



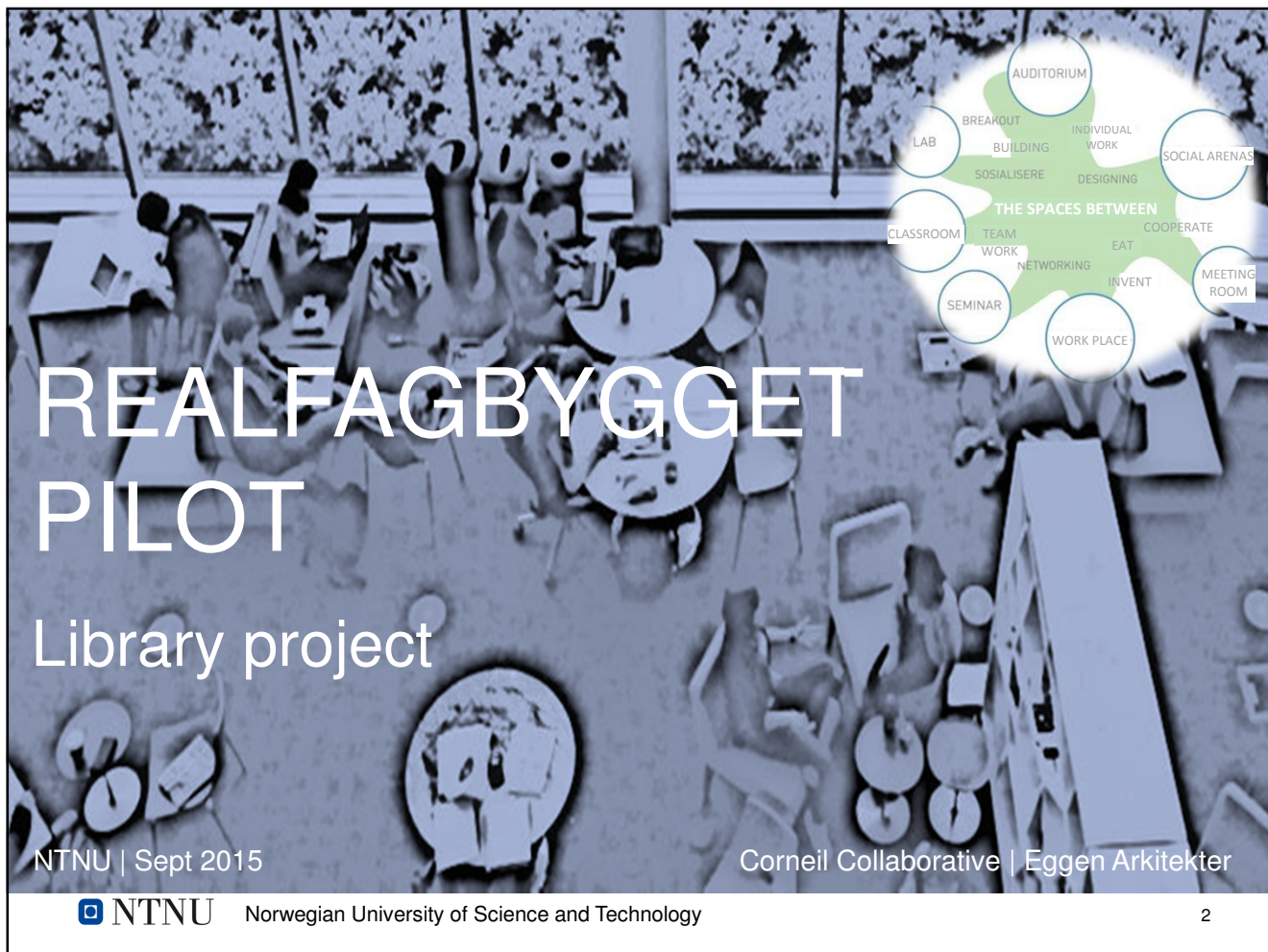
Norwegian University of
Science and Technology

