A Presentation of Reflections on Collaborative Design Processes

The Price for Sustainability?

Digging Deeper into the Problem of Plastic in the Soil

Agenda

- Introduction
- Methods and Empirical data
- Theoretical Framework
- Analysis
- The Collaborative Conclusion

Introduction

Problem Statement

How might we, students with minimal architectural background,

investigate a complex field within plastics in the construction industry?

Contribution

- Aiming to create a strategic design concept and proposal to innovate the perception of plastics in the construction industry
- Collecting data using design methods and applying design theories

Methods and Empirical Data

Double Diamond Model

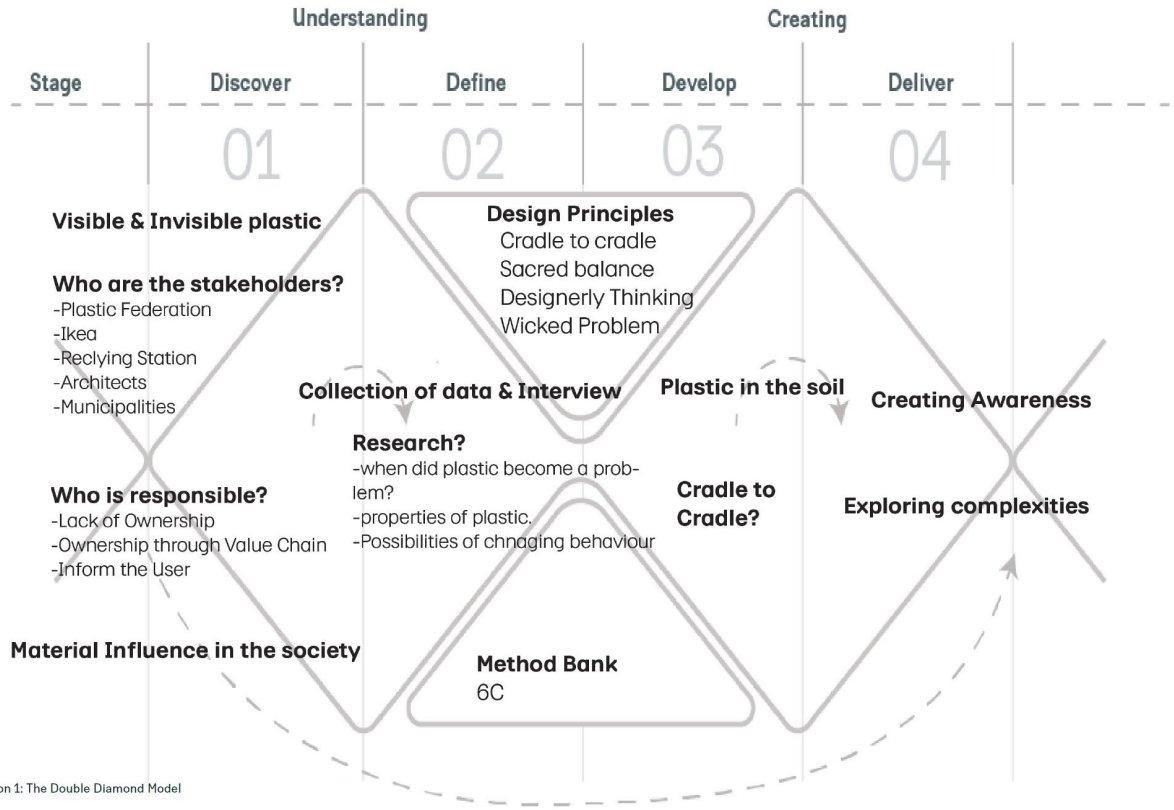


Illustration 1: The Double Diamond Model

The 6C Model

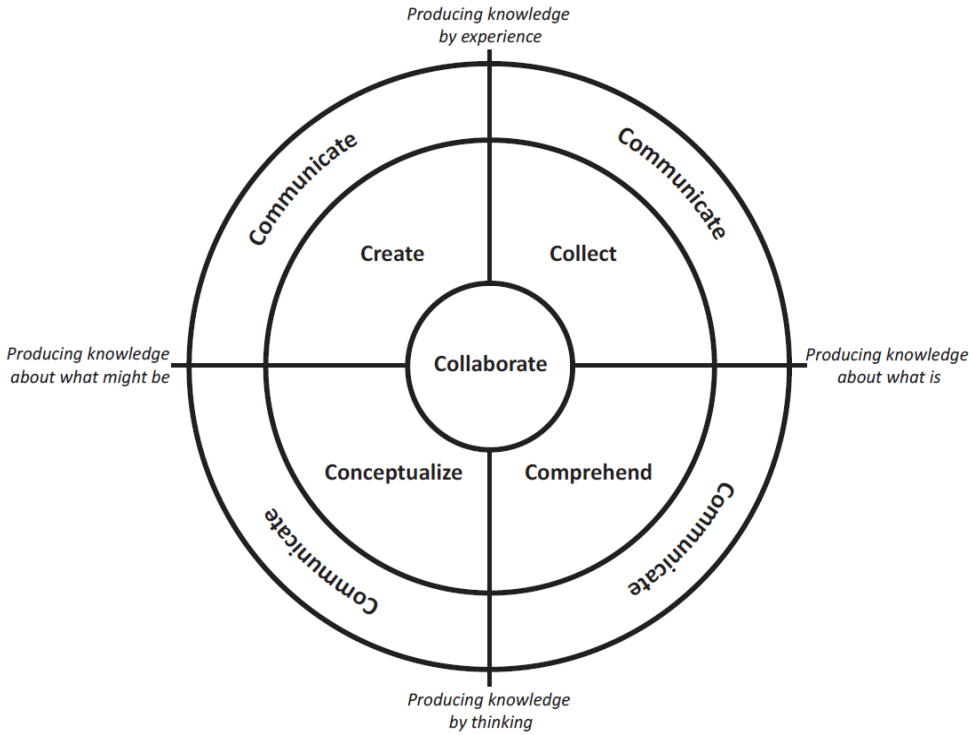


Illustration 2: The 6C Model

Collaborative Work as a Challenge and a Driver

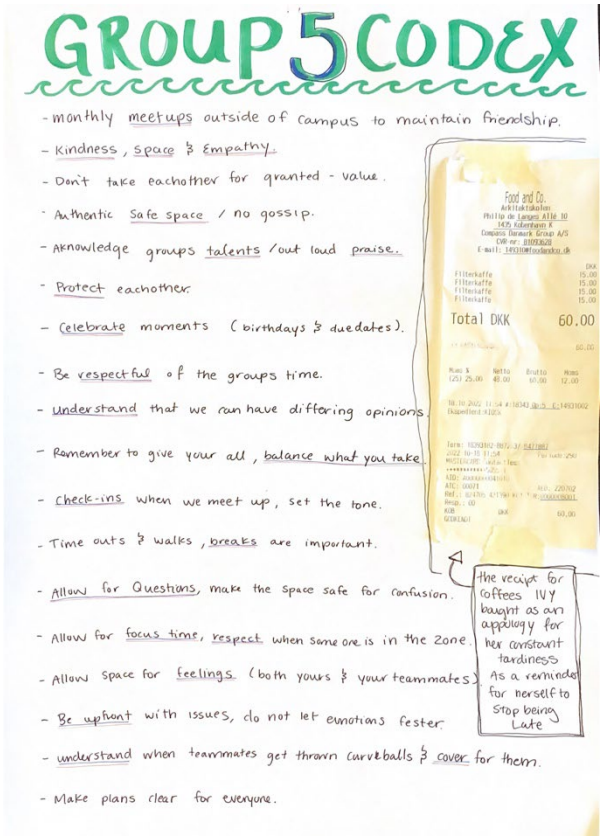


Illustration 3: Group 5 Codex

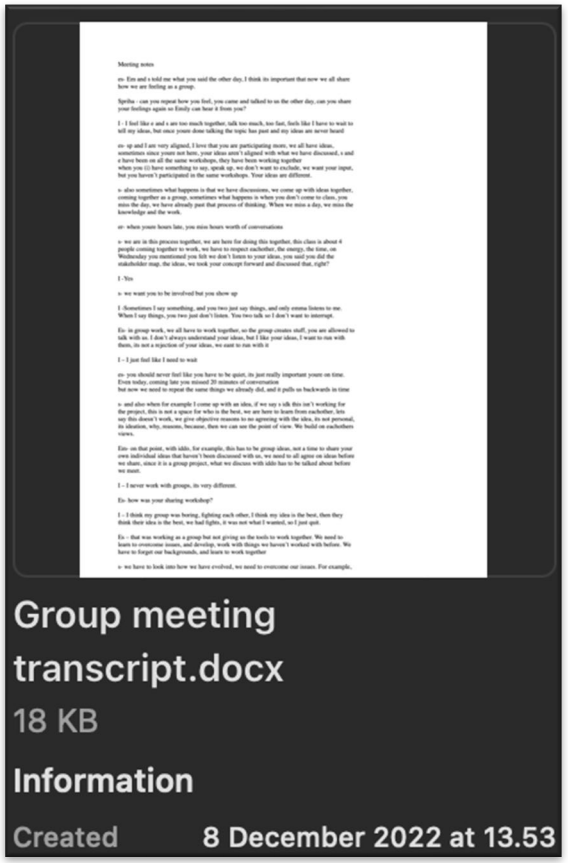


Illustration 4: One of the groups transcripts from our team issue fixing meetings

Illustration 5: Our teams desk space

Discovering the Challenge

What do we know?

What do we need to know?

How do we find out?

Potential solutions?

