



Youth for Children (Y4C) Innovation Hub



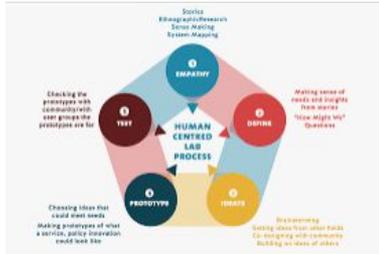
Introduction to Human Centered Design (HCD) Method

Dr. Joseph Cosmas Mushi

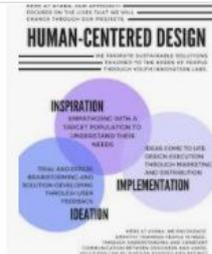
What is Human Centered Design?

- **Human centered design** is an innovation **approach / framework** to problem solving that starts with the people you're **designing** for and ends with new solutions that are tailor made to suit their needs.
- Literatures refers this phenomenon using different terms including:
 - "Design thinking"
 - "User-centered design"
 - "Design strategy"

Try Googling Human Centered Design?



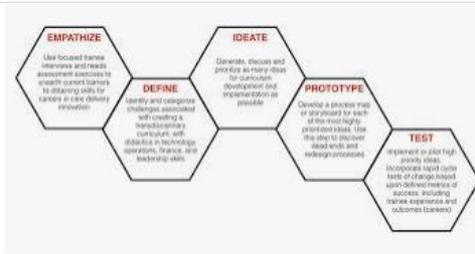
Human-Centered Design: Workbook
tamarackcommunity.ca



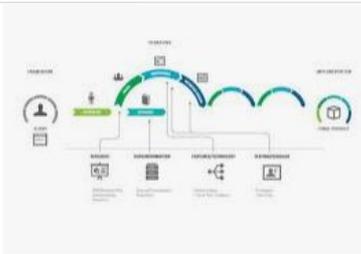
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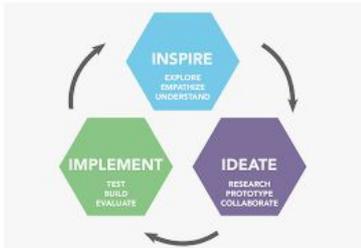
human-centered design principles ...
researchgate.net



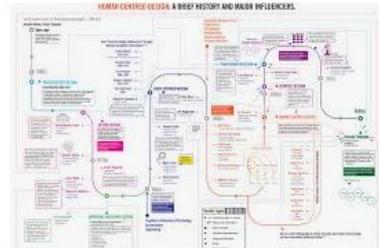
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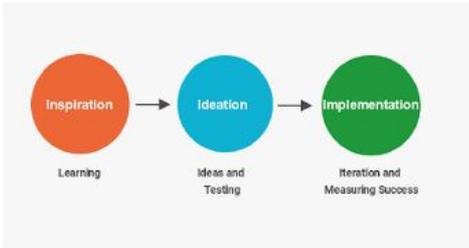
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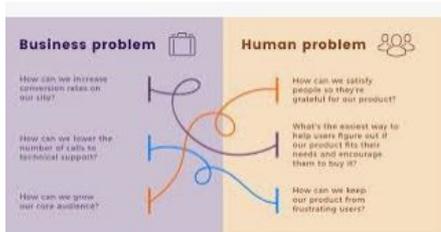
What is Human-Centered Design ...
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human centred design and marketing ...
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Human Centered Design for the FBS ...
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Related searches

