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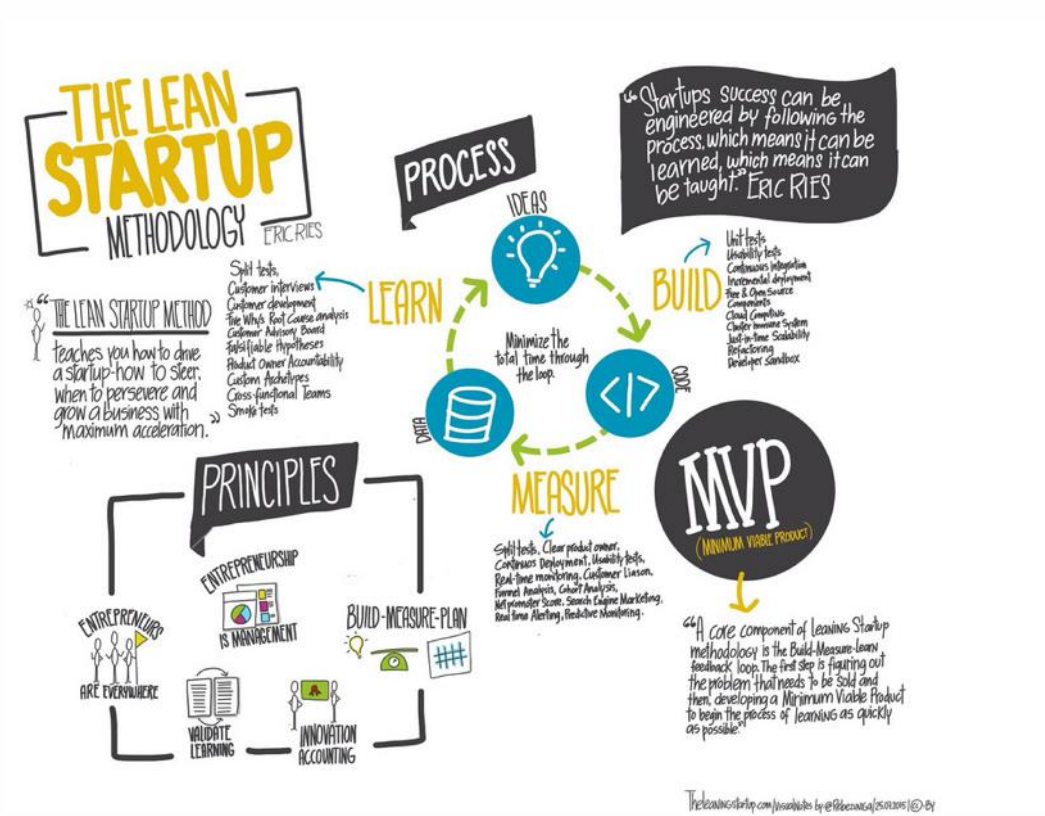
Information Systems and Technology Management

INFS2603 Lecture Series

Design Thinking I

Week 09 Recap:
Lean Startup



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Business Analysis in a Design Thinking Environment

Workplace type	Me and my team	My tools and methods	My collaborative networks	My manager's mindset
Conservative	Single function practice (e.g., BA Practices), farmed out to a project Single role per person	Business use cases, business requirements specifications including Plan based waterfall delivery method	Vertical; Limited to your own department plus incidentals within your own organisation	Hierarchical; Command and control; Conformity & uniformity "I'm the fire fighter"
Progressive	Cross-functional platform (persistent team) with a pipeline of work Multiple roles per person, where one may be the main role (3 Amigos: Dev, BA, QA)	Change based 'agile' delivery method Inceptions, User stories, Elaborations Acceptance criteria	Whole organisation; Vertical and horizontal (across departments) within your own organisation	Servant Leadership Tolerance and Flexibility Delegate authority "I'm the fire stoker"
Avant-garde	Cross-functional platforms and Multi-functional groups Ability to customise your role (with freelancing) % of platform, team or department work and % via internal, social marketplace (e.g. Google)	Design thinking, Lean and Agile delivery method Lean canvases Experiments Inceptions Continuous delivery DevOps	Extended across whole of your organisation and extending out to other connections you have and your colleagues have outside the organisation	Flatter structure Diversity and creativity Distributed authority "I'm the fire starter"

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What is design?

