Design Thinking

A human centred framework to be a problem finder and problem solver

Empathise

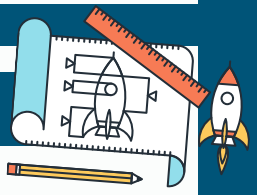
- Who are we trying to help, or solve a problem for?
- Understand the feelings, needs and ideas of others - view the world through their eyes.
- Provides a deeper understanding of the problem we are facing.
- Human-centered approach.

Define

- Use the insights gained from the empathise phase to clearly define the problem you are trying to solve
- Clearly articulate criteria and constraints of problem

Ideate

- Brainstorm ideas and possible solutions
- Be creative - the more ideas the better
- Choose an idea to solution



Prototype

- Bring your idea to life
- Iterate quickly - multiple prototypes may be needed
- A prototype could be a model, plan, mockup, simulation, storyboard, etc

Test

- Get feedback on your prototypes
- Does it solve the problem?
- What works? What needs to change? What improvements could be made?

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CESA references Stanford d.school's Design Thinking Process dschool.stanford.edu

Design Thinking: Empathise Tools

- Who are we trying to help, or solve a problem for?
- Understand the feelings, needs and ideas of others- view the world through their eyes.
- Provides a deeper understanding of the problem we are facing.
- Human-centered approach.

Readings

- Empathy Interview: Stanford d.school
- What, How, Why: Stanford d.school
- Empathy Mapping: Stanford d.school
- Shadow a User Challenge
- Customer Journey Maps: IDEOU
- Why-How Ladder: Stanford d.school

Videos

- Empathy Interview: David Lee
- Empathy Mapping: NN Group
- Whose Life: David Lee
- Empathy Mindset: IDEO

Templates

- Empathy Map
- What, How, Why
- Empathy Interview

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Design Thinking: Define Tools

- Use the insights gained from the empathise phase to clearly define the problem you are trying to solve
- Clearly articulate criteria and constraints of problem

Readings

- Story Mapping: Atomic Object
- Saturate and Cluster: Stanford d.school
- Point of View statement: Interaction Designs, Dan & Siang
- How Might We Statement : IDEO.org
- Root Cause Analysis: Think Realiability
- 5 Whys: IDEO.org

Videos

- Story Share and Capture: Academy for Innovation and Entrepreneurship
- Defining a Problem: Crash Course Kids
- How Might We Statements : DAN Innovation Council
- User Need Statements: NN Group

Templates

- Root Cause Analysis Tree
- Point of View Statements

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Design Thinking: Ideate Tools

- Brainstorm ideas and possible solutions
- Be creative - the more ideas the better
- Choose an idea to solution

Readings

- Crazy Eights: Design Sprints
- Hybrid Brainstorming: Padley. A
- Ideation: Interaction Designs, Dan & Siang
- NUF Test: Gamestorming
- Silent Critique: Project Design Sprint
- Four Category Method: Interaction Design

Videos

- Brainstorming: Ideo
- Crazy Eights: AJ & Smart
- Worst Possible Idea: Harvard Business Review
- Impact Effort Matrix: Gamestorming

Templates

- Ideation/Brainstorming Rules
- Judging and Choosing Ideas
- 100 Ideas
- NUF Test

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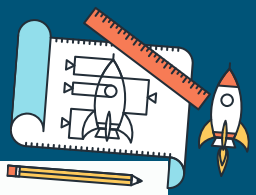
Design Thinking: Prototype Tools



- Bring your idea to life
- Iterate quickly - multiple prototypes may be needed
- A prototype could be a model, plan, mockup, simulation, storyboard, etc

Readings

- Eight Common Prototypes: Interactive Design
- Lego Prototyping: Rusciolelli. A
- Prototyping to Test: Stanford d.school
- Wizard of Oz Prototyping: Stanford d.school
- Storyboard Prototype: IDEO.org
- Role Play Prototype: IDEO.org

Videos

- Sketching and Paper Prototypes: Google
- Lego Prototyping: Lego Discover
- Cardboard Prototyping: Quirky
- Usability Prototyping: UX Playground

Templates

- Storyboard

Design Thinking: Test Tools

- Get feedback on your prototypes
- Does it solve the problem?
- What works? What needs to change? What improvements could be made?

Readings

- Get Feedback: IDEO.org
- Integrating Feedback and Iterating: IDEO.org
- Test your Prototype: Interaction Designs, Dan & Siang
- Feedback Capture Grid: Interaction Designs
- I Like, I Wish, I Wonder: Atomic Object
- Testing in Design Thinking: Interaction Design, Dan & Siang

Videos

- Feedback Capture Grid: David Lee
- Peer Feedback System: John Spencer
- Pitching: Shark Tank Australia

Templates

- Feedback Capture Grid
- I Like, I Wish, I Wonder

Design Thinking
CESA Key Capabilities

Key Capabilities

Relevant CESA Key Capabilities have been identified for each of the stages of Design Thinking. However, this is not an exhaustive list. Depending on the context of the Design Thinking inquiry students may identify any number of the capabilities during the phases of Design Thinking.

Empathise

Define

Ideate

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Design Thinking
CESA Key Capabilities

Prototype

Test

CESA Key Capabilities Continua

Find resource documents here

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