systems design

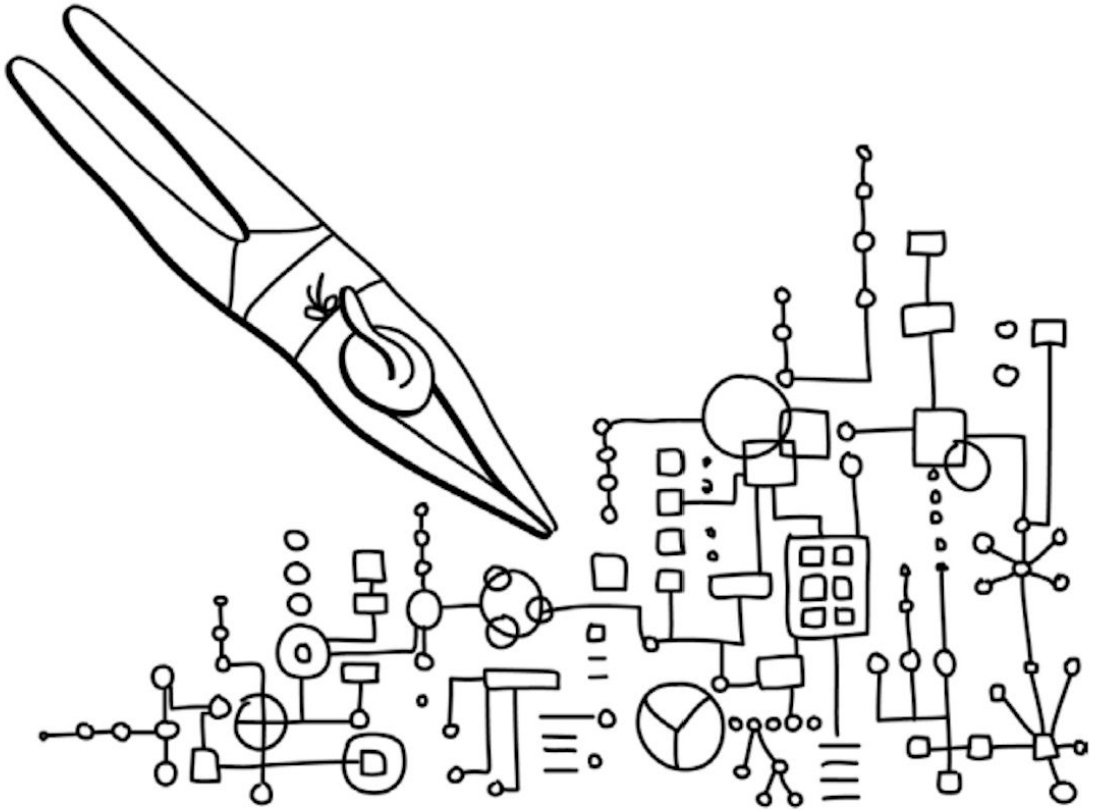
systems design

relations and interconnections and flows

worlds of relationships and interdependencies and effects

super-complexity and uncertainty

> systemic understanding > systemic co-design > rich design space



Elisabeth Skjelten, 2014

deep diving

exploring

unfolding ›

involving (diverse perspect

co-designing

observing (the system)

participating

framing

systems design

Complex issues are often never fully understood, but we might have a chance to understand them sufficiently if we dare to **intervene,** to learn from how the system **reacts** to our interventions, and continue to **iterate** based on those learnings.

Birger Sevaldson

systems design

We need to train our **systemic sensibility** – the skill to perceive the **world as systems** composed of **relations, flows, and dynamic forces,** rather than as static objects.
Understand problems in larger contexts as problem fields, problem networks, or “problematiques”.

