



**ID\*4110 JETS / UNIT 04**

# **DESIGN THINKING**

WHAT IS DESIGN THINKING?

**Design Thinking is a way of  
“*thinking like a designer*”  
to help transform organizations  
in developing products, services,  
processes, and strategies.**

[IDEO Design Thinking](#)



# **THE DESIGNER MINDSET**

Prof. Denise Anderson / Spring 2023

## THE DESIGNER MINDSET

- **Embrace empathy**

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- Dream up wild ideas
- Take time to tinker and test
- **Keep iterating + testing**

WHAT IS DESIGN THINKING?

**Design Thinking allows people who are not trained as designers to use *creative tools* to address a vast range of challenges.**

[IDEO Design Thinking](#)



# **DESIGN THINKING METHODOLOGIES**

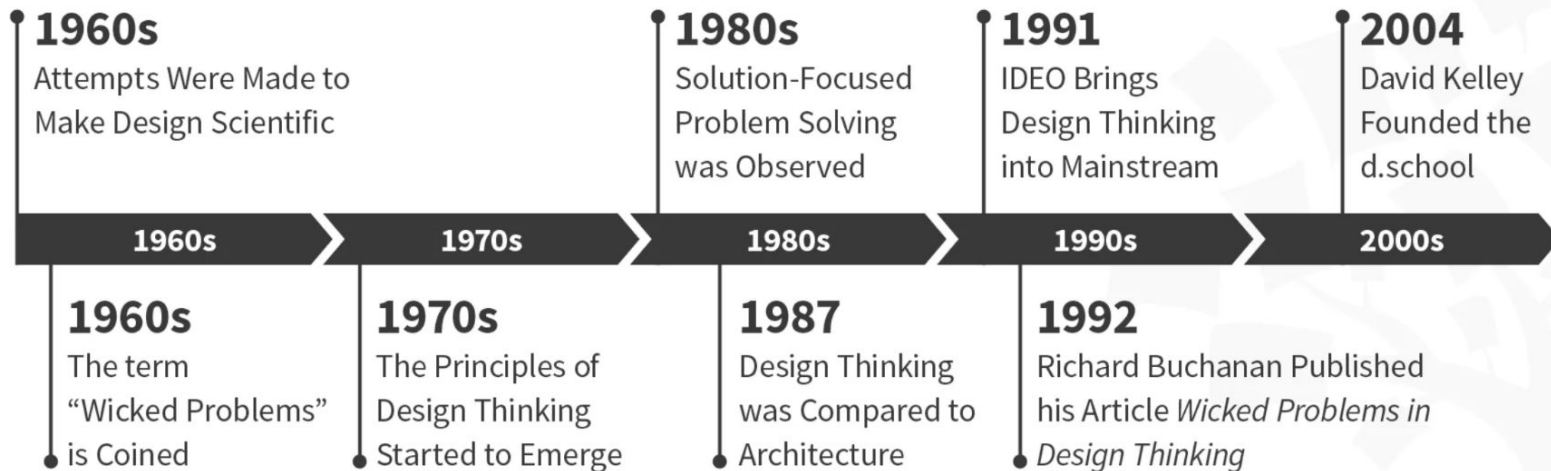
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WHAT IS DESIGN THINKING?

**Design Thinking uses *critical thinking* and *reflective practice* to apply design characteristics to reach creative solutions and innovative ideas.**

Apple, Microsoft, Starbucks

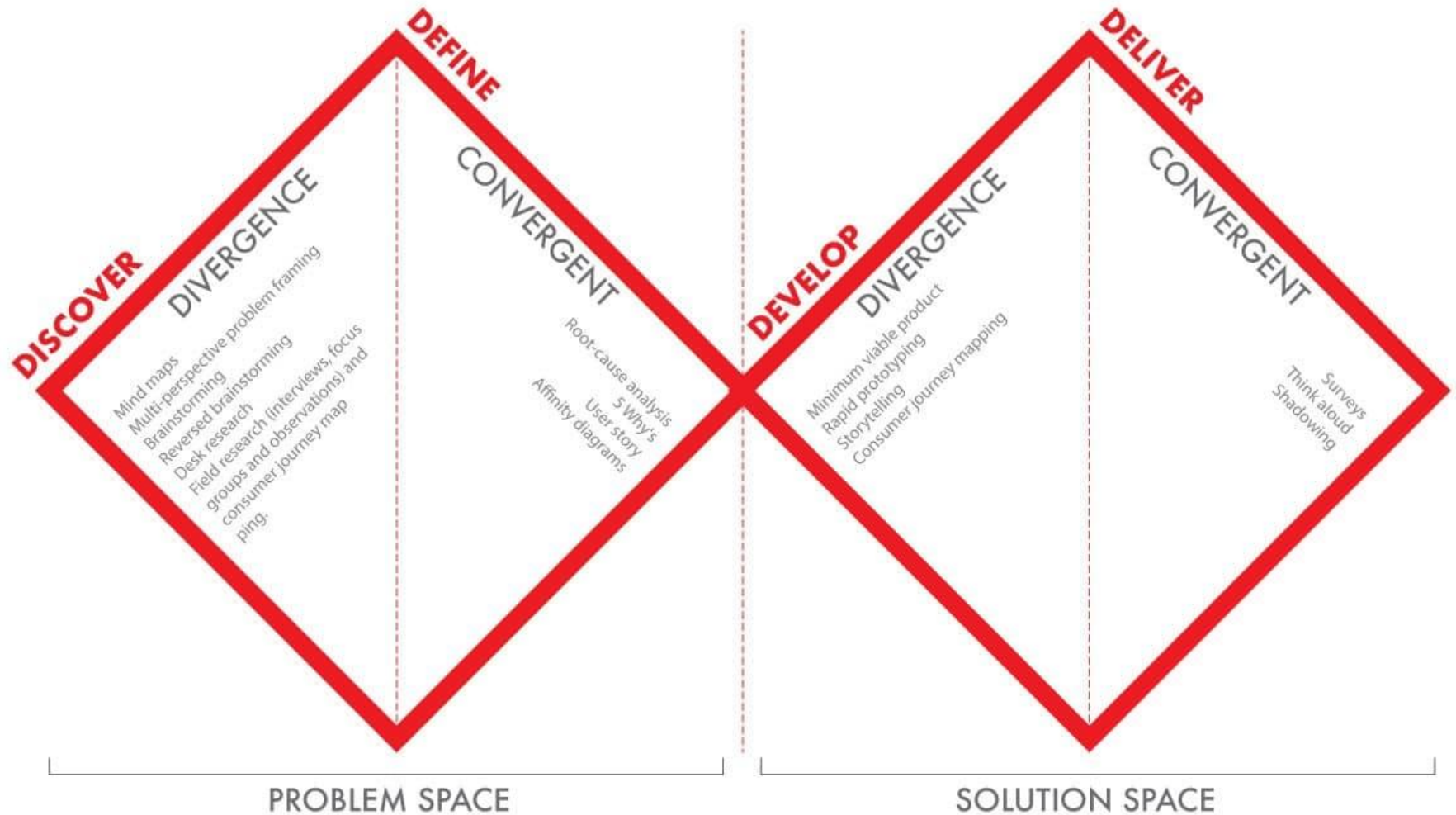
# Design Thinking Process Timeline



INTERACTION DESIGN  
FOUNDATION

[interaction-design.org](http://interaction-design.org)

