



Faculty of Design

2021

Mapping Transition Readiness: A model for identifying how and where design can intervene in system transitions

Goss, Hannah, Tromp, Nynke and Schifferstein, Hendrik N.J.

Suggested citation:

Goss, Hannah, Tromp, Nynke and Schifferstein, Hendrik N.J. (2021) Mapping Transition Readiness: A model for identifying how and where design can intervene in system transitions. In: Proceedings of Relating Systems Thinking and Design (RSD10) 2021 Symposium, 2-6 Nov 2021, Delft, The Netherlands. Available at <http://openresearch.ocadu.ca/id/eprint/3864/>

Open Research is a publicly accessible, curated repository for the preservation and dissemination of scholarly and creative output of the OCAD University community. Material in Open Research is open access and made available via the consent of the author and/or rights holder on a non-exclusive basis.

The OCAD University Library is committed to accessibility as outlined in the [Ontario Human Rights Code](#) and the [Accessibility for Ontarians with Disabilities Act \(AODA\)](#) and is working to improve accessibility of the Open Research Repository collection. If you require an accessible version of a repository item contact us at repository@ocadu.ca.

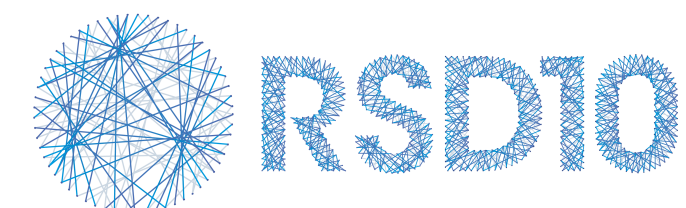
Mapping Transition Readiness

**A model for identifying how and where design can
intervene in system transitions**

MSc Hannah Goss, TU Delft, Faculty of Industrial Design Engineering

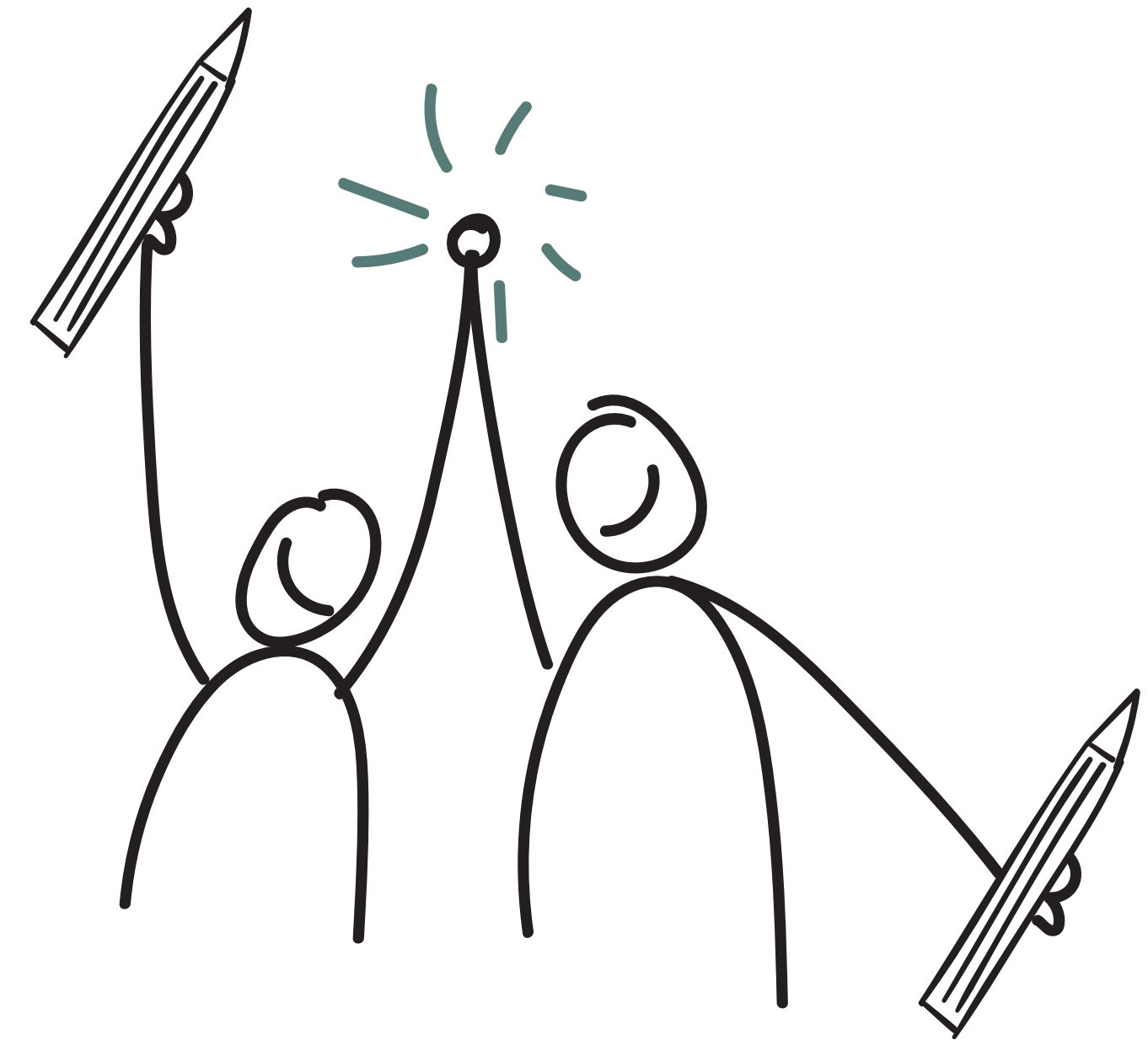
Dr. Nynke Tromp, TU Delft, Faculty of Industrial Design Engineering

Dr. Hendrik N.J Schifferstein, TU Delft, Faculty of Industrial Design Engineering