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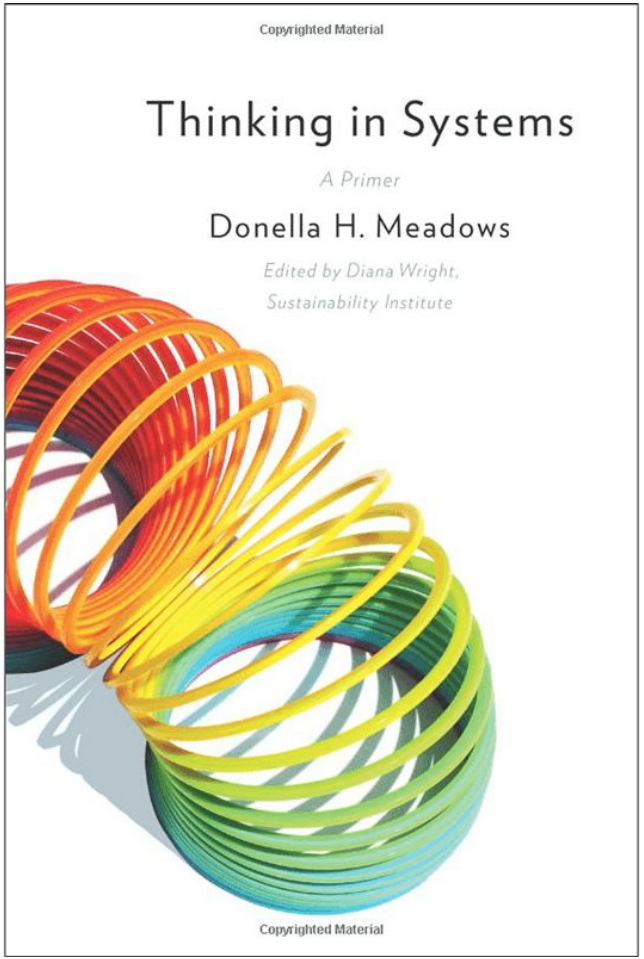
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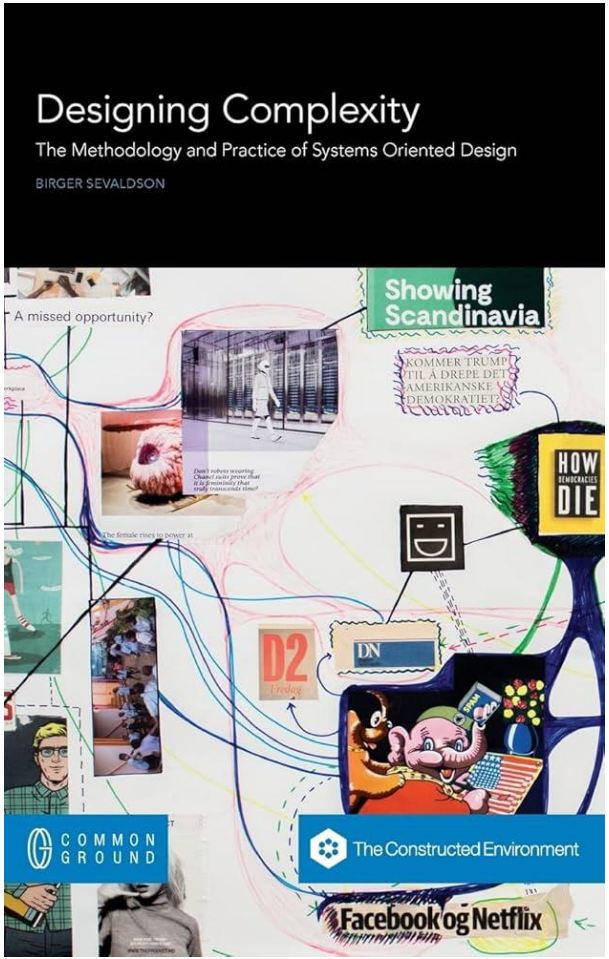

Designing Complexity
The Methodology and Practice of Systems Oriented Design
BIRGER SEVALDSON
A missed opportunity?
Showing Scandinavia
KOMMER TRUMP TIL Å DREPE DET AMERIKANSKE DEMOKRATIET?
HOW DEMOCRACIES DIE
D2
DN
COMMON GROUND
The Constructed Environment
Facebook og Netflix