Follow-up workshop: Future learning environments

NUAS 2015

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Tore Haugen, Professor

Case developed by Corneil Collaborative and Eggen Arkitekter


An aerial photograph of a library project, showing a large open-plan space with various seating areas, tables, and people. A diagram is overlaid on the right side of the image, titled "THE SPACES BETWEEN". The diagram consists of a central green shape with several smaller circles and rectangles connected to it, each containing a label for a different type of space or activity. The labels include: AUDITORIUM, LAB, BREAKOUT, BUILDING, SOCIALISERE, CLASSROOM, SEMINAR, WORK PLACE, INDIVIDUAL WORK, DESIGNING, SOCIAL ARENAS, COOPERATE, MEETING ROOM, EAT, NETWORKING, and INVENT. The text "REALFAGBYGGET PILOT" is written in large white letters on the left side of the image, and "Library project" is written below it in smaller white letters. At the bottom left, it says "NTNU | Sept 2015" and at the bottom right, "Corneil Collaborative | Eggen Arkitekter". The NTNU logo and name are at the bottom left, and the page number "2" is at the bottom right.

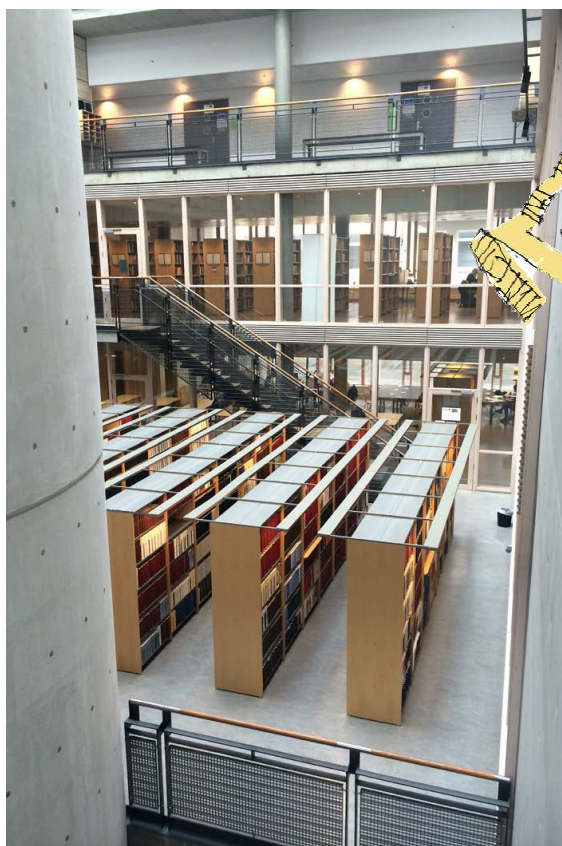
REALFAGBYGGET PILOT

Library project

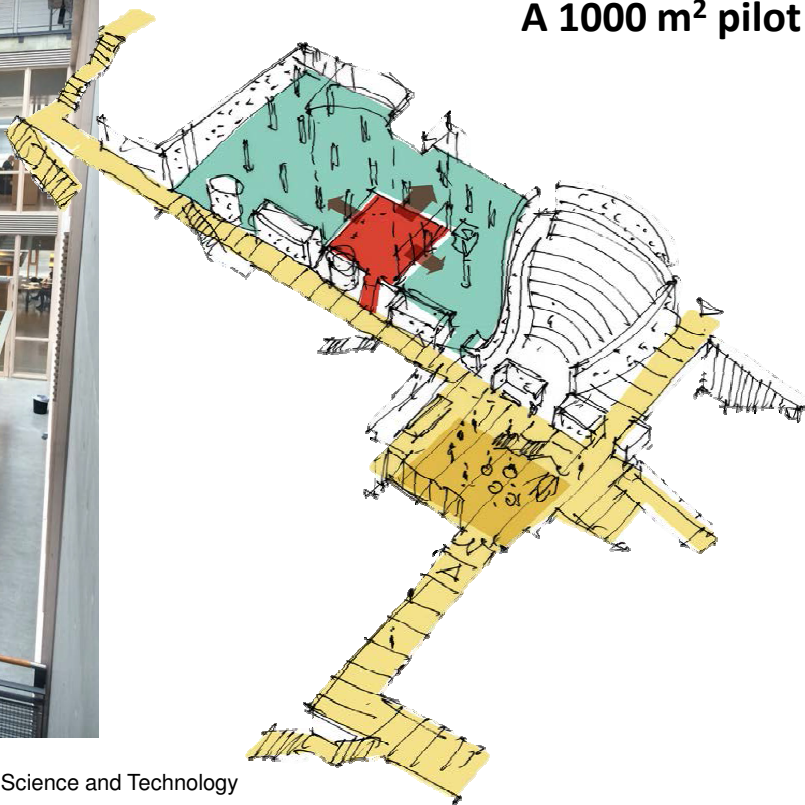
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**Innovative learning areas and
informal meeting places:
A 1000 m² pilot**

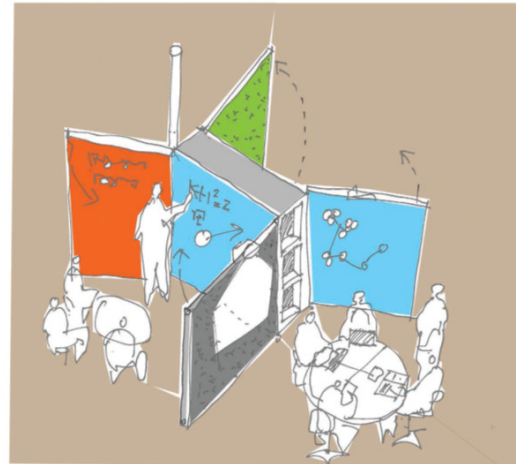
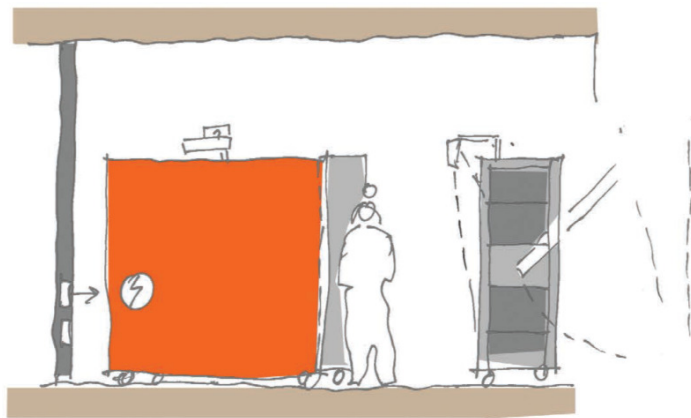
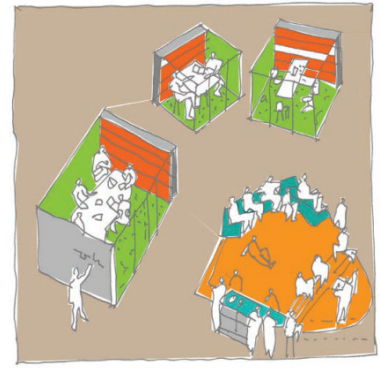
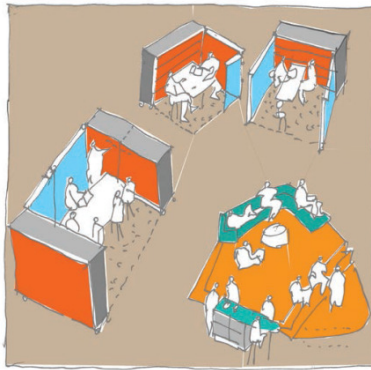
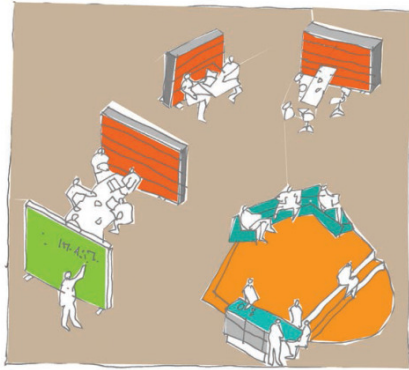


