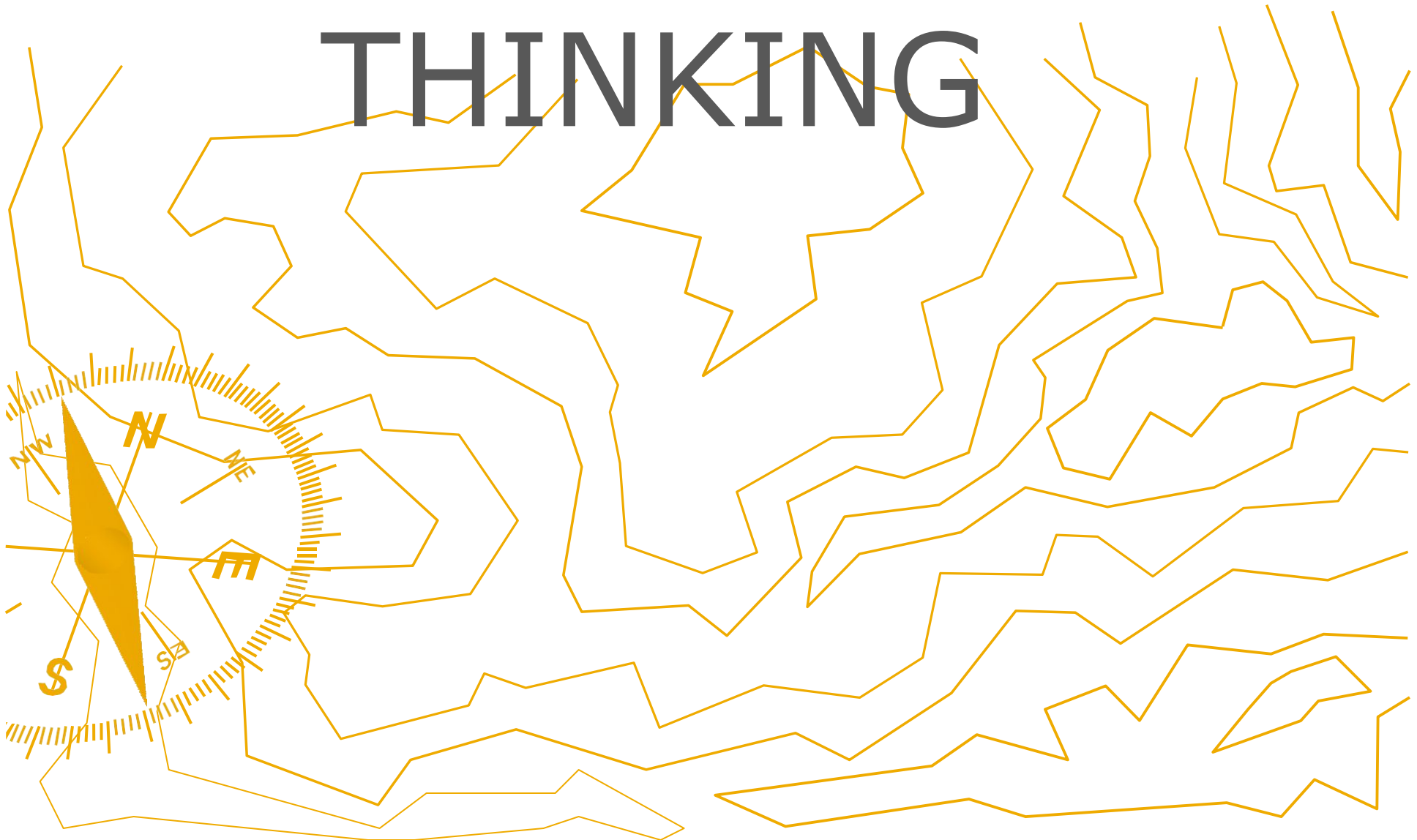
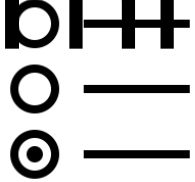
DESIGN THINKING