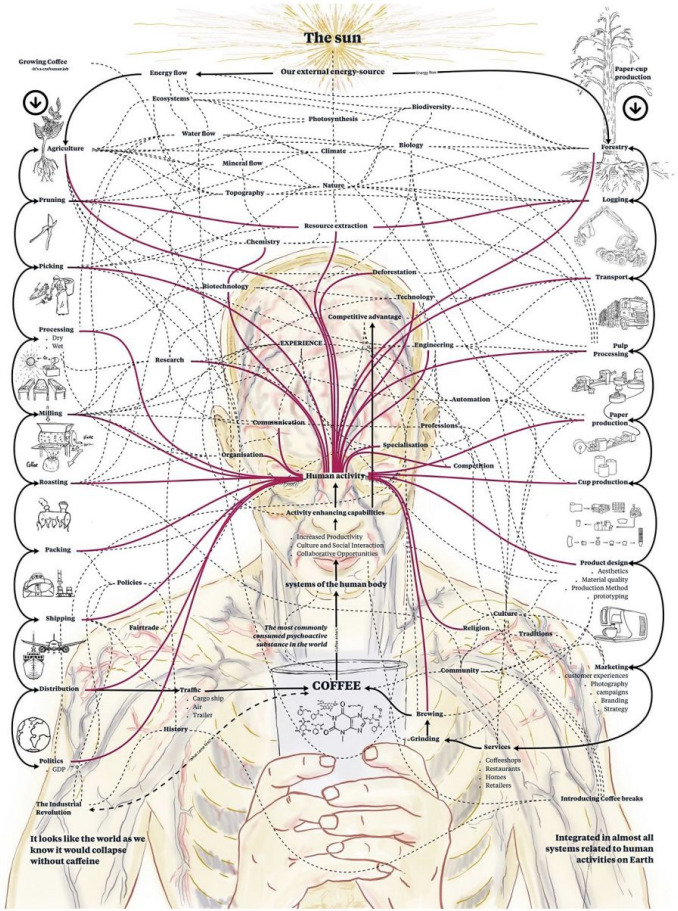
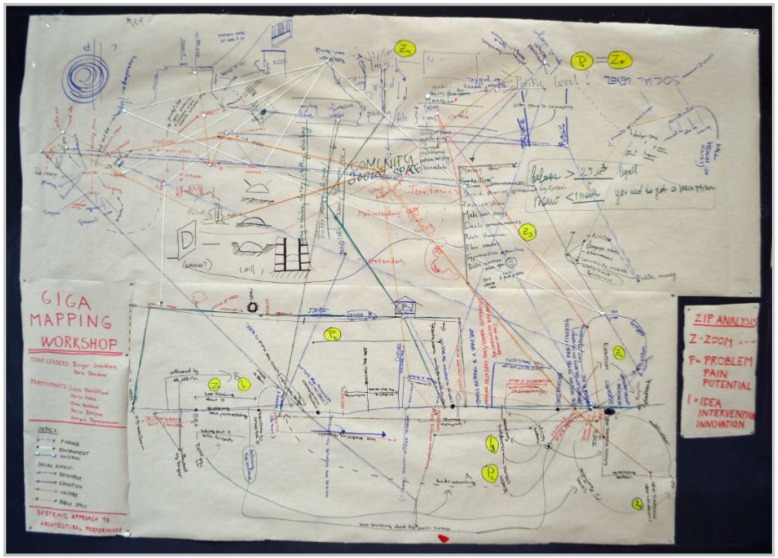


Figure 17: A diagram mapping out of the coffee cup as an intersection point (Martin Hauge, 2021).

Gigamapping, ZIP



GIGAMAP WITH ZIP POINTS IN YELLOW. LUCIE PAVLISTIKOVA, MARTIN MALEK, MIRKA BAKLIKOVA, MARIIA BORISOVA, GEORGIA PAPASOZOMENOU, 2016.

DEVELOPED ZOOM MAPS, PROBLEM MAPS AND IDEA MAPS. LUCIE PAVLISTIKOVA, MARTIN MALEK, MIRKA BAKLIKOVA, MARIIA BORISOVA, GEORGIA PAPASOZOMENOU, 2016.

