

# Interpretation and Define Problem

CP1403

Design Thinking

# Topics

- Interpretation and Define the problem
- Design Thinking methods for Define
  - Story Share and Capture
  - Saturate and Group
  - Empathy Map
  - 2 X 2 Matrix
  - Journey Map
  - Composite Character Profile /Persona
- Point of View Madlib
- Point of View Want AD
- Why and How Ladder

# Readings

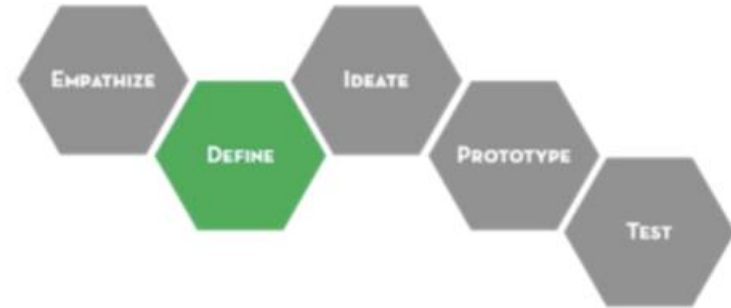
- SPRINT
  - Chapter 6 pages 73-82
  - Chapter 7 pages 83-88
  - Chapter 8 pages 95-102
  - Chapter 10 and 11
- Design for Software: A playbook for developers , p18-20

# Before Lecture

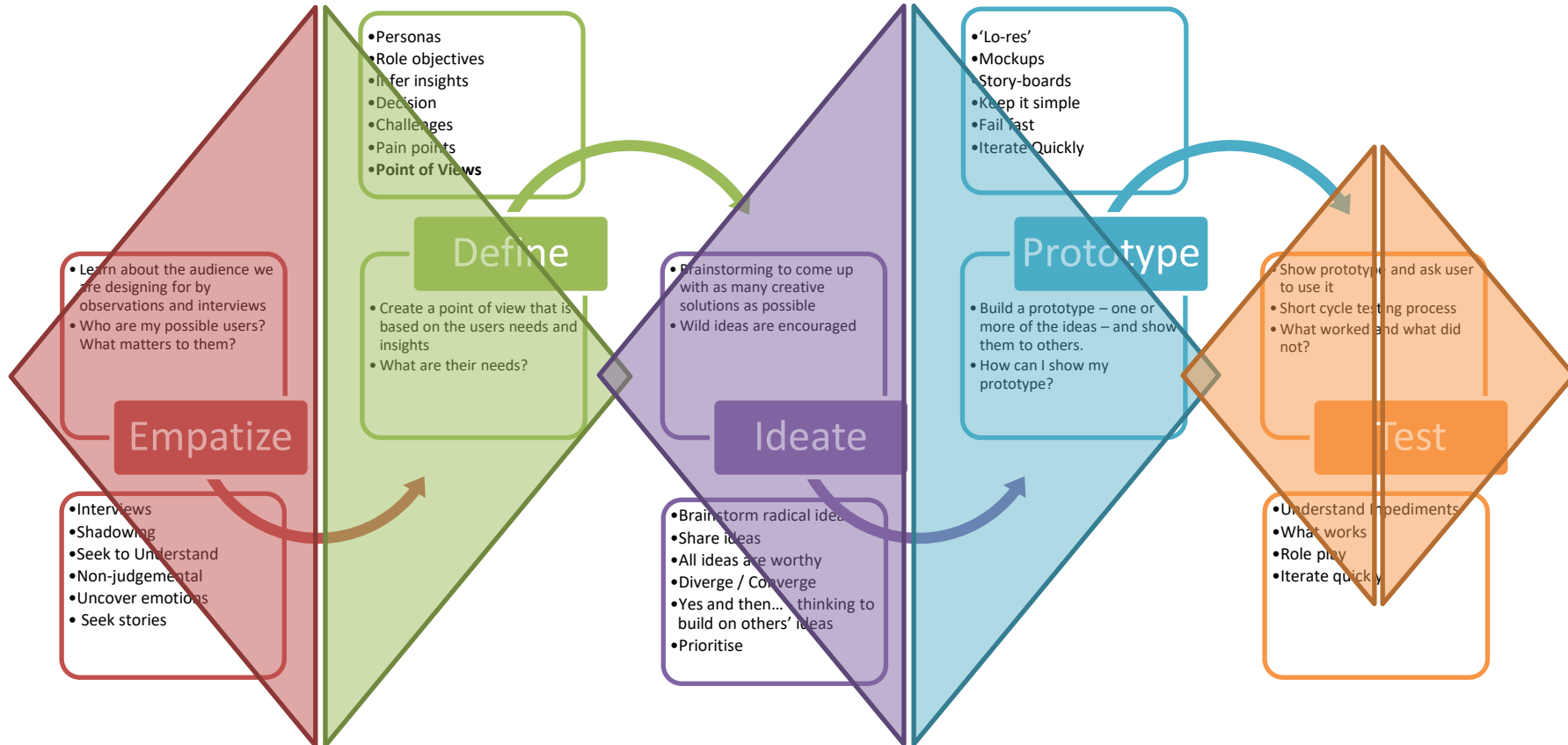
1. Team work on Assignment project!
2. Continue the task you started earlier with Airbnb:
  - Watch Video How design thinking transformed Airbnb from failing startup to billion-dollar business <https://youtu.be/RUEjYswWwPY>
  - Write down 5 key points about design thinking is used by Airbnb,
  - and now focus on one specific type of user:
    - Select and define this user
    - Write down what they need the Airbnb system to do for them (at least 5 items)
3. Reading tasks:
  - Empathy Mapping: A Guide to Getting Inside a User's Head (<https://www.uxbooth.com/articles/empathy-mapping-a-guide-to-getting-inside-a-users-head/>)
  - 10 Tips to Develop Better Empathy Maps (<https://xd.adobe.com/ideas/process/user-research/10-tips-develop-better-empathy-maps/>)
  - SPRINT - Chapter 2, pages 29 – 37
  - What is Project Management by PMI, <http://www.pmi.org/About-Us/About-Us-What-is-Project-Management.aspx>
  - Scrum reference card, <http://scrumreferencecard.com/ScrumReferenceCard.pdf>
  - A tip for effective meetings: Always be capturing, <http://www.gv.com/lib/a-tip-for-effective-meetings-alwaysbecapturing>

