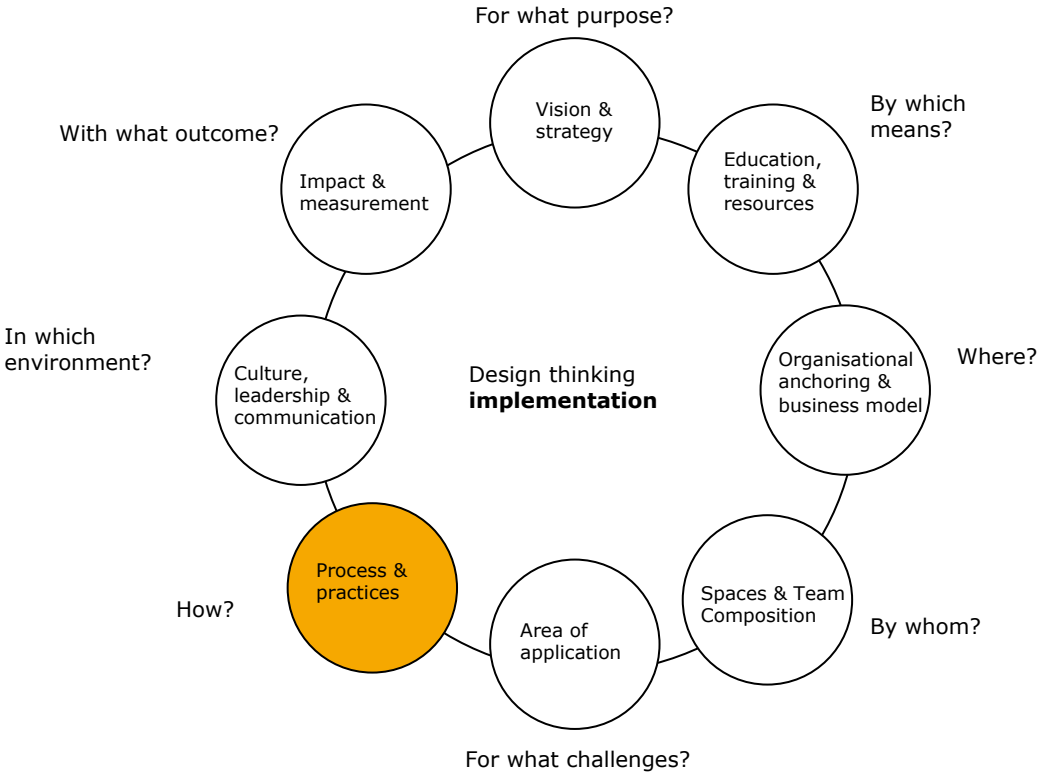
Mastering Design Thinking in Organizations
Curating and Enacting Design Thinking (Process & Practices)

Dr Danielly de Paula

Learning objectives ...

