

2.

PROJECT RESEARCH & PROBLEM/OPPORTUNITY IDENTIFICATION

MIS3506 * Lavin * Spring 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



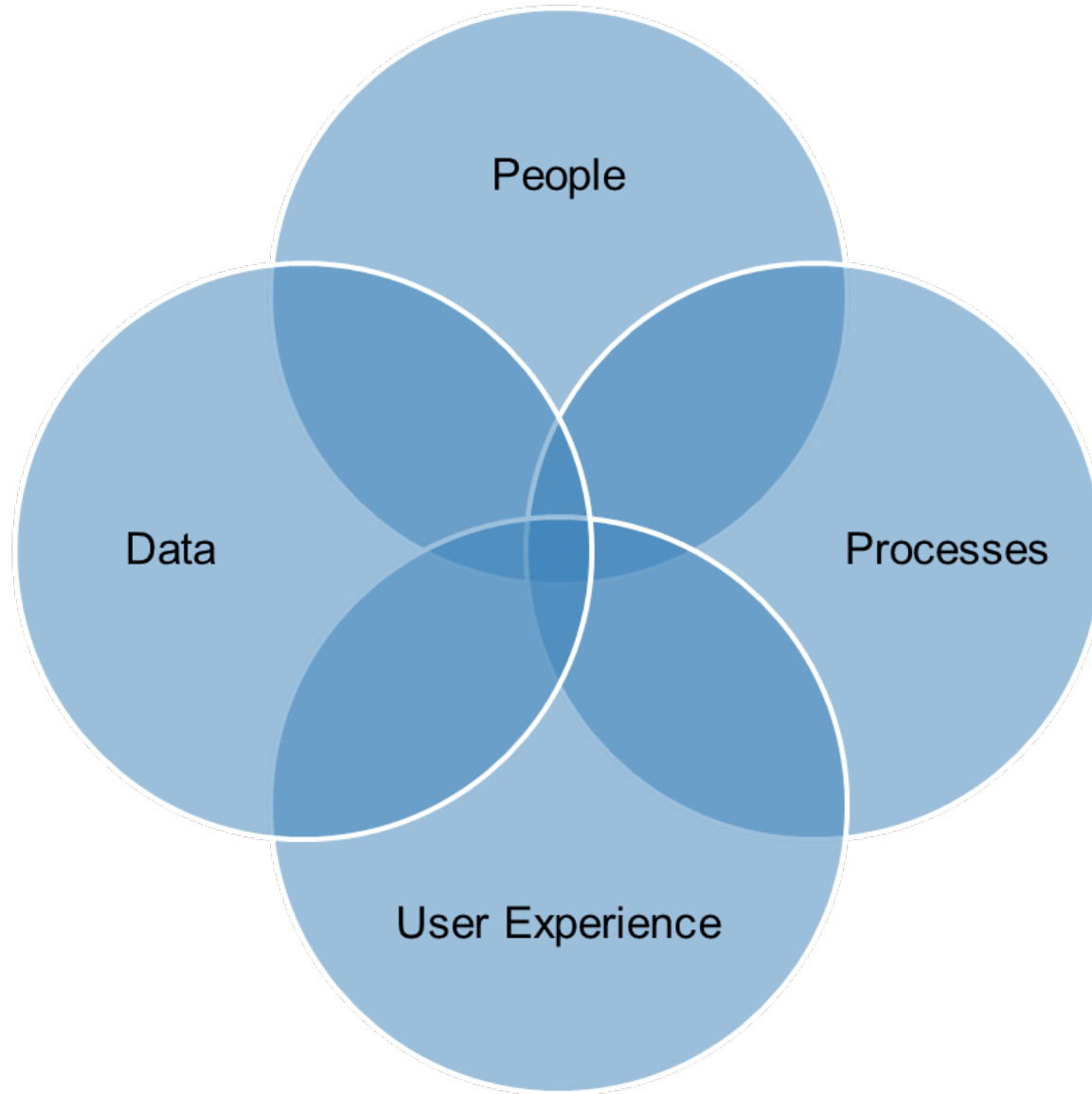
Feedback



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

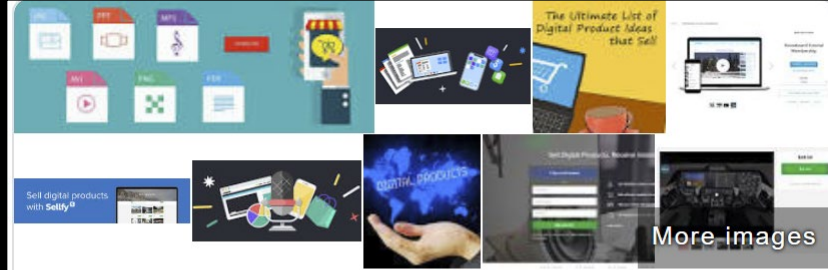
/ˈprədʊkt/

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"



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, ...

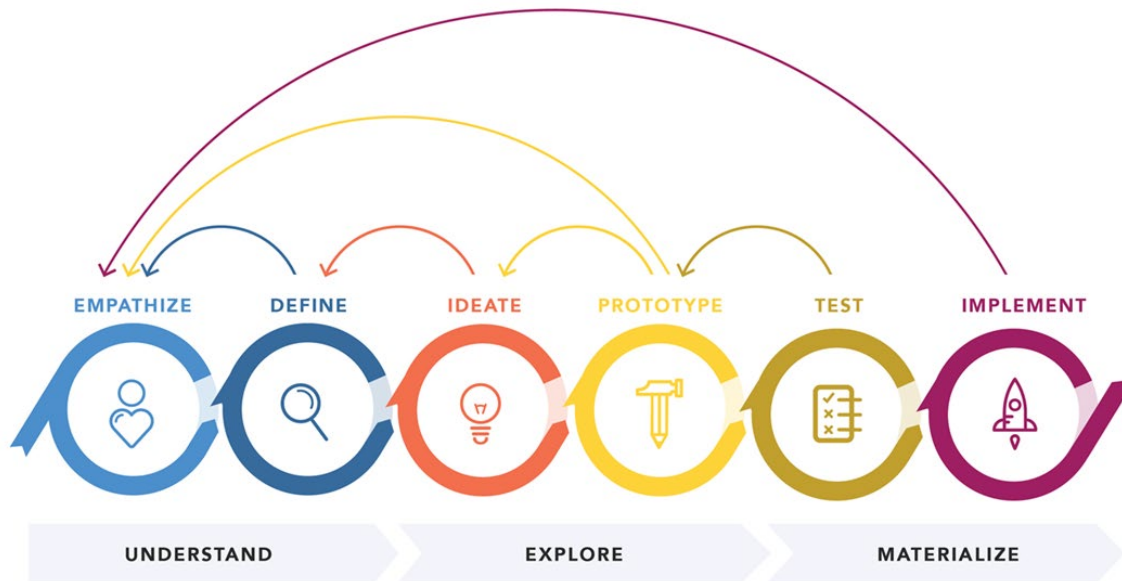
PROBLEM

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.

Business Opportunity Statement	
We will improve the experience of	What problem needs solving or improvements?
for	Which person is most effected by this?
The user struggles today because	What are some of the pain points?
Solving this will be good for our business because	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

We will improve the experience of	Getting the right income tax forms from the Federal Government.
for	Non tax savvy individuals looking to file their personal tax returns.
The user struggles today because	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.
Solving this will be good for our business because	<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

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What problem needs solving or improvements?

for

Which person is most effected by this?

The user struggles today because

What are some of the pain points?

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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?

