Design Thinking

Diamonds are forever
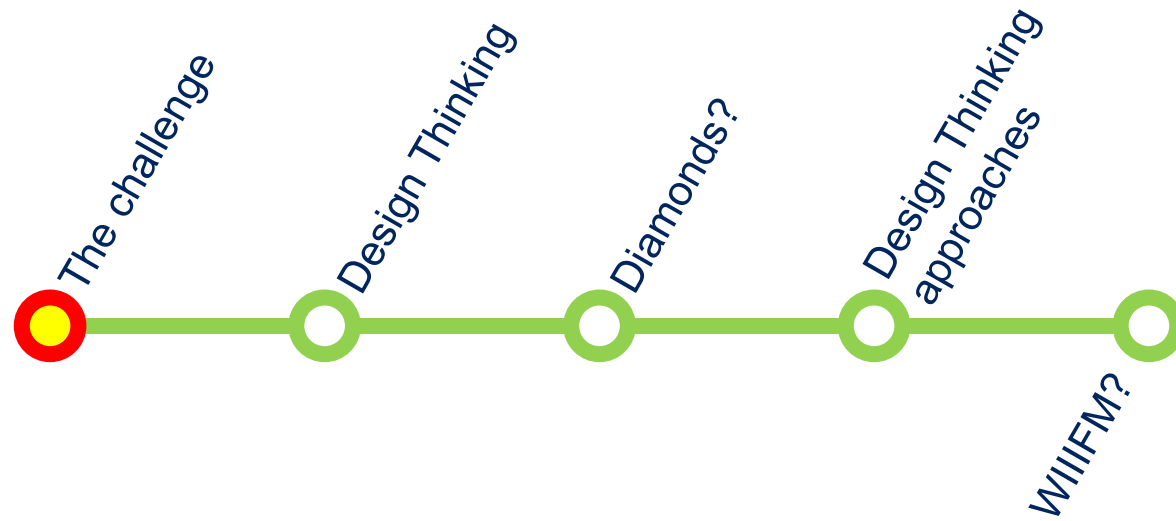
Pleased to meet you

Hans van Loenhoud

IREB International Requirements Engineering Board®

Amsterdam University of Applied Sciences

Taraxacum

Route

Taxi!

Pixabay

Wikimedia
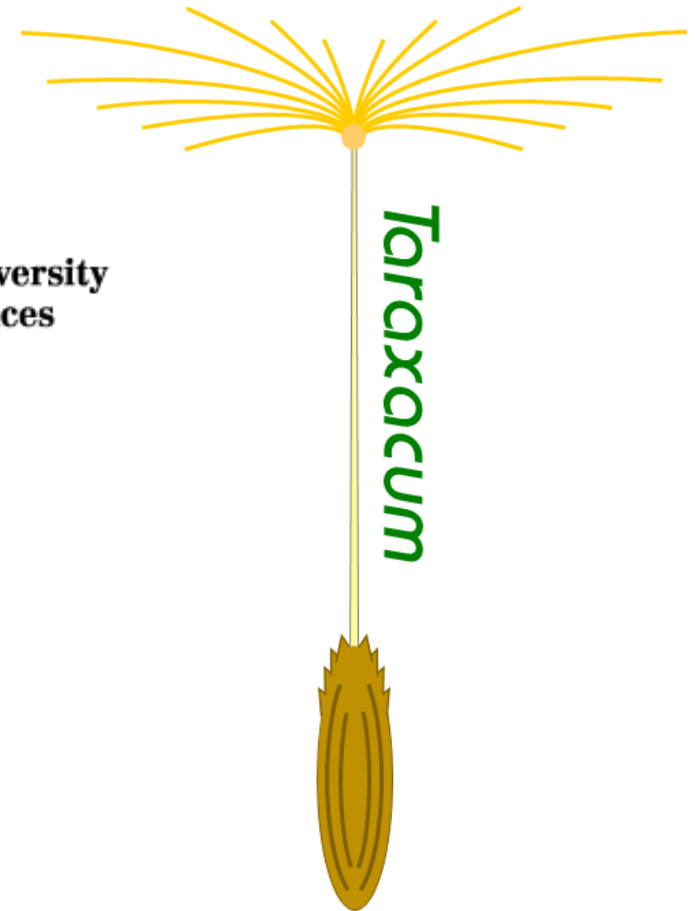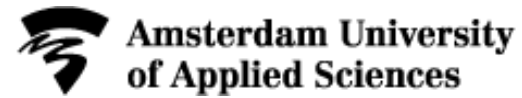
Users don't know what they want

- Research shows that only 20% of the 'real' requirements are mentioned by the stakeholders