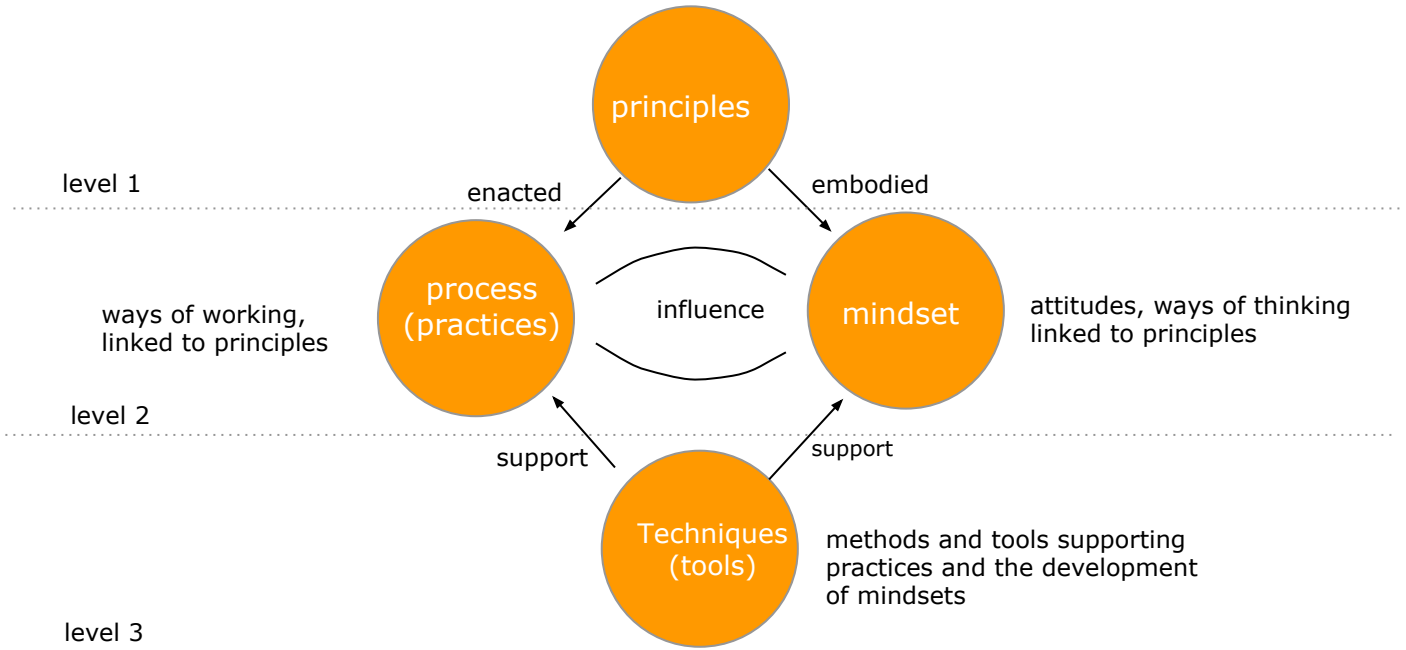
1. To learn about the different ways that design thinking can manifest itself
2. To have an overview of a design thinking process
3. To grasp some of the most recommended tools, techniques and practices
4. To understand the principles of design thinking

The Design Thinking Implementation Wheel



Source: Wolf, Ella (2019). Design Thinking coming of age. Exploring the implementation of design thinking for digital innovation in large organisations. Master Thesis. University of St Gallen.

Design Thinking Manifestations



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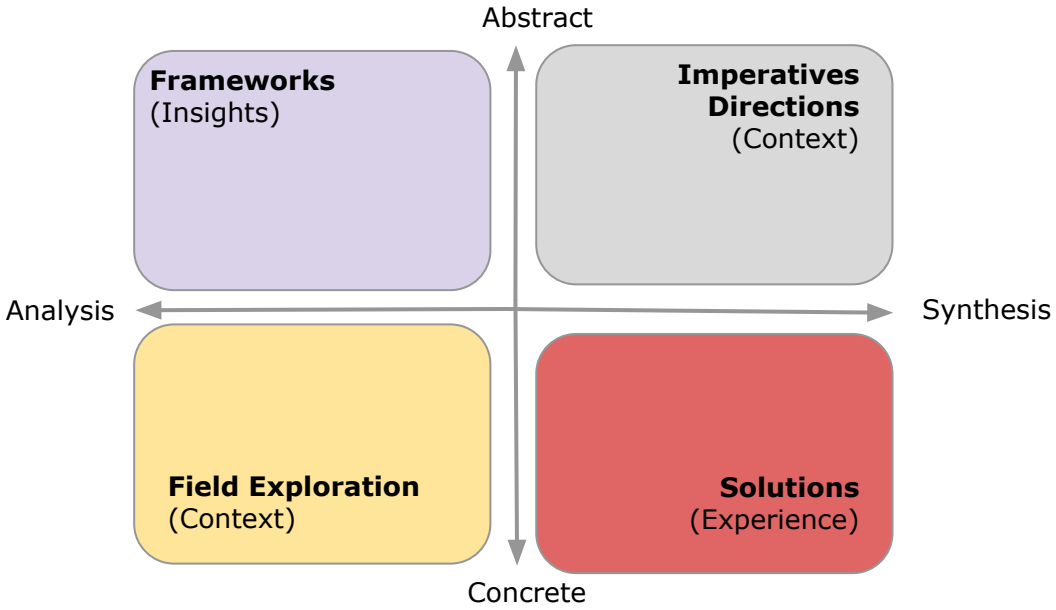
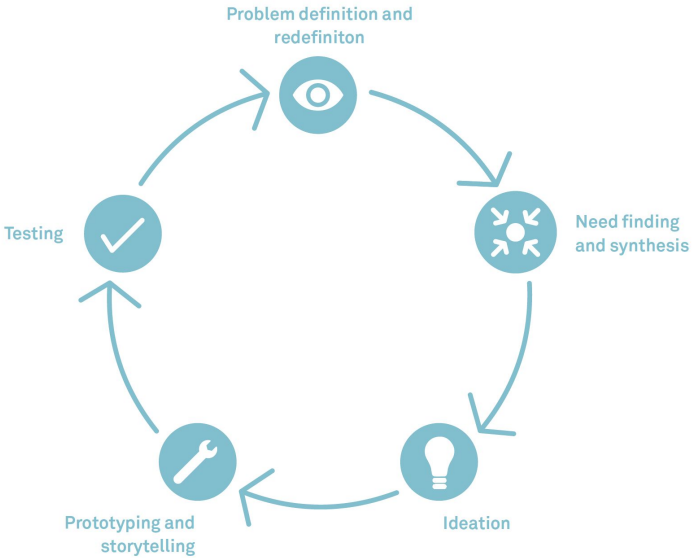
The Innovation Process