# DESIGN COUNCIL “DOUBLE DIAMOND” (2004)



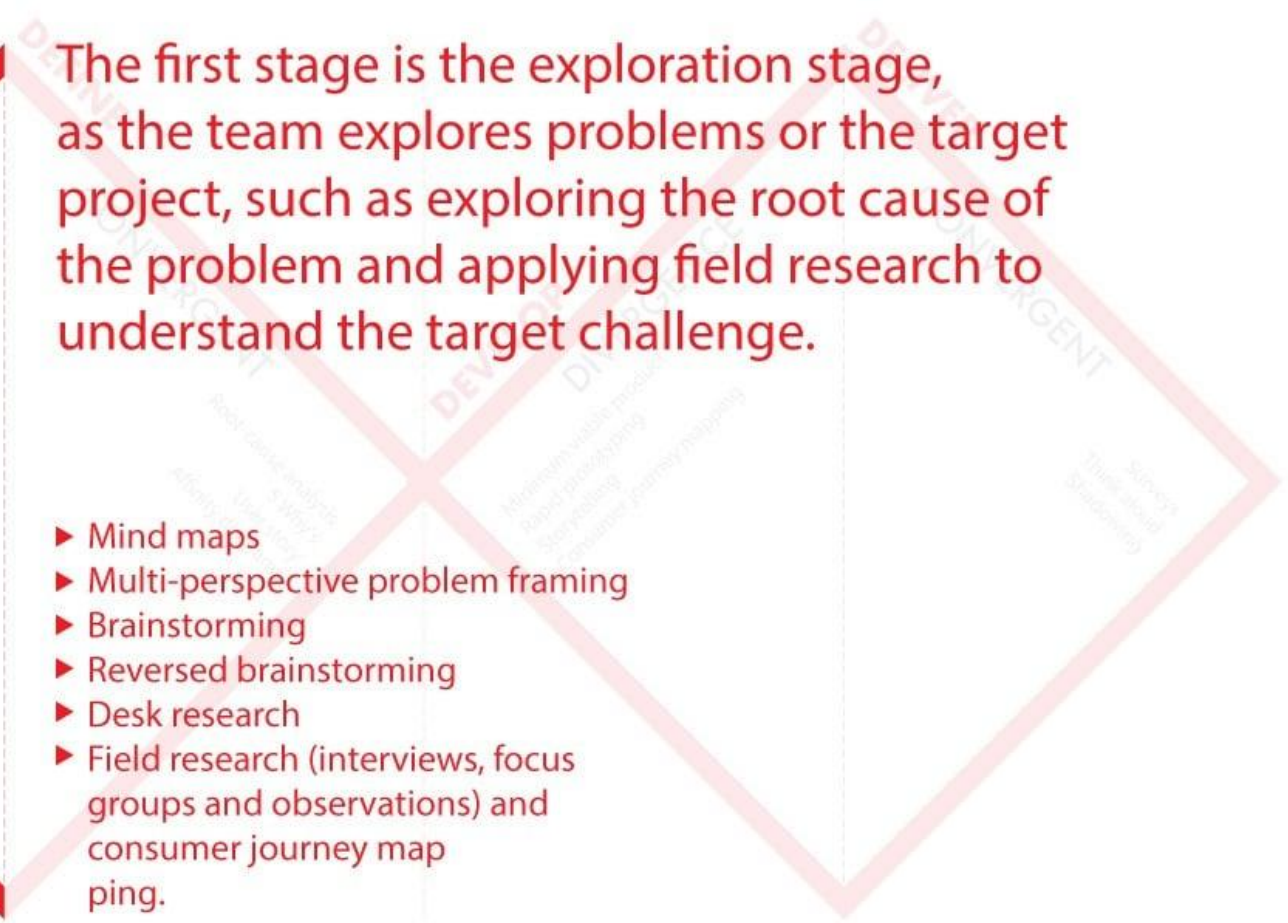


## DESIGN COUNCIL “DOUBLE DIAMOND”

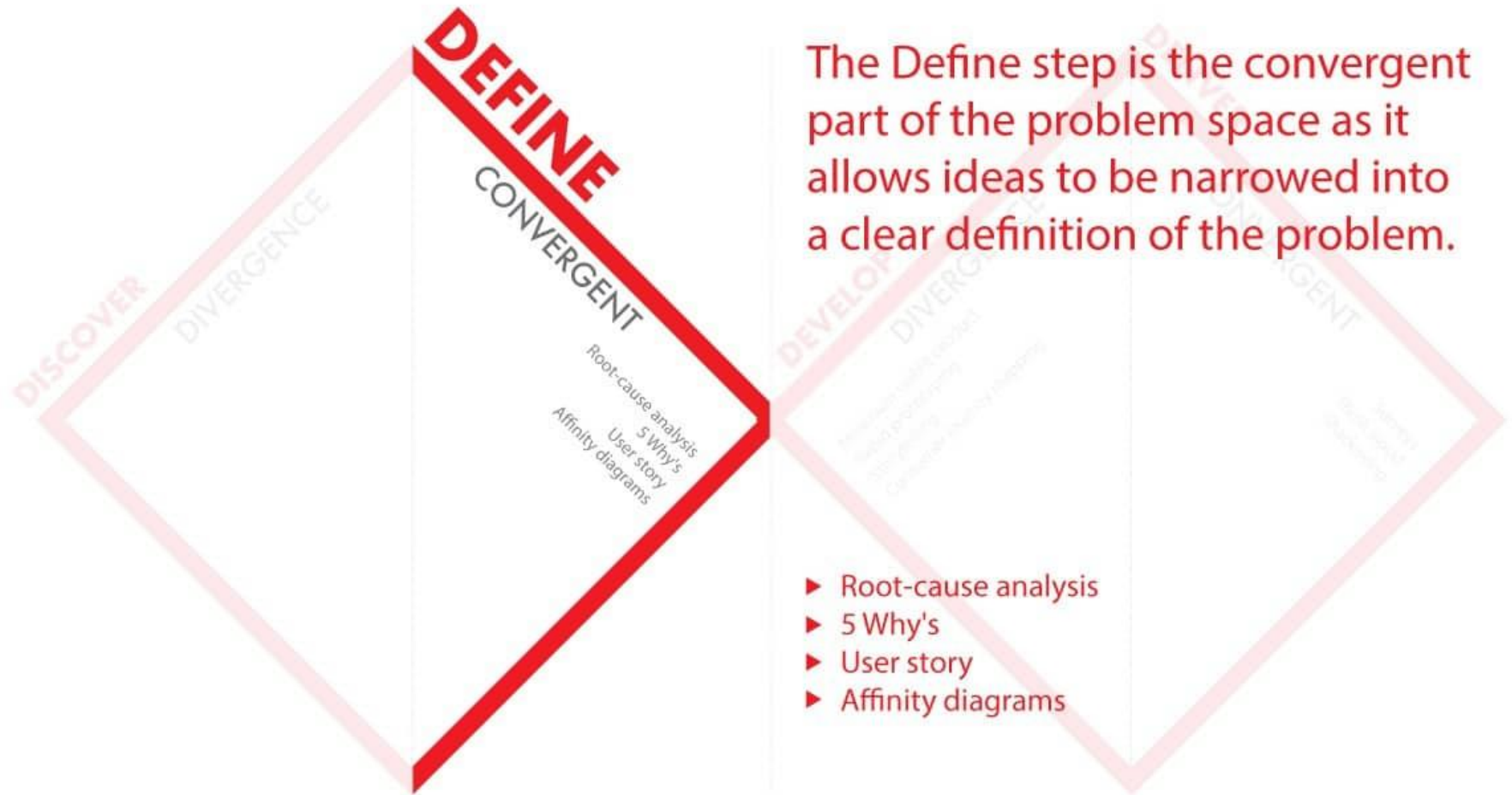


The first stage is the exploration stage, as the team explores problems or the target project, such as exploring the root cause of the problem and applying field research to understand the target challenge.

- ▶ Mind maps
- ▶ Multi-perspective problem framing
