



Design Thinking Skills & Public Management

Pre-Class Lecture

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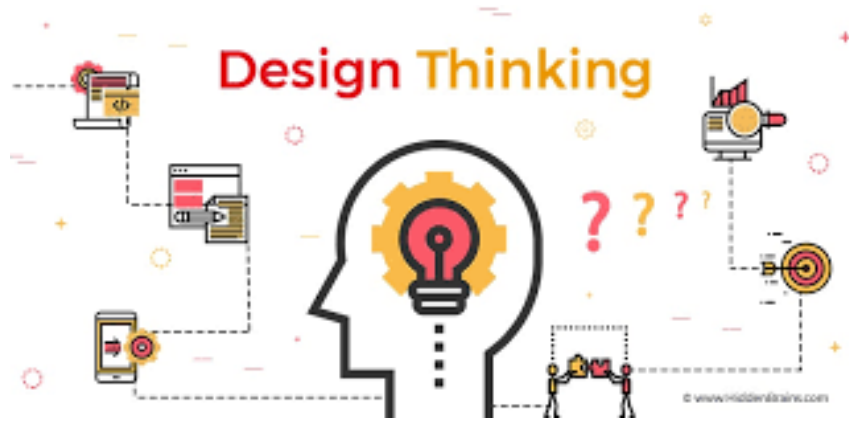
- What is design thinking?
- Why is it necessary? – Changing policy environment & complexity
- How do design thinking skills help better government services?
- How to do design thinking in practice?
- Design thinking practice in class - guideline

What is Design Thinking & Why?

- Design thinking – an iterative process in which we seek to understand the user (customer, people), challenge assumptions, and redefine problems in an attempt to identify alternative strategies and solutions that might not be instantly apparent with our initial level of understanding.
- Extremely useful in tackling problems that are ill-defined or unknown. Human-centered, creative, solution-oriented approach.
- Developed in private sector (IDEO, Stanford Design School, etc.) but now popular in public sector as well. Why?
 - Increased inter-connection and diffusion.
 - No longer depends on well-defined, discrete territorial and jurisdictional system of governance.
 - No longer effective top-down problem-solving
 - Increased complexity ('wicked problem'): e.g. climate change
 - Blurred governance (numerous stakeholders, interests, citizens)
 - Declined trust in government
 - Design became – 'strategic' → linked to innovation, creativity