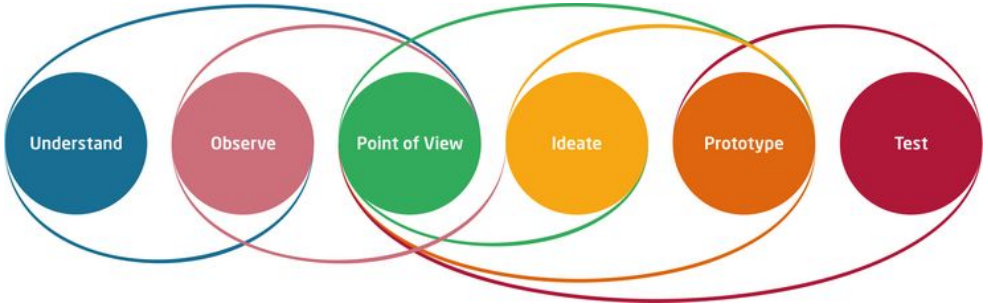


Source: Beckman, S. L., & Barry, M. (2007). Innovation as a learning process: Embedding design thinking. California management review, 50(1), 25-56.

Design Thinking Process Models



Source: ME310 SUGAR model



Source: Hasso Plattner Institute

Needfinding at a glance

Needfinding

Needfinding is the art of eliciting and gathering relevant data from users, customers and stakeholder. The focus is on behaviours, desires and needs of people.

Main Techniques

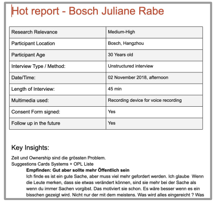
- Observation
- Interviewing
- Immersion

Needfinding outcomes in Design Thinking projects

Data gathered

Hot Reports

- summarized transcripts of interviews and focus group meetings
- contain the key findings
- can be analyzed in a structured way



Hot report - Bosch Juliane Rabe

Research Relevance	Medium-High
Participant Location	Bosch, Hangzhou
Participant Age	30 Years old
Interview Type / Method:	Unstructured interview
Date/Time:	02 November 2018, afternoon
Length of Interview:	45 min
Multimedia used:	Recording device for voice recording
Consent Form signed:	Yes
Follow up in the future	Yes

Key Insights:

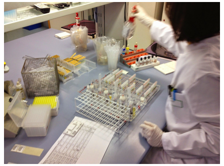
Zeit und Ownership sind die grössten Problem.
Suggestions Cards Systems + OPL Liste

Empfinden: Gut aber sollte mehr Öffentlich sein

Ich finde es ist ein gute Sache, aber muss viel mehr gefordert werden. Ich glaube Wenn die Leute merken, dass sie etwas verändert können, sind sie mehr bei der Sache als wenn du immer Sachen vorgibst. Das motiviert sie schon. Es wäre besser wenn es ein bisschen gezeigt wird. Nicht nur der mit dem meistens. Was wird alles eingereicht ? Was

Pictures & videos

- situational pictures and videos showing particular scences
- provide a in-depth understanding of context and practices



News & Articles

- Collections of demographic, technological, geopolitical trends, business reports
- Benchmark information of competitors or other industries

Sources: Pictures - Falk Uebernickel / Design Thinking classes 2010-2019 | BASF.com

Needfinding objectives and techniques

Rob McKim
Professor of Mechanical Engineering,
at Stanford University

“Needfinding is easy to get started with, but deceptively hard to master. The only way to learn it is to do it, and the best way to do it is in the wild.”

