

EXPO  
2020  
DUBAI  
UAE



Translations see page 7

FORENINGEN  
EXPO 2020  
DK

# The Spark Between Us

## Connecting Minds - Creating the future

Enabling students as SDG Ambassadors at the Danish Pavilion



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# 1. The Vision for EXPO 2020



The purpose of the World Expo 2020 in Dubai is to become the unified meeting point for the global community to discuss and decide on innovative ideas, which can resolve global the global challenges outlined in the Sustainable Development Goals (SDGs) for the well being of the global community.

Expo 2020 Dubai will be a global destination where everyone can learn, innovate, create progress, and have fun while sharing ideas and working together. The narrative for the Expo 2020 is to enable students as change makers and more than 180 countries and many millions of people will join hands to find creative solutions to the challenges outlined in the Sustainable Development Goals.

Through the theme, 'Connecting Minds, Creating the Future', Expo 2020 Dubai aims to provide a platform to foster creativity, innovation, collaboration between states, communities, companies, students and other stakeholders. This is underpinned by three subthemes fundamental in addressing the most pressing issues of our time:

- Sustainability: How do we live in balance with our planet while creating opportunity for all?
- Opportunity: How do we create a better, happier, more inclusive future for all?
- Mobility: How do we move people, goods, and data to create a more connected world?



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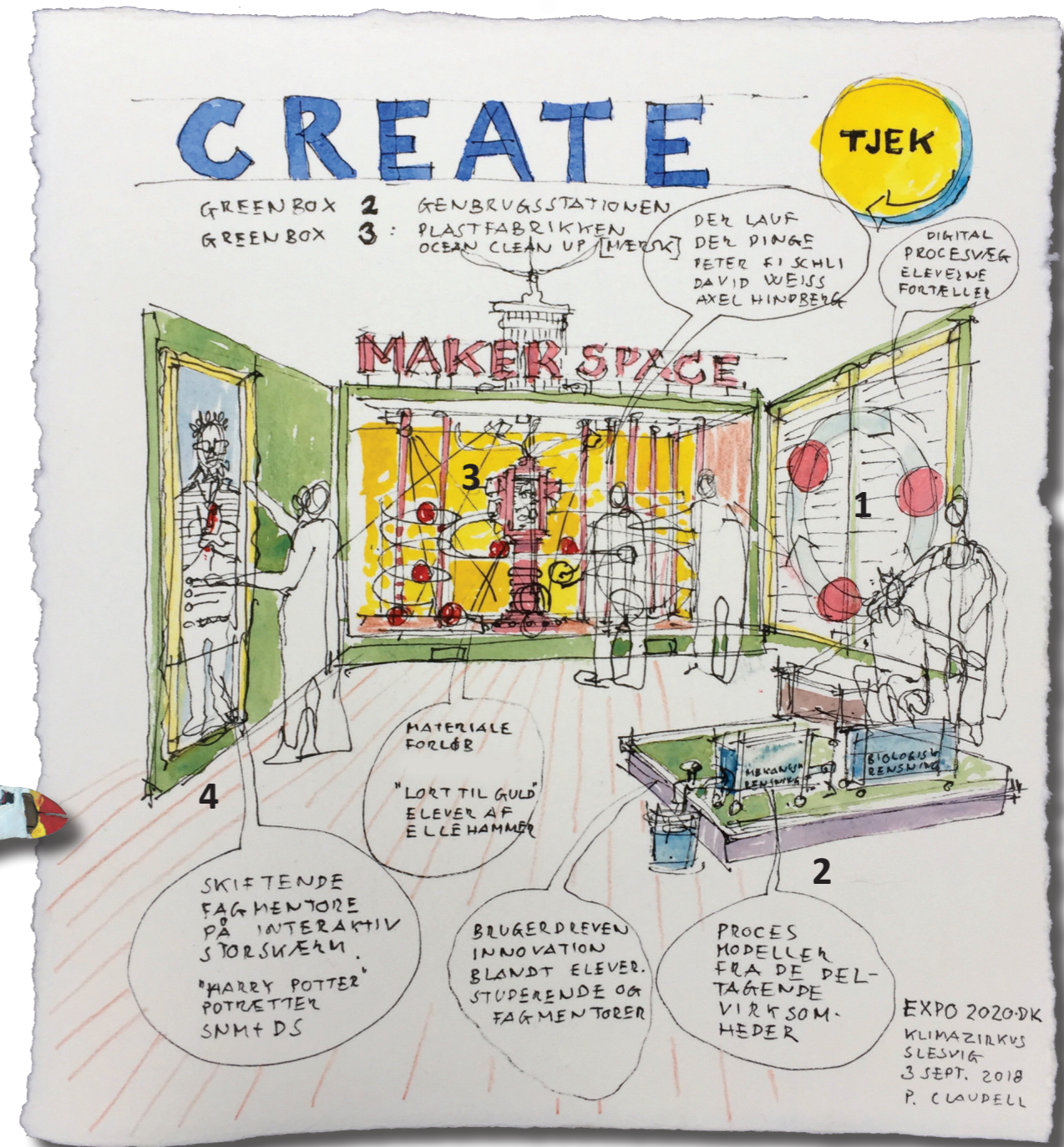
## 2. Enabling Students as Change Makers



