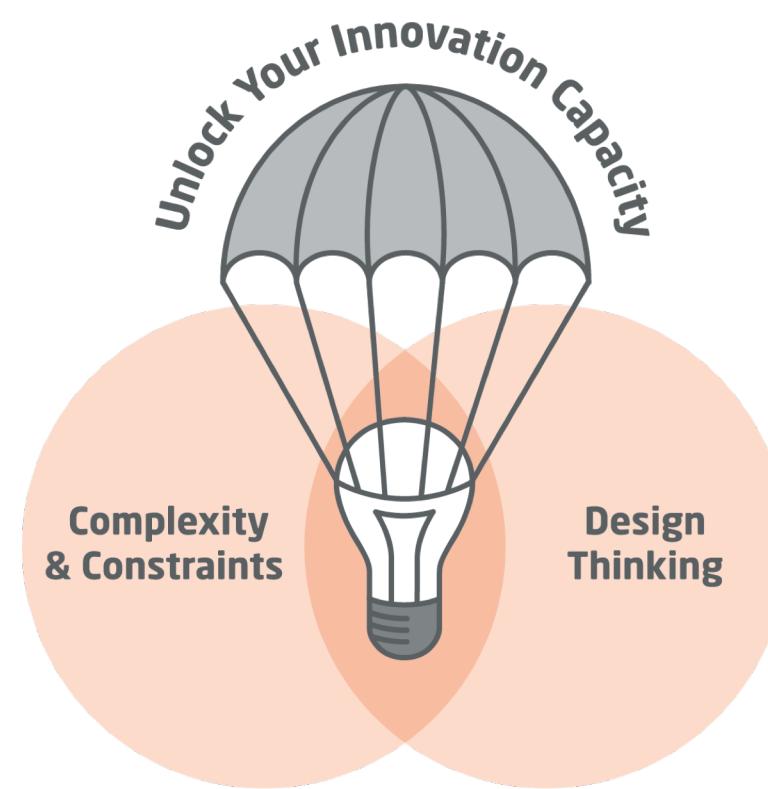


STRATEGIC DESIGN THINKING FOR EVERY DAY.



European Excellence Center for Digital Transformation



STUDENT
EDUCATION

DESIGN
THINKING
AT HPI



PROFESSIONAL
EDUCATION



RESEARCH
PROGRAM

Innovation at Heart

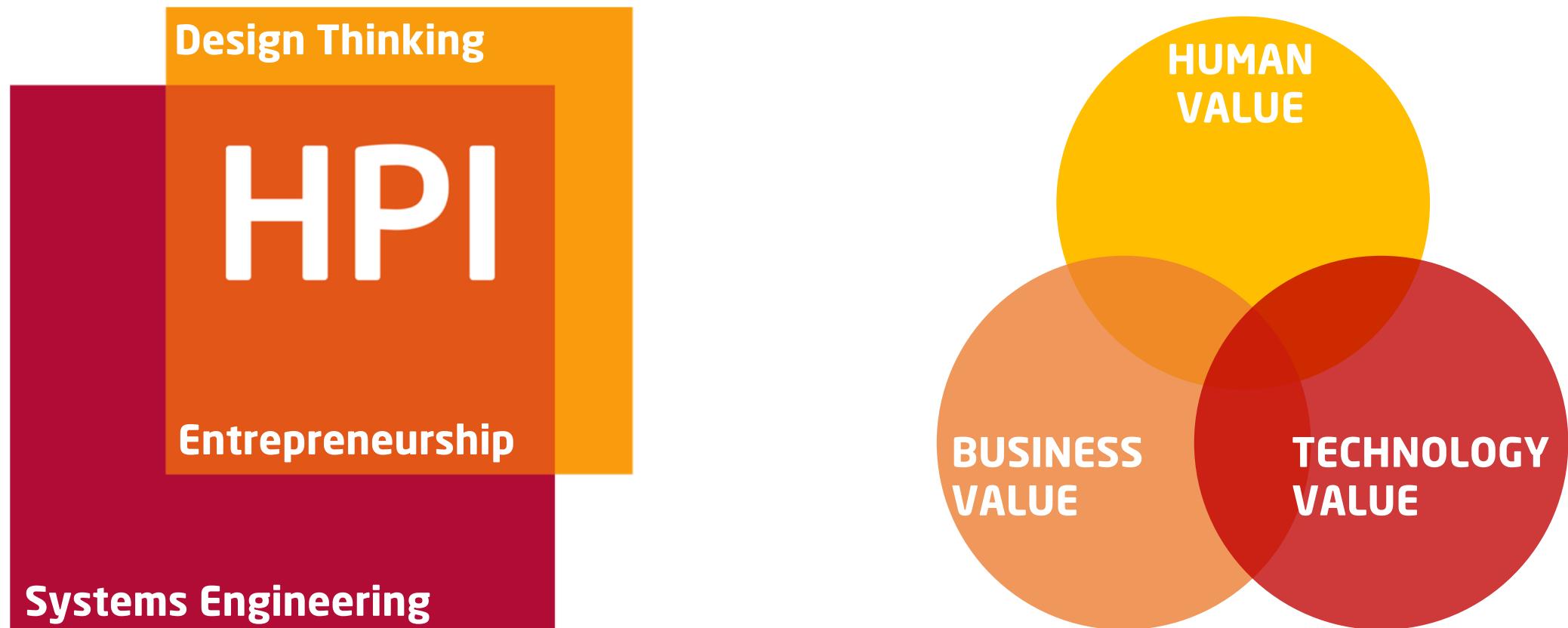


**“If something hasn’t
been invented for a
while, I get a little
restless.”**

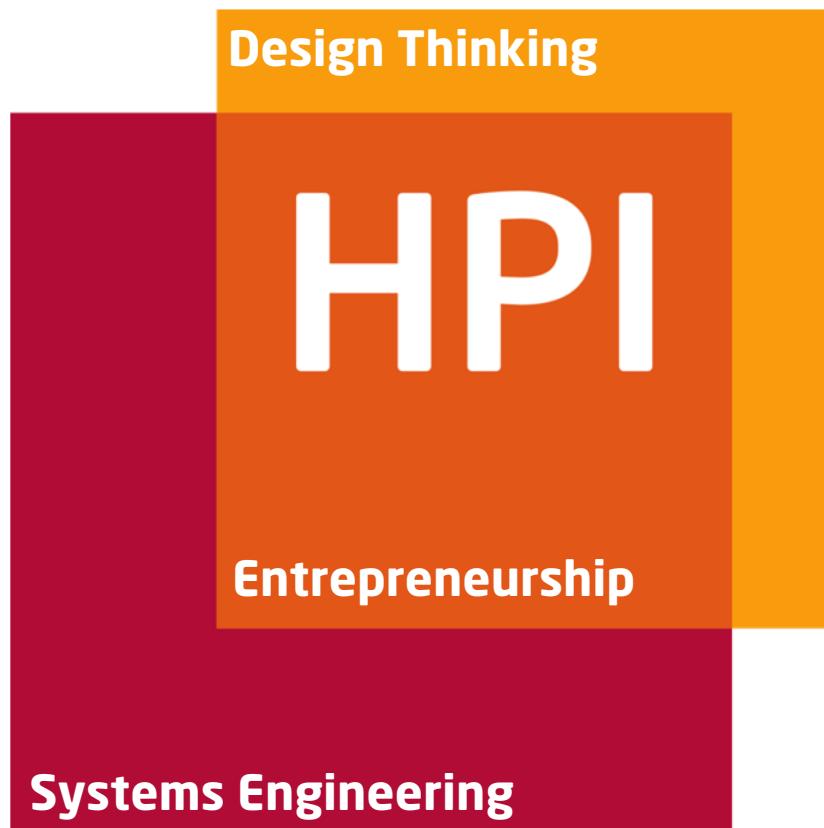
*1998: Hasso Plattner Institut for
Digital Engineering/University Potsdam*

