Circular Economy works in practice
- Methods to explore and work with materials
- Knowledge about possible ways of designing and fabricating in the future
- A basic understanding of bio-fabrication

MEMBERSHIPS AND NETWORKS FOR SUSTAINABILITY

In November 2017, the UN Global Compact working group at KEA attended the first organisational meeting for the UN Global Compact Network-Denmark and KEA has since become a member of the new network and plans on attending it's future working groups in the areas of innovation and the Sustainable Development Goals.

Tue Hylby Linqvist, a consultant from KEA Research & Innovation and member of the UN Global Compact working group, has represented KEA as the vice chairman of the board at RCE Denmark – Network for Education for Sustainable Development (ESD) for several years. They are a small NGO's working for cross level/sectional education for sustainable development in Denmark. Tue Hylby Linqvist had also been the main driver in establishing the NGO's annual (SKUB Samskabende Konference for Uddannelse og Bæredygtighed) conference aimed at co-creation for ESD, and facilitator of the first SKUB conference related to the SDGs in 2016. Tue Hylby Linqvist is currently a member of think tank / media house Mandag Morgen / Monday Morning's SDG network group, enabling cross-sectional cooperation and learning for the 2030 SDG agenda.

CENTRE
RESEARCH & INNOVATION

PARTNERS
UN Global Compact Network Denmark

RCE Denmark – Network for Education for Sustainable Development: http://www.rce-denmark.dk/

Monday Morning SDG Network Group: https://www.mm.dk/arena/netvaerk/implementering-af-fns-17-sustainable-development-goals/

CONTACT
Tue Hylby Lindqvist: thlx@kea.dk

RECRUITING STUDENTS WITH A SUSTAINABLE MINDSET

KEA is actively using our focus on sustainability as a unique selling point in our communication with future students.

Our communication is built around a cohort of actual students who serve as ambassadors.

In printed and digital material as well as in physical meetings, we convey our identity through their stories, projects and ambitions.

CONTACT
CAMPAIGN BY:
KEA Communication,
Marketing manager,
Helle Hauch Fenger:
hhfe@kea.dk

DURATION
2016 onwards

We wish to empower students, and to provide the knowledge and skills they need to become makers, innovators, entrepreneurs and intrapreneurs. KEA has a culture of doing, of practice based experiments and research. Students are actively engaged in research projects and their own ideas and values will shape their education.

But long before they enroll, we want them to know that we will nurture their appetite for sustainability… and that *"knowledge is not enough… you need skills."*

CHAPTER INDEX

EDUCATION ON TOPICS RELATED TO THE UN GLOBAL COMPACT AND SUSTAINABILITY

EDUCATION

This next chapter consists of a number of teaching modules that focus on sustainability from many different angles in accordance with reporting on education on topics related to the UN Global Compact and sustainability. The UN Global Compact's principles are incorporated implicitly in our conception of sustainability. Some modules have an environmental focus others, social and some blend these seamlessly. Many of the modules are in partnership with companies and organisations as away to disseminate sustainability to our stakeholders and the many different societal sectors that KEA's educational programmes apply to. Beyond the faculty planned educational modules, there exists a high level of personal motivation among the students to integrate sustainability at the core of their own chosen projects. For further inspiration there are hundreds of BA assignments concerning sustainability related issues available at: **opgaver.kea.dk**

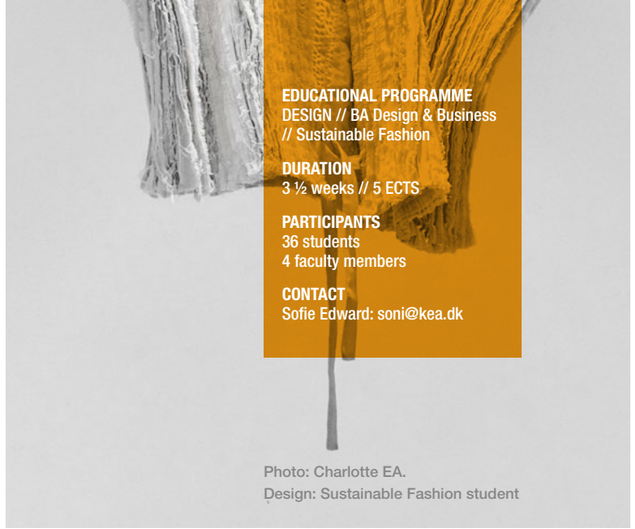
Photo: Charlotte EA.
Design: Brigitta Szekernyes from Sustainable Fashion

BIOMIMICRY // LEARNING FROM NATURE

In the first module of the BA in Sustainable Fashion, the students were introduced to BIOMIMICRY. This is to give the students a fundamental understanding of nature's possibilities and boundaries in relation to working with design from a sustainable point of view.

"Biomimicry is an approach to innovation that seeks sustainable solutions to human challenges by emulating nature's time-tested patterns and strategies" By Janine Benyus

The focus of this project was the creative process based on nature as design inspiration for experiments, explorations and material manipulations, and at the same time investigation the philosophical principles of Biomimicry:



EDUCATIONAL PROGRAMME
DESIGN // BA Design & Business // Sustainable Fashion

DURATION
3 ½ weeks // 5 ECTS

PARTICIPANTS
36 students
4 faculty members

CONTACT
Sofie Edward: soni@kea.dk

Photo: Charlotte EA.
Design: Sustainable Fashion student

"Nature as a model: Biomimicry uses the forms, processes, systems, and strategies employed by the natural world as inspiration for sustainable solutions. Nature as a measure: Looking at the standards set by nature, biomimicry aims to measure the sustainability of inventions using ecology as a benchmark. Nature as a mentor: The focus of biomimicry is not what we can extract from nature but what we can learn from it" By Janine Benyus.

The students integrated Biomimicry principles into three material manipulations. They were introduced to relevant methods and theories related to Biomimicry such as sustainable approaches in the design process and project work. A collection of natural elements were decoded, explored and translated in Material Design Lab at KEA in order to form the basis for three experimental material manipulations in calico. Finally the three material manipulations were scaled in a full size calico developed to fit the human body.

Photo: Charlotte EA.
Design: Leise Jaedig from Sustainable Fashion

DESIGN AND MANUFACTURING

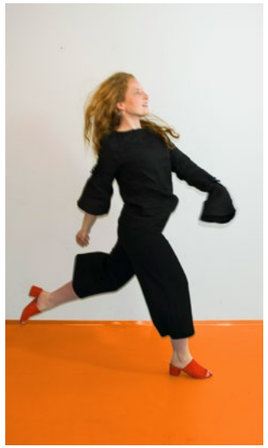
3rd semester students were divided into groups, and participated in a very fine briefing from Noa Noa's head of design, regarding the brand's thoughts about sustainability and the design DNA of their brand.

The groups were provided with one of the following sustainable focus areas:

- Zero waste
- Multi - functional/ transformational
- Designing for longevity and repair

One of these themes should be the foundational principles for the collection the students were going to develop.

The focus on this assignment was for the students to understand how to work with a sustainable product from idea to production as a part of a design company. Additionally they would attain knowledge about sustainable materials, how to use certifications and how to work with a sustainable focus area when designing a collection for a brand.



EDUCATIONAL PROGRAMME
DESIGN // AP in Design, Technology and Business // Sustainable Fashion

DURATION
3 ½ weeks // 5 ECTS

PARTICIPANTS
60 students
2 faculty members

PARTNERS
NOA NOA

CONTACT
Penille Dalmose Christensen:
pedc@kea.dk

KEA WORKS VINGE

KEA WORKS VINGE 2016 – CREATE THE URBAN FUTURE
35 km northwest of Copenhagen lies 370 hectares of empty fields, ready to be transformed into the sustainable city of the future, Vinge. KEA's students are given the opportunity to work with Denmark's largest urban development project and if their idea is good enough, it may even become reality...

By 2016, KEA WORKS focused on the development of Vinge as a smart and sustainable town, where nature and urban areas are combined in new ways. KEA WORKS VINGE took place from Monday, 14th to Friday, 18th November 2016 at KEA.

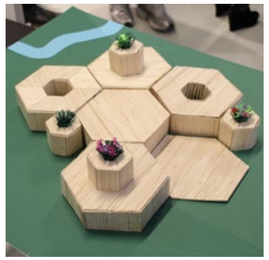
- On Monday, an opening conference was held in a cinema at Nørrebro for all students with various lectures and a documentary film screening, as well as an excursion to Vinge with food, talks given by both the Mayor of Frederikssund and others, and tours of the area.

- Tuesday - Thursday, students worked to create solutions suggested by teachers.

- On Friday, there was a closing reception where a jury of various experts and companies from Frederikssund, as well as the Mayor of Frederikssund, considered the proposals of the 14 best groups. Then three prizes were awarded by Frederikssund Erhverv for a total value of DKK 65,000 for the three best proposals.

KEA WORKS is KEA's interdisciplinary project week, during which a large part of KEA's students collaborate in interdisciplinary project groups to solve practical case challenges proposed by business partners. In 2016, the partners were Frederikssund Municipality and Frederikssund Erhverv, with cases from Vinge, the town that will be built over the next few years in the outskirts of Frederikssund.

ENERGY TECHNOLOGY FOR ECO HOUSING IN VINGE
In December 2017, a new collaboration with the partners and KEA's study programme, AP in Energy Technology, was executed. 25 students spent a week during their sustainability course to design solution proposals for housing and energy concepts for a eco-housing area of Vinge. During the week, the head of Urban Planning held a lecture for the students, whom also visited the oldest eco-town in Denmark, Dyssekilde, and the Kalundborg Symbiosis, for inspiration. The week concluded with a pitching session for the partners who awared the best solution with DKK 5000.



EDUCATIONAL PROGRAMME
Various educations from BUILD, DIGITAL, DESIGN, TECH

DURATION
One week workshop, with half a year of prior project development

PARTICIPANTS
Hundreds of students,
28 faculty members,
3 project managers

PARTNERS
Frederikssund Municipality and Frederikssund Erhverv

CONTACT
Gunnvá Nolsøe Nielsen:
gnni@kea.dk

Tue Hylby Lindqvist:
thlx@kea.dk

SECOND LIFE // FEATURING UPS

In this module the focal point was up-cycling of United Parcel Service (UPS) uniforms that were either unused or worn out. The UPS uniforms are characterised by the brown colour called “Pullman Brown” and the brownish yellow shield logo. The students got a stack of uniforms and were trained in how to up-cycle in order to create higher value for the products and at the same time focus on creativity and sustainability in relation to UPS. The project culminated in a fashion show where the up-cycled uniforms were displayed. In connection to the show, the students pitched their idea, concept and final outfit for a panel of judges composed of a representative from UPS, a fashion blogger and two designers from the industry. Finally the winners were announced and awarded.

The students applied skills in terms of shape, function and material as well as conceived of and carried-out experiments that generated creative and innovative products. Emphasis was placed on a discovery based approach from experiments to final outfit, as well as a design solution that delivers a level of high quality. Up-cycling is a way to work with Circular Economy and at the same time to create durable design objects.

The project was produced individually, while the show was organised jointly.

