

An Experimental Approach for Design & Framing the Problem

Lecture 04 of *Researching People-Centred Design* with Tim Maciag



University
of Regina

Faculty of
Engineering and
Applied Science



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Outline

- Mice, a story
- Fast Feedback Cycle
- Focus on ID'ing your target customer(s)
- Observing customers, building empathy
- Framing
- Affinity diagramming
- Scenarios
- MVP (recall)
- User story mapping

Project Bentley, a story of a mouse

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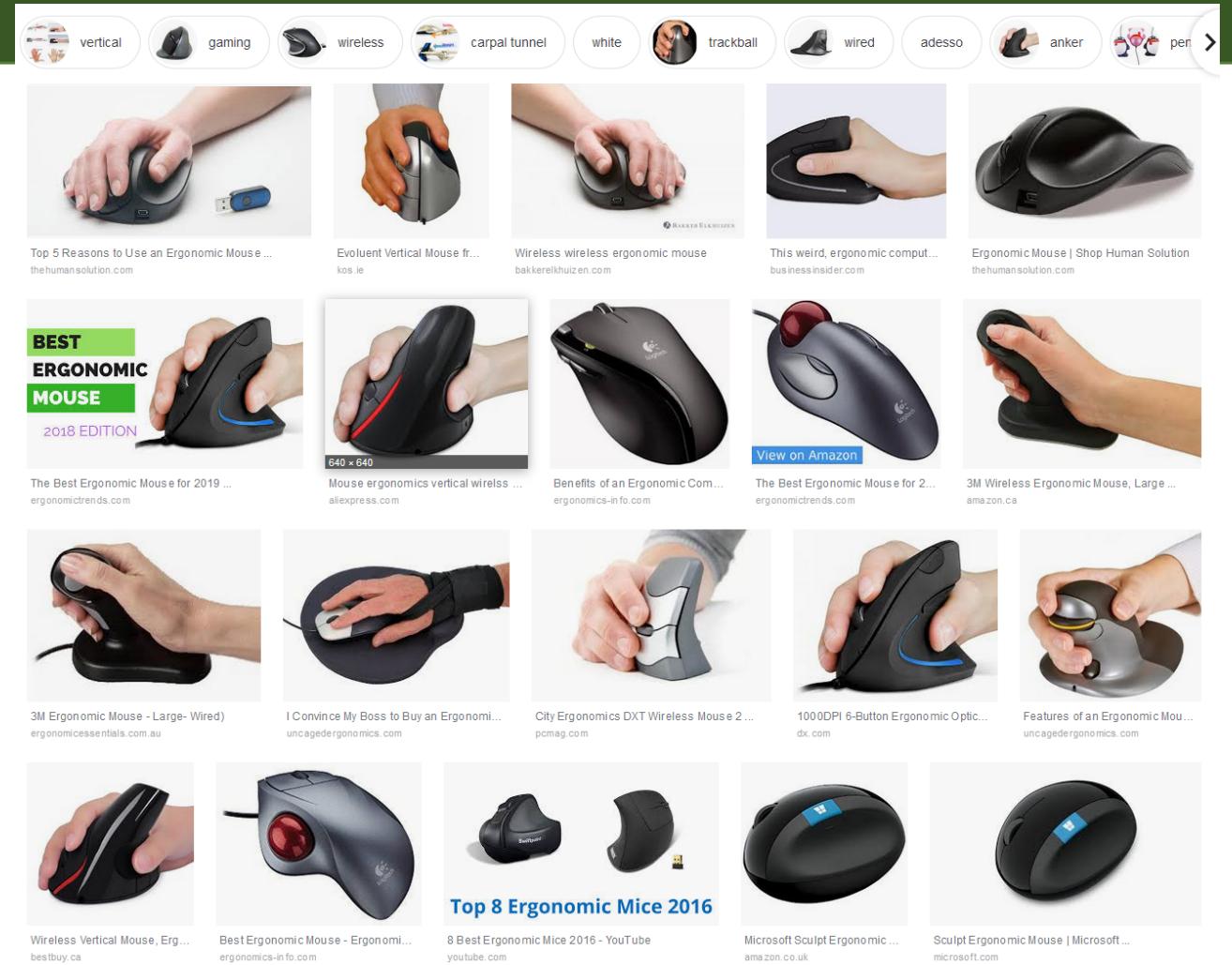
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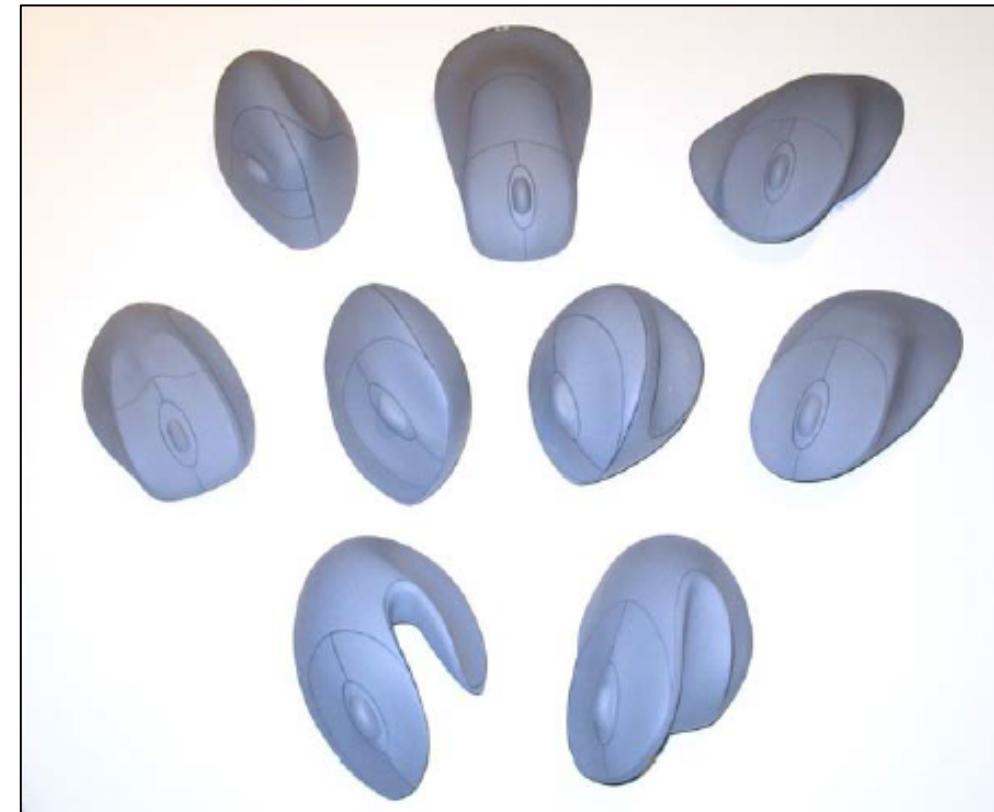
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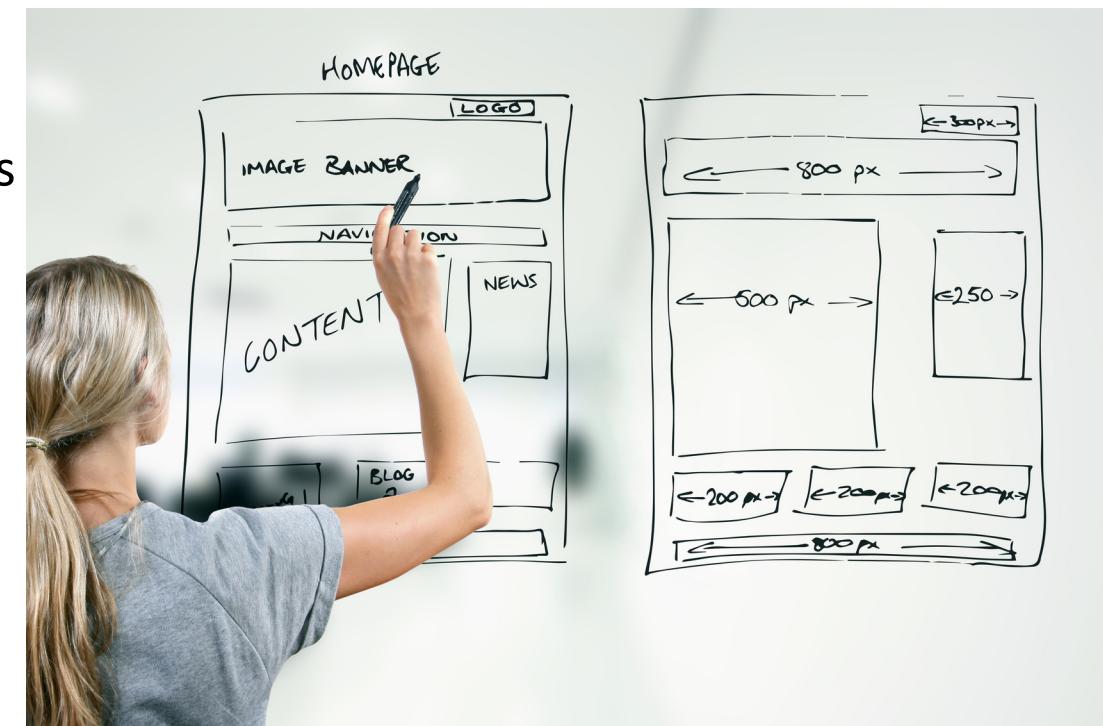
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- Understand those customers' needs and desires in the context of their real-life situations



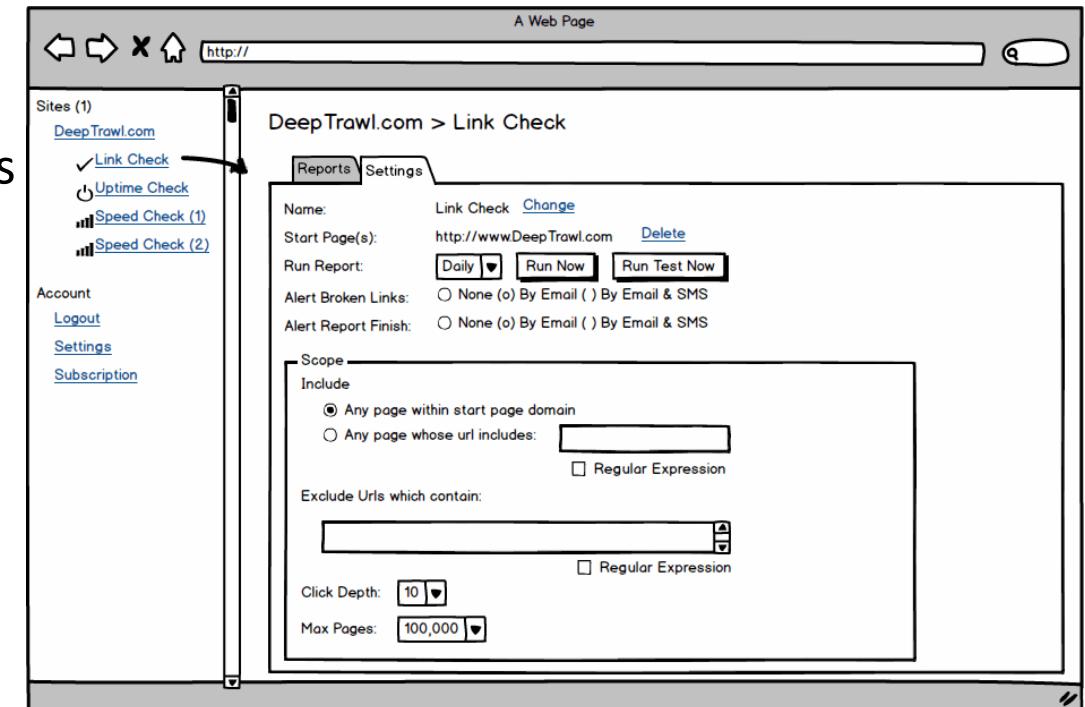
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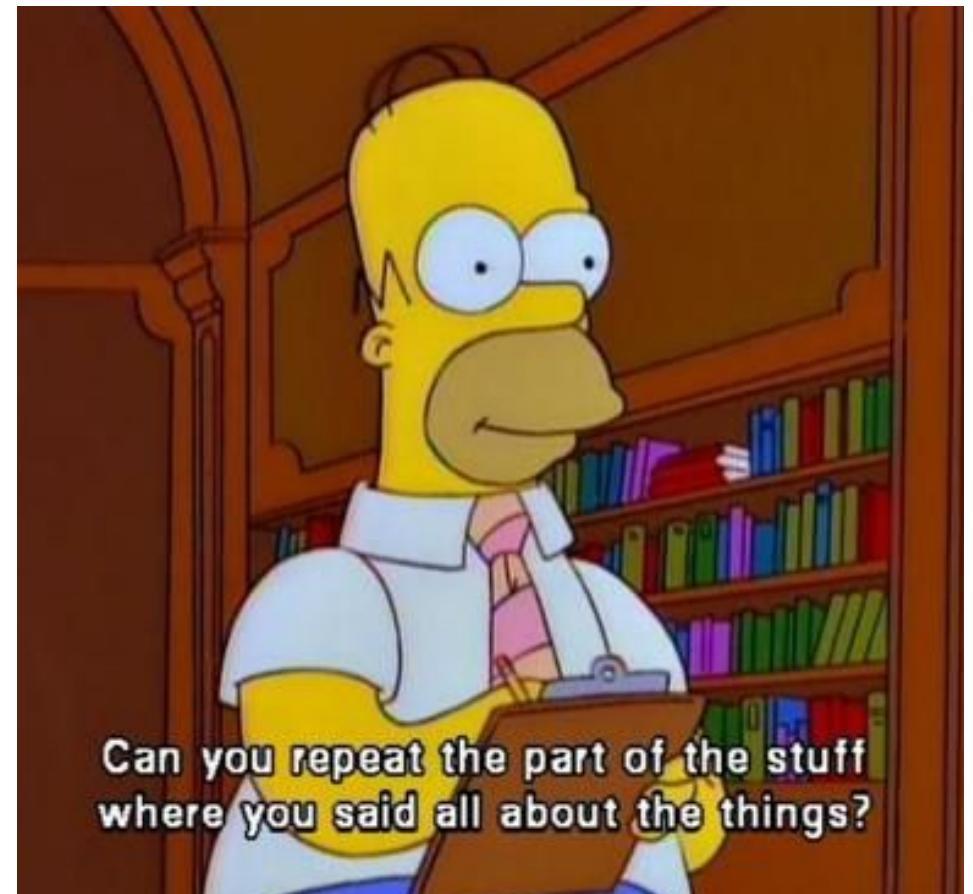
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The fast feedback cycle

