

# Material Matters in (Service) CoDesigning

**Mette Agger Eriksen** /  
Designing for Services  
Lecture with  
Smaller Reflective Individual Exercise

**Aalto University** / 16. January 2017



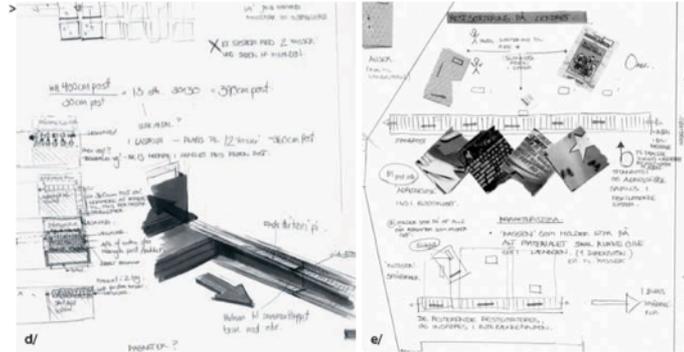
Det Kongelige Danske Kunstakademiske Skoler  
for Arkitektur, Design og Konservering

# Where I come from....

*Trained as an architect, first specialized as an industrial designer, my practice was mainly me and many various tangible, written and some computational materials...  
+ based on design 'programs'*



Eriksen 2012 / p. 48



/ p. 106

# Turn to...user-centered design...and (materials for) participation in (multidisciplinary) design processes

*Exchange student at Aalto University (2001) & final studies as "Communication designer" at AAA*



Conceptual design of "iPad"-like device / Internship with Bang & Olufsen Telecom (2000)



Final thesis "Journey to the World of the Users" (2003) / Aarhus School of Architecture, Denmark at (odd) Dept. of Communication Design (not there anymore)  
Fragment from image in Eriksen 2012/ p. 48

# Then I started to engage in PD/ CoDesign research.../

*...then I started (2001) to engage in participatory design (IT) research projects and the material practice was different e.g. with more explicit focus on methods and techniques...and my work and roles as a co-designer (researcher) were different too. This I wanted to understand better.*



Typical meeting in the PalCom project / Oct. 2004



"CoWall" final from Atelier project / 2003



Ethno & Co-Designing / Eriksen 2012/ p. 6

# Practice-oriented PD Research projects

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*That I have engaged in (so far)... PhD (2004-12) / Postdoc (2012-14) / Senior Researcher (2014-16)*

**Continually with a focus on: CoDesigning processes, methodology, materiality & multidisciplinary collaboration, increasingly sustainability**

**WorkSpace (2001-03 /EU) – Disappearing Computer focus / Landscape architect’s digital 3D praxis**

**Atelier (2003-04 /EU) – Disappearing Computer focus / Performative & Tech. Learning Environments**

**PalCom (2004+2006 /EU) – Palpable Computing / Technologies in Hand-surgery Rehabilitation**

**Xlab (2006+2011 /DCDR) – Experimental Programmatic Design Research**

**DAIM (2008-10) / EBST) – Design-Anthropological Innovation Model + Waste handling practices**

**Urban Transition Öresund (2012-14/ Interreg) – Municipal practices for Sustainable Urban Development**

**+ GröntSpel ( 2013 / Delegationen för hållbara städer) – Learning game for municipal collaboration around sustainability**

**+ Staden Studerad (2014 / Formas) – Exhibition at Form & Design Center on Urban Studies research**

**URB@Exp (2014-16 /EU) – Learning from Experiments with Urban labs as new forms of governance  
+ Malmö InnovationArena (2014-16/Vinnova) - Reflective “Co-lab” on Municipal Collaborative practices & roles**

**+ Social Innovation Skåne (2015-16 /ERUF) – Reflective “Co-lab” on Future library practices & roles**

# Your initial thoughts...

Reflective exercise –part 1

*What do you consider as “Material”  
in the last collaborative design-oriented session  
you hosted or participated in ?*

*(Write down/sketch for 2 minutes)*

# Material Matters in CoDesigning

Perspectives largely from PhD thesis (2012) –but also in later publications e.g. *Artifact* 2014, PDC'14

## METTE AGGER ERIKSEN MATERIAL MATTERS IN CO-DESIGNING

*Formatting & Staging with  
Participating Materials in Co-design  
Projects, Events & Situations*

This could be a format



MALMÖ UNIVERSITY

## ARTIFACT

2014 | Volume III, Issue 2 | Pages 4.1-4.14

### Experiments all the Way in Programmatic Design Research

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<sup>1</sup>Design School Kolding, <sup>2</sup>Malmö University

#### ABSTRACT

Experiments take various forms, have various purposes, and generate various knowledge; depending on how, when and why they are integrated in a design research study with a programmatic approach. This is what we will argue for throughout this article using examples and experiences from our now finalized PhD studies. Reviewing the prevailing literature on research through design the overall argument is that design experiments

play a core role in theory construct across the different directions. However, we explicitly discuss characteristics of design experiments and therefore to outline roles and characteristics upon Schön's we propose additional experiments in

experiments at its core. It was a meta-project in the sense that it aimed to further explore, understand and operationalize the dialectics between design experiments and the research program (Binder and Redström 2006; Brandt & Binder 2007; Redström 2011; Brandt, Redström, Eriksen & Binder 2011). XLab was inspired by research programs conducted by institutions such as the Swedish Interactive Institute in the late 1990s and the beginning of the 2000s.

### Taking Design Games Seriously

#### Re-connecting Situated Power Relations of People and Materials

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#### ABSTRACT

Using design games at Participatory Design (PD) events is well acknowledged as a fruitful way of staging participation. As PD researchers, we have many such experiences, and we have argued that design games connect participants and promote equalizing power relations. However, in this paper, we will (self) critically re-connect and reflect on how people (humans) and materials (non-humans) continually participate and intertwine in various power relations in design game situations. The analysis is of detailed situated actions with one of our recent games, UrbanTransition. Core concepts mainly from Bruno Latour's work on Actor-Network-Theory are applied. The aim is to take design games seriously by e.g. exploring how assemblages of humans and non-humans are intertwined in tacitly-but-tactically staging participation, and opening up for or hindering negotiations and decision-making, thus starting to relate research on various PD techniques and power issues more directly.

Recently, Bratteteig and Wagner (2012) look broadly at the complexity of design decisions within a full PD project. Their work is partly inspired by an empirical study by Borum and Enderud, who identified four mechanisms for structuring or avoiding conflicts: "Agenda control (what is discussed and who decides the themes), participants (...), scope (...which problems are defined and seen as relevant and therefore addressed), and resources (...)" (Borum & Enderud (1981) in Bratteteig and Wagner (2012) p. 47). With these complex mechanisms in mind, Bratteteig and Wagner broadly recognize that "applying these arrangements makes the exercising of power less visible, because it is difficult to identify what is *not* on the agenda or which solutions (and problems) are *not* discussed" (ibid p. 47). In the details, we will later see many of these various complexly intertwining characteristics too.

Another core part of PD literature is the wide array of tools and techniques that support various practices of participation – such as design games (e.g. Brandt et al.

# The little “co-” makes it a different practice...

## Basic Views of Co-designing / Participatory Design

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*My view: Participatory Design (PD) = Co-Designing*  
*- a co-designerly mindset, approach and practices*

**As a starting point...my basic views, based on the work of many others...**

- (Traditional) Designing and co-designing are different practices
- CoDesigning not *for* others – but *with* others
- Emphasis on long-term collaborations
- Reflective practice / Mutual learning
- In PD / people from different ‘communities of practice’ (CoP)
- → PD projects as a temporary CoP in the making
- Power issues e.g. the socio-material power of event organizers (not only facilitators)
- Detailed materiality perspectives of “PD methods, tools and techniques”
- Understanding ‘PD activities/interventions’ as performative events – not only workshops
- Also understood as socio-material / situated actions and practices

# Exemplars of Material Matters in Co-designing

Co-design events from five large co-design projects, teaching and workshop-series (selected from a large collection of workshop events during ten years)



Exemplar

# 01

Service Project Landscape  
-from Teaching

**Co-design project** Teaching Approach on

**Related Co-design Project Title** Service Design - Curriculum Project Transformation on Demand

**Time & Year** April 2016 - 2 weeks, 10 half days for the students

**Participants or events** 10-12 year international design BA students, 10 colleagues and 10 teachers

**Setting or Project** Faculty Office & Lab 01

**Location** Copenhagen University of Applied Sciences - Copenhagen

**Event organizers** A colleague and me in the lecture theatre on the second

**Key Issues** Co-designing as a teaching approach of the subject of designing

**Ways of documentation** Video, photos, sketches, drawings, digital documents and

/ p. 84-93



Exemplar

# 03

Kick-off  
-from DAIM

**Co-design project** 2016 Strategic International Innovation Model Approach on

**Related Co-design Project Title** Innovation Model Approach on

**Time & Year** 2016, May 2016 - 1 week

**Participants or events** 10-12 year international design BA students, 10 colleagues and 10 teachers

**Setting or Project** Faculty Office & Lab 01

**Location** Copenhagen University of Applied Sciences - Copenhagen

**Event organizers** A colleague and me in the lecture theatre on the second

**Key Issues** Co-designing as a teaching approach of the subject of designing

**Ways of documentation** Video, photos, sketches, drawings, digital documents and

/ p. 156-165



Exemplar

# 05

Design Dialogues  
-Relocating a University Department

**Co-design series** Design Dialogues Approach on

**Related Co-design Project Title** Relocating a University Department

**Time & Year** 2016, May 2016 - 1 week

**Participants or events** 10-12 year international design BA students, 10 colleagues and 10 teachers

**Setting or Project** Faculty Office & Lab 01

**Location** Copenhagen University of Applied Sciences - Copenhagen

**Event organizers** A colleague and me in the lecture theatre on the second

**Key Issues** Co-designing as a teaching approach of the subject of designing

**Ways of documentation** Video, photos, sketches, drawings, digital documents and

/ p. 256-267



Exemplar

# 02

Rehab Future Lab  
-from PalCom

**Co-design project** PalCom Approach on

**Related Co-design Project Title** PalCom Approach on

**Time & Year** 2016, May 2016 - 1 week

**Participants or events** 10-12 year international design BA students, 10 colleagues and 10 teachers

**Setting or Project** Faculty Office & Lab 01

**Location** Copenhagen University of Applied Sciences - Copenhagen

**Event organizers** A colleague and me in the lecture theatre on the second

**Key Issues** Co-designing as a teaching approach of the subject of designing

**Ways of documentation** Video, photos, sketches, drawings, digital documents and

/ p. 94-101



Exemplar

# 04

Per:form  
-from XLab

**Co-design project** XLab Approach on

**Related Co-design Project Title** XLab Approach on

**Time & Year** 2016, May 2016 - 1 week

**Participants or events** 10-12 year international design BA students, 10 colleagues and 10 teachers

**Setting or Project** Faculty Office & Lab 01

**Location** Copenhagen University of Applied Sciences - Copenhagen

**Event organizers** A colleague and me in the lecture theatre on the second

**Key Issues** Co-designing as a teaching approach of the subject of designing

**Ways of documentation** Video, photos, sketches, drawings, digital documents and

/ p. 166-175



Exemplar

# 06

Future Architects' Lab  
-from WorkSpace

**Co-design project** WorkSpace Approach on

**Related Co-design Project Title** WorkSpace Approach on

**Time & Year** 2016, May 2016 - 1 week

**Participants or events** 10-12 year international design BA students, 10 colleagues and 10 teachers

**Setting or Project** Faculty Office & Lab 01

**Location** Copenhagen University of Applied Sciences - Copenhagen

**Event organizers** A colleague and me in the lecture theatre on the second

**Key Issues** Co-designing as a teaching approach of the subject of designing

**Ways of documentation** Video, photos, sketches, drawings, digital documents and

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# Co-design Event/workshop ex.

- In the 'field'...'lab'...



Exemplar

## 02

*Rehab Future Lab*  
-from PalCom

<b>Co-design Project</b>	PalCom (Appendix 03)
<b>Main site/collaborators</b>	Staff at handsurgery rehabilitation Dept. / University Hospital / Sweden
<b>Time &amp; Year</b>	5-6. Sept. 2005 / Day 1: 13:00-17:00 (Day 2: 9:00-15:00 + not included)
<b>Participants at events</b>	Two interaction design researchers from local university / one physio-therapist, one occupational therapist and the manager of Dept. / three other PalCom researchers from three universities (new to the context), 1 (on leave so participating only for the Day 1 afternoon)
<b>Timing in Project</b>	1/3 year out of 4 years
<b>Location</b>	Handsurgery rehabilitation Dept. 4th floor / exercise / meeting room and meeting room down the hall (Day 1)
<b>Event organizers</b>	Four interaction design researchers from local university involved in PalCom / Project manager and PhD student stage the event
<b>My Roles</b>	Mainly observant / documenting
<b>Ways of documentation</b>	Still image camera, personal notebook, digital copies of documents used before, during and after the event e.g. a report of insights.

