

2.

# PROJECT RESEARCH & PROBLEM/OPPORTUNITY IDENTIFICATION

MIS3506 \* Lavin \* Fall 2023

# Evaluating Usability

## Level 1

Knowledge in the head vs. in the world

Gulf of execution and evaluation

Conflict among the designer's and user's conceptual and system image

## Level 2

Processing:  
Reflective – thinking,  
Behavioral – actions,  
Visceral- 'lizard brain'

## Level 3

Blame: The wrong thing, learned helplessness, oneself

Slips and mistakes

# Designing the UX

## Level 1

Conceptual model and system image

Affordance

## Level 2

Mapping

Discoverable

Feedback

## Level 3

Signifier

Constraints

Convention

# THE WORLD ACCORDING TO NORMAN



Discoverability



Affordance



Signifiers



Mapping



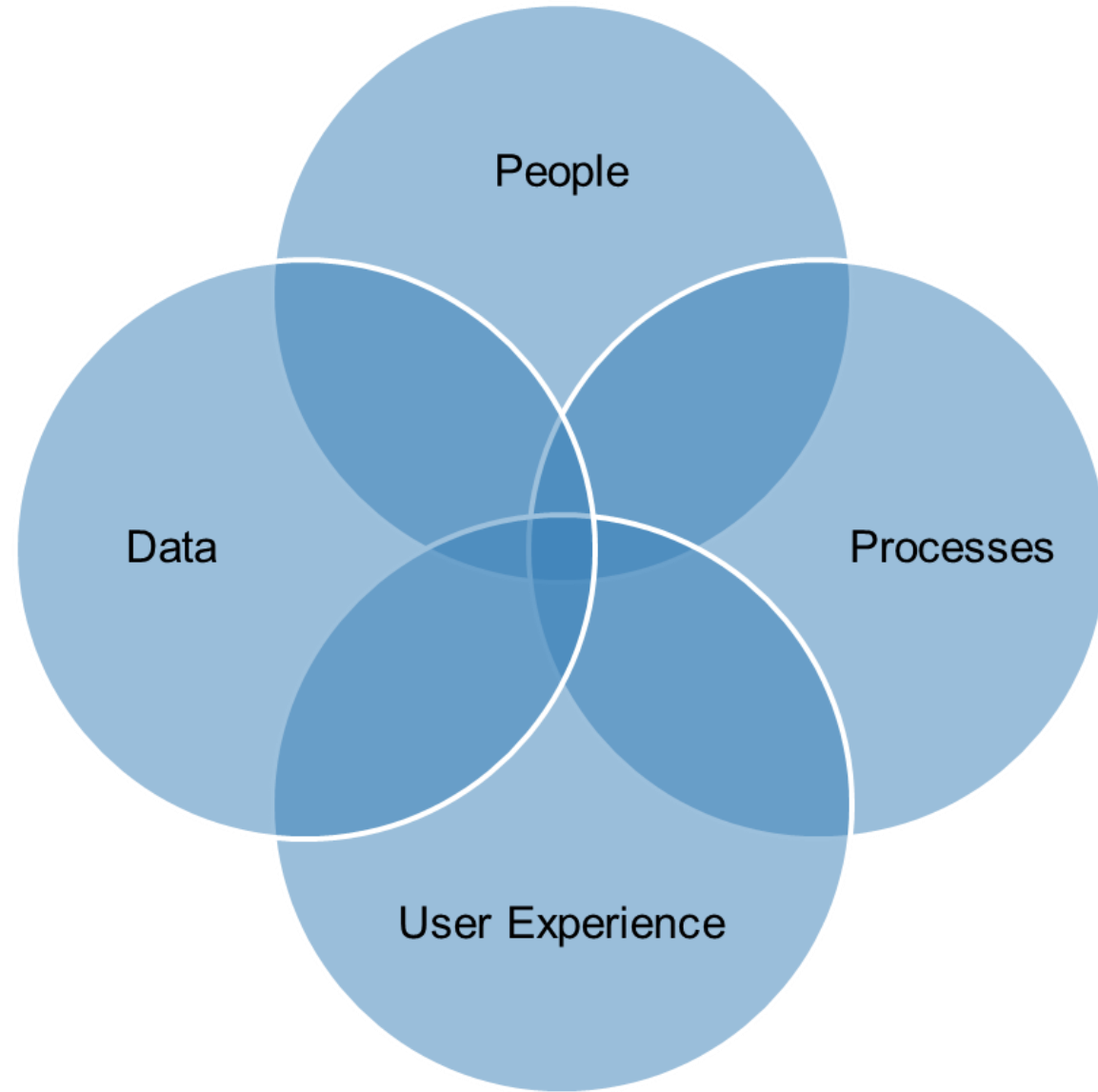
Feedback

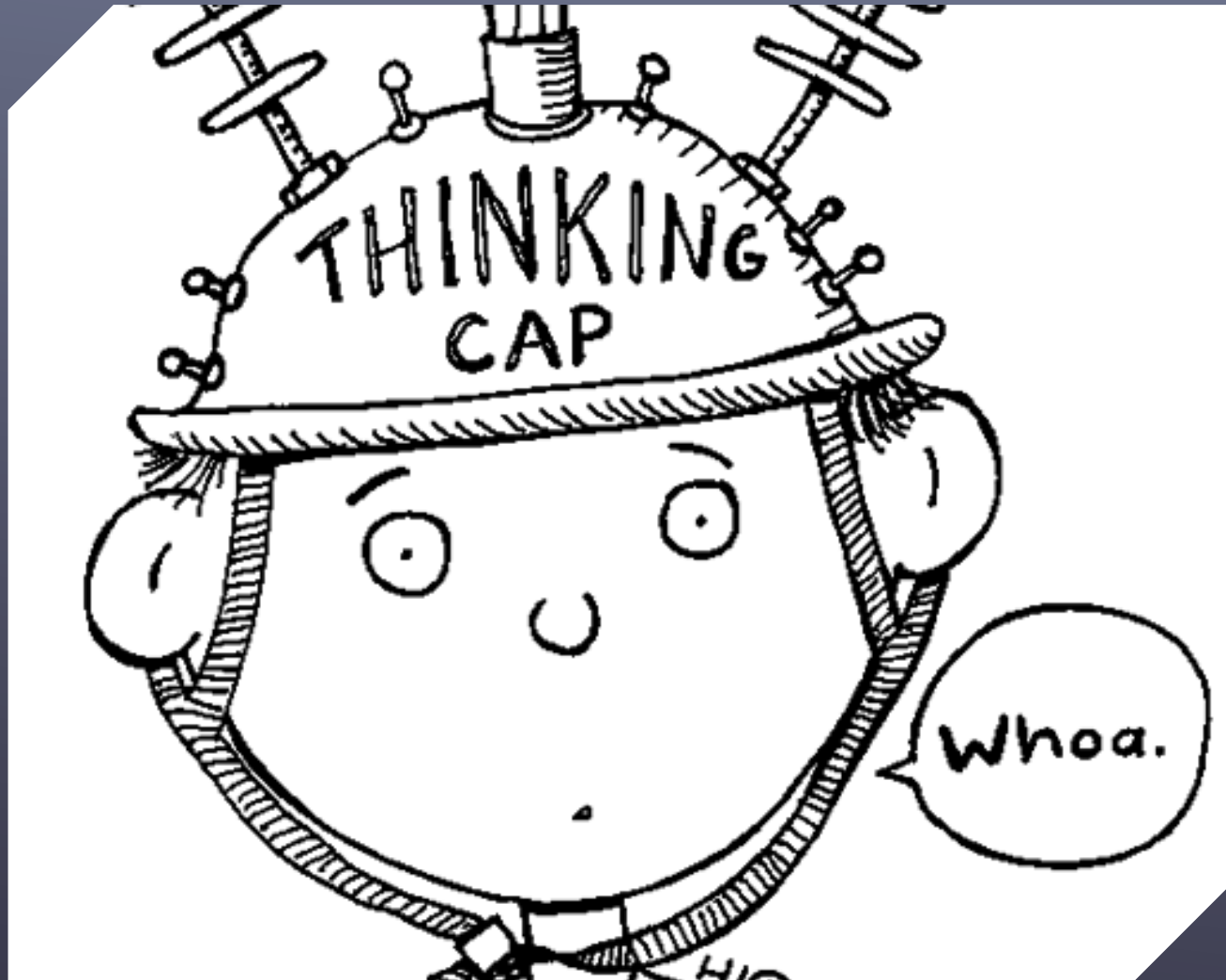


Conceptual  
model



System image





## PROJECT RESEARCH

- ▶ Project research requires several key steps – sometimes you have a lot of information – sometimes not much at all!
- ▶ For example...

