

TRANSFORMATION

Lighthouse KUB Nord

– a radically new hybrid flexible facility

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TRANSFORMATION

Lighthouse KUB Nord

– a radically new hybrid flexible facility



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Lighthouse KUB Nord

– a radically new hybrid flexible facility

A collaborative design for cocreation,
innovation and entrepreneurship across
university and society...



Approach Place Task Solution Process Perspectives

Approach – in general

Arkitema ..

**...architecture initiates interaction
between content, service, users, space,
place and time**

**we develop the design in a co-creative
process with client, staff, users,
suppliers and craftsmen**

A few examples...

Royal Danish Library, Aarhus DK



A few examples...

Royal Danish Library, Aarhus DK



A few examples...

Royal Danish Library, Aarhus DK



A few examples...

Royal Danish Library, Aarhus DK

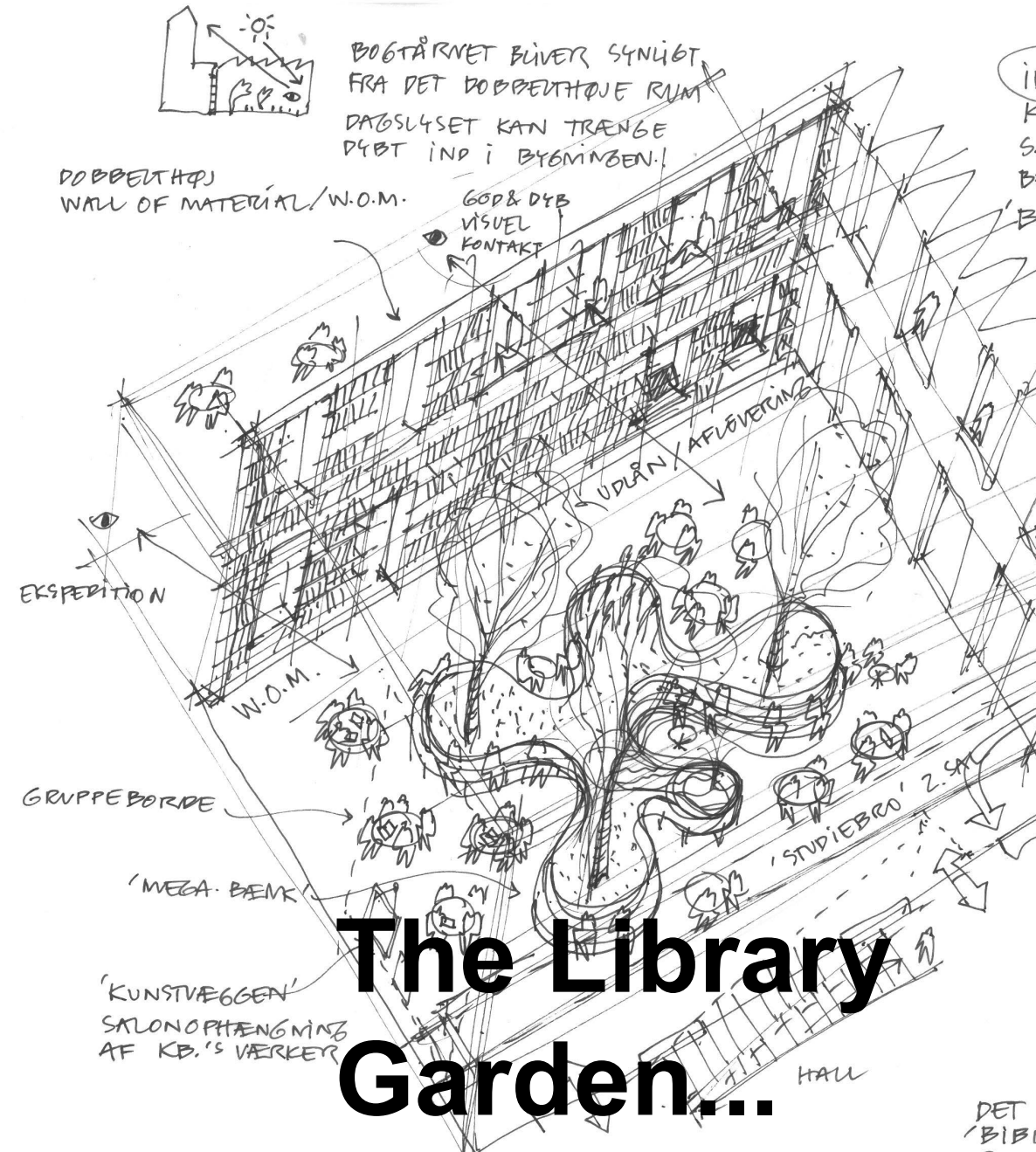


A few examples...

Royal Danish Library, Aarhus DK



Arkitema..

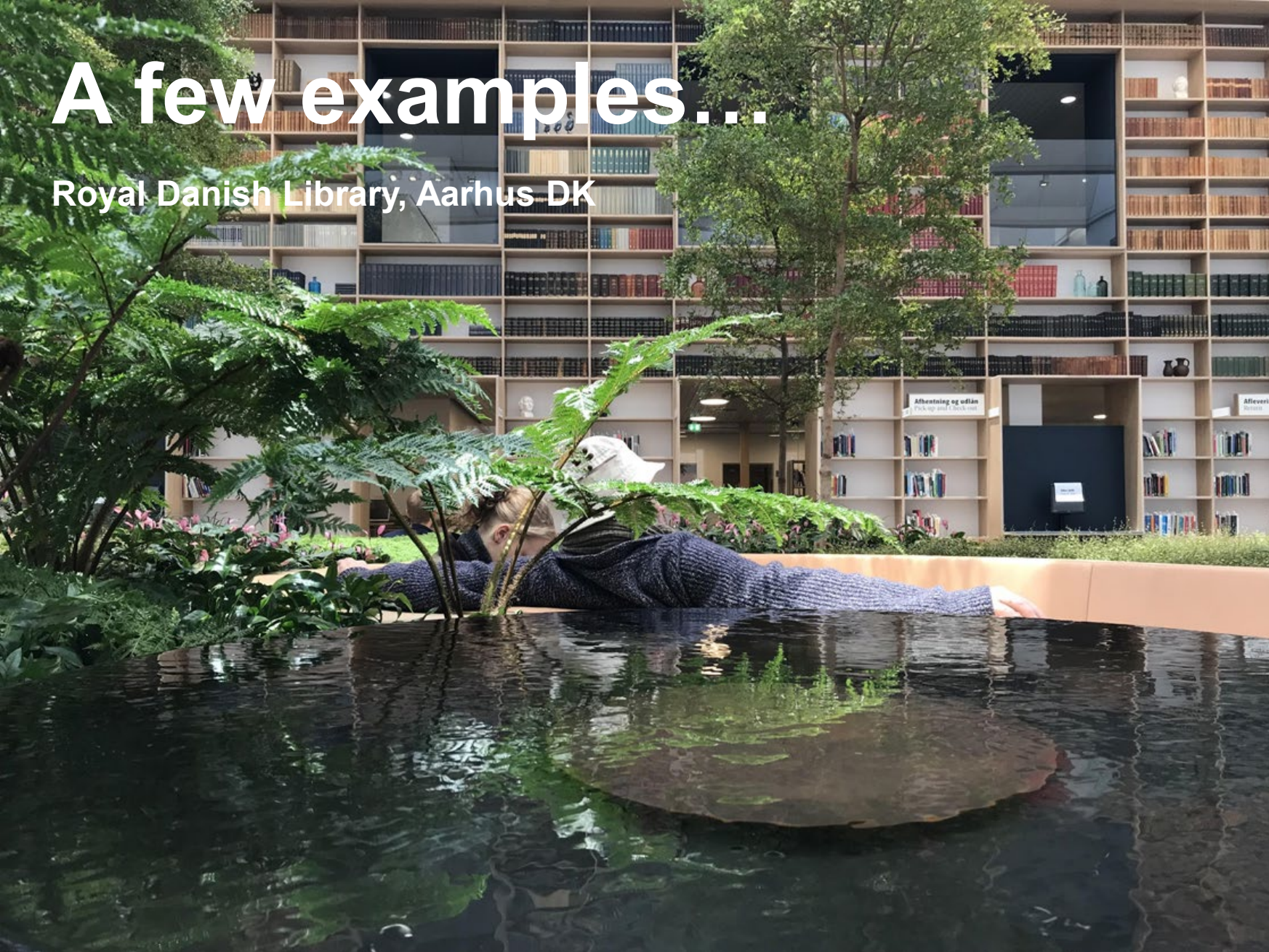


The Library Garden...

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A few examples...

Royal Danish Library, Aarhus DK



The Library Garden...





A few examples...

Royal Danish Library, Aarhus DK



The "Tænkepausen"

A few examples...

Royal Danish Library, Aarhus DK



A few examples...

Royal Danish Library, Aarhus DK



A few examples...

Royal Danish Library, Aarhus DK







Try Out...

1:1 Mock ups

Virtual Reality

Fysiske modeller

20180131_BYGST Kundeseminar_Det Gode Studiemiljø_v. Anna Kathrine Blsgaard Sørensen_ akb@arkitema.dk _Arkitema Architects

[illegible][illegible]

A few examples...

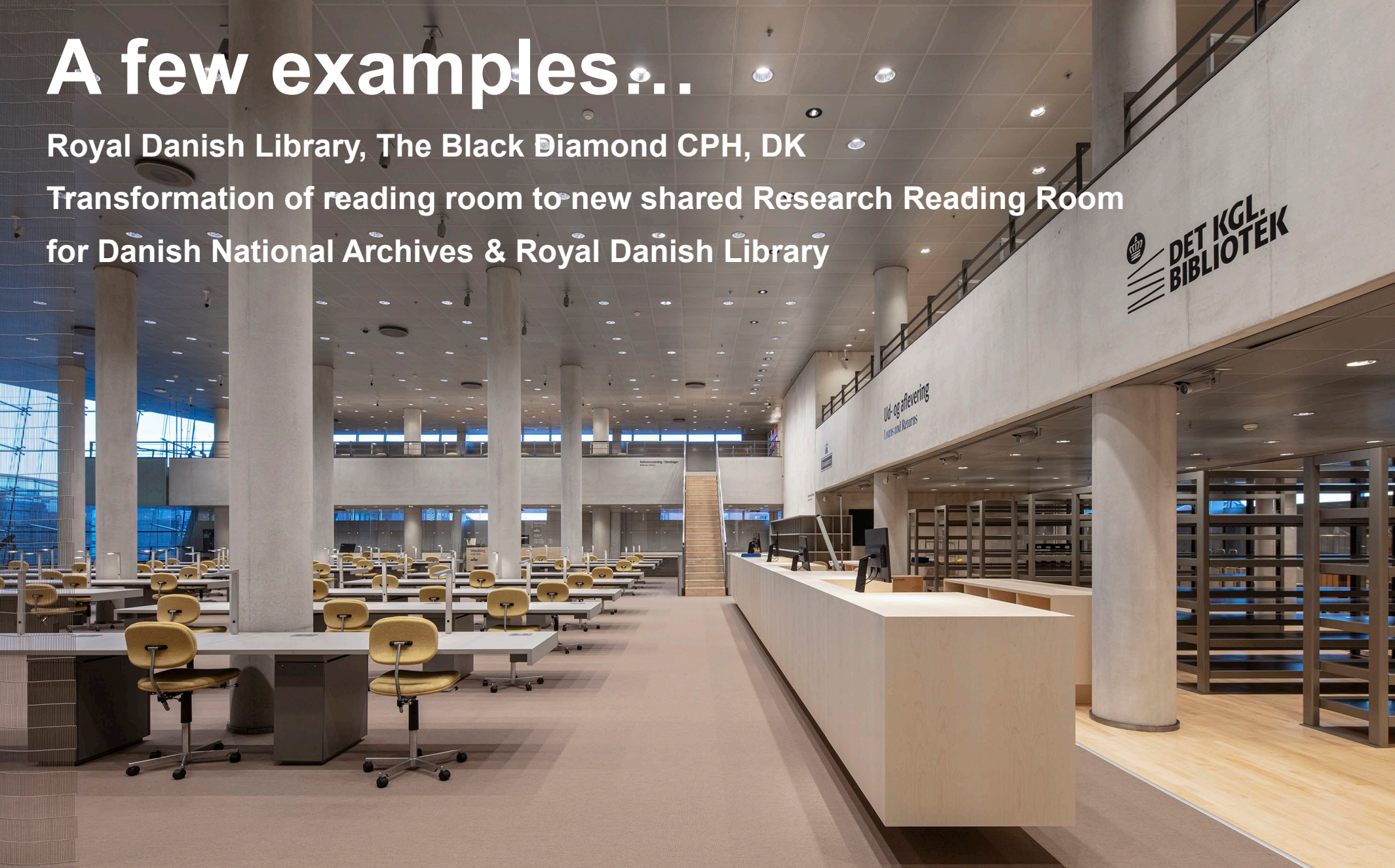
Royal Danish Library, The Black Diamond CPH, DK
Transformation of reading room to new shared Research Reading Room
for Danish National Archives & Royal Danish Library

The image shows a detailed physical model of a proposed library layout. It consists of numerous white foam blocks of varying sizes arranged on a base. These blocks represent tables, seating, and other furniture. Colored labels are attached to the blocks, indicating specific functions or areas. For example, blue labels include 'KORTBORDE' (tables) and 'FOTO' (photo). Orange labels include 'SKANNER' (scanner), 'OVERVÅGNING' (surveillance), 'SERUGSINRE' (storage), 'HÅNDBØGER' (handbook), 'UNDERVISNING' (teaching), 'BOKSE/KB' (boxes/catalogue), 'MOBILE MÅLERE' (mobile measuring devices), 'PC-GRUPPER' (PC groups), 'VERDIER' (values), 'OVERVÅGNING' (surveillance), 'FOTO' (photo), 'SERUGSINRE' (storage). Orange arrows point from one area to another, suggesting a flow or relationship between spaces. A person's hand is visible at the top left, pointing towards the model. Another hand is visible at the bottom right, near a small figure of a person standing next to a curved wall section.

