





*Leland Bell's painting of the "Seven Grandfathers".  
For more information on the seven teachings, scan the QR code*



# Why We're Here:

- **Explore Design Thinking as a creative problem-solving approach**
- **Practice tools you can apply in your own work right away**
- **Build confidence to think differently and experiment with new ideas**
- **Connect with others and learn from diverse perspectives**

sept. 22 | 9-11am



DALHOUSIE  
UNIVERSITY

OPEN LEARNING &  
CAREER DEVELOPMENT

# Today's Workshop:

- Introduction to Design Thinking
- Key Mindsets for Applying Design Thinking
- How It's Used Across Industries & Contexts
- Identifying the Right Problems for Design Thinking
- Activity: Mini Design Thinking Sprint

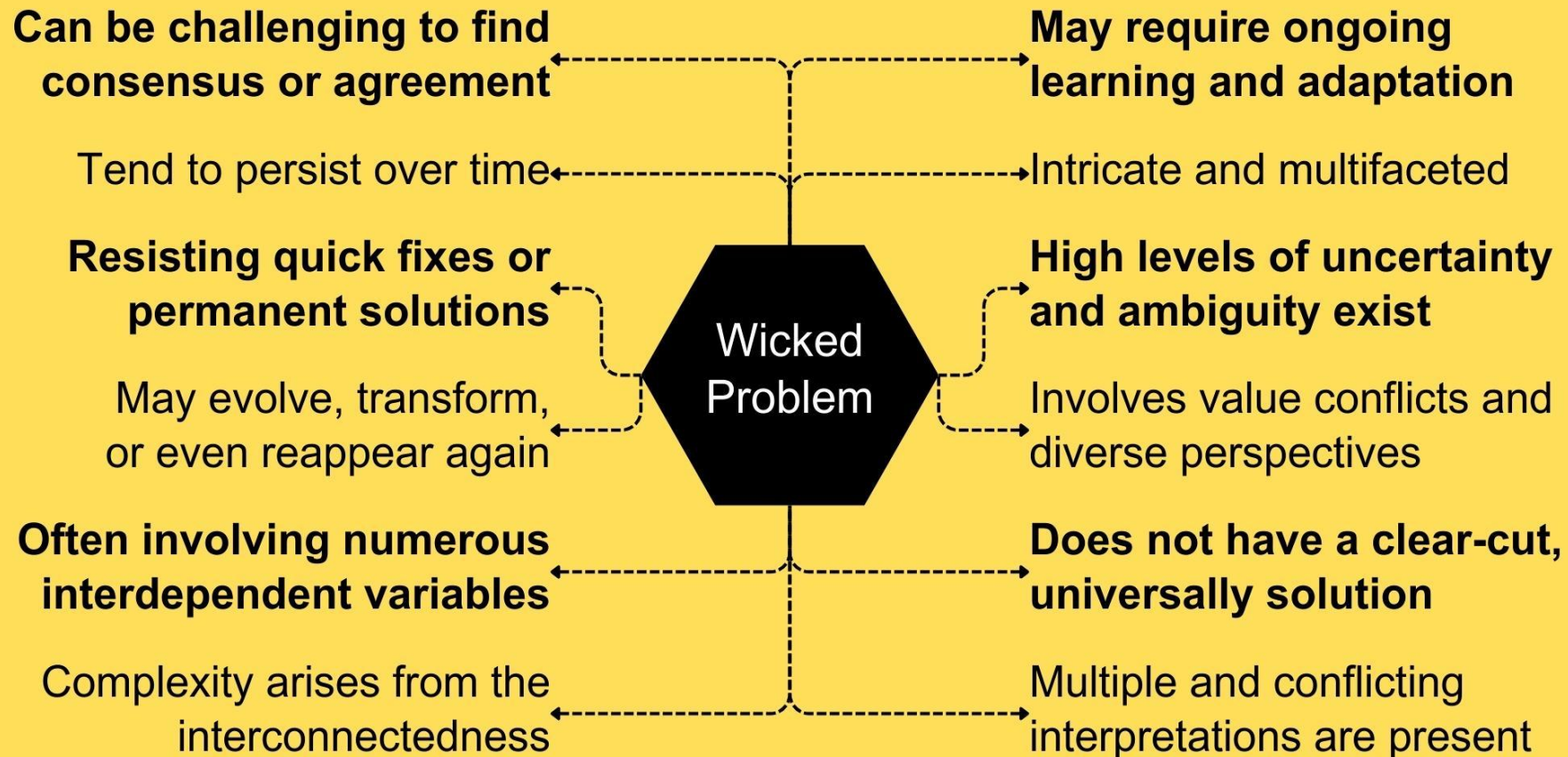
sept. 22 | 9-11am



**WE ARE LIVING IN  
UNPRECEDENTED TIMES**

# What is a Wicked Problem?

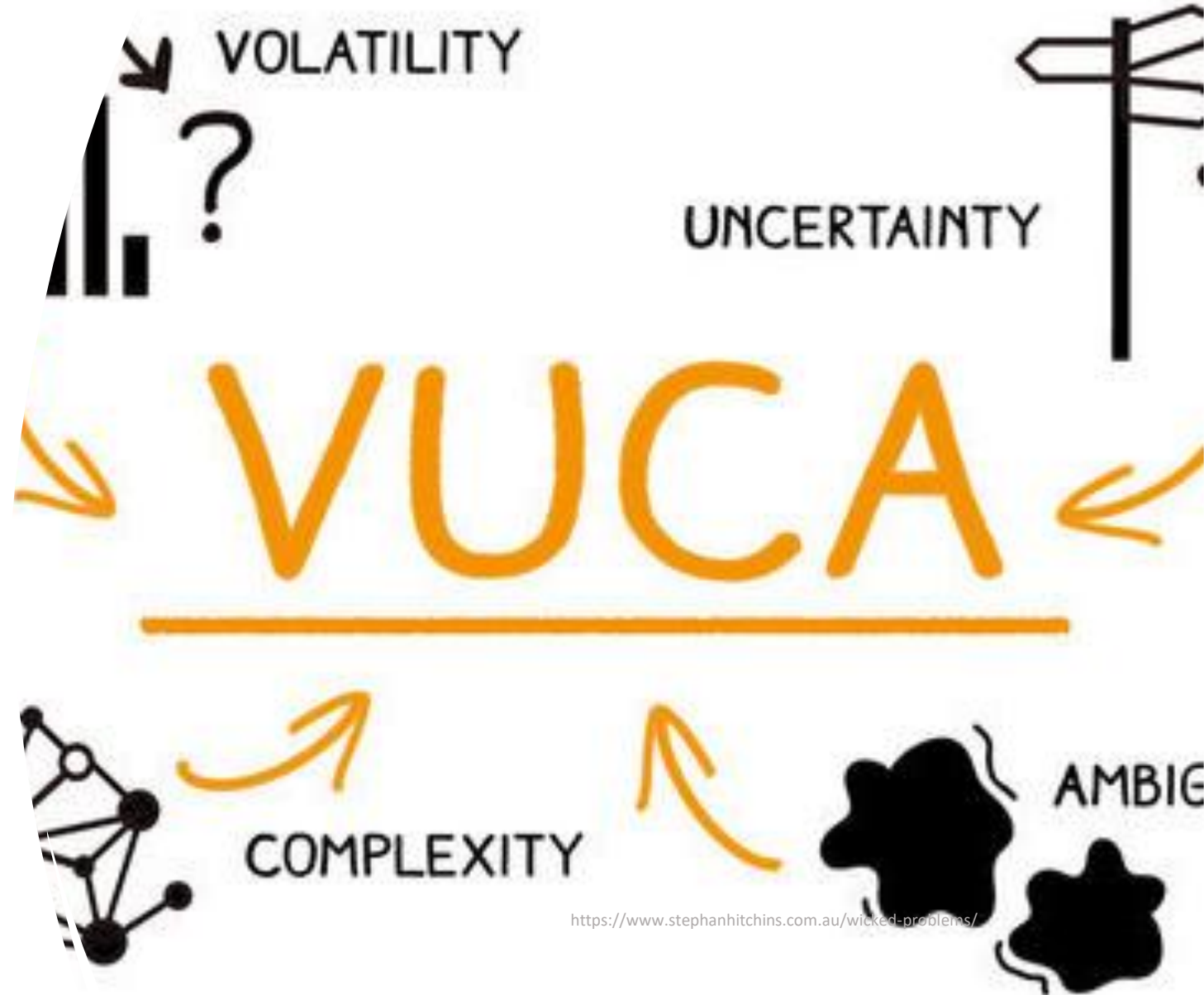
Typically characterized by the following attributes.



# The Cost of Complexity

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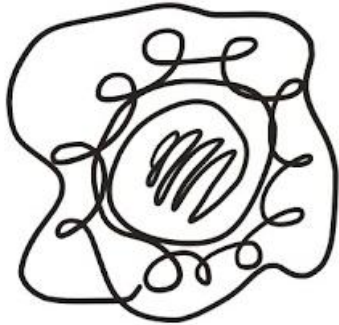
- Overwhelm
- Jeopardize long-term projects
- Destabilizes internal culture