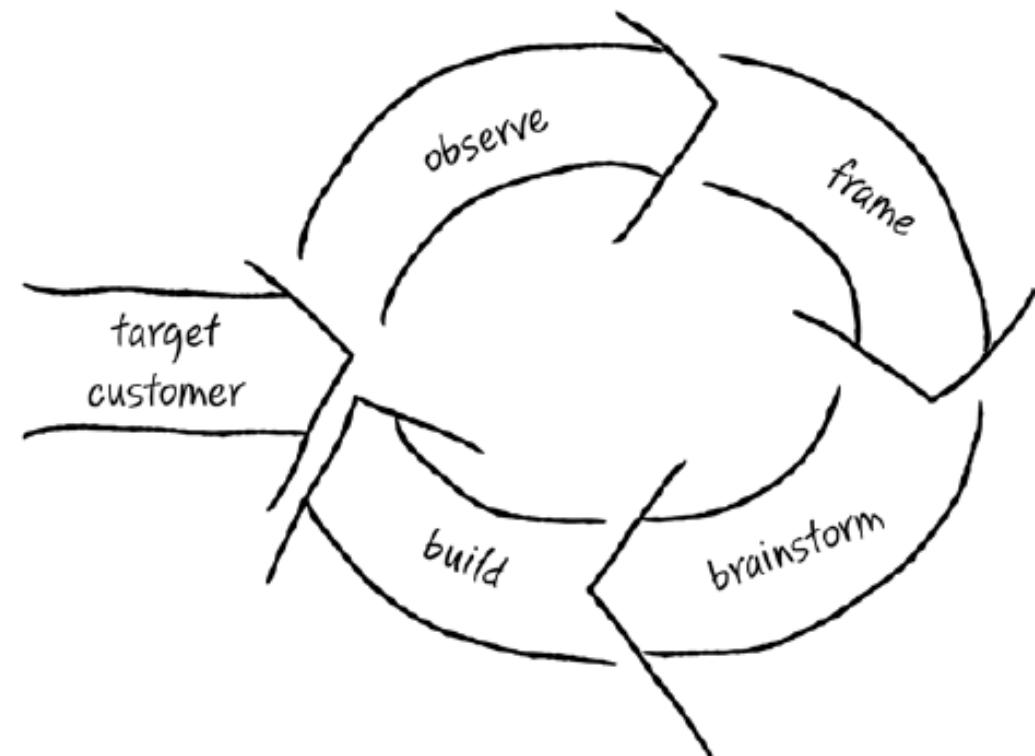
The fast feedback cycle

- Experimental approach
 - Thinking less about deciding what the product will do
 - Less about features and functionality
 - Thinking more about discovering what is actually going to work
 - In real time
 - In real usage
 - With real people
 - With real technology constraints



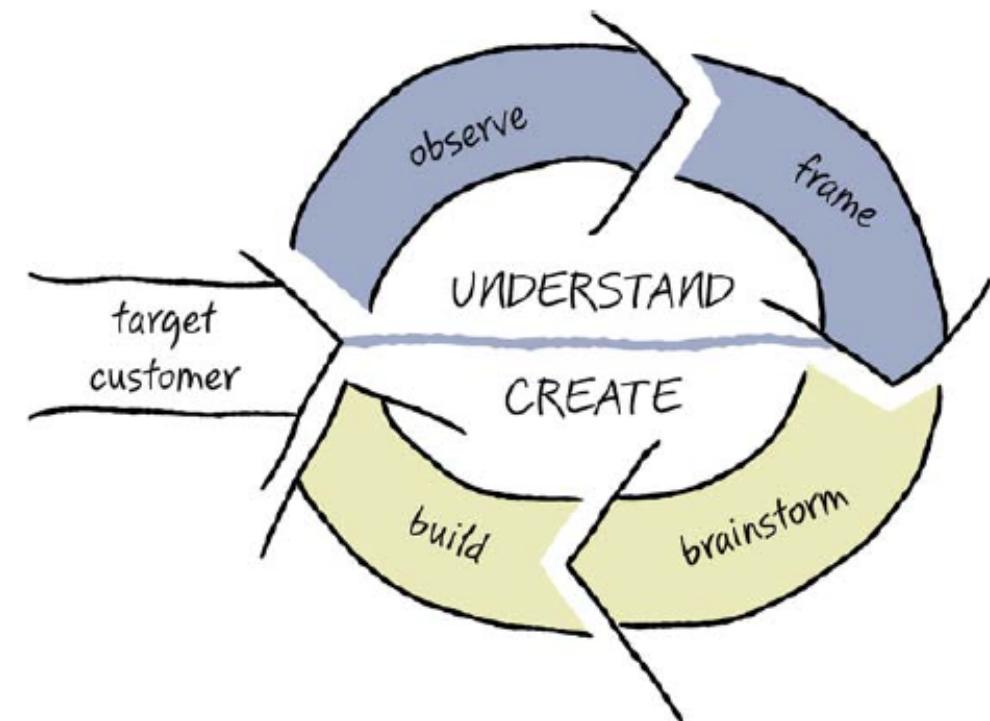
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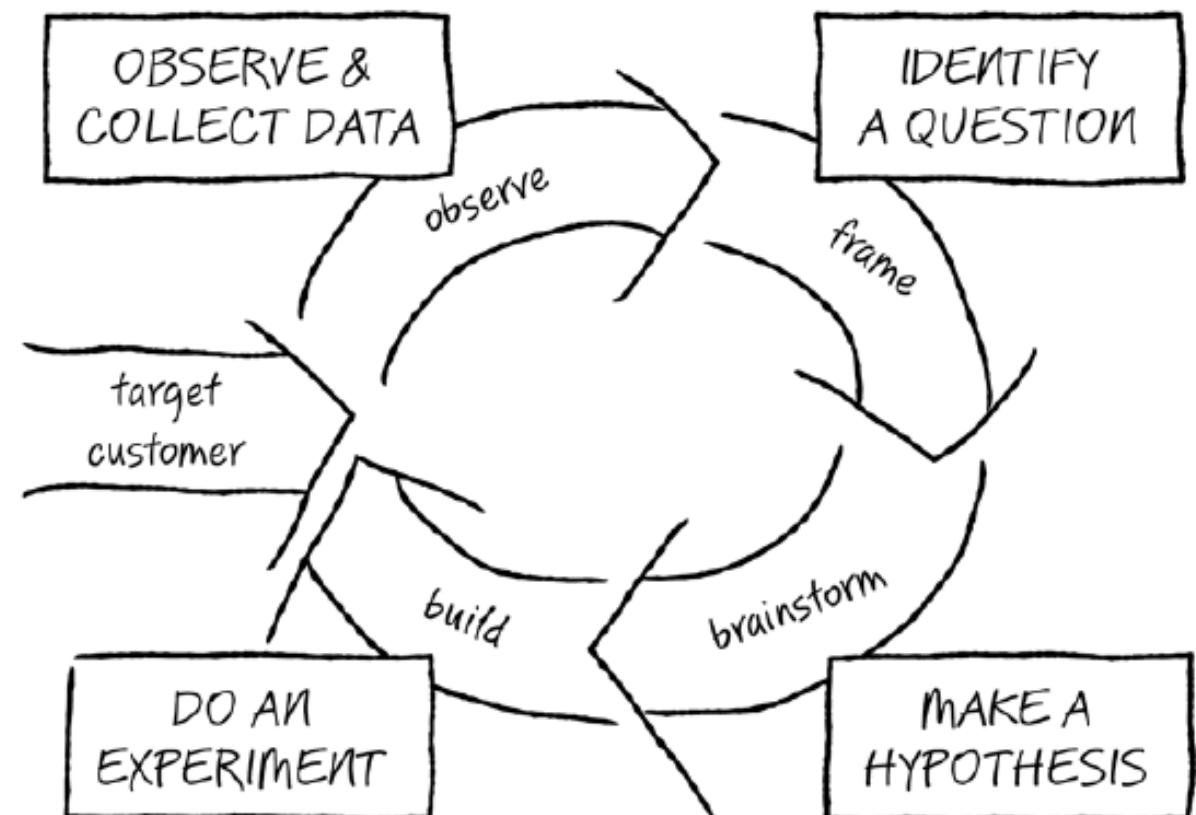
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Identifying your target customer

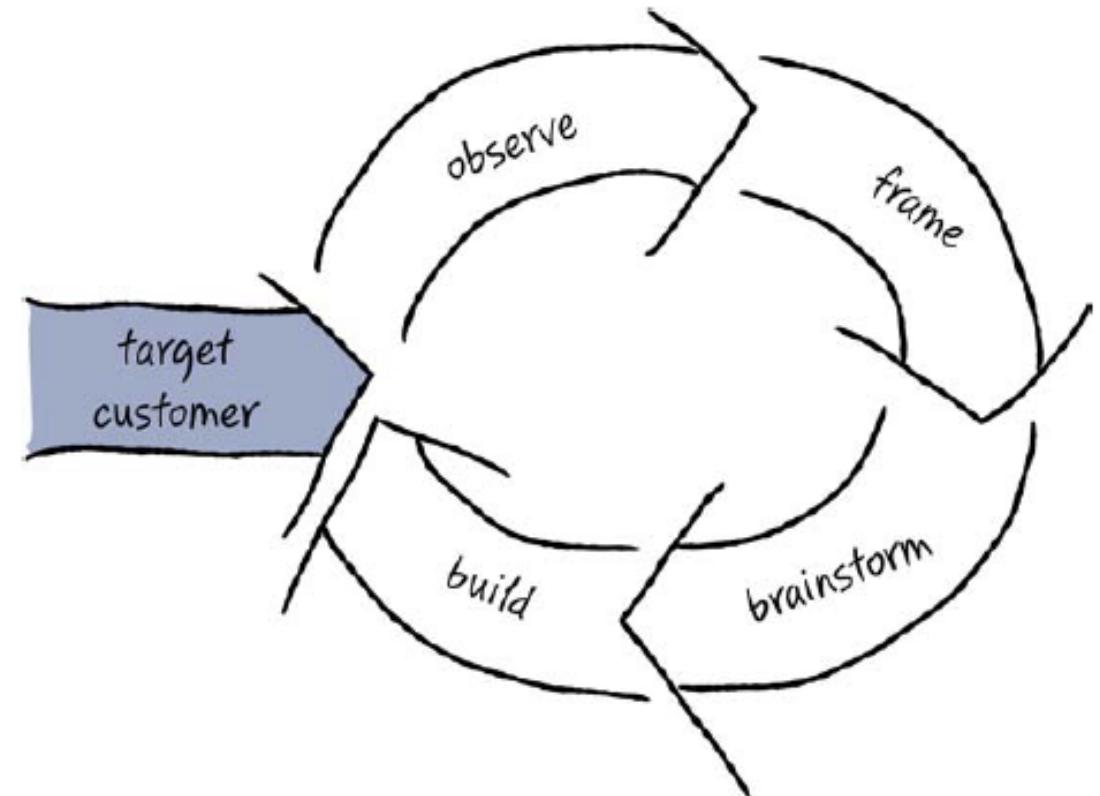
Identifying your target customer

- Modern day customers
 - What is a customer?



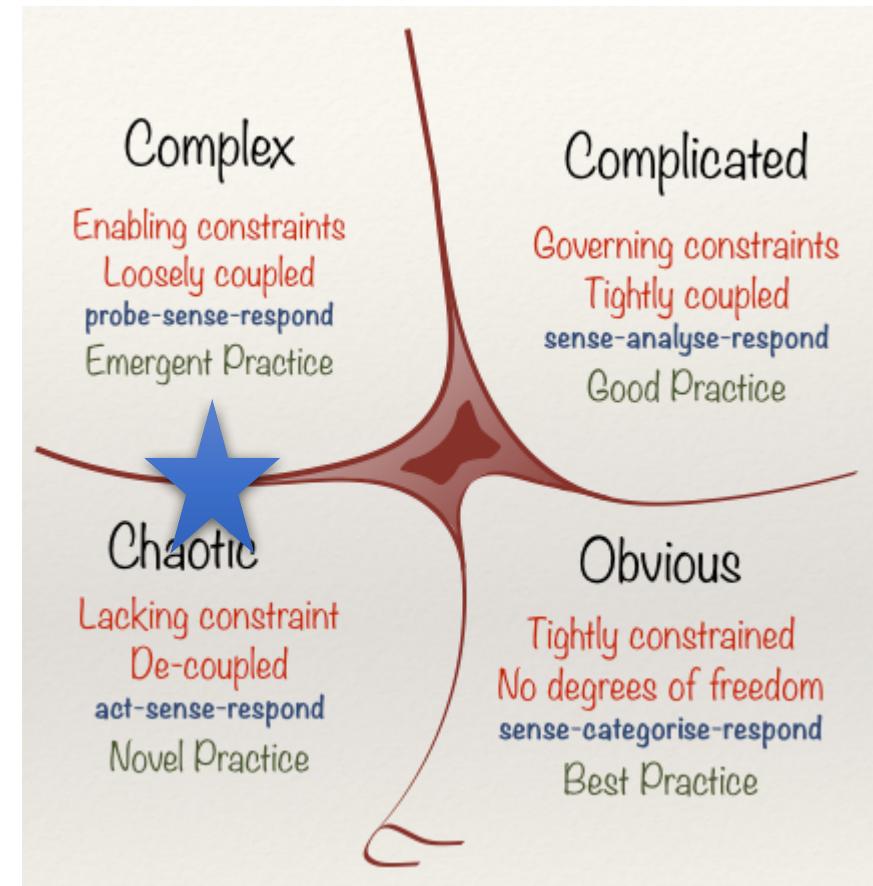
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- Who are we building for?
 - You can't optimize for everyone
- What are their needs?
 - Achieving true delight requires focus



Carryover

Carryover

- Many teams aspire to build general products that have mass appeal
 - Can get us into trouble #notsolid