A few examples...

Royal Danish Library, The Black Diamond CPH, DK

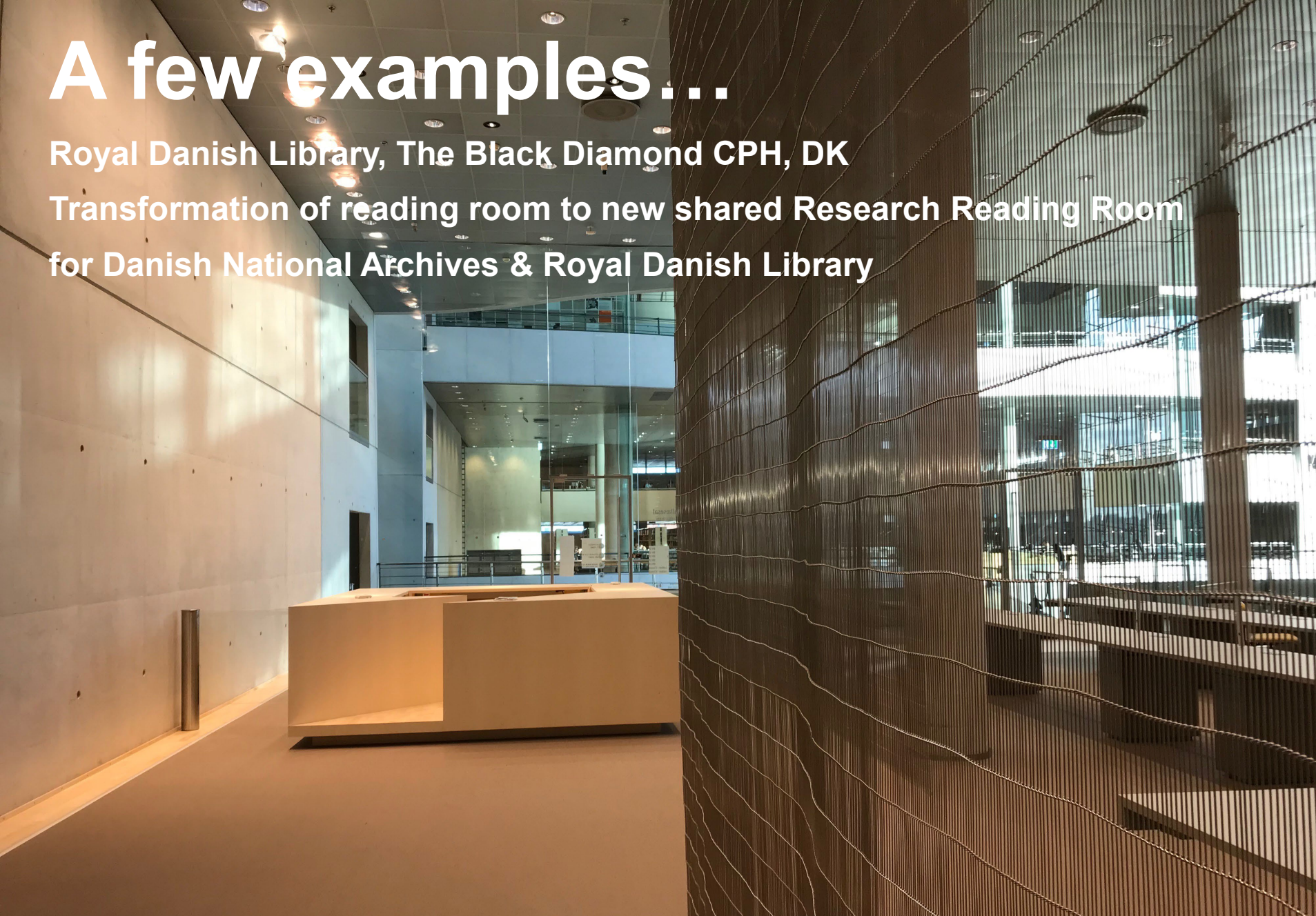
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A few examples...

Royal Danish Library, The Black Diamond CPH, DK

Transformation of reading room to new shared Research Reading Room
for Danish National Archives & Royal Danish Library



A few examples...

UCPH South Campus, Transformation of existing introverted university building from 1971-79 to a modern university as an active part of the urban neighborhood

Here: a former courtyard transformed into Knowledge Center and Library, The Faculty of Law.

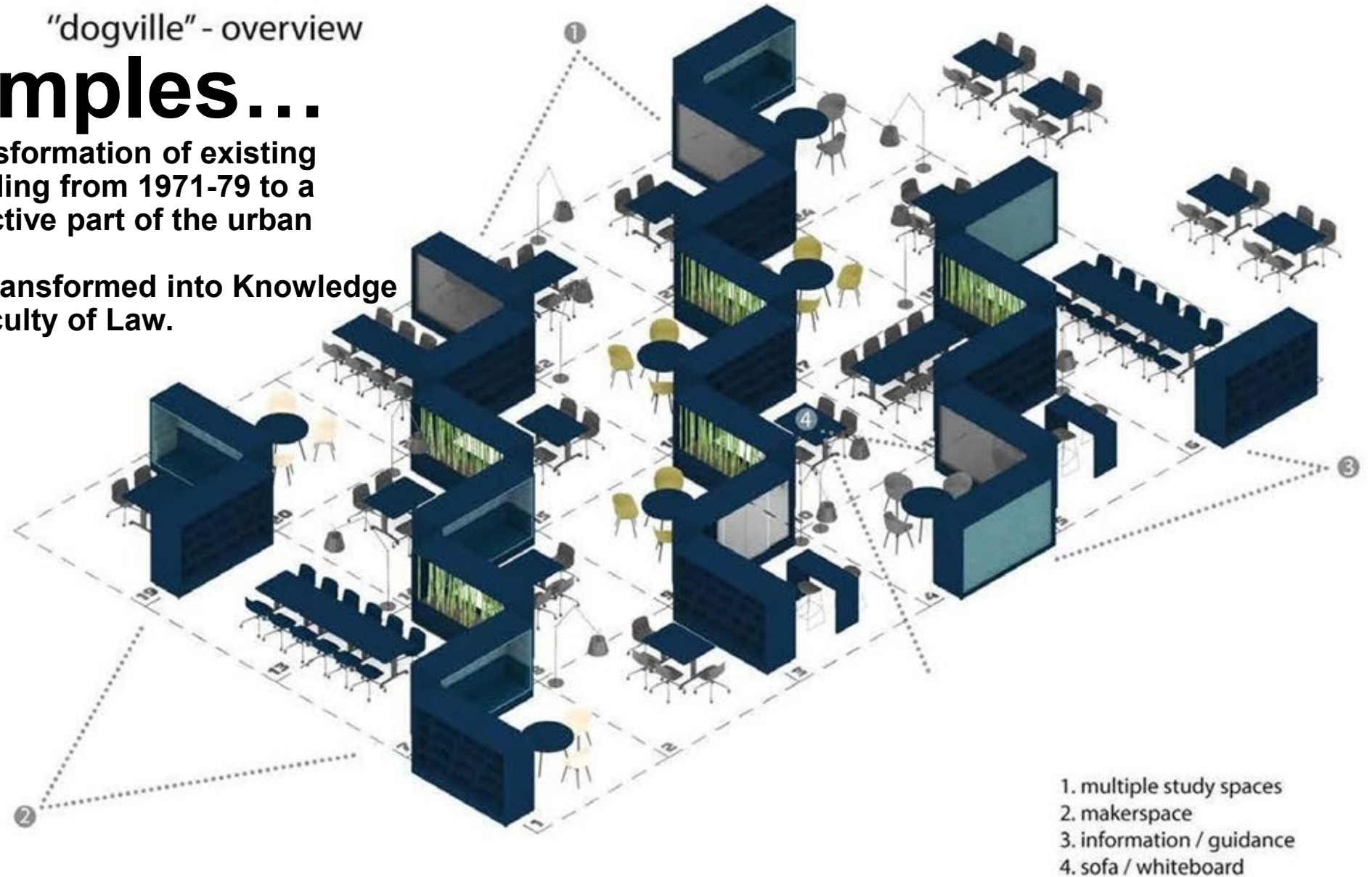
Potential...
30/09/2015 14:17

"dogville" - overview

A few examples...

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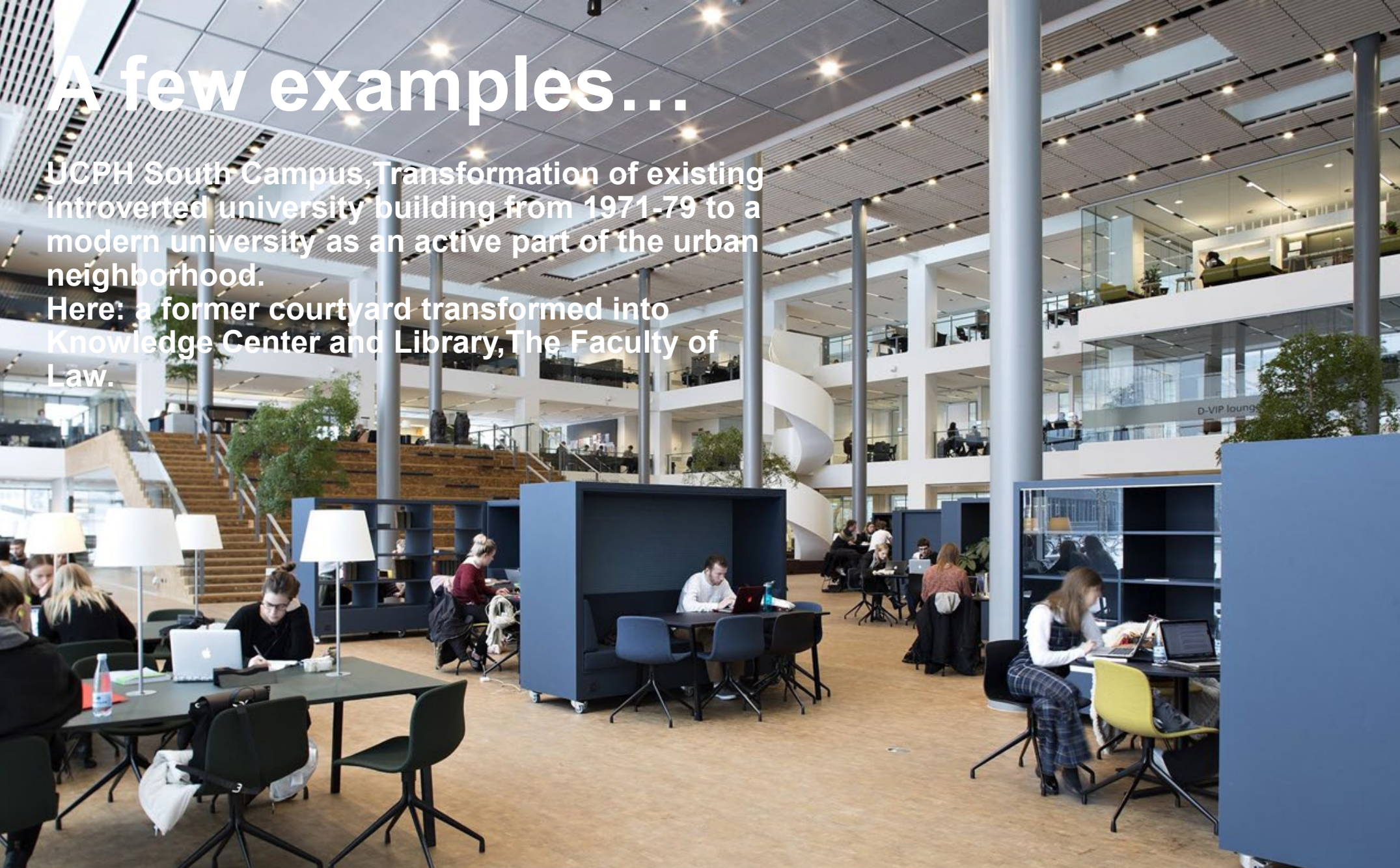
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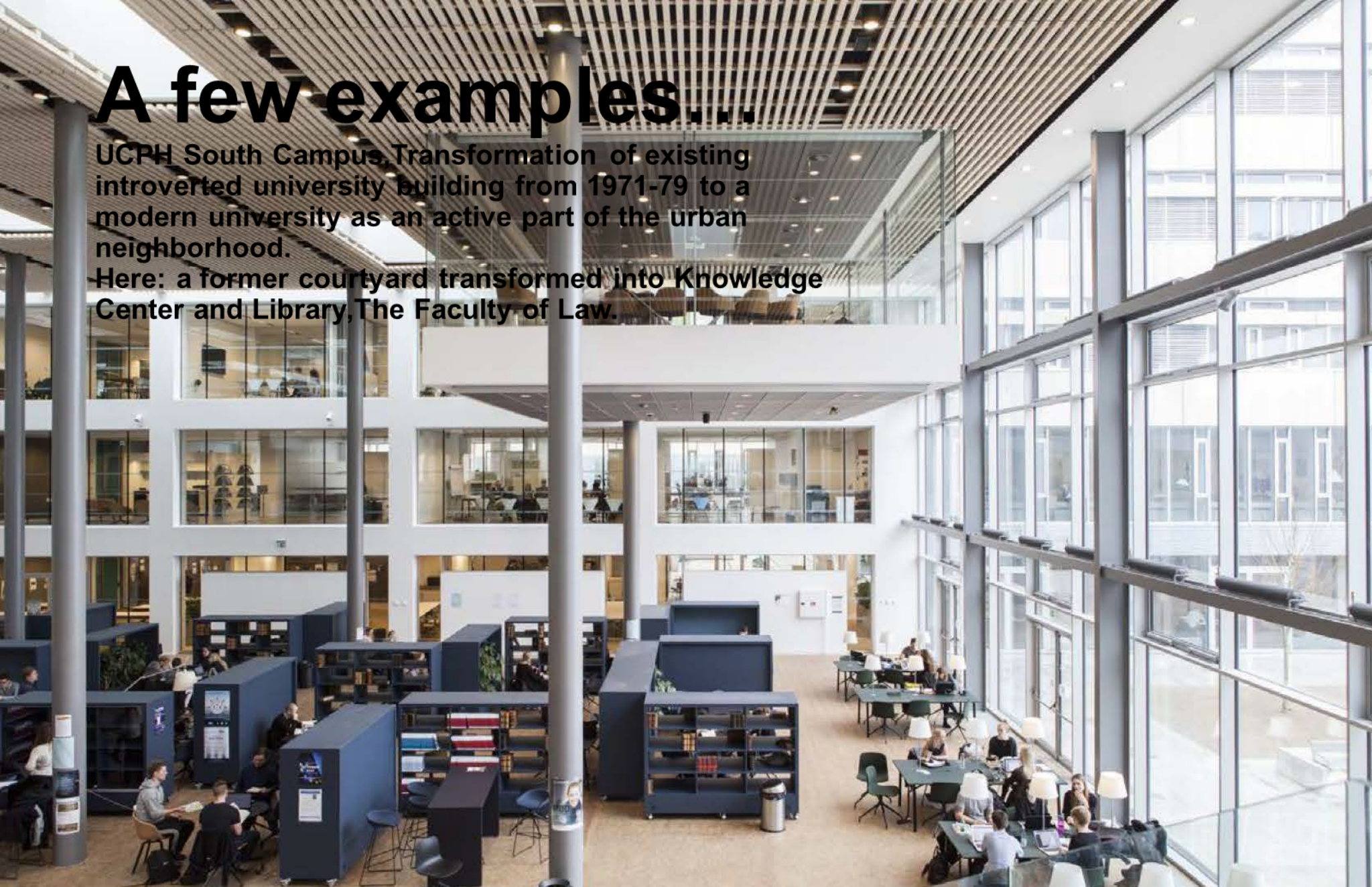
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UCPH South Campus Transformation of existing introverted university building from 1971-79 to a modern university as an active part of the urban neighborhood.