- ▶ Brainstorming
- ▶ Reversed brainstorming
- ▶ Desk research
- ▶ Field research (interviews, focus groups and observations) and consumer journey mapping.

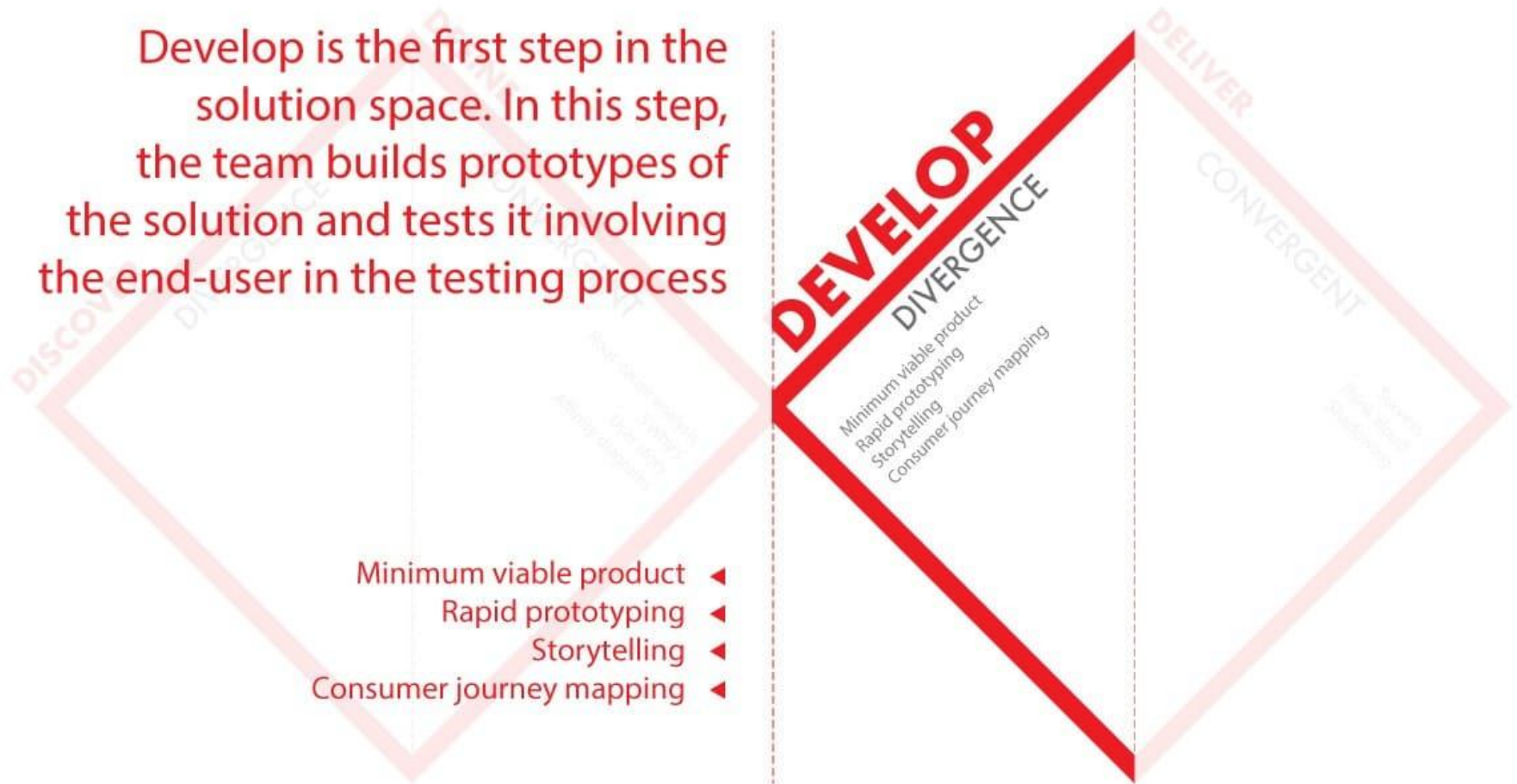


## DESIGN COUNCIL “DOUBLE DIAMOND”



## DESIGN COUNCIL “DOUBLE DIAMOND”

Develop is the first step in the solution space. In this step, the team builds prototypes of the solution and tests it involving the end-user in the testing process

