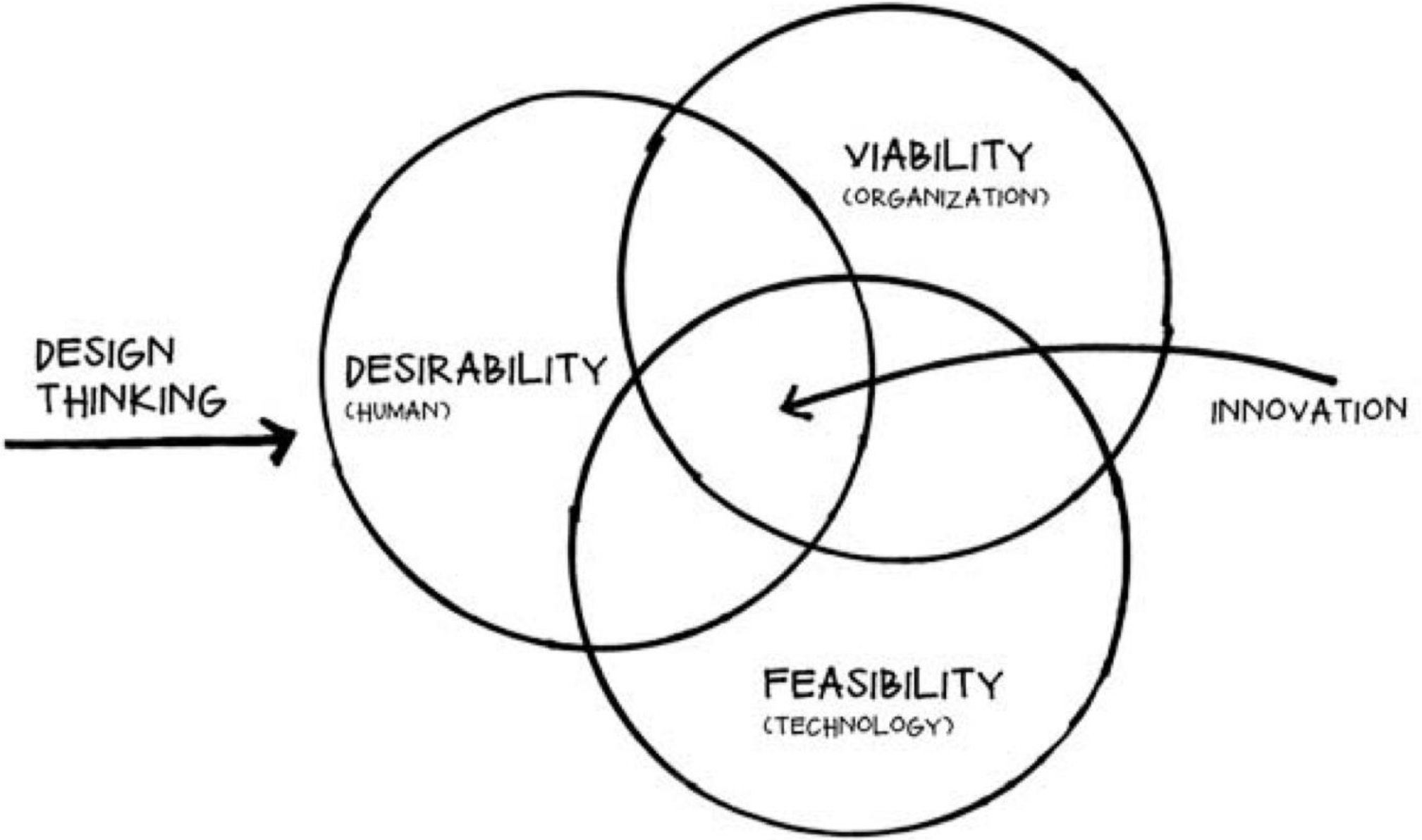
Design Thinking 101

Analysing user insight, choosing a focus, brainstorming

Design Thinking

A bit of recap..


DESIGN
THINKING
DESIRABILITY
(HUMAN)
VIABILITY
(ORGANIZATION)
FEASIBILITY
(TECHNOLOGY)
INNOVATION

learn by

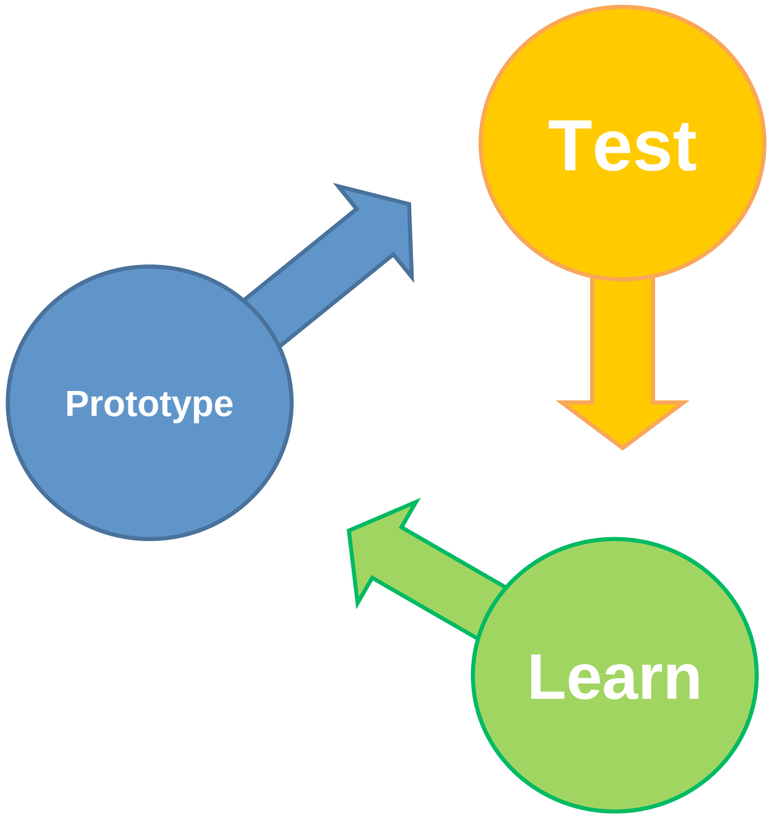
doing.

how to learn more?