Here: a former courtyard transformed into Knowledge Center and Library, The Faculty of Law.



A few examples..

UCPH Faculty of Law DK...



A few examples...

DTU Library, DK





Antonello Da Messina, "Saint Jerome in his Study", approx. 1475, National Gallery, London

Anna Kathrine Bisgaard, Arkitema Architects akb@arkitema.dk

500 years...



...what is attractive?

Transformation | Lightl

♥ 348 Synes godt om

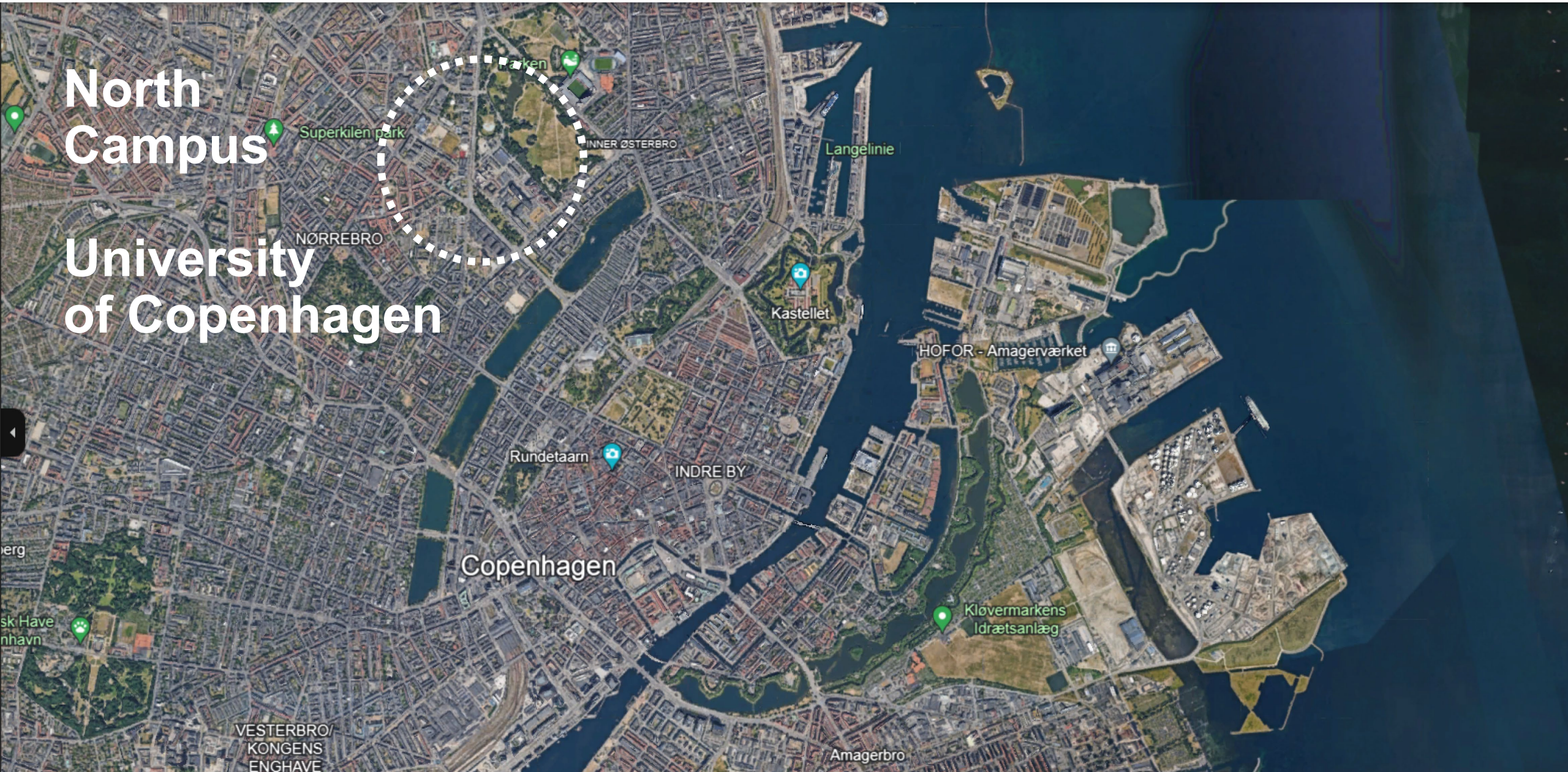
mitaarhus Nåh, men kælderen med FIFA er under Statsbiblioteket. Her tilbringer jeg en del tid med specialet. Biblioteket har netop renoveret kælderen, som nu er et sprødt miljø med studiepladser (OG HULER), bordtennis, massagestole og vandhaner med kogende vand 🍵 🍷 🍺 🍻