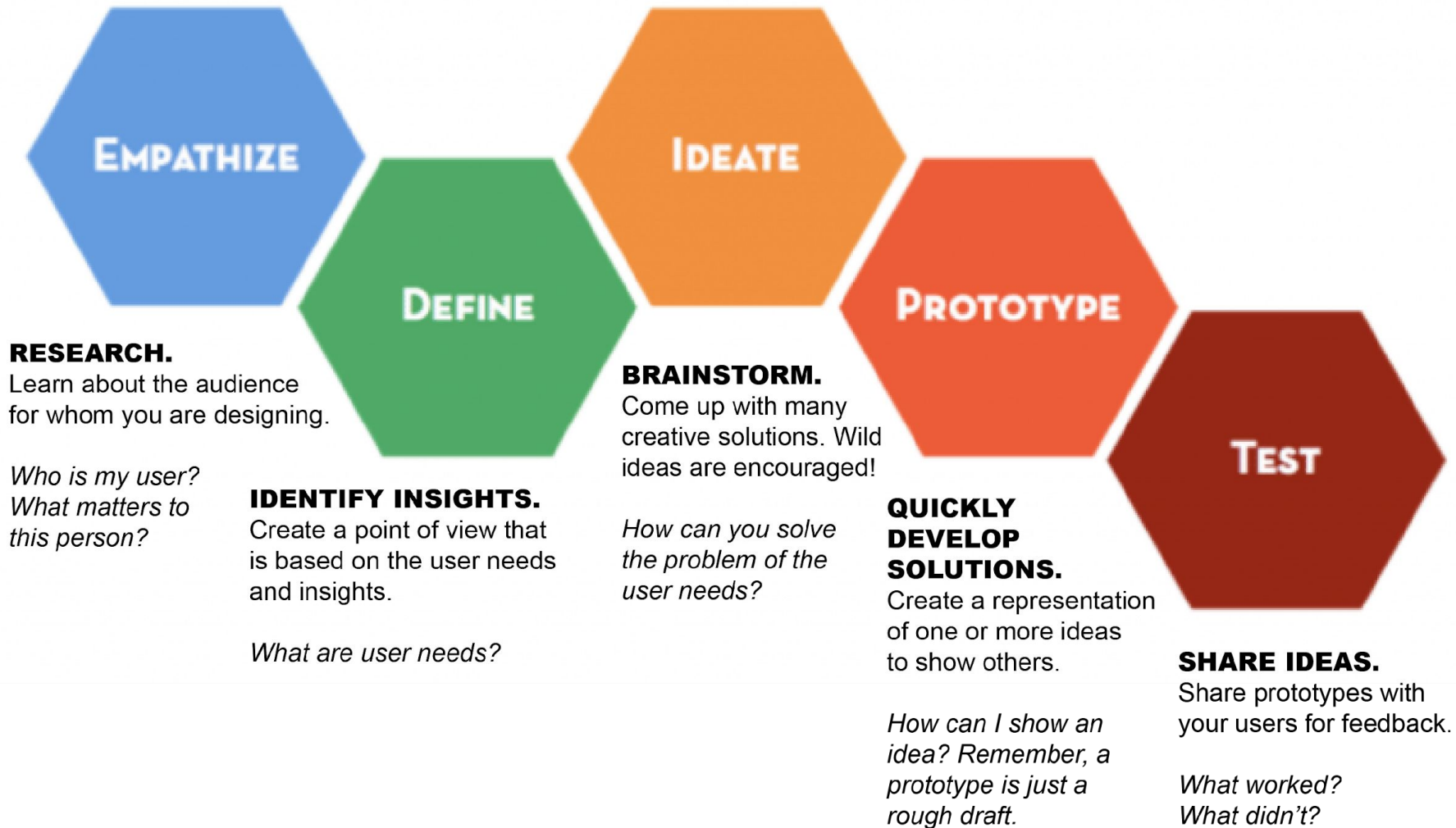


## DESIGN COUNCIL “DOUBLE DIAMOND”

Deliver the final product to the consumer and get feedback that will be used to improve the product in the future.



## IDEO'S DESIGN THINKING (1991)





**ID  
EO**



WHAT IS DESIGN THINKING?

**Design Thinking is about creating a culture to encourage creativity and radical collaboration by bringing group members with different backgrounds and specializations to work together to solve problems.**

[Design Thinking and the Culture of Collaboration](#)