# TRADITIONAL PROBLEM SOLVING PROCESS

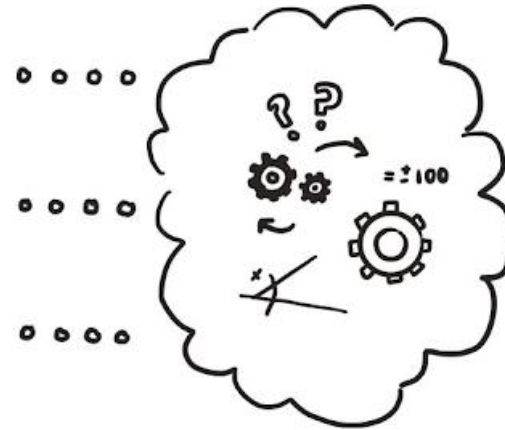
DEFINE  
THE PROBLEM



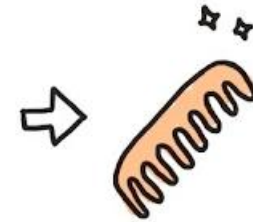
IDENTIFY VARIOUS  
SOLUTIONS



ANALYZE IN AIM TO  
FIND BEST SOLUTION



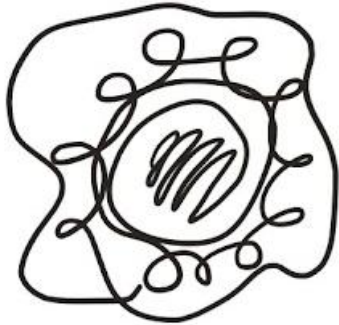
CHOOSE BEST  
SOLUTION



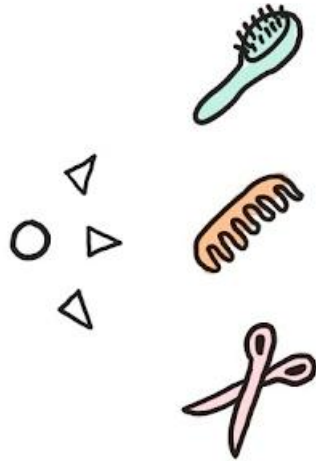


# TRADITIONAL PROBLEM SOLVING PROCESS

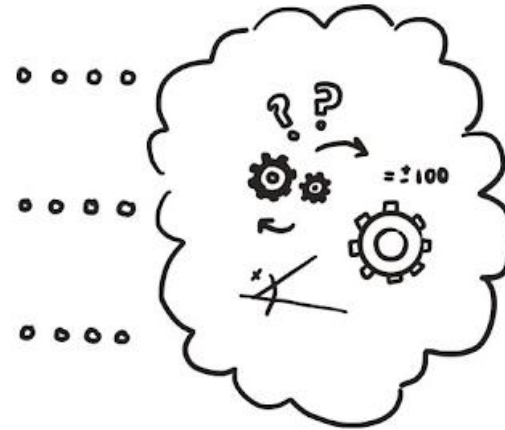
DEFINE  
THE PROBLEM



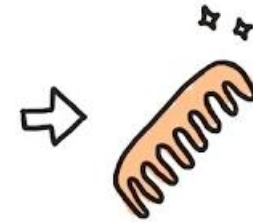
IDENTIFY VARIOUS  
SOLUTIONS



ANALYZE IN AIM TO  
FIND BEST SOLUTION



CHOOSE BEST  
SOLUTION





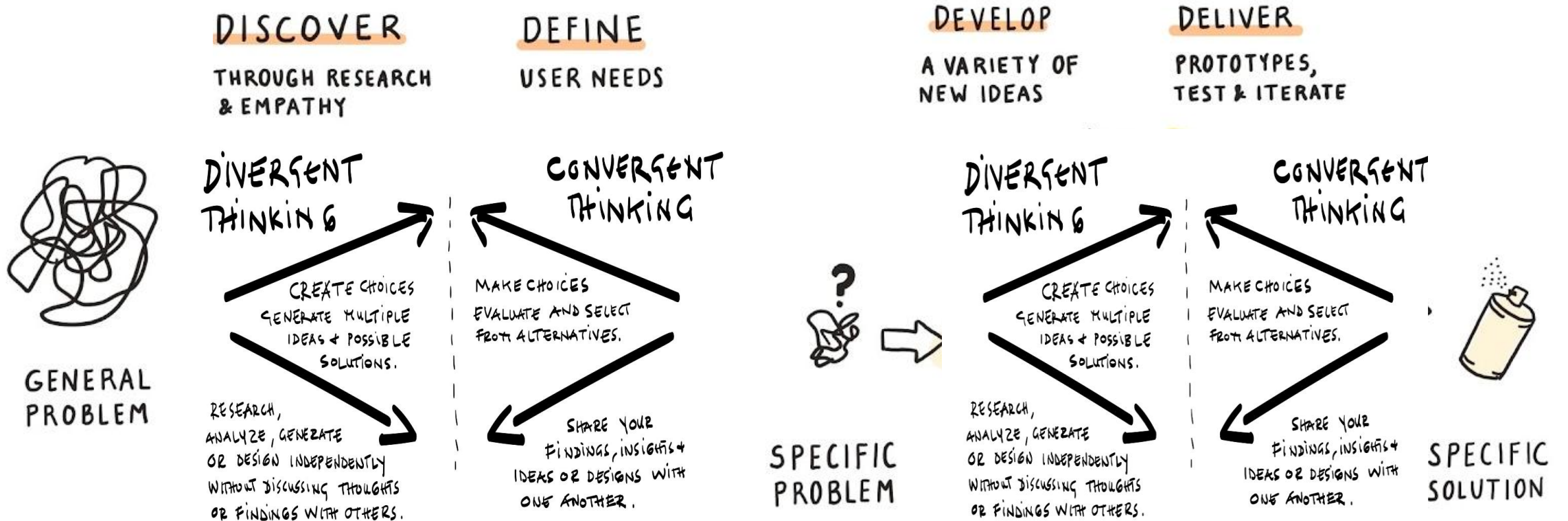
# TRADITIONAL PROBLEM SOLVING PROCESS

WHAT IF THE  
ACTUAL WINNING  
SOLUTION WAS  
LEFT UNNOTICED?



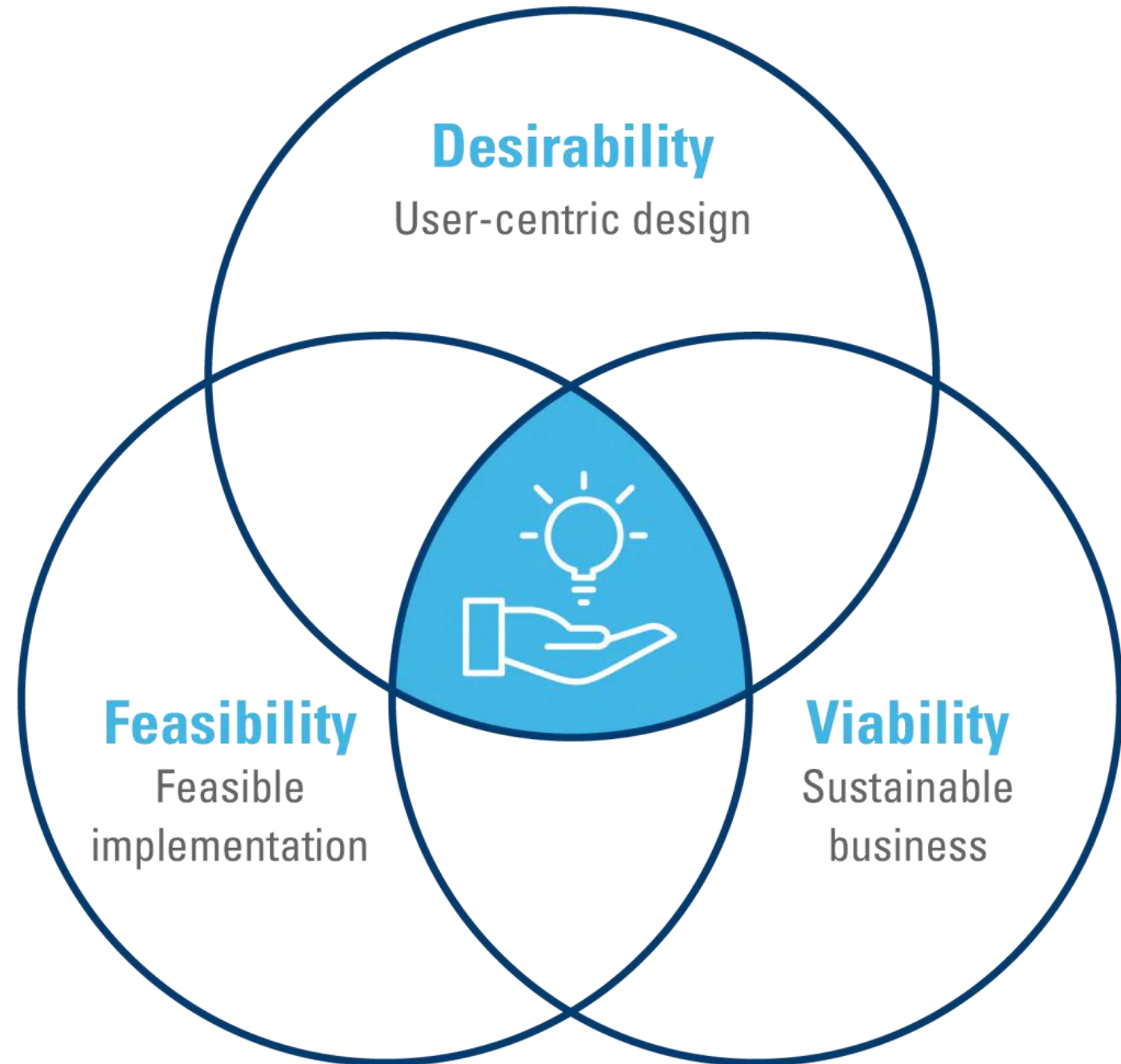


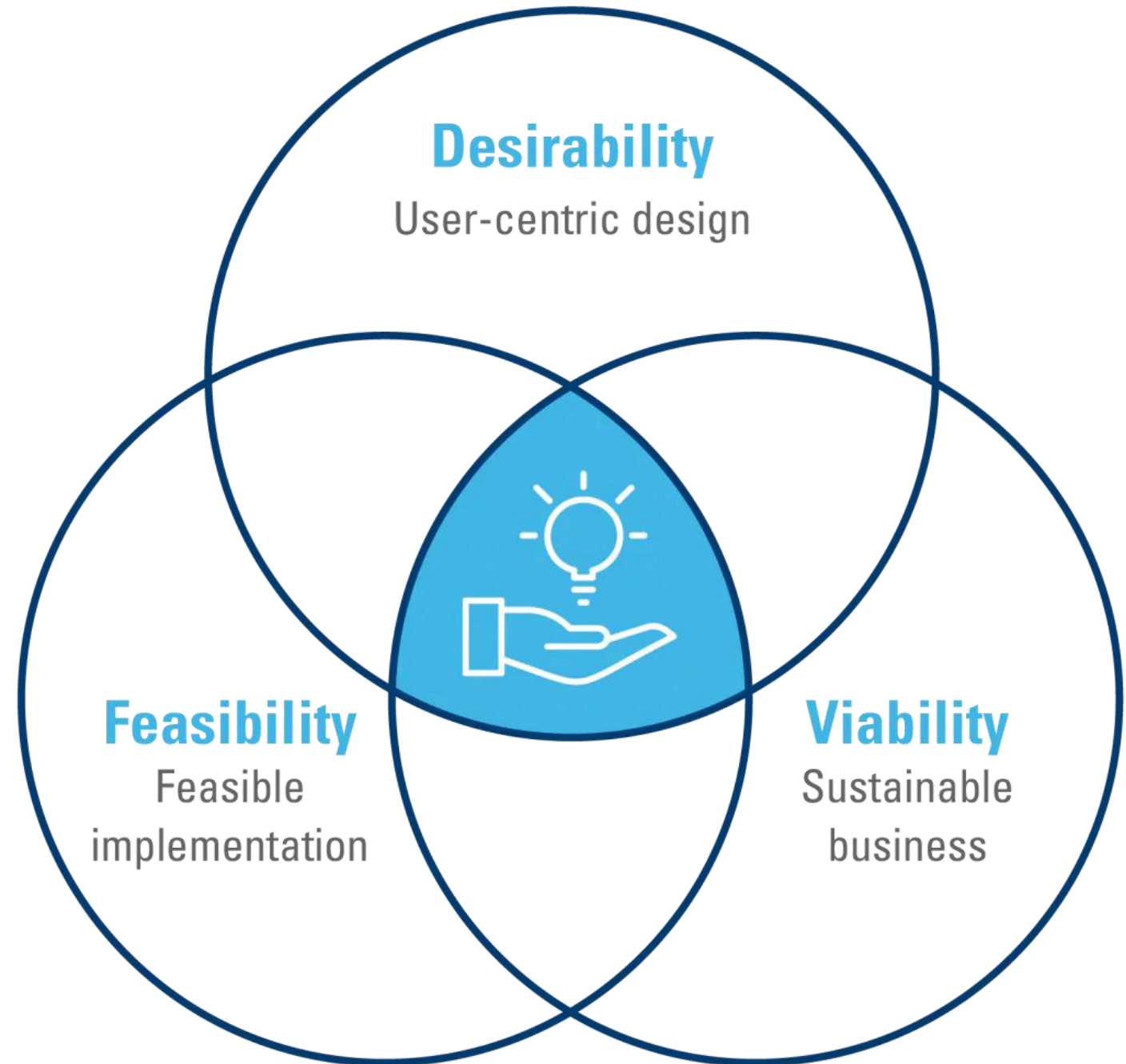
# DESIGN PROCESS



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Design thinking brings together what is desirable from a human point of view, with what is technologically feasible and economically viable





