



ID*4110 JETS / UNIT 04

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

Embrace empathy

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- Promote optimism

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- Take time to tinker and test
- Keep iterating + testing

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

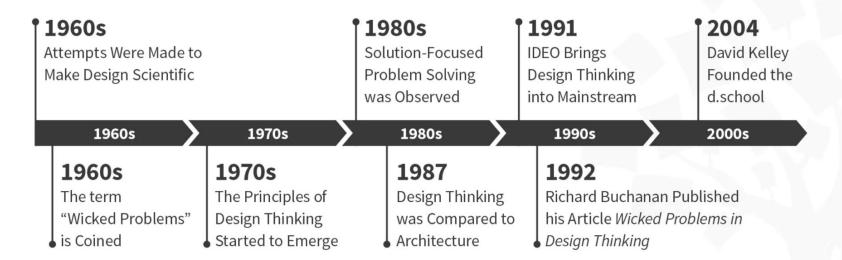
IDEO Design Thinking

DESIGN THINKING METHODOLOGIES

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

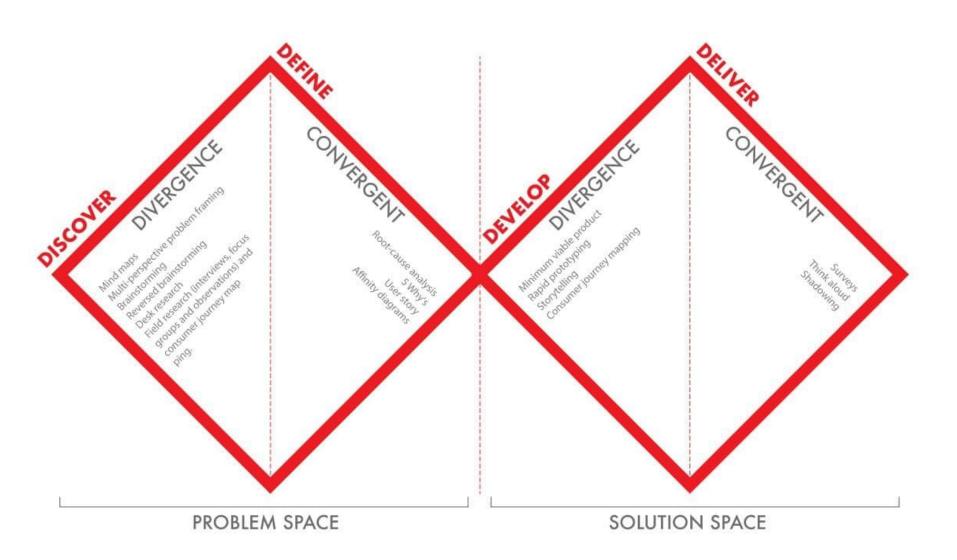
Apple, Microsoft, Starbucks

Design Thinking Process Timeline





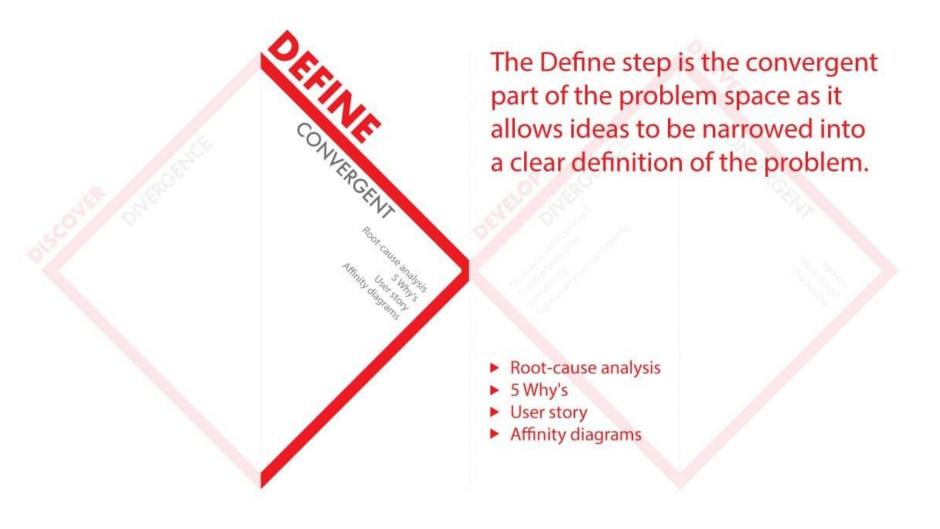
DESIGN COUNCIL "DOUBLE DIAMOND" (2004)





