UPF
LUNIVERSITY PROPERTIES OF FINLAND LTD

NUAS Joint Conference 2015 in Aarhus

How to co-create processes, places and services together with users

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Aalto-University

Agenda

- About UPF
- Campus retrofitting
- Co-creation
- Co-evaluating
- Co-investing
- Conclusions

University Properties of Finland Ltd.

In 2010 we decided to have ambitious vision:

The most respected campus developer in Europe

- Founded in 2009, in connection with the reform of the Finnish University Law
- Owners and users: 10 universities outside the capital area
- Asset value 1,11 billion €
- Turnover 140 M€ (2014)
- 1,3 million sqm, 19 campuses
- 115 000 students in the premises
- Approx. 6 500 pupils in training schools
- 20 000 persons working in the premises
- Only 36 emplyees =>network org.

CAMPUSES
All over Finland

Hämeenlinna
Hämeenlinnan kaupunki: Seminaarin kampus

Jyväskylä
Jyväskylän yliopisto: Jyväskylän kampus

Kuopio
Itä-Suomen yliopisto: Kuopion kampus

Oulu
Oulun yliopisto: Kontinkankaan kampus

Oulun yliopisto: Linnanmaan kampus

Rovaniemi
Lapin yliopisto: Rovaniemen kampus

Tampere
Tampereen teknillinen yliopisto: Hervannan kampus

Tampereen yliopisto: Kaupin kampus

Tampereen yliopisto: Keskustan kampus

Vaasa
Vaasan yliopisto: Vaasan kampus

Åbo Akademi: Vaasan kampus

Joensuu
Itä-Suomen yliopisto: Joensuun kampus

Kajaani
Kajaani: Kajaanin kampus

Lappeenranta
Lappeenrannan teknillinen yliopisto: Lappeenrannan kampus

Rauma
Turun yliopisto: Rauman kampus
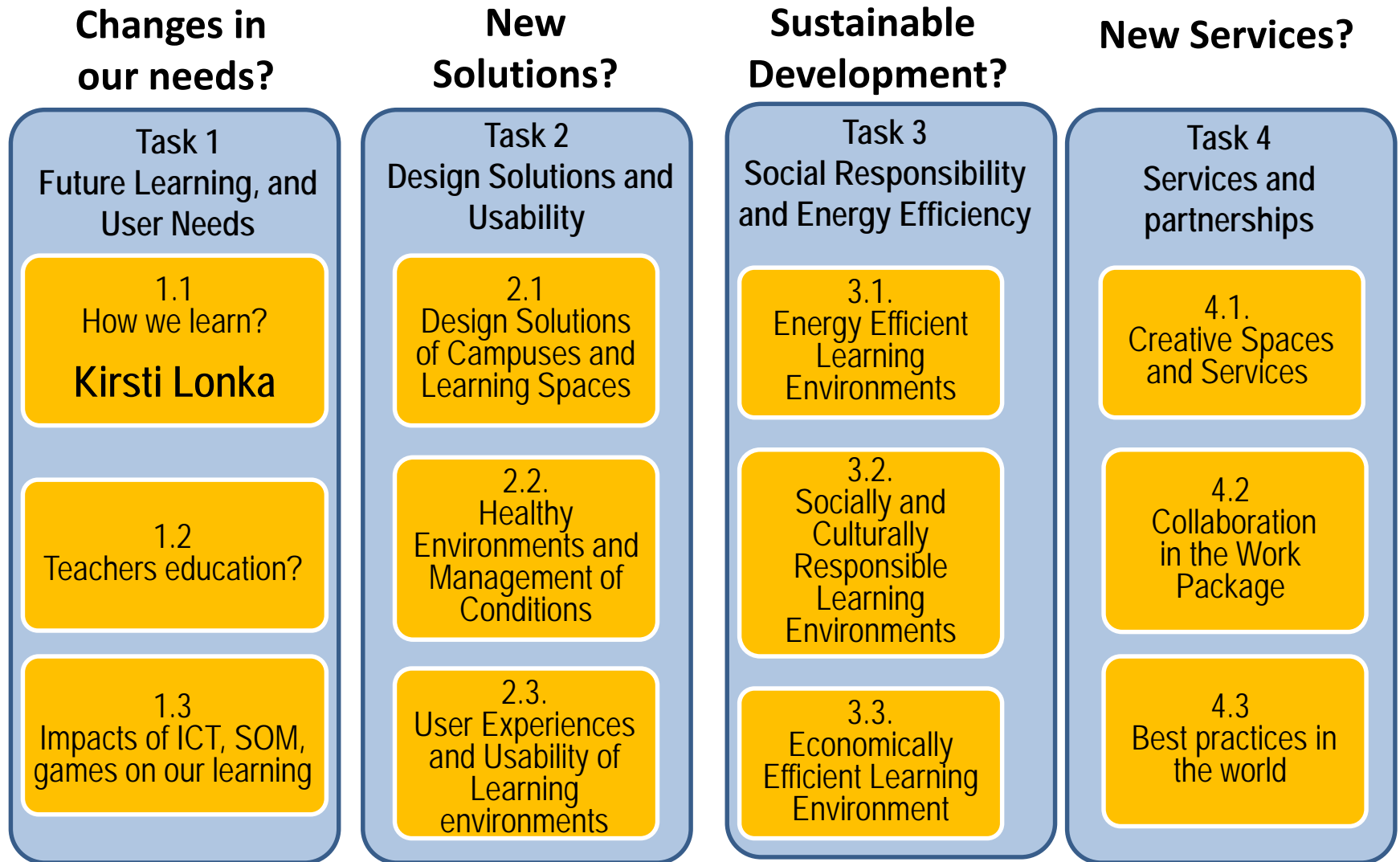
Savonlinna
Itä-Suomen yliopisto: Savonlinnan kampus

Turku
Turun yliopisto: Turun kampus

Åbo Akademi: Turun kampus

Hki

How to co-create processes, places and services   Olli Niemi - Suvi Nenonen

Tasks and Sub-tasks of our 10 M€ research
Spaces, places and services for learning and new knowledge creation

Changes in our needs?	**New Solutions?**	**Sustainable Development?**	**New Services?**
Task 1 Future Learning, and User Needs	**Task 2** Design Solutions and Usability	**Task 3** Social Responsibility and Energy Efficiency	**Task 4** Services and partnerships
1.1 How we learn? **Kirsti Lonka**	2.1 Design Solutions of Campuses and Learning Spaces	3.1. Energy Efficient Learning Environments	4.1. Creative Spaces and Services
1.2 Teachers education?	2.2. Healthy Environments and Management of Conditions	3.2. Socially and Culturally Responsible Learning Environments	4.2 Collaboration in the Work Package
1.3 Impacts of ICT, SOM, games on our learning	2.3. User Experiences and Usability of Learning environments	3.3. Economically Efficient Learning Environment	4.3 Best practices in the world

Future places for work
Olli Niemi

Research, Development and Innovation

Research ➡ Development ➡ Commercialisation

Investments in Research 500 000 €/a

Future Learning Environments 10 M€
2011:4-2015:3

Nordic Campus Retrofit CARE –project, in Finland 450 000 € 2014-2016:3

New ideas from R&D & clients

Small scale demonstration
Duration <1 year

Our clients usually resist strongly our change

Further development

Business as usual
2…4…8 years

10 demos = 1,8 M€ per year:
Learning by doing
Design, construct, use
Co-creation demos
Service demos
Analysis of impacts
=>Evidence based design
Demos are used for marketing

400 projects per year:
Repair and maintenance 17 M€ (5 % on demos)
Investments (new bldgs+renovation) **113 M€**
=> Multiuse projects, new service concepts
Under Construction and
Design phase 175 projects 500 M€

http://www.designcouncil.org.uk/designprocess

As a result of our research we have 36 demonstration projects Some examples

	Theme 1 **Learning Spaces**	Theme 2 **Unused Spaces**	Theme 3 **Learning Hubs**	Theme 4 **Work Spaces**
Flag Ship	UBIKO, Oulu	Musica, Jyväskylä	OASIS Tampere	SYKlinki
Others	Auditorium L2, Oulu High Scool, Jyväskylä Educarium, Turku ICT Room, Tampere Open labs, Tampere	Konetalo, Tampere Restaurant Tampere Lobby Turku Corridor restaurant, Kuopio	Library, Turku Language center, Joensuu POP-UP Library Tampere	SIMSpace Tampere Leaf-Lab Oulu Spark BIG Room Tampere SpaceLab Tampere

![UPF - University Properties of Finland Ltd logo]

As a result of our research all our new projects differ from traditional university buildings

Jyväskylä - Ruusupuisto

Tampere - Kampusareena

Tampere – Arvo2

Turku - Medisiina D

Oulu – Uusi Hammas

Investment
portfolio
500 mill. €

Lappeenranta – Verso

All

- Are multiuse buildings
- Have shared spaces and services
- Active co-creation has an important role in every project

As a result of our research we have published a book called

EDITED BY NENONEN, KÄRNÄ, JUNNONEN, TÄHTINEN, SANDSTRÖM, AIRO, NIEMI

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How to
CO-CREATE
campus?

How to co-create processes, places and services   Olli Niemi - Suvi Nenonen

The goals of the Nordic CARE – project

- To identify, develop and evaluate built environment retrofitting concepts and processes

- To engage users and develop evidence based design skills and design processes for retrofitting.

