

The background is a reproduction of a painting, likely 'Rain, Steam, and Great Bridge' by J.M.W. Turner, showing a sunset over a body of water with a bridge and figures in a boat. The painting is framed by a purple border with rounded corners.

MEC-E3001

pdp

PRODUCT DEVELOPMENT
PROJECT

A”

Aalto University
Design Factory

PDP shock workers





Free hands to plan and decide together frequency, place
why, what, and how

- 
- *Assignment of rights*
 - *Contract*
 - *VAT 24 -> 25,5%*



Take Away



PDP calendar is the law
Check points, halfway show, Gala
8. – 9. -10. October

spirit



bureaucracy

PDP of the WEEK







Mitä haluaisit oppia koneelta? Minun kysymys koneelle.

Miten maailma syntyi?!

Mikaelmäköh?

Onko jumala olemassa?

Onko elämä harha?


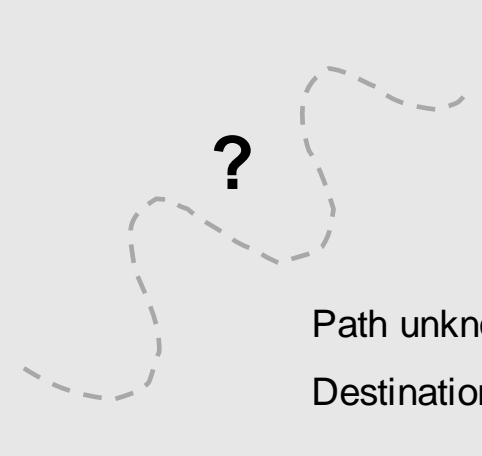


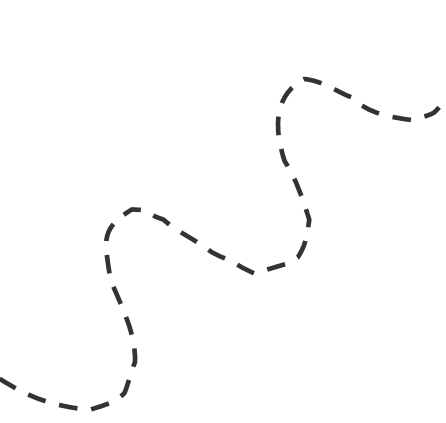


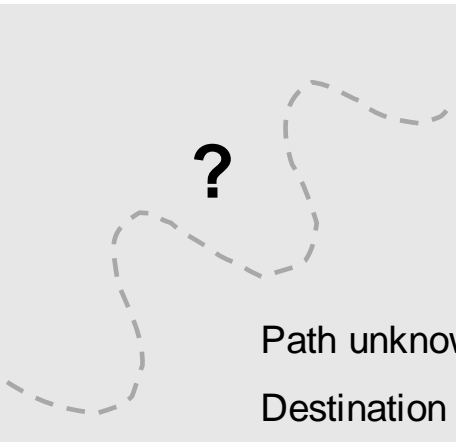


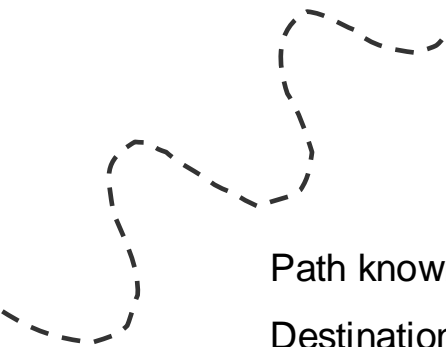

How was the universe born?

What is life?

Does God exist?

Is Life an illusion?

Project type?

   <p>Path unknown, Destination known</p>	  
   <p>Path unknown, Destination unknown</p>	   <p>Path known, Destination known</p>

Project starting point

IDEA exists. Find the technology and way of implementing it.

TECHNOLOGY exists. Find new ideas and market for it.

TECHNOLOGY exists. Accommodate it into this new product.

CONCEPT exists. Get through the PD-process.

PRODUCT exists. Improve it for future needs.

TECHNICAL PROBLEM exists. Solve it.

USABILITY PROBLEM exists. Solve it.

BIG GENERAL PROBLEM exists. Solve it.

OPEN QUESTION; find answers.

FINDING QUESTIONS; getting through the field.

Your project - one of these, mixture or something else?

/ chapter...