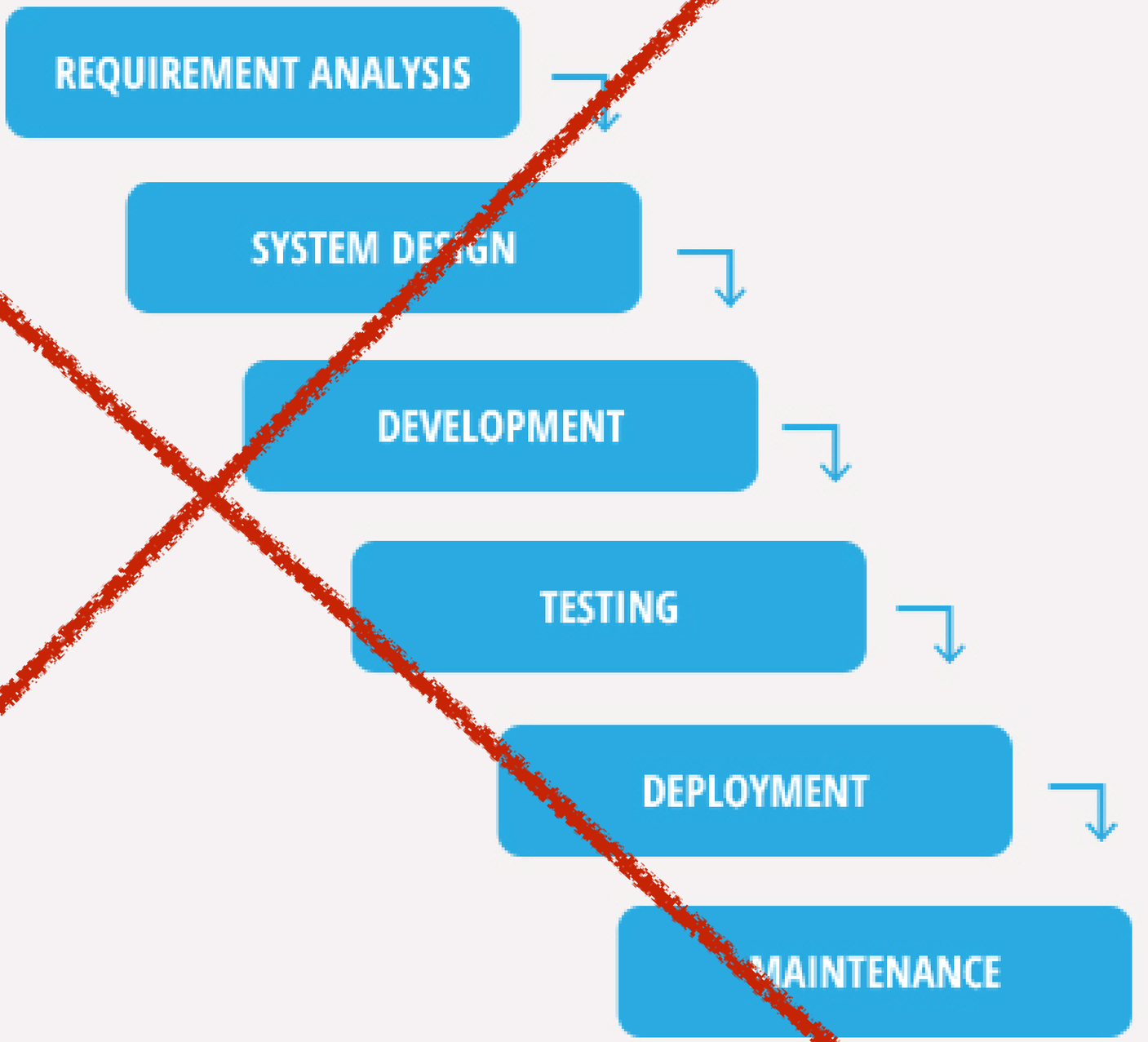
do more.