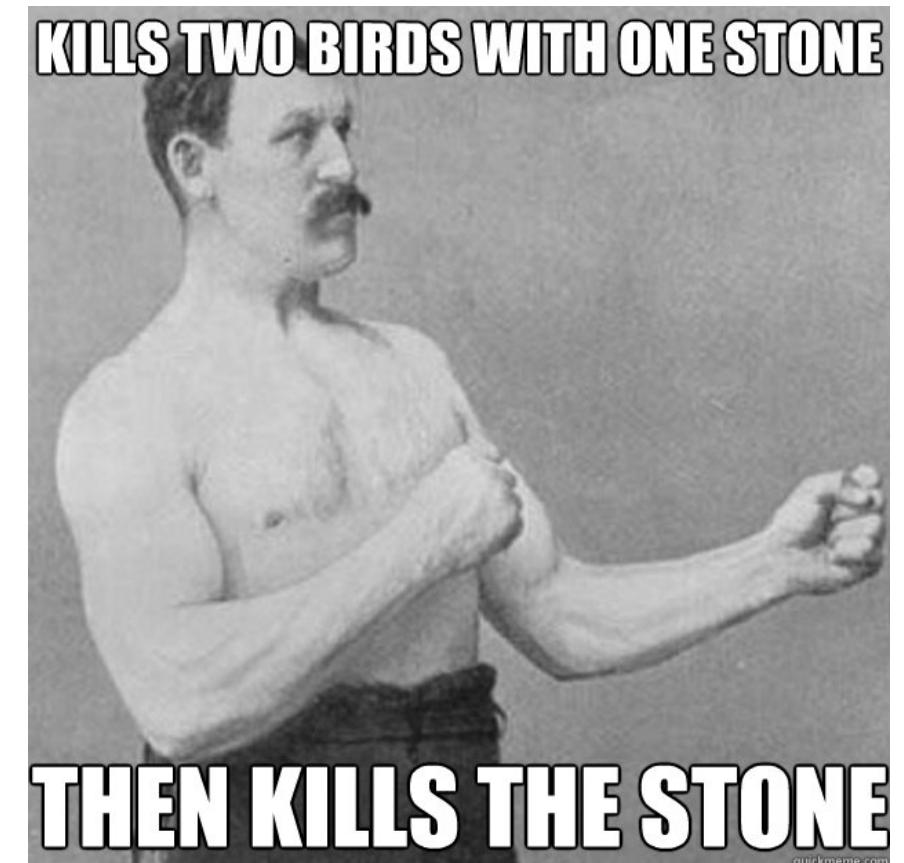
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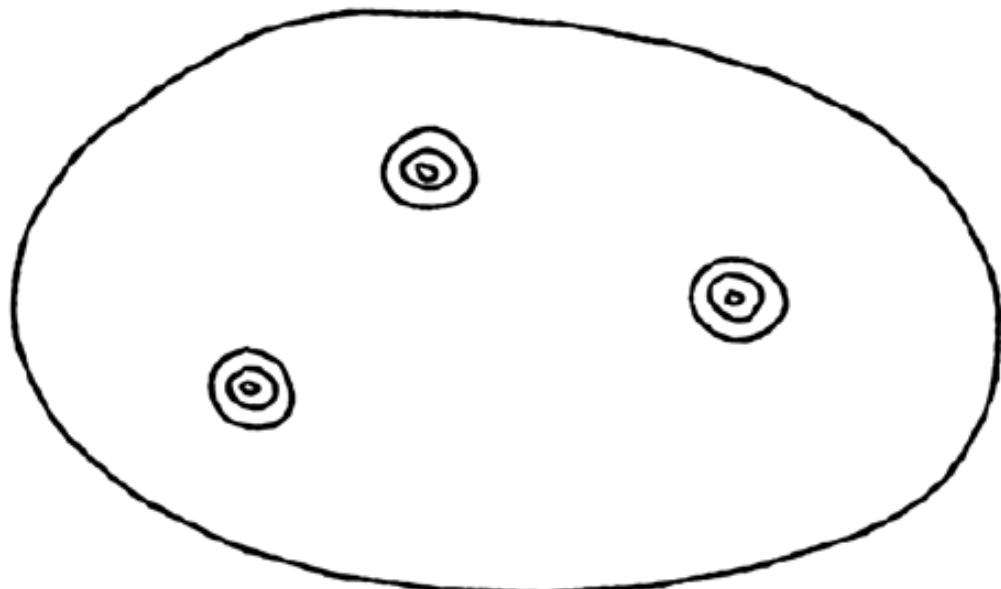
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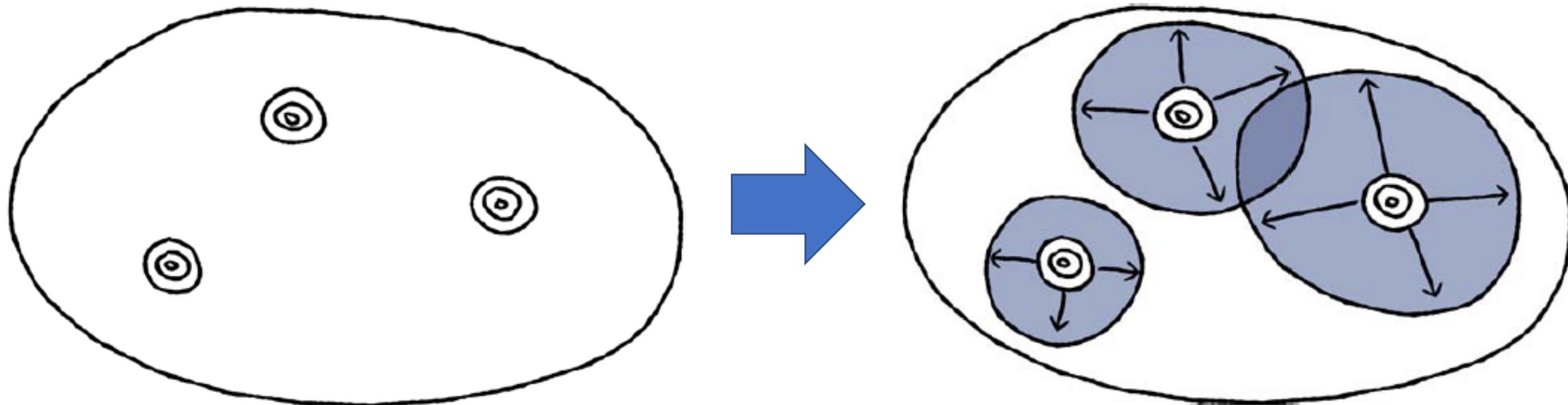


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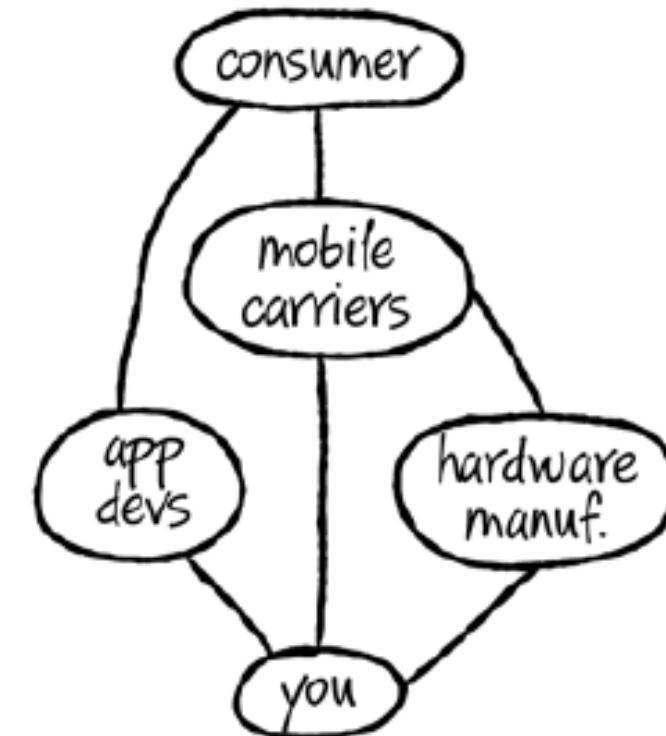
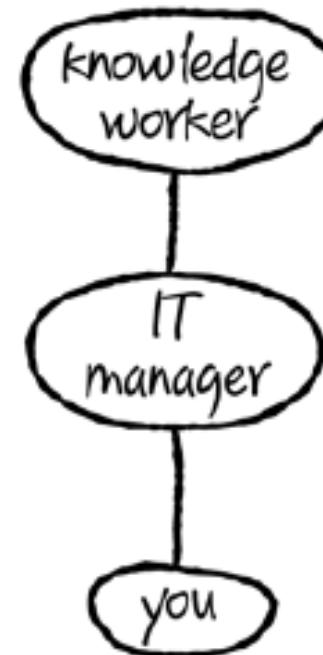
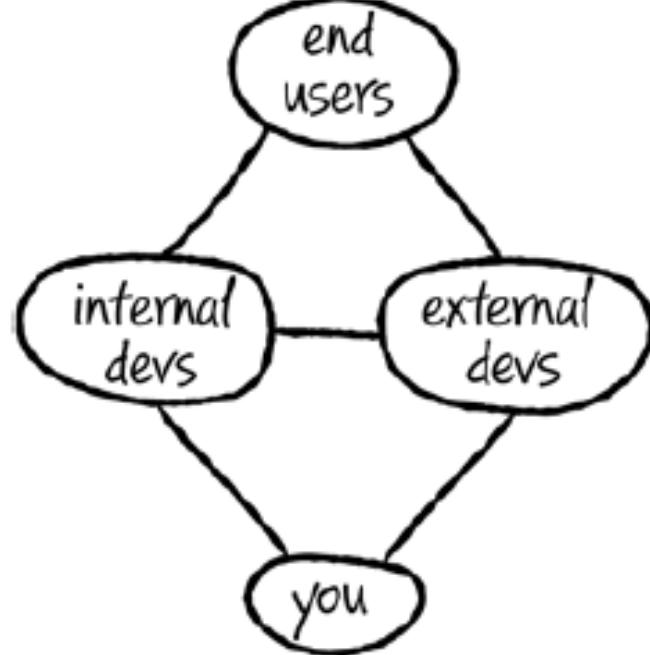


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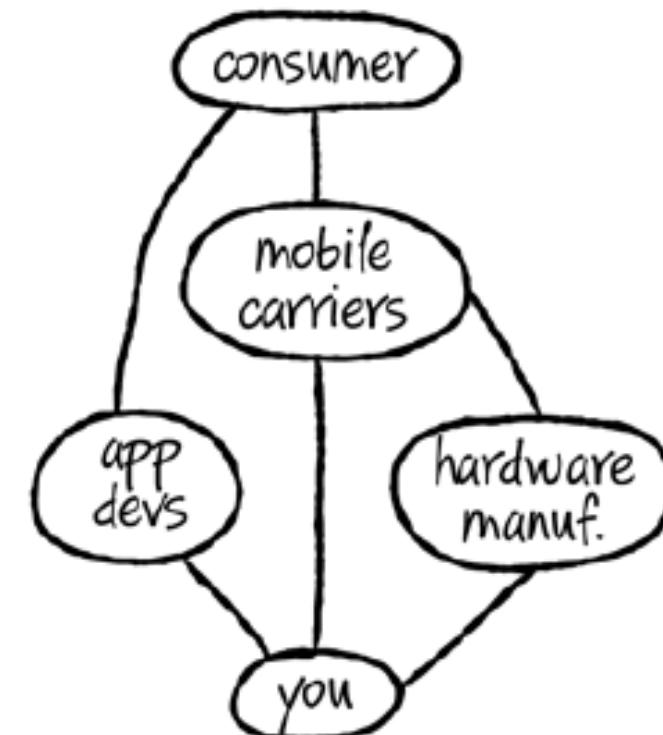
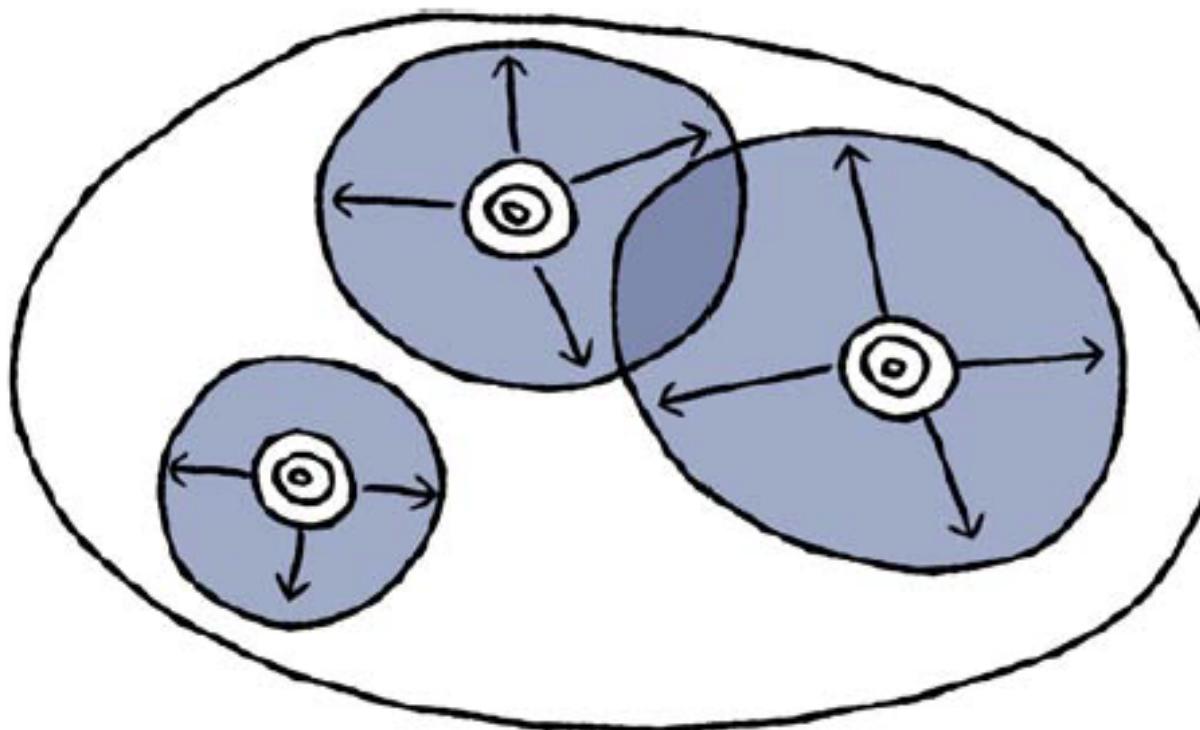


Map out your ecosystem, find your North Star

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Target customer & problem/requirement prerequisites

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- Start with problem and requirement prerequisites (as it relates to your envisioned *north star*)
 - The vision (the why as it relates to the problem you are trying to solve)
 - The rationale (dig a bit deeper into the what and the how of the why)
 - Stakeholders/customer groups
 - Your “north star” and those close by – illustrate customer ecosystem/carryover maps
 - Assumptions
 - Tech stack, environment, etc.
 - Constraints
 - Typically the known ones – you may come across others along the way
 - Key needs and requirements – the key experiences!