EDUCATIONAL PROGRAMME
DESIGN // BA Design & Business // Sustainable Fashion

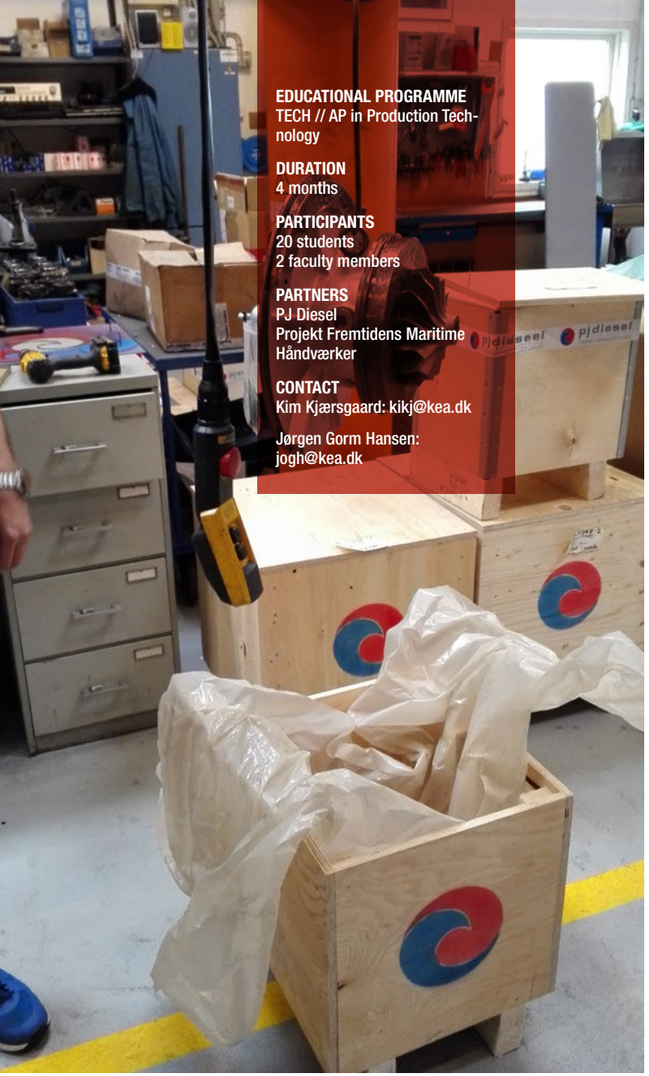
DURATION
3 ½ week // 5 ECTS

PARTICIPANTS
36 students
4 faculty members

PARTNERS
United Parcel Service (UPS)
Primetime

CONTACT
Susanne Guldager: sug@kea.dk

Photo: Victor Jones



EDUCATIONAL PROGRAMME
TECH // AP in Production Technology

DURATION
4 months

PARTICIPANTS
20 students
2 faculty members

PARTNERS
PJ Diesel
Projekt Fremtidens Maritime Håndværker

CONTACT
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Jørgen Gorm Hansen: jogh@kea.dk

THE SUSTAINABLE CRATE

Semester Project for 2nd Semester Production Technologists.

The aim of the project was that, during the semester, groups should prepare, design, and develop the production of a sustainable and reusable crate that would meet PJ Diesel's technical requirements.

PJ Diesel wants to focus on plastic in the oceans, and create a green profile and therefore one of the requirements for the project was that reuse of plastic, harvested from the ocean, should be part of the solution.

The different student groups during this semester worked on and presented solutions for PJ Diesel.

The groups' solutions was delivered in semester reports and then presented to PJ Diesel.

FREMTIDENS MARITIME HÅNDVÆRKER

THE EUROPEAN UNION
The European Social Fund
Investing in your future

REGION Region Hovedstaden
GREATER COPENHAGEN

Vækstforum Hovedstaden

SUSTAINABILITY ON THE SCHEDULE

We have introduced sustainability as a subject in the AP in Energy Technology education.

The contents of the subject are: Sustainable materials, C2C/Cradle to Cradle (technical and biological cycles) Certification schemes in construction and Waste/Resources.

The course was introduced in 2014 for the AP in Energy Technology education, which is quite natural, since it is a core part of our education.

Sustainability has become a word used interchangeably, and many use the word as a selling point. Either to brand a physical product, a company or a way of doing things. The important thing should be to teach students to figure out what is up vs down with this concept.

The concept of sustainability is broad, and there are many topics within the subject that can be worked with, and therefore many reflections have been made regarding the teaching content.

Should it be narrow or broad? What is most suitable in relation to what the student has previously encountered, and what is especially relevant to the energy technologist?

EDUCATIONAL PROGRAMME
TECH // AP in Energy Technology

CONTACT
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THE SUSTAINABLE BUSINESS CASE // IN COLLABORATION WITH MATERIAL DESIGN LAB AND NIKE

The Sustainable Fashion specialisation at KEA educates future fashion designers to contribute with the creation of trends, fashion concepts and products that can shape and influence the way we live in a more sustainable way. Standing on the shoulders of the past, and through new innovative design solutions, the students were asked to explore opportunities with the aim of creating a sustainable future. By applying principles within 'Material Driven Design' in the design process students were able to create innovative and circular design solutions that would be able to generate a positive impact on the future. From Nike's DNA, the students designed products related to the area of Sustainable Fashion - for example, products within leisurewear, sportswear and shoes, and aimed to target the future Nike costumer.

The involvement of crafting techniques, new technologies and digital options, opened the way for a re-thinking of practices and new definitions of future design solutions and processes. The project was founded in a material driven design approach in which the design or manipulation of the material was in focus from the outset. Working this way enables technological and artistic innovation and most importantly a sustainable outcome. It often provokes and inspires the designer to use alternative resources as raw material and facilitates designing products that are suitable for a circular economy.

The material can be seen, to a large degree, as the DNA of a product. It is what defines both the tactile and technical properties, and therefore largely determines the production method and the environmental impact. Qualities such as innovation and sustainability are not additives that can be injected into a product by a technician at the last minute, so if it is not originally designed to be sustainable, it most likely never will be.

The module links sustainable development and collaboration between businesses - in this case NIKE - who posed the challenge and visited KEA for the final presentation of the outcome.

EDUCATIONAL PROGRAMME
DESIGN // BA Design & Business // Sustainable Fashion

DURATION
10 ½ weeks // 15 ECTS

PARTICIPANTS
36 students // 4 faculty members

PARTNERS
Material Design Lab & NIKE

CONTACT
Kristine Harper: kh@kea.dk
Sofie Edward: soni@kea.dk
Susanne Guldager: sug@kea.dk
Tina Hjort: th@kea.dk

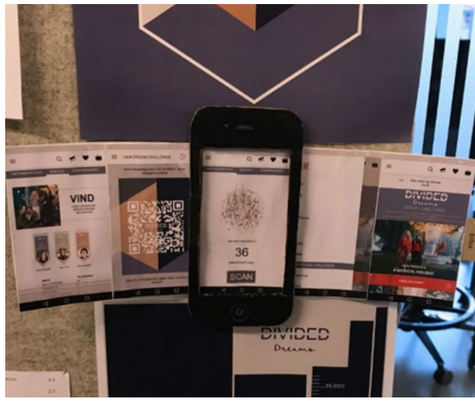
WALK ON WOOD
Katrine Grøner Errboe works with the waste materials from a carpenter's workshop, chips and dust. The soles of the shoe consist of chips and dust combined with natural rubber.

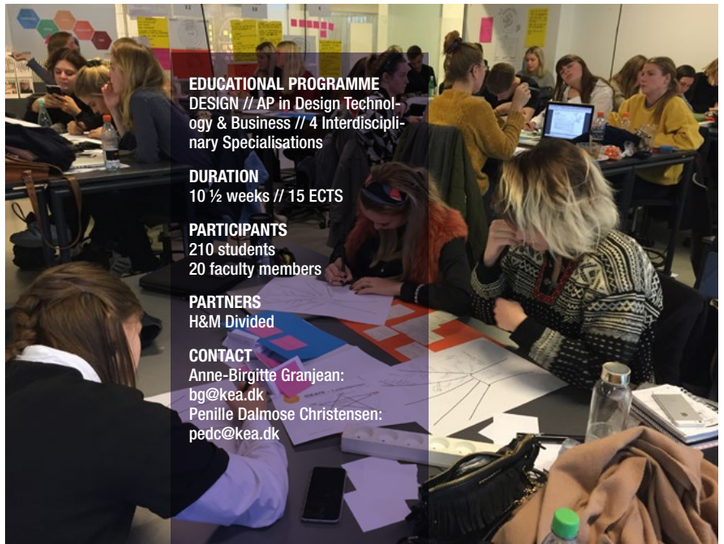
A SUSTAINABLE H&M

Based on research within different sustainable topics and a very informative and inspiring presentation from H&M, each interdisciplinary group, consisting of students from Sustainable Fashion, Pattern Design, Fashion Management and Marketing and Design, developed a new concept for a limited edition collection for H&M DIVIDED.

The purpose of the assignment was to start a new movement that would affect the younger generations in helping them to make more sustainable choices in their consumer behaviour in the future. The overall goal was to change the existing consumer habits in the group of young people.

This assignment ended in a presentation with representatives from H&M in attendance, an exhibition and a fashion show. H&M announced their choice of the three best projects and gave feedback and a small prize to the chosen projects.





EDUCATIONAL PROGRAMME
DESIGN // AP in Design Technology & Business // 4 Interdisciplinary Specialisations

DURATION
10 ½ weeks // 15 ECTS

PARTICIPANTS
210 students
20 faculty members

PARTNERS
H&M Divided

CONTACT
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Penille Dalmose Christensen:
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SUSTAINABILITY AND MATERIAL SELECTION

As part of the subject, PK (Engineering Design), there is instruction in the use of qualified material selection.

I have here chosen to focus on sustainability profile over the selection process, from the conviction that sustainable materials are the most qualified for use.

I have developed a paradigm that makes the process accessible to the students.

The aim is that the students, with both the intelligent and independent application of the paradigm, can in a measured way, compare different materials (or constructions) by giving points for various characteristics / parameters.

The paradigm is built based on the DGNB tool for sustainability certification of buildings. Furthermore, based on the paradigm the students are to familiarise themselves with the tool: material property analysis.

The students gain connection to the paradigm through a presentation of and thorough introduction and access to, the industry renowned certifiers / labels (DGNB, LEED, BREEAM, CRADLE2CRADLE, Nordic Swan, EPD, CE etc.).

The goal is to enable them to independently develop the paradigm for project-specific use and give them an understanding of the actual, practical implementation and execution of sustainability in construction.

Photo: Barbro Wickström

EDUCATIONAL PROGRAMME
BUILD // BA in Architectural Technology and Construction Management

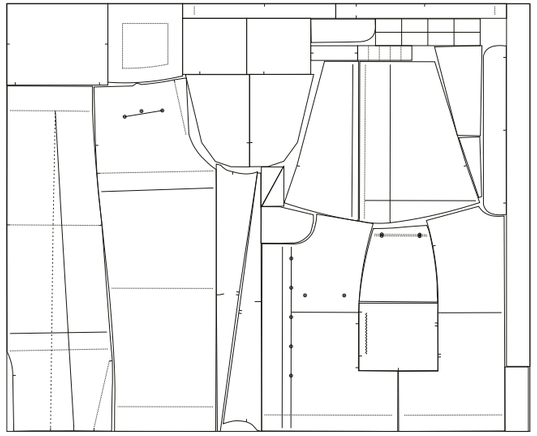
CONTACT
Tom Westergaard Hansen:
towh@kea.dk

EDUCATIONAL PROGRAMME
DESIGN // BA in Design & Business // Pattern Design

DURATION
3 ½ weeks // 5 ECTS

PARTICIPANTS
23 students //
4 faculty members

CONTACT
Berit Konstante Nissen:
bekn@kea.dk



JULIE STEHR WORKED WITH INSPIRATION FROM WORKWEAR, TRADITIONAL CRAFTSMANSHIP AND THE TED'S TEN STRATEGY NO. 8: (above)
Designed to reduce the need to consume, her unisex garments designed to be long-lasting in both quality, fit and style. She worked with jigsaw puzzle approach called Multiple Cloth Approach – an approach where two or more patterns are embedded in one maker to enable more flexibility.

