Developing your own Research Engagement Strategy

Or any user focused… thing

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Making the future possible (Sustainability of NRENs)
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4/10/23

Every NREN is different

- Lots of different stakeholders
- Lots of different priorities
- Lots of different unknowns

Instead let’s look at a tool you could use to develop a strategy

Agenda

- Intro to workshop concept
- Part1 – Designing the right thing
- Part2 – Design the thing right

The design process we will be following

INSPIRATION

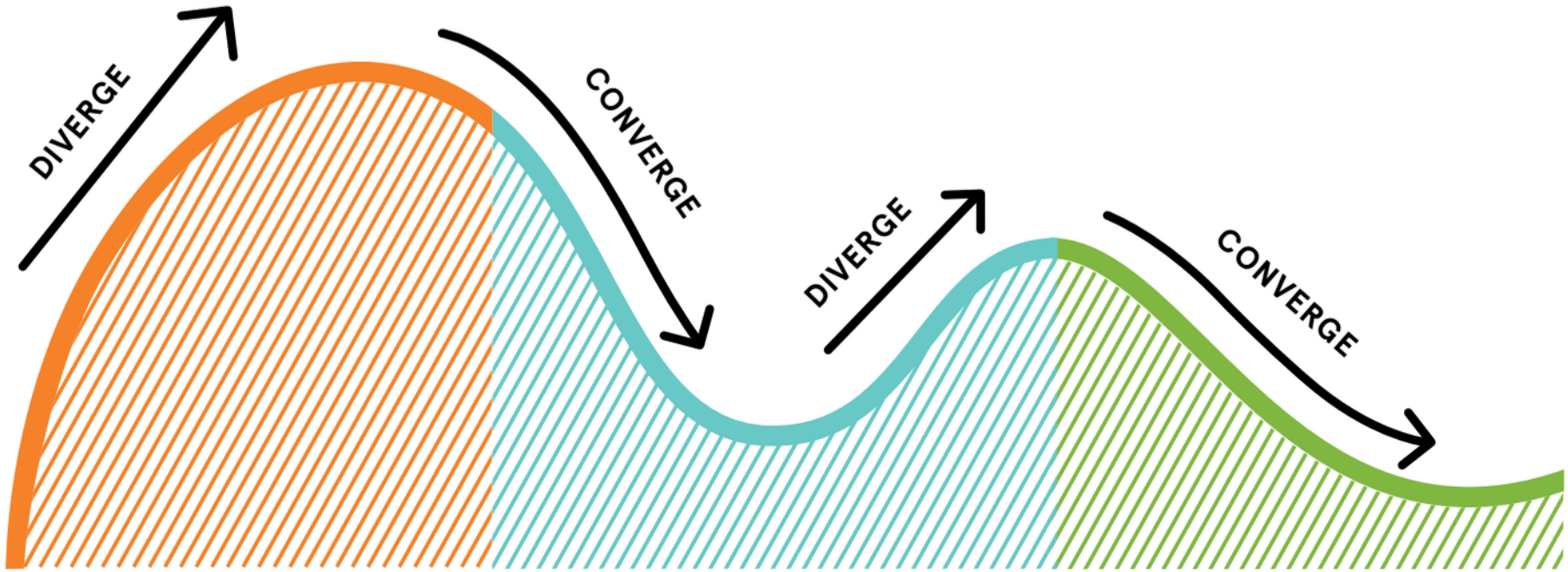
I have a design challenge.
How do I get started?
How do I conduct an interview?
How do I stay human-centered?

IDEATION

I have an opportunity for design.
How do I interpret what I've learned?
How do I turn my insights into tangible ideas?
How do I make a prototype?

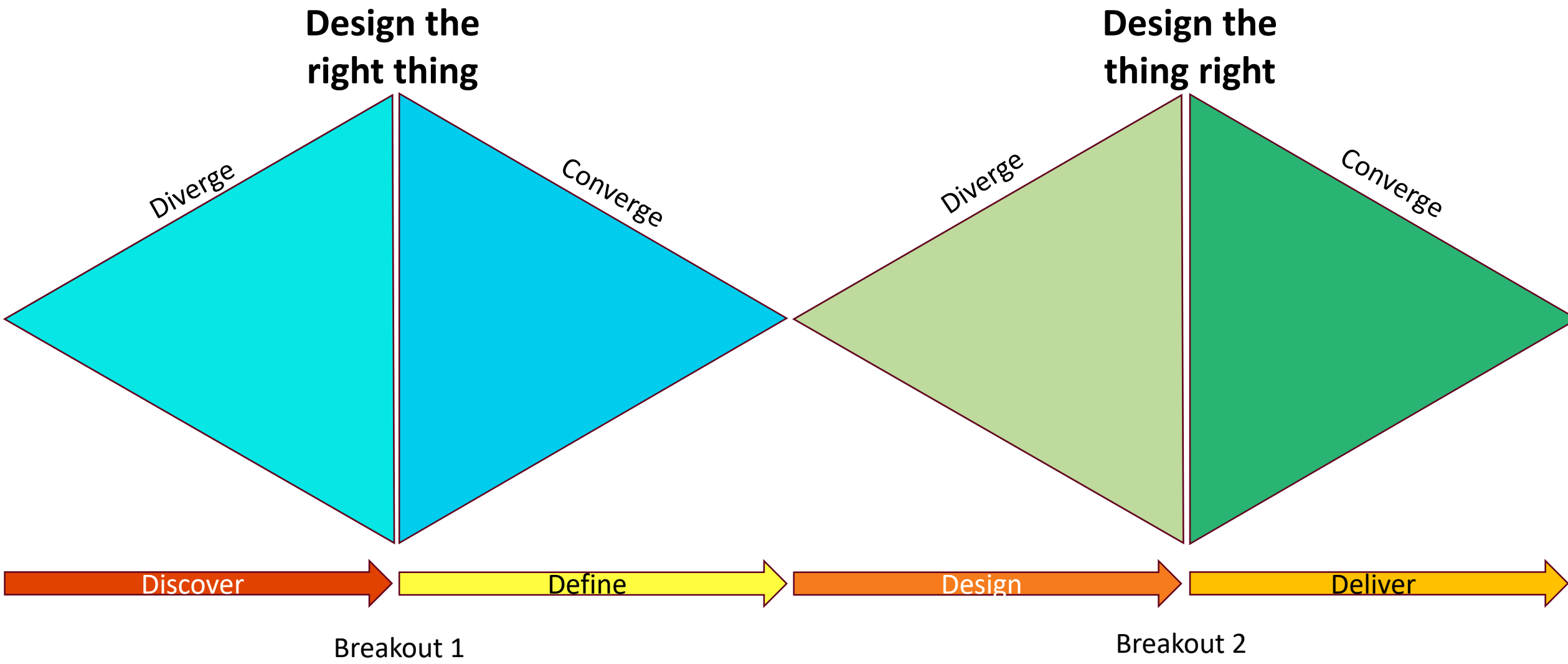
IMPLEMENTATION

I have an innovative solution.
How do I make my concept real?
How do I assess if it's working?
How do I plan for sustainability?



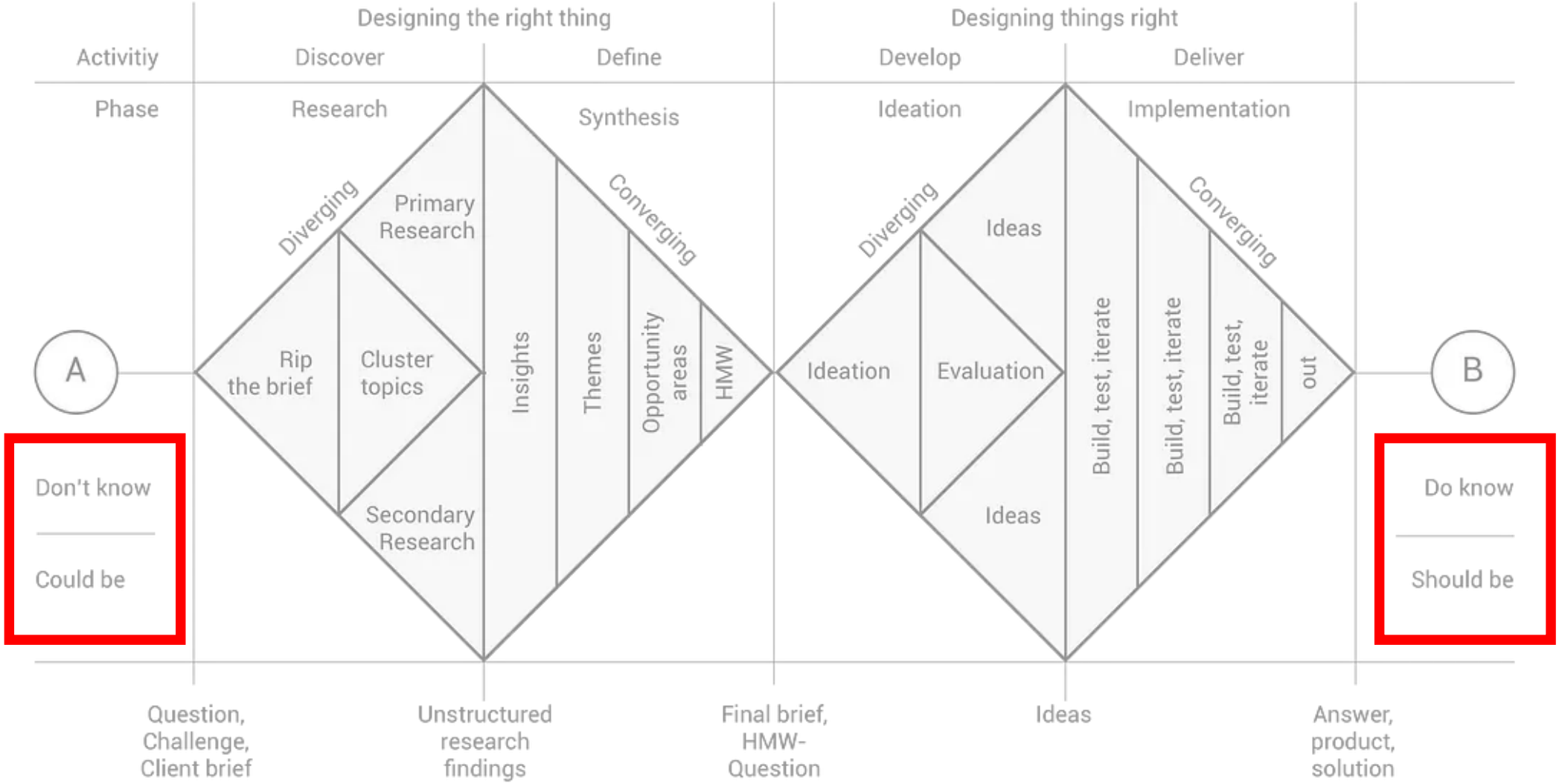
Adapted from work by Dan Nessler

Double diamond(-ish)