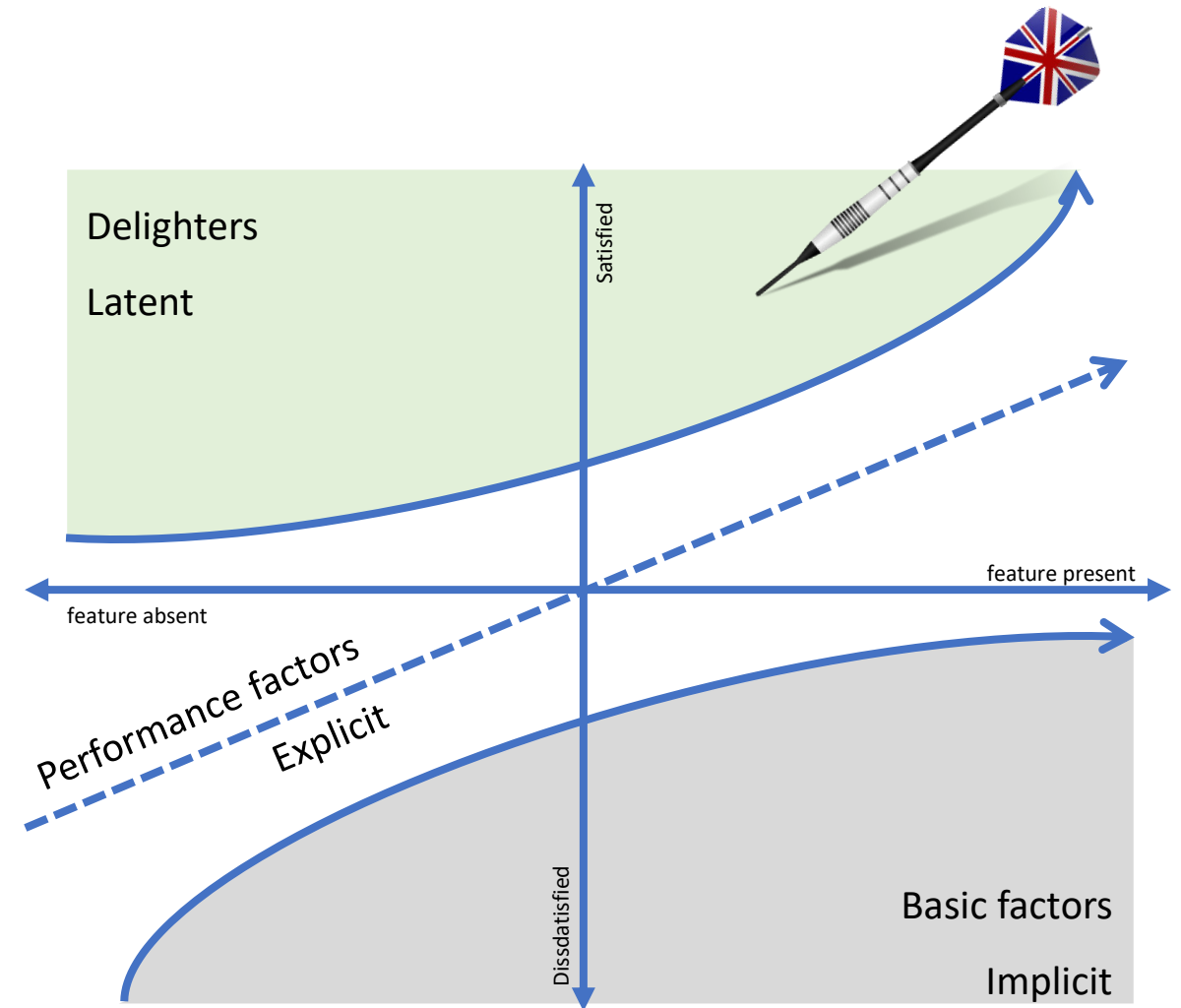# 3 Types of Requirements

- **Explicit** requirements
  - Asked by users

- **Implicit** requirements
  - Self-evident for users

- **Latent** requirements
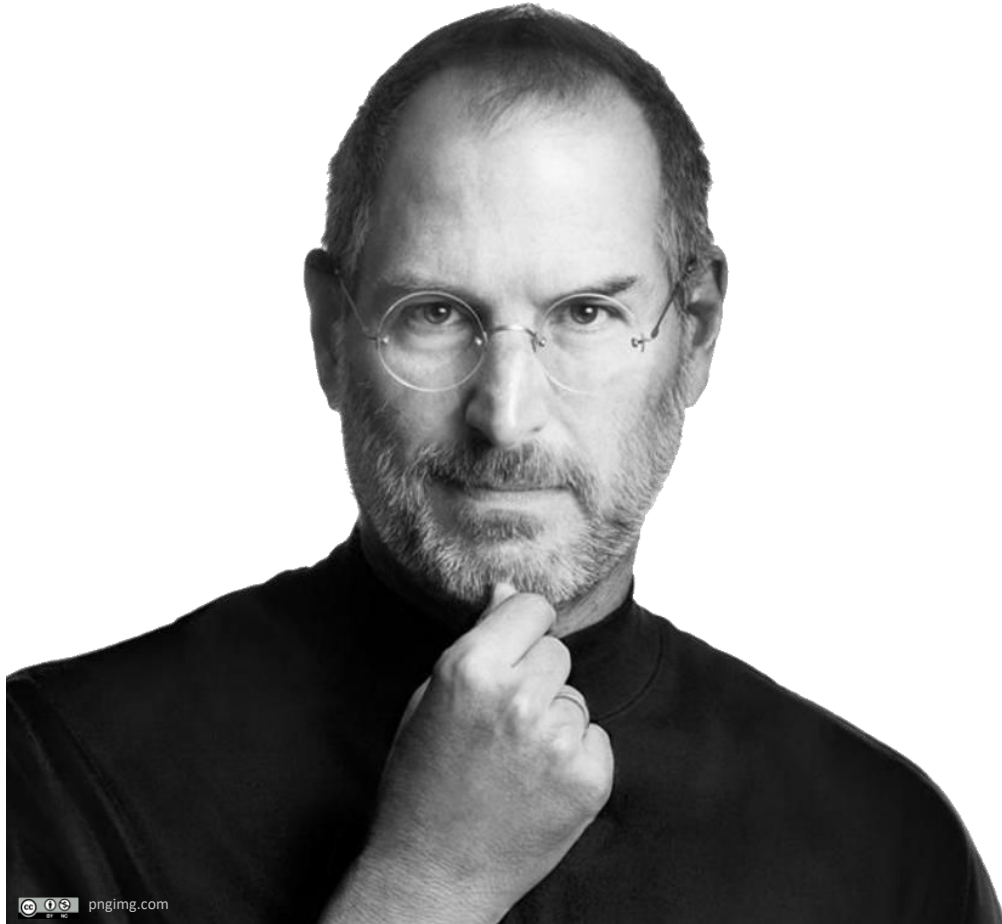 - Unaware users,
    but exited when present

Looking for Kano

Prof. Dr. Noriaki Kano (1940)

Delighters

Latent

Satisfied

feature absent

feature present

Performance factors

Explicit

Dissdatisfied

Basic factors
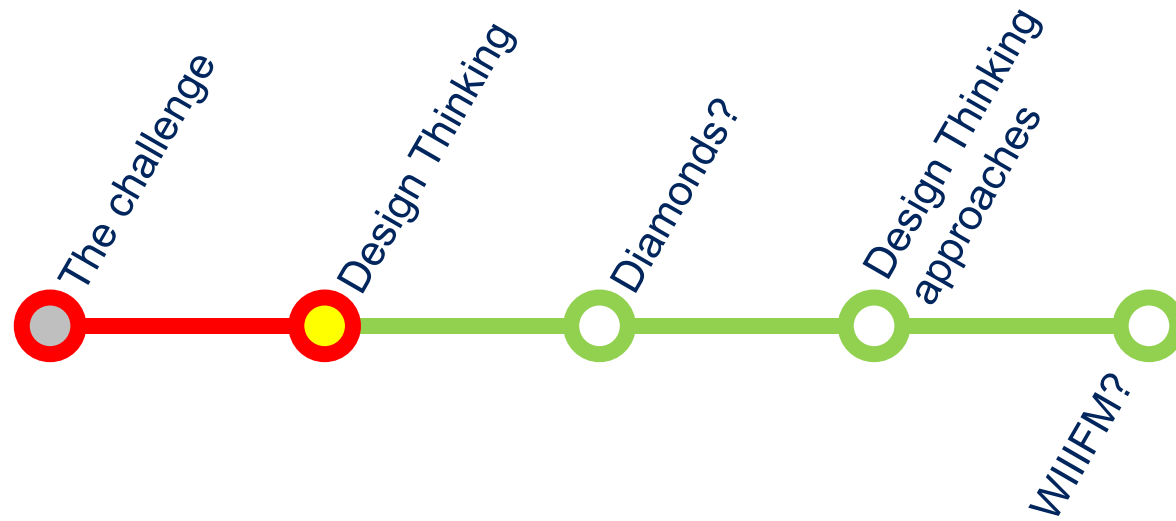
Implicit

Source excellencesummit.se

Steve Jobs on Design

Steve Jobs (1955 - 2011)

- Design is not just what it looks like. Design is how it works.

- The broader one's understanding of the human experience, the better design we will have.

- Most important, have the courage to follow your heart and intuition.

Route

Design Thinking?

- A method

- An approach

- A culture

- A mindset

Quite a lot of variant definitions can be found

What in common?