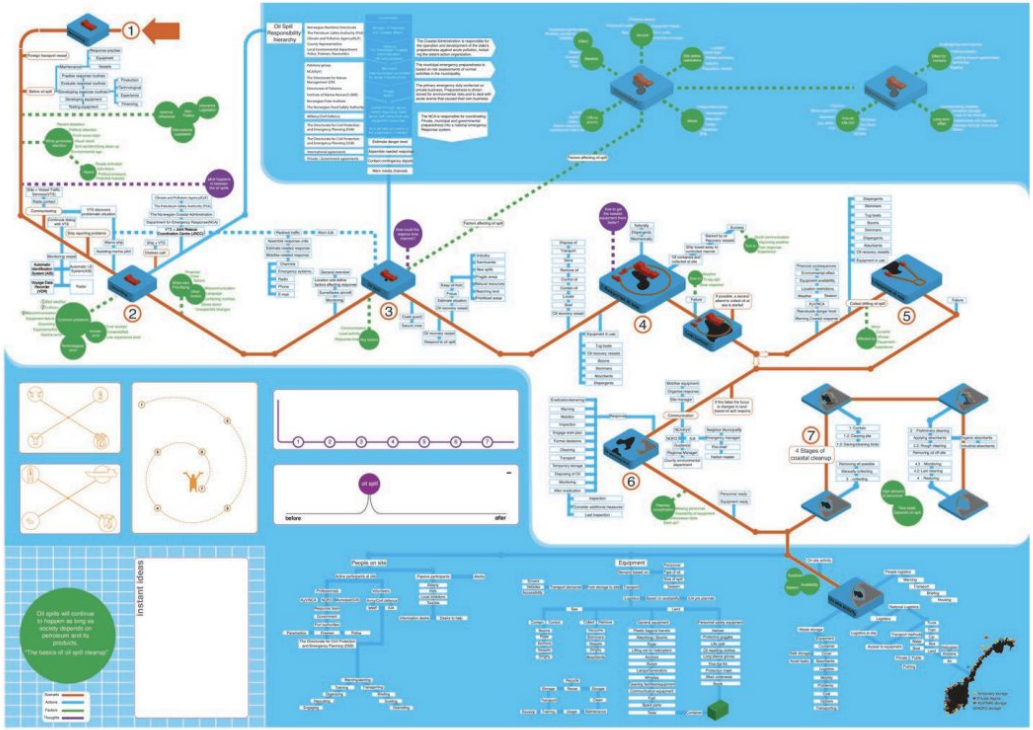
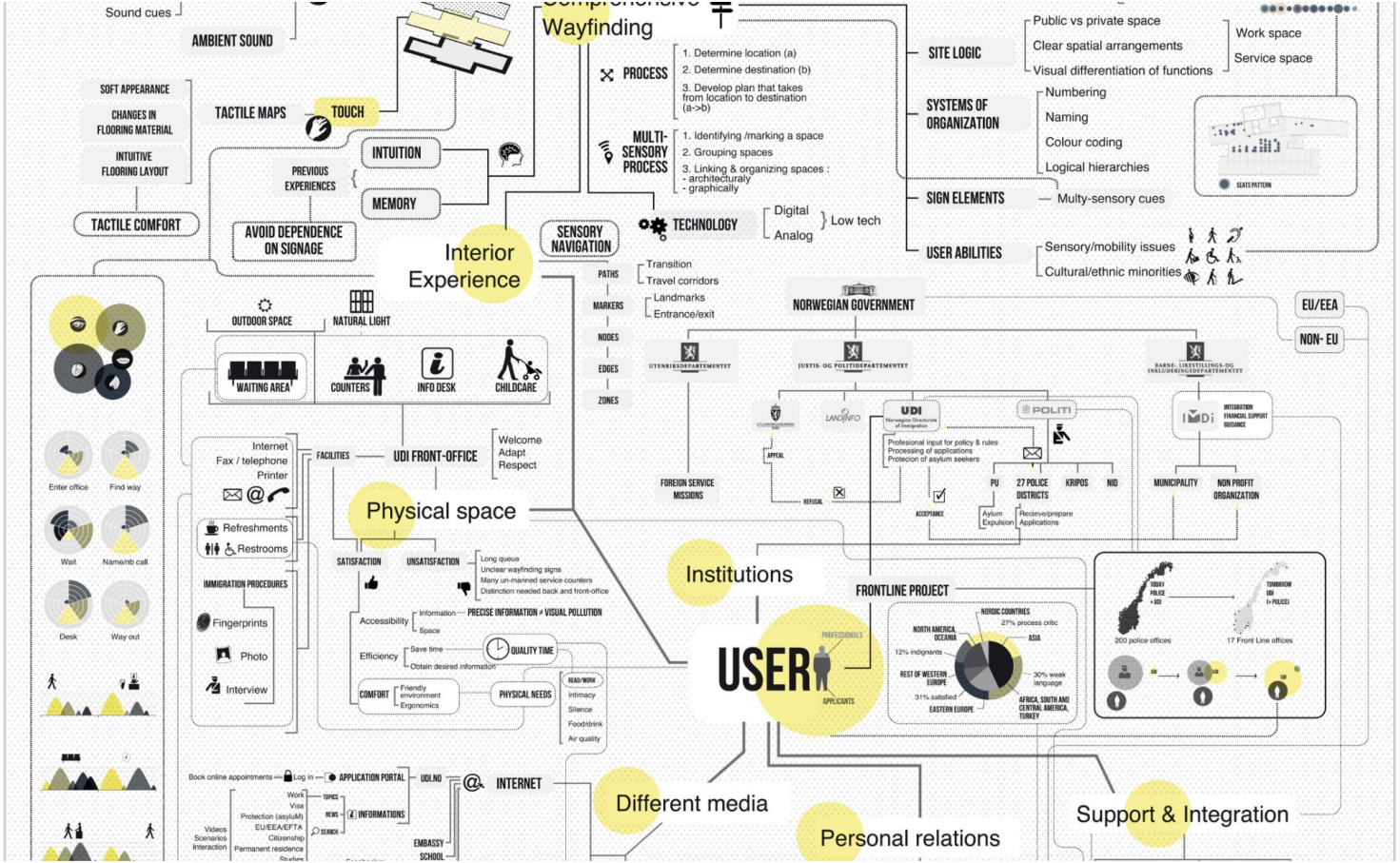