If Successful: Benefits

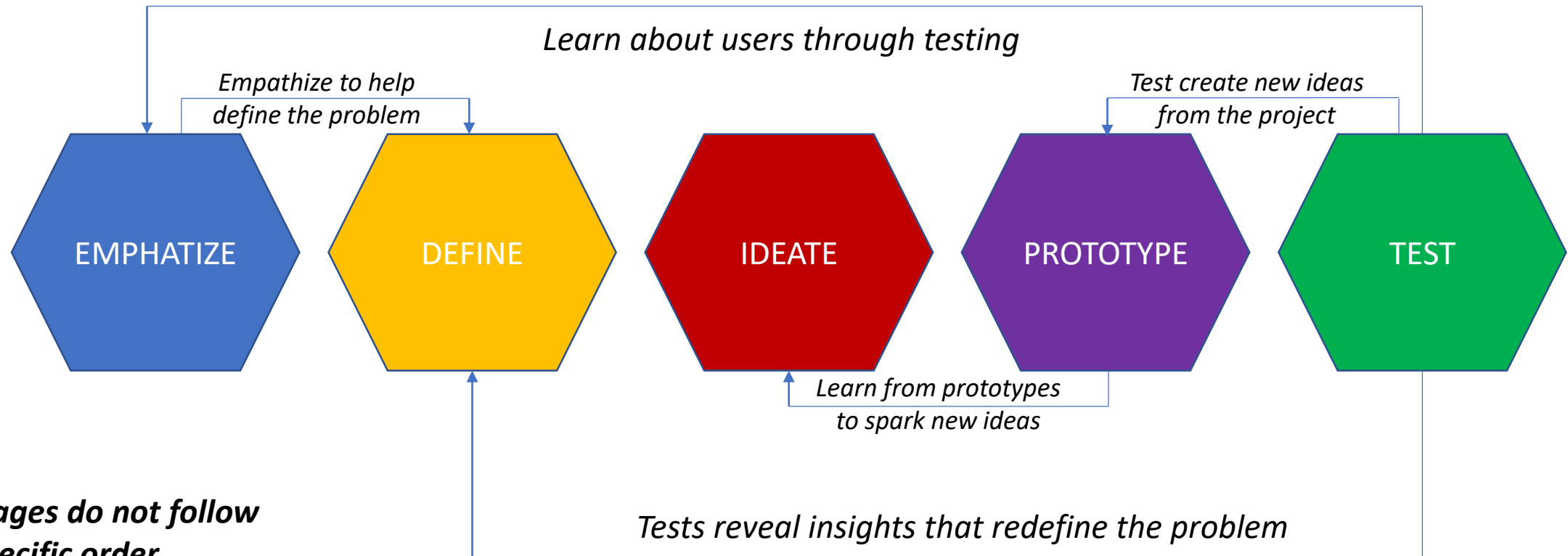
- Improve (public and private) service delivery: much deeper understanding of the needs the recipient of government services.
- Eliminate potential barriers to accessing and using government programs (e.g. California's food stamp program).
- Eliminate programs solving the wrong or unexciting problem.
- Save large upfront costs, **through rapid prototyping, iteration, and testing** (c.f. waterfall approach): **quick feedback** from users and decrease the costs and the risk of failure.
- Build capacity and work across silos.



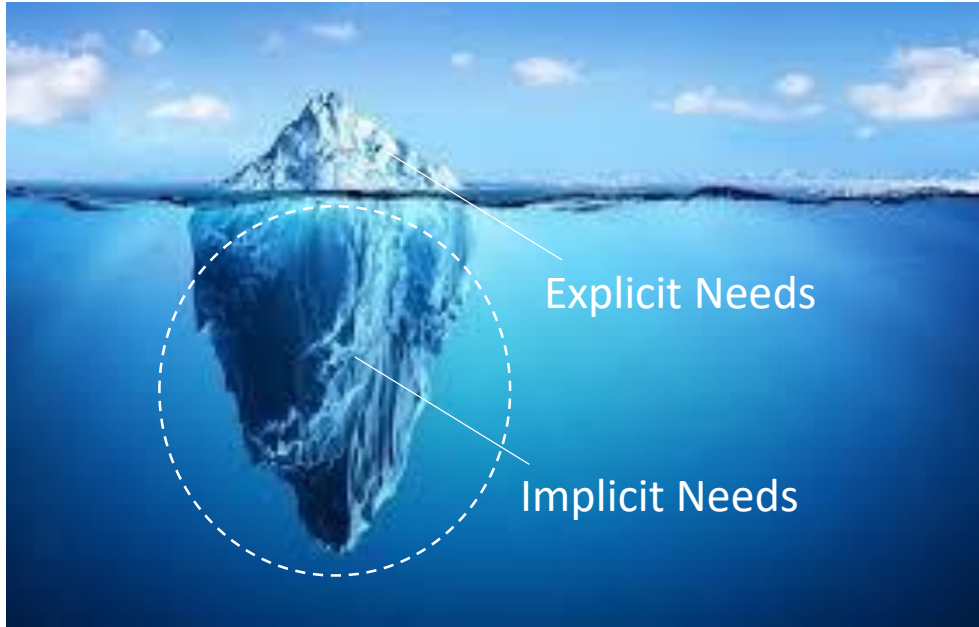
*How to Do
Design Thinking
in Practice?*

Design Thinking Process

- Developed by Stanford University Design School and IDEO – mostly widely used design thinking process model. This is a **non-linear** process.



Identifying (Understanding) 'Needs'



How to identify (understand) a. explicit needs and b. implicit needs (methods)?