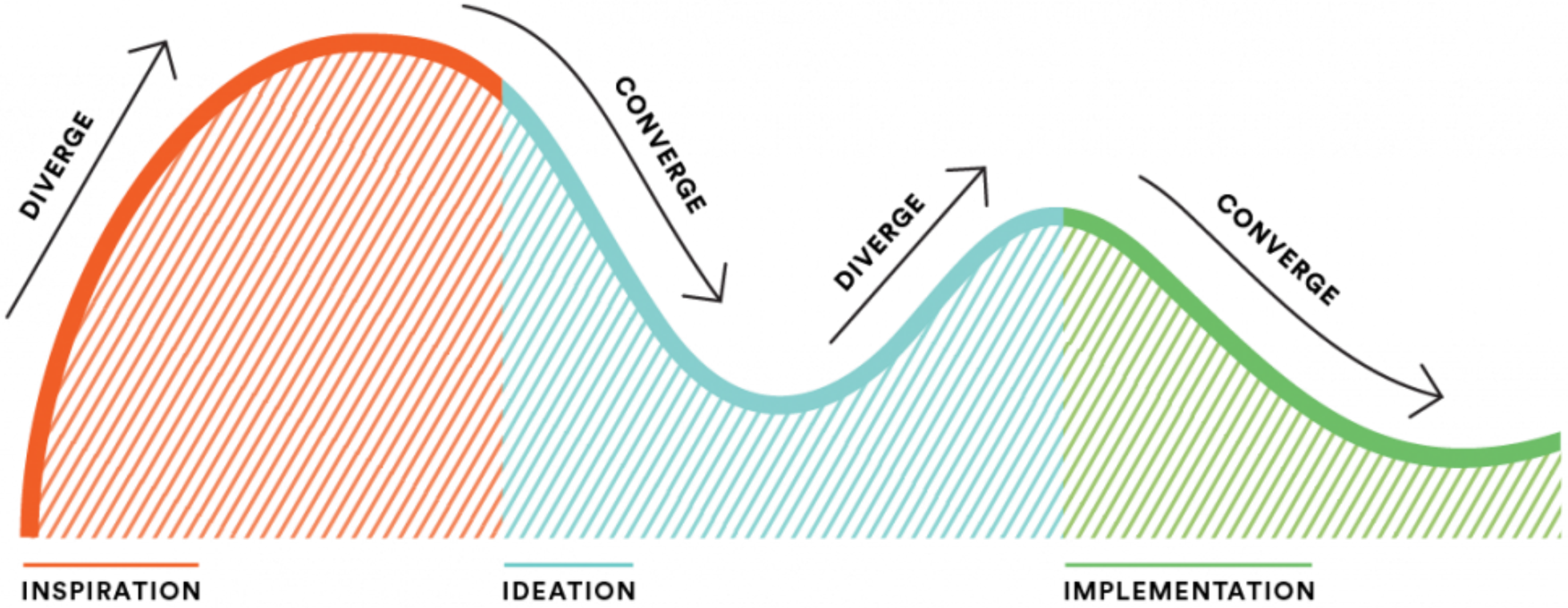
yeah OK fine AND

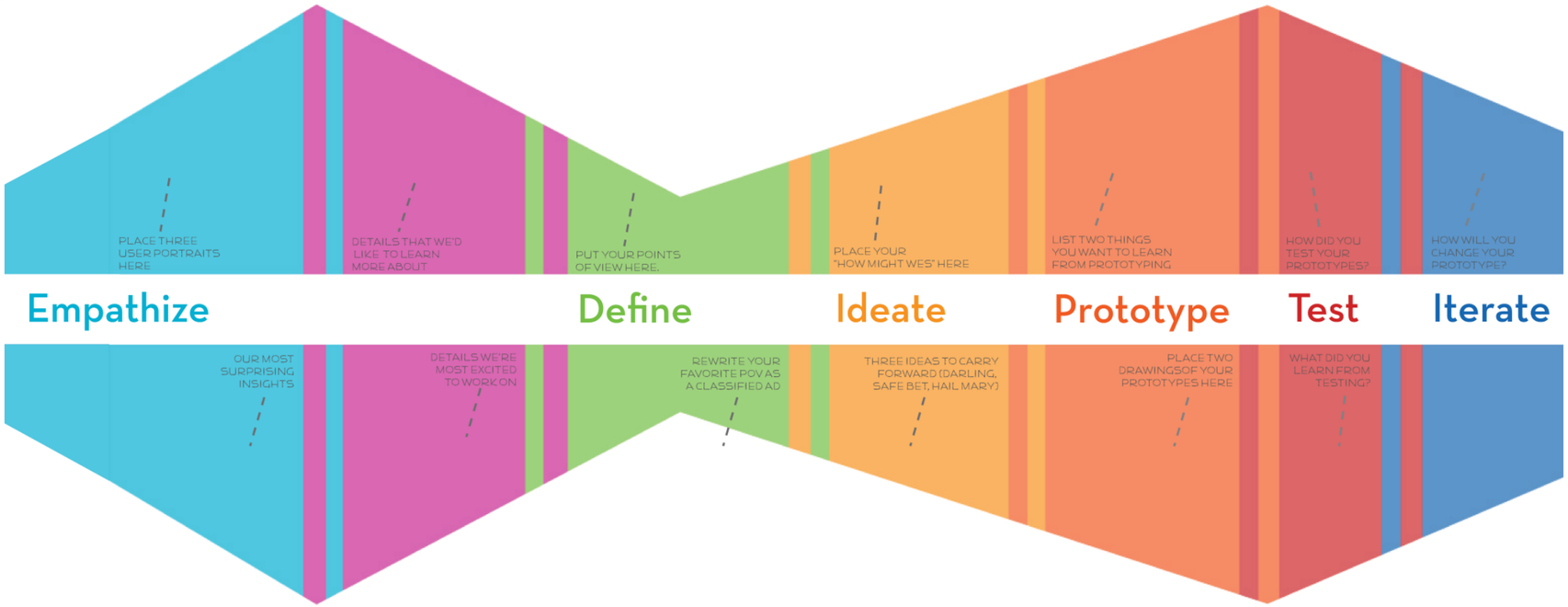
what are we supposed to be doing?