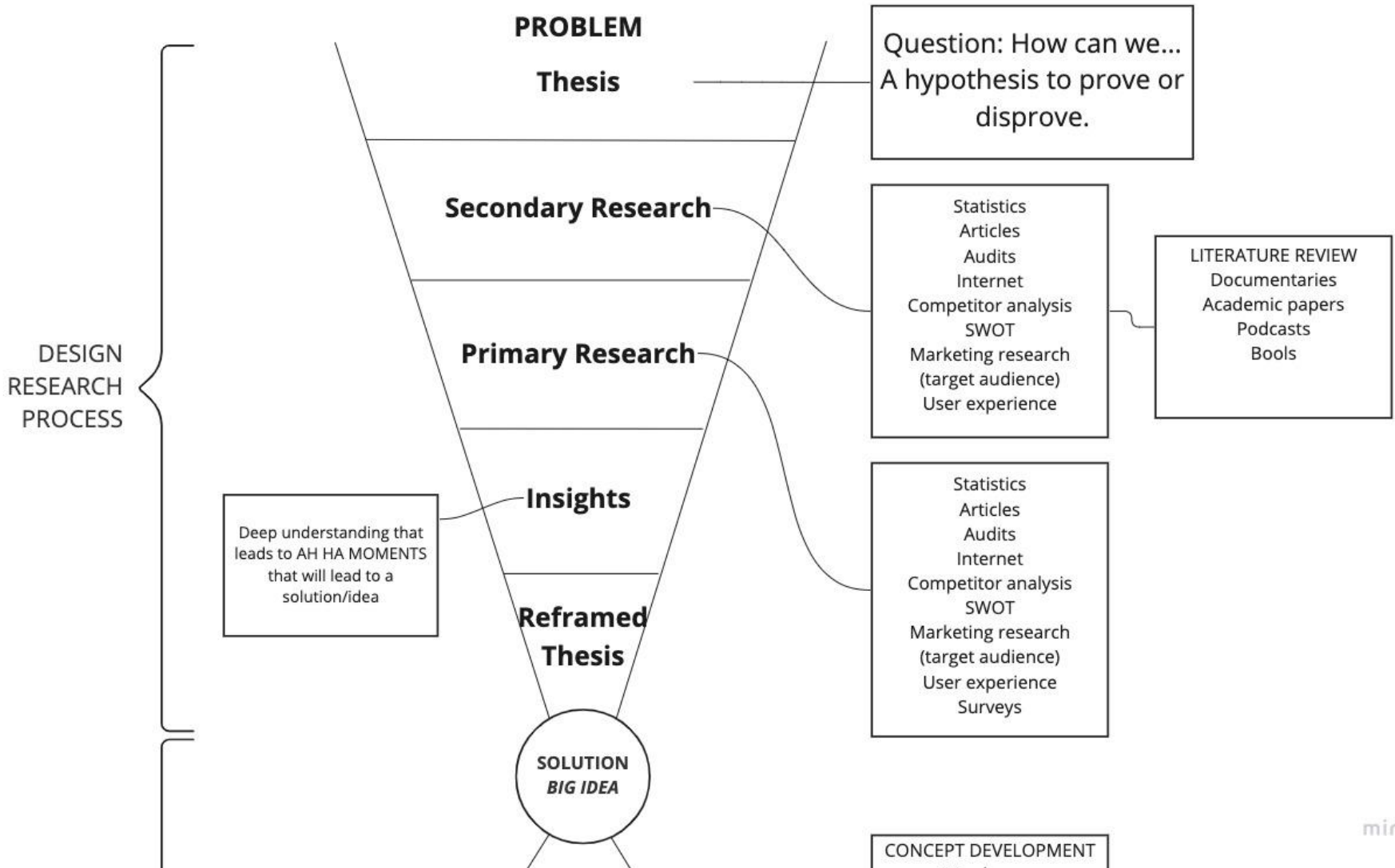


# **DESIGN THINKING** **[Simplified]**

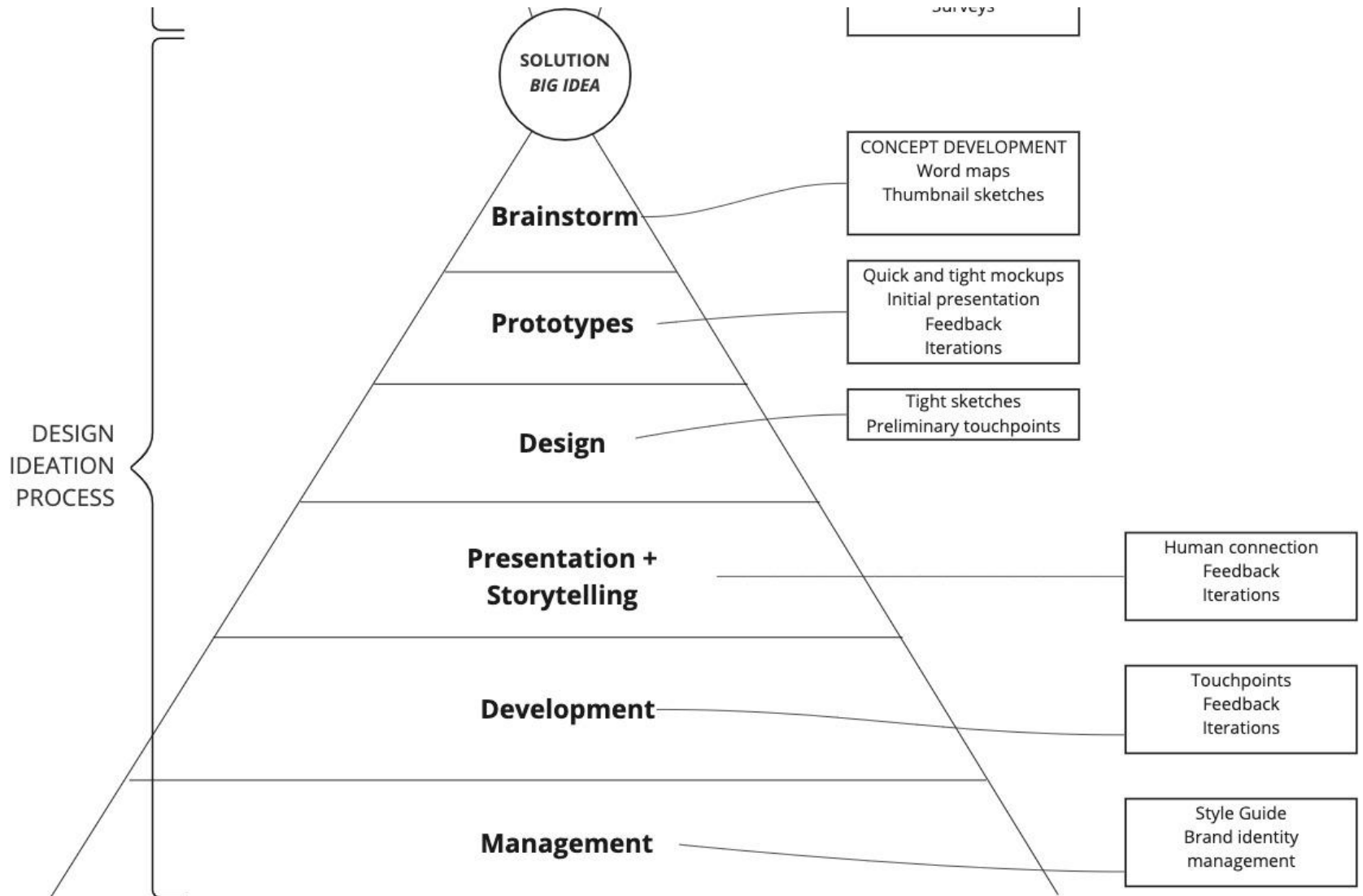
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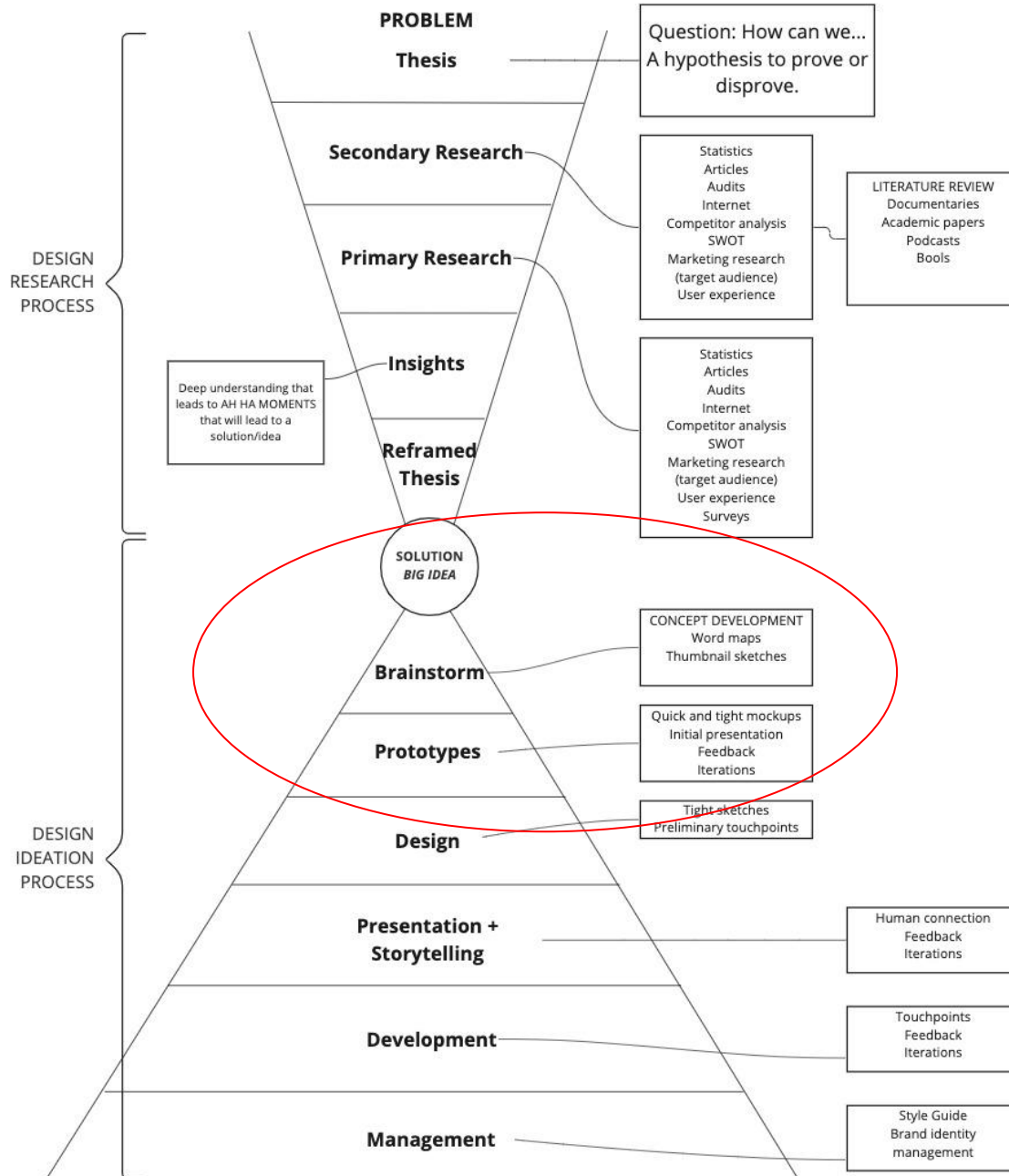