2008: First European Design Thinking School

Fertile Ground for Innovation & Transformation



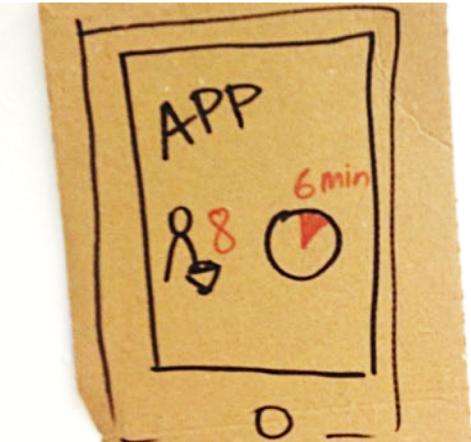
Fertile Ground for Innovation & Transformation



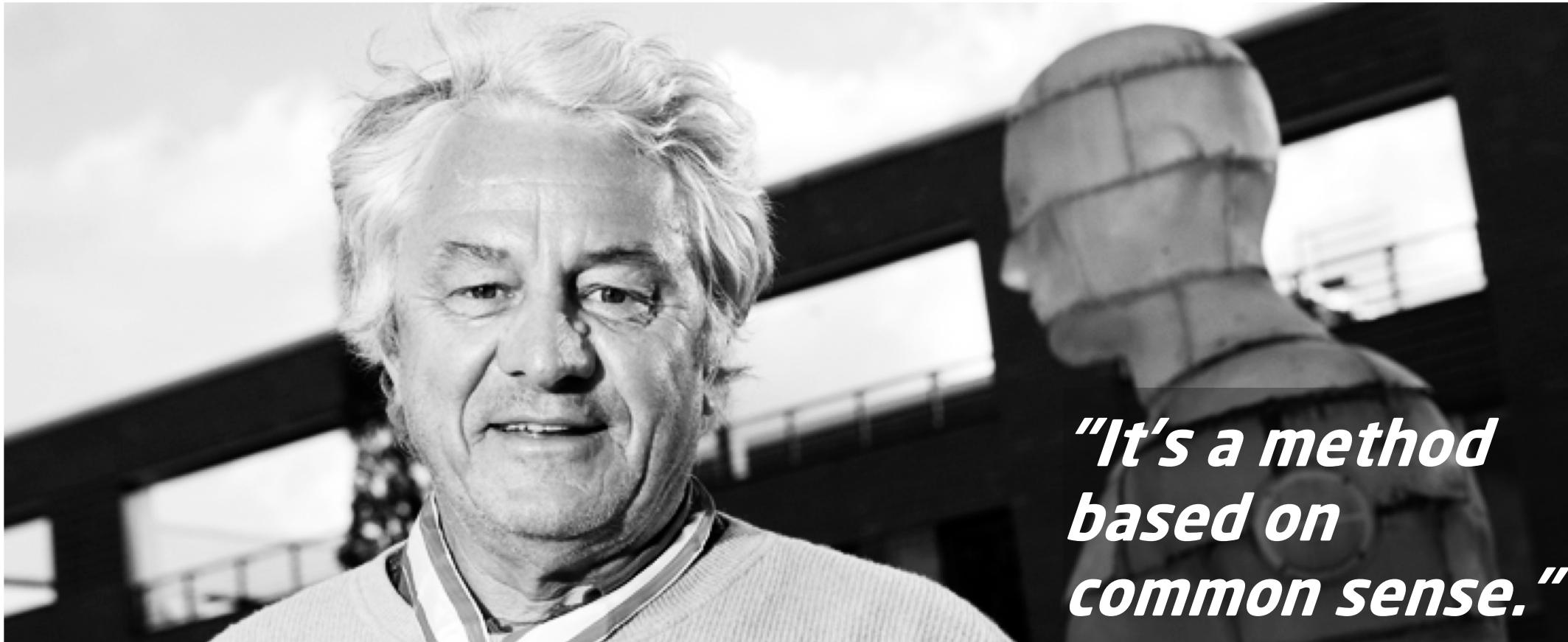
HPI Alumni Startups



Focus: Practical Application



What is Design Thinking?

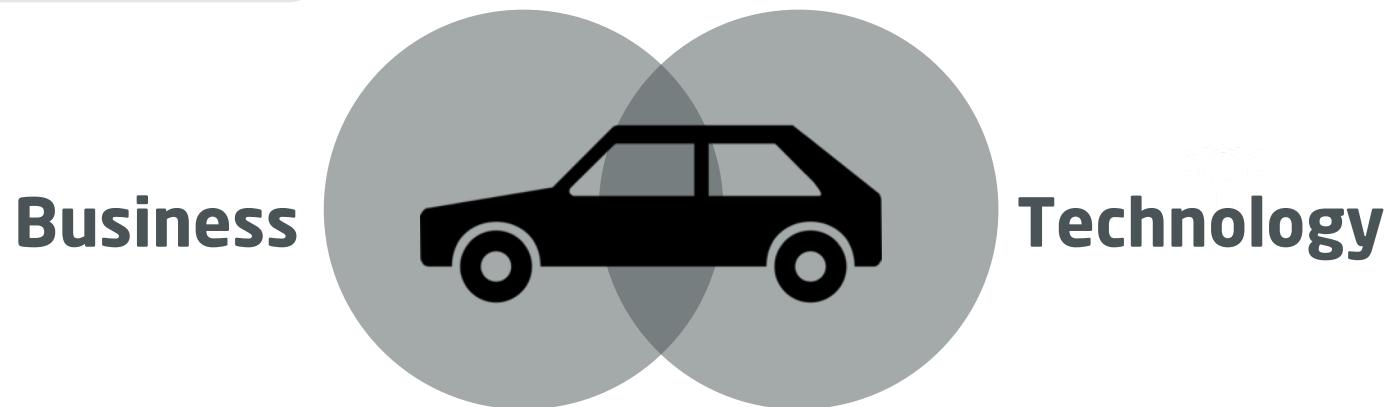


***"It's a method
based on
common sense."***

What is Design Thinking?