/ p. 94-101



**½ day co-design workshop-event at Handsurgery Rehabilitation Department, UMAS**



**½ day co-design workshop-event at Handsurgery Rehabilitation Department, UMAS**

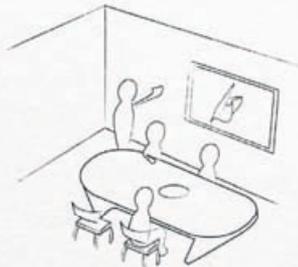


**Roleplaying / Discussing incremental changes of mock-up/scenario prototype / future practice**

**SITUATION : Patients viewing and sharing media**

Due to their injuries patients often must find ways to cope with problematic situations of everyday life, most often including supportive tools. The occupational therapists have a good overview of tools and solutions, but patients are creative and can come up with their own solutions. Producing, documenting and sharing solutions can be a way for patients to engage in rehabilitation.

**SETTING: Activity room at the rehabilitation ward**



*Point*  
*Explicit usage*  
*who puts?*  
*was table for?*  
*remote into*

**OBJECTIVE: For patients to be able to view and share media in semi-large groups in a way that supports a shared understanding of what's going on.**

**MAIN ACTIONS: Retrieve files, display media, share media files.**

**ARTEFACTS/TOOLS/DEVICES: Large display, cell phones, docking station for remote control & "bowl".**

**SCENARIO:** Jennifer is a member of the work-training group and visits the clinic for the weekly session. She is now at the coffee table, enjoying a break from training and some small talk with fellow patients and the occupational therapist in charge of the work-training group. As the discussion concerns everyday situations, she comes to think of a video recording she made at home where she is using the pen holding tool she bought recently. She has the video clip in her phone.

On the table, there is a remote control with a pocket for inserting a CAREphone. The remote control operates video playback on the wall display with clearly marked buttons for play, pause, fast-forward, rewind, etc. There is also a bowl on the table for sharing video.

Jennifer browses on her phone to the video clip about the pen holding tool, then puts the phone in the remote control to claim the wall display. The video clip appears on the wall display. The remote control starts to emit a softly pulsating green light to indicate that it is connected and ready to use. When Jennifer pushes the play button on the remote, the video starts playing on the wall display and the remote turns to a steady green light. She can use the remote to pause and rewind the movie as desired, and also to navigate the files on her phone, when she explains the pen holding tool to her fellow patients and the occupational therapist.



**Roleplaying / Discussing incremental changes of mock-up/scenario prototype / future practice**



**Collaboratively listing topics of identified issues and challenges**

# Co-design Event/workshop ex.

- In the 'lab'...



Exemplar

# 03

Kick-off  
-from DAIM

Co-design Project	DAIM (Design Anthropological Innovation Model) (Appendix 03)
Main project case	Waste handling and recycling
Time & Year	28. May 2008 10:00 – 16:00
Participants at events	Project manager and three others from core team, three from development-department at the waste handling partner organization, 1-2 from each of the other Danish, Swedish and American partner institutions and companies, another PhD scholar and 1 (mainly to document)
Timing in Project	Month 2 out of 20
Location	The Danish Design School in Copenhagen / Denmark
Event organizers	Project manager and three from core team at The Danish Design School
My Roles	Documenting, observing and participating a bit in one team to start with and some in plenum discussions
Ways of documentation	Video cameras, still image cameras, personal notebook, used tangible materials were kept, copies of documents

/ p. 156-165

## *Designantropologisk Innovationsmodel (DAIM)*

Agenda for workshop d. 28.5.2008 at Danmarks Designskole

### 10:00 *Welcome*

Short overview of the project (Eva Brandt)

- objectives
- time plan
- deliverables
- organization

### 10:30 *Things on their way (a first encounter with the world of waste)*

Questioning categories searching for meaning (Trine Paludan)

Hands- on exercises

### 11:00 *Experiences and challenges, inspecting the common toolbox*

Bringing together a bow tie and a spiral (Thomas Binder)

Partner presentations

### 12:30 *Lunch*

### 13:00 *Mapping a landscape of waste and innovation*

Brief reports from the field (Joachim Halse)

Building a landscape in three steps (group exercise)

- From field visits to situations=people+place+activity+time
- Identifying relations
- Preparing journeys of innovation

Re-telling the journeys (reports from the groups)

### 15:00 *Next steps*

How to proceed towards the tentative innovation model?

- Framework & Toolbox
- The inspiration seminar June 24<sup>th</sup>
- Commitments & Collaboration
- Transition from phase 1 to phase 2

Project organization

- Project workshops
- Steering group meetings
- Website and other kinds of project communication
- In and out of the the core team
- Dates for coming workshops/meetings

Other issues



**Example of Workshop agenda : 'Kick Off' / the first partner-workshop in the DAIM-project**



**From 'Things on their way' > a 'waste-cake-table' with all group's negotiated issues/insights**



**Groupwork during 'Things on their way' -working with brought things, provoking anecdotes, etc**

SITUATION

=

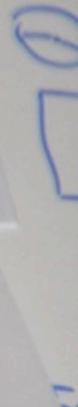
people, place, activity,  
time.

Kvartermiljøstationen ligger midt i byen og har kun meget begrænset plads til beholdere, som hurtigt bliver fyldt.

Information  
Kvartermiljøstationen  
Kvartermiljøstationen  
Kvartermiljøstationen

proceder kan man se mere om situationen  
askes af for de grunde: generelt og  
energibrug afslutninger: reaktioner

- Fokus på +/- løsning  
situation



100

Focus during 1-step of 'Mapping a Landscape of Waste & Innovation'-co-design situation



**Groupwork during 'Mapping a Landscape of Waste & Innovation' - working with field**



All groups co-designing a Landscape – relating and highlighting situation overlaps and connections

# Schön's understandings of design practice...

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*Schön 1983, 1987, 1992*

## **Main views...**

- Design as a Reflective Conversations with the situation (Schön 1983) / **Designing as Reflective Conversation with the Materials of a Design Situation** (Schön 1992)
- Based on ideas of 'learning-by-doing' and 'tacit knowledge' (largely inspired by John Dewey)
- The materials 'back-talk' in the situation
- **The material / media understood broadly as tangible, talk, etc.**
- Problem-setting through 'framing, **naming**, and reframing'
- Future-oriented practice by asking "What if"
- Relationship between the 'whole' and the 'parts'
- 'Reflection-in-Action' / 'Reflection-on-Action'
- Single and double-loop learning

# My suggested additions to Schön → co-designing

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*In Eriksen, 2012 Chapter 1*

**Main additional arguments...  
of course partially based on the work of others...**

- Co-Designing as Reflective Conversation with the Materials of a Co-Design Situation (p.125)
- **Co-designing = socio-material situated practice** (Part 1)
- **Co-designing = materializing** (e.g. different delegated roles of materials, processes of formatting and staging, rematerializing, etc.) (Part 2)
- **Co-designing = relating** (e.g. non-humans have agency too, action happens related to/within communities-of-practice, larger contexts) (Parts 1+ 2)
- **Co-designing = performing** (e.g. PD processes understood as performative structures, rituals and situated actions) (Part 3)

# Participatory Design, Methods & Materiality

*Different perspectives by different (PD) authors...*

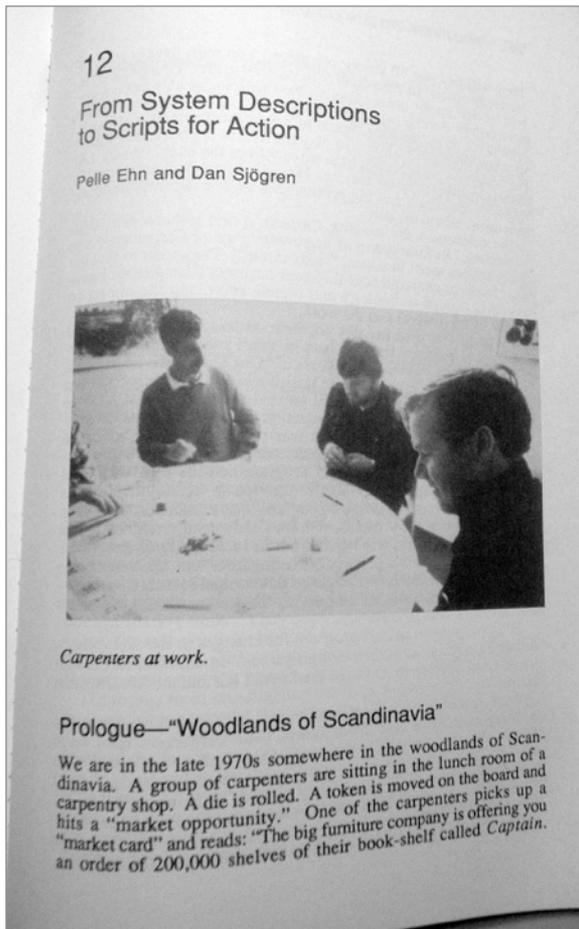
**- More or less specifically on understanding materiality as a part of PD practices**



+ various others...

# 'From System Descriptions to Scripts for Action'

By Pelle Ehn & Dan Sjögren (1991) in Greenbaum & Kyng (eds.) 'Design at Work', p. 247-248

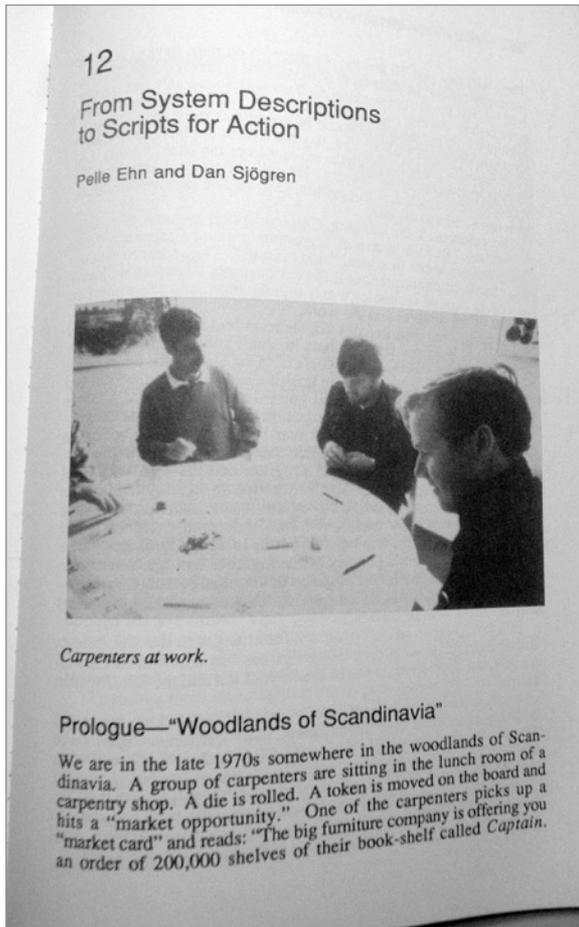


'As system designers we are familiar with making and using system descriptions (...) This was our approach in the initial analysis and design work in the UTOPIA project. As design experts we tried to capture the participating typographer's views of work organization and technology (...) At first we thought that we were very successful with our many system descriptions. As designers we quite liked the systems we were designing, and we thought that the typographers were pleased with the descriptions as well.

There came a day, however, that put an end to this idyllic form of designer-user cooperation. This was the day when we found out that the system descriptions only made sense to us, (...) The only sense our system descriptions made to the participating typographers was that they were made by us, that is, their own experts. There was no co-design going on. (...)

# 'From System Descriptions to Scripts for Action'

By Pelle Ehn & Dan Sjögren (1991) in Greenbaum & Kyng (eds.) 'Design at Work', p. 247-248



...and they started working with 'Design Games'...