# PROFESSOR ANDERSON DESIGN RESEARCH



# PROFESSOR ANDERSON DESIGN RESEARCH





# 1. Identify problem

1. Identify problem
- 2. Research**

1. Identify problem
2. Research
- 3. Brainstorm ideas [in-class]**

1. Identify problem
2. Research
3. Brainstorm ideas
4. **Prototype ideas [assignment]**

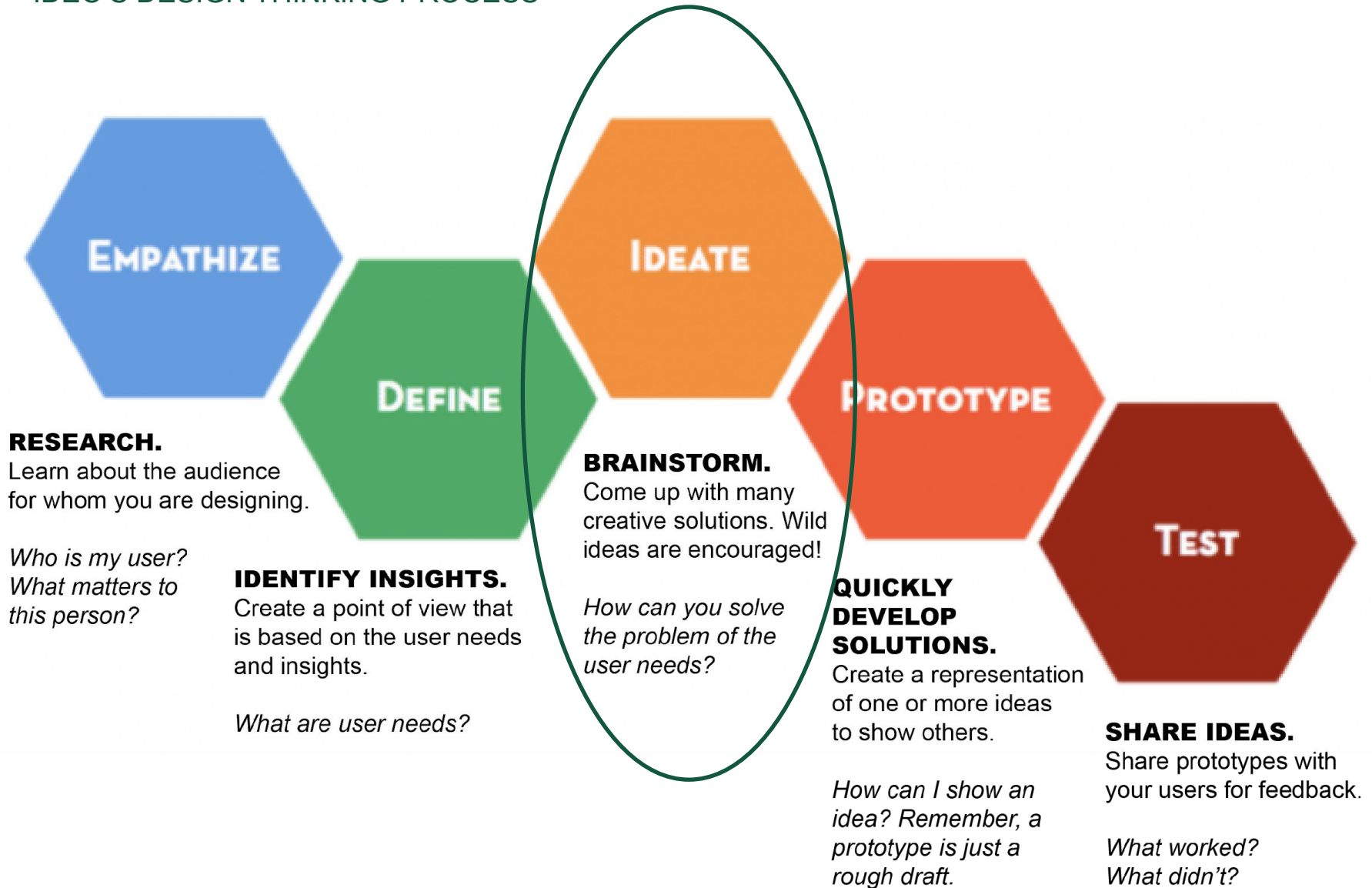
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- 5. Receive feedback**



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5. Receive feedback
- 6. Iterate (step and repeat 1-5)**

1. Identify problem
2. Research
3. Brainstorm ideas
4. Prototype ideas
5. Receive feedback
6. Iterate (step and repeat 1-5)
7. **Present solutions (to client)**

