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Systemic design interventions: Using systems thinking and design thinking to intervene in systems

Rygh, Karianne and de Droog, Marc and Arets, Danielle

Suggested citation:

Systemic Design Interventions

Using systems thinking & design thinking to intervene in systems

KARIANNE RYGH
COLLABORATIVE RESEARCH THROUGH DESIGN
Leverage Points
Donella Meadows

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

1. The power to transcend paradigms
2. The mindset or paradigm out of which the system arises
From Burden to Resource

Changing Mindsets through Rehabilitative Prison Manufacturing
Furniture in sold outside prison creates an overlapping
<table>
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<tr>
<th>Number</th>
<th>Category</th>
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<tbody>
<tr>
<td>36</td>
<td>Wood</td>
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<tr>
<td>14</td>
<td>Assembly</td>
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<td>Metal</td>
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<td>12</td>
<td>Textile</td>
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<td>8</td>
<td>Farming</td>
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<td>7</td>
<td>Mechanical</td>
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<td>Painting</td>
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<td>Soap</td>
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<td>Stone</td>
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<td>Knitting</td>
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<td>Printing</td>
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<tr>
<td>1</td>
<td>Sound</td>
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</tbody>
</table>

Prison workshops in Norway
“In the Norwegian prison system, there’s a focus on human rights and respect. When they arrive, many of them are in bad shape. We want to build them up, give them confidence through education and work and have them leave as better people.”

Are Høidal - Prison governor, Halden Prison
Inmate Contributing member of society
Prison

Inmate

Skill training

Contributing member of society
Prison

Skill training

Inmate

Impulsive

Reflective

Contributing member of society

Converting from Impulsive to Reflective
CHOICE WITHIN THE MAKING

A Manual

Product: Rocking Chair
#9 and #10

Center line

40mm

40mm

80mm

Ø = 20mm

Ø = 16mm

Step 4
#13 and #14

80mm
40mm
40mm
80mm

Step 6
Step 4
Step 5

Step 4
Step 5
Step 6
“All men are designers. All that we do almost all the time, is design, for design is basic to all human activity. The planning and patterning of any act toward a desired, foreseeable end constitutes the design process.”

Victor Papanek, ‘Design for the Real World’. 
how?
63 Partners, 150 experts
8 projects, 4 years
2 design reviews a year
1 webportal
[www.crispproject.nl]
1 culture of excellence

By developing knowledge, methods and supporting tools that together form a knowledge infrastructure for designing Product Service Systems
Product Service Systems
Networks producing PSS are social networks.
Connections of Value
Value Pursuit
Network is a reservoir of resources
Products/Services
Understanding of the value to be gained
Understanding of the value to be gained

Ability to express their needs clearly
Understanding of the value to be gained

Understanding of other stakeholders’ expectations

Ability to express their needs clearly
Challenges of the industry
José Stenvisen considers the challenges the textile industry faces in manufacturing PSSs. — Page 3

Exploration in practice
Guido Storopff describes how Océ Technologies prototypes new business PSSs. — Page 63

Also in this issue
Bertholt Leeflink (Ministry of Economic Affairs), Hester Andersen (TU Delft), Paul Vandenberg (Philips), Erik Roscam Abbing (Silver Innovation), and many others.
Thank you.

KARIANNE RYGH