- Design thinking cannot begin without a deeper understanding of the people you are designing for.
- It is important for you as a designer to empathize with the people you are designing for so that you can understand their needs, thoughts, emotions & motivations.
- Human-centered innovation: first step is to understand their needs (problem).
- **Problem** = the condition that desire (need) is not satisfied continues. (e.g. stress, inconvenience)



Trick-eye Crossroad



Positive Deviance Program in Vietnam (Malnutrition)



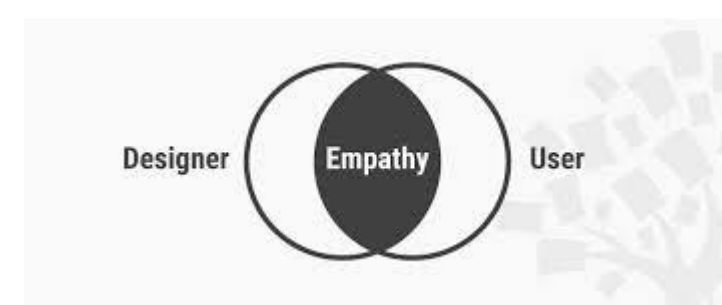
'Yellow carpet' for children safety



Colored traffic guide

- Some examples of user-centered (human-centered, customer-centered) service design – 'empathize' with the people is critical step.

Empathize



- Then, how to identify (understand) people's needs (in particular, implicit needs) – three ways, a. Observe, b. Engage, and c. Watch & Listen. To empathize, you:
- **Observe:** View users and their behavior *in the context of their lives*, not yours. As much as do observation in relevant contexts in addition to interviews. Observe (and record) what they do, how they do, and why they do. Minimize your interpretation and use memo, photo, recording, video, etc. (choose most suitable method).
- **Engage:** Similar to interviewing, but feel more like 'conversation.' Prepare some questions you would ask, but expect to let the conversation deviate from them. Keep the conversation only loosely bounded. Elicit stories from the people you talked to, and *always ask 'why'* to uncover deeper meaning.
- **Watch and Listen:** *Combination of 'Observe' and 'Engage.'* Ask them, have them physically, go through the steps, interact with the subject, used the environment to prompt deeper questions.

How to do Interview (to empathize) (1)

- In their natural environment, the design thinkers engage with the people in interviews. - **imagine ourselves in these users' environment, or stepping into their shoes as the saying goes**, in order to gain a deeper understanding of their situation.
- Ask why questions (ask specifically).
- Seek their **storytelling**, instead of stating facts (reveal interviewee's worldview, etc.) → a good way to establish **rapport** & connection. (e.g.) **If you need to understand what's trending with teenagers, try asking what they would buy with \$150.**
- Pay attention to interviewees' abnormal behavior, attitude, non-verbal expressions, etc.
- Do not be awkward in silence. Do not influence the interviewee. Ask value-free (neutral) questions. Take specific situation or examples.

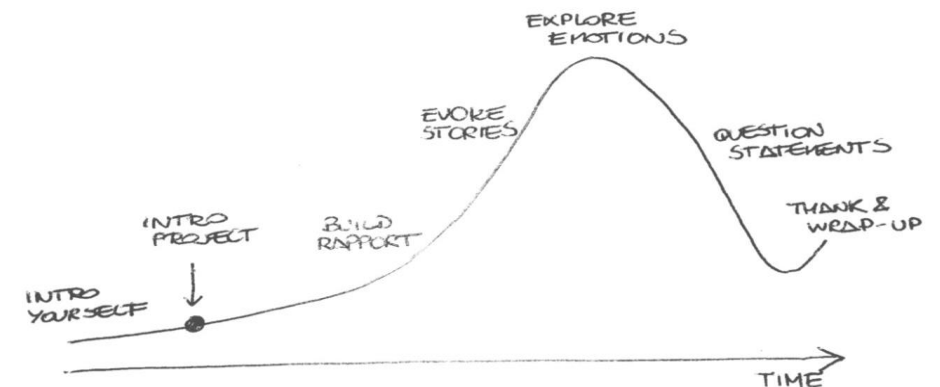
Interview Form (Example)

