

Aalborg Universitet



Temporary & Smart Placemaking at Stigsborg Waterfront

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TEMPORARY & SMART
PLACEMAKING AT
STIGSBORG WATERFRONT

Exhibition Catalogue

Aalborg University
Department of Architecture, Design & Media Technology

Exhibition Catalogue
Venue: Nordkraft, Aalborg, Denmark
Time: May 17-20, 2016

Title: Temporary and Smart Placemaking at Stigsborg Waterfront

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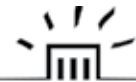
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Special thanks to all the students, Aalborg Municipality, Aalborg Harbour and DGI Nordjylland for their participation and help in the process.



AALBORG UNIVERSITY



ARCHITECTURE & DESIGN



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Exhibition, May 2016

Student exhibitors

Urban Design MA2 students (coordinator Simon Wind)

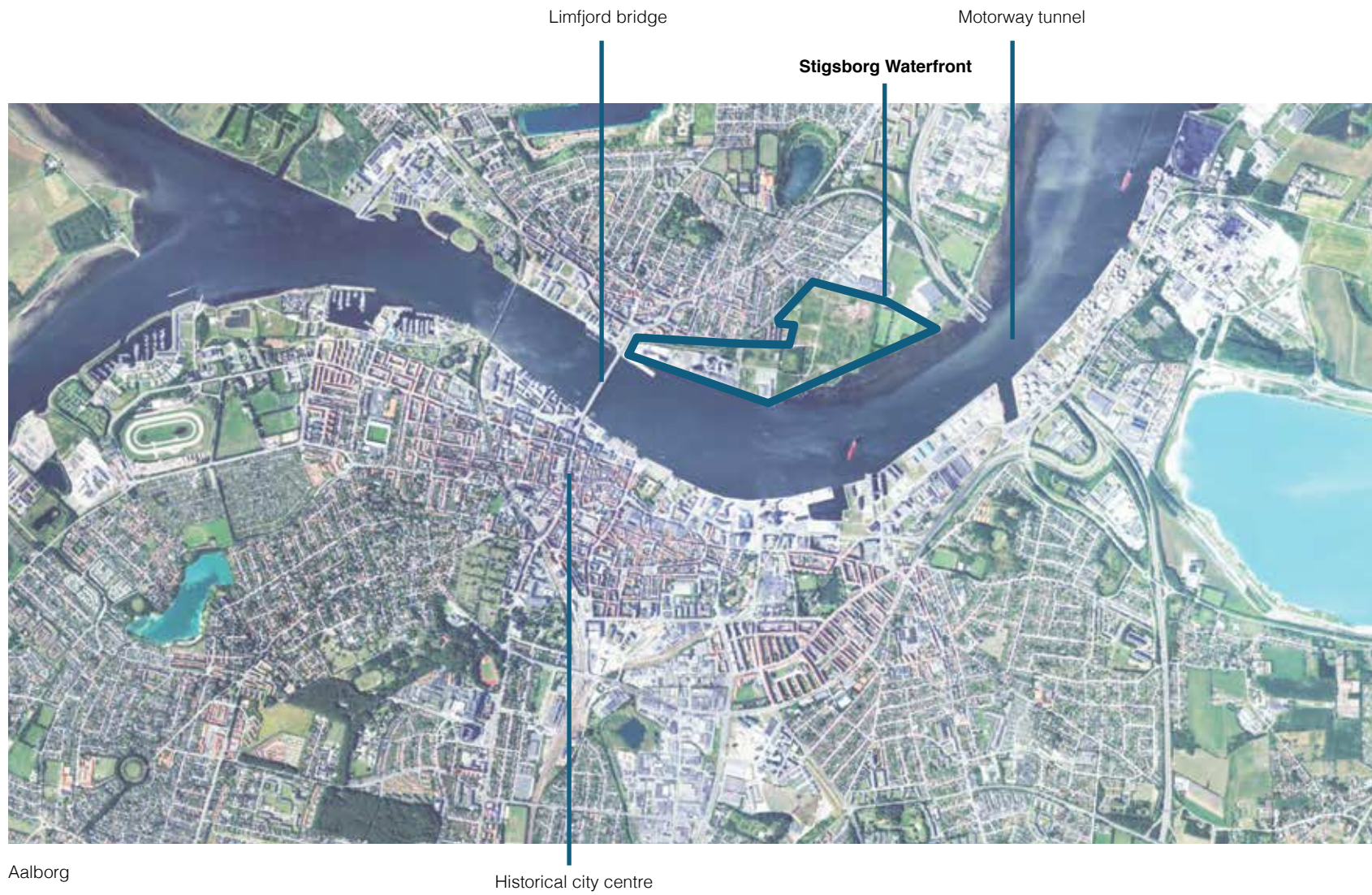
Katrine Støtt Bøjer, Lars Erik Barly Pedersen, Giampaolo Costantini, Irina-Teodora Comanita, Christian Østgaard, Kristian Mortensen, Line Guldhammer Mogensen, Maria Mortensen, Søren Risdal Borg, Thor Vingolf Nielsen, Laura Lyhne, Louise Marie Christensen, Nanna Fredslund Jensen, Viktor Kristoffer Becker, Louise Christina Studstrup

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Introduction

Over the next 20-30 years the Stigsborg Waterfront areas will be developed and as a central part of this process the area is going to be opened up to temporary uses and activities. With point of departure in the DGI sport event in the summer of 2017, students from the educations Urban Design, Architecture and Art & Technology, at Aalborg University, have been developing physical designs for temporary activities and new experiences at Stigsborg. The notion of 'Smart City' has been an overall umbrella of this work and the students have in their projects interpreted how new technologies, sensors and data can be brought together with temporary installations and pavilions to create foundations for new functions, opportunities, experiences and social communities. In total the exhibition of the selected student projects put images and words on what 'smart' placemaking might look like at Stigsborg Waterfront in the near future and how this can aid Stigsborg in becoming a new attractive and liveable destination in Nørresundby and Aalborg in many years to come.

Introduktion

Stigsborg Havnefront skal udvikles over de næste 20-30 år og som en central del af denne proces skal der åbnes bredt op for midlertidig brug og aktiviteter på området. Med afsæt i DGI-landsstævnet som afholdes i sommeren 2017, har studerende fra uddannelserne Urban Design, Arkitektur og Art & Technology på Aalborg Universitet i foråret udarbejdet over 100 projekter der giver bud på innovative designs der kan huse midlertidige aktiviteter og nye oplevelser. En særlig ledetråd i dette arbejde er ideen om den 'smarte by'. Her har de studerende i deres projekter fortolket hvordan teknologier, sensorer og data kan tænkes sammen med midlertidige installationer og pavilloner, og derigennem skabe nye funktioner, muligheder, oplevelser og fællesskaber der kan åbne Stigsborg Havnefront området op og invitere borgerne ind. Til sammen sætter de mange udvalgte projekter på udstillingen billeder og ord på hvad der kan ske i det enorme mulighedsrum som på Stigsborg Havnefront udgør og hvordan det kan blive en ny attraktiv og levende destination i Nørresundby og Aalborg i mange år frem.



Stigsborg Waterfront from above

DGI Sports & Culture Festival in Aalborg

The DGI Sport & Culture Festival is Denmark's biggest festival of sport. Every four years thousands of active Danes flock to a new host city that puts on a wealth of sports activities against a backdrop of festivities, colour and a great sense of community. During the period 29 June - 2 July 2017, Aalborg will have the honour of hosting the DGI Sport & Culture Festival attracting 25.000 participants.

These participants represent all ages and phases of life. In 2013 the biggest group was made up of young participants, 45% being below 30 years of age. The participants also represent all regions of Denmark. Anyone can take part in the Festival, and you don't have to be a member of an association or club to participate.

Spectators are welcome to watch all the events: ranging from performances at various locations in the city to the street football tournament at the waterfront or springboard diving into the fjord.

Every day of the festival will conclude with music and entertainment in various urban spaces throughout the city. The many stages on the city's squares will host attractions for people of all ages, and a great party atmosphere will embrace the entire city. The stage will be set at the waterfront in Aalborg when DGI Festival 2017 kicks off with a fantastic opening ceremony. For the first time ever, the ceremony will take place in an urban environment, thus providing a unique opportunity to experience sport in combination with the attractive surroundings at the waterfront.

DGI Landsstævne i Aalborg

DGI Landsstævne er Danmarks største idrætsfestival. Hver fjerde år strømmer tusindvis af aktive danskere til en ny værtsby, der kan præsentere et væld af idrætsaktiviteter, fællesskab, fest og farver. I dagene 29. juni - 2. juli 2017 er det Aalborg, der slår dørene op for Landsstævnet. Der forventes 25.000 deltagere til Landsstævnet i Aalborg.

Deltagerne i Landsstævnet fordeler sig over alle aldre og livsfaser. I 2013 var der en overvægt af unge deltagere, hvor 45% var under 30 år. Deltagerne repræsenterer hele landet. Alle kan være med til Landsstævnet, og man behøver ikke at være medlem af en forening for at deltage.

Alle er velkomne som publikum til alt dét, der sker. Lige fra opvisningerne rundt i byen, til streetfodboldturneringen på havnefronten eller udspring i fjorden.

Dagene under landsstævnet bliver afsluttet med musik og underholdning i byrummet. De mange scener på byens pladser fyldes med oplevelser for folk i alle aldre og byder op til fest. Scenen er sat på havnefronten i Aalborg, når DGI Landsstævne 2017 for alvor sættes i gang med et forrygende åbningsshow. For første gang nogensinde laves showet i et urbant miljø, og det er derfor en enestående mulighed for at opleve kombinationen af sport og de smukke omgivelser på havnefronten.



Stigsborg Waterfront

A brand new neighbourhood close to the city centre

On both sides of the Limfjord, comprehensive renewal of sections of the waterfront is in progress, and time is now ripe to focus on the regeneration of the eastern waterfront on the Nørresundby side, which has been christened "Stigsborg Waterfront".

Stigsborg Waterfront is Aalborg's biggest urban development area of recent years, and is expected to be realised over a period lasting several years. The 55-hectare area stretches from Limfjord Bridge in the west to Limfjord Tunnel in the east, and is one of Denmark's largest urban development projects lying so close to a city centre, just a few minutes from the centre of Aalborg and Nørresundby.

Stigsborg Waterfront is to be regenerated into an attractive new urban neighbourhood featuring both housing and office space, at the same time as which there'll be plenty of space for recreational activities in the interconnected green areas along the banks of the Limfjord. The unique location will also create rich opportunities for water sports on the fjord.

The development of Stigsborg Waterfront is being undertaken as a collaboration between the City of Aalborg and the Port of Aalborg. A vision looking forward to 2035 has been drawn up for the area, with the intention being that Stigsborg Waterfront will provide a connecting element around the fjord in the centre of Aalborg.

En hel ny bydel tæt på centrum

På begge sider af Limfjorden er omfattende fornyelser af havnefronterne i gang, og tiden er nu kommet til at stille skarpt på omdannelsen af Nørresundby Havnefront Øst, som har fået navnet "Stigsborg Havnefront".

Stigsborg Havnefront er Aalborgs største byudviklingsområde i nyere tid og forventes realiseret over en lang årrække. Det ca. 55 ha store område strækker sig mellem Limfjordsbroen i vest og Limfjordstunnelen i øst og er et af Danmarks største centrumnære byudviklingsprojekter med kun få minutter til Aalborg og Nørresundby centrum.

Stigsborg Havnefront skal omdannes til et nyt attraktivt bykvarter til både boliger og kontorerhverv, samtidig med at der vil blive rigeligt med plads til rekreativ udfoldelse i de sammenhængende grønne områder ved Limfjorden. Den unikke beliggenhed vil også skabe rig mulighed for søsportsaktiviteter på fjorden.

Udviklingen af Stigsborg Havnefront sker i et samarbejde imellem Aalborg Kommune og Aalborg Havn A/S. Der er lavet en vision for området, der strækker sig frem til ca. 2035. Visionen er, at Stigsborg Havnefront skal skabe sammenhæng i Aalborgs bymidte omkring fjorden.

URBAN DESIGN
MA2

Giampaolo Costantini, Katrine Støtt Bøjer, Lars Erik Barly Pedersen, Irina-Teodora Comanita,
Christian Østgaard, Kristian Mortensen, Line Guldhammer Mogensen, Maria Mortensen, Søren
Risdal Borg, Thor Vingolf Nielsen, Laura Lyhne, Louise Marie Christensen, Nanna Fredslund
Jensen, Viktor Kristoffer Becker, Louise Christina Studstrup

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The Urban Design assignment

Over the course of three intensive weeks Urban Design master students have in the spring developed strategic and conceptual design for temporary structures and activities at Stigsborg Waterfront.

In the next 20-30 years Stigsborg Waterfront is going to become a new mixed urban centre in the city. It is envisioned to become a 'smart city', a sustainable frontrunner project in Aalborg that showcase urban solutions that integrate environmental, social, cultural and economic aspects. The Stigsborg Waterfront area is a former industrial site that has housed heavy industry. Although the most structures and buildings have been removed, the public access to the area need facilitation and in many places is inaccessible. As of now, there are almost no public functions and programs on the site and therefore citizens of Nørresundby and Aalborg have little knowledge of the area and the municipality's future plans. As part of paving the way for the future development on Stigsborg Waterfront, there is a need to open the area, make it accessible to the public and create programs and experiences that can facilitate the formation of a new identity for the area.

Taking point of departure in this, the Urban Design students have worked with the notion of 'Smart City' and what this might mean in the context of creating temporary development and kickstarting placemaking processes at Stigsborg Waterfront. As an ambiguous umbrella term 'smart city' deals with finding solutions for the grand challenges, such as sustainability, climate change, resource scarcity, energy security, inequality, civic involvement and participation etc. in an increasingly urbanised world. Politicians, government officials, policy makers, technologists and international corporations as well as citizens, NGOs and entrepreneurs, have primarily advanced the notion of Smart City. However, to a less degree Smart City has been on the agenda for professionals involved in city making such as urban designers, architects and planners. Taking stock of this, the Urban Design students have proposed 'smart placemaking' strategies and interventions, not only as a way of rationalising and optimising the city and its complex processes, but also as a way of creating more attractive, liveable and resilient cities and urban environments for the inhabitants.

Urban Design opgaven

I løbet af tre intensive uger i foråret har Urban Design kandidatstuderende udviklet strategiske og konceptuelle designs af midlertidighedsstrukturer og aktiviteter på Stigsborg Havnefront.

I løbet af de næste 20-30 år skal Stigsborg Havnefront blive et nyt urbant centrum i byen. Visionen er en 'smart by', et bæredygtigt forgangsprojekt i Aalborg som kan vise hvordan urban byløsninger kan integrere miljømæssige, sociale, kulturelle og økonomiske aspekter. Stigsborg Havnefront er et forhenværende industriområde som har huset tung og forurenende industri. På trods af at alle de oprindelige bygninger næsten er fjernet er området dårligt tilgængeligt for offentligheden og mange steder helt lukket af. Der er meget få aktiviteter eller funktioner og derfor fylder området og de planer som kommunen har for området stadig ikke meget i Nørresundby og Aalborg borgernes bevidsthed. Som en del af at bane vejen for denne nye udvikling er der derfor brug for at åbne Stigsborg Havnefront, gøre det mere tilgængeligt for offentligheden og skabe nye aktiviteter og oplevelser der kan facilitere dannelse af en ny identitet og stedsforståelse for området.

Med afsæt i dette har de Urban Design studerende også arbejdet under temaet 'Smart City' og givet kreative bud på hvad smart by kan være i forhold til urbane midlertidighedsprocesser og stedsskabelsesprocesser på Stigsborg Havnefront. Smart City begrebet dækker over de mange forskelligartede urbane tiltag der forsøger at imødekomme de helt store udfordringer vi står overfor så som klimaforandringer, øget global konkurrence, ressourceknaphed, mangel på ren og billig energi, ulighed, demokrati og participation osv. Det har primært været politikere, rådgivere, store teknologiske selskaber som HP, Google, IBM, Siemens samt NGO'er og IT-iværksættere der har båret smart city begrebet frem. På trods af det stærke fokus på byen, har det i mindre grad været urbane designere, planlæggere og arkitekter der har været fokuseret på smart city begrebet og agendaen. De Urban Design studerende har derfor igennem deres projekter arbejdet aktivt med smart city begrebet og deres projekter skal forstås som brudstykker i en form for 'smart' stedsskabelse på Stigsborg Havnefront som både handler om at medvirke til udviklingen af området på lang sigt men også handler om at skabe et attraktivt og livligt sted for alle nu og her.

7 ISLANDS

Giampaolo Costantini

"The vision defines the Stigsborg Harbourfront area as more than an empty space, as a 'place' with a strong identity, that is build upon the concept of using technology in order to simulate social interactions and also to create environmental awareness among the young citizens of Aalborg."

The intervention represents an instalation that will be implemented to create awareness about the level of water pollution. It will contain waterproof led lights that will light up with different colours according to what degrees of presence of pollutants there are in the water. They will be placed into the water, taking some of the water waves' shape and also within to perimeter the future pool whereas people will be able to swim.

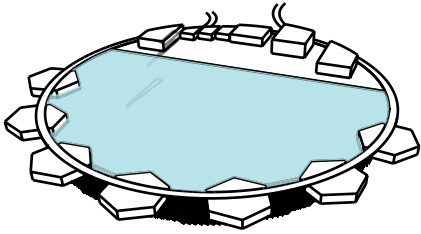
Furthermore in a the case pollutants will disapear, the lights will change colours according to the usage of an app that allows people to track their fingers movement on the personal smartphone and repropose it on a bigger screen dived in the fiord. Within this vision the lights can be used in light shows.

Free wi-fi system will be provided to the users as a catalyst of the area. The people will be attracted by the possibilities of connect devices free of charges. LED technology is used as a sustainable environmental friendly vision. The main reason is the smaller consume of energy compare other typologies. Wind power is implemented to get a self sufficient energetic autonomy, so at the very beginning it will not be necessary to bring electricity in the site. Thermal cameras will be involved for security reasons, when the swimming pool will be opened.

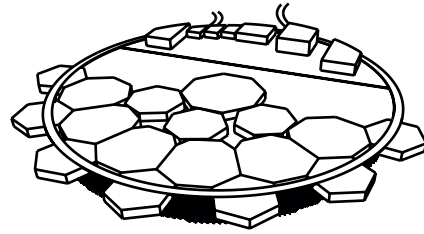


SEASONS OVERVIEW

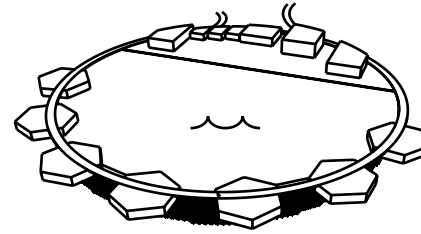
Studio: Simulating and Modelling Urban Flows



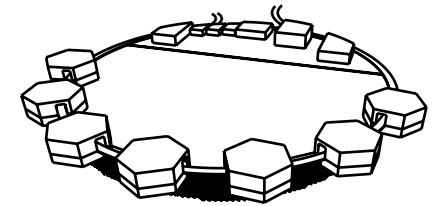
During winter seasons, as the swimming pool is fenced off, there is the possibility to create ice where people can ice-skate on it.



As the image shows, during spring seasons, extra floating platforms are applied in order to create a open space whereas concerts and gigs can take place.



During summer periods, the main function of swimming pool in the fiord will be adopted.



In autumn the platforms will be implemented with simple structures that will allow people having expositions or art shows.



DRUM BARRELS

Katrine Støtt Bøjer

'DRUM BARRELS!' is an interactive installation of trampoline drums encouraging its users to socialization in motion and intuitive discovery in a battle against oneself and other users. The trampoline drums are equipped with smart technology affording each barrel to play different sounds as you jump, depending on how much pressure you put down when jumping.

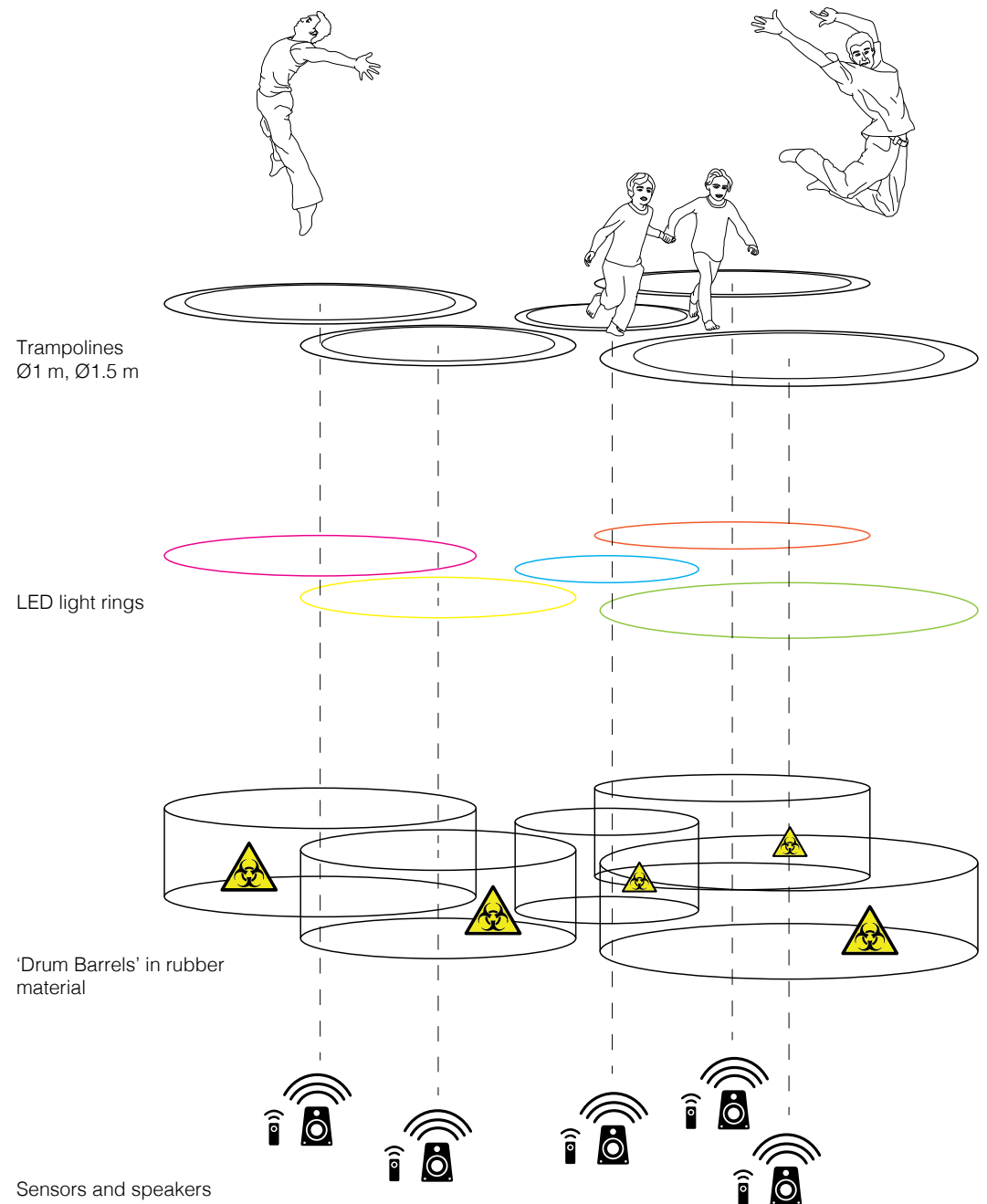
Placed at the far east end of the Stigsborg Harborfront deserted from everything else than industry, a few tall bushes and a large grass field, the 'DRUM BARRELS' create a social place, an attractor point, meaning something to see and navigate from, and hint to the past and present pollution of the Stigsborg brownfield landscape. Through users' utilization of the space and their creation of positive experiences, barriers are torn down, and essentially, fun makes for a closer future of an urban development at Stigsborg.

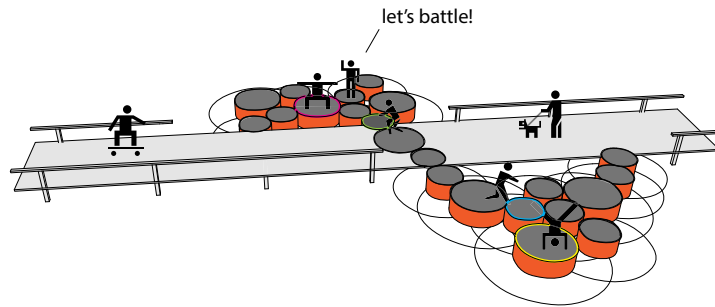
Tickle

20 trampolines are placed as an alternative route along the raised track. Additionally, two more tightly suspended trampolines are placed into the track as a little 'tickle' to gain the interest of passers-by. Motion-sensors will sense users nearby and pulsing drums will 'call out' for their attention according to user's individual speed.

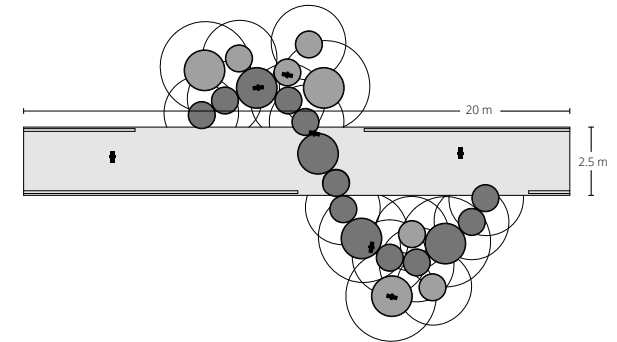
App interface

'DRUM BARRELS!' works both with and without an app, but carrying a smartphone the installation becomes a interactive musical game similar to 'GuitarHero'. The user, or users if playing as a group, chooses a rhythm in the app, presses play, then jump the trampolines lit up nearby, and as quickly as possible to earn maximum points. Another great option for the user would be to record own compositions and save them on the app, leaving them for other users to try out.





A SOCIAL PLACE-MAKING
Intruding the path and captivating the attention of passers-by



SAFETY
A layer of wood chips assure safety in a radius surrounding the trampolines.



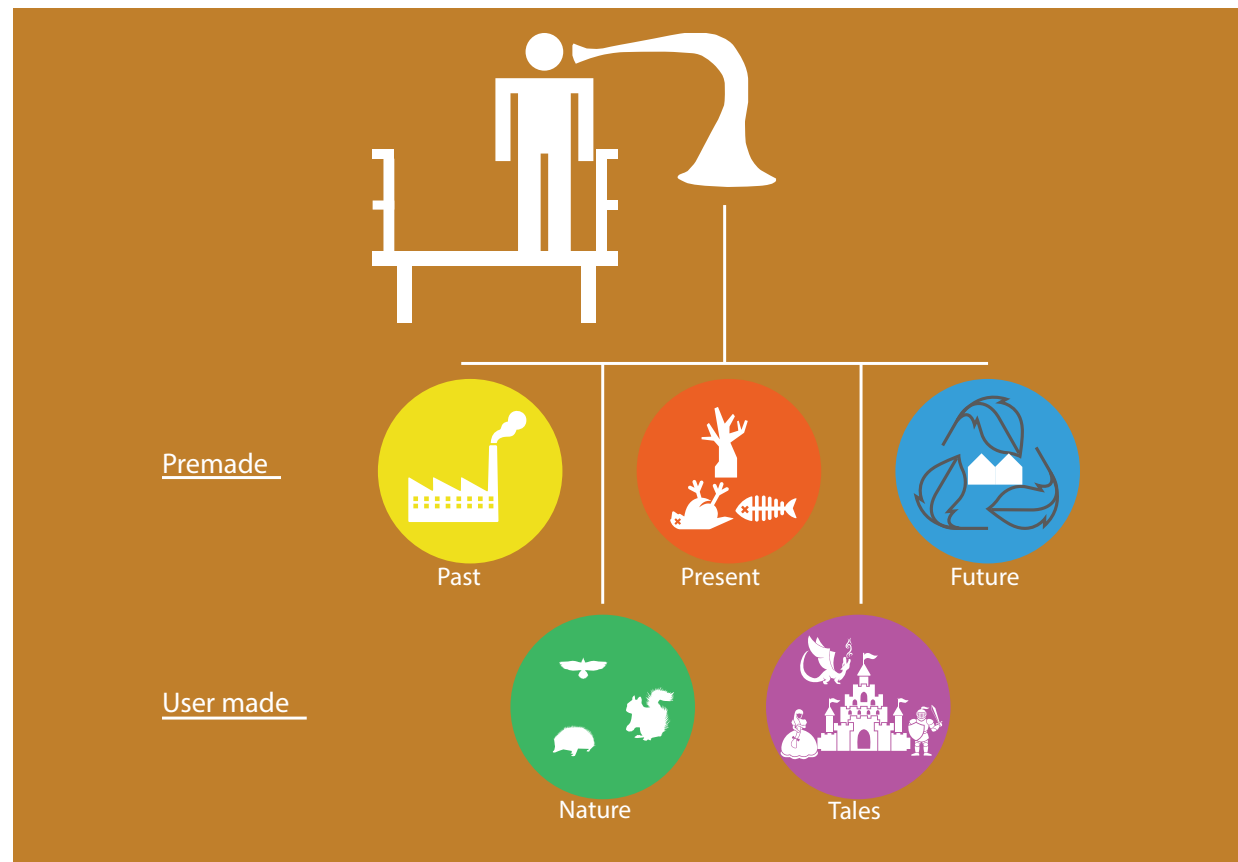
Tales from the past

Lars Barly Pedersen

Once upon a time a big noise factory ruled the land of Stigsborg brygge. It was a time of no fun and games, no one quite knew what they did in this big noise factory. As the harbour front off aalborg developed there was no space for a big noise factory so it was shut down and the land was closed off from the public as it was too dangerous to enter. The land soon got the rumor of being on safe and heavy polluted. It still has this rumor though nobody knows how bad it really is.

Now the municipality comes as a knight in shining armor, to save the people from the land of death where nothing can live and create a new land with fun and games, where people once again can enter.

One way to do this is by telling about the site and show how far we are along with the plans of cleaning the site. This installation will do this and more. It will tell the history of the site, the life on it and what it will be in the future. The user can interact with the installation by using the app to record sounds, tell stories and choose what to hear in the tales from the past installation. By doing this people will know the truth about the site and hopefully see the site in a better light.