Thinking focusing **Limitations**
>>> Daily Business Thinking

What technical capabilities
and given resources
**ALLOW the maximum
achievable solution?**



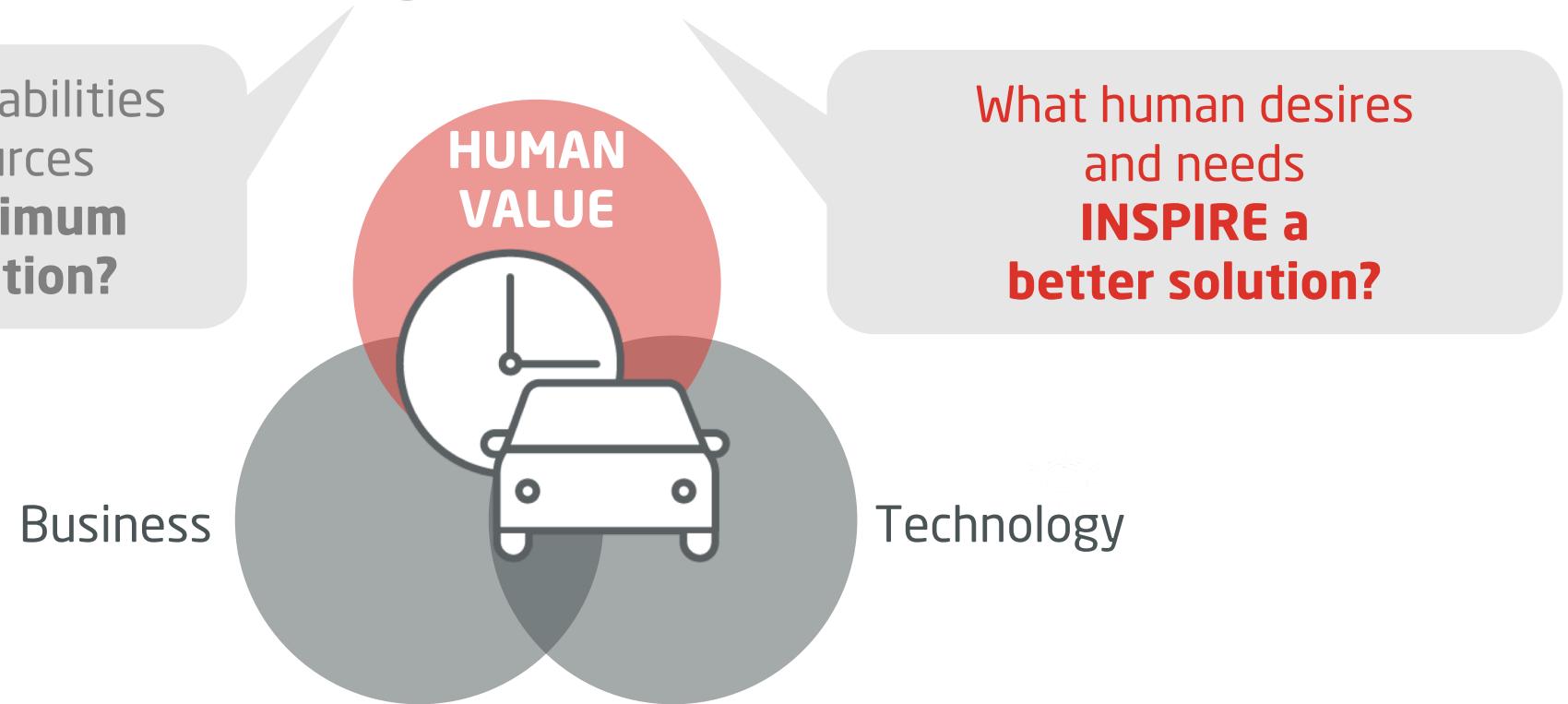
What is Design Thinking?

Thinking focusing **Limitations**
->>> **Daily Business Thinking**

What technical capabilities
and given resources
ALLOW the maximum
achievable solution?

Thinking focusing **Opportunities**
->>> **Design Thinking**

What human desires
and needs
INSPIRE a
better solution?



This is Design Thinking.

*“....starting with **human value** and
making more out of what we have
- instead of making more by
investing more.”*

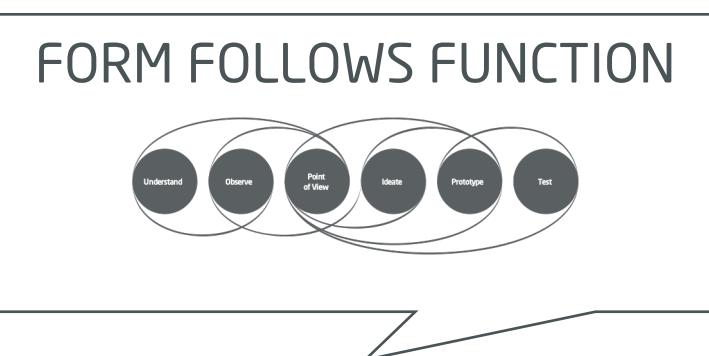
This is Design Thinking.

...and what is
Strategic Design Thinking?

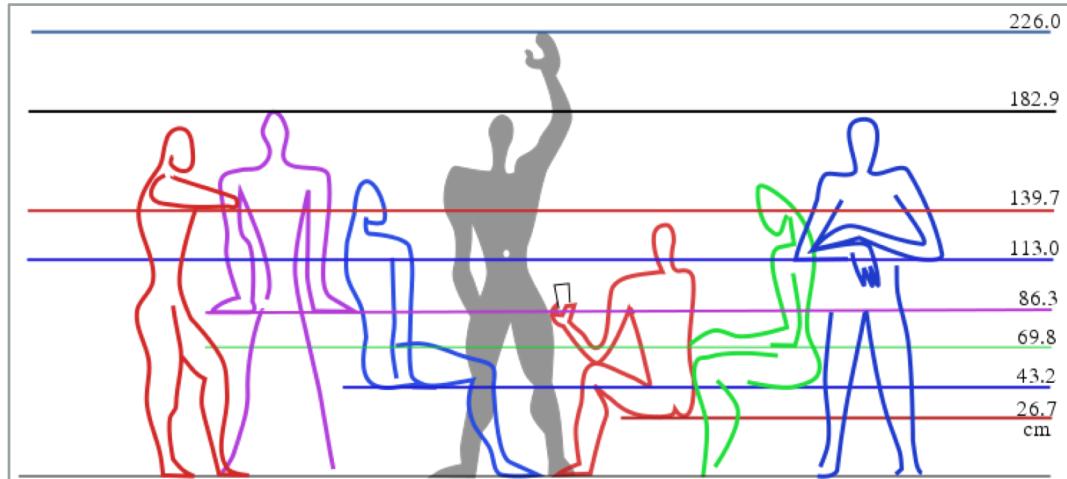
Evolution of Design Thinking

METHOD

Designer's Process
to create innovations



Method: Designer's Process to create innovations



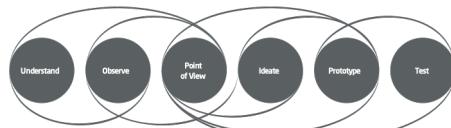
Shyamal / CC0; https://commons.wikimedia.org/wiki/File:Modulor_measurements.svg; Cité Radieuse, CC BY NOSA, photo by Annie Kerguenne

Evolution of Design Thinking

METHOD

Designer's Process
to create innovations

FORM FOLLOWS FUNCTION



MINDSET

Specific Attitude
In dealing with complexity

- HUMAN CENTEREDNESS
- DIVERSE COLLABORATION
 - LEARNING THROUGH EXPERIMENTATION

CULTURE



David Kelley
IDEO



Mindset: Specific Attitude in Dealing with Complex Problems

*"... we saw how excited the students became **doing the multidisciplinary thing** ...that's how the idea for the d.school came about.... I saw how powerful it was (for innovation) **to have multiple professors and students from different departments working together.**"*

David Kelley
IDEO



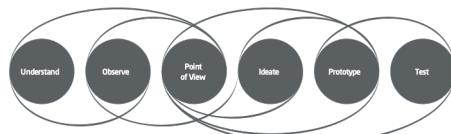
David Kelley: From Design to Design Thinking at Stanford and IDEO. Available from: https://www.researchgate.net/publication/306097249_David_Kelley_From_Design_to_Design_Thinking_at_Stanford_and_IDEO [accessed Jul 08 2020].