Course Grades Course feedback

Chapter 1: Welcome to Viima and Aalto Design Factory

Hi there,

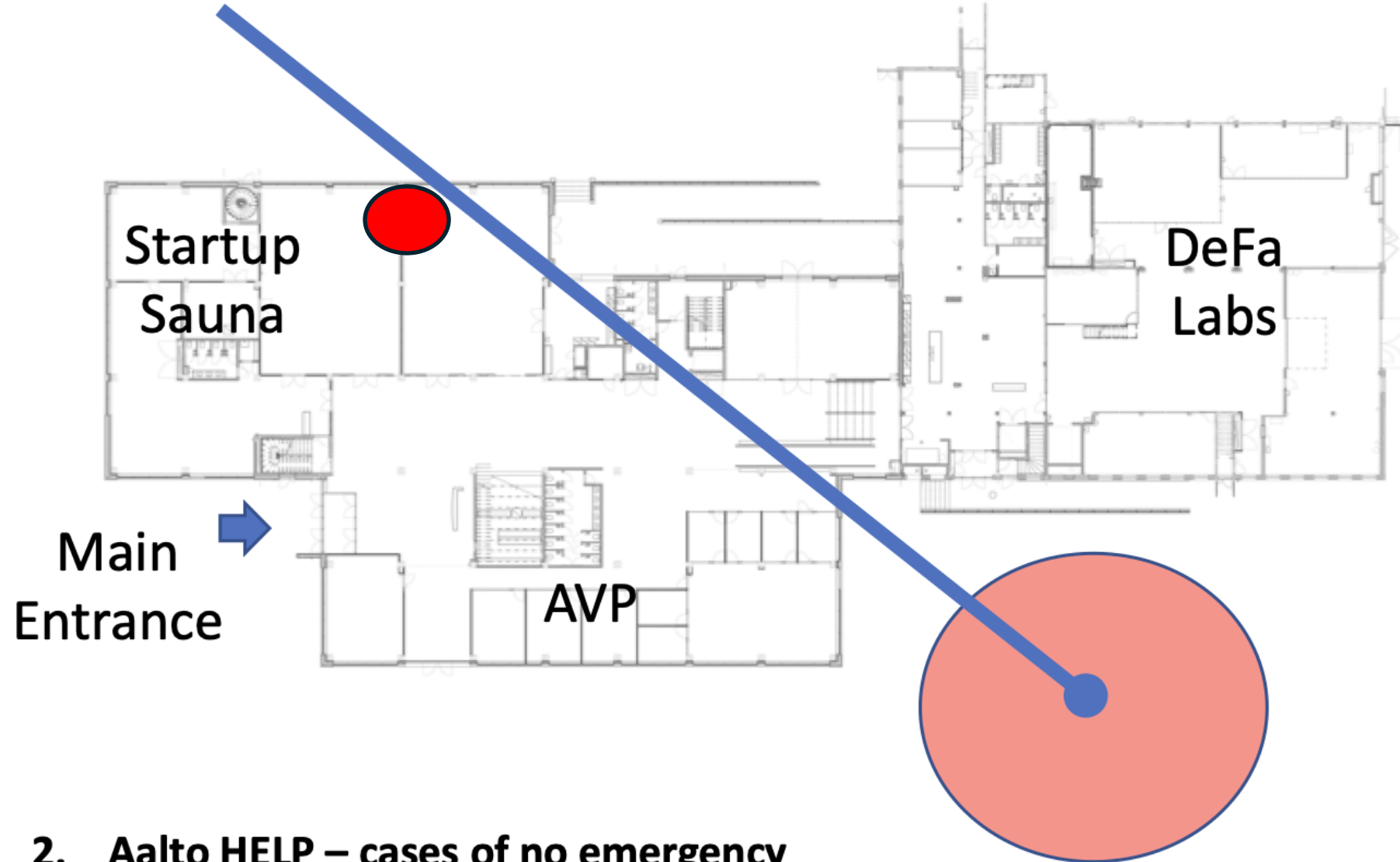
Kindly view the video and complete the multiple choice questions. We expect all answers to be correct, as we do not accept errors. Best of luck!

P.S. We apologize for the quality of our additional footage, which is not up to standard. More relevant additional footage and graphics will be introduced by the next academic year. Thank you for your patience and understanding.

ProTip! Use the CC button to select subtitles.



In case of **GENERAL ALARM**, leave the building immediately, go to the evacuation area and stay there until you get permission to leave.



2. Aalto HELP – cases of no emergency

- 24/7 service call

PROTOTYPING & TESTING

- Earlier the better
- During PDP, every team must
 - Build
 - Test
 - Interact with users
- And, have plan and purpose for it

PROTOTYPING & TESTING

- “somebody’s job”
- “adjustment”
- “small tasks”
- “silence”



Acceptable or forbidden?

University rules – always consult if doubts

According to project plan

- Items, components, subcontracting
- Services
- Traveling
- Hospitality expenses – tight limitations!

Forbidden

- Illegal, unethical, and T.A.D.

PURCHASING

Economy officers (respect the rules)

Ask Staff First (avoiding unnecessary mistakes)

On shelf at ADF (no need to pay)

List of recommended suppliers

Avoid using cash, but...

- NEO helps to get your money back... after a while
- Always save the receipts (or your money is gone)

Ordering

- Carefully provide the shipping/billing address
- But how companies still fail shipping and charging...?!?

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OCTOBER

2024

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		9:15	9:15	9:15	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

HOLIDAYS AND OBSERVANCES: 14 - COLUMBUS DAY ; 31 - HALLOWEEN

SHININGMOM.COM

PD6



"How to get the best from the Human-to-Human interfaces for fruitful cooperation and teamwork in highly creative environments?"



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**PROBLEM
FRAMING**

Learning goals

- Understanding the role of problem framing in guiding innovation efforts.
- Recognize assumptions connected to project design briefs.
- Getting familiar with methods to create and assess different frames for the projects.

Design Thinking

A way to think, work, and solve complex problems that have more than one possible solution.

Taking the tools and practices commonly used in design to other professionals in fields such as management, healthcare, human resources etc.