# What is a product? What is a project?



prod·uct

*/ˈprədʊkt/*

*noun*

1. an article or substance that is manufactured or refined for sale.  
"food products"

2. a thing or person that is the result of an action or process.  
"his daughter, the product of his first marriage"

*synonyms:* result, consequence, outcome, effect, upshot, fruit, byproduct, spin-off, legacy, issue  
"her fear was a product of her emotional insecurity"



The Ultimate List of Digital Product Ideas that Sell

Sell digital products with Sellfy

DIGITAL PRODUCTS

More images

## Digital product

Digital goods or e-goods are intangible goods that exist in digital form. Examples include this Wikipedia article; digital media, such as audible ebooks e-books, downloadable music, internet radio, ...

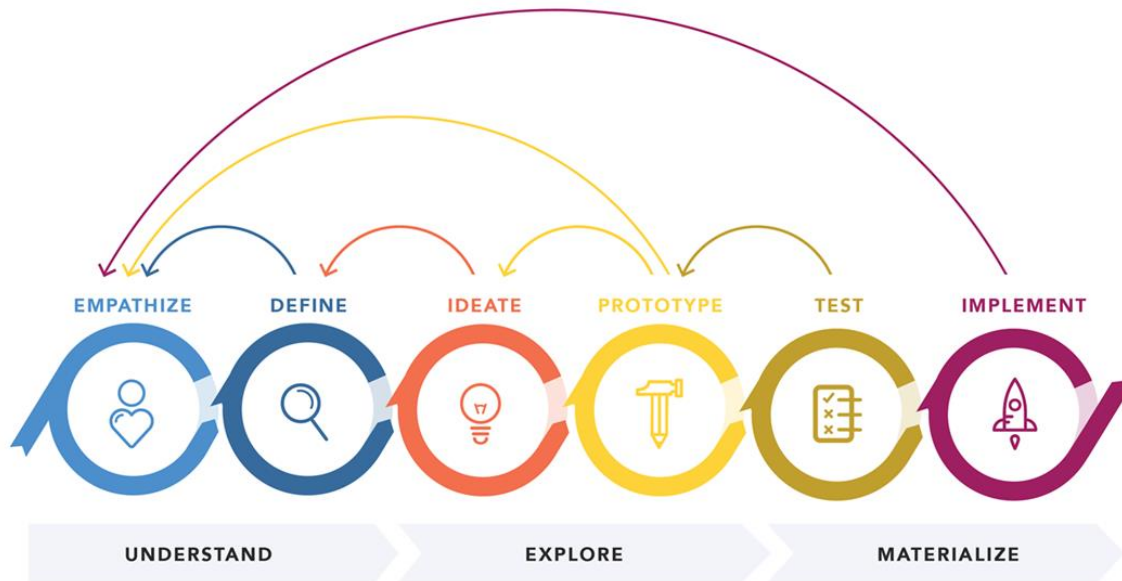
## PROBLEM

An issue that is preventing  
the achievement of goals and objectives.

VS

## OPPORTUNITY

Initiatives that will assist in reaching  
goals and objectives  
if implemented appropriately.



DESIGN THINKING 101 [NNGROUP.COM](https://nngroup.com)

DESIGN PROCESS:

IS IT A PROBLEM?

IS IT AN  
OPPORTUNITY?





▶ Ask the following questions to understand the problem or opportunity:

- ▶ **Who** are our intended users?
- ▶ **What** do they want? Do they need?
- ▶ **Why** do they want?
- ▶ **Where** can they get the information?
- ▶ **How** do they want to work?
- ▶ **When** do they want it?

## PROBLEM/OPPORTUNITY IDENTIFICATION: EMPATHY



## Answering those questions enables us to

- ▶ Understand the problem/opportunity
- ▶ Understand the user better
- ▶ Enable productivity
- ▶ Provide a pleasurable experience

# Analyzing Problems and Opportunities

A problem or opportunity statement is a concise description of user issues or unmet needs that need to be addressed.