LOT-US

Irina-Teodora Comăniță

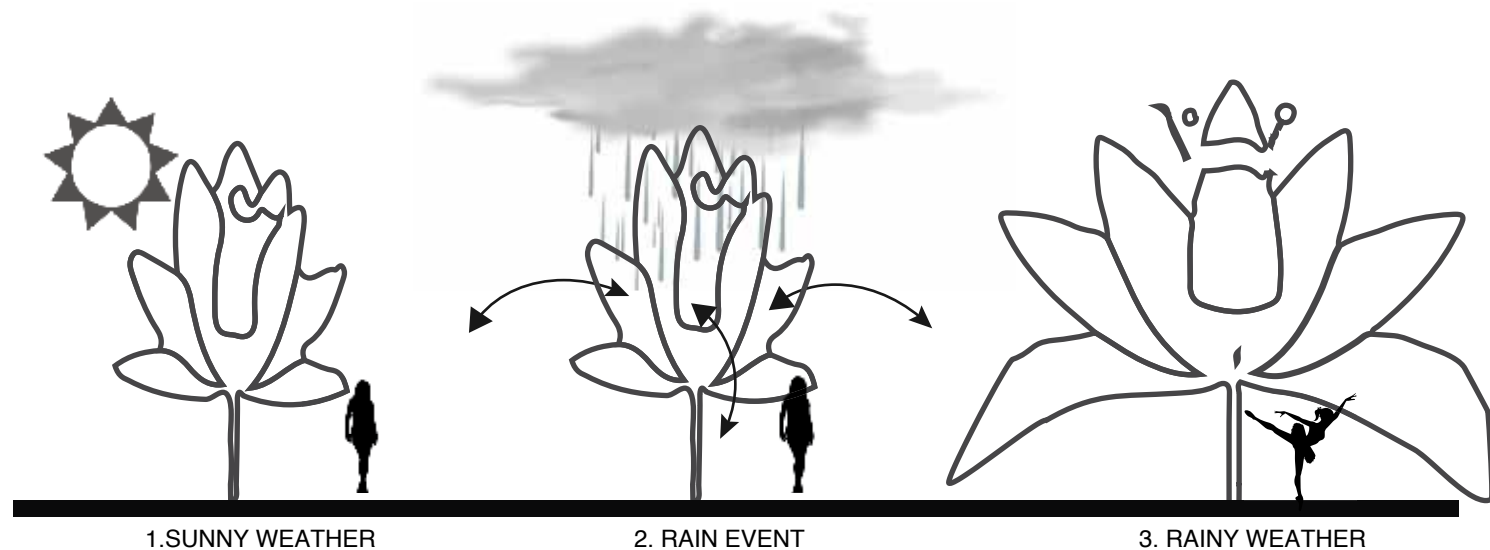
The overall vision defines the Stigsborg Harbourfront area as more than a space, as a 'place' with a strong identity, that is built upon the concept of using technology in order to stimulate social interaction and also to create environmental awareness among the young citizens of Aalborg. The structure is located on the southern part of the area, in direct connection to the beach and the water.

"I love the lotus because while growing from mud, it remains unstained."

The shape of the installation was inspired by the shape of a lotus flower. The lotus symbolizes awakening, spiritual growth, and enlightenment. Lotus flower grows in aquatic environments and has its roots firmly in the mud while its petals bloom one by one.

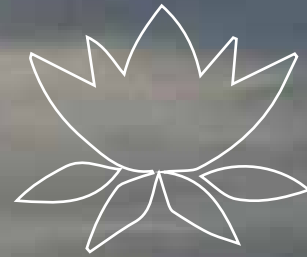
The design is responsive to the weather factors. When it's sunny outside, the petals have a bulb shape. On the other hand, when the rain starts, the petals open up and turn into a shelter. The bend of the petals is connected to a "water sensor" that will activate the mechanism that lays behind the movement of the structure.

By night, the LED lights positioned where the poles meet the petals will glow creating an ambiental meeting place, perfect for conversations while watching the harbourfront. The flower will be powered by energy produced by its own wind turbines.



"WHEN A FLOWER DOESN'T BLOOM, YOU FIX THE ENVIRONMENT, NOT THE FLOWER"

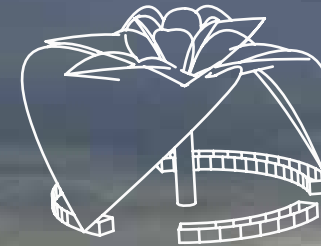




LADSCAPE



SITTING AREA



SHELTER



THE RESPONSIVE FOUNTAIN

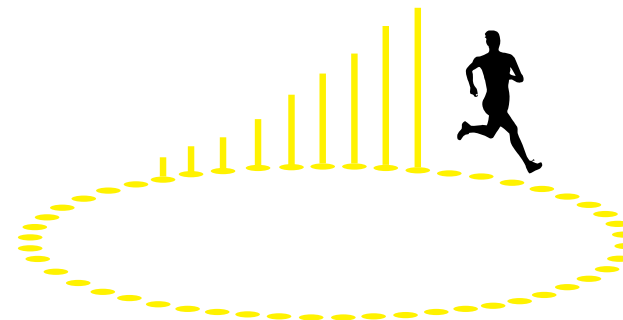
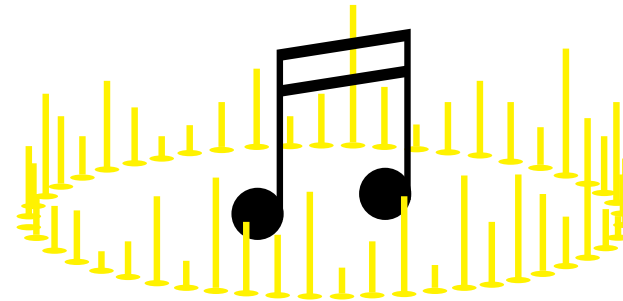
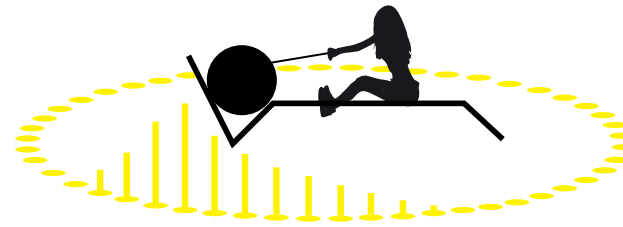
Christian Østgaard

The path takes a turn out in to Limfjorden and creates a space between bridge and shore, where an oval fountain is created. The responsive fountain comes alive through training, music and movement. On shore there will be placed a platform with rowing machines, which will be part of the overall strategy of interactive circle training, under the theme of watersports.

When using the rowing machines, then fountain will respond to the power of the stroke and create a curve based on the force. The harder one pulls, the higher the fountain goes. The curve will move around the oval fountain like a race track. When several users are training, its possible to race each other, starting in different positions with equal space between them.

When two users are in the same position, the fountain will make an interference effect, where the hight will double. This will make the rowing experience more exciting, giving a visual and physical feedback to the users, aswell as giving surplus value by affecting the space in a way that creates spectacle for other visitors.

When the rowing machines are not used, it should be posible to connect the fountain to your smartphone, which will be customizable via the app or by playing music directly through bluetooth. When neither of these are used, the fountain will respond to movement around the track. Sensors will pick up the speed of passers by and reflect this in to the hight of the fountain.



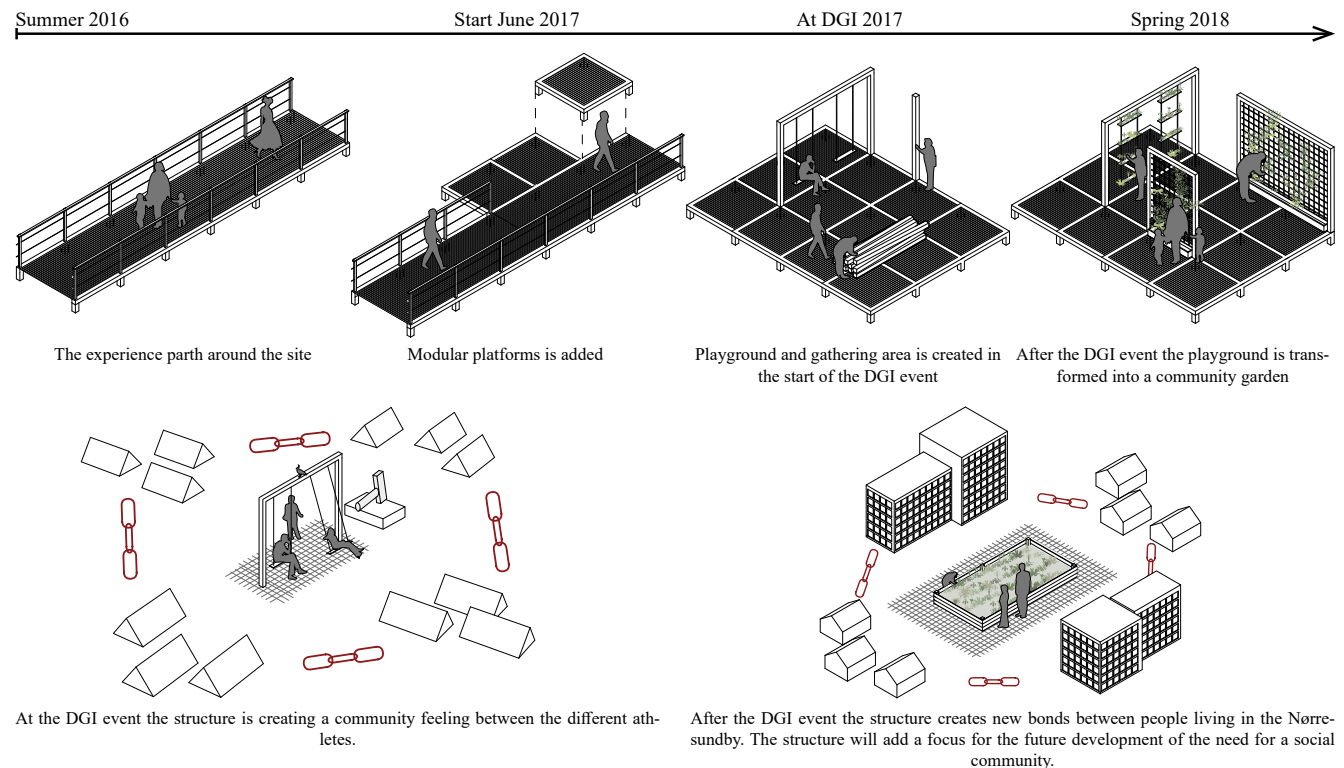


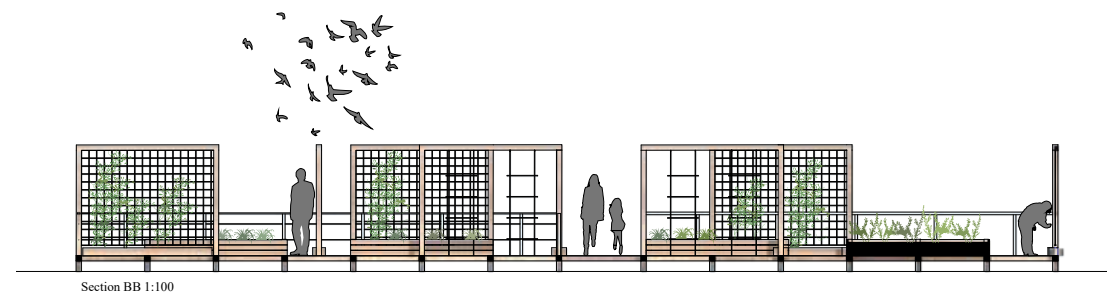
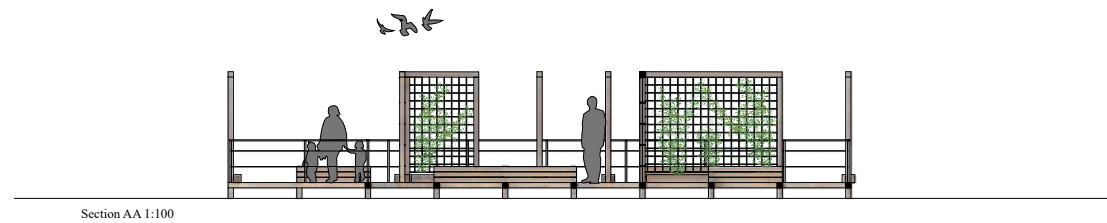
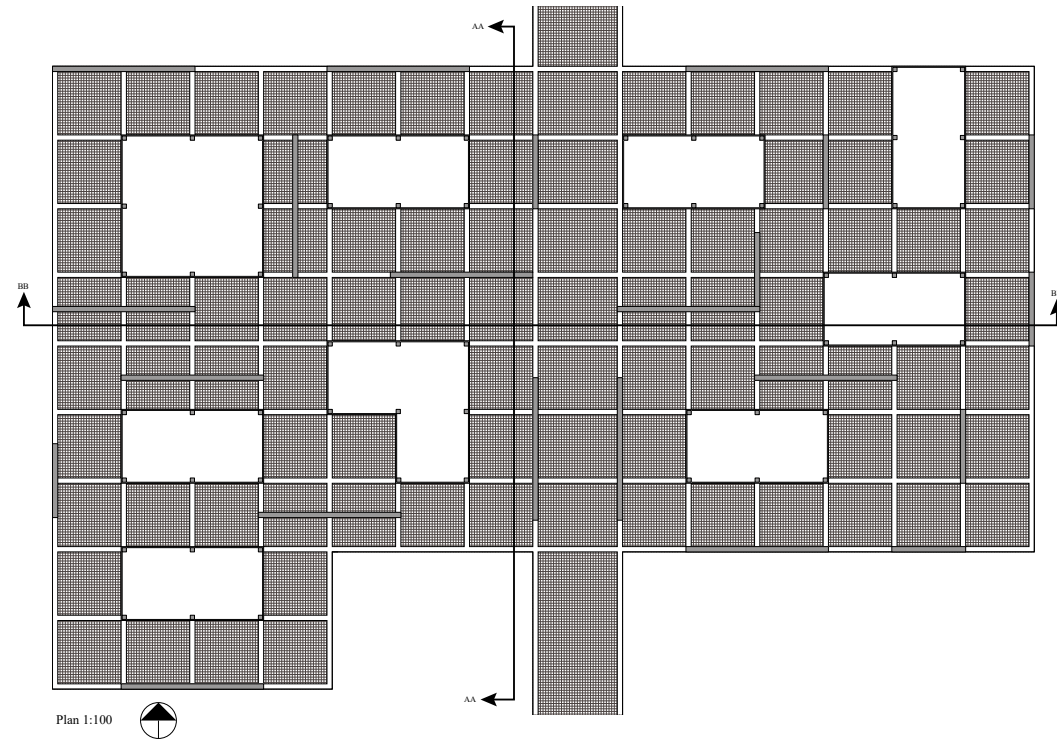
COMMUNITY GARDEN

Kristian Mortensen

One of the greatest asset of living in a city is the possibility to interact and socialise with other individuals. The rise of communication technologies over the past years made the possibility to socialise even greater, but have removed the need of being within a short distance of each other to communicate, this has destroyed the community feeling and the need to be part of a community that is physically close by. The changing need of the community feeling has left a city where you no longer know your neighbours, this gap should be filled with shared activities and projects that that can restore the community. This installation will bring the community together again through play and nature. The area will change over time starting with the inclusion of the DGI event and there guest to build the structure, and use it as a gathering space for socialising after the DGI it will transform into community garden for people living close by. The installation will shape the area even after the construction of residential dwellings by providing an area where the newcomers can interact.

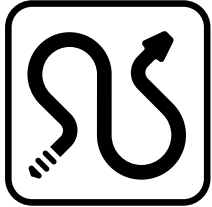
The installation is a raised platform where there at DGI event will be different size wooden framings that temporarily will be used as a playground and a gathering place for the participants. After the DGI even the wooden framings will be transformed into a horizontal and vertical community garden. There will be introduced an app where the users of the gardens can communicate and that app will be able to send notifications with information regarding the gardens such as when it will be a good time to plant new plants or if the plants is in need of water. The light on the insides of the framing will be controlled by infrared cameras that adjust the brightness accordingly to the activities and amount of people.





#MAKEITGLOW

Line Guldhammer Mogensen



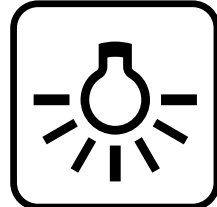
DETOUR/
SURPLUS VALUE

The intervention is placed along the curved experience path. The path is creating a connection in the environment, because it both attaches the land and in the Limfjorden.



SIGHT
SENSE

The sense of this intervention is to sight, where the goal is to eliminate the other senses. By this, the path is raised above the ground, so it is only possible to watch the light installation.



LIGHT
INSTALLATION

The intervention is working with light, where the light installations can vary in colors, brightness and permanent light or 'blink'. The light can highlight the site and be used as way-finding/landmark in the area.



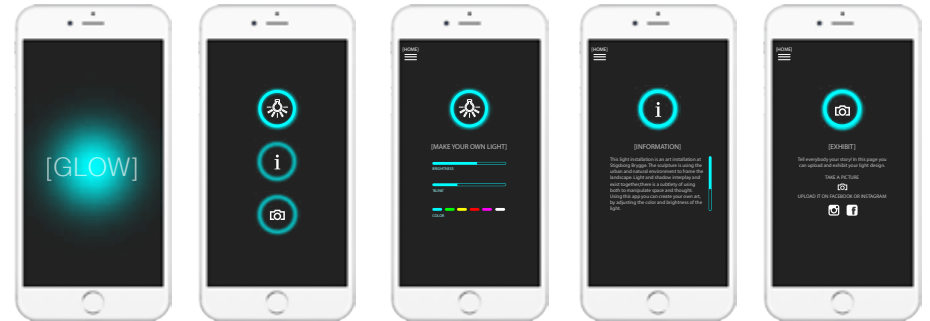
TECHNOLOGY/
SMART CITY

The technology is working through an app, developed to create a connection between the visitors and the installations. The app (see diagram), can adjust different parameters, so people can interact and create their own light design.



Materiality

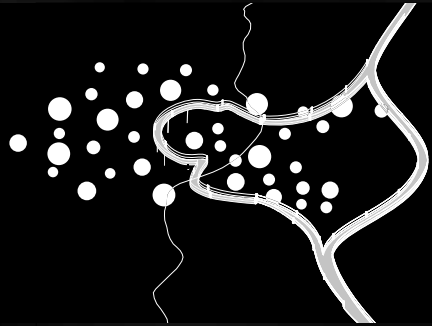
Cloud Gate is a public sculpture by Indian-born British artist Anish Kapoor. The 110-ton elliptical sculpture is forged of a seamless series of highly polished stainless steel plates, which reflect Chicago's famous skyline and the clouds above [Cityofchicago]. The inspiration from the Cloud Gate, is by the use of the reflecting material. During the night the installation at Stigsborgs Brygge, is very interesting because of the light, but during the day, the installation will lose the effect. By using a very highly polished stainless steel, as the Cloud Gate, it is possible to create a meaningful and interesting aspect of watching these sculptures.



TECHNOLOGY Using an app is both easy to use for the individual and also it can create a lot of fast data. This app is developed to be the connection between the intervention and the visitor. The idea by the app is to give people information about the installation, the meaning of light and also information about the site 'Stigsborg Brygge'. By getting people involved in the intervention, can create meetings and create a playful experience.

People who are going to use this app, are people who want to explore and have a bit more out of the visit. The vision is to create a belonging and an idea of creating something personal.

The data from the app, can tell something about, how well visit the site is. To get people involved and let people know about the site, Instagram and Facebook is ideal platforms for communication. People can upload pictures from the visit, and by this, the data and information will flow on these platforms and create awareness about the different interventions.



Function

The function of the intervention is to be a part of a bigger strategy, where people can interact with their senses due to the different interventions and senses. This is an example of how the sight is in focus, and how it create a platform for experiences, activity and information about your sight sense. As seen in the diagram the experience path is raised above the ground, and creates a loop on the regular path. The raised path is turning into a bridge, so people can have a better view of the light intervention. The goal is to create awareness of the site, and let people take part in the process.



Interaction

As seen in the illustration, people can use their smart-phone to connect and play with the intervention. As mention before, they can for example change the color of the light. By using this feature, is it easy for people to take a stop on the route, it might not be more than a couple of minutes, but they have the opportunities to interact and connect, using the technology, everyone is carrying around today.



SENSORIAL SOUNDS

Maria Mortensen

The interventions along the structure each focusing on the different senses to give different experiences along the recreational journey. This intervention is focusing on the sense of hearing and the installation is used as an active element in the landscape but also for the further development of the site.

CONCEPT

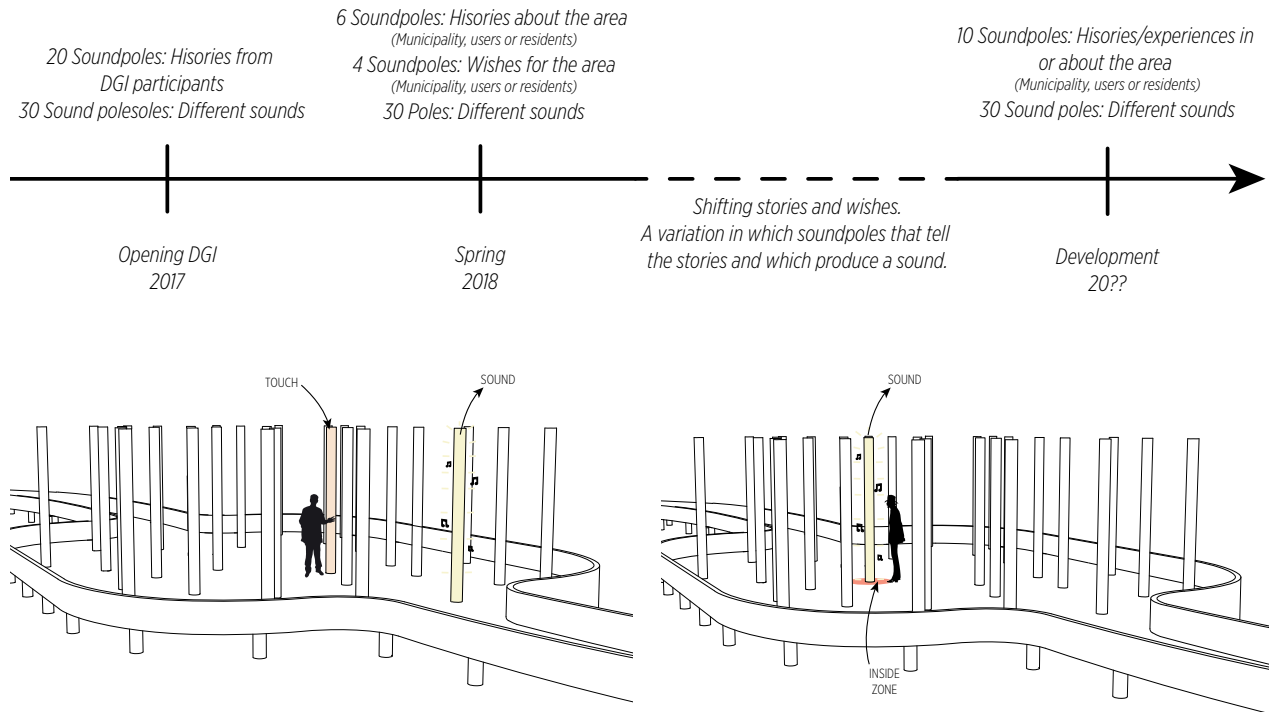
The installation exists of 40 sound poles placed in a platform along the experience path that moves through the area. Each of the sound poles either tells a story or a wish for the area while others produce a sound related to landscape or cityscape. Each of the sound poles is featured with motion and touch sensors. The sound poles that produce a sound related to cityscape or landscape are activated by touch. When a person touch a pole another pole in the platform starts producing a sound. The sound poles telling a story or a wish is activated by motion in a radius of the poles. Moving out of the activation zones the story stops.

PUBLIC INCLUSION

The installation will be finished for the DGI event and during the event, the participants can upload stories about their passion for the gymnastics or stories about past DGI events with their smartphones. After the festival, the public will be included in the installation. With smartphones or on the internet the public can upload stories about the area or wishes for the area. Which of the poles that produce sounds and which tell stories will change during the time. This makes the installation change and invite people to explore it numerous times. The municipality can use these wishes in the further development for the area.

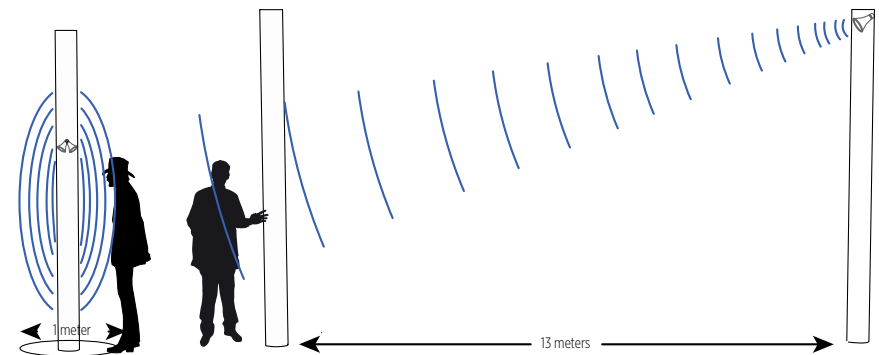
It will be the municipality who decides, which stories the sound poles will tell. The municipality can also communicate their plans for the area and how far the process is.

After the new development of the area, the intervention there will be no need for the stories. Then all the sound poles will produce different sounds and the installation will function as a playful and active element in the urban space in the new area.



2 TYPES OF SPEAKERS

Both integrated in the structure. One in the height of 1,8 meters with an intense sound that only reach a meter from the core of the pole, radius of the activation zone. One in the top of the structure with a louder sound that can reach the distance of 13 meter. Therefore, the user will be able to hear the sound from a pole in the other corner when touching the closest sound pole.



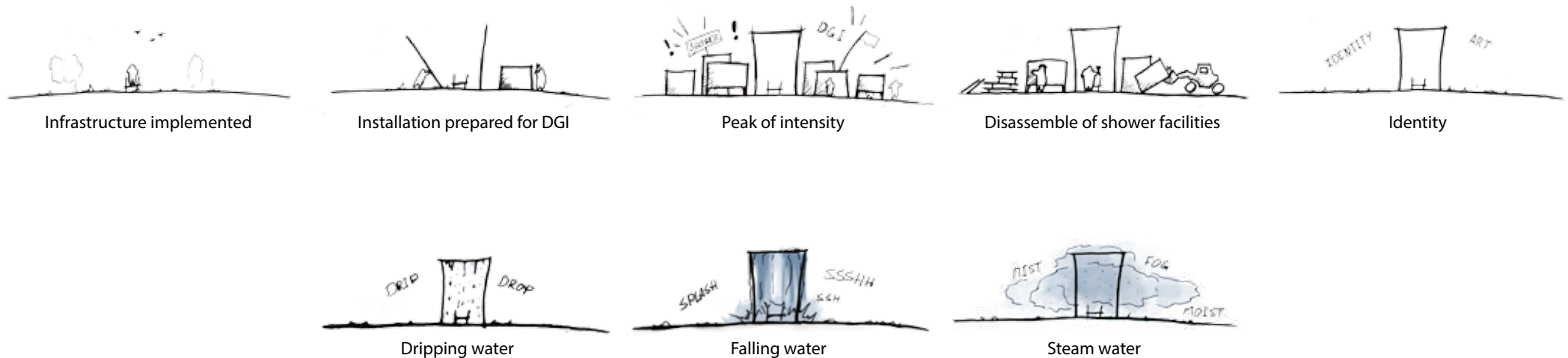


Stigsborg Havnefront - explore your senses

A TOUCH OF WATER

Søren Risdal Borg





The sense of touch, is more than the use of hands, it is the nerve placed in the skin covering the whole body. The sense of touch is pain, vibration, temperature, movement and of course touch.

The implementation of water can stimulate many senses, but looking at the sense of touch. Water can move, it can change temperature and change its form, from solid, liquid to gas. By touching the skin of a person, it activates the nerves.

The installation has multiple purposes. During DGI, it functions as a shower station. The water is provided through the infrastructure. Simple structures surrounding the tower of water houses some of the bathing facilities necessary during the event.

After the end of the DGI event, the primary function of the interventions is to be an art installation, a playful one at that. It is constructed by a simple frame structure, when silent standing quietly in the landscape, not dragging attention to itself.

When interacted with the installation changes from a simple skeleton, into a structure of water. It changes appearance by dripping water silently, symbolizing a waterfall or blowing out water steam. This is changes that will be visible during the day, during the night a simple lighting can be implemented, thereby creating a structure working all hours.

The Intervention

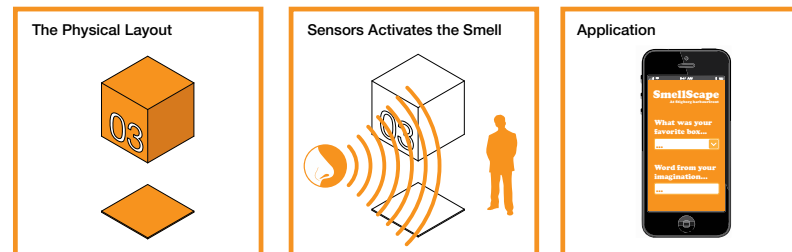
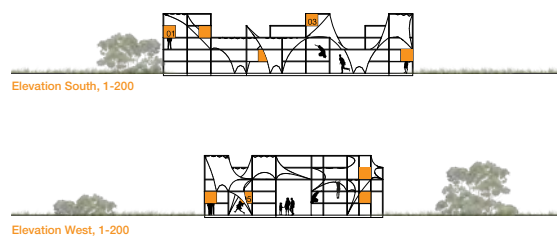
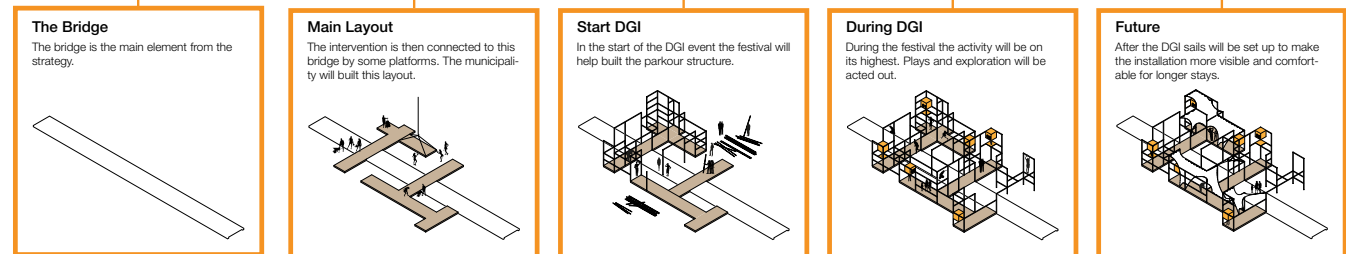
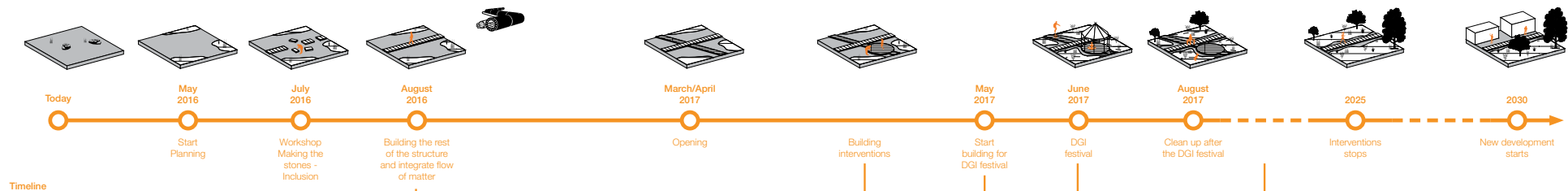
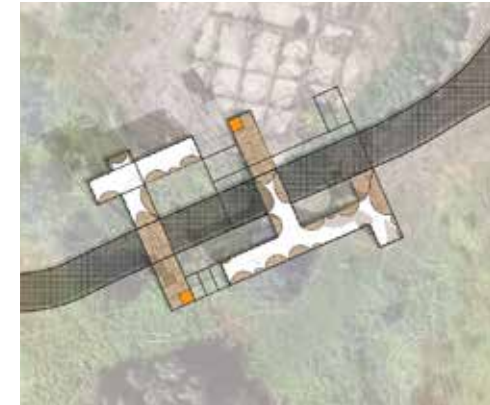
Thor Vingolf Nielsen

The intervention of Smell-Scape is an installation that explores the sense of smell. The sense is linked to our unconsciousness and is something that is very closely linked to images of places we've been in the past, where different odors give different imaginary associations.