- ideo human centered design
- design thinking

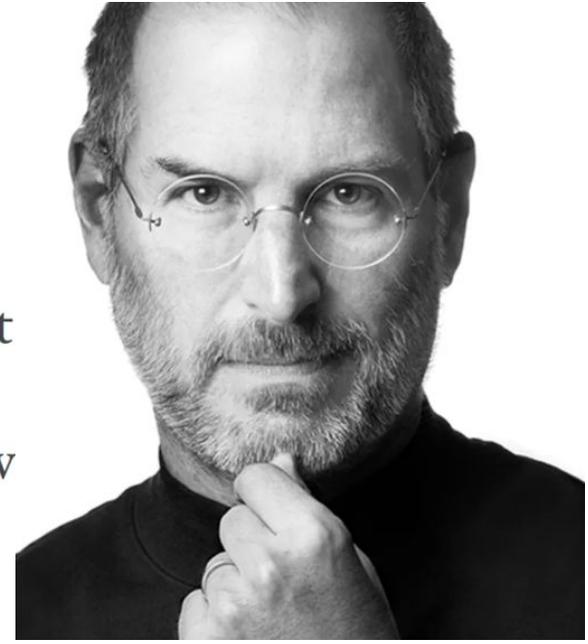


What is Human Centered Design?

- HCD is a design framework that helps us to:
 - understand the "human" element;
 - identify people's real needs, and challenges;
 - satisfy users through frequent feedback;
 - develop effective solutions

“Design is not what it looks and feels like. Design is how it works.”

Steve Jobs, Some famous guy who invented some stuff

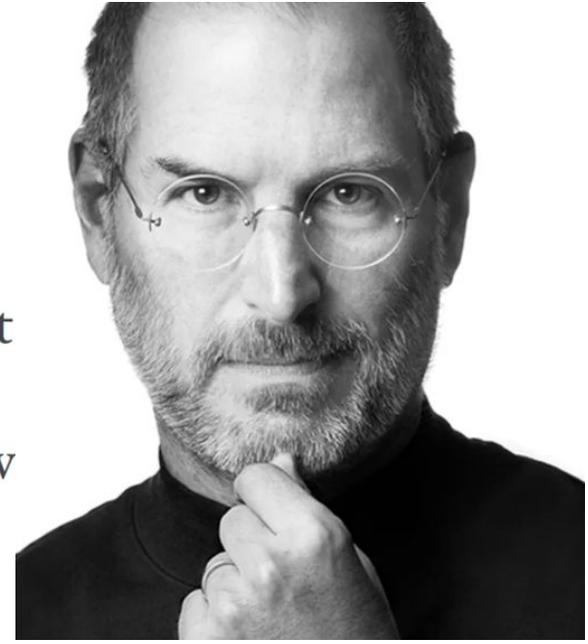


What is Human Centered Design?

- HCD framework helps to:
 - Know where to begin;
 - Keep the user at the centre your decisions;
 - Reminds you to continuously improve;
 - More reliable and flexible than intuition.

“Design is not what it looks and feels like. Design is how it works.”

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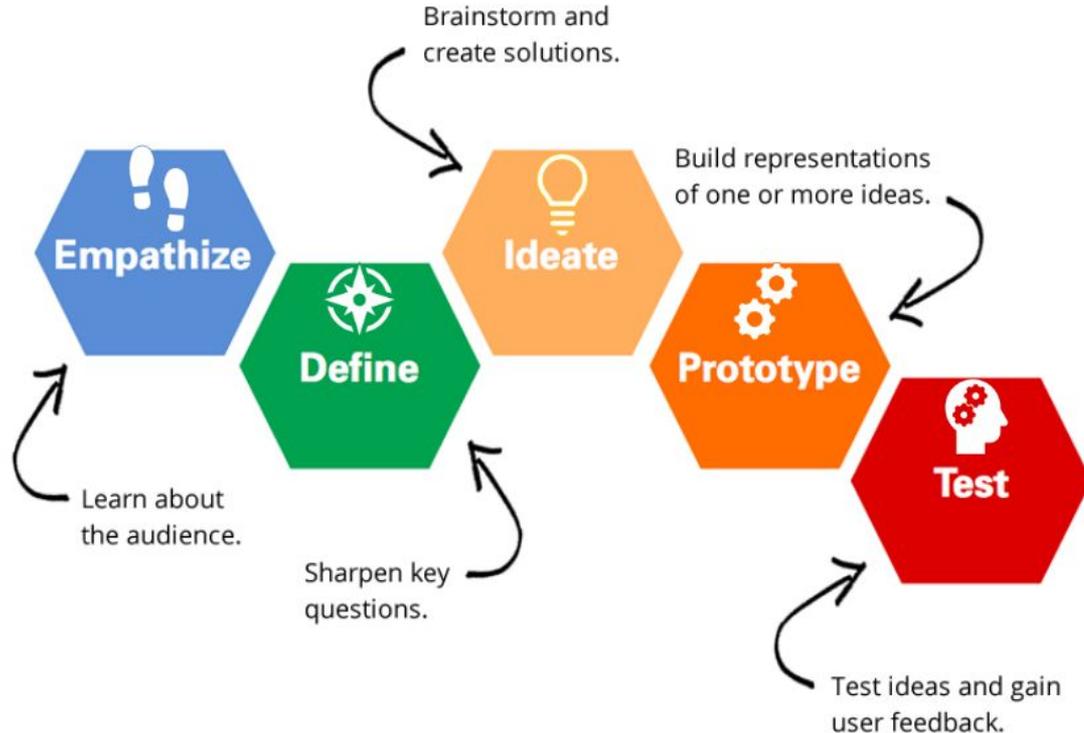
HCD Design Process