**This approach is also fundamental for
the hybrid-flexible facility Lighthouse
KUBNord**

**It was the road to create this new kind
of space inbetween the physical and
virtual world...**



Place

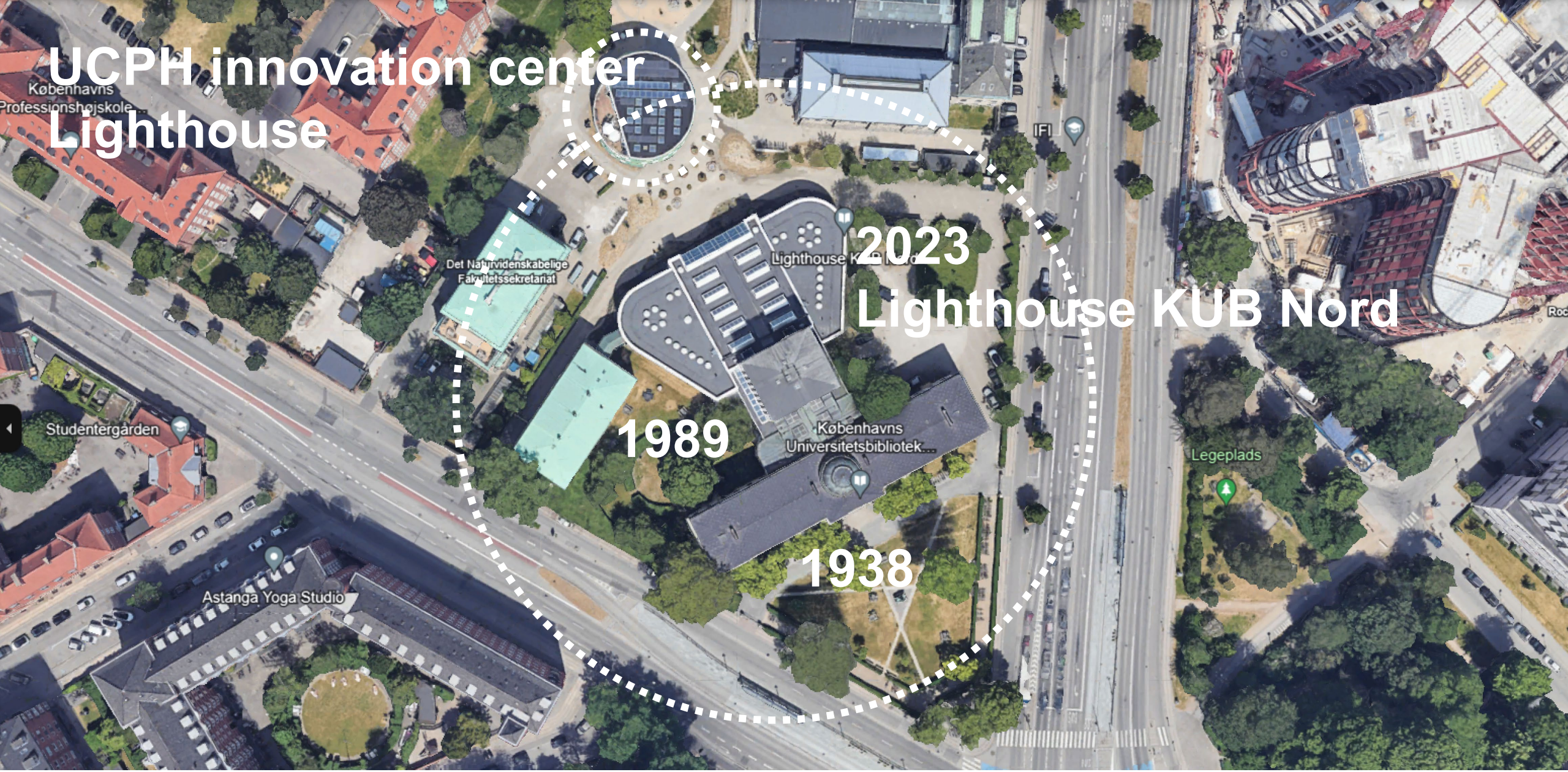


North Campus

University of Copenhagen

Copenhagen University Library KUB Nord Natural and Health Science

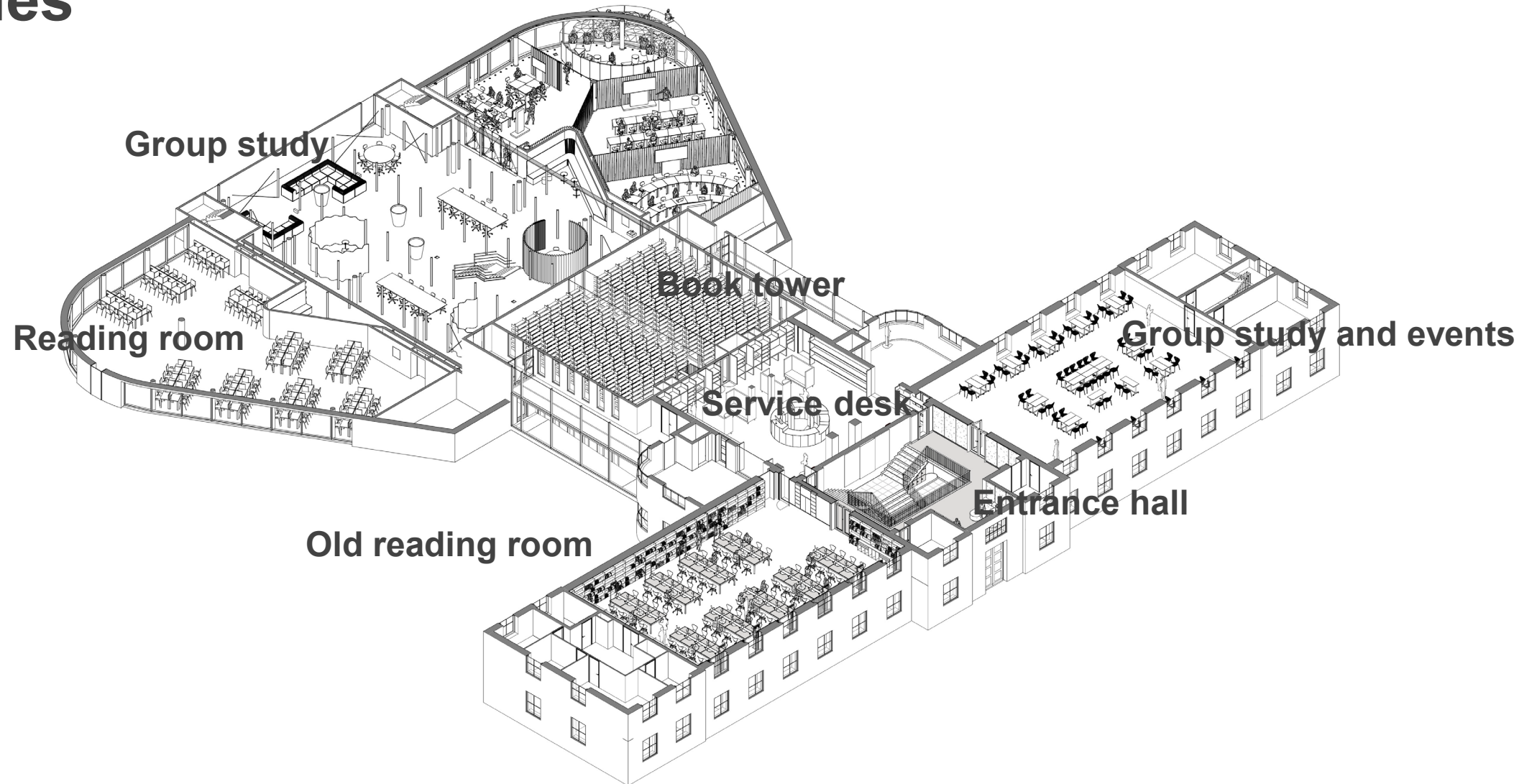




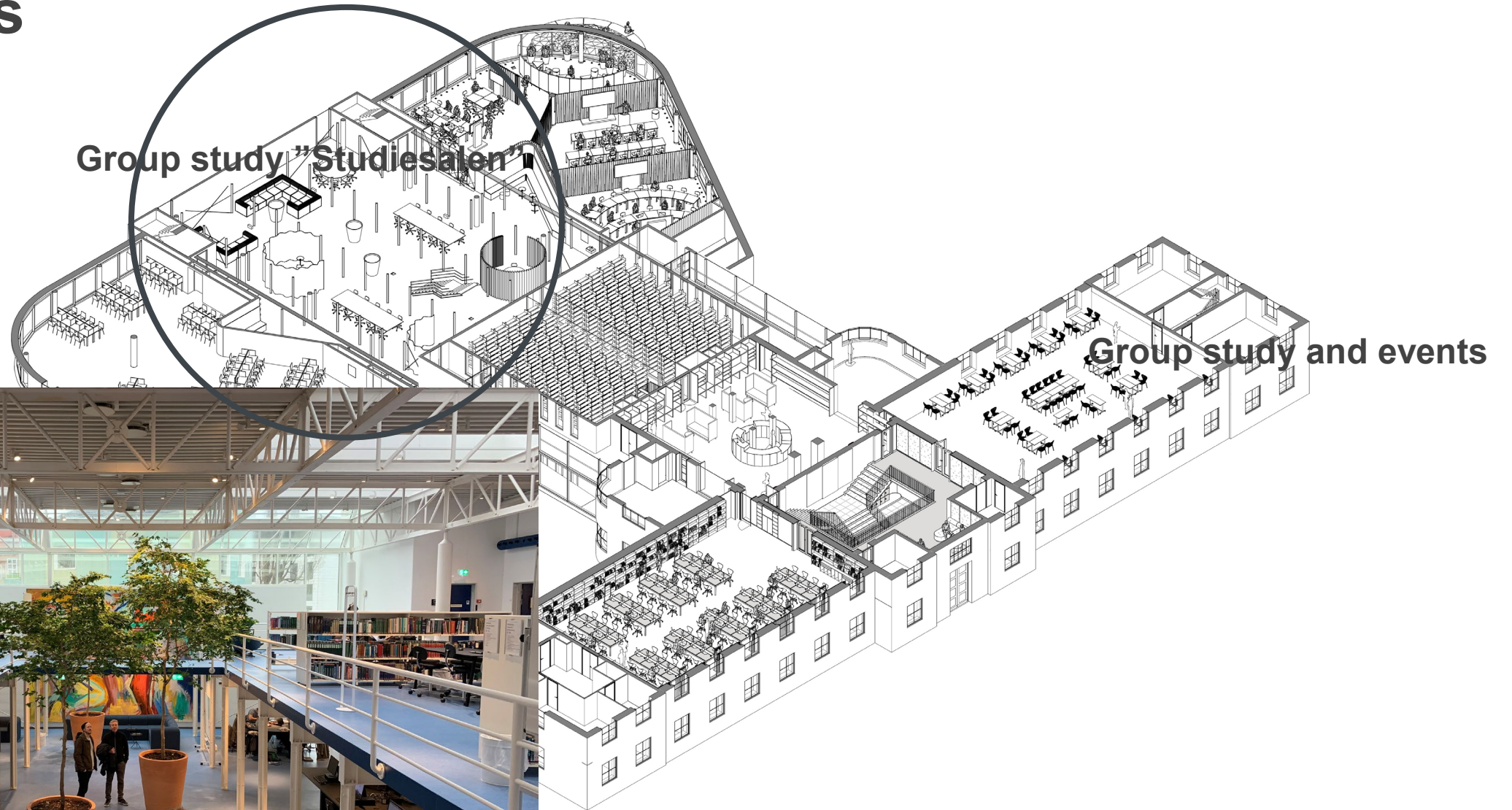


Library facilities

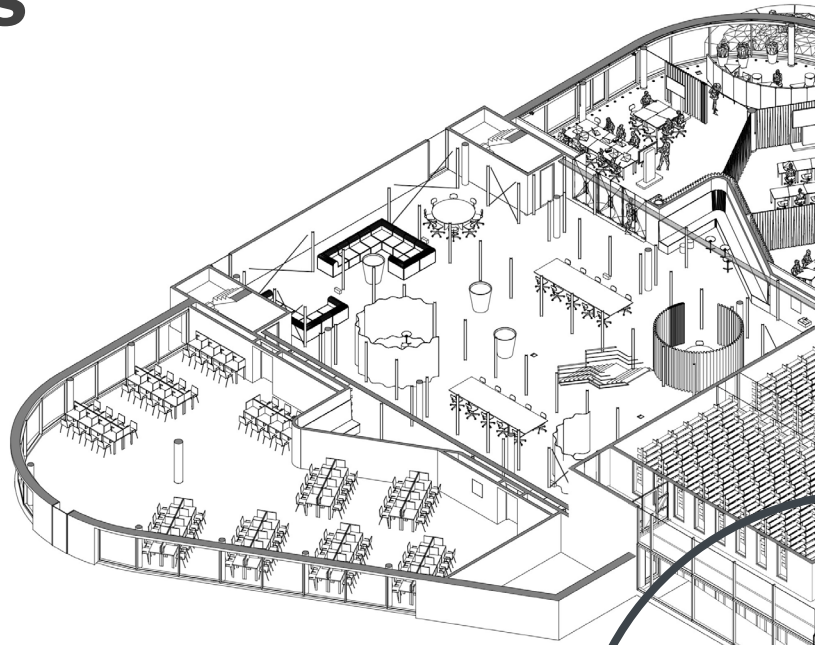
New hybrid flexible facility – "Lighthouse KUB Nord"