Evolution of Design Thinking

METHOD

Designer's Process
to create innovations

FORM FOLLOWS FUNCTION



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David Kelley
IDEO

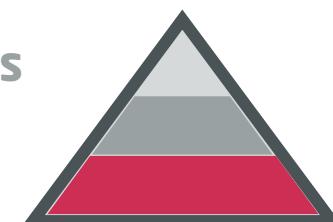


CULTURE

Strategic Principles
to grow an innovation culture



- CULTURE:**
- artefacts
 - values
 - beliefs



Culture: Strategic Principles to grow an Innovation Culture



"it's no longer just for products. Executives are using this approach to devise strategy and to manage change."

There's a shift under way in large organizations (...) it's about applying the principles of design thinking to the way people work (...) for developing a responsive, flexible organizational culture.

Design Thinking Practice Today

This is Design Thinking

Home Design Thinking Stories » What is Design Thinking? » Why this Site? »

Jul 07

IBM: Design Thinking Adaptation and Adoption at Scale

Jul 06

Building Trust with Prototypes: An IoT solution at Piller

Sep 26

Feeling in Control: Bank of America Helps Customers to "Keep the Change"

Jul 20

Building Risks Earning Trust Including Co-Workers: User Centred Design at Deutsche Bahn Operations

Recent Posts From Case Studies

IBM: Design Thinking Adaptation and Adoption at Scale

How IBM made sense of 'generic design thinking' for tens of thousands of people

Building Trust with Prototypes: An IoT solution at Piller

An IoT solution in the German Mittelstand? Small and medium-sized enterprises are the powerhouse of Germany's economy, but they often shy away from embedded systems technology. During an innovation cooperation with SAP's German SME department, a team from Piller Blowers & Compressors paved the

What is Design Thinking?

Design thinking is hard to grasp. Many discussions focus on finding a clear cut definition or core concept stating what it actually is.

This site takes a different stance: We look at what organizations are actually doing when they say, they practice it:
"This is their design thinking!"

Recent Videos

IBM: Design Thinking Adaptation and Adoption at Scale

Reinventing Solar Energy Supply for Rural Africa

Extreme Bathroom Users: Lapeyre Embraces the Elderly

How an Improved Food Service Creates a Better Life Quality for Elderly People

Latest Buzz on Design Thinking

The future must be different from the past: embracing an anti-racist agenda

Two ID alumni are shaping the future of autonomous driving at Waymo

Adithya Ravi on a poetic approach to design

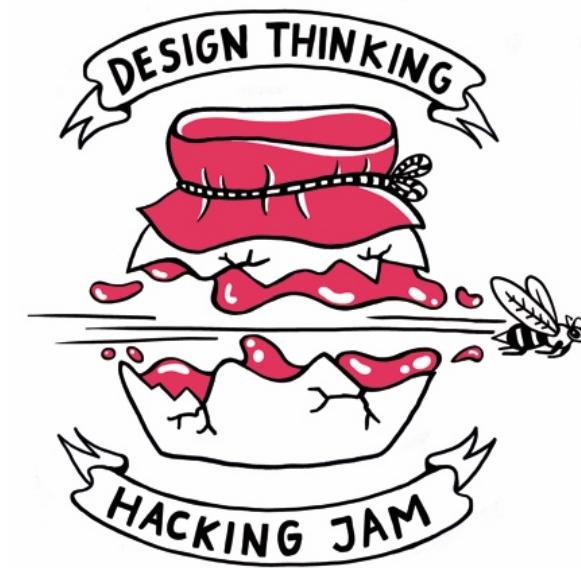
Our Top Authors

<https://thisisdesignthinking.net>

Strategic Design Thinking For Every Day Online Course | www.hpi-academy.de

HPI Hasso Plattner Institut
HPI Academy • Education for Professionals

The Design Thinking Hacking Jam



A space where practitioners share how they applied Design Thinking to overcome system-immanent constraints.

Hacking Design Thinking

What is a Hack?

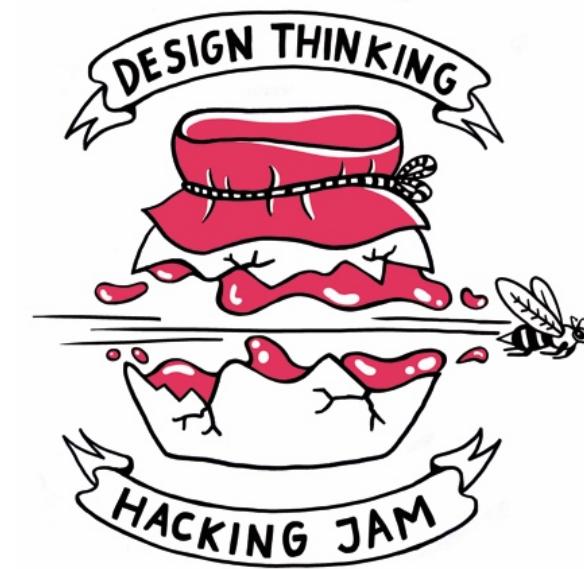
"an inelegant but effective solution to a specific computing problem"...

A hacker is any skilled computer expert who uses their technical knowledge to overcome a problem."



>>> Design Thinking Hacks are small interventions that use principles with high leverage effect on everyday challenges.

Hacking Design Thinking



Your Learning Goal:

**Using Design Thinking to
unlock and nurture your
innovation capacity. Every
day**

How?

**...by diving into what's
under the visible part of the
iceberg.**

Let's talk about...

Methods & Tools, Mindset, Principles and Practices of Design Thinking.

Methods & Tools

INTERVIEW



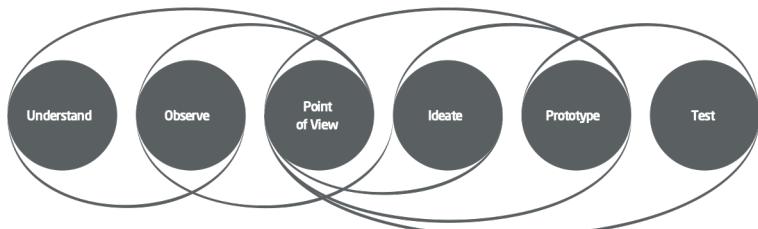
PROTOTYPE



TIME TIMER



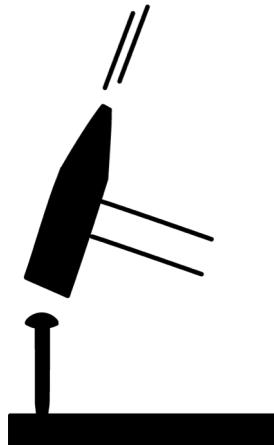
Design Thinking PROCESS



Methods and tools are the concrete **procedures and artefacts that you use** when carrying out a task with a specific goal.