- Literature referring different phase names but meaning the same:

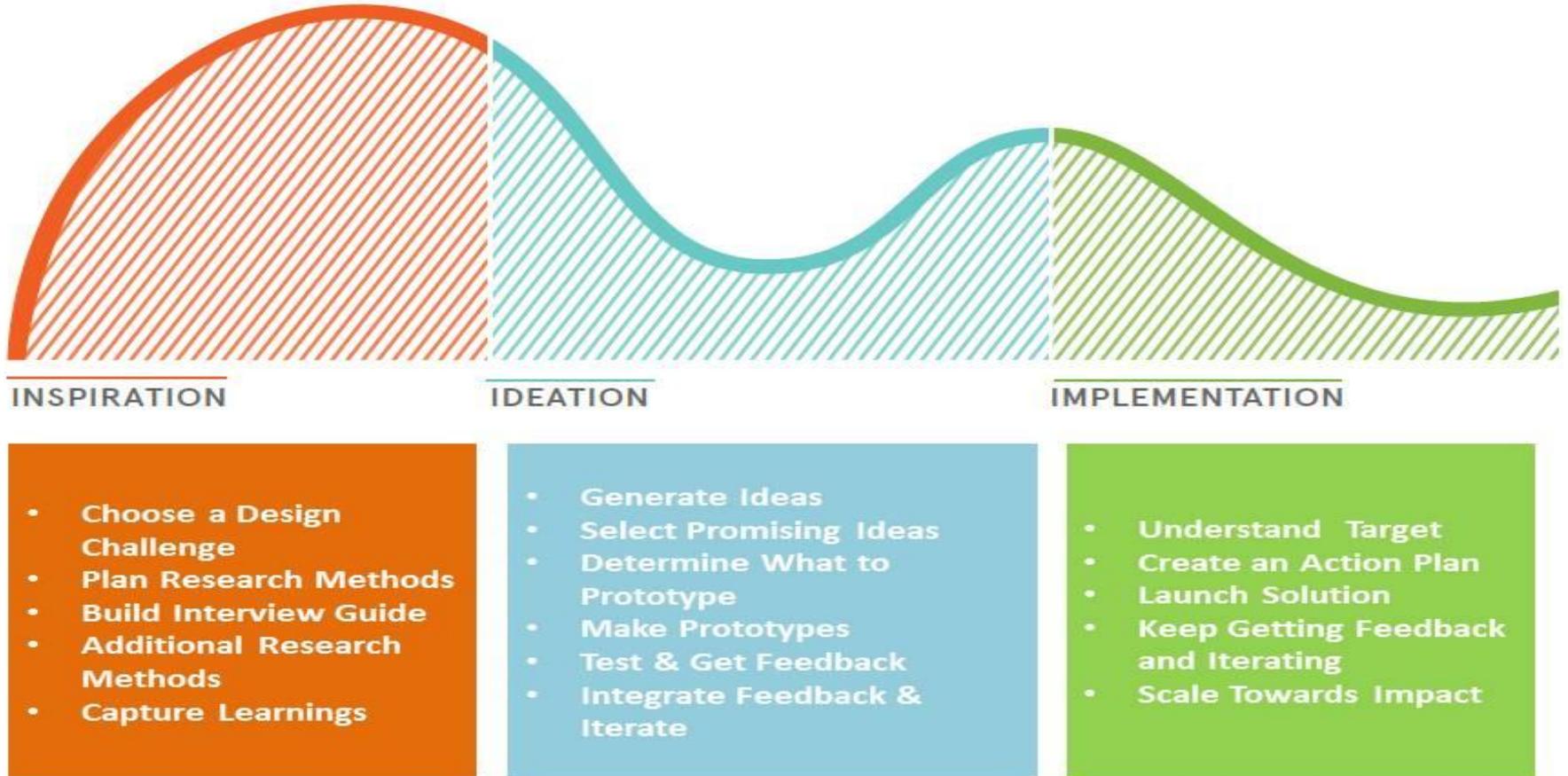


HCD Design Process

- Literature referring different phase names but meaning the same



HCD Design Process



- **The Design process oscillates from tough to easen thinking modes.**

HCD Design Process

PHASES

1

Empathize



I have a challenge.
How do I approach it?

2

Define



I learned something.
How do I interpret it?

3

IDEATION



I see an opportunity.
What do I create?

4

Prototyping



I have an idea.
How do I build it?

5

Test & Evolve



I tried something new.
How do I evolve it?

STEPS

1-1 Understand the Challenge

1-2 Prepare Research

1-3 Gather Inspiration

2-1 Tell Stories

2-2 Search for Meaning

2-3 Frame Opportunities

3-1 Generate Ideas

3-2 Refine Ideas

4-1 Make Prototypes

4-1 Get Feedback

5-1 Track Learnings

5-2 Move Forward

HCD Design Process

1. Empathize

- **Discover design challenge:**

Design process begins with a specific and intentional problem to address; this is called a design challenge.

- **Characteristics** of design challenge:

- should be approachable
- understandable and actionable
- should be clearly scoped—not too big or too small, not too vague or too simple.
- One which “**problem**”, “**Users**” and “**context of use**” can be identified

HCD Design Process

So, what does this mean?