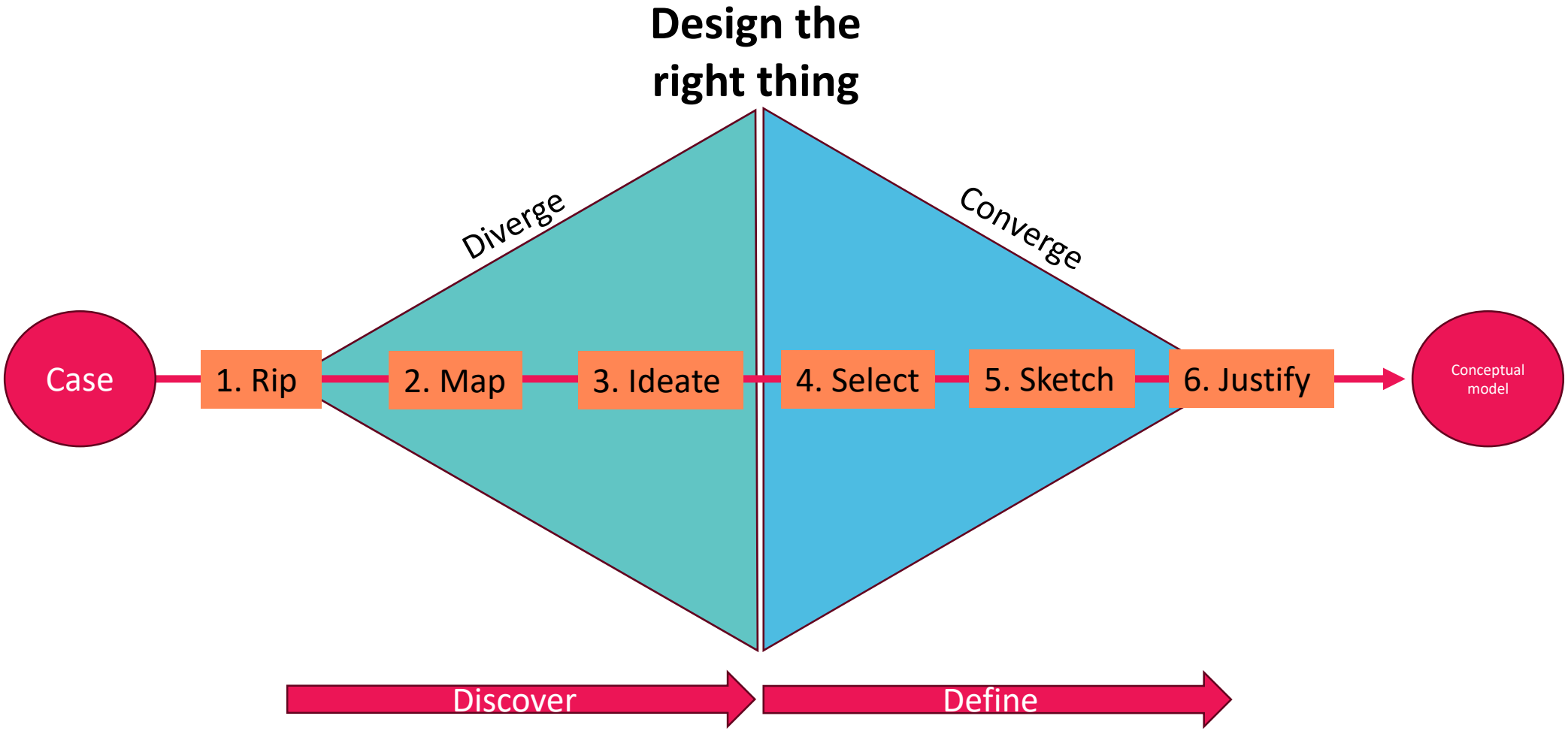
Adapted from work by the Design Council

Broken down a little further



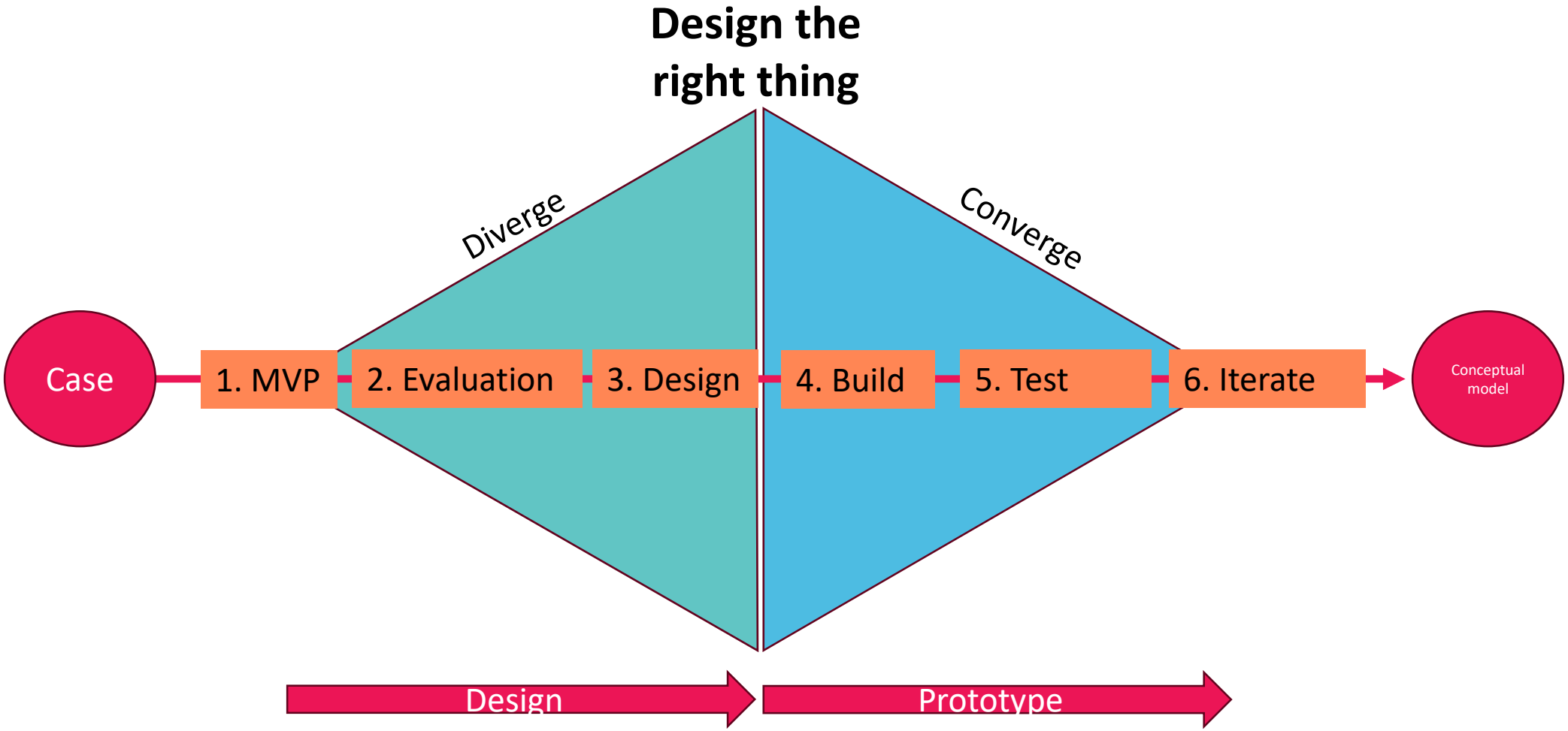
Adapted from work by Dan Nessler

Part 1


Design the right thing
Diverge
Converge
Case
1. Rip
2. Map
3. Ideate
4. Select
5. Sketch
6. Justify
Conceptual model
Discover
Define

Part 1

Part 2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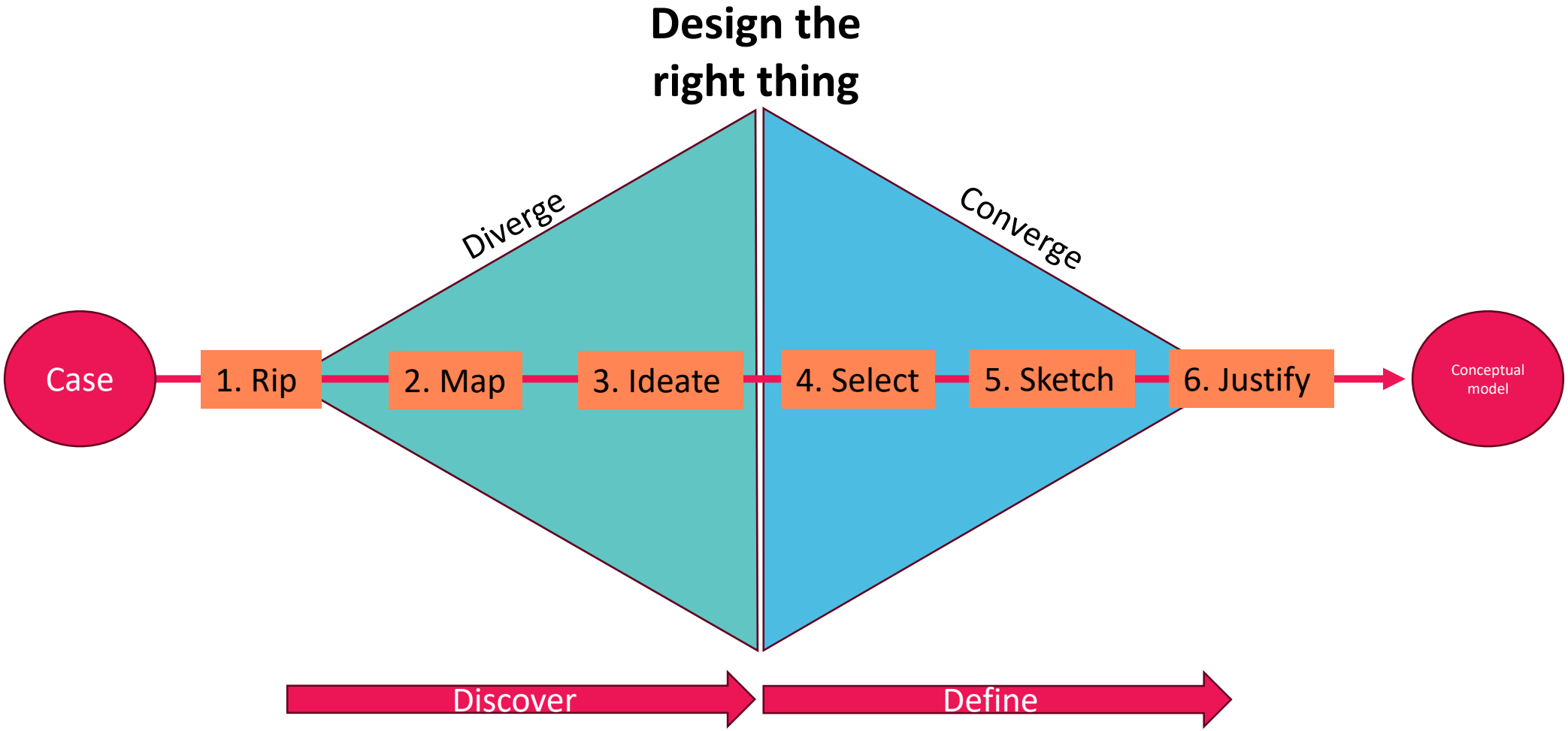
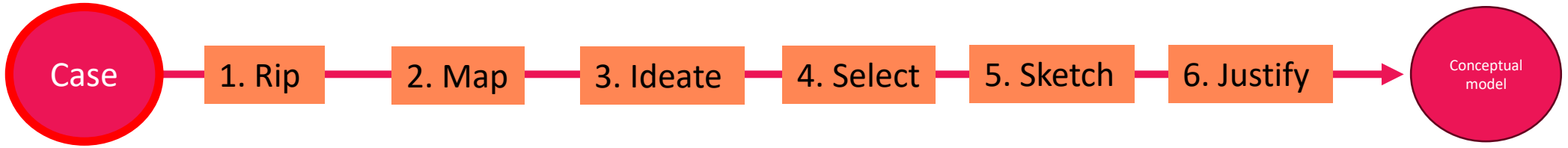
Part 2