PROCESS

- **Phase#1:** Analysis and feasibility studies
Scenarios and design concepts
Example studies, 'best practice-next practice'
- **Phase#2:** Work-shop
with students and employees
(~50 participants)
- **Phase#3:** Development of design part 1
- **Phase#4:** Development of design part 2
Summarize process, develop design tools
Point out the next steps towards realization



IDEAS



AMBITION

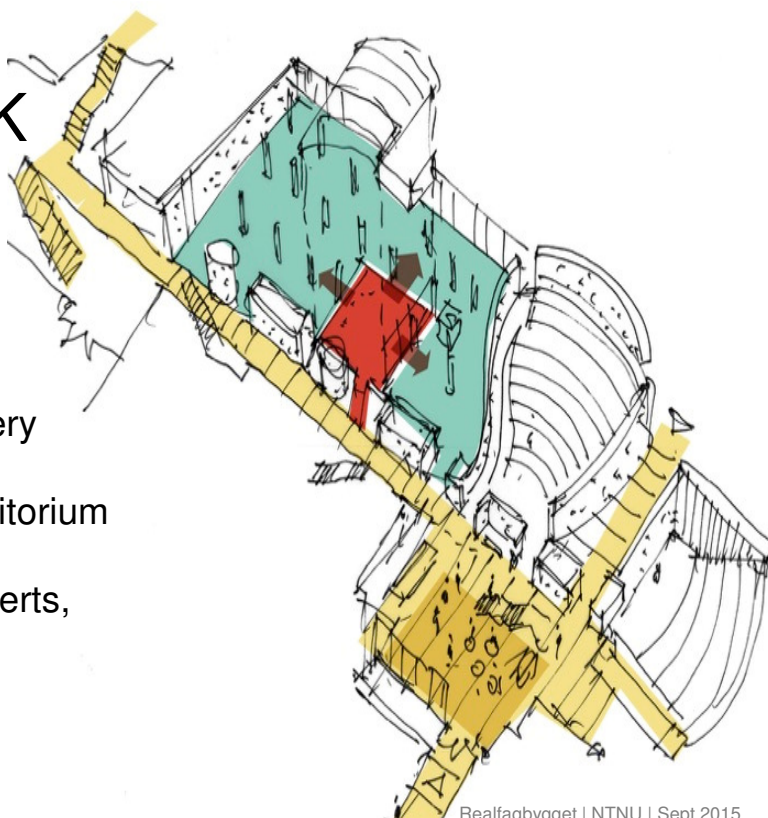
- Innovative and informal learning arenas opening for new ways of working, teaching and learning.
- Meeting places for self-initiated work
- Arena for multidisciplinary activities
- Meeting place for “MAKERS” from different departments
- Emphasize on social aspects and collaboration
- A laboratory for learning arenas: flexible and continuous change



DESIGN FRAMEWORK

Context: Realfagbygget U1

- Connected with the main artery
- Visibility and openness
- Interacting with café and auditorium
- Flipped auditorium
- Auditorium as arena for concerts, drama and film



Realfagbygget | NTNU | Sept 2015
CornellCo | Eggen

THE OVERALL QUESTION:

How can campus development and changing ideas of "university" be combined into innovative environments for learning and knowledge development?