Methods & Tools

Using a tool, following a method:
A hammer for knocking in a nail



Methods & Tools

INTERVIEW



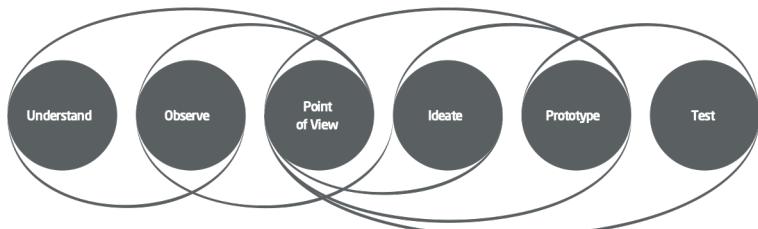
PROTOTYPE



TIME TIMER

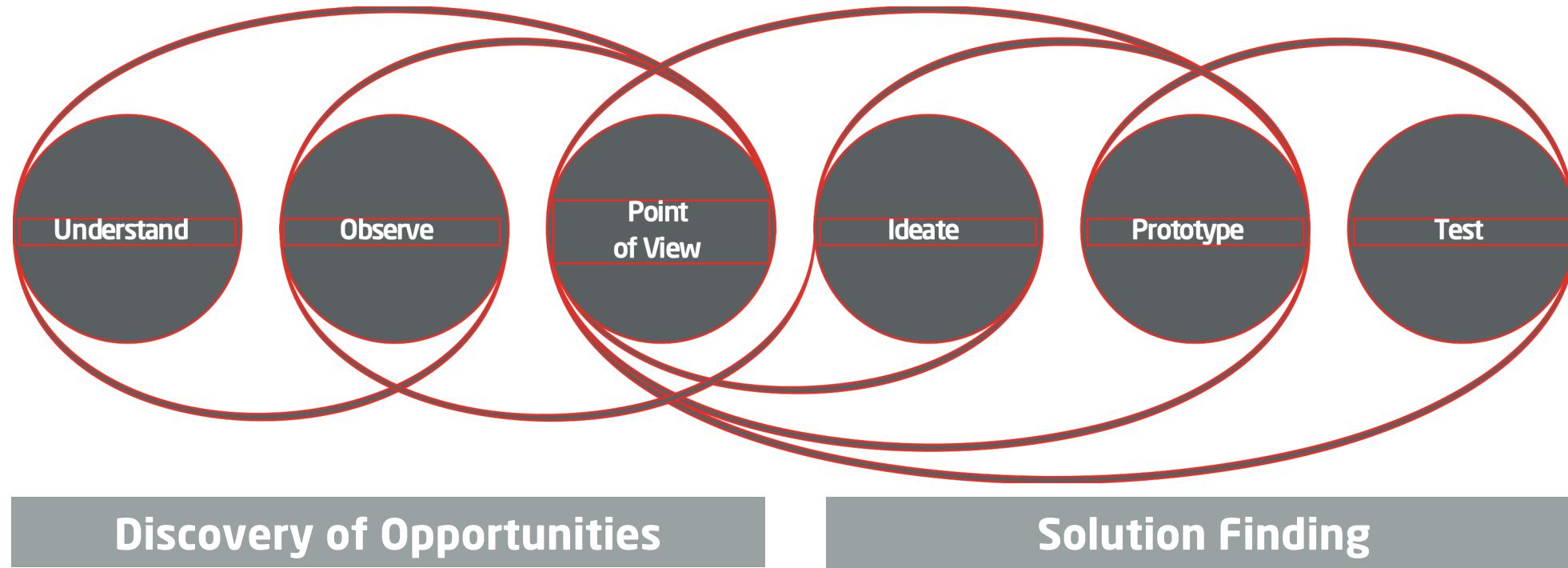


Design Thinking PROCESS

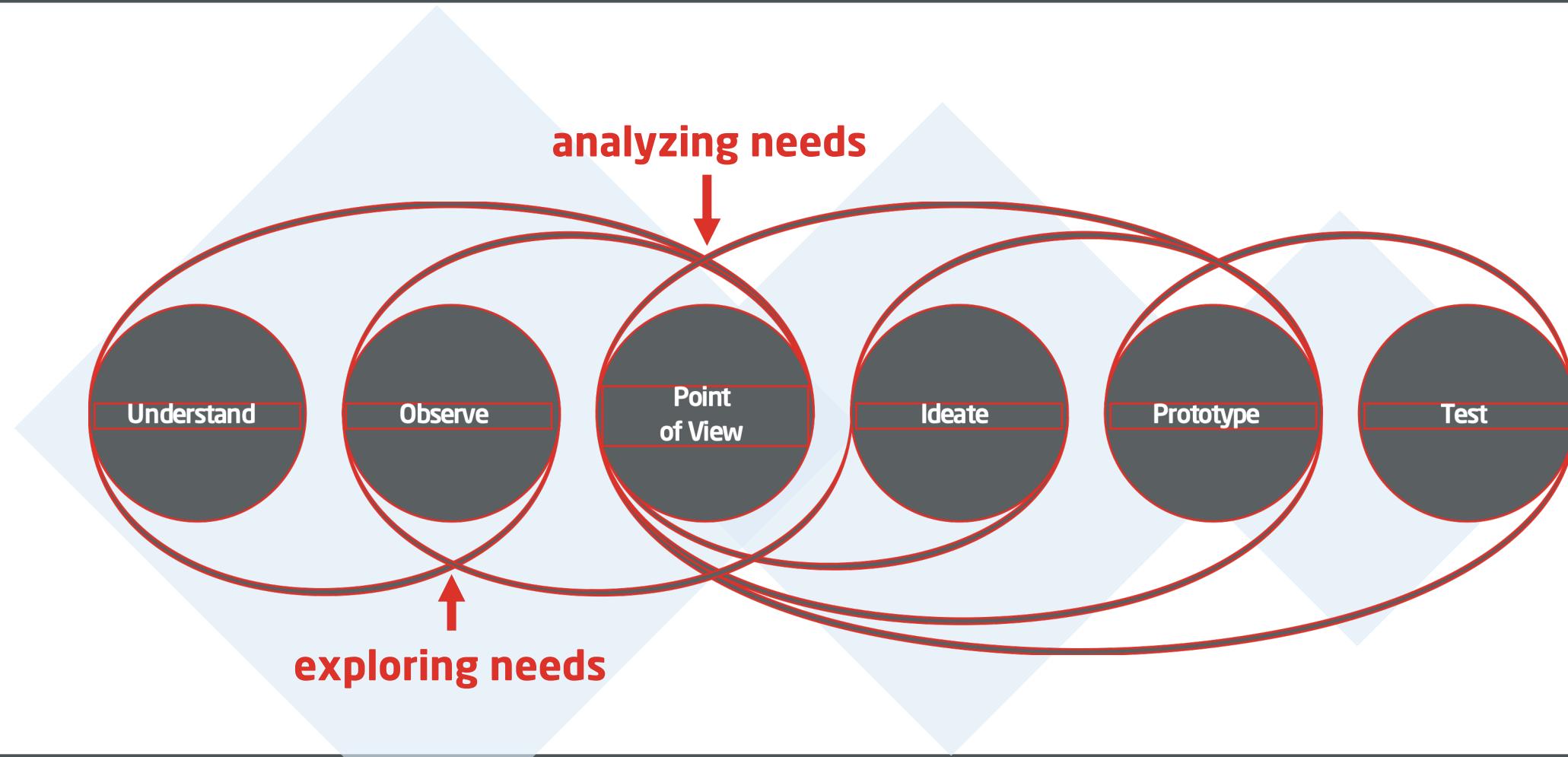


Methods and tools are the concrete **procedures and artefacts that you use** when carrying out a task with a specific goal.