Process

Iterative

Collaborative

Making & Learning

Problem Space

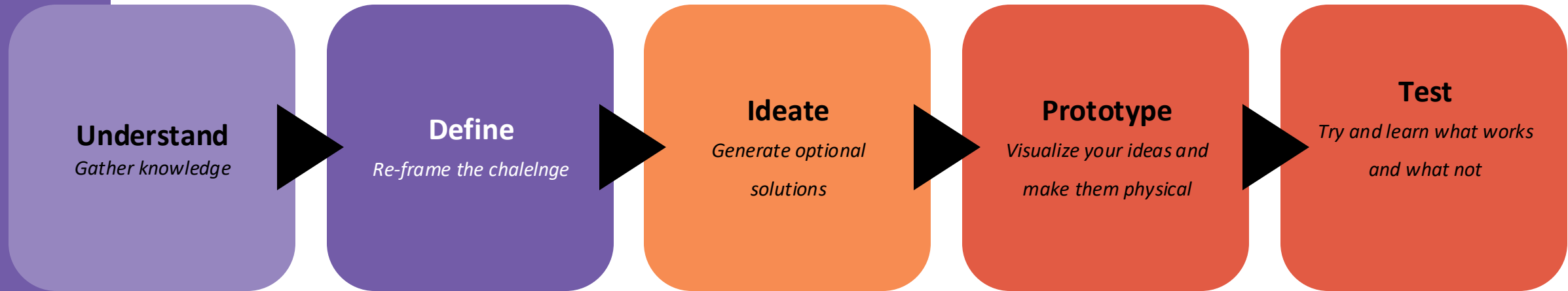
Novel

Relevant

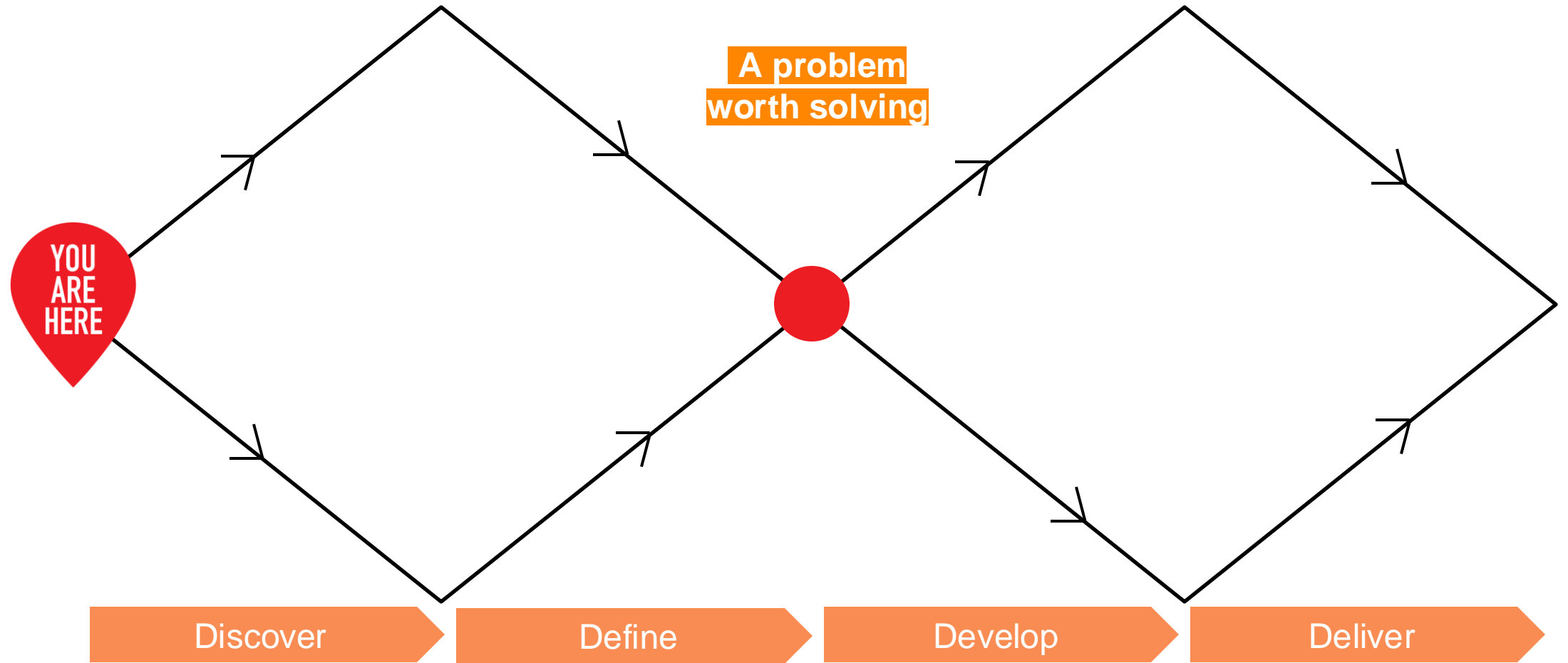
Justified

Impact

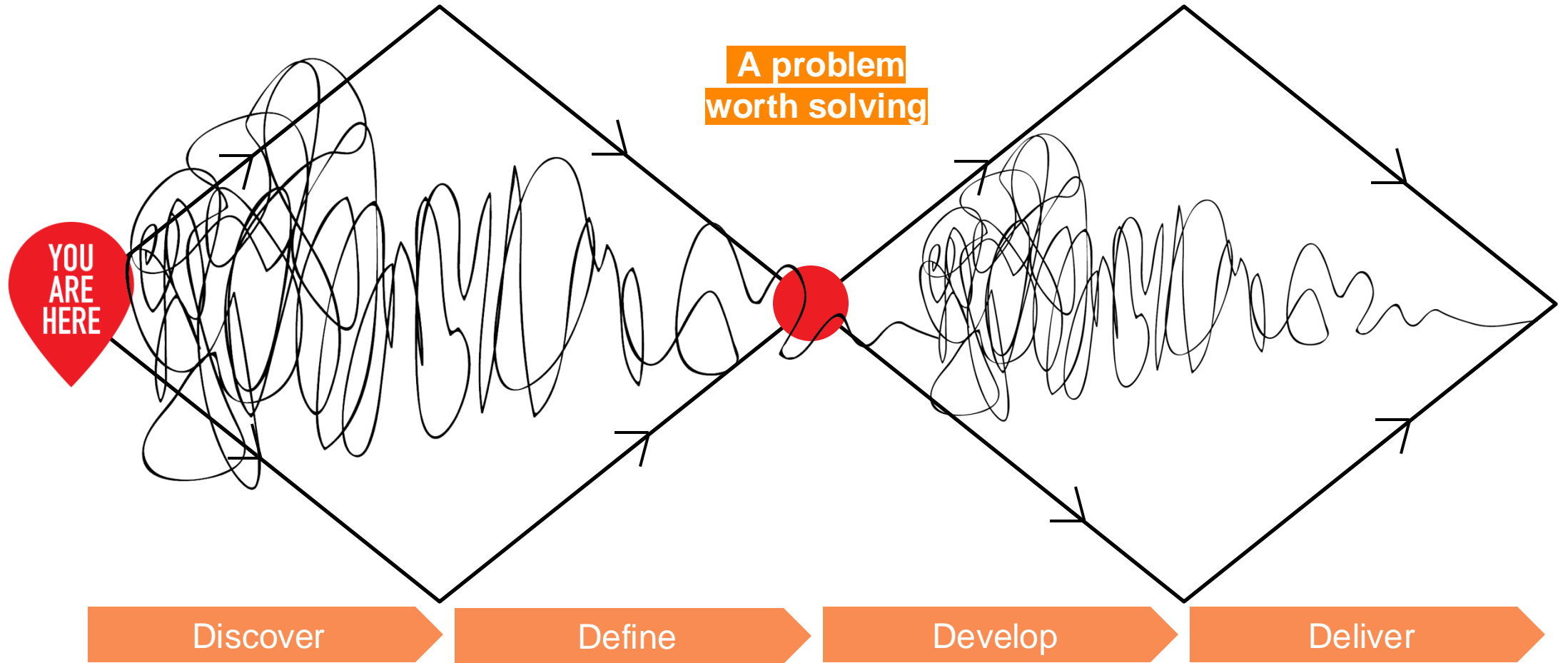
Design Process



Double Diamond



Double Diamond





80% of companies report providing