# Interpretation / Define

- Define process focuses on developing a deep understanding of your users and, based on that understanding, to come up with (define) an actionable problem statement: your point of view(POV).



# What is design thinking?



# Define is about making sense

- **WHAT** is the Define mode
  - The Define mode of the design process is all about bringing clarity and focus to the design space.
  - It is your chance, and responsibility, as a design thinker to define the challenge you are taking on, based on what you have learned about your user and about the context.
  - The goal of the Define mode is to craft a meaningful and actionable problem statement – this is what we call a point-of-view.
  - This should be a guiding statement that focuses on insights and needs of a particular user, or composite character. Insights don't often just jump in your lap; rather they emerge from a process of synthesizing information to discover connections and patterns.
- **WHY** Define
  - The Define mode is critical to the design process because it results in your point-of-view (POV): the explicit expression of the problem you are striving to address
  - The Define mode is also an endeavor to synthesize your scattered findings into powerful insights.
  - It is this synthesis of your empathy work that gives you the advantage that no one else has: discoveries that you can leverage to tackle the design challenge; that is, INSIGHT.
- **HOW** to Define
  - Develop an understanding of the type of person you are designing for – your USER

# Goal of the Define Stage

- To create (multiple) PoV statements that clearly state the needs of the participants



# Interpretation / Define

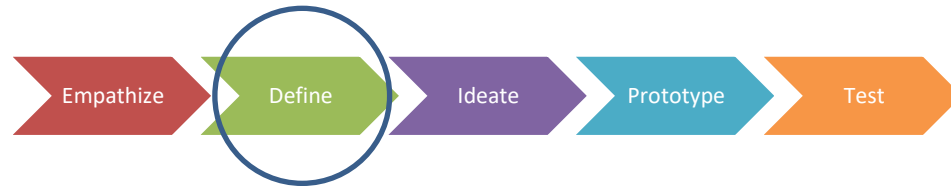
- A good point of view (POV) is one that:
  - Provides focus and frames the problem
  - Inspires your team
  - Provides a reference for evaluating competing ideas
  - Empowers team members to make decisions in response to the high-level goals of the team

# Interpretation / Define

- A good point of view (POV) is one that:
  - Fuels brainstorming by suggesting “how might we” statements
  - Captures the hearts and minds of people you meet
  - Saves you from the impossible task of developing solution concepts that are all things to all people
  - You revisit and reformulate as you learn by doing
  - Guides your innovation efforts

# Finding the Point of View

- This is not about getting right answers, its about directing your efforts later
- Embrace example:
  - <http://extreme.stanford.edu/projects/embrace>
  - <https://vimeo.com/11283910>





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**Entrepreneurial Design  
for Extreme Affordability**

In developing countries, 80% of all premature and low-birth-weight infants are born far away from hospitals and traditional incubators.

Embrace is a \$25 thermoregulator designed to save premature and low birth weight babies. Our mission is to help the 20 million vulnerable babies born every year around the world, who can't access traditional incubators that cost up to \$20,000.



# Interpretation / Define

- Team arrived at the specific POV via synthesis(combining) and grouping (categorizing)
- Members share users stories and insights from the empathy process, group concepts and search for a common theme

# Interpretation / Define (Methods)

- Story Share and Capture
- Saturate and Group
- Empathy Map
- Journey Map
- Composite Character Profile / Persona
- Power of Ten
- 2 X 2 Matrix
- Why and How Ladder
- Point of View Madlib
- Point of View Want AD
- How Might We

# Story Share and Capture

- Team members share and come up to speed about what other members saw and heard during the empathy process.
- Even if members are present during the same interview or fieldwork, they can have different experiences and observations.