The Design Thinking Process: Discovery and Solution Finding in Loops



The Design Thinking Process: Diverge - Converge



Strategic Design Thinking

Methods & Tools

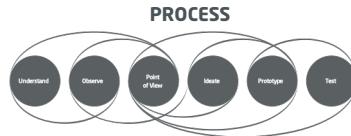
INTERVIEW



TIME TIMER



PROTOTYPE



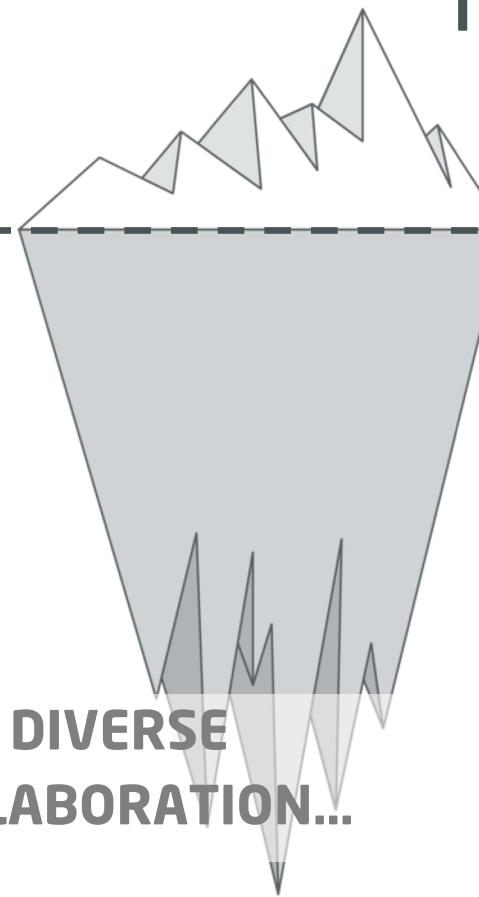
Principles

Mindset:

HUMAN
CENTEREDNESS ...

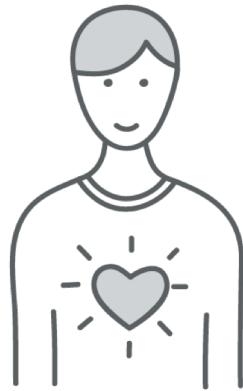
DIVERSE
COLLABORATION...

The Typical Perception

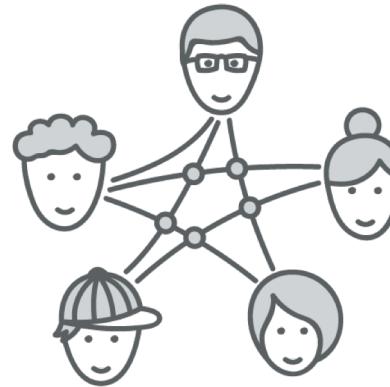


LEARNING THROUGH
EXPERIMENTATION...

Basic Design Thinking Mindset Elements



**HUMAN
CENTEREDNESS**



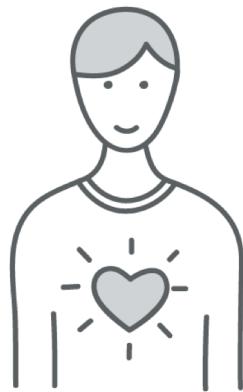
**DIVERSE
COLLABORATION**



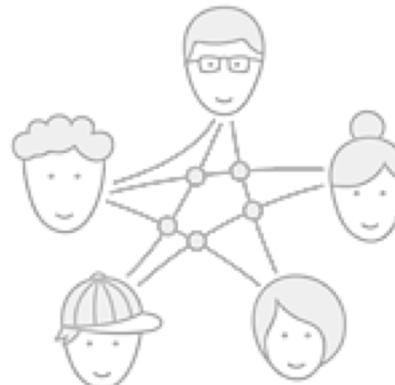
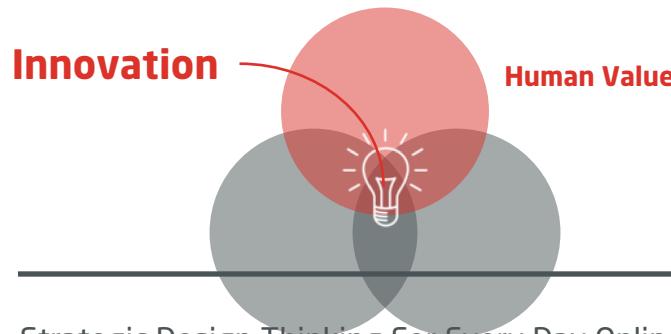
**LEARNING THROUGH
EXPERIMENTATION**

Mindset: a set of values that fuels your motivation and guides your behavior

Basic Design Thinking Mindset Elements



**HUMAN
CENTEREDNESS**

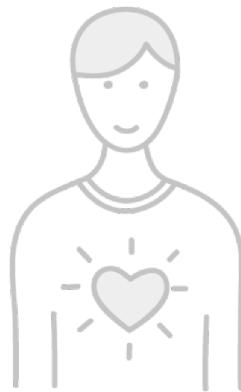


**DIVERSE
COLLABORATION**

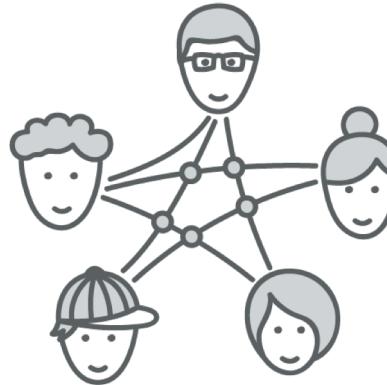


**LEARNING THROUGH
EXPERIMENTATION**

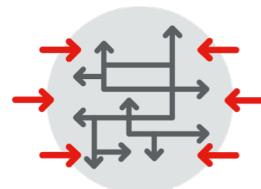
Basic Design Thinking Mindset Elements



HUMAN
CENTEREDNESS



DIVERSE
COLLABORATION

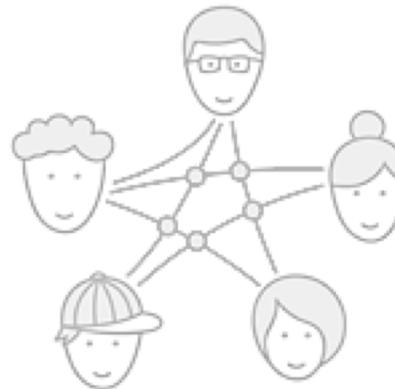


LEARNING THROUGH
EXPERIMENTATION

Basic Design Thinking Mindset Elements



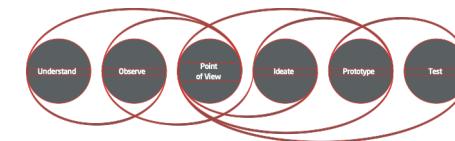
**HUMAN
CENTEREDNESS**



**DIVERSE
COLLABORATION**



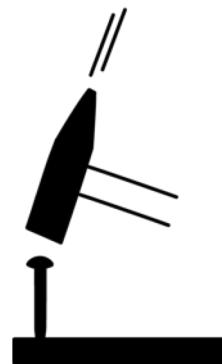
**LEARNING THROUGH
EXPERIMENTATION**



Tool & Methods vs. Mindset

Using a tool, following a method:

A hammer for knocking in a nail



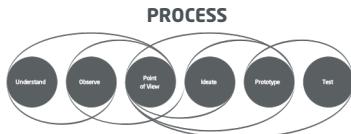
Being guided by a mindset:

Attitude of doing things yourself - rather than buying them.