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- Ensure every team member can recite
 - The problem & vision
 - The list of target customers
 - and refer to them naturally in conversation, in design discussions, and when making tradeoffs

Target customer & problem/requirement prerequisites

- Start by defining:
 - Target customer
 - Target problem
 - Solution
 - Approach
 - Constraints
 - Conditions
 - Knowledge
- Ensure you have:
 - Technical knowledge
 - Technical skills



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Latent needs & customer insights

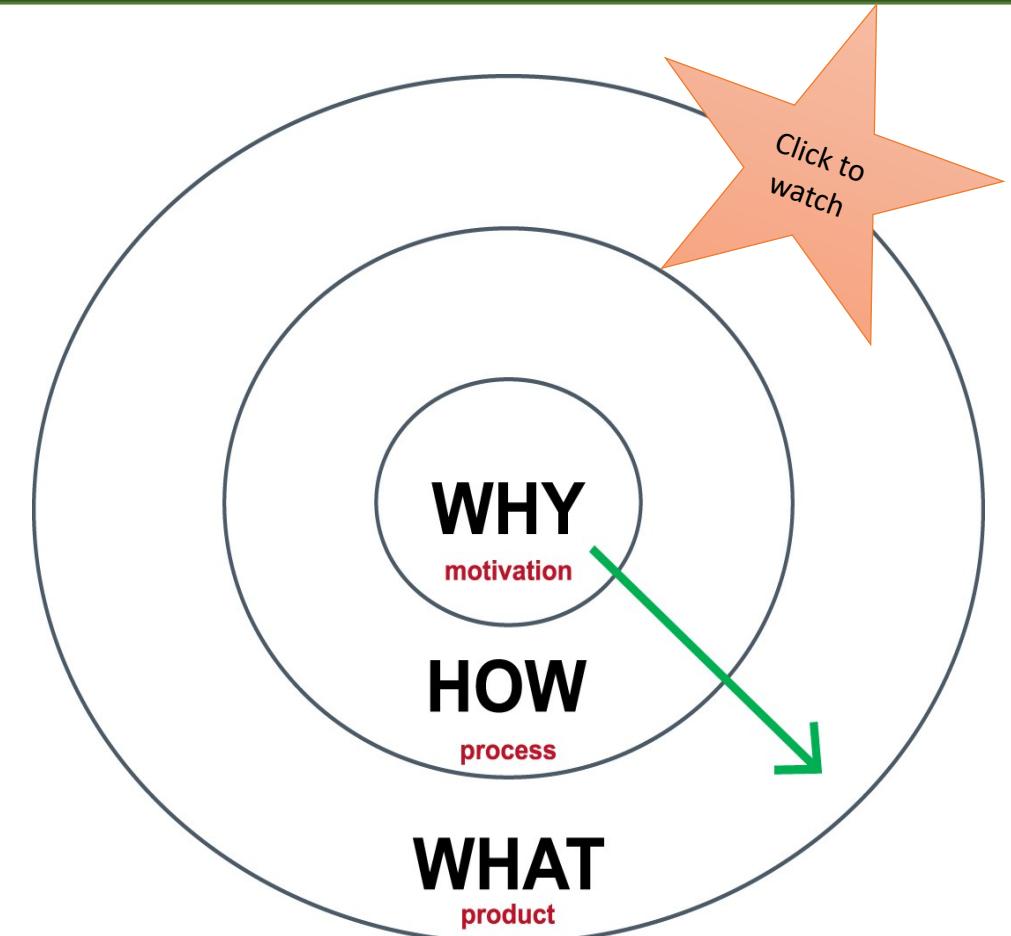
Latent needs & customer insights

- Root cause of customer needs/desires



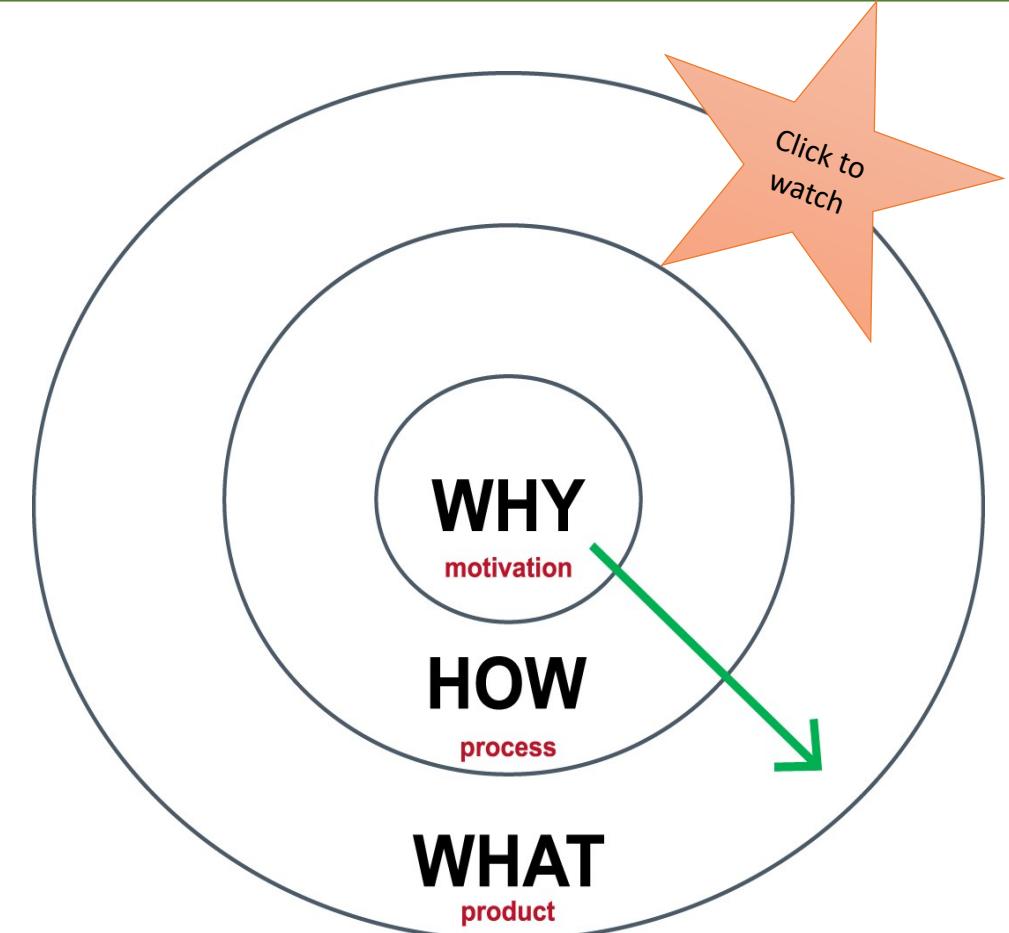
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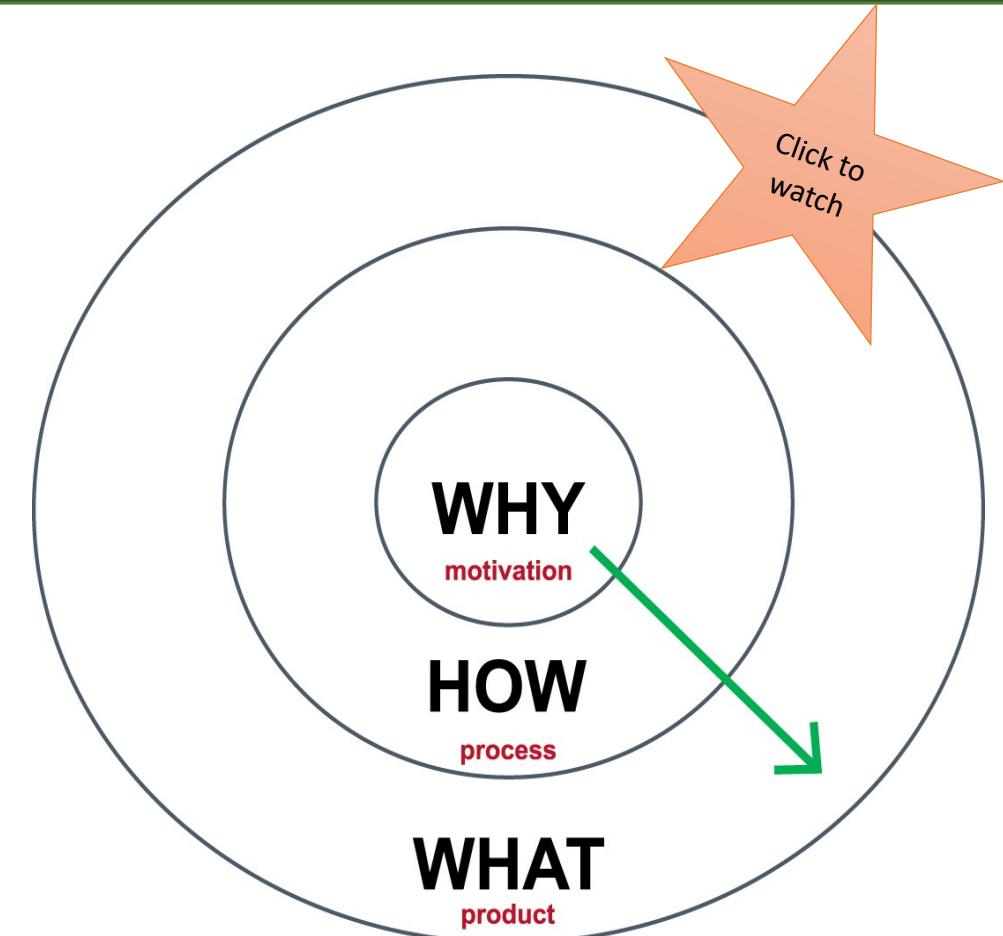
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Latent needs & customer insights

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- Tells you why customers are experiencing what they are experiencing
- Good questions to ask/probe
 - What is the customer's motivation for this need?
 - Why does the customer care about this?



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Latent needs & customer insights

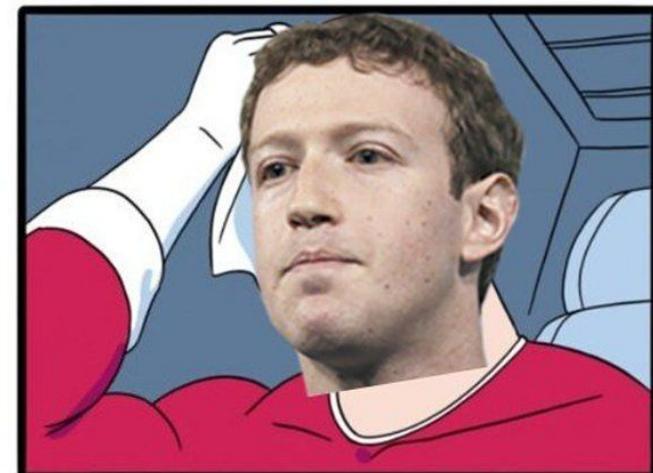
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- Good questions to ask/probe
 - What is the customer's motivation for this need?
 - Why does the customer care about this?
- Fundamental truths can help guide our work
 - Desire to belong to a community, #fomo
 - Desire to feel safe and secure
 - Desire to express love
 - Desire to feel vengeful when wronged



How?

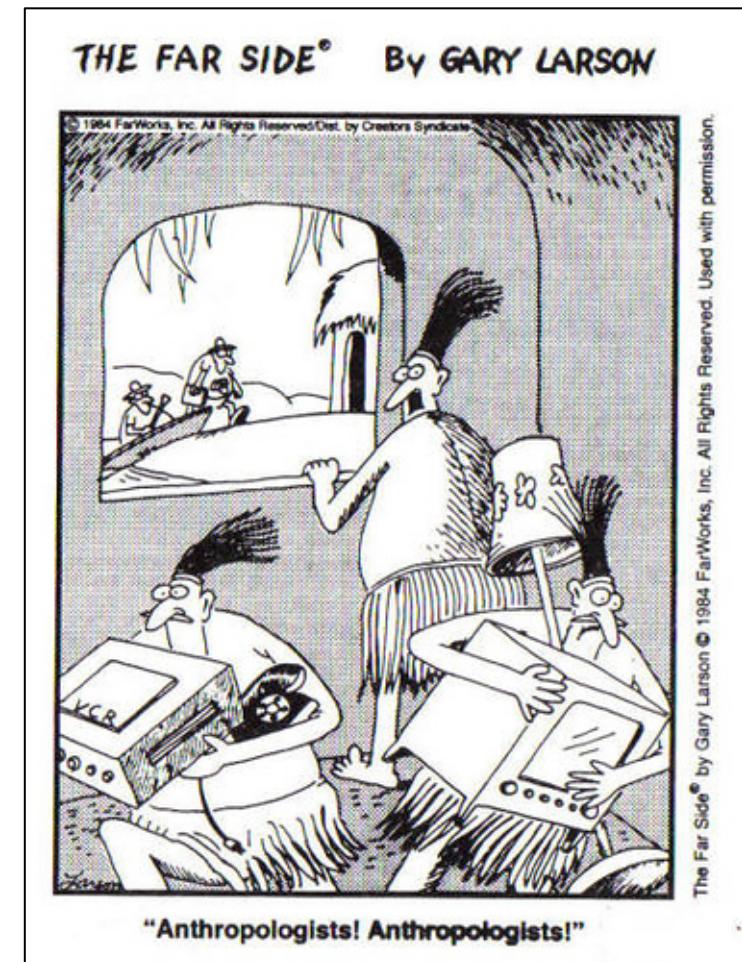
How?

- Generative research
 - Collecting data to help create an understanding of customer needs to inspire solution ideas
 - NOTE: **Evaluative research** is used to measure or evaluate something you have created



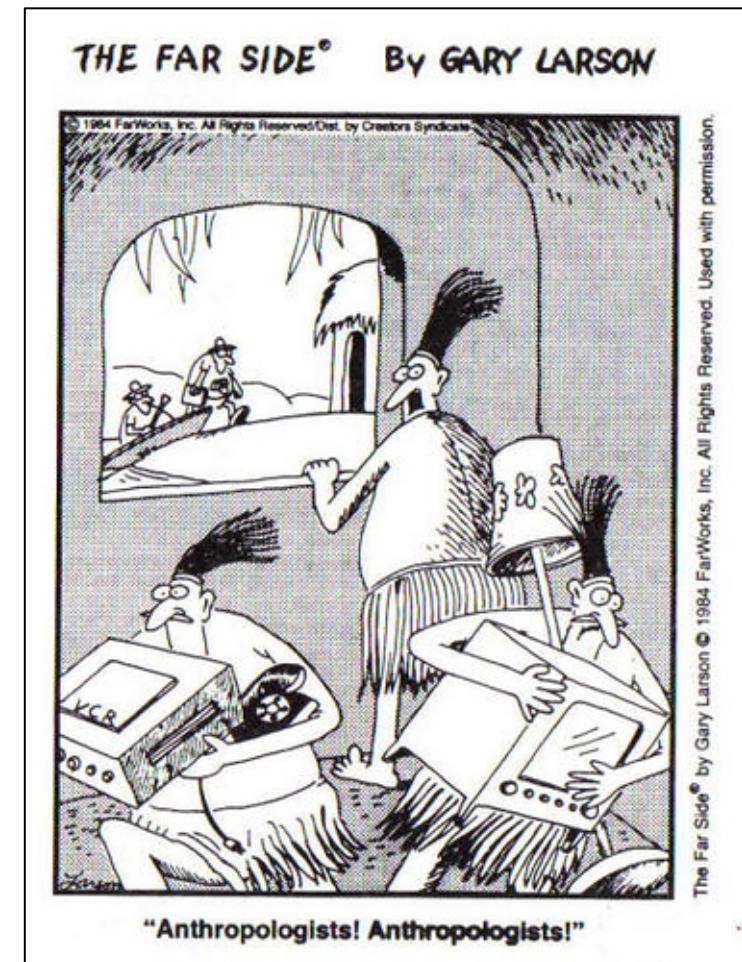
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 - Lean: “Walk the gemba”