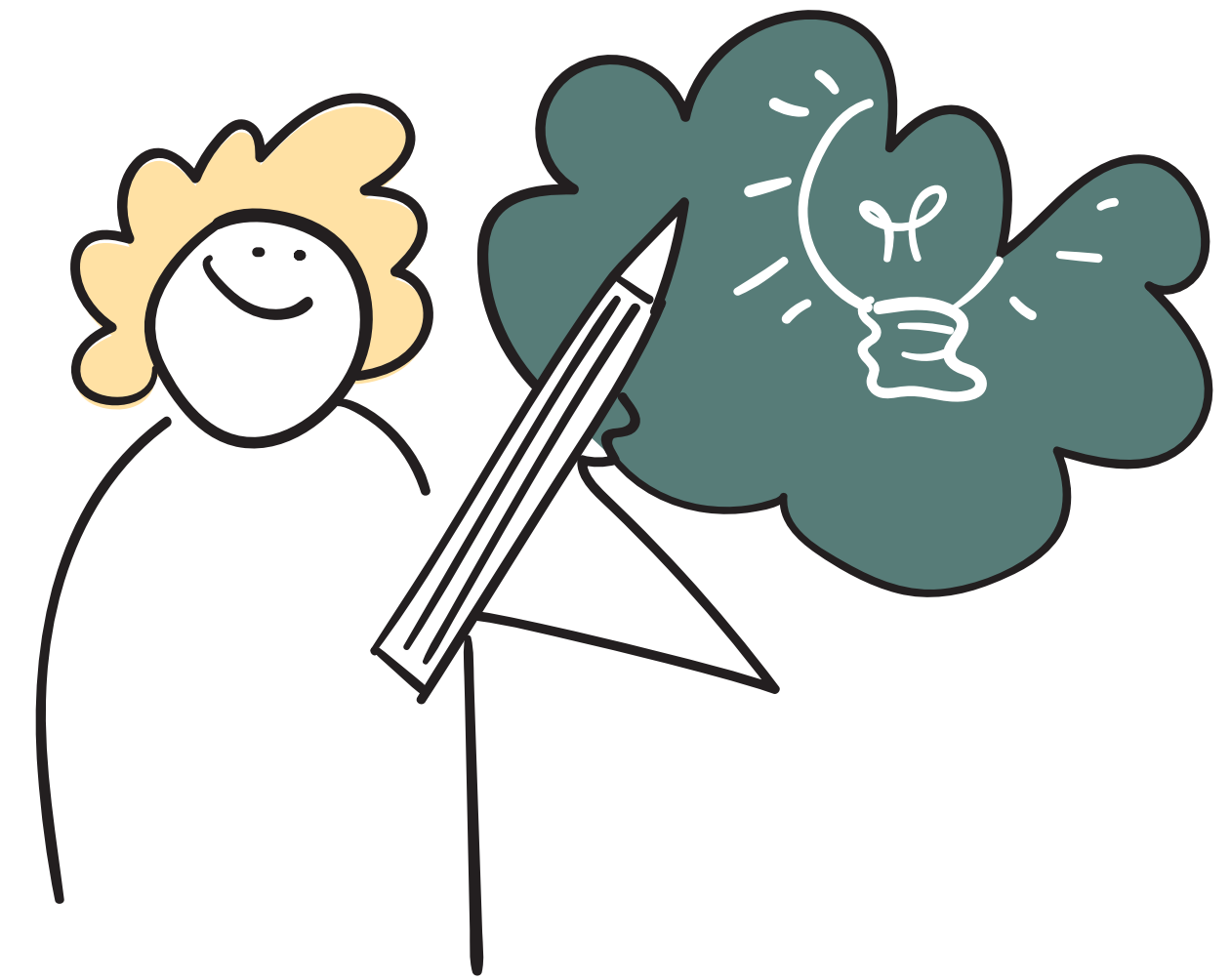


Designers are increasingly tackling complex societal challenges and system transitions

(Ryan, 2014; Norman and Stappers, 2015; Irwin, 2015; Rotmans, 2005)



**How can we design
innovations that
deliberately accelerate a
transition?**



Purpose of the paper

anticipate the dynamics of a system transition and identify how and where design can intervene to accelerate a transition.

VALUE CONFLICT



What drives and steers the
behaviour of the system from
an organization perspective

READINESS

The willingness and state of preparedness of stakeholders to move in the transition



READINESS

VALUE CONFLICT



What drives and steers the behaviour of the system from an organization perspective