Strategic Design Thinking

Methods & Tools



The Typical Perception

Principles

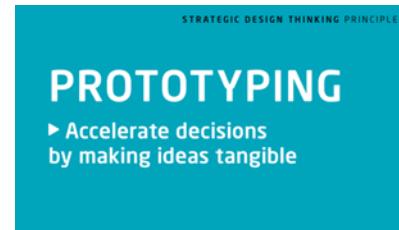


Mindset:
**HUMAN
CENTEREDNESS ...**

**DIVERSE
COLLABORATION...**

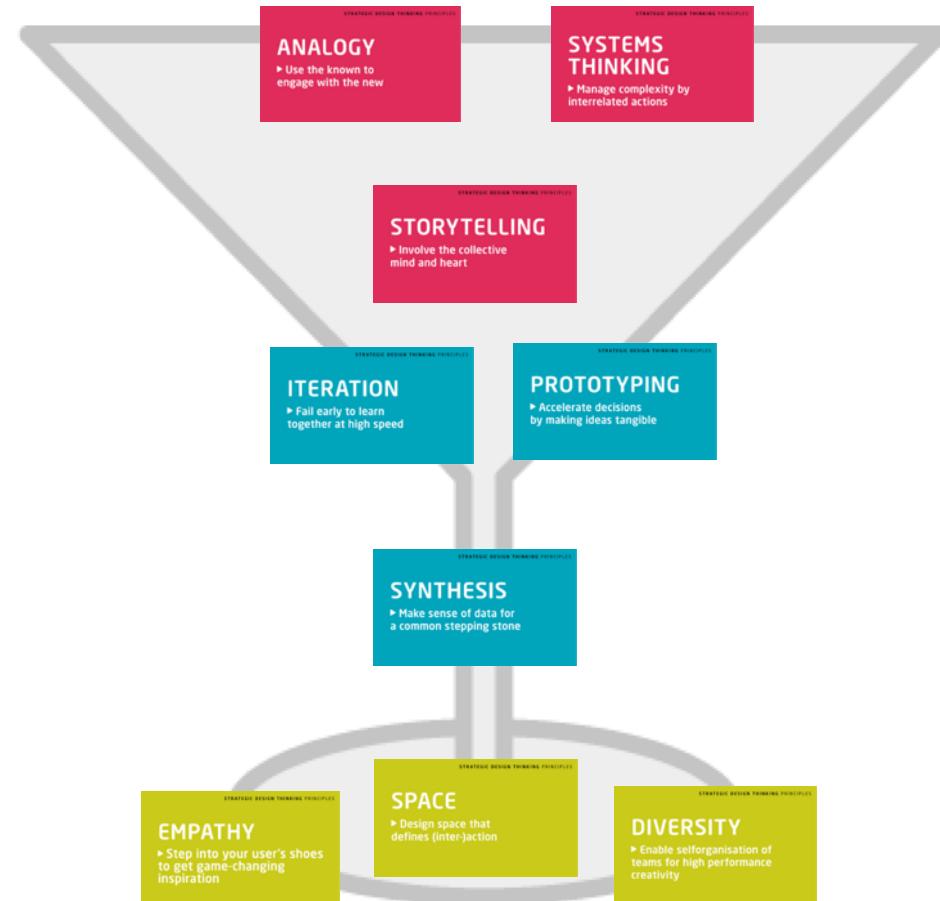
**LEARNING THROUGH
EXPERIMENTATION...**

Design Thinking Principles



PRINCIPLES: concrete rules and actionable guidelines to application

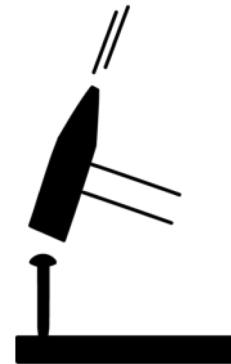
A Cocktail of Intelligence



Method & Tools vs. Principles

Using a tool, following a method:

A hammer for knocking in a nail



Applying a principle:

Use Hard & heavy things to amplify the impact of energy.



The tool-engineer:

„If you don't have a tool, you can't do it.“

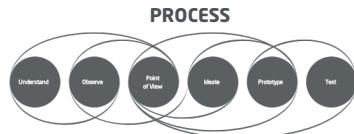
The Design Thinker:

„If you don't have a tool, apply the principle and use existing resources.“

Strategic Design Thinking.

Strategic Design Thinking

Methods & Tools



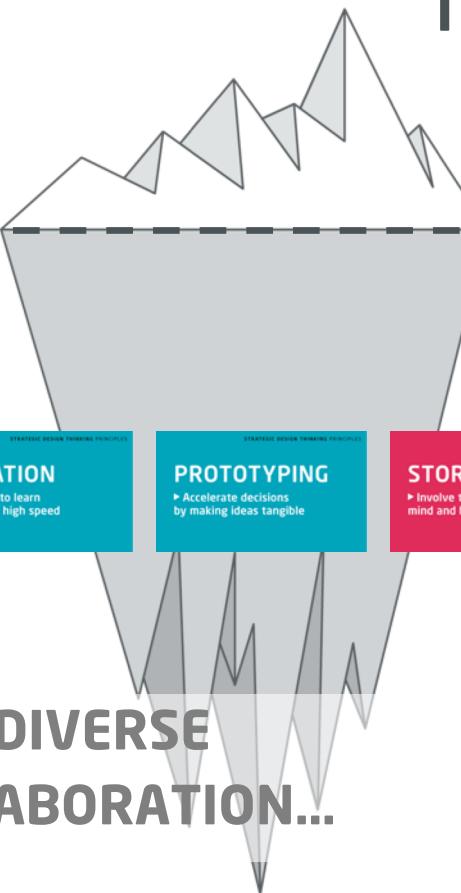
Principles: concrete rules and actionable guidelines to application



Mindset:
HUMAN
CENTEREDNESS ...

DIVERSE
COLLABORATION...

The Typical Perception



LEARNING THROUGH
EXPERIMENTATION...