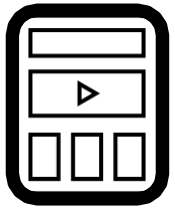
Design Thinking

Empathy



Define

Ideate

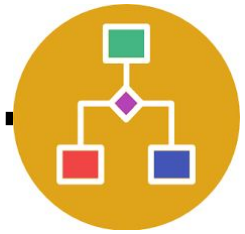


Prototyping

Deploy

Software Development Lifecycle

Planning



Analysis

Design

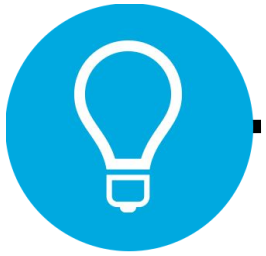
Implementation

Research Methodology

Problem Statement

Empirical Study

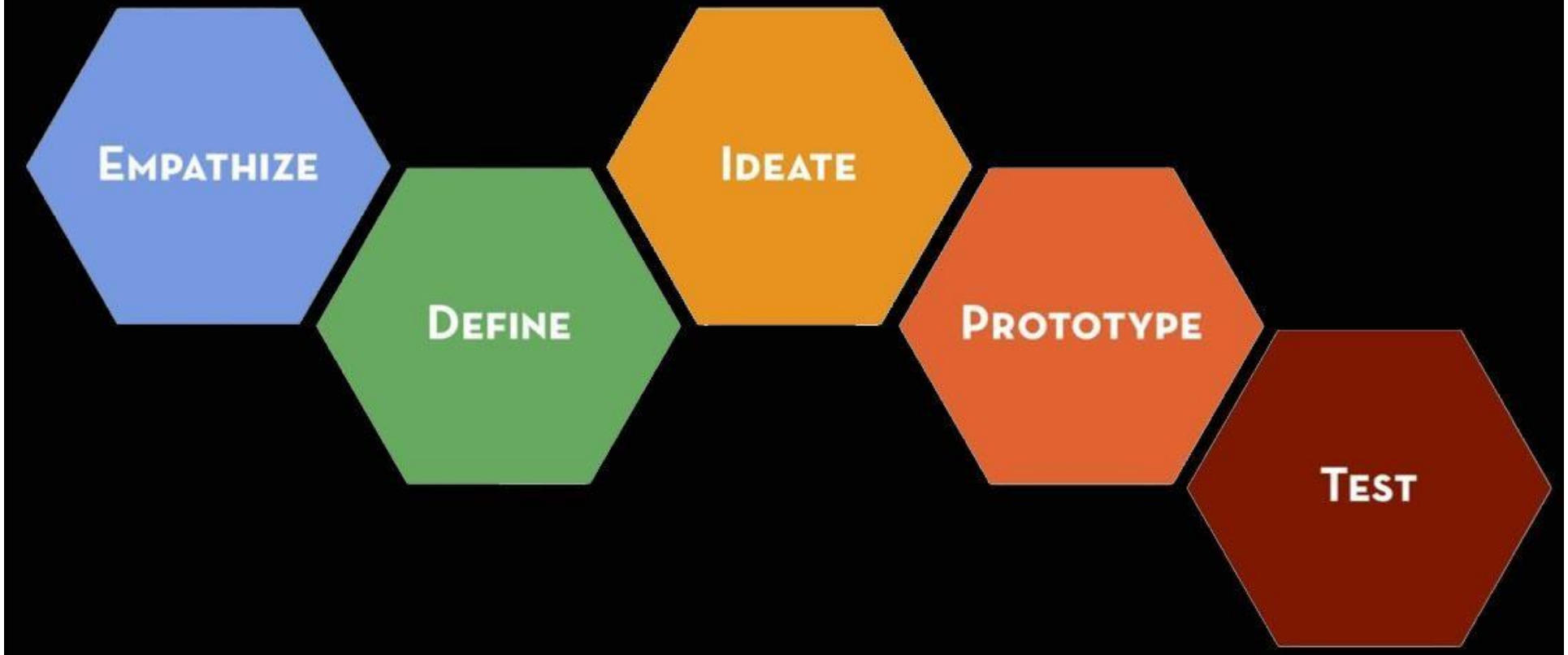
Data Analysis



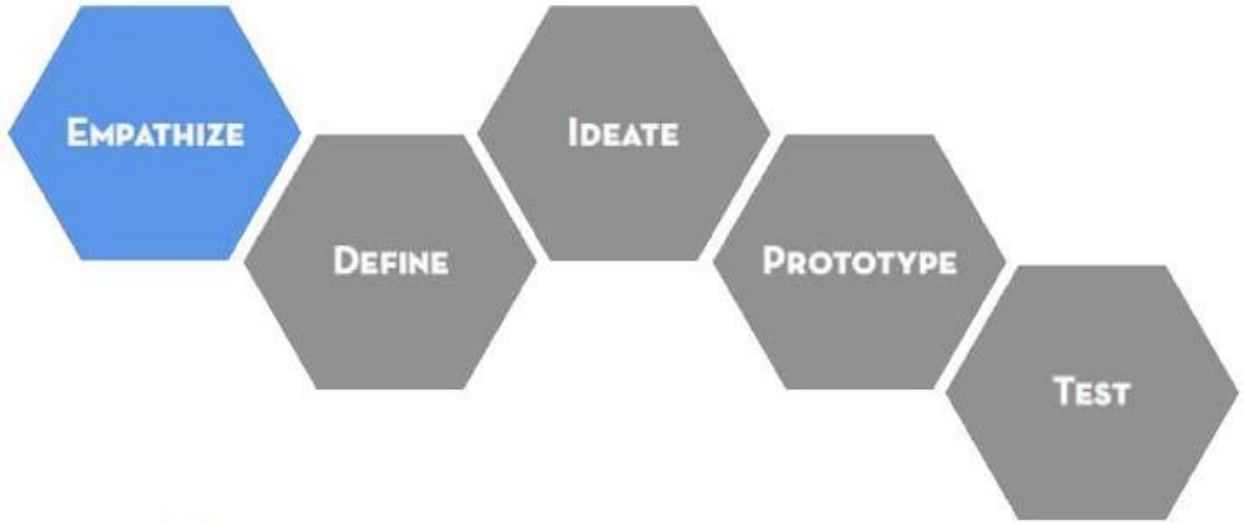
Experimentation

Result Analysis

THE PROCESS



PROCESS VIDEO

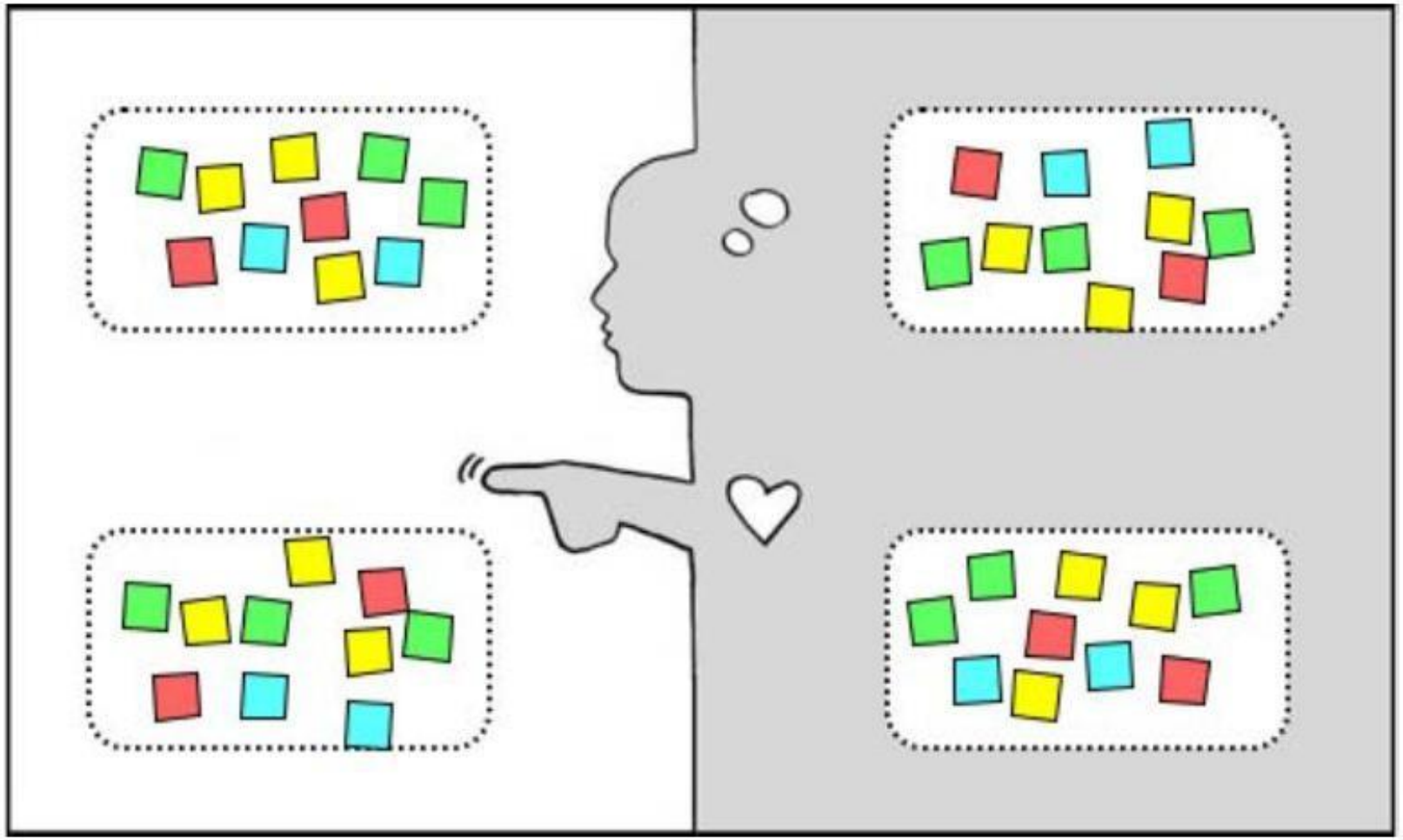


WHAT is the empathize mode

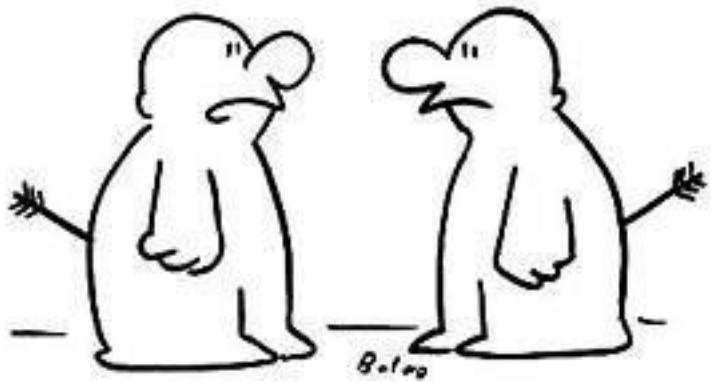