# Story Share and Capture

- Story share and capture is a space saturation process
  - Each member write down headline quotes, surprises, interesting bits from the empathy fieldwork
  - Use one headline per post-it
  - Stick the post-its on the wall / desk surface which can then be easily rearranged and grouped



## Interpretation / Define (Methods)

# Saturation and Group



Interpretation / Define (Methods)

# Saturation and Group

You group these findings to explore what themes and patterns emerge, and strive to move toward identifying meaningful needs of people and insights that will inform your design solutions.



# Empathy Map

- Good design is grounded in a deep understanding of the person for whom you are designing.
- An Empathy Map is one tool to help you synthesize your observations and draw out unexpected insights.

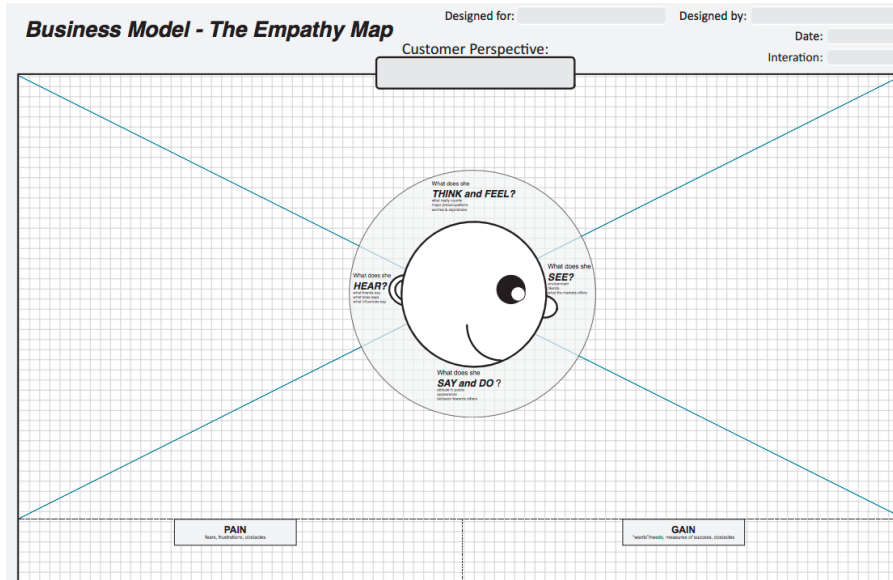
## Interpretation / Define (Methods)

# Empathy Map

- Create a four quadrant layout on paper or a whiteboard.
- Populate the map by taking note of the following four traits of your user as you review your notes, audio, and video from your fieldwork:
  - SEE:
    - What do they say about their environment/circumstances?
    - What problems/opportunities do they see?
  - SAY and DO:
    - What are some quotes and defining words your user said?
    - What actions and behaviors did you notice? (Observations)
  - HEAR:
    - What do they say about others thoughts/opinions?
    - What have they heard, and how do they respond to it?
  - THINK and FEEL: (Inference)
    - What might your user be thinking? What does this tell you about his or her beliefs?
    - What emotions might your subject be feeling? (Inferences)

## Interpretation / Define (Methods)

# Empathy Map



- Thoughts/beliefs and feelings/emotions cannot be observed directly.
- They must be inferred by paying careful attention to various clues.
- Pay attention to body language, tone, and choice of words.

Reference: <https://youtu.be/cCK9KXJHIII>

Interpretation / Define (Methods)

# Empathy Map

- **Identify PAIN and GAIN:**
  - PAIN is negative issues (gripes) given by the user
  - GAIN is positive opportunities (wishes) given by the user
  - Both could be based on inferences or observations

# Empathy Map

- **IDENTIFY NEEDS:**

- “Needs” are human emotional or physical necessities.
  - Based on Pain and Gain lists
- Needs are *verbs* (activities and desires with which your user could use help), not *nouns* (solutions).
- Identify needs directly out of the user traits you noted, or from contradictions between two traits – such as a disconnect between what she says and what she does.
- Write down needs on the side of your Empathy Map.

# Empathy Map

- **IDENTIFY INSIGHTS:**

- An “Insight” is a remarkable realization that you could leverage to better respond to a design challenge.
- Insights often grow from contradictions between two user attributes (either within a quadrant or from two different quadrants) or from asking yourself “Why?” when you notice strange behavior.
- Write down potential insights on the side of your Empathy Map.