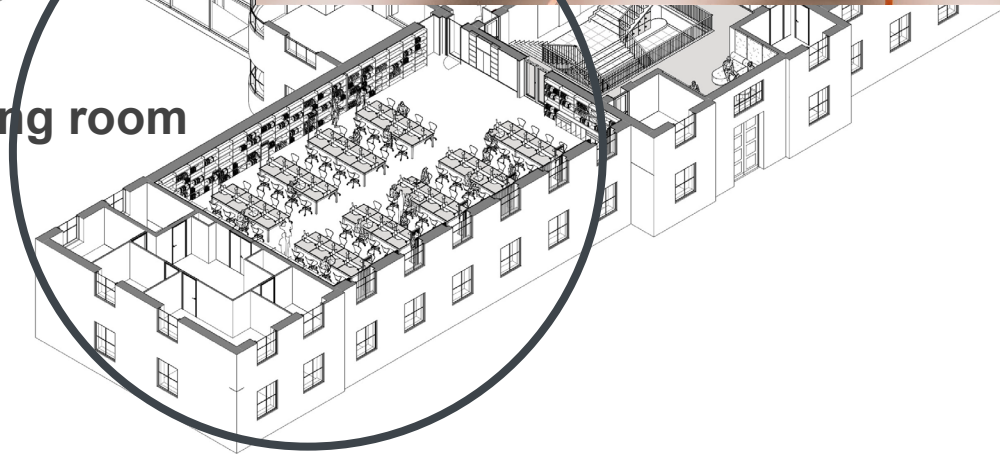
Library facilities



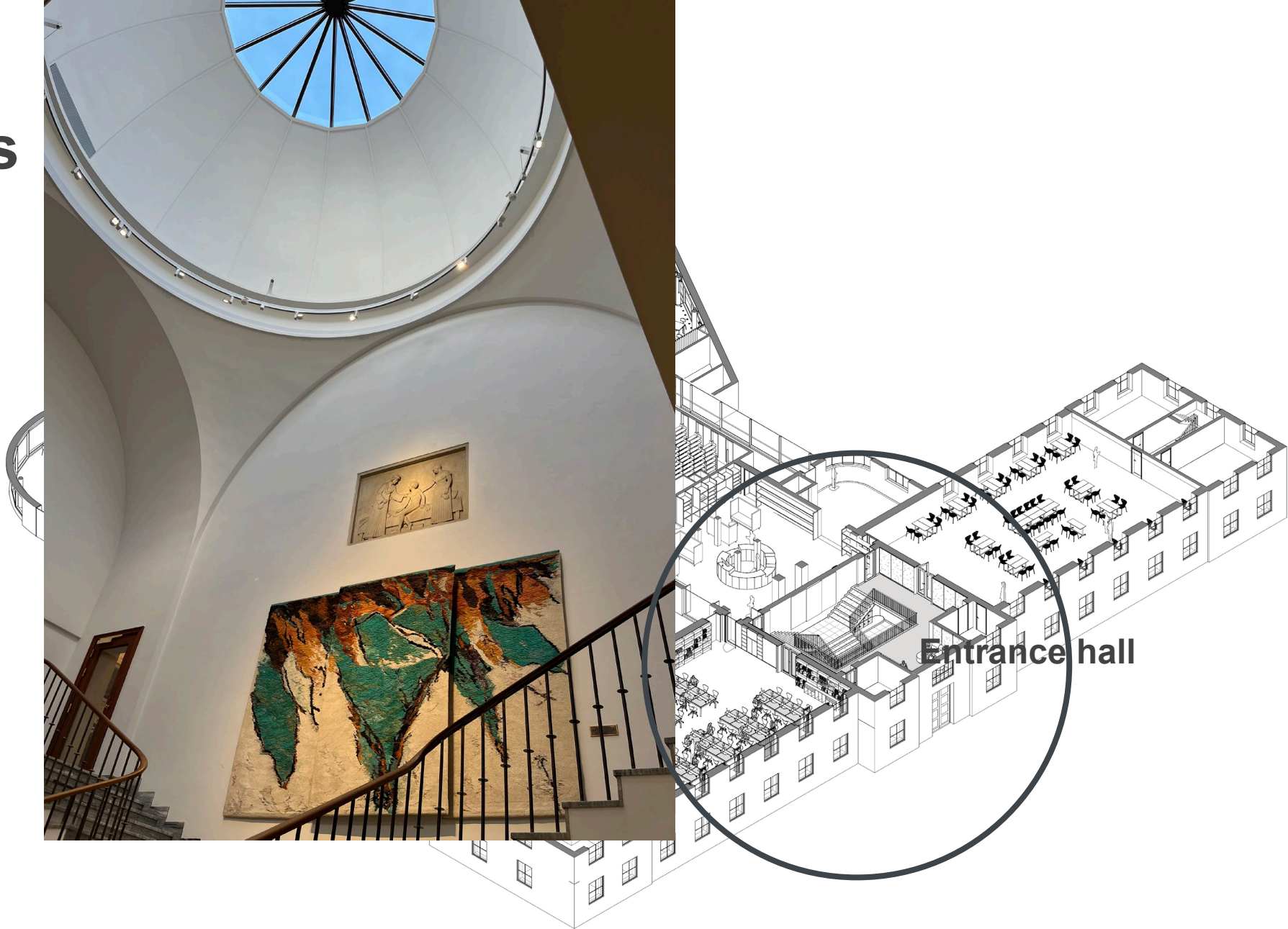
Library facilities



Old reading room

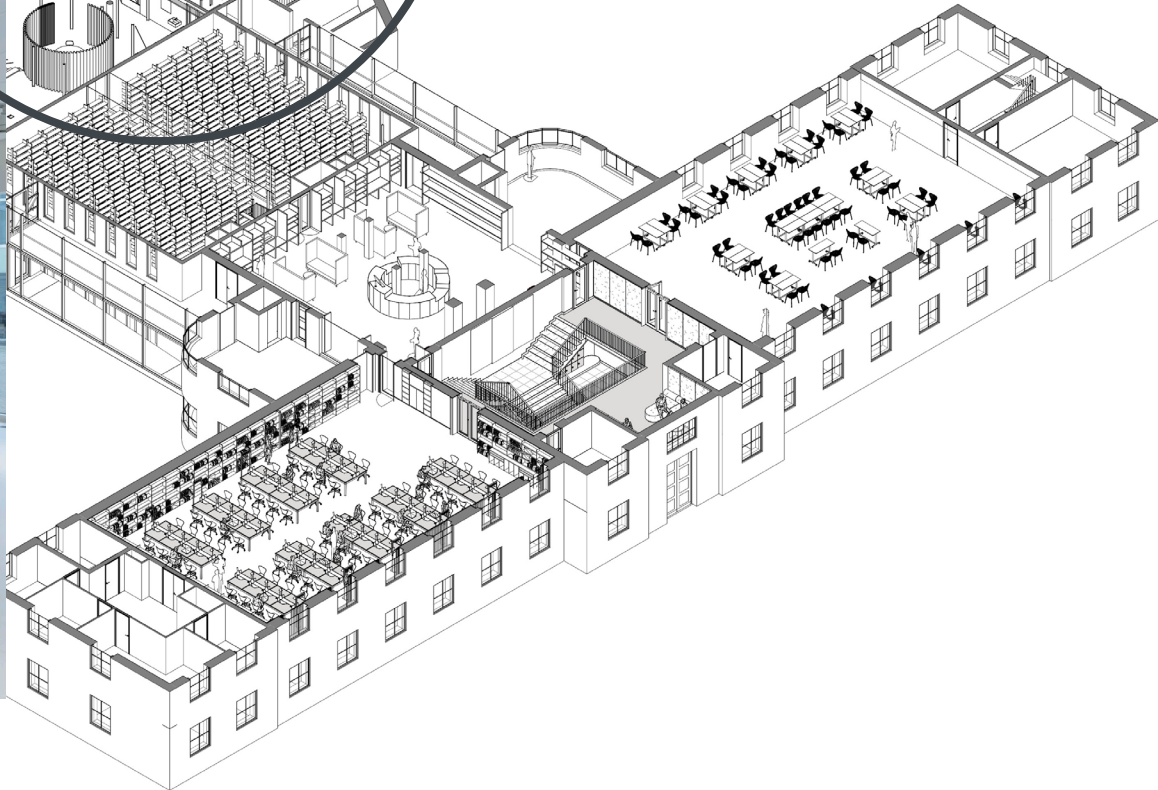


Library facilities



Facilities

New hybrid flexible facility – "Lighthouse KUB Nord"



Task

Task

A wide-angle photograph of a modern, bright room, likely a classroom or meeting space. The room features a high ceiling with a grid of recessed lights and a large window on the right side that looks out onto a green lawn and parked cars. In the foreground, there is a long, dark table with several black chairs. To the left, a large whiteboard on a stand is visible. The room is well-lit, with natural light coming from the window.

Excerpt from a brief task description from the Royal Library:

“The purpose of the renovation is twofold:

We would like to create a flexible learning space for use in teaching, events, data lab activities, and promoting group interaction.

We would like to prepare for the upcoming collaboration on a joint KU Innovation Center with Green Light House, which is a neighboring building to KUB Nord...”



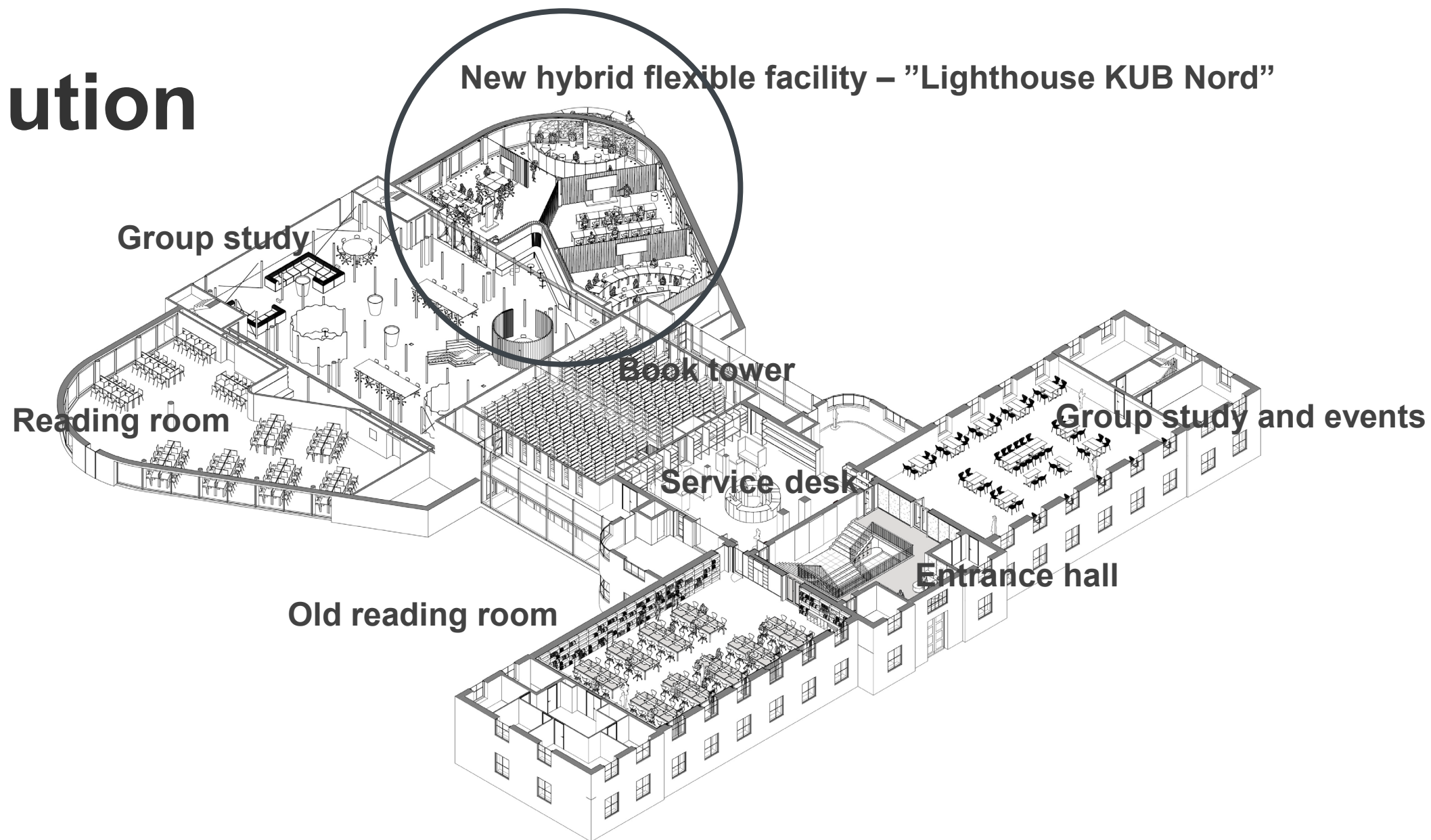
Transforming the former archive
and reading room into...

...a melting pot!