a superior
customer experience

80% of companies report providing
a superior
customer experience



8% of their clients agree



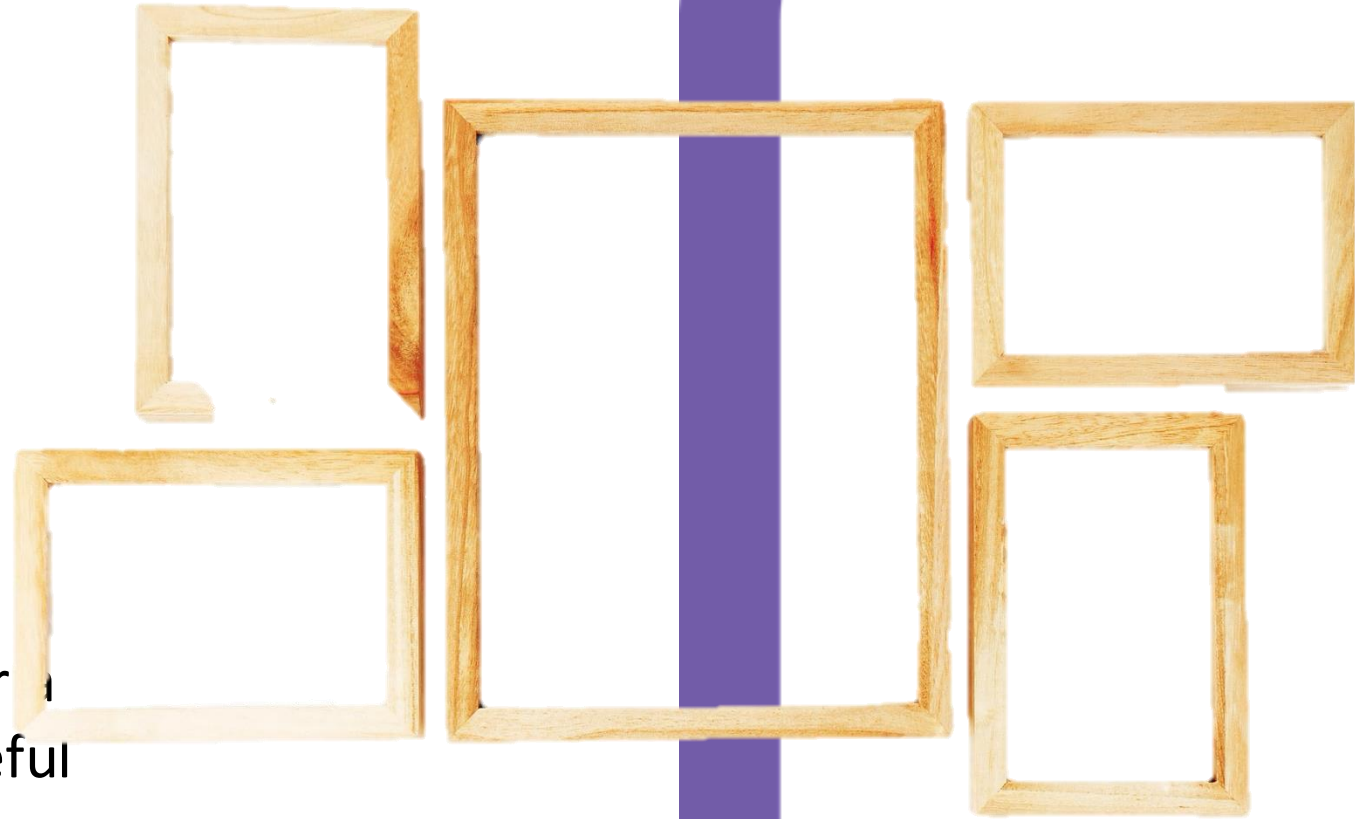
FRAMES

Frames

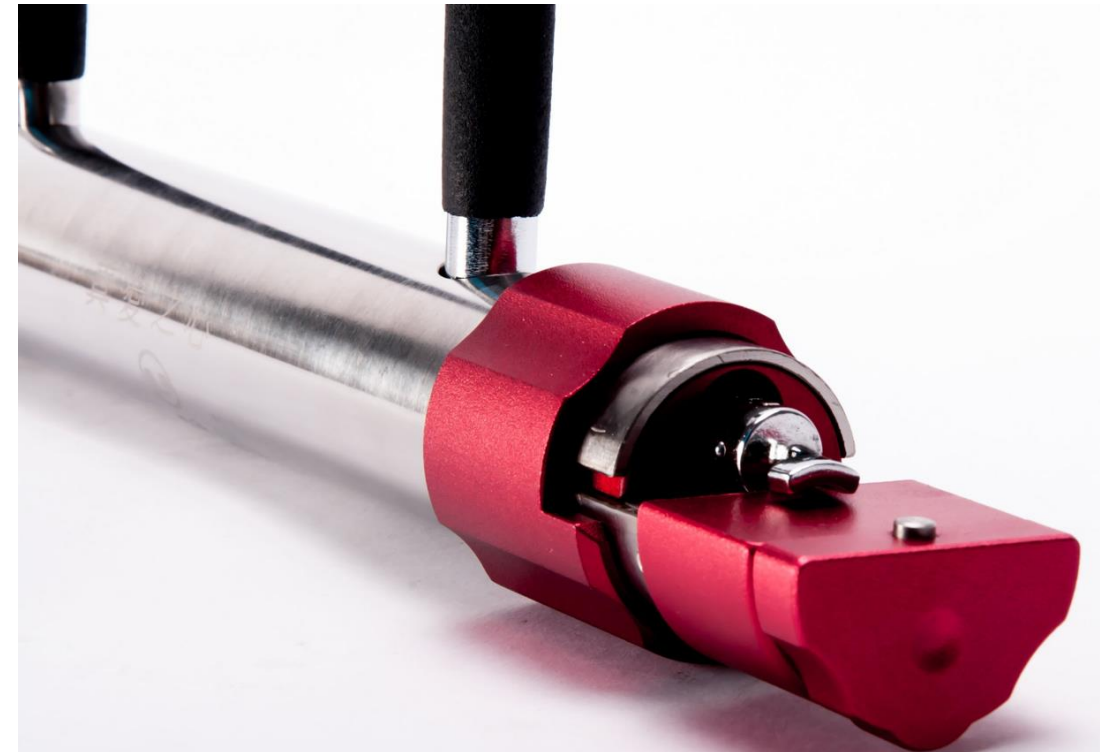
A 'frame' provides context and parameters by identifying what is relevant.