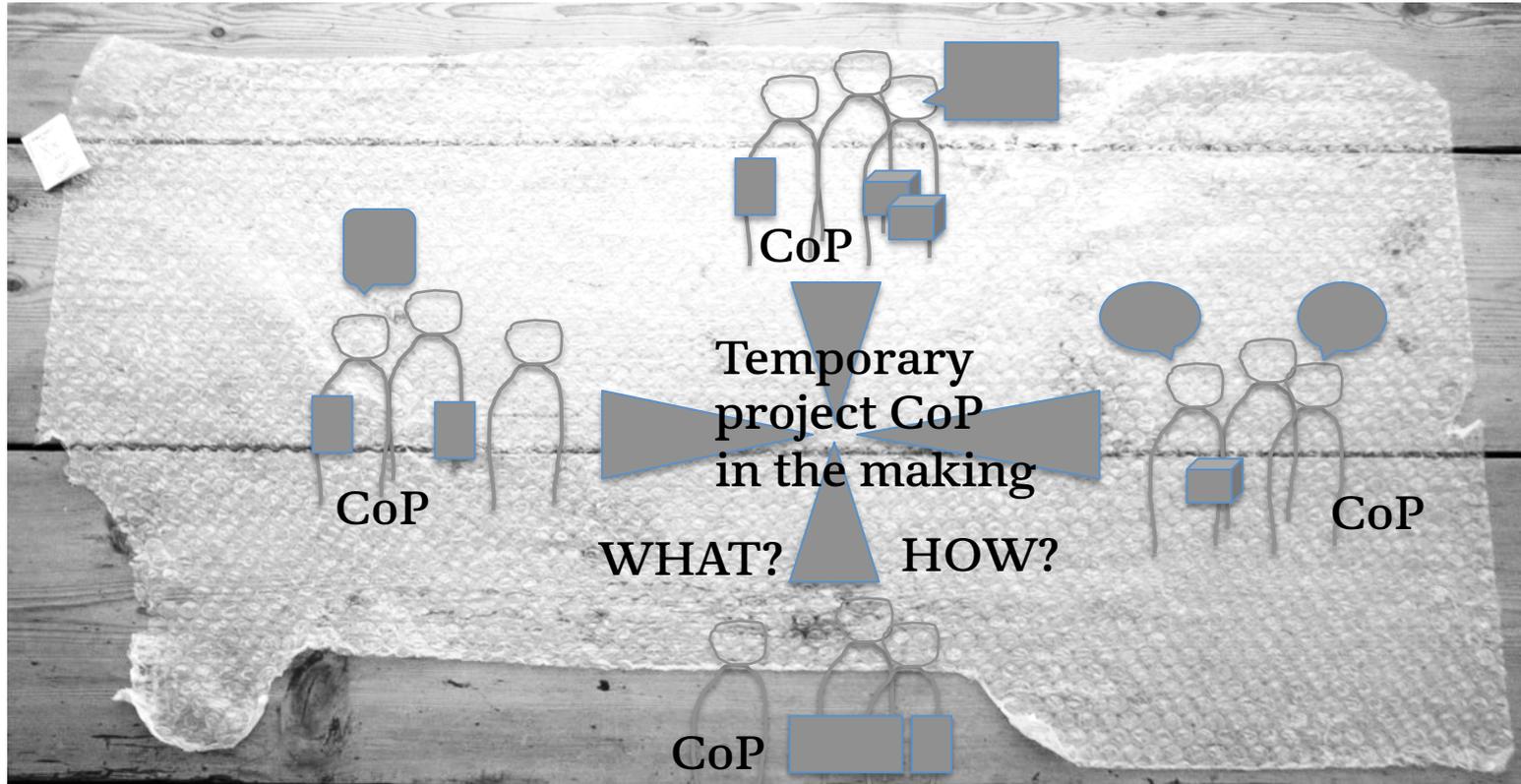
E.g. called 'The Layout Kit', 'The Organizational Kit', 'The Specification Game'

- One of their points is that such 'language design games' always are/must be understood as 'situated'.
- Still, there is 'family resemblance' across different situations.
- They are intended for stakeholders of different backgrounds (designers and non-designers) to be able to collaborate.

(Initially inspired by this work, e.g. Eva Brandt and Kirsikka Vaajakallio have published widely on 'Design Games')

# Co-designing & 'Communities of practice' (CoP)/

*Perspectives by Lave & Wenger (1991+1998), Brandt & Eriksen (2001, 2010, 2012), etc.*



**Communities of practice is generally a concept or theory of learning** CoP are ‘...groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis’ (Wenger et al, 2002:4). (...) **Reification or processes of reifying is viewed as 'making into a thing'** As Wenger exemplifies, very practically reifications can take a variety of forms – for example; signatures on credit card slips, meeting minutes, evening news, national archives, lesson plans, text books, private address lists, sophisticated databases, small logos, huge info processing systems, formulas, a truck, etc.

# My proposed views / Also inspired by – but partially different from or dissecting ‘Boundary objects’

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*A widely referred theoretical concept for understanding relations with objects...e.g. in PD Literature*

**As described by Star & Griesmer (1989) / In Brandt et al. (2012) p. 148-149**

“..Boundary objects are objects which are both plastic enough to adapt to local needs and the constraints of the several parties employing them, yet robust enough to maintain a common identity across sites. (...) These objects might be abstract or concrete.

They have different meanings in different social worlds but their structure is common enough to more than one world to make them recognizable, a means of translation.

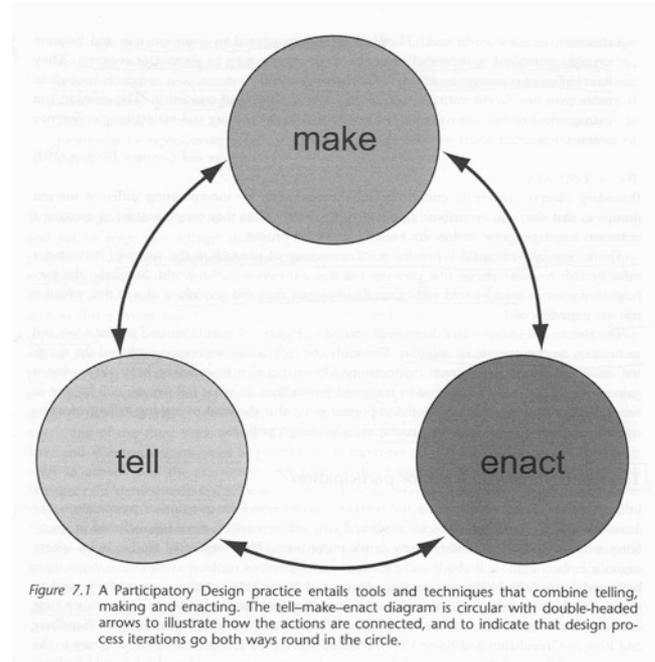
The creation and management of boundary objects is a key process in developing and maintaining coherence across intersecting social worlds” (Star & Griesmer, 1989, p. 393 / In Brandt et al. p. 148-149).

# Materiality ...Beyond Tools, techniques & methods

*Materiality & Design explorations – e.g. relates to ways to telling, making and enacting by Brandt, Binder & Sanders / Chapter 7 in Simonsen & Robertson, 2012, p. 145-181.*

## Main initial arguments

- Tools and techniques do not operate in isolation
- Tools and techniques cannot be directly replicated
- Tools and techniques rather framed as ‘various practices of participation among designers and non-designers’
- Tools and techniques cannot stand alone – e.g. without a PD mindset (in their focus)
- There are a varied set of ‘toolboxes’ / a richness of practical tools and techniques to be combined, adapted and extended in the collaboration
- In other words, a need for sensitivity and appropriation to the (co-)design situation.
- A part of shaping and scaffolding the ‘temporary community of practice in the making’



# Design Games – as a Tool, Mindset and Structure

By Vaajakallio (PhD dissertation, Aalto Uni, 2012) & comprised in Vaajakallio & Mattelmäki (2014)

Table 1. Play framework illustrating the three distinct perspectives related to design games and the qualities and functions typical for each category.

Design Practical application context with its objectives and characteristics	Games	
		Play-qualities drawn from design and games, play and performance
Designer’s perspective: design games as a tool	Player’s perspective: design games as a mindset	Design game designer’s perspective: design games as a structure

Organising dialogue – combining purposes of instrument, competence

Transporting participants into another world – a magic circle as physical and ideal

Supporting idea generation, collaboration and interplay between now and the future by game materials



[ill.: 2014 p. 79 / Table p. 65]

# Beyond (service) co-design..methods & tools focus...

Rather -what sometimes is described e.g. as a "method"...becomes a part of the situated practice...

## Beyond or dissecting of "Journey" / "Service Blueprint" / "Design games" / "Prototypes", etc.



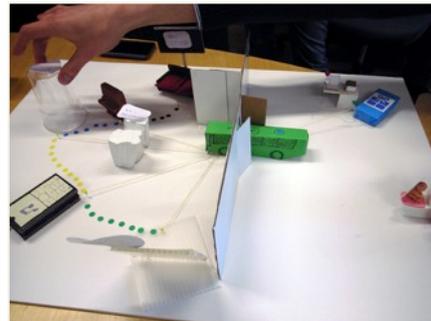
["User / Customer Journeys" / ill.: www.enginegroup.co.uk]



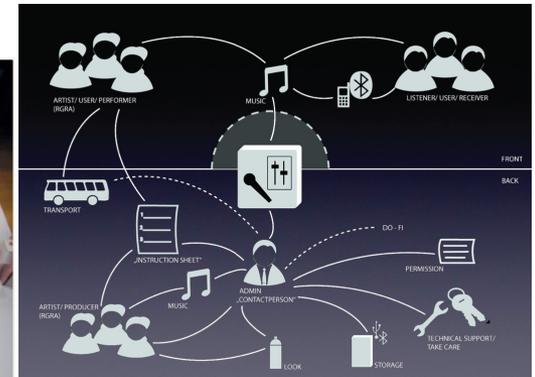
["Service blueprinting" / ill.: www.1508.dk]



["Design games" / ill.: from Brandt & Messeter, 2008 p. 7-8]



["3D & 2D front- & backstage mappings" / ill.: Interaction (service) design master students/K3 / 2008 / rel. ex. in Eriksen, 2012]



# Material Matters in Co-Designing / Key arguments

## MATERIAL MATTERS IN CO-DESIGNING

Participation in design is broadening, and there is a movement away from designing to co-designing. They are related, but the little co- makes them different organizational and socio-material practices. Practically, co-designing typically takes place in multidisciplinary, distributed, complex projects, where people – and invited materials – only occasionally meet, align and make each other act, in the situation at quite explicitly staged co-design events.

With a broad view of materiality and focus on co-designing as processes, this work suggests ways of understanding and staging a co-designing practice, which entails a move away from a focus on methods and pre-designed proposals, towards an acknowledgement of participating materials and formatting co-designing. This calls for additional 'material' (broadly understood) of the co-designer, including skills of drawing together and delegating roles to non-humans as parts of staging co-designing *with* others. Further, it necessitates a different understanding of co-design processes from what can be efficiently managed to materially staging performative co-designing.

This practice-based, programmatic and materially interventionistic work builds upon and draws together about ten years of engaging with hundreds of people and materials in many co-design networks, projects, events and situations, through five experimental, participatory design research projects, teaching and other co-design 'workshop' series. Partly in opposition to the 'classic' design field of industrial design, the thesis intends to contribute to the (co-) design fields of interaction design and especially participatory design, but also to co-creation and service design.



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AARHUS  
UNIVERSITY  
DEPARTMENT OF COMPUTER SCIENCE



Danish Centre for Design Research



The Royal Danish Academy of Fine Arts  
School of Architecture, Design and Conservation  
The School of Design

DISSERTATION: NEW MEDIA, PUBLIC SPHERES, AND FORMS OF EXPRESSION

## METTE AGGER ERIKSEN MATERIAL MATTERS IN CO-DESIGNING

*Formatting & Staging with  
Participating Materials in Co-design  
Projects, Events & Situations*

This could be a format



MALMÖ UNIVERSITY

# One claim: Participating Materials

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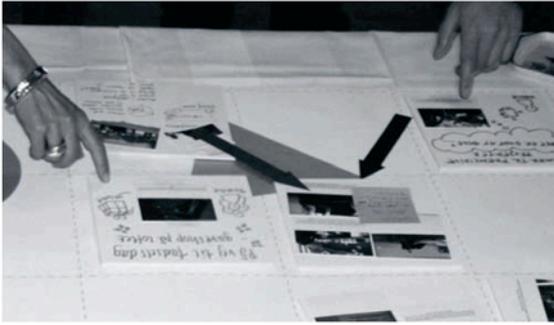
*In Co-designing processes and practices*

## **Main arguments (in Part B / Introduction)**

- Focus not on (design) methods, techniques and tools – but socio-material co-designing (first preliminary position)
- Meanings of materials are negotiated in the (co-design) situation (second preliminary position)
- Not only artefacts with affordances ‘in’ them (third preliminary position)
- Broad views of materiality and participating materials /
- Co-designing = materializing (fourth preliminary position) (Eriksen, 2012:177-191)



Challenge 1 is for example based on insights from Exemplar 02



From Exemplar 03



From Exemplar 05

For more details:

Foreword: Program  
 Positions & Approaches  
 Part A / All

Part B / All  
 Part C / Intro / Chapters 7, 9  
 Part D / Chapters 11, 10 -

Landscape no. B, C, H-V

### Challenge 1 /

## From Views of Materials as 'just' Prototypes and Methods – to Participating Actors in Co-design Situations and Networks

#### From views of materials as 'just' prototypes and methods

In many (co) design communities, during processes of (co-) designing, materials are often 'just' viewed as a part of a method, tool, sketch, model or prototype. This is despite general awareness in the participatory community of the socio-material richness of everyday practice. With this view, non-humans as emails, agendas, event documentations, etc. as well as the situated reconfiguring of relations among people and materials are left out. I suggest including these. I suggest also, a broad view of materiality and materials in co-designing.