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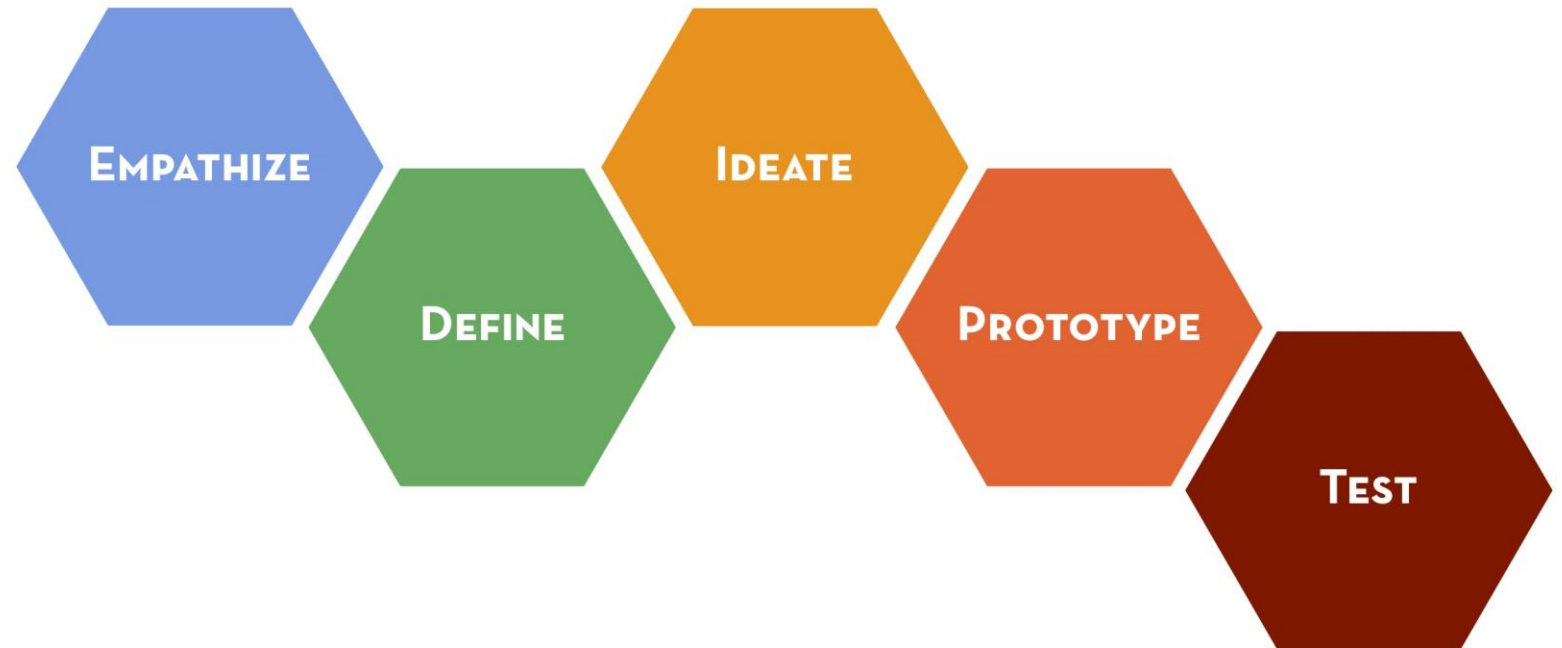
**Desirability:** What makes sense to people and for people?

**Feasibility:** What is functionally possible within the foreseeable future?

**Viability:** What is likely to become part of a sustainable business model?

# The 5 Elements of Design Thinking

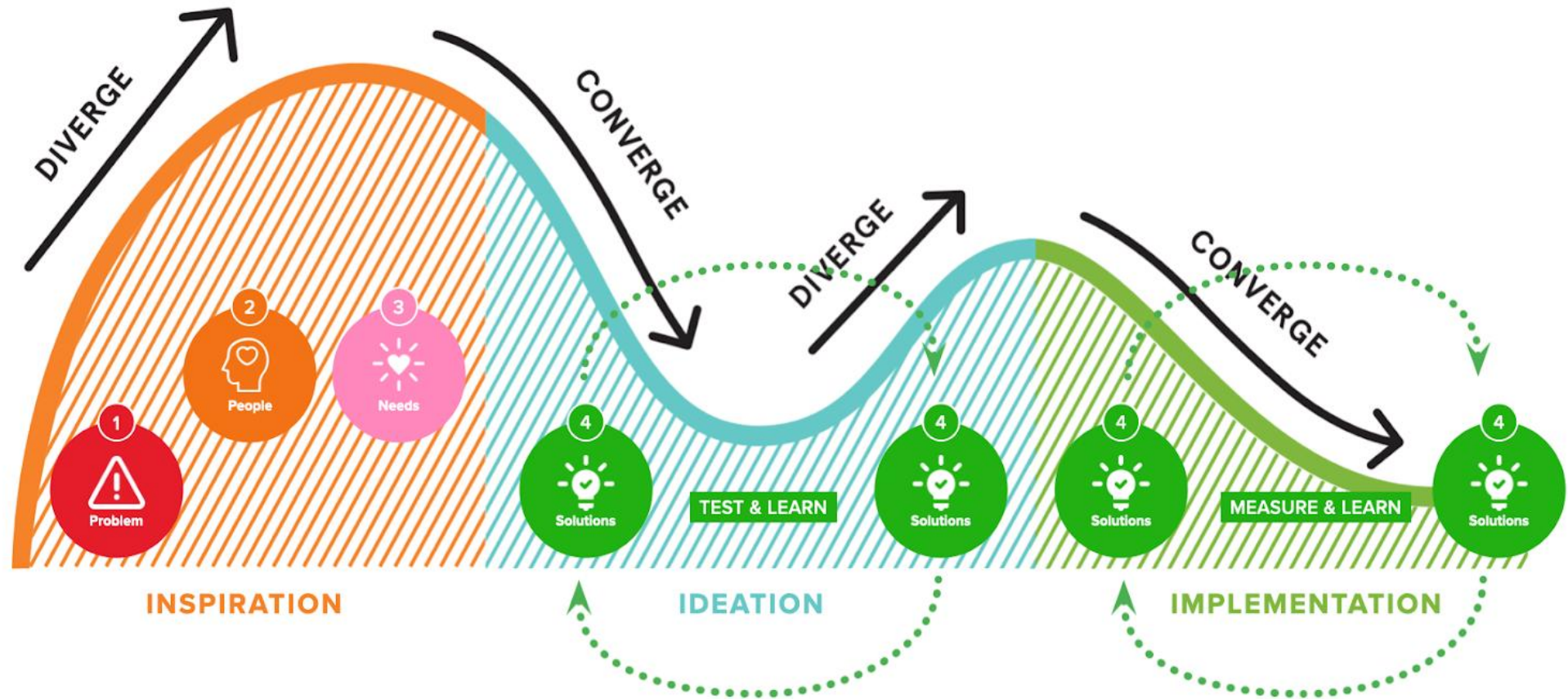
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# HCD design process by IDEO

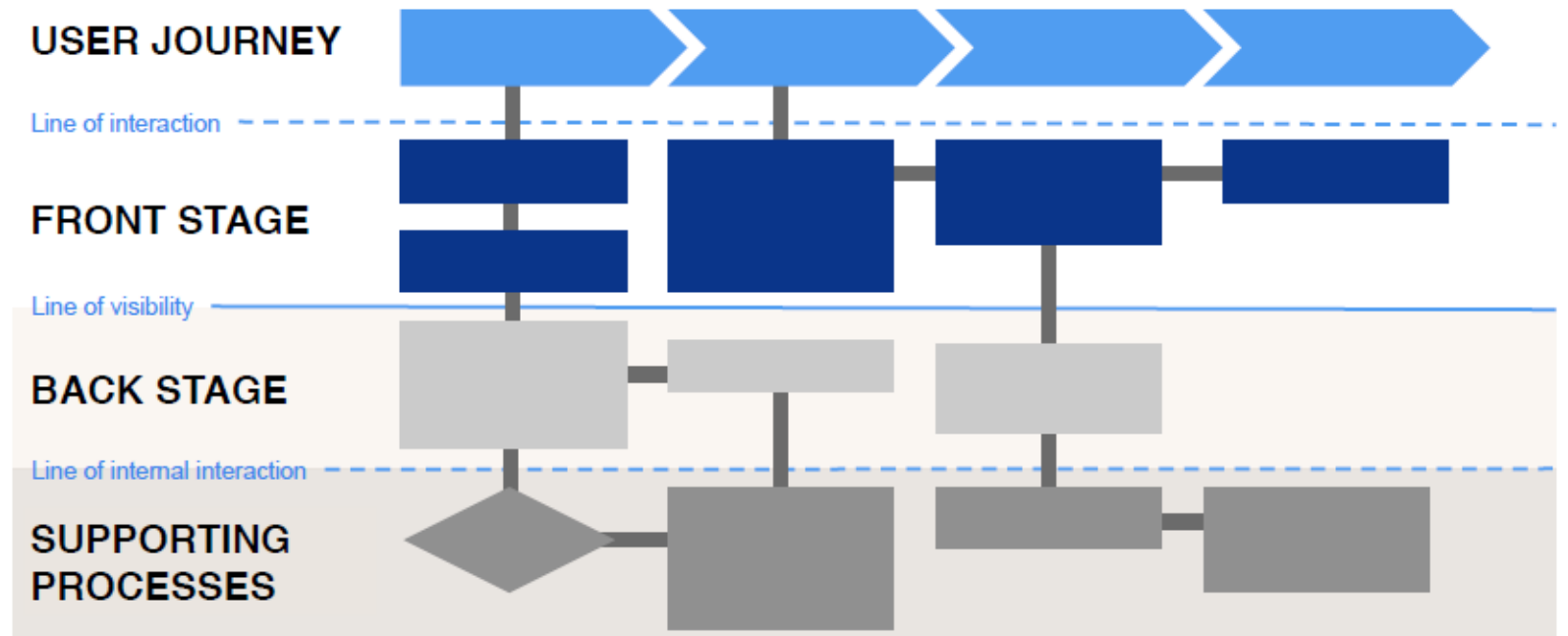
\* image source IDEO.org





# Fields of Design Thinking:

- *Service Design*

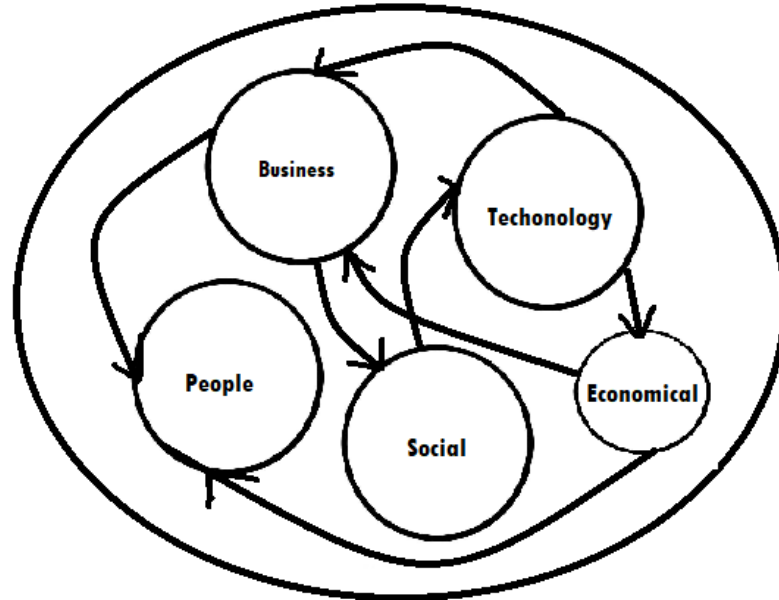




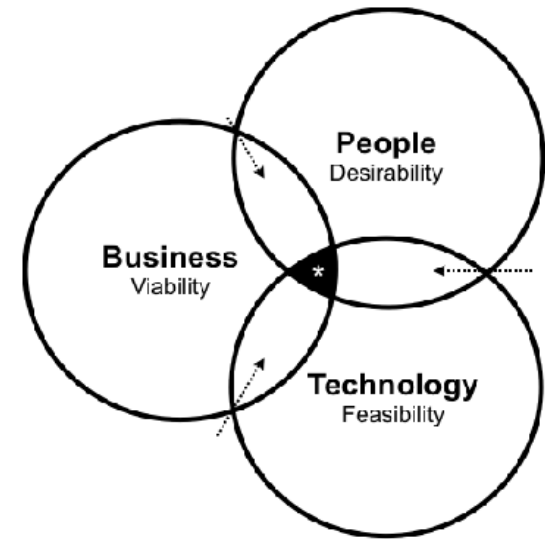
# Fields of Design Thinking:

- *Service Design*
- *Systemic Design/Systems Thinking*

## Systems Thinking



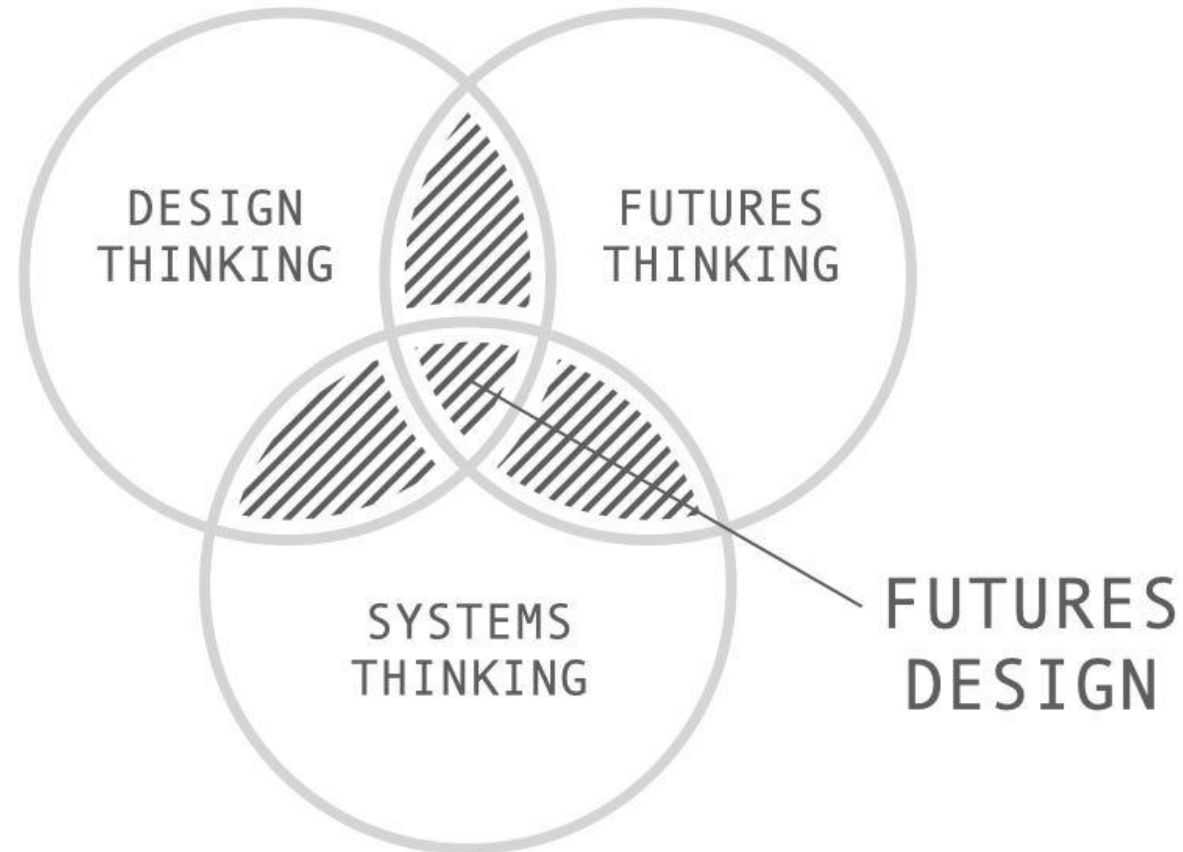
## Design Thinking





# Fields of Design Thinking:

- *Service Design*
- *Systemic Design/Systems Thinking*
- *Futures Design/Futures Thinking*

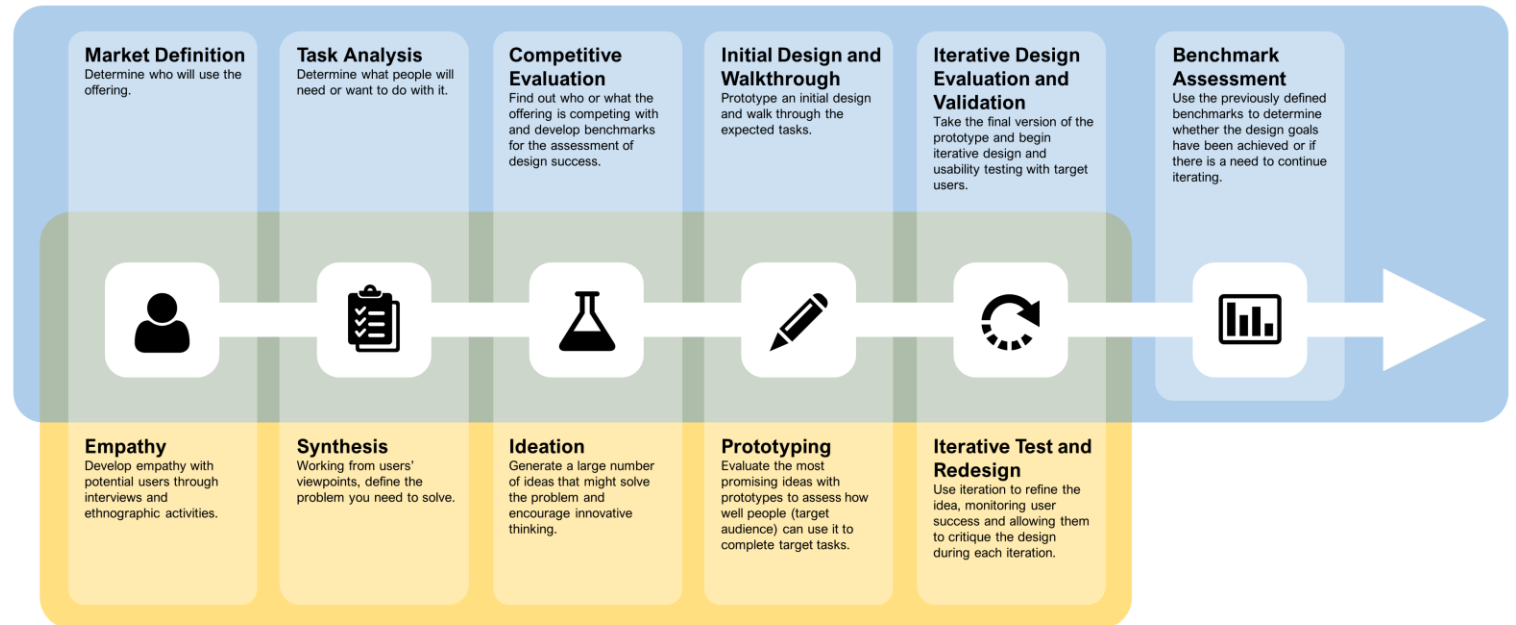




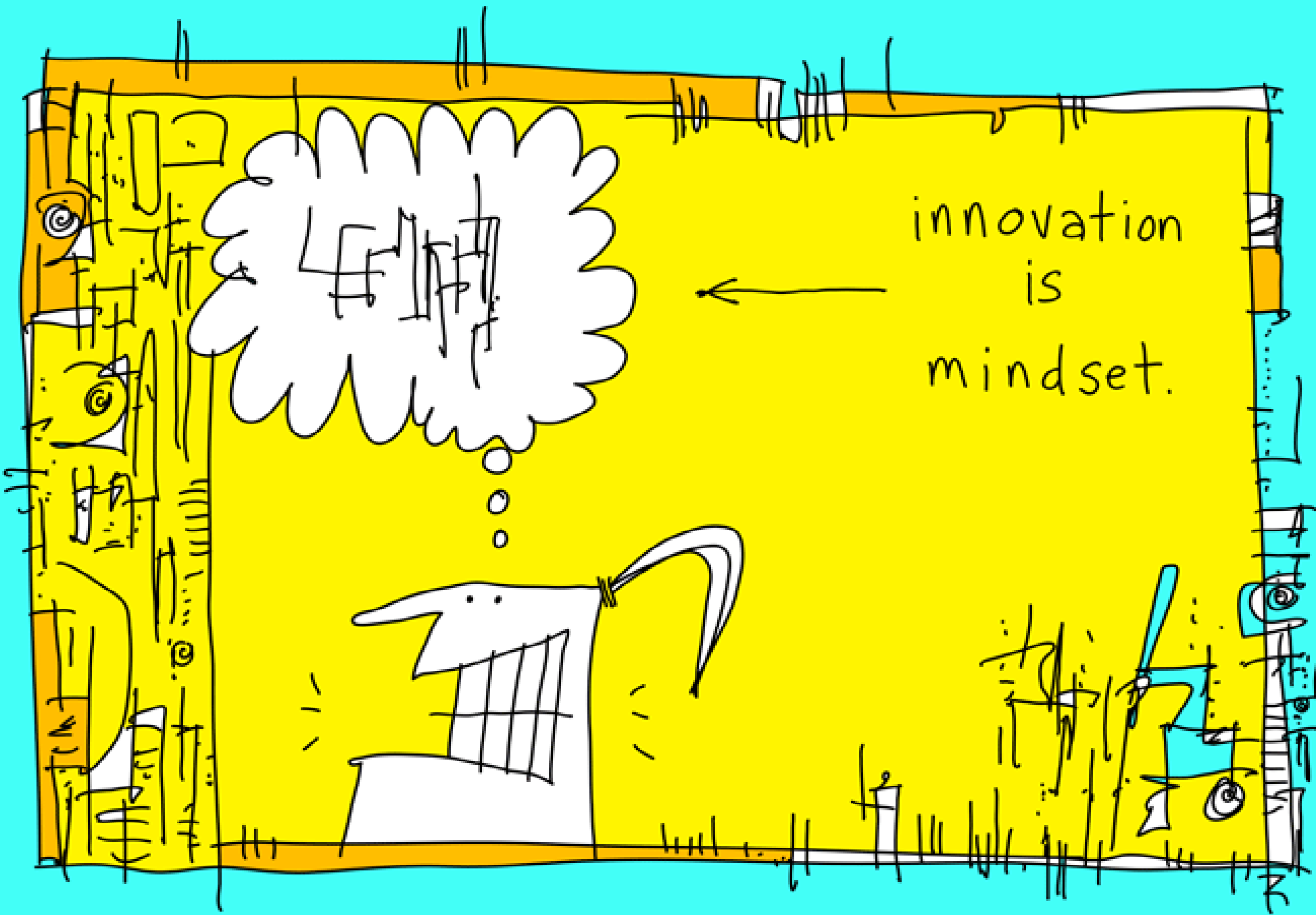
# Fields of Design Thinking:

- *Service Design*
- *Systemic Design/Systems Thinking*
- *Futures Design/Futures Thinking*
- *UX Design*

## User-Centered Design (UCD)



## Design Thinking



innovation  
is  
mindset.

@gapingvoid

**EMPATHY**

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Seek  
Discomfort

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**EMBRACE  
AMBIGUITY**

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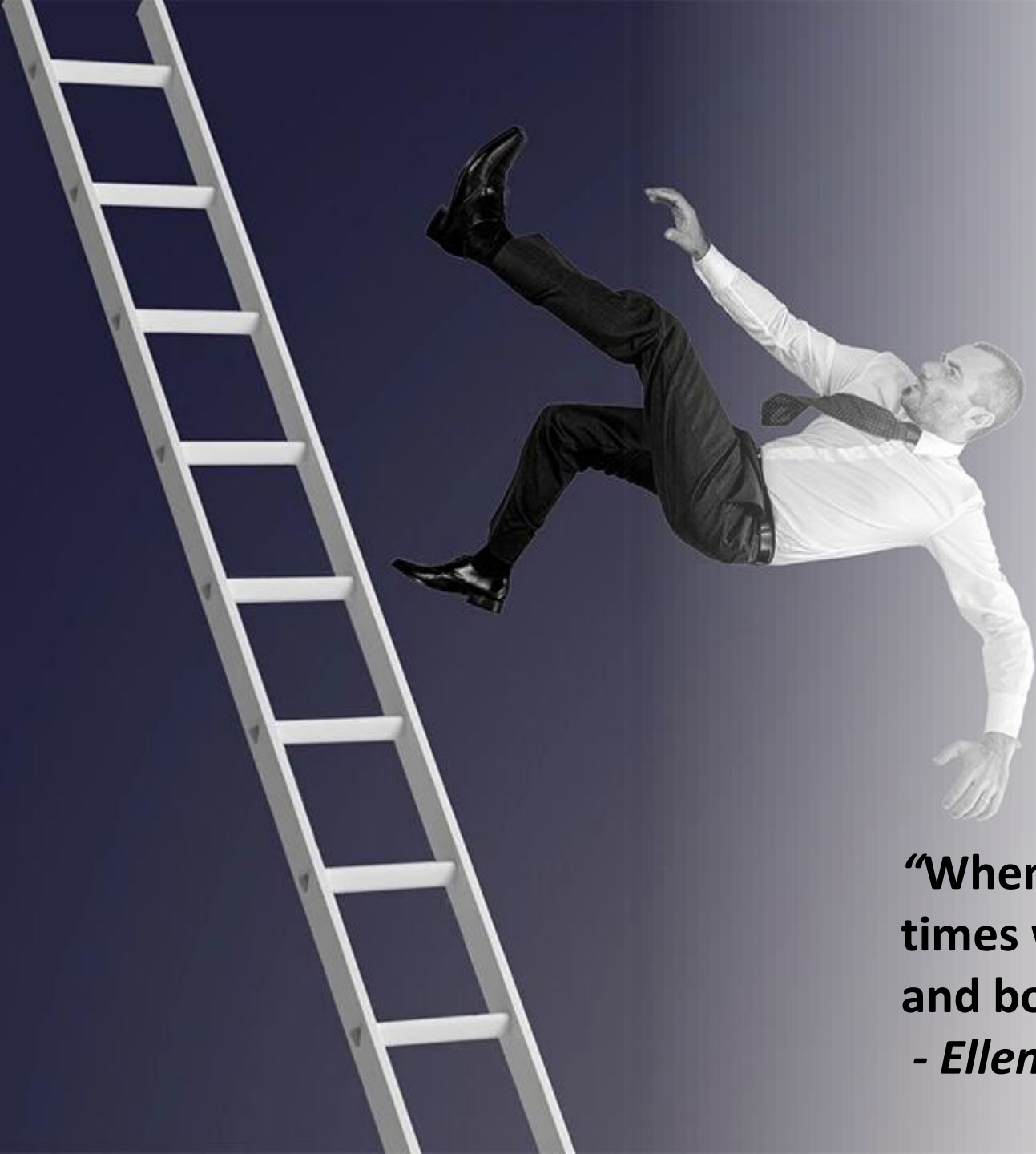