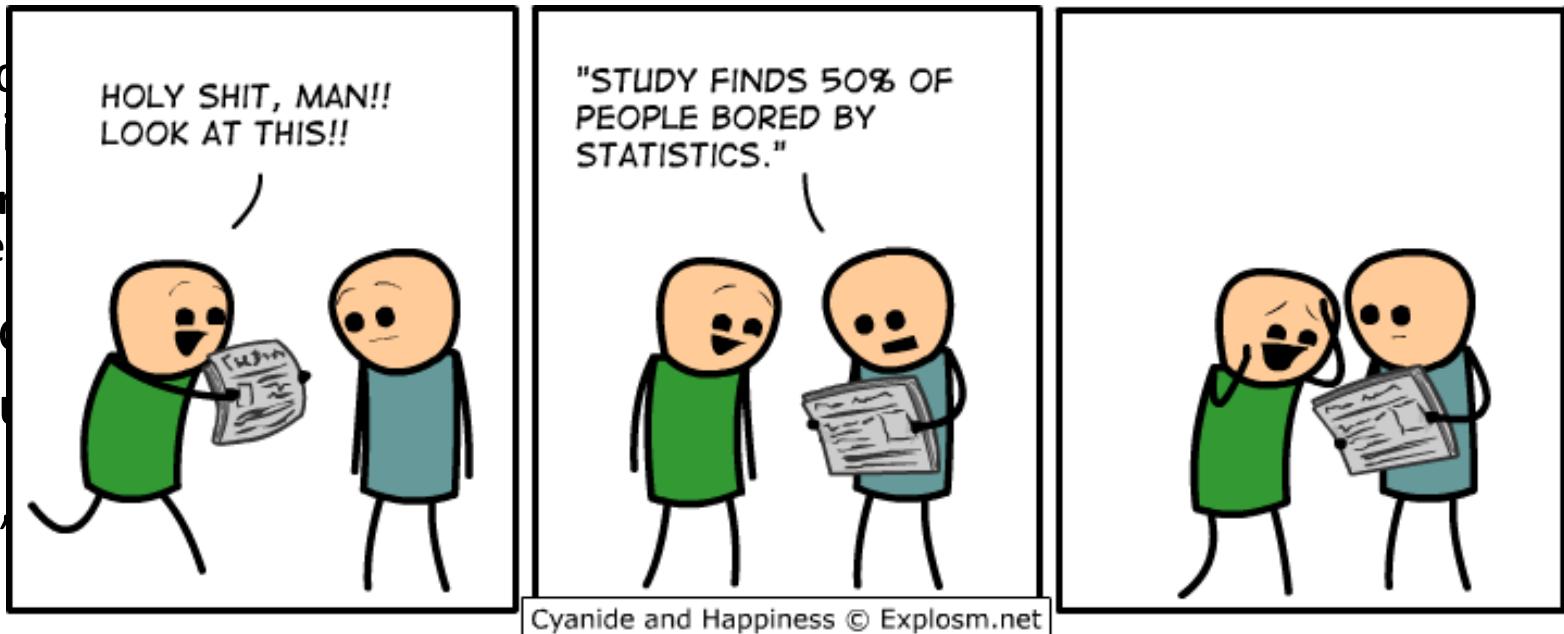
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- Need vs insight chart
- “Say” data (Qualitative/Subjective) and “Do” data (Quantitative/Objective)
 - “Qual vs Quant”



So how? It's all about empathy

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So how? It's all about empathy

- Recall: You are not the user!



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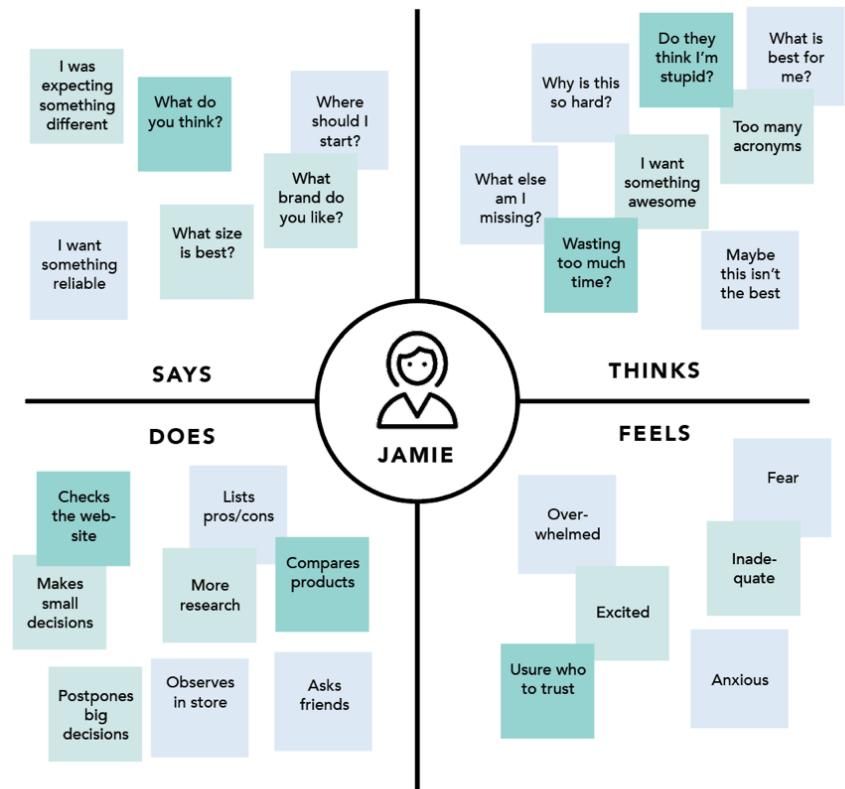
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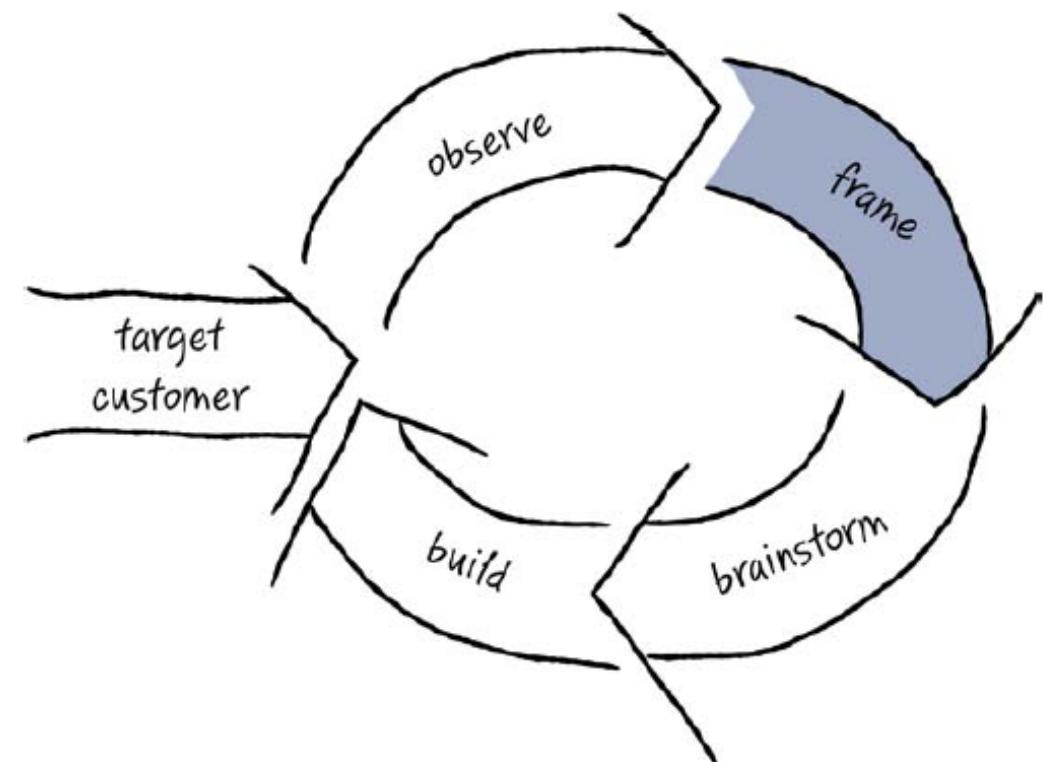
EMPATHY MAP Example (*Buying a TV*)



Faming step

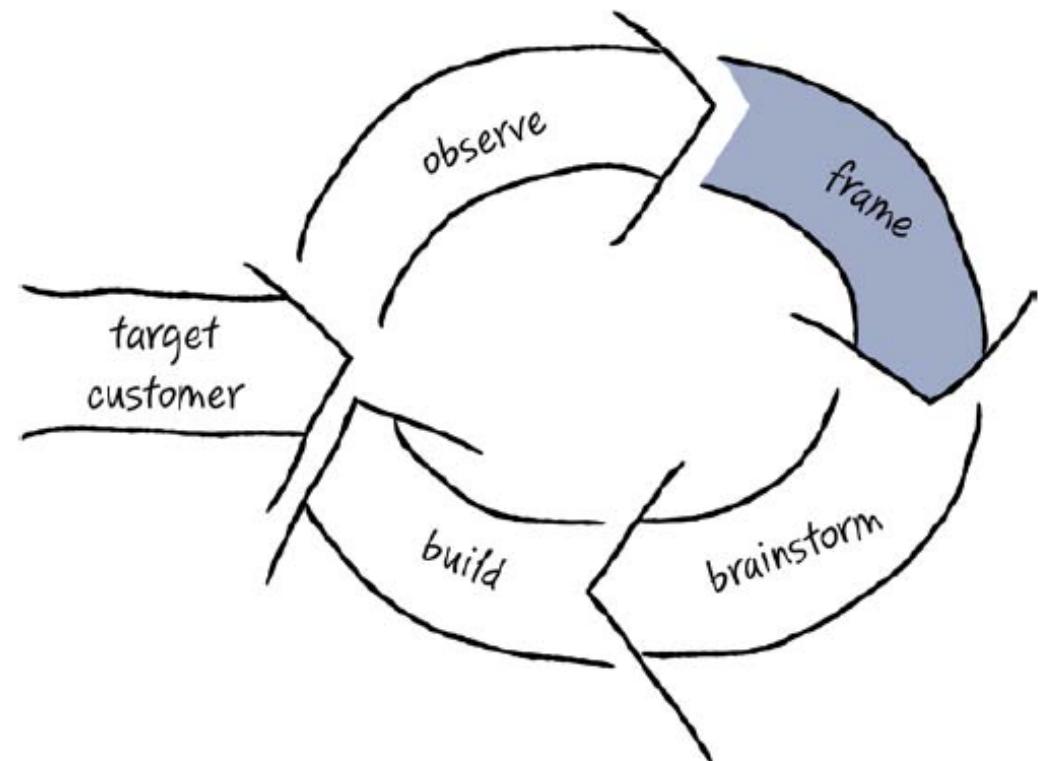
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 - You should know your target customer(s)
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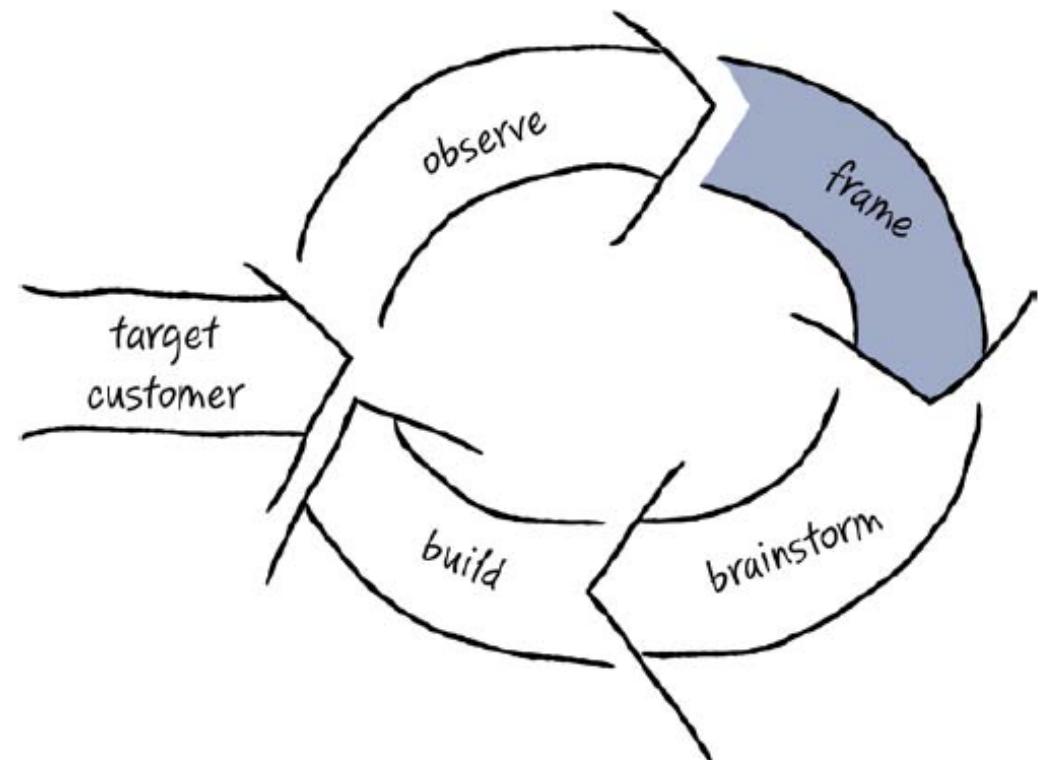
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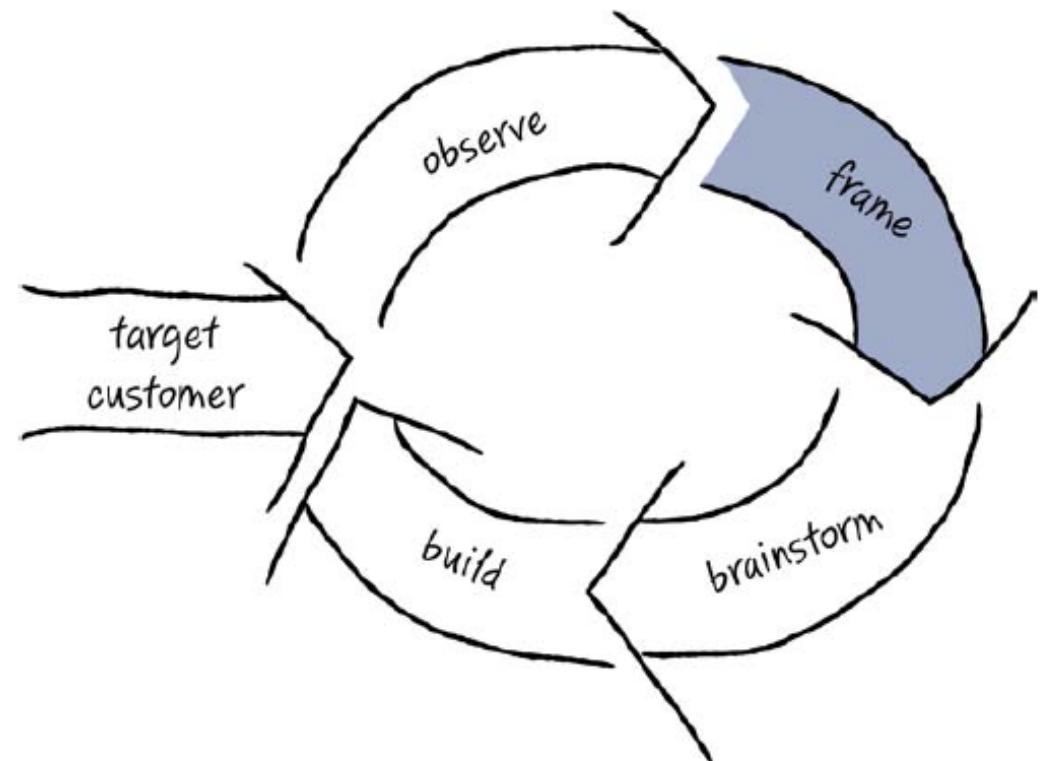
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- How?
 - From affinity diagramming to crafting user scenarios to envisioning minimum viable products to user story mapping