#### - to participating actors in co-design situations and networks

Working with (lo-fi and hi-fi) mock-ups and prototypes as central materials is common practice in (co-) design work. Some of these too often get to play a central role in (co-) design projects as 'boundary objects' intertwining in language design games. Other tangible materials (e.g. field images or more generic materials) are also often a part of how stakeholders collaborate e.g. during co-design event. Yet, initially with Donald Schön's 'Designing as reflective conversations with the materials of a design situation', 'materials' are not just prototypes or methods; they are parts of the unique situation. When applying a broad view of materiality, as I have established in this thesis, with Schön, recent material culture studies perspectives, and especially with Bruno Latour and Lucy Suchman's views of relations in actor-networks, materials are participating and acting too. These authors all share a view of materiality as an integral part of living. For example, in Bruno Latour's views both humans (people) and non-humans have the 'agency' to act, sometimes as actors mediating and staging others to act. Further, this leaves traces in the complex network of a co-design project. In other words, when invited in, an assemblage of materials is participating in staging what happens in co-design situations at a co-design event, other materials are made and over time some become actors in the co-design process - for example playing a role between two co-design events. So, when understanding and staging co-designing...

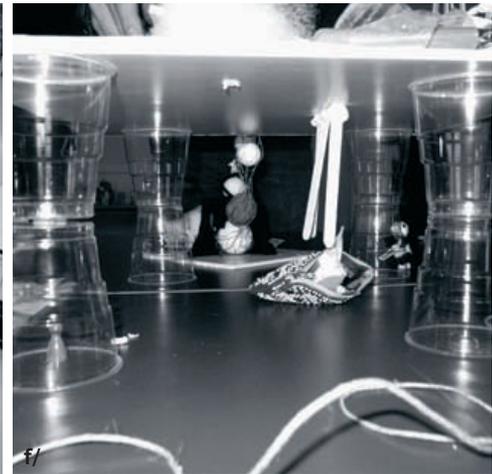
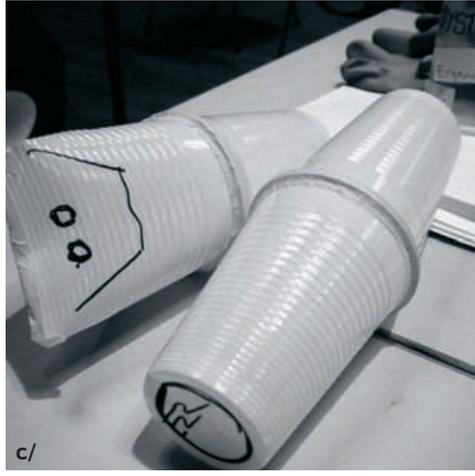
*Broadly seeing materiality and materials - like people - as participating, relating and acting in co-design networks, projects, events and situations...matters*

*Understanding how a complex, continually transforming assemblage of materials (e.g. including talk as material) participates in situated co-designing...matters*

# Participating Materials – in the situation

*Invited materials – as people*

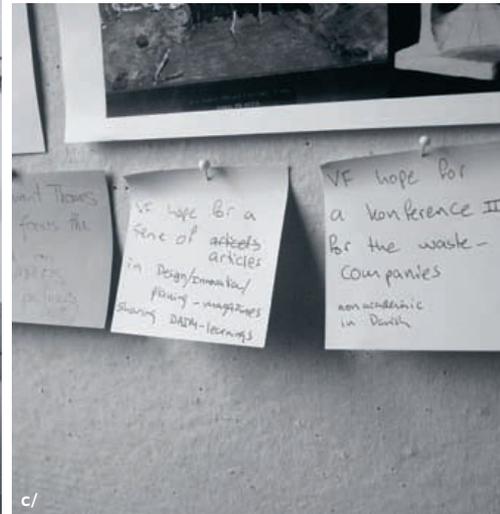
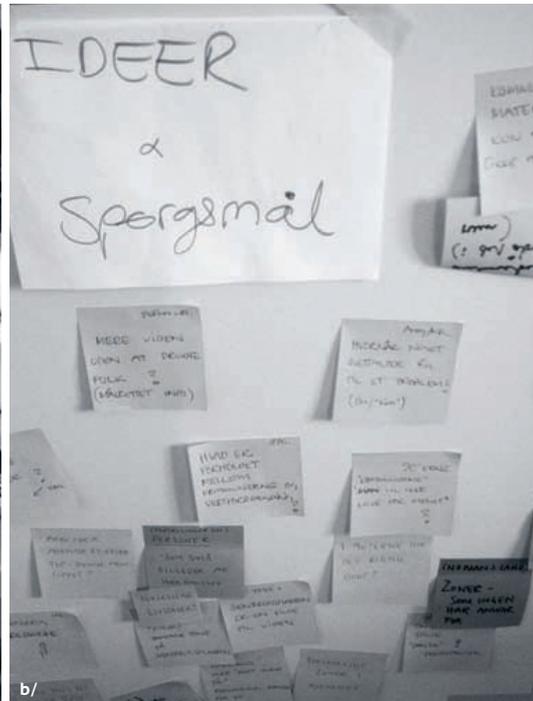
**An example / Situated negotiated meanings of disposable cups (In Eriksen 2012, p. 181-182)**



# The classic format of post-its – makes no sense alone

*The additional verbal, written etc. guides a part of staging and formatting participation...*

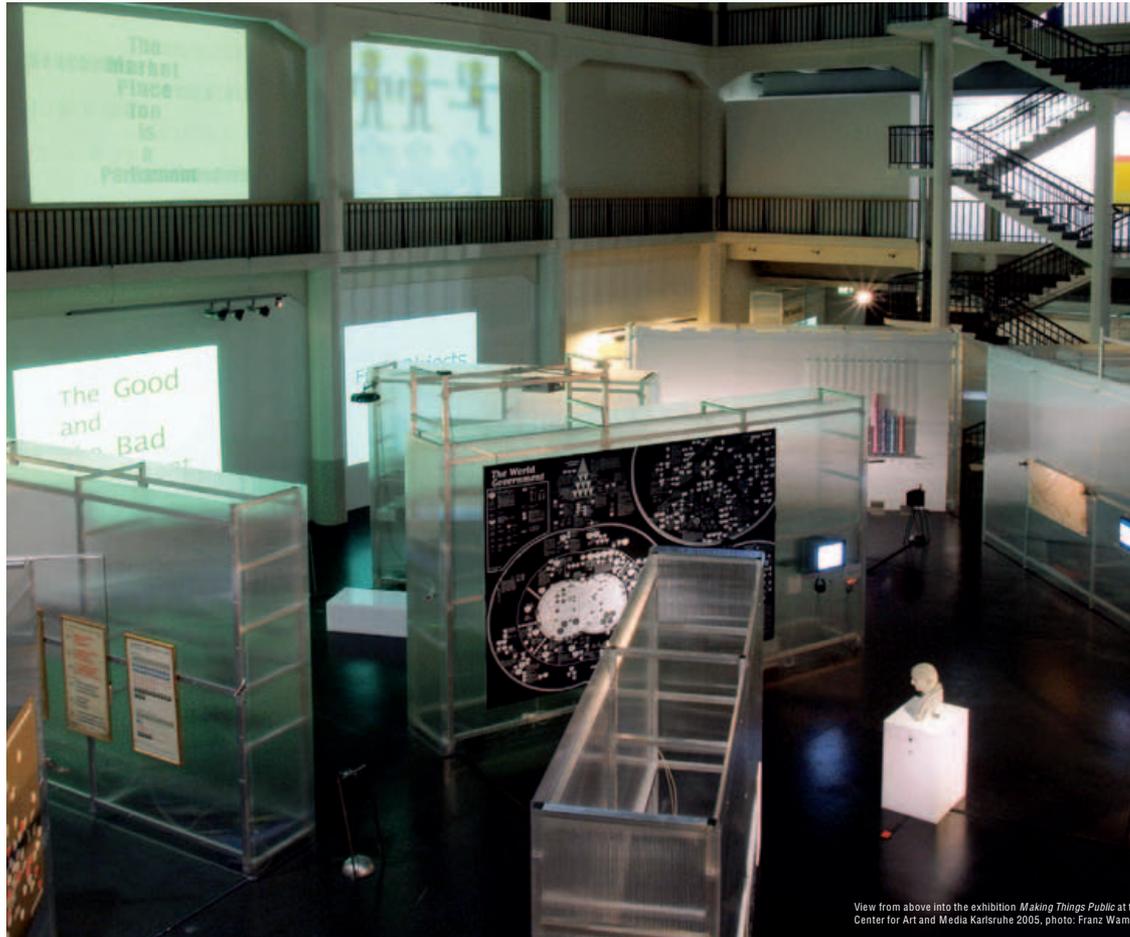
**Written content is added in the situation of use**



[ill: Eriksen, 2012, p. 223]

# Actor-Network Theory (ANT) / 'Making Things Public'

*A widely referred theoretical concept for understanding relations with non-humans.../also in PD*



## Main arguments by Bruno Latour

- Agency both of *'humans and non-humans'*
- *'Transforming mediators', making others act (and 'transporting intermediaries')*
- *'Delegated roles' e.g. to non-humans*
- Go for *'Matters of Concern' / not 'Matters of Facts'...*
- *'Thing' understood as a gathering*
- *Composing*

# Part B/ Participating Materials

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## *In (Service) Co-designing*

### **Main arguments p. 192-204**

Co-designing as relating (Chapter 4)

Inspired by Bruno Latour / ANT and Lucy Suchman's perspectives:

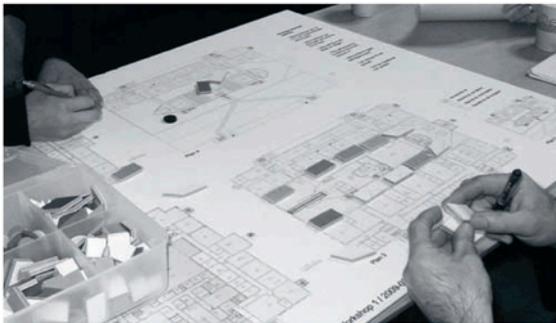
- Relations as networks of 'human and non-human actors' / Situated assemblages
- 'Delegated roles' to non-humans (e.g. as what I suggest to view as 'formats' and 'content material')
- Roles of 'mediators' and 'intermediaries' / Actors as 'mediators' / Mediators are "making others do unexpected things" (Latour 2005, p. 59).
  - + their 'well-attached attachments' to other time, place, and agency (ibid, p166)
- Collaborative processes of transforming – as 'circulating references'
- Reconfiguring relations in the 'situated actions' (different from the 'plans' of action)



Challenge 3 is for example based on Insights from Exemplar 02



From Exemplar 04



From Exemplar 05

For more details:

Foreword: Program Positions & Approaches Part A / All

Part B / Intro / Chapter 5 Part C / Chapter 9 Part D / Chapters 11, 10 -

Landscape no. B, C, G, J, L-V

### Challenge 3 /

## From Designers Mainly Pre-Designing Form and Proposals – to Largely Making Formats and Staging Co-designing

#### From designers mainly pre-designing form and proposals

In 'classic' designing, giving form, visualizing and making (e.g. aesthetic and functional) proposals or solutions for others is the main job of designers. However, in co-designing to foster engagement, shared author and ownership of issues, ideas and solutions among stakeholders is essential. This is, to a large extent, changing how designers' visualization and materialization competences are to be/being used. I suggest using these skills especially when preparing formats for staging and engaging in co-designing with others.