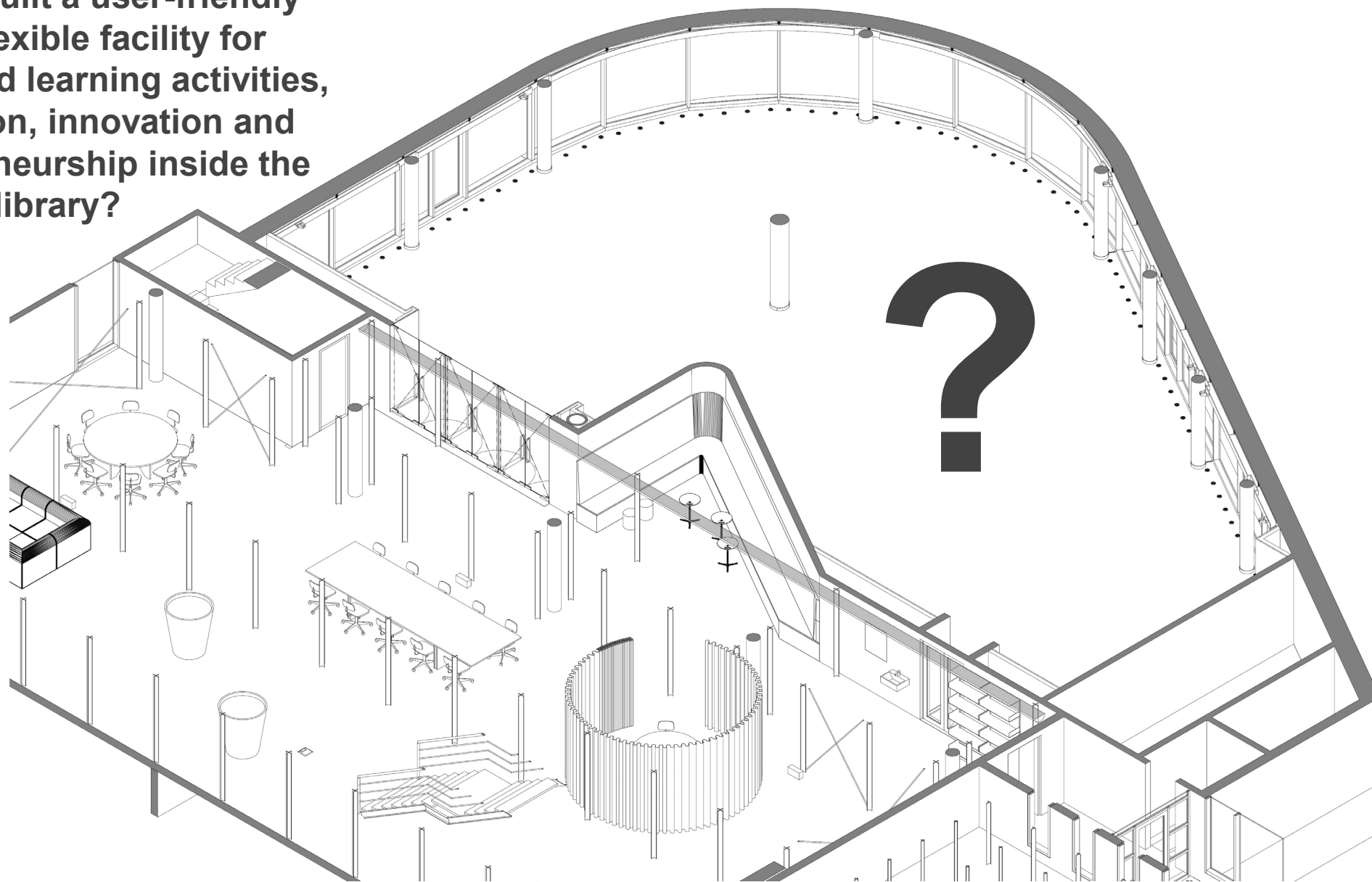


Solution

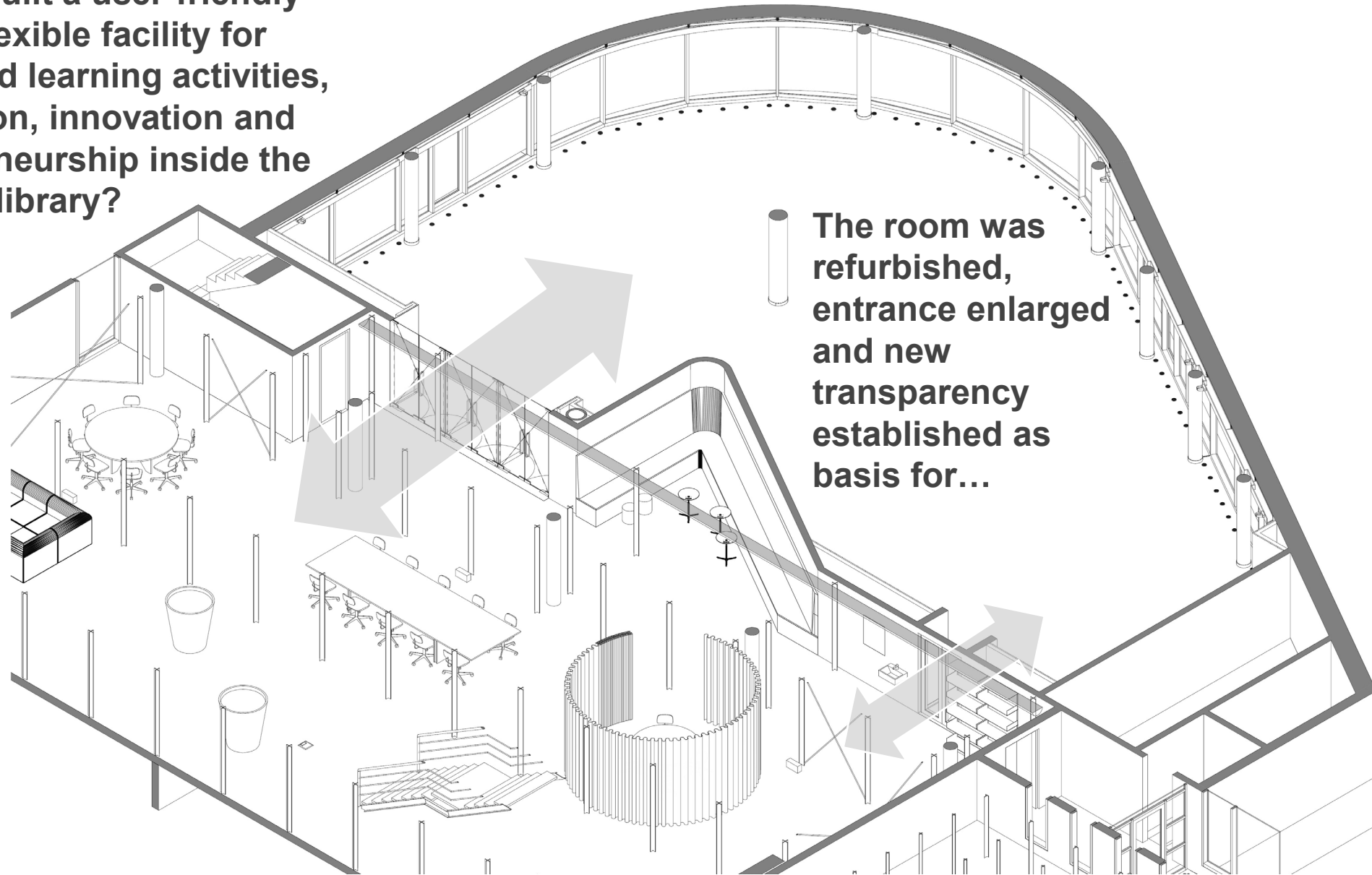
Solution



**How to build a user-friendly
hybrid-flexible facility for
study and learning activities,
cocreation, innovation and
entrepreneurship inside the
existing library?**



**How to built a user-friendly
hybrid-flexible facility for
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SOFT 1-7 layer CURTAINS as FLEXIBLE ROOM DIVIDERS and WALL COVERS, sound absorbers and colorful back drops for changing activities

LIGHT & COLOR DESIGN
high quality supports hybrid sessions

NATURAL LIGHT
adjusted for screen use and exterior view

SOLID "CIRCLE SOFA"

AV-TECHNOLOGY
distributing sound and picture

SELF-CONFIGURING
touch screen
showing AV-elements in the actual room set up

MOBILE MULTIPURPOSE FURNITURE
for different set ups

ALL FURNITURE IS ALWAYS CONTAINED IN THE ROOM despite activity

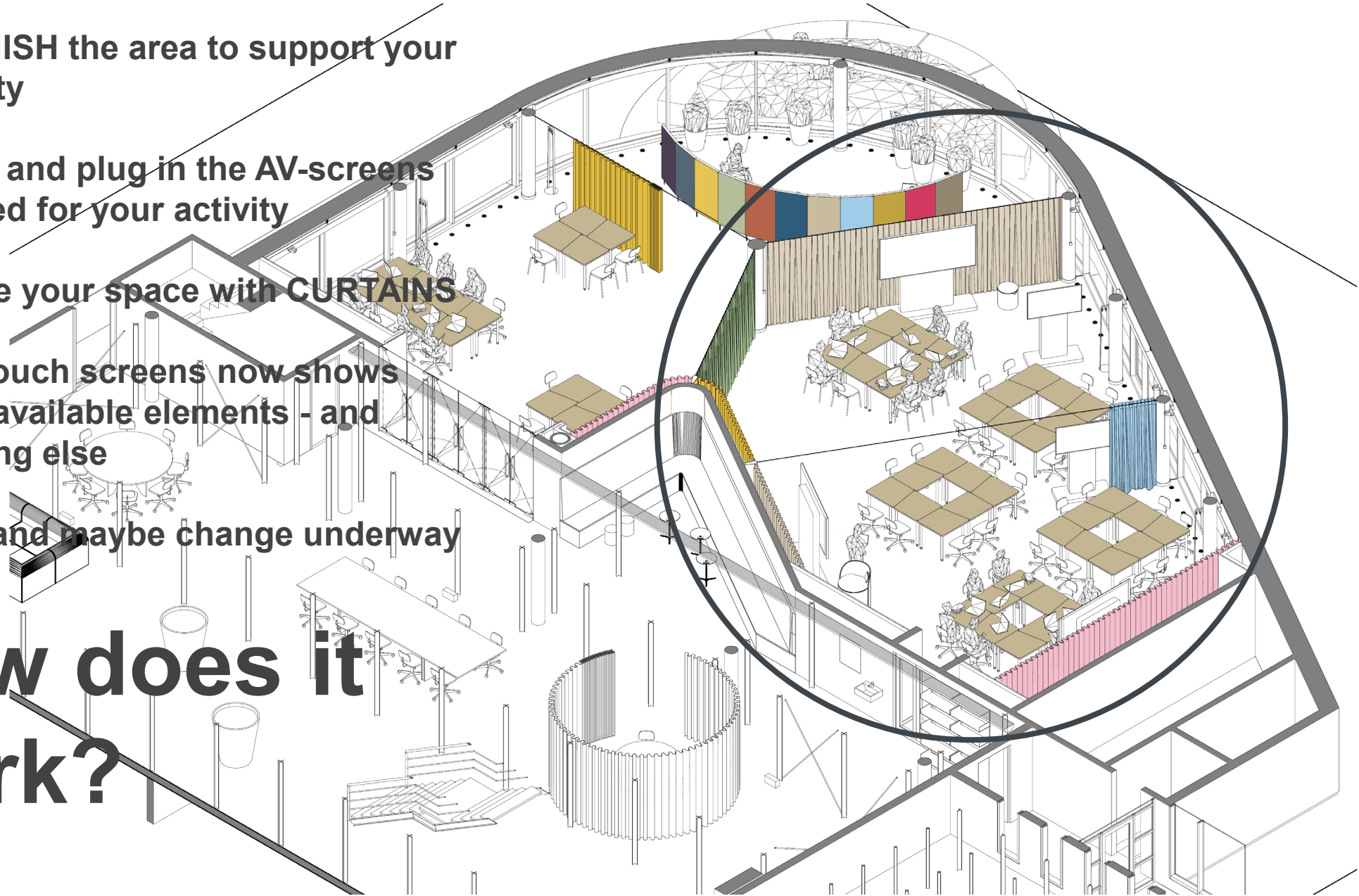


The image is a detailed architectural line drawing of a modern office space. The drawing is shown from an isometric perspective. A large circular area on the right side of the drawing is magnified by a thick black circular line, showing a closer view of a meeting room with several square tables and chairs. The office space includes various work areas: a large open-plan area with desks and chairs, a circular meeting room with a large table and chairs, and a smaller meeting room with a large table and chairs. There are also several smaller tables and chairs scattered throughout the space. The drawing uses black lines for the structural elements and colored areas for furniture and partitions. The overall style is clean and modern.

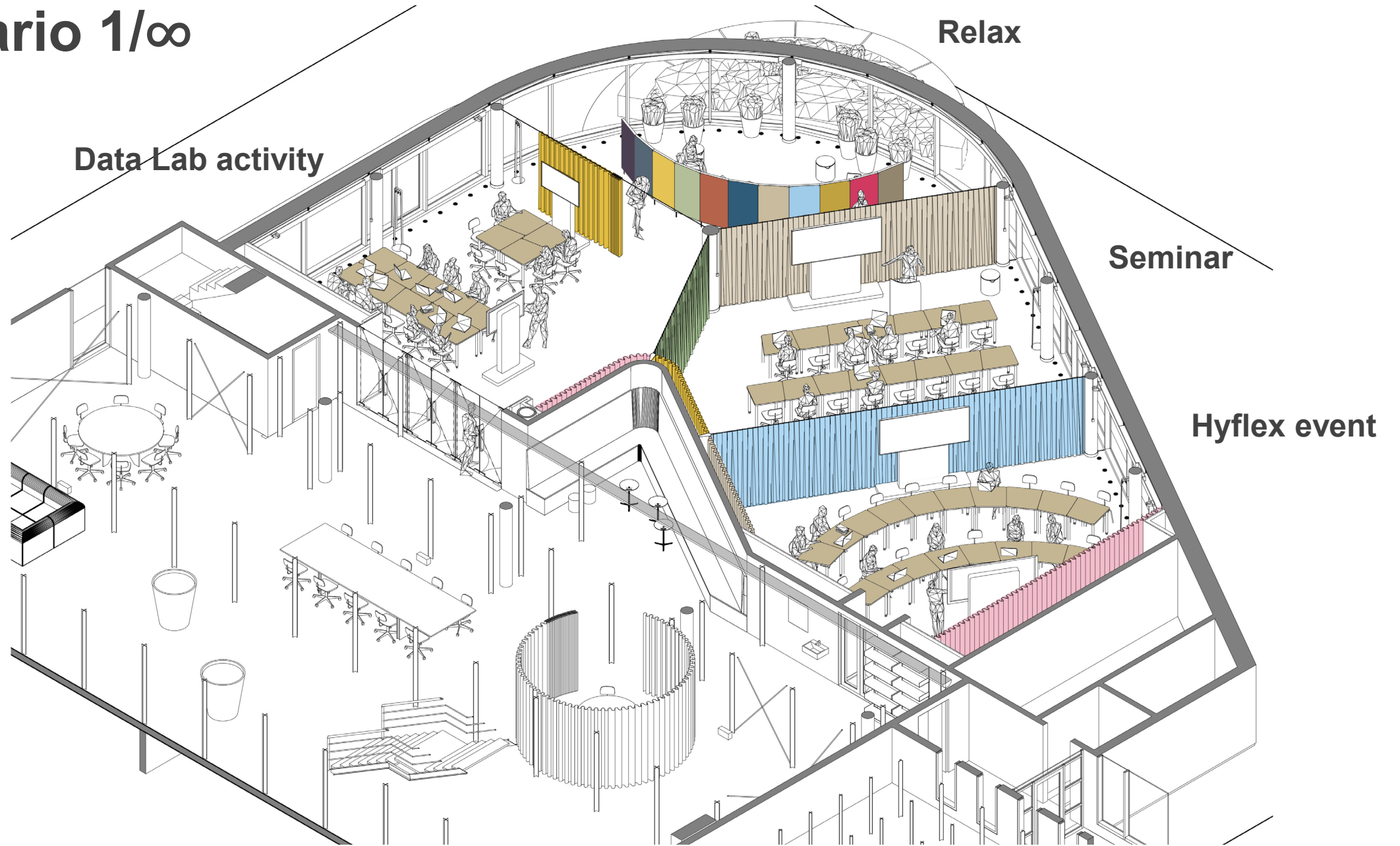
How does it work?