- To develop co-creation models to accelerate the joint Nordic innovate ventures in the future

Partners
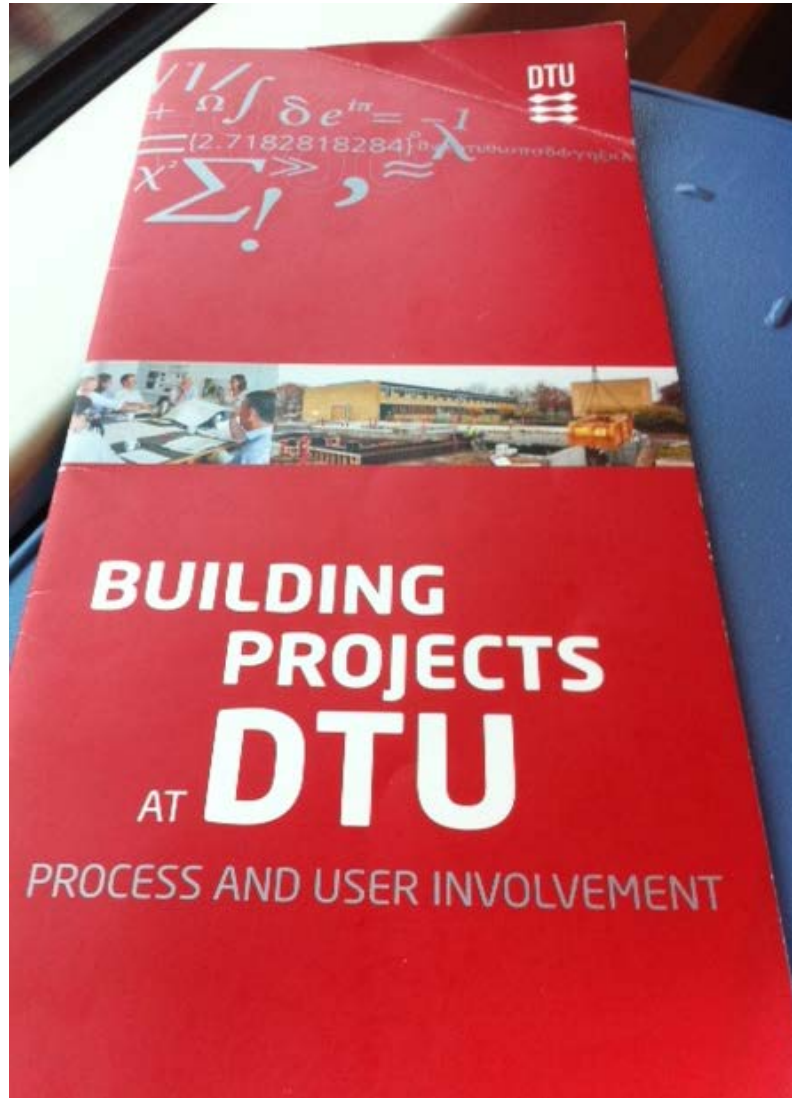
Chalmers University of Technolog

NTNU

How to co-create processes, places and services   Olli Niemi - Suvi Nenonen
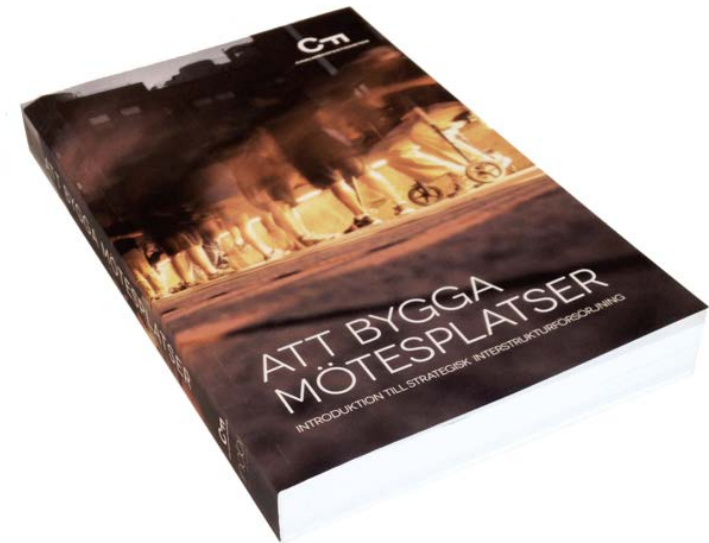
Retrofitting –from building based retrofitting to activity and evidence based retrofitting

- Retrofitting processes are the additions of new technologies, functions and services to existing built environment systems.

- **The activity based retrofitting** consists on multidisciplinary collaboration and learning processes where the diverse users have diverse roles during the retrofitting process.

- The process and the product are as equally important for successful retrofitting concept.

- **The evidence based retrofitting** follows the impacts of interventions on existing buildings.

How to co-create processes, places and services   Olli Niemi - Suvi Nenonen
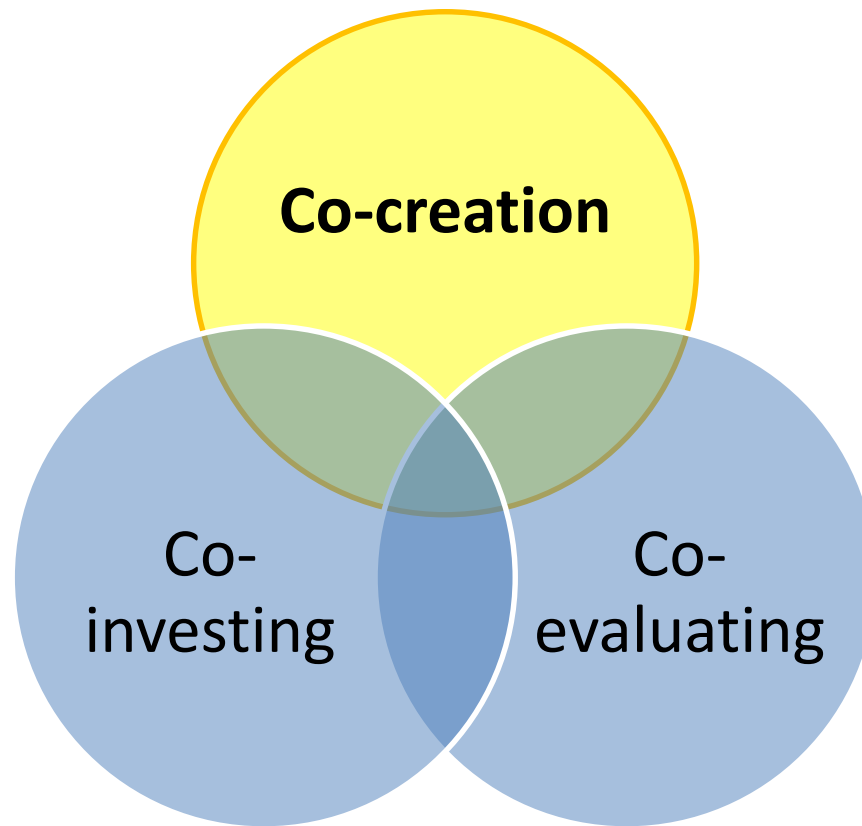
Demonstrations are divided into four themes, which form a path of learning and innovation creation

theme 1
LEARNING SPACES

theme 2
UNUSED SPACES

theme 3
HUBS

theme 4
WORK SPACES

Picture: Heidi Sumkin
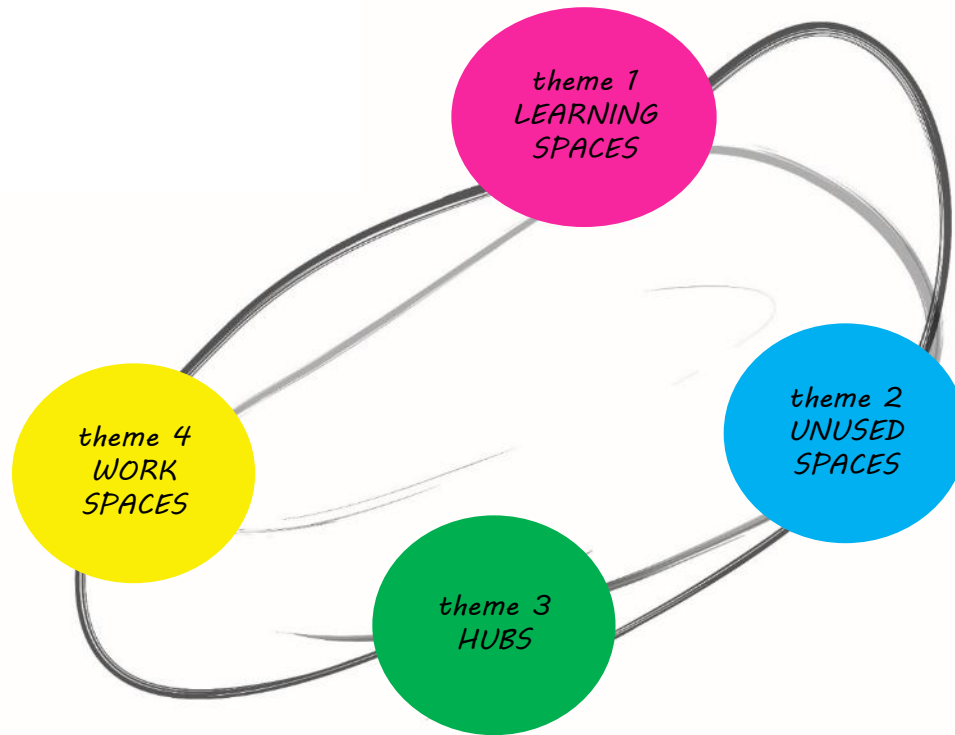
How to co-create processes, places and services   Olli Niemi - Suvi Nenonen

Education as a service? How we learn?