#### - to largely making formats and staging co-designing

As clearly stated, already in 1991 in the book *Design At Work*, to increase chances that an IT-system or a service concept will fit the practice it is being designed for, from day one in a project, issues and proposals for solutions have to be co-designed. However, as it was also clearly stated in that book, and which the performative perspectives I apply in this thesis also emphasize, co-designing needs staging. And integral in staging is *formatting*. Of course, solutions still have to be well-designed. Yet, from studies of many *co-design situations* I have found that unless it is very carefully staged, bringing or inviting pre-designed proposals to *co-design situations*, very often implicitly create a critique/defence situation, which is not very fruitful if the intension is co-designing. To emphasize, this role of proposals I therefore call 'delegated advocates'. Staging co-designing is a complex, subtle and very material practice (calling for additional skills to visualizing and materializing). Core materials of the co-designer are e.g. listening, drawing together, respecting others' practices and sharing responsibilities (and fame). Throughout this thesis, I have exemplified and discussed how staging co-designing practically can be done by making and inviting (carefully co-designed) assemblages of materials. This includes: choosing and setting the stage(s), planning agendas with transitions of *co-design situations*, making tangible and guiding formats of how to collaborate, preparing or selecting *content materials*, etc., then invited into a specific co-design event and situation. So when understanding and staging co-designing..

Recognizing that the role of designers largely changes from mainly designing forms and proposals for others, to (co-) designing formats for staging co-designing with others...matters

Acknowledging that formatting is an essential part of staging co-designing...matters

# Chapter 6 / Formatting Processes of Materializing

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*With participating materials at co-design events and situations / or in Design Explorations*

## **Main arguments...**

- Formatting a part of staging and setting the scene for co-designing / design explorations
- An assemblage of materials participate in assisting event organizers in formatting & staging
- ‘Delegating roles’ to non-human materials a part of the practice / Tangible materials often not self-explanatory, do not do the job on their own
- Collaboratively Materializing in the situation: Transforming from materials – through materializing – to Materialized / A merging of tangible ‘format’ and ‘content material’
- Collaboratively materializing depending on skills, available ‘having’ materials and doing
- Some material get the role as ‘intermediaries’ / others as ‘mediators’...
- Intertwine with situated negotiation of meanings (of ‘content material’)
- New ‘format’ materials assist in transforming between different processes of materializing

# Formatting...situations of materializing/exploring

---

*Mockups / Prototypes as ex. of different ways of staging participation / developing knowledge...*

**What are the 'circulating references' in a co-designing practice?  
/ Which non-humans are invited?**



[ill: PalCom-project / MAH - Malmö / 2004]



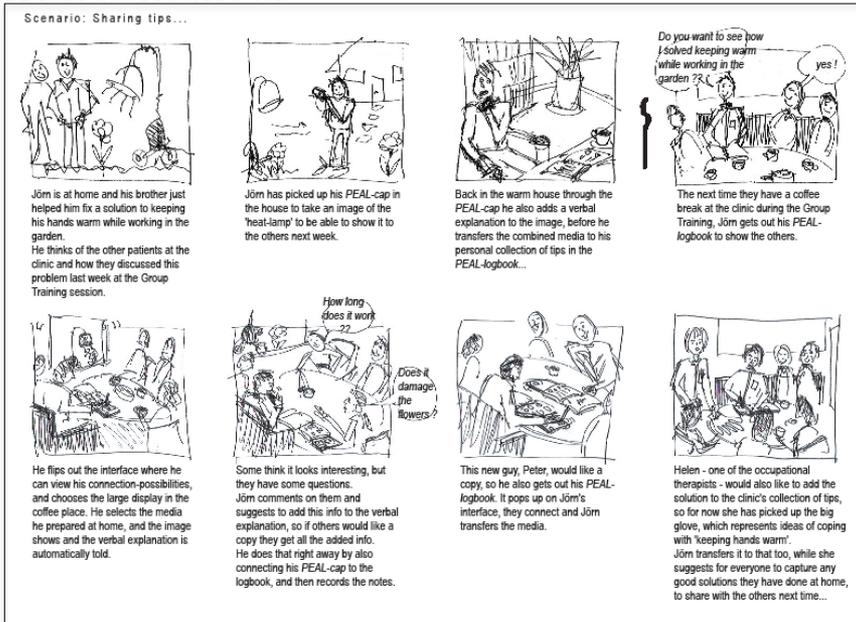
[ill: PalCom-project / MAH - Malmö / 2004]

# Formatting...situations of materializing/exploring

*Storyboard as another example of staging and formatting participation / exploration...  
Empty or filled out surely establish different situations*

## With content or

Scenario: Sharing tips...



Jörn is at home and his brother just helped him fix a solution to keeping his hands warm while working in the garden.  
He thinks of the other patients at the clinic and how they discussed this problem last week at the Group Training session.

Jörn has picked up his PEAL-cap in the house to take an image of the 'heat-lamp' to be able to show it to the others next week.

Back in the warm house through the PEAL-cap he also adds a verbal explanation to the image, before he transfers the combined media to his personal collection of tips in the PEAL-logbook...

Do you want to see how I solved keeping warm while working in the garden??  
yes!

The next time they have a coffee break at the clinic during the Group Training, Jörn gets out his PEAL-logbook to show the others.

He flips out the interface where he can view his connection-possibilities, and chooses the large display in the coffee place. He selects the media he prepared at home, and the image shows and the verbal explanation is automatically told.

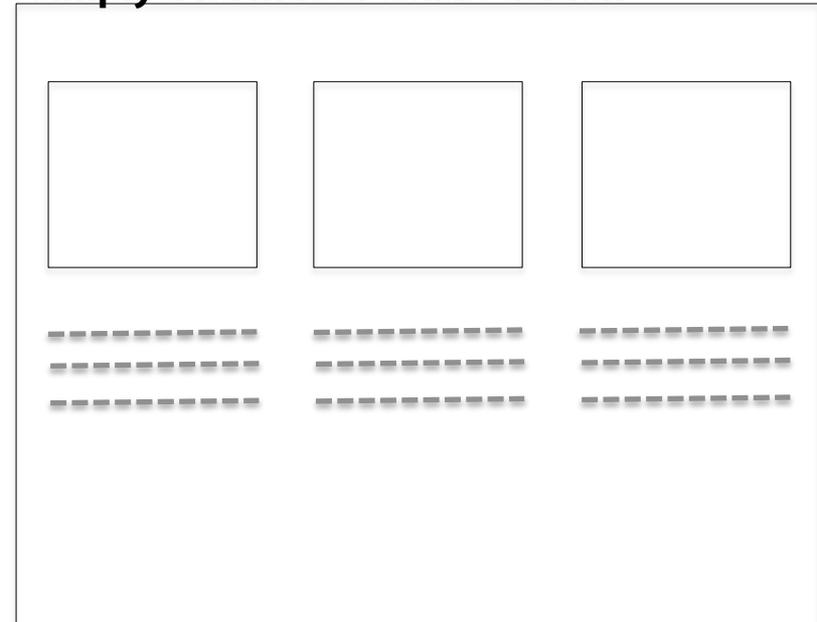
How long does it work??  
Does it damage the flowers?

This new guy, Peter, would like a copy, so he also gets out his PEAL-logbook. It pops up on Jörn's interface, they connect and Jörn transfers the media.

Helen - one of the occupational therapists - would also like to add the solution to the clinic's collection of tips, so for now she has picked up the big glove, which represents ideas of coping with 'keeping hands warm'.  
Jörn transfers it to that too, while she suggests for everyone to capture any good solutions they have done at home, to share with the others next time...

[ill: PalCom-project / MAH - Malmö / 2004]

## simply a format of collaboration



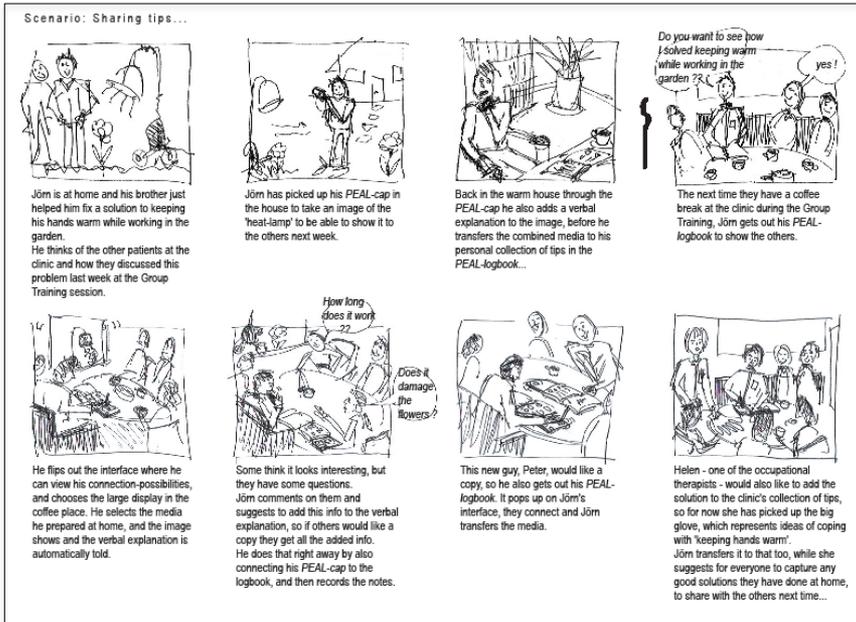
The template consists of a large rectangular frame divided into three columns and three rows. Each cell contains a large empty square box for an image or drawing, and below it, three horizontal dashed lines for text.

[Example: storyboard scenario template]

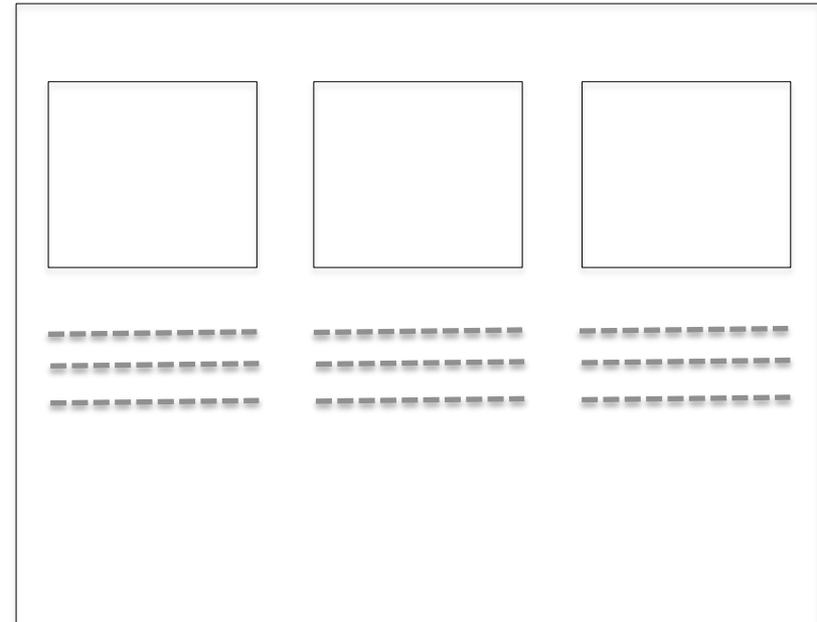
# Formatting...situations of materializing/exploring

*Storyboards as one example of different ways of staging participation / exploration...*

## The 'frame(s)' of collaboration also influences the situated co-designing / design exploration



[ill: PalCom-project / MAH - Malmö / 2004]



[Example: scenario template]

**E.g. Opening up for critical reflection/dialogue or testing**

# Part D - Chapter 10 / Emerging Material Landscape of Co-Designing

*A catalogue for understanding and staging co-designing (selected pages)*



Overview of Emerging Material Landscape of Material Matters / This quite complex, Layered and constructed yet abstracted 3D-landscape is my suggested materialization of a landscape grasping core 'materials' of co-designing practices. / p. 343

collaborative materializing and situation cooldown..



**Q /**  
Pre-designed  
Proposals  
/ 'Delegated  
Advocates'

I know that designers are largely trained in making proposals for solving design problems, but when engaging in co-designing, I also know that ownership of ideas, proposals and solutions is closely tied to being engaged in making these. Therefore, if I or we pre-design proposals, I carefully stage their participation for instance at co-design events..