# CREATIVE CONFIDENCE

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**“No artist tolerates reality.”**  
*- Friedrich Nietzsche*





# LEAN INTO FAILURE

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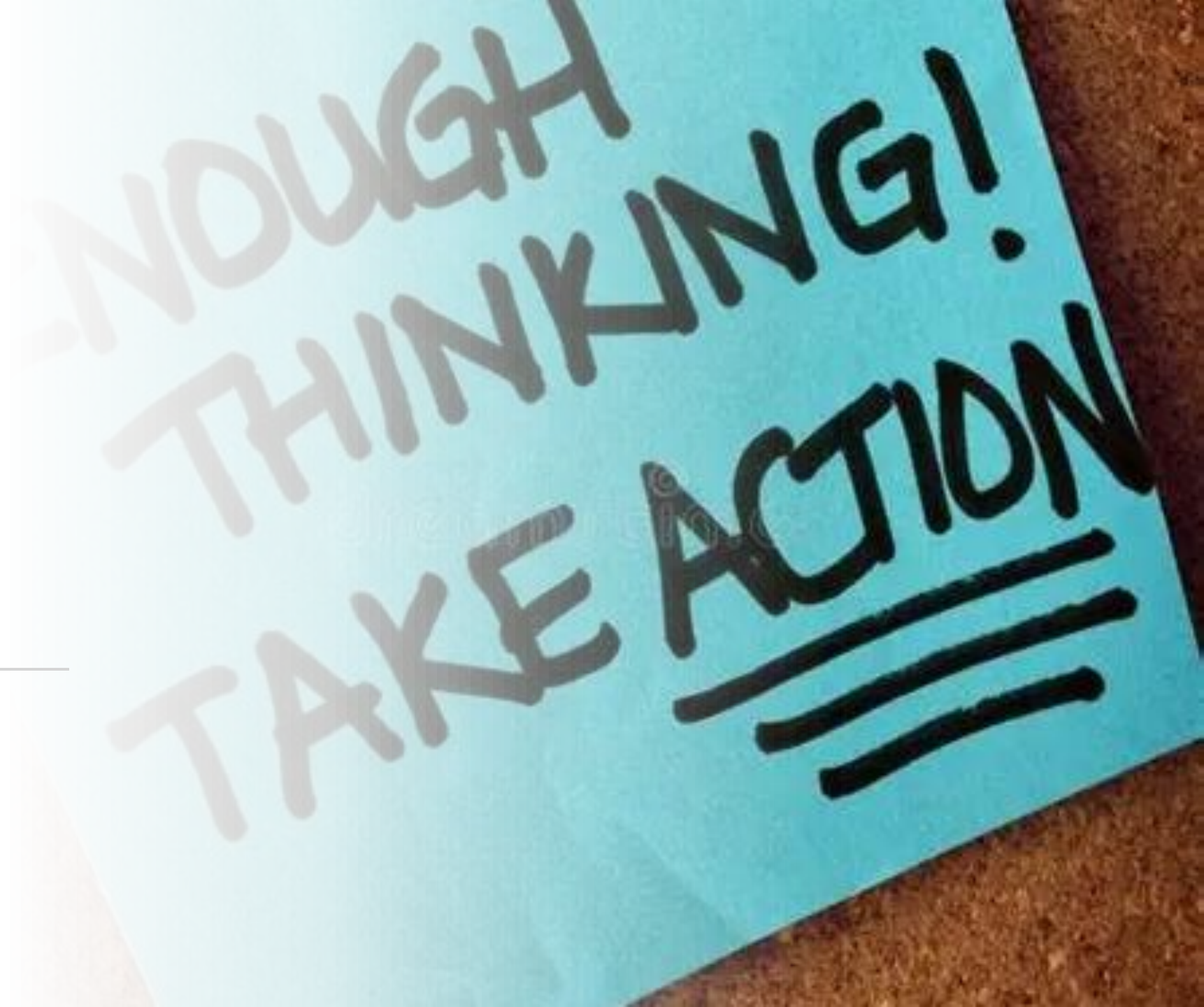
**“When you take risks, you’ll learn there will be times when you succeed and times when you fail, and both are equally as important.”**

***- Ellen DeGeneres***



**MAKE IT**


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TRY FAIL

A chalkboard drawing illustrating a cycle. The word "TRY" is written on the left and "FAIL" is written on the right. A curved arrow starts from the top of "TRY" and points to the top of "FAIL". Another curved arrow starts from the bottom of "FAIL" and points back to the bottom of "TRY", forming a continuous loop.



ITERATE,  
ITERATE,  
ITERATE!

---

**OPTIMISM**

---



# Templates

Find a template



For you

Starred

Use cases

Strategize

Plan

Research

Brainstorm

Prioritize

Create

Present

Reflect

Connect

Ways of working

LUMA System

Agile

**Design thinking**

## Empathize



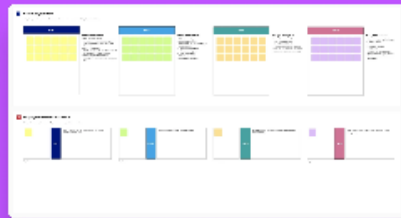
User personas



Empathy map



Empathy map canvas



Change narrative



The Double Diamond



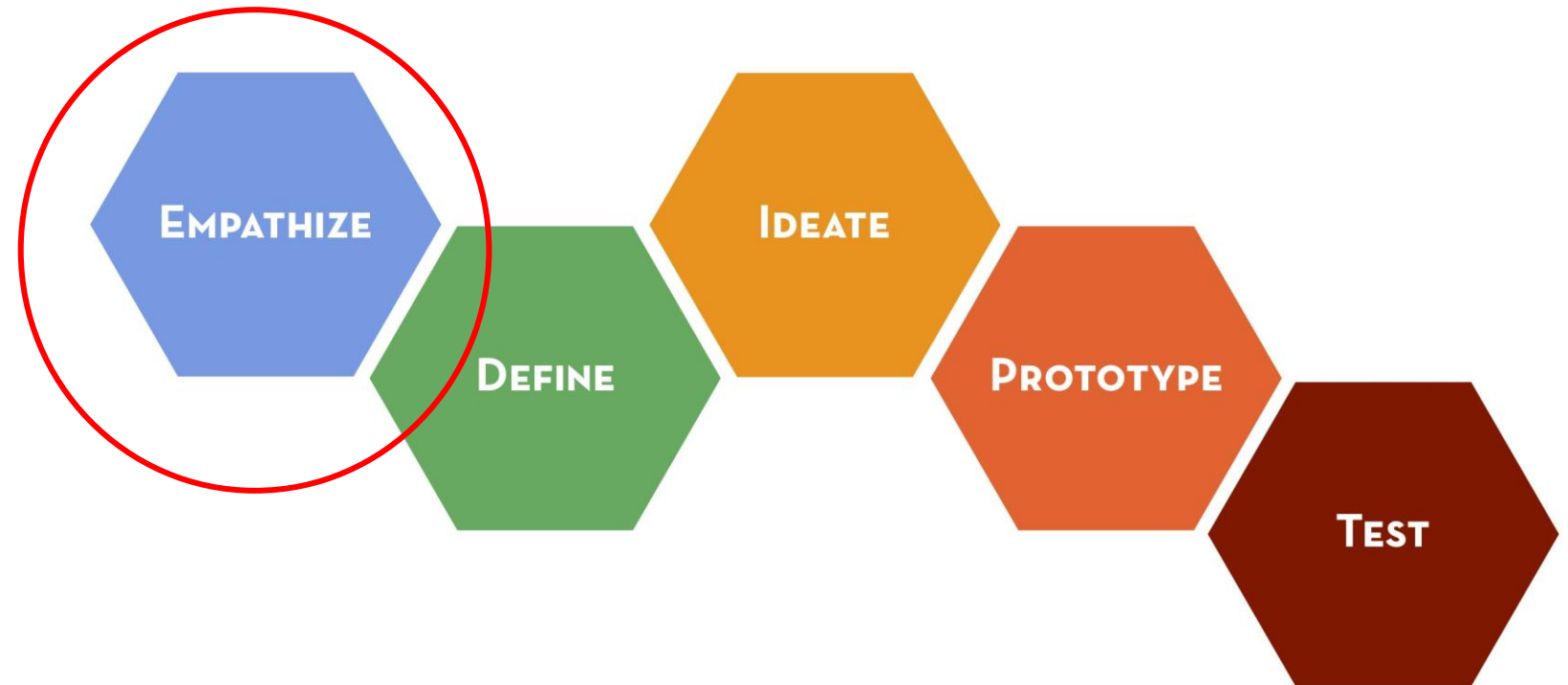
Persona Profile

Sign up free



# The 5 Elements of Design Thinking

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# EMPATHY Activities

EMPATHIZE

DEFINE

IDEATE

PROTOTYPE

TEST



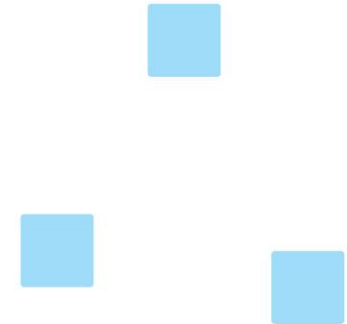
## Says

What have we heard them say?  
What can we imagine them saying?



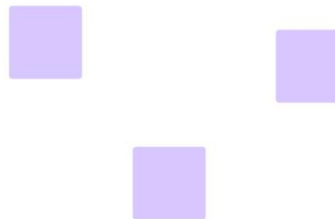
## Thinks

What are their wants, needs, hopes, and dreams?  
What other thoughts might influence their behavior?



## Persona's name

Short summary of  
the persona



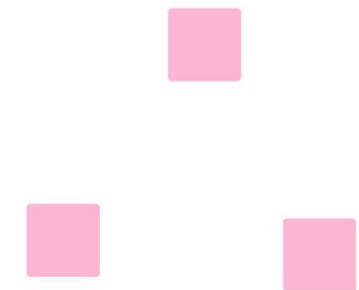
## Does

What behavior have we observed?  
What can we imagine them doing?



## Feels

What are their fears, frustrations, and anxieties?  
What other feelings might influence their behavior?



[See an example](#)

**1 Focus** on the person you're designing for to gain understanding of the persona's needs/desires as they use your product/service.

**2**  
**General description**

Information about the persona your product or service aims to solve a problem for

Background? Demographic? Character Attributes? Position?