Back to Part 1



Part 1

Case


Case
1. Rip
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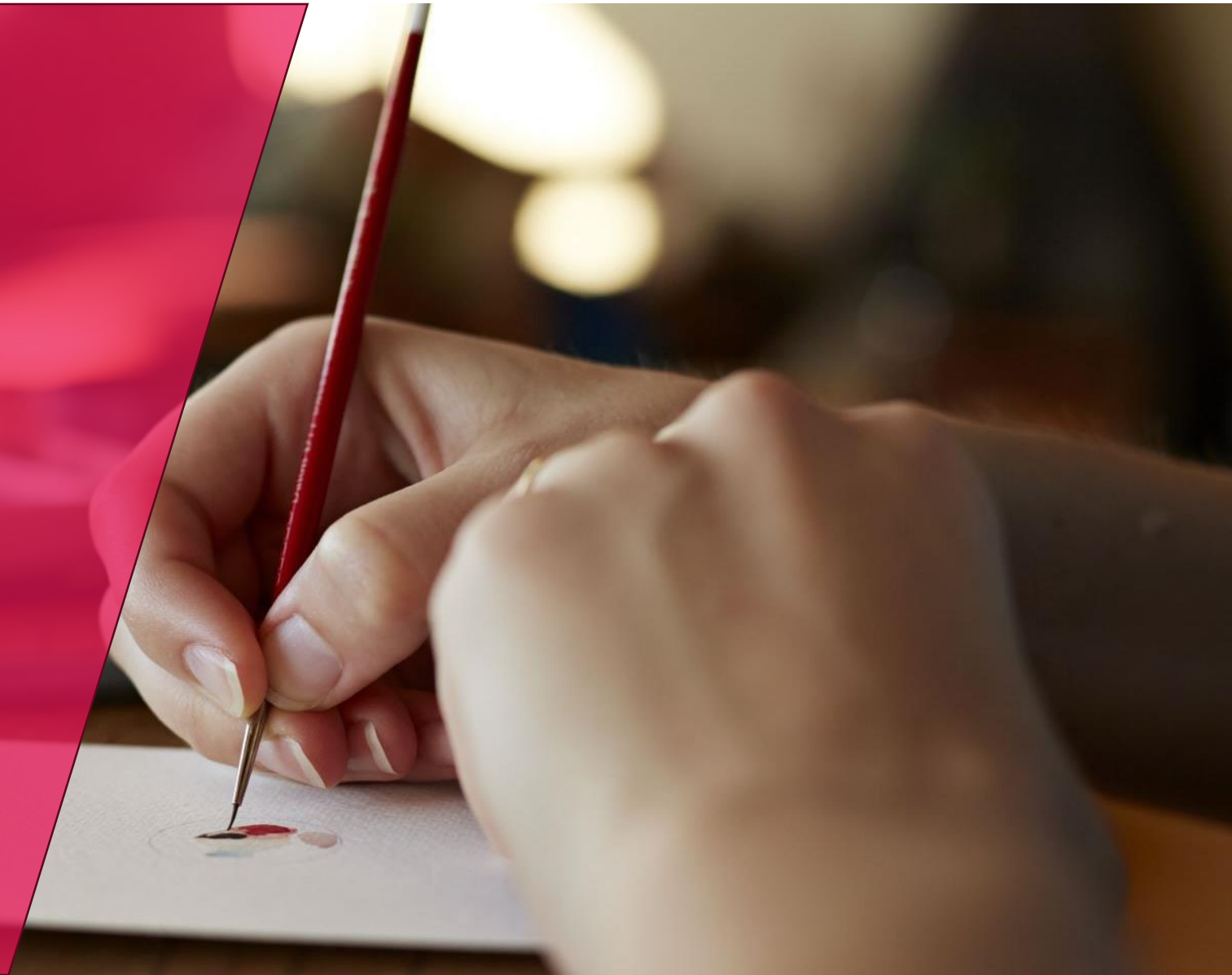
6. Justify
Conceptual model

This stage is all about getting to know your users

The Case – This will be prepared by you in advance

- Who is this system for?
- Purpose
- What we don’t know
- What we do know
- Areas of focus
- The brief we are working to



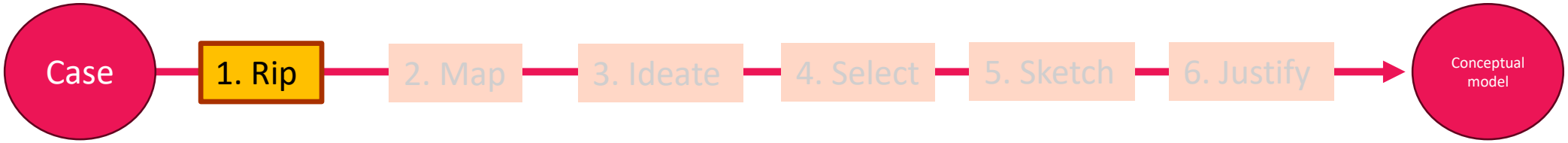
Resources

- Each group will need an exercise pack containing:

- Brief and high-level concept diagrams
- Rip sheet
- Ecosystem sheet
- Crazy 8 sheet
- Rating sheet
- Concept sheet
- MVP Objects Sheet
- Must-Should-Could Won’t sheet
- Validation design sheet
- Usability test recording sheet
- Spare paper
- Scissors
- Pens

Be warned, we will be doing this quickly.

Rip the brief – 30 minutes



This step is all about understanding your user

Role Play and re-formulate

Tasks:

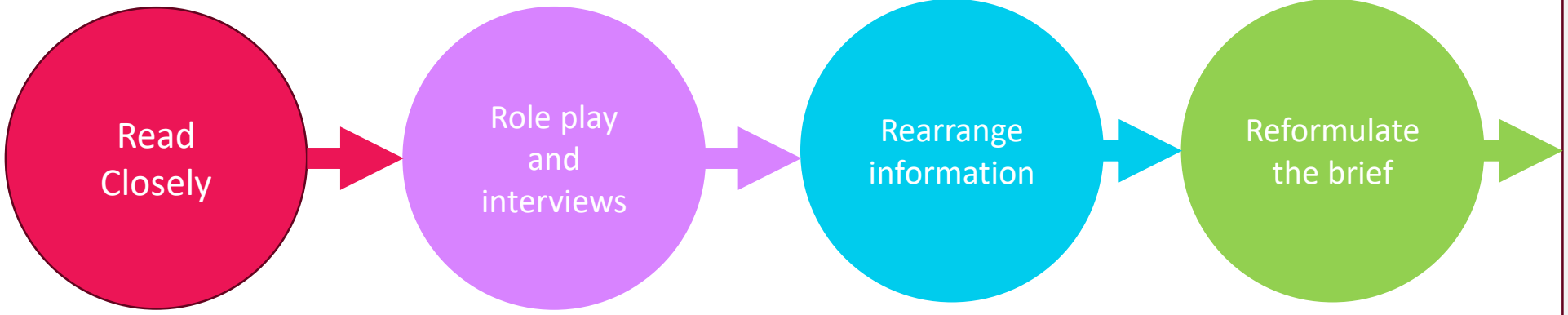
- Read your brief
- Formulate some Questions (Examples provided to help you)
- Roleplay
- Reframe challenge as a group
- Title and Present

You will Need: The A3 concept template

Interviews

You still need to formulate some questions (next screen)

Role Play and re-formulate



A3 concept template

Title
Description of the brief

Example Questions:

Who is this for?
What is the main purpose?
What do we know?
What are we unsure of?
Can we make an educated guess?
Is the case clear to us?

Role Play:

Two users (not from WP3)
Two interviewers
One note taker

Assignment:

Reframe challenge (3-5 Sentences)
Write site title
Present amongst your small group

It's best to do this with a user (Interview). If that's not possible, then roleplaying gets you into the shoes of the user.

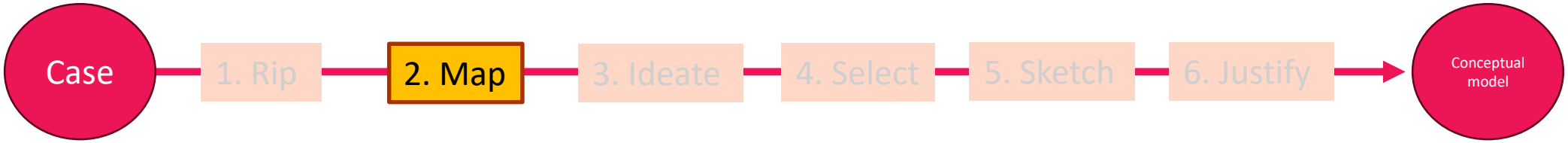
Reformulate the brief

Steps to re-formulate:

- Read the brief
- Identify the users
- Think about what their challenge is
- Think about what limitations they currently face
- Think about what the user wants to achieve in an ideal world
- Re-write the brief into a 2-3 sentence problem statement

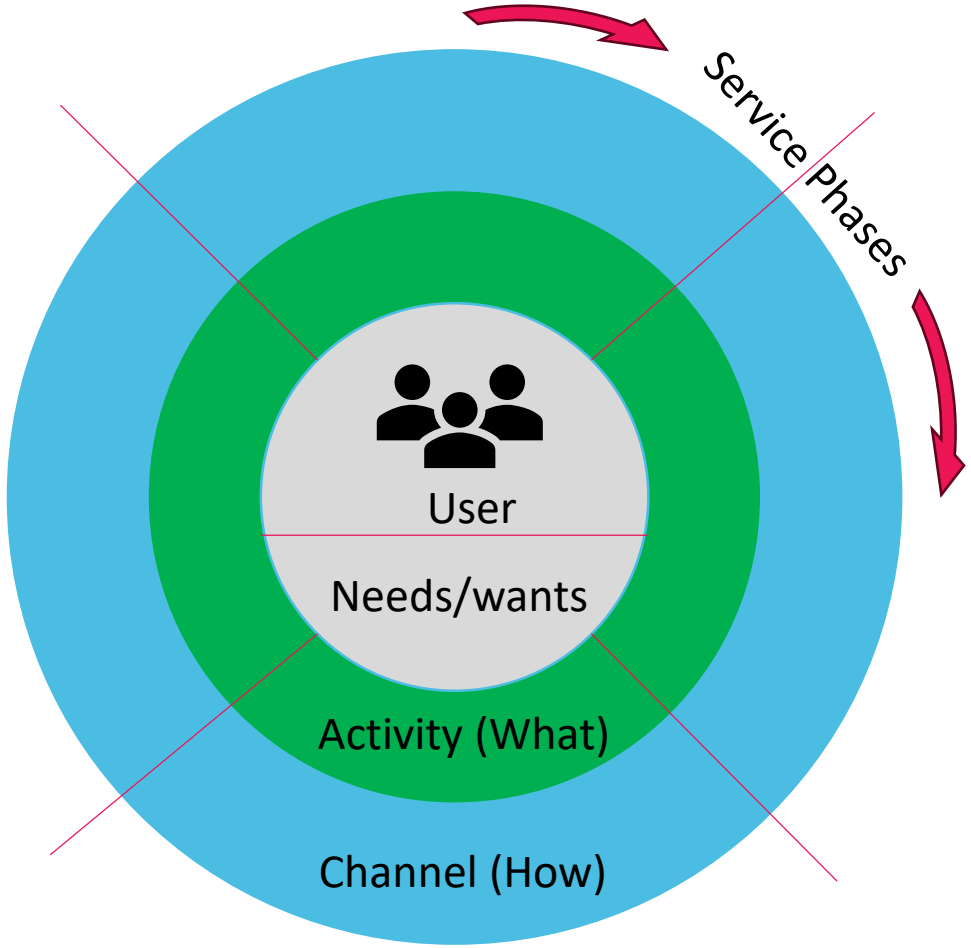
i.e. We want a means of transport to efficiently move a person from point A to Point B. The user should exert minimal effort in making the means of transport move.

Ecosystem Map – 30 minutes



This step is all about understanding the environment the thing you will be delivering must exist within

Map your primary user group



User: User or persona variables like age, gender, location, skill set, education, level of access

Needs/Wants (Why): What they need or want (or in many cases, what we think the user needs or wants. In this case it is in your brief