EXPO2020DK has chosen to integrate a focus on students in the heart of the project by realizing we need to engage our global students and provide them with inspiration and tools to address the grand sustainability challenges outlined in the Sustainable Development Goals we collectively are facing.

Through a dedicated school programme, Expo 2020 Dubai UAI will engage directly with teachers to help them explore Expo 2020's vision inside and outside the classroom. Schools are integral to the success of Expo 2020 and the aim is to offer initiatives that will inspire educators and students to be act and see how they can be a part of the change. Their initiatives will cover, workshops, Expo 2020 clubs, Expo 2020 champions, online learning resources, and much more.

It is expected more than 35.000 students and 500 schools will be reached through Expo 2020.



1. Digital process wall  
The students tell their solutions
2. Process model from the sponsoring companies
3. Material progress
4. The companies tell how they work as a professional mentor for school students



### 3. The Danish Way

#### Co-creating SDG solutions with students

The ambition and concept of the Danish pavilion has a direct link to Expo 2020's focus on students. Denmark's ambition for Expo 2020 is to integrate students in the heart of the Danish pavilion and create a playground where students, visitors and companies can explore and co-create solutions based on Danish innovations supporting the Sustainable Development Goals.

Hence, the Danish pavilion will through a lively experience showcase how we approach sustainable innovation via a focus on interdisciplinary, the meeting between people, between institutions and companies, and between students and professionals across traditional boundaries. All in order to drive innovation, create new solutions and ensure development addressing the sustainable development goals.

Inspired by the theme, 'Connecting Minds', we will alongside the Expo in Dubai create a living lab in Denmark where Danish students, teachers and companies are able to connect and co-create with their counterparts at the Expo in Dubai.



## 4. Impact:

### The Danish pavilion will:

- Inspire students and visitors while promoting Danish competencies in education and learning with a focus on sustainable innovation and collaboration
- Provide Danish public and private organisations with an exhibition platform based on collaborative education to be used before and after the EXPO
- Attract attention from global talents to Danish companies developing sustainable solutions
- Showcase and promote Danish solutions supporting the Sustainable Development Goals



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1. The ice is melting and Sea level continues to rise
2. Ocean Clean Up Plastic Station

## 5. The Sustainable Development Goals as the Framework



The SDGs both represent immersive business opportunities for Denmark and are in line with Danish values and aspirations for the society. The SDGs hence naturally serve as the framework for the Danish pavilion.

SDG no. 17 states that partnerships are essential to fulfilling the goals. Achieving the goals will require collaboration and the Danish pavilion will gather public entities, organizations, companies, big and small, to engage students, inspire and join forces to show why Danish solutions play a vital role in achieving the SDGs.

### 5.1 We Work in SDG Clusters

The Danish pavilion will be structured around four SDG clusters containing two or more closely related SDGs. The SDGs chosen reflect areas with a strong Danish know-how and each run for approximately 1.5 month. From a communication perspective, this is chosen to clearly communicate to the audience, which specific themes the students in the open school and Living Labs are working on. This, in turn will also make it easier for the Danish companies represented to showcase their solutions in collective manner.