Relevance is associated with the perspective of the stakeholder placed central to the frame.

A frame is an organizational principle or a coherent set of statements that are useful to think with.



Forever lock – the unpickable bike lock

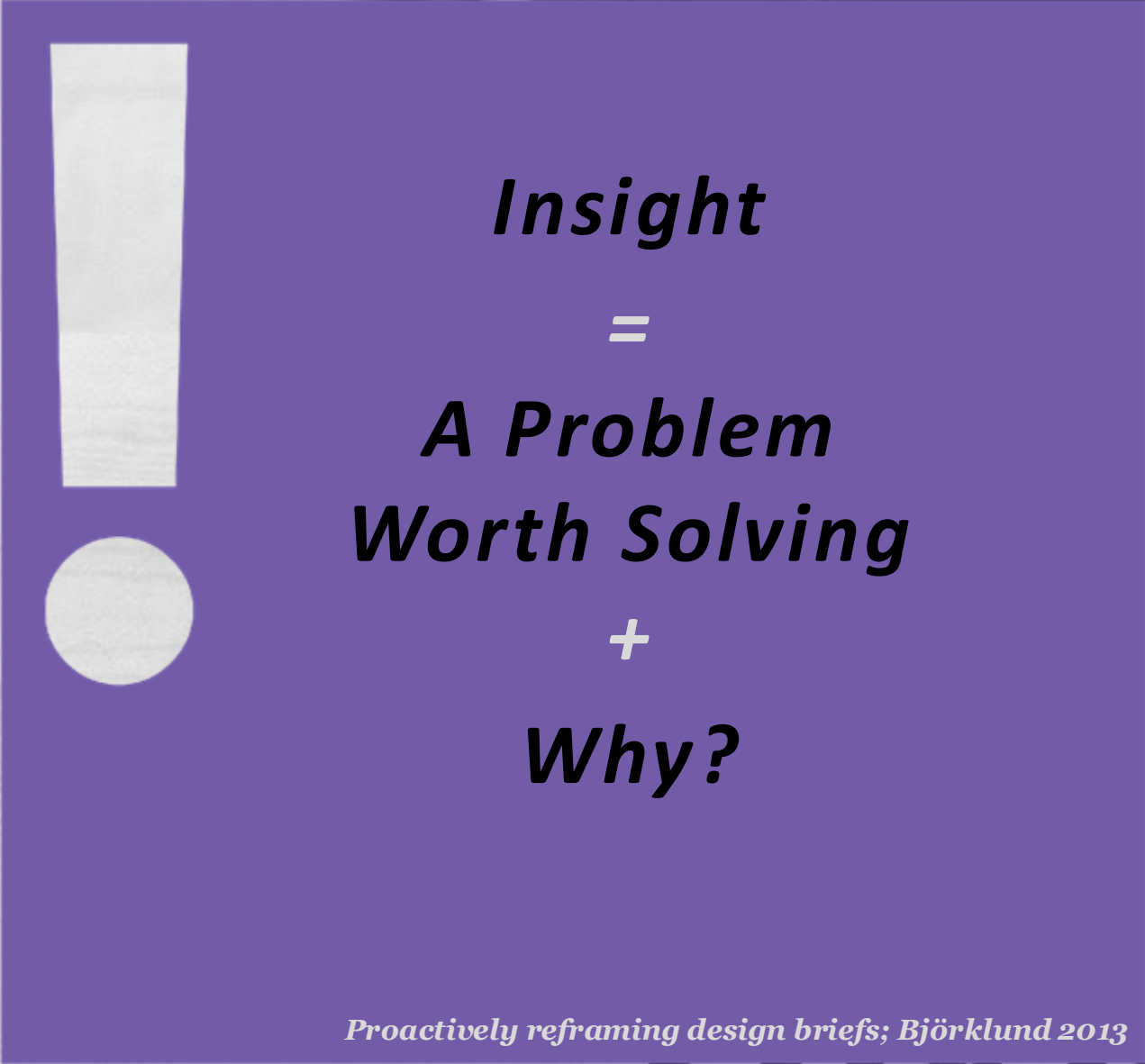


Forever Lock

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Forever lock – the unpickable bike lock





Insight
=
A Problem
Worth Solving
+
Why?

Proactively reframing design briefs; Björklund 2013

Take Away



A close-up photograph of a person's hands working on a 3D printed lattice sphere. The sphere is dark and has a complex, porous structure with several circular holes. It is mounted on a stack of metal blocks. The person is wearing a blue shirt and is using a tool to work on the sphere. The background is blurred, showing other people and equipment in a workshop or laboratory setting. The text "FINDING YOUR WHYS" is overlaid in white, bold, sans-serif font across the center of the image. There are orange rounded square shapes in the corners of the image.