**Value conflicts and transition readiness
are valuable indicators to bridge system
analysis and synthesis**

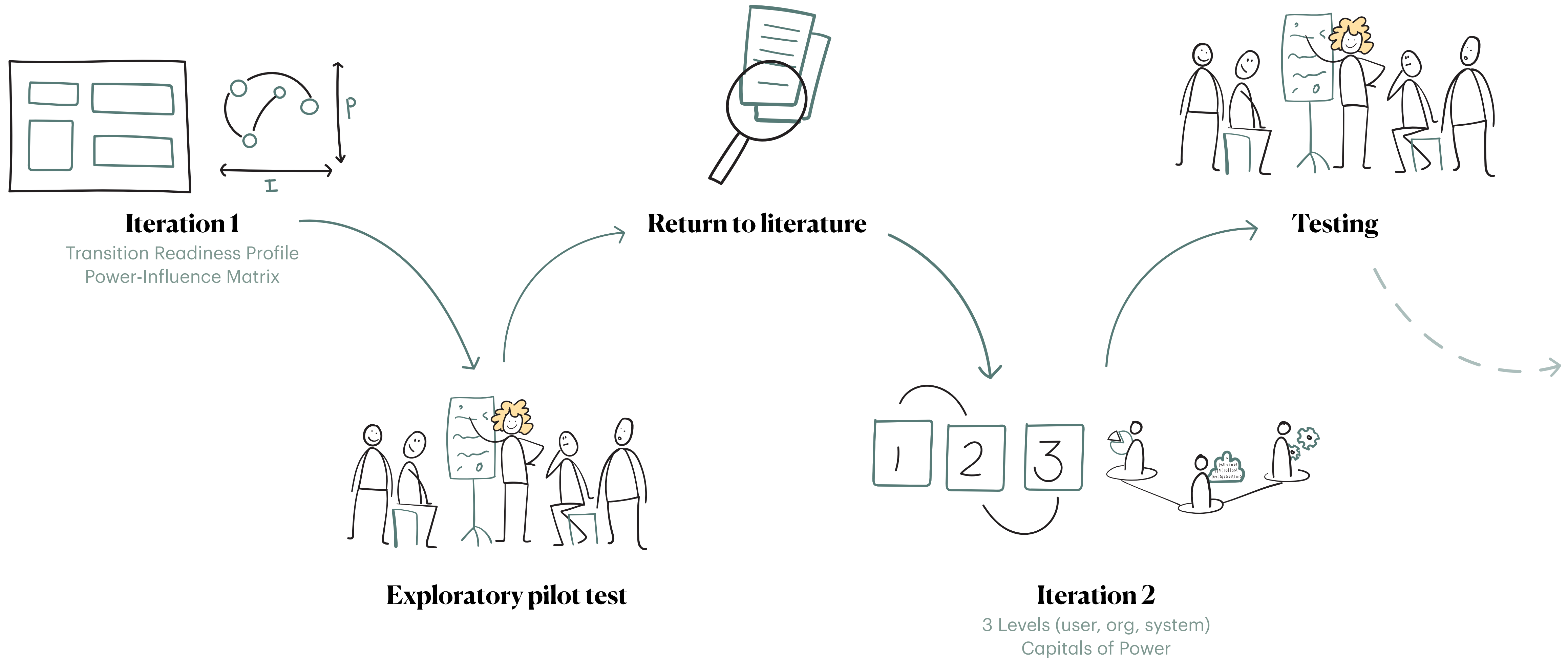
**Value conflicts and transition readiness
are valuable indicators to bridge system
analysis and synthesis**

time, complexity, design expertise, innovation as an outcome

Transition Readiness Profiles

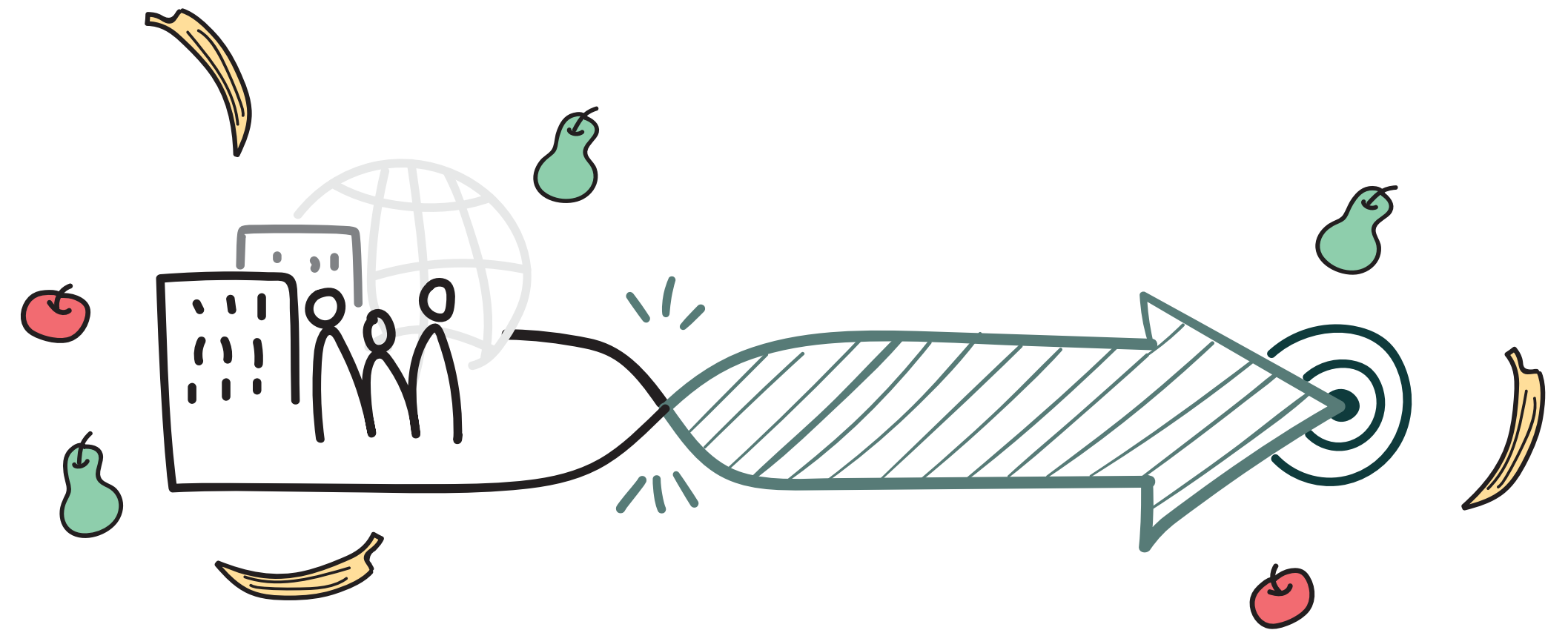
offer insights in (potential) system dynamics to help designers understand how and where to intervene in a transition.

Research-through-Design Process



Transition case

- Exploratory pilot in bachelor course at TU Delft
- Case: Transition to a food system with less consumer food waste
- 12 groups each given a stakeholder in food system



Iteration 1

Stakeholder Analysis (Wednesday afternoon, 4hrs)

The main objective of the stakeholder analysis is to understand profoundly how it operates in the current system that drives on 'excess', and its potential in transitioning towards a system that drives on 'enough'.