STUDENT WORK (right)
Cleo Lehmann Christensen designed a dress built of squares. This makes sense because fabrics come, in square meters, and by using squares and a so-called jigsaw puzzle method she has achieved a material waste of 0%. In addition, the dress is multifunctional because it can be styled in a variety of ways - for example, tie the side and in front to adjust the length. It is designed to have many different features and expressions, and it can help reduce our urge to buy something new.

SUSTAINABLE PATTERN MAKING

Over 400 billion square meters of textile are produced annually and it is estimated that 15% of all this ends up as waste on the cutting room floor during the garment's initial production.

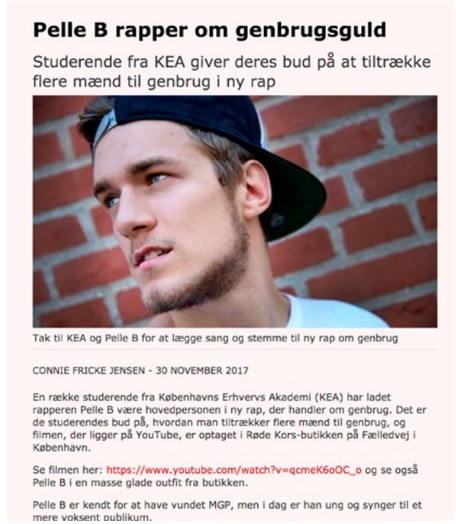
Students at KEA, studying BA in Pattern Design, have taken on the challenge of tackling the issue of pre-consumer waste in a project called Sustainable Pattern Design as their final module during their 6th semester. Sustainability is not at core part of the curriculum in the Pattern Design specialty – but as a stakeholder placed in the middle of a value chain in transition, the pattern designer plays a part in developing more responsible production.

To gain agency in this process, students have been working with different Zero Waste Fashion design approaches. Using inspiration from Ted's Ten, a set of sustainable design strategies for textile and fashion designers, especially strategy No. 1 – Design to Minimise Waste, the students have been working with different Zero Waste Fashion design approaches.

Zero Waste Fashion Design is seen as a holistic approach to product development - where design and pattern-making take place together in the same process and has influence on the design of the final garment, as the pattern cutting process is a primary design step.

The focus of the project was to design and develop commercial products that meet a chosen target group's values and emotional needs, while at the same time assuring that minimum to no amount of material is wasted in the finished product. Also scalability was addressed as the students experimented with marker making and grading the end product for different sizes.

CAMPAIGNS FOR THE DANISH RED CROSS



Pelle B rapper om genbrugsguld

Studerende fra KEA giver deres bud på at tiltrække flere mænd til genbrug i ny rap

Tak til KEA og Pelle B for at lægge sang og stemme til ny rap om genbrug

CONNIE FRICKE JENSEN - 30 NOVEMBER 2017

En række studerende fra Københavns Erhvervs Akademi (KEA) har ladet rapperen Pelle B være hovedpersonen i ny rap, der handler om genbrug. Det er de studerendes bud på, hvordan man tiltrækker flere mænd til genbrug, og filmen, der ligger på YouTube, er optaget i Røde Kors-butikken på Fælledvej i København.

Se filmen her: https://www.youtube.com/watch?v=qcmeK6oOC_o og se også Pelle B i en masse glade outfit fra butikken.

Pelle B er kendt for at have vundet MGP, men i dag er han ung og synger til et mere voksent publikum.

NEWSLETTER FROM RED CROSS
How students from KEA present their idea: how to attract more men to reuse, with a new rap.

2016
The task was to set up a semester start campaign targeted at young people, primarily to be communicated to the young audience via online media, but also to be rolled out offline – particularly in the organisation's shops.

The aim was to encourage young people to buy second-hand furniture and knick-knacks from Red Cross shops, when they leave home and move into student accommodation, for example.

2017
The task was to design an attitude-changing and awareness-raising campaign targeting young men. The aim was to establish and maintain relations with male customers, possibly through the development of various loyalty programmes.

The campaign was primarily to be communicated to the target audience via online media, with a view to getting the target group to buy second-hand furniture and other home accessories and/or garments in the Red Cross shops.

https://www.youtube.com/watch?v=qcmeK6oOC_o

EDUCATIONAL PROGRAMME
DESIGN // AP in Design Technology & Business // Marketing & Communication Design

DURATION
3 ½ weeks // 5 ECTS

PARTICIPANTS
110 students
7 faculty members

PARTNERS
The Danish RED CROSS

CONTACT
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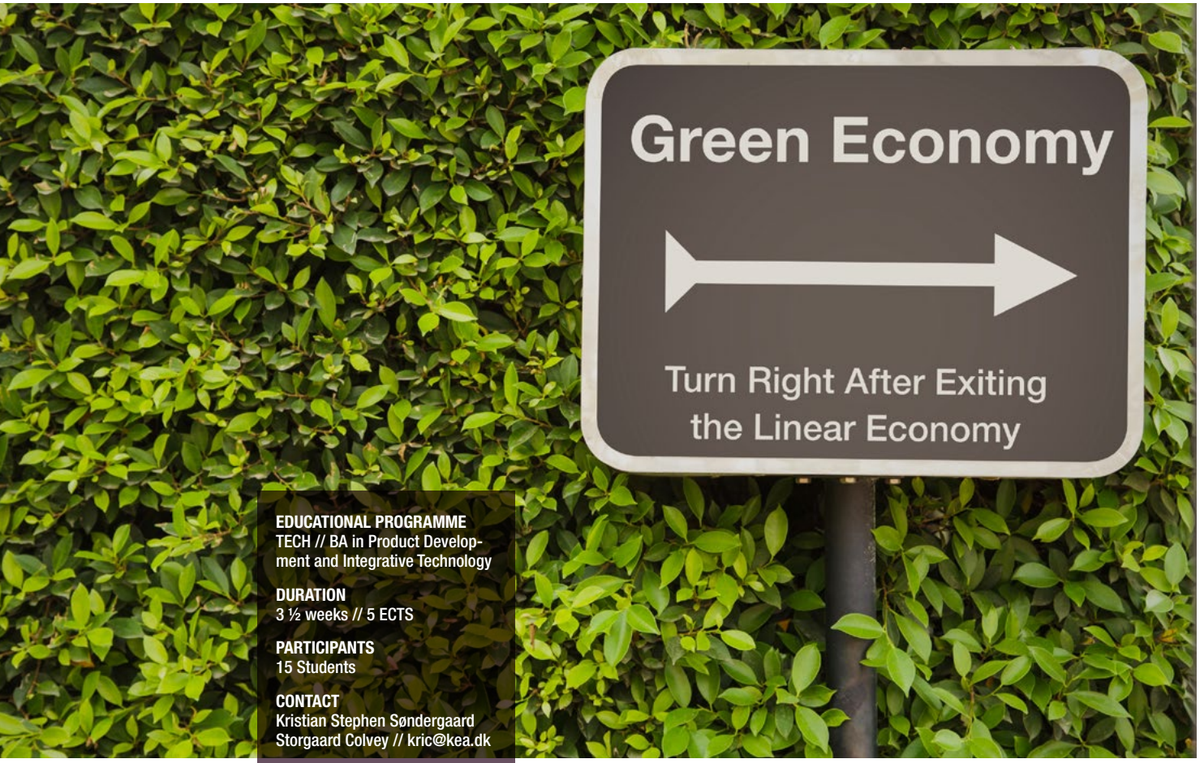
Gitte Nørregaard: gitn@kea.dk



EDUCATIONAL PROGRAMME
TECH // BA in Product Development and Integrative Technology

DURATION
3 ½ weeks // 5 ECTS

PARTICIPANTS
15 Students

CONTACT
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INNOVATING FOR THE GREEN ECONOMY

The scenario is set, resource consumption related to our throwaway culture is changing the landscape in which organisations can plan and operate with stable foreseeable horizons. As resources become depleted, organisations that can adapt to disruptive industry shifts related to allocation of these necessary finite resources will be able to survive the ecological and resource bottleneck that the state, producers and consumers are already experiencing. To disrupt the Business as Usual paradigm we must understand how trends and tendencies in this bottlenecking will affect the sustainability of our organisations.

The elective course, Innovating for the Green Economy identifies and explores prevailing thoughts in applying economic system thinking to the actors at producer level to learn how we can create value in a transition to the circular economies of tomorrow. We explore this by understanding how business and organisations are adapting, and how design philosophies like that of Cradle to Cradle, and work by the Ellen Macarthur Foundation and service models for delivering product value in the Performance Economy and Shared Economy will change the landscape of our economy towards that of a greener future. The students then find a case, or business in which they are tasked with redesigning a product or product line with regards to taking advantage of a circular value-chain. They deliver a business proposal for how to create change within the organisation, and adapt to a future business strategy by focusing on a product offering that can enter material/service loops.

SUSTAINABLE INNOVATION

The purpose of the assignment was to give the students the possibility to work with a sustainable design company such as ANIMANA, in a case they presented, and to decode the company's values, visions and missions, to understand and develop new sustainable initiatives, which would benefit the company.

The students used design methods, design experiments and detail development as the catalyst of the design process in creating new sustainable design solutions. They worked with inspiration from an inspirational talk delivered by Peclair, the trend forecasting bureau from Paris, France.

They were given an introduction to the assignment and to the company where the main focus was:

ANIMANA wanted to innovate their sustainable design principles and wanted the students to develop a clothing collection, using sustainable innovation in the design process which would help the local economy in a sustainable, ethical way.

EDUCATIONAL PROGRAMME
DESIGN // AP in Design, Technology and Business // Sustainable Fashion

DURATION
3 ½ weeks // 5 ECTS

PARTICIPANTS
35 students
2 faculty members

PARTNERS
ANIMANA and Peclair

CONTACT
Penille Dalmose Christensen:
pedc@kea.dk

USER EMPATHY

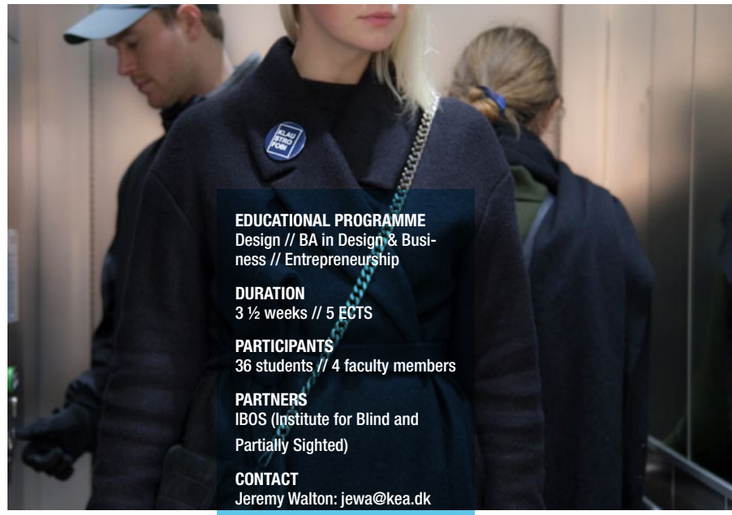
Human-Centered Design Module - BA in Design & Business Entrepreneurship partnership with IBOS (Institute for Blind and Partially Sighted)

Here we investigate the challenges, conditions and opportunities for visually impaired people in relation to physical exercising. We explore how designers can work to create empathy and understanding of everyday life in order to improve physical exercising for visually impaired people.