Source: Drake, Milan. 2020. “Needfinding in the Wild — Stanford D.school.” Stanford d.school. August 2, 2020. https://dschool.stanford.edu/classes/needfinding-in-the-wild.

Ideation phase

Source: own

Ideation

The ideation phase represents the process of "going wide" which enables to explore a broad solution space creatively.

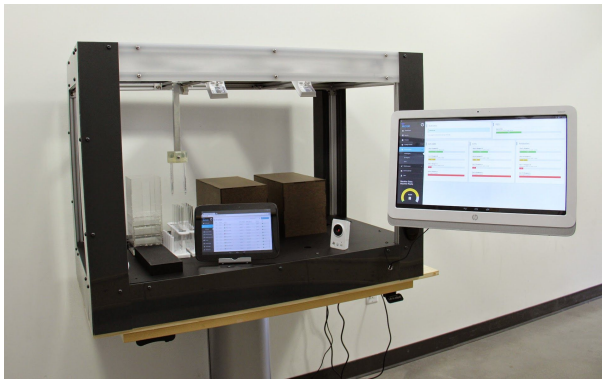
Approach

Brainstorming and other creativity methods to generate a large quantity of diverse ideas. A strong focus lies on listening and building on each other's ideas to leverage collective thinking.

Prototyping

Low fidelity ⟷ **High fidelity**

Example of a QR code based mechanism to pair a blood sample with a patient record for automatic identification.



A prototype of connected laboratory machine with a highly user oriented and configurable user interface. Data are shared with a lab based cloud service.

- Low fidelity prototypes are allowing to test assumptions quickly and early in the development process
- The cost for failure is acceptable low and accelerated learning is happening
- The prototyping activity helps to spark creativity

- High resolution prototypes (HRP) are testing the boundaries of feasibility and viability
- HRPs are

Testing as part of the Design Thinking process


Source: own

Testing

Permanent testing of ideas and prototypes with customers, users and other stakeholders. Testing helps to fail in early project stages and to involve the customer in your own ideation process.

Approach

Interviews and other field research techniques can be used for testing but also in-house testing methods like focus groups.

Four Critical Implementation Practices

RESOURCES

Provide necessary material

INTEGRATE

Integrate DT into related processes

USER INVOLVEMENT

Provide access to the user

SPACES

Provide innovation spaces

Source: de Paula, Danielly (2019). Design Thinking Capability Model: a management framework to support design thinking implementation for product development. PhD Thesis NUI Galway.