**4**  
**Attitudes**

How your persona feels about their tasks and goals, and the challenges faced in pursuit of them

Positive? Negative? Unsure? About your challenge?

**6**  
**Portrait**



**3**  
**Goals**

What does your persona hope to accomplish?

Short term? Long term? Dream?

**5**  
**Quotes**

What your persona says about their tasks and goals, and the challenges faced in pursuit of them

Positive? Negative? Unsure? About your challenge?

**7**  
**Name**

Add your persona's name here...

Full name? Nickname, or what they go by?

Share your feedback

Quote from the persona's perspective that illustrates their mindset, motivation, goals or attitude.



**Persona name**

Short description of the persona

**Situation and context**

What is the typical context of the real people represented by this archetype?

Five purple rectangular input boxes for notes.

**Goals and motivations**

Beyond our product and service, what motivates this person?

Five purple rectangular input boxes for notes.

**Fears and frustrations**

What keeps them up at night? What does a bad day look like?

Five purple rectangular input boxes for notes.

**Tasks and tactics**

What does the person do to accomplish their goals?

Five purple rectangular input boxes for notes.

Quote from the persona's perspective that illustrates their mindset, motivation, goals or attitude.



**Persona name**

Short description of the persona

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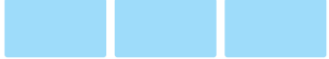

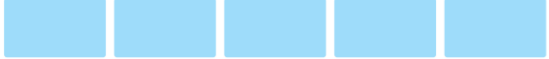

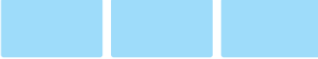

























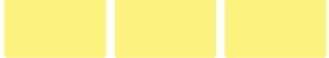

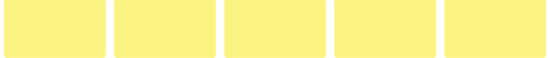

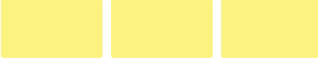
What keeps them up at night? What does a bad day look like?

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








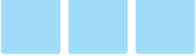
**Tasks and tactics**

What does the person do to accomplish their goals?

Five teal rectangular input boxes for notes.

<p><b>Scenario:</b> [Existing experience through a product or service]</p>	 <p><b>Entice</b> How does someone become aware of this service?</p>	 <p><b>Enter</b> What do people experience as they begin the process?</p>	 <p><b>Engage</b> In the core moments in the process, what happens?</p>	 <p><b>Exit</b> What do people typically experience as the process finishes?</p>	 <p><b>Extend</b> What happens after the experience is over?</p>
 <p><b>Experience steps</b> What does the person (or people) at the center of this scenario typically experience in each step?</p>					
 <p><b>Interactions</b> What interactions do they have at each step along the way?</p> <ul style="list-style-type: none"> <li>■ <b>People:</b> Who do they see or talk to?</li> <li>■ <b>Places:</b> Where are they?</li> <li>■ <b>Things:</b> What digital touchpoints or physical objects do they use?</li> </ul>					
 <p><b>Goals &amp; motivations</b> At each step, what is a person's primary goal or motivation? ("Help me..." or "Help me avoid...")</p>					
 <p><b>Positive moments</b> What steps does a typical person find enjoyable, productive, fun, motivating, delightful, or exciting?</p>					
 <p><b>Negative moments</b> What steps does a typical person find frustrating, confusing, angering, costly, or time-consuming?</p>					
 <p><b>Areas of opportunity</b> How might we make each step better? What ideas do we have? What have others suggested?</p>					

[See an example](#)

 <p><b>Steps</b> High level steps your user needs to accomplish from start to finish.</p>				
 <p><b>Steps</b> Detailed actions your user has to perform.</p>				
<p><b>Feelings</b> What your user might be thinking and feeling at the moment.</p>  				
				
 <p><b>Pain points</b> Problems your user runs into.</p>				
 <p><b>Opportunities</b> Potential improvements or enhancements to the experience.</p>				



### People

What were root causes involving employees, customers, or stakeholders?



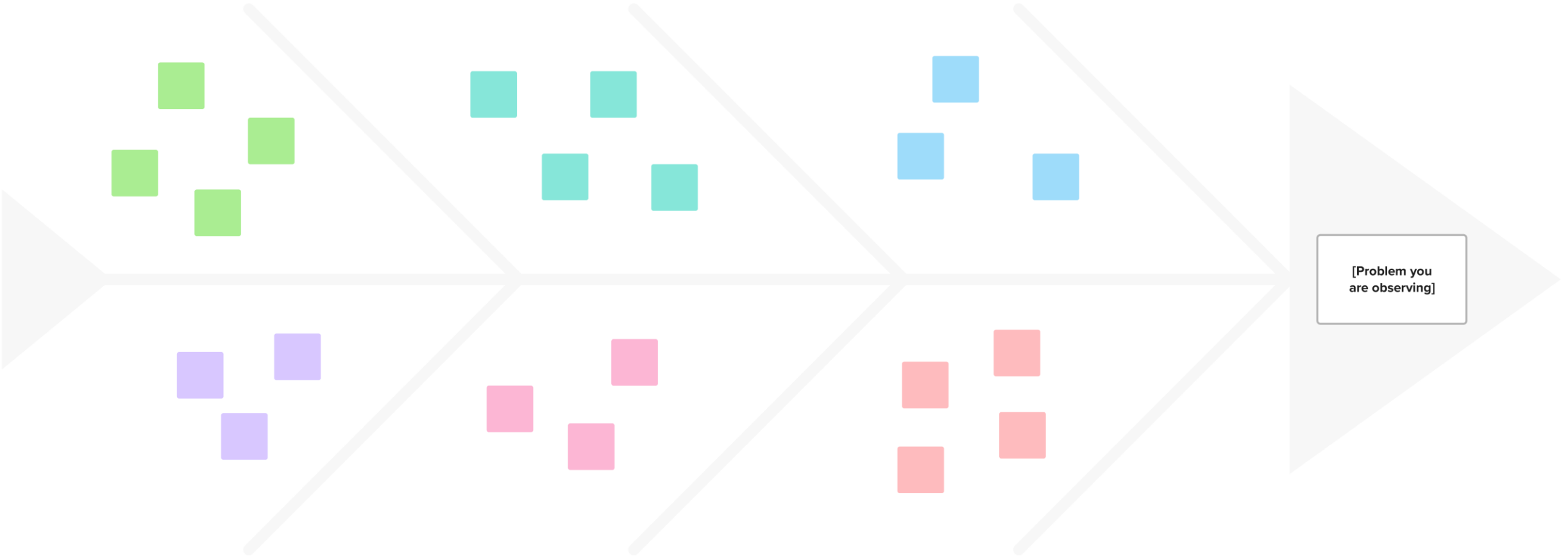
### Processes

Are there inefficiencies, missing steps, or unclear procedures that contributed to the problem?



### Products

Was the quality, availability, or design of our product/service a contributing factor?



### Place

Did the physical or digital location (store, website, office) create challenges?



### Promotion

Did our advertising, messaging, or communication create confusion or contribute to the issue?

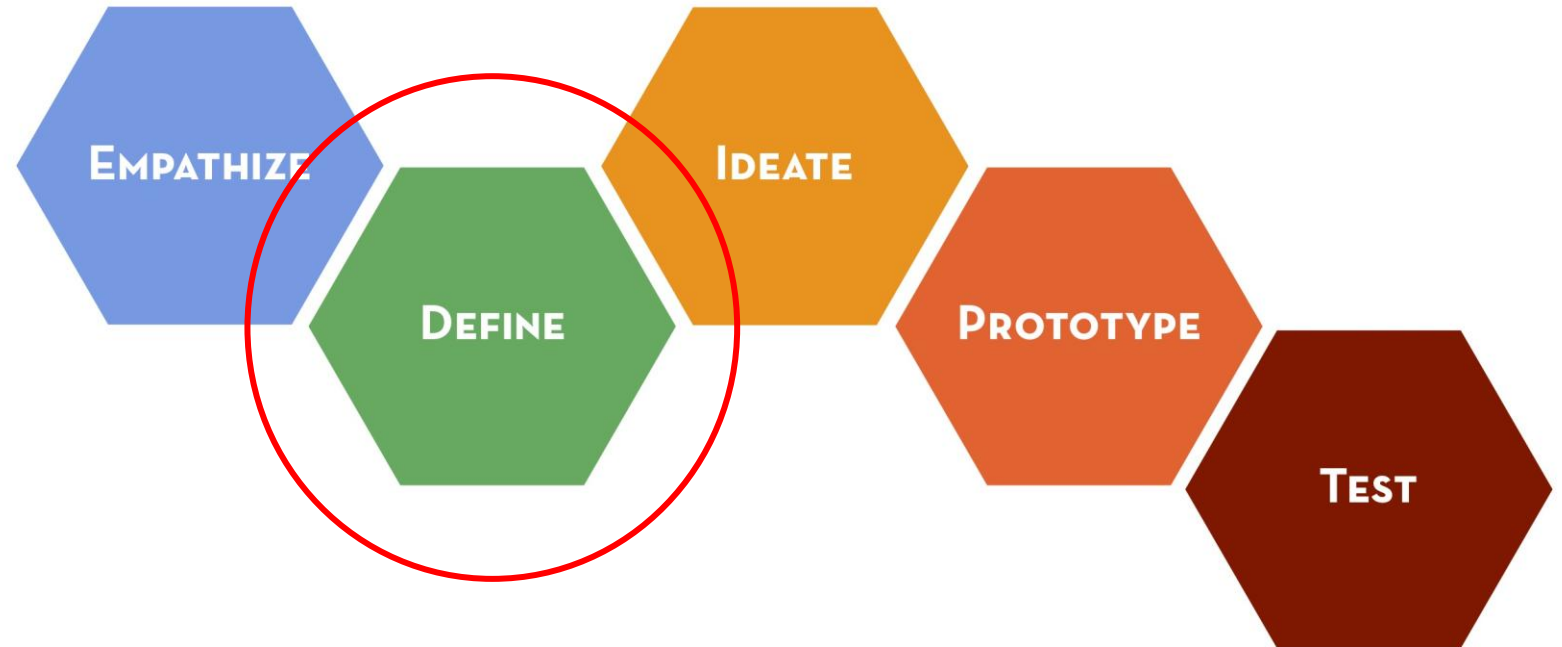


### Price

Did cost, pricing strategy, or perceived value play a role in this problem?