The learning focus of the project is to train user-empathy methods within the theoretical framework of human-centered design, to professionally engage in user and collaboration driven development processes. Perform a number of classic and more experimental research methods and design activities in direct contact with users in intervention and field research.

One of the bearing - and possibly the most difficult outcomes of the project is training the ability to look beyond our own attitudes, self-esteem and ways to be in the world. Instead, we must work in a focused and empathetic way in understanding the world, from a visually impaired perspective.

The project has been done twice on PBA 2016 and 2017. The three and half week module culminates in an exhibition of insights at IBOS and compiled user analysis reports from each individual group are handed over to IBOS.



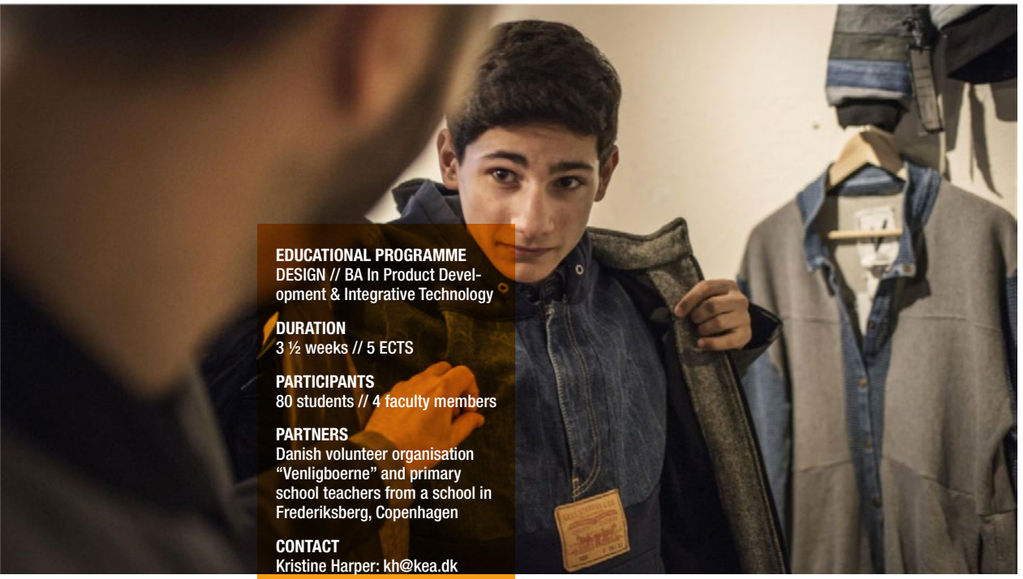
EDUCATIONAL PROGRAMME
Design // BA in Design & Business // Entrepreneurship

DURATION
3 ½ weeks // 5 ECTS

PARTICIPANTS
36 students // 4 faculty members

PARTNERS
IBOS (Institute for Blind and Partially Sighted)

CONTACT
Jeremy Walton: jewa@kea.dk



EDUCATIONAL PROGRAMME
DESIGN // BA In Product Development & Integrative Technology

DURATION
3 ½ weeks // 5 ECTS

PARTICIPANTS
80 students // 4 faculty members

PARTNERS
Danish volunteer organisation "Venligboerne" and primary school teachers from a school in Frederiksberg, Copenhagen

CONTACT
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SOCIAL INCLUSION // KEA STUDENTS DESIGN FOR YOUNG REFUGEES

In February-March 2016 and 2017, Sustainable Fashion students engaged in Social Inclusion projects with the purpose of designing identity-creating garments for young unaccompanied refugees from Syria and Eritrea. The project was conducted in collaboration with the Danish volunteer organisation "Venligboerne" and primary school teachers from a school in Frederiksberg, Copenhagen (Skolen ved Bülowsvej) that has a special class for young unaccompanied refugees. The task was to create garments for the young refugees based on their functional, cultural and aesthetic needs through upcycling and redesign of recycled garments. This required comprehensive fieldwork and several meetings with the young refugees.

At the end of the project-period a (free) Pop-up Shop in the center of Copenhagen was established, in which the produced garments were presented and the young people chose clothes matching their needs, identity and aesthetic preferences.

Insights that the students from Sustainable Fashion gathered in this project were, among others, that the young refugees were, despite their dramatic history and traumatic experiences, pre-teens and teenagers much alike other teens with the need to express themselves and communicate through their clothes. In order to be able to become integrated in Danish society it is of great importance to them to feel confident, and therefore wearing garments that they feel match their identity is crucial.

"In February, a group of undergraduate students redesigned old clothes for young refugees. The idea has been to forge links between cultures. 16-year-old Roy Bahsous from Syria called the meeting a "beautiful experience." (SØNDAG February 28, 2016)

RE-IMAGINE

During Michelle and Brittany's time in the SUSTAINABLE FASHION specialisation, they were instructed in Biomimicry, Social Inclusion, Future Thinking, The Sustainable Development Goals and Material Design Driven as a part of a previous collaboration with NIKE. There was a great emphasis on the whole Value Chain in a multidisciplinary working environment with a focus on innovation, critical thinking, materials, concept & product development, and sociology and business.

During their internship period, they chose to work as entrepreneurs and began to research about discarded clothing and how to prolong the life of this clothing. When they reached their BA project they decided to continue together on this trajectory and created the brand "Re-imagine", primarily re-designing second-hand denim clothing and wrote their thesis about their work. They produced an extraordinary BA project where they conducted thorough research through a structured and systematic process, looking at the system behind "fast fashion" and how this influenced the value chain of the charity organisation Red Cross.

They employed a comprehensive design process and demonstrated a clear ability to implement research into their written assignment, product, and oral presentation. They presented themselves as a strong team, complementing each other very well. During the process they also invited a group of new students in the Sustainable Fashion specialisation to join them in designing a collection. Finally, they sold most of their designs in a pop-up shop and donated the profits to Red Cross.

Design: Michelle Jensen and Brittany Malvino

Design: Sustainable Fashion Students working on the Re-imaging concept arranged by Michelle and Brittany.

EDUCATIONAL PROGRAMME
DESIGN // BA Design & Business // Sustainable Fashion // Bachelor Thesis

DURATION
3 ½ month // 20 ECTS

PARTICIPANTS
2 Students

PARTNERS
Danish RED CROSS

CONTACT
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Brittany Malvino:
malvinobrittany@gmail.com

CHAPTER INDEX

APPLIED RESEARCH AND THOUGHT LEADERSHIP IN RELATION TO THE GLOBAL COMPACT AND SUSTAINABILITY

RESEARCH

A broad swath of research and innovation projects are described in this chapter, with reference to reporting on applied research and thought leadership in relation to the global compact and sustainability. The intent of KEA is not to publish research and innovation projects in peer reviewed journals, but rather to generate useful knowledge and value for educations, our partners, the sectors we educate our students for and finally society at large.

This chapter describes the KEA's manifold approach to sustainability and reflects how diversity and research and innovation projects serve as a source for providing new knowledge and value to KEA's educations and partners.

SUSTAINABILITY IN THE CONSTRUCTION INDUSTRY

PETER FALK // LECTURER
KEA BUILD, BA in Architectural Technology and Construction Management

IF YOU WOULD PRESENT THE PROJECT– THE TITLE AND WHAT ITS ABOUT?

- Sustainability in the construction industry is defined as economic sustainability, environmental sustainability and social sustainability. Our project "only" deals with environmental sustainability.

As part of environmental sustainability assessment, the LCA method is used. LCA is an abbreviation for Life Cycle Assessment.

The LCA method (EU standard) is used to make a holistic (cradle to cradle) assessment of the environmental impacts of building a particular building, using some specific materials, performing certain processes, etc. Right from when the raw materials are extracted and processed and until one day it is to be disposed of or recycled. In the project the selected materials and their environmental impacts are followed from "start to finish" (cradle to grave) or from "start to new start" (cradle to cradle).

A building is made up of many construction products, which again are made of many different materials. In our project we use a wooden/aluminium window as an example because it is a simple and well-known product in the industry. We looked at the three primary materials that the window consists of: wood, from which the frame is built, glass which the window pane is made, and aluminium which protects the frame from the outside, from wind and weather. Aluminium, glass and wood are all materials obtained in nature and processed and treated before they eventually are produced into a window. When the window can no longer be used, the materials will be separated and discarded or recycled. We look at how they both individually and together in, different ways, affect the environment and the earth's resources.

The project is about communication where we, through pedagogical and visual staging, map the LCA method and link it to some concrete materials and processes. The goal has been to use as little text as possible, which hasn't been easy…

WHAT IS THE BACKGROUND FOR THE PROJECT – THE MOTIVATION BEHIND?

- The overall purpose of the project is to provide students at the advanced building engineering programmes in Denmark - tomorrow's advisors and

contractors - an introduction to the LCA method, as well as an understanding of how the method is used, for example in choosing the most suitable building materials with regards to the environment.

HOW DID YOU GO FROM IDEA TO ACTION – THE PROCESS?

- The building engineering programs must support sustainable development in relation to sustainability. The challenge, however, is that there are very many attitudes towards sustainability, as well as ample opportunity for approach and interpretation. I had completed a couple of semesters where I had taught LCA-build and LCC-build, which we introduce the students to, and they use in their projects. But it's hard for the students to see what's happening 'inside the machine'... and students do not necessarily get an understanding of the underlying thoughts, considerations and prerequisites regarding LCA.

So, based on an idea of communicating a complex topic in an "accessible way" I started searching for some funds and writing an application with input from some external partners. After getting the funding in place, the project was further developed by a project group consisting of:

Flemming Carøe Østergaard - FCO Arkitektur ApS

Mathias Kemner Høeg and Henrik Fred Larsen - Teknologisk Institut

Mette Rydahl Anker, Magnus Sølvhøj Kühn, Peter Falk - KEA

WHAT IS THE OUTPUT OF THE PROJECT?

- The project consists of 3 main elements / products:

1. *An exhibition at KEA's campus, Nørrebro in Copenhagen*
2. *A teaching concept consisting of 3 modules (1-2.sem, 3-4.sem and 5.sem)*
3. *A website where you can read about the background of the project, download material/ posters in different formats, get the different teaching modules and gain background knowledge about LCA.*

HOW DO YOU WORK WITH SUSTAINABILITY ON THE PROJECT?

- Through reading, outreach work, development meetings, visits to relevant exhibitions, calculations of LCA load on given materials and processes, etc.

As part of the project, a part of the project team visited the Architecture School in Wageningen University in the Netherlands, participated in some lectures on sustainability in urban context in the course Climate-responsive planning and design. Here we also had the opportunity to discuss different aspects of sustainability and limitations with Professor Sven Stremke and Professor Sanda Lenzholzer from Wageningen.

WHAT DO YOU HOPE THE PROJECT WILL LEAD TO?

- I hope it will spread knowledge and contribute to the understanding of Life Cycle Assessment - mainly in the construction industry, but also in other industries - an LCA can be made for processes and materials in all industries...

FROM SUSTAINABLE REFURBISHMENT TO SUSTAINABLE FACILITY MANAGEMENT

This project is meant to further develop and strengthen Nordic Facility Management (FM) competences in accordance with the Nordic Built Charter.