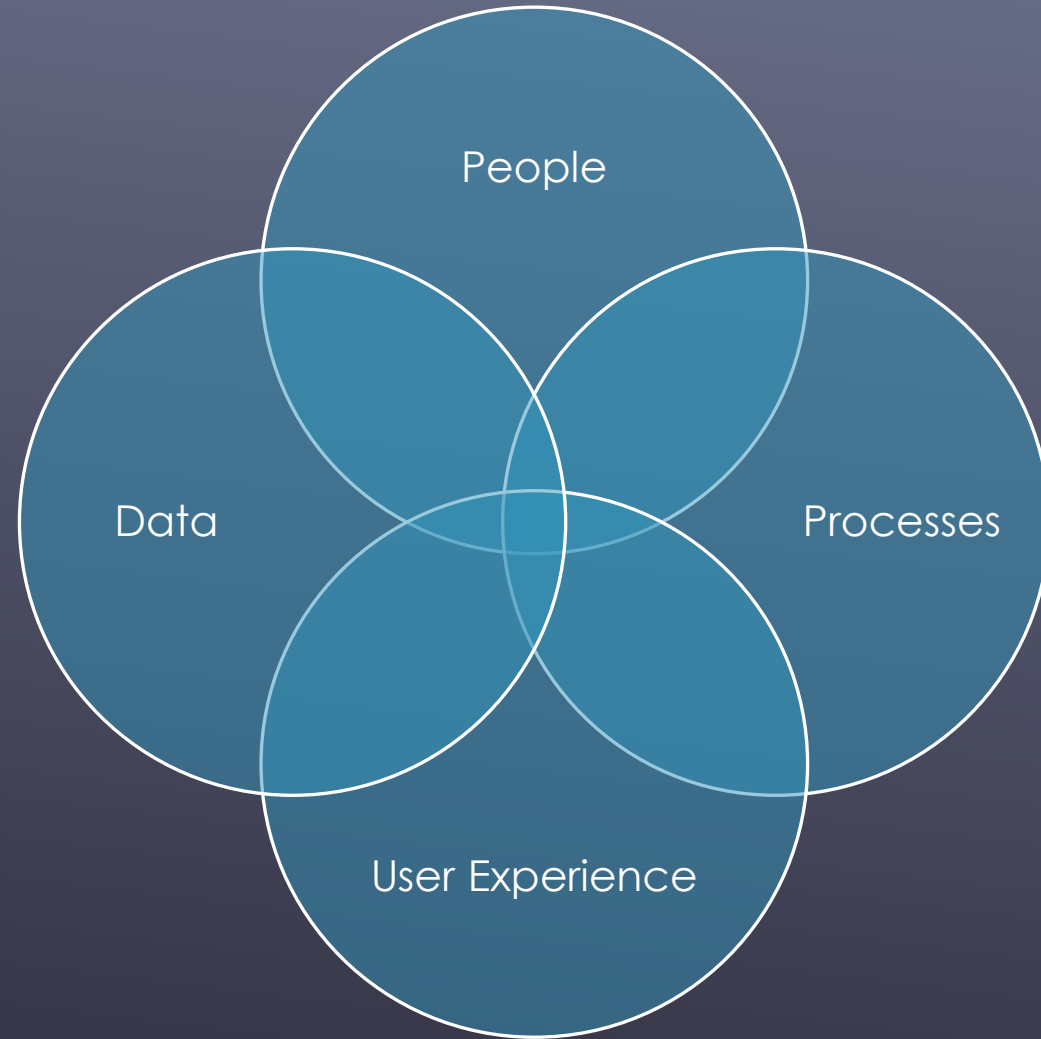
What tools can we use?

- ▷ 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

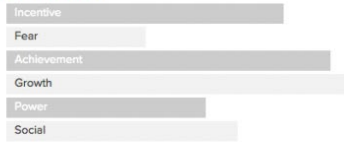
AGE 26
OCCUPATION Software Developer
STATUS Single
LOCATION San Jose, CA
TIER Experiment Hacker
ARCHETYPE The Computer Nerd

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

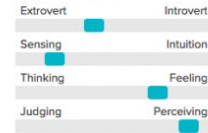
Frustrations

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

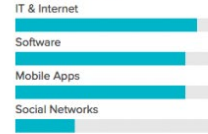
Bio

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 weekends, he would like to cut down on alcohol intake.