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 map ping.



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

- Minimum viable product ◀
 - Rapid prototyping
 - Storytelling 4
- Consumer journey mapping ◀





IDEO'S DESIGN THINKING (1991)

EMPATHIZE DEFINE RESEARCH.

Learn about the audience for whom you are designing.

Who is my user? What matters to this person?

IDENTIFY INSIGHTS.

Create a point of view that is based on the user needs and insights.

What are user needs?

IDEATE

BRAINSTORM.

Come up with many creative solutions. Wild ideas are encouraged!

How can you solve the problem of the user needs?

QUICKLY

DEVELOP SOLUTIONS.

Create a representation of one or more ideas to show others.

PROTOTYPE

How can I show an idea? Remember, a prototype is just a rough draft.

TEST

SHARE IDEAS.

Share prototypes with your users for feedback.

What worked? What didn't?

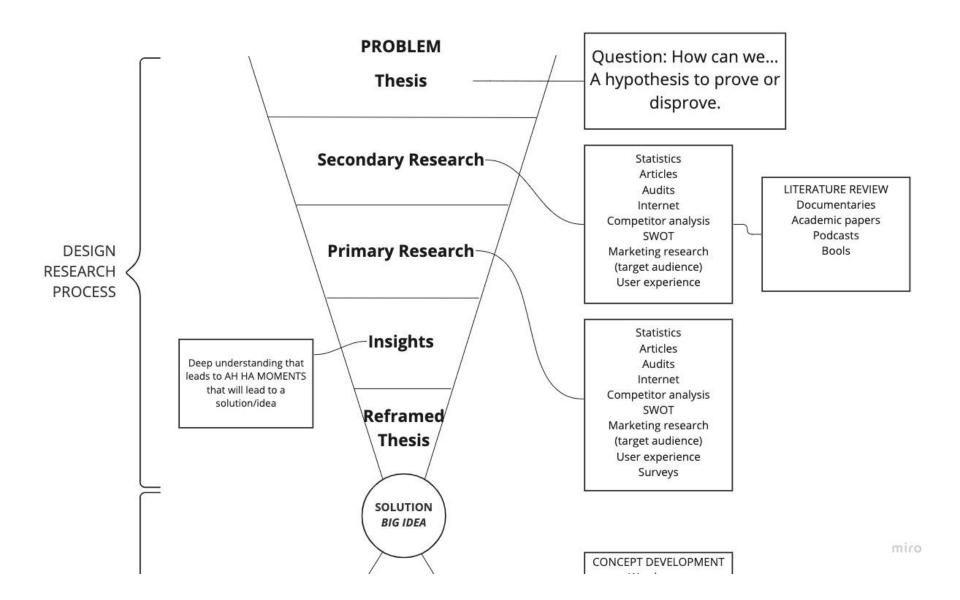


Design Thinking is about creating a culture to encourage creativity and radical collaboration by bringing group members with different backgrounds and specializations to work together to solve problems.