# The 5 Elements of Design Thinking

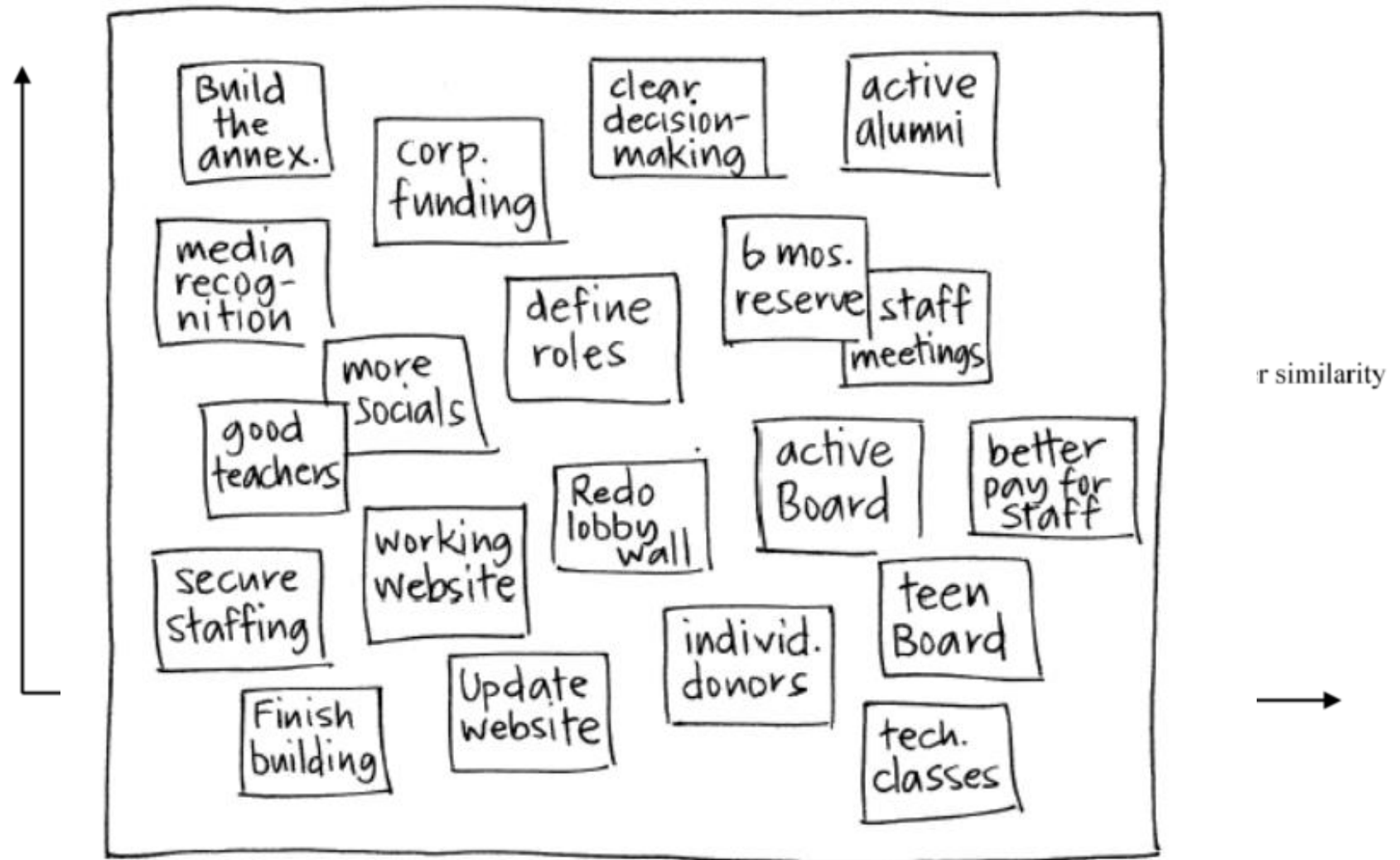
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# Define

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- *Clustering*
- *Affinity Diagramming*





## Frame Your Design Challenge

# Define

- *Clustering*
- *Affinity Diagramming*
- *Framing the Design Challenge*

What is the problem you're trying to solve?

1) Take a stab at framing it as a design question.

2) Now state the ultimate impact you're trying to have.

3) What are some possible solutions to your problem?

Think broadly. It's fine to start a project with a hunch or two, but make sure you allow for surprising outcomes.

4) Finally, write down some of the context and constraints that you're facing.

They could be geographic, technological, time-based, or have to do with the population you're trying to reach.

5) Does your original question need a tweak? Try it again.

# Define

---

- *Clustering*
- *Affinity Diagramming*
- *Problem Statement Formulation*
- *Defining the problem*

# Problem Statement

ONCE THE TEAM HAS DEFINED THE PROBLEM, TRANSFER THEIR OUTPUT IN THE TEXT BOXES BELOW, THEY SERVE AS THE SKELETON OF THE PROBLEM STATEMENT.

## WHO?

Replace with the top voted persons

This is a text box...

## WHAT?

Replace with the top voted challenge

This is a text box...

## WHERE/ WHEN?

Replace with the top voted context

This is a text box...

## WHY?

Replace with the top voted value for the customer

Customer value/benefit

This is a text box...

Replace with the top voted value for the business

Business value/benefit

This is a text box...

# Define

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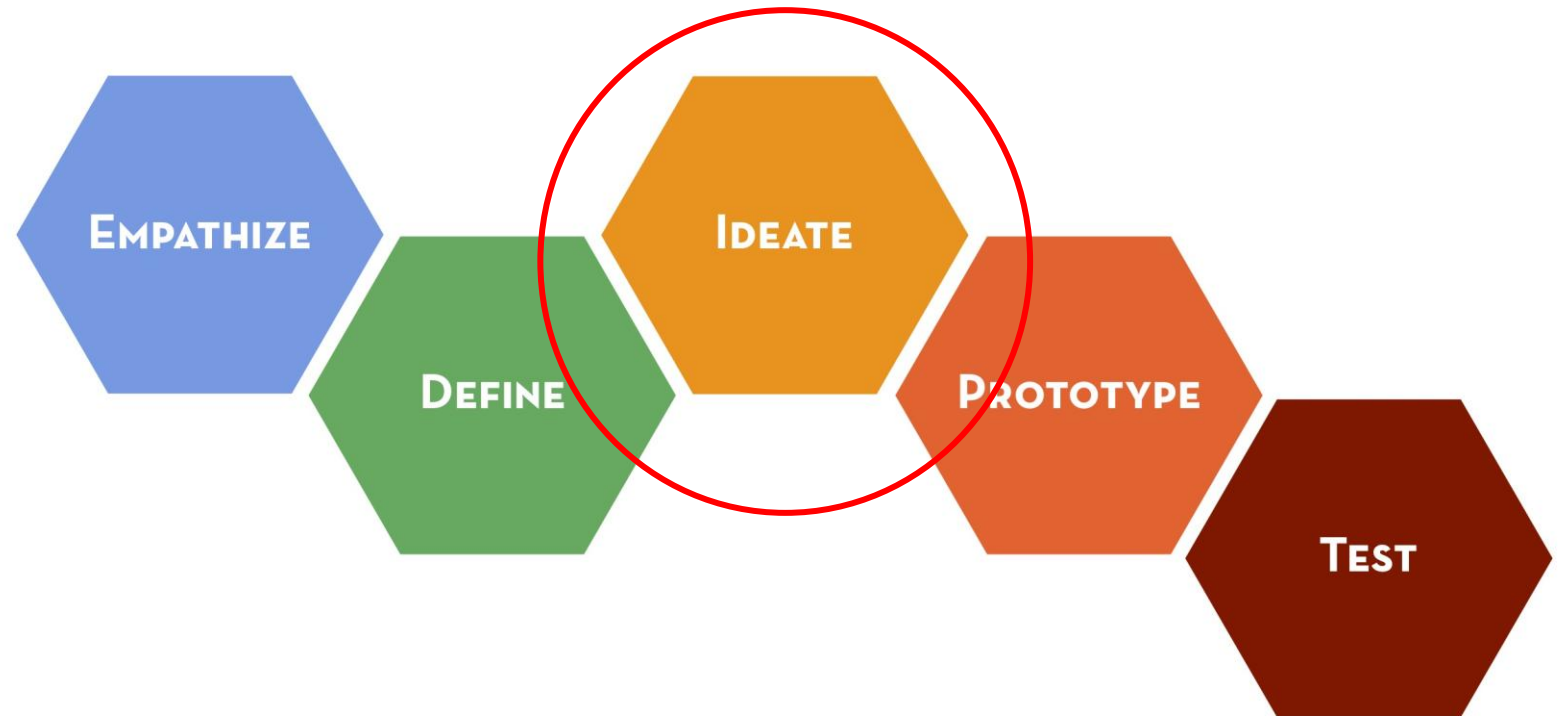
- *Clustering*
- *Affinity Diagramming*
- *Framing the Design Challenge*
- *Defining the Problem*
- *Generating “How Might We...” Statements*

How might we \_\_\_\_\_  
DO WHAT  
for \_\_\_\_\_ in order to  
FOR WHOM  
\_\_\_\_\_ ?  
BENEFIT, GAIN OR RESULT WE'D LIKE TO SEE