Data sources: organization website (incl. yearly reports), LinkedIn profile of organization + employees, social media presence, food industry analytics, economic statistics, food sector innovation literature.

Running the business

How is the organization structured, how is it run in the current system?

- What are the main activities of the organization?
- What is their business model?
- What is the company's relationship within the larger system?

Capability to adapt

- How does the company innovate?
- How are they tied to the concept of 'excess' and what could drive them to 'enough'?

Driving forces

- What are the company's core values? What motivates them?
- What is the company's vision?
- What is the company's vision on food waste?

Figure: Stakeholder analysis questions provided to students

Stakeholder Transition Profile

Part 1: Stakeholder Relationships

Name of stakeholder: *Caterer (Sodexo)*

Who are the major individuals within the organization who make decisions? What drives change in the company?

- *Director of Food Service [2]*
- *Manager of Sustainability and Innovation*

Name 3 other stakeholders that your organization would benefit from developing a relationship with.

- *Farmers: Getting products from sustainable farmers would improve the products offered. By creating a relationship with the farmer, the caterer gains more insight in the sustainability of their product*
- *Policy Maker: Creating newer regulations about food waste would benefit the caterers (Reduce taxes for sustainable caterers/retailers [3]) [1]*
- *Food Bank: Donating healthy food is accepted by many local food banks free of charge. [3]*

Part 2: Power in Transition

What does the organization bring to table that is a potential power in the transition and why? How could the organization grow in the transition process?

- *Catering offers a venue to introduce consumers to more sustainable food alternatives, such as organic, seasonal, local, or vegetarian meals. It is expected that consumers can learn more sustainable eating practices from models in canteens or cafeterias, and hence also change their private consumption practices[1]*
- *By reducing the food-waste there's more resources for investment in our services and facilities.*

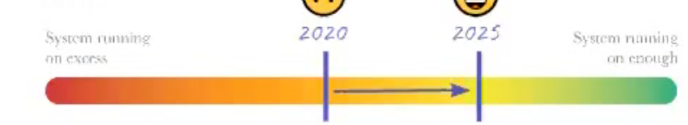
Part 3: Critical Conditions

What are critical conditions for the organization to survive in the transition? What conflicts may rise for the company when the system would aim to cater for 'enough'?

- *The demography of our client needs to be considered: when the supply is changed, we may lose consumers due to offering products that do not fit the consumption habits.*
- *Behaviour of consumers: it can take some time before the behaviour of consumers is adapted to the new sustainability goal (for example: throwing food away in the wrong trashcan).*

Part 4: Perceived Readiness for Transition

Indicate where on the scale best represents your organizations position of driving on excess vs driving on enough in the year 2025.



What are your organizations core driving values? List in order of importance.

1. *High-quality service: being hospitable, listening to requests and having eye for detail.*
2. *Inspired teams: members respect and complement each other.*
3. *Progress: We strive for progression. By being critical about our results, we are able to develop as an organization. [2]*

References

- [1] Wahlen, S., Heiskanen, E., & Aalto, K. (2011). Enduring Sustainable Food Consumption: Prospects from Public Catering. *Journal of Consumer Policy*, 35(1), 7-21. <https://doi.org/10.1007/s10603-011-9183-5>
- [2] Duurzaamheidsverslag Sodexo Nederland. <https://docplayer.nl/7198716-Duurzaamheidsverslag-2015-sodexo-nederland.html>
- [3] Nimmer, B. & Stott, P. (2020). Donating Safe and Wholesome Food. Utah State University. https://idmmons.utv.edu/extension_surreal/2019/