(Lombardo & Eichinger 1996)

• **Formal learning,**	**10 %**	**Passive learning**
• **Non-formal learning**	**20 %**	**Active, reflective**
• **Informal learning**	**70 %**	**Leisure time learn**

Schools are designed for formal learning
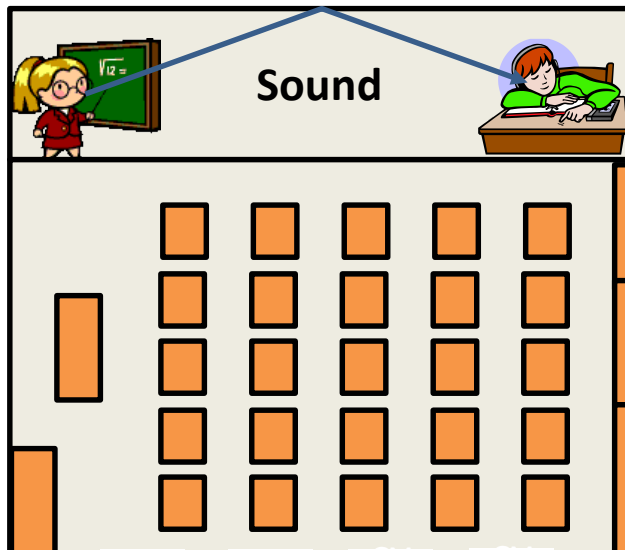
Active collaborative learning needs new solutions

Sound

Corridors are learning environments

5-10 min

Future, Innovative Campuses
Olli Niemi
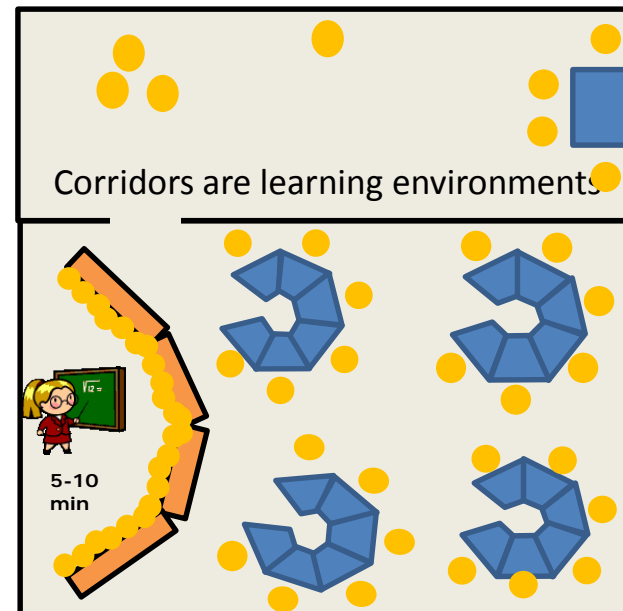
Theme 1:
Our best demo:
UBIKO – Ubiquitous learning
University of Oulu, training school

- Oulu UBIKO demo is one of the finalist of The EAPRIL Best Research & Practice Project Award.
- EAPRIL =European Association for Practitioner Research on Improving Learning

Targets of Oulu UBIKO project:
Pupils will come inspired, skillful and self-regulated learners

Inspired, skillful and self-regulated learners

- are aware of their abilities
- can set personal goals for learning and modify them if necessary.
- are able to utilize efficient learning strategies (analyze, practice, take notes)
- monitor and evaluate the achievement of their goals.
- modify and regulate their learning environment

Pedagogical solution:
Pupils will come skillful learners, if they have a possibility

1. To engage in longstanding, many-sided, meaningful multiple sessions
2. To choose how to work – what, when and with whom,
3. To influence on their challenges – how much, how fast and how much support,
4. To influence on their evaluation criterions and on the analysis of their learning and reflection.

(Perry & Rahim, 2011, p. 130)

Perry, N. E. & Rahim, A. (2011). Studying self-regulated learning in classrooms. In B. J. Zimmerman & D. H. Schunk (Eds.), *Handbook of self-regulation of learning and performance* (pp. 122-136). New York: Routledge.

Training school teachers in Oulu asked:
Why our school do not support team teaching?

| Public zone | Semi-public | Semi-privat | Private zone |

(Heikki Luminen)

Final solution

Semi-public

Semi private

Private

Public

Demo in Oulu training school

Future Learning Environments - SHOK Summit   Olli Niemi
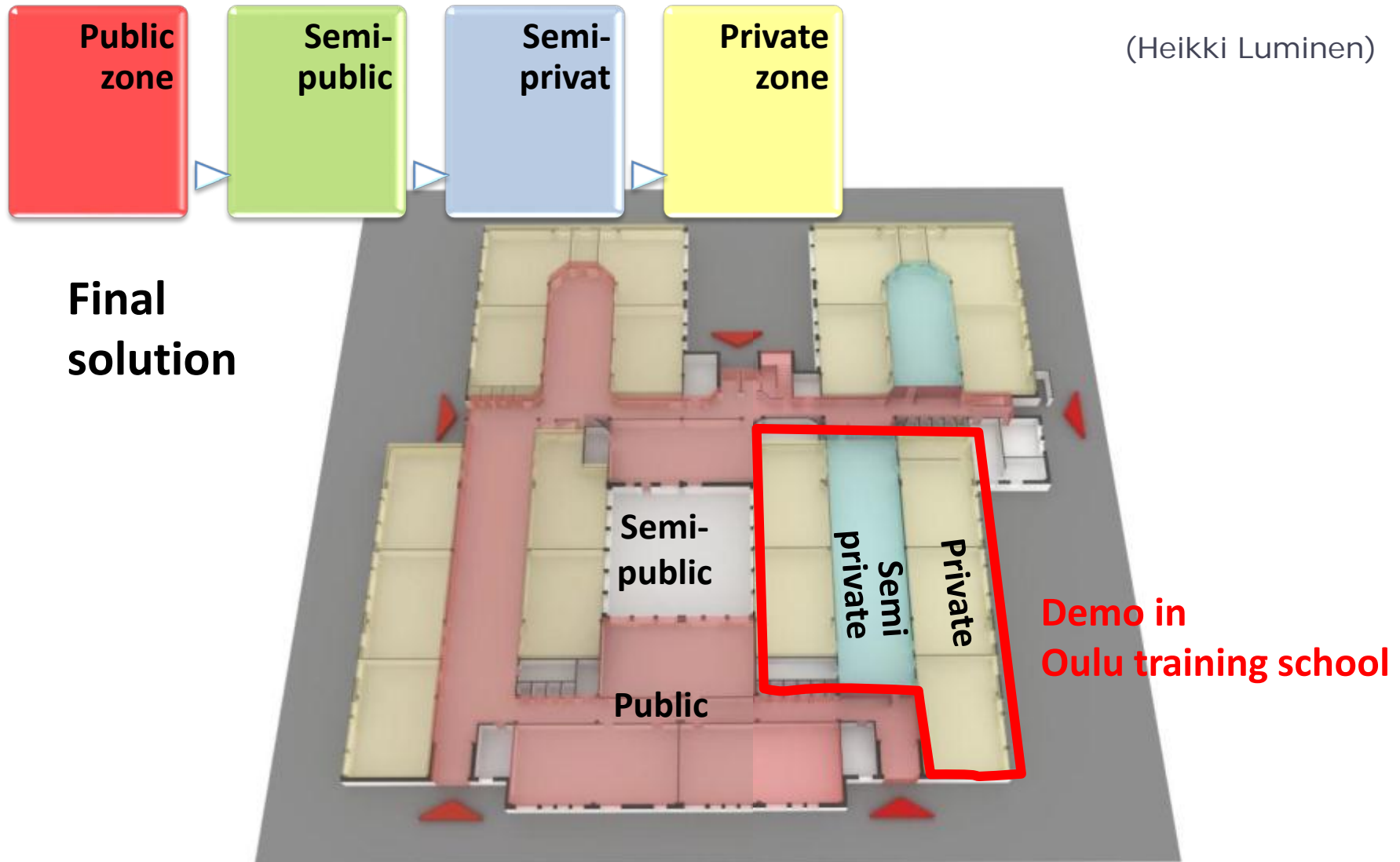
Future UBIKO classroom in Oulu University

