

SPT-E1050

**Systems Thinking for
Sustainable Living Environment**

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Aija Staffans



Today:

- **Introduction and guidelines to self-evaluation**
- **Members of the Jury**
- Place and schedule of presentations on Wednesday 10.4.
- **Final points and tips for the whitepaper and the presentation**

Jury members:

- **Annukka Jyrämä**, Aalto sustainability expert, Dr.Sc. in Economy, Docent, Senior adviser
- **Iloa Mansikka**, Architect, Planning manager, Helsinki–Uusimaa Regional Council
- **Salla Jokela**, PhD in Geography, Postdoctoral researcher at the RELATE Centre of Excellence, Helsinki University
- **Christoffer Weckström**, Doctoral candidate at Spatial planning and transportation engineering, Aalto, member of "Urban Helsinki" group
- **Miro Pulkkinen**, TET-trainee, future enthusiast and representative of the youth

Presentations on Wednesday 10.4.

- Three sets of presentations (4, 4, 3)
- After each set a short break, followed by comments from the jury
- Coffee, tea and snacks available on breaks!
- Place: Rakentajanaukio 4, Rakennus -ja ympäristötekniikka, lecture room R3 (255)

NOTE:

- Prepare and practice your presentation to make it **MAX 8 minutes**
- **It is up to the group to decide who presents** (all or one or some), but ALL group members need to come to the stage! The jury will want to see you!

Check list for whitepaper and presentations (workshopping)

- Make sure to have names and master's programs of each of the team members in the whitepaper!
- Names also to the presentation, but no need to spend time to the introduction of the group members
- Each proposal should have a name and a short pitch-type INTRODUCTION that can be used both in the whitepaper and in the presentation
- Make sure to use the expertise from different fields to the benefit of the proposal
- Synthesize the learnings from other tasks and your backgrounds
- Include your "exhibition idea in a nutshell" both to the whitepaper and to the presentation
- Make sure to include the references and literature you use!

Three questions to each group:

- What system are you working with?
- What kind of system change is anticipated?
- How does your work relate to the Regenerative sustainability chart?

What system/systems are you working with?

- Type of system – human, technical, ecological, other?
- Scale?
- Systems of systems and subsystems?
- System boundaries?
- Iceberg: mental models – structures / rules – patterns?
- **Visualize** the systems, e.g. systems mapping!

System change?

- What kind of system change?
- Attractors?
- System's behaviors?
- Interconnections between systems and parts of the systems?
- Linear impacts or feedback loops?
- **Visualize** the systems change!