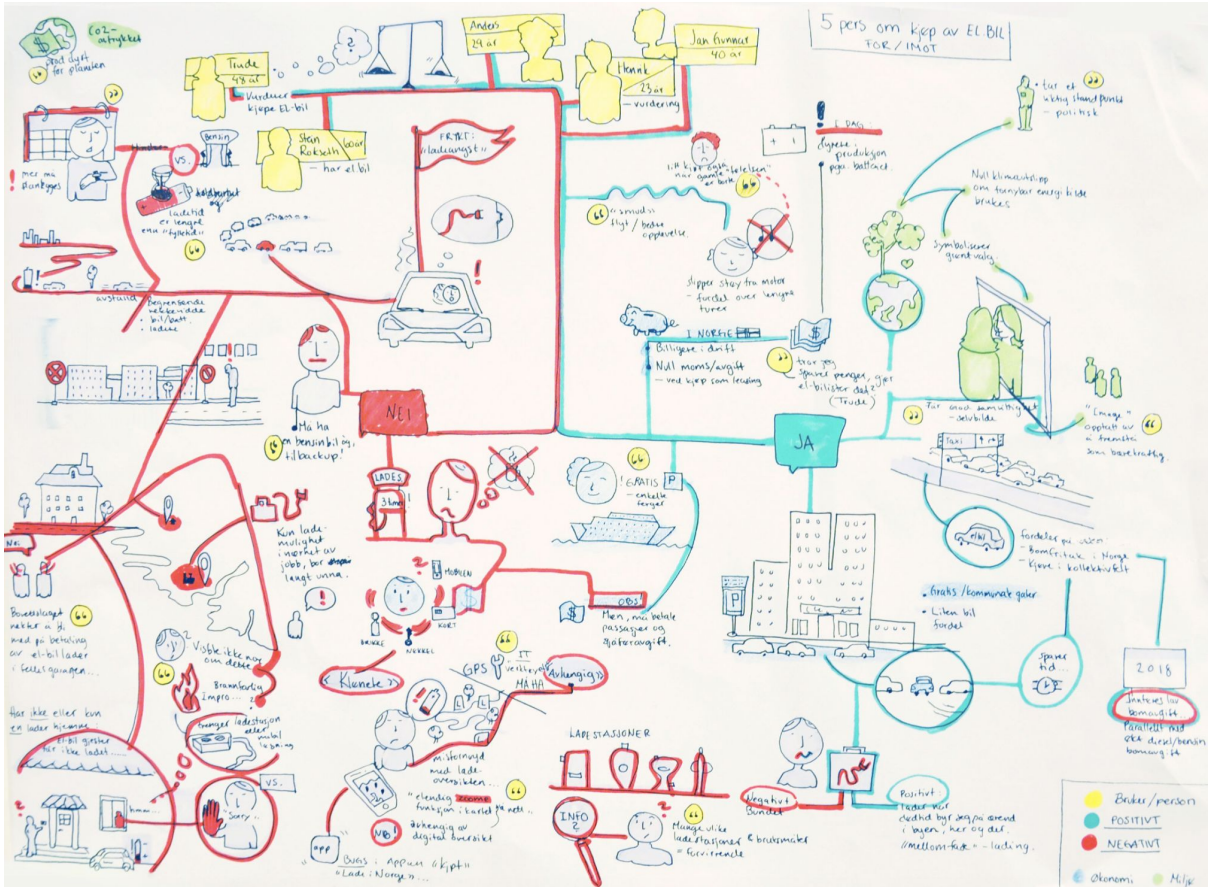
Figure 30: The Gigamap shows the sequential development of the Full City oil spill accident outside the coast of Norway. It unfolds the complexity of the process, as well as the organisations and systems involved. The Gigamap helped shift focus from the end point of spill cleanup to much earlier points where better co-ordination would have prevented the event. The project uses a real-life case as an example of an accident where this type of awareness could have made an essential difference (Adrian Paulsen, 2010).