Often, renovated buildings do not live up to the wishes and requirements for subsequent operations and lifetimes. What this entails is that immediately following the commissioning of installations, they and their systems must be rebuilt to ensure, for example, they deliver promised energy consumption, indoor climate or the well-functioning environments for user activities. These errors and deficiencies cannot be called economically, socially or environmentally sustainable.

EDUCATIONAL PROGRAMME
BUILD // Architectural Technology and Construction Management

DURATION
3 years 2015-2018

PARTICIPANTS
5 Faculty // various students

PARTNERS
Konstruktørforeningen Chalmers University, Göteborg Sweden

NTNU // Norwegian University of Science and Technology

VIA University College

CONTACT
Mattias Straub: mats@kea.dk

http://www.nordicinnovation.org/nordicbuilt/

This project is focused on how the Architectural Technology and Construction Management education in Denmark - in cooperation with the FM-related research programmes at Chalmers in Sweden and NTNU in Norway - can strengthen the implementation of the latest research knowledge on sustainability in relation to FM functional tasks and processes under all phases of construction - from idea to operation.

The project promotes sustainability by using the Nordic Built Charter as a framework in relation to exploring and operationalising the concept of 'commissioning' for educational purposes. This ensures that the right information and the right knowledge is transferred after sustainable renovation and that the building is subsequently operated sustainably throughout its entire life cycle. This has a focus on the function-dependent operation, i.e. that installations, fixtures, machines, etc. also work and operate sustainably.

The specific output is a summer school that will result in products that can be conveyed to a broader range of stakeholders as well as improve teaching. The ultimate goal is that the knowledge acquired through this development project will become a natural part of the varying educational and study programmes wherein the goals of Nordic Built, the 10 principles of the Charter, become an integral part of the education when speaking about FM, 'commissioning' and sustainability.

MATERIAL DRIVEN DESIGN – WHEN MATTER LEADS TO FORM

Over the last few decades, most design educations have embraced digitalisation and a more theoretical approach and largely steered away from previous craftsmanship-based approach to design and materials. This has opened up a new world of possibilities, but has also left designers with a lack of knowledge about materials.

Naturally a designer will never have the same deep understanding of materials as that of a materials engineer. However, the very limited material knowledge of most young designers effectively creates a barrier between the designer and the final product. A barrier that not only works against the implementation of advanced materials, but also becomes a major obstacle in the creation of more sustainable industrially produced products.

This Material Driven Design project questions not just the way we educate about materials, but the role of the material in the design process; experimenting with prioritising matter over form with the expectation that this can lead to faster integration of new materials and more sustainable products.

Considering that all human-made materials that surround us are made from elements that are naturally occurring on our planet, it can be hard to understand how using these same elements in the materialisation and building of our civilization, could end up being so harmful to the same environment they came from.

When it comes to materials and sustainability it is always a matter of context. The most sustainable material can used or mixed in the wrong way and result in a very unsustainable product.

Understanding how to design for a Circular Economy, where a product has to either be recycled or biodegraded at the end of it's life, demands a profound understanding of the composition and compatibility of materials.

A material driven design process ensures that the end product is recyclable and/or biodegradable and could, therefore, potentially play an important role in a change towards a Circular Economy.

The project has developed through experiments with a material driven design process mainly with designers and design students, but also in collaboration with engineers, biologists, architects and scientists.

The expected result of this project is to present a new material driven design process, that can be used by both by designers and as a part of design education.

Photo: Material Design Lab, KEA

Sustainable Fahion student Fanni Fabian experiments with material driven design in her project NIKE BIOTECH-SECOND SKIN // Gowing performative second skin.

DEPARTMENT
RESEARCH AND INNOVATION // Ph.d. project

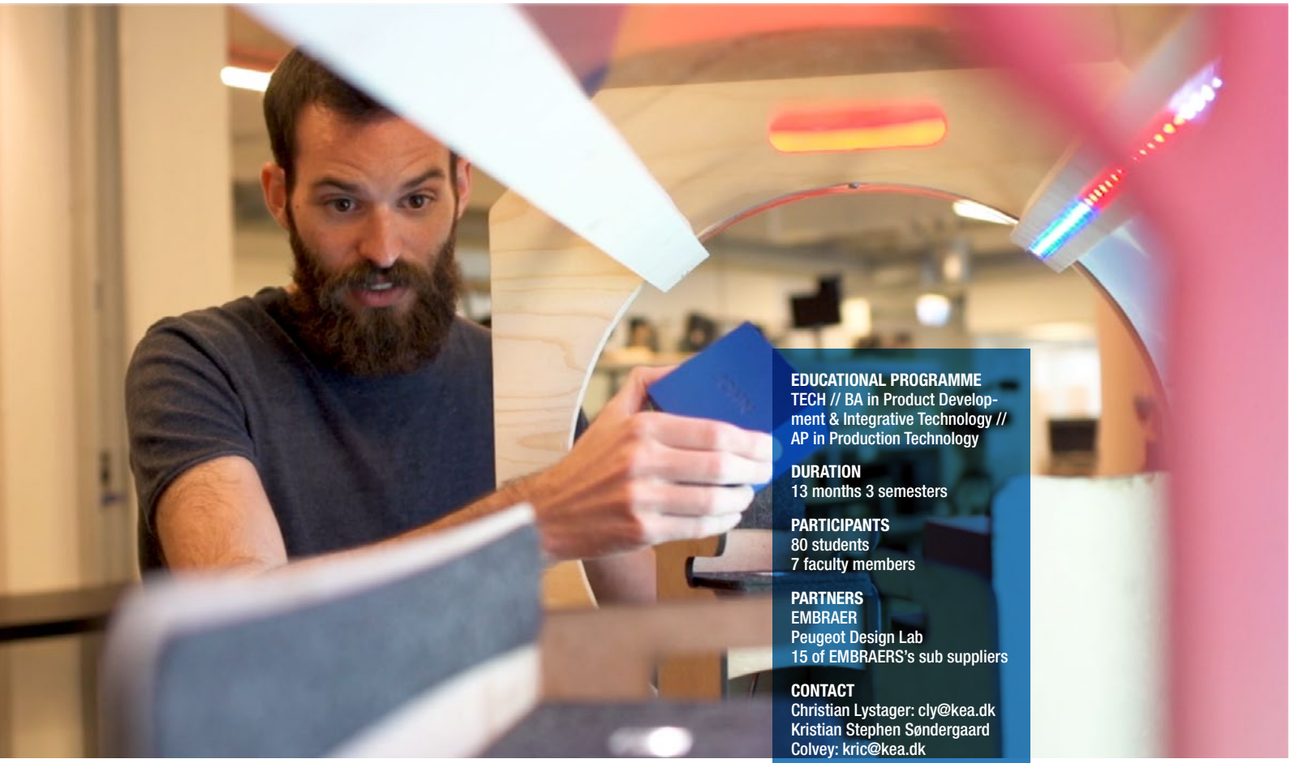
DURATION
01. 12. 2014 - 01. 01. 2019

PARTNERS
KADK, Det Kongelige Danske Kunstakademis Skoler for Arkitektur, Design og Konservering

CONTACT
Mette Bak-Andersen, Ph.D.
student and leader of Material ConneXion & Material Design Lab

meba@kea.dk

https://www.youtube.com/watch?v=bB8yPqmaTlo



EDUCATIONAL PROGRAMME
TECH // BA in Product Development & Integrative Technology // AP in Production Technology

DURATION
13 months 3 semesters

PARTICIPANTS
80 students
7 faculty members

PARTNERS
EMBRAER
Peugeot Design Lab
15 of EMBRAERS's sub suppliers

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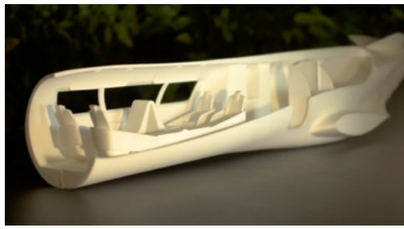
GREEN CABIN CONCEPT PARTNERSHIP



Future Concept Development Partnership with Embraer, Peugeot Design Lab and KEA

The design challenge is clear: in the future, private air travel will change, demands for resource efficiency will collide with our perception of luxury and opulence, but can we harmonise the two? This was what our project set out to do, by partnering with one of the world's largest aircraft manufacturers, Embraer, and some of the renowned designers of Peugeot Design Lab, we worked towards developing a concept cabin for an executive jet for year 2040. We wanted to ensure that our cabin would meet the resource efficiency demands of the future, without sacrificing the comfort of private air travel, by twisting the notion on its head and exploring how more natural solutions, developed using eco-design principles and design for the environment could actually provide a healthier, more-relaxing, and ultimately truly engaging passenger experience.

Students from AP in Production Technology and BA in Product Development and Integrative Technology came up with intriguing and innovative concepts that covered all three pillars of sustainable development, and focused on optimising resource use, material health and recyclability, and a healthy passenger experience. Such concepts included the use of bio-based materials like wood, bio-leather and cork, technical materials like copper were incorporated for its recyclability, material health and self-cleaning properties, along with PET laminates for easy recycling for product end of life.

Disruptive design approaches using 3D printing and Virtual Reality rendering of the cabin assisted and shaped the design perception.

GREEN CABIN CONCEPT

CHRISTIAN LYSTAGER, LECTURER // KRISTIAN SØNDERGAARD COLVEY, ASSISTANT LECTURER
TEKNIK, BA in Product Development and Integrative Technology

WHAT PROJECT HAVE YOU BEEN WORKING ON?

- We call the project the 'Green Cabin Concept,' which is much more of a journey into the design of an executive jet cabin for a 2040 future. We incorporate an exhaustive array of concept development, generative design, trends and future tech to provide a holistic solution for passengers in the near future developed in collaboration with Embraer and Peugeot Design Lab.

WHAT IS THE BACKGROUND AND MOTIVATION BEHIND THE PROJECT?

- To be honest, we all know and recognise that air travel -especially private air travel- isn't the most sustainable of passenger transport solutions, but if we yet persist with the idea a little longer, we realise that through development and technological revolution towards a 2040 future, we could yet experiment with the idea of how we might handle executive jet travel in the future where sustainability is not just a priority, but a fundamental desire built in to the mindset of consumers. This design challenge, faced by Embraer was the starting point for their first explorations into what this cabin might look like, and after creating some contacts in the years past, we stood ready and open to accept the design challenge to develop Embraer's concepts to the next level, so that they might get some fresh eyes on their work, through the lens of student development projects.

HOW DID YOU GO FROM IDEA TO ACTION?

- When redesigning a cabin, there are many, many possibilities for meeting a design challenge that truly takes sustainability to heart. We started out about developing unique layouts in the cabin with our students to establish our design language. From these rough concepts we divided the cabin up into elements that student groups could individually focus on and begin to iterate.

Here, they were given the chance to dive deeply into passenger experiences with for example, what one could do with the forward space where the cockpit used to be in what is now an autonomous aircraft. Or how one could transform the traditionally cramped lavatory of an aircraft into a sanctuary. There was heavy dependence on developing a design language that would match customer needs explored through personas, and an immense amount of time used in understanding how luxury, and resource efficiency can potentially overlap to deliver sustainable solutions.

The full project took place over the course of one academic year with a dedicated R&D specialist representative from Embraer, Luciana Ribeiro Monteiro to guide the project locally at KEA, and was monumentally instrumental in helping us understand how to work at an industry level in terms on a development project of this scale.