# IDEO'S DESIGN THINKING PROCESS



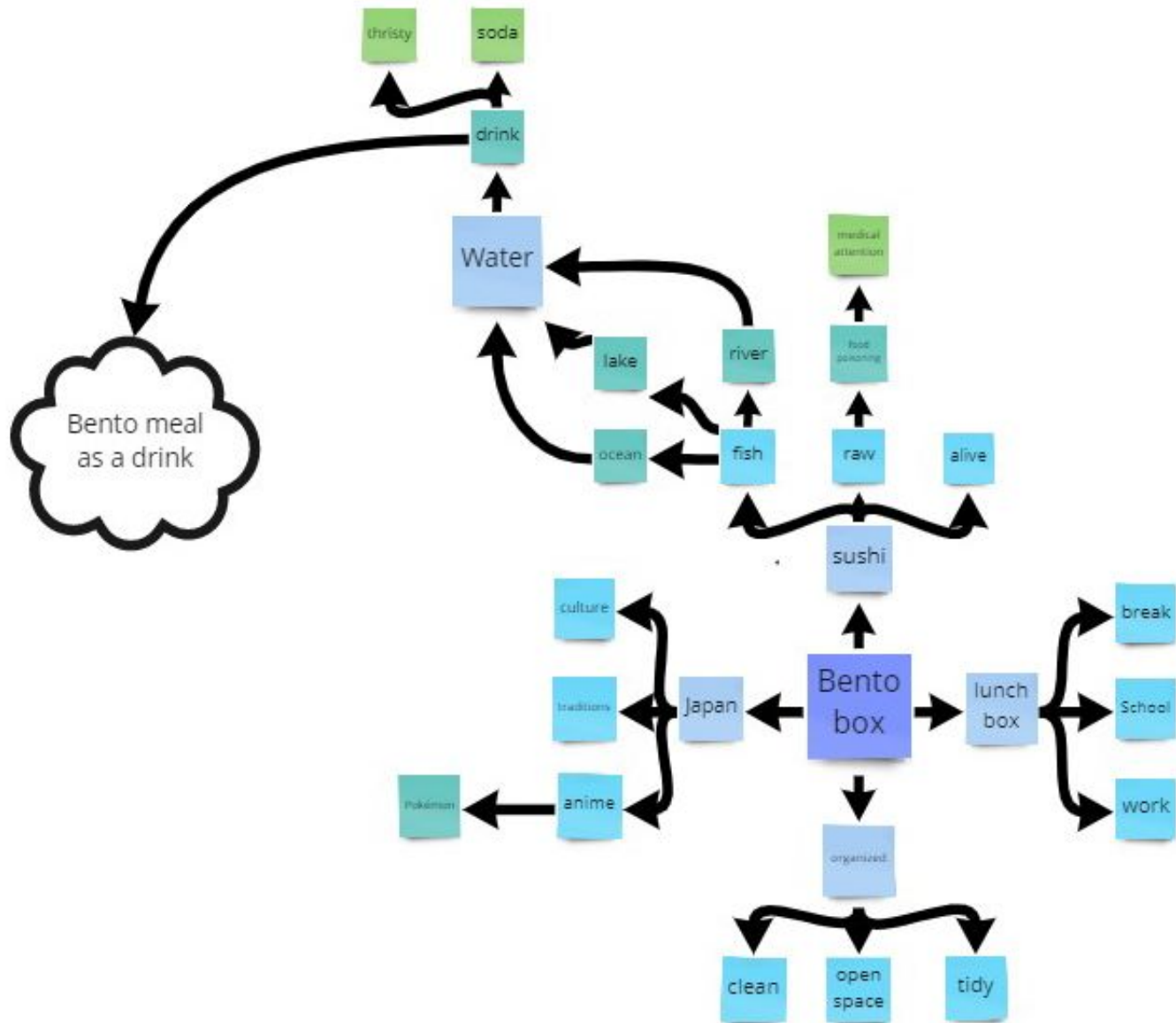
## IDEATION METHODS + TOOLS

- **Word maps**



Mind Map: Proteins (detailed) based on p.122-127, Book 1, SK277, Human Biology

# IDEATION METHODS + TOOLS—WORD/MIND MAPS



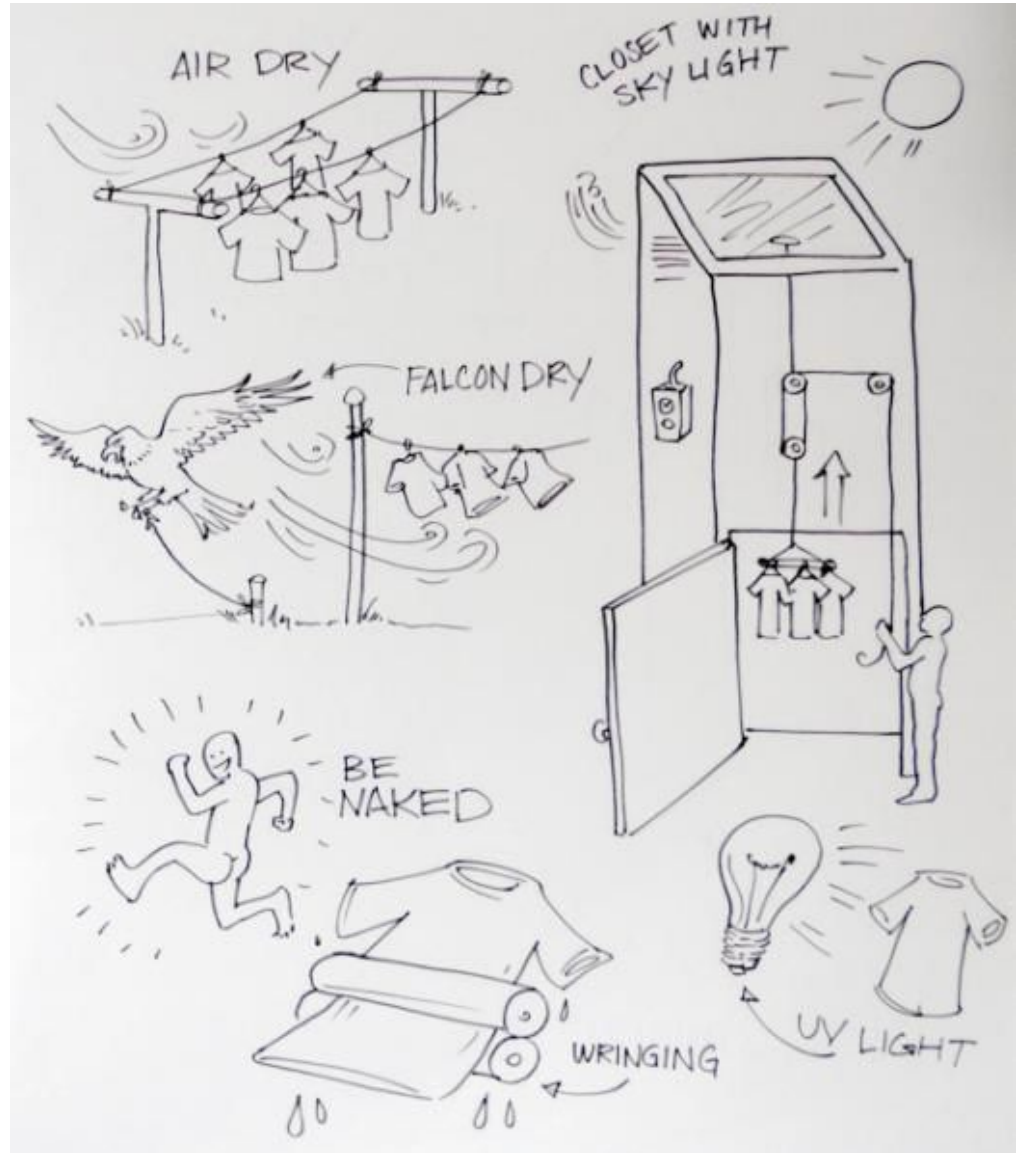
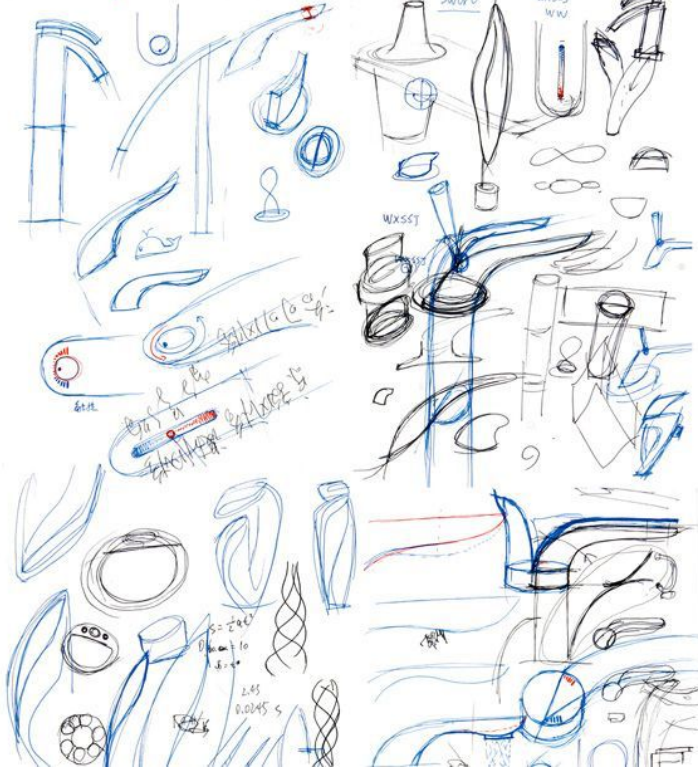
## IDEATION METHODS + TOOLS