Network map

https://systemsorienteddesign.net/gigamap-network/



Analyses map



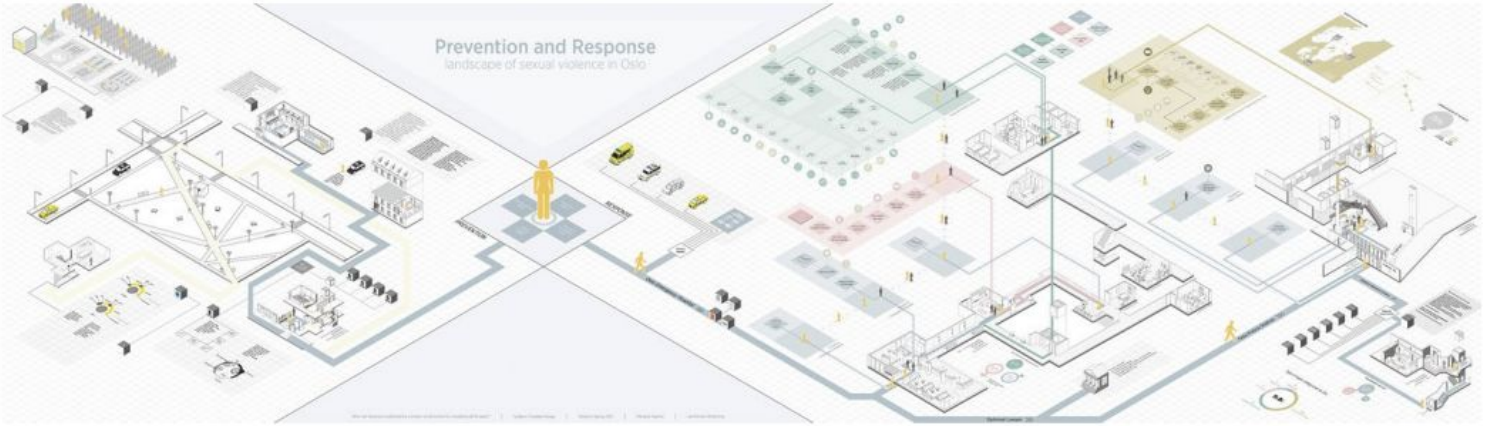
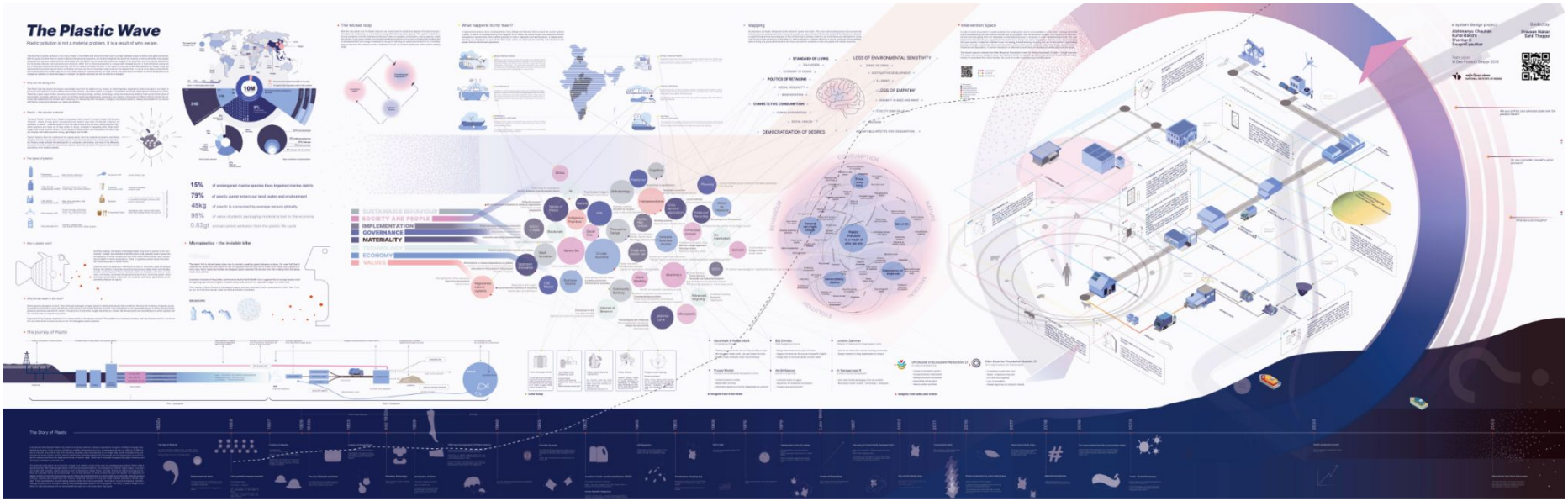