Multi space, interactive learning, team teaching, use of ICT
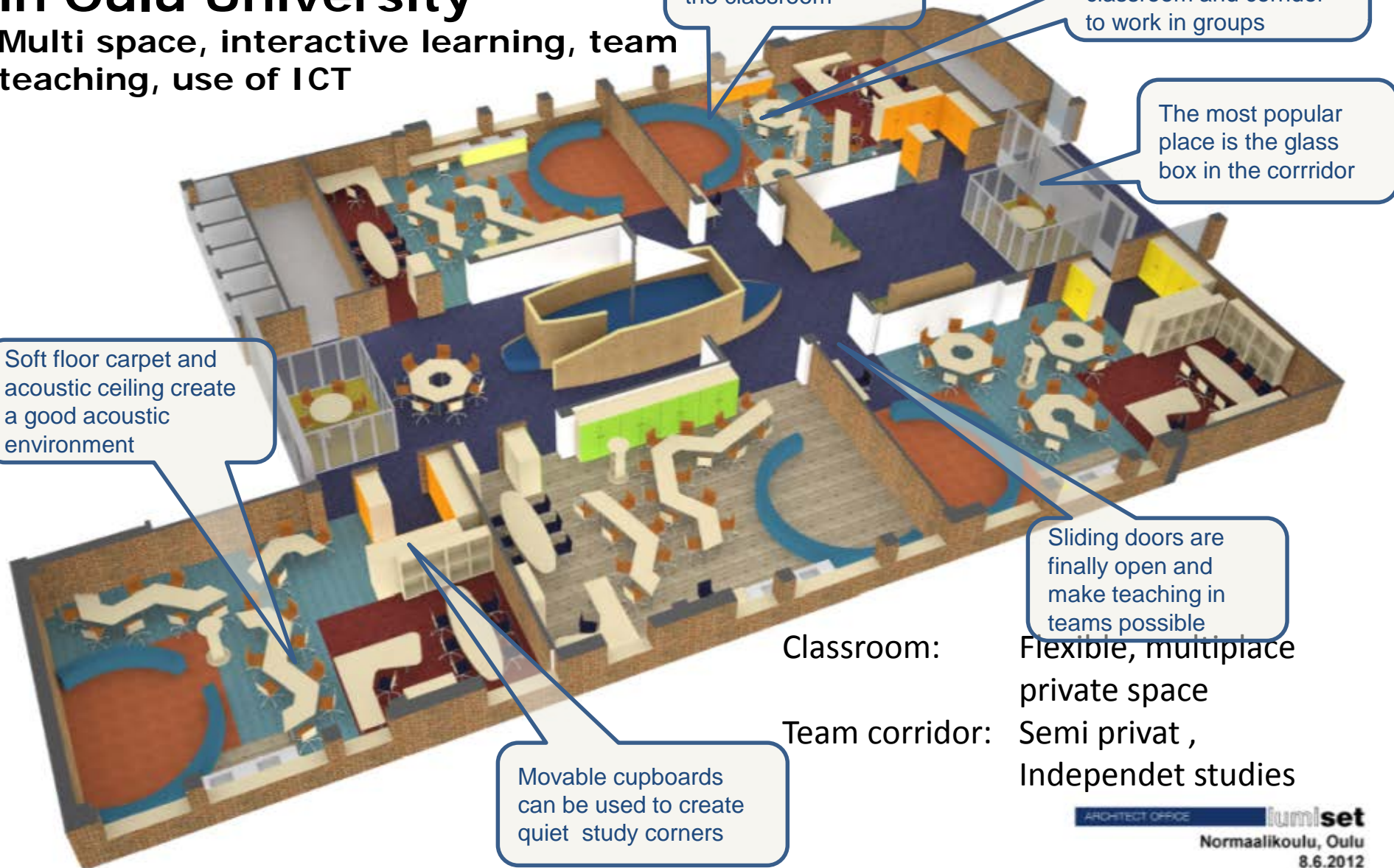
Teacher can start the lesson in front of the classroom

After the start the pupils spread out in the classroom and corridor to work in groups

The most popular place is the glass box in the corrridor

Soft floor carpet and acoustic ceiling create a good acoustic environment

Sliding doors are finally open and make teaching in teams possible

Movable cupboards can be used to create quiet study corners

Classroom: Flexible, multiplace private space

Team corridor: Semi privat, Independet studies

ARCHITECT OFFICE **lumiset**
Normaalikoulu, Oulu
8.6.2012
Heikki Luminen

New inspiring, collaborative learning and team teaching is possible because of the new, flexible spaces

The lesson starts together
Smart board

Pictures: Heikki Kontturi / OY, UBIKO

And continues in smaller study groups
If needed, the teacher can support

Most popular place

From movable "auditoriums" it is easy to arrange even large happenings

Some boys have noticed: Inside the box it is easy to concentrate

The ship in the lobby is multifunctional

A place for wrestling and relaxing

It is a stage

or studying

It's very common
to work on the floor

Theme 1: LEARNING SPACES - MUSICA

theme 1 LEARNING SPACES

BEFORE

AFTER

University of Jyväskylä

How it was done?

In 2014 we did our first demonstration of co-creation process
Charrette

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Charrette Work Cycles

public meeting
vision

public meeting
review

open house
review

public meeting
confirmation
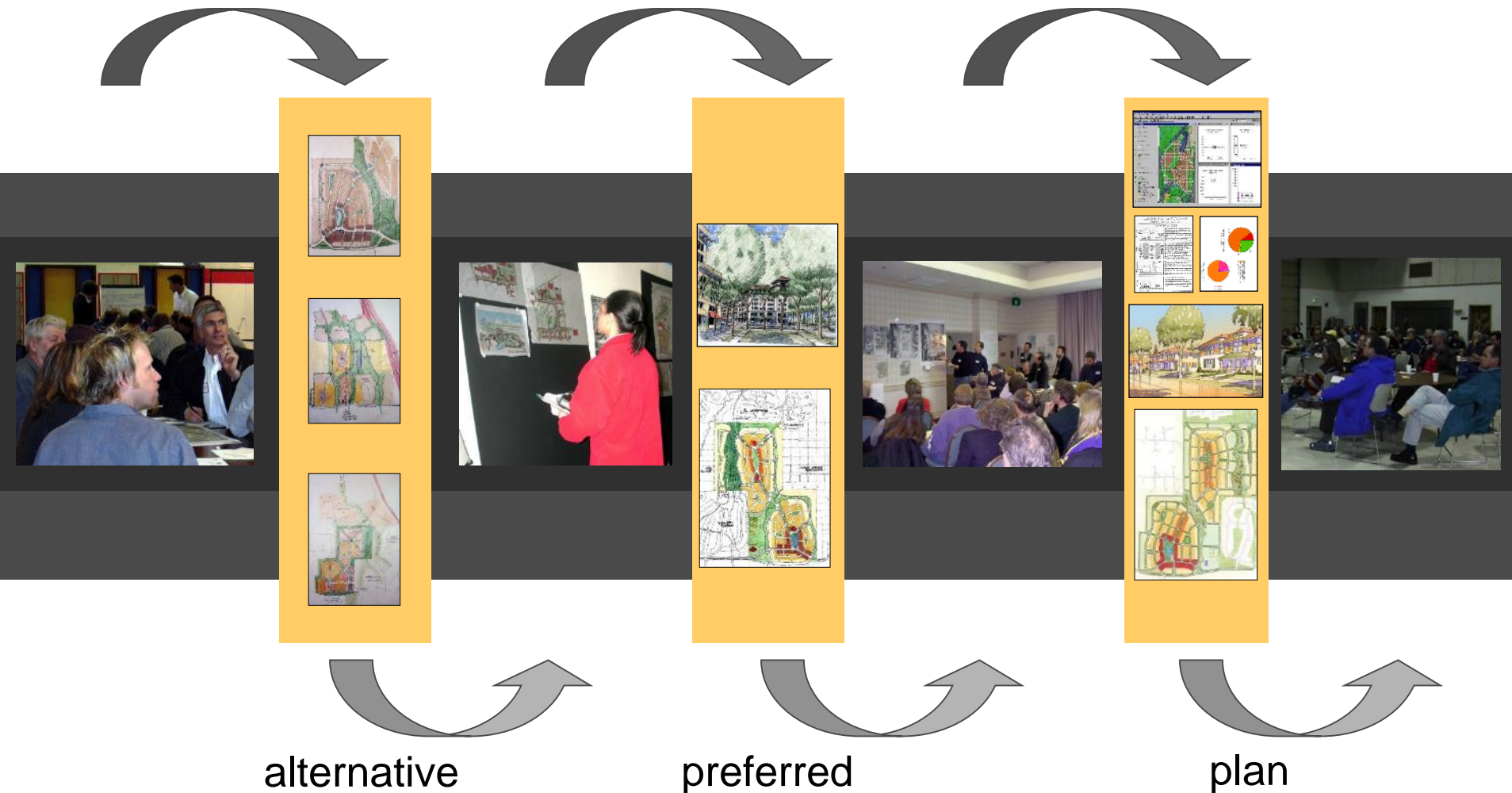
alternative

preferred

plan

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How to co-create processes, places and services – Olli Niemi - Suvi Nenonen
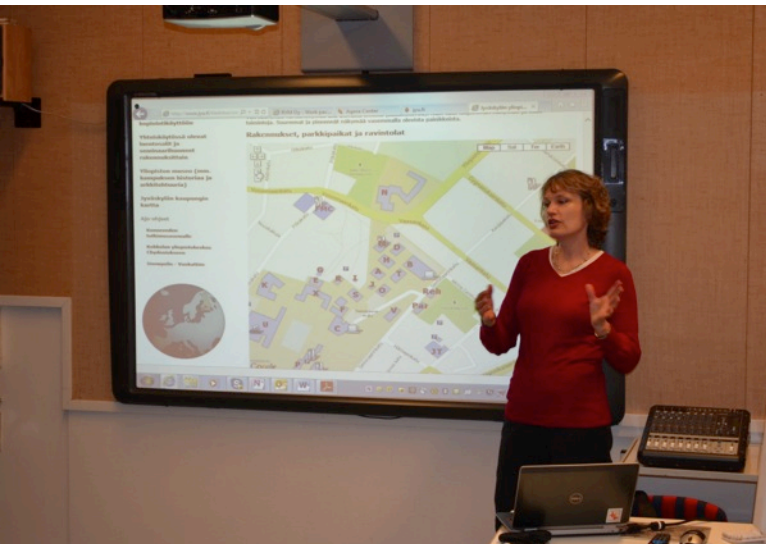
Day 2
Space concepts