WATERFALL METHOD

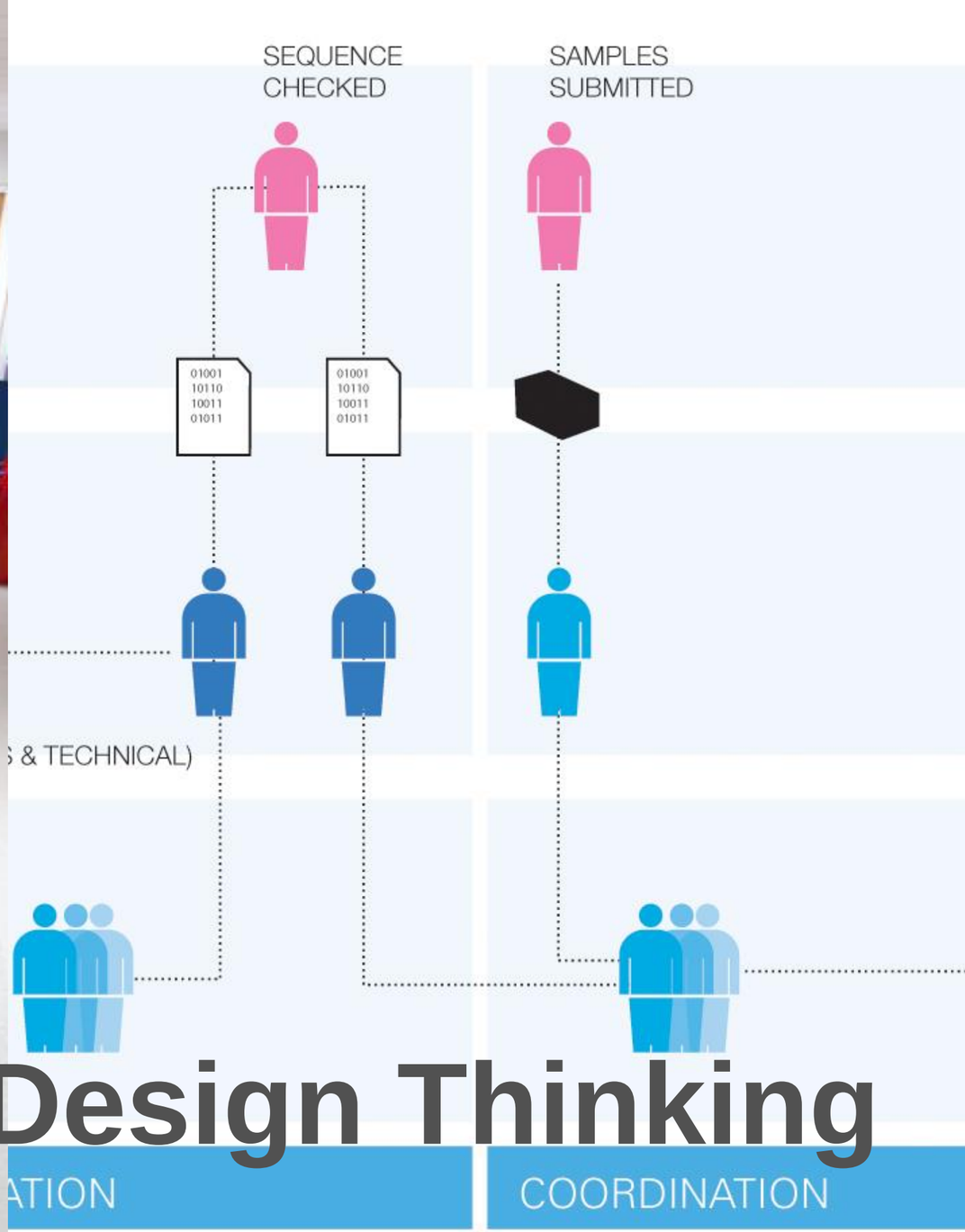



DIVERGE
CONVERGE
DIVERGE
CONVERGE
INSPIRATION
IDEATION
IMPLEMENTATION

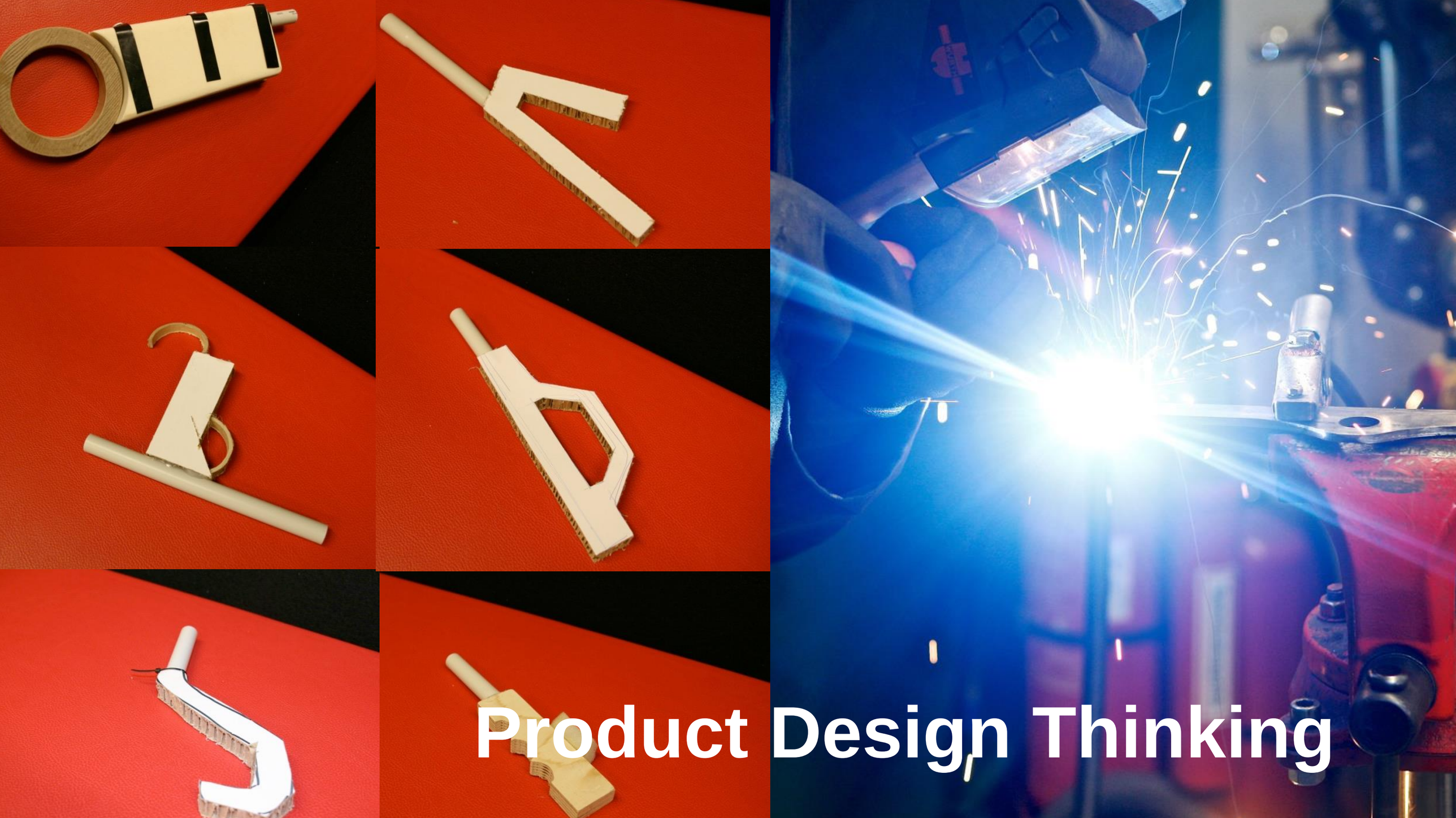

PLACE THREE USER PORTRAITS HERE
DETAILS THAT WE'D LIKE TO LEARN MORE ABOUT
PUT YOUR POINTS OF VIEW HERE.
PLACE YOUR "HOW MIGHT WES" HERE
LIST TWO THINGS YOU WANT TO LEARN FROM PROTOTYPING
HOW DID YOU TEST YOUR PROTOTYPES?
HOW WILL YOU CHANGE YOUR PROTOTYPE?
Empathize
Define
Ideate
Prototype
Test
Iterate
OUR MOST SURPRISING INSIGHTS
DETAILS WE'RE MOST EXCITED TO WORK ON
REWRITE YOUR FAVORITE POV AS A CLASSIFIED AD
THREE IDEAS TO CARRY FORWARD (DARLING, SAFE BET, HAIL MARY)
PLACE TWO DRAWINGSOF YOUR PROTOTYPES HERE
WHAT DID YOU LEARN FROM TESTING?

Design Thinking might be good to use when…

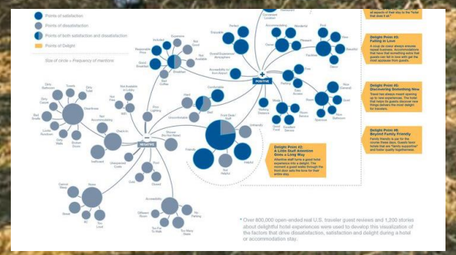
- The problem / challenge at hand is ambiguous
- There is no clear solution for it
- Solving an issue requires a deeper understanding of the context
- “Wicked problems”