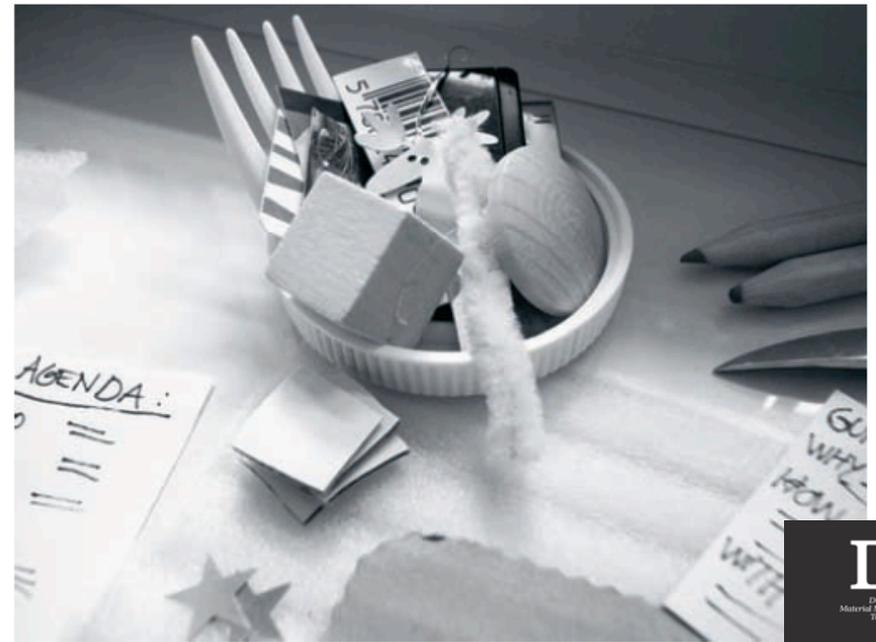
# Acknowledging material formats & content material as participating materials -by dissecting design games

As proposed in Eriksen (2012) e.g. in the concluding “Emerging Material Landscape of Co-Designing”

N/  
Formats / ‘Delegated Coach Assistants’



P/  
Content Materials /  
‘Delegated Playmates’



# No format of collaboration in the situation

---

*Often leads to (sometimes long) discussions of 'how to collaborate' ...*

**Co-design situation with a lot of 'fieldcard' content material – but no format of how to engage**



[ill: Eriksen, 2012, p. 222]

# What were the “formats” & “content materials” here:

*If the socio-material situated practice / the “co-design situation” is understood as such...*



**Groupwork during 'Things on their way' -working with brought things, provoking anecdotes, etc**

# What were the “formats” & “content materials” here:

*If the socio-material situated practice / the “co-design situation” is understood as such...*



**Groupwork during 'Mapping a Landscape of Waste & Innovation' – working with fieldcards**

# What were the “formats” & “content materials” here:

*If the socio-material situated practice / the “co-design situation” is understood as such...*



**Groupwork during 'Mapping a Landscape of Waste & Innovation' – working with fieldcards**



Scenario: Sharing tips...

Jörn is at home and his brother just helped him fix a solution to keeping his hands warm while working in the garden.  
He thinks of the other patients at the clinic and how they discussed this problem last week at the Group Training session.

Jörn has picked up his PEAL-cap in the house to take an image of the 'heat-lamp' to be able to show it to the others next week.

Back in the warm house through the PEAL-cap he also adds a verbal explanation to the image, before he transfers the combined media to his personal collection of tips in the PEAL-logbook...

Do you want to see how I solved keeping warm while working in the garden??

yes!

The next time they have a coffee break at the clinic during the Group Training, Jörn gets out his PEAL-logbook to show the others.

How long does it work?

Does it damage the flowers?

He tips out the interface where he can view his connection-possibilities, and chooses the large display in the coffee place. He selects the media he prepared at home, and the image shows and the verbal explanation is automatically told.

Some think it looks interesting, but they have some questions. Jörn comments on them and suggests to add this info to the verbal explanation, so if others would like a copy they get all the added info. He does that right away by also connecting his PEAL-cap to the logbook, and then records the notes.

This new guy, Peter, would like a copy, so he also gets out his PEAL-logbook. It pops up on Jörn's interface, they connect and Jörn transfers the media.

Helen - one of the occupational therapists - would also like to add the solution to the clinic's collection of tips, so for now she has picked up the big glove, which represents ideas of coping with 'keeping hands warm'. Jörn transfers it to that too, while she suggests for everyone to capture any good solutions they have done at home, to share with the others next time...

[ill.: PalCom-project / MAH - Malmö]

[Example: scenario/journey template]

## Pre-designed proposals and / vs. Formats for co-designing proposals...

- Who adds/decides about the content...? / Who invites - who/what is invited?

..co-designing practices /

---

## *B / Series of Performative Co-design Events*

The differently shaped white boxes for example established with the little white papers on top of each box and with its unique edges and spatial qualities.

Furthermore, they are connected by white threads and fill out different areas of the underlying bubble wrap.



Practically, co-design (research) projects can be organized as ‘workshops’ or a *series of co-design events* (= the white boxes), as I recently have re-argued with Eva Brandt. With Joachim Halse, additionally co-design events can be viewed as (ritual) *performative events*, where diverse stakeholders (and materials) meet face to face to participate in co-designing (no. F).

F /  
**Overall Performative Structures of  
 a Co-design Event**

The white box  
 is made in a setting  
 and is roughly made  
 of different  
 – somewhat invisible  
 parts a left upper  
 a middle lower  
 and a right upper  
 level

Additionally, wi-  
 thin the underlying  
 bubbles wrap tied  
 to the white box is  
 something before –  
 on the left of it and  
 something after –  
 on the right of it.



A co-design event (no. B) can be viewed as ‘performative’, because it is structured or sequenced much like a performance. This view is strongly inspired by Joachim Halse and Brendon Clark’s performative perspectives on co-designing and Richard Schechner’s ‘time-space-sequence’ descriptions of transformative (artistic and everyday) performance processes.

Within Schechner’s framework, the structure of co-design events can be described as:

- proto-performance (Proto-p.)* (= before/on the left of the event-box) (no. G)
- performance* (= the whole event-box) (no. I, J, K)
- aftermath* (= after/below and on the right of the event-box) (no. H).

## G/ Co-design Event Proto-Performance

Different papers  
with different texts  
different hands-on  
materials  
in different shapes  
are all parts of  
making  
the bubble wrap  
in the left area  
of the white box



Before an actual co-design event takes place (no. B, F), a sequence, which I with Schechner call the *co-design event proto-performance* or *Proto-p.* (= the area on the left of the event-box within the bubble wrap-project program) (no. F, A) occurs. Also with Schechner, together the time-space sequence of proto-performance, actual performance and aftermath reveals my understanding of co-designing as performance processes (no. F, H).

During Proto-p. of the co-design event, various *materials* (= drafts of the invitations/calls, agendas, to-do-lists, design of format-suggestions, content materials-possibilities, etc.) are engaged in planning and preparing how to be stage, format and collaborate during the actual event (No. L, N, P, O,

I /

## Collaborative Warm-up of a Co-design Event

Connecting to the bubble wrap on the left the edge and the upper left and back level is the way into the white box.

For example coffee cups different paper one called 'AGENDA' three light-spots on the back surface the cut-outs in the back are all parts of shaping this side of the white box.



The process of starting and opening a performative co-design event (no. F) is a sequence, which I with Schechner call *collaborative event warm-up* (= the edge, left and back white upper space on the event-box) (no. F). The collaborative warm-up takes place before moving into the actual collaborative performance/the explorative, liminal phase of the event (no. J). *During the warm-up, stakeholders leave the everyday behind and, often with the use of different materials; they get into the frame(s), focus(es), topic(s) and approach of the event.*

J/  
*Explorative 'Liminal' Performance of a Co-design Event*



The middle, lowered area of the white box has light and dark areas in this in-between space.

It includes and is made with the uneven striped plastic pieces and the other different materials as well as the setting.

The middle part of a performative co-design event is a sequence, which I with Schechner call the actual collaborative 'performance' (= the middle lowered area of the event-box) (no. F). Merged with Victor Turner's three-phase transitional ritual performance, this can also be viewed as the '*liminal*' phase or space of a co-design event.

In a co-design project, this middle part of a co-design event is often *where collaborative designerly inquiries, experiments and explorations take place*. During the Future Architects' Laboratory, the participating landscape architects together with various IT-researchers explored technologies while at the same time rehearsed or simulated being themselves in the future.

Exemplar 06 /  
 circles 05-14

K /  
**Collaborative Cooldown of Co-design Event**



Connecting to the bubble wrap the edge and the upper right and back level is the way out of the white box.

Also connecting to the various materials in the lower area of the white box video-tape one light spot on the back surface cardboard saying 'INSIGHTS' a series of dots 'NEXT STEPS' 1. 2. 3. - are all parts of shaping this right side of the white box.

The act of ending and closing a performative co-design event (no. F) with Schechner I call collaborative co-design event cooldown (= the right white upper and back space and edge on the event-box). *Co-design event cooldown can last a few minutes or much longer. In fact, breaks during an event can also have cooldown characteristics.*

*It is during the collaborative cooldown that participants prepare for their return to everyday life, taking with them the experiences of the collaborative performance; but this is also when shared wrap-ups and initial reflections are often made.*

H /  
**Co-design Event Aftermath**



Videotape and stick written cardboard lists here elk and two-surface construction are all filling out and making the bubble wrap in the right area of the white box.

Further, they are parts of connecting to the next white box.

After a co-design event (no. F, I, J, K) comes a sequence, which I, with Schechner, call the co-design event aftermath (= the area on the right and below the white event box within the bubbles wrap project program) (no. F, A). Again with Schechner, together the time-space sequence of proto-performance, actual performance and aftermath reveals my understanding of co-designing as performance processes (no. F, G).

To Schechner, there is short-term and long-term aftermath, but *generally a performance aftermath has no clear time-constraints, but includes 'critical responses', 'archives' and 'memories'*. In the aftermath, material participants (= e.g. here video and still images on USB, written lists and selected elk and construction re/materializations, etc.) (no. T, U) can become engaged in refreshing the experiences and memories of the actual



Challenge 9 is for example based on insights from Exemplar 03



From Exemplar 06



From Exemplar 04

For more details:

Foreword: Program  
 Positions & Approaches  
 Part A / Chapter 2

Part B / Chapters 4, 5, 6  
 Part C / Intro / Chapter 8  
 Part D / Chapters 11, 10

- Landscape no. B, F, G, I,  
 N-Q, V

### Challenge 9 /

## From Secret Backstage Preparations only by Event Organizers – to Proto-Performance Engagement through Materials by Stakeholders

#### From secret backstage preparations only by event organizers

It is sometimes argued by event organizers, that stakeholders do not have time to do anything before a co-design event. But is that really the case, or is it organizers wanting to keep control of the process by secretly planning and preparing everything (backstage, during the proto-performance)? In everyday life, ownership and engagement is often tied to material things. With a similar view on co-design projects, to foster engagement, I suggest *content materials* to be sometimes prepared by participating stakeholders.

#### - to proto-performance engagement through materials by stakeholders

With Richard Schechner's framework for understanding performances, I view the proto-performance (proto-p.), like the aftermath, as a part of the (co-design event) performance process. Proto-p. precedes the event, and in co-design projects organizers often use this time for planning and preparing a coming event. Then, in a sense, their proto-p. start earlier than for the other stakeholders. Yet, as soon as stakeholders have been invited to a co-design event, more or less explicitly their proto-p. starts too, and I have found this can be used fruitfully. When staging co-designing, (and not bringing pre-designed proposals), as shown throughout the thesis, the tangible materials invited into an event are often split up into *formats* and *content materials*. Generally, formats assist the organizers in staging how to collaborate, while the other materials can be viewed as capturing possibly negotiated content-specifics (e.g. related to the field and/or topic in focus). Stakeholders often have expertise content knowledge of current products, services and practices. Thus, when preparing for a shared co-design event, it can be divided among the different stakeholders to prepare different materials. (For non-organizers, this usually takes guiding *formatting* too – e.g. "Bring three things on their way"). While organizers usually prepare formats for staging and *formatting* co-designing at the event, sometimes letting other materials be prepared and brought by other stakeholders can be a way to establish their engagement in the event already during proto-p. So when understanding and staging co-designing...