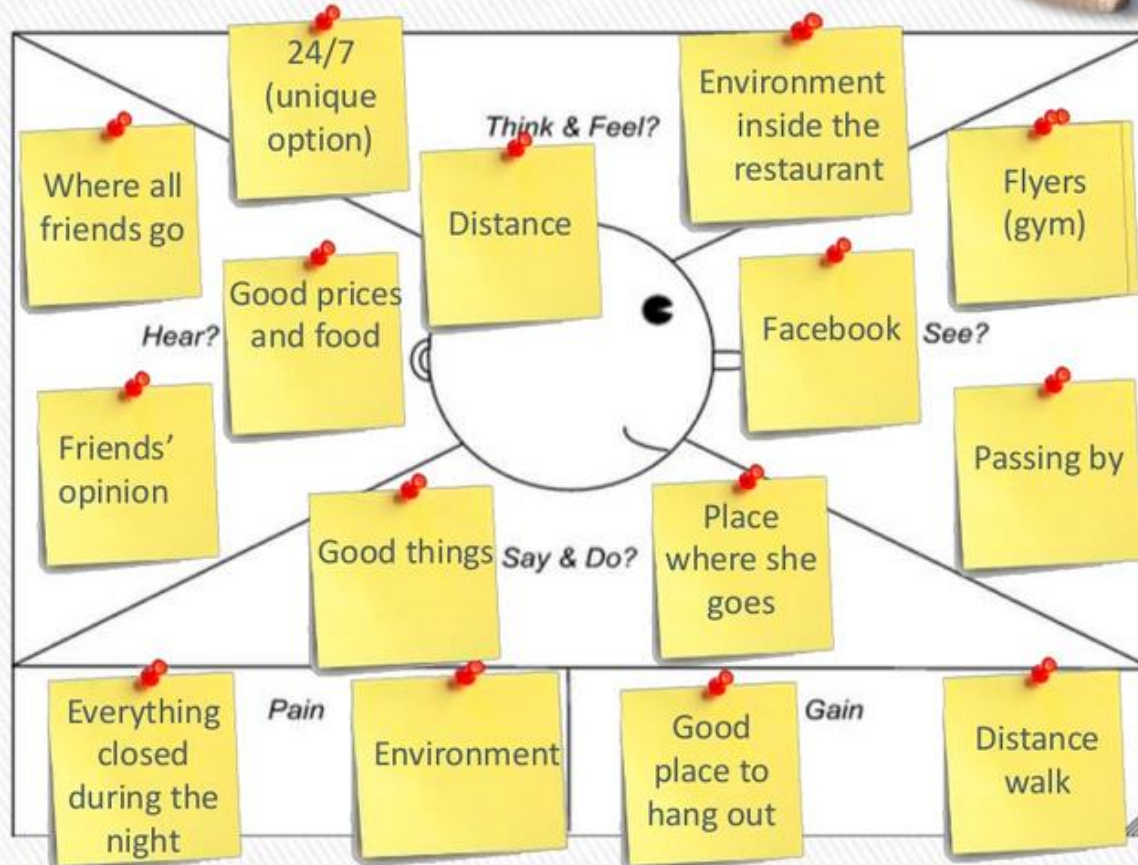


Interpretation / Define (Methods)