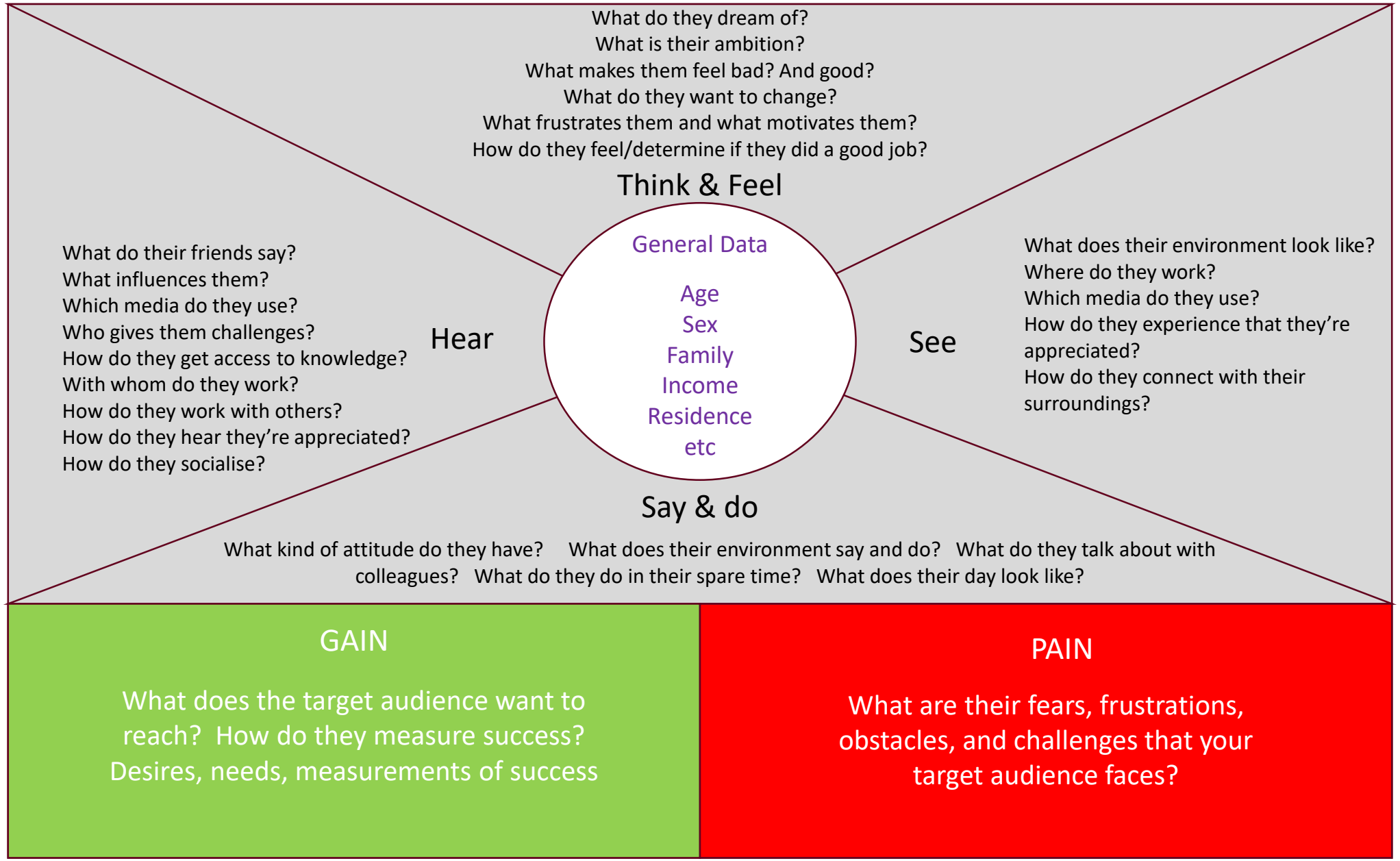
Service Phase: Elementary phases in the service. E.g., enrolment, first time user experience, asking for help, learning to use the system, learning to use the data, sharing data, ending…

Activity (What): What the user likes or wants to do: go online, go to a place, look for information. This is tied to the phases

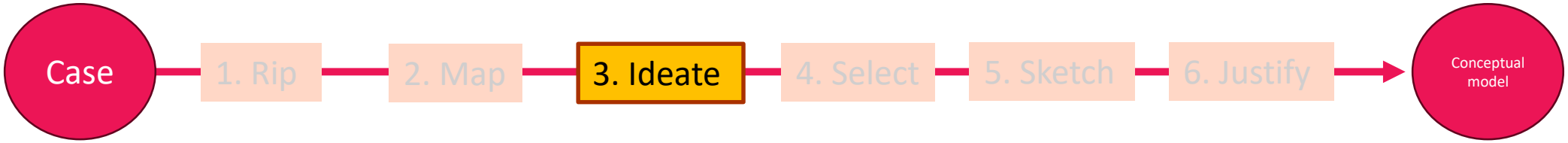
Channels (How): Channels are digital and non-digital: smartphone, desktop, office, a meeting, a training etc

You will need: the ecosystem map sheet

Empathy map


What do they dream of?
What is their ambition?
What makes them feel bad? And good?
What do they want to change?
What frustrates them and what motivates them?
How do they feel/determine if they did a good job?
Think & Feel
What do their friends say?
What influences them?
Which media do they use?
Who gives them challenges?
How do they get access to knowledge?
With whom do they work?
How do they work with others?
How do they hear they're appreciated?
How do they socialise?
Hear
General Data
Age
Sex
Family
Income
Residence
etc
See
What does their environment look like?
Where do they work?
Which media do they use?
How do they experience that they're appreciated?
How do they connect with their surroundings?
Say & do
What kind of attitude do they have? What does their environment say and do? What do they talk about with colleagues? What do they do in their spare time? What does their day look like?
GAIN
What does the target audience want to reach? How do they measure success? Desires, needs, measurements of success
PAIN
What are their fears, frustrations, obstacles, and challenges that your target audience faces?

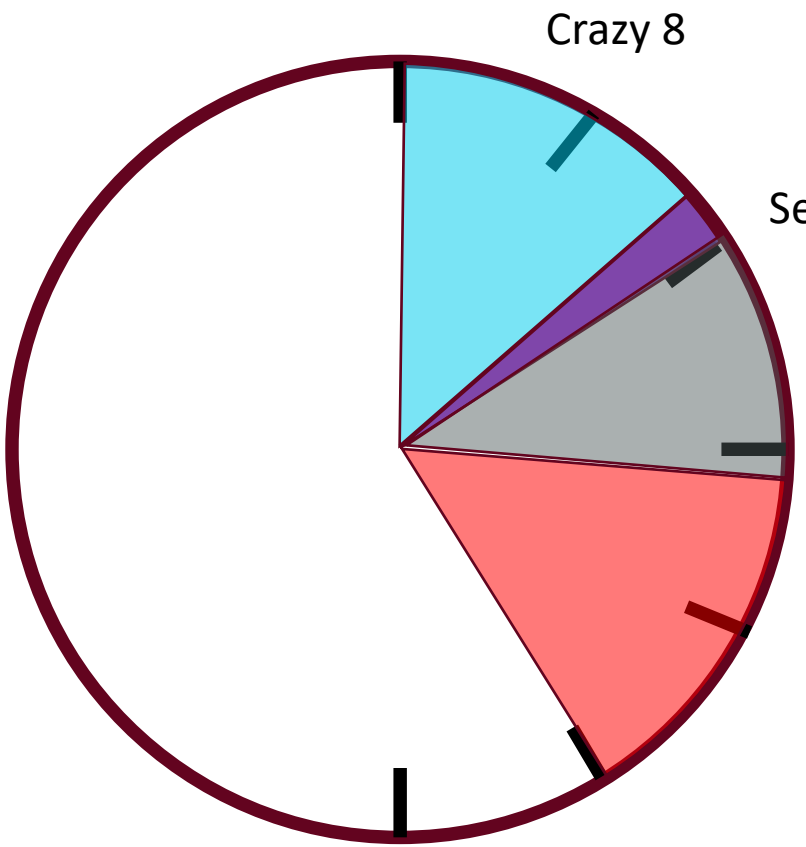
Ideate – 30 minutes



This is all about (freely) creating ideas which could be implemented that meet the aims of what you are trying to create

- Could be a use case to work on
-Could be a new policy to implement
- Could be a new service

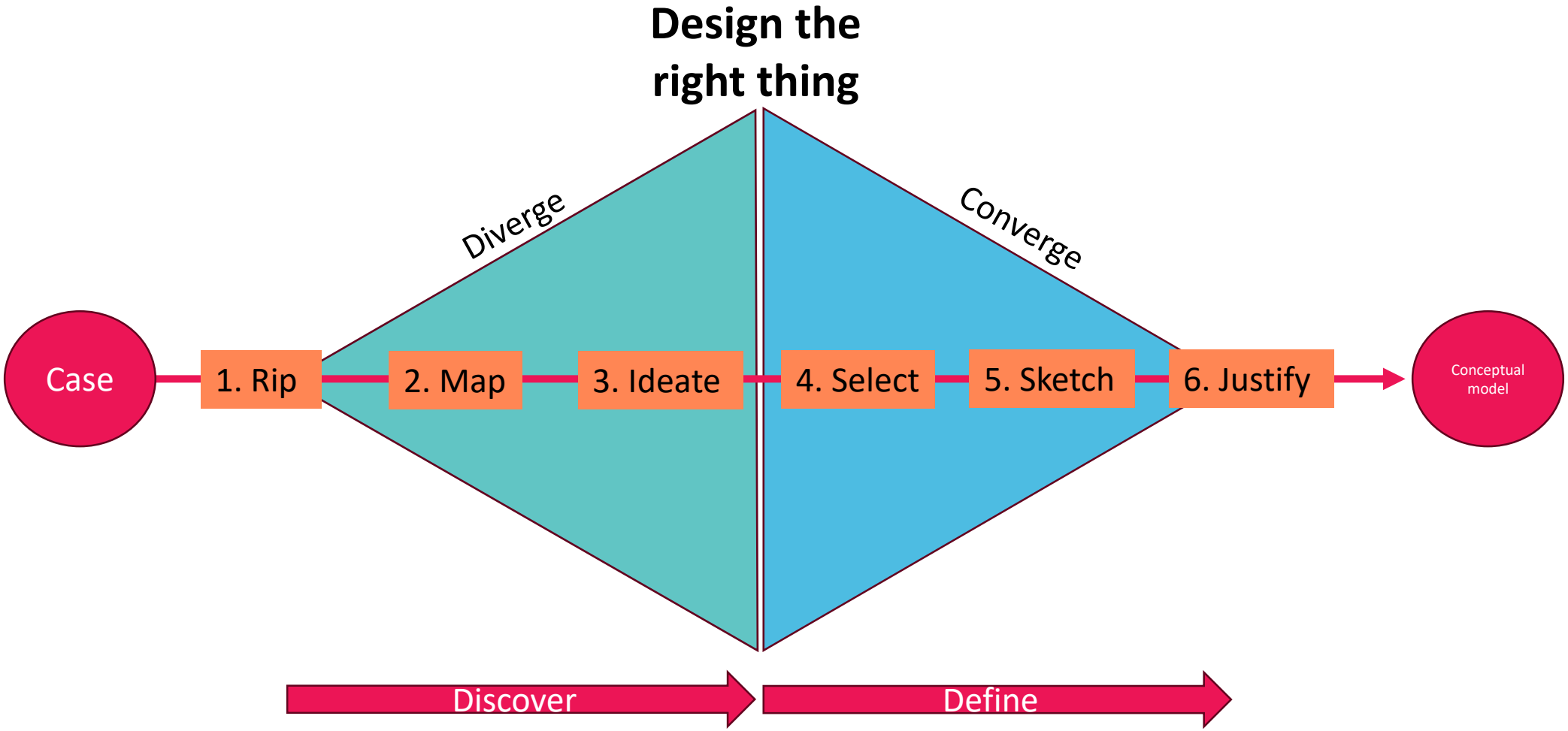
Crazy 8 – 25 Minutes



Crazy 8: Come up with 8 ideas in 8 minutes

You will need a Crazy 8 worksheet

Part 1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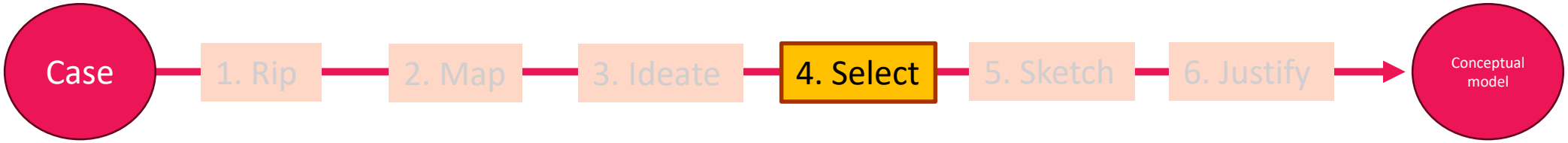
Part 1