Therefore this intervention should be viewed as an investigation of Stigsborgs future, but letting people smell and project old memories from places and images of the past into the future. "What should this place be...?" By introducing various odors in isolated smell-boxes round the intervention, the other senses are shielded of and one can focus by dwelling in the smell and memory of a spicy marketplace, urban fruit garden, forest lakeside etc.

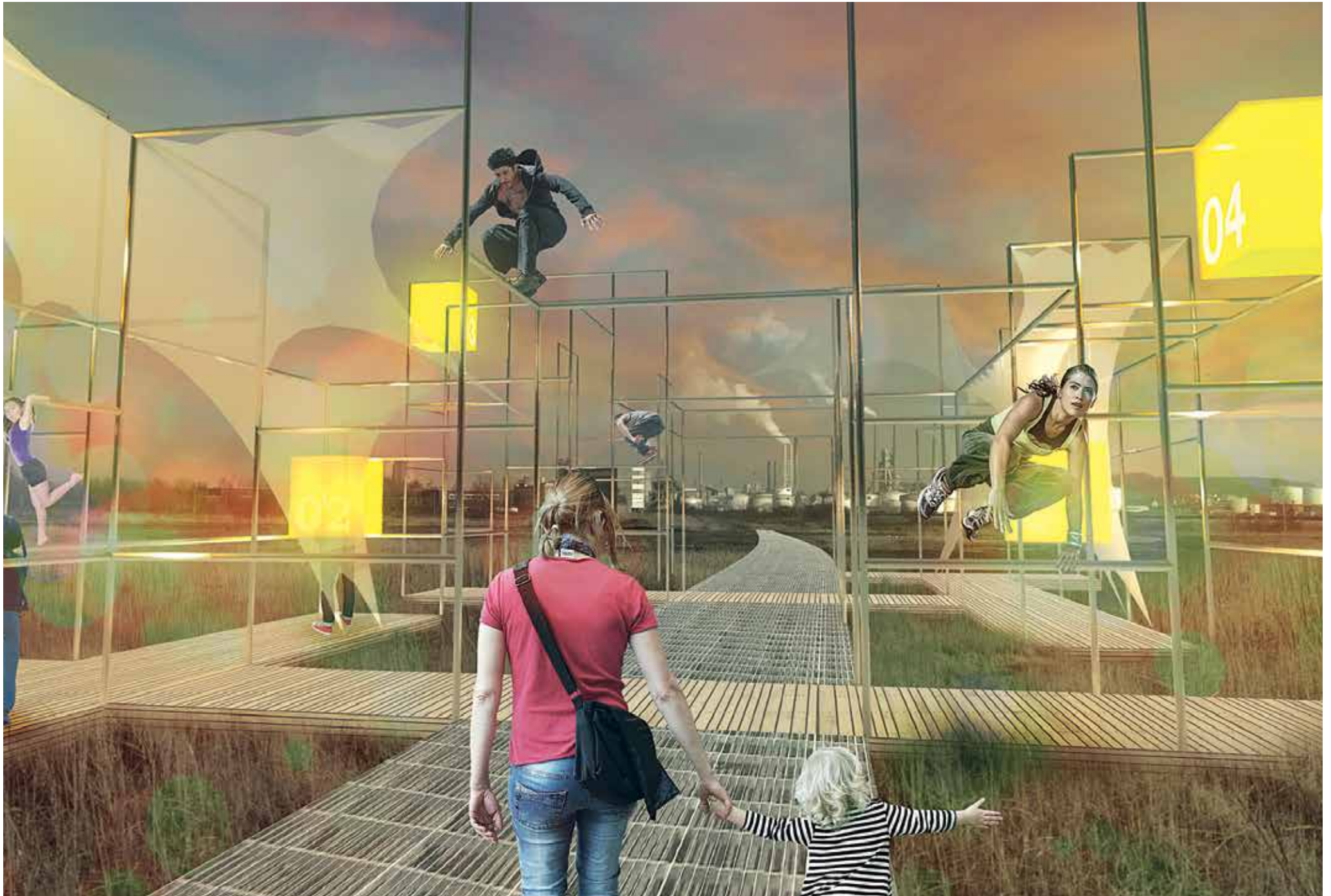
Some of these boxes are located on ground and is easy accessible while others are placed above ground in a steel structure, similar to a parkour framework. This engages people to interact and play upon this structure, which makes the intervention not only an exploration of the smell but also a playful element upon the site.

The technology behind the Smell-Scape is that the boxes make up the physical framework, which encloses the sense of smell and reduces the other senses. When a person approaches the boxes a sensor registers this and sprays a small amount of odor around in the box. The person can then dwell inside this box or move along to the next. To get some feedback from the users about their imaginations of the future through smell, a simple app will be created where people can feed back their favorite smell and associations



"The most persistent memory of any space is often its smell...
...A particular smell makes us unknowingly re-enter a space completely forgotten by the retinal memory; the nostrils awaken a forgotten image, and we are enticed to enter a vivid daydream."

Juhani Pallasmaa, The Eye of the Skin, 2005



JORDEN ER GIFTIG

THE FLOOR IS MADE OF LAVA - by Laura Lyhne

In continuation to the strategy of making a luminous path that connects different spots on Stigsborg, the aim has been to develop five different temporary installations in a time frame starting at DGI rally in 2017. The common vision has been to incorporate the Smart City approach to the development and catalyzing of the area, therefore the strategy can be seen from two points – one is the public participation (the game) and the other is the data collection. In this installation “the Floor is Made of Lava” the concept is to make a combination of public participation and fun. The public participation part function by that the users connect the game via an app and make a sentence from the suggested word – then the user will jump the sentence on the LED active floor and the sentence will be projected on the old chlorine tank. By doing that the users are at the same time playing a game and are an active role in the public participation process. There is one other game related to the app – missing word game, which is implemented to catch the younger users’ focus, and to make some diversification in the way of using the LED path. Both of the games are linked to the common point system, so the installation will work as a game on the path.

The path is also accessible for people who do not want to use digital media on their move, therefore the path will sensor people walking on the path the whole time, making random sentences to catch people’s awareness.

The game “the floor is made of lave” should be seen as a funny approach to implement public participation and games in the public space. The three different games works at the same way according to technology they use, but with a deviation of how the sensor tracks the different users on the path and how game on the app is working and returns the data back to the municipality.



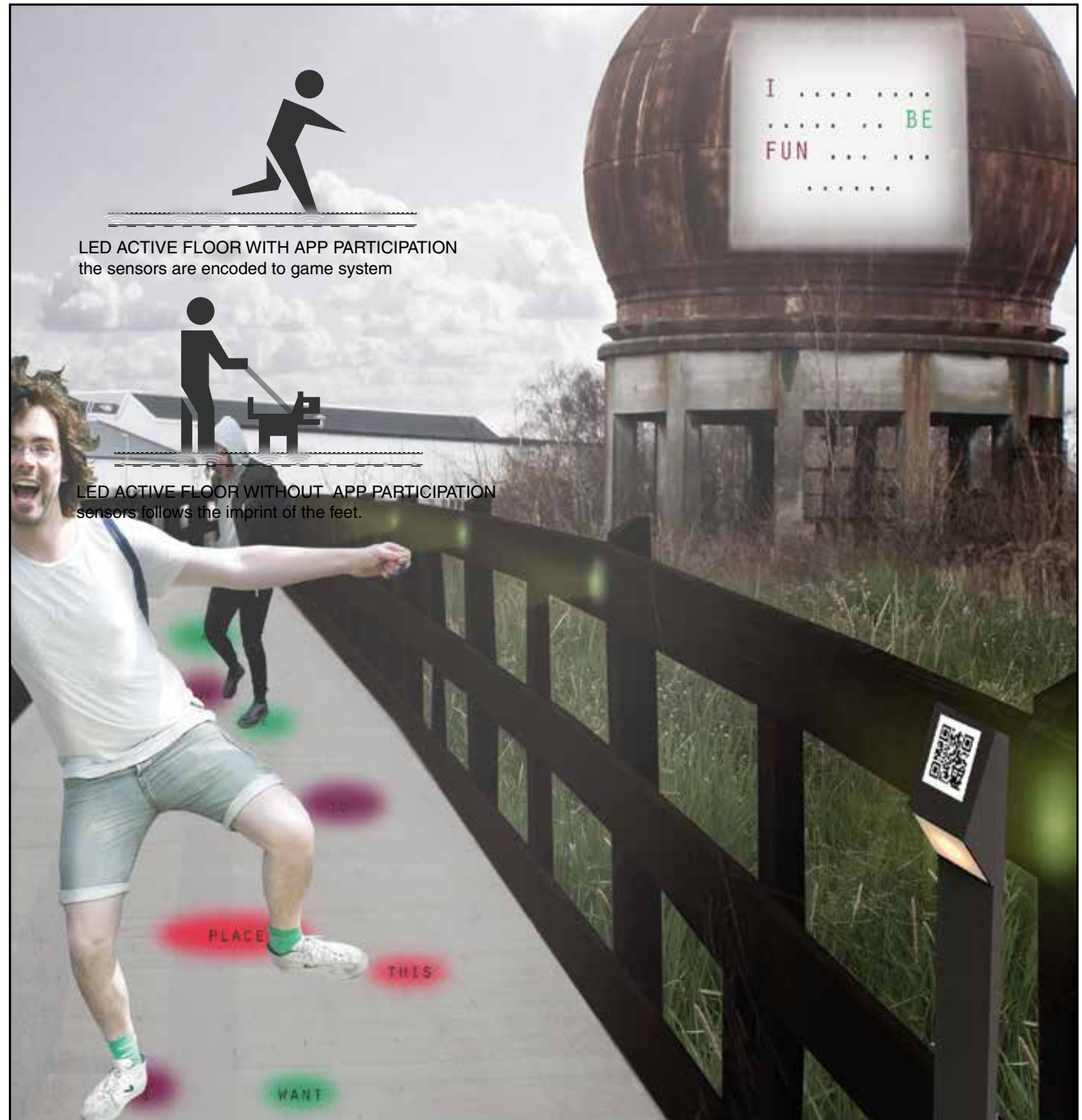
THE FLOOR IS
MADE OF LAVA
INTERFACE



PUBLIC
PARTICIPATION
WORD GAME

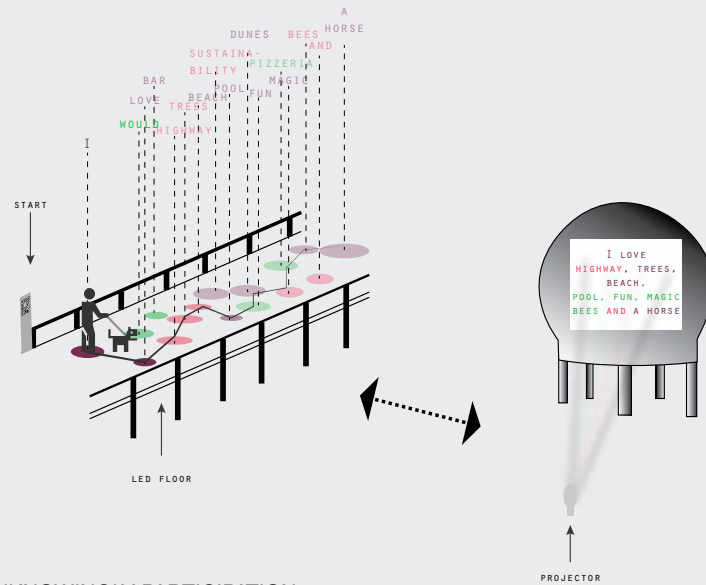


MISSING WORD
GAME

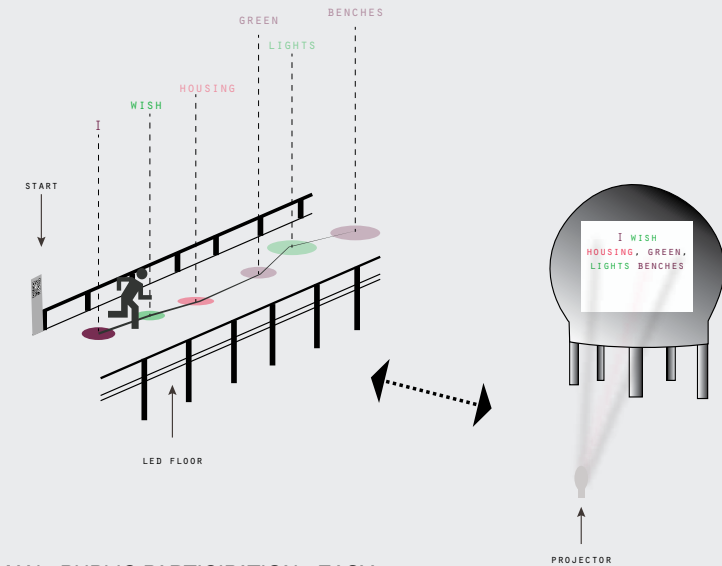


LED ACTIVE FLOOR WITH APP PARTICIPATION
the sensors are encoded to game system

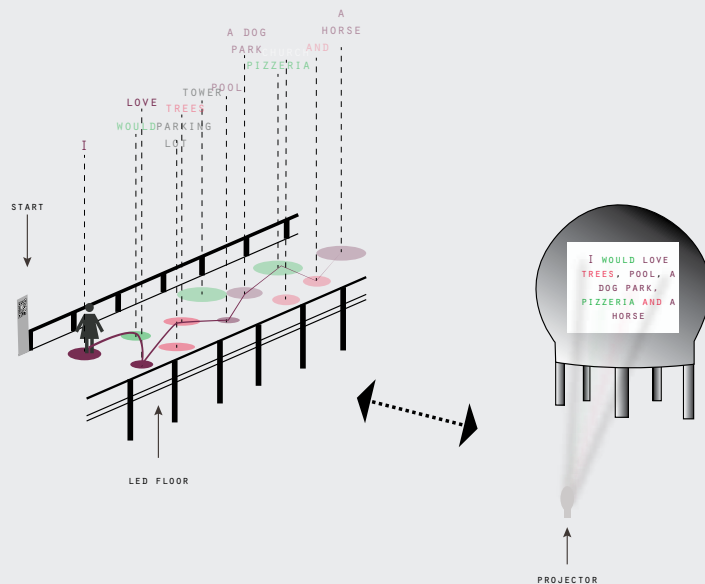
LED ACTIVE FLOOR WITHOUT APP PARTICIPATION
sensors follows the imprint of the feet.



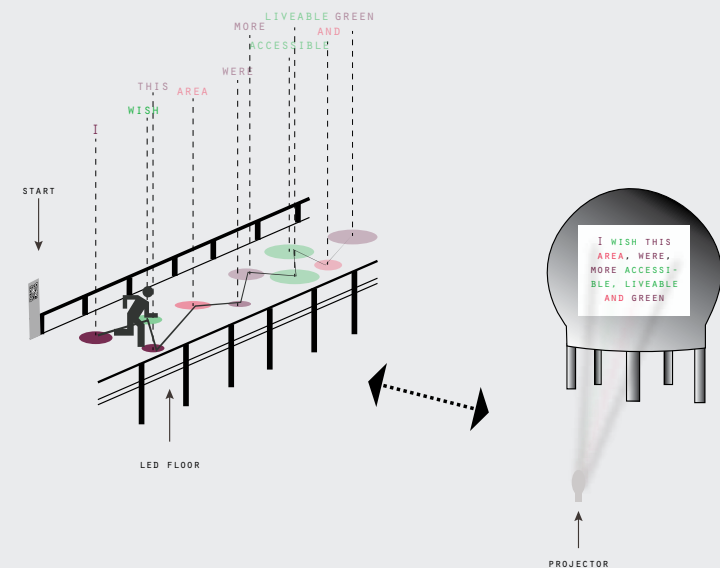
OLD MAN - UNKNOWINGLY PARTICIPATION



YOUNG MAN - PUBLIC PARTICIPATION - EASY



YOUNG GIRL - MISSING WORD



YOUNG MAN - PUBLIC PARTICIPATION - HARD

The Songline

Louise Marie Christensen

The site for the intervention is located at the harbourfront as shown on the map (III 2).

The area is around 400 meters long and the intervention has the purpose to make the distance seem shorter and create experiences along the path.

This specific site for intervention is connected to the vision from "Min cykelby" that wants to create a recreational path through the area near the water.

The intervention will thereby be a part of the recreational route.

The intervention is called the "SONGLINE". It is composed of a lifted path with integrated lifted areas for seating where the interventions are going to happen. It is possible to both bike and walk on the path.

Along the path there will be two different in-

stallations that are based on sound.

There will on the side of the path that is facing the polluted area be hung up pipes on three spots shown on the map (III 2). When people touch the pipes, either when they bike by or walk by, they will create sounds according to the speed of the actor. This installation is 100% analog.

It is possible to interact with the intervention both by foot and by bike, and thereby it connects to the strategy with the "smart bike".

Two other places there will be laid out a mat which is looking like a piano. The idea is that the mat is interactive, so when the participants are moving over the mat, it will create different sounds.

The mat will store the data for how people are moving over the tangents, and in the nighttime, when it is not in use, the piano will light up the history of how the tangents has

been touched during the day.

If people will use the piano in the nighttime it will light up the tangents that are touched.

EXTREME CHARACTER

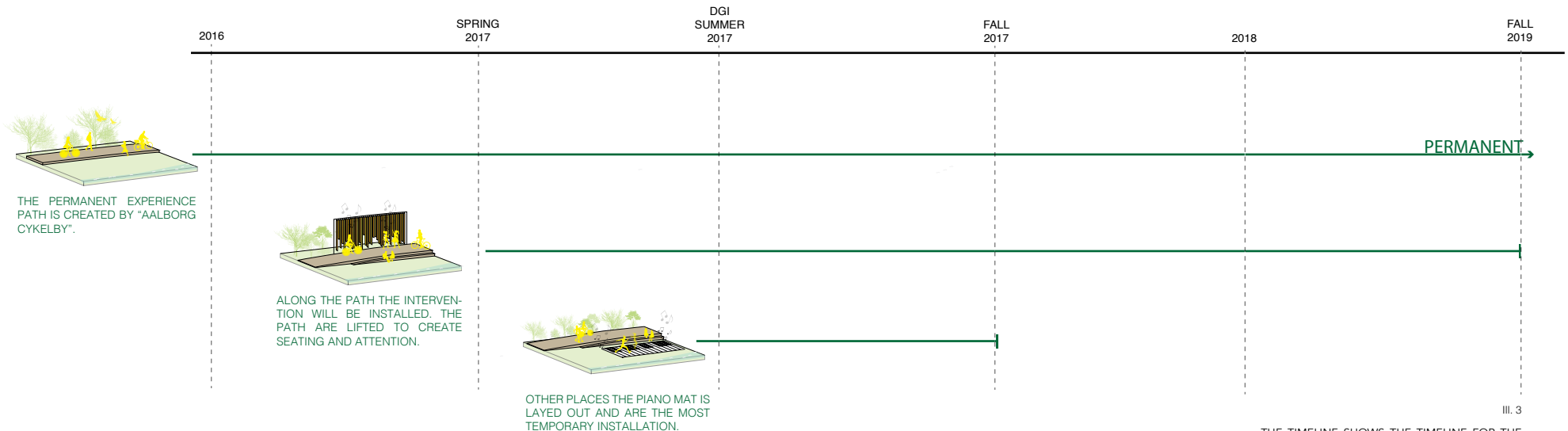
Girl
17 years old
Gymnast at the DGI
event
Loves music



PLACEMENT OF THE INSTALLATIONS ALONG THE PATH

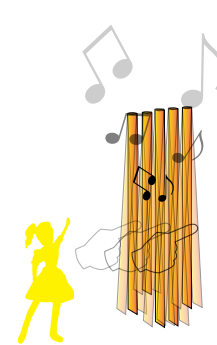
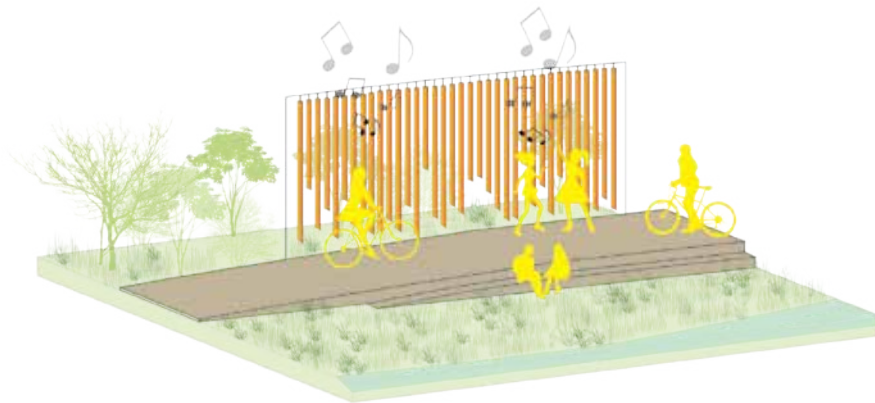
III. 2

III. 1

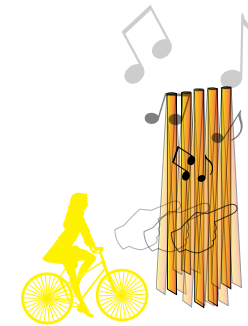


THE TIMELINE SHOWS THE TIMELINE FOR THE DIFFERENT INSTALLATIONS

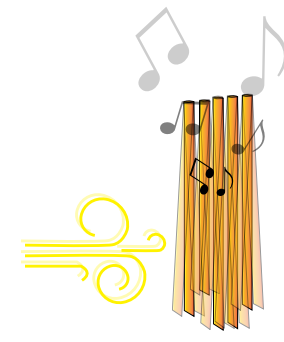
THE PIPES



REACTS ON HUMAN TOUCH



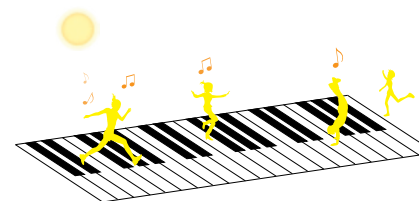
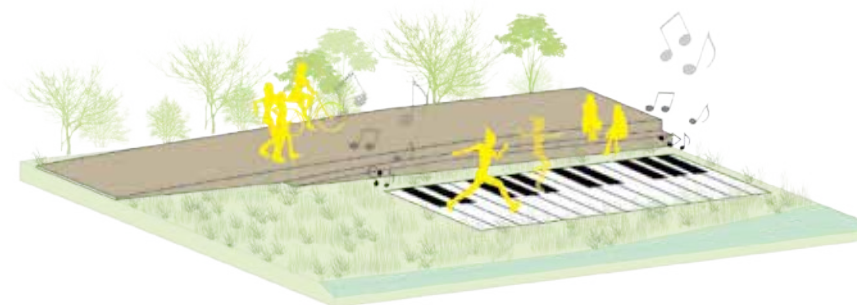
DIFFERENT SPEEDS CREATES DIFFERENT SOUNDS



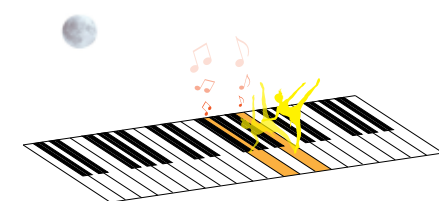
THE WIND CAN ACTIVATE SOUND FROM THE PIPES

III. 4

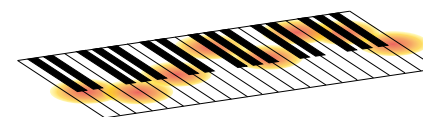
THE PIANO



DAYTIME USE: THE TANGENTS REACTS ON TOUCH AND RELEASE SOUND. THE USAGE IS BEING LOGGED



NIGHTTIME USE: THE TANGENTS REACTS ON TOUCH AND LIGHTS UP WHILE RELEASING SOUND



NIGHTTIME - NOT IN USE: THE DATA FROM THE DAYTIME USE IS RELEASED AND SHOWED AS GLOWING MOVING SPOTS.

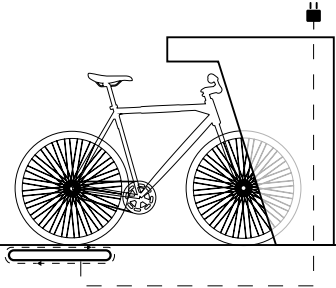
III. 5

Pedal Power

Nanna Fredslund Jensen

BIKE YOUR CITY • STIGSBORG SMART BIKE • AALBORG CYKELBY • DGI L2017
• GET HEALTHY • BIKE A SMOOTHIE • BRING YOUR OWN BIKE • PICNIC WITH
YOUR BIKE • OUTDOOR SPINNING CLASS •
LIGHT AT NIGHT • PEDL POWER • GREEN ENERGY

The *pedal power* is an installation that relates to the overall strategy for stigsborg, by using bikes as the activating part. It will be a social gathering point where you can explore and learn about the nature of power creation. The more people using the installation, the more possibilities will follow. Around the pedal power installations there will be several roller belts. When plugging in your bike and biking, the belt will start turning, creating power to the socket in the installation. The power outlet will be suitable for any kind of power plug-in letting you use any device with the installation. You can also just plug, not bike, and enjoy your carry-along food. Situated at the harborfront, the pedal power installations will be on the route of the new recreational bike service along the shore of Limfjorden. The materials are durable for the time frame of approximately three years and the main part of the installation will be made of a semi-transparent plastic allowing light to glow through it at night.



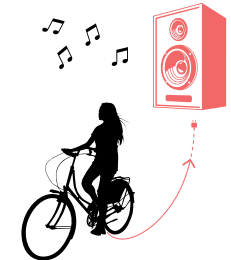
EVENT USER: DGI PARTICIPANT

During the DGI games, the *pedal power* installations will function as a meeting place and a rallying point for the young participants. Being close to the information hub, the ferry landing, and the tent camps, the installations constitute a bike bar featuring *fixed* and *movable* bikes and *smart bikes*, and the option to '*bike yourself a smoothie*'. The fixed bikes are a temporary feature, only available during events.



EVERYDAY USER: CYCLIST

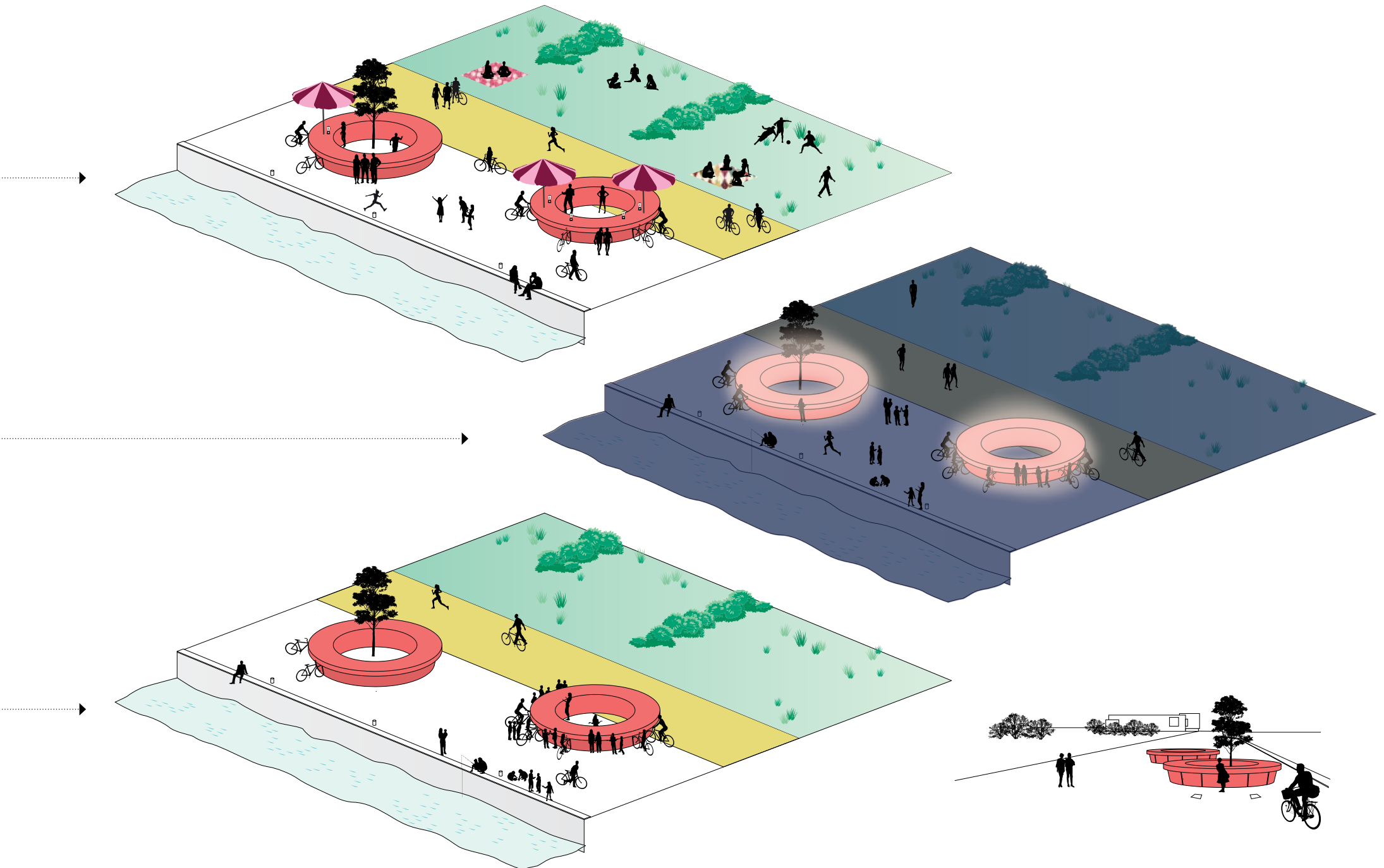
For the everyday user, the pedal power installations constitutes a 'picnic' area, where you simply plug in your bike in order to use it as a table set with your own bike as a chair. Plugging in your bike at night will activate the glowing lights, and treading the pedals while plugged in to the 'roller belt', you can use the power source - you - for any activity of your liking.