WHAT WAS THE PURPOSE OF THE PROJECT?

- The purpose of the project was to deliver cohesive concepts for the cabin of a 2040 executive jet cabin focusing on sustainable solutions and representing the design values of Embraer.

HOW DO YOU WORK WITH SUSTAINABILITY ON THE PROJECT?

- Working with sustainability in the future was quite interesting, we needed to forecast passenger needs for a time where values might be wholly different then they are today. At the same time we needed to evaluate how the term 'sustainability'

could potentially co-exist with the word 'luxury', which is one of the main value propositions for private air travel. These two on the surface seem to be at odds, as 'luxury' typically connotes excess, one-of a kind, and even decadence at times. This seems to be fundamentally at odds with 'sustainability', which tends to connote sufficiency and efficiency over unnecessary and irreverent consumption. To find a meeting point - which we call 'eco-luxury' - we looked to try and understand what scarcity could mean in a 2040 scenario and then work backwards towards what we could offer that would be both unique and provide an amazing passenger experience, but was yet sustainably sound. The answer in many ways was uniqueness, simplicity and quality - reflected in our use of the Eco-Design principles, and Design for Environment in the product development.

'Simplicity' is reflected in focusing on using fewer rather than many materials, and looking wherever possible to see if those materials are found in nature and have characteristics that not only make them excellent purveyors of luxurious experiences, but can find themselves in an effective reuse, recycling, or cascade loop at the end of the product life span. Good examples of this focus lead to the use of materials like copper and cork.

'Quality' also addressed the needs of production and supply chain to minimise the carbon/resource footprint by focusing on local over global solutions where possible while delivering superb performance in a design environment that has many regulatory restrictions regarding performance. An example of this manifested in the use of bio-leathers sourced from non-traditional sources like apples and jellyfish

'Uniqueness' focused on providing solutions to deliver value in more uncommon ways that would yet enhance the passenger experience, like the inclusion of natural lighting via skylights in cabin, or the ability to have a warm shower utilising, for example, waste heat and water from a hydrogen driven electric powerplant.

DID YOU COLLABORATE WITH ANY EXTERNAL PARTNERS?

- Yes, yes and yes! Collaboration was the name of the game for this project. There were three main partners in the project: Embraer (project owner) providing information and expertise for how one goes about designing for the air-tech industry and providing insight about requirements and customers using their products. Peugeot Design Lab provided ample design expertise in helping the students refine the design language of their concepts. Lastly it was all about the students, who with open minds and hearts did all the massive amount of legwork in developing, iterating, and designing elements of the cabin to serve as feed-in inspiration for Embraer's own design strategy.

Beyond these three we worked with many of Embraer's suppliers and other relevant firms that provided material expertise to our students, so they could learn about what materials can do, and what the demands are for development and testing in this highly regulated industry. This coalesced into a

"supplier week" where many of Embraer's current suppliers could present the cutting edge of what they are working with, and share knowledge about how one develops in the air-tech industry.

WHAT DO YOU HOPE THE PROJECT WILL LEAD TO?

- We hope in earnest that our little experiment will result in companies such as Embraer truly leaping forward with development of their future products to meet the demands of our fast-approaching future. It makes sense to start looking at redesign of our products now, for the future that we want, and not the future that we are consigned to end up in. This kind of forward thinking represented by Embraer's willingness to partner with KEA in order to look towards new solutions for the future, is a clear sign that one has to be bold, and engaged, and have the willingness to invest time, money, and effort into radically changing our future.

We will have to see when 2040 rolls around if our attempts truly had any lasting impact, but for now Embraer is satisfied to move forward with concepts that we have helped them develop, and we are confident that the world has been opening up for our students about what a collaboration like this can bring to the development of their own aspirations for a green future. We are in the end happy with the knowledge in that in our way. We have made our mark in helping to start transform a traditionally high resource consumption industry into one that truly addresses sustainability.

PHOTOGRAPHIC DESIGNANTHROPOLOGY

"Photographic Designanthropology: Becoming through diffractive imagemaking and entangled visions in a Copenhagen immigrant youth context"

EDUCATIONAL PROGRAMME
RESEARCH & INNOVATION // Ph.D

CONTACT
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The Ph.D. project "Photographic Designanthropology: Becoming through diffractive imagemaking and entangled visions" is concerned with a proposal for a sustainable photographic designanthropology. The project explores potentials and limitations of practice-based photography and aesthetic practice in a designanthropological context.

The visual (photography & design) is examined in relation to issues of authorship, agency, participation and dissemination, framed through feminist new materialist theory. The field engagement has involved girls from the girl's clubs Lunden and Kvarterhuset Copenhagen, DK – two clubs focusing on Muslim immigrant girls.

The girls have been invited to participate in various visual experiments concerning the 'becoming of identity' through images. Visual modes have been used as a way of engaging with the participating immigrant girls, and explore the aesthetic and 'response-able' potentials of photography, through shedding light on visual diverse statements about identities in an immigrant context.

The project relates to social sustainability, as it is concerned with creating an aesthetic space for cross-cultural dialogue and aesthetic imagination, which potentially enables democratic and public scholarship potential. Following this, the project seeks to make a proposal for/put into action, a responsible and sustainable photographic design anthropology at KEA.

SUSTAINABILITY IN DANISH SOCIAL HOUSING - THE USER FOCUS

The Ph.D research project focuses on the sustainability of sustainable, social terraced houses when occupied by users. From an evaluation perspective, it is only once the sustainable housing is put into use that one can examine whether the sustainability lives up to the intentions in relation to the user's needs. The users are defined as: residents, operating staff and operations management, who can provide valuable, qualitative feedback on the concept.

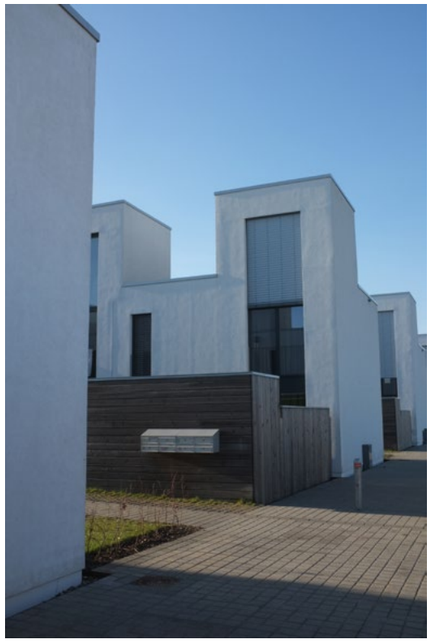
The project intends to examine a wider overall assessment of sustainable social housing in Denmark. The study involves the builders' and architects' assessments of users' experiences with the buildings' sustainability - which are systematically and comprehensively analysed and described.

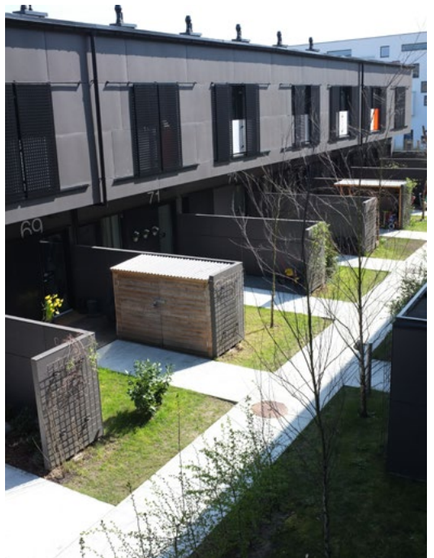
The project's research design has a phenomenological approach. Regarding the methodology, a three-tier method is used in combination with both in-depth and focus group interviews.

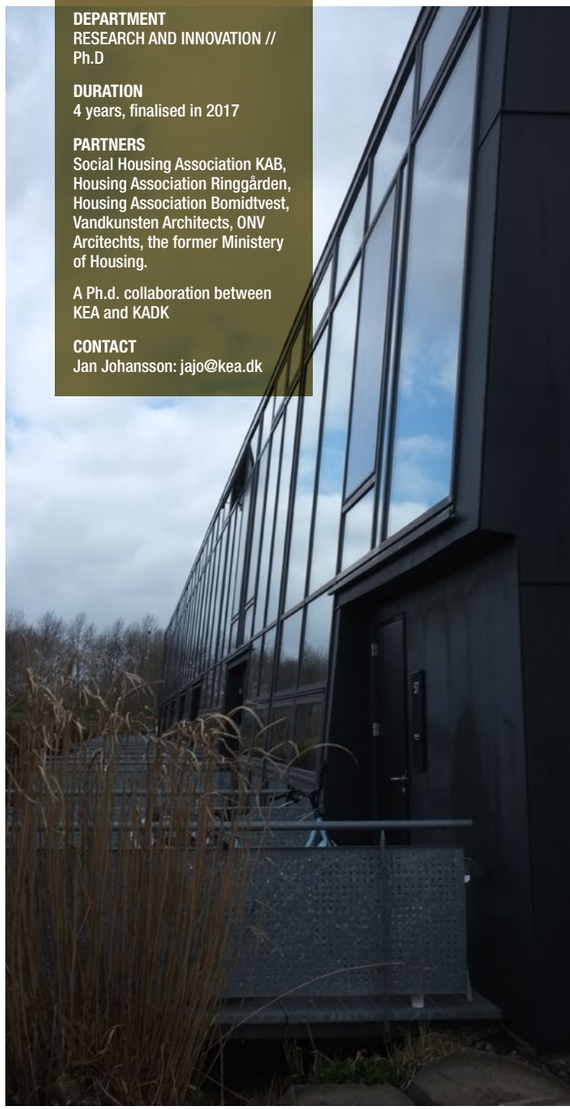
The case studies are; "Økohus 99", Ikast,"Lærkehaven III" in Lystrup and "Grøndalsvænge" in Copenhagen. Each, in their own way, represents three Danish social housing estates with different approaches to sustainability.

To apply the users' experiences in the development of future sustainable social housing there are a number of recommendations provided:

- Early user involvement and consideration of user expectations and balancing for community and privacy are key to a successful user experience.
- Be aware of architectural aesthetics, as sustainability in and of itself cannot stand alone, and avoid steep stairs in the housing.
- Be realistic in relation to the funding and ambitions regarding sustainability, and be aware that increased self-management does not produce financial savings.
- Avoid complicated technology, and be aware that the visibility of energy consumption is not behaviourally dynamic.
- Modernise communication and information to increase user knowledge about the sustainable initiatives. Social media can be used.







DEPARTMENT
RESEARCH AND INNOVATION // Ph.D

DURATION
4 years, finalised in 2017

PARTNERS
Social Housing Association KAB, Housing Association Ringgården, Housing Association Bomidtvest, Vandkunsten Architects, ONV Arcitechts, the former Ministery of Housing.

A Ph.d. collaboration between KEA and KADK

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CHAPTER INDEX

GLOBAL COMPACT PRINCIPLES AND THE SDGs

THE SUSTAINABLE DEVELOPMENT GOALS

In September 2015 the report ‘TRANSFORMING OUR WORLD: THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT’ set a new plan for sustainability in the context of people, planet and prosperity. It consists of 17 Sustainable Development Goals and 169 targets where 193 UN countries declared their intent on achievement by 2030. The plan has been called the most ambitious plan for the world ever and it is a call for action that includes among others society, business and academia to drive the agenda. All progress on the goals helps to create a better world community and Denmark is considered to be in the best shape to deliver on the goals. In fact, it may become one of the five best performing countries according to OECD and Sustainable Development Solutions Network.