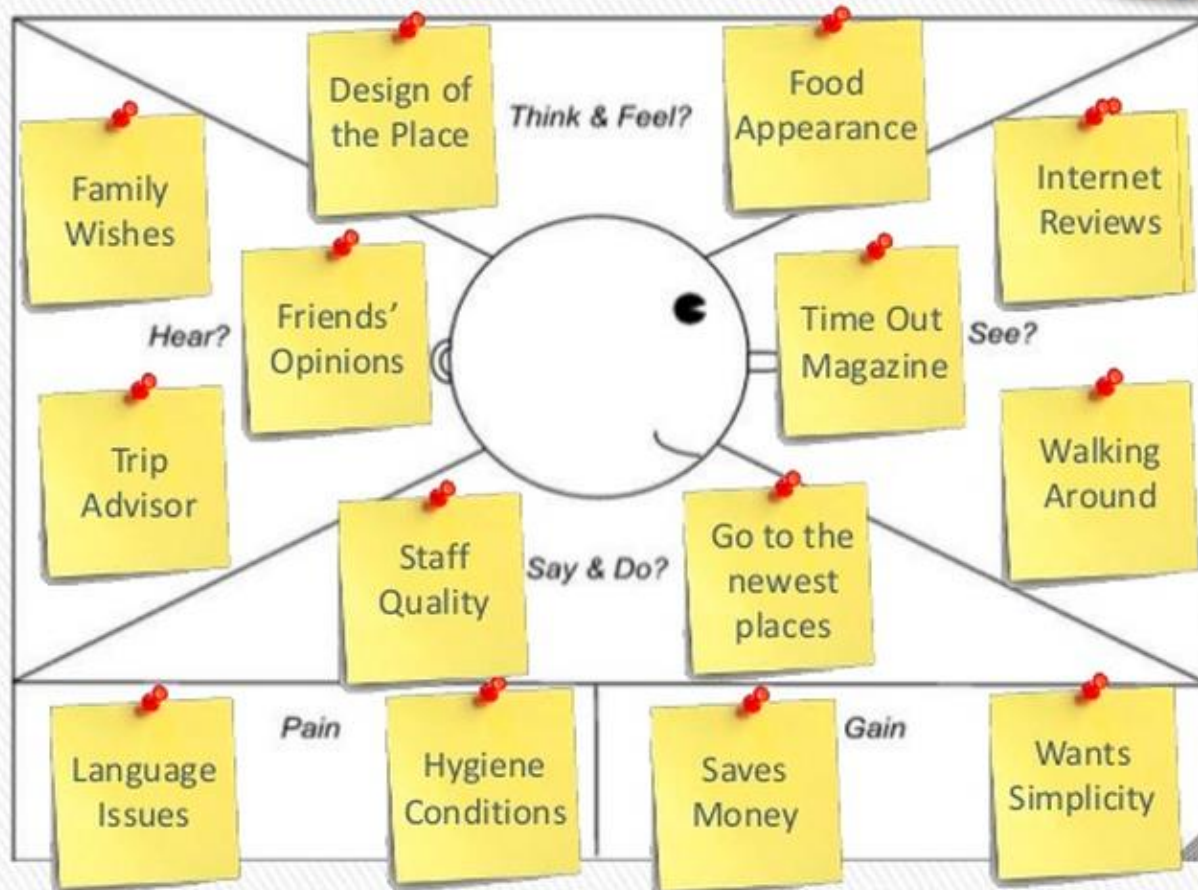
# Empathy Map

- **Example**
  - **A café owner uses empathy maps to understand the needs of different types of customers**

