



Faculty of Design

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Radical design processes for systemic change

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Radical design processes for systemic change

Sigrun Lurås & Kjetil Nordby

The Ulstein Bridge Concept

Ocean Industries Concept Lab

The Oslo School of Architecture and Design

ULSTEIN BRIDGE VISION™ WINDOW ON THE FUTURE

00:02



The Ulstein Bridge Concept project

Duration 2011-2014 (Pre-study 2010)

Goals

1. To develop a new ship bridge concept for advanced marine operations.
2. To put Ulstein in a front position in radical ship design.
3. To develop design centered knowledge and processes that are especially tailored for very complex activities in the ship building industries.

Partners

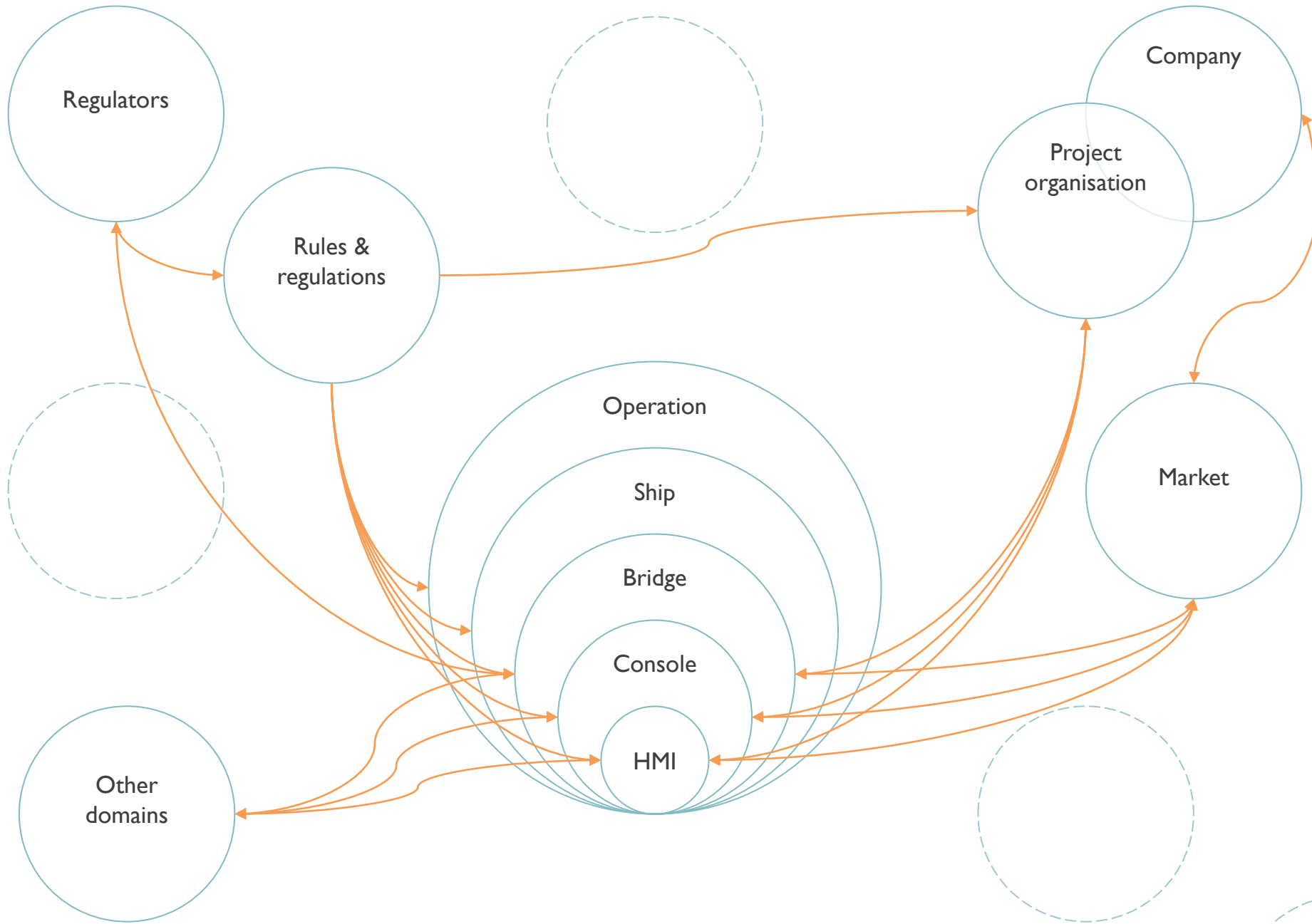
- The Oslo School of Architecture and Design (AHO)
- Ulstein Power and Control
- Høgskolen i Ålesund
- Kwant controls
- Technology partners in Germany, USA, the Netherlands, England and Slovenia

Funding

- Pre-study: the Norwegian Design Council and the Ulstein Group.
- Main project: the Norwegian Research Council's MAROFF programme and the Ulstein Group.