- Word maps
- **Sketching**



# IDEATION METHODS + TOOLS—**SKETCHING**

## Concept Sketch



[Wen Chen, Pinterest](#)



## RULES OF IDEATION

- **Share research/insights**
- Stay focused on the topic
- There is no bad idea
- Encourage wild ideas
- Build on ideas of others
- Don't criticize another's ideas

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## IDEATION METHODS + TOOLS

- Word maps
- Sketching
- **Stickies**

# IDEATION METHODS + TOOLS—STICKIES



How IBM is Training Its Workforces to Think Like Designers





**GET STARTED.  
HAVE FUN!**

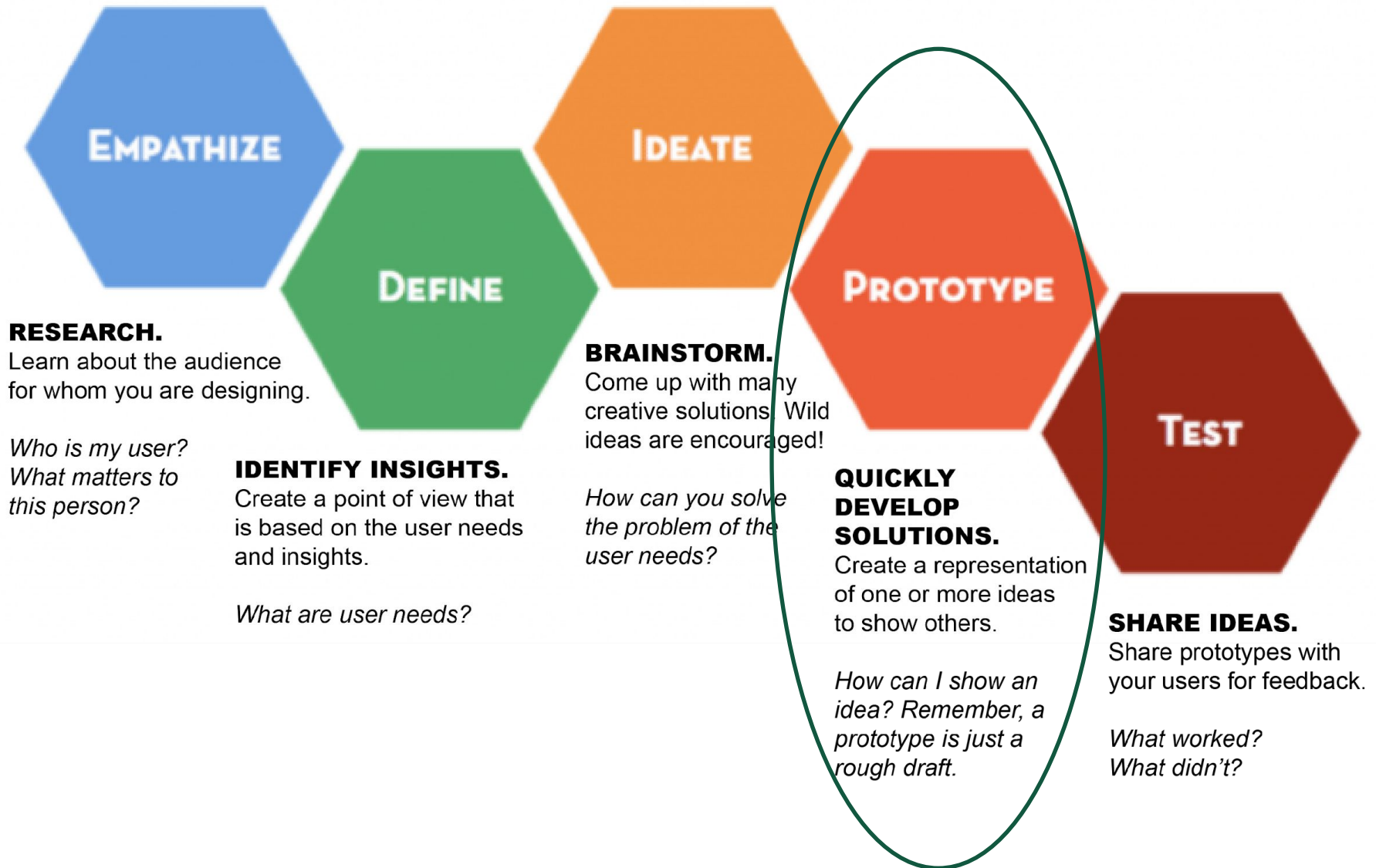


**HOMEWORK ASSIGNMENT**

**PROTOTYPING**

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# IDEO'S DESIGN THINKING PROCESS



## UNIT 04 : HOMEWORK ASSIGNMENT—BRIEF

### UNIT 05: ASSIGNMENT

- **Select two ideas per group** based on the brainstorming session.
- **Break into subgroups.** Split the team into two, with one design student guiding each.
- **Develop two concept directions per idea.** Each subgroup will develop two DIFFERENT directions per idea based on the team brainstorming session. Each team will yield two ideas x two areas of focus = four ideas. (See "idea board" template on Blackboard.) The objective of the idea board is to make sure someone reading it understands the idea and can easily repeat it to you.
- **Combine four idea boards in one PDF and submit one document per team.** PDF. Make sure submissions are well organized and your research validates ideas. List subgroups with their ideas.
- **Submit one brainstorming ideas document per team in a Google Doc.**
- **Email all deliverables to professors by noon, Monday.** (One pdf and Doc link per team)

## UNIT 05 : HOMEWORK ASSIGNMENT—IDEA BOARD

### **[Idea]**

(Describe your concept in 6-9 words or less)

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**[Idea Description:** Use complete sentences and supporting bullet points if needed to explain details of your idea. This section should give context to the solution and provide clarity to the user.]

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**[Image Mood Board.** This section will visually communicate your idea. Images selected must communicate the subject (i.e., man), attributes (i.e., facial hair), and personality (i.e., hipster) of your idea. Select 10-12 images, or more if needed to express the idea.]