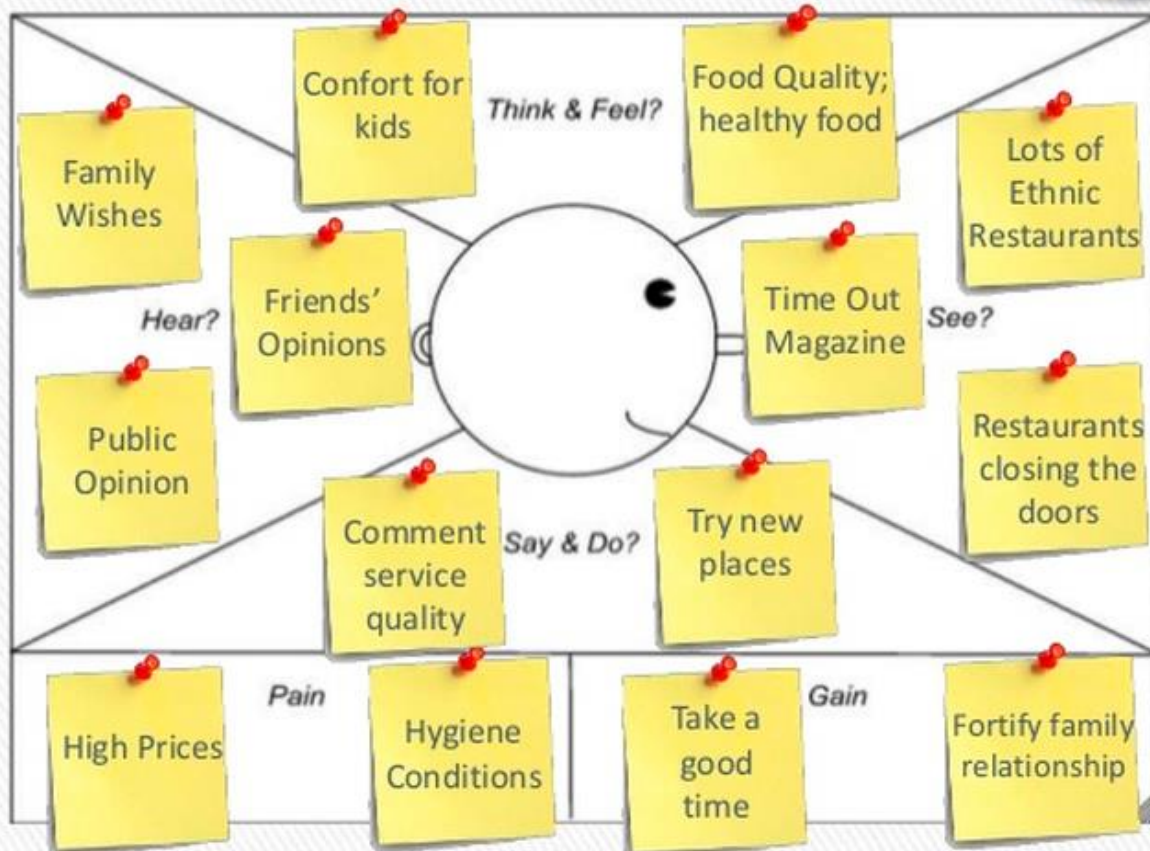
# Empathy Map – Young people



# Empathy Map - Tourist



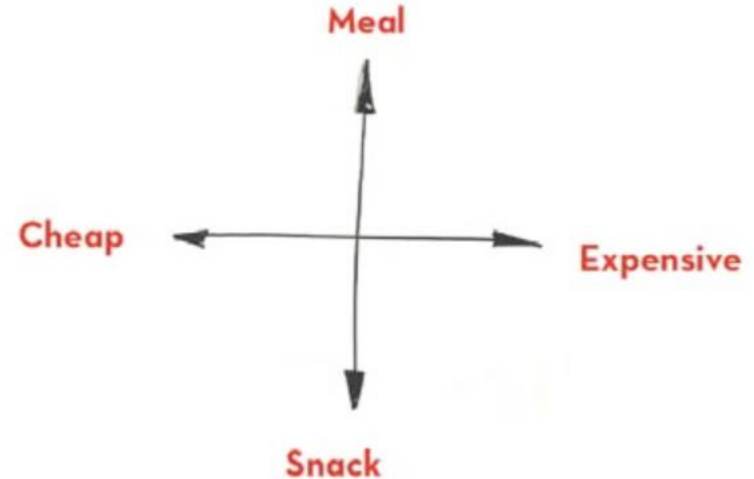
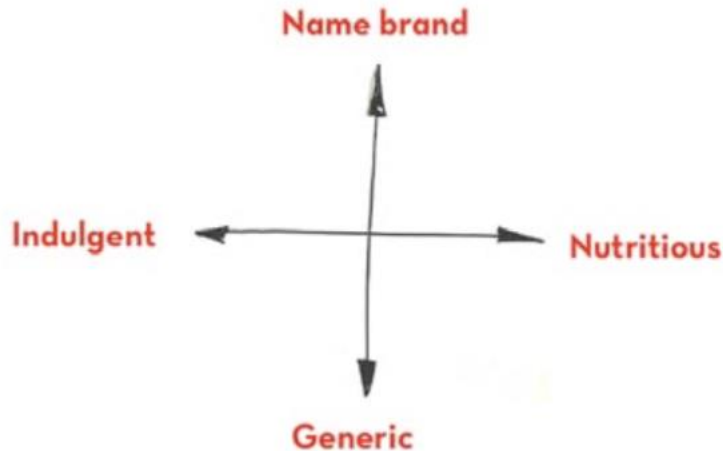
# Empathy Map - Family



Interpretation / Define (Methods)

## 2 X 2 Matrix / Segmenting by meaning

- 2 X 2 Matrix can help you think about relationships between things or people



Interpretation / Define (Methods)

## 2 X 2 Matrix / Segmenting by meaning

- Pick two spectra (one on each axis), draw a 2x2 matrix, and plot items in the map
- You may need to try a number of combinations of spectra to get one that is meaningful and informative
- Because you are trying to understand how people think, usually at least one of the axes should be subjective



Interpretation / Define (Methods)

## 2 X 2 Matrix / Segmenting by meaning

- Examples of axis: Young – Old, Inexperienced – Experienced, Introvert – Extrovert
- Can be used to extrapolate from the interview findings
  - Discover personas that were not encountered in the field