FINDING YOUR WHYS

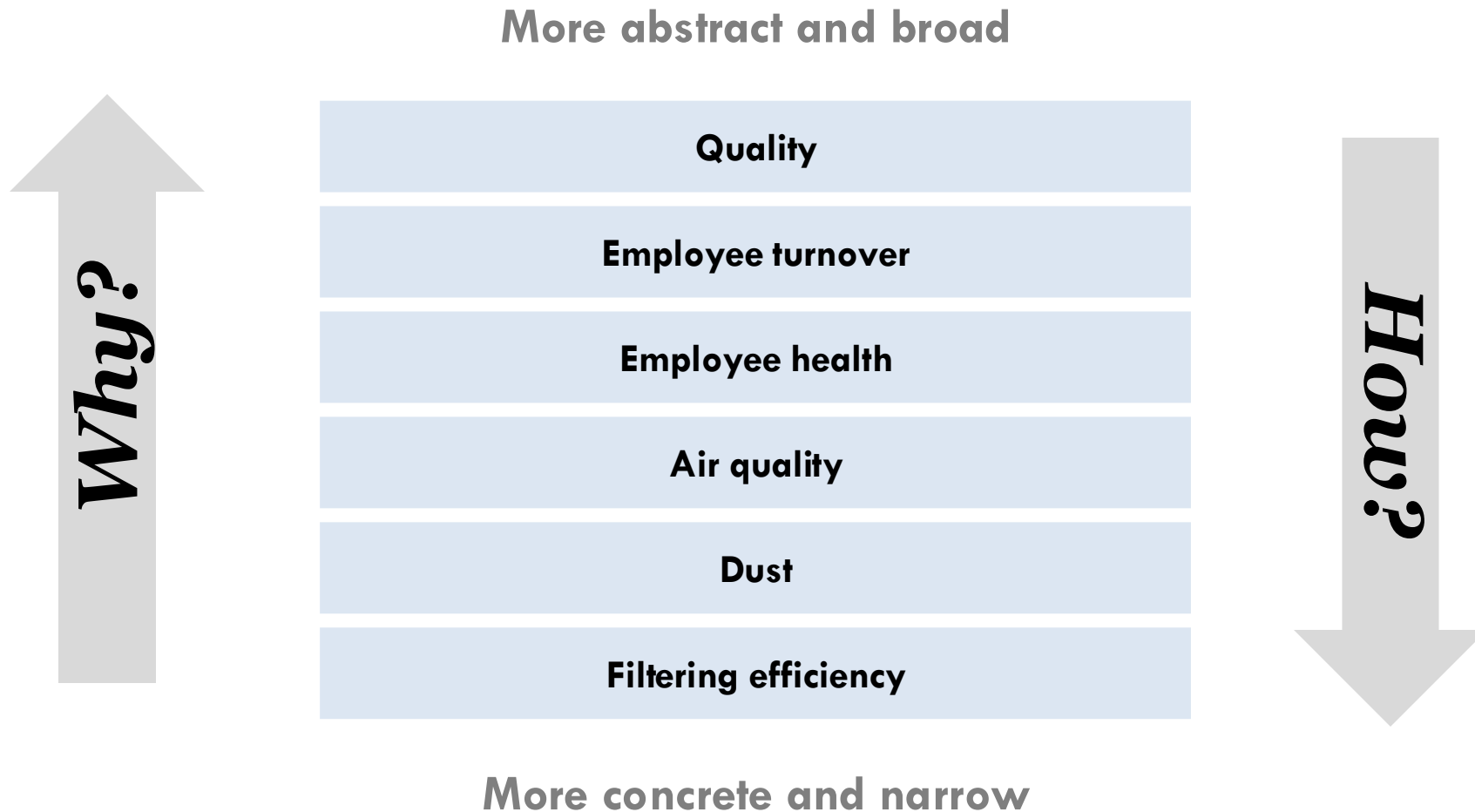
Simple way of getting to the root causes of an issue.

0. "We need more efficient filters at our construction site."

- 1. **Why?** – We need to reduce the amount of dust at our site.*
- 2. **Why?** – We need to improve air quality on our site.*
- 3. **Why?** – We want to improve our workers' health.*
- 4. **Why?** – We want to reduce turnover at our company.*
- 5. **Why?** – We find it difficult to attract new workers in the current construction boom.*



The Ladder of Abstraction



A close-up photograph of hands working on a precision-machined metal part. The part is a dark, spherical component with a complex, porous, lattice-like structure. It is mounted on a stack of four small, rectangular metal blocks. The hands are positioned around the part, suggesting a process of inspection or assembly. The background is blurred, showing other hands and tools, indicating a workshop or manufacturing environment. The word "STAKEHOLDERS" is overlaid in white, bold, sans-serif capital letters across the center of the image. The image is framed by orange rounded rectangular shapes on the left and top edges.