Accepting that choices of invited materials can be distributed among (designers as) co-design event organizers and other stakeholders, both before, during and after events...matters

I repeat: Viewing a series of co-design events as situated performances and (time-space) sequences of proto-performance – actual performance – aftermath...matters

# Chapter 6 / Formatting Processes of Rematerializing

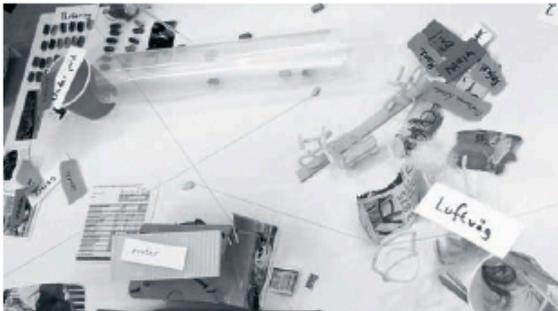
## Chapter 9 / Rematerializing for Aftermath

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*Processes from Material / Data / Materializing-Knowledge Developments / Contributions / Step 2 partly overlaps with participating materials at/after co-design events / Design explorations*

### **Main arguments...**

- Rematerializing in the situation or afterwards: Formatting processes of (collaborative) reflection-on-action
- Explicitly staged and formatted ways of reflectively documenting insights, negotiations, issues, challenges, ideas, etc. / E.g. by critically relating, comparing, possibly further transforming or adding layers to previous Materialized outputs
- Not 'just' mere documentation
- With Materialized outputs (from preceding processes of materializing) – often with new material/formatting – Rematerialized outputs
- Time for this is important / when still in an explorative frame, when fresh? / weeks later?
- Non-human (Re)materialized outputs feed into event archives / Help refresh memories
- / often a mediating role in further transforming (co-)design /research processes



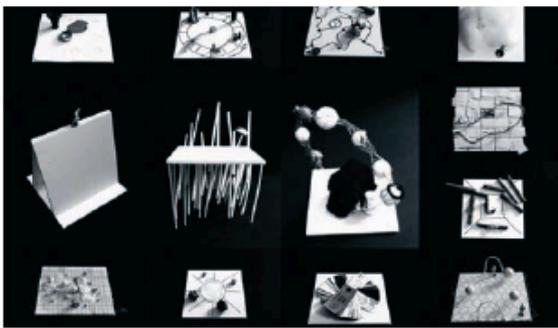
Challenge 11 is for example based on insights from Exemplar 01.

**2. Pick up patient RFID reader from box**  
 The doctor picks up an RFID reader from the reception. The RFID reader is connected with an RFID. The Reception Box (RFID service) with the Patient Manager that a Patient RFID reader has been picked up. Further things happen:

1. A read Patient RFID reader action is started. This communicates via Bluetooth with the Patient RFID reader.
2. The Patient Manager asks the Assembly Manager to create a Patient Assembly assembling the CheckOut service with the Patient RFID service.

Design Issue: Should the Patient Manager be in an assembly with the Assembly Manager or should he communicate via the Assembly Manager a basic service that all other services can interact with?

From Extra example in Part C / Chapter 9



From Exemplar 04

For more details:  
 Foreword: Program Part C / Chapters 8, 9 K-R, T, U, V  
 Part A / Chapter 3 Part D / Chapters 11, 10 -  
 Part B / Intro / Chapters 4, 6 Landscape no. B, C, F, H, J,

**Challenge 11 /**

**From Ending with Presentations & Documentation – to Shared Reflective Yet Explorative Rematerializing for Aftermath**

**From ending with presentations and documentation**  
 Good quality images, videos and stories are becoming more and more important when sharing experiences, insights and proposals from a co-design event and project. However, at co-design events, filming and photographing is often considered as a job of mere documentation of what happens, an extra job for already busy organizers or a student volunteer (often without a stake in the project). Short deadlines during the event - e.g. when ending group-work with plenum presentations - also make stakeholders and groups focus on co-designing presentable materializations for that presentation-situation. It might work there to tell the story, but not very well after the event. I suggest integrating what I call shared reflective yet explorative rematerializing.

**- to shared reflective yet explorative rematerializing for aftermath**  
 Bruno Latour suggests tracing traces to understand which are the (human and non-human) actors in a network. I have found that (re)materialized outputs from co-design events often make traces over time in co-design projects. With Richard Schechner I also view the last sequence of a performance process as the event aftermath, potentially lasting forever. Central of the aftermath are 'responses' and 'archives' of documentation, which can help refresh 'memories' of the event, memories that otherwise quickly fade away. Together, these views place an emphasis on what is collaboratively made for the co-design event archives, including which design-oriented traces are started during co-designing. Co-design event archives are what appear on project blogs, websites, wikis, what is in event resumes, server-spaces with images and films, etc. Thus, instead of considering visual and material documentation as an extra job of the organizers (sometimes even done after the event has ended), I suggest integrating this in the explorative phase of events. After processes of materializing, instead of using a lot of time making groupwork presentations, I suggest staging for reflective yet explorative rematerializing and making rematerialized outputs. It can be challenging, but formatted playfully it too creates shared ownership of the visuals/materializations integrated in the event archives, further work and story-telling about the project. So when understanding and staging co-designing...

*I repeat: Acknowledging that quite explicitly staged processes of materializing – and also rematerializing – are important situations in co-designing...matters*

*I repeat: Understanding how negotiated materialized and rematerialized outputs, often become traces, memories, actors in the aftermath archives of an event...also matters*

# 'Circulating references'

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*Concept by Latour on how knowledge is produced / made (in scientific practices)...(1999)*

## **Summarized in Eriksen 2012 (p. 200-201)**

'Circulating references' captures observations of how (academic) insights and arguments develop through collaborative processes of transforming with the materials of the situation (to relate back to Schön (1983))

Exemplified in essay *Sampling the soil in the Amazon forest* in the book *Pandora's Hope* / a detailed study of a research excursion by a multidisciplinary team of natural science researchers / how academic data, references and evidence are produced.

As researchers, the team-shared aims were to discover new academic insights with samples of soil and other data from the Amazon forest.

Latour saw that the researcher's practice was largely a combination of talking to each other, studying maps, investigations on site in the quite small selected area on the edge between the forest and savanna, collecting samples of soil, vegetation and worms in the area, making notes, making sketches, diagrams, new maps, transforming the samples into generic numbers - assisted by a cardboard with color codes and holes next to them to match sample colors (an intermediary non-human), etc.

All this data was intertwined in their collaborative analysis and in the written report of the excursion, which again (when back in France) eventually was transformed into various academic publications.

(...) This process is provoked by different mediators and assisted by different intermediaries.

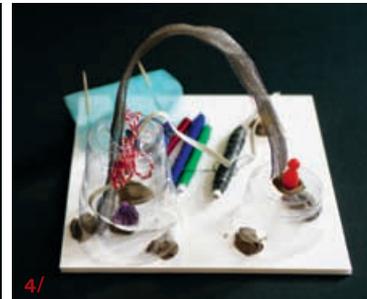
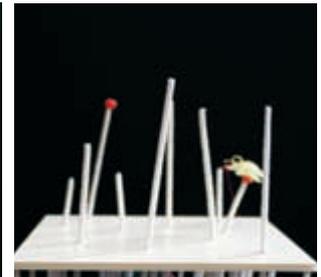
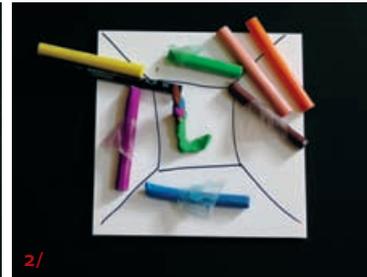
# Some Ways of Rematerializing / Participating...

*To (collaboratively) reflect upon and negotiate what were important insights...  
/ New ways of doing this can surely be further explored, researched and developed*



[Exemplar 04 from Xlab in Eriksen, 2012 /

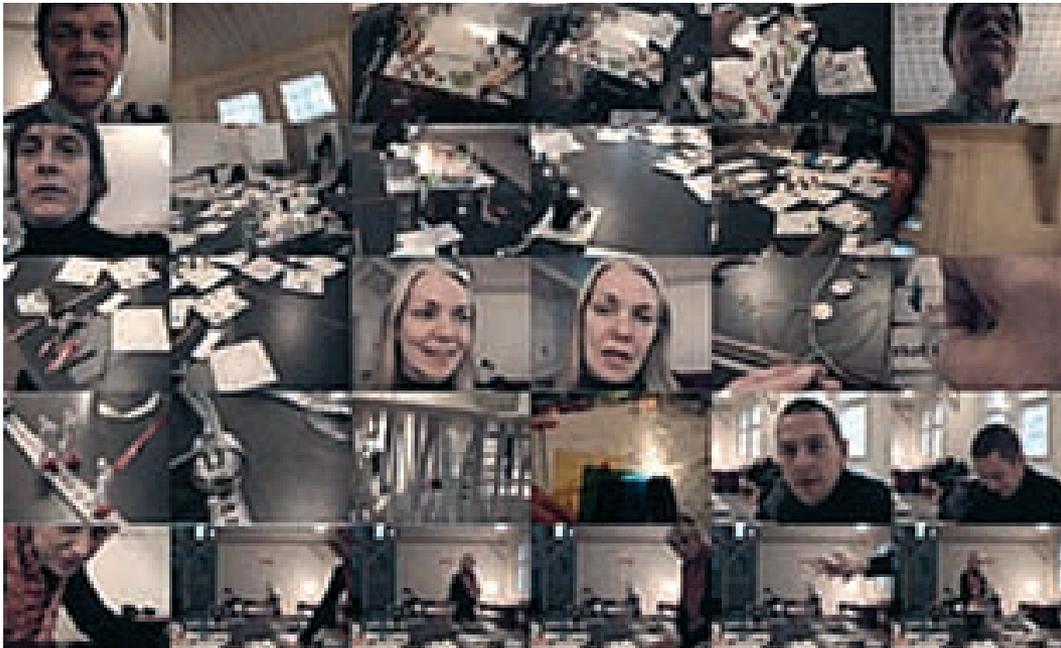
A silent process of materializing / intertwined with moments of 'rematerializing']



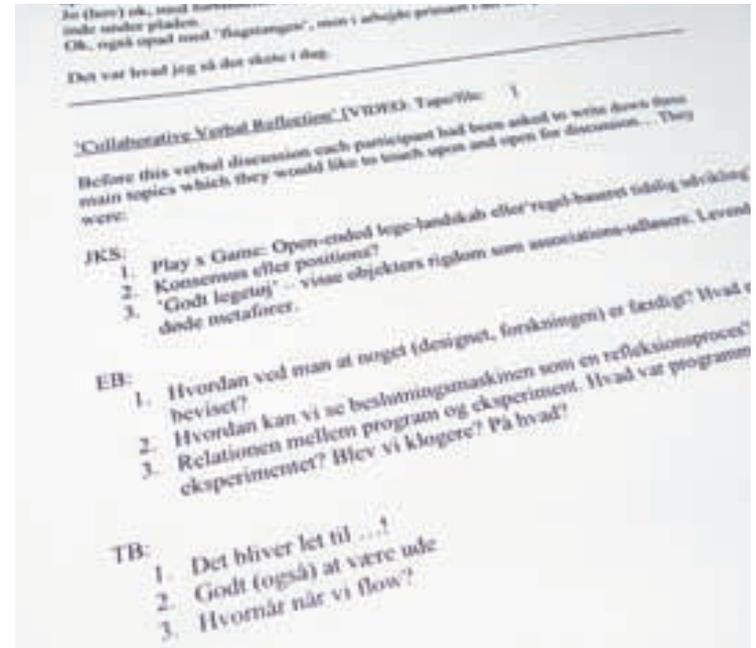
[Documenting by rematerializing / carefully arranged images with written down explanations of the main point captured]

# Some Ways of Rematerializing / Participating...

*To (collaboratively) reflect upon and negotiate what were important insights...  
/ New ways of doing this can surely be further explored, researched and developed*



[Individual video-reflections, recorded by being one at a time in the room with the 'Materialized' outputs – some filmed details, others overview + with voiceover explanations]



[Individual notes written down about the three main insights of the day / later digitalized by organizers]

# Summary: Material of the (Service) co-designer...

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*My proposed broad understanding of Materiality in (service) co-designing practices*

**Related to an understanding of methods & tools, rather seen as situated "assemblages"...**

- Yes, Digital, tangible, crafts, visual etc. material ...
  - + Fieldwork data
  - Mock-ups, scenarios, full-scale enactments, etc.
  - Concepts & prototypes at the core / but not only these!
  
  - ..also paper-templates, post-its, whiteboards, etc...
  - ..and schedules, plans, agendas, etc...
  - ..collaboration guidelines,
  - ..as well as talk (e.g. questions, stories, arguments, etc.)
  