- Human-centered
- Empathy is key

In common

- For 'wicked, ill-defined' problems

- For innovation

In common

- No early commitment to a single solution
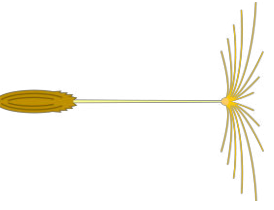
In common

- Customer co-creation

In common

- Frequent / early feedback
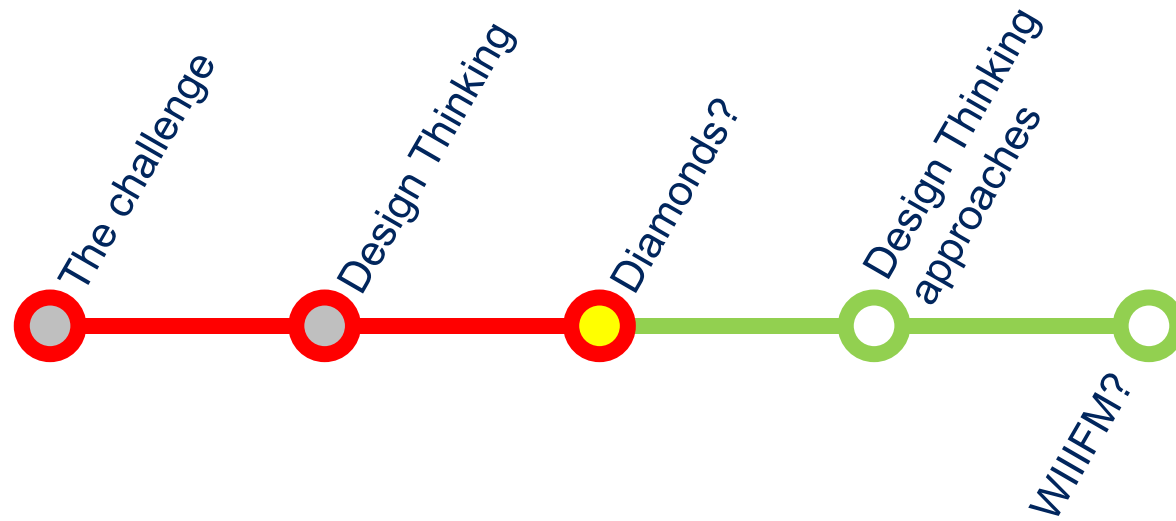- Prototyping
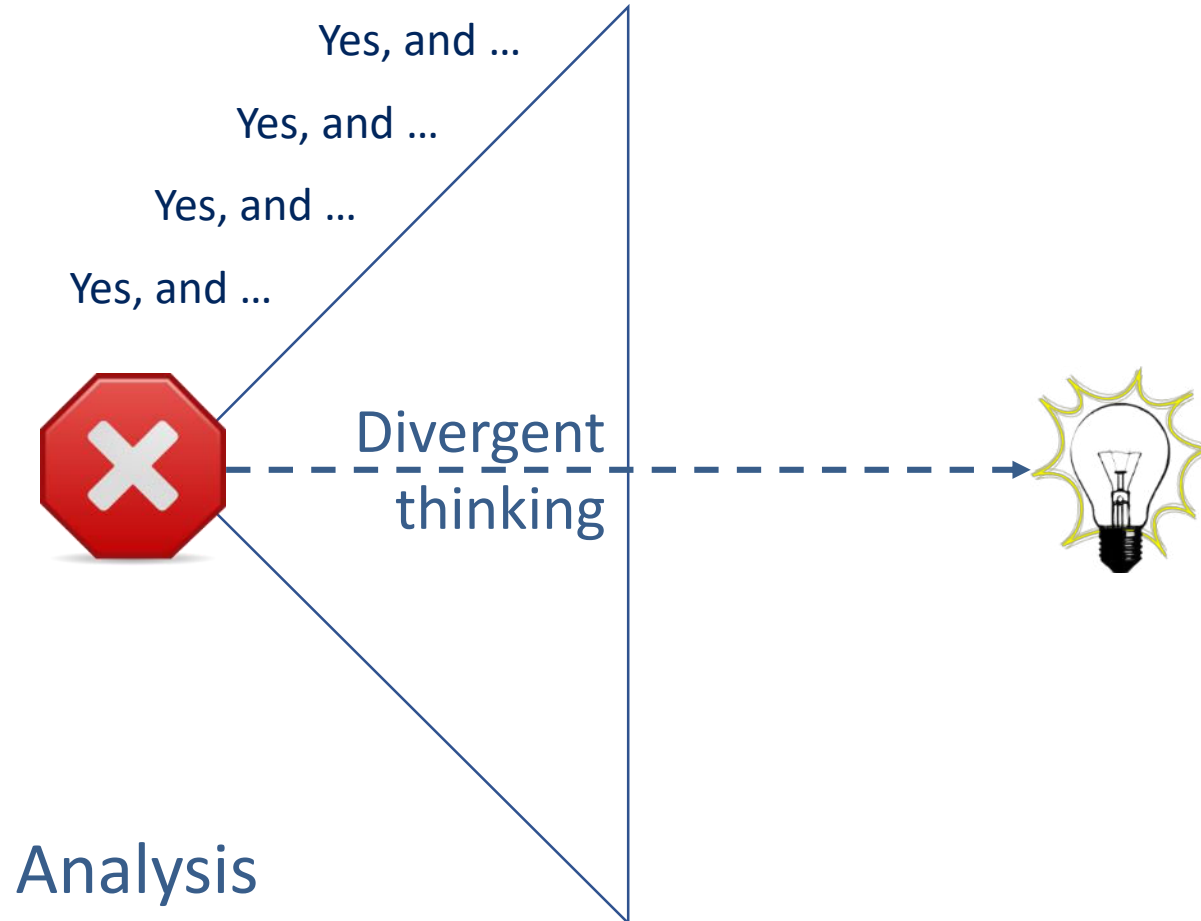- A/B testing