DESIGN IS NOT AN EVENT

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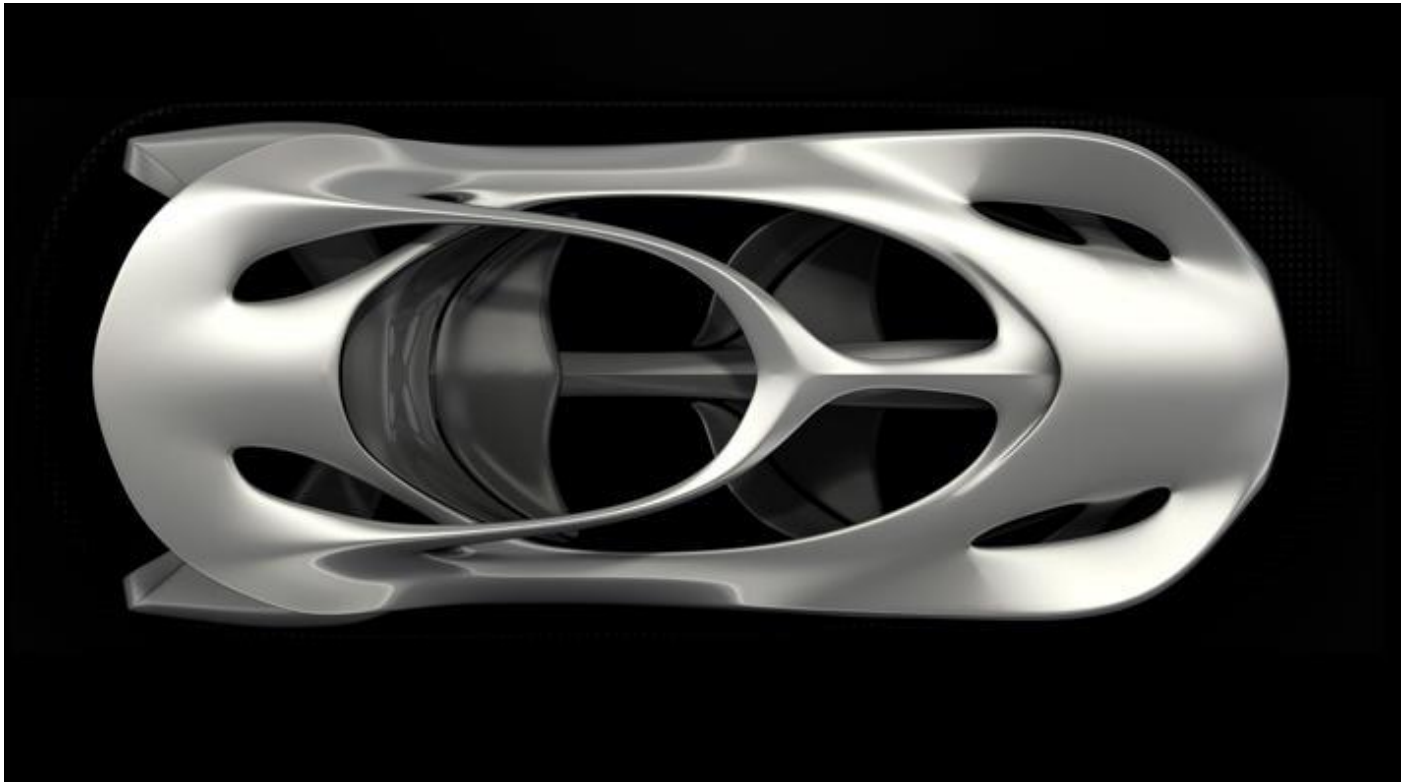

DESIGN IS NOT AESTHETIC

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DESIGN IS NOT A PRODUCT

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DESIGN IS NOT AN EXPERIENCE

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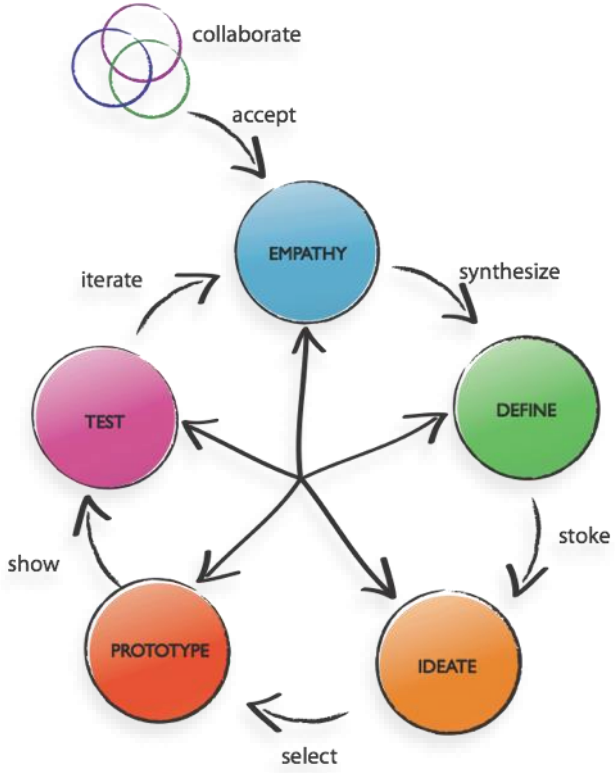