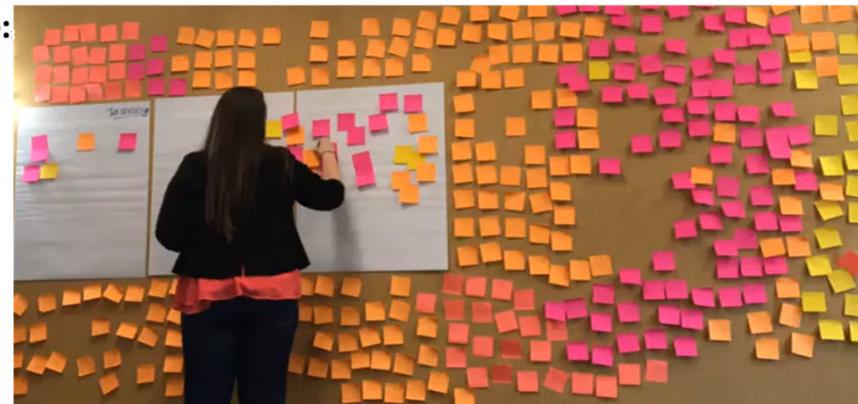
From Empathy Mapping to Affinity Diagrams

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From Empathy Mapping to Affinity Diagrams

NNGroup on Affinity Diagramming

Before:



After:



NNGROUP.COM NN/g

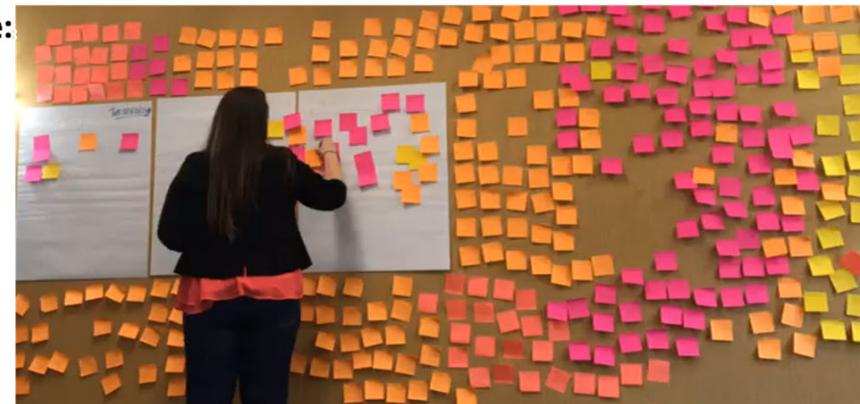
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1. Preparation

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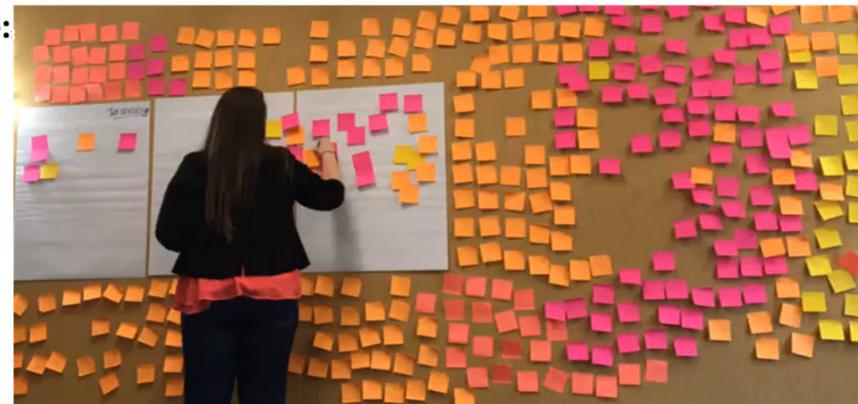
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NNGroup on Affinity Diagramming

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2. Initial sorting

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After:



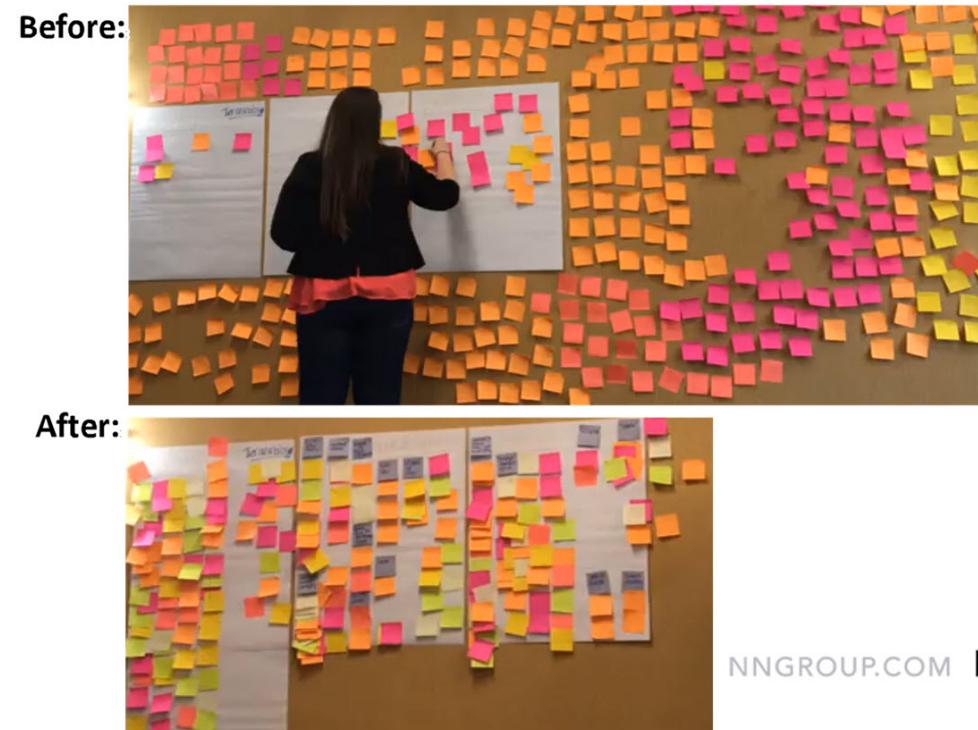
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NNGroup on Affinity Diagramming

1. Preparation
2. Initial sorting
3. Summarize



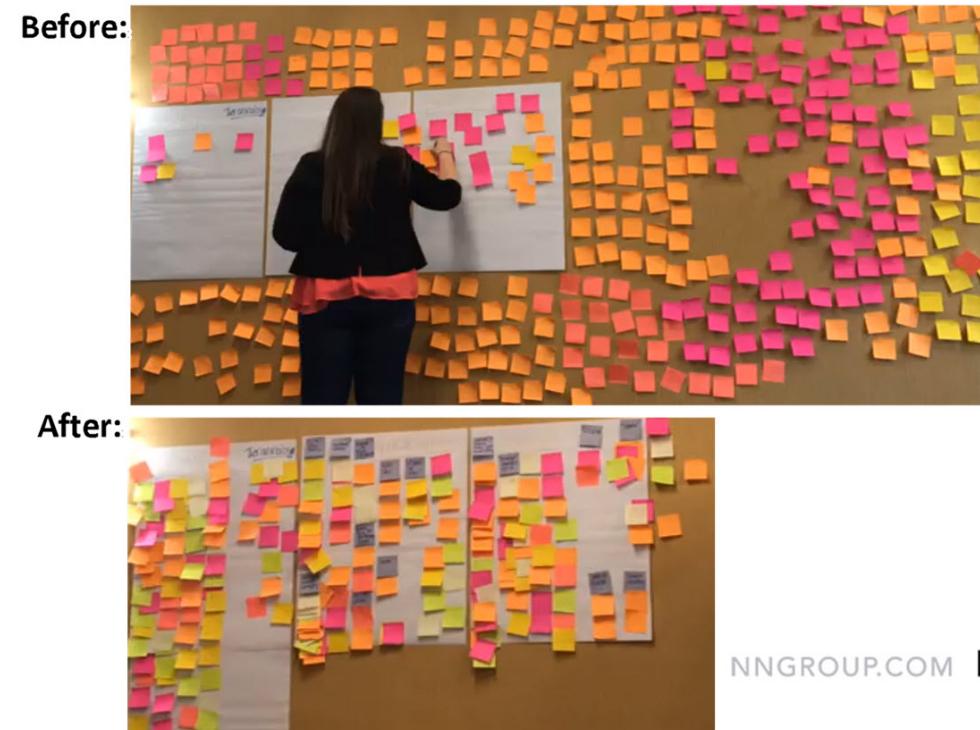
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From Empathy Mapping to Affinity Diagrams

NNGroup on Affinity Diagramming

1. Preparation
2. Initial sorting
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4. Read-Out/Re-Sort



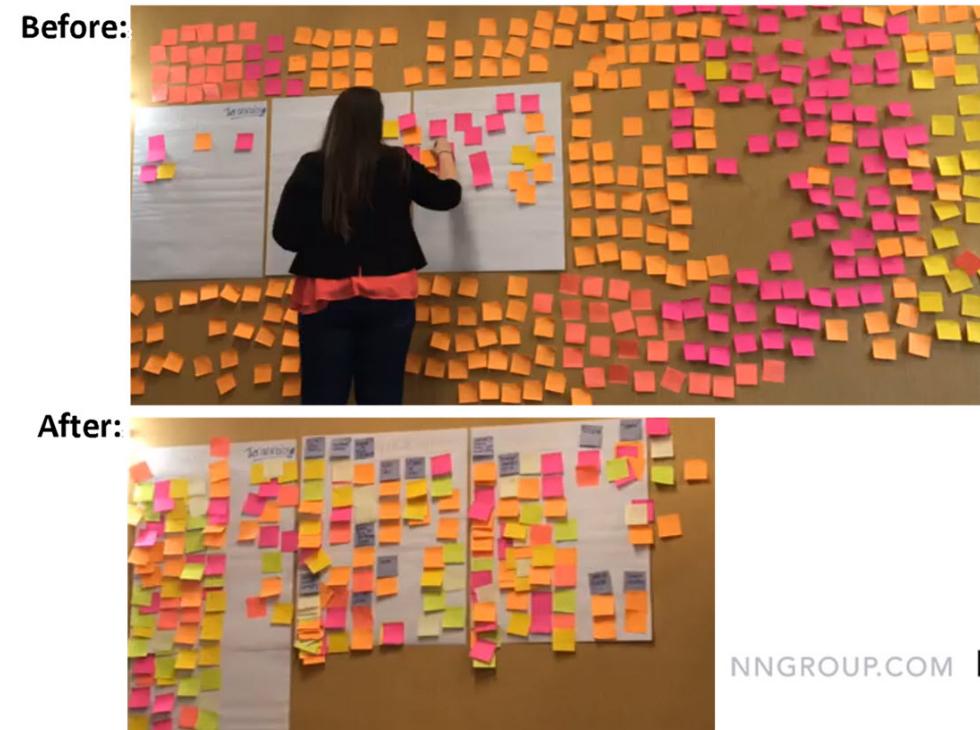
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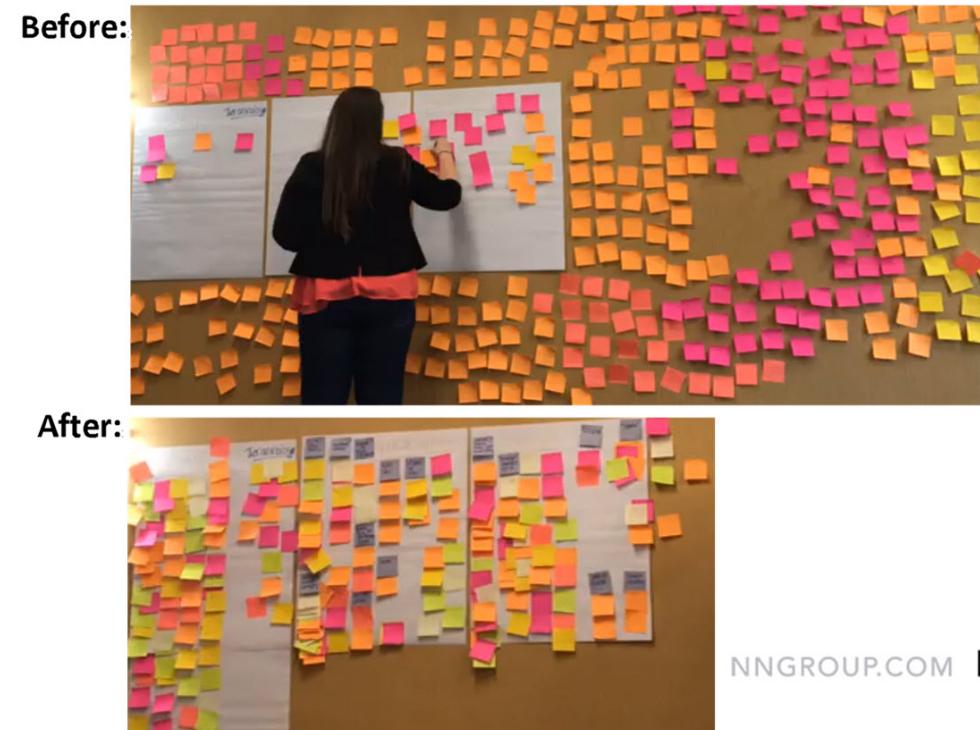
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From Empathy Mapping to Affinity Diagrams

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6. Look for insights



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From affinity diagramming to user scenarios