**Let's start get into a Design
Mindset**

□ **Example Challenge:**

How might we improve a process of identifying students by Gate-keepers when entering ColCT main gate?

HCD Design Process

□ **Challenge:** How might we improve a process of identifying students by Gate-keepers when entering CoICT main gate?

1

Empathize



I have a challenge.
How do I approach it?

5 mins.

2

Define



I learned something.
How do I interpret it?

3 mins.

3

IDEATION



I see an opportunity.
What do I create?

5 mins.

4

Prototyping



I have an idea.
How do I build it?

7 mins.

5

Test & Evolve



I tried something new
How do I evolve it?

2 mins.

HCD Design Process

1. Empathize

1.1 Understand the challenge:

- Review the Challenge
- Share What you Know
- Build your Team
- Define your Audience
- Refine your Plan



HCD Design Process

1. Empathize

1.2 Prepare Research:

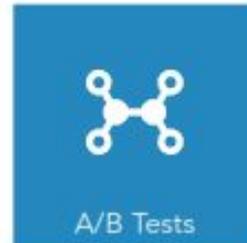
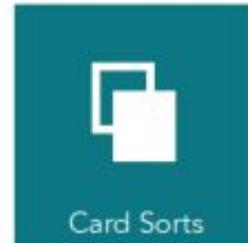
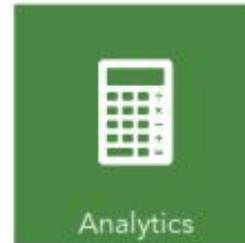
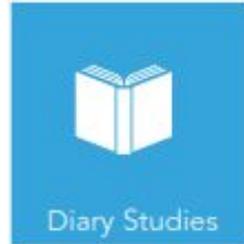
- Identify Sources of Inspiration
 - Imagine interesting people to meet
 - Think of extremes
 - Make a list of activities you want to do
- Select Research Participants
 - Describe the people you want to meet
 - Plan the interaction and logistics
 - Invite participants
 - Track your recruiting progress