  - ..also physical location(s), sites, etc.
  
  - ...and other people's work/examples, integrated theoretical perspectives/concepts, etc.
- Generally – non-humans, or rather situated “assemblages” of humans and non-humans as actors for example setting the scene for / formatting the situated collaboration...

*What do you now consider as “Material”  
in the last collaborative design-oriented session  
you hosted or participated in ?*

*E.g.*

*Which non-humans were involved in the assemblage(s) formatting  
the collaboration / setting the scene for collaboration – and the  
continual progress?*

*Which non-humans played the main roles as “content material”,  
which were invited, which were actually explored and negotiated?*

*(Possibly inspired by what is on the front table?  
Write down/sketch for 2 minutes)*

# The following last slides include examples from my recent research mostly with public sector actors:

---

*Publications and thorough insights in the making!*

## **These co-design-based research processes related to the following larger topics:**

- Cross-country and cross-department municipal collaborations for sustainable urban transition (hands-on through a game co-design process lasting 8-12 months – 1.5 years (duration different for different stakeholders))
- “Urban labs” as new forms of governance / Labs (design labs, living labs, city labs, innovation labs, etc.) are overall seen as (partially design-oriented) collaboration platforms semi-connected with the local municipality /

Case / Experiment: Malmö InnovationArena – particularly focus on a collaborative reflective “co-lab” process running alongside everyday practical activities to explore support structures of learning from local experiments/projects

Case / Experiment: The future role of libraries and librarians in a citizen-centered perspective / “Co-lab” to explore experimental practices and gaps and relationships between local libraries and regional strategic officers

Case/ Experiment: Pilot-project of developing “ReTuren” – a local wastehandling/ upcycling station also aimed to increase awareness of sustainability among the local citizens etc. / Also deals with cross-department and –sector models of collaborations and distribution of responsibilities

# Urban Transition through a game co-design process / exploring ways of collaboration around sustainability





# Ex. of CoDesigning a design game / 2. step



- Co-designing three different rough game / dialogue-tool prototypes – later one selected...

# Ex. of CoDesigning a design game / 3. step

- to address cross-sector municipal ways of collaboration around sustainability



Hvad er de 2-3 vigtigste spille-materi-aler...? Andre forslag? (Eksempler + Hvorfor)

Hörnen - riktighetsförändrande också för gruppen som helhet

Modifiers - bra tillägg, "ful"

Timglas - mycket viktigt att begränsa diskussionen tidmässigt

Brugssituation(er) for spillet - i kommunerne...? (Eksempler + Hvorfor)

Forgrundstænkelse: i forbindelse med udvælgelsen af samarbejdsformering af eksisterende bygninger

At kunne bruge spillet til bedre at kunne se/forske borgernes perspektiv.

(fx. Hvorfor er papirer og papirer og grønne (bussstoppesteder))

- At få realistiske (ek.) (baseret) forslag og forslag til at se spillet som et dialog-værktøj.

Stee Ste. Kalle

- A proposal had been designed by professional game designers and researchers – Then a session of collaboratively exploring, evaluating and adjusting this early game prototype...

# Iterative game co-designing / Step 4

- to foster reflection around current (not) collaborative practices
- and address cross-sector municipal ways of collaboration around sustainability



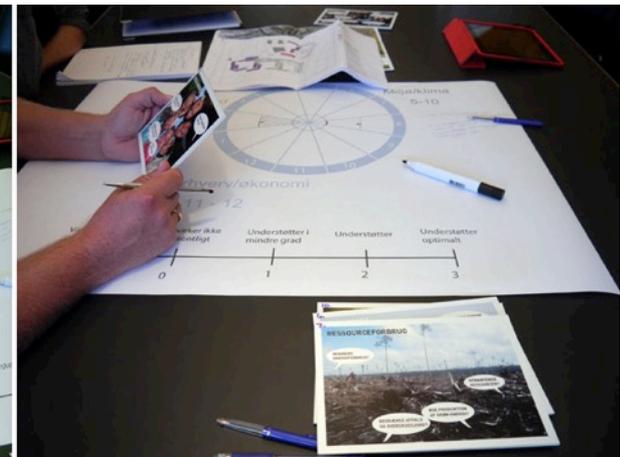
5 Different "test" –around real-world cases, with municipal stakeholders > game refinements...

# ”Implementing” practices with design game

- to address cross-sector municipal ways of collaboration around sustainability in Malmö, Sweden & Roskilde, Denmark



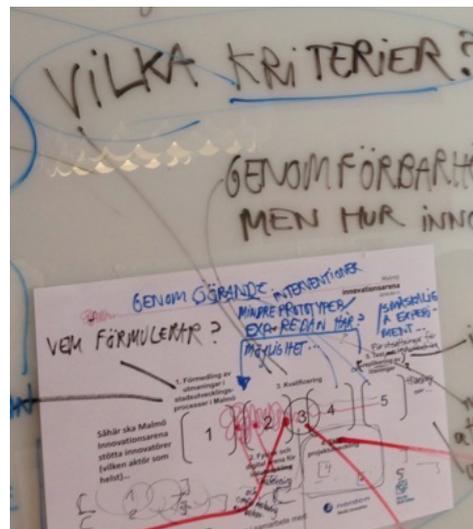
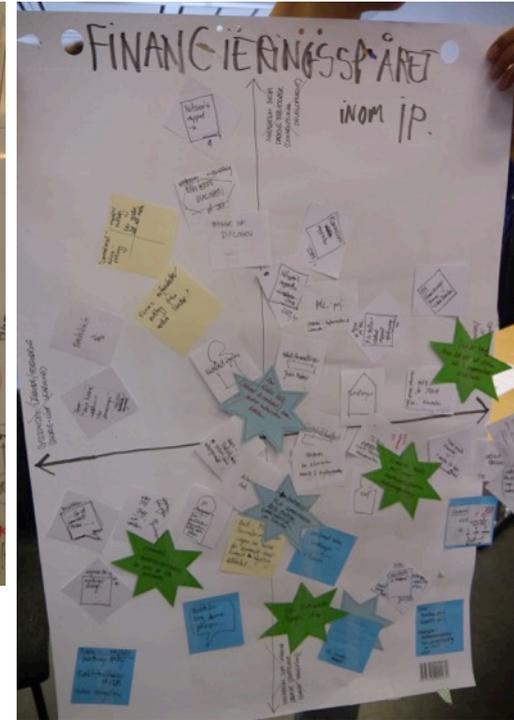
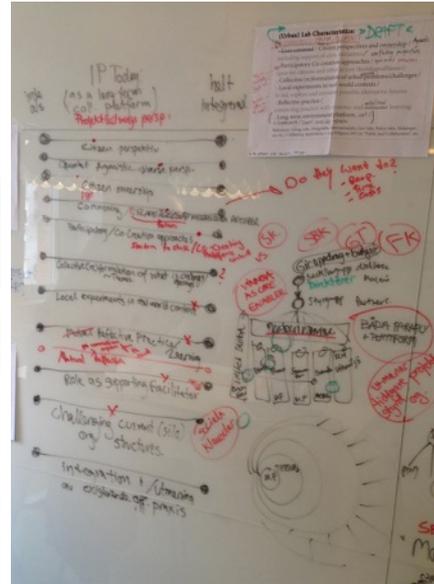
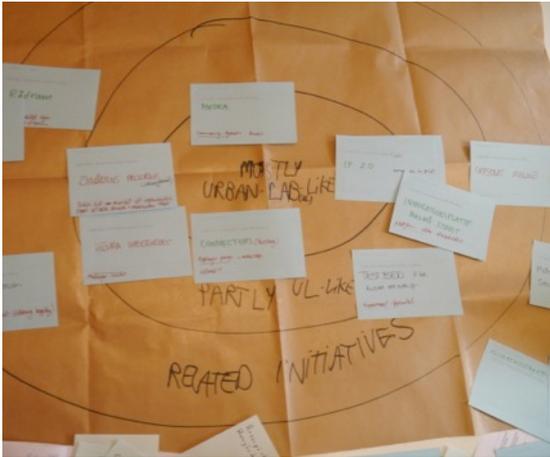
- Sharp use e.g. With working & steering groups, with local citizens, developers, etc.



> Inspired re-appropriation of local sustainability tools... from Excel to a dialogue-tool/game...

# Reflective (Co-lab) process as long-term experiment - with Malmö InnovationPlatform/Arena

- with management team, steering group (2014-15 + 2016-) towards develop structures of learning...
- Through various forms of mapping, previous → future experiments, roles, process models, etc.

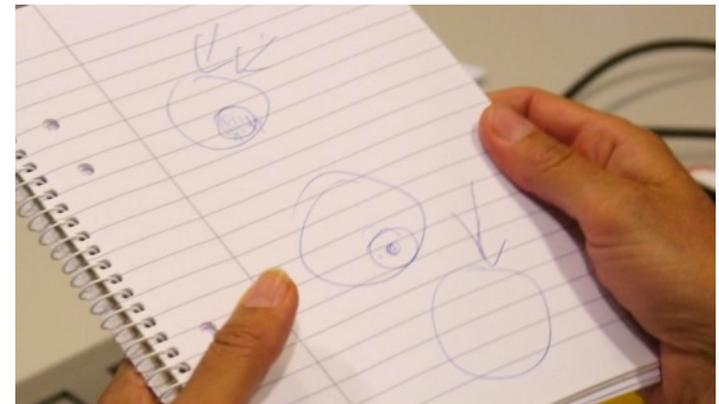
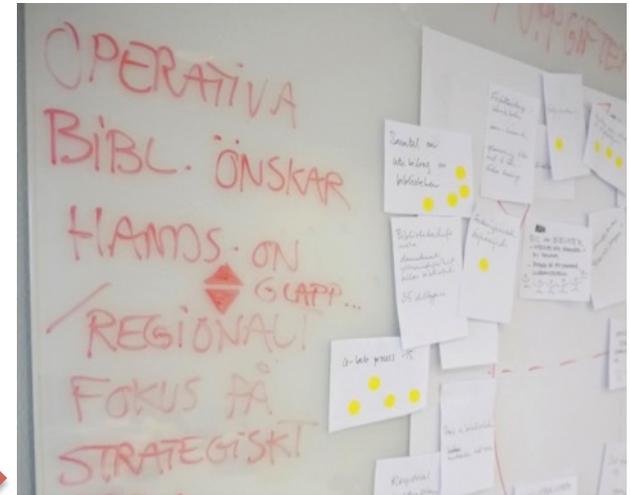


Malmö  
innovationsarena

# Long-term “Co-lab” Experiment / infrastructuring incl. small-scale experiments by librarians & regional officers / strategic & operational library developments

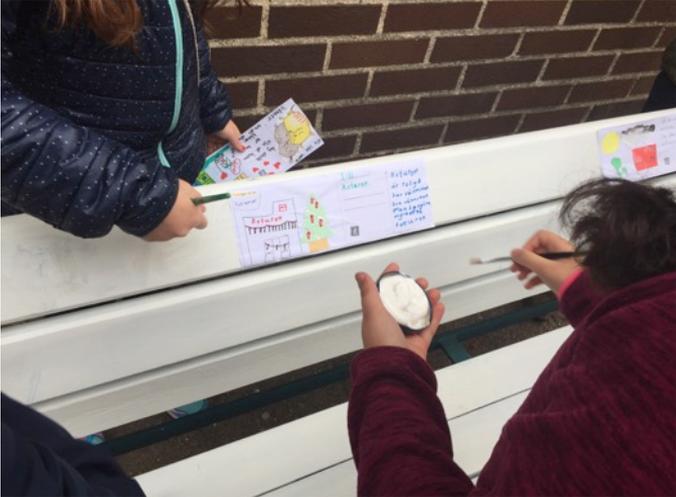
Co-lab # 1: Process of 6 half-day seminars with library staff from 5 libraries and Region Skåne + library managers at one event (2015)

/ Co-lab #2: With regional officers working with library issues, experimenting with their roles (2016)



# Collective infrastructuring process of co-producing or slowly materializing “ReTuren” in Lindängen

Long-term process among VASYD, Mah researchers, STPLN, civil servants, local NGOs, citizens, etc. (during 2014-16 / However, Pilot closed by VASYD before schedule – continued by others / Evaluation



Utkast utvärdering av kvarternära återvinningssentraler  
2016/17

Beskrivning på budget och resurser i Lindängen som ska utvärderas eller utvärderas efter avslutad rapport.

Utkast utvärdering av kvarternära återvinningssentraler  
2016/17

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*Thanks*

*Comments?*

*Questions?*