Service Design Thinking

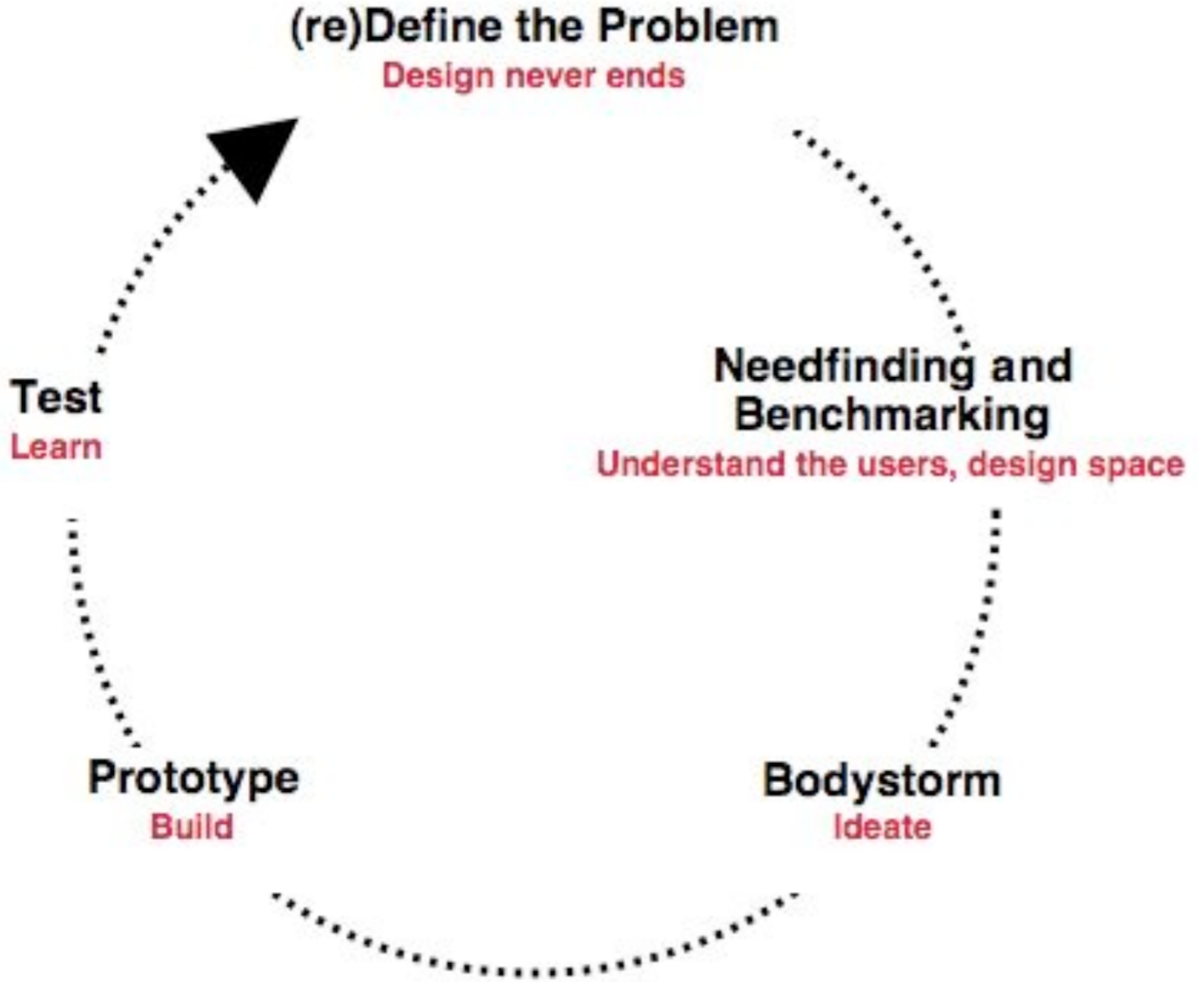


Product Design Thinking

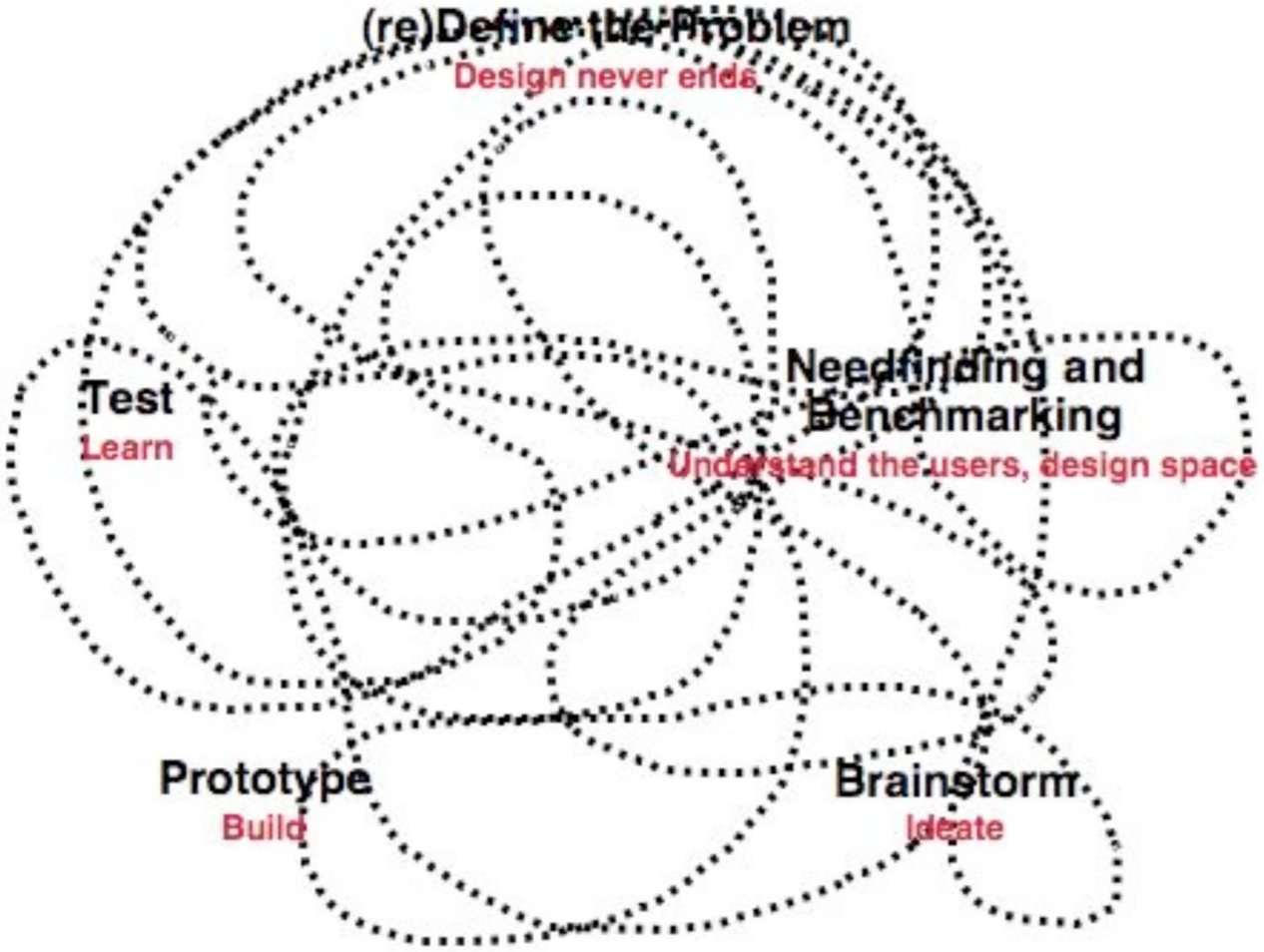


Experience Design Thinking

Stanford-IDEO like design process



Stanford-IDEO like design process … in reality



ambiguous (?)

C4SI is

more than just program.