#### The SDG clusters chosen are described below:

- No. 2: zero hunger & no. 3: good health and well-being
- No. 6: clean water and sanitation & no. 14: life below water
- No. 7: affordable and clean energy & no. 13: climate action
- No. 9: industry, innovation, and infrastructure, no. 11: sustainable cities and communities & no. 12: responsible consumption and production



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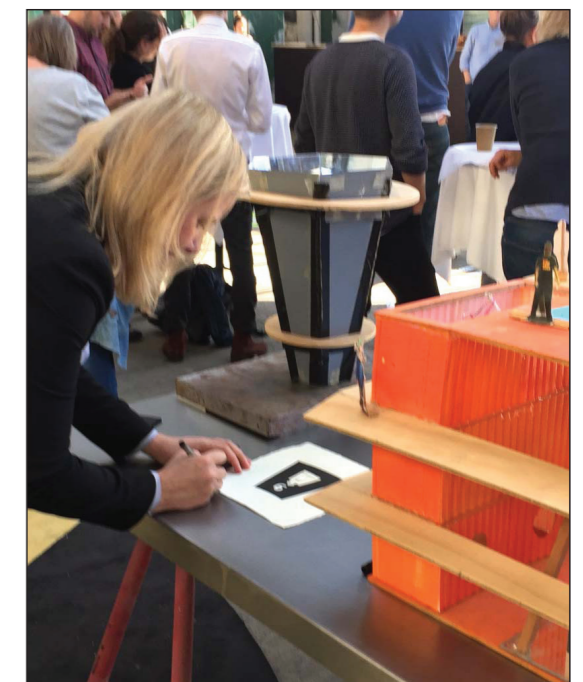
### 5.1.1 Who Will be Represented in the Clusters?

The organization behind the Danish contribution to Expo 2020 will only invite companies, which at a strategic level are dedicated to supporting the Sustainable Development Goals. These are companies with core solutions or services directly supporting the SDGs or companies shifting their traditional business towards investing in building new solutions and innovations supporting the SDGs.

This means, the SDG clusters and the pavilion only will represent companies dedicated in ambition and action to sustainable development.

### 5.1.2 We All Matter – Big & Small Companies Will be Present

All companies have at one point been a start-up and in order to achieve the SDGs we need new start-ups design sustainable solutions to emerge. The technologies of today simply cannot alone ensure a sustainable future for all. Following the Danish tradition of collaboration, start-ups relevant to each cluster will also be invited to share their innovations, inspire and co-create with students, visitors and other companies.

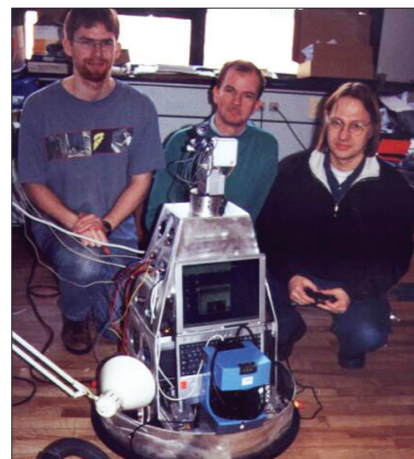


## 6. How the Pavilion Works

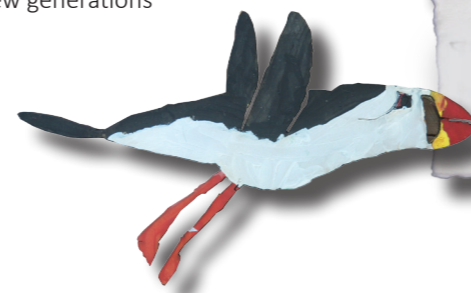


The pavilion will be based on two formats; open schools and Living Labs where students, primarily from the Middle East and Africa, work through methods, tools and didactic developed in Denmark.

The students co-creates with mentors from the attending companies through an innovation or engineering process, which will facilitate the interaction between the attending companies and the students.



**GuideBot connects digital Denmark and Dubai**  
 In a Building Workshop Ole Ravn and Nils Andersen, in 2002, assisted a group of students from the Department of Automation and Robotics, in developing a GuideBot for Experimentarium's exhibition "Robot is loose". GuideBot is still running on DTU and is currently working as a rolling platform for new generations of students.



