Understanding Design Methodology

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Understand
Understanding ends in **Insight**.

Empathy | Define

Create
Creation ends in **ideas**.

Ideate

Deliver
Delivery ends in **reality**.

Prototype | Test
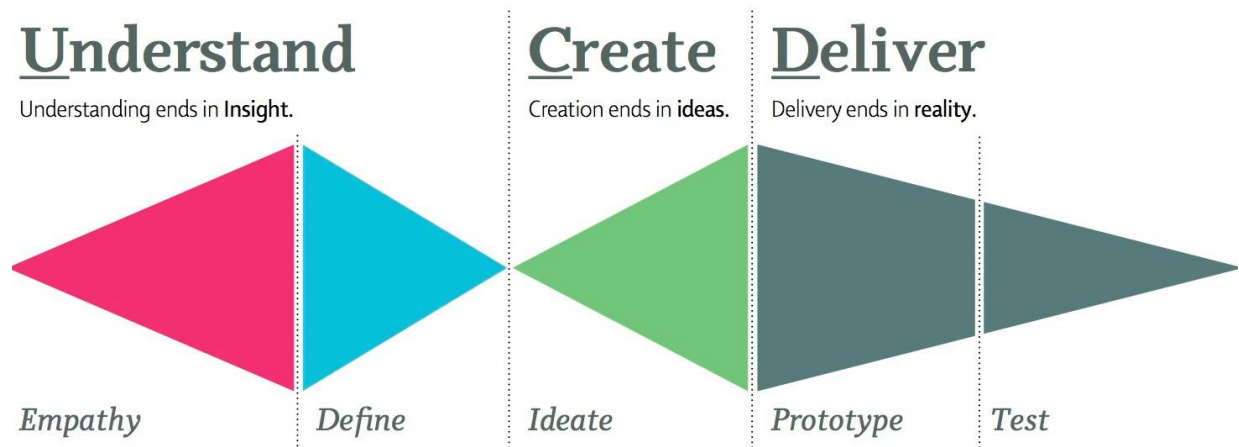
For facilitators:

Summary of our Workshop

- Estimated running time: 120 minutes
- This workshop aims to teach the power of design thinking and concentrated collaboration, primarily to address the problems faced by student and non-profit organizations. It introduces both of these approaches by first improving a certain real-life product, then transferring the skills gained from that process to a potential organizational issue.
- Design Thinking
  - The 5 aspects of design thinking are:
    - Empathize - consider the user's interaction w/ the product/process
    - Define - specify the problems that current users face
    - Ideate - brainstorm as many solutions as possible
    - Prototype - begin to constrain potential solutions
    - Test - present solution, consider pros/cons, receive feedback, repeat
  - *Note to facilitator:* We will not be mentioning these 5 divisions by name, but the workshop has sections that roughly correspond to each division. The structure of the workshop is to run from "Empathize" → "Test" twice (once thinking about a real-life product, and once thinking about an organization's problem)
  - Design thinking is heavily focused on how products/processes are *used* - how do they actually affect users? Participants should be focusing on the human interaction, rather than getting bogged down in the problem
- Concentrated Collaboration
  - Pulled from the "hackathon" community, where coders come together for 24-36 hours to solve a problem by collaborating on a software program

- Very nicely imitated by the workshop environment, where the focus is on quick thinking, lots of ideas, and jumping off other's suggestions

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- Read through the workshop
- Adjust time of workshop according to time constraints and size of participant group (e.g: consolidate "Empathize" and "Define" into one 15-minute block)
- Items required:
  - Roll of large paper (each group ideally needs at least 20" x 36")
  - Markers
- Pick **3 potential products** for improvement
  - We have found the options below work very well for the purpose of this workshop:
    - Travel Mug
    - Headphones
    - Shopping Cart
    - Trashcans
  - If you know **beforehand** that the participants share a common interest, and may have a very specific product they would like to improve (e.g. a group of artists may all hate their current paintbrushes), then you can allow participants to agree on a product not mentioned above
- Use the **2** potential organizations below and a **specific problem** they are currently facing
  - Large student organization having trouble including/involving all members
    - Example: USC Society of Women Engineers
      - The older members would typically not interact with the newer members, resulting in newer members not feeling very useful or welcomed
    - Example: High School Key Club
      - Community service outings with limited spots usually given to friend groups, tends to leave new members out if they don't already know people in the organization.
  - Poor communication and execution of a valuable mission
    - Example: USC Recycling
      - In charge of an essential task on campus, but no one knows about it, and no one recycles
      - Not enough bins, and not enough awareness
    - Example: Peaks and Professors
      - Runs hikes for students, taking along faculty members