Collecting Data by Experience

- Plastic mapping
- Invisible and Visible
- Fieldwork

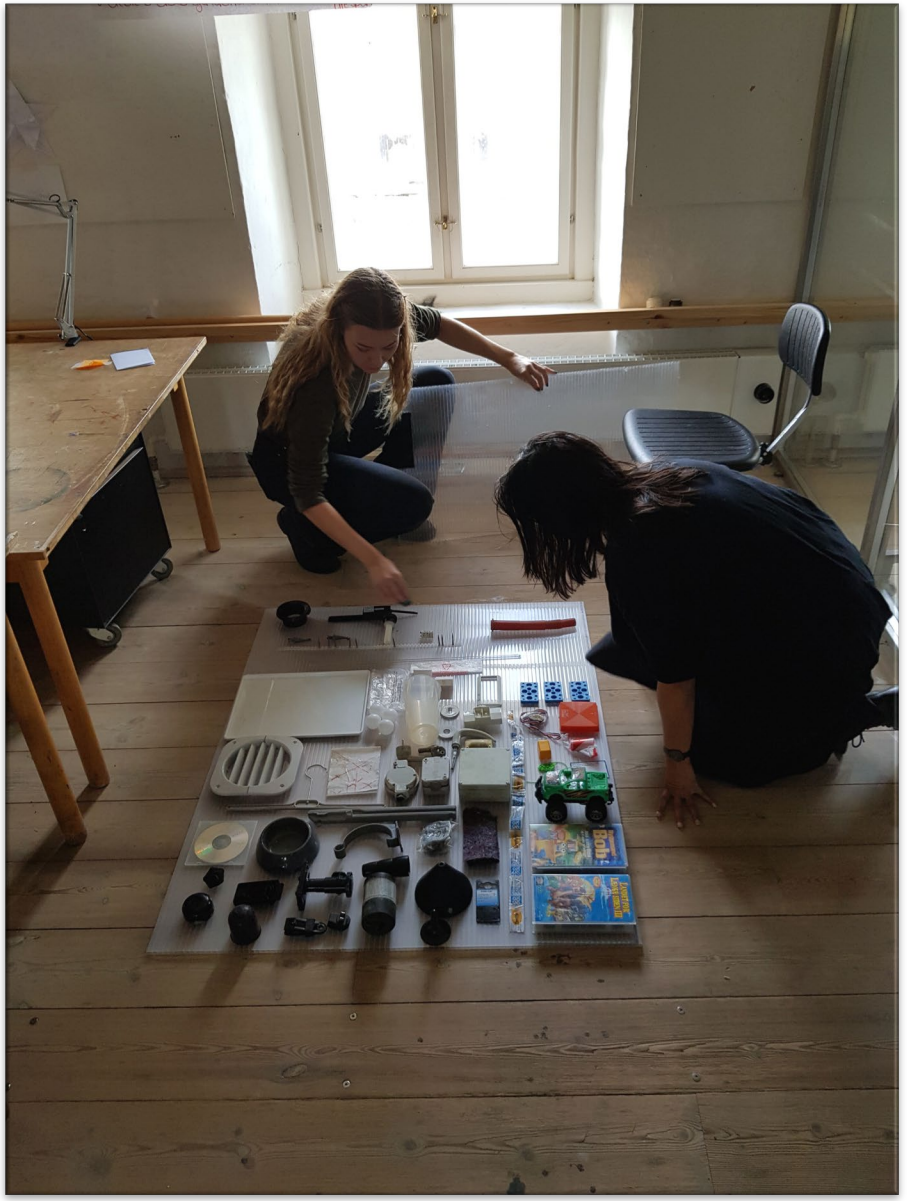


Illustration 6: Building our invisible and visible board

Doing Fieldwork at the Recycling Station

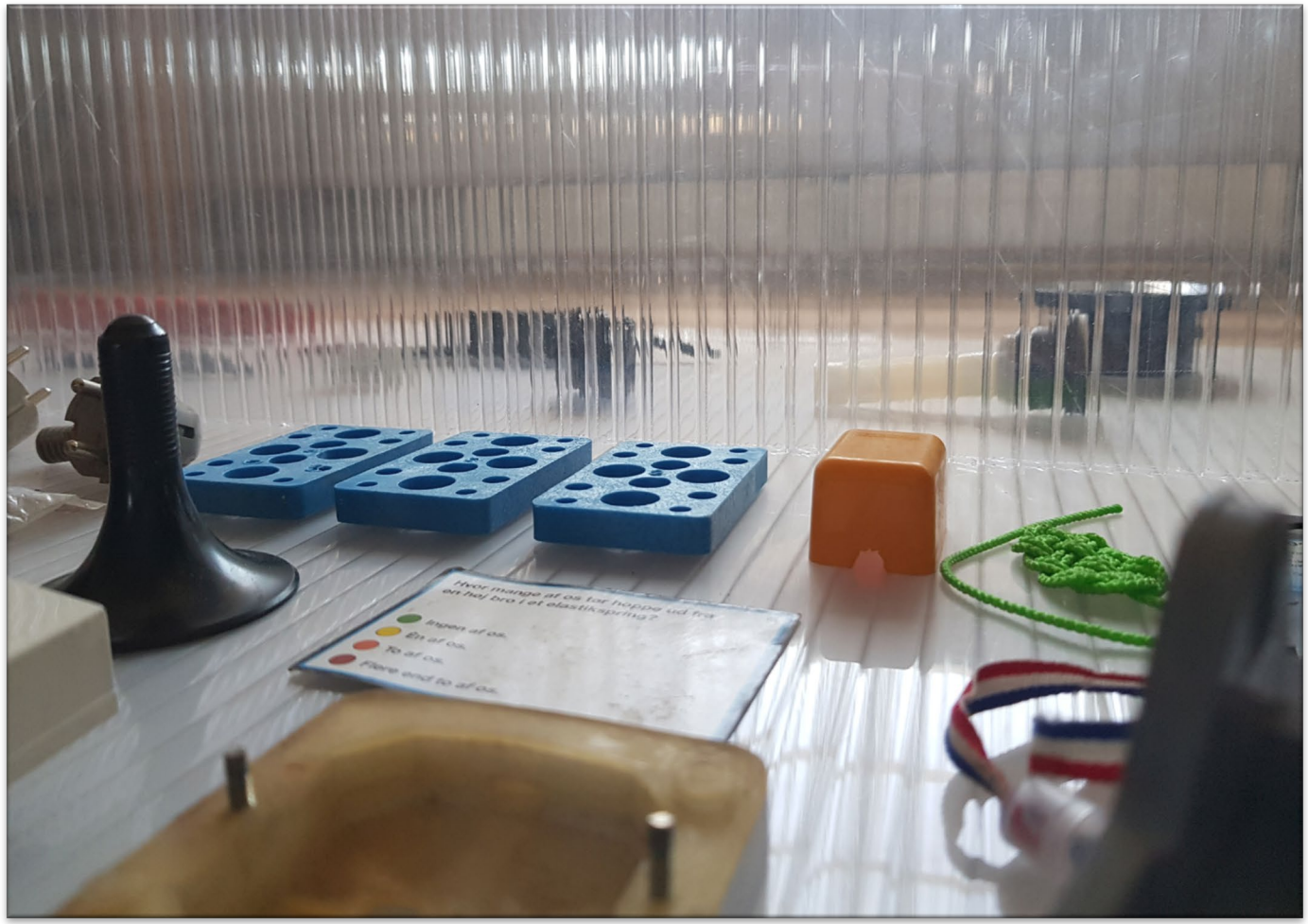


Illustration 7: Atlas of Hidden Plastic Behind the Walls

Illustration 8: Atlas of Visible and Invisible Plastics collected from the recycle center

Coming Closer to a Wicked Problem

How does the plastic waste go into the soil?