**Day 3
Designing space concepts,
Scale models of the concepts**

How to co-create processes, places and
services   Olli Niemi - Suvi Nenonen

Day 4
Unified design, open house

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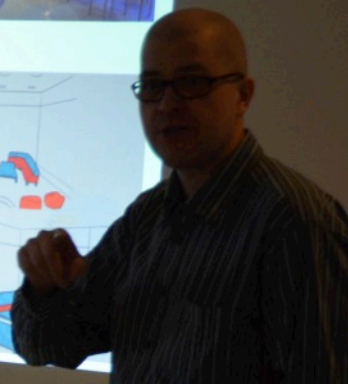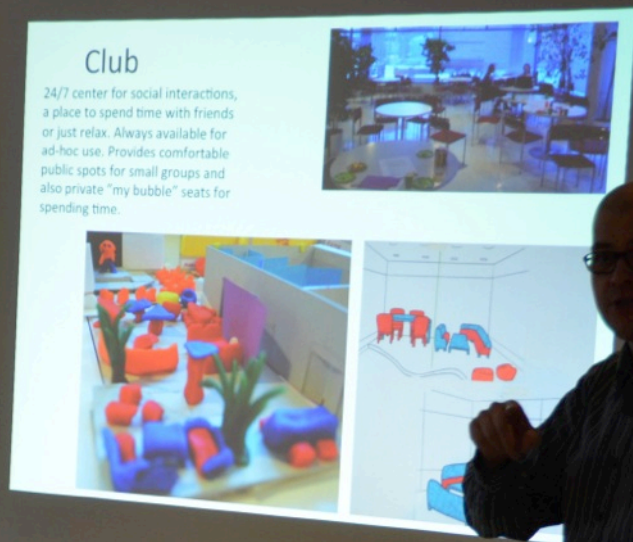
Day 5
Decisions and architect's first draft

27.10.2015

How to co-create products and services – Olli Niemi
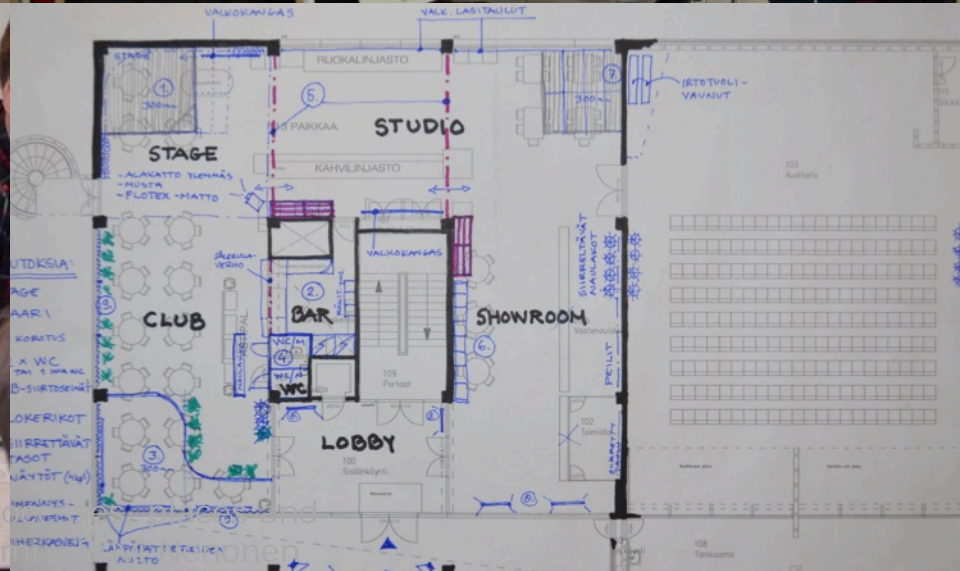
Impacts of Co-creation

500 000 € => 125 000 €
Usage time
from 11-14 =>
To 8-20-24
+ Weekends…

Learning hub
Seminar hub
Party hub

How to co-create processes, places and services   Olli Niemi - Suvi Nenonen

theme 2: MULTIFUNCTIONAL STUDY ENVIRONMENT

theme 2 UNUSED SPACES

BEFORE

AFTER

Tampere University of Technology

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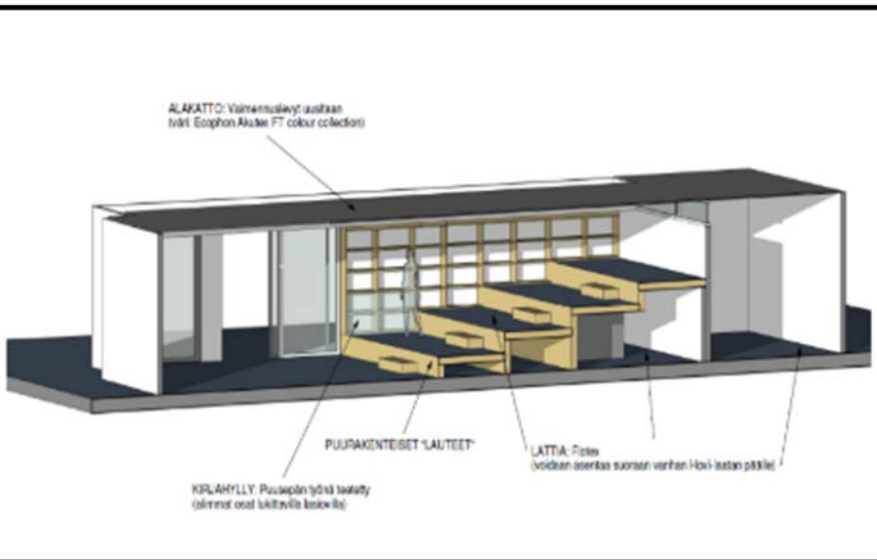
theme 3: PLAYFUL MEETING LIBRARY

theme 3
HUBS

BEFORE

AFTER

University of Tampere

Playfullness in learning
Places in spaces
small balls in wooden tub

#palaveripalju

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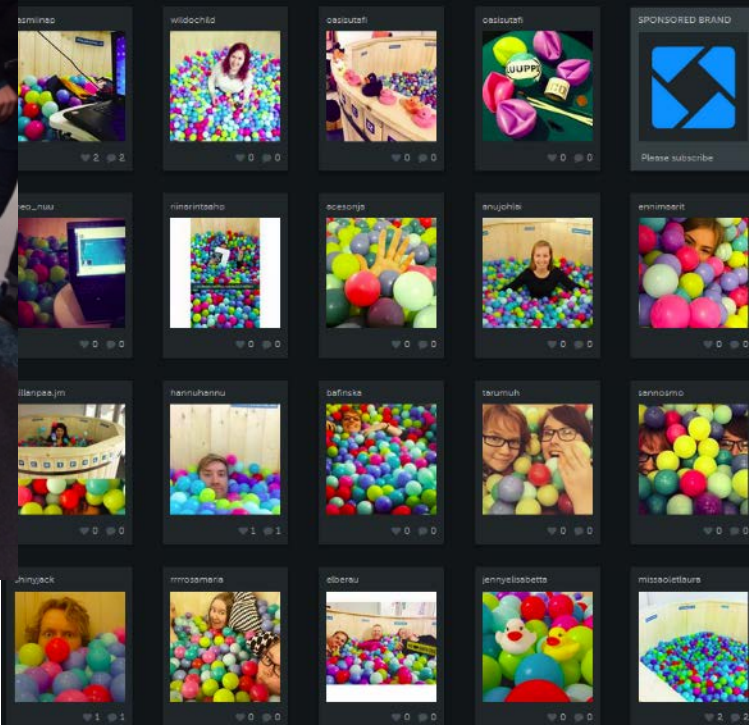
theme 4: ACTIVITY BASED WORK ENVIRONMENT