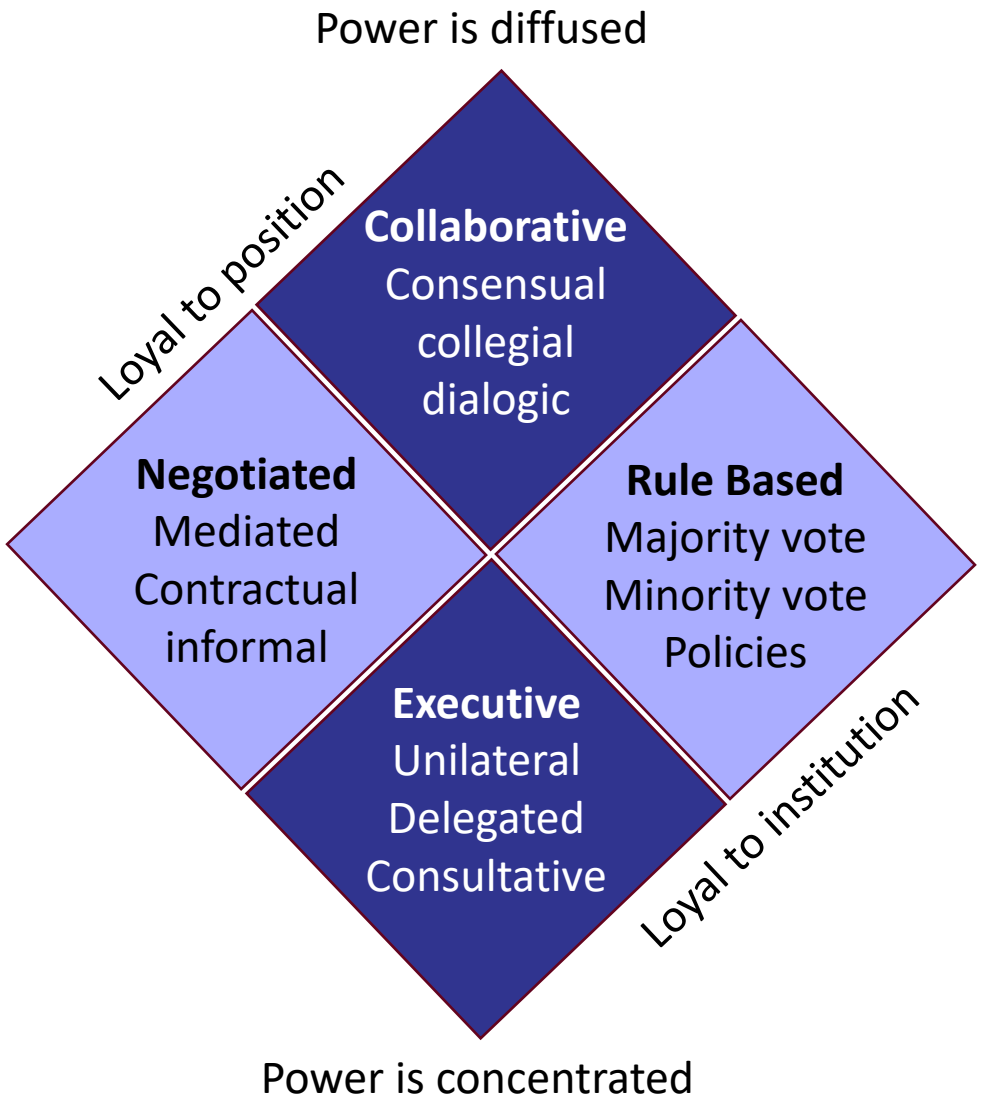
Select your team idea – 30 minutes



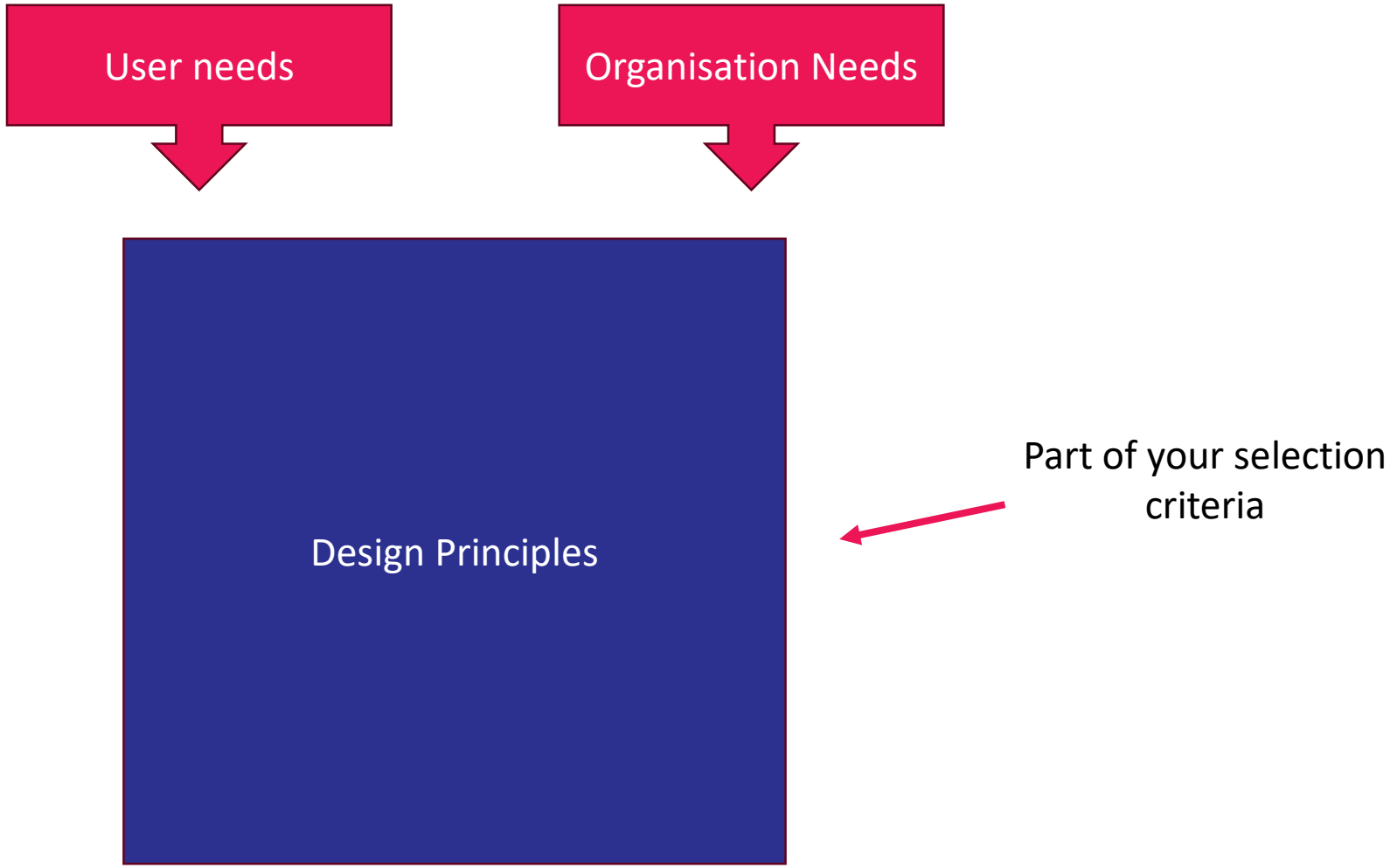
This is about how to focus on an idea in a way which will likely lead to a good outcome.

Selection Criteria

Decision strategies



These different strategies help you to think about your organisational needs for whatever it is you are building.


User needs
Organisation Needs
Design Principles
Part of your selection criteria

Design Principles

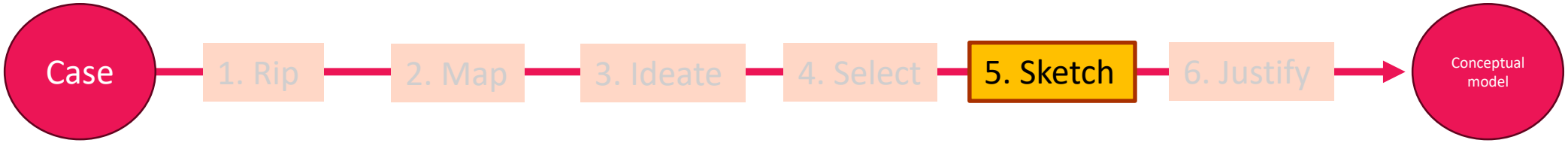
Keep	Keep users in control
Keep	Keep things safe
Make	Make it understandable
Make	Make it ethical
Do	Do the thinking for the user
Expose	Expose data and functionality only through service interfaces.
Communicate	Teams/technologies must communicate with each other through these interfaces.
Ensure	Ensure it is F.A.I.R
Don’t do	Don’t do harm

Rate ideas individually – Score averages as a group (30 mins)

- Criteria to evaluate ideas against:
  - Brief
  - Ecosystem Map
  - Design Principles

(0-10, 10 being the most closely aligned)

Sketch the winning idea – 30 minutes

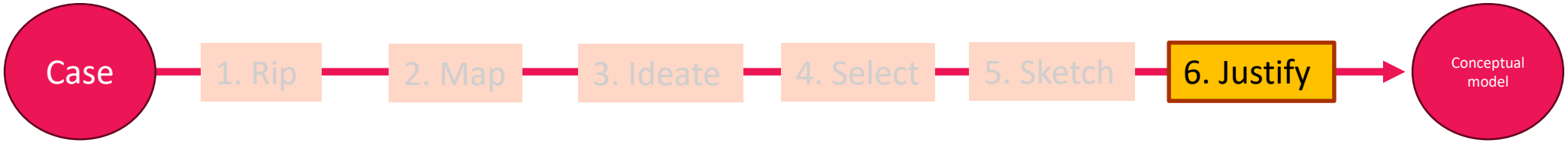


Start to develop what the system will look like (i.e. dream)

Sketch – 25-30 minutes

- Visualise the design (Typically individually)
- Mandatory elements of the visualisation:
  - Position of the different users
  - Interaction moments and solutions
  - Data and information flows
  - Context of use
  - Added Experiential value

Justify the concept – 5-minute presentation



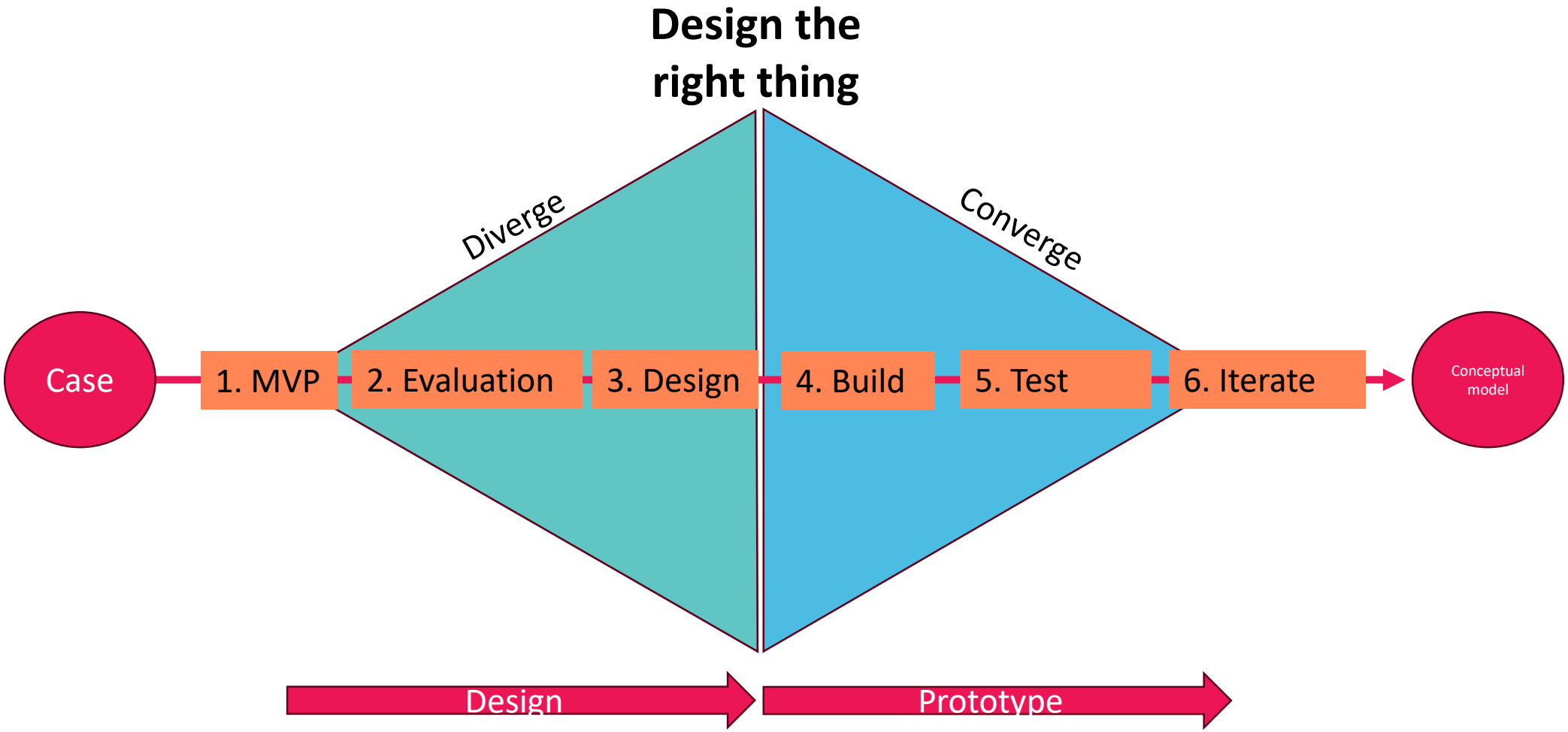
Show the group what you've come up with

Group Presentations – (5 mins per team/group/individual)