1. Young people tell about their projects
2. The companies tell how they work as a professional mentor for school students
3. The Train will carry student projects





## 6.1 This is how it works

### Before the EXPO:

1. The facilitators of the workshop and the companies outline a real world problem relating to the SDG's.
2. Danish students use innovation and engineering processes to engage with the real-world problem.
3. The student's solutions will be evaluated by the companies and the best solutions implemented in the Danish Pavilion.

The workload for the companies is estimated to be 5 working days - distributed on a period on 30 days.

### Under the EXPO:

The Danish Pavilion will invite international students to attend the workshops.

The theme of the workshops will rotate between the SDG's. Your company will be involved in workshops relating to the SDG's you have decided to address - each theme run for approximately 1.5 month.

1. The facilitators of the workshop and the companies outline a realworld problem relating to the SDG.
2. International students use innovation and engineering processes to engage with the real-world problem.
3. The student's solutions will present their solutions to the pavilion's visitors.



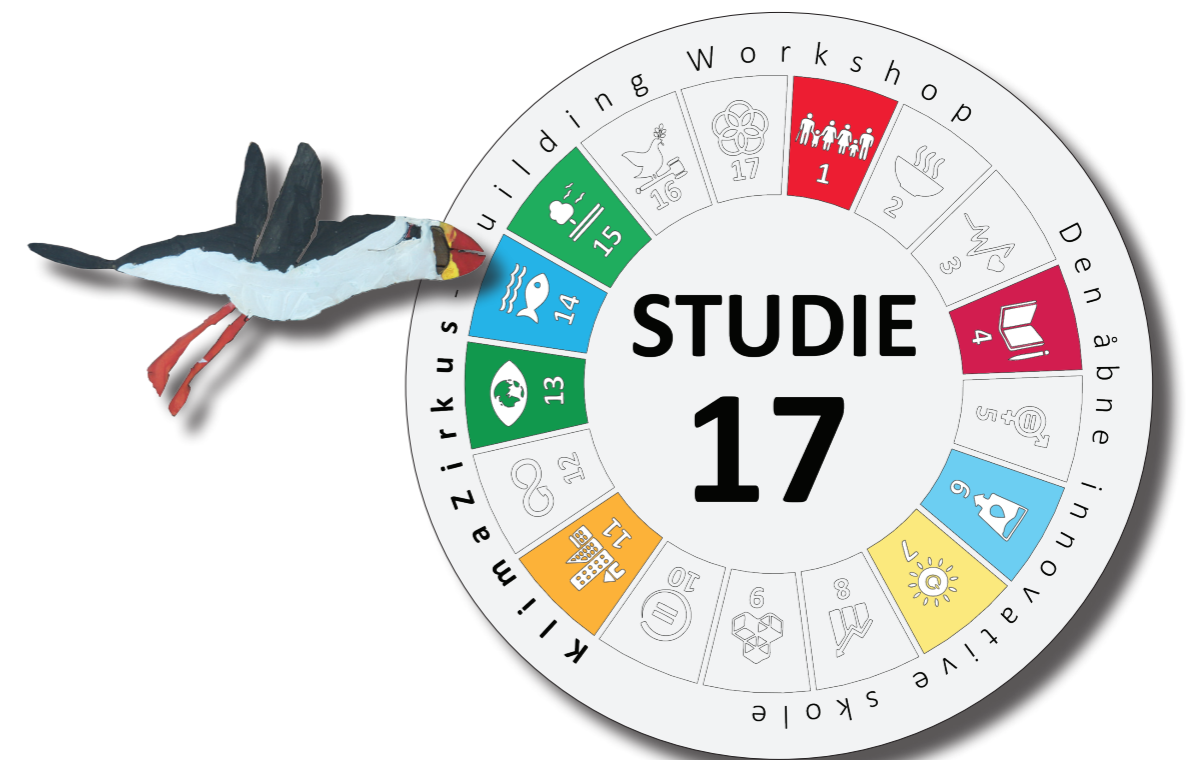
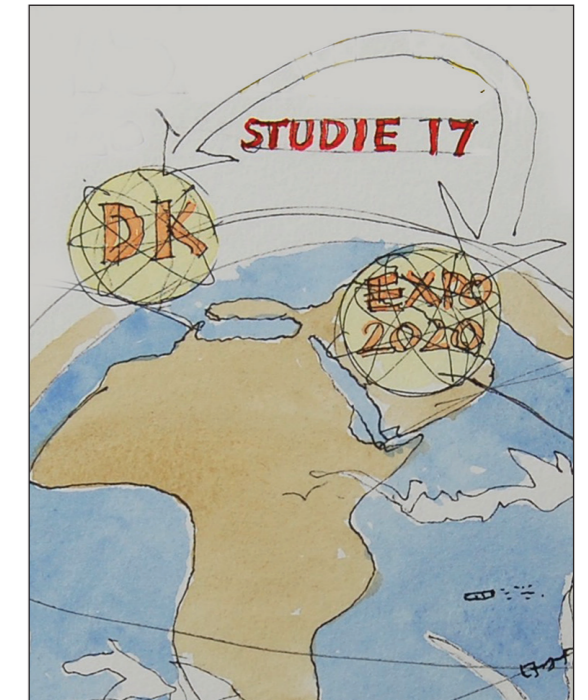
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## 6.2 Connecting Denmark and Dubai