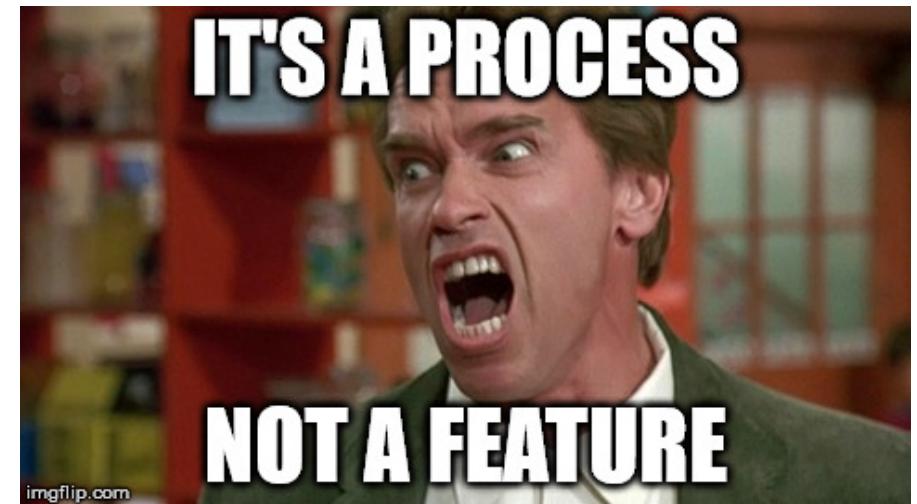
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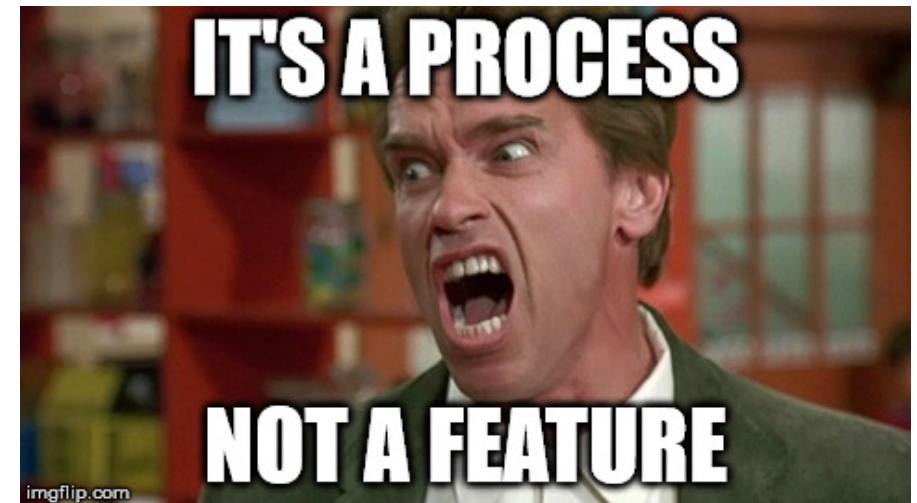
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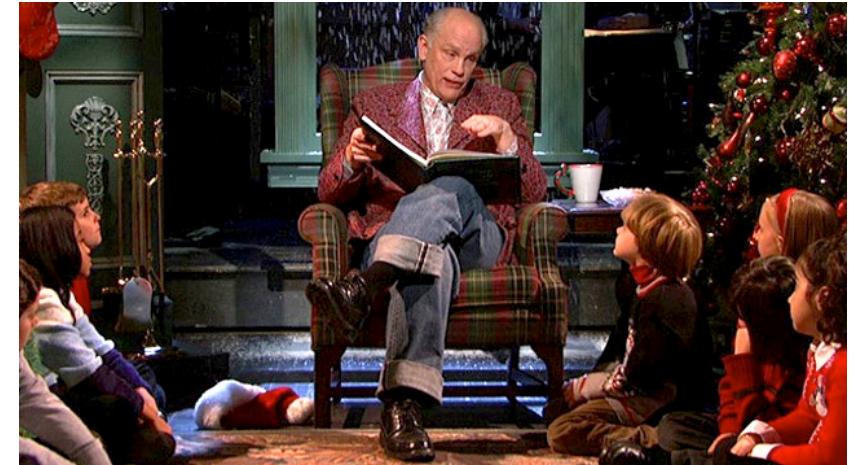
In order to watch online TV, viewers need to subscribe to an online TV provider

Why scenarios/stories?

- T.A. Alspaugh. Narrative Requirements. 2015. Online: <http://www.thomasalspaugh.org/pub/fnd/narrativeRequirements.html> (Accessed: Jan.10.2018) CC-NC-SA

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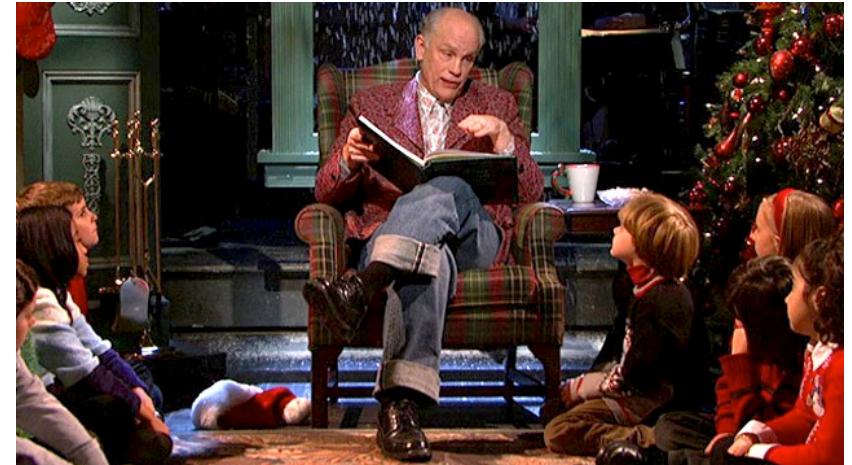
- A more humane way of educating, learning, and understanding
 - Highly accessible, regardless of background/skills



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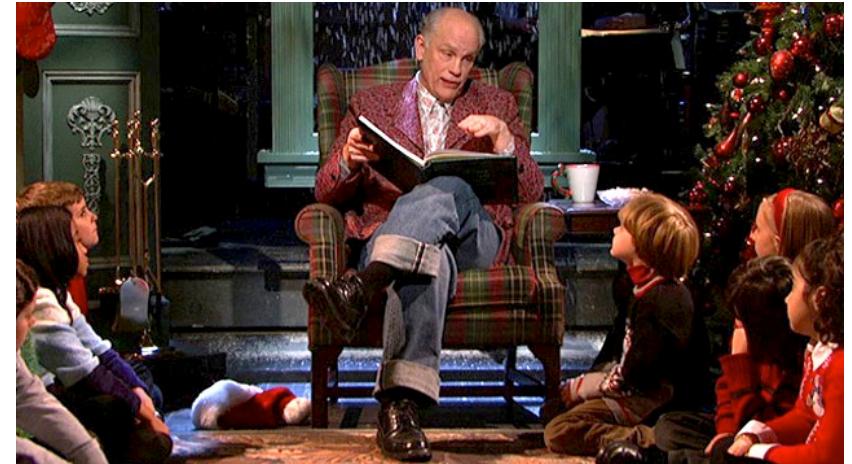
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 - Cautions
 - Storyteller may babble - Too long, too complex #tldr
 - Comparisons may be difficult (among others, see reference below)
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Framing (writing) scenarios

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 - Problem or opportunity
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In order to watch HBO, Tim opens the App which automatically recognizes him, saving him the time and effort of logging in, and proceeds to watch the latest episode of Game of Thrones.

Framing (writing) scenarios

S tells a narrative STORY

P includes PERSONAL details

I is IMPLEMENTATION-FREE

C CUSTOMER's story, not the product story

I reveals deep INSIGHT about customer needs

E includes EMOTIONS & ENVIRONMENT

R based on RESEARCH

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As a viewer, I want to subscribe to HBO online so that I can watch Game of Thrones on any device

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Towards a Minimum Viable Product (MVP)

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- A goal in agile is to try and construct Minimum Viable Products (MVP)
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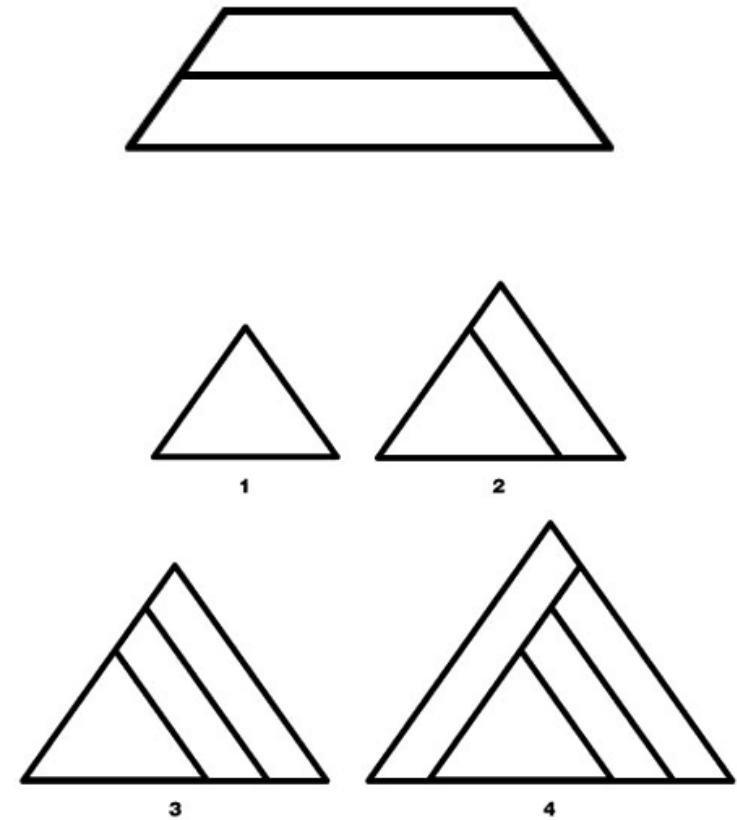
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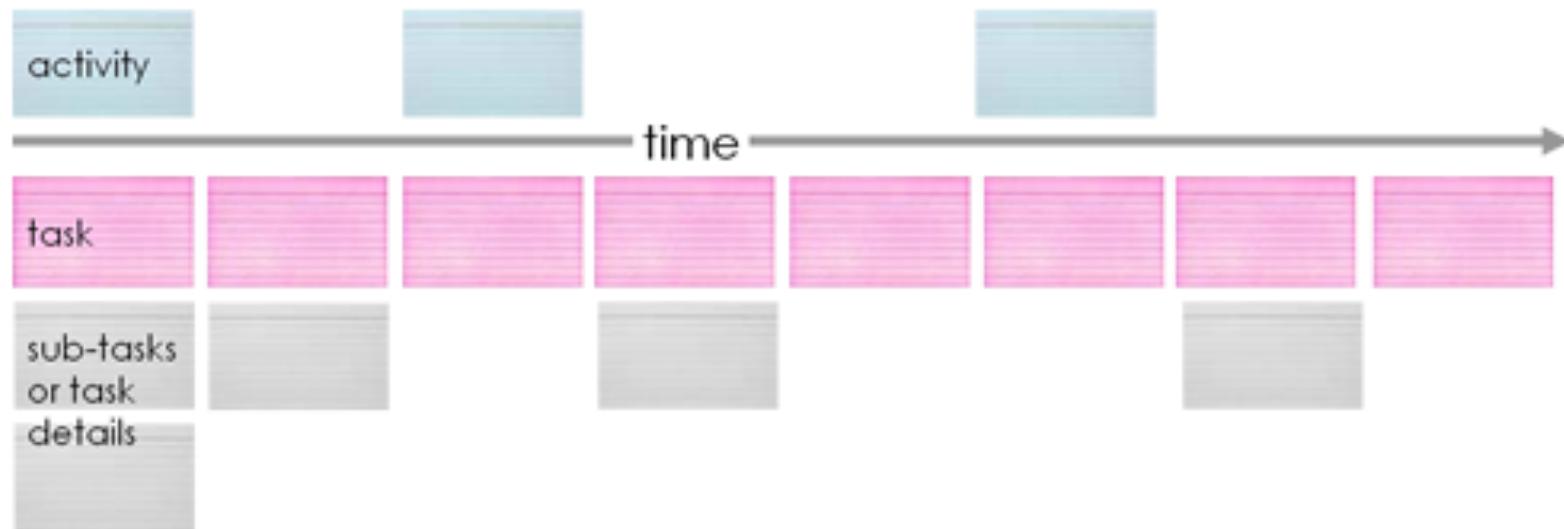
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User story mapping

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User story mapping

- User story mapping
 - Created by Jeff Patton



- Book available through [Safari online!](#)

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Elements of a USM

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Elements of a USM

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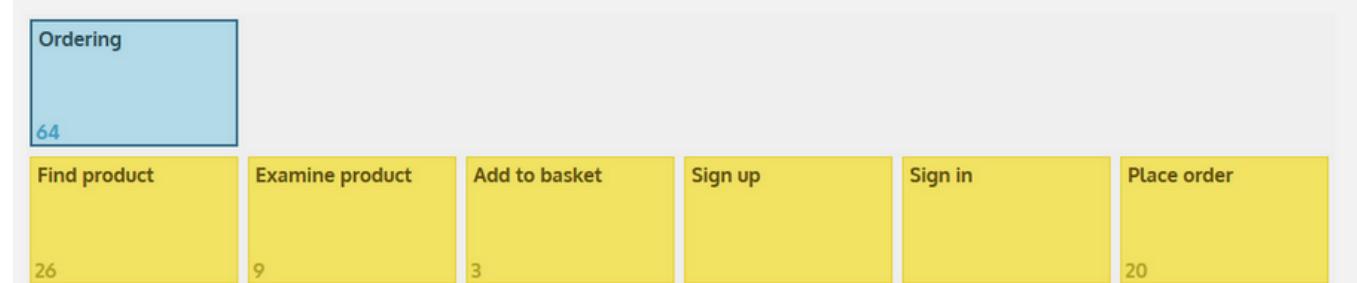
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Oh Hi Mark. As an online
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that I can buy cool stuff
like this football here