HCD Design Process

1. Empathize

1.2 Prepare Research:

- Formulate a Question Guide
 - Identify topics: brainstorm themes you want to learn from participants
 - Develop questions
- Prepare For Fieldwork
 - assign roles
 - Prepare your equipments



HCD Design Process

1. Empathize

1.3 Gather Inspiration:

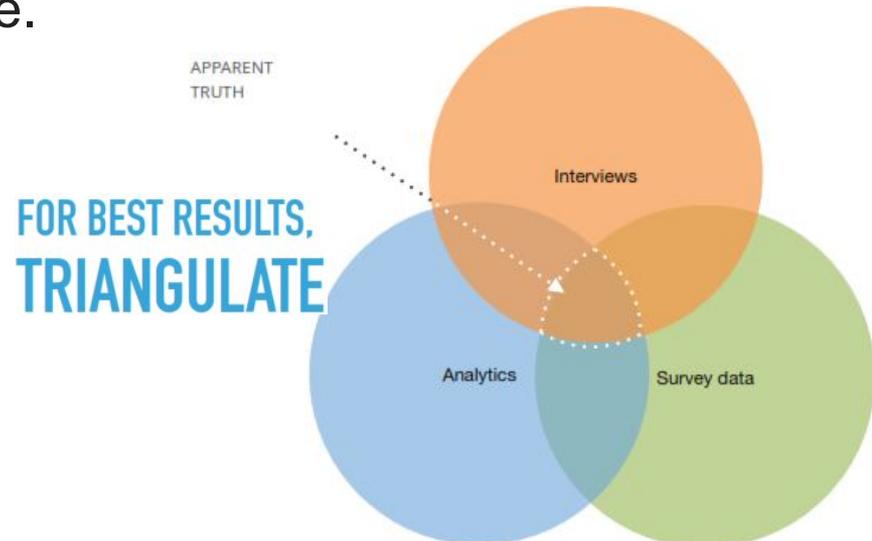
- **Immerse Yourself In Context**
 - Plan your observations
 - Capture what you have seen
- **Seek Inspiration In Analogous Settings**
 - Absorb the experience
- **Learn From Experts**
 - Choose the participants
 - Set up for a productive conversation

HCD Design Process

1. Empathize

1.3 Gather Inspiration:

- **Learn From Users:** Each type of user research requires a different set-up to ensure the best discovery session and users' comfort and willingness to share.
 - Create a trusted atmosphere
 - Pay attention to the environment
 - capture your immediate observations
 - Get continuous feedback



HCD Design Process

□ **Challenge:** How might we improve a process of identifying students by Gate-keepers when entering CoICT main gate?

1

Empathize



I have a challenge.
How do I approach it?

5 mins.

2

Define



I learned something.
How do I interpret it?

3 mins.

3

IDEATION



I see an opportunity.
What do I create?

5 mins.

4

Prototyping



I have an idea.
How do I build it?

7 mins.

5

Test & Evolve



I tried something new
How do I evolve it?

2 mins.

HCD Design Process

2. Define

2.1 Tell Stories:

- Capture Your Learnings
When you step out of an observation, it's easy to feel overwhelmed by the amount of information you have taken in. Use the half hour immediately after the session to start capturing what you have learned.
- Share Inspiring Stories
Share what you learned from your research as stories, not just general statements. This will create common knowledge that your team can use to imagine opportunities and ideas

2.2 Searching for Meaning

- Find Themes: Make sense of all that information and inspiration.
- Make Sense of Findings: Take a closer look at what the information mean.
- Define Insights: Expression of what you have learned from your research and inspiration

HCD Design Process

2. Define

2.3 Frame Opportunity:

- Create a Visual Reminder

Diagrams and frameworks are great tools to communicate your insights, use visuals to make complex information more accessible e.g. use-case.