In common

- Diamonds

Route

From problem to solution

Start with divergent thinking

Yes, and …

Yes, and …

Yes, and …

Yes, and …

Divergent thinking

Analysis

Then focus on a solution

Yes, and …   Yes, we can …

Yes, and …   Yes, we can …

Yes, and …   Yes, we can …

Yes, and …   Yes, we can …

Divergent | Convergent
thinking | thinking

Analysis   Synthesis
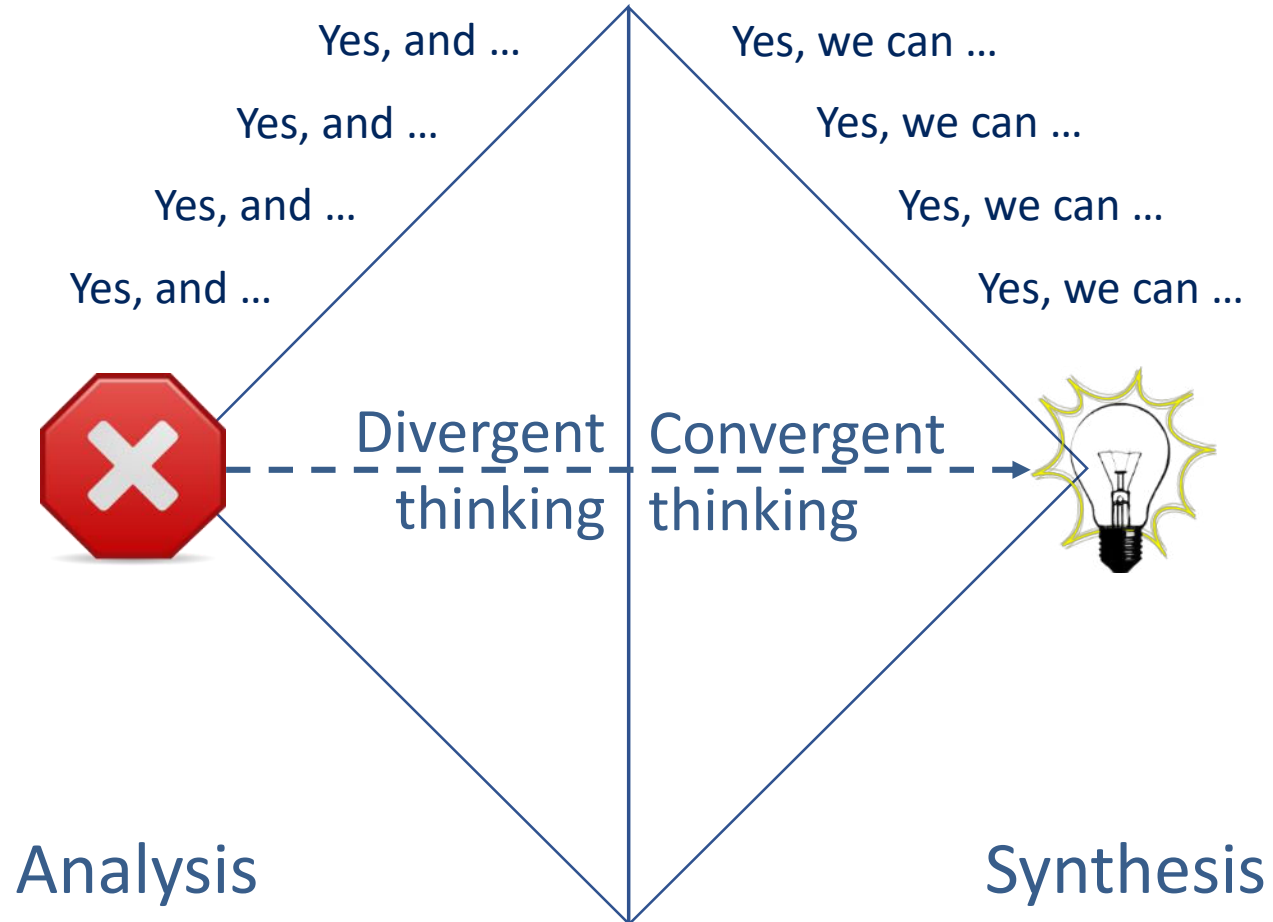
Here's your diamond

Analysis   Synthesis
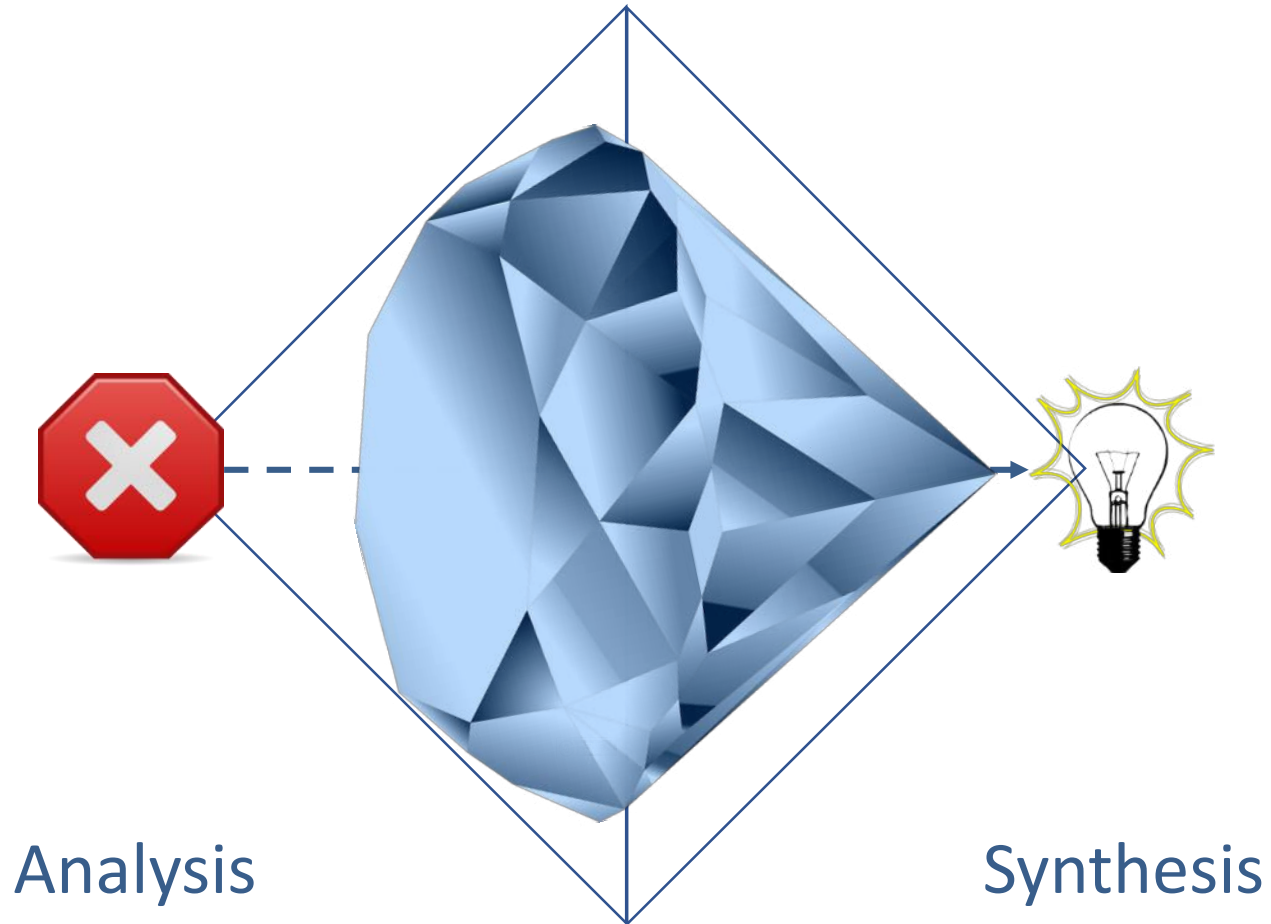
Traditional development