Order: 1) Select Interviewee; 2) Make Questionnaires; 3) Interview; 4) Summarize & Analyze Interview

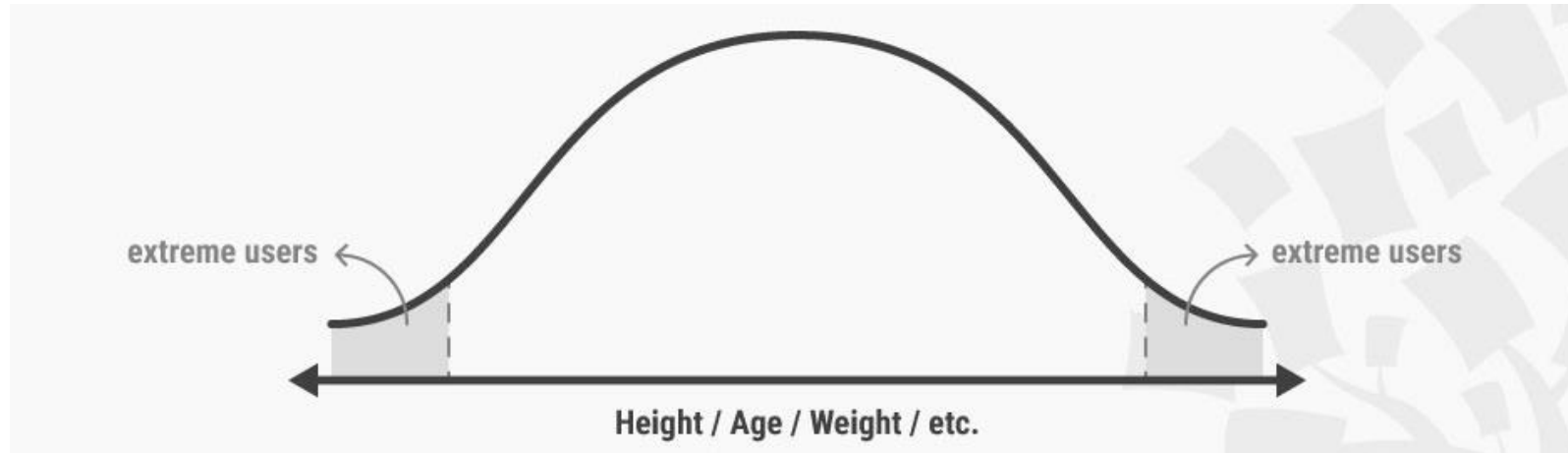
Select Interviewee	Make Questionnaires
Field Interview	Summarize & Analyze Interview

Interview Questionnaires: Make questionnaires & and after interview, record (notetaking) the interview in detail. |

1. _____
2. _____
- ...



Interviewing Extreme Users (2)



- Extreme users are few in number, but you should not disregard them. They can provide excellent insights that other users may simply be unprepared to disclose.
- If you can manage to please an extreme user, you should certainly be able to keep your main body of users happy.
- The needs of extreme users tend to overlap with the needs of the majority of the population → You may not be able to keep everyone happy at all times with your design, but you can certainly improve the chances that it will not frustrate users.

Story Share-and-Capture (3)



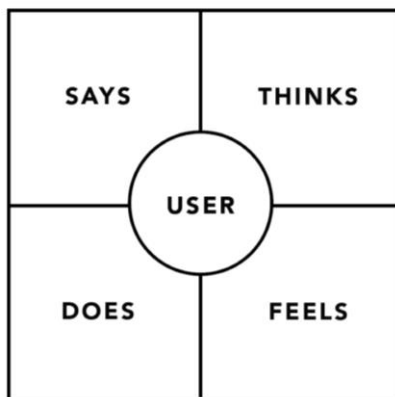
- After observing the subjects or interviews, your team share the result of it with your teammates and share information about users.
- Share information that may be valuable, surprising, or interesting – write down on sticky notes, classify the notes with themes.
- <Practice>

Team members take turns sharing their interviews.