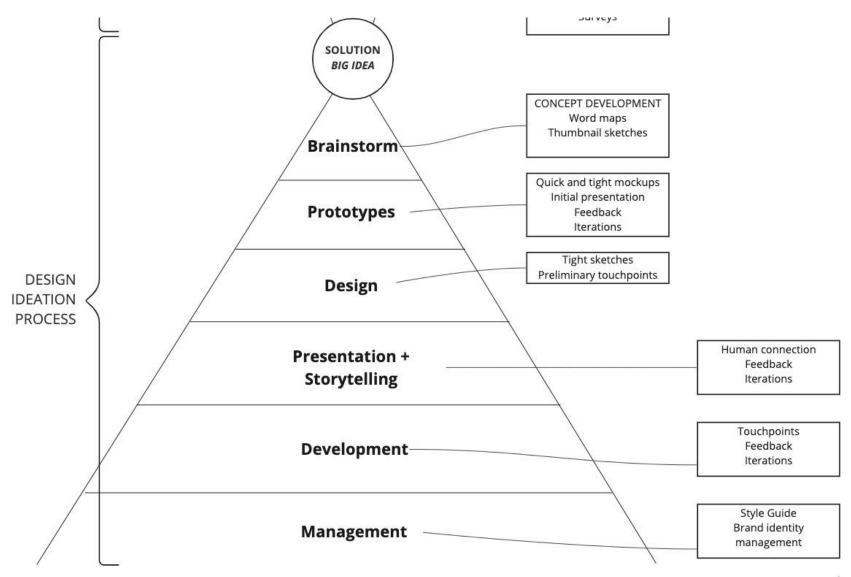
Design Thinking and the Culture of Collaboration

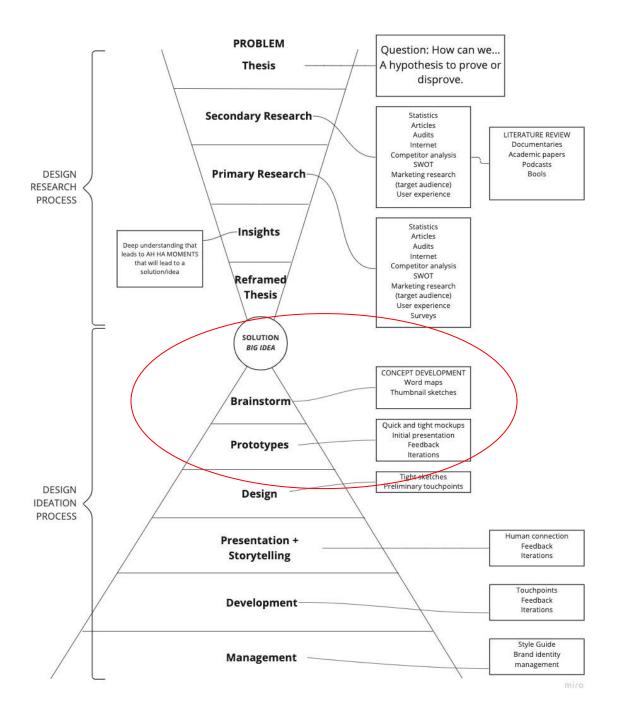
DESIGN THINKING [Simplified]

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]

- 1. Identify problem
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- 5. Receive feedback

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- 6. Iterate (step and repeat 1-5)

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- 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

EMPATHIZE

RESEARCH.