Idea

Solution

Design Thinking
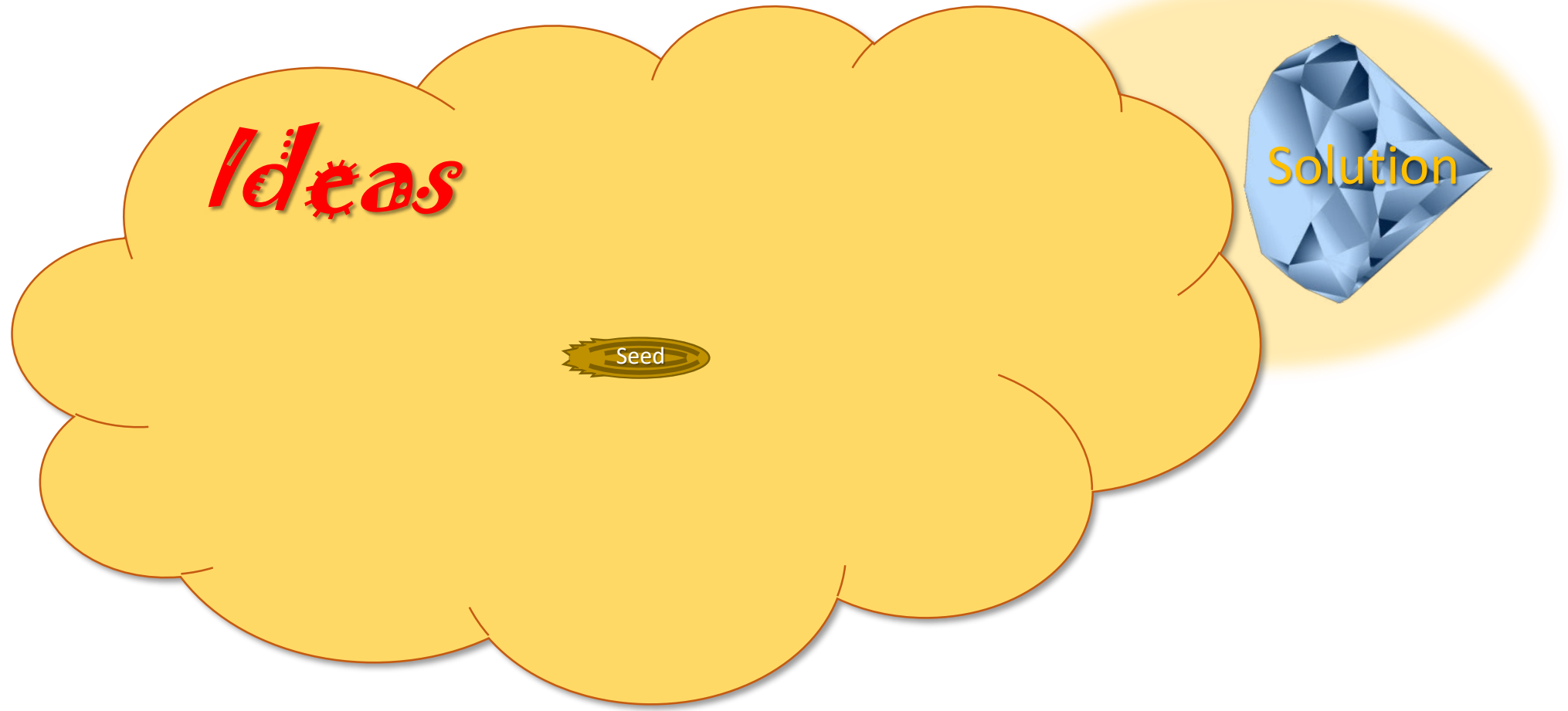
Route
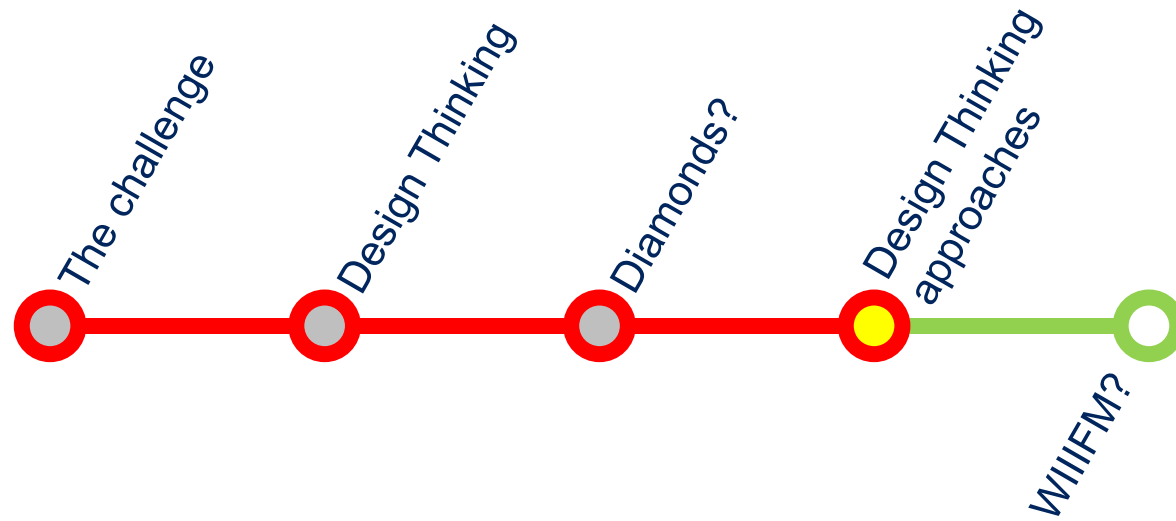
Three amigos

- Double Diamond

- Stanford d.school

- Designing for Growth

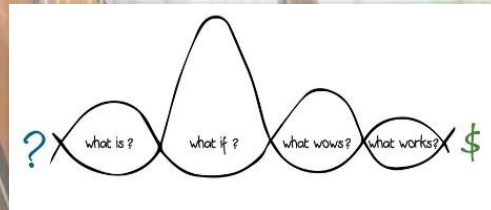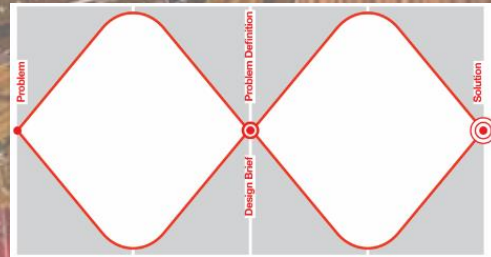# The Double Diamond

- Developed by the Design Council
  - A British independent charity organization and government's advisor on design
  - Established in 1944

- 25 design methods into 4 steps
  - Discover
  - Define
  - Develop
  - Deliver

Discover — insight into the problem
Define — the area to focus upon
Develop — potential solutions
Deliver — solutions that work

Problem

Problem Definition

Design Brief

Solution

Source www.designcouncil.org.uk
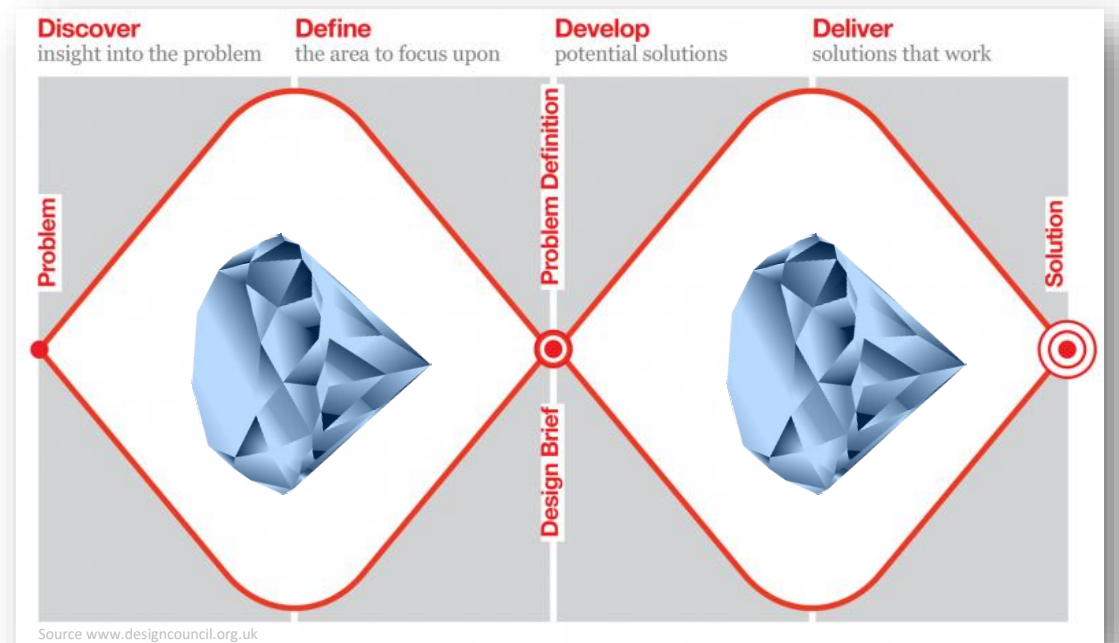
Don't solve the wrong problem