theme 4
WORK
SPACES

BEFORE

AFTER

University Properties of Finland Ltd

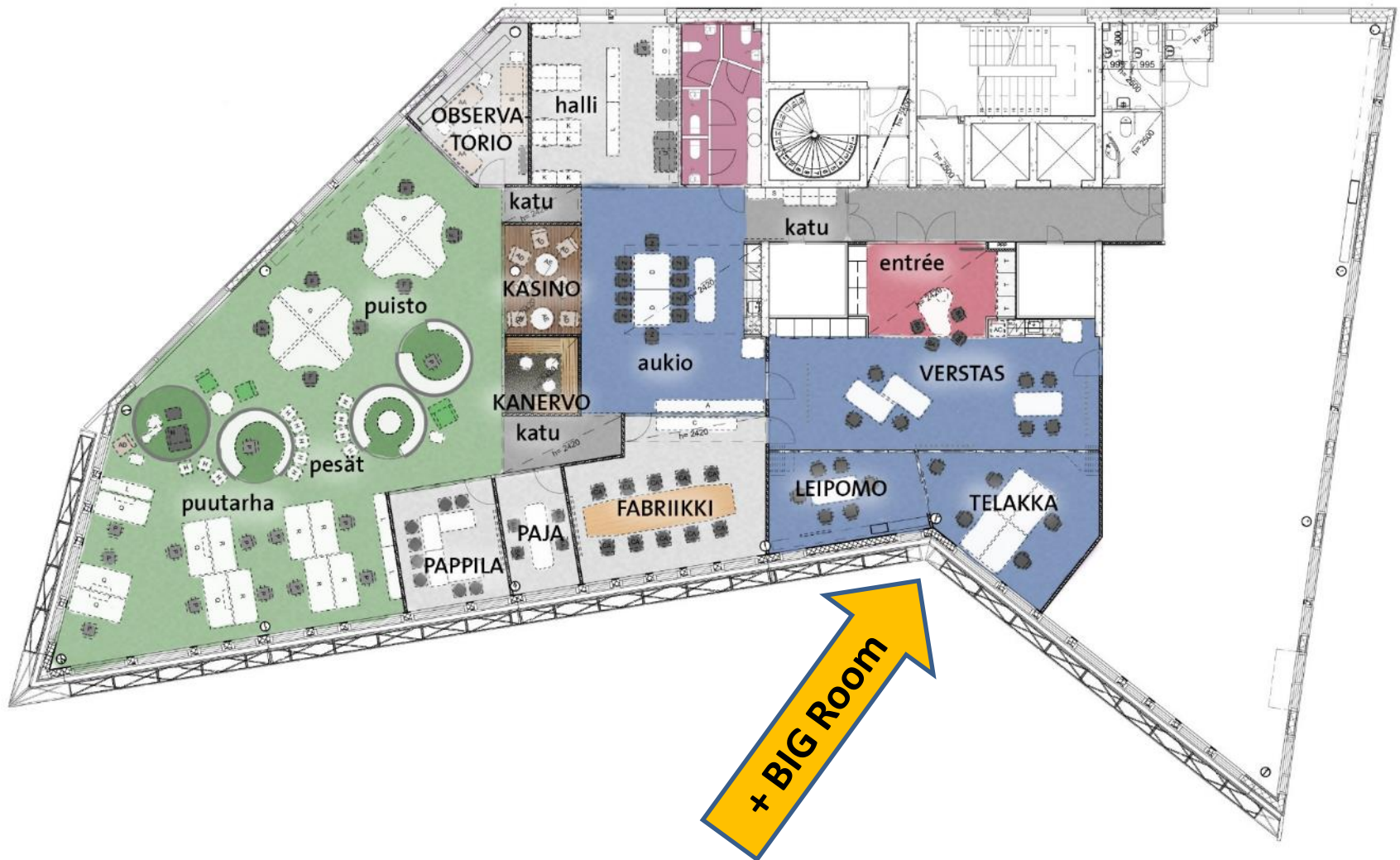How to co-create processes, places and services   Olli Niemi - Suvi Nenonen

Value Co-creation, BIG ROOM, White boards

How to co-create processes, places and services   Olli Niemi - Suvi Nenonen

SYKCity

Flexible big room

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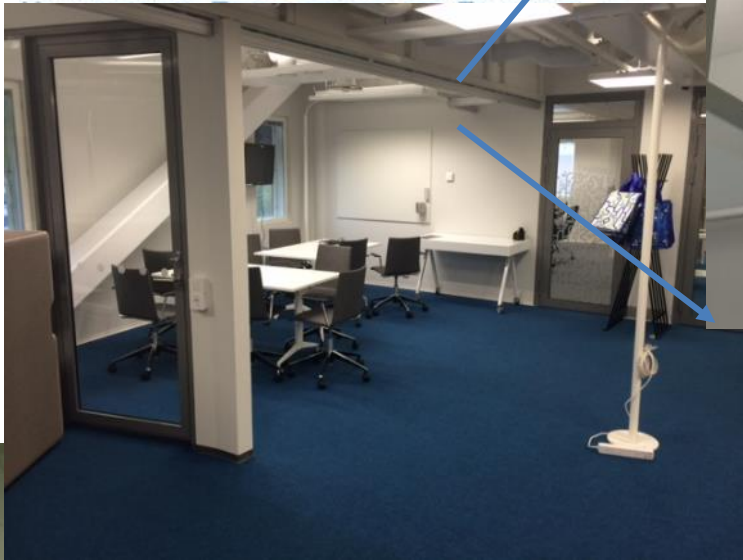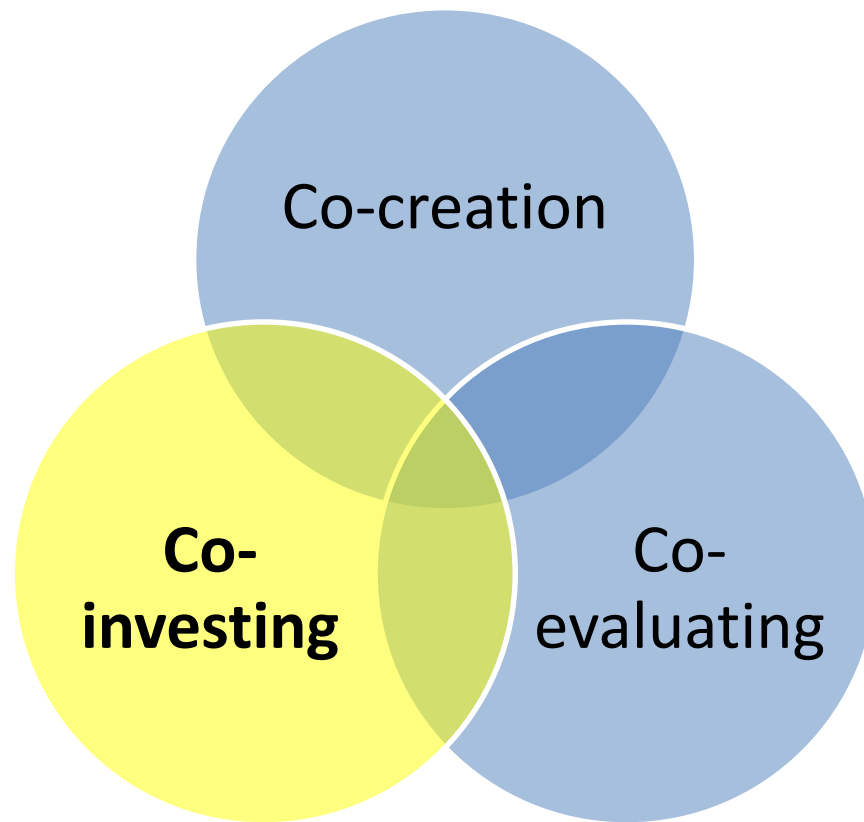
Co-creation learning points