COLLECTION AND PRINT - UN SDGs

EDUCATIONAL PROGRAMME
DESIGN // AP in Design, Technology and Business // Sustainable Fashion

CREDITS // DURATION
5 ECTS // 3 ½ weeks

PARTICIPANTS
70 students
4 faculty members

PARTNERS
Mellemfolkeligt Samvirke in Denmark

CONTACT
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pedc@kea.dk

Working with United Nations' Sustainable Development Goals in the Value Chain.

3rd Semester students developed their own fictive fashion brand based on a very fine introduction to the UN´s 17 sustainable development goals given by Mellemfolkeligt Samvirke in Denmark.

They selected one or more of the UN SDGs and actively incorporated them in their brand.

They analysed them, in regards to the value chain in the production of their products.

They were instructed to figure out how each step would create a positive or sustainable effect and how they might design a collection based on those SDGs.

The main focus in this assignment was for the students to acquire knowledge about working with the UN's Sustainable Development Goals in relation to the clothing industry.

GLOBAL GOALS JAM

MARIE LOUISE BRIXTOFTE, LECTURER
KEA DIGITAL // Digital Concept Development
EDUCATIONAL PROGRAMME:
Ecommerce // Digital marketing and User research

WHAT PROJECT HAVE YOU BEEN WORKING ON?

- The Global Goals Jam (GGJ) is a two day event consisting of short design sprints. Creative teams of designers, developers and 'Jammers' from KEA -and the rest of the world, work together using a tailored toolkit. Together, they will create interventions aimed at short-term targets in support of the long term UN Sustainable Development Goals.

Some of the participants in the event are the cities of Rio de Janeiro, Accra, Copenhagen, Amman, Delhi and Fukuoka.

WHAT IS THE BACKGROUND FOR THE PROJECT?

- We began working with this, because of an invitation we received from MediaLAB at Amsterdam University of Applied Sciences (HVA). They organise the event across the world. So I am the local organiser, with the contact to HVA and from them we got a manual on how to arrange the event. KEA has great collaboration with HVA.

The motivation behind the project was being part of an international event and making a change, and at the same time teaching the students how to work with an innovation process.

WHAT IS THE PURPOSE OF THE PROJECT?

- To come up with some concrete solutions for the UN Sustainable Development Goals. The main focus this year was to work with goals 1,2,3,4 or 11.

HOW DO YOU WORK WITH SUSTAINABILITY ON THE PROJECT?

- Both this year and last year we worked with SDG 11. The first time, we worked with creating a sustainable garden for KEA and this year we worked with plastic as a topic, and the challenge given to the students was how to make Nørrebro a plastic free zone.

WHAT DO YOU HOPE THE PROJECT WILL LEAD TO?

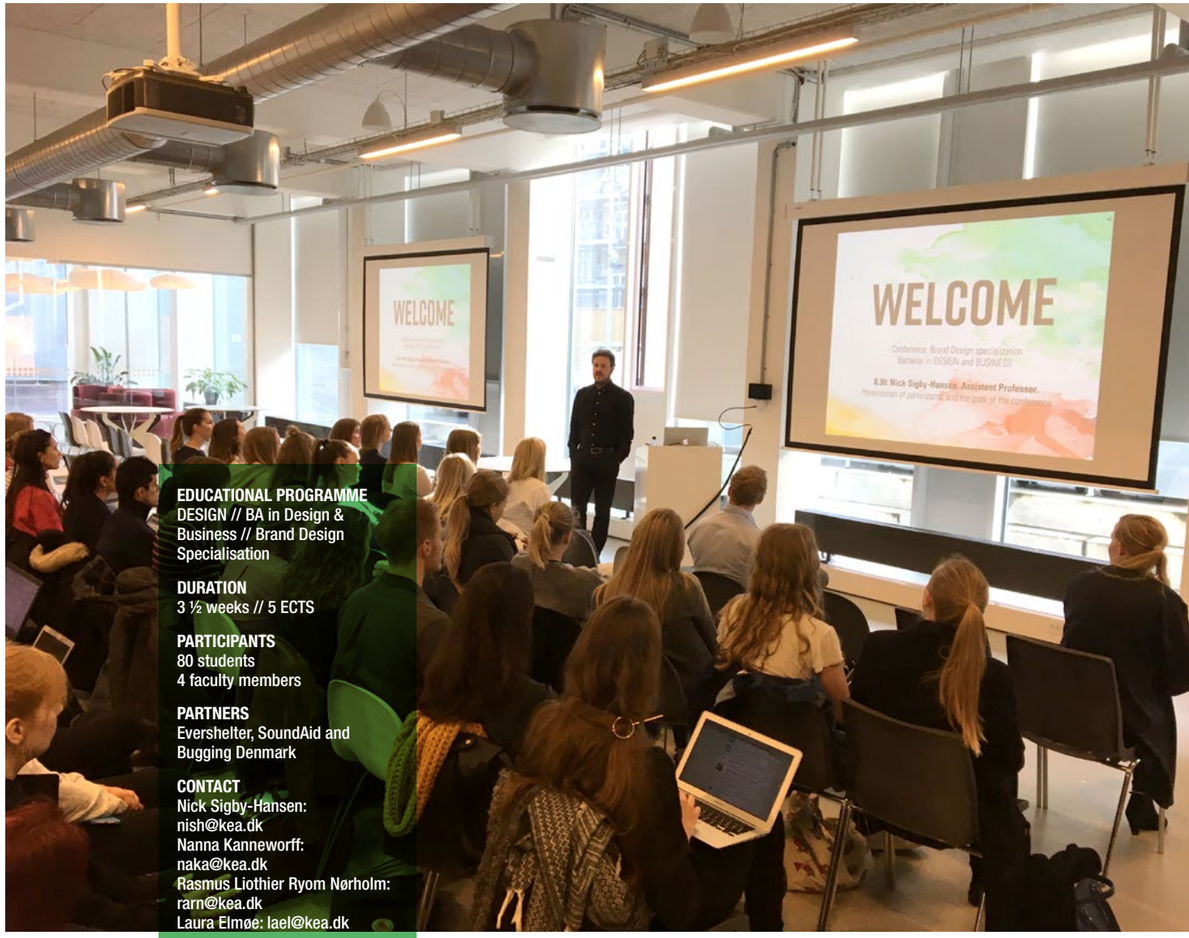
- The hope is of course that we here at KEA, first of all become much more aware about the SDGs, both as students and teachers.
Secondly to show how the students' knowledge, which they have gained here at KEA, can be used to change the world.
Since GGJ is an ongoing event, I am sure it will lead to new projects and that we, over time, get one of the projects implemented at KEA or somewhere else, where it will have an impact on our planet.

WHEN THE GOAL IS GREATER THAN PROFIT!

In this module 80 students at the BRAND design specialisation worked with concept design. The aim of the project was to give the students the opportunity to work with skills gained during their study at KEA. This was with a special focus on sustainability in collaboration with companies.

The module started up with a conference called ‘When the goal is greater than profit!’, with the purpose of creating awareness about sustainability. Here the students were introduced to sustainability from a broad angle. First they were introduced to a political view by the political party *Alternativet* talking about user-driven news media. This was followed by a talk with the advisory group & digital studio *Sustainia,* who spoke about their work with the Sustainable Development Goals and about how they can be used strategically to make business ‘good’. To give the project a practical angle, Pil Bredahl, designer, talked about sustainability in practice. The students were also introduced to the negative consequences that our unsustainable use of plastic has had on the environment especially in the sea, delivered by a scientist from Roskilde University, Kristian Syberg, who had been in Hawaii with Plastic Change researching and measuring these consequences. This was also to help us reflect on which conversion to sustainable use of plastic, we need to make in order to counter the problem of plastic pollution growth to such an extent that it can conclusively damage our natural ecosystems. Finally, other areas within sustainability receiving focus were: The Circular Economy, Corporate Social Responsibility and how to use natural ingredients like enzymes within food cultures were also introduced to the students.

The task for the students was to then use the knowledge gained at this conference together with their obtained skills in reference to one of the three participating companies: Evershelter, SoundAid and Bugging Denmark. All three companies have an innovative and sustainable profile and the students chose a problem statement that related to one of the companies challenges and created design concepts to promote the companies and their work with sustainability and the UN global goals.



EDUCATIONAL PROGRAMME
DESIGN // BA in Design & Business // Brand Design Specialisation

DURATION
3 ½ weeks // 5 ECTS

PARTICIPANTS
80 students
4 faculty members

PARTNERS
Evershelter, SoundAid and Bugging Denmark

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Rasmus Liothier Ryom Nørholm: rarn@kea.dk
Laura Elmøe: lael@kea.dk

EDUCATIONAL PROGRAMME
DESIGN // BA Design & Business // Sustainable Fashion

DURATION
3 ½ weeks // 5 ECTS

PARTICIPANTS
36 students // 4 faculty members

PARTNERS
Fashion Business students at London College of Fashion (LCA)

CONTACT
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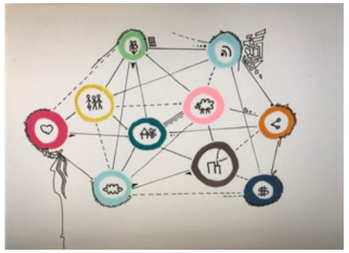
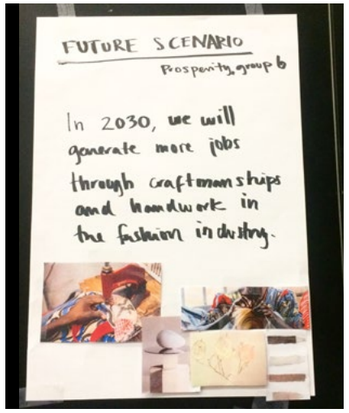




FASHION NARRATIVES FOR THE FUTURE // FEATURING VIVIENNE WESTWOOD

Youth Fashion Summit (YFS) every year gathers 100 students from all over the world to meet up in Copenhagen. They are among the future generation of fashion designers, makers, communicators and business executives of fashion, and they stand to inherit significant sustainable challenges. YFS is based on the UN Sustainable Development Goals and from this starting point YFS gives the students an opportunity to shape the fashion industry of the future. To learn more about YFS please visit: www.youthfashionsummit.com or read about the project in the interview at page 80 in this report. Danish Fashion Institute and KEA runs YFS in partnership.

"The Sustainable Development Goals (SDGs), are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity" (www.undp.org).

In 2016 the program and process from YFS was brought into the DESIGN program at KEA under the title FASHION NARRATIVES FOR THE FUTURE. To create the interdisciplinary element from YFS with fashion designers, makers, communicators and business executives, Sustainable Fashion at KEA teamed up with Fashion Business students at London College of Fashion (LCA).

All the students worked together with the 17 Sustainable Development Goals at LCA in a workshop based on the YFS process:

- Dreaming the Future/
- Discovering the challenge/
- Stakeholder path/
- Initial Proposal/
- Multiple Pitfalls/
- Fashion Narratives for the Future/
- Demand and Fashion Narratives.

By dreaming the future and mapping its path the students found possibilities for radical changes and long-term transformations. Finally they came up with a set of Demands related to the Fashion Industry and after a visit to *Vivienne Westwood* the KEA students went back to Copenhagen for the second part of the project. In this part the students worked individually on concept and design development as well as the design solution for *Vivienne Westwood.*

The design process was based on translating the output from the workshop consisting of DEMANDS and FASHION NARRATIVES FOR THE FUTURE.