Discover
insight into the problem

Define
the area to focus upon

Develop
potential solutions

Deliver
solutions that work

Problem

Problem Definition

Design Brief

Solution

- Look at the world in a fresh way
- Notice new things
- Gather insights

- Make sense of possibilities
- Develop a clear creative brief
- Frame fundamental design challenge

- Concepts created, prototyped, tested, iterated
- Trial and error
- Improve and refine ideas

- Resulting project finalized, produced, launched
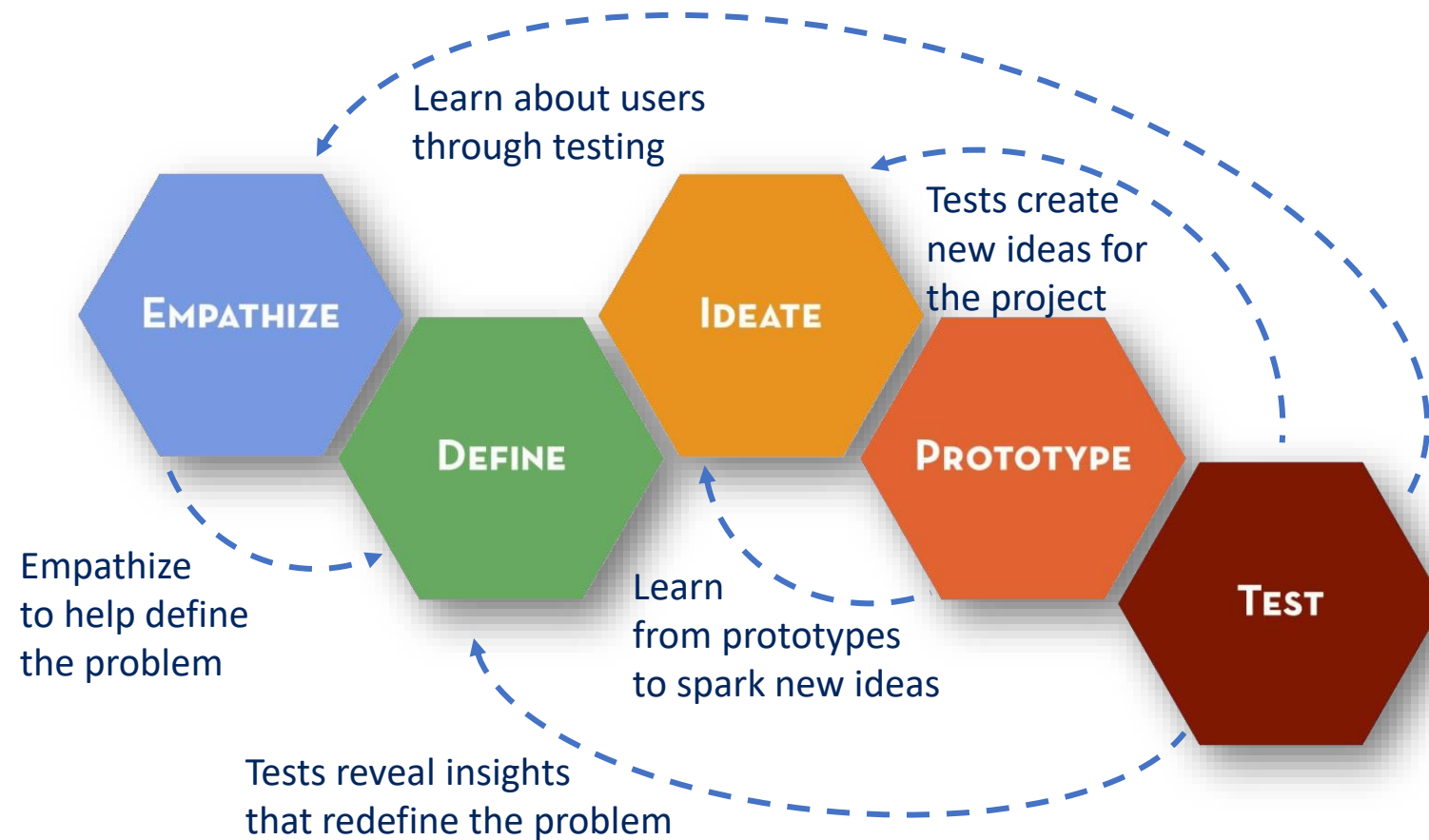
Source www.designcouncil.org.uk

Stanford d.school

- Developed from 2003 by the Hasso Plattner Institute for Design at Stanford University

- 30+ design methods into 5 steps
  - Empathize
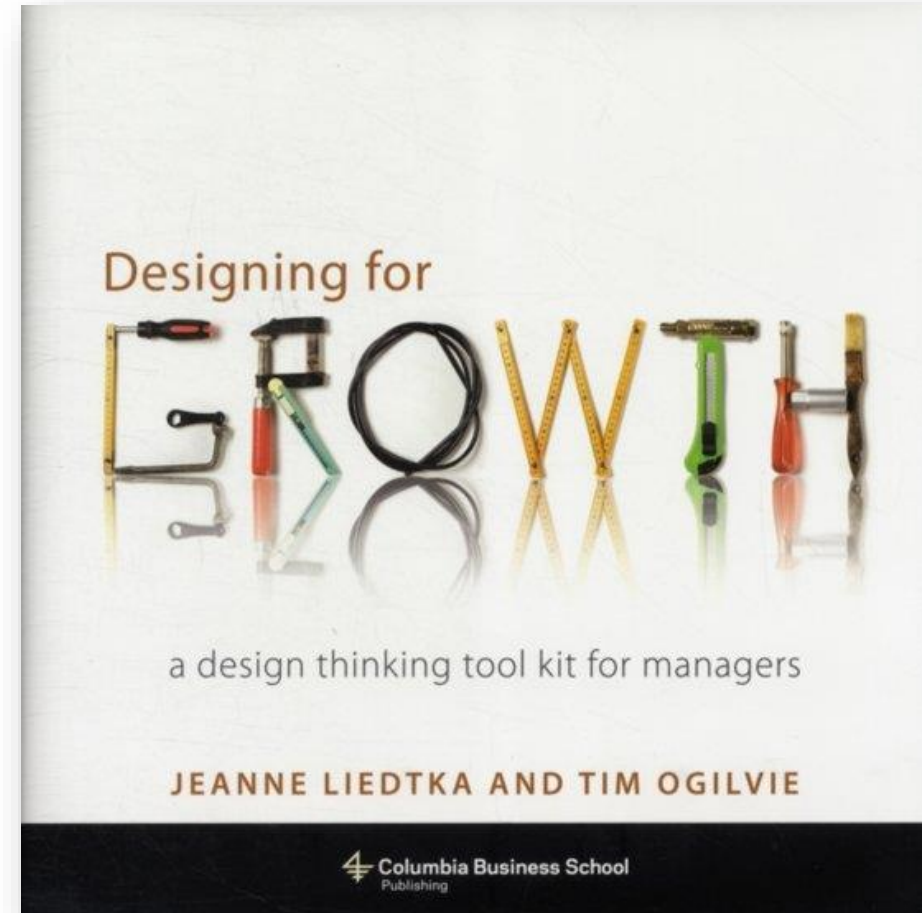 - Define
  - Ideate
  - Prototype
  - Test