As natural continuation of the theme, 'Connecting Minds, Creating the Future', a pavilion in Denmark will be built in order to facilitate a live connection between Denmark and Dubai during Expo 2020. This mean both students in Denmark and Dubai will work with the same challenges and sustainable development goals.

The connection between Danish students and Expo 2020 will be supported by the integration of Danish trainee teachers from VIA University College at the Danish Pavilion. The trainee teachers will help with manning the pavilion and VIA University will be able to support the project in terms of both developing the methods and processes that will be used at the Expo, but also by making their students ready for manning the Expo pavilion.

A partnership with Universe Science Park, a natural science adventure park where children and adults play and learn about natural science and technology, has also been established in order to make the trainee teachers ready for Expo. Universe Science Park will inter alia provide courses for the students of VIA University in how to activate visitors at an exhibition.





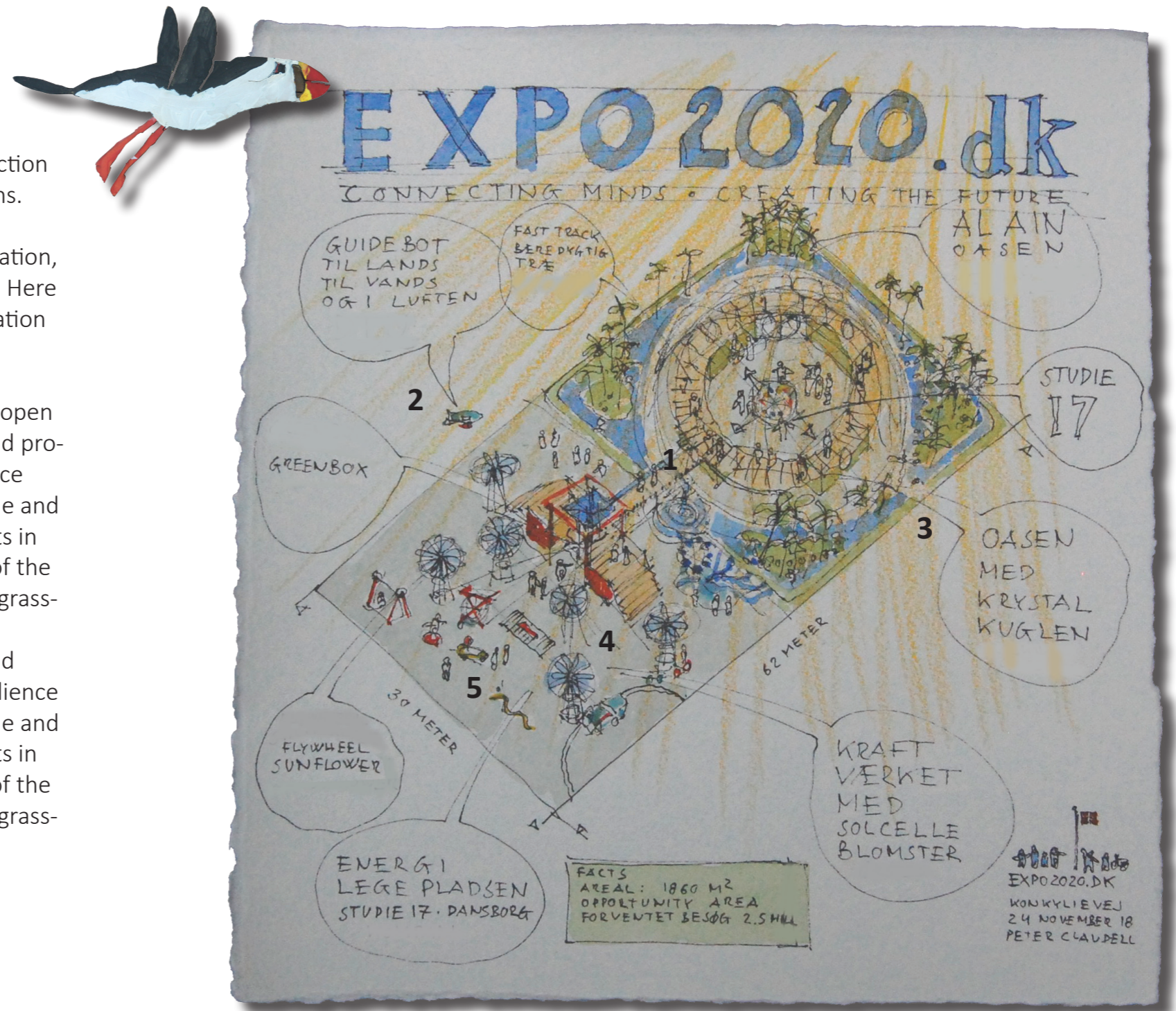
## 7. The Visitor Experience



Arriving at the Danish pavilion the visitors will be met by an introduction to how we in Denmark work with innovation and create new solutions.

The visitors will in the introduction experience how education, innovation, interdisciplinary cooperation is cultivated, prioritized and developed. Here we share how Denmark is a country committed to sustainable innovation through selected cases, companies, and organizations.

The visitors continue in, a loop where they discover a live show with open school and Living Labs interactive stations and areas where young and professional work and demonstrate sustainable solutions. As the audience moves around the loop, they look up, into and down on young people and professionals who work in and around the pavilion's room. The guests in the Danish Pavilion get an experience of getting into the workroom of the Danish companies and experiencing the sparkle between