‘THE VOICE OF THE NEXT GENERATION’

TINA HJORT, LECTURER
KEA DESIGN // BA in Design and Business
// Sustainable Fashion Specialisation

WHAT PROJECT HAVE YOU BEEN WORKING ON?

The project is called Youth Fashion Summit (YFS). It is a platform where more than 100 students from all over the world meet in Copenhagen to work with sustainability in fashion. The students apply for YFS and a strong group of multidisciplinary students are selected to join in Copenhagen for a three-day workshop. Before coming to Copenhagen, the students have participated in webinars on topics related to sustainability in fashion, and have conducted an assignment and read the curriculum presented to them by YFS. This is meant to create awareness about sustainability in fashion and the UN Sustainable Development Goals and thereby create common

Inspirational talk by Rick Ridgeway, PATAGONIA

ground for the workshop days in Copenhagen. The next step is to bring their ideas - in form of demands - to more than a thousand actors from the fashion industry that have gathered for the Copenhagen Fashion Summit in the Danmarks Radio Concert Hall.

WHAT IS THE BACKGROUND FOR THE PROJECT?

YFS started in 2012. At that time KEA had a knowledge centre called Centre for Responsible Design (CRD), which I worked part time in. Danish Fashion Institute (DAFI) visited the CRD to tell us about their project - Copenhagen Fashion Summit - and during the conversation they told us about the idea of YFS. CRD saw this as a great opportunity to collaborate with DAFI on the matter.

At CRD we had run a three-year summer school as an Erasmus programme called ‘Innovating Sustainable Fashion’. It was in partnership with different design schools in EU with KEA as the host. The partners of this project were the first to be invited and were collaborators for the first YFS in May 2012. YFS was held again in 2014, 2016 and from 2017, constituting a four-year contract that strengthens the collaboration between DAFI and KEA and the future of YFS.

HOW DO YOU COLLABORATE WITH EXTERNAL PARTNERS AND WHAT HAS THE COOPERATION CONTRIBUTED TO?

The process of YFS is based mainly on collaboration between DAFI and KEA with each their own focus. DAFI is responsible for the contact with businesses partners and bringing YFS into the Copenhagen Fashion Summit platform. KEA is responsible for content, process and everything that has to do with participating students and faculty members. Since we started in 2012, this relationship and collaboration has only grown stronger. It is based on high ambitions, curiosity and common respect for our differences, and how these can be

put into action. At KEA the development and execution of YFS is shared between the programmes of DESIGN and RESEARCH & INNOVATION. In the process we also collaborate with design and business schools from all over the world to validate the high level of teaching methods/ knowledge level, as well as be stay tuned in to the state of the art in sustainable fashion.
In a way you can say that YFS is a platform for multidisciplinary collaboration both among students, faculty members, schools, businesses and organisations.

WHAT IS THE PURPOSE OF THE PROJECT?

> *"The purpose of YFS is to give the next generation of designers, communicators and business executives a platform, tools and an opportunity to influence the decisions that are made today, but whose effects will mostly be felt tomorrow. It is to give these next generations a voice to express their dreams and possible solutions for a sustainable future. The overall purpose of the YFS is to empower the next generation of young people to engage with actors within government, businesses and organisations, civil society and media to set a new agenda for a more sustainable world, as well as creating a sustainable student network across schools and countries all over the globe". YFS Vision Statement*

The goal in KEA running this project is manifold. First it gives us the possibility to collaborate with highly skilled faculty members from national and international design and business schools to share and elaborate on knowledge in relation to sustainability in fashion. It also involves KEA in business collaborations at a high level through our partnership with DAFI.

In 2016 and 2017, the YFS also served as a research platform for Centre for Sustainable Fashion - the research centre from the University of the Arts London - in their research into the state of art in sustainable fashion. In the future, it is so planned that KEA would join in further research with the YFS platform to engage in applied research and to bring this knowledge back to KEA. These areas are core elements for KEA.

HOW DO YOU WORK WITH SUSTAINABILITY ON THE PROJECT?

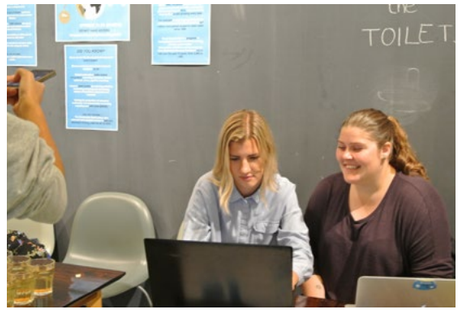
Sustainability in fashion is the whole core of the project. In the first years, we concentrated on many different aspects within sustainability and applied different themes to the YFS workshops to cover the whole value chain of fashion. Since 2016, the core of YFS has been to engage the students to understand, develop, integrate and operationalise the UN Sustainable Development Goals. It is to bring about students' awareness of the Sustainable Development Goals in relation to fashion and to inspire companies to think towards for a more sustainable fashion industry in the future.

In 2016 and 2017 YFS ran as a two-year project for the first time, where the students came back the second year and changed their requirements into a draft for a UN resolution. This resolution draft was presented to the UN General Assembly in September 2017, in New York.

WHAT DO YOU HOPE THE PROJECT WILL LEAD TO?

In the future the plan is to continue to run YFS as a two-year project where the first year is about a call for action and creating the requirements presented at the Copenhagen Fashion Summit. The second year the same students are invited back to change their requirements into action points in collaboration with international fashion companies. A new perspective is also a newly launched two-year partnership with the United Nations Global Compact, where they challenge the YFS students to work with the SDG 3, "ensure healthy lives and promote well-being for all at all ages" and SDG 5, "achieve gender equality and empower all women and girls" and how this relates to the fashion industry.

http://youthfashionsummit.com



COMMUNICATION BY "GENERATION SDG"

KEA students are an important target audience in terms of "Generation Verdensmål" (Generation Sustainable Development Goals). KEA works in a goal-oriented manner with the SDGs, and as teaching revolves around sustainability and the many facets of the concept, it was an obvious choice to contact *World's Best News*. In addition, constructive journalism is useful, as a concept and method, for our students to understand communication as a social driver.

At KEA, we desire to have our students become active members of Generation Verdensmål. In connection with the Conceptual Communication module in BA in Design & Business, our students were given the task of involving the other students at KEA and in order to create awareness of what it means for them to be part of Generation Verdensmål – whom are historically the large generation of young people who will work especially hard to solve the world's challenges for which the SDGs form the framework for. Our students worked in groups with a specific SDG, and on the 8th of September, 2017 different "communication zones" on campus were designed to attract and invite passers-by to interact with the different conceptual solutions our students had developed.

In the example above, we know that it is important to involve students in the development of communication concepts aimed at involving different users in taking an active role in relevant issues. We are planning a special collaboration with LGBT Denmark to highlight SDG No. 5: "Achieve gender equality and empower all women and girls" in the involvement of a specific case, which, in the wake of these year's focus on harassment and abuse of women in a large number of professions, offers demanding communication challenges.

EDUCATIONAL PROGRAMME
DESIGN // BA in Design & Business

DURATION
3 ½ weeks (5 ECTS)

PARTICIPANTS
80 Students, 4 Faculty Members

PARTNERS
World's Best News
UN Development Programme-Contact

CONTACT
Rasmus R. Simonsen, PhD:
rasi@kea.dk

THE GLOBAL GOALS FOR SUSTAINABLE DEVELOPMENT

THE SUSTAINABLE DEVELOPMENT GOALS AND NOT-FOR-PROFIT ORGANISATIONS

In this module, all six specializations within BA in Design & Business, worked with a not-for-profit organisation focusing on UN's 17 Sustainable Development Goals in relation to both tangible and intangible design solutions.

The students exercised their ability to perform environmental analysis and develop design concepts that solved a particularly wicked problem. The Sustainable Development Goals were introduced and the students related these to an organisation chosen for the purpose of the assignment. They worked with Network Thinking and Analysis and got familiar with concepts like Emotional Design and Critical Design, Time Concepts and Value, Strategic Decision Making, TOWS, Value Creation, The Beautiful and the Sublime as well as Aesthetic Strategy. In addition, they focused on documentation and validation of fieldwork through Visual Ethnography and Design Anthropology and, finally, they worked with both Key Success Factors and Key Performance Indicators.

The overall aim of the workshop was to anchor the theoretical and methodological lectures in BA in Design & Business through practice. It was about working with design, business and sociology at an analytical and strategic level and by incorporating methods and theories from the lectures to develop a design solution for a not-for-profit organisation that incorporated the Sustainable Development Goals.

As mentioned, each specialisation collaborated with a not-for-profit organisation during the module. These organisations proposed challenges to the students that were both grounded in their organisation and the Sustainable Development Goals. The collaborating organisations were: Clean Clothes Campaign, The Settlement, Act Learn & The Danish Food Bank.

EDUCATIONAL PROGRAMME
DESIGN // BA Design & Business // All Specialisations

DURATION
3 ½ weeks // 5 ECTS

PARTICIPANTS
280 Students, 15 Faculty members

PARTNERS
Clean Close Campaign, The Settlement, Act Learn & The Danish Food Bank

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CHAPTER INDEX

AFTERWORD

PERSPECTIVES ON OUTCOME

Here we would like to share some reflections that came about during the making and shaping of this COE report.

We had discussed the purpose and aims of the report and the most suitable way of communicating it. At first, it was to showcase what actions and outcomes in relation to UN Global Compact and sustainability we engage in at KEA in a well-crafted and designed report. It still is… but we realised that the purpose of the COE report could serve in fact as leverage to mobilise and energise faculty members and staff to join together towards future work by sharing ownership as co-writers of the report. In this way, the writing of the report will then pave the way for the establishment of the network in order to initiate even more activities by even more people in the future.

The report maps both activities and advocates across the organisation and highlights both qualitative and quantitative indicators of the growing engagement in sustainability at KEA in 2016 and 2017. In our future work, we will look into how we can focus even more strategically on targets in relation to sustainability at KEA at our Campuses and in our Educations and Research by joining PRME and HESI that both offer guidance on the matter.

The resulting report is a patchwork of stories from different corners of the organisation showing our aspirations for making a better future world together with the next generation, i.e. our students, and how we equip them to be part of reshaping society, businesses and organisations.

The stories found herein are neither all the stories that could be told, nor do they reveal all there is to say about the subject of sustainability at KEA in 2016 and 2017. Nonetheless, all the stories expressed here hint at yet a bigger story, as it seems that the mindset of sustainability here at KEA for staff, faculty members and students is growing into a very common, if not an omnipresent mindset in the future.

The fact alone that a substantial part of our students' final assignments in our new library database are in both direct and indirect ways concerned with sustainability gives us enormous hope that our students who will be graduates, then employees, and entrepreneurs will be truly better citizens and caretakers of "our common future".

THANK YOU TO ALL CONTRIBUTORS!

Thank you to all of the people at KEA that have made this COE report and the work behind it possible.

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Also a great thank you to Kim Kristensen for helping us shape our work in order to engage and align with KEA's organisation and management.

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Finally thank you to all the students at KEA that interact sustainability into their work and help shed new light on the challenges and possibilities throughit as well as in engaging with organisations and businesses helping them to move towards more sustainable business models and behavior.

With regards,

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UN GLOBAL COMPACT
COMMUNICATION
ON ENGAGEMENT

KEA's
SUSTAINABILITY
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