- Students love the idea, but it's a new group, and very few people have heard of it
- Currently using Facebook, but it's not enough to communicate the opportunities for students

○ Again, if you know **beforehand** that the participants share a common involvement, and may already have a specific issue they are facing (e.g. student government leaders who cannot get enough attendance at events), then you can allow participants to agree on an issue not mentioned above

Introduction - (15 minutes)

- Icebreaker/introduction (5 minutes)
    ○ Name
    ○ Major/job
    ○ Anti-pitch the product you use that you most hate
        ■ Now each person will pair up with the person next to them
        ■ They will work together for 5 minutes to pick one of their most-hate products, and create a negative pitch or "anti-commercial"
        ■ *Explain to participants:* Think of an anti-commercial as a parody of a commercial - a way to highlight the product's flaws. Have fun with it - be as outrageous, sarcastic, or funny as you want.
- This workshop is designed for 10-12 people. Decide groups using their birth months (from now on, these small groups of 3-4 people will be referred to as **Small Groups**, while the entire group will be called **Collective**)
- **{Collective}** Interactive (2 minutes)
    ○ *Ask participants:* When you come across a problem in your organization, do you have a process in place to address that problem? What is that process?
    ○ *Explain to participants:* Keep that problem in the back of your mind as we go through this workshop - think about how that problem relates to this new problem-solving process. We'll get back to this near the end.
- **{Collective}** Introduce the workshop, cover the following points (6 minutes)
    ○ This workshop will introduce design thinking and concentrated collaboration, as very useful alternatives/additions to your current problem-solving process
    ○ We will use a real life product in need of improvement to practice these skills, and then transfer them to a sample problem faced by an organization.
        ■ *Note to facilitator:* If you've already decided to allow participants to pick their own **organizational problem**, mention that they should begin thinking about that now, because the group might have a chance to collaborate on solutions to that particular problem during the final portion

- **{Collective}** Introduce the three products you picked before the workshop - if you have a whiteboard, write them there. (2 minutes)
  - *Note to facilitator:* If you've already decided to allow participants to pick their own **product**, you can ask them to suggest one or two here (based on what their shared interests are)

"Empathize" (15 minutes):
- **{Small Groups}** Discuss the three products you just wrote on the board (6 minutes)
  - Think about the last time you used these
  - *Ask participants:* Questions should include the following:
    - How do you use it?
    - How do others use it? (Mother, Friend, Grandpa, etc.)
    - What other interactions occur while you're using it? How do these influence how you use it?
    - What would your life be like without this product?
- **{Collective}** Come back as a whole and discuss as a whole. (7 minutes)
  - Push them further than the questions earlier.
  - Take notes on the board, especially which features are important based on how it's used
  - *Ask participants:* Questions can include the following:
    - Why do you use this product?
    - How does this product enhance your daily life?
- **{Collective}** Vote on one product to improve (2 minutes)

"Define" (7 minutes):
- **{Collective}** As a whole group discuss problems with the chosen product (you can erase the others, and take notes on the board)
  - *Ask participants:* Questions should include the following:
    - What are these problems?
    - How do they detract from the user's experience?
    - How could these issues be improved?