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DEFINE

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ROTOTYPE

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TEST

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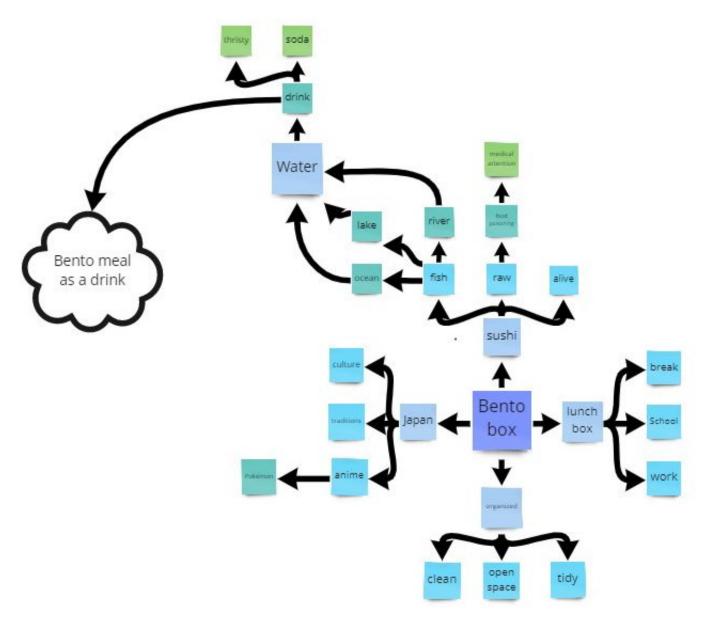
What worked? What didn't?

IDEATION METHODS + TOOLS

Word maps

skeletal support building fibrous. (e.g. collagen) acido blocks (xx) (p122-3) STRUCTURE possibles. FUNCTION polypeptide enzymes P122 condensation chain formation P.122 antibodies reaction (p12/4) membrane -peptide. PROTEINS. protuins (SK277 Book 1 p122-) mobile carrier eg. Hb. Variation - R, R, R, Eguena. DISOKDERS PKU (genetic) DIET: DAILY DEFICIENCIES - babies screened. NEEDS . 0126 Lowces - digestion of blood phenylalamine 4 (p124V) peptide reliases brain damage PEM Additional Pellagra needs (p.125) (maize diet) Marasmus tryphophan maire depairing (long tem famure) Clacks Replacing diarrhoea Kwashiorkor orphophan organs/muscle (biggu, more muscle) mobilised (children) tissue. linon. protein poor dut gut inefficiency Building (banana / cassara) exercise/training. bums. Vitamin deficiency muscle Cancer wasting y mark was d a