Your project

is more than

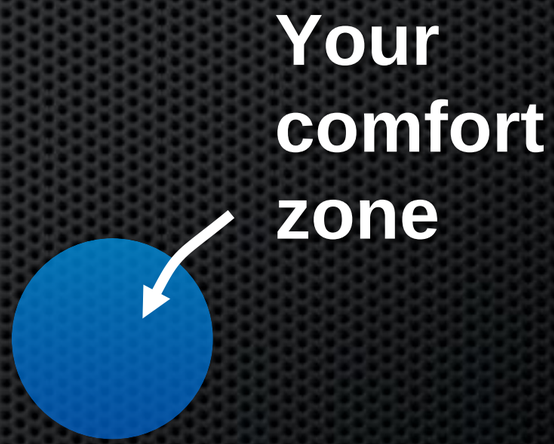
an assignment.

Design Thinking in brief

- *Collecting + analyzing **user insight***
- ***Ideating** possible design solutions*
- ***Building rapid prototypes** & test your ideas with real users*
- *Repeat…*

- *(Developing a great new product/service/experience, documenting the process, building customerbase, launching your proof-of-concept)*

Where the magic happens



- Challenge your assumptions.
- There are no stupid questions. Fire away!
- [#ideas, #prototyping] Don’t worry, be crappy.
- Our motto: Work hard, learn & have fun!


Jump to Conclusions
???
JUMP AGAIN
STRIKE OUT
COULD BE
LOSE ONE TURN
YES!
NO!
ACCEPT IT
GO WILD
ONE STEP BACK
THINK AGAIN
MOOT!
START

Team check-in:

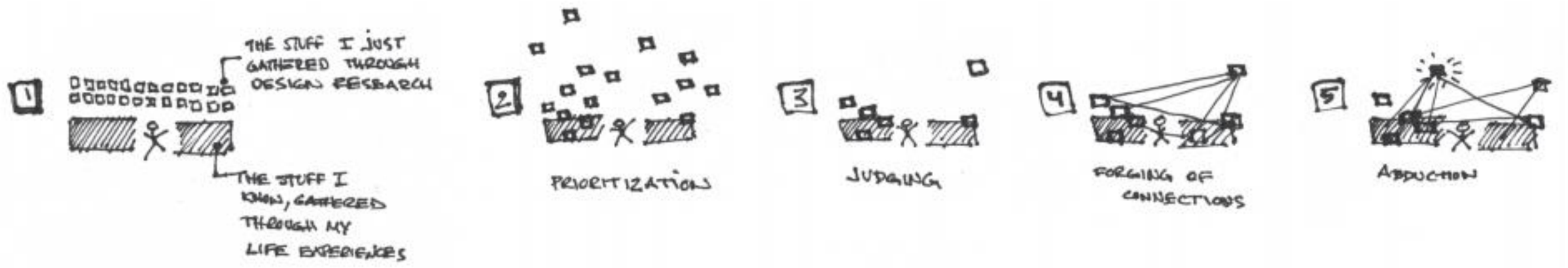
- Very briefly, describe in few words:
  - What have you done so far?
  - What data/information do you have?
  - What kind of data/information do you need to proceed?

Today we will:

- Try to understand the problem at hand, and stakeholders involved (not looking at solutions, yet)
- Analyse current situation
- Define a user (who are you designing for)
- Choose a focus to brainstorm possible solutions
- Brainstorm possible solutions

- If I had an hour to solve a problem and my life depended on the solution, I would spend the first 55 minutes determining the proper question to ask, for once I know the proper question, I could solve the problem in less than five minutes.

Albert Einstein


1
THE STUFF I JUST GATHERED THROUGH DESIGN RESEARCH
THE STUFF I KNOW, GATHERED THROUGH MY LIFE EXPERIENCES
2
PRIORITIZATION
3
JUDGING
4
FORGING OF CONNECTIONS
5
ABDUCTION

First:
Map out your current best understanding of the problem, and the stakeholders involved.

15 minutes

Hierarchy of Complexity

The interdependence of living things, for sustainable design.

The human condition, for global design.

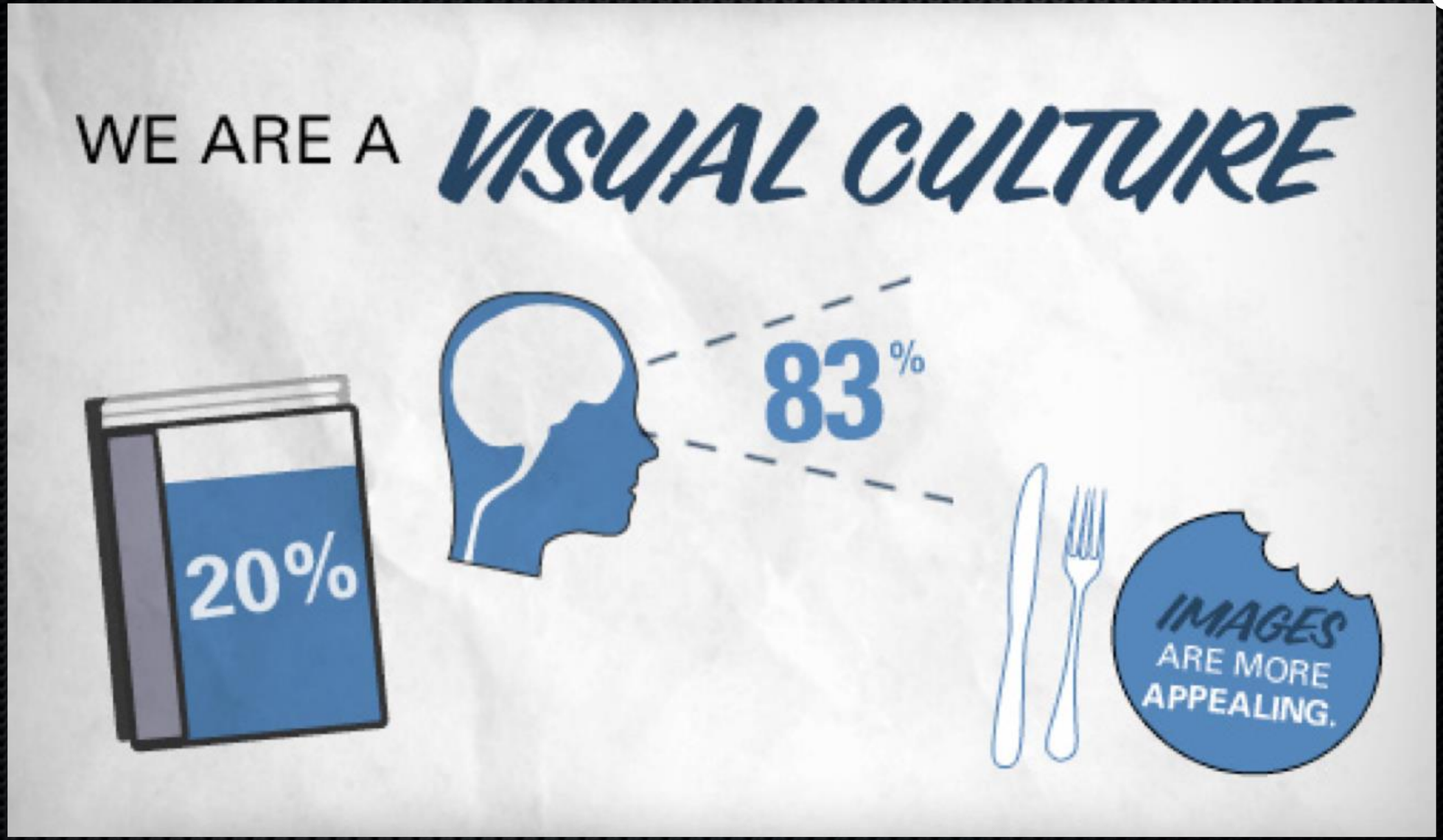
The way people relate to one another, for the design of connected systems.