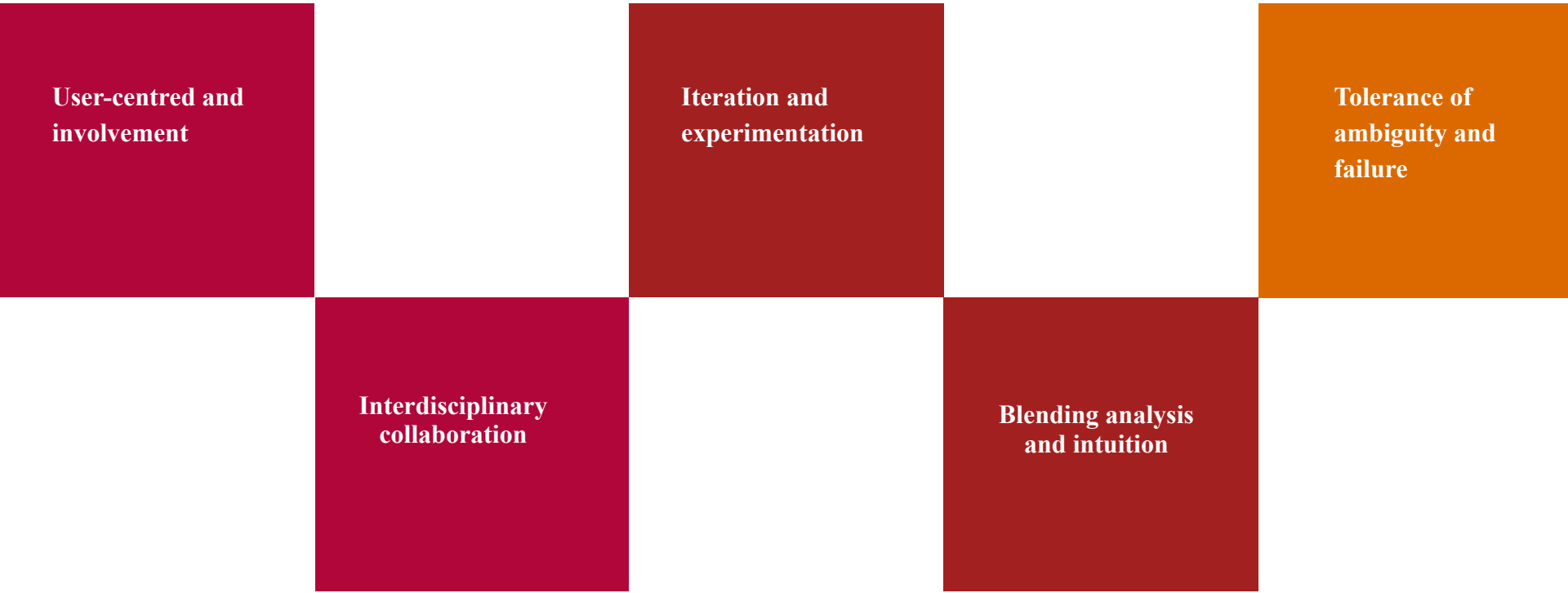
From practices to principles...

Design Thinking Principles

User-centred and involvement	Problem-solving	Iteration and experimentation	Gestalt View	Tolerance of ambiguity and failure
Creativity and Innovation	Interdisciplinary and collaboration	Ability to visualize	Blending analysis and intuition	Abductive reasoning

Source: Micheli, Pietro; Wilner, Sarah; Bhatti, Sabeen; Mura, Matteo; Beverland, Michael (2018). Doing design thinking: conceptual review, synthesis and research agenda. Journal of Product Innovation Management, 36(2), 124-148.

Design Thinking Principles



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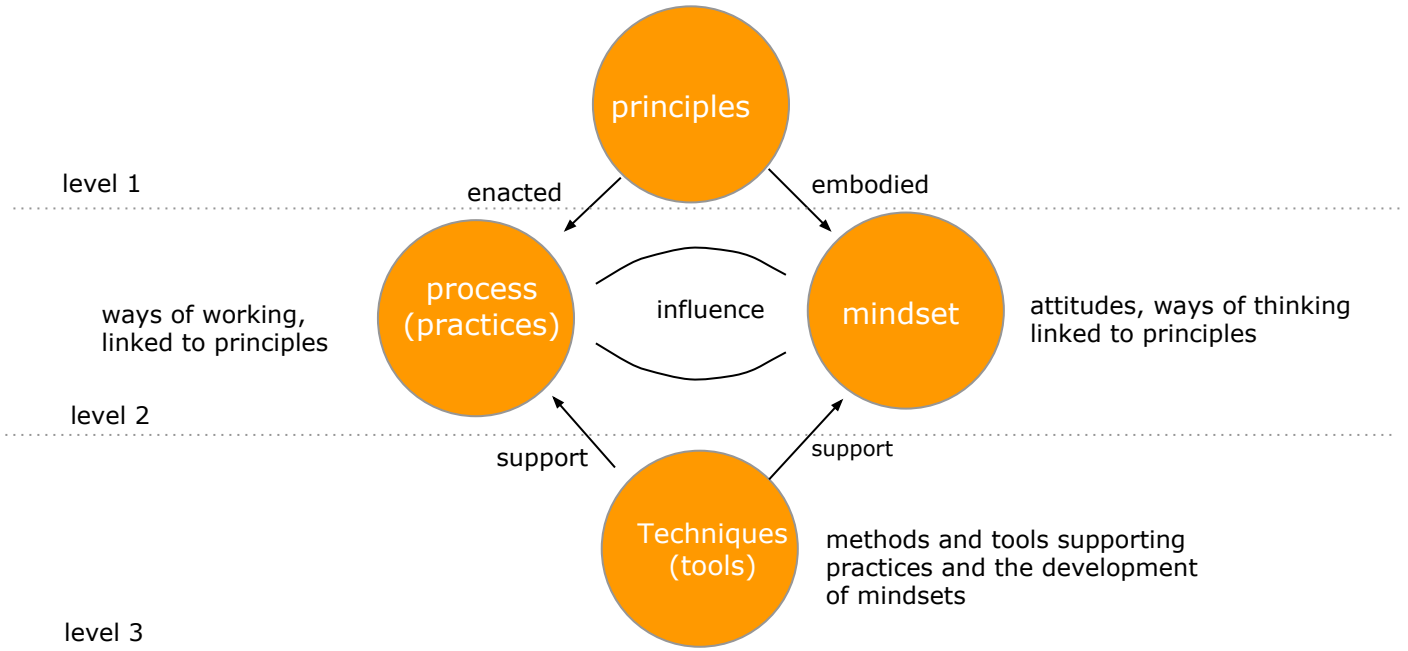