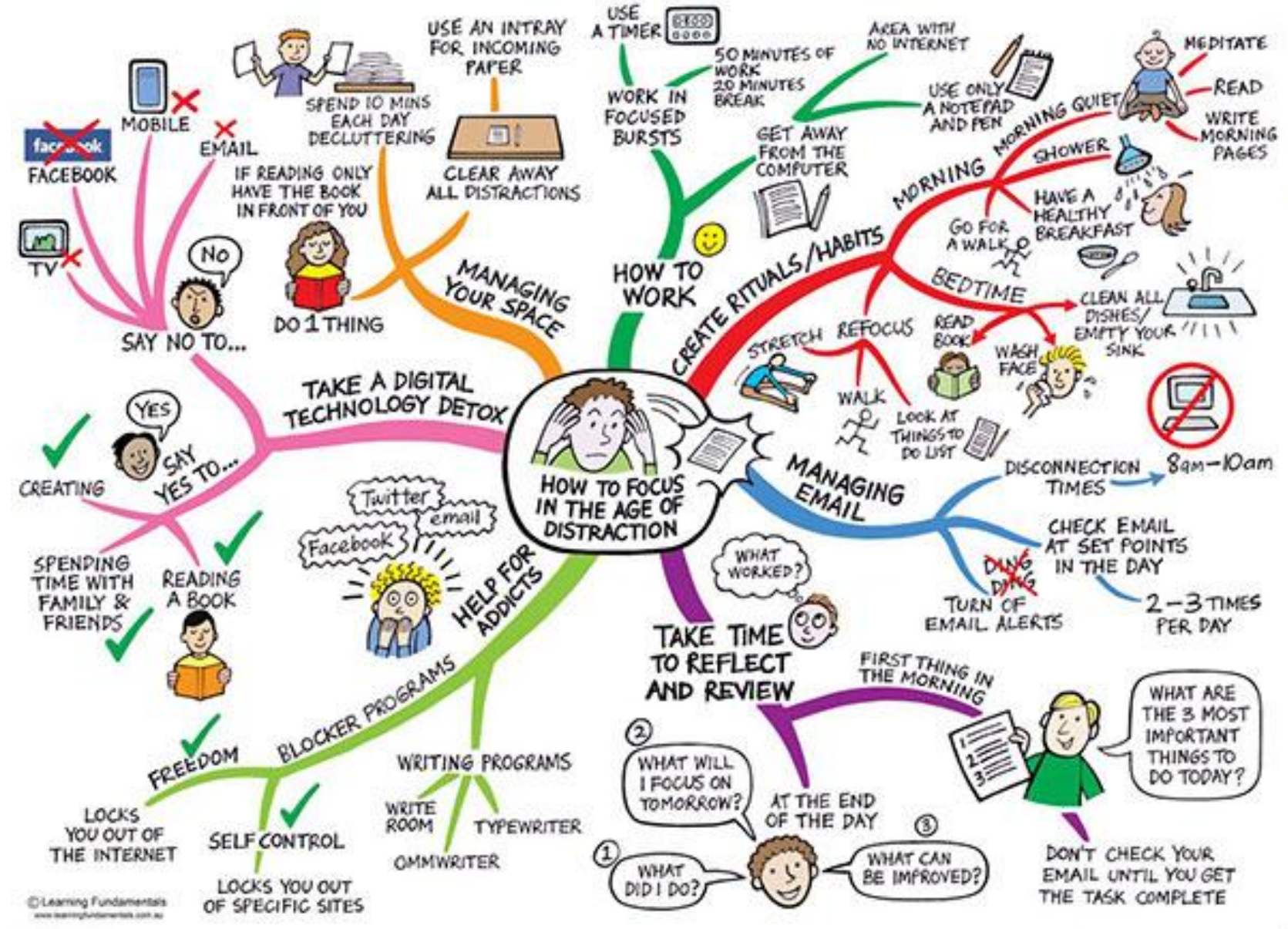
# The 5 Elements of Design Thinking

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# Ideate

- Storyboarding
- Sketching
- Mind mapping



# Ideate

---

- *Storyboarding*
- *Sketching*
- *Mind mapping*
- *Comparing and clustering*

## IDEA DASHBOARD

FLESH OUT YOUR CONCEPT

### WHAT...

*What's the intervention/solution?*

### WHO/HOW...

*Who will implement it?  
How can it be created in the system?*

### WHY...

*What change does it creates for people?*

DRAW IT

The  
of D  
Thir

# Still stuck on which ideas to prototype?

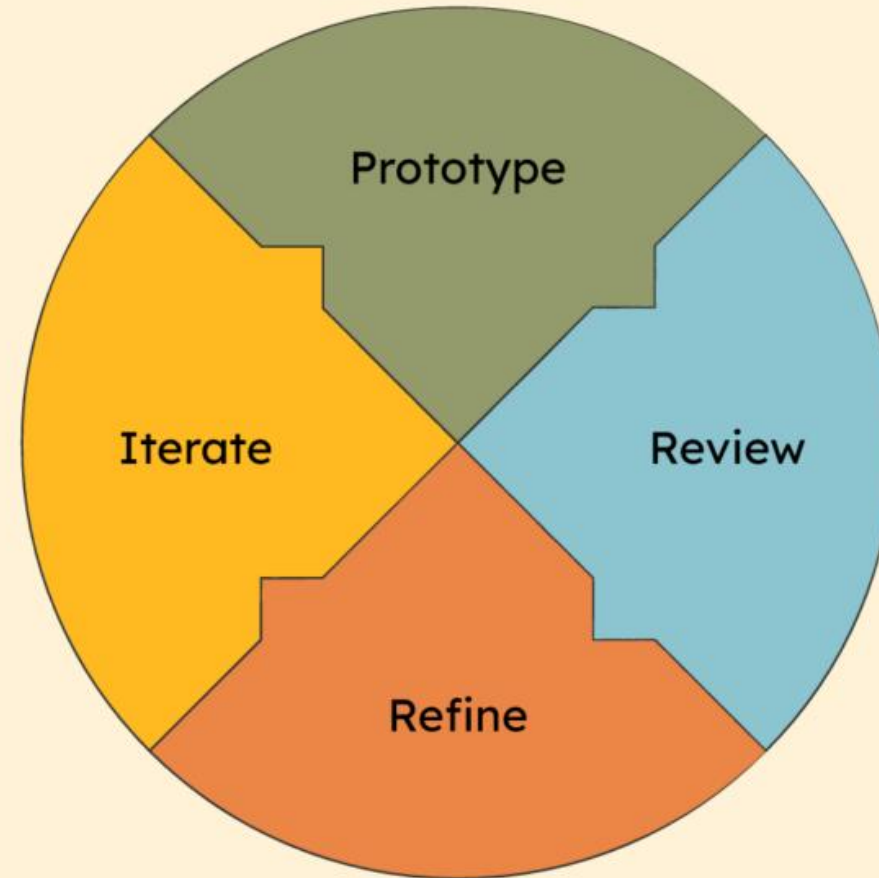
- What idea is the most likely to delight?
- What idea is the rational choice?
- What idea is the most unexpected?

# Prototyping and Testing

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- *Low-resolution, low-risk prototype(s) that are quick, easy and unexpensive to make*

## Rapid Prototyping Approach



11:15

Friday, Jan 15

Learned new words for cafe!  
Slide to view

> slide to unlock

CAFE

15% complete

Match each word on the left with its correct meaning on the right.

café

spoon

taza

coffee

cuchara

cup

CAFE

20% complete

Match each word on the left with its correct meaning on the right.

café

spoon

taza

coffee

cuchara

cup

✓ Correct!

CAFE

LEARN NEW WORDS?

YES

NO



café



taza

# Sprinting

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- A rapid, five-day process
- You design, prototype and test ideas with users within a specific time frame





Day 1



**Marcus Romer**  
@MarcusRomer



 Follow

### The Creative Process

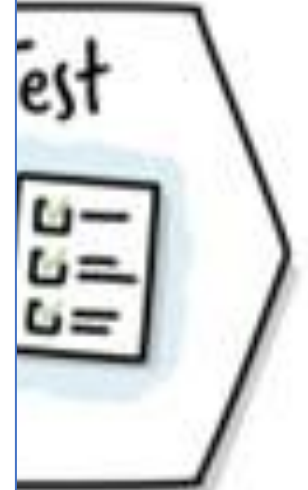
1. This is awesome
2. This is tricky
3. This is shit
4. I am shit / *We are shit*
5. This might be ok
6. This is awesome

RETWEETS  
**19,036**

LIKES  
**12,722**



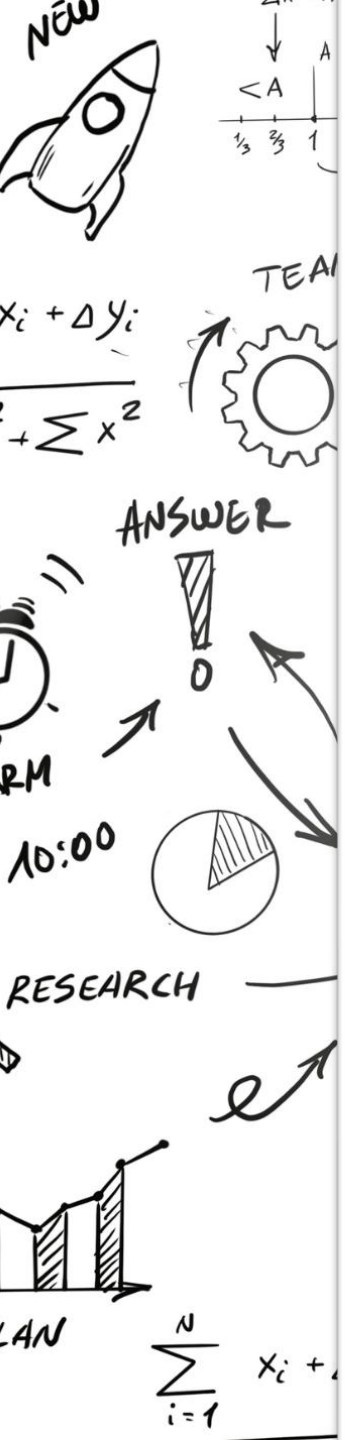
12:18 PM - 23 Oct 2013



y 5

# Design Sprint: Building a Personal Organization Hub

A 1-Hour Sprint Challenge for Creative Problem-Solving



**As a starting point, ask your partner about their current space? Get them to walk you through what it looks like:**

- **“What frustrates you most when things are messy or disorganized?”**
- **“What motivates you to stay on top of things?”**
- **“What tools or habits do you already use?”**
- **“What would ‘being organized’ free you up to feel or achieve?”**
- **Ask “why?” a lot. Discover the root problem and avoid focusing on the symptoms.**

## DEFINE: User Personas

Let's synthesize our findings by creating a persona and further defining the problem.



### List your partner's characteristics:

What stood out to you when interviewing your partner? What are they trying to achieve? What are their challenges? What are some motivating factors, personal circumstances or an explanation or connection to the challenge you may face?

### Defining the Problem

I am *(insert main characteristics here)*. I am trying to *(outcome/job to be done)*, but *(problem they are facing)* because *(deeper route cause for why the problem is happening)*

I am \_\_\_\_\_

I am trying to \_\_\_\_\_

But \_\_\_\_\_

Because \_\_\_\_\_

OR

How can I offer my user,

\_\_\_\_\_ *(main user + characteristic)*

help/support in

\_\_\_\_\_ *(the problem or need)*

to help them

\_\_\_\_\_ *(are you solving a deeper problem?)*

Based on the information gathered and looking at the challenge from multiple perspectives, rephrase the main problem or insight as an open-ended question that invites exploration and sparks new ideas. The question:

- Should be challenging and inspiring
- Should not be too broad or vague
- Should not provide a solution or make assumptions
- ...but also, not too narrow to stifle creative ideas

I am trying to \_\_\_\_\_

But \_\_\_\_\_

Because \_\_\_\_\_

help/support in \_\_\_\_\_

(the problem or need)

to help them \_\_\_\_\_

(are you solving a deeper problem?)

Based on the information gathered and looking at the challenge from multiple perspectives, **rephrase the main problem or insight as an open-ended question that invites exploration and sparks new ideas. The question:**

- Should be challenging and inspiring
- Should not be too broad or vague
- Should not provide a solution or make assumptions
- ...but also, not too narrow to stifle creative ideas

### HOW MIGHT WE...

(Find the sweet spot of not too broad and vague, but also not too narrow to stifle creative ideas)

## IDEATE: 5-Step Sketch Activity

Now let's start to narrow our focus on a solution to prototype, by sketching-out your ideas visually. Even if you're not artistically inclined, rough sketches can help convey the essence of a concept and spark further discussion. Suspend judgement and explore wild ideas.



Sketch 1

Sketch 2

Sketch 3

Blank area for Sketch 1

Blank area for Sketch 2

Blank area for Sketch 3

**HOW MIGHT WE...**

*(Find the sweet spot of not too broad and vague, but also not too narrow to stifle creative ideas)*

**IDEATE: 5-Step Sketch Activity**

Now let's start to narrow our focus on a solution to prototype, by sketching-out your ideas visually. Even if you're not artistically inclined, rough sketches can help convey the essence of a concept and spark further discussion. Suspend judgement and explore wild ideas.



Sketch 1	Sketch 2	Sketch 3
Sketch 4		Sketch 5

Handwritten notes on the left margin including: "Now", a rocket sketch, a graph with  $< A$ ,  $x_i + \Delta y_i$ ,  $\sum x^2$ , "ANSWER", a clock, "10:00", "RESEARCH", a bar chart, "LAN", and  $\sum_{i=1}^N x_i$ .

Handwritten notes on the right margin including: "INVEST", a line graph, "IDE", "GRAM", "ART", "A", "THINK", a lightbulb in a box, and "PARTIVE".

Share your solutions with your partner and capture their initial feedback. What do they like about the solutions? What do they wish they saw more of? What are they still left wondering?

## PROTOTYPE & TEST: Build your solution

Decide on one solution to prototype (this could be one idea, a combination of multiple ideas, or a completely new idea) and sketch your idea, or use what's around you! Feel free to use technology if it's available to you:



Handwritten notes on the left margin:

- Now
- $x_i + \Delta y_i$
- $\sum x^2$
- TEA
- ANSWER
- 10:00
- RESEARCH
- PLAN
- $\sum_{i=1}^N x_i +$

Handwritten notes on the right margin:

- INVEST
- IDE
- GRAM
- START (A)
- HINK
- PARTIVE

Share your solution with your partner and get feedback:

What worked:	Improvements:
Questions:	Ideas:

## PROTOTYPE & TEST: Improve & Iterate

Reflect a bias towards action and don't be emotionally invested in your prototype. Remember – we want to fail and fail quick during this prototyping and testing!



Adjust your prototype based on feedback and testing, and share your new solution with your partner:

Now  
 $x_i + \Delta y_i$   
 $\sum x^2$   
TEA  
ANSWER  
10:00  
RESEARCH  
LAN  
 $\sum_{i=1}^N x_i +$

INVEST  
IDE  
B  
GRAM  
START (A)  
HINK  
PARTIVE

Share your solution with your partner and get feedback:

What worked:	Improvements:
Questions:	Ideas:

## PROTOTYPE & TEST: Improve & Iterate

Reflect a bias towards action and don't be emotionally invested in your prototype. Remember – we want to fail and fail quick during this prototyping and testing!



Adjust your prototype based on feedback and testing, and share your new solution with your partner:

Handwritten notes on the left margin including: "Now", a rocket drawing, a number line with points  $\frac{1}{3}$ ,  $\frac{2}{3}$ , and 1, a graph with  $x_i + \Delta y_i$  and  $\sum x^2$ , a gear labeled "TEA", "ANSWER", a clock, "10:00", a pie chart, "RESEARCH", a bar chart, and a summation formula  $\sum_{i=1}^N x_i +$ .

Handwritten notes on the right margin including: "INVEST" with a line graph, "IDE", a lightbulb, "GRAM", "START (A)", "HINK" with a lightbulb in a box, and "PARTIVE".



## Design Sprint: Building a Personal Organization Hub

A 1-Hour Sprint Challenge for Creative Problem-Solving



Join at menti.com | use code: 1279-4190

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What's one word you'd use to describe today's workshop?

fast bold  
creative  
inspiration leader focus  
transpiration

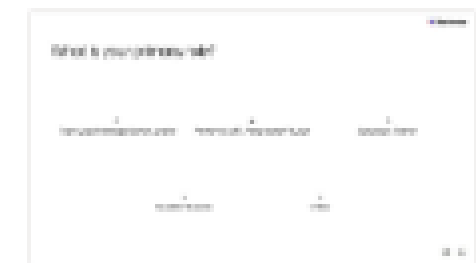


Menti

Design Thinking 101 Par...



Choose a slide to present



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ME!**



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UPCOMING  
COURSES**

**SCAN  
ME!**



**WORKSHOP  
RESOURCES**