Empathy is the foundation of a human-centered design process. To empathize, we:

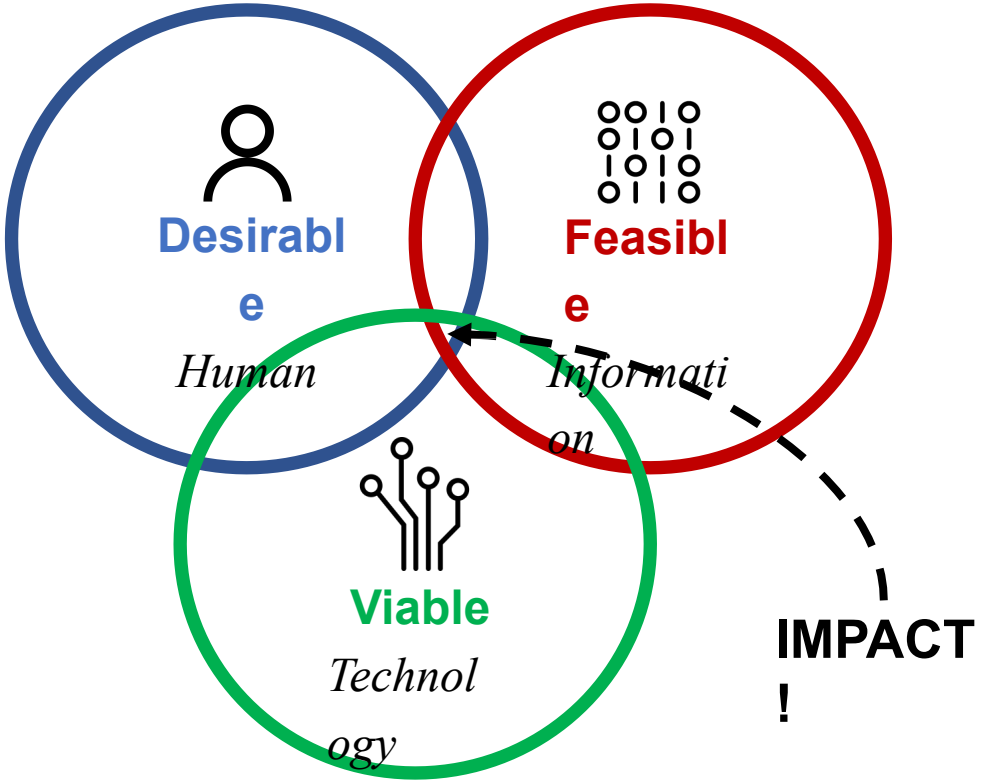
- **Observe.** View users and their behavior in the context of their lives.
- **Engage.** Interact with and interview users through both scheduled and short 'intercept' encounters.
- **Immerse.** Experience what your user experiences.