<b>Business Opportunity Statement</b>	
<b>We will improve the experience of</b>	What problem needs solving or improvements?
<b>for</b>	Which person is most effected by this?
<b>The user struggles today because</b>	What are some of the pain points?
<b>Solving this will be good for our business because</b>	What is motivating the company to solve this problem?
IBM Garage	IBM

# Analyzing Problems and Opportunities

A problem or opportunity statement is a concise description of user issues or unmet needs that need to be addressed.

## Business Opportunity Statement

<b>We will improve the experience of</b>	Getting the right income tax forms from the Federal Government.
<b>for</b>	Non tax savvy individuals looking to file their personal tax returns.
<b>The user struggles today because</b>	Finding the right form requires you to understand tax-code terminology and form numbers. Getting simple to understand answers to simply stated questions is near impossible.
<b>Solving this will be good for our business because</b>	<p>Our department's mandate is to make it as easy as possible for people to correctly file their taxes.</p> <p>The easier answers are to find, the fewer people need to call our call center, meaning lower wait times.</p> <p>People accurately filing their taxes means lower auditing costs for the government.</p>
IBM Garage	IBM

# In Class Exercise

Create a Business Opportunity Statement

## Brainstorm

- ❑ Choose a problem or opportunity that you can identify that could make Temple University better.
- 

## Analyze

- ❑ Use the steps in the BOS to outline how you would address this problem or opportunity.
- 

## Present

- ❑ We'll discuss together as a group.

# Business Opportunity Statement

<b>We will improve the experience of</b>	What problem needs solving or improvements?
<b>for</b>	Which person is most effected by this?
<b>The user struggles today because</b>	What are some of the pain points?
<b>Solving this will be good for our business because</b>	What is motivating the company to solve this problem?
IBM Garage	IBM

# Project Research

How do we learn about problems/opportunities?

- ▷ Leadership
- ▷ Social Media
- ▷ Customer Service
- ▷ Market Research
- ▷ ...What else?

Listen/Look for statements like...

- ▷ I can't complete...
- ▷ This is so easy!
- ▷ This product sucks!
- ▷ Where can I find?
- ▷ How do I?
- ▷ ...What else?



# Project Research

How can we perform this research?

- ▷ Interviews
- ▷ Usability Studies
- ▷ Internet Research
- ▷ Data Analysis
- ▷ ...What else?

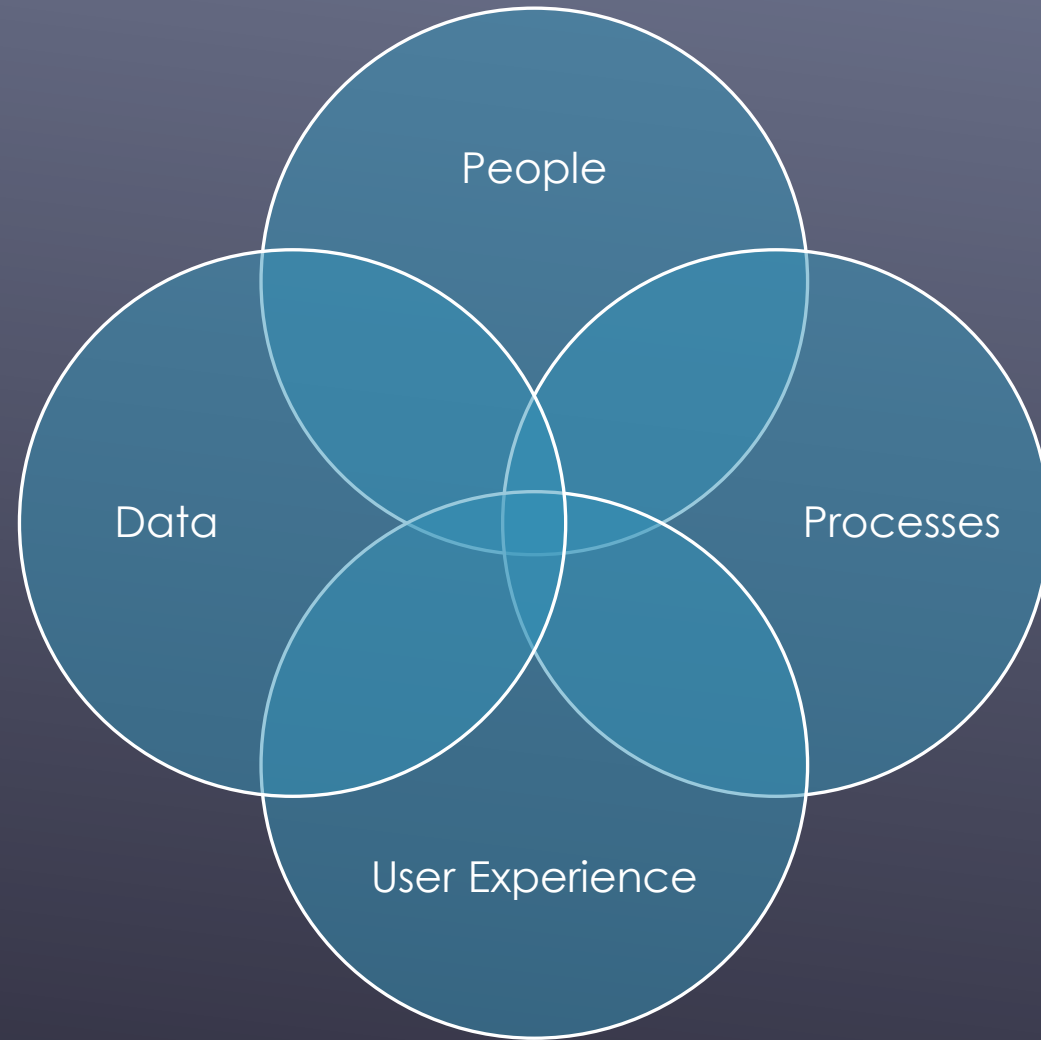
What tools can we use?