Personality



Technology



Brands



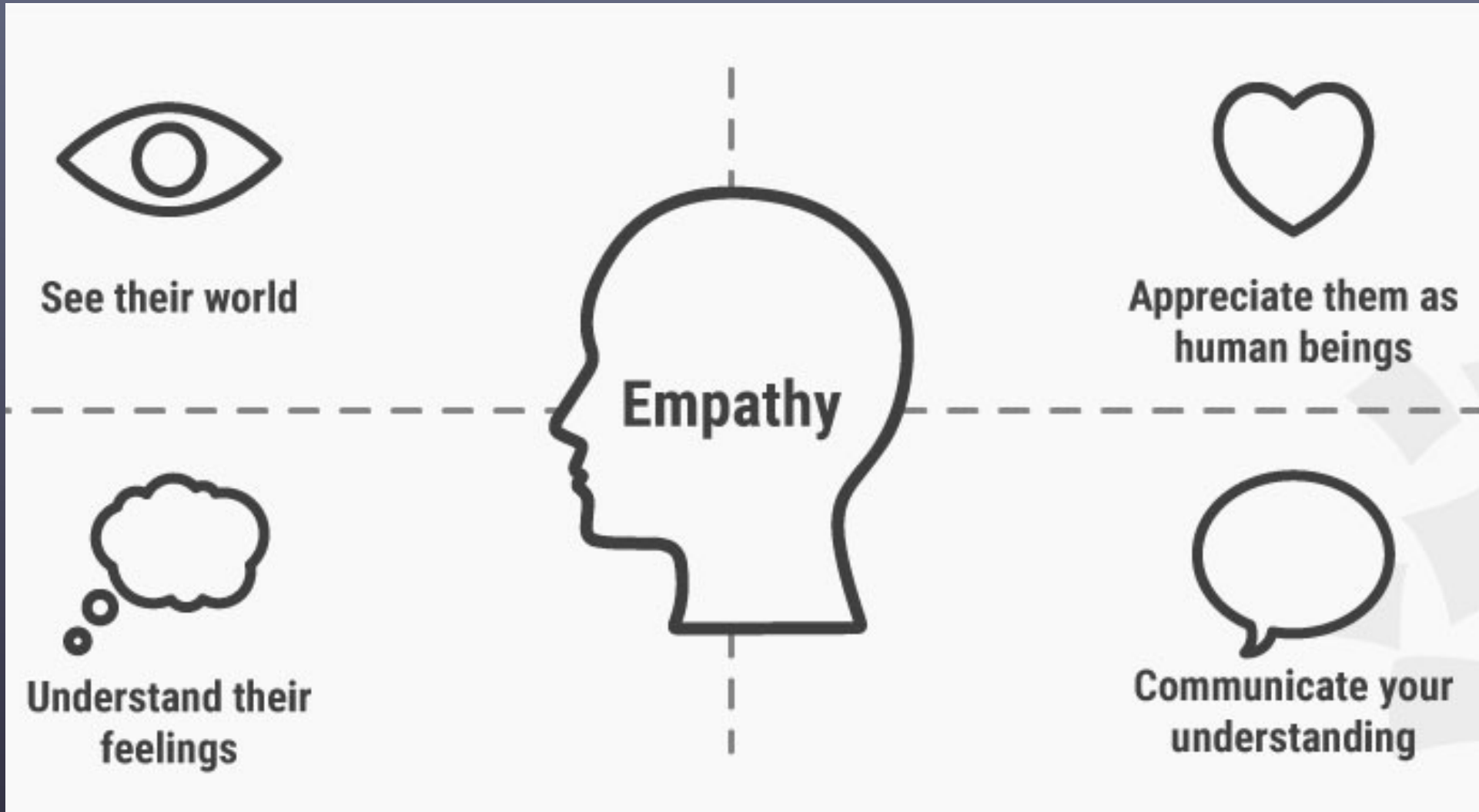
Developing a Persona:

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



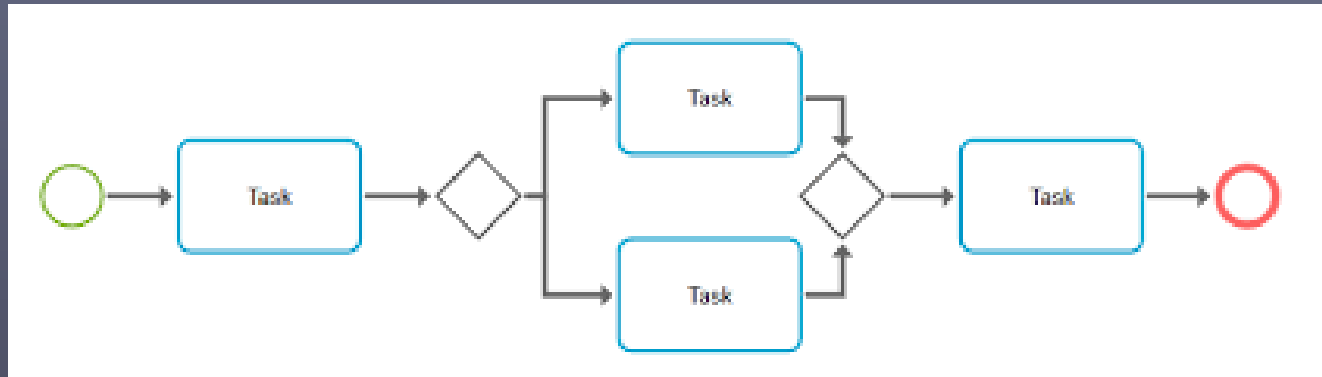
Processes

How do we learn about processes?

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

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





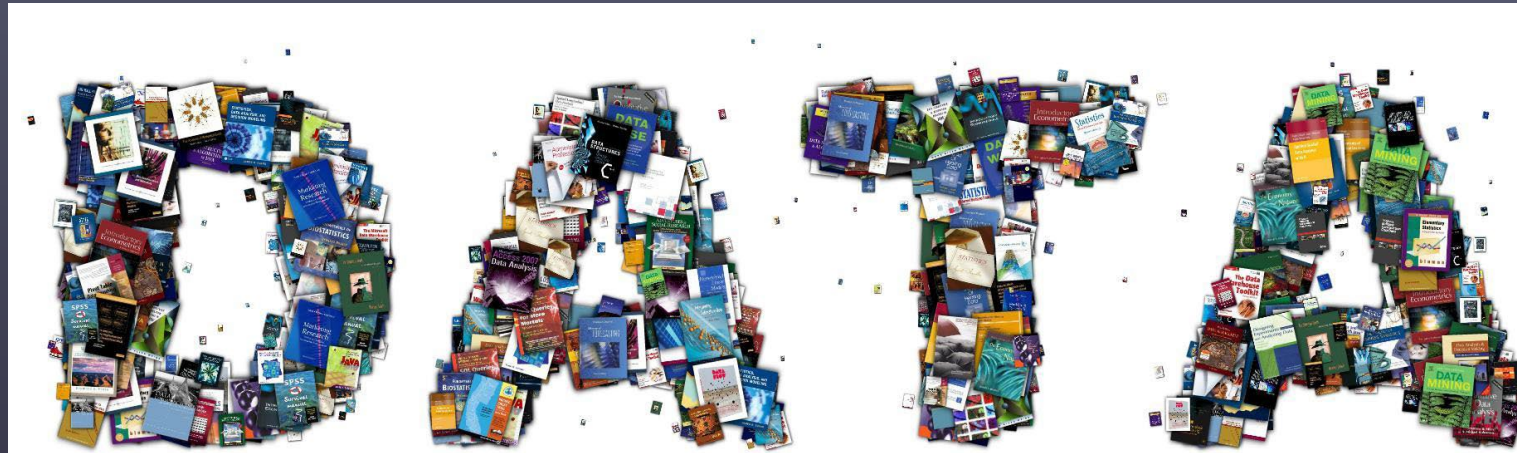
Processes

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