When a team member present, the other members summarize ‘valuable,’ ‘surprising,’ or ‘interesting’ things on sticky notes.

Find patterns.

EMPATHY MAP



(e.g.) GE's MRI for Children

- Diagnostic imaging procedures are cutting-edge technology but often they are an unpleasant experience for patients – even for pediatric patients (children).
- Doug Dietz – an industrial designer for GE healthcare remembered a little girl who was crying on her way to MRI designed by him.
- Challenge – create a scanner children would love.
- Approach – human-centered. Observing and gaining empathy for children. Interviews.
- Implementation – created a series of first prototypes of what would become the 'adventure series'



Point of View Statement: MRI Case

- **Problem situation:** Because of the fear of children and resistance to the MRI machine, sedatives are inevitable → affect the number of daily patient who has to be scanned.
- **Method:** human-centered design thinking
- **Point of View Statement**

Customer (Name)	This pediatric patient _____
Customer's Needs	Needs to overcome the fear of MRI machines and Noise
Point of View	Because getting a sedative every time (MRI) is not efficient.



(e.g.) Keep the Change Program



- Motivation: Observed that customers pay cash at grocery stores or restaurants → keep the change and deposit at the bank later.
- IDEO (a Design Thinking company) and Bank of America come up with a debit cards, called Keep the Change.

Keep the Change.™
Save automatically with everyday purchases.
A Free Service – Only from Bank of America



- In the program – each purchase is rounded up to the nearest dollar, and the different is moved to an interest-bearing savings account.
- In addition, BOA will match that amount 100% for the first 3 months, and 5% thereafter.

Other example of Point of View Statement: How to increase customers' loyalty to our market?

Interview with a grandmother with two daughters, a son, and five grand children

Design thinker: Please tell us about your most recent experience in supermarket

Grandmother: Yes I woke up yesterday morning and opened the fridge and found out that there was no fresh bread. So, I went to the supermarket to buy bread. My house is right in front of the supermarket.

Design thinker: How about buying frozen bread and baking it at home?

Grandmother: I agree. But if I do that, there is nothing I need to do in the morning. Because I go to supermarket every morning, I can go out everyday and get some fresh air.



Customer (Persona): 75 years old grandma who live alone, with two daughters, a son and five grandchildren.

Needs (in verbs): Need to buy groceries

Superficial reasons:

1. To have fresh bread for breakfast everyday
2. To feed them well when my family visits
3. To get information about product directly from a clerk

Your insights:

1. Grandma actually enjoys going out everyday because there is nothing special to do.
2. Grandma wants her family to feel that she is still important.

Good Point of View (POV) Statement

- Task: How to lead teenagers to have good foods with vitamins.
- You need to have more specific statement

Elements	Normal POV	Good POV	Condition for Good POV
Customer	A teenager	A 14 year old girl starting new semester	Talk about specific customer
Needs	It is necessary to eat healthy food	Even when eating health foods, it is necessary to get a socially acceptable feeling	Describe deeper needs (potential needs)
Insights	Because certain nutrients are essential for physical health and cognitive development	Because she feels more important not to be bullied than to eat healthy foods among her peers	Describe some surprising things that were discovered during empathy (deeper root of the needs)

A Step Further: How Might We (HMW) format

- Ask 'how might we' questions for brainstorming: Choose 3~5 questions. You will get more ideas from participants and teammates. Choose best questions to solve the problems suggested in POV.

I interviewed a male worker in his 30s. He is busy with work and lacks time with his family. He was sorry for not being able to help his wife or play with his children. He was sorry that he could not take care of family, especially when there were problems. He wants to spend more time with his family. He said he would be happy if you gave gifts to his children. Currently the family is in Hanoi, and he works in Ho Chi Minh.