- ▷ Google Analytics
- ▷ Websites
- ▷ User Stories
- ▷ Interviews
- ▷ ...What else?



RESEARCH

# Project Research – Gathering Requirements





# Intended Users – “People”

Why is it important to learn about the people involved? What can be learned from these groups?



- ▷ Leadership
- ▷ Customers
- ▷ Competition



# Intended Users – “People”

How do we obtain knowledge about the people involved?

- ▷ Interviews
- ▷ Observations
- ▷ Secondary Research
- ▷ LinkedIn, Social Media Channels



How do you develop a persona for your users?

# Clark Andrews

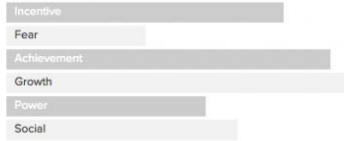
AGE 26  
OCCUPATION Software Developer  
STATUS Single  
LOCATION San Jose, CA  
TIER Experiment Hacker  
ARCHETYPE The Computer Nerd

Friendly   Clever   Go-Getter



"I feel like there's a smarter way for me to transition into a healthier lifestyle."

## Motivations



## Goals

- To cut down on unhealthy eating and drinking habits
- To measure multiple aspects of life more scientifically
- To set goals and see and make positive impacts on his life

## Frustrations

- Unfamiliar with wearable technology
- Saturated tracking market
- Manual tracking is too time consuming

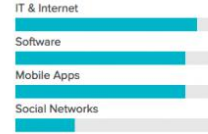
## Bio

Aaron is a systems software developer, a "data junkie" past couple years, has been very interested in tracking health and performance. Aaron wants to track his mood, sleep quality and how his eating and exercise habits are doing. Although he only drinks occasionally with friends on weekend, he would like to cut down on alcohol intake.