- Spontaneous interview unfolding more stakeholders, questions and loose ends

Sustainable and indigenous way of thinking

- Workshops making us question if recycled plastic is the solution

Introduction to design thinking workshop

- Realizing this was a wicked problem
- Creating Mr. P to connect the different values of plastic

Illustration 10: Mr. P

Unfolding a Wicked Problem by Digging into the Soil

Contradictory Statement

- Fact finding & debatable discussion

Addition of more stakeholders

- Beginning to look at soil and its relationship with plastic raising new questions

Evidence

- Reports on landfills
- Types of waste mixed with soil

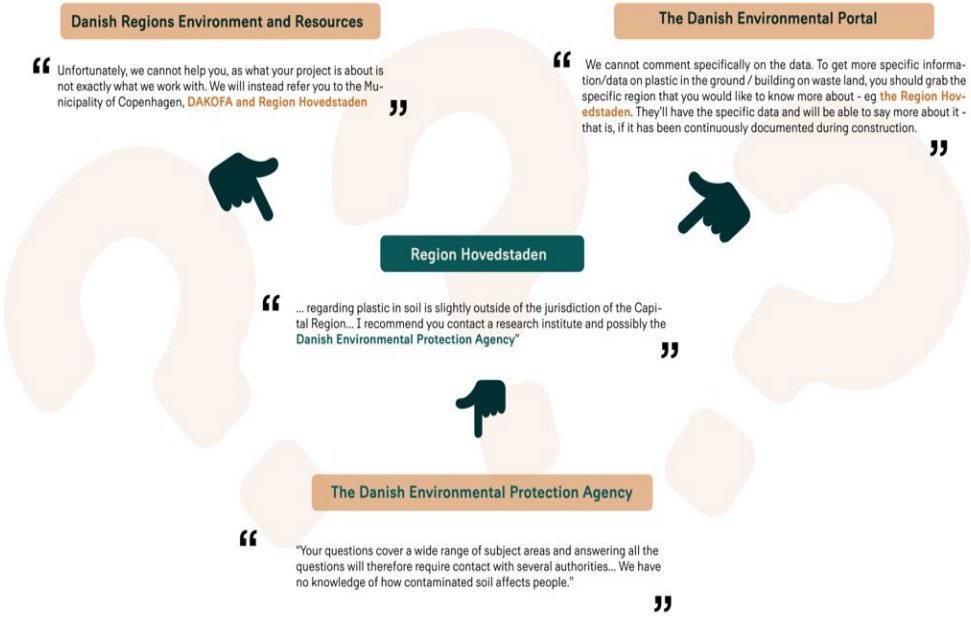


Illustration 11: E-mail responses

Cradle 2 Cradle?

Exploration of plastic in the context of soil

- Fundamental issues of hazardous component in the plastic itself but also the materials covering it.
- Will sustainable practices around plastic really solve the problem?