Interview Result

The male worker (customer) need a way to spend more time with his family. Because (insights),

He worries about his family
He is sorry for not being able to help his work (housework) and to play with his children
He believe that giving gifts to his children will make them happy
He want to see his family more often
Children live in Hanoi and he works in Ho Chi Minh

Point of View Statement

How Might We~:

1. *How might he take care of his family problems?*
2. *How might he be less sorry for his family?*
3. *How might he see his family more often?*
4. *How might he give gifts to please his children?*
5. *How might he work at a place that is close to the family?*

Convert POV to HMW format

A Practice:
POV →
HMW

_____ needs to find a way to _____

Customer's name

Customer's needs

Because,

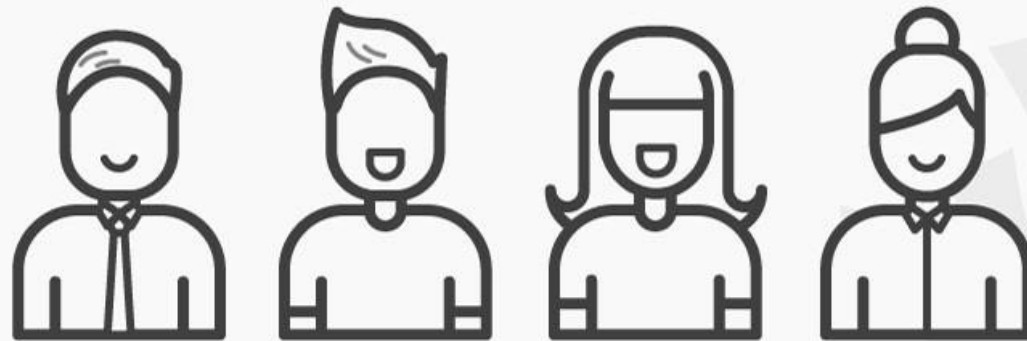
(Write your insights)

List 'How Might We' questions and choose the best ones.

(Write HMW questions here)

Now, your
class
assignment
(Persona)

Personas



How to get more information from your user (customer)?

What are Personas?



- Before starting a product (public service) design, it is very important to know clearly the demand of users. Persona is distilled essence of real product (service) users. Persona is a data modelling method based on observation.
- We build empathy with target users, focus on their world, share insights/knowledge with other stakeholders to gain consensus, make defensible decisions reflecting the persona's exact needs.
- Definition - The Persona definition is that **one or several fictional characters** that can **represent the majority of the potential users of product (or service)** with conventional user demands and they are created through a great amount of quantitative and qualitative research.
 - Examination of the comprehension about users
 - User-centered (human-centered) approach
 - Adapt designers decision based on the persona
 - Time-saving – a way to replace some traditional user demands research method

Typical Process

1. Find out who are potential customers (users) to know what we must know (age, gender, education, etc.)

Questionnaire, interview

2. Determine who is our user in the interviews and collect extensive data on target user.

e.g. Extreme user's picture, values, interests, education, lifestyle, needs, attitudes, desires, limitations, goals, behavioral patterns

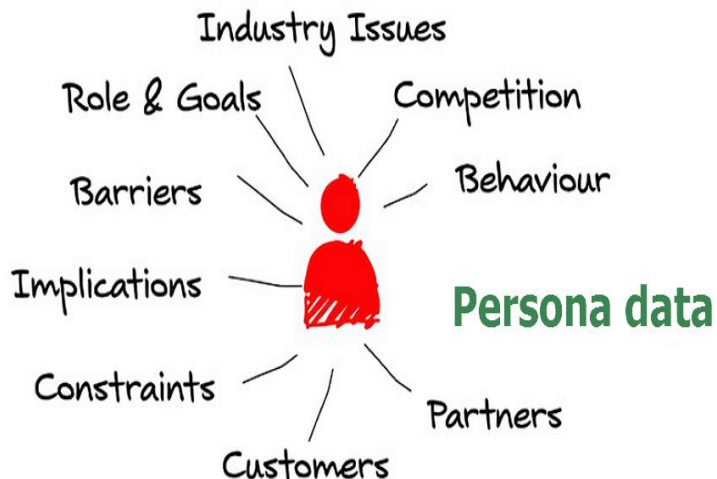
3. Develop a hypothesis from the research, determining the qualities of and differences between users.