1. **FURNISH** the area to support your activity
2. Place and plug in the **AV-screens** needed for your activity
3. Define your space with **CURTAINS**
4. The touch screens now shows your available elements - and nothing else
5. Go...and maybe change underway

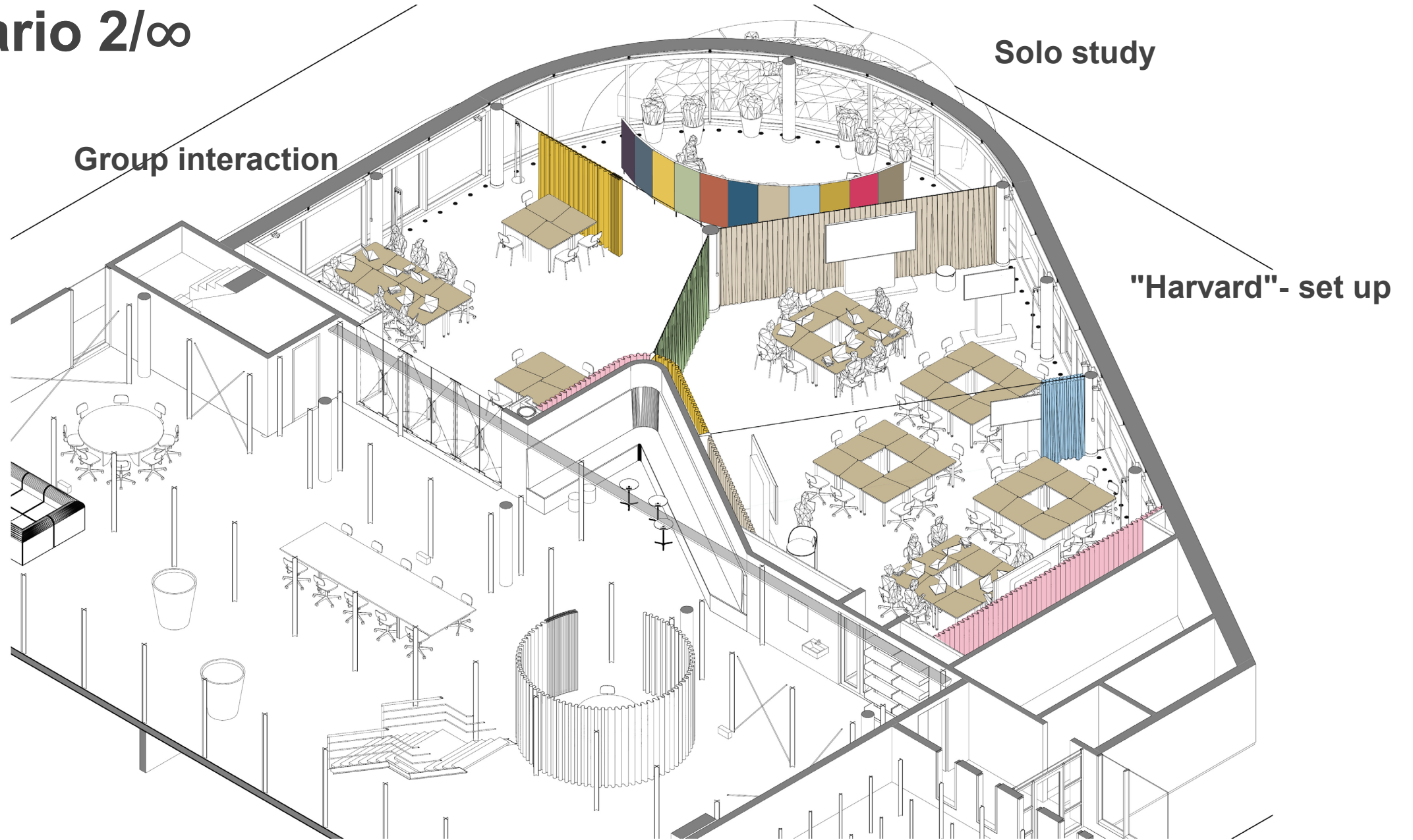
How does it work?



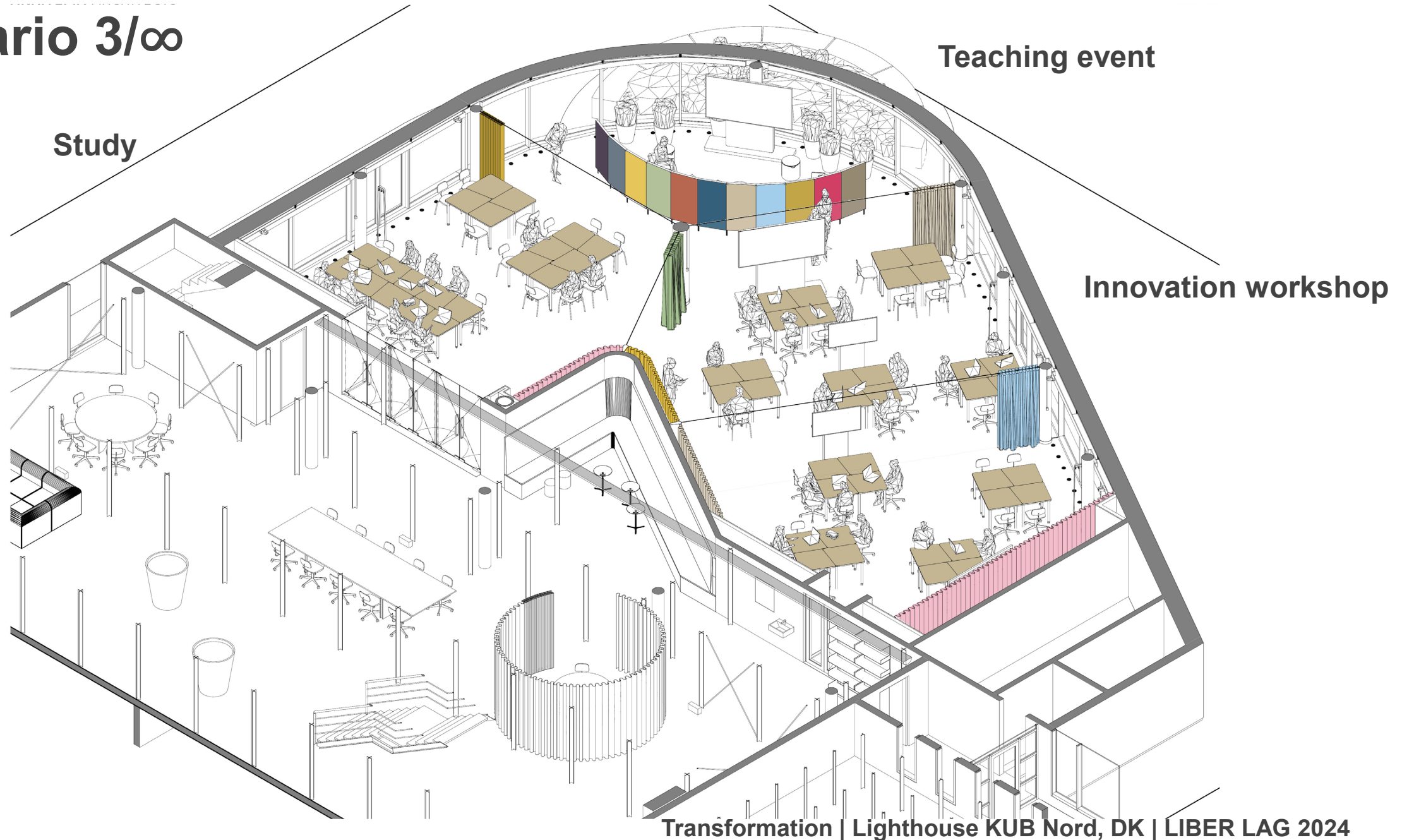
Scenario 1/∞



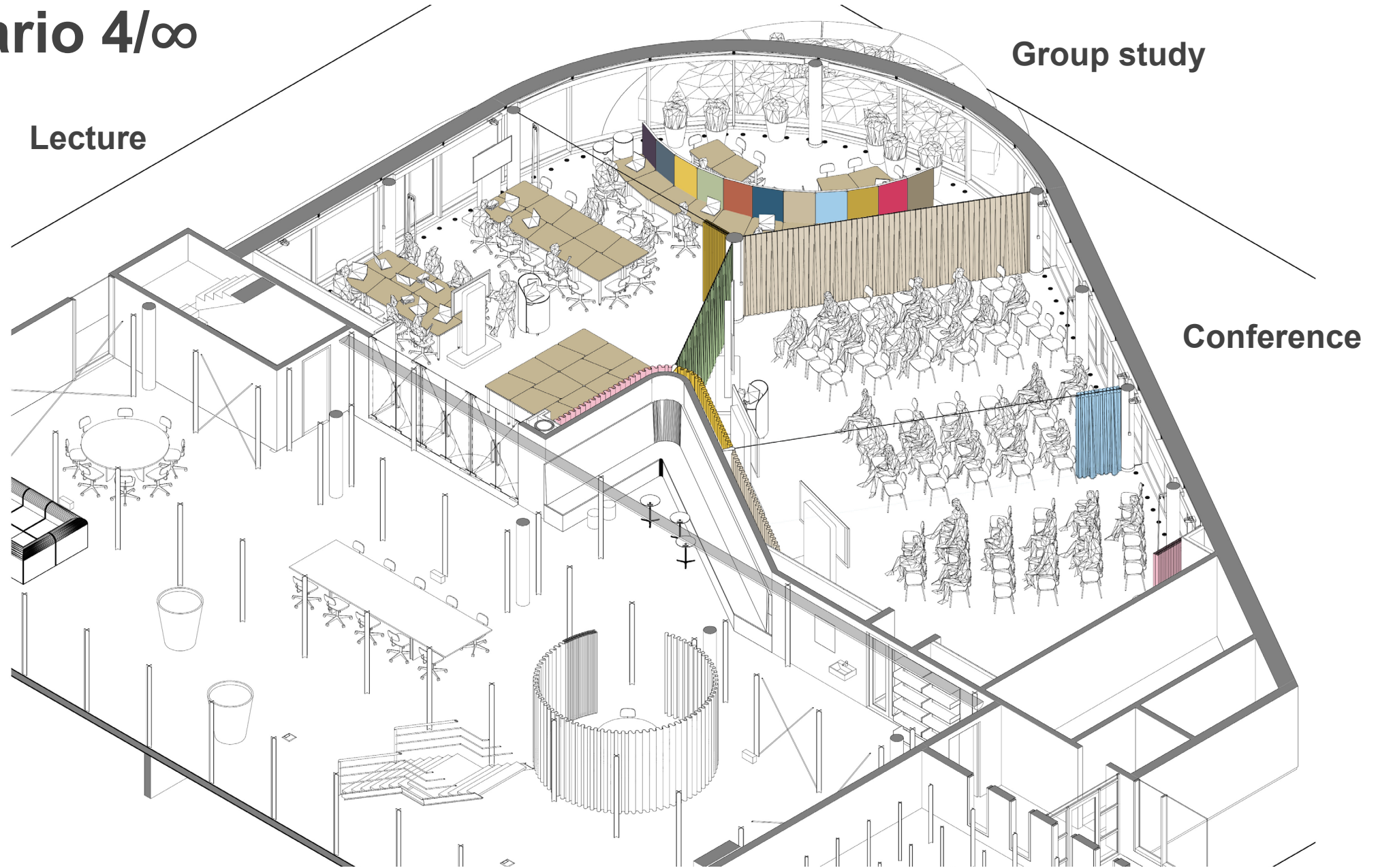
Scenario 2/∞



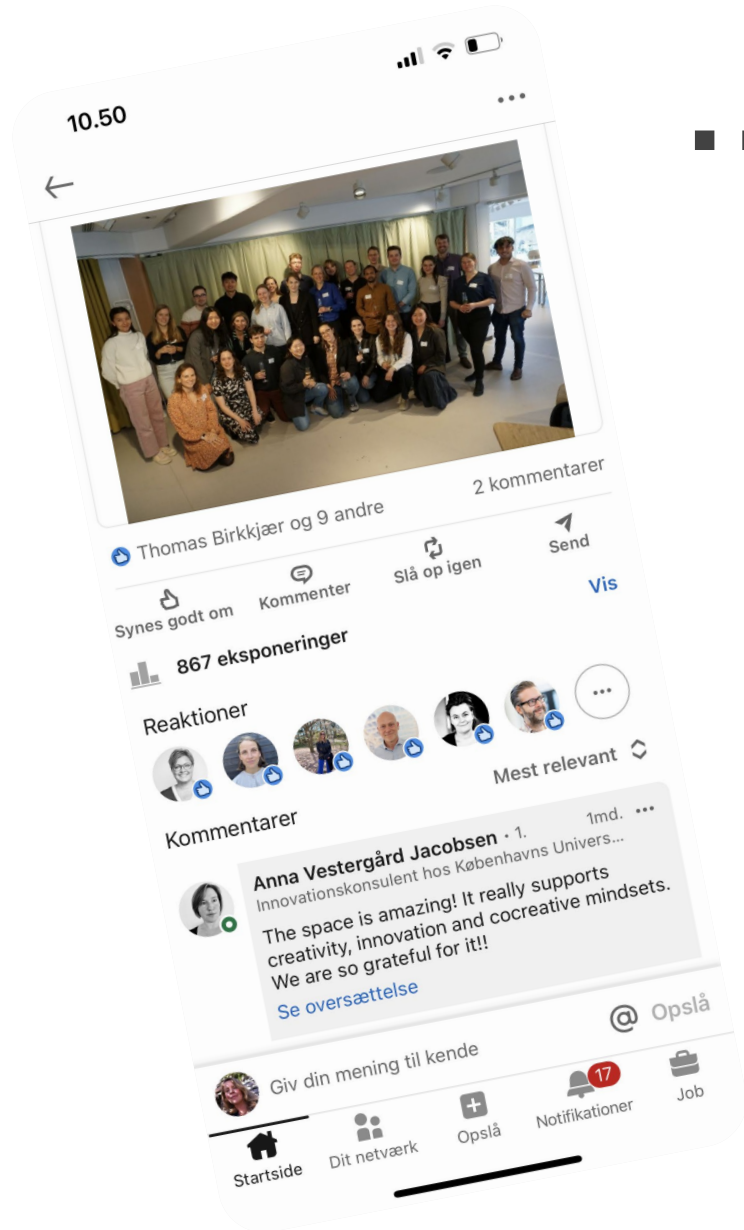
Scenario 3/∞



Scenario 4/∞



...UX - user experience



Arkitema ..



Anna Vestergård Jacobsen · 1. 1md. ...

Innovationskonsulent hos Københavns Univers...

The space is amazing! It really supports creativity, innovation and cocreative mindsets. We are so grateful for it!!

[Se oversættelse](#)

**WHY does
it work?**



textile is a long known
element for human kind
– we wear it, - as tents
in early, nomadic, and
contemporary out door
culture... - establish a
feeling of
confidence...maybe
feeling at home...