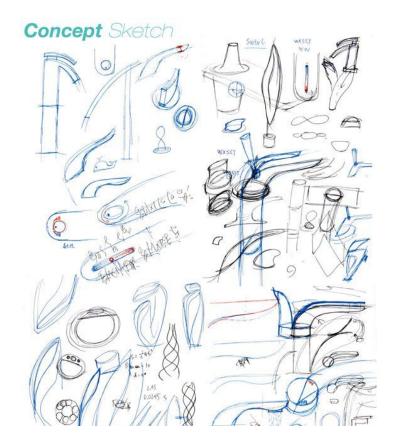
IDEATION METHODS + TOOLS—WORD/MIND MAPS



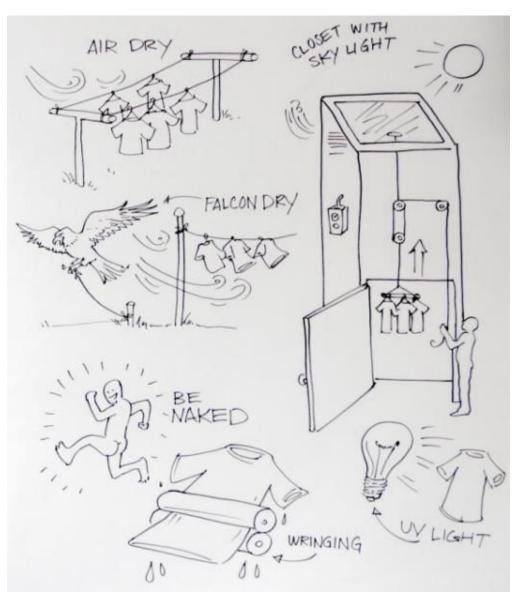
IDEATION METHODS + TOOLS

- Word maps
- Sketching

IDEATION METHODS + TOOLS—SKETCHING



Wen Chen, Pinterest



Whole Systems and Lifestyle Thinking, Part 1

- 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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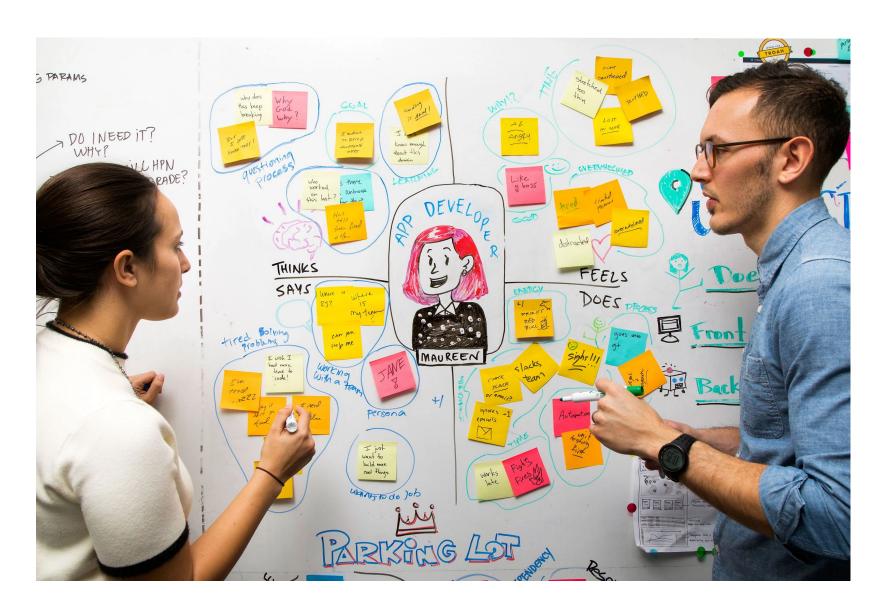
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IDEATION METHODS + TOOLS

- Word maps
- Sketching
- Stickies

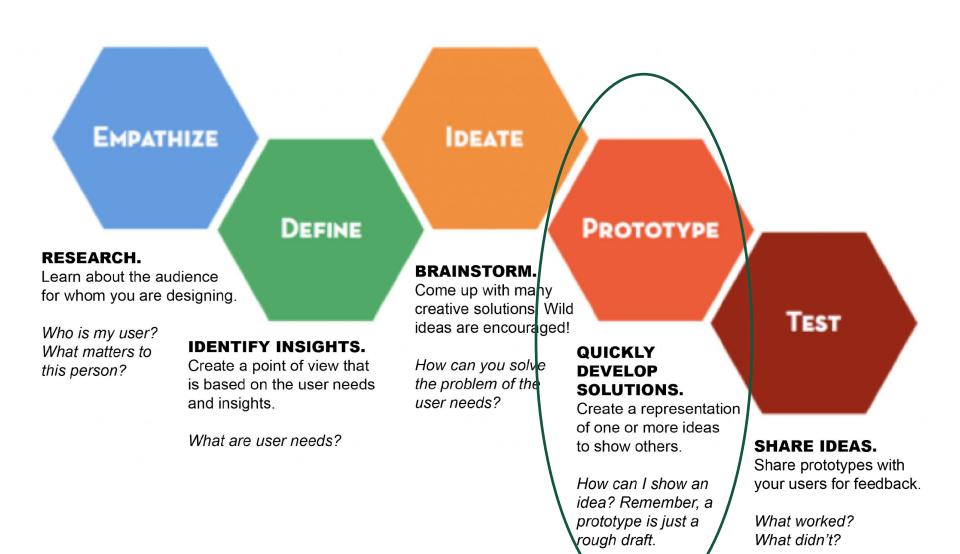
IDEATION METHODS + TOOLS—STICKIES



GET STARTED. HAVE FUN!

HOMEWORK ASSIGNMENT PROTOTYPING

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)

[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.]

[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.]