Theory

- Cradle to cradle - less bad
- A system around plastic being *eco-efficient*

"But this 'solution' to pollution-dilution-is an outdated and ineffective response that does not examine the design that caused the pollution in the first place"

What is and what might be?

What is the price for sustainability?

Theoretical Framework

Designerly Thinking as a Matter of Contextualization (Buchanan, 1992)

- Placements as a tool for contextualization
- A tool for addressing wicked problems

Product Semantics and the Circular Design Process

- Creating meaning out of the context by Krippendorff (1989)

Triple Co-Evolution (Hallestrøm & Galle, 2014)

- Co-evolution of problem and solution, as a wicked tendency
- Identifying and constituting the audience → Creating a triple co-evolution

Analysis

Adding placements to understand the context

- Fieldwork to the recycling station
- Redefining the challenge to also include soil as an actor
- Mr. P as a placement to unify the idea of plastic as a material with contradictory interpretations

Illustration 12: AV Miljø Fieldwork

Creating Meaning of our Findings

- The material in context making us imagine the future consequences
- Making sense of a new discovery by doing desktop research and field work
- Following the actor and relating to theories, questioning the initial challenge
- Aiming to creating meaning to the Plastic Federation

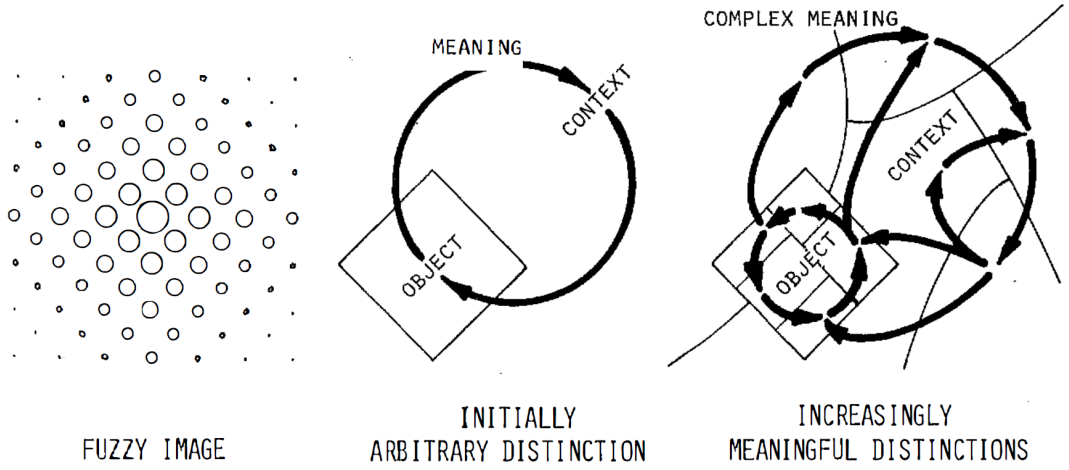


Fig. 2) Illustration 13: Illustration by Krippendorff

Triple Co-Evolution

Identifying the Audience

- Co-evolution of plastic in the soil & circular economy
- Discovering a lack of knowledge and interest in the problem

Constituting the Audience

- PF overlooking the fundamental issue of recycling, as a downcycling method
- Knowledge gap as an opportunity for PF to educate their members

Constituting the Rhetoric

- Making PF understand the rightness in the discourse by using Mr. P

Critical reflections on the outcome of the analysis

- Investigating a wicked problem, is wicked
- Little interaction with user, causing difficulty in creating meaning to them
- More research could have resulted in a different outcome
- Traditional designerly thinking has its limits

Theory and Challenges faced during Groupwork

"the nature and quality of relationships are crucial to exploring what we do not know… Sharing feelings, experiences and individual understanding can help break down barriers between people you sympathize with because you empathize" (Darsø, 2011)

- *Challenge Framing*

  (an idea from the Simplex System by Min Basadur)

- *Intrainnovative and Socioinnovative Competencies*

  (Darsø)