Figure: Filled in Transition Readiness Profile by student group

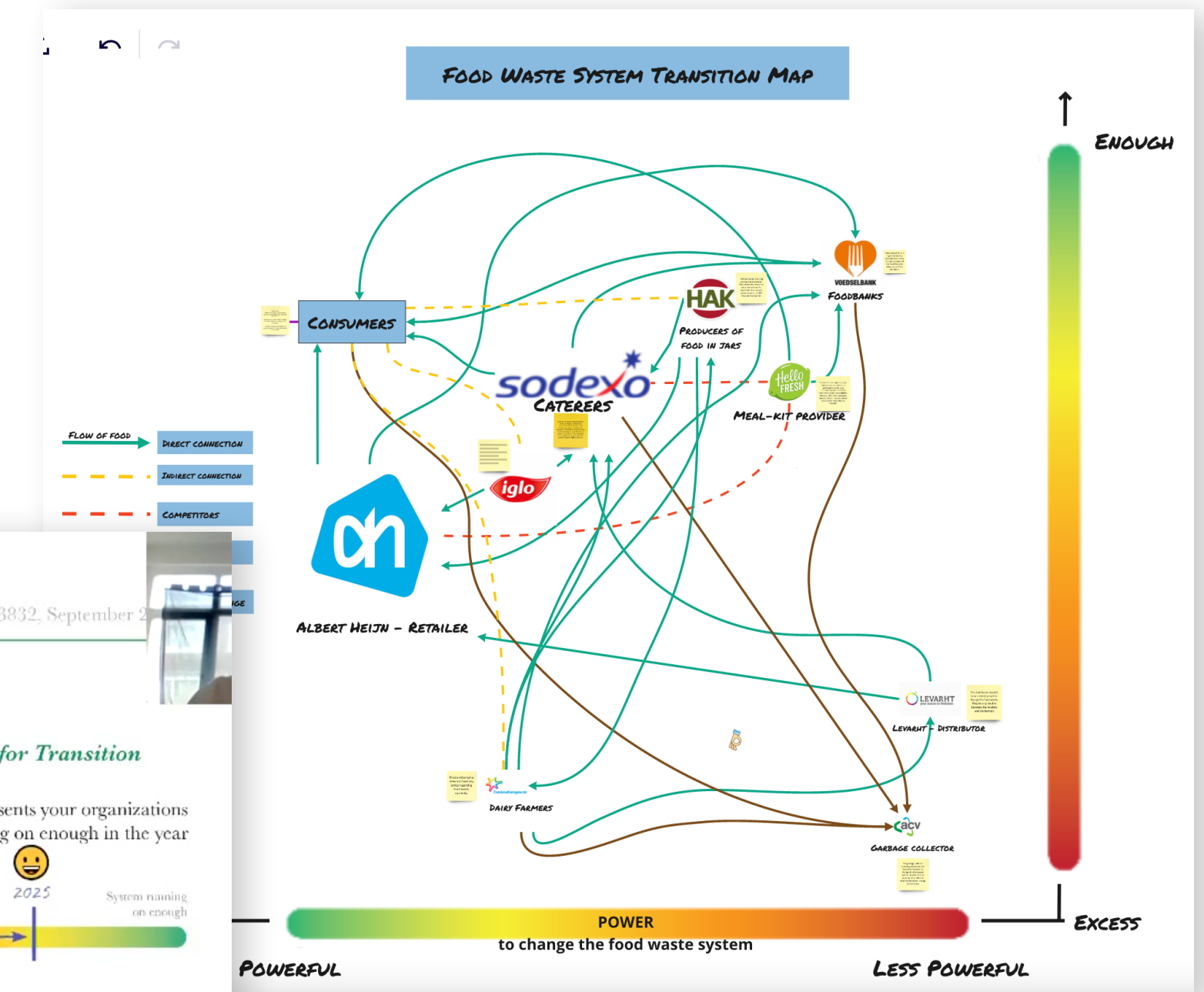
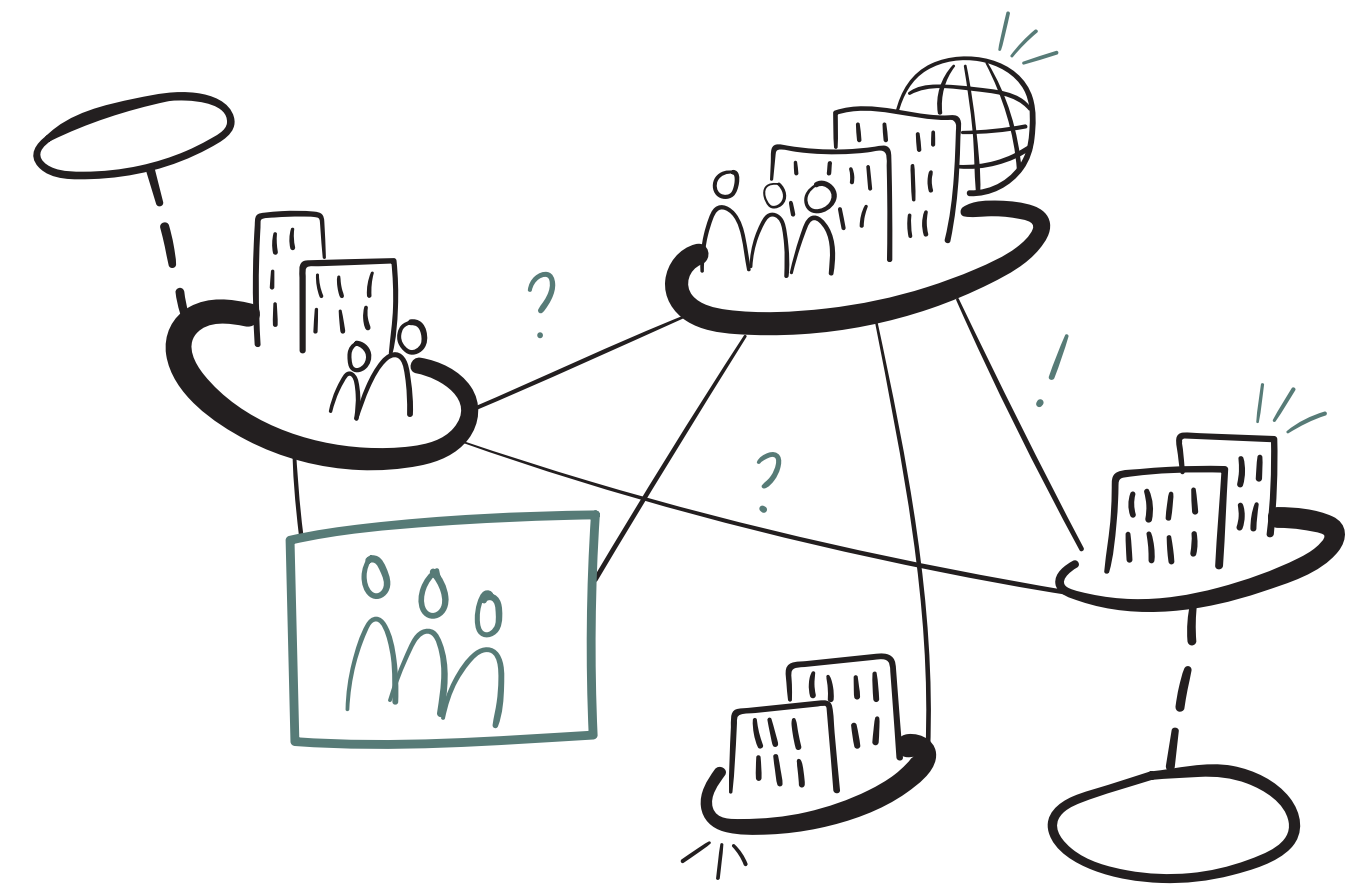


Figure: System mapping by student group

Iteration 1 insights

- Critical reflection on stakeholder position relative to transition and how other organizations influence one another
- Power-influence restricting seeing more angles of how stakeholders can push transition