d. Hasso Plattner Institute of Design at Stanford
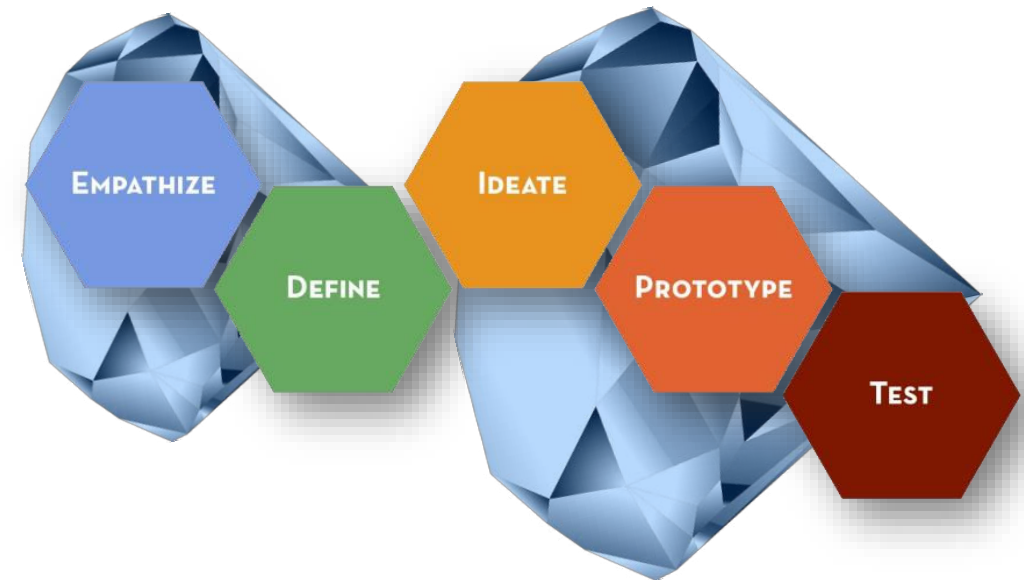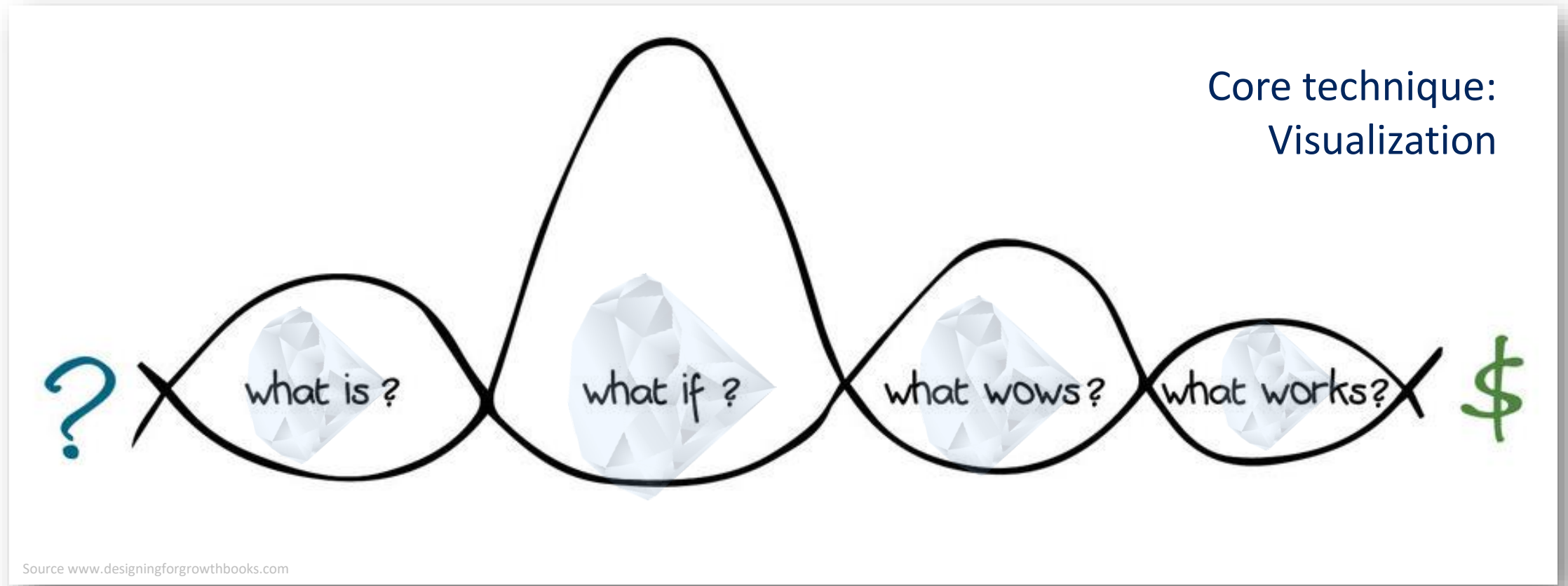
"Fail faster to succeed sooner"

A non-linear process

Designing for Growth
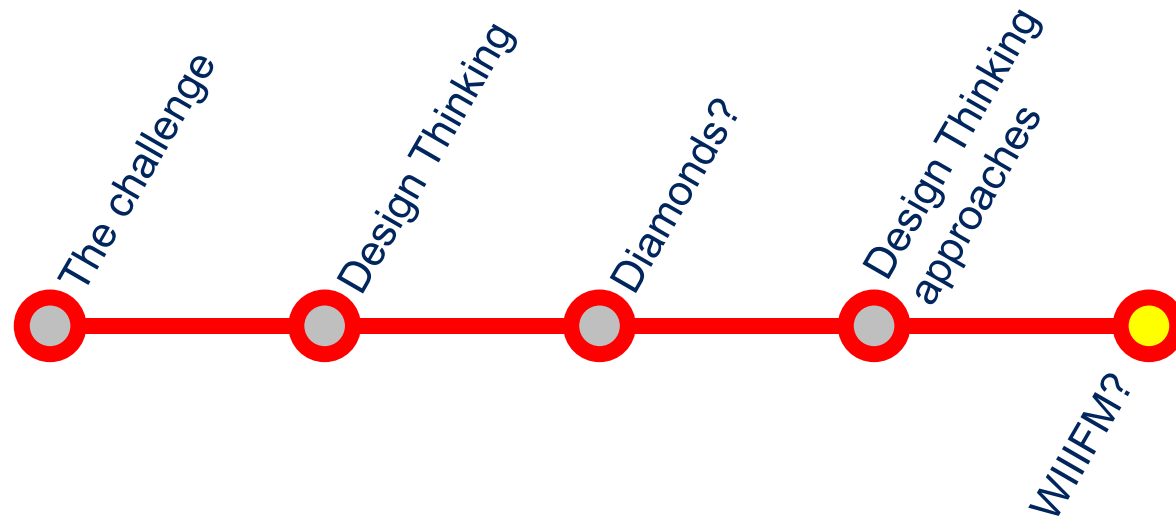
- Book by Liedtka & Ogilvie (2011)
- 10 design methods into 4 steps
  - What is?
  - What if?
  - What wows?
  - What works?