EMPATHY



Empathy


"I know how you feel."


Desirable
Human
Feasible
Information
Viable
Technology
IMPACT!

Identify Problem

Persona (User)

Goa l

Activity #1
Post-It

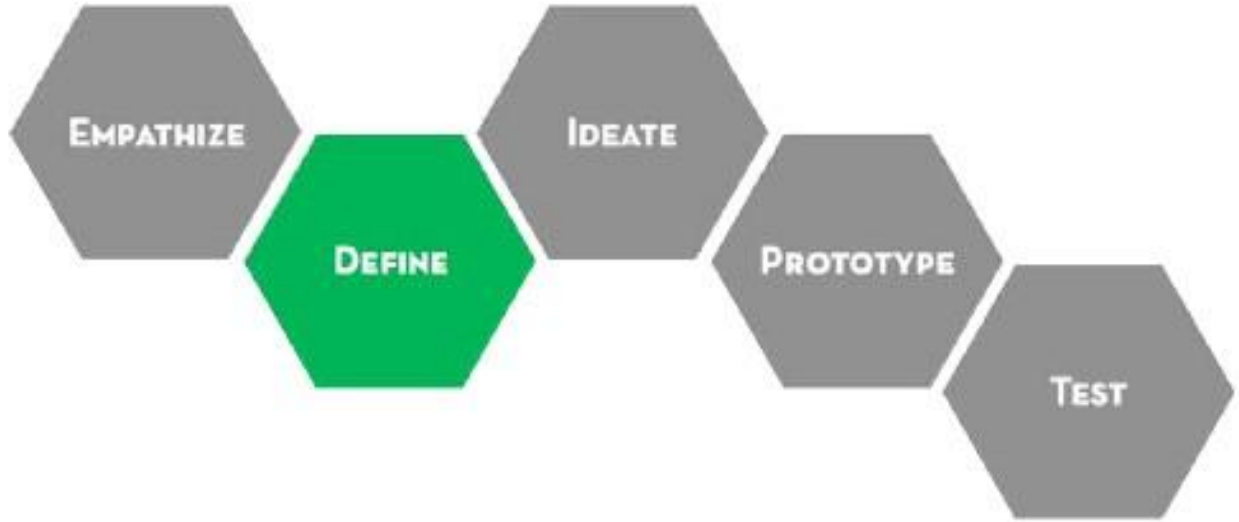
Form a group (at least 4 members) with common research interests or current project

team or just thinking a new idea in research. Think about **ONE BIG** project

related to the interests. Discuss about:

1. Problems need to be addressed
2. Current progress toward solving the problems
3. Advantages of the current solutions
4. Potential new solutions

“Problems in teaching programming at primary school”



WHAT is the define mode

The define mode is when you unpack and synthesize your empathy findings into compelling needs and insights, and scope a specific and meaningful challenge. It is a mode of "focus" rather than "flaring." Two goals of the define mode are to develop a deep understanding of your users and the design space and, based on that understanding, to come up with an actionable problem statement: **your point of view**. Your point of view should be a guiding statement that focuses on specific users, and insights and needs that you uncovered during the empathize mode.