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“Design thinking is not a linear process (...) – it's a paradigm shift. Businesses that think of Design Thinking as a methodology that can be easily adapted to their own culture may be in for a disappointment”

Hillary Collins
Design Management Review

Source: Collins, Hillary. (2013). Can design thinking still add value? Design Management Review, 24(2), 35-39.

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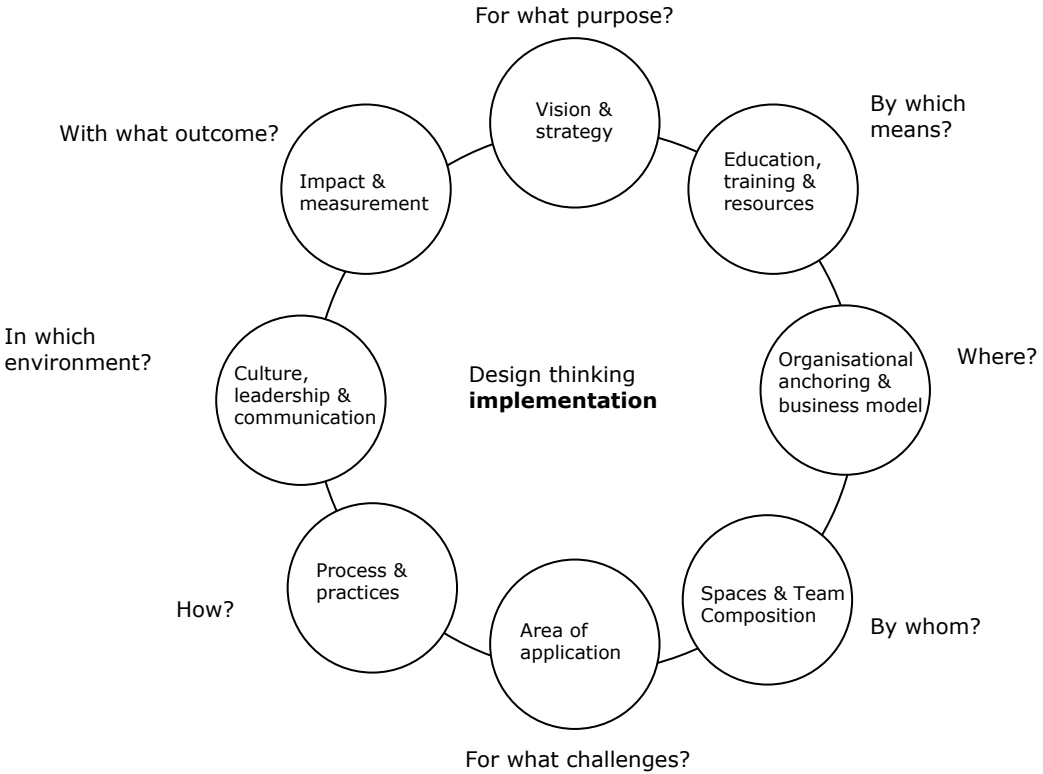

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