STAKEHOLDERS



*people
needed to
create change*

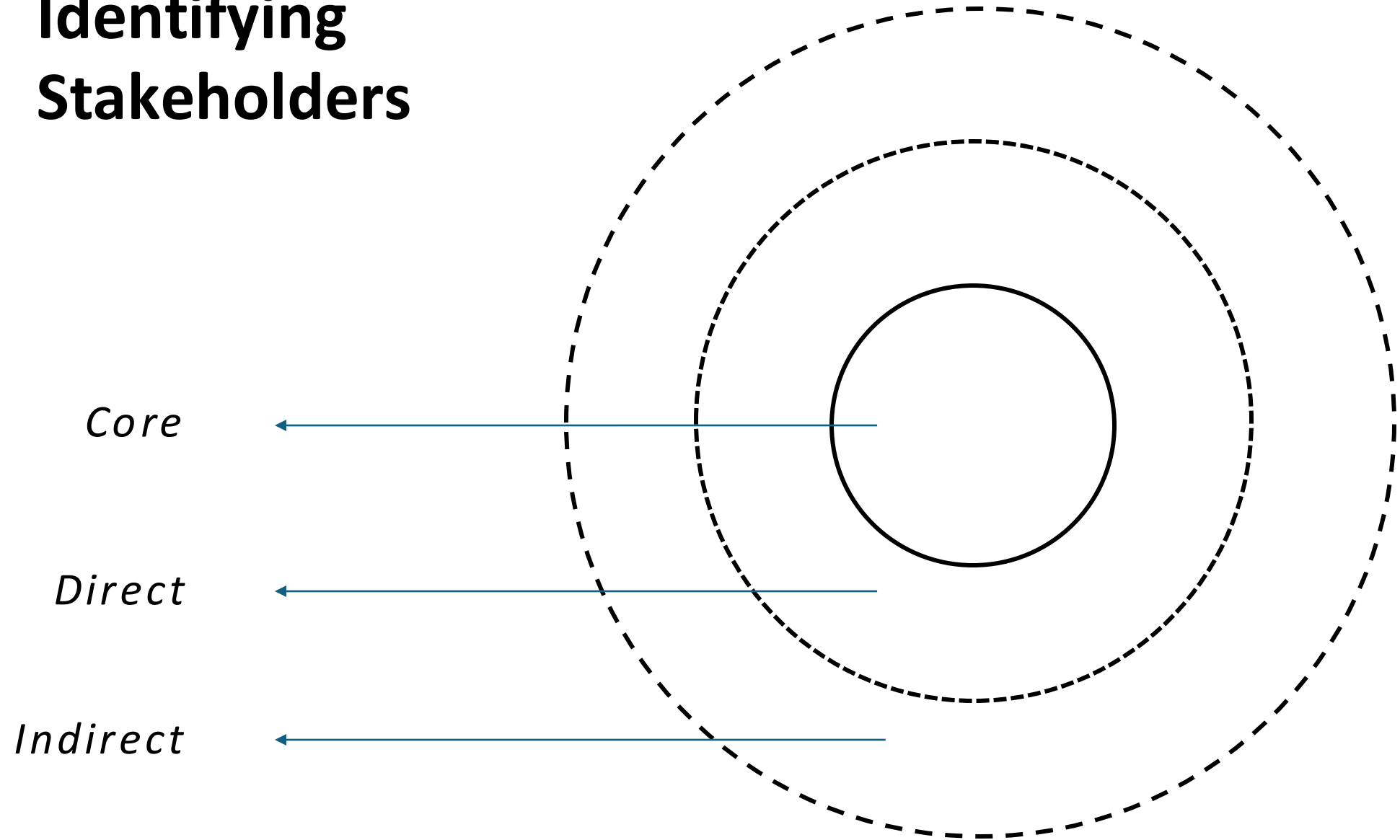
+

*people
affected by
the change*

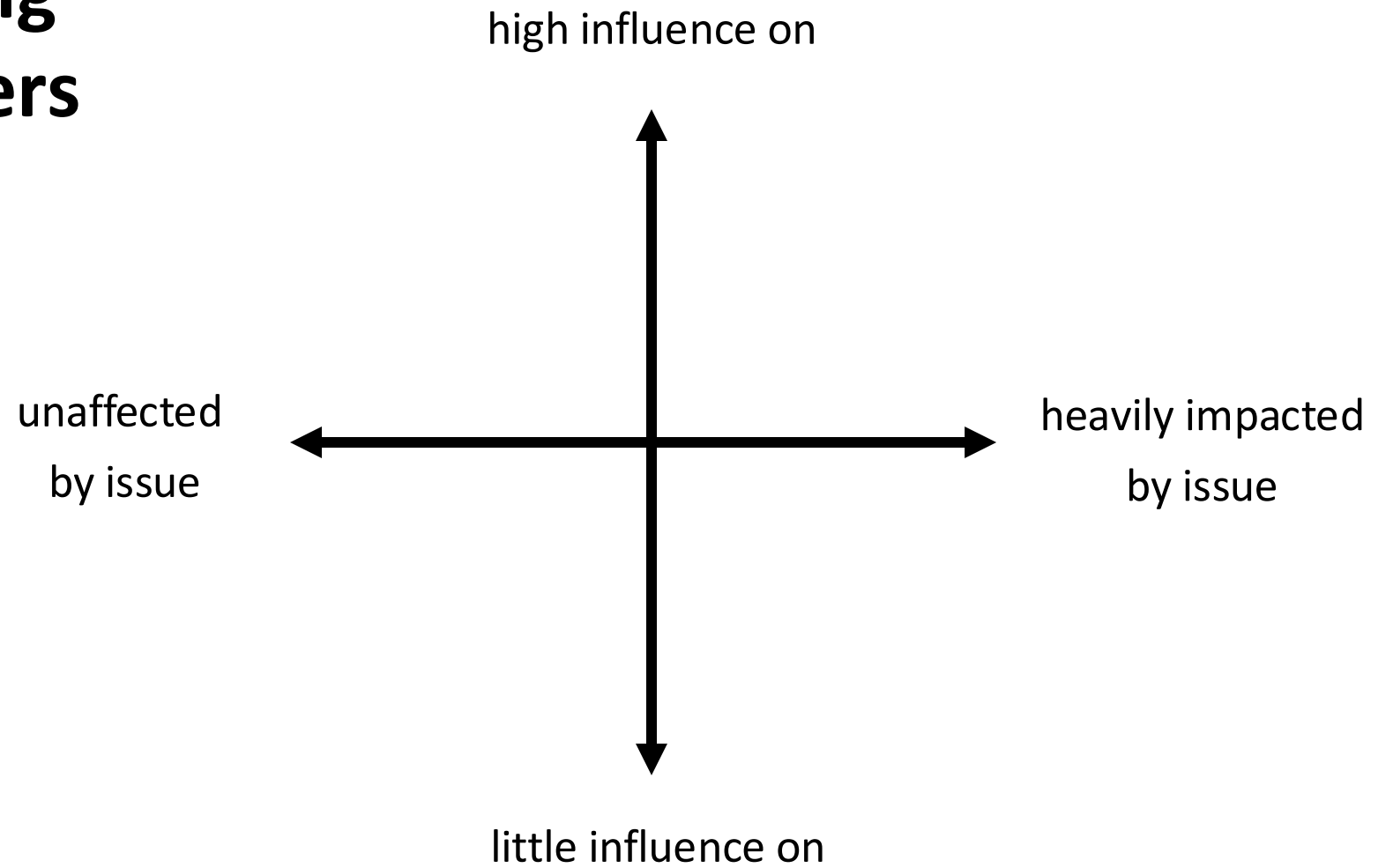
Take Away



Identifying Stakeholders



Categorizing Stakeholders





'HOW MIGHT WE' QUESTIONS

'How Might We' questions

How might we

[what: goal]

so that

[who: stakeholder]

can

[why: need/insight]

Our Scenario



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'How Might We' questions

How might we *decrease the noise level of imaging*
so that patients
could feel less anxious during the process?

'How Might We' questions

How might we *decrease the noise level of imaging*
so that *patients*
could *feel less anxious during the process?*

How might we decrease the noise level of imaging
so that patients
could *engage in other activities during the diagnosis process?*

How might we *better predict upcoming maintenance needs of the machine*
so that *doctors*
could engage in other activities during the diagnosis process?

'How Might We' questions

an actionable scope

Does the question allow for a variety of solutions? If not, broaden it with “why” questions.