More than simply defining the problem to work on, your point of view is your unique design vision that you crafted based on your discoveries during your empathy work. Understanding the meaningful challenge to address and the insights that you can leverage in your design work is fundamental to creating a successful solution.

POINT OF VIEW

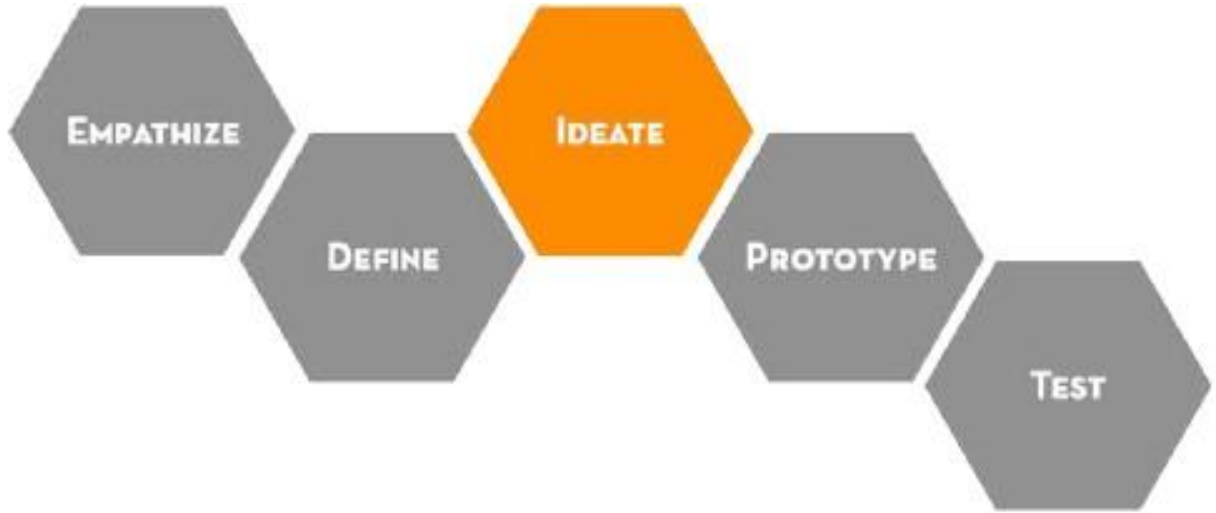
Create a point of view mad-lib.

[GROUP] needs to [GROUP'S NEED]
because [SURPRISING INSIGHT]

The design challenge is to improve the National Direct Consultation process:

- Who is your group?
- What are their needs?
- What are some surprising insights?

Use flip chart to try out a number of options, playing with each variable and the combinations of them.



WHAT is the ideate mode

Ideate is the mode during your design process in which you focus on idea generation. Mentally it represents a process of "going wide" in terms of concepts and outcomes—it is a mode of "flaring" rather than "focus." The goal of ideation is to explore a wide solution space - both a large quantity of ideas and a diversity among those ideas. From this vast depository of ideas you can build prototypes to test with users.

BRAINSTORMIN G VIDEO

One Conversation at a Time

Go for Quantity

Headline!