- Co-creation process can be long or short – the intensity matters

- Be creative who can be the co-creators

- Enhance dialogue

- Change resistance is a source for inspiring change

Co-creation

Co-investing

Co-evaluating

How to co-create processes, places and services   Olli Niemi - Suvi Nenonen

theme 1: MODERN AUDITORIUM
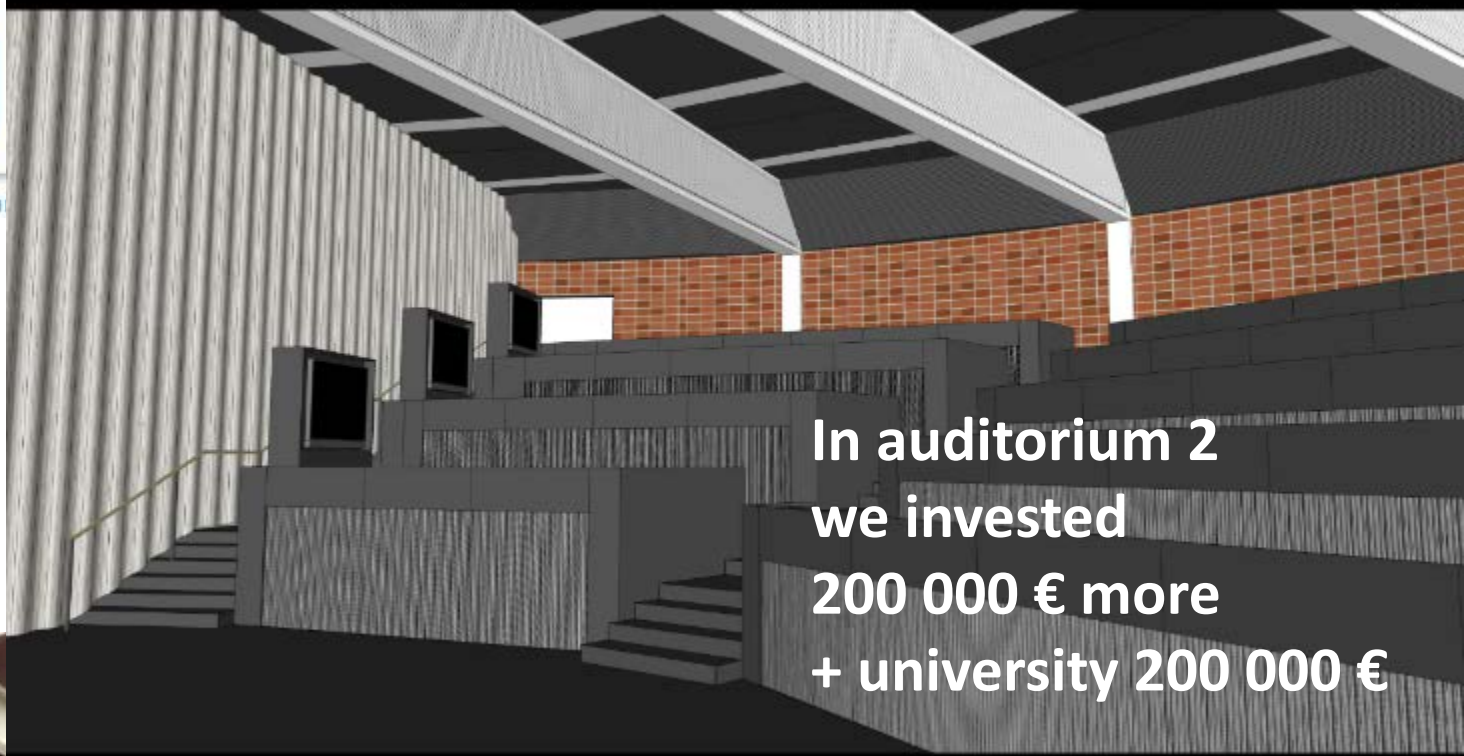
theme 1
LEARNING
SPACES
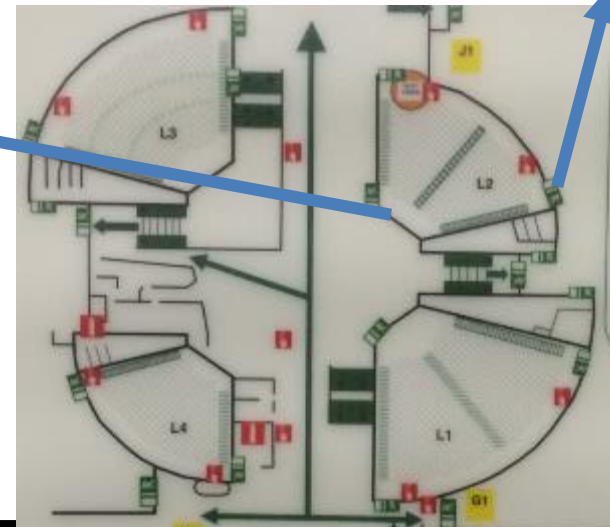
BEFORE

AFTER

University of Oulu

Modern auditorium

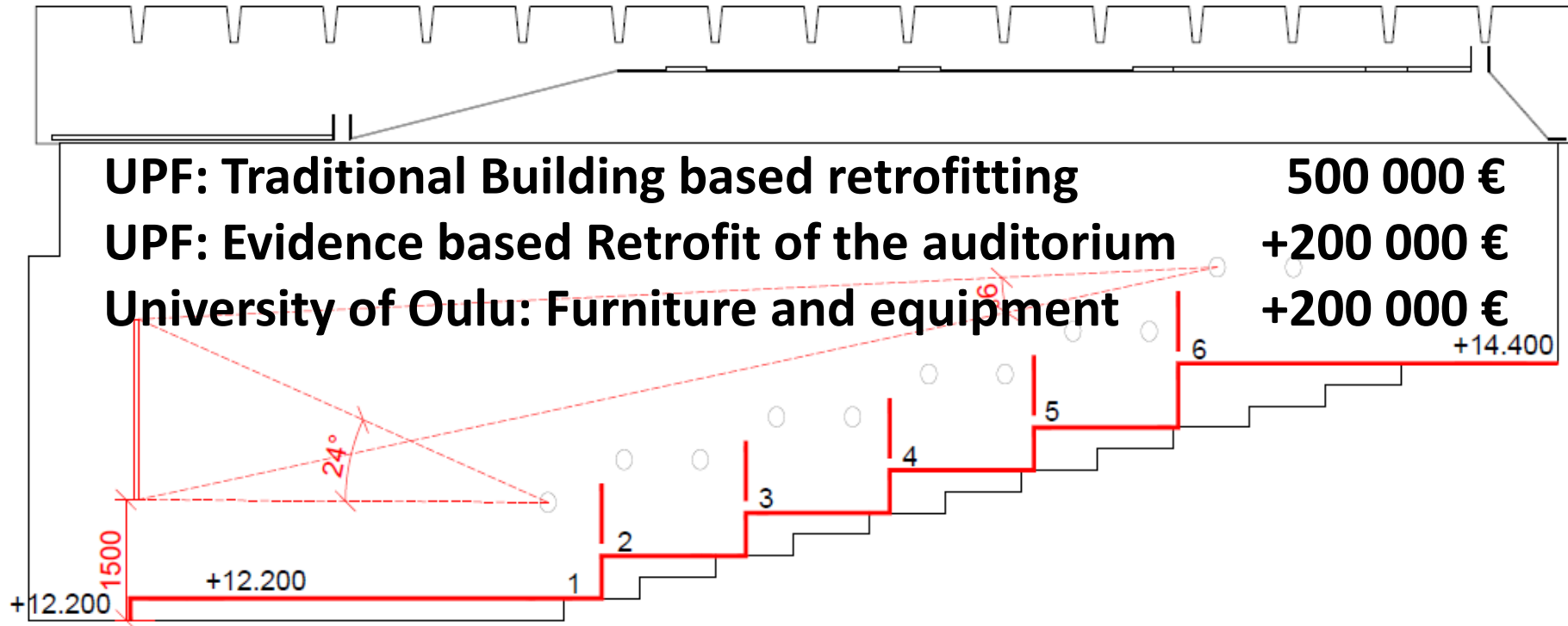**In auditorium 2 we invested 200 000 € more + university 200 000 €**

In Oulu university 3 auditoriums were renovated by 500 000 € per auditorium

How to co-create processes, places and services   Olli Niemi - Suvi Nenonen

Co-investing
Interactive, multiuse auditorium,

UPF: Traditional Building based retrofitting   **500 000 €**

UPF: Evidence based Retrofit of the auditorium   **+200 000 €**

University of Oulu: Furniture and equipment   **+200 000 €**
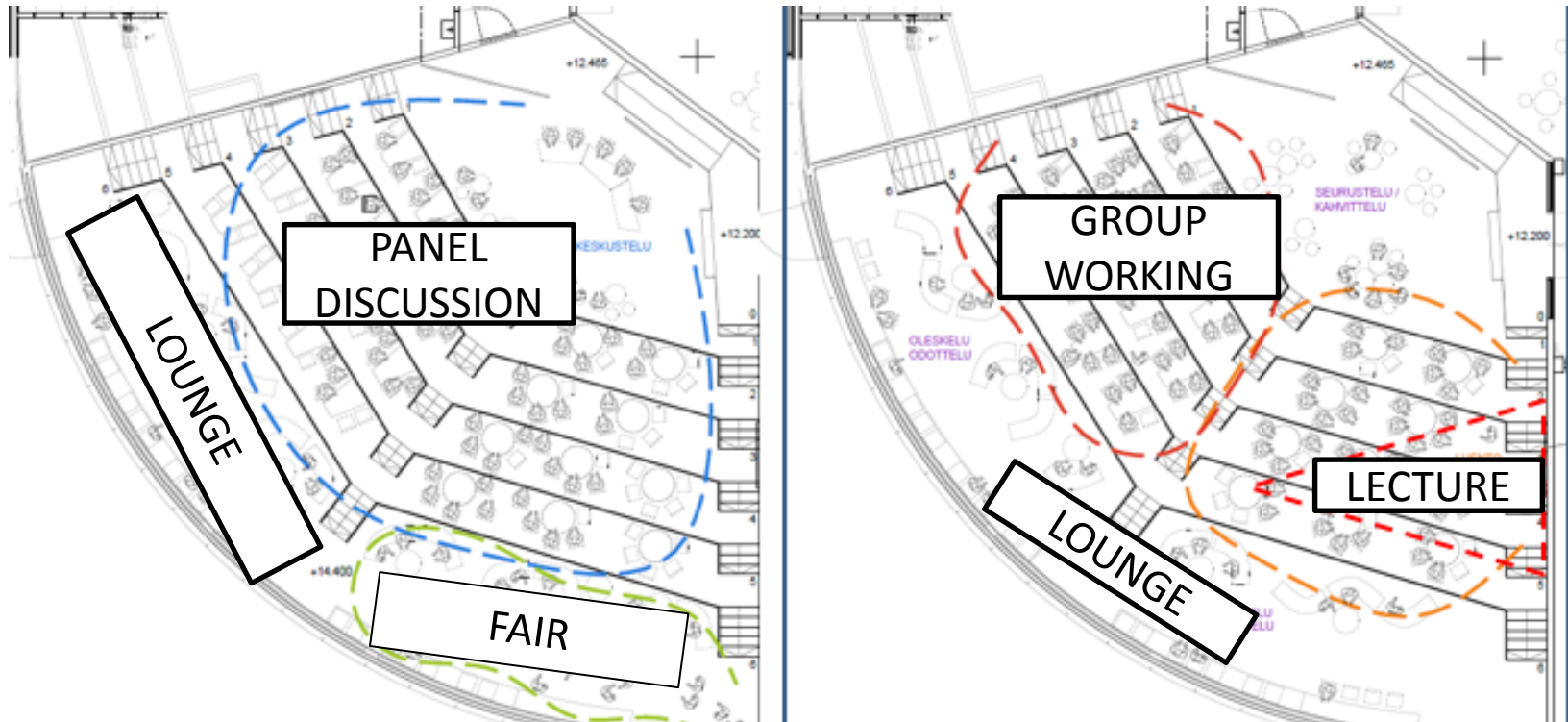
KATSELUKULMAT, ESIMERKKI: 2,25m kuvakorkeus