## Interpretation / Define (Methods)

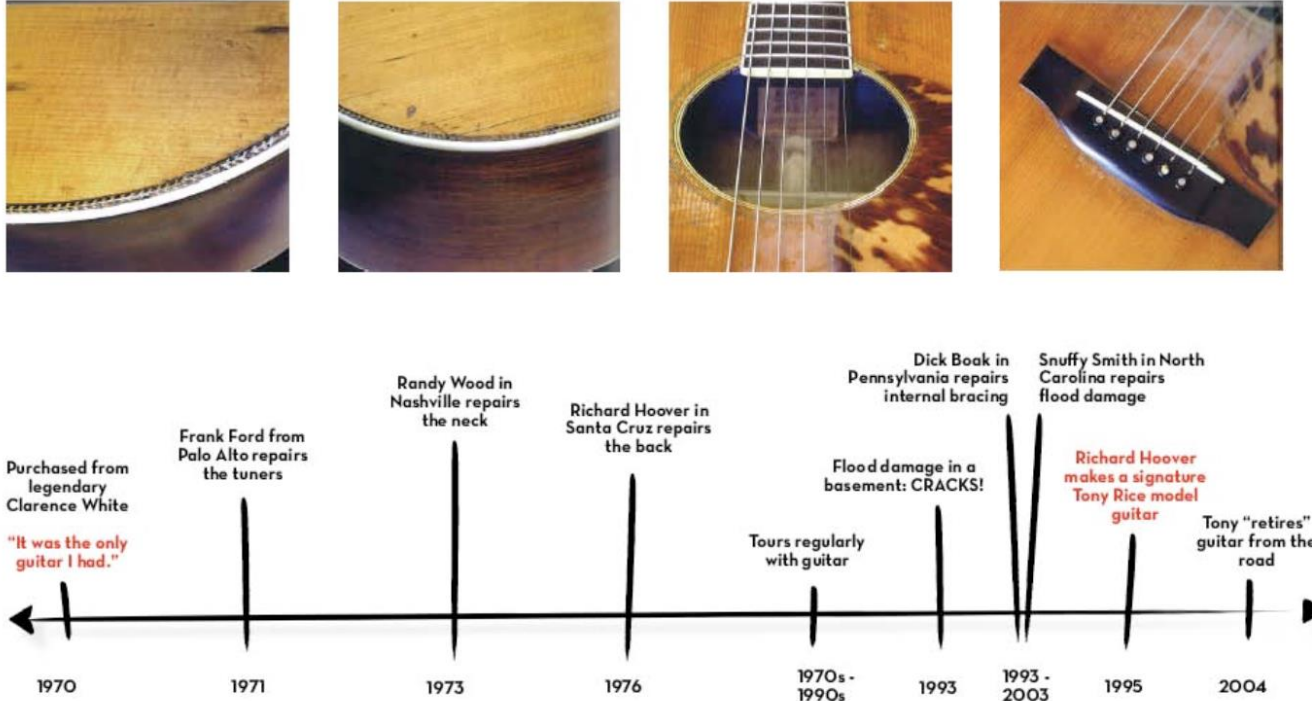
# Journey Map

- Journey map provides an understanding of someone's journey through an experience
- Create diagrams that capture multiple observations, e.g. a map of a user's day, a map of a user's experience, or a map of how a product moves through space and time
- You can create a journey map based on observation and interview – or you might ask a user to draw a journey map and then explain it to you.
- Organize the data in a way that makes sense: a timeline of events, a number of parallel timelines that allows for easy comparison, a series of pictures, or a stack of cards.



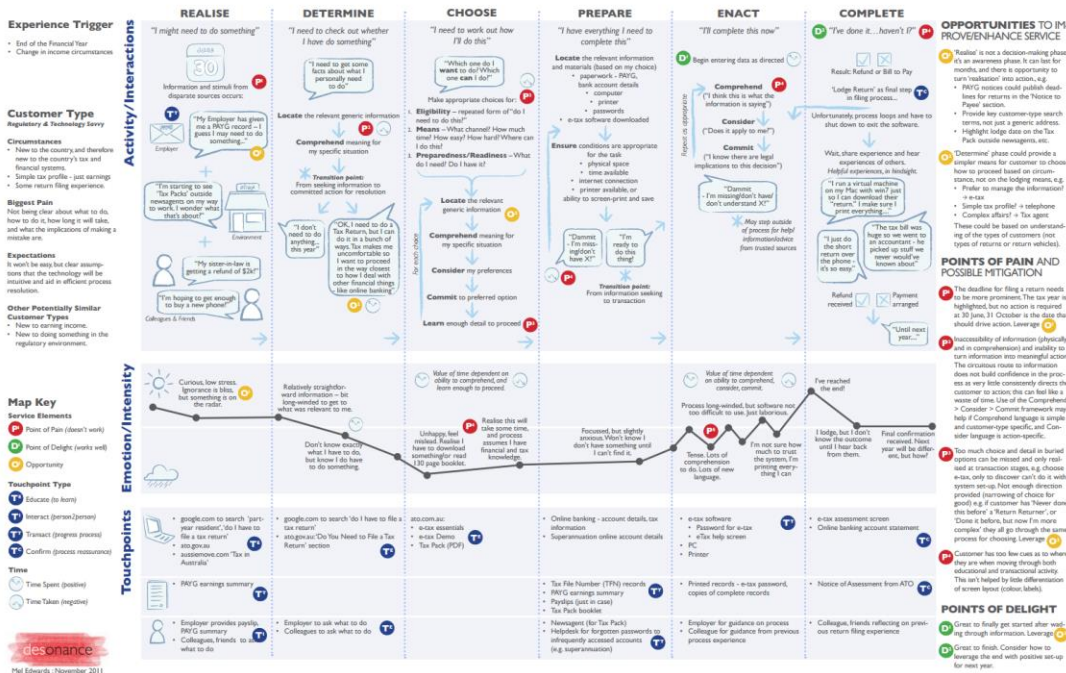
## Interpretation / Define (Methods)

# Journey Map



This map is based on the data of a single customer. No knowledge of how the tax office operates is included in this map because this map is just a component of one service designer's point of view. This is a case study, a component research, and a map into a customer's experience.

This map is a representation of the current experience of a customer completing a tax return in Australia using the 'online' facility, e-tax. The journey itself begins at the point of realisation that some action may need to be taken. It ends at the point of confirmation (refund made, bill payment actioned). This map is not about the e-tax experience itself, this map captures the beginning, middle and end as they engage a service to achieve their goal, showing the range of tangible and quantitative interactions, triggers and touchpoints, as well as the intangible and qualitative motivations, frustrations and meanings.



Source:  
<https://desonance.files.wordpress.com/2011/11/return-experience-map-desonance-nov-11.pdf>

# Activity (10 minutes)

- Create a journey map of your last subject enrolment experience, or
- Create a journey map based on your interviews
- Compare your map with the one next to you.

Interpretation / Define (Methods)

# Composite Character Profile / Persona

- Composite character profile is a way to focus the team's attention on the salient and relevant characteristics of the user they wish to address
- It is a (semi)-fictional composite character who embodies the observations the team obtained from the empathy fieldwork
- Give your character a name, and make sure every member of the team buys into the identity and corresponding characteristics

Interpretation / Define (Methods)

# Composite Character Profile



## Franklin

- 38 years old
- Divorced
- 2 kids
- Diabetic
- Free-clinic care-giver
- Has extreme tendencies in consumption and preparation of food.
- Balances his health and that of others, favoring the health of others.