## Personality



## Technology



## Brands



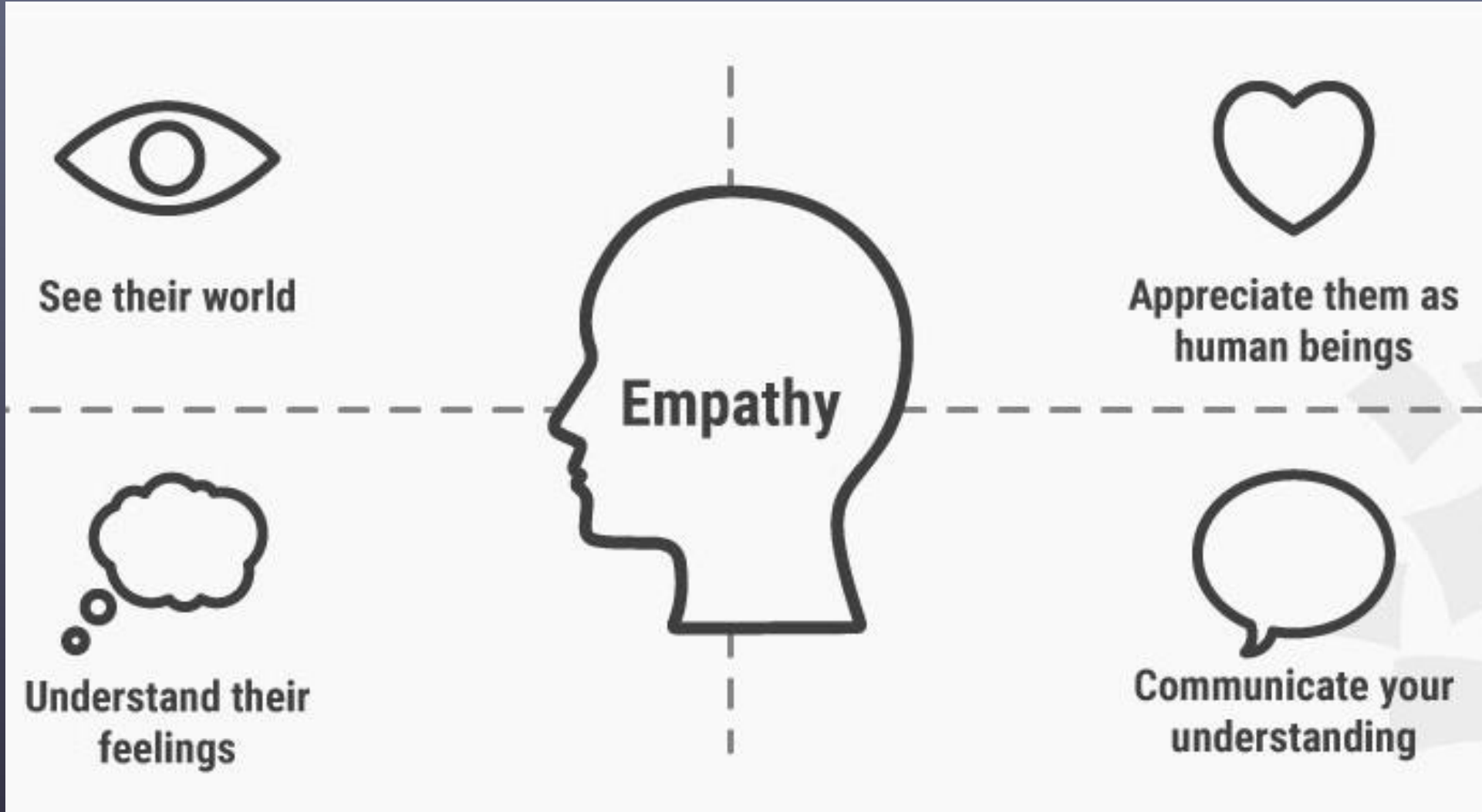
## Developing a Persona:

Why?  
What should be included?  
Comfort with technology?

# PERSONAS

- ▶ Use what you know, clearly define – prioritize features
- ▶ Provides focus for the prototype
  - ▶ Novice v Expert users, just in case users, product streamline
  - ▶ Assumption personas – data you have, assumptions about your base
    - ▶ Validate later, through usability testing
- ▶ Describe actual users and behaviors, task oriented
- ▶ Personable & Believable
- ▶ Design Implications
- ▶ Goals – Speed & Efficiency? Visibility? Needs and Desires?