- Title
- Description
- Concept Sketch
- Rationale
  - Key design decisions
  - Why
    - Brief
    - Empathy map
    - Ecosystem Map
    - Design Principles

At the end of this diamond your team should have a common understanding about what it is they are working towards

Let’s have a break!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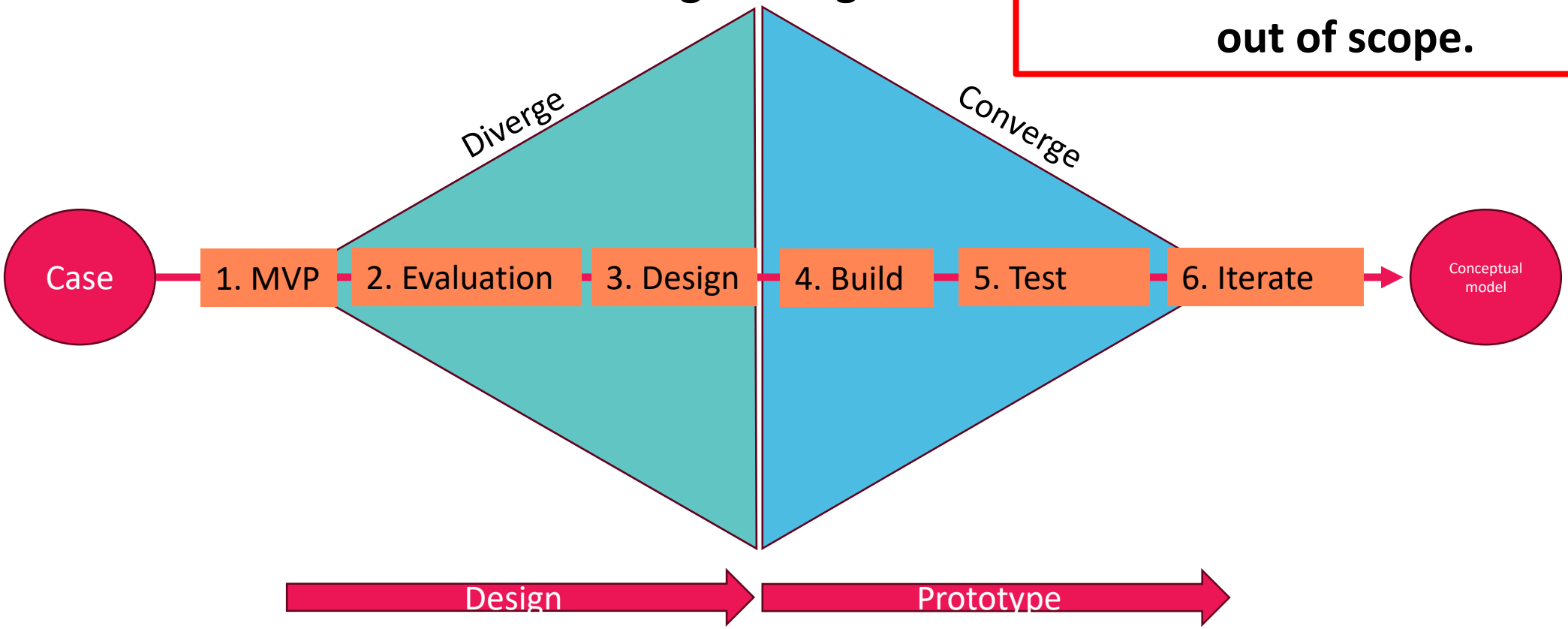
Design
Prototype

Part 2

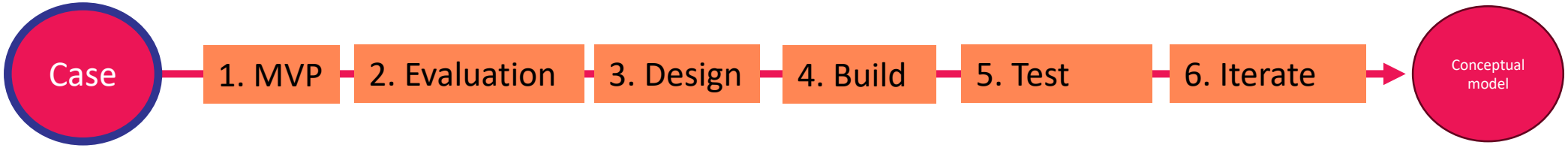
Design the right thing

We're only focusing on the interfaces. Detailed backend is out of scope.



Part 2

We are peeling away bits to work towards the low-level details. Rather than working from the low-level details to build up something.

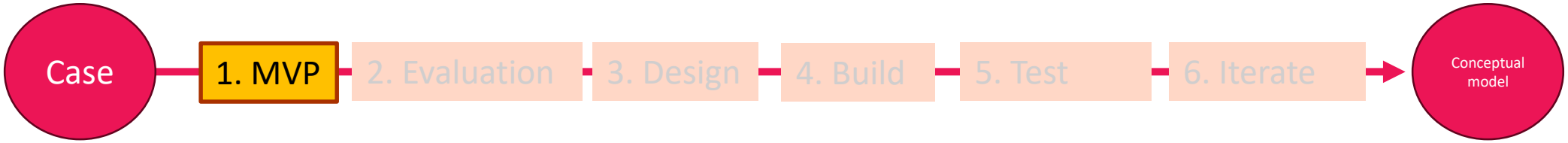


We start where we left off, with the agreement between the team on what the high-level concept looks like.

We don't need to be in total alignment about what is being built. Just what the majority understands.

You will need all the materials that you created in the last diamond exercise.

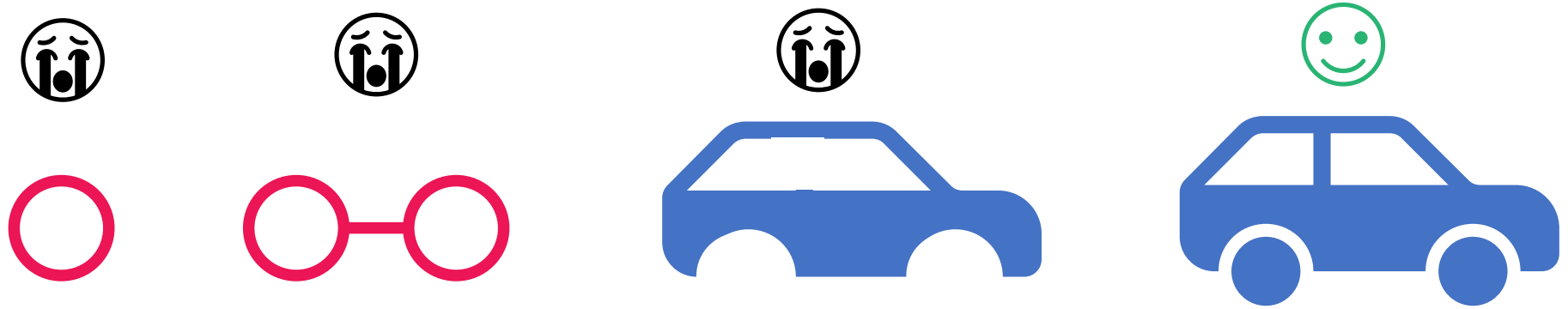
Minimum viable product – 30 minutes



We’re diverging again. This time to define the scope of what is to be built.

Minimum Viable Product

Not like this



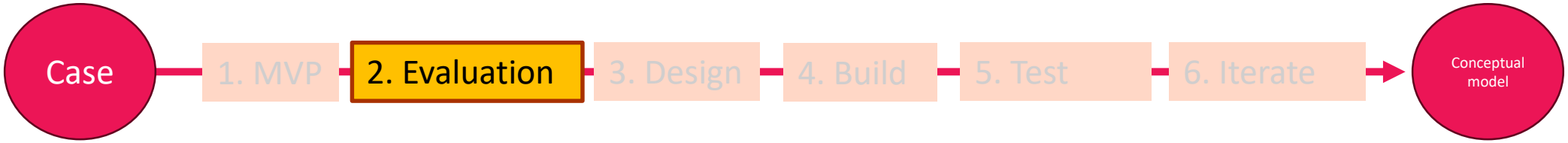
like this

Must Should Could Won’t – 30 minutes

Must have (elementary, legal, unsafe if left out)	**Should have** (Not vital, painful if left out, workaround acceptable but temporary)	**Could have** (Desirable, little effect if left out)	**Won’t have (now)** (For the next iterations)

You need the Must Should Could Won’t sheet

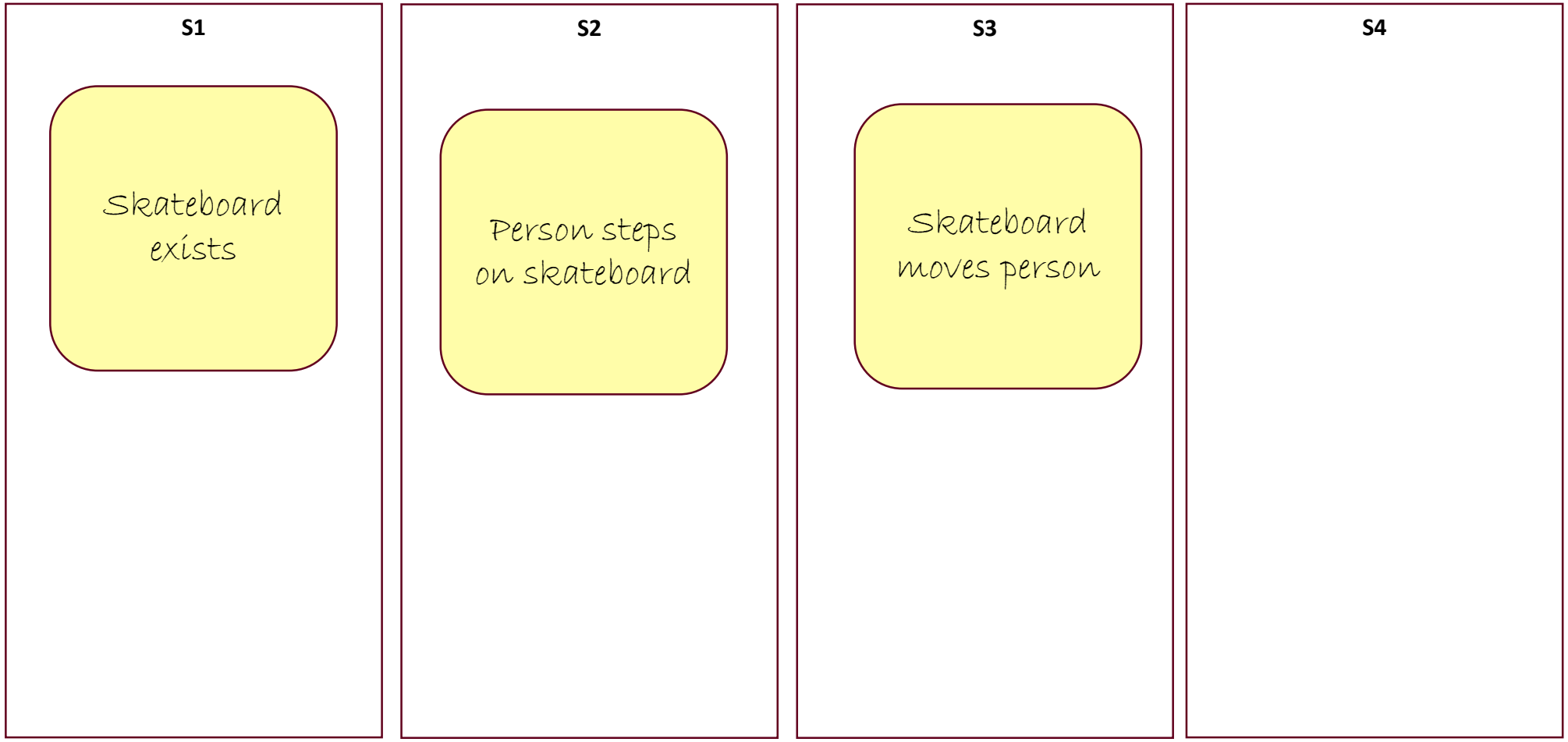
Evaluation – 25-30 minutes



Now we start to try and understand how the thing you are creating will work.