The way mind works, for the design of human-computer interactions.

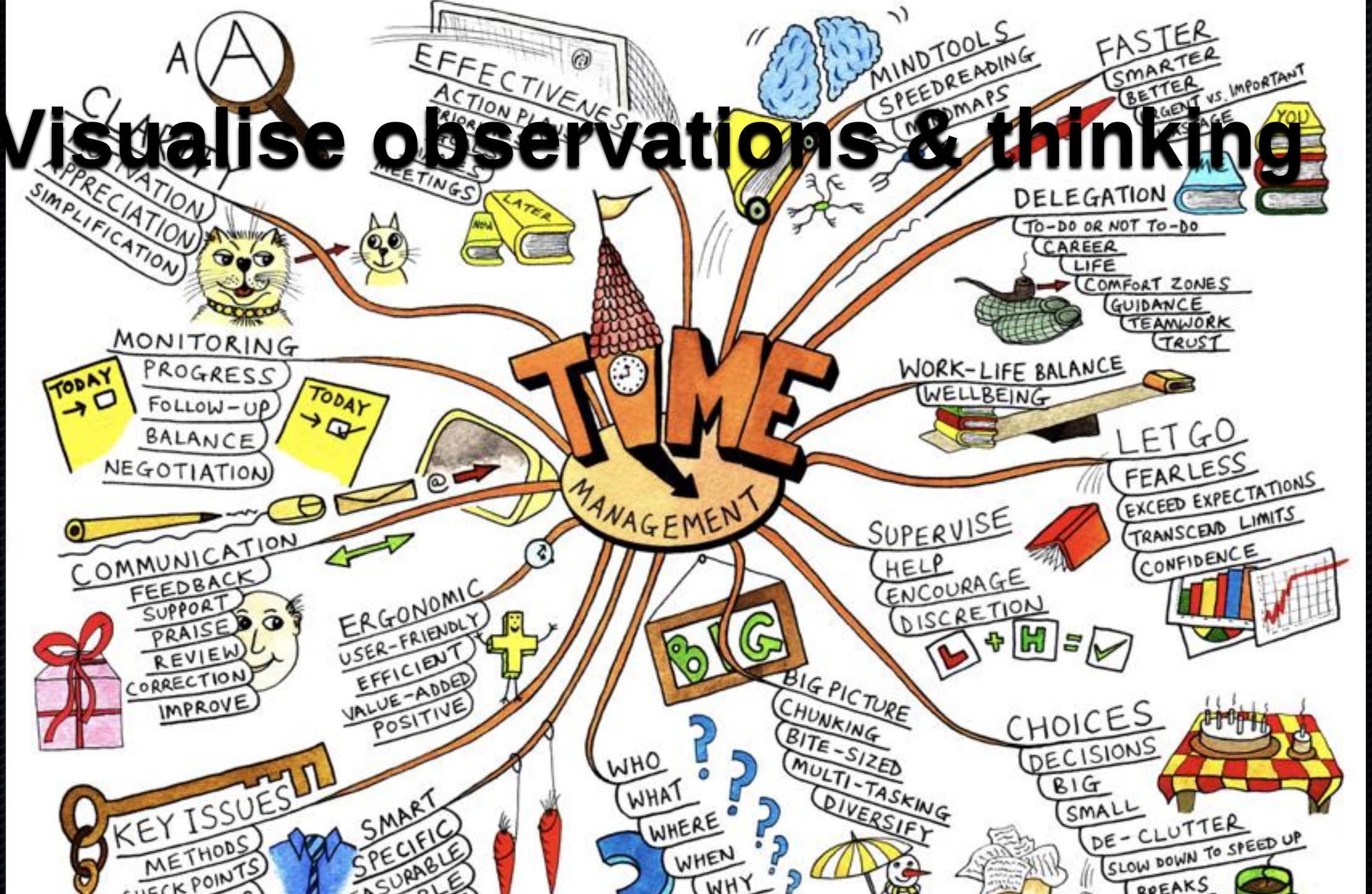
The way the body works, for design of physical man-machine systems.

The sizes of people, for the design of physical objects.

Visualise observations & thinking



Visualise observations & thinking



Visualise observations & thinking

Problem and stakeholder mapping:

Mapping can be broken down into four phases:

1. Identifying: listing relevant groups, organizations, and people
2. Analyzing: understanding stakeholder perspectives and interests
3. Mapping: visualizing relationships to objectives and other stakeholders
4. Prioritizing: ranking stakeholder relevance and identifying issues

Focus and identify what information/data you have, and what are you still missing? (This will be extremely important for you in the next weeks to guide your efforts.)

15 minutes

Second:
2. Define a user (who are you designing for)

15 minutes

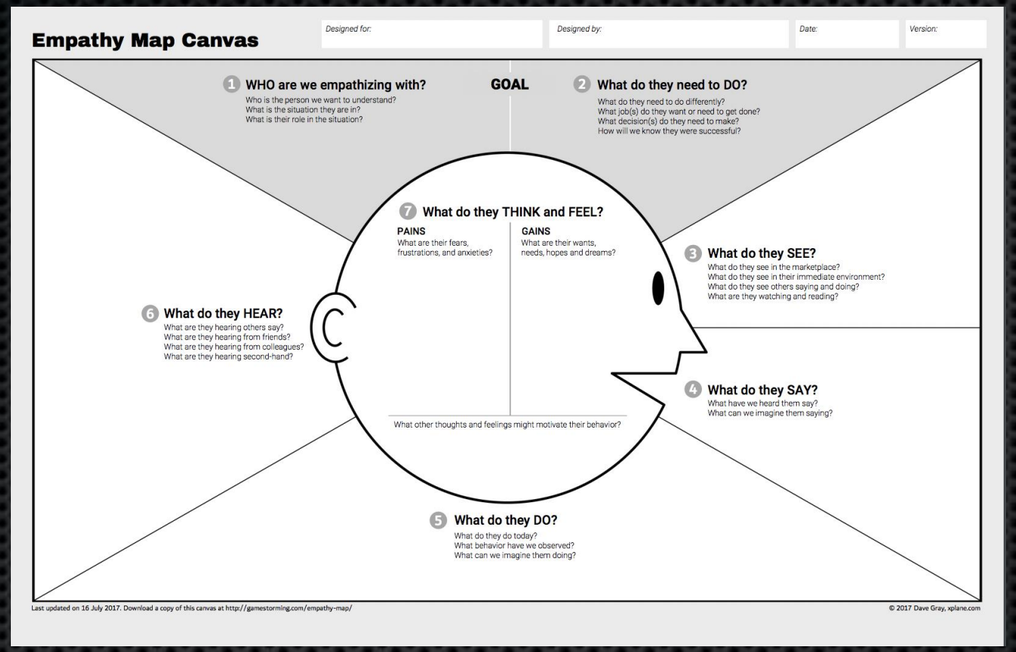
2. Define a user (who are you designing for):
- Make a composite persona