EVERYDAY USER: SCHOOL CLASS

Being a pedal powered source of power, the installation can be used for any activity. School classes have the possibility to use the installation for learning purposes related to eg. cleaning and filtering of water. The installation will be activating the children physically and mentally in a learning situation.





Team Work

Viktor Becker

00.01_TEAM WORK



Co-work [koh-wurk]: The art of working together
Campingvogn [kam-pin-vogn]: The Danish word for a camper
Co-wogn [koh-vogn]= Co-work + Campingvogn

00.02_CONCEPT

Team work is more than 11 vs 11 and a ball. To broaden the target groups who use Stigsborg will the "team-working station" located in east, as far away from bridge between Aalborg and Nørresundby as possible along the path, focus on co-work instead of only sports. The concept is about creating temporary, energy effective and mobile office spaces along the path to attract some of the creative start-up companies and freelancers from Aalborg over to the other side of the fjord and in to the area. Creating a attractive working environment by the harbor front of Nørresundby, close to the nature and exercise path. What could possibly be better then being neighbor with activity path when you run dry of ideas?

North Jutland is full of old campers that can be bought cheaply and transformed for this purpose. The municipality, together with some young start-ups in need of cheap office space could build the first three co-wogens and create an organisations in charge of renting out the office campers. If it's a success, more co-wogens could be built along with other facilities to complement the working environment, as well as the public activity path around Stigsborg. When the area is ready to be built, the co-wogens could be moved to other places around the city and be turned in to a part of Aalborgs business environment. Can the smart city allow us to rethink our office spaces?

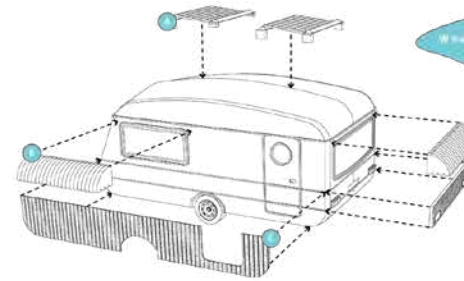
00.03_HOW TO BUILD IT?

1 BUY A OLD CAMPER



A lot of old campers are laying around North Jutland waiting for a funeral. Why not turn them in to eco-friendly mobile offices?

2 OPTIMIZE THE EXTERIOR



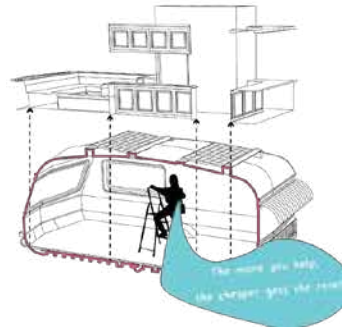
A: Monocrystalline Solar Panels
 B: Awnings for Sunscreening
 C: Wooden cladding for protection

3 PIMP IT



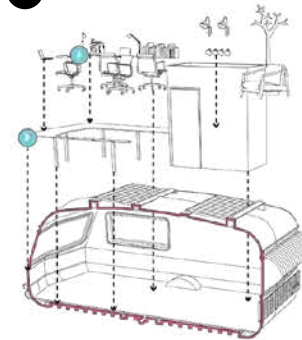
Paint it and make it noticeable! Create a brand and organisation around the project, invite companies to co-op in return for commercial.

4 REMOVE THE OLD INTERIOR



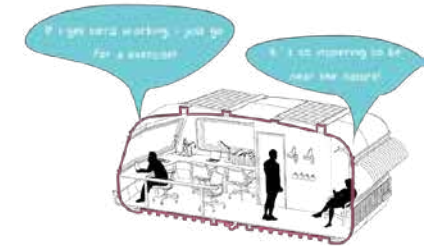
Invite people, freelancers, artists and office monkeys to participate in the transformation. The more they work, the cheaper it gets!

5 BUILD A MODERN OFFICE



A: Loose Furnitures as comfortable chairs, lamps, coffeemachine, microwave, books, pencils, etc.
 B: Big place-built office desk and toilet.

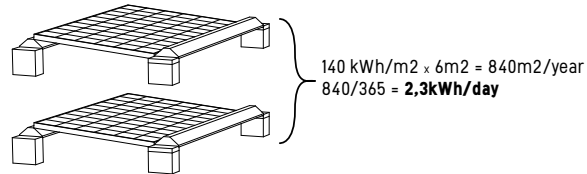
6 RENT IT OUT!



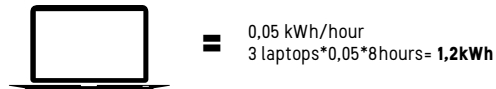
Rent it out to freelancers, start-up companies or bored office monkeys in suits that's in desperate need of a more inspiring environment.

00.04_HOW TO POWER IT?

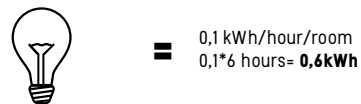
MONOCRYSTALLINE SOLAR PANELS



LAPTOPS



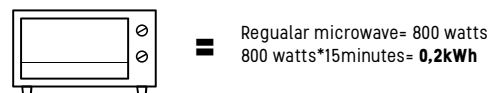
LAMPS



COFFEE MACHINE



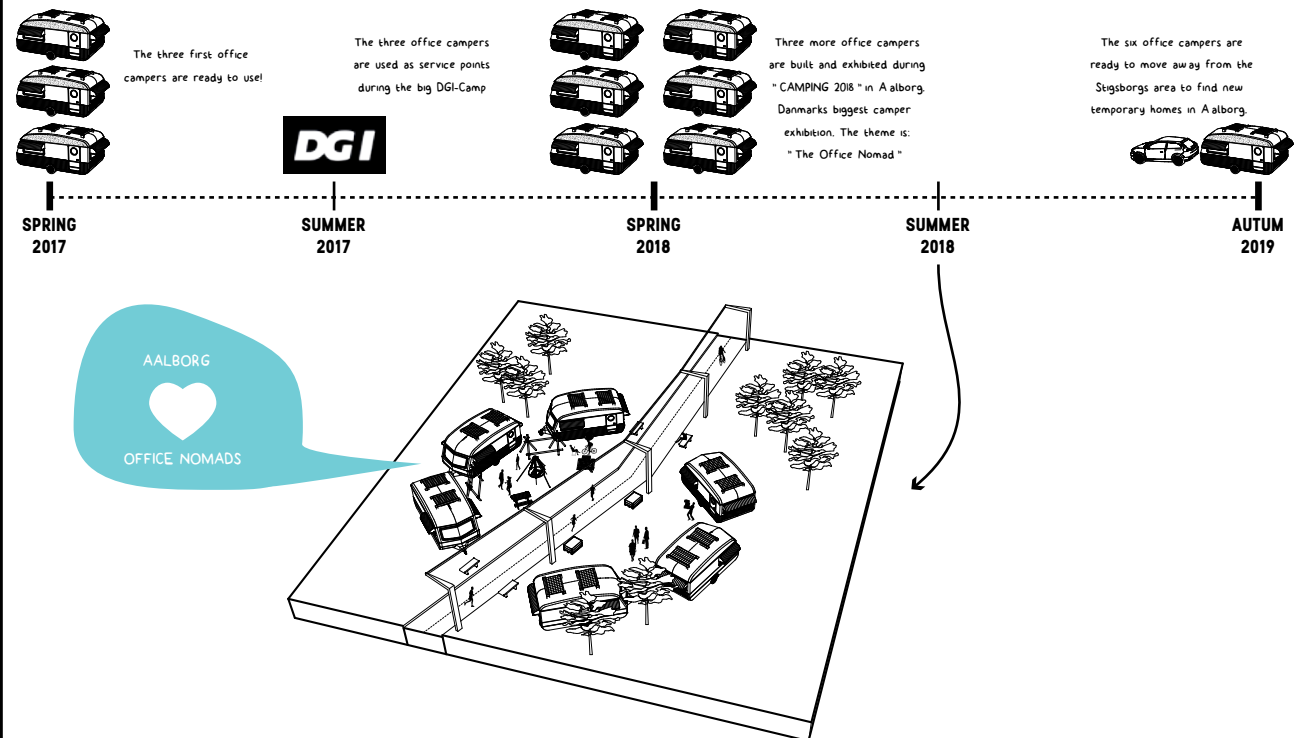
MICROWAVE OVEN



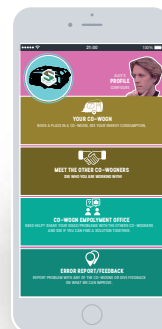
TOTAL CONSUMPTION

Six square meters of monocrystalline solar panels is enough to power three laptops for a working day of eight hours, light for six hours, and supply the office workers with eight cups of coffee and warm food. The total consumption is estimated to 2,2 kWh/day.

00.05_TIME FRAME



00.06_APP INTERACTION



HOW DOES IT WORK?

The mobile application can be used to unlock/book a place or a whole Co-wogn. Every office camper has place for 3-4 people. To be able to book a Co-Wogn you have to pay a low monthly subscription for the general maintenance, except of that, the rent is based on how much energy you consume. If the solar power isn't enough and you need to connect to the power grid, the user pay for the costs.

THE SOCIAL PARAMETER

The application adds both a digital and a social layer to the co-wogns. Through the application it is possible to meet other users, see their portfolio/linked-in, connect with them and book office spaces together. There is also an internal job bank, or employment office where local companies can reach out or where the users can ask for help. There is also a maintenance section where the users can help with the regular maintenance of

STIGSBORG on the move

Louise Christina Studstrup

INTERACTIVE TREES

True analyses of the green area where the Syre Stien goes true at space of intervention for this project is picked out. It is also the first phase in this areas strategy of evolving in to a park of interactive arts and light. The Phase 1 space is also the main entrance primarily because of its placement and visibility. The special character of this space is the 10 park trees standing in a row at the edge. They don't ampere in the rest of the park and there for make them more characteristic. Now they are with out leaf and that makes them weary sculptures. The trees are in this intervention the main subjects. The strategy is to use the areas special characters and identities to use as a part of the redesigning the park. The idea is to make the identity of the park more strong and there for becoming a strong catalyst for the rest of the Stigsborg area.

PHASE 1

The 10 trees is a part of the Interactive trees. The first 3 trees is al about information about the area, events, and stories. Her you can park your bike and the tree will start telling you something and it will also light up with these big light bobbles hanging down. Will listing to the story the bench is inviting you to sit down. Another tree I a bike parking space where you can rent ore borrow a Smart bike. You can also park your own bike and use it to sit on. When coming to the next trees the activity is different her you can use your bike to make the light go on and if you bike even more the light will follow the trees lines and make it light up in a sculptures way. In the same time an instrument will start playing a melody will your are biking. If some on joins you on one of the other trees another instrument will join the same melody.

THE EXTREME CHARACTER

Man 35 years old
Commuter on bike and a active runner.

He works in Aalborg and living in Nørresundby. Every day he commutes over the bridge and drives under the bridge to get home. He is passing the area every day. And in his free time he runs on the Syre Stien. The idea is to make an intervention that makes him interested and make him tell other people about it because it is a part of his every day life. Also to make him want to take his family with him on a walk in the weekend



ANALYSIS

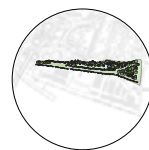
AREA OF INTERVENTION



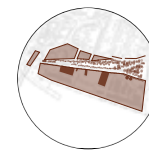
FLWS - SYRESTIEN



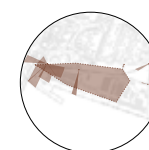
VEGETATION



BORDERS



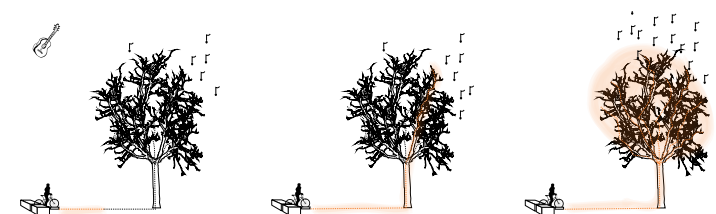
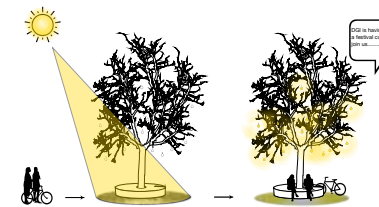
VIEWS



POTENTIAL SPACES



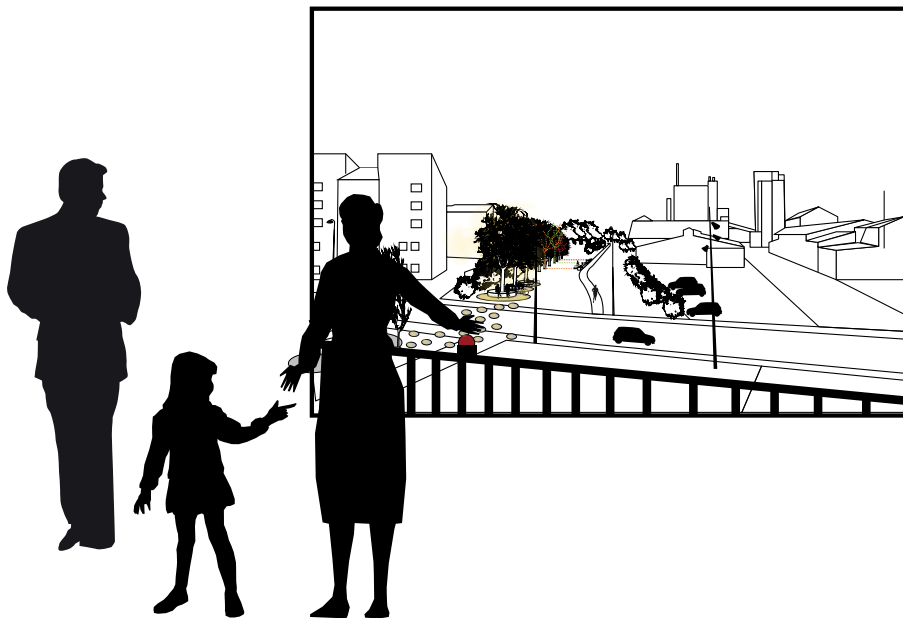
PHASE 1 - INTERACTIVE TREES AND SPACE



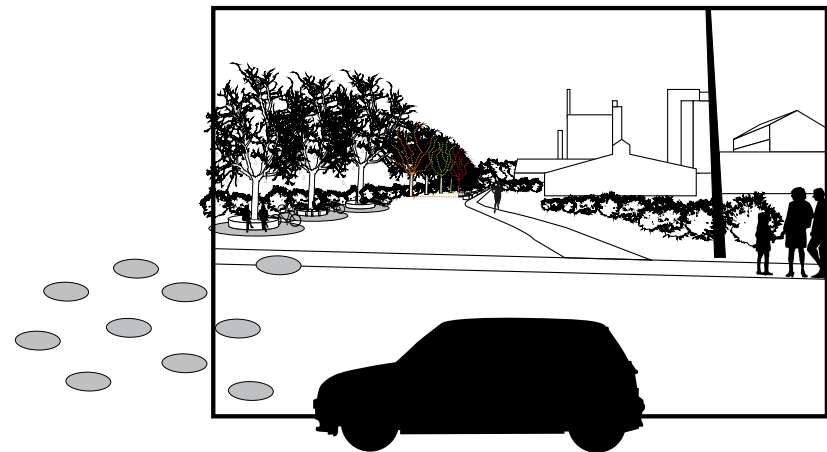
ENTRANCE



BRIDGE



BUMBS



ARCHITECTURE
MA2

Architecture MA2 students

Aleksandra Maria Przesmycka, Alessandra Marino, Anders Brusen Jensen, Annemette Vinther Toft, Antonia Pohankova, Asger Skjødtt Jacobsen, Brage Mæhle Hult, Casper Langberg Thaler, Christoffer Andersen, Hugo Lebrunet, Irene Ank Jørgensen, Jeppe Mortensen Stubberup, Marie Louise Thorning, Mathis Lauridsen Gerlich, Michael Skov Thomsen, Nicolai Mai Jørgensen, Quazi Wafiq Alam, Simona Skinkyte

ARCHITECTURE
MA2

**Shuttle boat
building**
page 50-61

**Kitchen
structure**
page 62 -65

**Observation
towers**
page 66-71

**Beach
bar**
page 72-79

**Information
pavilion**
page 80-81

The Architecture assignment

As part of a plan to open up Stigsborg Waterfront thus paving the way for future development, the municipality of Aalborg wishes to formulate a strategy for temporal structures and uses in the area. The first major event in this process is the 2017 DGI-games which will have over 20.000 participants living in tents at different locations in Aalborg, Stigsborg Waterfront being one of them. During the one-week games a lot of temporary facilities for different purposes will be needed. Some of these facilities might stay for a few years as small landmarks to encourage the initiating phases of discussing and planning the future use of the whole area. As part of the Architectural Master course 'Integrated Design of Sustainable Architecture' and in collaboration with municipality representatives a design brief has been developed for different minor buildings such as outdoor kitchens, beach bars, towers for fire surveillance and a shuttle boat building. As part of a sustainable integrated design-approach the kitchens must rely on natural ventilation, the beach bars must run on energy from build-in solar cells etc. In general the projects must be based on low-tech (sustainable architecture) eventually combined with high tech responsive systems (digital) leaving out the middle tech (e.g. cooling and ventilation systems with high energy demands). The architectural students have had approximately ten days to develop and document their individual design.

Arkitektur opgaven

Som del af en plan om at give adgang til Stigsborg Havnefront og dermed bane vej for fremtidig byudvikling, ønsker Aalborg kommune at formulere en strategi for midlertidige strukturer og anvendelser af området. Den første større begivenhed i denne proces er DGI-stævnet i 2017 som vil få over 20.000 deltagere, der bor i teltlejr forskellige steder i Aalborg, herunder Stigsborg Havnefront. Under det en uge lange stævne vil der blive behov for midlertidige faciliteter til at dække forskellige behov. Nogle af disse faciliteter bliver måske stående i nogle år, hvor de kan fungere som fikspunkter, der understøtter de indledende diskussioner om planlægning af hele området. Som del af master-kurset i Arkitektonisk Design 'Integreret design af bæredygtig arkitektur' og i samarbejde med repræsentanter for Aalborg kommune er der blevet udarbejdet nogle retningslinjer for design af forskellige små bygninger såsom udekøkkener, strandbarer, tårne til brandvagter og et venterum til en båd, der kan krydse Limfjorden. Som del af en bæredygtig integreret design-strategi skal køkkener fungere ved hjælp af naturlig ventilation, strandbarer skal køre på energi fra indbyggede solceller osv. Generelt skal projekterne være baseret på lavteknologi (bæredygtig arkitektur) eventuelt kombineret med højteknologiske responsive systemer som tilsammen overflødiggør mellemteknologi (f.eks. kølings- og ventilationssystemer med højt energiforbrug). De arkitekturstuderende har haft cirka ti dage til at udvikle og dokumentere deres individuelle design.

HYPERBOLIC BOAT BUILDING

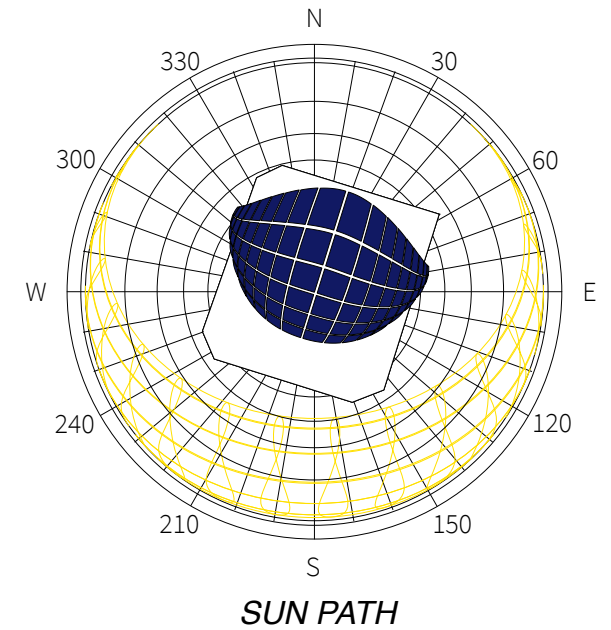
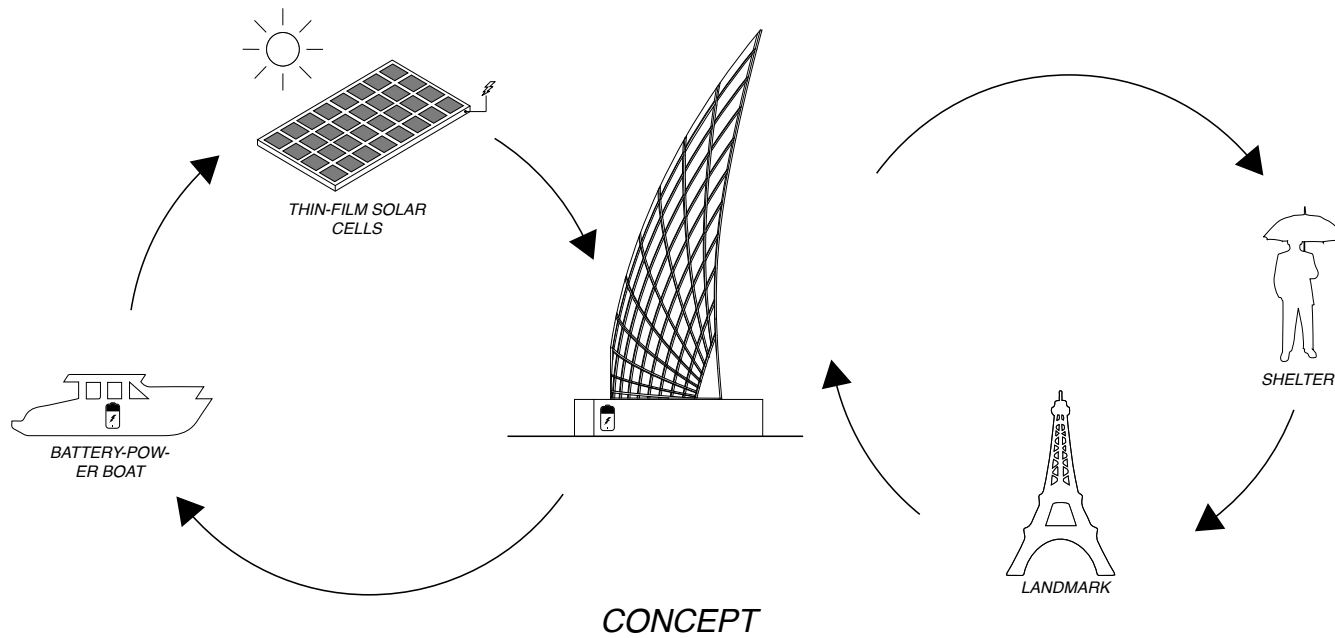
Anders Brusen Jensen

Whatever people waiting for the doctor, the bus or the boat, have the space for waiting being built in uncertainties and made customary. You can just hanging around, waiting, doing nothing. The classic tight waiting space where people staring at each other or in their phone and where the time more seems to pass slowly does not solving the problem. The fundamental problem is how people who are waiting can spend their time so it doesn't felt abused.

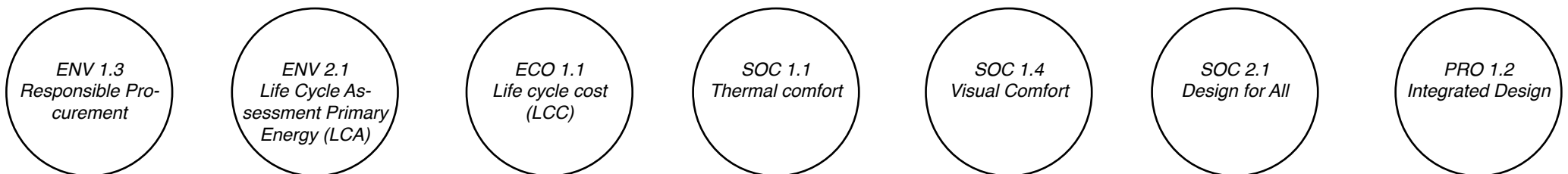
How can we design a waiting place (Shuttle boat building) where people feel wholeheartedly?

Instead of designing architecture and add renewable technologies after, was the idea to turn the "Architectural Definition 180 degrees and ask; How can the natural forces and renewable technologies shape the building? By looking at the wind and the lane of the sun are the shuttle boat building is shaped like a sail (hyperbolic paraboloid) and stands like a landmark with its 15 meters height. The grid structure and Gothic arch looking shape, will be more stable and the material-use be less. The grid structure and the lamellas against north is made of FSC marked spruce while the wall is made of plywood. This will give a warm and maritime atmosphere. The grid structure is packed with Solar Cells that will give power to the battery-powered boat and lights on the building. The building is orientated so the Solar cells is pointing from east to west and follows the sun path. At the same time it is protecting the users against the averaged wind from west and south west. Because of a new bridge out to the placement of the building and the interesting shape, this project invites to more than just waiting. To get an idea of how many Solar Cells there are needed for the boat, is the area of the solar cells calculated to the estimate of 6-8 hours sailing with 50m² Solar Cells that produce power in four hours.





DGNB - CRITERIAS



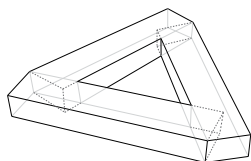
THE INFINITY BOAT HOUSE

Annemette Vinther Toft

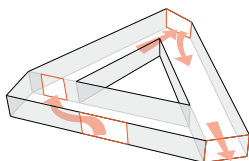
The house for the boat which is going to connect Stigsborg and the Aalborg harbor front should provide a sheltered space for the guests that wait. The boat house and the landing bridge will be constructed as a permanent installation that will stay after the DGI-games have finished and will not be connected to the grid in any way.

As it is seen on the diagrams below this building-proposal is composed by three similar, rectangular platforms which are connected a way that forms a triangular plan. The geometrical shape and the homogeneity in the material give a clean and iconic visual appearance, which benefits the structure's landmark potential. In other words, the complex consists of three similar "volumes" where one forms the closed shelter-part and the two other platforms act as a covered landing bridge. The flow is somewhat "infinite" and the three different facades greet the visitors from all directions. This emphasizes the buildings visibility and the lines of sight are also accentuating the flow within the house. At the same time the continuous view to the fiord and Aalborg city adds an attraction-value to the house; this design concept is seen in other designs such as "The Infinite Bridge" by Gjorde & Povlsgaard and "Your Rainbow Panorama" by Olafur Eliasson, where views and flows become a significant part of the architecture and an attraction in itself. This also ensures that the house has value and purpose, even if the boat route should be closed down after the DGI-games.

In terms of sustainability the boathouse and its landing bridge are constructed in untreated sitka spruce, which not only is fast growing, strong and resistant, but also grows locally and therefore doesn't need the long and often polluting transportation. However, not many timber sorts can withstand being subjected to saltwater for a long period of time, and the posts carrying the landing bridges has to be made out of a stronger sort; in this case azobé.



Three rectangular volumes form the triangular, infinite building shape.



The lines of sight define and accentuate the flow within the house.





West elevation



South elevation



East elevation



North elevation



SHUTTLE BOAT PIER

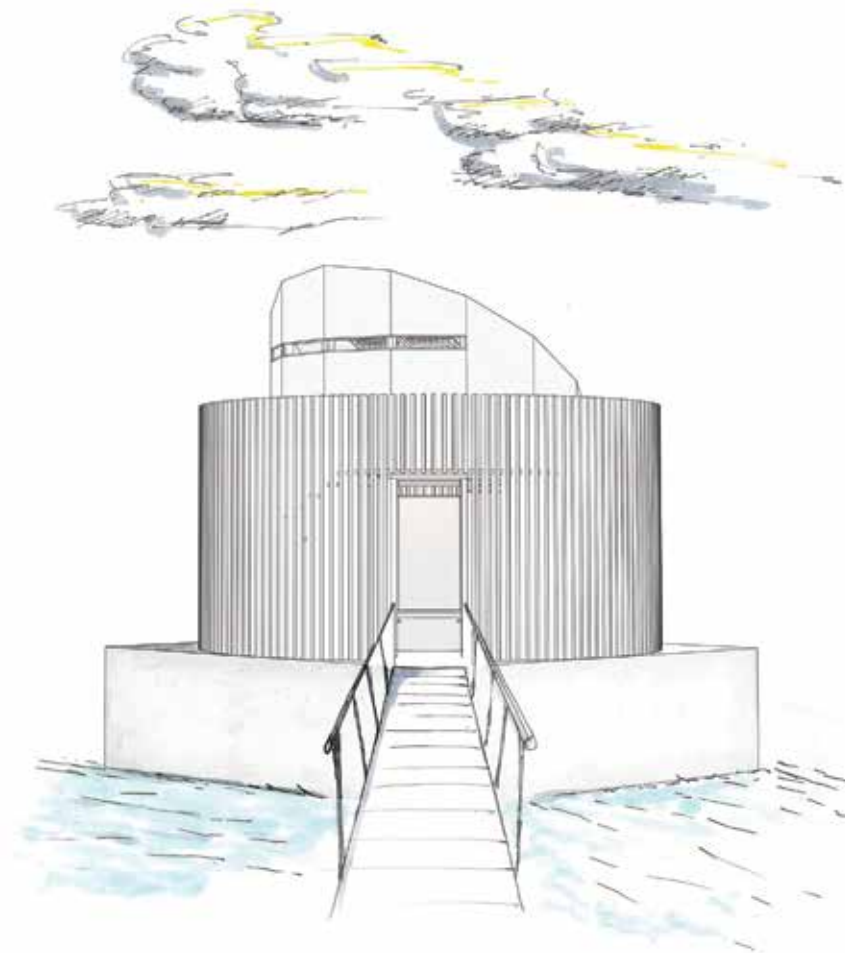
Asger Skjødtt Jacobsen

As part of the DGI games, taking place in Aalborg in 2017. A shuttle boat connection will be organized between Stigsborg Brygge, where the participants are camped, and the center of Aalborg. The use of Shuttle boats is an alternative future connection across Limfjorden and could be a permeant line in the future.

The shelter would be built on the existing landing bridge at Stigsborg, forming a clear sport on the harbor clearly visible from both side of the fjord. The shelter will form a landmark for the new development in the area, with an exposed location providing qualities for people to enjoy weather they are heading for the shuttle boats or just enjoying the view.

The design considers the conditions of the surroundings in terms of views, but also challenges from unwanted wind and sun exposure. By holding the challenges against the needs of the users, both in terms of convenient access to the boat, but also comfort and an interesting place for waiting, the design is adjusted to account for both the functionality and the quality.