MVP Flow – 25-30 minutes

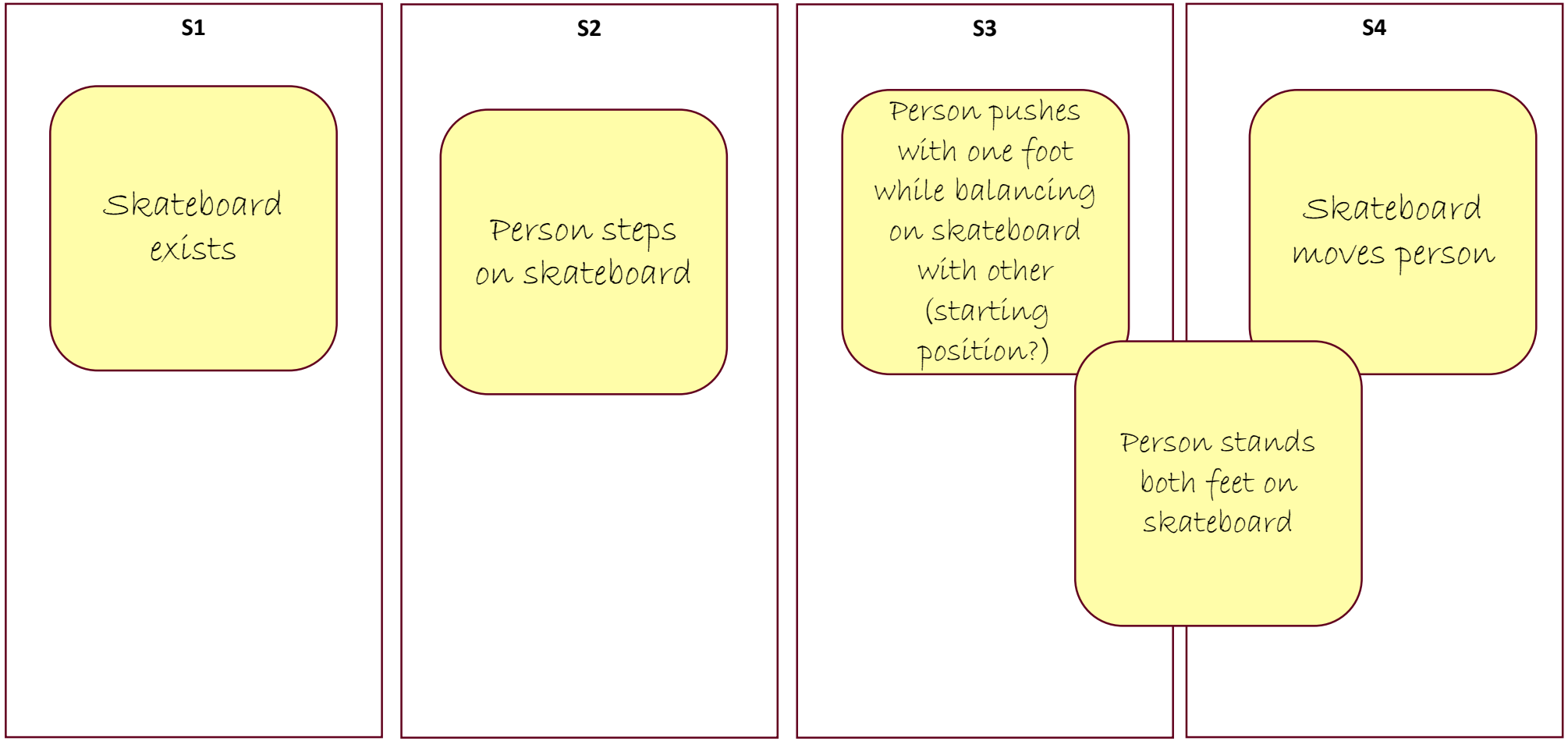
Screens (or interfaces/objects)



You will need the MVP flow sheet

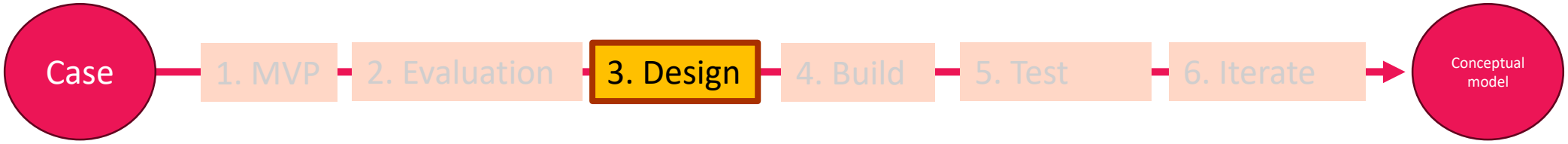
MVP Flow – 25-30 minutes

Screens (or interfaces/objects)



You will need the MVP flow sheet

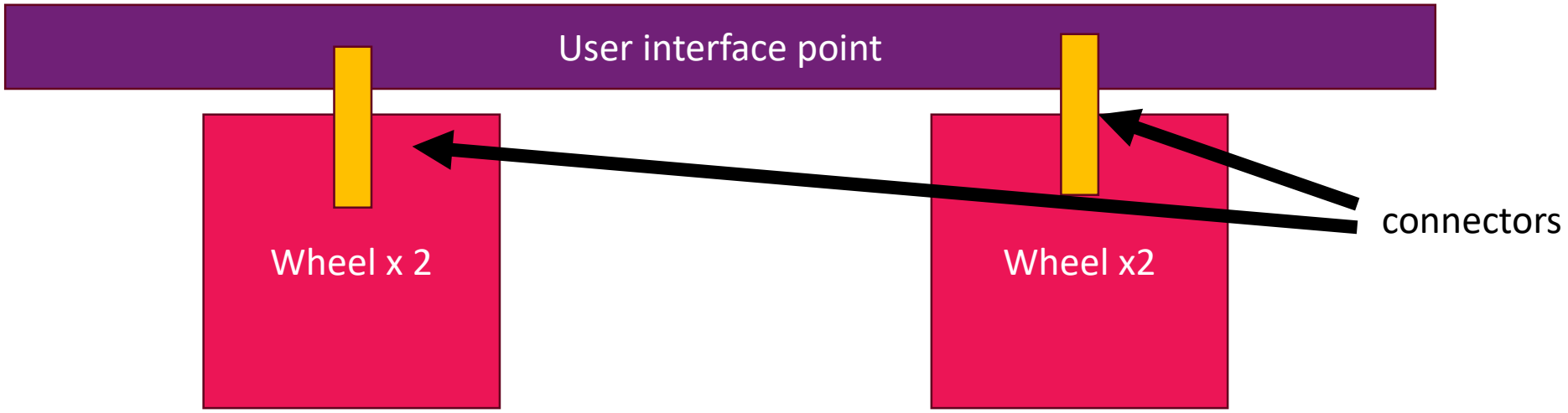
Design the prototype – 30 minutes



Based on the MVP flow exercise, you may need to add more elements to your thing.

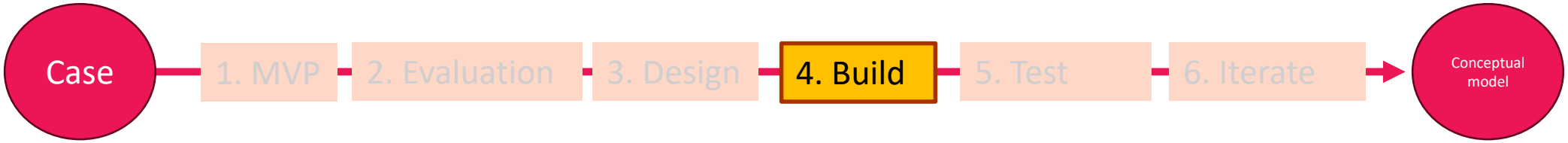
This is where you start to formulate how your thing will “look” and “work”.

Create a block diagram!



It doesn't have to be accurate. You don't have to know the details about the construct of the elements (yet) just their function.

Build the prototype – 30 mins



Now we start to converge towards the idea that will be built

Build

Paper Prototyping

Wizard of Oz technique:

- A method to test very complex systems where you don’t have to implement the complexity in the back end. (low fidelity prototyping technique)

The point:

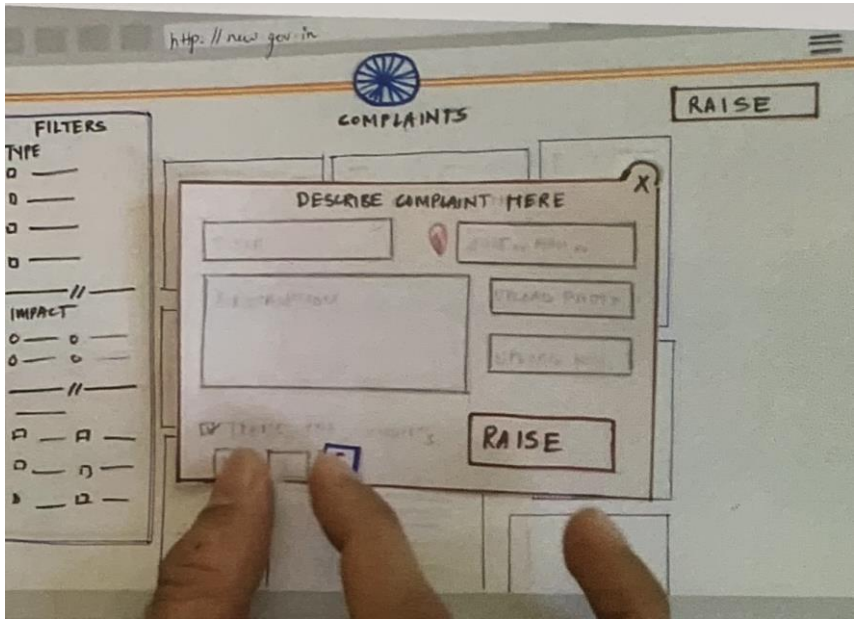
The point of prototyping is to bring ideas or concepts to life and explore the real-world acceptance, impact or value that idea or concept can have