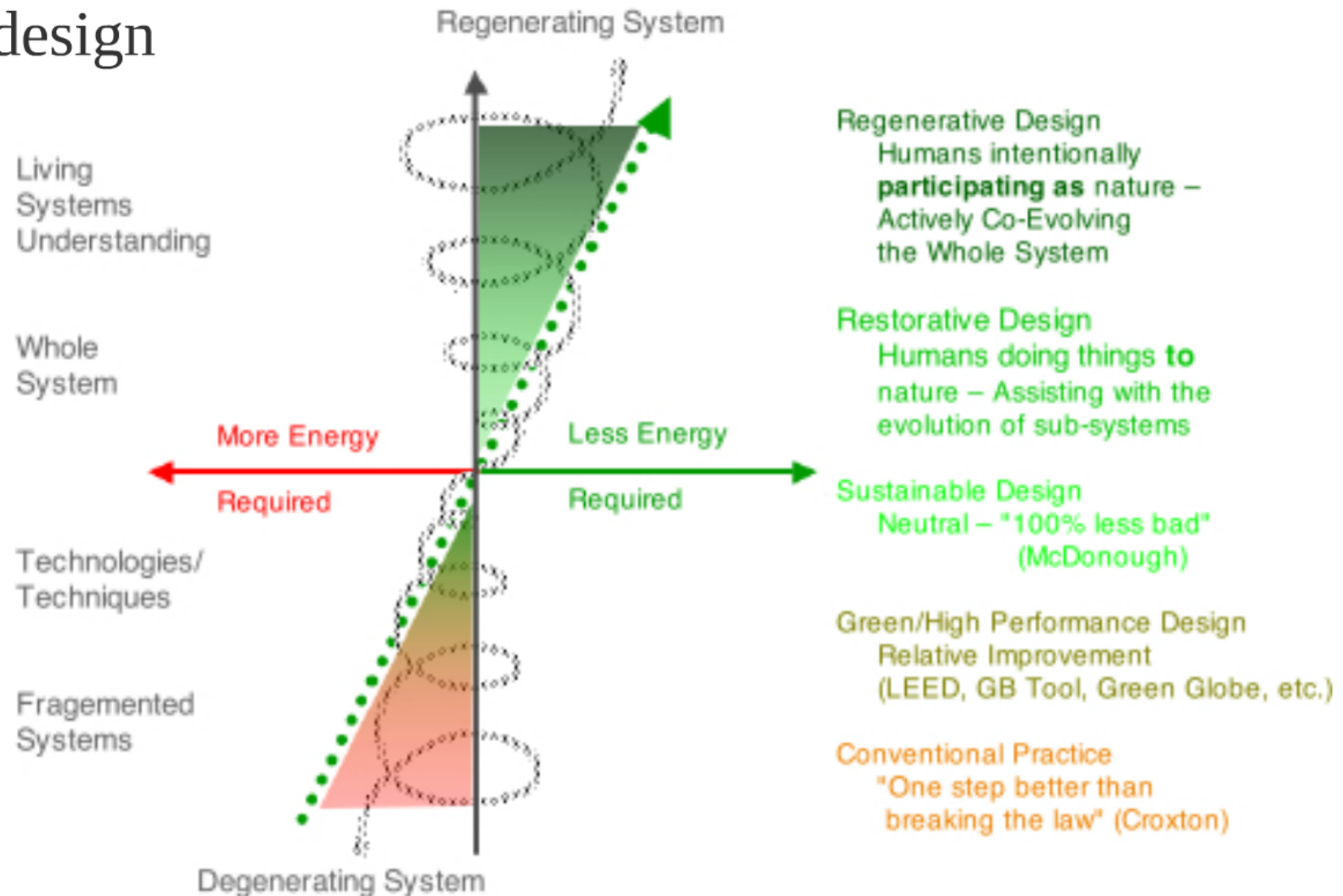
The impact – less bad or regenerative?

- Discuss: On the scale from degenerative to regenerative, where is the expected impact of your design taking place? How?
- **Visualize** – use the idea of the regenerative scale chart as a starting point!
- Discuss also: relationship to Anthropocene and Planetary boundaries aspects such as climate change, biodiversity loss and land use change.