the young grass-roots and the established companies. discover a live show with open school and Living Labs interactive stations and areas where young and professional work and demonstrate sustainable solutions. As the audience moves around the loop, they look up, into and down on young people and professionals who work in and around the pavilion's room. The guests in the Danish Pavilion get an experience of getting into the workroom of the Danish companies and experiencing the sparkle between the young grass-roots and the established companies.



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- |    |   |    |                              |
|----|---|----|------------------------------|
| 1. | Fasttrack                                 | 4. | Power plant with solar cells |
| 2. | GuideBot At land, at water and in the air | 5. | Energy playground            |
| 3. | The oasis with the crystal ball           |    |                              |

## 8. The Design of the Pavilion



The Danish Pavilion will be partly covered with covered exhibition and workshop facilities and a walkway where visitors can move around and through the exhibition and pavilion. The design will be based on Danish competences around architecture and planning and will make use of solar energy, natural ventilation and shadow and will demonstrate how Danish architects and engineers base their work on Danish traditions and approaches to sustainability when they design into a significantly different local context, culture and climate.

The pavilion's outdoor concept creates an exciting experience for the visitors and is in itself inspired to think differently and enjoy. The landscaped garden with local fauna creates a rare recreational area in Dubai and demonstrates how Danish architects and landscape architects are leaders in integrating the green areas when creating new spaces. The Danish Pavilion and the integrated landscape in and around the pavilion are being developed by SLA.

### Facts about the pavilion:

- Total site area: 1860,11
- Location: 'Opportunity' area
- Expected visitors: 2.5 million