OULUN YLIOPISTO, luentosali L2 // käyttövaihtoehtokaavio 1:50 // 20.5.2013 LINJA ARKKITEHDIT OY

Interactive, multiuse auditorium

Interactive teaching and learning
Group works when the auditorium is free
External seminars
Exhibition Events
Terrace Restaurant
Christmas parties,…

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Impacts of Co-investing and co-creation

500 000 € => 700 000 + 200 000 €
Lecturing => seminars, evening parties, external users,…

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Co-creation learning points

- Co-creation process can be long or short – the intensity matters

- Be creative who can be the co-creators

- Enhance dialogue

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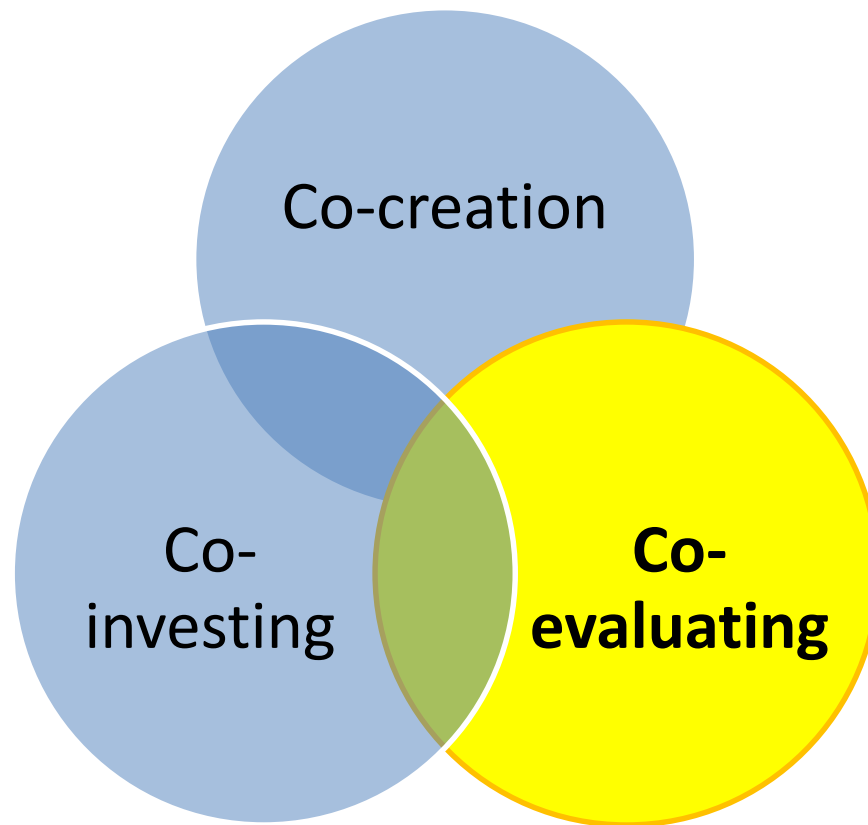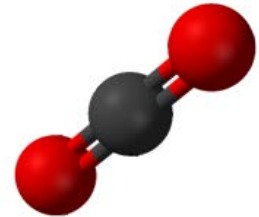
We need evidence: Measurements before and after

Collection of information

- User experiences: Happy or not questions and explanations by QR codes

- Changes in use rates and ways of use by Interval cameras

- Changes in indoor air conditions: Wirepass wireless sensors

Measurement tools

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Initial situation

Design

Idea:
How the rise of floor level effects on the use of the lobby

Design and visualization: Esa Hotanen

Before furnishing and use

In use

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New solutions make university lobbies and corridors alive

"+40 cm solution" +190 hours

"Glass box" +70 h

OBSERVATION AREA 1

	Glass Box 1	Glass Box 2	Table Group 1	Table Group 2	Table Group 3	Table Group 4	Platform 1 0	Platform 2 +20	Platform 3 +40	Platform 4 +60	Platform 5 +40	Platform 6 +20 cm above floor level
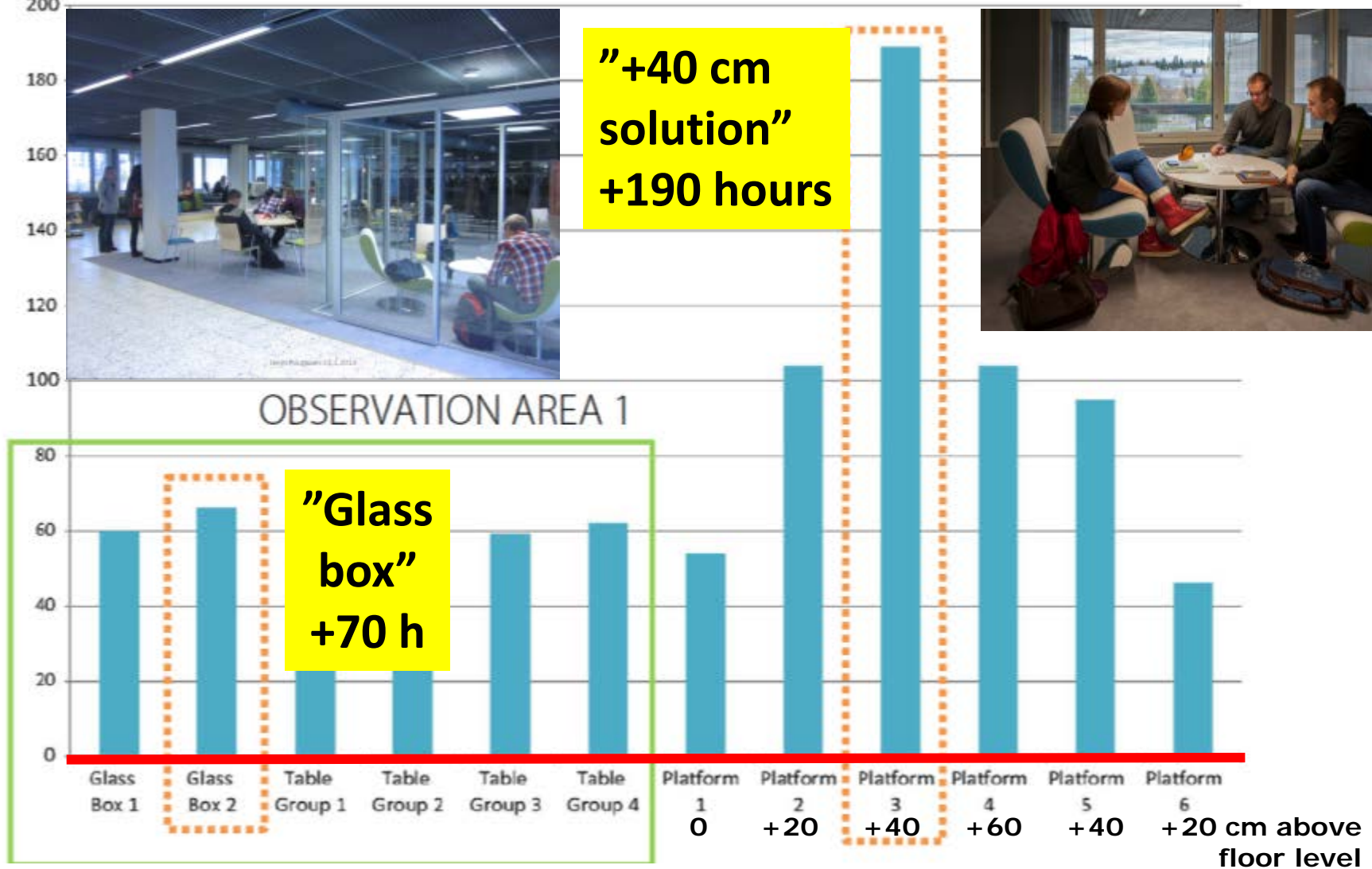
Learning points of Co-evaluating

- Use differents measurements

- Take care about the feedback flow and feed forward flow

- Celebrate the results and success

Conclusions

- Every property owner has a budget for repair and maintenance: this can be used as a seed money for co-investing with users!

- Instead of repairing and retrofitting the building one can respond to the needs of the future – involve users! (Activity based retrofitting)

- Measure and collect evidence!(Evidence based retrofitting)

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