Overview of presentation

- Systems involved in ship bridge design
- 3 interventions for systemic change
- The interventions in relation to Meadows' places to intervene in a system
- Conclusions: Semi-open innovation processes for systemic change



How can we make
radical innovations
possible in these
systems?

3 interventions

Presented by

- Objectives
- Target
- Strategy
- Means of presentation
- Results

1



2

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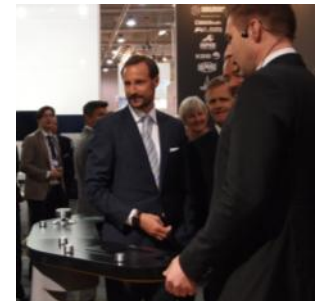
confronting energy paradoxes

STAVANGER, NORWAY, 28-31 AUGUST 2012

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3


**NOR
SHIPPING**
OSLO JUNE 04-07
2013



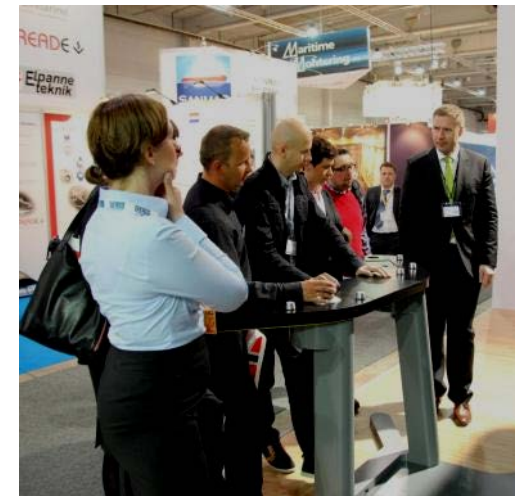
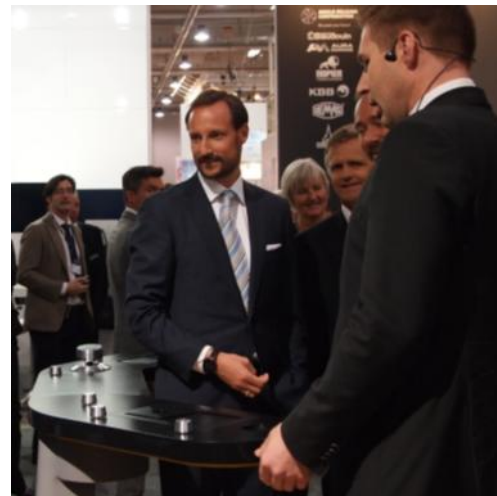
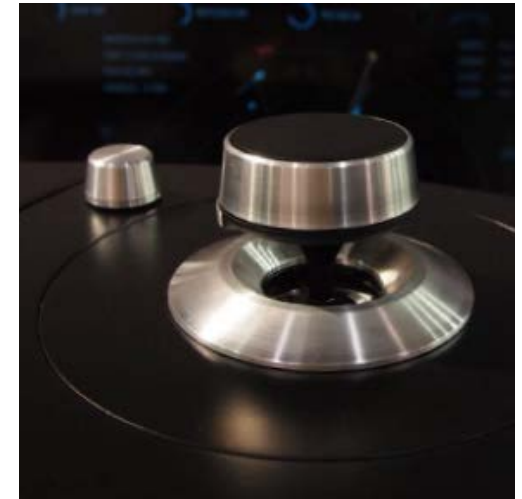
The 1st intervention