- Make Insights Actionable

Turn insights into brainstorm questions, the springboard for your ideas. Insights only become valuable when you can act on them as inspiring opportunities.

HCD Design Process

3. Ideate

- Ideation means generating lots of ideas.
- Brainstorming encourages you to think expansively and without constraints.
- It's often the wild ideas that spark visionary thoughts.
- With careful preparation and a clear set of rules, a brainstorm session can yield hundreds of fresh ideas.

3.1 Generate Ideas (Brainstorming)

- Defer judgments
- Encourage wild ideas
- build on the ideas of others
- Stay focused on topic
- One conversation at a time
- be visual

HCD Design Process

3. Ideate

- Ideation means generating lots of ideas.
- Brainstorming encourages you to think expansively and without constraints.
- It's often the wild ideas that spark visionary thoughts.
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3.2 Refine Your Ideas (Brainstorming)

- Describe Your Idea
- Do a Reality Check
- Select the most valuable idea based on research answers

HCD Design Process

4. Prototyping

- Prototyping brings your ideas to life for refine.
- Building prototypes means making ideas tangible, learning while building them and sharing them with other people.
- Even with early and rough prototypes, you can receive a direct response and learn how to further improve and refine an idea.

4.1 Make a prototype

- Create a storyboard – Visualize your idea using series of images, sketches, etc
- Create simple architecture
- Create a Card-based – Narration of architecture
- Create a mock-up – Simple digital tool for simple idea automation
- Create a role-play - Act out the experience of your idea

HCD Design Process

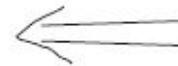
Storyboards

- Often used with scenarios, bringing more detail, and a chance to role play.
- It is a series of sketches showing how a user might progress through a task using the device.

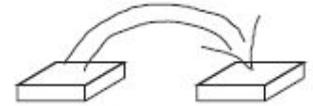
- Used early in design



Give



Receive



Transfer



Digital devices



happy



Upset



Surprise



Sound

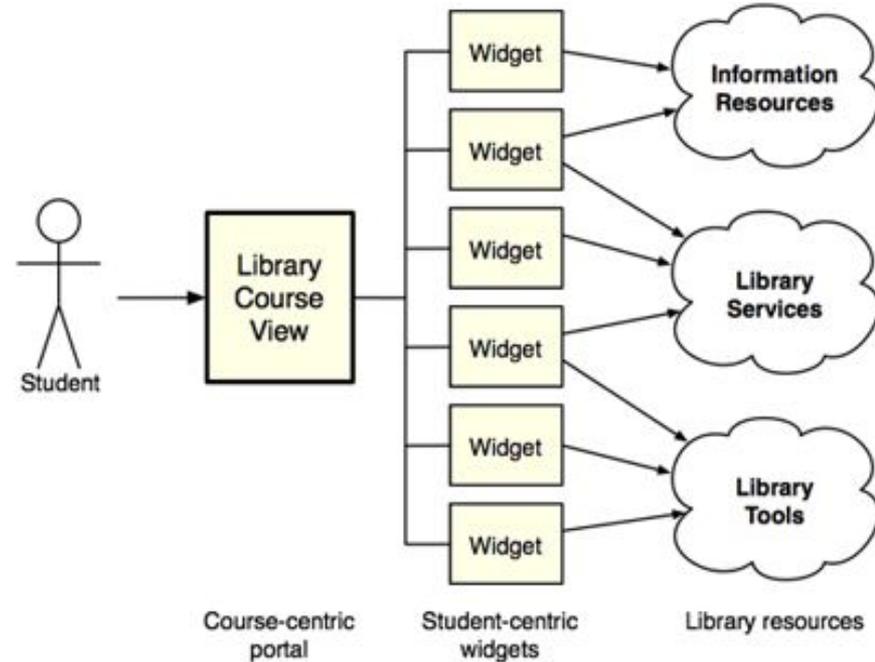


Light

HCD Design Process

Architectural Prototype

- An **architectural prototype** is primarily a learning and communication vehicle used to explore and experiment with alternative architectural styles, features, and patterns in order to balance different architectural qualities.