"Ideate" (15 minutes):
- **{Small Groups}** Individual groups are now tasked with coming up with improvements to the product (Should use banner paper and markers to all sketch out ideas - just one side for now. Everyone in the group can use their own portion of the paper - does not have to be organized.)
  - *Note to facilitator:* Emphasize the following:
    - Quantity over quality - no idea is a bad idea

- ■ Sketch quickly
  - ● Be as visual as possible!
- ■ Think outside the box and have fun
- ○ *Explain to participants:* There are no constraints - ideas need not be feasible, old chap. Don't worry about cost or the engineering details. Again, all ideas are good ideas

"Prototype" (10 minutes):

- ● **{Small Group}** Moderators should check in, as groups start to move from a ton of ideas to the most useful ones (6 minutes)
  - ○ *Ask participants:*
    - ■ What have you come up with so far?
    - ■ Which of these ideas most enhance the user experience?
    - ■ Which ideas are likely to be unnecessary?
      - ● *Explain to participants:* This is the part where we try to identify which ideas are feasible and which are not. These improvements need to be physically possible. Elaborate more on functionality - a*ttempt* to solve engineering problems. Identify whether or not these improvements target a specific group of users. There is still *no* cost restriction.
- ● **{Small Group}** Groups finalize their concepts, by moving from quantity to most quality ideas (4 minutes)

"Test" (10 minutes):

- ● **{Collective}** Groups come together to present what they've each come up with.

Combine Ideas and Reflect (10 minutes):

- ● **{Collective}** Facilitators should lead one last drilldown session, to attempt to combine the best of each group into a feasible product (4 minutes)
  - ○ *Note to facilitator:* If each group's ideas happen to conflict with each other, lead the group into recognizing why their improvements won't work together - for example: they might be targeting different users or different issues. Reflect on the pros and cons of each.
- ● **{Collective}** Reflect on the process of how everyone came together and used design thinking to end up at the final design (6 minutes)
  - ○ *Explain to participants:* Think about how we can use these skills to solve problems in a broader, organizational context
  - ○ *Note to facilitator*, **ask questions** that bring up these lessons:
    - ■ Ideation is all about being quick, coming up with lots of ideas, without caring too much about which ideas are good

- ■ We want to enthusiastically collaborate - during brainstorming, we don't say no
- ■ During ideation and prototyping, always go back to the **user** - how will people be interacting with this product/process?

Switch to Non-Profit Example
Introduction (3 minutes):
- ● **{Collective}** Explain that we'll now be quickly applying what we just learned to a non-profit example

"Empathize" / "Define" (10 minutes):
- ● **{Collective}** Present and choose a non-profit's problem/issue (5 minutes)
  - ○ *Note to facilitator:* If you have decided to allow participants to suggest their own **organizational problem**, now is the time for them to suggest that.
    - ■ If no one has any ideas, present the 2 options we pre-selected
  - ○ Pick the problem that most interests the group
  - ○ *Note to facilitator:* The most effective problem will be specific enough that participants can agree on the exact issues to address. Feel free to use our "Examples" underneath each broader **organizational problem** to help accomplish this
- ● **{Collective}** Go through the "empathize" / "define" process for the selected issue (take notes on the board) (5 minutes)
  - ○ *Ask participants:* Again, questions can include the following
    - ■ Who are the "users" of what this org is trying to do?
    - ■ How does it affect the "users"?
      - ● How does it uniquely fit into the different lives of "users"?
    - ■ What are the motivations for getting involved with this group/activity?
    - ■ What are the current issues with this group/activity?
    - ■ How are users being prevented from enjoying it/getting involved?

"Ideate" / "Prototype" (15 minutes)
- ● **{Small Group}** Flip over the paper used for the product, and brainstorm solutions for this issue, always based on what will help the end "users"
  - ○ *Explain to participants:* The following instructions emphasize the brainstorming process:
    - ■ Be Visual! (last time, it was really easy to prototype, since it was a tangible product. It will be harder to be visual now, but try your best)
    - ■ Quantity over quality at first, then identify what's the most useful
    - ■ Limited time, so collaborate quickly - there are no dumb ideas, everything is valid

- ○ About halfway through, facilitator should check in with groups and encourage them to move towards a specific, implementable solution

Conclusion Discussion (10 minutes):
- **{Collective}** Each group will briefly present their ideas, and then discuss how these skills are relevant in organizations
  - ○ *Ask participants:* Potential reflection questions:
    - ■ How do you see yourself using "design-thinking" or this type of thought-process in solving problems within your organization?
    - ■ How is this any different or similar from how you've been handling problems before?
    - ■ What are the benefits of collaborating in a shorter, highly-focused time period as opposed to prolonged, individual brainstorming?