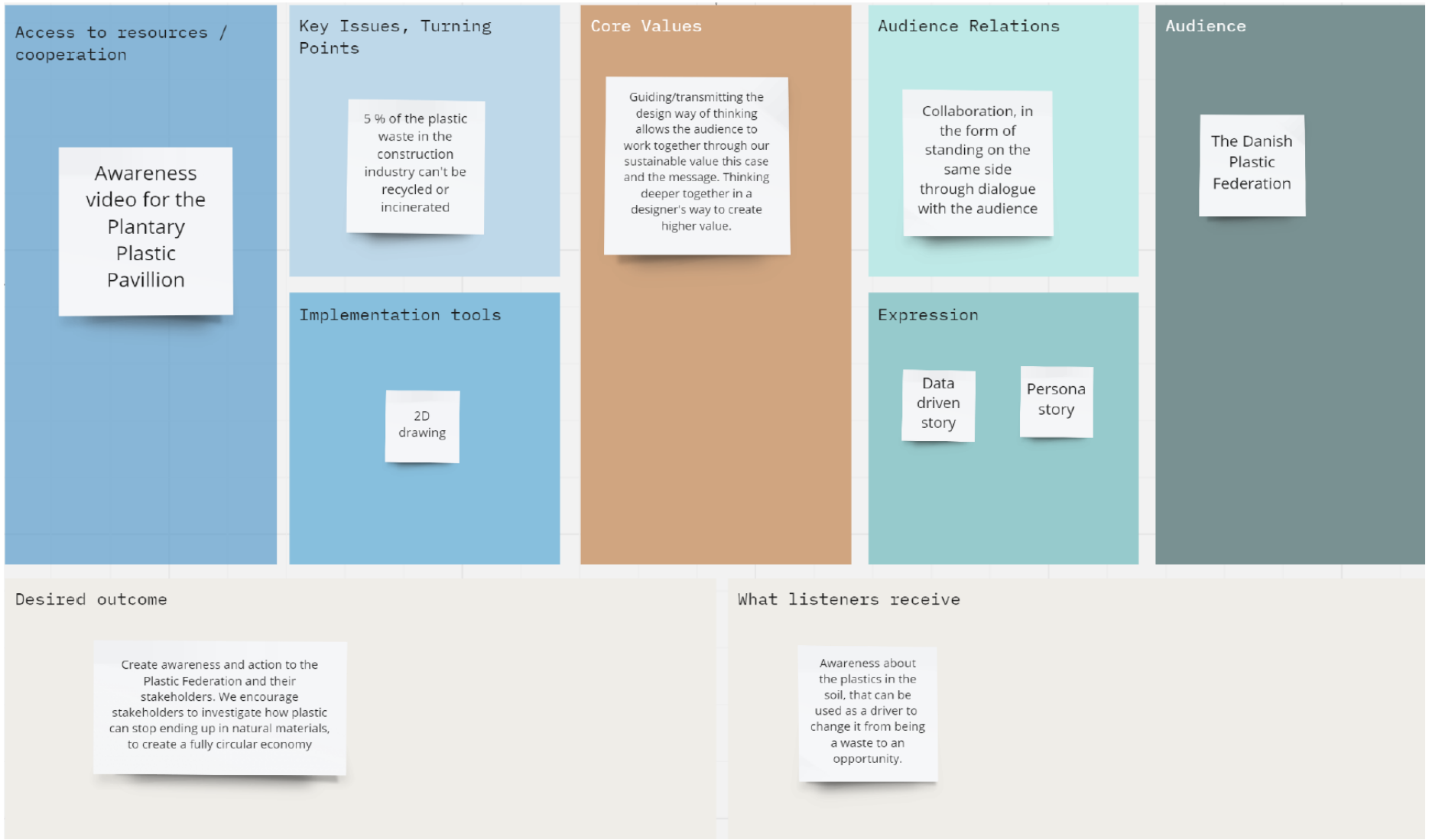
- Challenges as a wicked problem

Collaborative Conclusion

How might we, students with minimal architectural background, investigate a complex field within plastics in the construction industry?

Illustration 14: Group 5

Introducing the Strategic Design Concept



Thank You.

Q&A