HCD Design Process

Card-based prototypes

Travel Organizer 23 August

WELCOME HELEN

Where do you want to go? YORK

What date do you want to travel? 16 Sept

Which form of transport do you want? TRAIN ▼

Do you need accommodation? YES ▼

Travel Organizer 23 August

Train timetable from Milton Keynes Central to York on 16 Sept

Depart	09:09	10:09	same	22:09
Arrive	12:30	13:30	mins past hour	01:30

Accommodation

Hotel	B & B
£40 to £150	£20 to £60

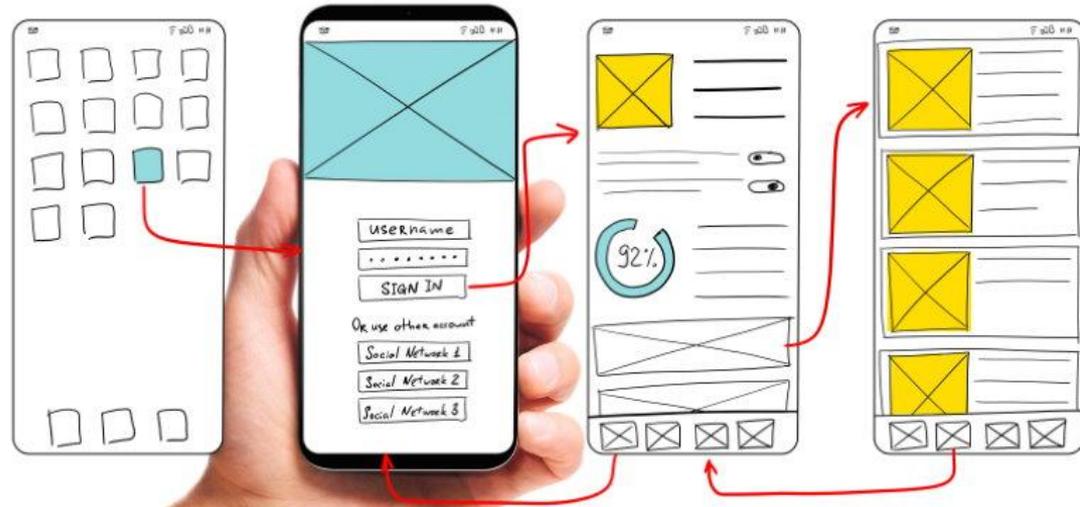
- Index cards (3 X 5 inches)
- Each card represents one screen or part of screen
- Often used in website development

HCD Design Process

Mockup

- A mockup is a static, high-fidelity simulation of the finished product that delivers the visual look of the product design - including typography, iconography, color, and overall style.

- Mockups establish how the users will interpret the brand through its visual identity.



HCD Design Process

Role play

- A **Role play** is a type of prototype that is not only pretty easy to build, but can also help you get an idea, experience, or product in front of the people you're designing for quickly.
- You may learn a lot by trying on the roles of the people in your small skit before you even get out of the office.



HCD Design Process

4. Prototyping

- Prototyping brings your ideas to life for refine.
- Building prototypes means making ideas tangible, learning while building them and sharing them with other people.
- Even with early and rough prototypes, you can receive a direct response and learn how to further improve and refine an idea.

4.2 Get Feedback

- Identify Sources for Feedback
- Select Feedback Participants
- Build a Question Guide
- Facilitate Feedback Conversations
- Capture Feedback Learning
- Integrate Feedback

HCD Design Process

Team Formulation

- Communication
- Collaboration
- Collective decision-making
- Knowing your strengths and weaknesses