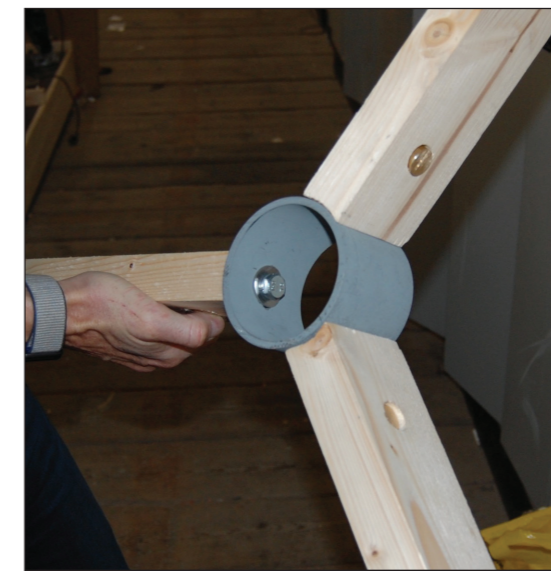
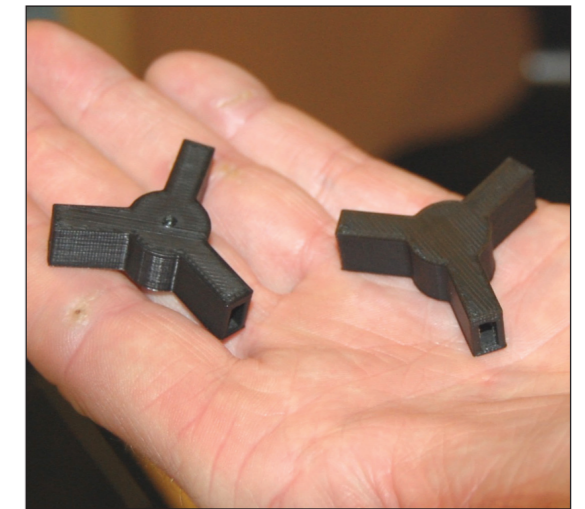
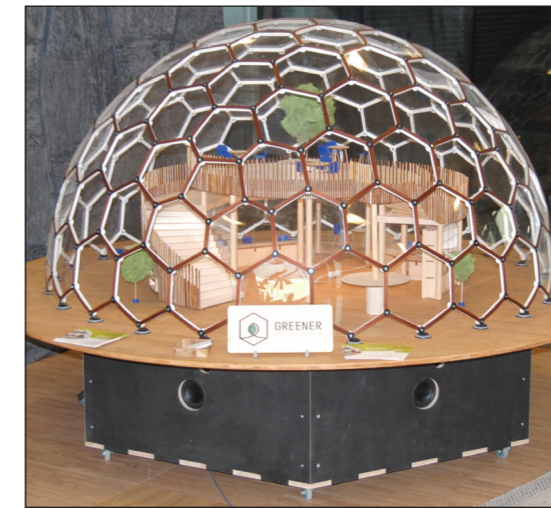
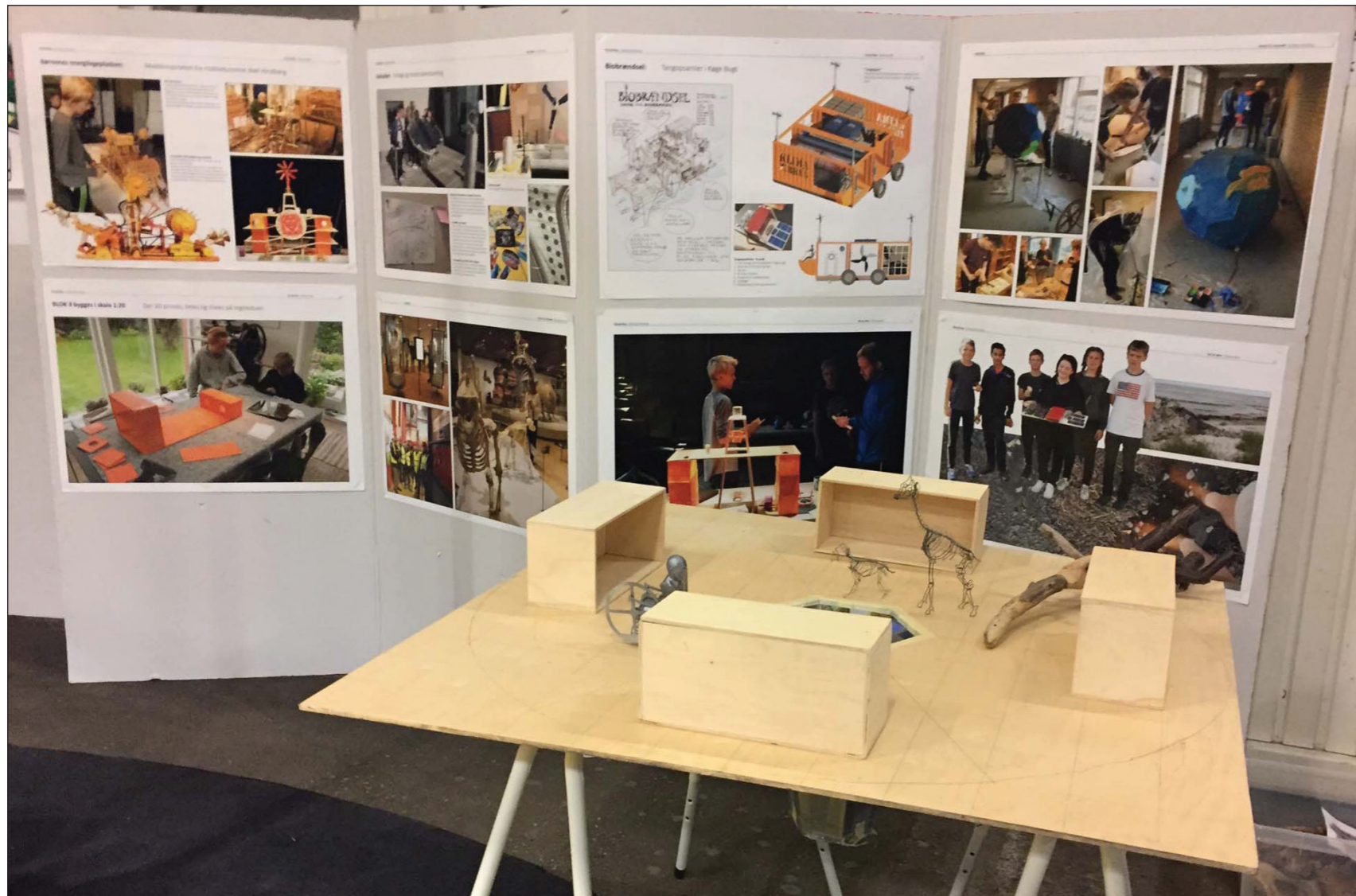