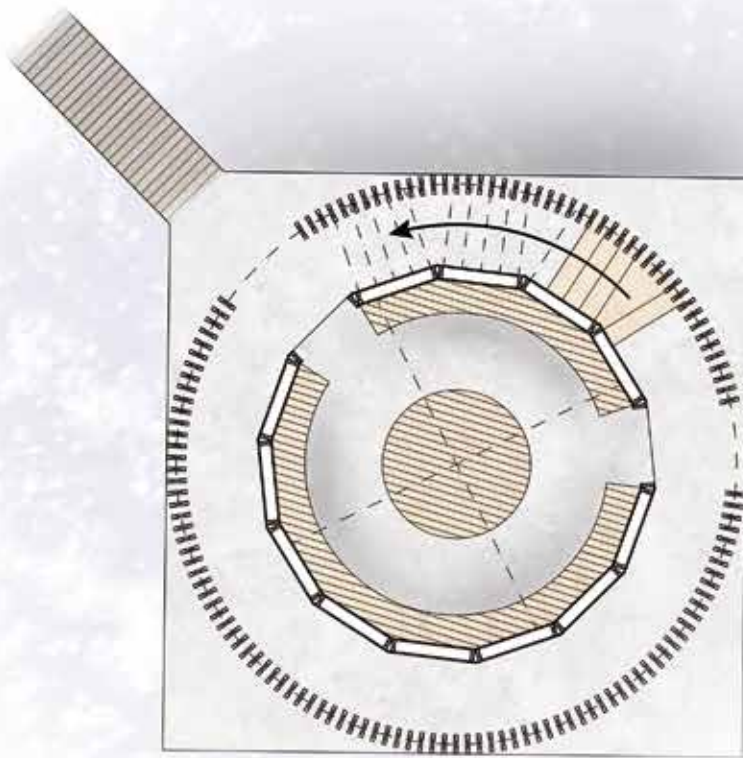
The Shelter provides different situations of thermal comfort, and radiant exposure in varies zones, to account for the many different periods and conditions. Each zone also provide a different experience, like the full view from the balcony, the semi closed pathway, or the inner core of the shelter, with the semitrans-parent photovoltaics panels in the ceiling, which illuminates the with a soft light.



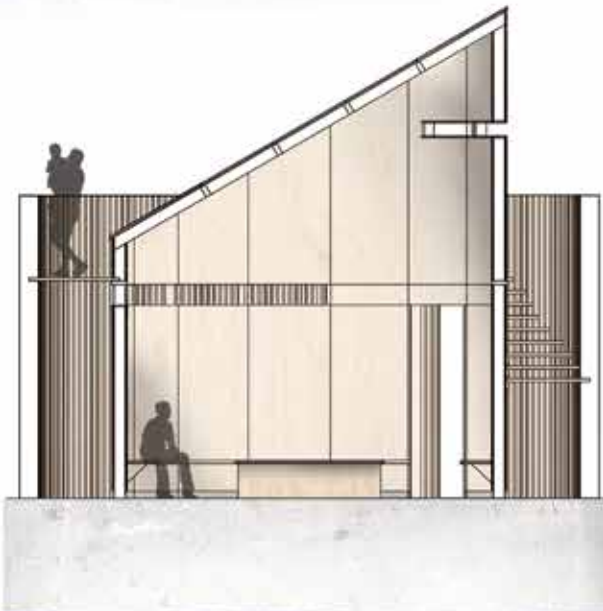
Perspective sketch



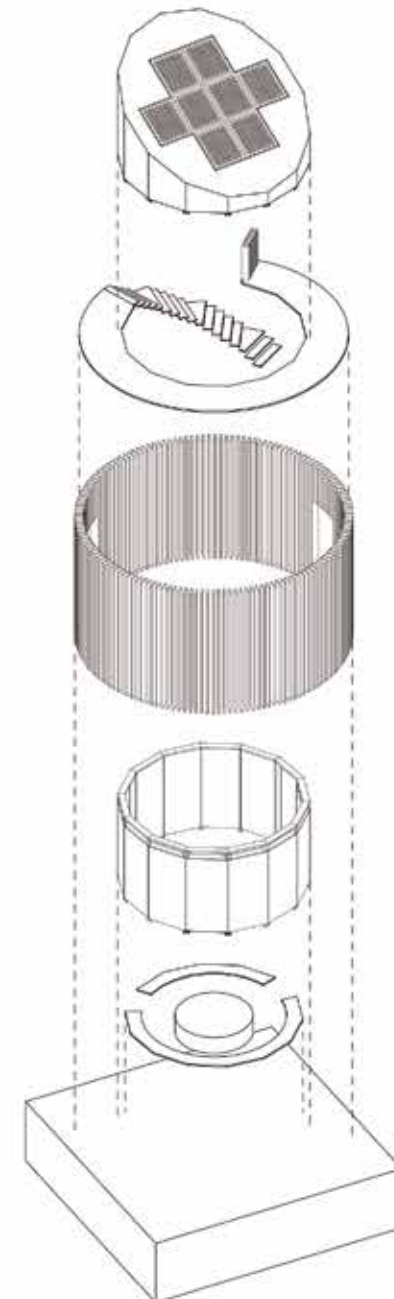
Location map



Plan 1:100



Section 1:100



Axonometric

P.O.M.P. (Pallet, OSB, Metal, Polycarbonate)

Brage Mæhle Hult

A shuttle boat station proposal

Utilizing a nearby pallet factory, provided a cheap and easily attainable “building block”. Being made out of certified and recycled wood, pallets became a cheap and sustainable choice for the project. Euro-pallets/EPALs come in standard sizes and therefore don't vary enough to become a problem, additionally they are refundable, if not damaged

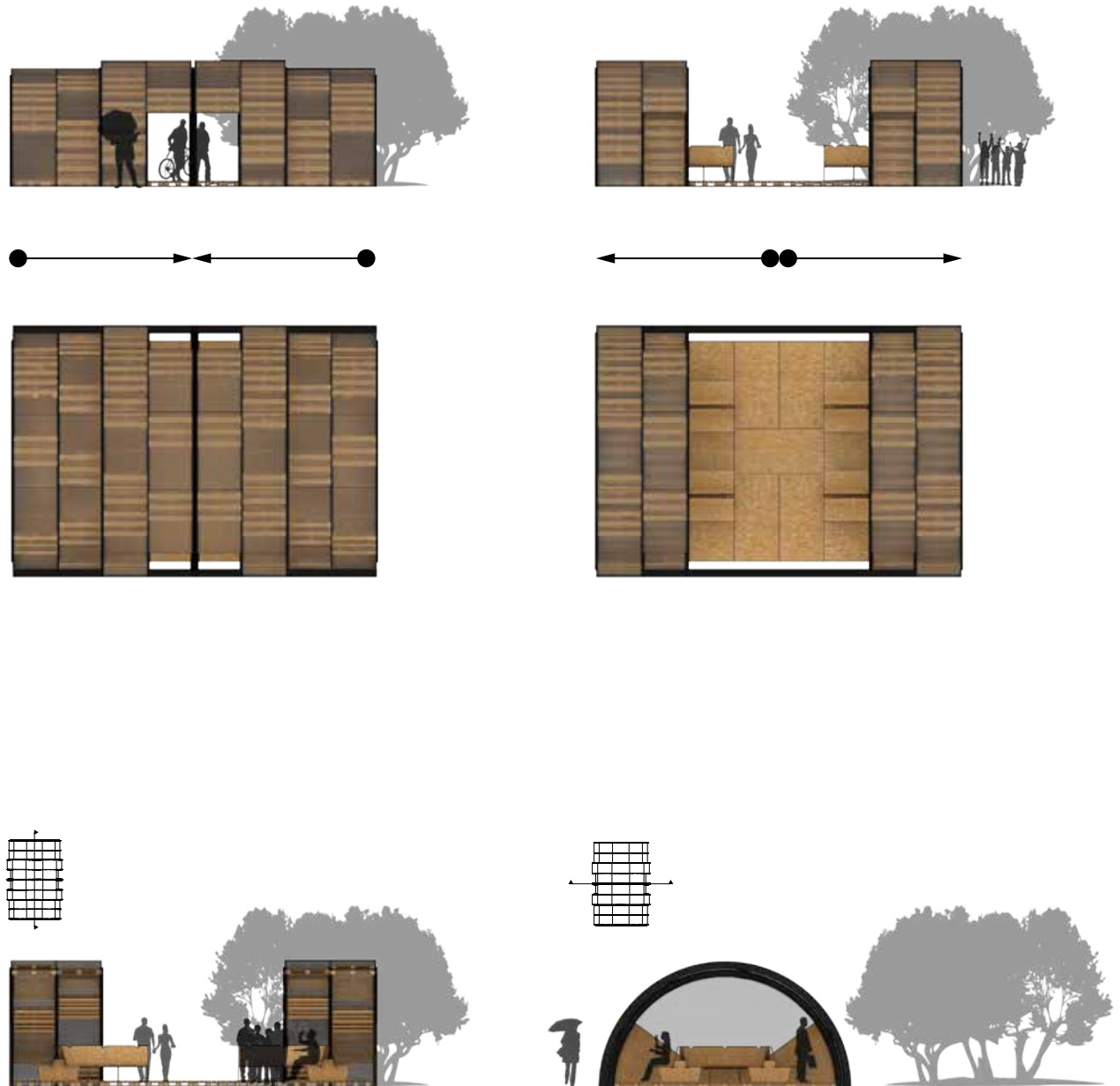
As building blocks, the pallets are used for spacing the frame while also making it rigid, as well as shaping a uniform base for the construction.

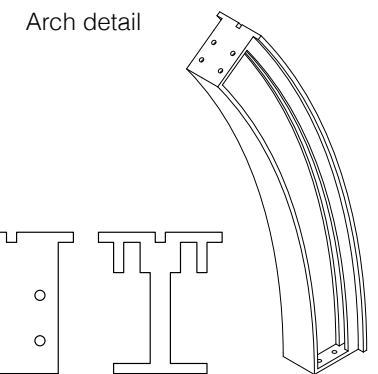
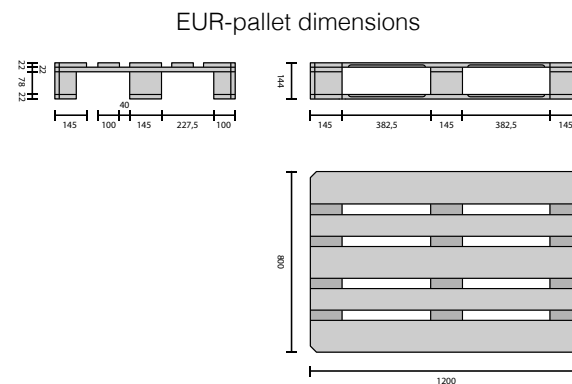
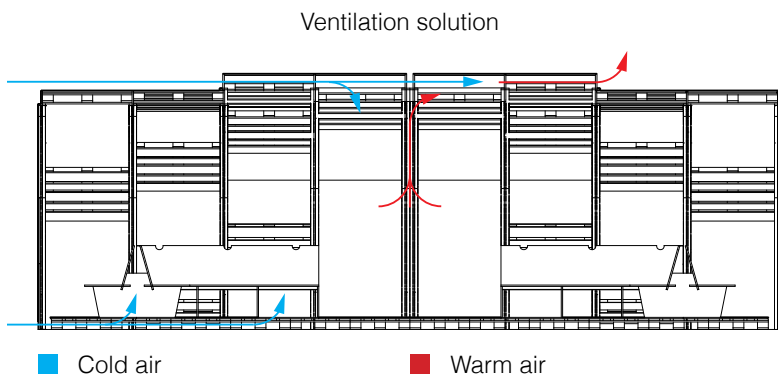
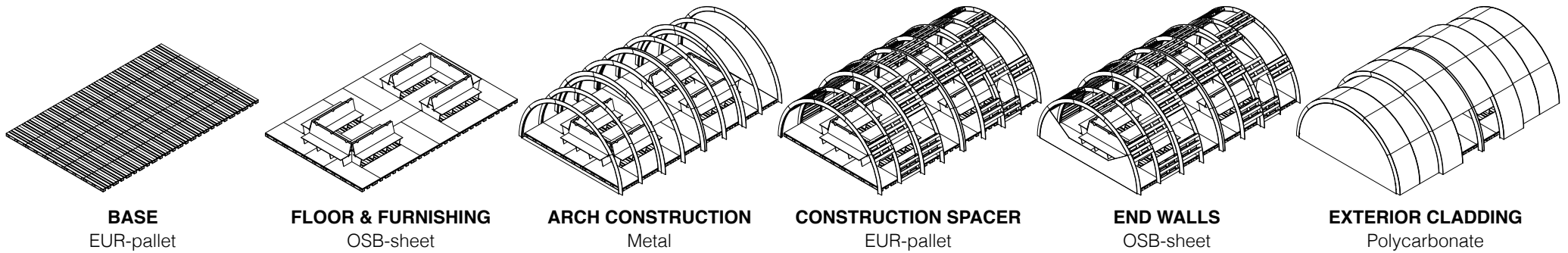
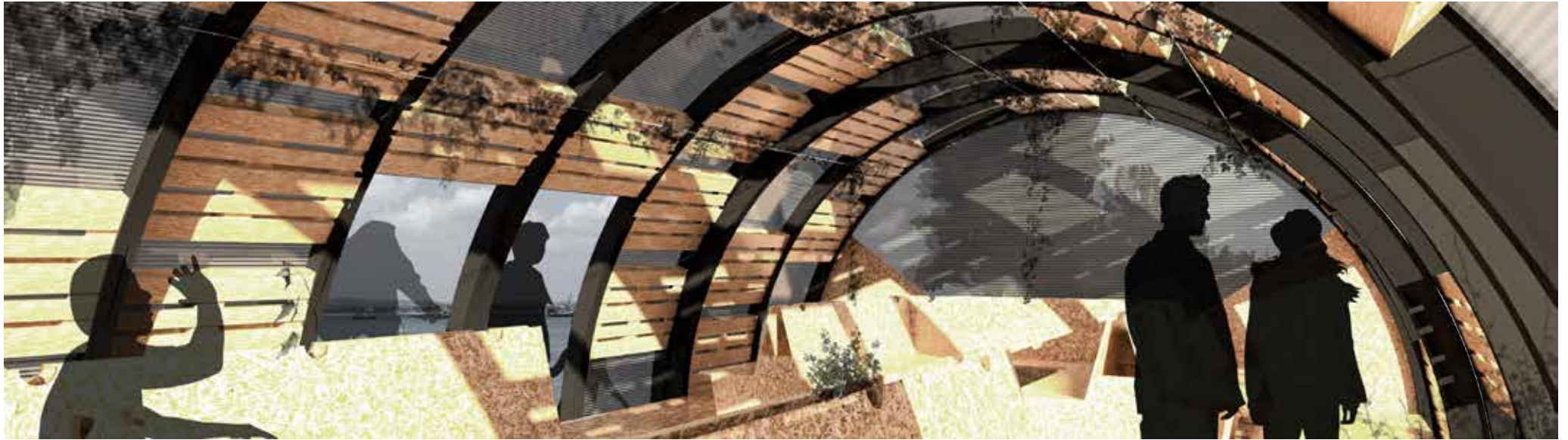
The base is then covered with a floor of OSB sheets, on top of the EPALs. While other sheets are cut into specific pieces for easy assembled and durable furniture. As with EPALs, OSB sheets are recyclable and cheap, thusly a logical choice.

To make sure the shuttle boat building can last for 5-10 years, the joining frame is made out of metal, the least recyclable material in the project, this is however a realistic necessity to avoid damage from water (capillary effect or similar). This adds durability, but also enough weight to withstand stronger winds. Additionally, for ease of (dis)assembly to the build the arc-frame is divided into smaller, lighter and more transportable pieces. The arcs come in 2 sizes, adding the option to have sliding walls/arcs, on top of rails, from the middle or end of the construction. This gives to the project the possibility to open its interior up to the exterior.

Finally, the metal arcs are clad with sheets of semi-translucent polycarbonate. Sheets of polycarbonate can be made stronger than glass, and are therefore preferable. Depending on kind, they also have high U-values and flexibility.

These materials culminate in the flexible and easily assembled design, a white semi-transparent half tubular design. From the outside hinting with the structure of EPALs, while the inside is a calm well light room shaped with pallets and the simple textures of wood and OSB. When sun shines the tube can open up, transforming the room into an outdoor espalier to relax in while waiting to the ferry.





THE SHUTTLE BOAT SHELTER

Irene Ank Jørgensen

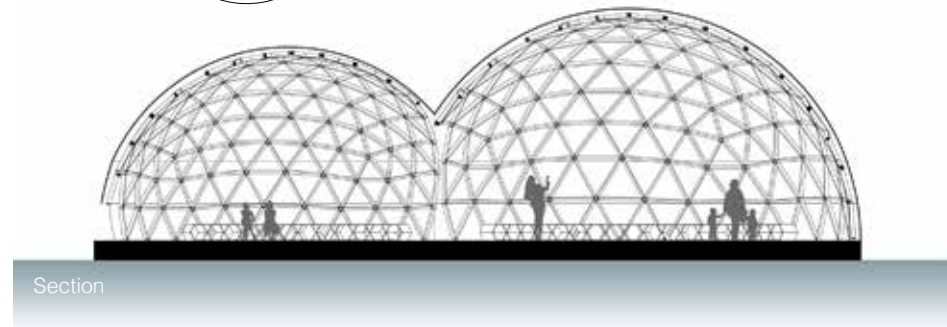
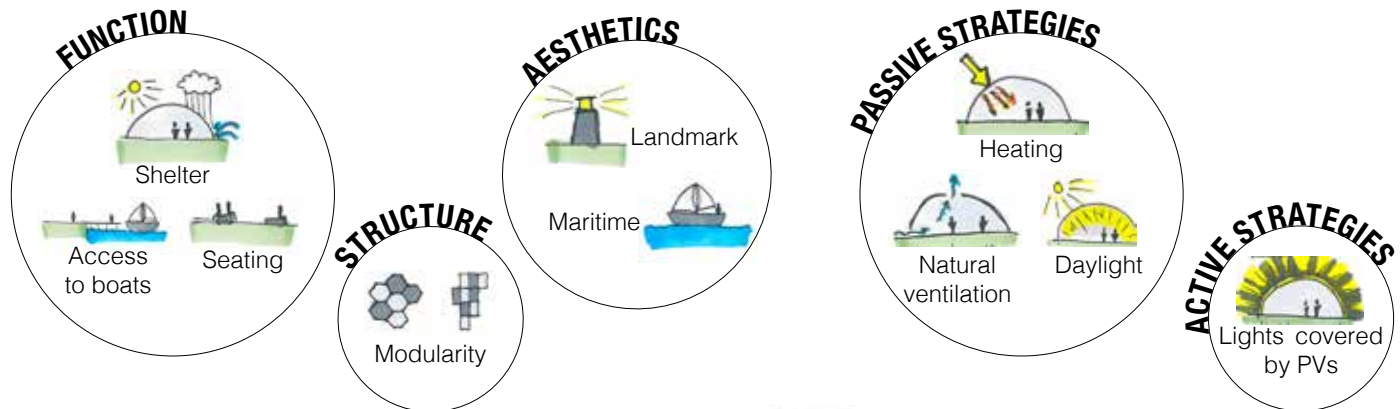
The shuttle boat shelter is placed on the pier of Stigsborg Brygge connecting the camp site of the DGI Games 2017 with Aalborg. The focus of the design is to provide shelter and seating for people waiting for the shuttle boats, creating a landmark that will be visible from a distance, and integrating sustainable solutions in terms of cheap and easy assembling/disassembling, materials and energy production.

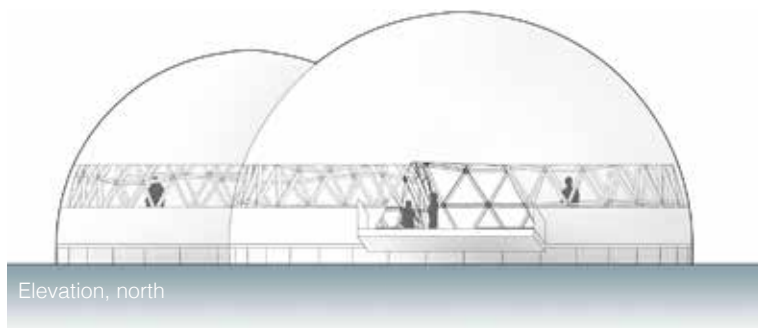
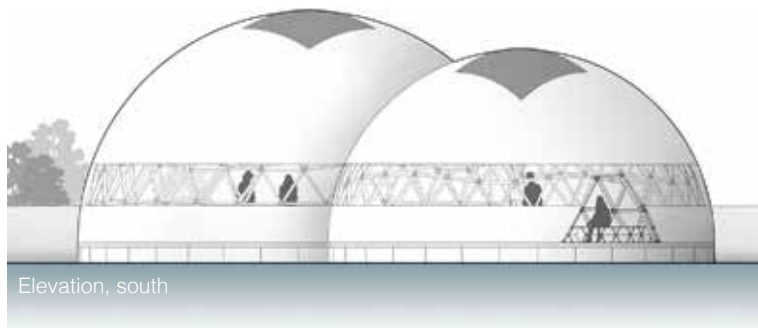
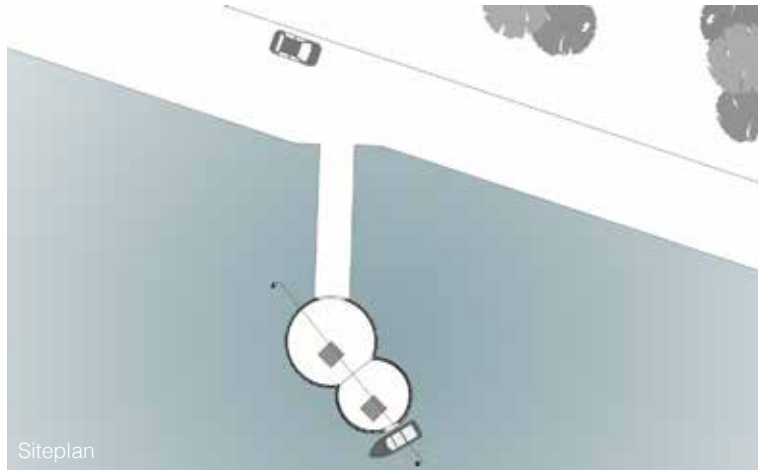
The shuttle boat shelter consists of two geodesic domes intersecting each other. This construction is chosen for its structural stability while still using little material. The domes create shelter from both precipitations, sun and wind from all directions and a transparent stripe in eye level gives the visitors a 360-degree view of the surroundings. The domes are constructed of timber beams with three different lengths connected by identical metal joints. In this way manufacturing and assembling becomes easier and quicker, saving money, emissions and energy.

The pavilion is floating on Limfjorden by recycled plastic barrels filled with air. It is connected to the pier with a sloping bridge, giving access to all, and blurring the edge between water and pier, inviting the visitors to interact more with the context.

For the shuttle boat shelter to be visible at night, lights are fitted inside the pavilion. To cover the energy use for these lights thin-film photovoltaics are fitted on the outside of the pavilion to the south.

The pavilion is designed to be on the fjord for 5-10 years. After this it can be disassembled into smaller segments and easily be moved to another location, acting as a shelter for eating, art installations and the like. When the pavilion is no longer needed it can be taken apart completely and all materials recycled.





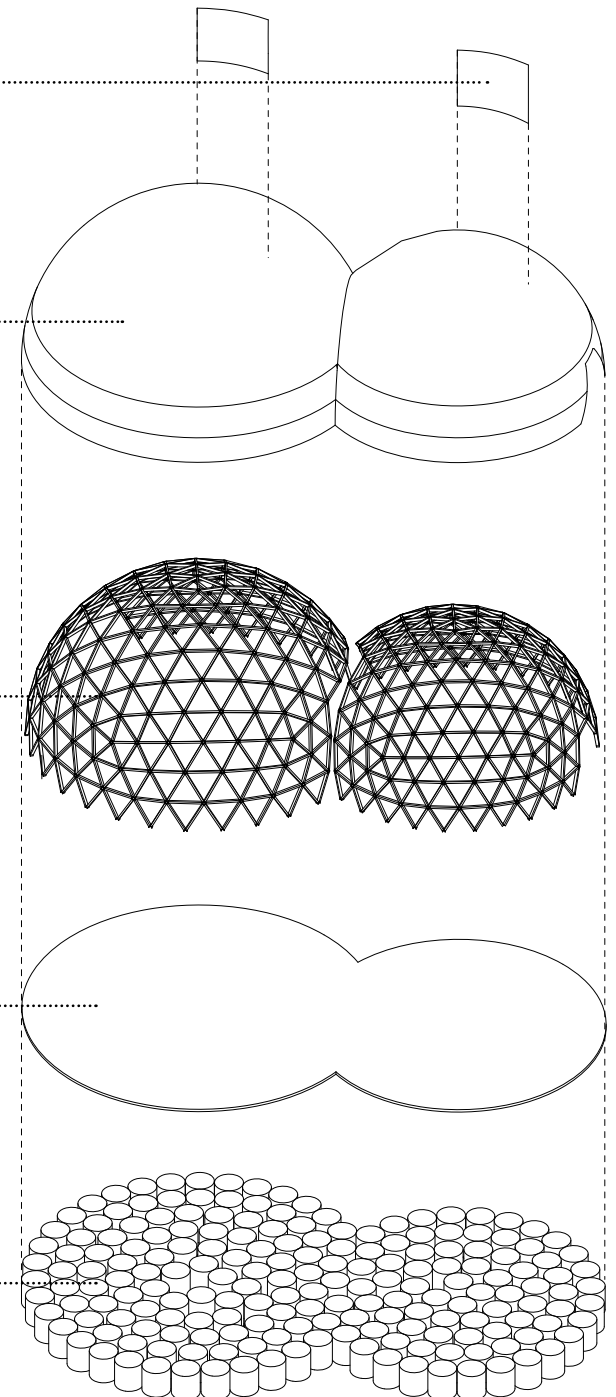
Thin-film photovoltaic solar cells fitted to the domes. A total of 12 m² produce 1062 kWh/year to cover the energy used for interior lights (1022 kWh/year).

Cover made of recycled sail-fabric makes the shelter resistant to precipitation, wind and sun. A transparent stripe gives a 360 degree view from inside the pavilion.

Geodesic dome structures made from FSC certified, Nordic Ecolabel wood produced locally in Aalborg. Joints are made from metal and bolted together for easy assembling.

Wooden flooring made from FSC certified, Nordic Ecolabel wood produced locally in Aalborg.

Floating platform made from recycled plastic barrels filled with air.



SHUTTLE BOAT BUILDING

Simona Skinkyte

Main goals of the design:

- 1.Community object and usable in the future.
- 2.Showing the place characteristic identity and reference to the Aalborg city. According to existing landscape in my opinion necessary to create an object, which does not disturb a lot the ambient.
- 3.Reflect the waiting moment – be interesting and pleasant to wait.

Waiting moment reflection - PAUSE

-FUNCTIONAL >>> Save from sun and wind, give shelter. Give orientation, observe nature, water and city.

-ATTRACTIVE >>> Suitable for environment and showing the Aalborg city spirit.

-MODERN >>> Reflecting modern people needs and fulfilling it.

-SUSTAINABLE >>> Made from natural materials environmentally friendly, easy and simple to build, aswell provided to use renewable energy sources for the future development.

Therefore it is important to have a **VISIBLE LANDMARK**, but not extravagant. At the same time well incorporated with the surroundings. The aim is to achieve the connection between greenery, pavement till the shuttle boat and water.

In order to get the frame effect it was chosen to have a **SQUARE** – easily recognizable sign. This leads to the idea framing the surroundings and being framed by the surroundings. Moreover, to represent and focus to the Aalborg panorama. Frame concept reflects clear boundaries, space interpretation and transparency.

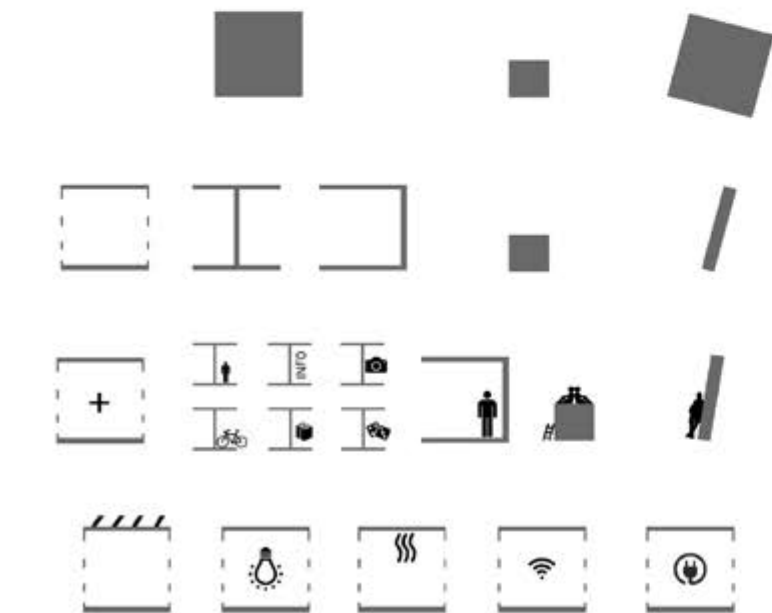
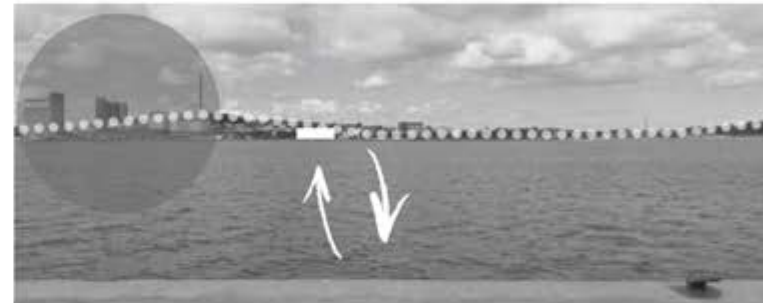
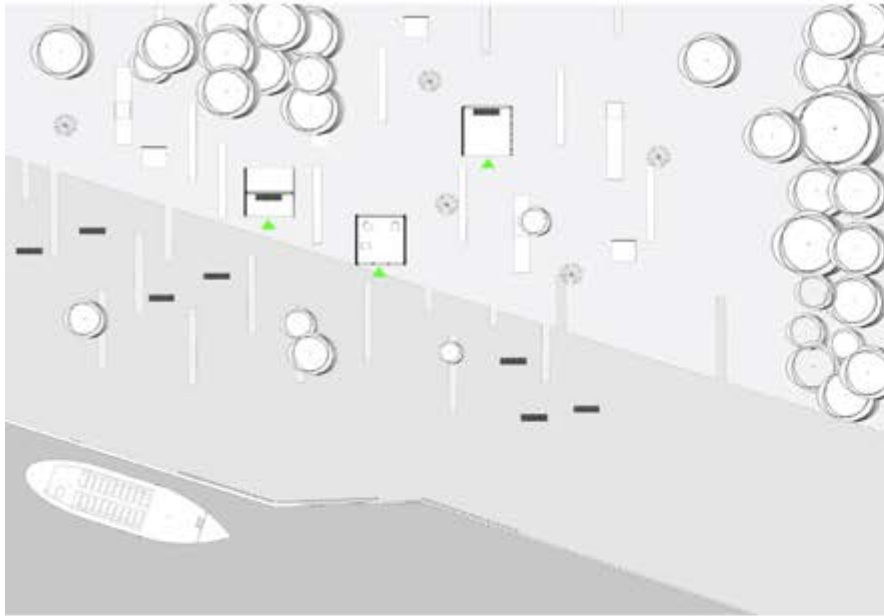
Design

It was chosen to have a different type of waiting spaces. First of the box was design with a closing glass doors. At a windy and rainy day people can have shelter here and wait.