Interpretation / Define (Methods)

# Point of View Madlib

- A POV Madlib provides a scaffolding to develop your POV
- Use the following madlib (fill-the-blanks) to capture and harmonize three elements of a POV: user, need, and insight. Replace the red elements

[USER] needs to [USER'S NEED]  
because [SURPRISING INSIGHT]

Interpretation / Define (Methods)

# Point of View Madlib

- Examples

Marketing executives needs to understand the motivations and expectations of healthy people because they want to understand how to market to them effectively

Interpretation / Define (Methods)

## Point of View Want AD

- A POV Want Ad can be a good way to express your distilled findings in an intriguing format.
  - Embed your user, his or her need, and your insights within the format of a want ad.
- **Format:**
  - [Descriptive characterization of a user] seeks [an ambiguous method to meet an implied need]. [Add additional flavor to capture your findings]



Interpretation / Define (Methods)

# Point of View Want AD

- Example:
  - “High-energy teenager seeks awesome social network. Interests should include issues of societal importance (e.g. how much parents suck and also why being a vegetarian might be cool). Willingness to IM constantly during the school year is a MUST!”

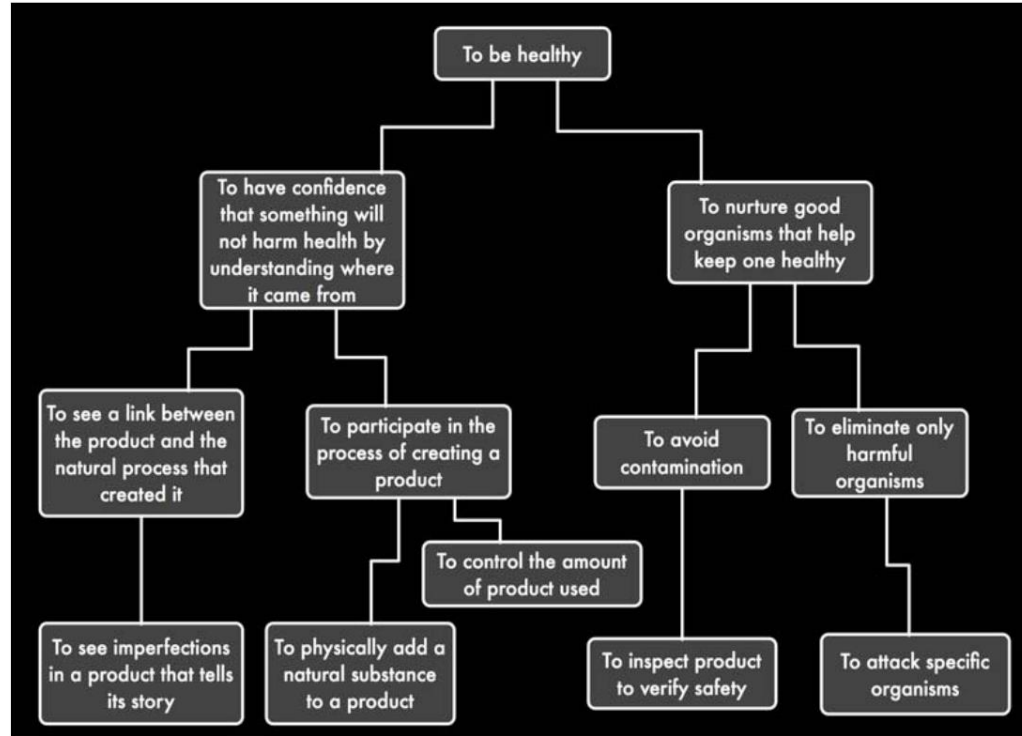
## Interpretation / Define (Methods)

# Why and How Ladder

- Start with one of your users meaningful needs.
  - Write that need on the board and then ladder up from there by asking ‘why’.
  - Why would your user would have that need, and phrase the answer as a new need.
    - For example, “Why would she ‘need to see a link between a product and the natural process that created it’?”
- Combine your observations and interviews with your intuition to identify that need.
- Then take that more abstract need and ask why again, to create another need.
- Write each on the board above the former.
- Eventually you will reach a very abstract need, common to just about everyone, such as the ‘need to be healthy’. This is the top of that need hierarchy branch.
- You can also ask ‘how’ to develop more specific needs. Climb up (‘why?’) and down (how?) in branches.
- There may be multiple answers to your ‘why’ and ‘how’ questions – branch out and write those down.
- The result (after some editing and refining) is a needs hierarchy that paints a full picture of your user or composite user.

## Interpretation / Define (Methods)

# Why and How Ladder



# Laddering exercise: What does she need?



# Before Next Lecture

- Why should you stop brainstorming  
<http://bcove.me/k2z43ri5> or  
<https://hbr.org/2014/03/why-you-should-stop-brainstorming>
- **Team work: empathy maps, personas and PoVs**