Literature leading to iteration 2

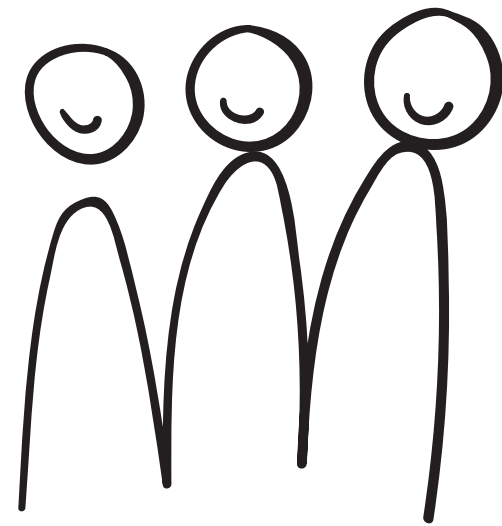
<i>Field</i>	<i>Tool/Method</i>	<i>Citation</i>
SYSTEMIC DESIGN	Giga Mapping Causal- Loop Diagram	Sevaldson, 2011 Hirsch et al., 2007
CONFLICT & STAKEHOLDER ANALYSIS	Power-Influence Matrix Conflict Map Needs-Fear Mapping	Eden & Ackerman, 1998 Mason & Rychard, 2005 Irwin & Kossoff, 2017; Mason & Rychard, 2005
TRANSITION STUDIES	Multi-Level Perspective Transition Management Framework Multi-Phase model	Geels & Schot, 2007; Kemp, 1998 Loorbach, 2007 Rotmans et al., 2001
ORGANIZATION INNOVATION	Organisation Identity Sustainable Business model Value Framework Value Flow Model	Gilmore & Pine, 200 Bocken et al., 2013 Den Ouden, 2012 Den Ouden 2012

Overview of the Profile



VISION

transition direction



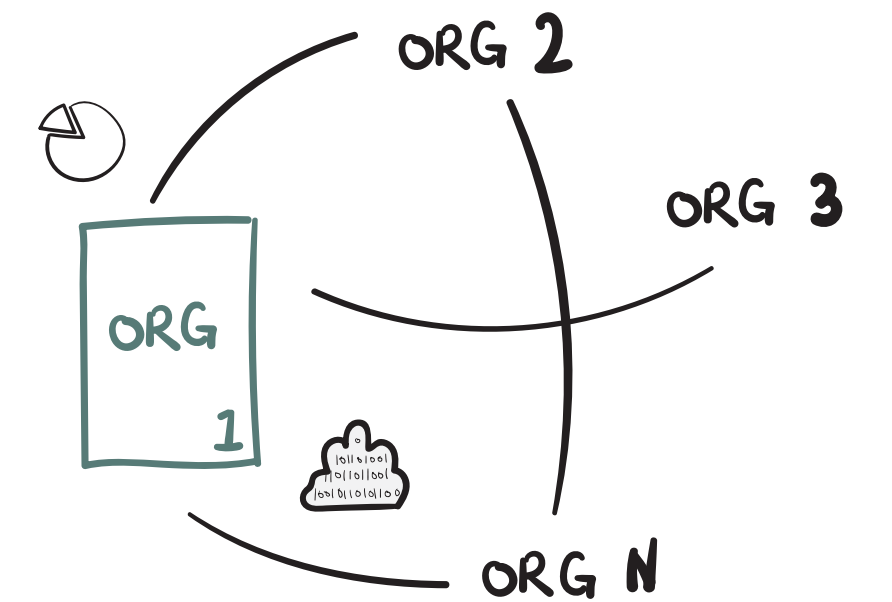
INDIVIDUAL LEVEL

behaviour and practices



ORGANIZATION LEVEL

running of the business, driving forces, capability to adapt



SYSTEM LEVEL

capitals of power, dependencies/relationships, and barriers/conflicts

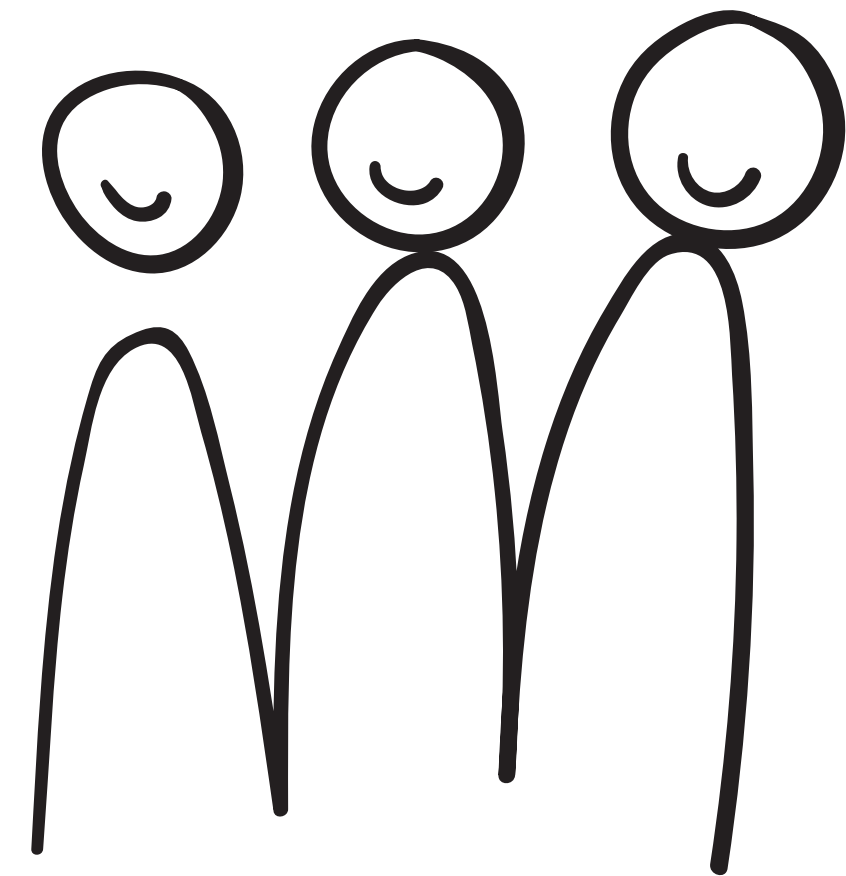
Vision

- Shared direction
- Aim: provide a point on the horizon to move and innovate towards