The 2nd intervention



The 3rd intervention



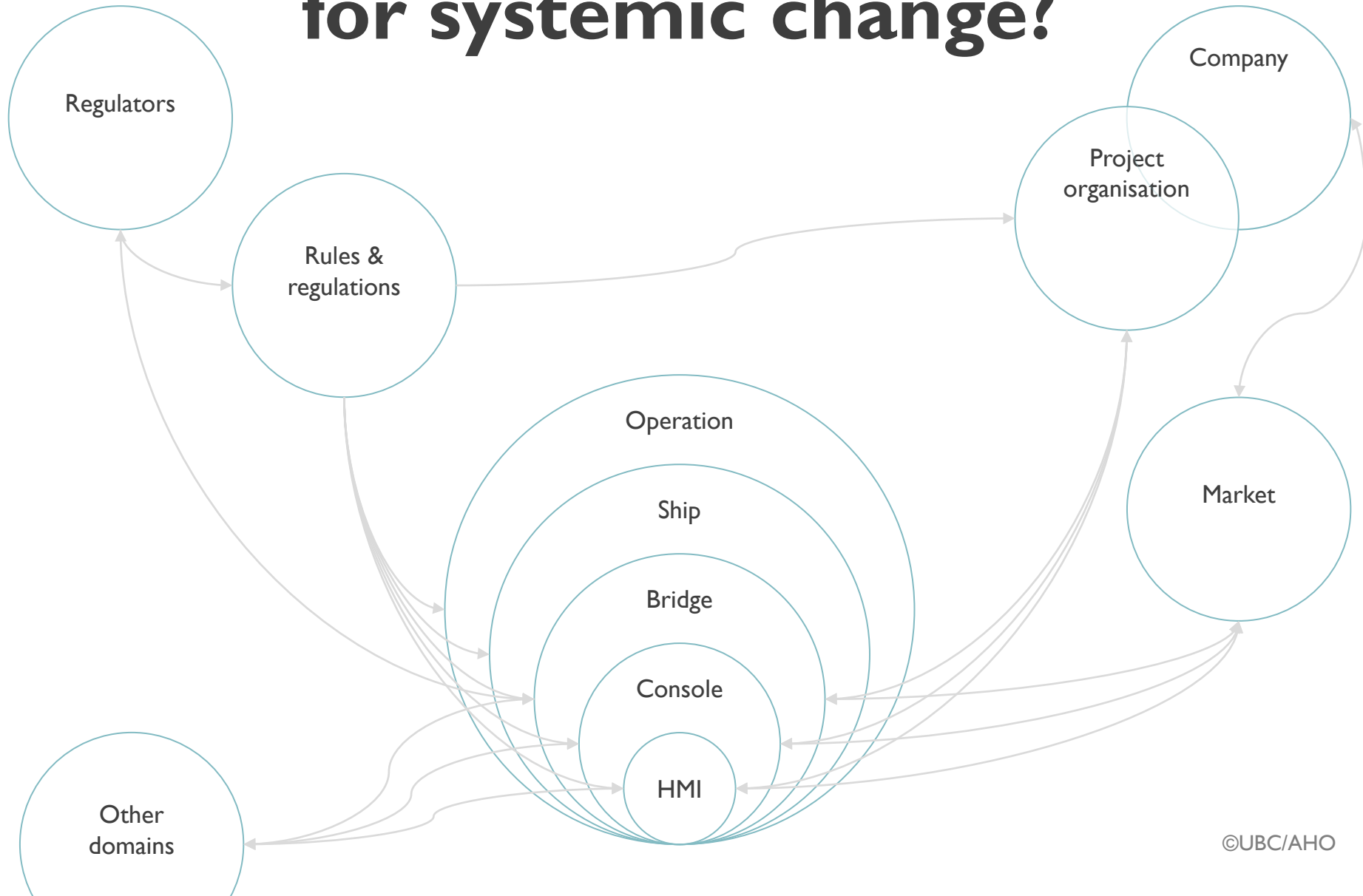
	1st intervention	2nd intervention	3rd intervention
Target	Internal Local (closed)	External Local & global (Internet)	External Local (targeted)
Objectives	Create interest internally Create commitment Establish a common goal for Ulstein and AHO	Create industry interest Communicate the project's ambitions Position Ulstein as an innovative company Attract partners	Create trust in that the vision is achievable Get committed partners
Strategy	One-way communication	One-way communication	Two-way communication
Means of presentation	3d visualisations and presentation	Professional film production Press conference with "buzz-makers"	Interactive demonstrator
Results	Commitment from Ulstein and AHO New design research project	Interest Innovation awards Further commitment New expectations	Positive feedback and additional interest Position as innovative actors in the offshore ship industry

Places to intervene in a system

In increasing order of effectiveness (Meadows, 1998)

12. Constants, parameters, numbers
11. The sizes of buffers and other stabilizing stocks
- 10. The structure of material stocks and flows**
9. The length of delays
8. The strength of negative feedback loops
- 7. The gain around driving positive feedback loops**
- 6. The structure of information flows**
- 5. The rules of the system**
4. The power to add, change, evolve or self-organise system structure
- 3. The goals of the system**
2. The mindset or paradigm out of which the system arises
1. The power to transcend paradigms

A semi-open innovation process for systemic change?



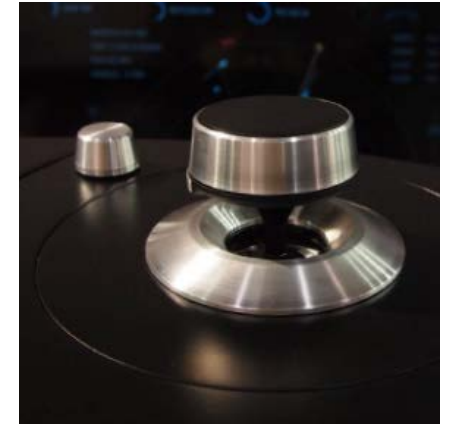


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