1. Young people tell about their projects
2. Bamboo dome.  
Diameter 22 meters  
Height 11 meters
3. Guidbot



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# 9. Building Workshop



Design students from Hvidovre Municipality develop sustainable bamboo dome for EXPO2020

MakerSpace "Under the Bridge" at BLOXHOB, makes MakerSpace available to the student team.



# 10. Time Plan/Organization/Budget



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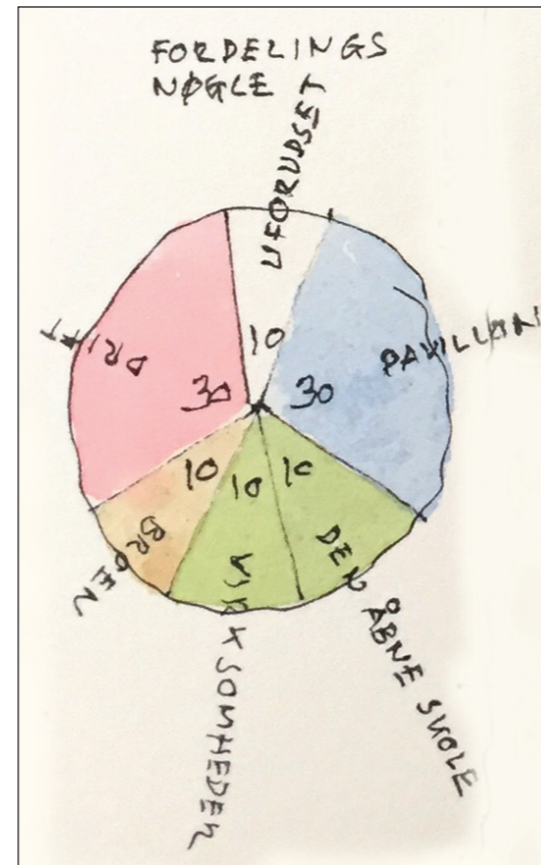
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### Distribution key

- operation
- pavilion
- unforeseen
- School projects
- Fast track
- company area



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