Individual level

- Behaviour and practices
- Understanding what practices hinder (or accelerate) the transition and what value conflicts are present around the consumer



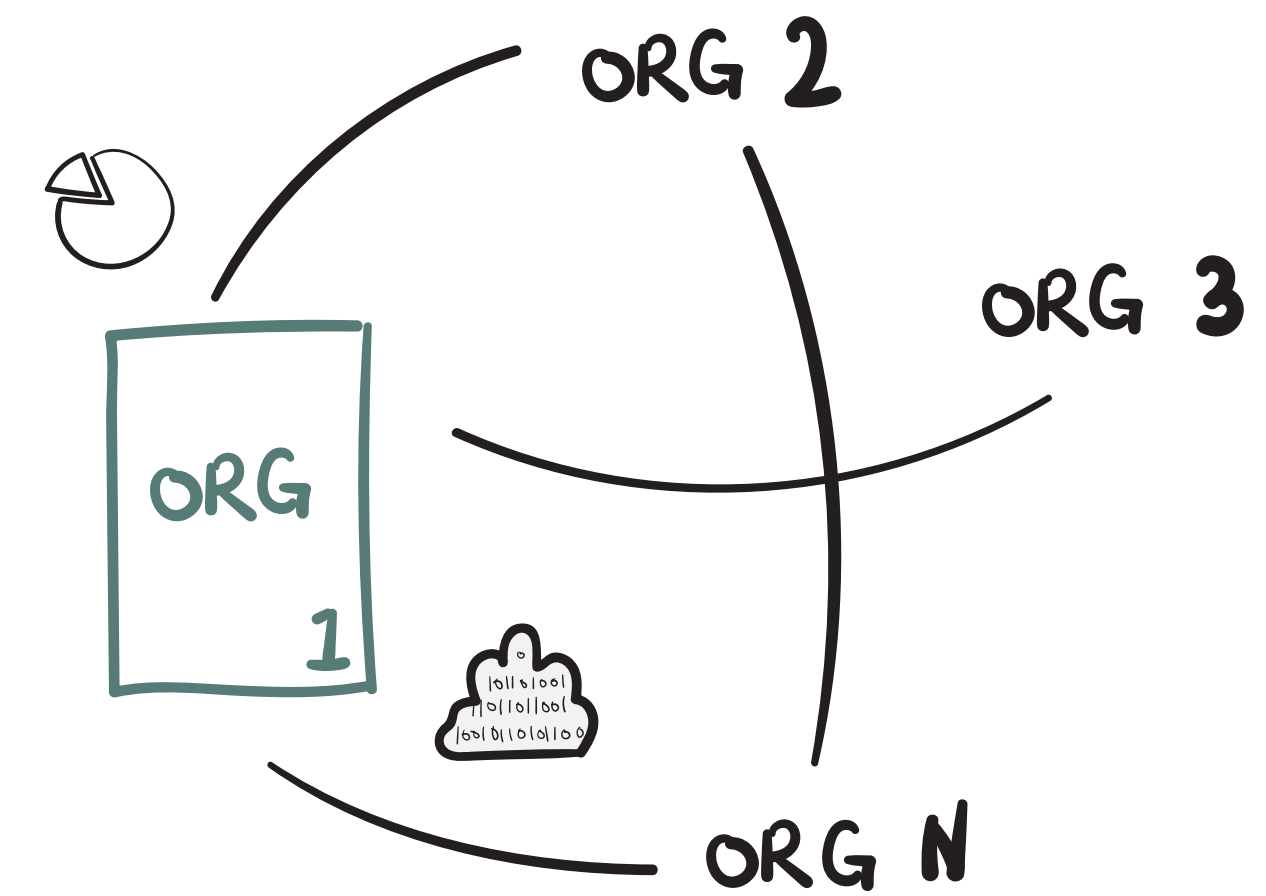
Organization level

- Organization analysis
- Identify potential barriers for an organization to enter the transition
- Interpreting an organization in light of the transition vision illuminates how aligned they are with the transition direction and possible conflicts/barriers that hinder their transition