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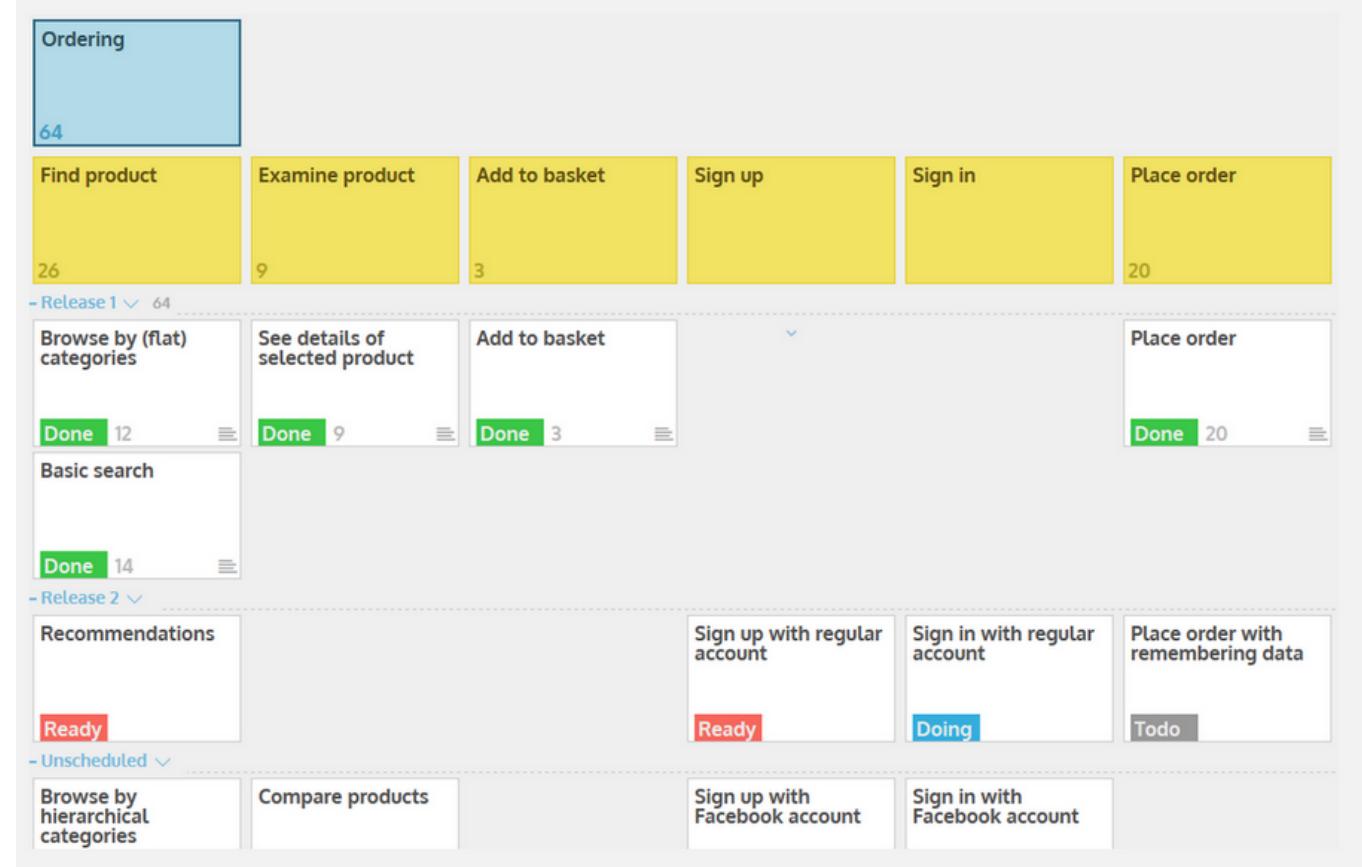
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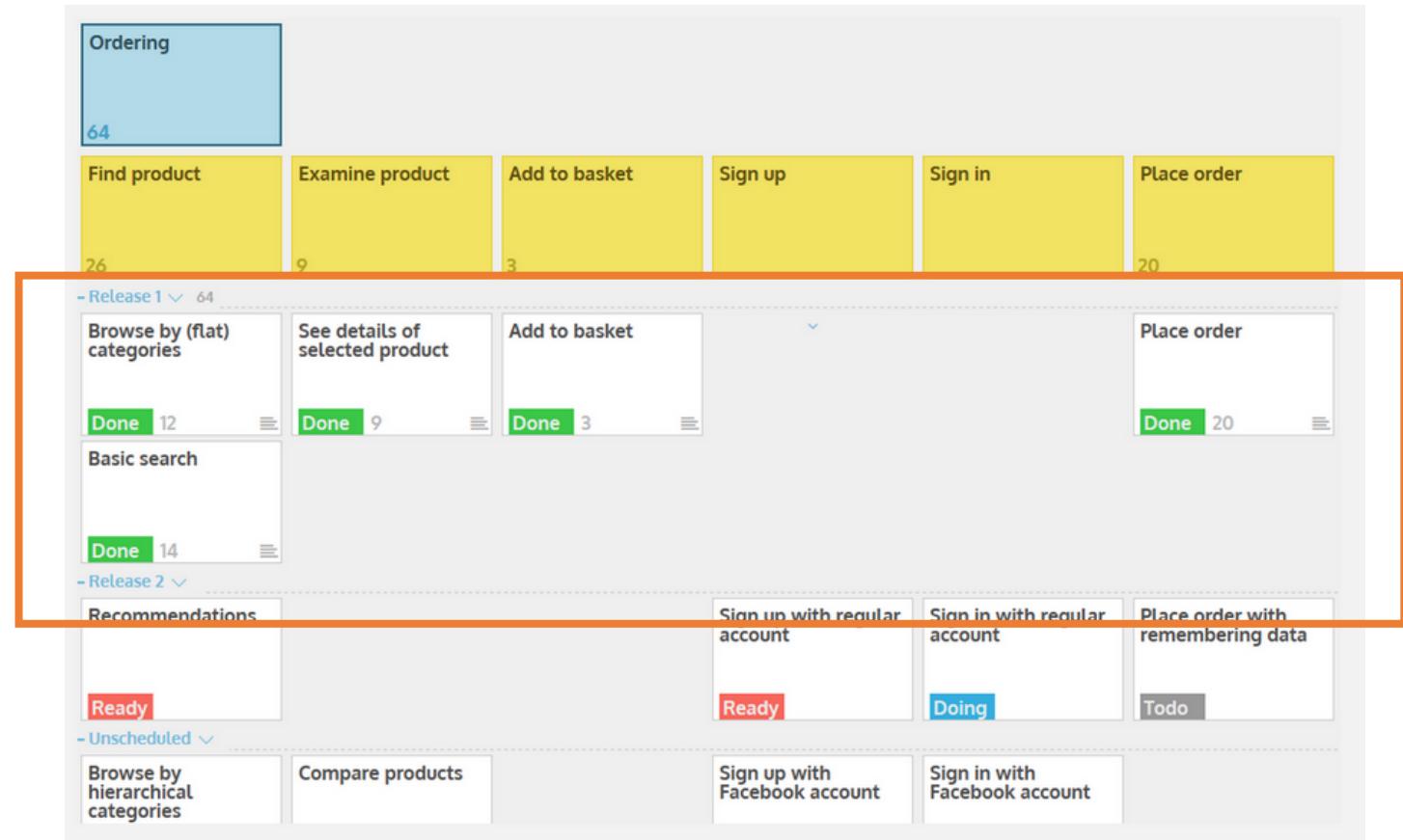
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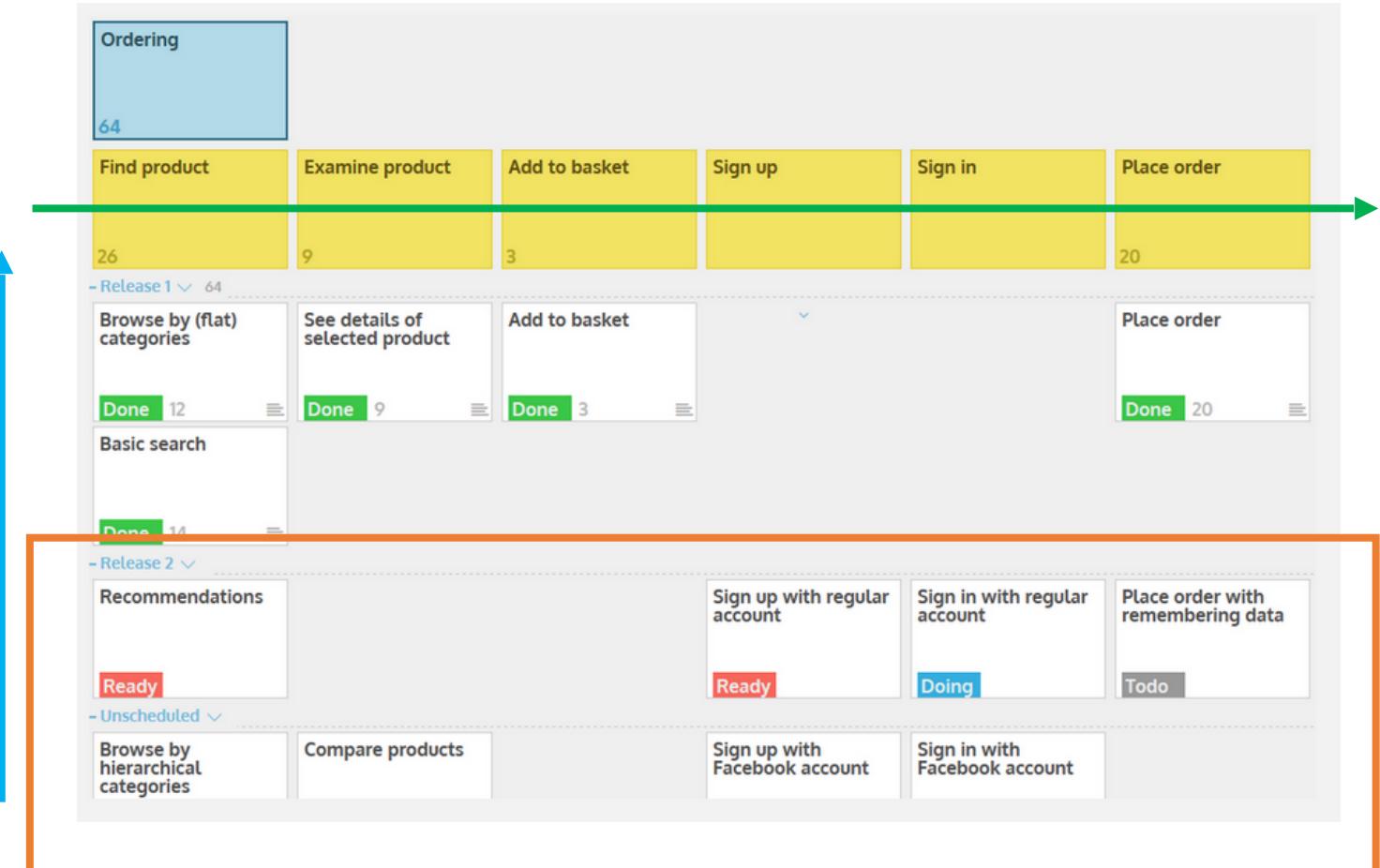
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HBO partial USM playground

HBO partial USM playground

< Trev & Tim's Sandbox

The board has three columns:

- Column 1 (Top Row):** Contains a blue card "Connect to HBO online" with a person icon, and two yellow cards "Sign up" and "Login".
- Column 2 (Top Row):** Contains a blue card "Watch HBO shows" with a person icon, and three yellow cards "Search for shows", "Add show to favorites", and "View favorites".
- Column 3 (Bottom Rows):** Contains three sections:
 - MVP 1:** Contains three white cards: "Sign up form" (Doing), "Login form" (Done), and "Search bar" (Doing).
 - MVP 2:** Contains two white cards: "Add to favorites button" (Todo) and "Favorites list" (Todo).
 - MVP 3:** Contains one white card: "Sign up using Facebook" (Todo).

Each card includes a small progress indicator icon (e.g., a bar chart icon) and a "Todo" button.

HBO partial USM playground

< Trev & Tim's Sandbox

MVP 1

- Connect to HBO online
- Sign up
- Login

MVP 2

- Sign up form
- Login form
- Search bar

MVP 3

- Sign up using Facebook

Card

Subscribers

Connect to HBO online

In order to watch HBO online, Tim, a bonified Game of Thrones fan, must open the App and first login to his account. A problem with this is that the system never remembers his password, and neither does Tim! Frustration sets in and he has to go into his webs browser's password vault to retrieve his password and then reattempt logging in to get his Game-on

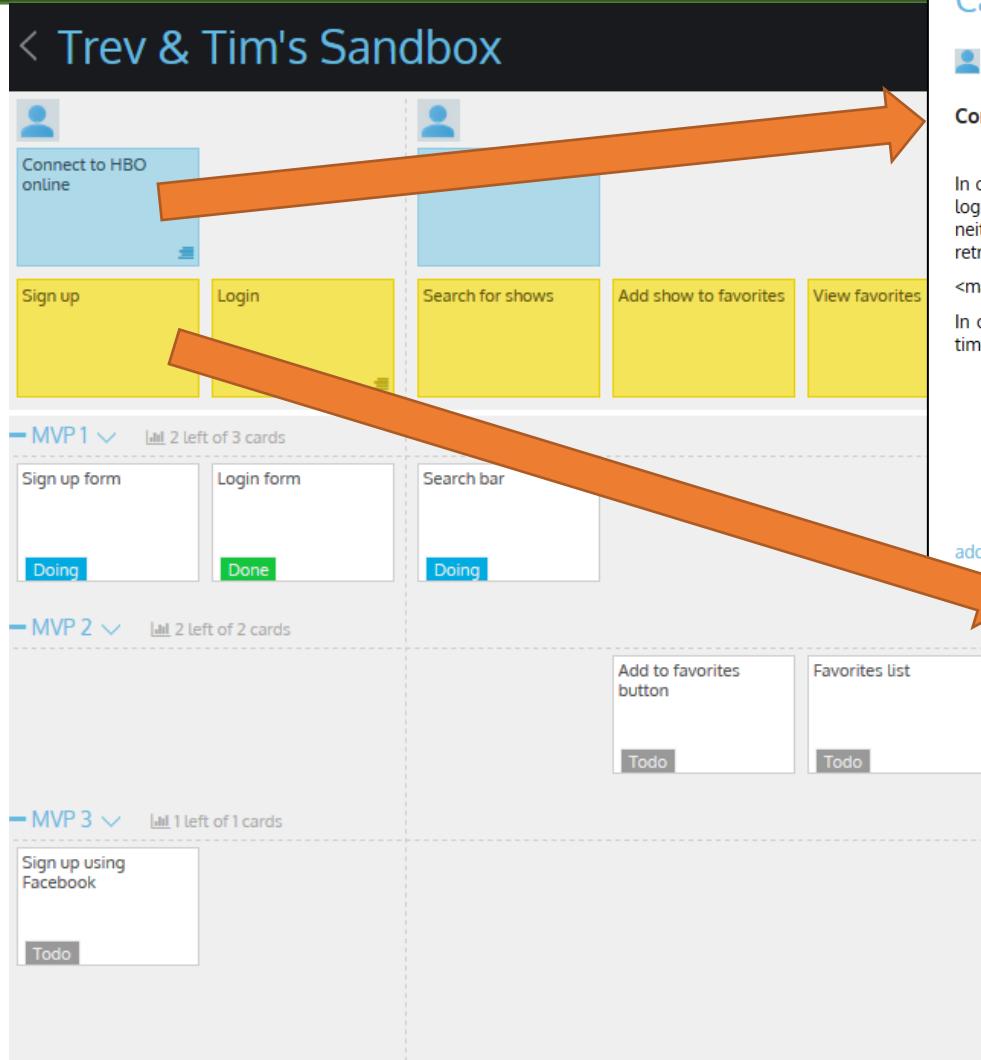
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In order to watch HBO, Tim opens the App which automatically recognizes him, saving him the time and effort of logging in, and proceeds to watch the latest episode of Game of Thrones.

Created by Tim Maciąg
Created about 6 hours ago
Card color Default

[add comment](#) | [add attachment](#) | [delete card](#)

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Created by Tim Maciąg
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Card

Sign up

As a viewer, I want to subscribe (sign up) to HBO online so that I can watch Game of Thrones on any device

Created by Tim Maciąg
Created 9 minutes ago
Card color Default

[add comment](#) | [add attachment](#) | [delete card](#)

Discussions/questions

- Features and functionality
- Team alignment
- Carryover
- False-consensus effect
- Data
- Stories
- Implementation detail

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