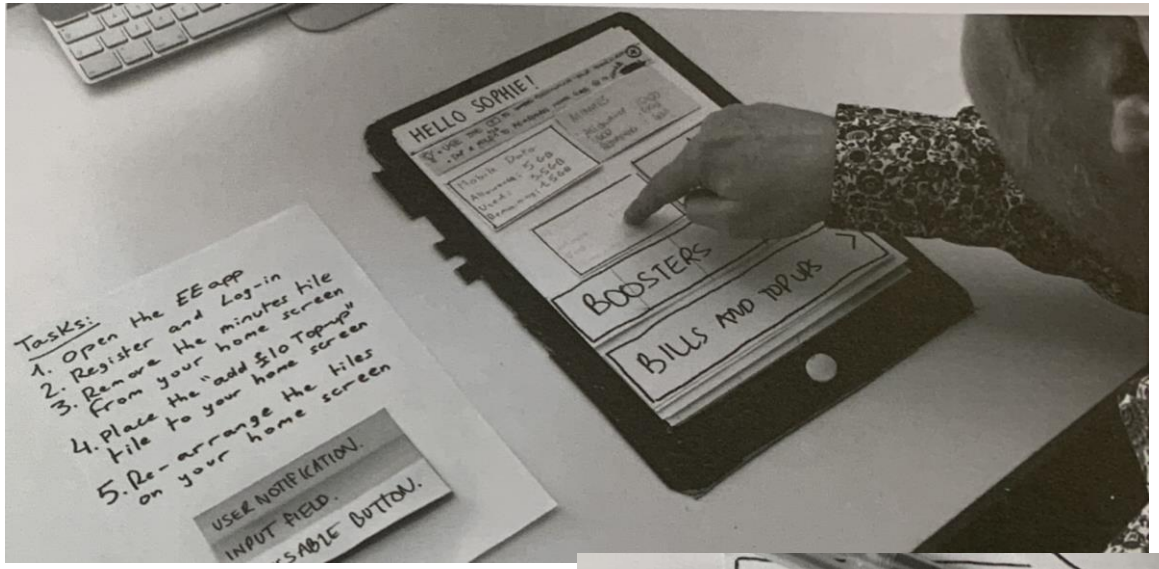
Prototyping – why its needed

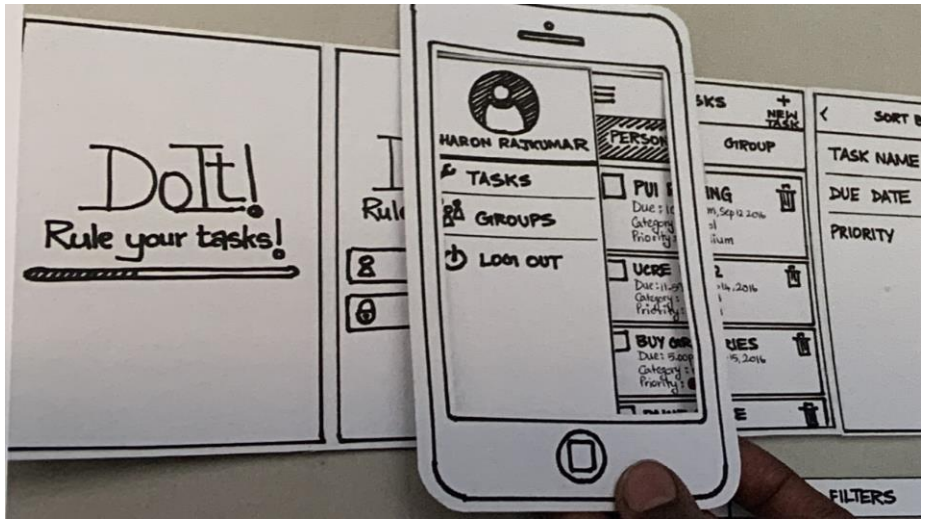
Paper Prototyping

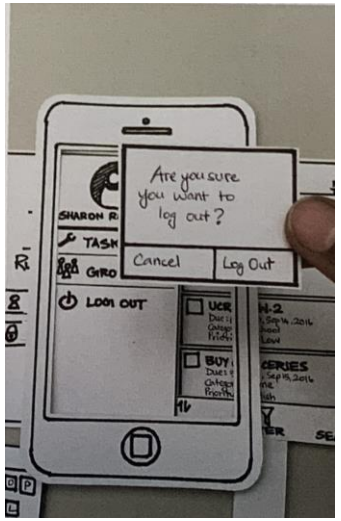
- In the early stages of concepts – quick feedback
- Maximum learning for minimum effort
- Draw one sketch per screen or interface, use colours for intentions (please provide a legend)
- Make sketches as a collection that different aspects of the interactions imagine
- One person is the ‘computer’ the sketches are switched according to user actions.

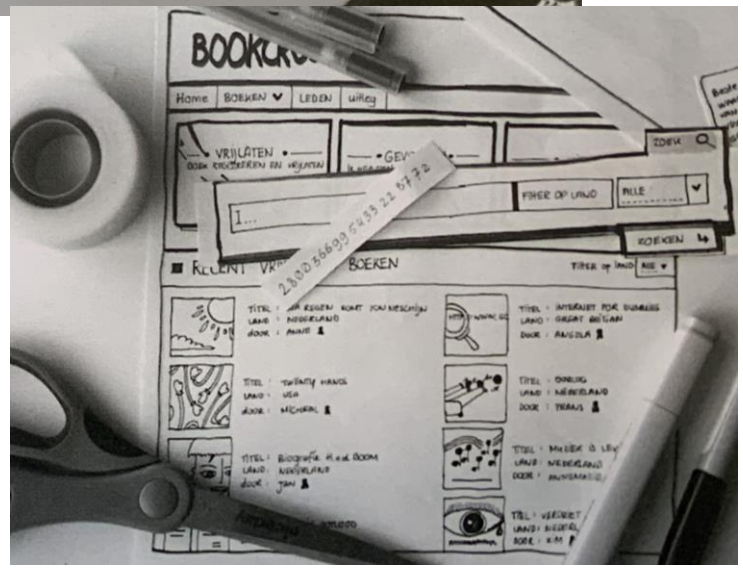
Some examples







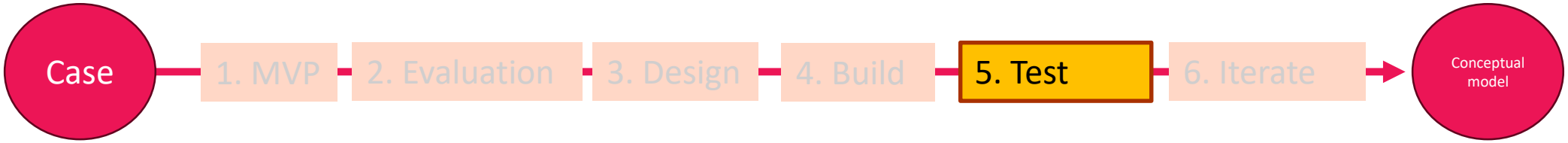




Remember the User Principles – they should still be followed

- Keep users in control
- Make it understandable
- Do the thinking for the user
- Make it ethical
- Don’t do harm
- Keep things safe
- Expose data and functionality only through service interfaces.
- Teams/technologies must communicate with each other through these interfaces.
- Ensure it is F.A.I.R

Validate (30 minutes)



Now we test your wizard of oz paper prototype

Low-fi User Testing

It is **not asking** what they think of it, but **observing** what the users do when asked to perform elementary tasks.

Usability test (Mandatory Roles):

We are testing with “users” if they can use and understand the task/application

- Facilitator
- Human Computer
- Test Participant
- Observer (behaviour)
- Notetaker

Testing process

Research Question(s)
- The questions that you want answered

Script
- The tasks that you are going to give to the users

Recruit
- A list of users and times/places

Test/Observe
- Brief the user
- Do the tasks
- Observe the user
- Make notes
- Debrief with the user

Analyse
- Identify usability issues
- Identify improvements

Recommend
- Formulate findings
- Make recommendations for improvements

Research: Formulate the questions what you want to get answered with the test. Think of design principles, critical (human) success factors, etc.

Script: Transform user goals into targeted scenarios and tasks and put test participants in the 'Do' mode

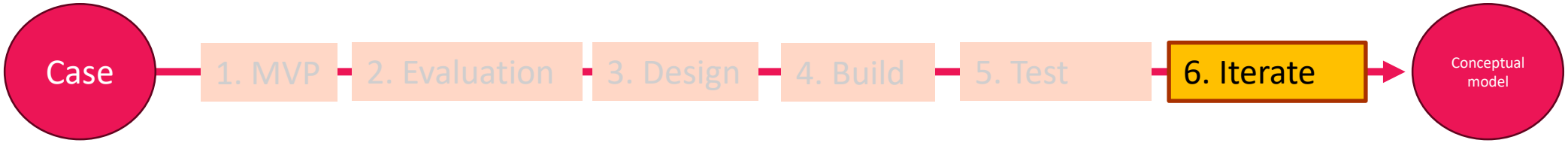
Recruit: Which participants are representable enough for your user group (lowest level of representability). Do they have enough experience with context of use. How many test participants (5-7 is standard)

Test & Observe: Don't provide hints or directions to the solution. Avoid terms that are in your prototype. Make sure your test participant 'thinks aloud'. Observe what user does and does not do. Reflect with user: how did it go? What was easy/difficult? Why?

Analyse: Debrief the observations and issues. What are the (root) causes of the issues? What is the solution direction?

Recommend: What are your recommendations / Solutions? What are quick wins vs projects?

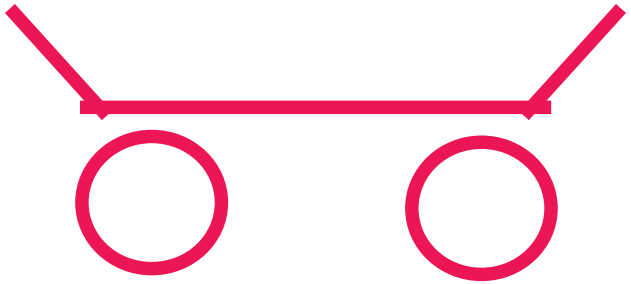
Use the Testing design sheet and the usability test recording sheet



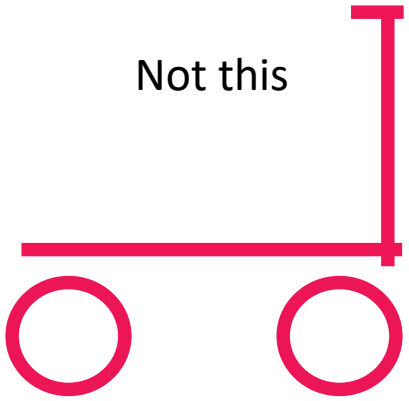
Change your design based on the user feedback

You want to be careful

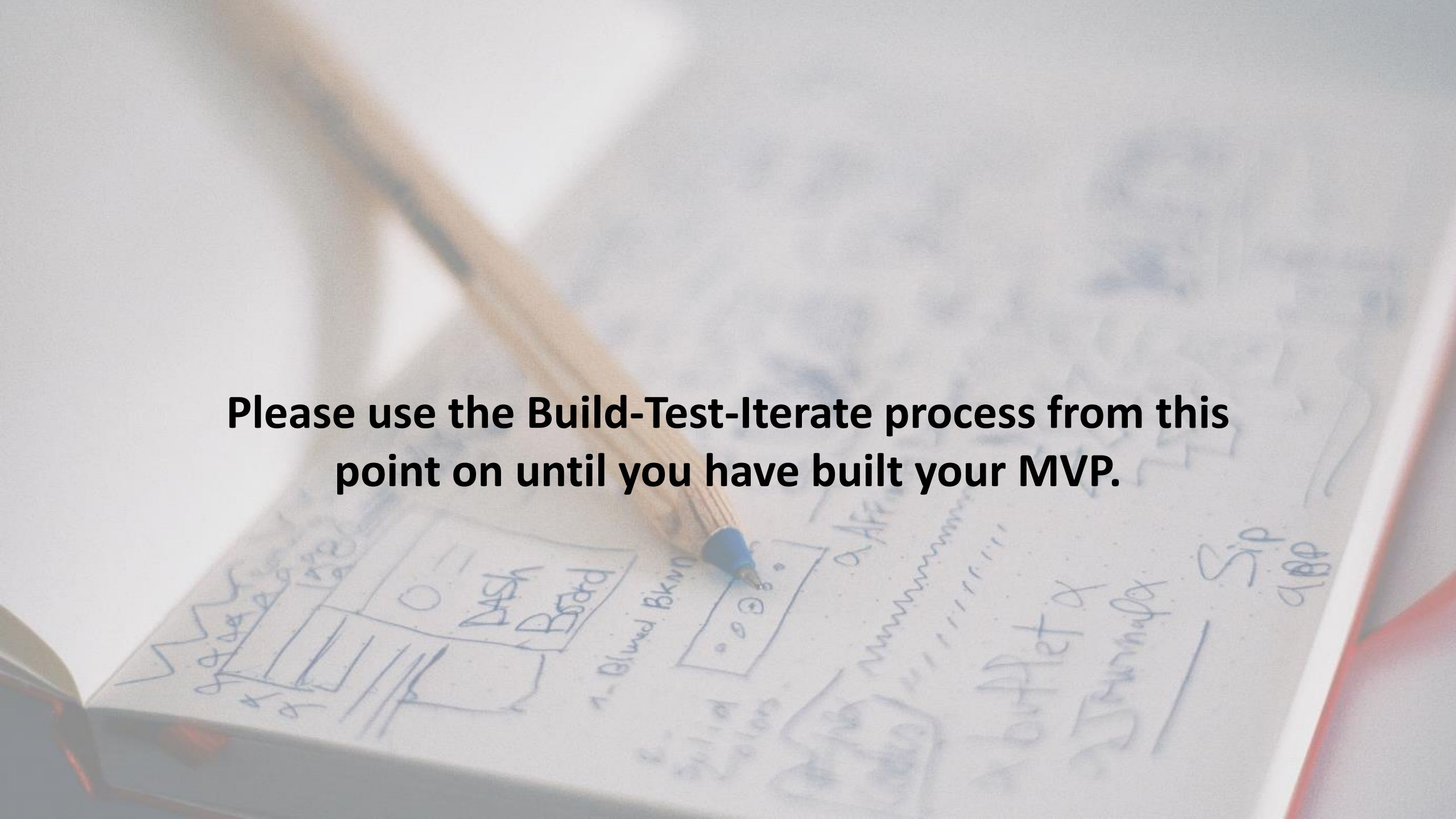
Refine this



Not this



For this, start back at the beginning of the 2nd diamond


Please use the Build-Test-Iterate process from this point on until you have built your MVP.

Based on slides and workshop provided by Informaat, Netherlands 2022


That's all Folks!

Thank You

Any questions?

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