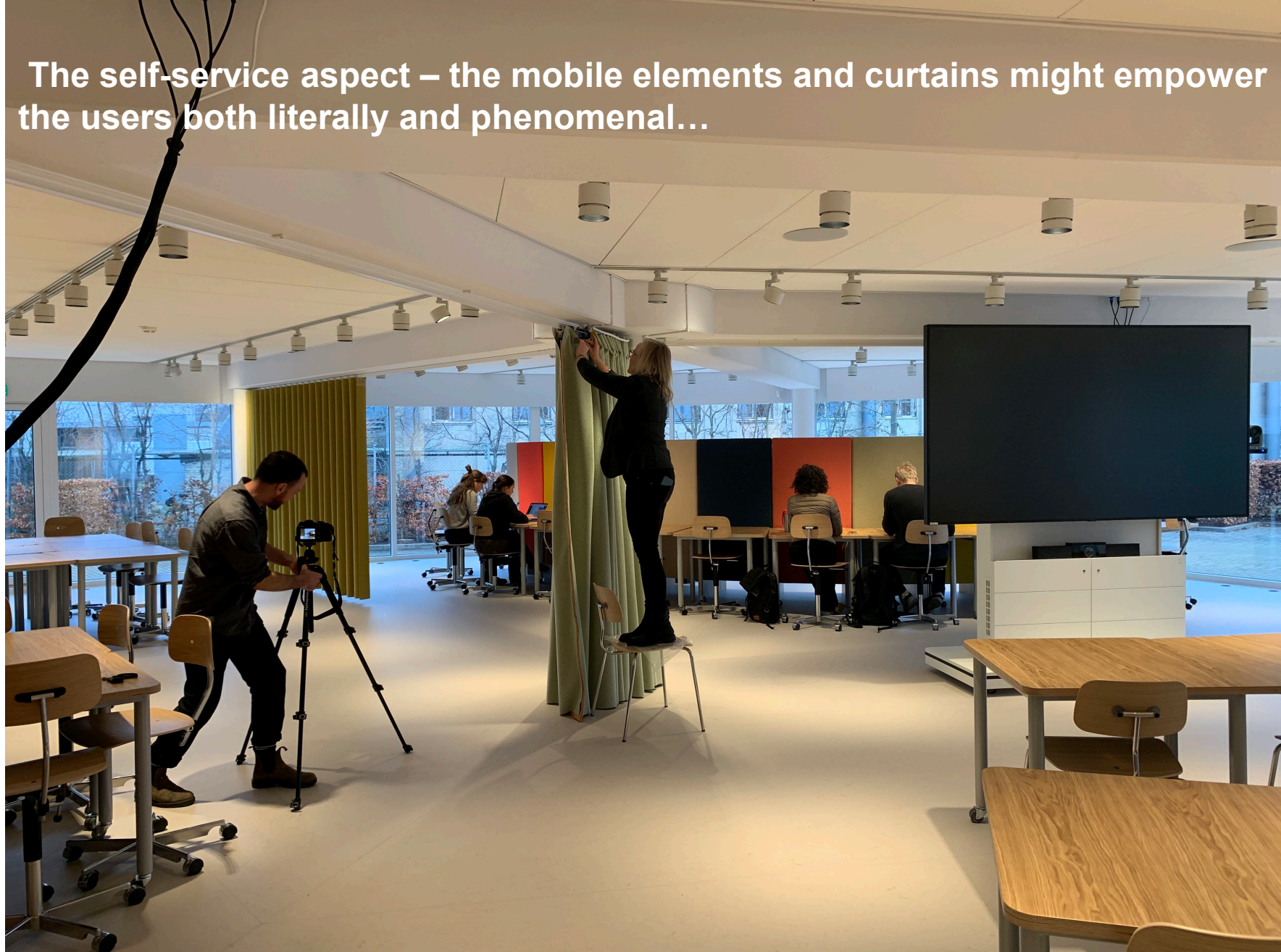
**WHY does
it work?**



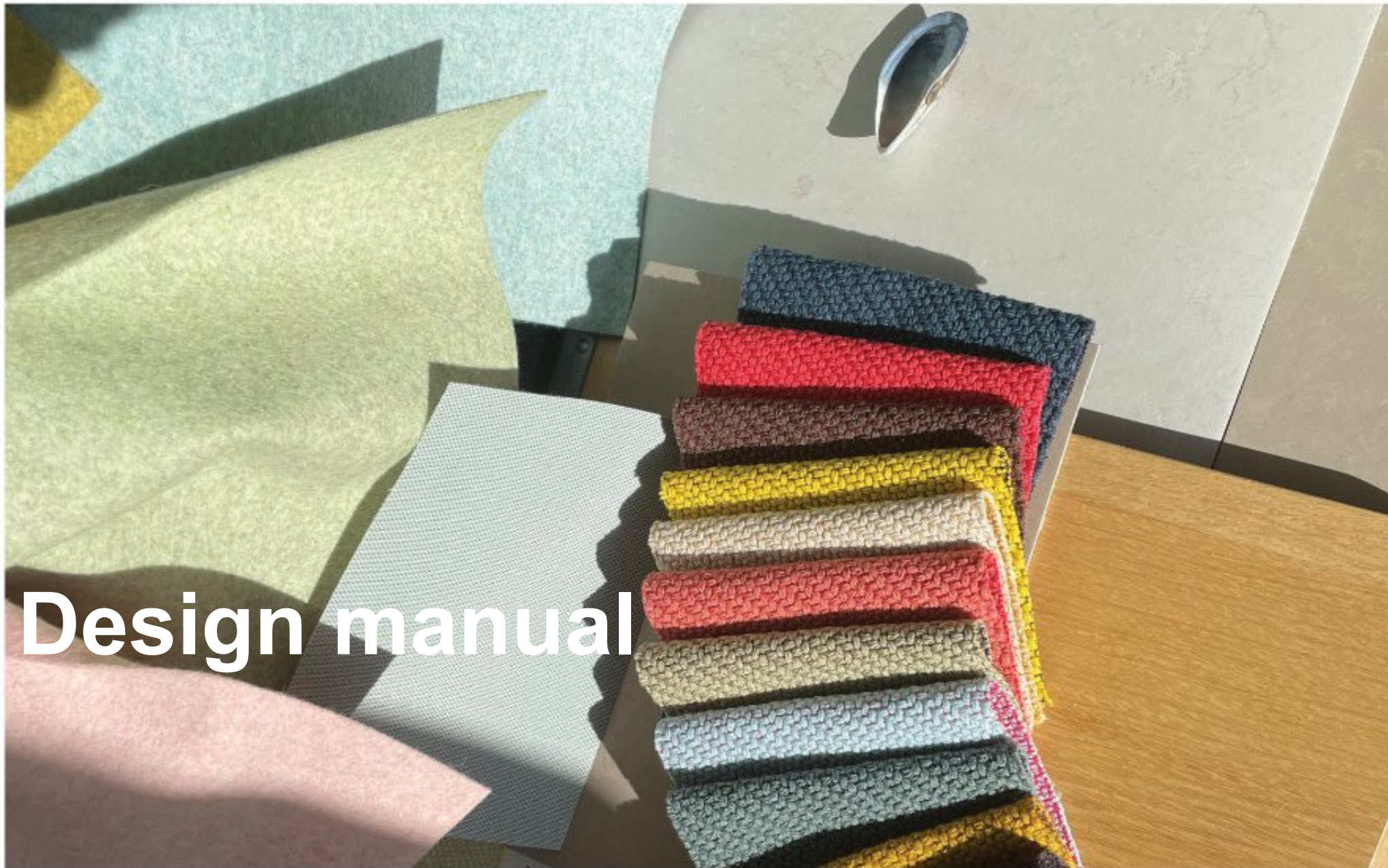




The self-service aspect – the mobile elements and curtains might empower the users both literally and phenomenal...







Design manual



How textile and technology interacts: what's the formula?

SOUND is distributed in the room by a voice lift system. This allows users to speak in normal sound level
So the general sound level is relative low.

This allows us to use textile room dividers - "wollen walls" that dampens 16-18 dB



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Process

- **Defining architectural values in existing building**
- **Sketching programming analysis and iterative development process**
- **Virtual Reality with real sound**
- **1:1 Mock up of tailormade acoustic curtain collab with suppliers**
- **Study trip to DTU Lyngby.**
- **Software/interface development with users.**

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VR 3D model tour including the sound scape



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The "sound curtain"









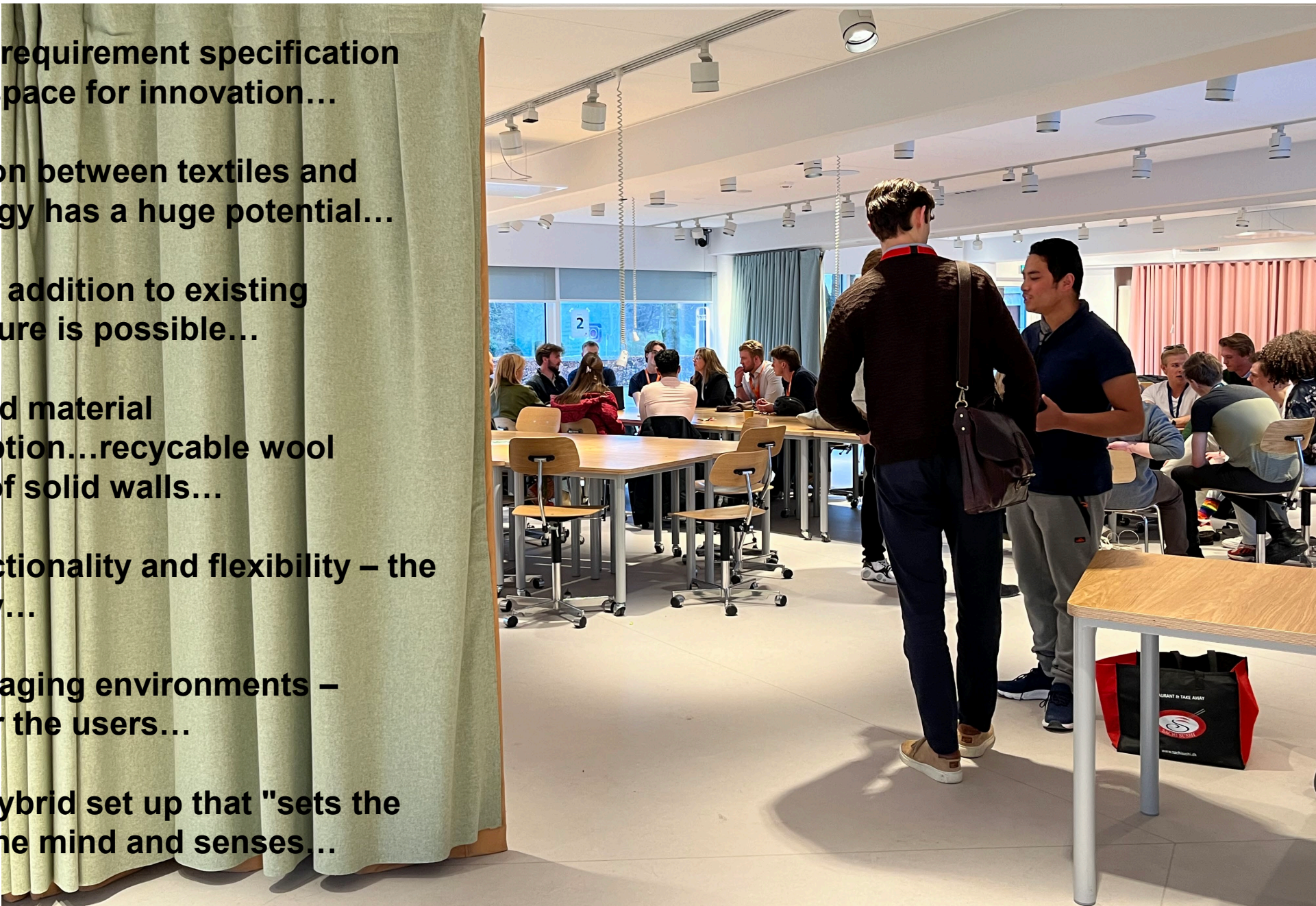






Perspectives

- An open requirement specification creates space for innovation...
- Interaction between textiles and technology has a huge potential...
- "Simple" addition to existing architecture is possible...
- Minimized material consumption...recycable wool instead of solid walls...
- Multifunctionality and flexibility – the easy way...
- Self-managing environments – empower the users...
- Spatial/hybrid set up that "sets the stage", the mind and senses...



- 1. Innovative Library Spaces:** The evolution of library spaces, from traditional to flexible and multifunctional designs.
- 2. Sustainable and Environmental Impact:** Strategies for designing environmentally friendly and sustainable library buildings.
- 3. Digital Transformation:** The impact of digital transformation on library architecture and design
- 4. Community Engagement:** Designing libraries that serve as vibrant community hubs.
- 5. Accessibility and Inclusivity:** Creating library spaces that are welcoming and accessible to all patrons.
- 6. Preservation of Heritage:** Strategies for preserving historical libraries while meeting modern needs.
- 7. Adaptive Reuse:** Converting existing structures into functional and efficient library spaces.
- 8. Future trends and Emerging Technologies:** Exploring the future of library architecture in a rapidly changing environment.

Arkitema ..

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