Second one was designed to have a mix with some extra activities, as it is shown in a diagram and lastly the third one was created as an open one.

It is also necessary to mention that the amount of the boxes can be enlarged according to the necessity of the waiting spots.





KITcheapen?

Alessandra Marino

"KITcheapen?" is a small wooden and modular kitchen, designed to be economical, easy to assemble, to transport and to re-use.

These features meet the need of temporary and sustainable architecture, which combines the architectural value and the technical efficiency, with an excellent ventilation inside the structure, thanks to the tilting roof and the movable lamellas, manually adjustable in case of rain.

The name "KITcheapen?", sounds like a provocation and the synthesis of the project: as well as the words take on a different meaning depending on the order in which they are read, so the project takes on a different uses, depending on how the modules are assembled: the "kit" refers to the packaging, containing the equipment needed to cook and dine; "Cheap" is an important feature of the project, that ensure an easy marketability during the DGI games and after; "En" in Danish means "one" and refers to the uniqueness of the starting module, designed for four people, which constitutes the real project: the many possible combinations depend on the number of modules that are used, according to the user that should be served. But "Cheapen?" it's the provocative wondering, if "cheap" is really considered as something that decrease the quality of an object.

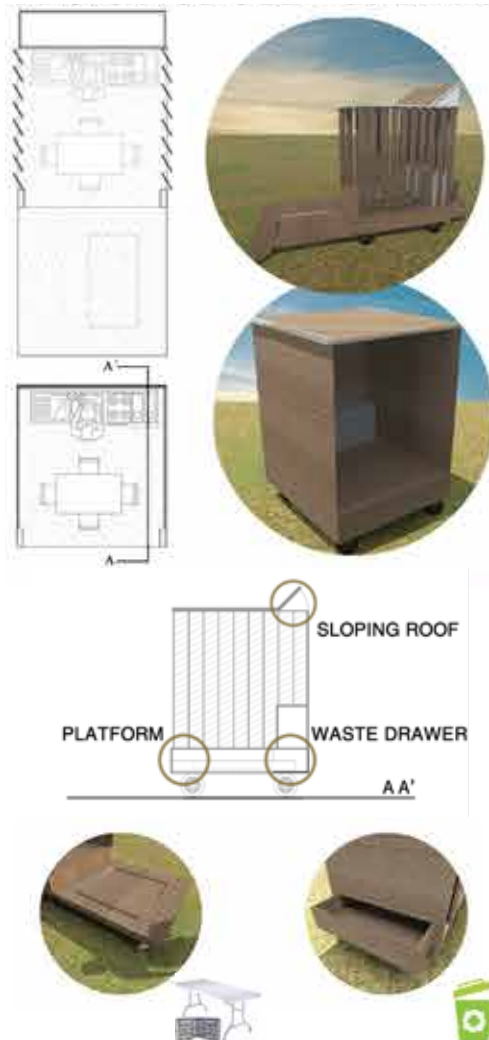
This is the main challenge of the project: in its simplicity and small size, it is opposed to "architecture-poster", and it is the demonstration that "cheap" means "sustainability".

Easy transport and re-use are two of the best qualities: every kitchen is 2.7 x 2.5 m, so that many modules together can be transported on flat tracks, and each module can be individually rented at the end of the DGI festival by individual campers, moving it through trailers or thanks to the wheels of the structure.

The hinges on each side of the kitchen are used to attach the modules to each other, depending on how they should be assembled: indeed each retractable platform creates a different type of external space, which favors the privacy or socialization. Each platform has a door with folding table and chairs inside; on the back there is an outside drawer for waste disposal by the staff.



BASIC MODULE - OPEN AND CLOSE



CROSS AND STACK VENTILATION



TRANSPORTATION



FLAT TRACK



TROLLEY TRAILER



TRAILER

CALCULATIONS

AIR CHANGE RATE, CO₂ LEVEL

C = Concentration of pollution in the room (m^3/m^3)

C_i = Concentration of pollution of inlet air (m^3/m^3)

q = Pollution load (m^3/h)

V = Volume of the room (m^3)

n = Air change pr. Hour (h^{-1})

$C = 350 \text{ ppm}$

$q = 21 \text{ l/s pr. Person} \times 4 \text{ pers.} \times 10^3 = 0,096 \text{ m}^3/h$

$C_i = 850 \text{ ppm}$

$n = 0,096 \text{ m}^3/h (850 - 350) \times (6,75 \text{ m}^2 \times 2,70 \text{ m})$

$\times 10^3 = 10,53 \text{ h}^{-1}$

AIR FLOW SUPPLY

Internal Area: $6,75 \text{ m}^2$

Internal Volume: $18,225 \text{ m}^3$

Assumption of dissatisfied users: 25%

Pollution: 1 olf

Average amount of persons: 1,5

Experienced air quality in the outer air: 0,05

$C = C_i + 10 \times q / V_L$ & $V_L = 10 \times q / (C - C_i)$

$2 = 0,05 + 10 [(1 \times 1,5 + 0,1 \times 6,75)] / V_L, V_L = 1,94$

$1,94 / 6,75 \text{ m}^2 = 0,287 \text{ l/s m}^2$

C = Experienced air quality in the room, unit dp

C_i = Experienced air quality in the outer air, unit dp

q = amount of pollution, unit olf

V_L = Necessary air flow, unit l/s

1



PRIVACY

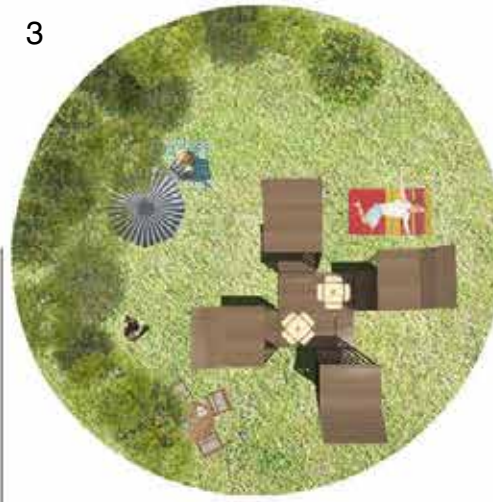
4 user can be served. Private camping, for reuse.

2



An infinite amount of user can be served. Each module preserve its individual external space to dine privately.

3



SOCIALIZATION

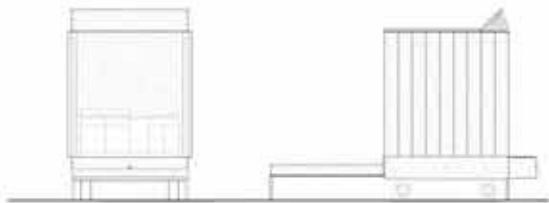
16 people can be served. "Discrete socialization". Several configurations like this, create a "Refreshment Island", where people can find a cozy place, without feeling forced to interact with too many people.

4

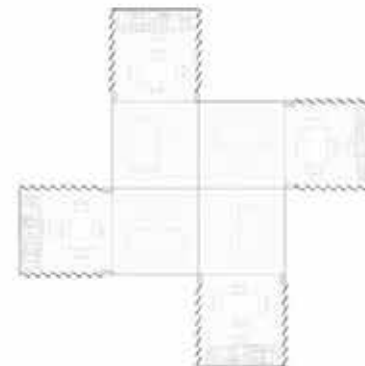


An infinite amount of user can be served. It is possible to dine with a lot of people.

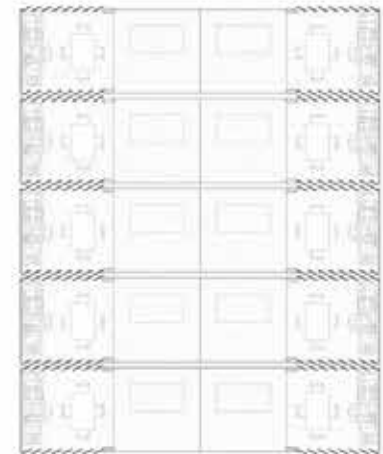
1



3



4



2



The Dome

Nicolai Mai Jørgensen

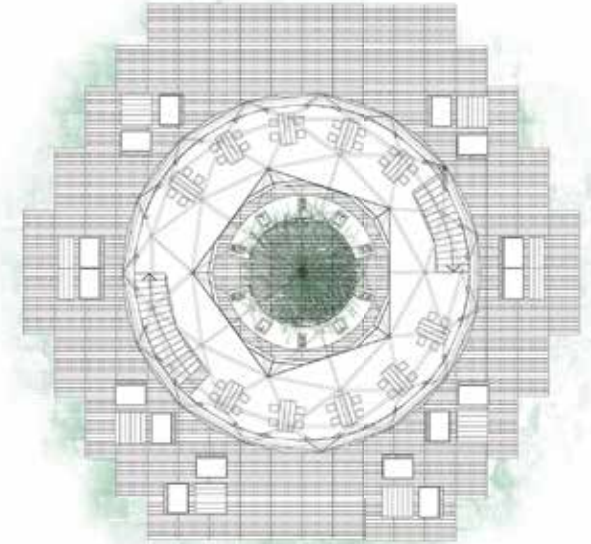
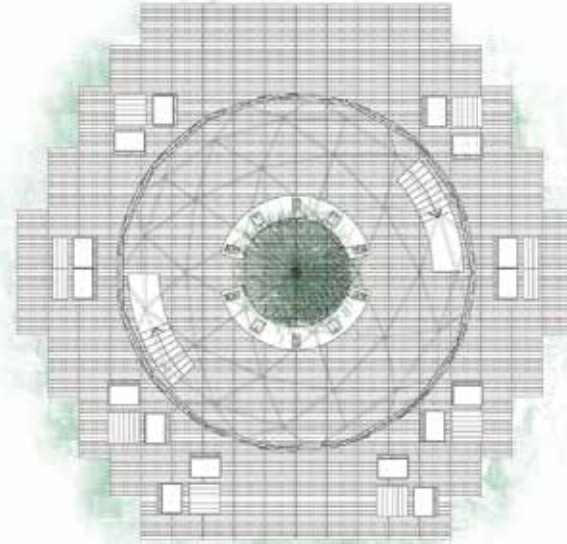
A kitchen at an event as the DGI games is more than just a place to prepare your food. It is the communal space where everybody needs to go and a gathering point where attendees, across generations can meet.

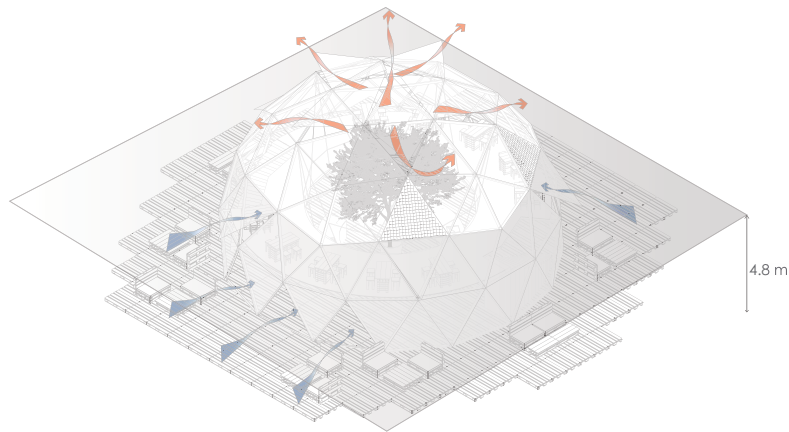
The concept of The Dome is not only a place for eating but also a place for meeting. By making a visual statement in the tent camps the domes will act not only as kitchens, but also as focal point, a kind of plaza. Here you can meet with your teammates before venturing out from the camps, or relax after a long day.

The structure is centered around a tree which creates a focal point in the room. Underneath the branches the kitchen is situated. And around the treetop is "The Ring" the second floor of the dome. Outside the dome is a terrace area with lounge furniture, where attendees can meet up and relax.

The dome consists of a grid system made from FSC certified wood connected by steel joints, and clad in triangular pieces of clear polycarbonate. The flooring of the dome and surrounding area consists of wooden pallets, which can be returned and reused when the games are over.

The dome is not intended as a singular use structure. At the DGI-games it will be used as a kitchen, but it can be taken down and put up again at other events. Fitting it with different interiors it can act as a bar, info center or whatever needs comfort and shelter at another event.





Natural ventilation

Openings in the top of the dome allows for natural ventilation, utilizing the buoyancy principle, to ventilate the dome for both excessive temperatures but also cooking fumes. The neutral plane is placed 4.8m above the ground, making it possible to ventilate the dome from both openings at the ground level but also the second floor.

User Control

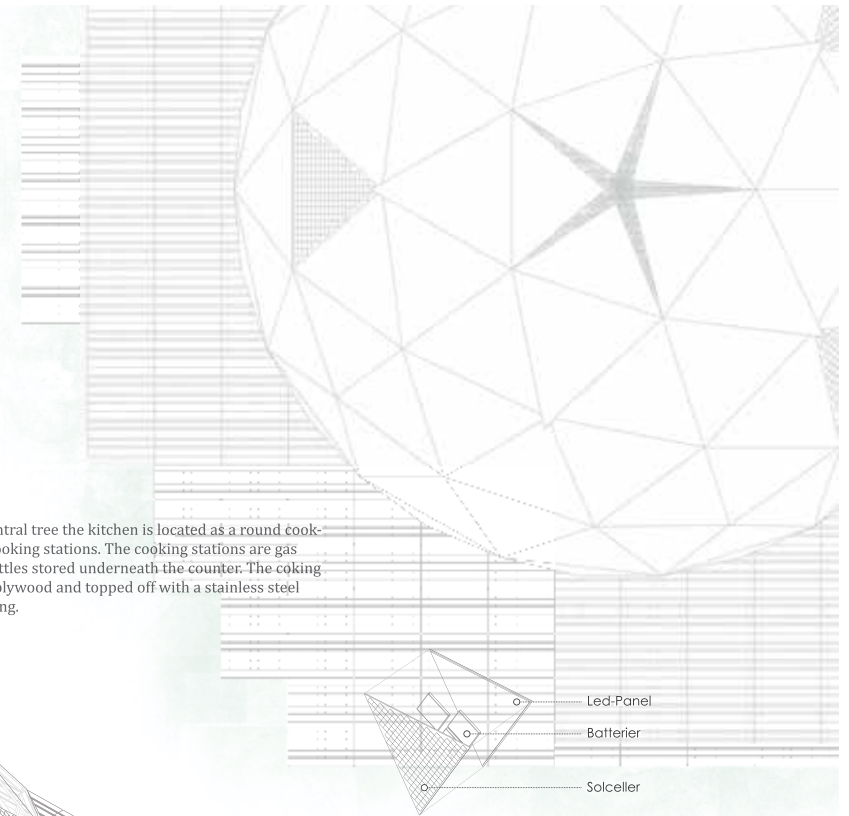
Adjustable openings on the second floor allows the attendees to adjust the ventilation of the dome. This allows for extra ventilation in the occupied zone of the dome on hot days, or when the dome is densely populated.

Terrace

An outdoor terrace provides an outdoor area where people can relax and enjoy the weather when it allows it. The deck is made of EUR-pallets which can be returned to the supplier after use and re-used for e.g. storage in other contexts. The furniture of the dome is also created from recycled pallets which are deemed not suitable for use in the return-system.

Kitchen

Underneath the central tree the kitchen is located as a round cooking island with 6 cooking stations. The cooking stations are gas driven, with gas bottles stored underneath the counter. The cooking station is made of plywood and topped off with a stainless steel plate to ease cleaning.

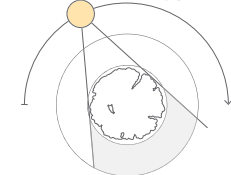


Solar Modules

Integrated solar modules are placed 3 places in the grid structure of the dome. The modules consist of 3 parts. An outer layer where thin film photovoltaic cells are attached to a plate of water resistant plywood. An inner LED-panel which provides the dome with light in the evening. Sandwiched between these two elements are a battery pack to store the energy created during the daytime.

The Ring

The ring provides the dome with a second floor where attendees can enjoy their dinner in the "treetop". The area is sheltered from both rain and wind. The tree provides shady areas around the ring, depending on the time of day, and hereby position of the sun.



“Stairway to...”

Christoffer Andersen

This project constitutes the written part of the course module “Integrated Design of Sustainable Architecture”, which concerns the building of a lookout tower located on the outskirts of Aalborg, on Stigsborg Harbourfront. The structure will act as a fire lookout tower during the DGI-festival, and as a general attraction there after. In a bigger perspective, the project will be a key to Aalborg municipality’s plans to change the public image of the location. There has throughout the project phase been a genuine focus on sustainability, when it comes to materials, production, construction and life expectancy of the structure.

The overlook tower has been designed as a staircase that revolves around a point and rises from the ground by long, slender supports, acting as legs. The staircase provides different views on the sites, in different directions as one gradually goes up the stairs. There are several shifts in direction, when the staircase transitions from steps to landings, which allows the mind to take in the landscape, as the eyes pan the horizon. The staircase ends with a total view of the surroundings. An important feature is the structures ability to create space around- as well as inside itself. This creates depth in the project, and enables the visitor to experience it on different levels.





ACID TOWER

Marie Louise Thorning

Concept

The acid tower is a wooden construction creating a wall that within has a staircase and platform. Placing a wall in a flat deserted landscape, creates a sense of curiosity and associations to a relic of former times. Besides the function as a tower, the acid tower also functions as a wall providing shelter from the strong wind, thus creating a social gathering point at ground level.

The technical sustainable concept is to create a structure that is assembled by four simple wooden elements in a repeating and modular system (concept fig. 2). All the wooden elements are prefabricated created by wooden laths dimensioned 30mm by 60 mm (concept fig. 1), and easy to assemble at site. Thus creating a modular structural tower possible to vary in height and design (concept fig. 3).

Integrated Design Process

The tower is created with a strong focus on an integrated design process based on the Vitruvian philosophy of uniting functional, aesthetical and technical aspect towards a strong coherent architecture. With a strong focus on structure, functionality and detailing, the tower contributes to an aesthetical statement in the landscape. The significant structure and possibility to experience and interact with the tower, contributes to how we perceive and understand the site and creating a greater affiliation with the site.

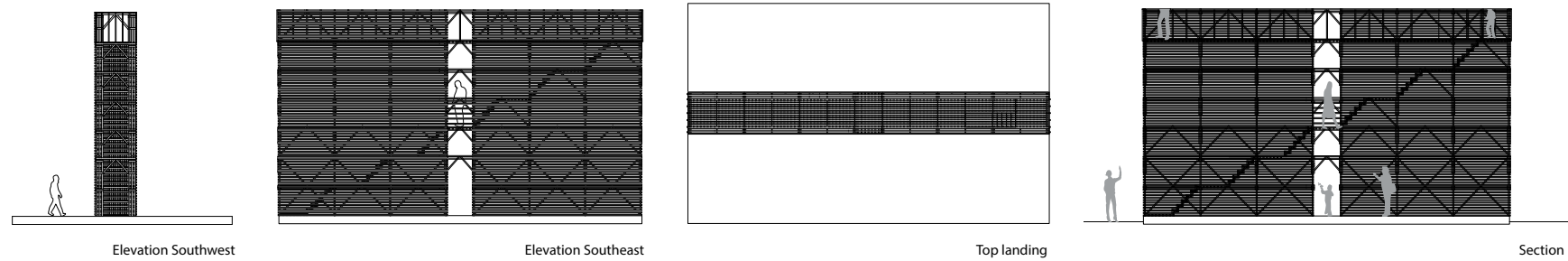
As the tower will be a temporary construction with short lifespan of four years, thus creating the urge for recycling and materials with low embedded energy. Due to this consideration the structure is composed by pine laths, which is reusable. To ensure a sustainable choice of material, the wood is FSC certificated, meaning the wood manufactures are ensuring stabile growth in the forests. Additionally, a modular system contributes to efficient production and achieves greater flexibility, thus the user has a greater influence on the design.



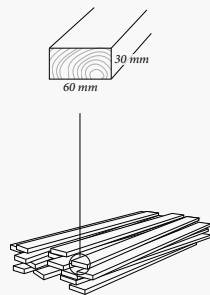
Visualisation



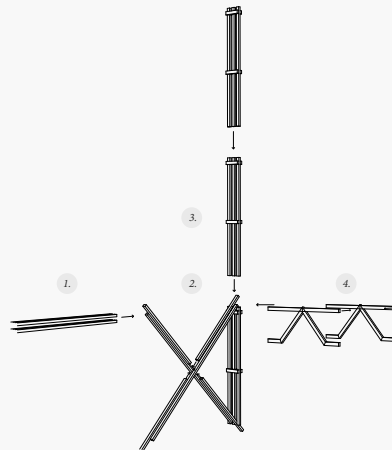
Visualisation



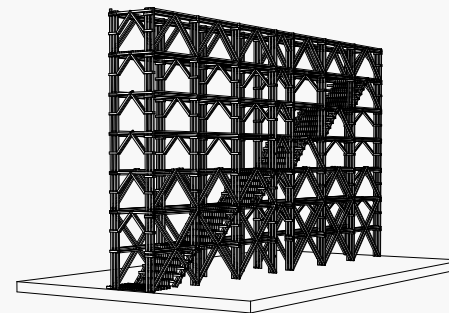
INTEGRATED DESIGN PROCESS



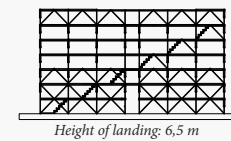
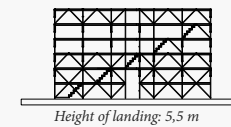
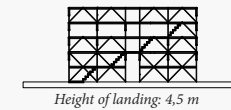
1. The construction of the tower is based on wooden battens having the same dimension through out the construction.



2. Premanufacturing these into four elements;
 1. Vertical beams
 2. Cross beams
 3. Vertical beams
 4. Transverse beams



3. The elements is repeated through out the construction and easy to assemble at the site



3. Three variations of the tower ue to site- and climate comditions

Concept

Tower of Tessellation

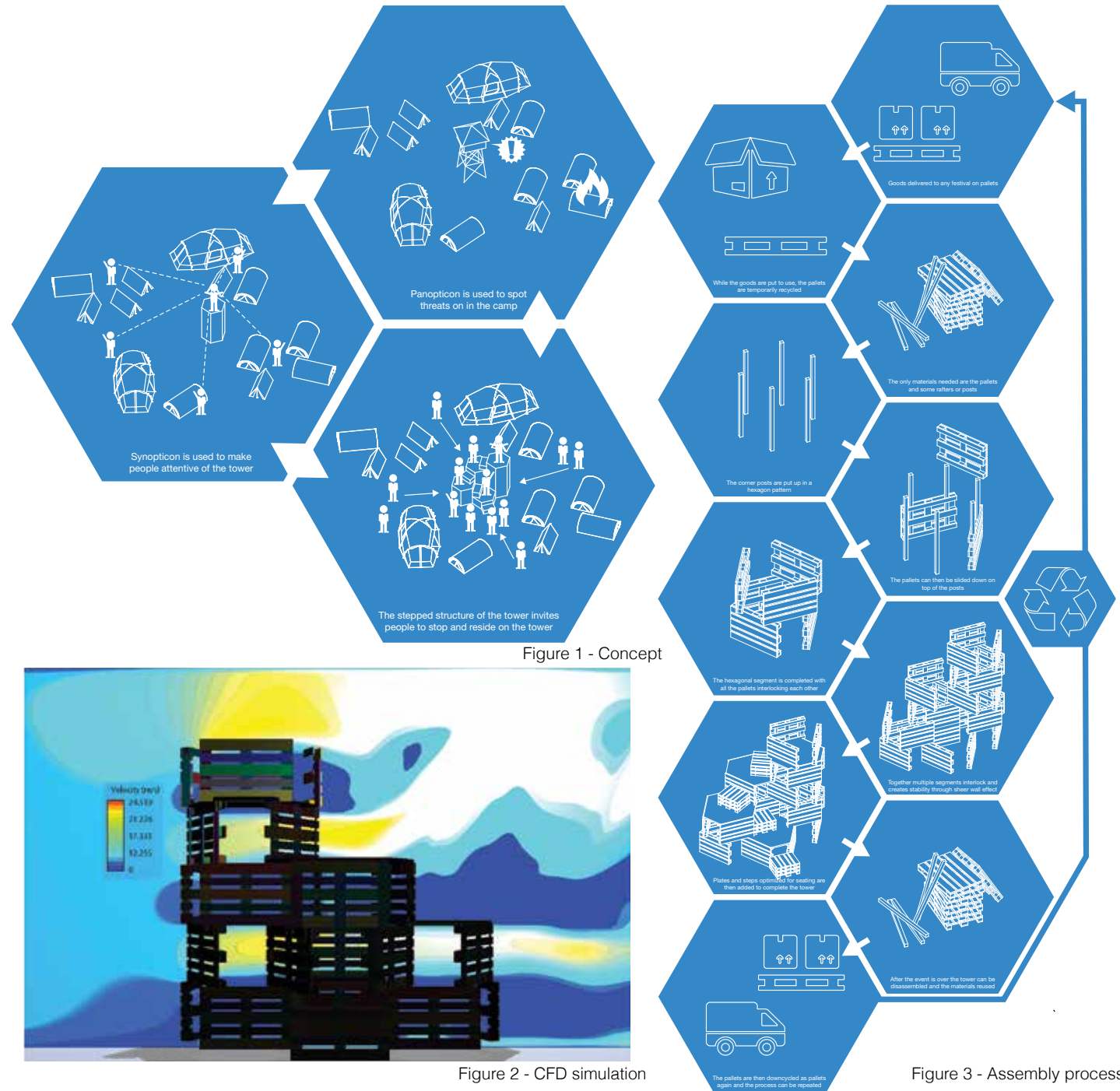
Mathis Lauridsen Gerlich

In a world of competitive individualists that are both on the same team but also competitors for the same spot, it is important to create a basis for unity (DGI 2005). It is extremely important to create the frame that invites people to interact with each other, and create social relations (Larsen 2005). This is the case on two levels, both within the team where people compete for the same spot, but also on a larger scale between teams where the only social relation is based on rivalry (Larsen 2005).

In order to create a gathering in a festival like the DGI-games or any other festival for that matter, the gathering effect of stairs has been used. That way the tower has three functions; panopticon is used as a security measure for the camp, synopticon is used to make a point of reference and navigation and finally the stepped structure invites people to stay (see figure 1). To climb the building should be an experience. To make it so CFD has been used in the design process to simulate how the structure affects the wind flow around the building. To do so weather data from Aalborg has been used together with 3d models, as seen on the picture here (see figure 2).

The tower is made up from a modular system based on pallets. Using the structure of the pallets for joining the elements together. The plan is to use the pallets used to transport goods to the festival during the event, and then taken apart afterwards and shipped on (see figure 3). The modular system allows for an infinite variations of combinations possible, only limited by the creativity of the builder. Another advantage of the system is ease of which it can be constructed, no lifting equipment is needed and the whole thing can be done by a few people with no tools.

Because the tower is made up from standardized EUR pallets, the structure is not dependant on the specific materials, this enables the tower to be built anywhere. With more than three billion EUR pallets just in Europe it is not a resource hard to find. In fact, around 50 % of the hardwood production by both the US and IKEA goes into making wooden pallets. The modular system also allows for an infinite amount of different towers, so the drawings only represents an example (see figure 4).