WE WOULD LIKE YOUR ADVICE:

Based on what we have told you, how should we plan our larger pilots regarding:

- Space for different activities
- Equipment and infrastructure
- Support services



ENGAGE

...in a crowd



highly flexible
meeting space for events
and large gatherings in the atrium

...or as individuals



highly flexible
informal space for
individual and quiet study

CONNECT

...in a team



highly flexible work space for group study and project work

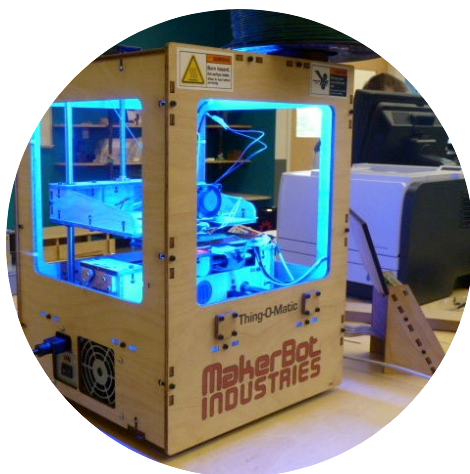
... or with technology



Technology equipment units w/ table space, screens, and white boards

MAKE

...with tools



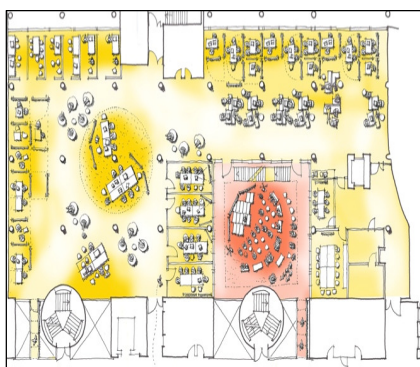
equipment and tools to work on interdisciplinary “hands on” projects outside of class

...and with things



space to display and test out the things that students make

ALTERNATIVES



#1:
ENGAGE



#2:
MAKE



#3:
CONNECT

We need environments that can:

ENGAGE – a crowd and individuals

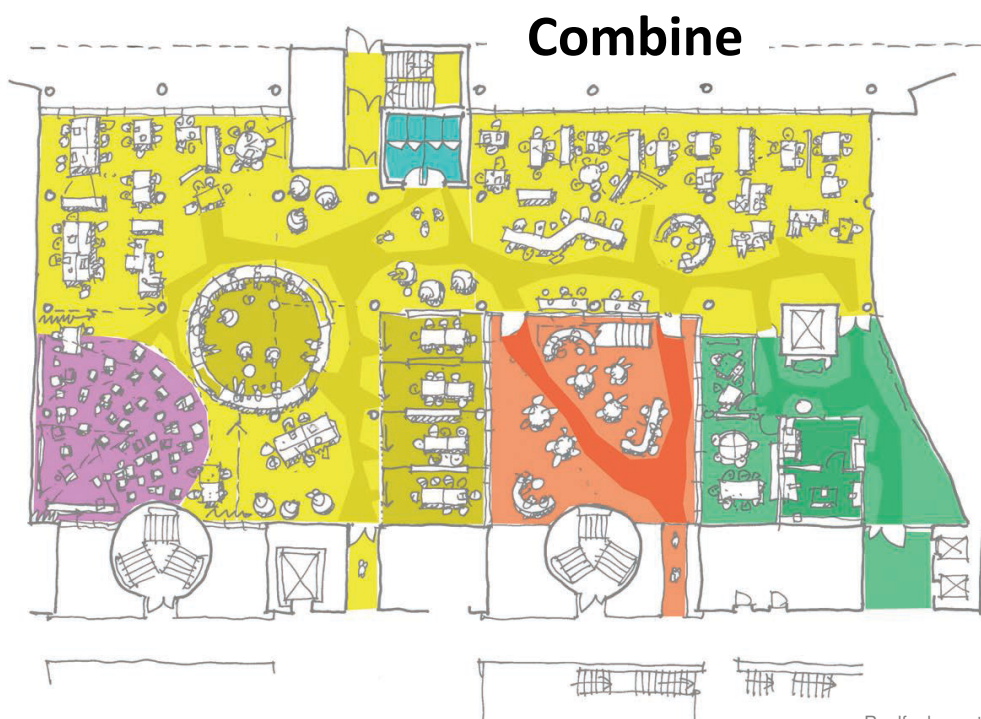
CONNECT – in teams and with technology

MAKE – with tools and with things

From your perspective what do you see as the most important things to do to create our future learning environments?