Figure 36: A Gigamap showing the whole landscape of sexual assault. The prevention field is to the left and the response field to the right. The image shows the final map after it was developed through many iterations to become the final design artefact shown here. Designing the map was an important reflexive thinking-through-designing process that makes it possible to organise and internalise large amounts of information, as well as crystallise and design its relations. (Manuela Aguirre & Jan Kristina Strømsnes, 2012).



https://rsdsymposium.org/synergetic-landscape/

https://systemsorienteddesign.net/zip-analysis/

Mapping and redrawing through several versions.

They can have following functions:

- Mapping pre-existing knowledge to identify necessary research areas;
- Visualizing, organising, and making sense of knowledge gained from research (desktop research and real-life research);
- Acting as an analytical, holistic, and dialogic tool for experts to respond and comment on;
- Creating opportunity for collaborative mapping with relevant stakeholders;
- Providing a dialogic tool for open-ended and jumping yer focussed conversations;
- To elicit the “unknown unknowns”, the issues you don’t know are issues. Providing a means to identify problems, ideas, intervention points, and potential innovations (ZIP analyses);
- A method that moves from a descriptive to generative mode, enabling the creation of new relations and entities;
- A means to visualise and communicate the final project.

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Benefits from gigamapping (by students):

– It creates a shared overview that incorporates synchronized perspectives.

– It is in an understandable visual format where opportunities can be easily identified and pinpointed to the designers and stakeholders.

– It creates a common and understandable setting for dialogue and opportunities where new solutions can be placed in the existing system to result in stepwise improvement of the system.

– The Gigamap can be used in a training program for staff members, providing a common synchronized overview of the response system.

– Visualization in gigamapping creates shared images between the designers that align differences and nuances in conceptions.

Birger Sevaldson

Visual mapping of systems / exercise in class 10.09

Theme: D&TF department

1. Actors: write and map down as much as possible
2. Cluster / organise visually
3. Relations: direct, indirect etc
4. Drivers: what are the immaterial/'soft' drivers of the system (social aspects, philosophy, commercial aspects, your drivers, university's drivers, etc)
5. Tensions: problem areas, conflicts between different values
6. Study: brief look into chosen tension
7. Present the viewpoint of your tension: **reorganise and redraw** your maps from the tensions' perspective.