# Empathize with Users



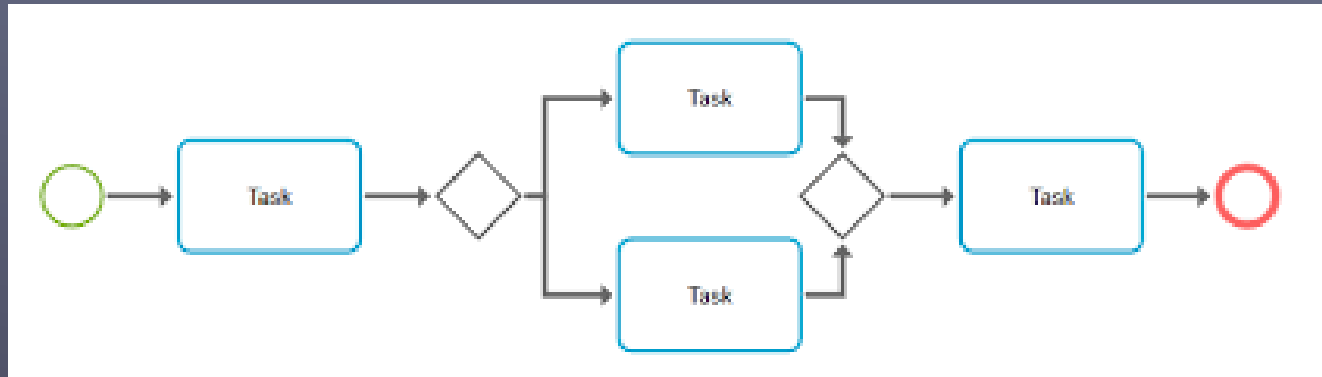
# Processes

How do we learn about processes?

- ▷ Primary Research
- ▷ Secondary Research
- ▷ Observation
- ▷ Interviews

Do I need to keep all this research in my head?





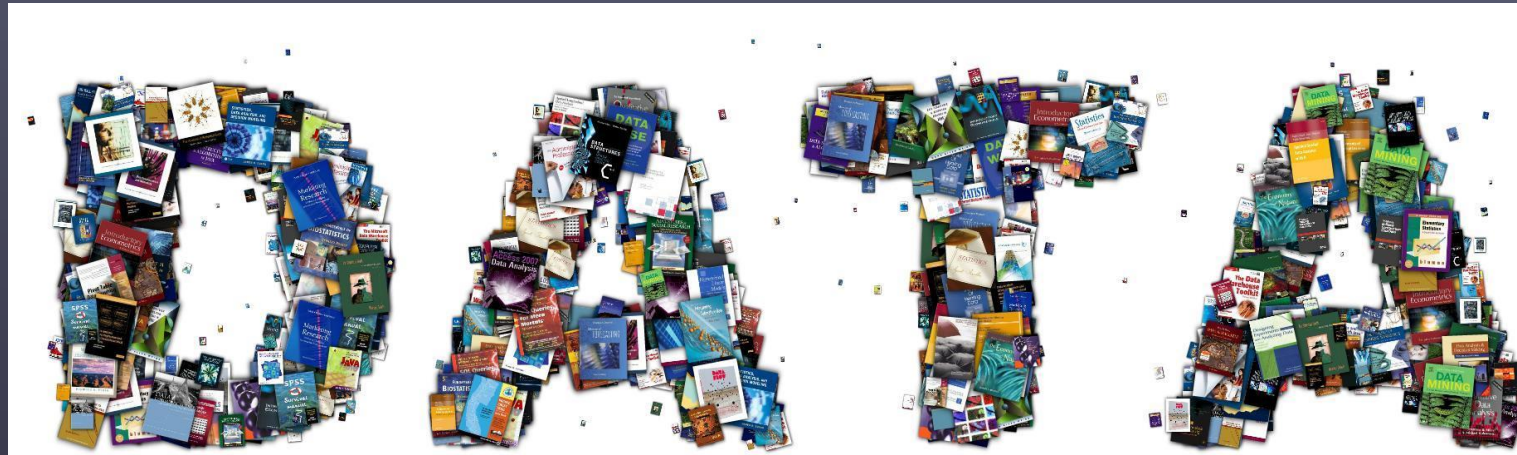
# Processes

# Data



How do we gather information about data?

- ▷ Go to the site or app – what is being collected
- ▷ Sign up for the mailing list – what information is generated
- ▷ Think of the processes – what data might be needed to complete them





# Compiling the details...

- ▷ Make a list of critical findings
- ▷ Persona map
- ▷ Data requirements documented in an ERD structure
- ▷ Visuals
- ▷ Collaboration tools



No one wants to read a long report!

# Project Research

Gathering Requirements and getting the big picture is critical to understanding your goals!





# IN-CLASS ACTIVITY

Researching your  
project

# Breakout – In Class Activity

## Pick a Company

Be able to answer the following questions:

- ▷ Provide basic company information
  - ▷ What is the goal of your company?
  - ▷ Who is the target market/user?
  - ▷ Why is this company attractive?
  - ▷ Who are your main competitors?
  - ▷ What goals should users accomplish?
  - ▷ Why would users pick your company?
  - ▷ What would a persona of your typical user look like?
- 
- ▷ Prepare a 3 minute – 3 slide presentation of your findings