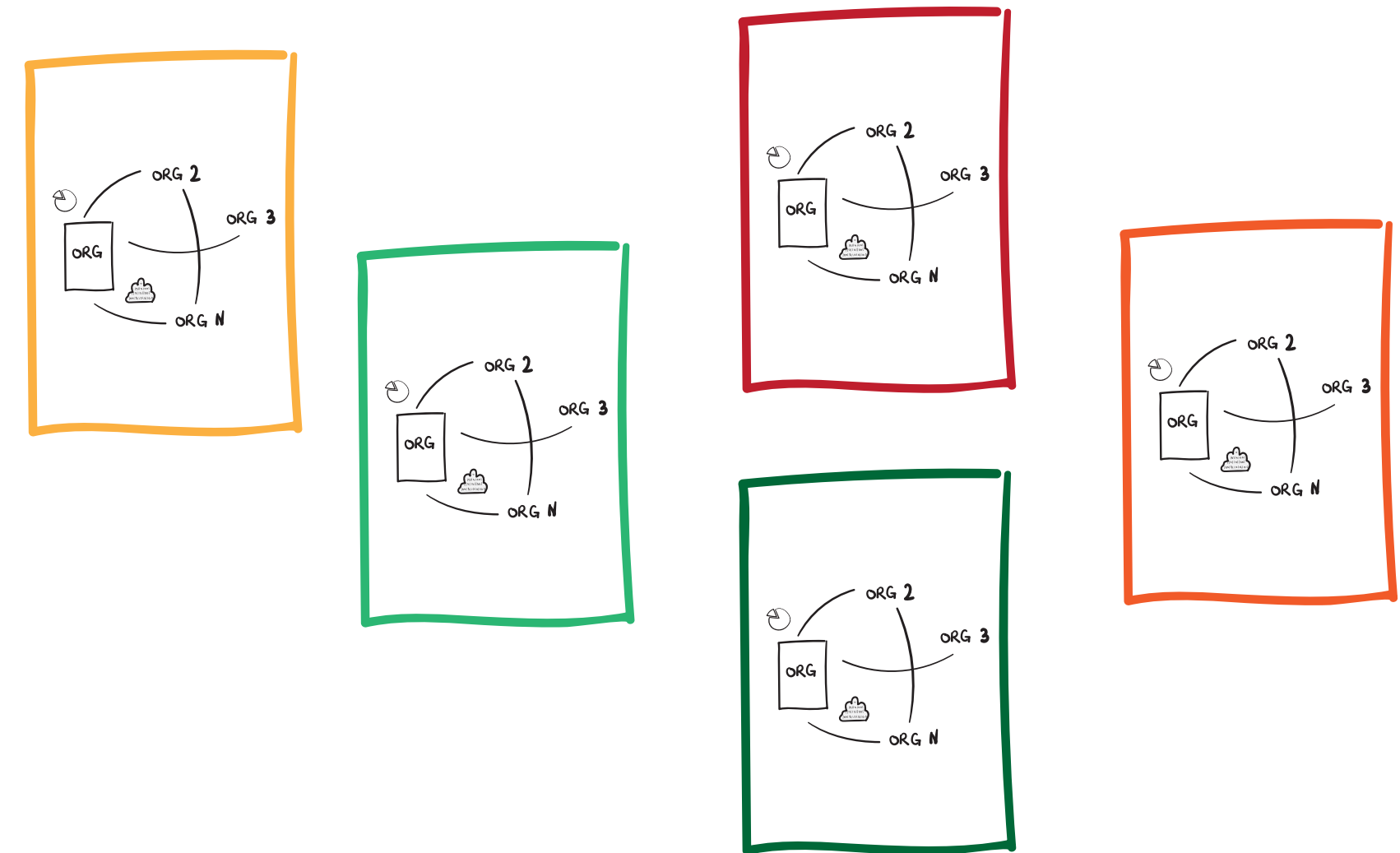
System level

- Readiness, relationships, dependencies and competences
- Anticipating what characteristics of an organization can be brought out in the system to accelerate the transition
- Capitals of power: human, structural, relational, financial, reputation, resource, cultural



Profiles taken together

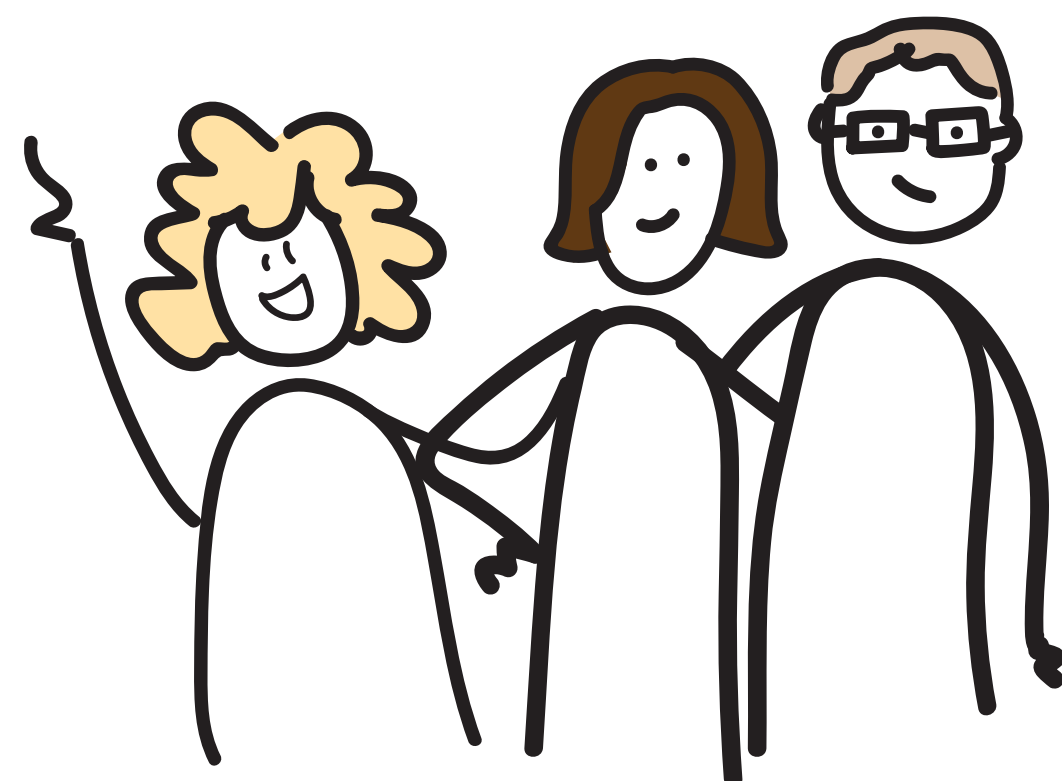
- Selection of stakeholder relevant to transition
- Reveal how best to intervene
- Zooming in & Zooming out



Questions for Discussion

- Do, and if so how do, the Profiles support going from a complex system analysis to innovations?
 - What are the strengths and weaknesses of how we are doing this?
- What is a feasible yet meaningful way to reduce complexity in a way that fits a design process?
 - How can we systemically study the data to understand whether the tool reduces the complexity in a meaningful way from a design and system standpoint (e.g, interpretation stakeholder dynamics and capitals or power correctly)?

Thank you!



MSc Hannah Goss: h.goss@tudelft.nl

Dr. Nynke Tromp

Dr. Hendrik N.J Schifferstein