Abstract ideas ⇨ practice ⇨ business growth

Core technique:
Visualization

? what is? what if? what wows? what works? $

Source www.designingforgrowthbooks.com

Route

What Is In It For Me?

- For designers only?

- For development only?

- For special innovative projects only?

- No!
  Every team member can and should try to apply both divergent and convergent thinking

- No!
  Every phase in the lifecycle can and should benefit from Design Thinking concepts

- No!
 Every project can and should try to exceed customer's expectations

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Pixabay

But I'm a **tester**…

- **Divergent thinking** concepts can and should be exercised in test design, e.g.
  - Empathy
  - 'Wicked, ill-defined' problems
  - Customer co-creation
  - Early feedback
  - …

- **Convergent thinking** relies on testing skills, like
  - Benefit & risk analysis
  - Reviewing
  - Root cause analysis
  - Prioritizing
  - Clustering
  - …
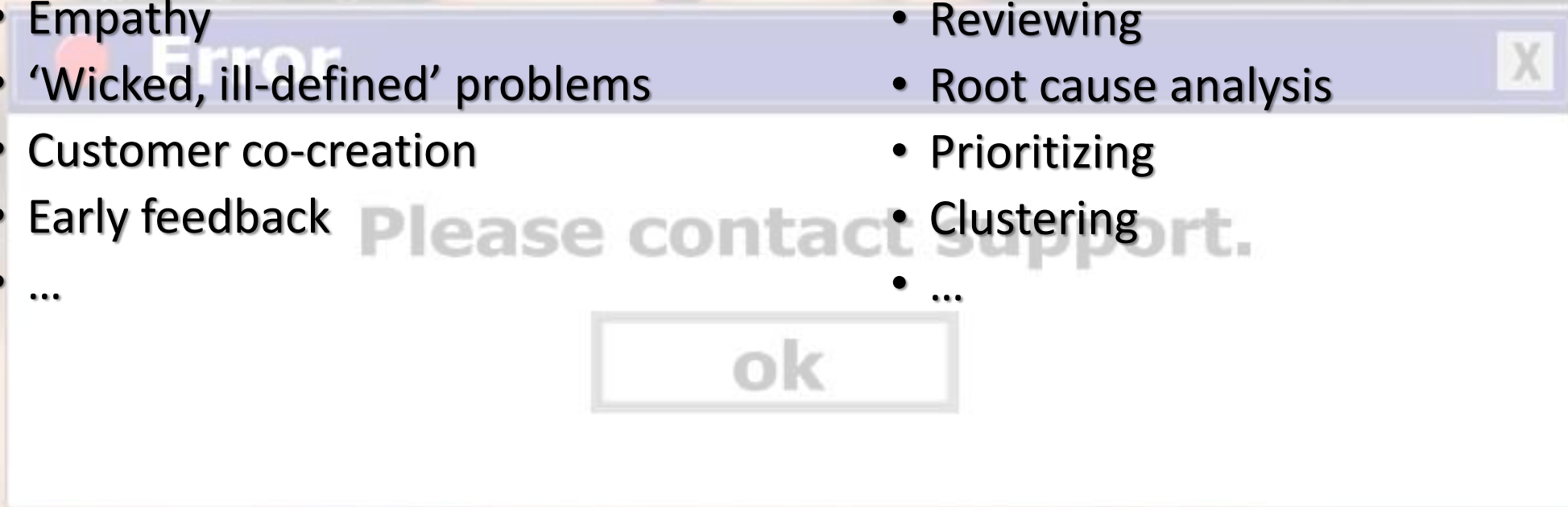
Désormais, je vais …

- … look for opportunities to improve my empathy with our users
- … explore the whole problem space while designing test cases
- … seek earlier feedback on the System Under Test
- … and on my test cases
- … present Low Fidelity prototypes whenever I can
- … consider failure as the best way to learn and to improve
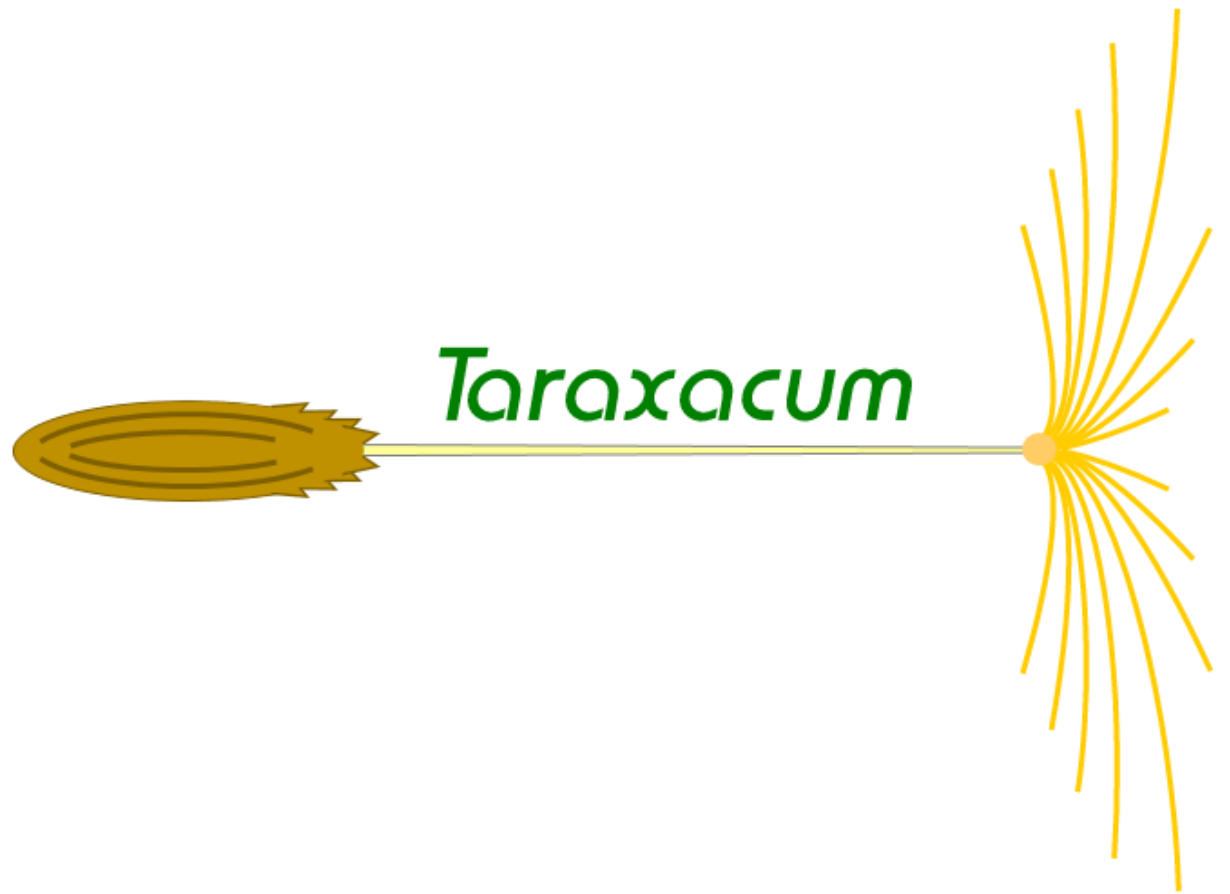
Taraxacum

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🌍 www.taraxacum.nl