PREFERRED PLAN "COMBINE"



PREFERRED PLAN: LAYOUT - ZONES

1. ATRIUM

- Large informal meeting place with exhibition possibilities

2. MINGLE ZONE

- Common space for informal interaction with tables and stools and whiteboards

3. LEARNING LOUNGE

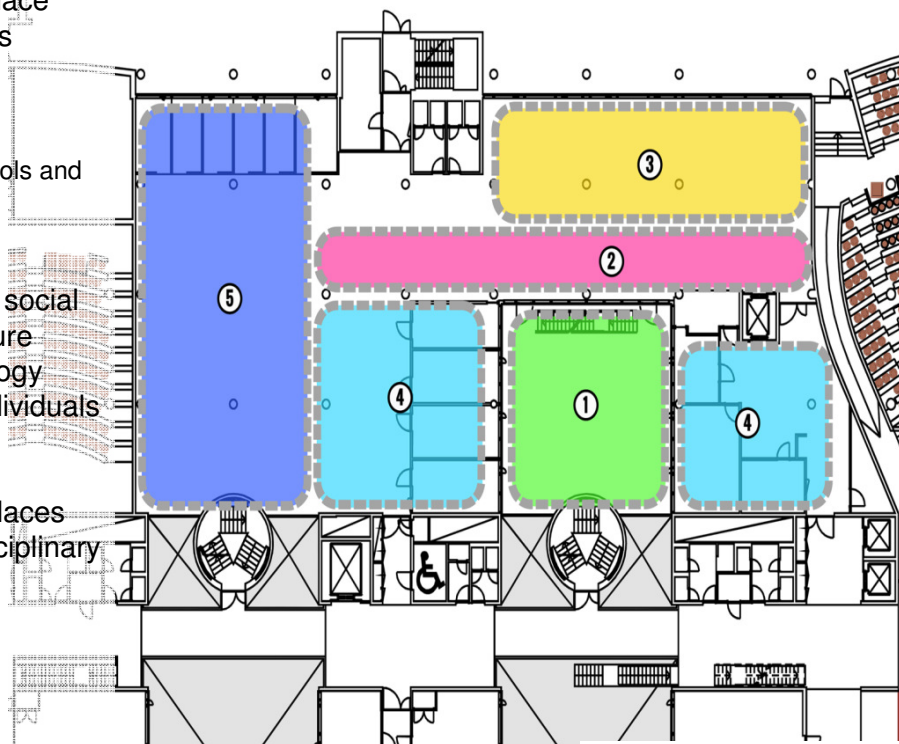
- Variety of informal, flexible social learning spaces and furniture arrangements and technology facilities for groups and individuals

4. MAKER COMMONS

- “Maker” space with work places and equipment for interdisciplinary informal student activities

5. BACKROOM

- Future expansion space – temporary study cubicles



PREFERRED PLAN: REFINED - PROJECTS

1. Bridge to atrium
2. Technology consoles
3. Wooden boxes (different shapes)
4. Atrium platform
5. Movable partitions
6. Lounge sofas and tables
7. Study tables and chairs
8. Common work tables and high stools
9. Kitchenette
10. Maker closets
11. Maker Commons
12. Maker workrooms
13. Meeting room



To do things right – or to do the right things?

We are asked by our owners to develop efficient and productive learning and research environments?

How do we create space and environments that meets those expectations?





 NTNU Norwegian University of Science and Technology

Thank you for your
participation 😊