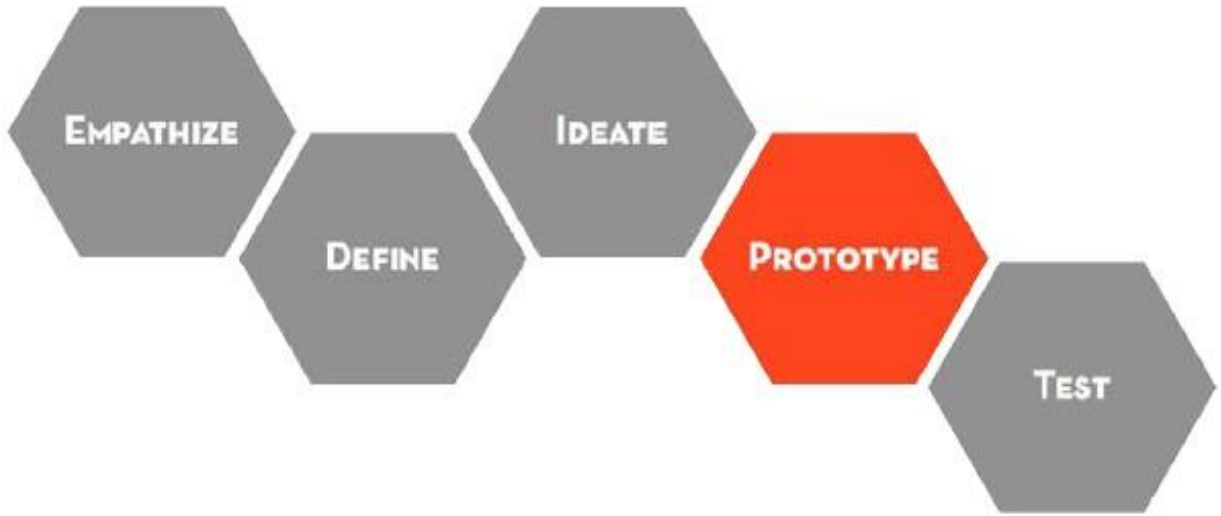
Build on the Ideas of Others

Encourage wild ideas

Be Visual

Stay on Topic

Defer Judgement -
NO Blocking



WHAT is the prototype mode

Prototyping is getting ideas and explorations out of your head and into the physical world. A prototype can be *anything* that takes a physical form – be it a wall of post-it notes, a role-playing activity, a space, an object, an interface, or even a storyboard. The resolution of your prototype should be commensurate with your progress in your project. In early explorations keep your prototypes rough and rapid to allow yourself to learn quickly and investigate a lot of different possibilities.

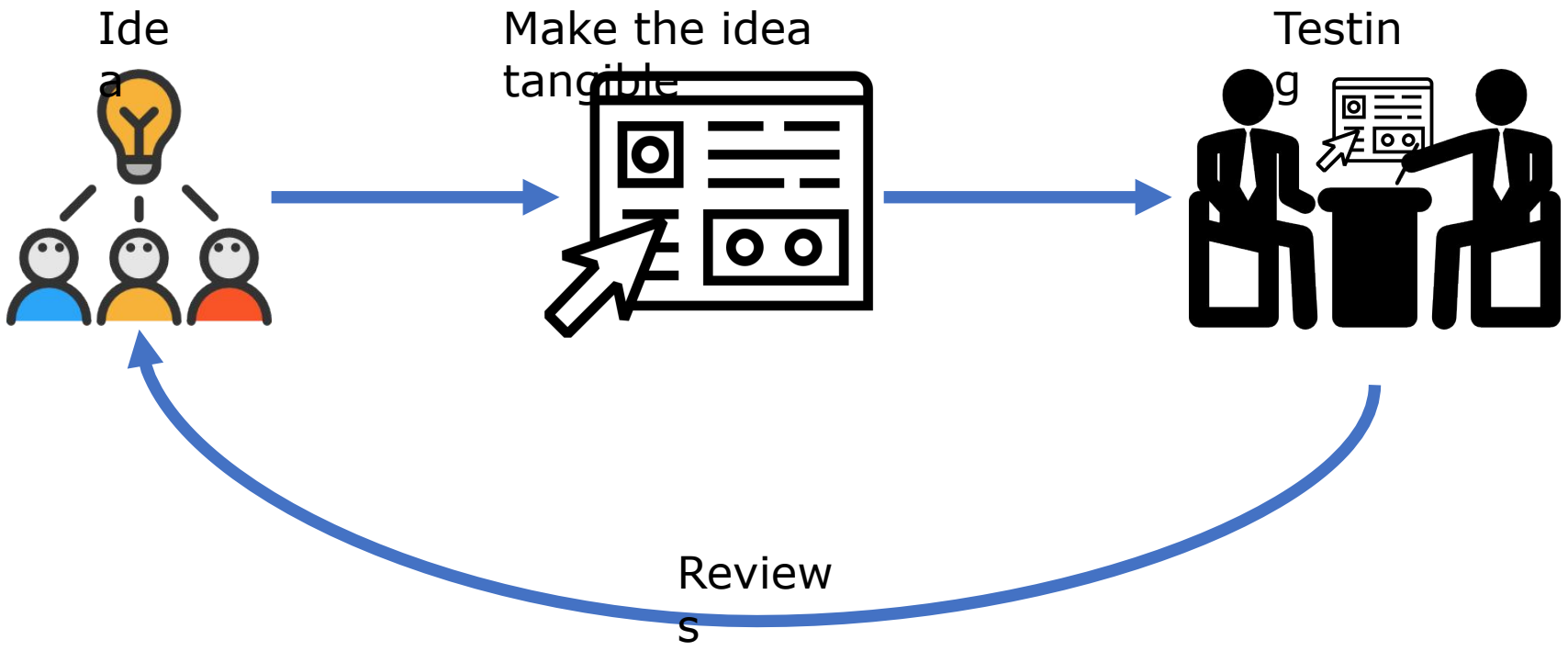
Prototypes are most successful when people (the design team, the user, and others) can experience and interact with them. What you learn from those interactions can help drive deeper empathy, as well as shape successful solutions.