After that to make an abstract image of a certain kind of potential users

4. Describe several situations / scenarios prompting the persona to use our product – put them in context with problems to overcome

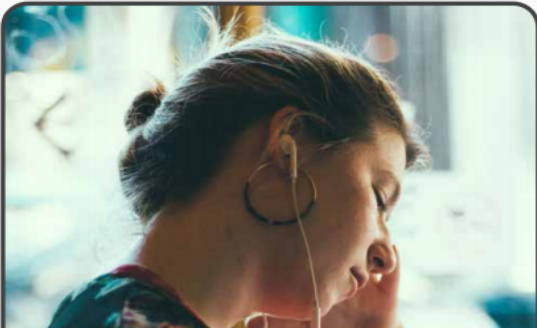
Make continuous adjustment (revise, add, discard, etc.)

Should be realistic, relevant





(e.g.) Spotify design team

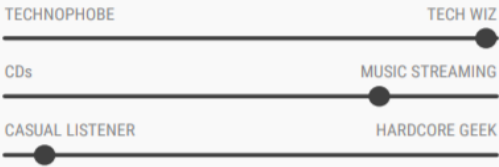


Rebecca

Casual audiophile

Age 26
Occupation Frontend developer
Education Bachelor degree
Marital status Single
Location Mountain View

Online locations Work and mobile
Computer(s) iPhone and MacBook Pro
Internet usage 8-9 hours



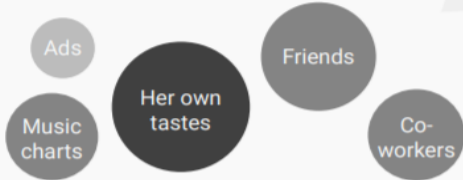
Music is essential to Rebecca's life. She is listening to tunes almost every second of her life, particularly while working.

- Obstacles Rebecca faces:**
- Too busy to explore new music artists she might like
 - Streaming music consumes a lot of data

How will Rebecca interact with Spotify?

- Questions Rebecca will ask:**
- How do I keep updated on new releases by artists I follow?
 - How do I learn of new artists I haven't heard of?
 - Can I listen to music in a data-efficient manner?
 - How can I listen on both my MacBook and my iPhone?

Who influences Rebecca?



Rebecca's situation

- Goals, motivations:**
- Listen to great music to keep her productive at work
 - Relax and unwind at the end of the day
 - Superior music quality for full enjoyment of tracks
 - Expand the circle of music artists she listens to

Key words
music, jazz, r&b, pop, artists, new releases, top charts, background music

Rebecca's story

Music is a big part of my life; I like to think that I always have a "background music" running in each scene of my life. I love working while listening to music; somehow, it gives me a lot of focus on my task.

I regularly talk to my co-workers about music and singers — that's what we like to talk about over lunch. We're constantly looking for new artists to inspire us and to expand our music library, but lately it seems a little tough to do that. Everything seems to have a "filter bubble" effect, and we keep listening to the same genres and artists.

I really enjoy finding new artists that match my subjective taste, and most of the times I get those from my close friends. I wish there were a way to find more music and artists without having to rely on the serendipity of life!



Goals & concerns



A short scenario to indicate the persona's attitude.

In-Class Design Thinking Assignment – Create a Persona



- Design thinking team assignment – you are required to be a member of one of student teams and participate in design thinking assignment (creating a persona).
- Assume that you are members of Academic Affairs Team at Fulbright School of Public Policy and Management & designing an ‘Fulbright Support Program’ to help students who are academically struggling in class.
- Do research (e.g. interviews) and find people who seems need your team’s help (potential program beneficiary). Interview them, collect information, share and discuss the target person.
- Present your persona