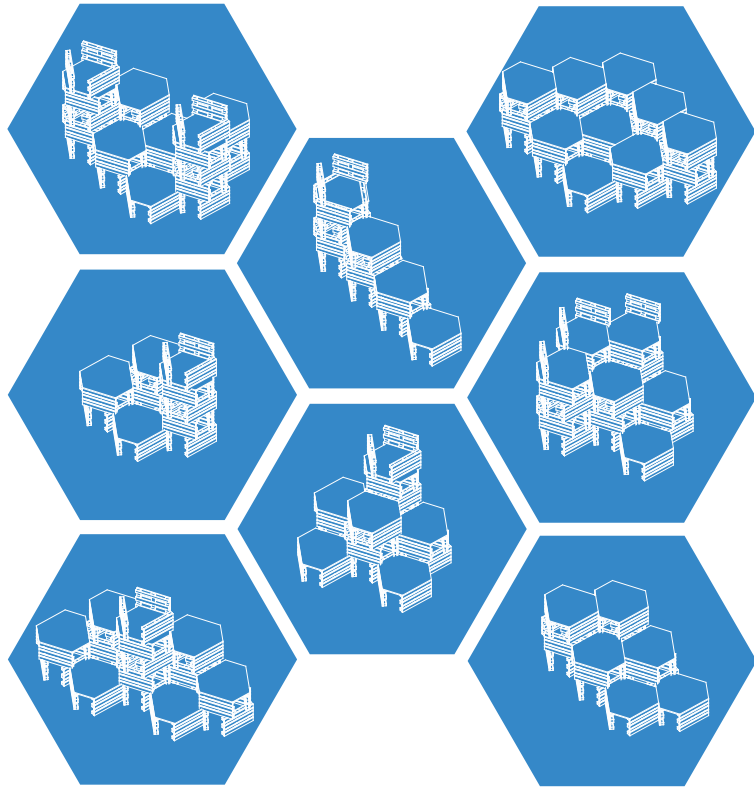


Figure 4 - Assembly variations

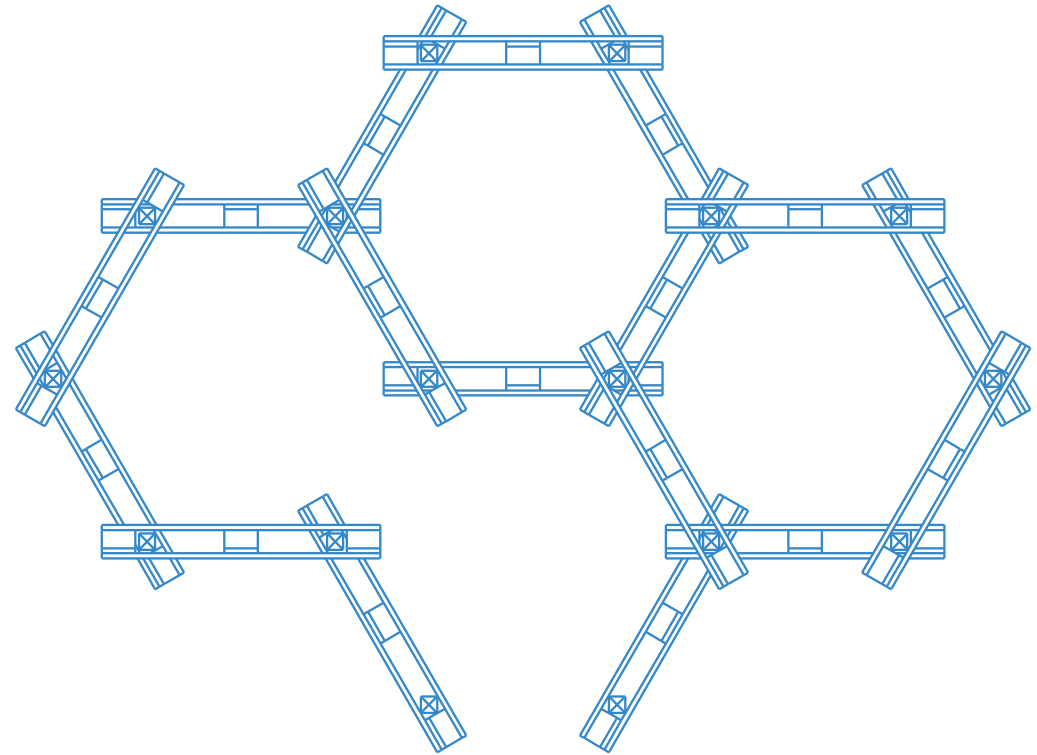


Figure 5 - Plan

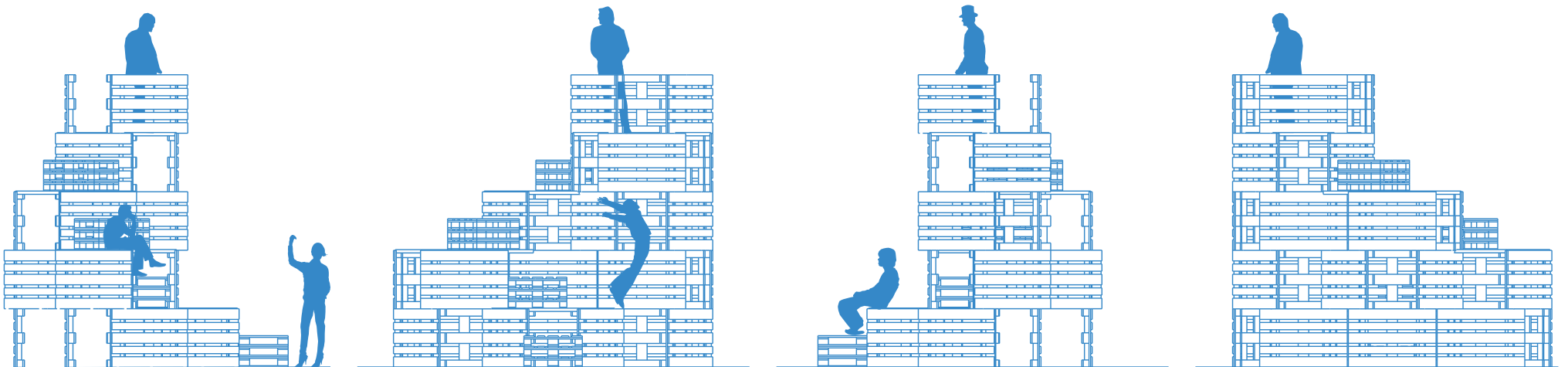


Figure 6 - Facades

BEACH BAR

Aleksandra Przesmycka

The idea of the DGI beach bar project is to create an adjustable and fully recyclable place, where people could meet and relax during the DGI event. The project uses the sun to produce the necessary energy and heat the surrounding by using the energy accumulated in the thermal mass of the walls.

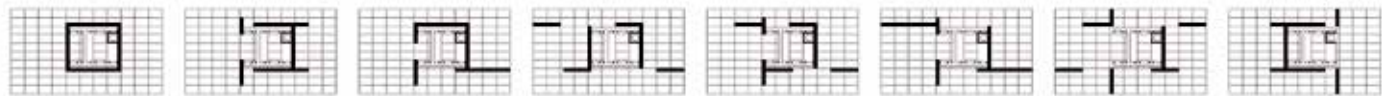
The cost of the bar is reduced by using cheap and reusable materials: pallets and sand. The energy demand for refrigerators, coffee machine, etc. is covered by the solar energy. After the DGI-games the beach bar can be disassembled and materials can be reused. Deconstruction process is easy and doesn't involve production of the waste.

Both design and the technology of the bar were developed simultaneously. The surface of solar panels needed for the bar, as well as the placement of technical appliances, the size of the material and others, were considered early in the design process.

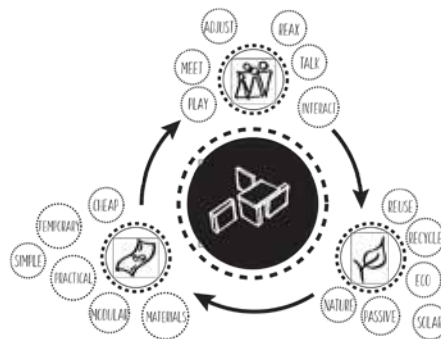
DGI-games are supposed to take place in summer. For this reason, there is no need for heating. However, the beach bar project benefits from thick walls with thermal capacities. The heat accumulated during the day in the walls can be released in the evening. If it is too hot during the day it is possible, by moving walls, to enable the natural cross ventilation.

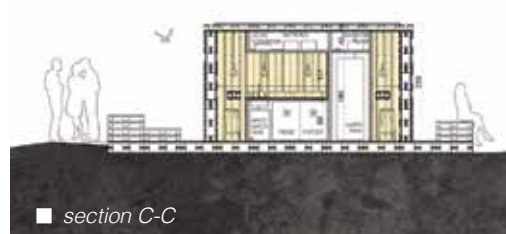
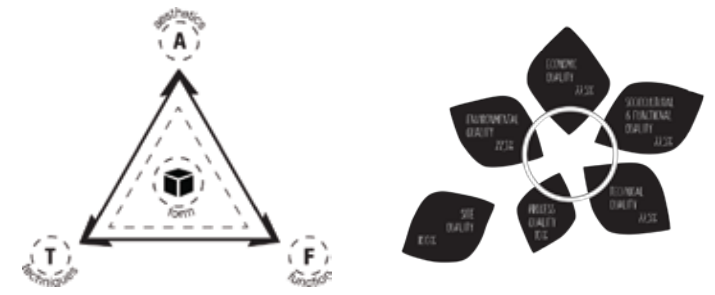
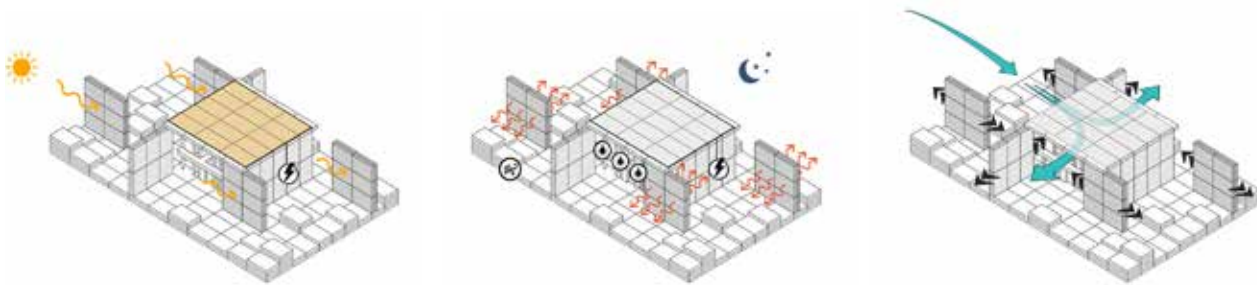
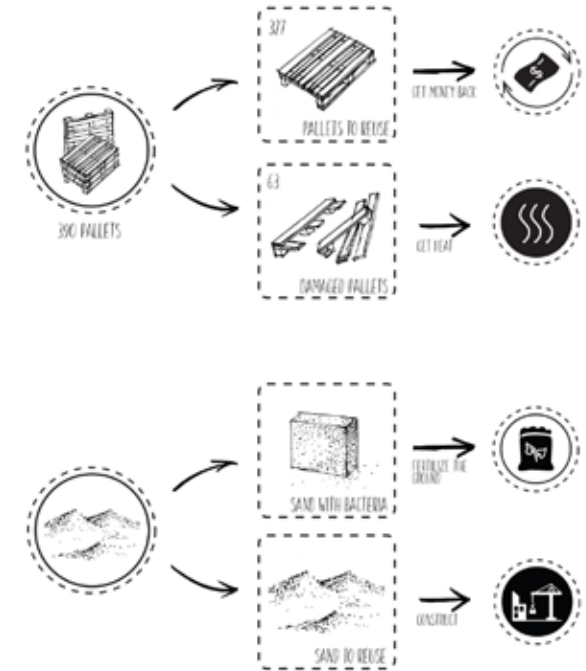
People's wellbeing in the building is usually closely related to user's option to control the indoor environment. In the beach bar project, by moving walls, people can enable natural ventilation but also protect themselves from strong winds. They can also use walls as shading system to prevent glare or overheating.

It is important to make all building technical systems easily accessible and replaceable. Thanks to the technical room hidden just behind the movable wall it is possible to easily access and repair or replace all appliances.



■ different wall configurations





BEACH BAR

Antónia Pohanková

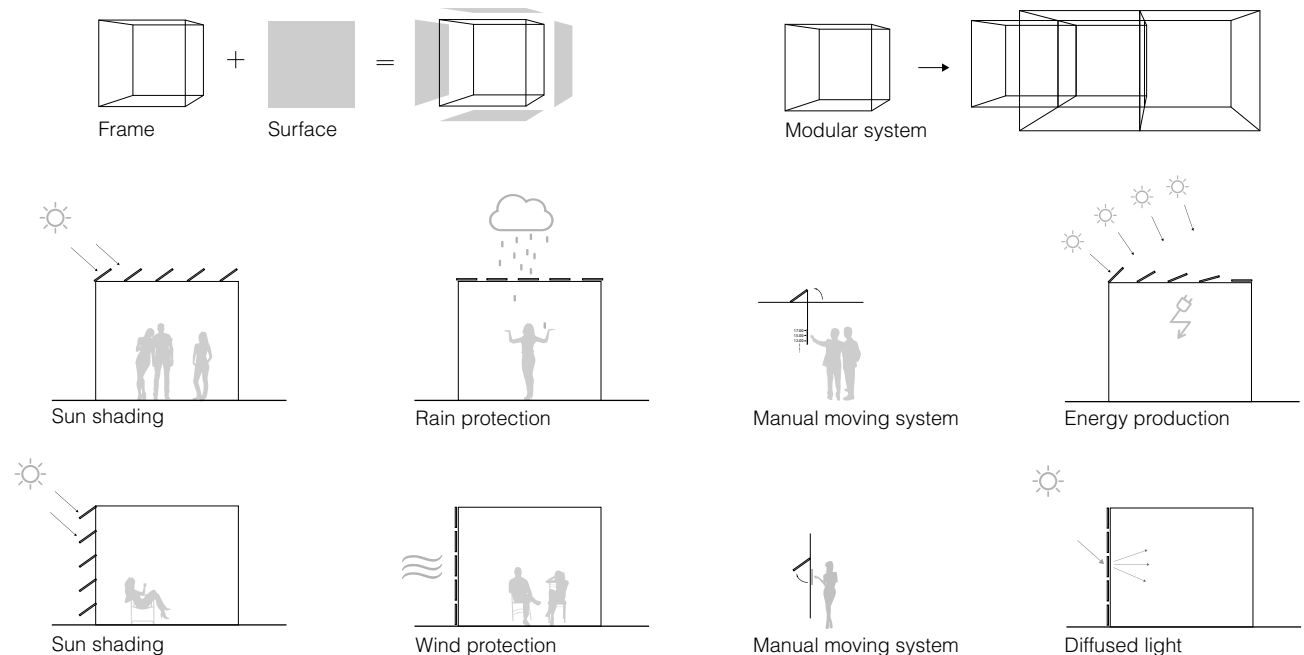
The beach bar is designed as a modular system made of wooden frames. The different types of surfaces applied on the frame create a space division inside of the bar as well as provide various functions such as shading, wind protection, rain protection and energy production. The manual solar tracking system allows people to move the solar cells themselves according to the hour during the day. Single-axis rotation follows the sun path and therefore increases the energy production and let people explore effectivity of PVs. The impact of rotation is showed in the table, calculated for stable and tracking systems. The area of PVs needed to cover the energy consumption significantly decreases.

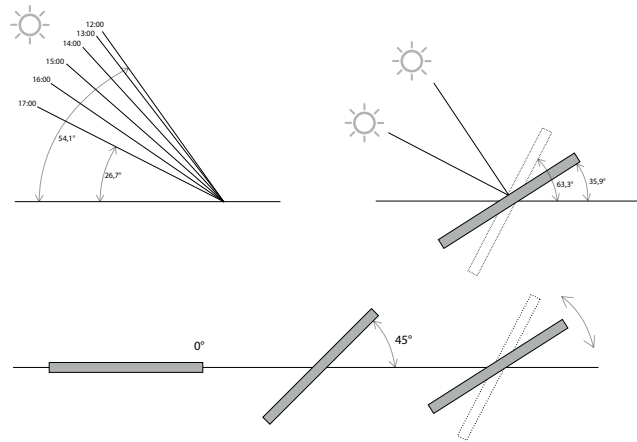
The same system is used for wall-panels, so users are able to change the positions and create the desired atmosphere of the bar. Moreover, the modular system of the beach bar is suitable for many diverse compositions of surfaces with different floor area what make this structure optimal depending on the required capacity.

The design of the bar is affected by DGNB criteria, where the main roles play user control, life cycle impact assessment and deconstruction and disassembly. Secondary, visual comfort, responsible procurement and adaptability of technical systems.

The materials used for the beach bar are wood and polycarbonate sheets. Wood is completely biodegradable, natural renewable material used for frame structure, floor and furniture. At least 80% of the wood should be certificated. The low energy demand for production and low environmental impact together with the carbon storage capacity make this material ideal for sustainable building. The wooden frame is assembled by traditional joints to avoid usage of other materials with higher environmental impact. The whole structure of the beach bar is lifted above the ground on the short wooden pillars to avoid damage caused by moisture.

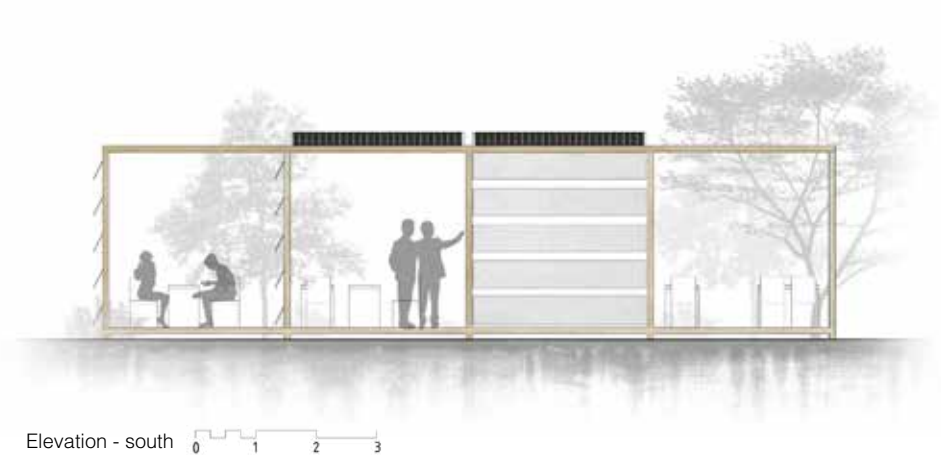
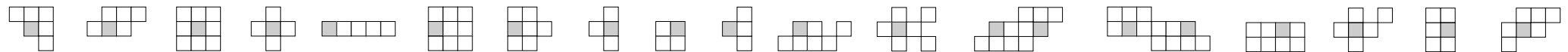
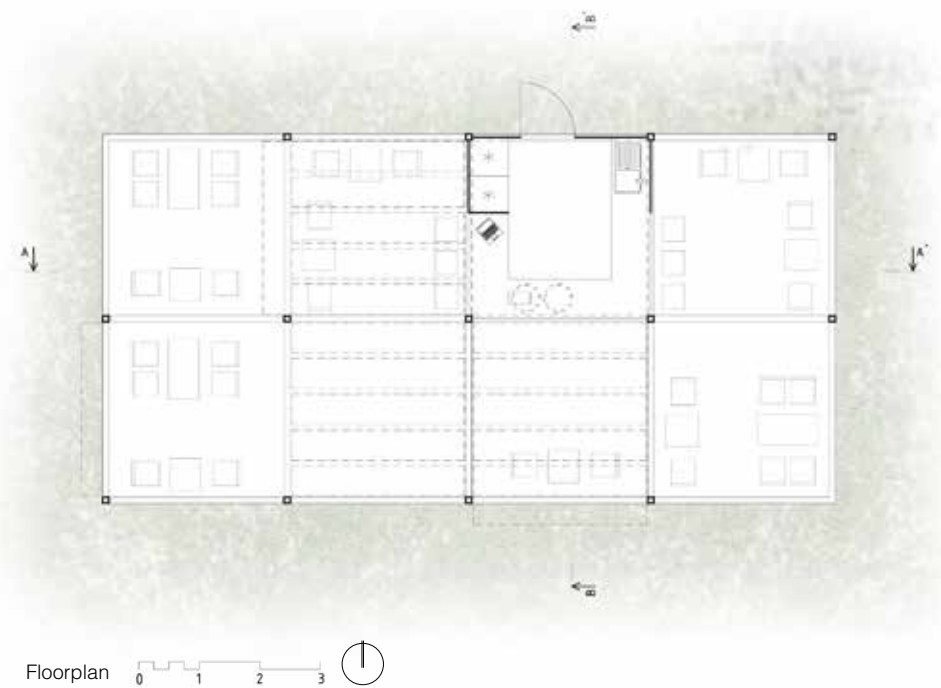
The polycarbonate sheets are used only for wall-panels, to create the shading and diffused lighting inside the bar. It is 100% recyclable material with better mechanical properties than glass.





Total energy demand 10,46 kW/day
Area of collar cells:

System	Area of solar panels (m ²)
Stable 0°	35,4
Stable 45°	29,8
Horizontal tracking system - single axis	22,3

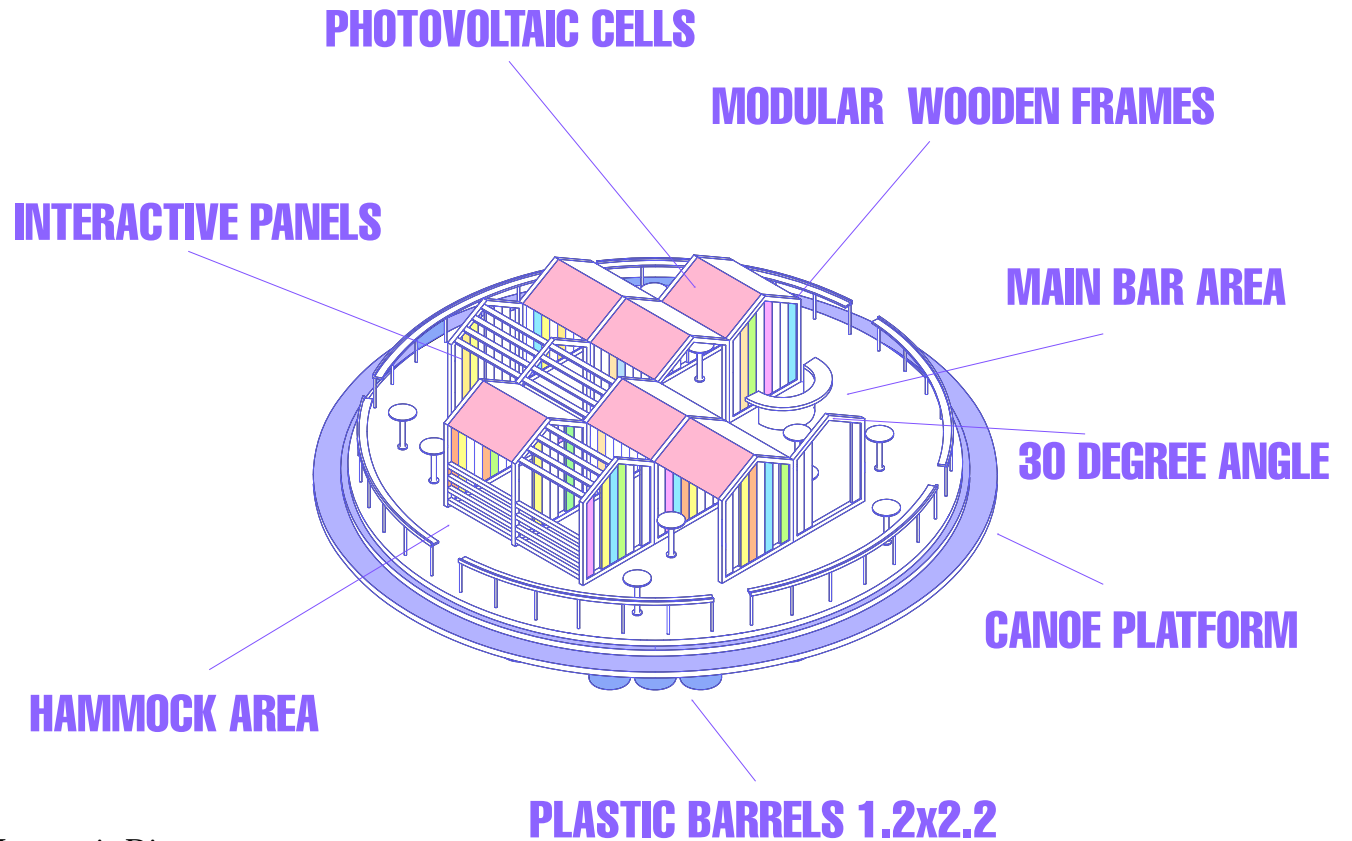


FLOATING BEACH BAR

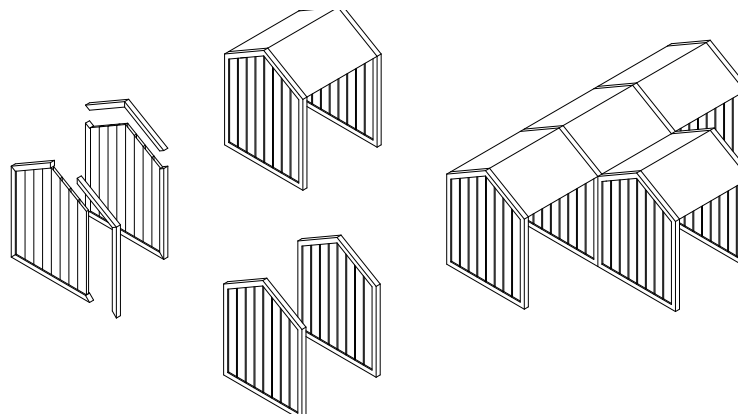
Jeppe Stubberup

LIFEBOAT CITY

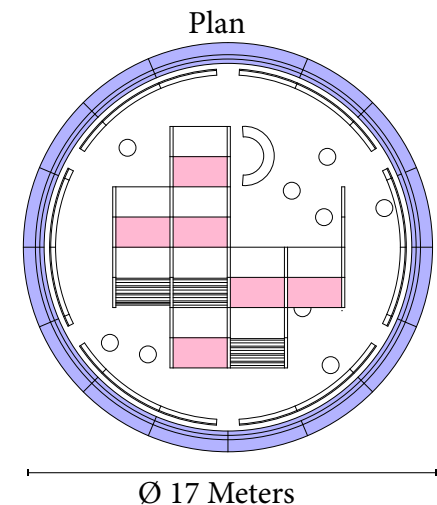
The concept behind Lifeboat City started with inspiration from Brendan Gleeson's future predictions on the next urban condition, namely the lifeboat cities. These cities are a result on the devastations on our civilizations caused by the lack of solutions especially regarding the environmental threats that modern society is creating, due to the lack of sustainable initiatives. These cities will act as a middle step between the salvation of a privileged segment of the population, and the beginning of a new era reconstructing and adapting to the ruins of the old world. This beach bar pavilion is intended to create a playful and engaging social platform and catalyst, which serves as a literary as well as metaphoric example of this predestined future condition. It serves as a reminder of why engaging towards a positive strategy towards the environment is more critical than ever before. The beach bar is also intended to represent an integrated design solution that exemplifies some building strategies that are applicable in the aim towards this, as well as to serve as an urban element, creating a social and memorable environment with a positive and fun atmosphere.



Isometric Diagram



Assembly Method





Beach Bar

Quazi Wafiq Alam

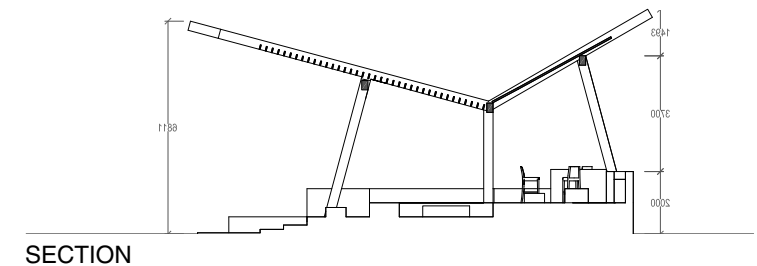
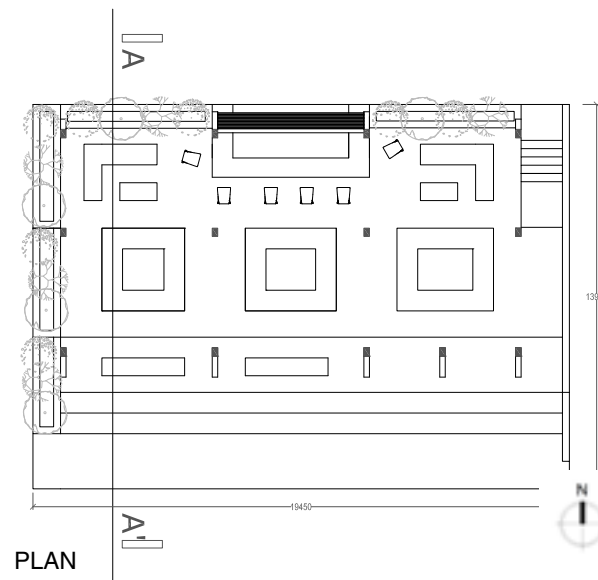
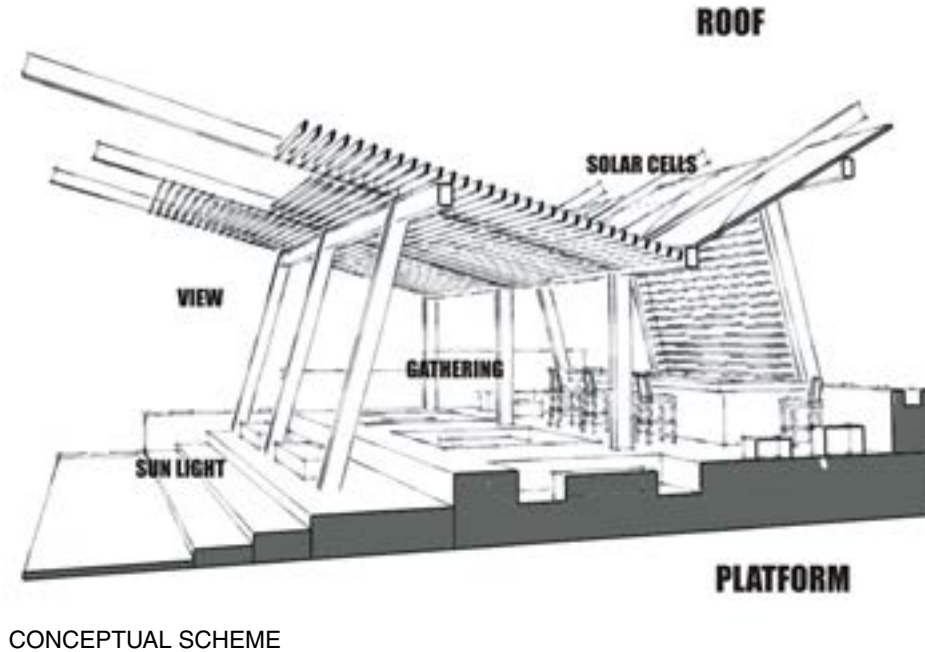
I came to Denmark to study from Bangladesh. And one of the most interesting thing that I observed here is the people's relationship with sun. When ever there is good sunlight people are always outside enjoying the sun. So when I decided to design the Beach Bar I thought it would be nice if the bar provides spaces for people to enjoy the sun and have a good time.

The beach bar has two distinctive components. The Platform and the Roof. The platform is conceptualized as a place which enables people to gather and communicate. The openness of the space also enables uninterrupted views of the waterfront. The steps in the platform work both as a seating area and a place to enjoy the summer sun. The roof works as an element which provides shade and contains the solar cells which is the sources of power supply for this structure. The use of lamellas in the roof creates semi-outdoor spaces in the interior of the bar. More over the openness of the design ensures cross-ventilation and natural light which confirms to good indoor environment quality.

On top of the roof at the back, the solar cell attachment system is placed, where each panel is oriented 35° degrees towards the southern sun, the angle is deliberately chosen as the analysis have shown that the angle provides for the most solar radiation during the warmest summer month (at which the DGI 2017 games will be held). The solar calculations are elaborated below.

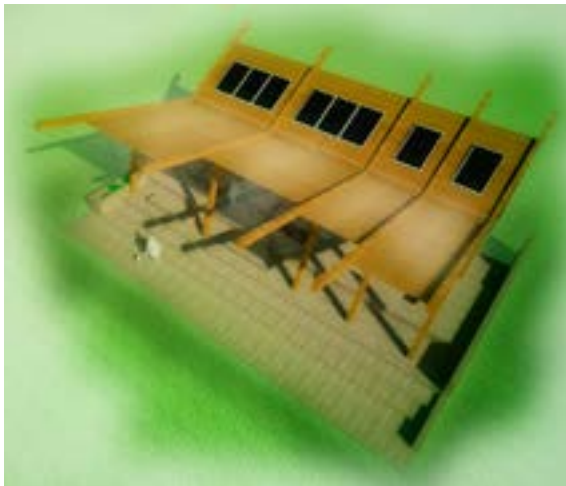
As the roof where the solar panels are inclined 35 degrees so the solar panels only have to be angled directly towards the south (180° degree azimuth).

The natural ventilation has only been worked with on a passive level, where the openness in elevation allows the primary west-south-west wind to freely pass by the beach bar, thus having no obstructions. Nearby context has been taken into consideration, where the building constituting Aalborg Kommune's Tekniske Forvaltning have been used in a wind simulation to clarify how to behind the building the wind speed is normalized. From the simulations it can be concluded that on average, the wind speed is normalized around 15-20 meters behind the building.