Franklin

- 38 years old
- Divorced
- 2 kids
- Diabetic
- Free-clinic care-giver
- Has extreme tendencies in consumption and preparation of food.
- Balances his health and that of others, favoring the health of others.

8 minutes

2. Define a user (who are you designing for):
- Use empathy map to try and understand your user



Also: Focus and identify what information/data you have, and what are you still missing?
(This will be extremely important for you in the next weeks to guide your efforts.)

25 minutes

Third:

3. Choose a focus

- Look at the Pains & Gains of your user and make 2-3 „How might we?“ questions.

5 minutes

Fourth:

4. Part 4 - Brainstorming the solutions:

- Put the How might we questions on the top of the whiteboard/flipchart, and brainstorm possible solutions. The crazier, the better!!

30 minutes

Brainstorming is a group creativity technique designed to generate a large number of ideas for the solution of a problem.

- Wikipedia

Rules that *must* be followed by ALL.

1. Go for Quantity

Quantity
Quantity
Quantity
Quantity
Quantity
Quantity
Quantity
Quantity
Quantity
Quantity
Quantity

VS.

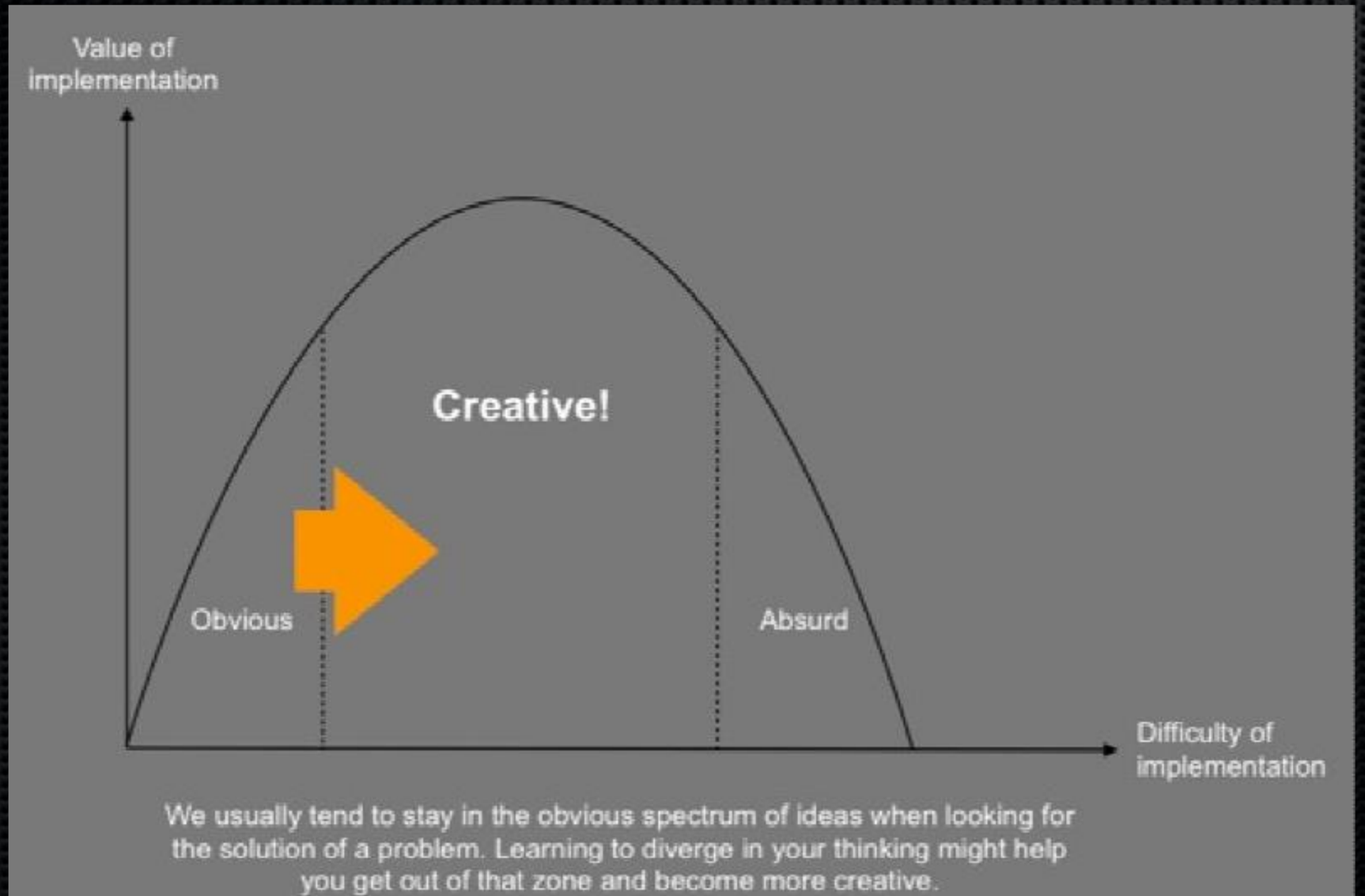
2. CUT criticism

Quick Diverge

3. Welcome Weird


PET ROCK
PET ROCK
PET ROCK

Go beyond!


Value of implementation
Creative!
Obvious
Absurd
Difficulty of implementation
We usually tend to stay in the obvious spectrum of ideas when looking for the solution of a problem. Learning to diverge in your thinking might help you get out of that zone and become more creative.

4. Take good ideas further.
Build & combine.

Can you do it?

Brainstorm!

You have 30 minutes.
Come up with 50+ ideas

Last part (before lunch):

4. Part 4 - Brainstorming the solutions:

- Put the How might we questions on the top of the whiteboard/flipchart, and brainstorm possible solutions. The crazier, the better!!

30 minutes

Share!

Share max 5 ideas that you think would be good to explore further.

Questions? Comments?

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Let's have a cup of coffee and make interesting projects happen!

CERN Ideas