Design Thinking Principles: your Key to go from Attitude to Action

STRATEGIC DESIGN THINKING PRINCIPLES
SPACE
► Design space that defines (inter-)action

STRATEGIC DESIGN THINKING PRINCIPLES
DIVERSITY
► Enable selforganisation of teams for high performance creativity

STRATEGIC DESIGN THINKING PRINCIPLES
EMPATHY
► Step into your user's shoes to get game-changing inspiration

STRATEGIC DESIGN THINKING PRINCIPLES
SYNTHESIS
► Make sense of data for a common stepping stone

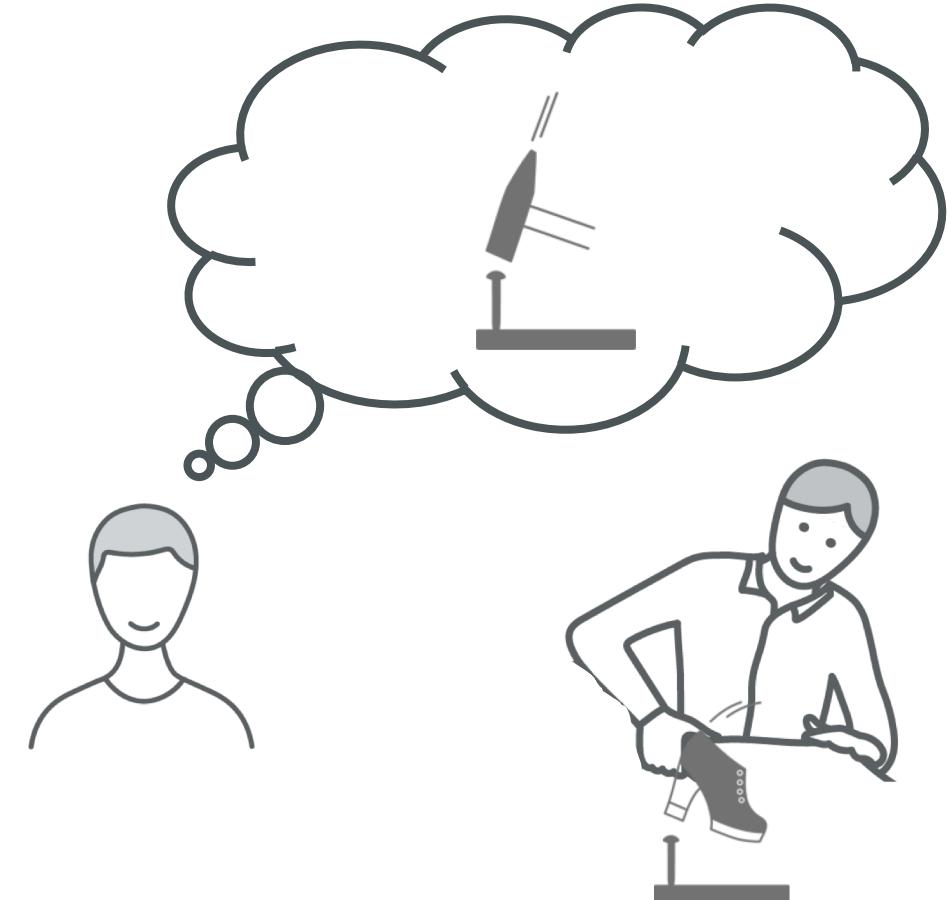
STRATEGIC DESIGN THINKING PRINCIPLES
ITERATION
► Fail early to learn together at high speed

STRATEGIC DESIGN THINKING PRINCIPLES
PROTOTYPING
► Accelerate decisions by making ideas tangible

STRATEGIC DESIGN THINKING PRINCIPLES
STORYTELLING
► Involve the collective mind and heart

STRATEGIC DESIGN THINKING PRINCIPLES
ANALOGY
► Use the known to engage with the new

STRATEGIC DESIGN THINKING PRINCIPLES
SYSTEMS THINKING
► Manage complexity by interrelated actions



Strategic Design Thinking for Every Day



HUMAN NEEDS AS INNOVATION SOURCE

Module 1

EMPATHY

- ▶ Step into your user's shoes to get game-changing inspiration

Module 2

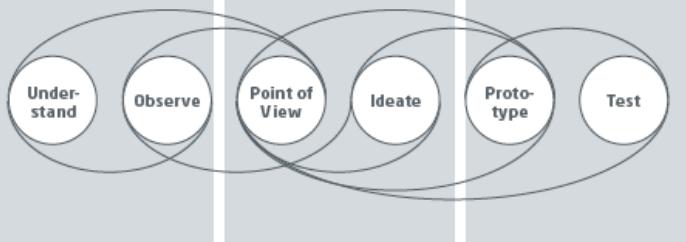
PROTOTYPING

- ▶ Accelerate decisions by making ideas tangible

Module 3

SYSTEMS THINKING

- ▶ Manage complexity by interrelated actions



MULTIPERSPECTIVITY AS INNOVATION AMPLIFIER

Module 4

DIVERSITY

- ▶ Enable selforganisation of teams for high performance creativity

Module 5

SYNTHESIS

- ▶ Make sense of data for a common stepping stone

Module 6

ANALOGY

- ▶ Use the known to engage with the new

Module 7

SPACE

- ▶ Design space that defines (inter-)action

Module 8

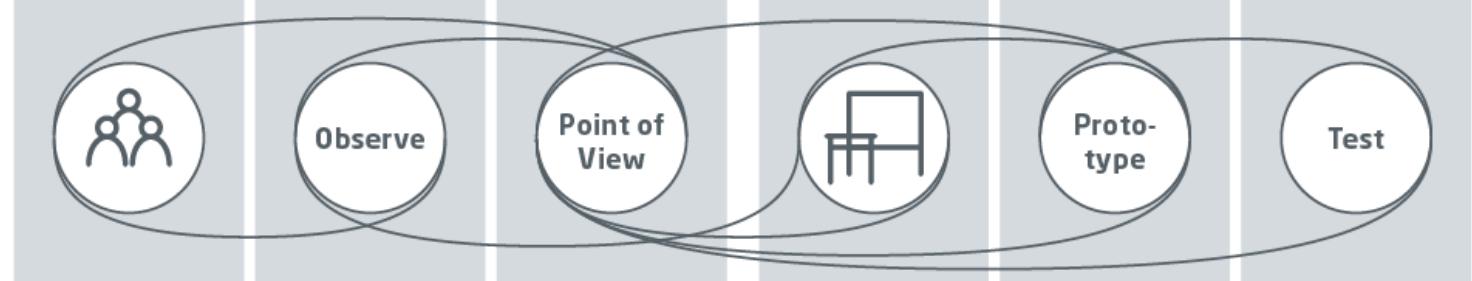
ITERATION

- ▶ Fall early to learn together at high speed

Module 9

STORYTELLING

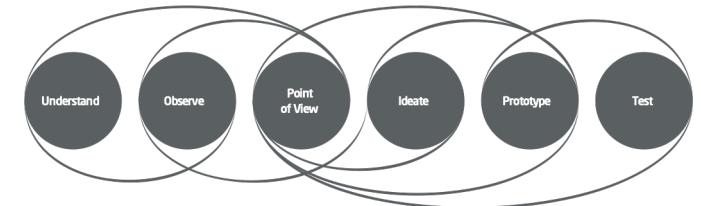
- ▶ Involve the collective mind and heart



Two ways of training - that you can combine.

1. WORK ON THE COURSE CHALLENGE

Re-Design the Learning Experience
in a world where schools do not exist.



2. WORK ON SINGLE DESIGN THINKING HACKS INSPIRED BY PRINCIPLES



The Course Design Challenge:

**Re-Design the
Learning Experience**
in a world where
schools do not exist.

3 Criteria of a Design Challenge

concrete



**Re-Design the
Learning Experience**
in a world where
schools do not exist.

**user-
experience**



solution not pre-defined

So let's get practical.



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