Does it provide a narrow enough scope to get started? If not, narrow it down “how” questions.

reasonable assumptions

Are the assumptions made in the question clear? If not, form a How Might We question.

Are the assumptions made in the question true? If you're unsure, collect more data or test them.

FRAMING BETTER CHALLENGES



Why?

Framing the challenge is a critical exercise in design. Framing challenges the assumption that we are aligned around what we aim to do, for whom, and why. The easiest way to think outside the box is to describe the box differently or redraw the box completely! No challenge or goal is without assumptions or limitations, but by spending time on framing, we can make those assumptions explicit and explore several options before deciding on one. That way, you create clarity and shared understanding within your team. The time you spend on framing will help to set you up for success in developing solutions to your challenge.

How?

These tools are created for anyone who wants to frame better design, development, or innovation challenges and are free to use.

We recommend that each framing session has an organizer/facilitator who focuses on running the session rather than producing ideas. This is particularly important if more than one group works in the same session. This handbook guides you through what to do.

However, you can also use this toolkit and participate in the framing. If this is the case, share the cheat sheet and consider sharing the handbook, too, with the entire team participating in the session. This way, if you get too absorbed in the tasks, they can help remind the team that it's time to move along.



FIVE WHYS TEMPLATE

I want to...



Write an underlying need on a post-it!

1

because...



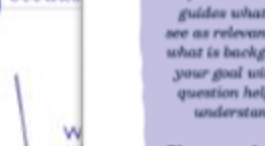
4

because...



5

because...



INSTRUCTIONS

Choose an insight that sparks your curiosity. Put yourself in the shoes of the stakeholder for this entire exercise. Write your insight on a sticky note as "I want [expressed motivation]". Read the motivation and ask yourself, "Why do I want this?". Write your response on a new sticky note. Read this response, ask yourself, "Why do I want this?", and write it on a separate sticky note. Ask "Why" five times.

Note that another underlying motivation could replace every response to "Why do I want this?". Ideally, these responses are informed by user data, but sometimes, you might need to make some assumptions. If you get stuck and can't imagine an underlying motivation, return to an earlier response and change it.



DEVELOPMENT QUESTIONS TEMPLATE

HOW MIGHT WE *[what: goal]*
SO THAT *[who: stakeholder]*
CAN *[why: underlying need]* ?

HOW MIGHT WE _____
SO THAT _____
CAN _____ ?

HOW MIGHT WE _____
SO THAT _____
CAN _____ ?

HOW MIGHT WE _____
SO THAT _____
CAN _____ ?

HOW MIGHT WE _____
SO THAT _____
CAN _____ ?

HOW MIGHT WE _____
SO THAT _____
CAN _____ ?

HOW MIGHT WE _____
SO THAT _____
CAN _____ ?

"HOW MIGHT WE"?

What solution options we can think of depends on how we understand the problem or task at hand. A frame guides what we notice, what we see as relevant to the challenge and what is background noise. Framing your goal with a "how might we" question helps to explicate your understanding of the issue.

Play around with multiple frames, trying out different what, who and why options. Have everyone in your team write a few alternative ones, and discuss your different versions.

TIP!

You can construct the questions also from bottom to top, starting from a user research insight you felt was compelling and working your way up.



FRAMING BETTER CHALLENGES

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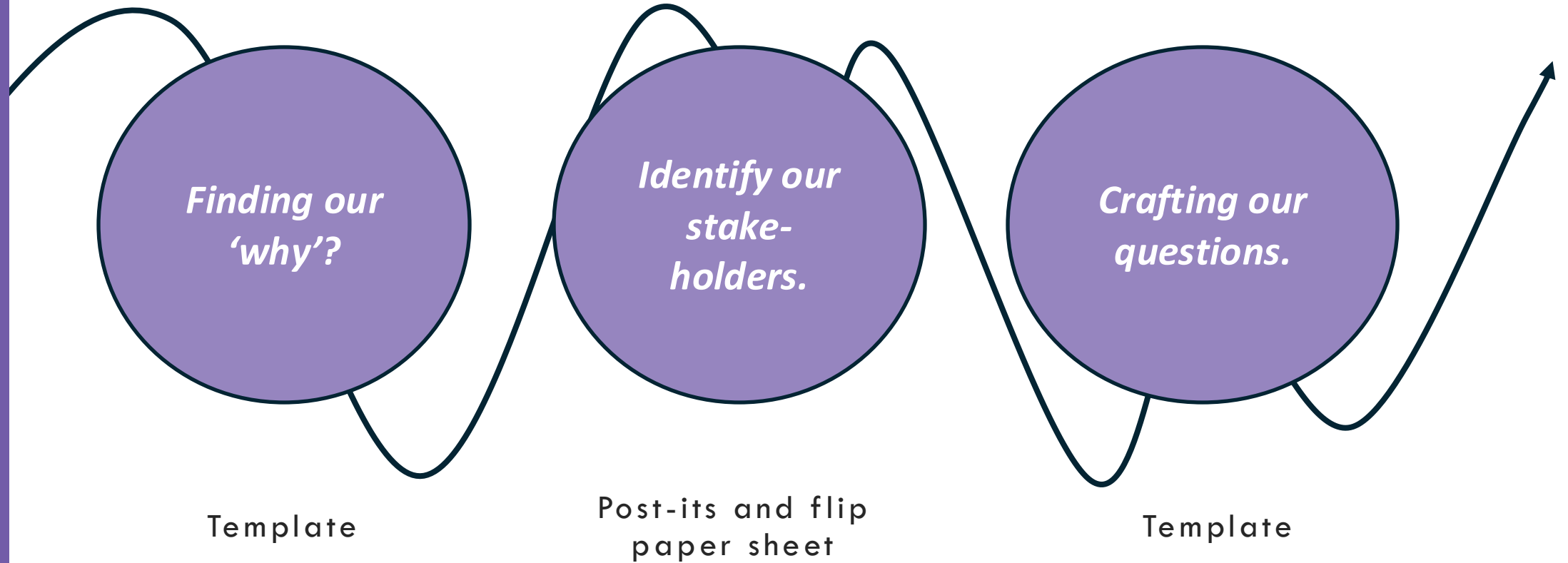
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Focus for the next few weeks



Please, love the problem space. Don't rush.



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