PROTOTYPE TO TEST

TIPS FOR PITCHING & PRESENTATION

- **Start building.** Even if you aren't sure what you're doing, the act of picking up some materials (paper, markers, other objects are a good way to start!) will be enough to get you going. .
- **Build with the your group in mind.** What do you hope to solve for the group? What sorts of questions do you expect? Answering these questions will help focus your idea/solution and help you receive meaningful feedback in the feedback phase.
- **Label Your POV.** Identify what's being solved for with your idea. It would be helpful to your audience if you wrote down and presented what need your are addressing (your POV statement).

Prototyping



Activity #2 Paper Prototype

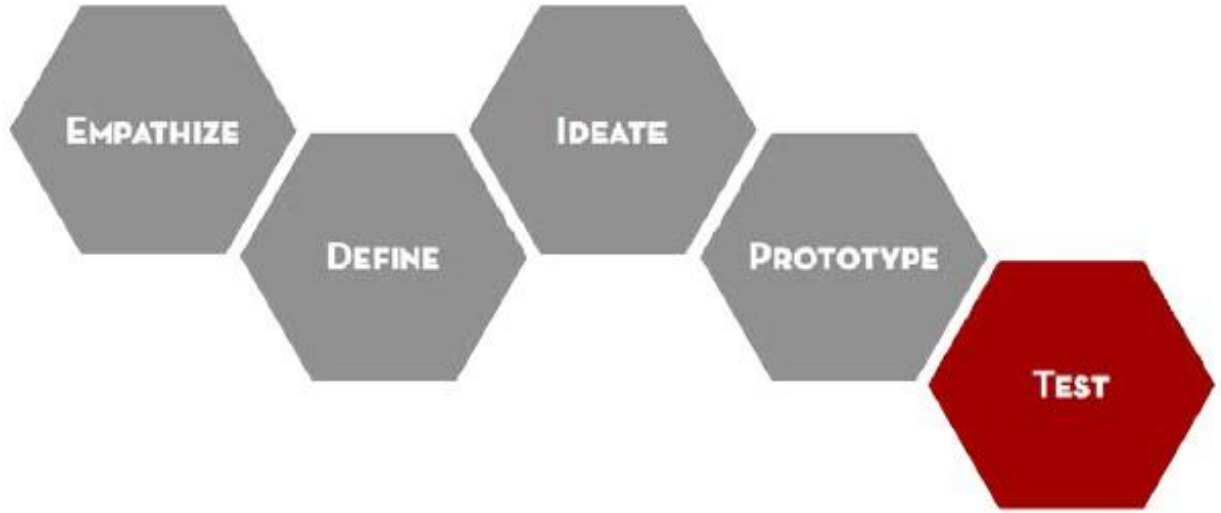
Based on the problem identifies, discuss on how to materialize your idea. You are

provided with papers, pencils, glue, scissors, marker pens, and manila cards

1. Decide what platform will be used to the solutions
2. Use the card boards as the platform and papers as the screen
3. Design the user interface using marker pens (or sharpie)
4. Present your prototype to potential users (can do video recording etc)
5. Improvise

To Do Clock
search...

$120



WHAT is the test mode

Testing is the chance to refine our solutions and make them better. The test mode is another iterative mode in which we place our low-resolution artifacts in the appropriate context of the user's life. Prototype as if you know you're right, but test as if you know you're wrong.

THANK YOU!