Regenerative design

E.g. Reed, 2007, 2012;
DuPlessis 2012;
Cole, 2012

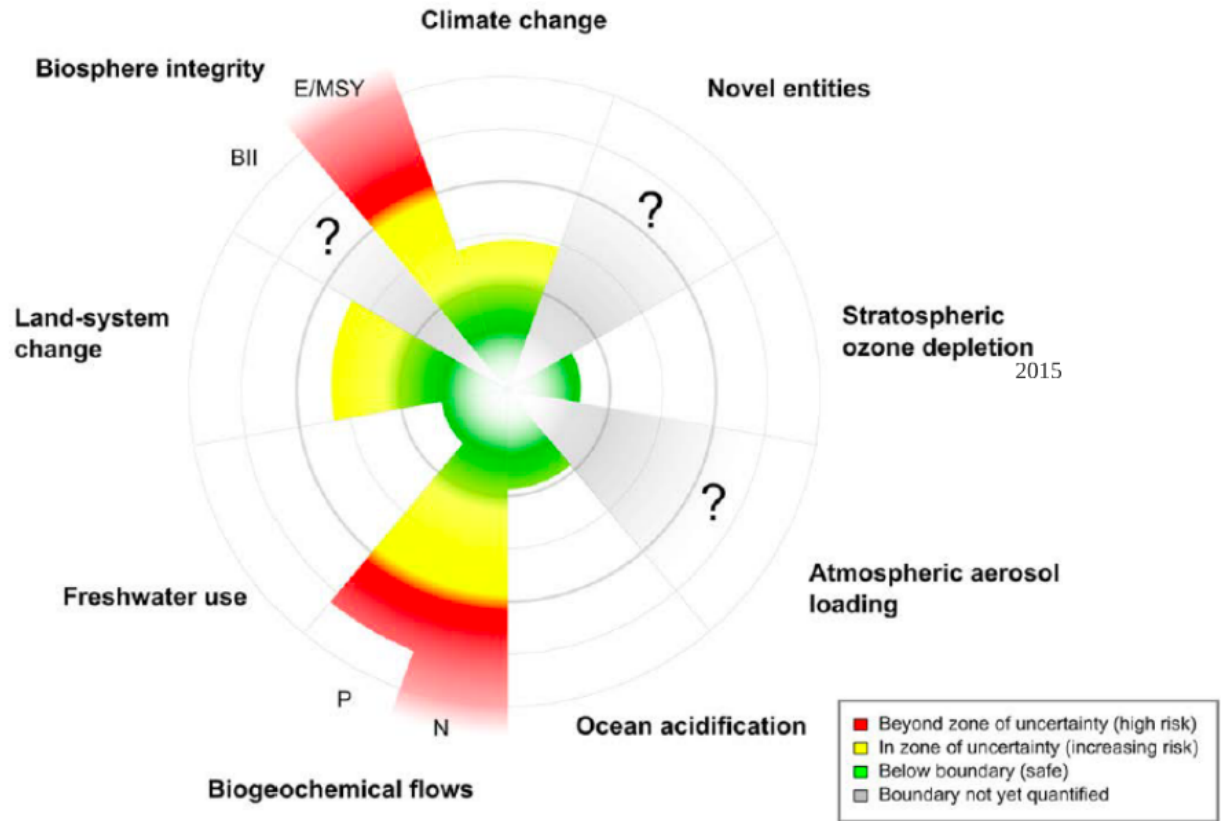
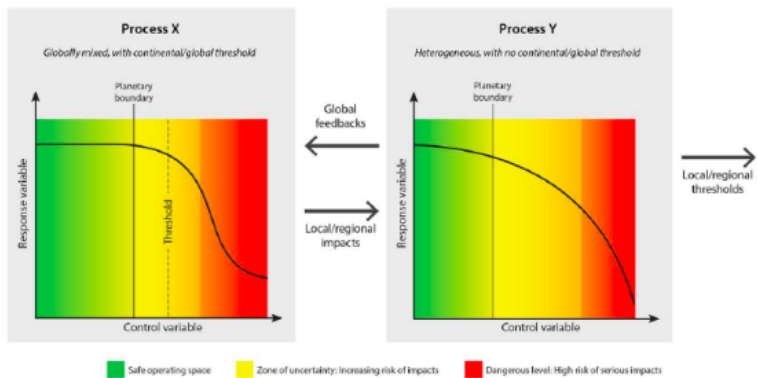
<http://www.eurestore.eu/>



<http://www.integrativedesign.net/trajectory.htm>

Planetary boundaries – the big picture


The current status of the control variables for seven of the nine planetary boundaries. Green zone is the safe operating space (below the boundary), yellow represents the zone of uncertainty (increasing risk), and red is the high-risk zone. The planetary boundary itself lies at the inner heavy circle. The control variables have been normalized for the zone of uncertainty (between the two heavy circles); the center of the figure therefore does not represent values of 0 for the control variables. The control variable shown for climate change is atmospheric CO₂ concentration. Processes for which global-level boundaries cannot yet be quantified are represented by gray wedges; these are atmospheric aerosol loading, novel entities and the functional role of biosphere integrity.



Steffen et al., 2015 in Nature

http://www.ted.com/talks/johan_rockstrom_let_the_environment_guide_our_development

Fig. 1. The conceptual framework for the planetary boundaries approach, showing the safe operating space, the zone of uncertainty, the position of the threshold (where one is likely to exist) and the area of high risk. Modified from (1).



Whitepapers due: Friday 5.4. 12:00
Presentations due: Wednesday 10.4.12:00
Self-evaluations due: Friday 12.4. 12:00

See you next week!