VIEW OF INTERIOR



Venturi Pavilion

Michael Skov Thomsen

The pavilion aims to be a meeting place for the DGI attendances and in a longer perspective be a conference/meeting place for the municipality. By utilizing the wind conditions at the site, the pavilion acts as an informative (wind speed) and visible object from distance. The inspiration for the pavilion is the container cranes and the temporality of containers.

To maximize the effect from the “wind turbine” the Venturi effect is calculated and applied to the design. Further calculation show that the effect can be tripled by narrowing down the middle of the container. This informs the design, determines the shape container, and illustrates at dynamics of the wind.

DGNB CRITERIA

ENV 1.1 LCA (Life Cycle Analysis, the CO₂ levels and GWP)

The effect on the environment. All materials in the pavilion are recycled materials (old container, old I-Beams,) the only new material is the insulation and the wood in the occupant container. The materials are from the local harbour area and even though the transport is not included in the LCA it is good for the environment to use local materials.

SOC 1.1 Thermal climate

The occupant container is insulated to insure a relatively good thermal climate. Indoor temperature between 21-26 degrees. Thermal solar panels could be used to insure a prolonged period of use.

SOC 1.4 User satisfaction

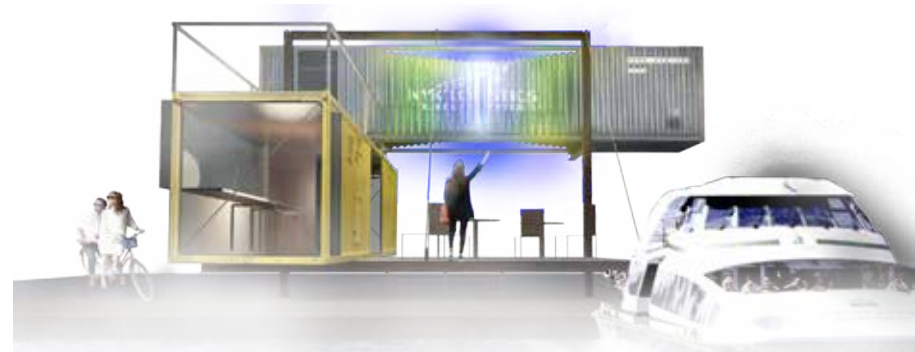
E.g visual Comfort (light into the occupation container; daylight factor)

SOC 2.2 Public accessibility

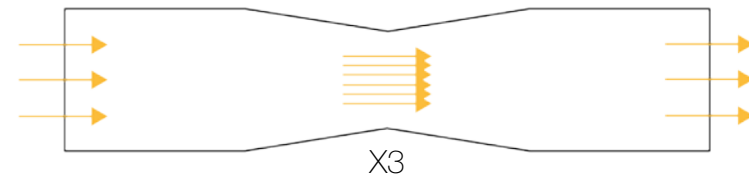
Integration of the building in surroundings, opening of the outdoor areas to the public, internal public areas, variation of the different facilities, ownership of the building.

ECO 2.1 – Flexibility in terms of other use

Space efficiency, ceiling height, depth of floor plan, vertical access, floor layout, structure and building service.



UTILIZING THE ENVIRONMENT



The Venturi effect increases the effect from the turbine by 3 times



ART & TECHNOLOGY
BA4

Art & Technology BA4 students

Catja Græsborg Agnstoft, Radu Gelu Albutiu, Camilla Brix Andersen, Cody Lukas Anderson, Brandon Charles Bjerre, Casper Schacht Christiansen, Christina Anine Cliff, Nadia Ali Hansen, Sara Mia Gøtghe Hansen, Tenna Rasch Hansen, Randall Kenneth Heath, Malte Bjørk Tjalfe Feldkamp Herold, Magda Honorata Hertzberg, Jens Hougaard, Signe Aagaard Häggqvist, Malthe Roed Jensen, Benjamin Hugo Lager, Merle Laporte-Petersen, Mads Deibjerg Lind, Cecillie Lundsgaard, Kamilla Udsen Jørgensen Nielsen, Emma Ella Petersen, Imre Márk Petkov, Suvi Kristiina Pölönen, Simone Bøgelund Rasmussen, Kristine Lindgaard Sundwall

ART & TECHNOLOGY
BA4

Project group 1
The Shipyard
page 86-87

Project group 2
Syrens Have
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Project group 3
Flux
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The Art & Technology assignment

The objective of ArT4, “Place and Space of Embodied Interaction” is to introduce the students to problem areas and designing solutions in relation to embodied interaction in interactive space, places and installations. Each project group focuses on interactive element(s), the experience for the audience and the specificity of the urban (public) site (and its temporary and/or future use) as essential elements of their, interactive installation that promotes, provokes, stand in opposition to, symbolises or represents in some form a space of interaction and transformation. The students held a bodystorming session at Stigsborg site, where they walked through each others life size prototype installations to problem solve and refine their designs.

Art & Technology opgaven

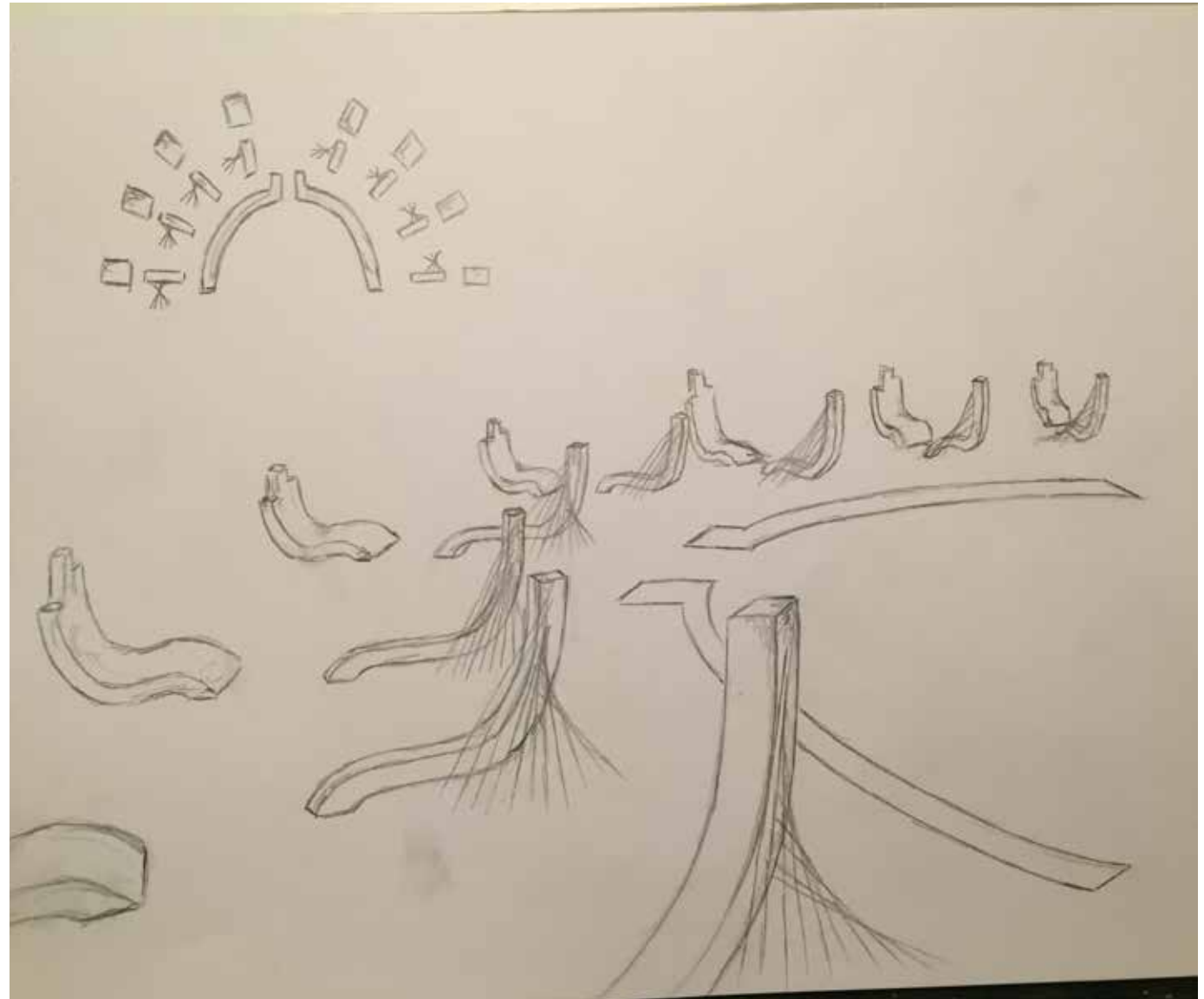
Med overskriften “Place and Space of Embodied Interaction” er målet med ArT4 projektet at introducere de studerende til problemfeltet omkring, samt at udforske design løsninger i forhold til, kropslig interaktion i interaktive rum, steder og installationer. Hver projektgruppe har specifikt fokuseret på interaktive elementer, brugernes oplevelse og det konkrete (offentlige) urbane rum (og dets potentielle midlertidige fremtidige brug) som centrale elementer i deres arbejde med at skabe interaktive installationer. Disse installationer skal promovere, provokere, symbolisere og/eller repræsentere interaktion og transformation i og af rummet. De studerende har igennem deres arbejde undersøgt via metoden ‘bodystorming’ hvordan 1:1 prototyper af interaktive installationer fungerer på Stigsborg Havnefront.

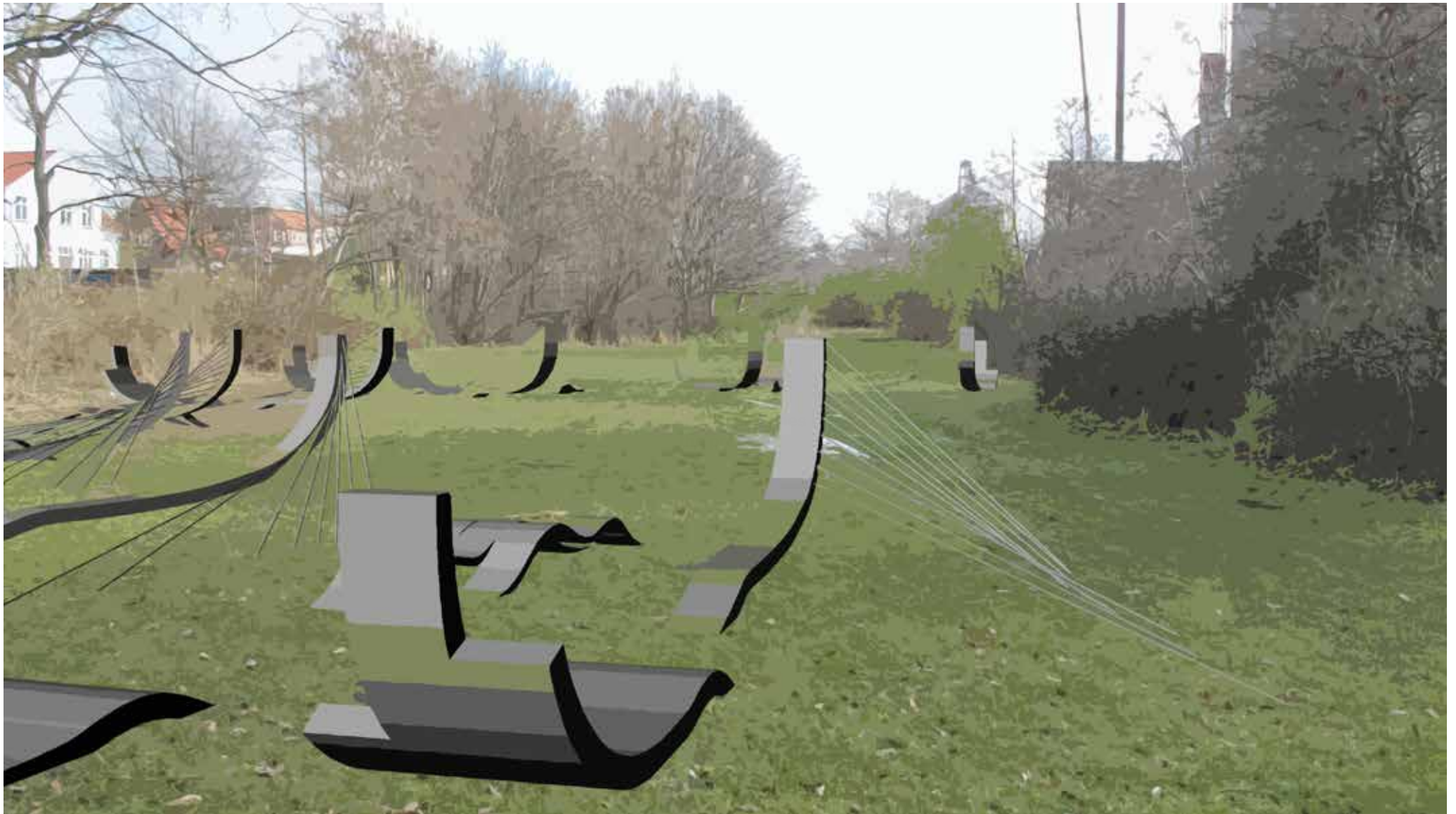
THE SHIPYARD

Group 1: Catja Græsborg Agnstoft, Christina Anine Cliff, Cody Lukas Anderson, Malthe Roed Jensen, Sara Götghen Hansen

The Shipyard, is an interactive sound installation designed to foster a relaxing and playful space for the athletic participants of DGI's Landsstævne 2017 to enjoy. Surrounded by nature, individuals are given the opportunity to either interact and play with the broad variety of sounds, from the eight instruments installed in the site, in harmony with others, or simply enjoy the space as a stop along the walking path, close to the harbour. Aalborg is a city in transition, having gone by many names throughout its long history: Denmark's "center for industry and workers", "City of smoking chimneys" and now, "Paris of the north". Its past is deeply rooted in the industry brought to it by the waters of the Limnfjord, along which it lies; where today one finds the city both as a knowledge-based community and an important hub for the region with its various theaters, performance venues, and museums. Paying homage to Aalborg's industrial past while embracing its transition towards an experience economy, The Shipyard seeks to bridge the gap between the two periods in the city's story through the element of play. This urban sound installation utilises music in order to engage individuals in social interaction as they explore and experience the instruments that comprise the work and the unique space it creates.

The individual instruments, each comprised of two uneven parts, draw inspiration from the old ships that used to dock in Aalborg's harbour, with the 12 strings emerging in an hourglass form from their inner peak as their sails. When touched, said strings activate various sounds, differing between numerous classical and industrial instruments, in order to allow individuals to play and create music in collaboration with one another. The specific sounds made possible for individuals to play, represent the two distinct periods in Aalborg's history, being sounds of industry on the one half, and sounds from classical instruments on the other; the music that then emerges from the collaboration between individuals as they play, merges / bridges the gap between the two.





Syrens Have

Group no. 4.

Suvi Pölänen, Imre Mark Petkov, Mads Deibjerg Lind & Signe Thyrr

Syrens Have is a site-specific sound installation consisting of several concrete sculptures, which, with embedded technology, are given capacitive sensory touch points that react to touch with audio. The installation aims at addressing how we relate to a site in transition. It does this by incorporating the “old” site, what it is now, and it presents a thought on the future. The title *Syrens Have* is a reference to ‘Syren’ or ‘The Acid’ the colloquial name of the now demolished chemical plant and the Stigsborg area in general.

The project’s point of departure was the site itself, a contaminated landfill, undergoing the transformation from an old industrial area to a new urban harbour front. We chose to work with the contrast of the overgrown hills spotted with industrial waste, creating multiple organic objects ‘growing’ from the poisoned ground. Having several elements, we try to make the optimum use of the landscape and lure people in and around the site.

The sculptures will be slightly different from one another in shape (from 60 to 120 cm tall), size, and sound output. Each sculpture will have thematically composed soundscapes from around the area of Stigsborg Havnefront, giving the sculptures traces of sounds that define the area. The sounds will be divided into tracks/clips, that each touchpoint represents and then they can be activated separately or together to create full harmony.

With *Syrens Have* we seek to create a place of exploration initiated through embodied interaction that establishes a connection between the participant and the sculptures, and through the haptic interaction we try to introduce a sense of intimacy, hopefully challenging how people relate to both the sculptures and the site.





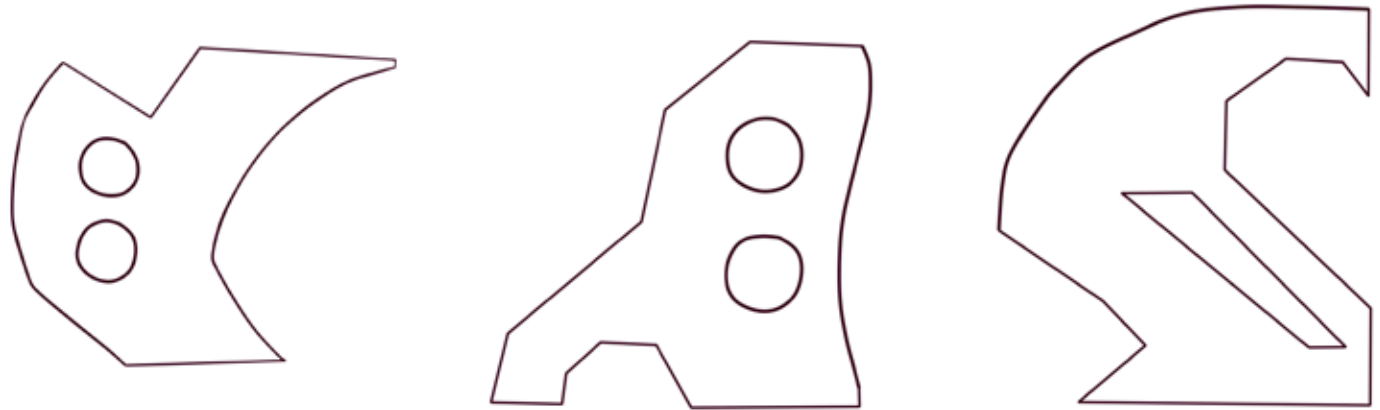
FLUX

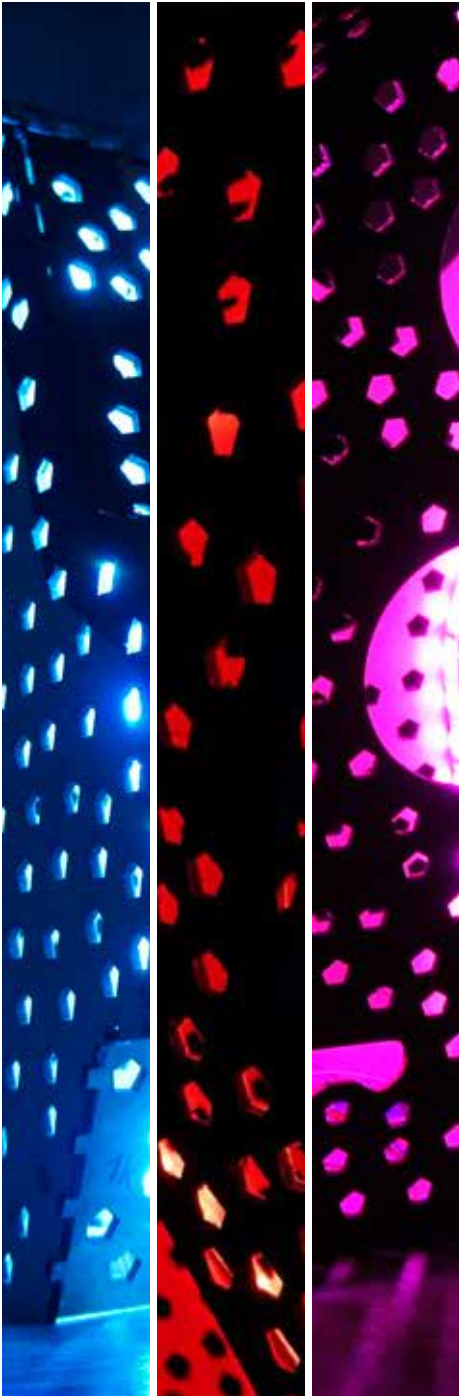
Group 3: Casper Schacht Christiansen, Cecilie Lundsgaard, Magda Honorate Hertzberg and Nadia Ali Hansen.

FLUX is an interactive light installation that is created in collaboration with Aalborg Municipality, in order to enhance the interest in Stigsborg Harbour area. One of the project's main goals is to light up the darkened area behind the industry buildings on the harbour front. The shapes of the sculptures are inspired by the structure and history of the site, but the user might also see some resemblance of animals.

FLUX invites to play and interaction with its responding lights, which gets activated by touch and movement. Additionally, each individual sculpture has sounds assigned to them – also reacting to a user. Each individual sculpture possesses its own personality and reacts accordingly with sound and light.

FLUX integrates the elements of embodied interaction with focus on exploration, collaboration and use of imagination. The multiple options of interaction allow a deeper form of exploration. The interaction changes when the user is nearing the installation, when the user is touching different sculptures and when more than one user is interacting with the installation. The grey painted stripes on the sculptures reacts to touch and the sensors installed when entering the room will pick up the movement of people passing by, allowing the different audio and light transitions.





Catch the Light

Art4 Group 4:

**Jens Bugay-Hougaard, Emma Ella Petersen,
Simone Bøgelund, Kristine Sundwall, Malte Herold.**

Abstract:

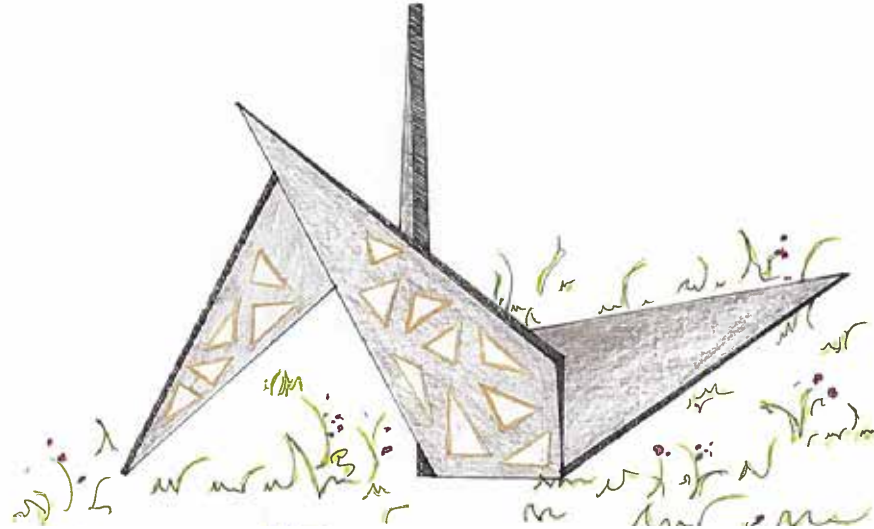
Catch the Light is three interactive sculptures combined with urban gameplay aiming to confront the common aesthetics of gaming, created for the DGI National Sports Event 2017. The striking sculptures are each providing three game types available with audible and visual feedback. Once a game is started buttons will light up colourfully and the participants will have to chase them in a high speed with increasing difficulty level.

Concept:

Our goal is to activate the participants physically in a playful and fully embodied way and catch attention through the combination of brutalist sculpture and classic gameplay, thereby challenging the common understanding of gaming aesthetics. The sculptures are heavy, dramatic, and with sharp edges, whereas a common game interface is designed to be practical, lightweight, and soft. The three sculptures have identical structure but will be rotated in each their own way creating unique visual and functional expression. The game is incorporated on the surfaces according to the rotation, granting variation in body movements for each sculpture. The game will increase in difficulty in proportion with the skill of the participants to create an ever challenging and interesting experience for spectators as well as participants.

Design:

The design of Catch the Light is inspired from brutalist architecture to accord with the industrial aesthetics and history of Stigsborg harbour front, with construction in solid concrete, further contrasting the usual perception of trivial gaming interfaces. Each sculpture will be between three and four metres in height with heavy and pointy surfaces stretching dramatically in various directions making its silhouette visible from the Aalborg side. The unusual play-buttons are integrated seamlessly into the sculptural aesthetics with copper frames to detect the touch of a hand and a plexiglass surface for the colourful light of the buttons to shine through.





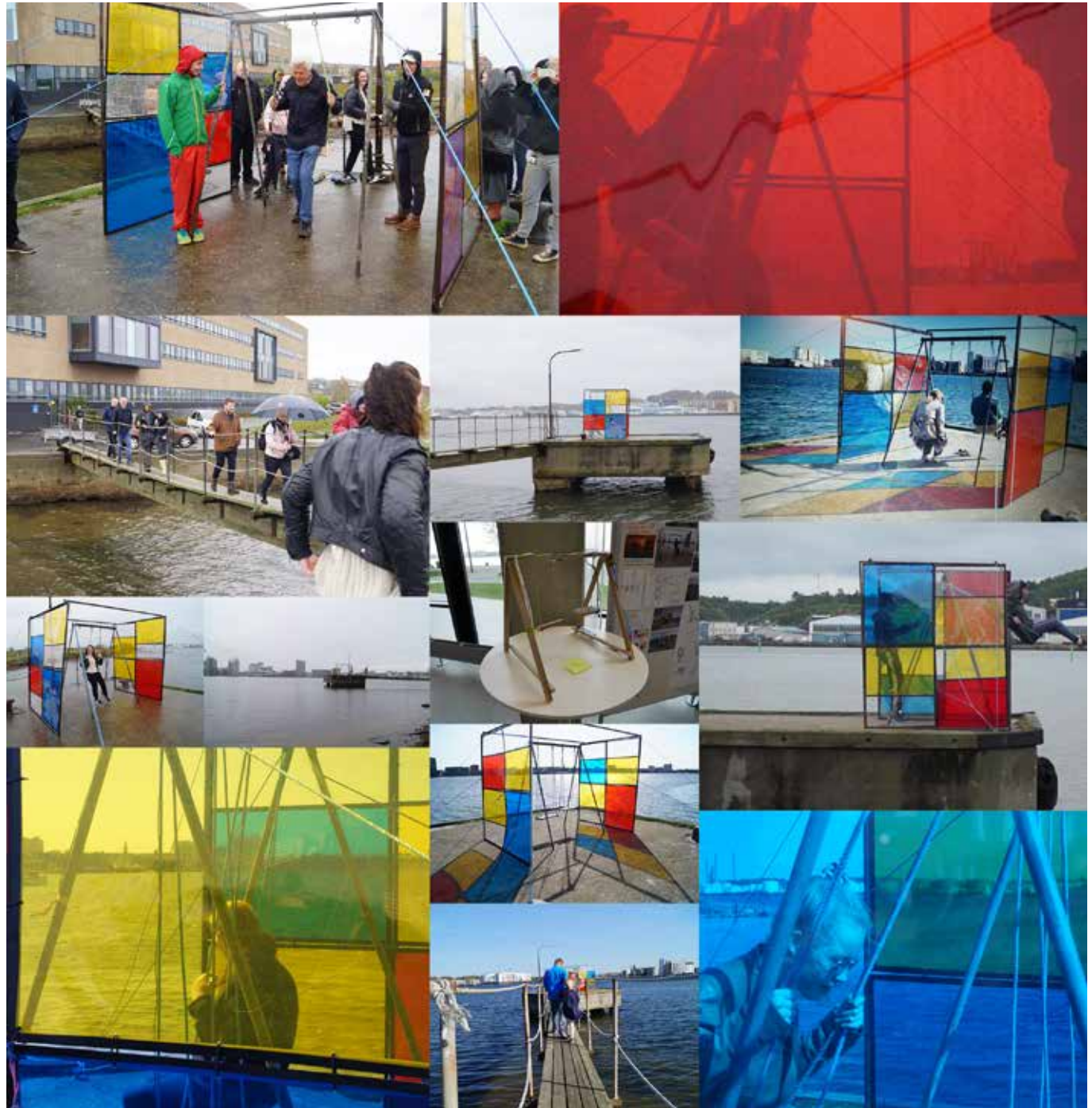
Akvarel

**Group 5, Kamilla U. J. Nielsen, Radu Albutiu,
Brandon Bjerre & Camilla Brix**

The 4th semester theme ***Place and Space of Embodied Interaction: A site in transition*** was established in conjunction with the Architecture and Design/Urban Design studies from Aalborg University and in cooperation with Aalborg municipality to create a proposal for Aalborg municipality. The task was to create an art installation for a DGI event taking place in 2017 at Stigsborg Brygge therefore addressing the temporal and long term issues of use within the site. Stigsborg Brygge is an old industrial area, referred to as Syren (the acid) by locals. The area is perceived negatively and is associated with pollution from prior use. While developing the installation we were asked to think of a Smart City. Smart City finds solutions for problems regarding sustainability, environment and communities etc. Our proposal for the municipality is a concept of an interactive art installation. If chosen by the municipality, it will be built by engineers and for longer term usage.

"How can we create an interactive art installation that will raise awareness about Stigsborg Harborfront and create affordances that will change the way the area is perceived by the surrounding community; transforming the image of the former industrial site into one of a modern urban space?"

Using this problem formulation, the group explored aesthetics in conjunction with riskinfused, emotionally stimulating interactivity to create a site specific art installation that promotes interplay and potentially heightens the visitor's awareness by creating an emotional reaction in the participant that would replace the preexisting perception -of Stigsborg Brygge.





Future Design

The final installation is designed to be larger, specifically the plexiglass construction, which will be more visible and attract more visitors. However, the question of safety is still problematic. Thilo Frank's swing is placed completely above the water, in this way it is designed so the 'interactors' jump off of it in the (not so deep) water. In our case, the placement of the swing on the edge of the pier presents a higher risk factor in case people want to jump off of it. During the exhibition we had a visit from the Stigborg site administrator Erik Møller, who stated that he is keen on the idea, but in his opinion the swing should be placed at least one meter away from the edge. This would be a rather big detriment, since it would substantially decrease the desired emotional response and risk factor.

Embodied Interactive Swing (EIS)

Group 7: Randall K. Heath, Tenna Rasch Hansen, and Merle Laporte Petersen

EIS is a swing designed to encourage not only relaxation but to encourage mutual exchange or interaction between two people. Its seating is confronting therefore initiating people to face each other, which could in some ways construe the swing not so much as a conversation piece but a conversation activation piece. EIS in some implications could also be dubbed with beguilement as an 'arc generator' that draws imaginary curved lines in space, a 'circumnavigator' that allows daydreaming to sail around the planet. EIS is a place to be to reflect an emotion, a life step or even a simple snooze. EIS is a tactile swing for senses in midflight, it hybridizes the senses within that momentary pause between one swing direction and another. A 'planetary nomad' as it has also been imagined is where the piece serves as a space to travel the mind, to unwind and relax. Like the swing in a playground we approach the piece with generally one thing in mind which is playfulness. With EIS we learn with our whole body. The interaction arrives with a tactile notion leading us to step in and swing. It may seem that play is a retreat or relief from learning but it is through playing that we learn.