DESIGN IS A PROCESS

...USING THESE MINDSETS

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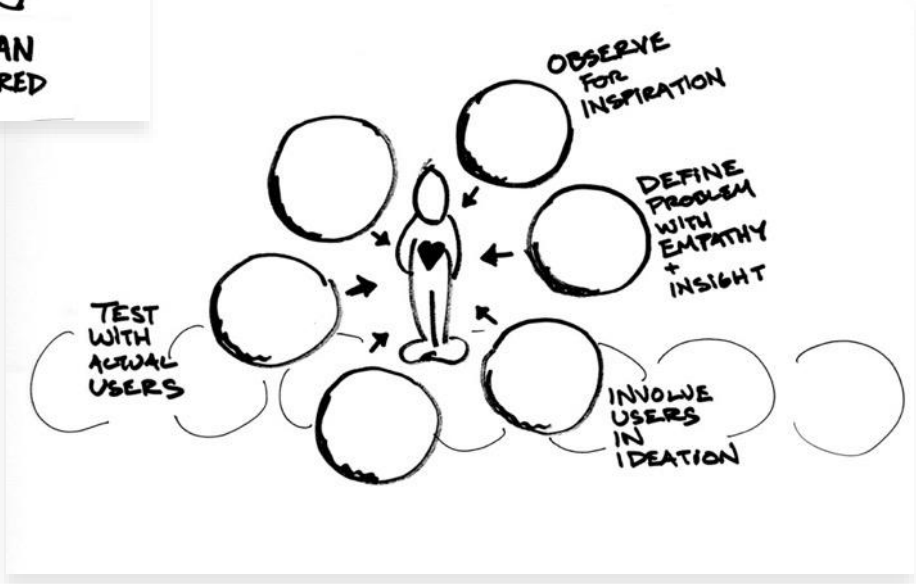

- **You are designing for SOMEONE ELSE not for yourself**
- **INVOLVE them in every step of the way**
  - **Observe for inspiration**
  - **Define Problems with Empathy and Insight**
  - **Involved users in Ideation**
  - **Test with actual users**

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- Collaboration within the team
- Collaboration with users
- Observe in Pairs
- Synthesize in teams
- Invite outsiders to brainstorm
- Test with users

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- What is prototyping?
- Solicit feedback regularly
- Keep ideas fresh and open to outside input
- Decrease fear of failure; create a “failure is good” culture

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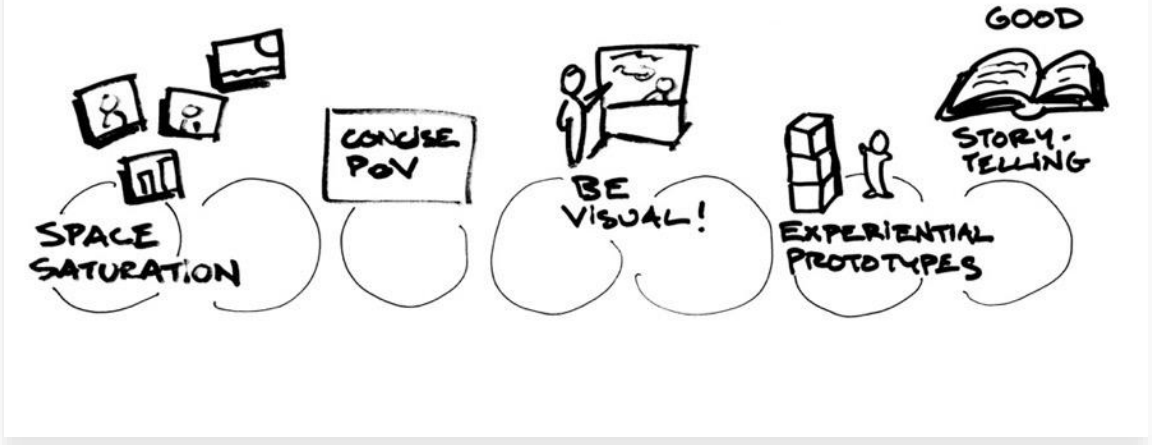

FROM

“This is what I think”
“This is what I believe”

TO

“Here it is, what do you think?”

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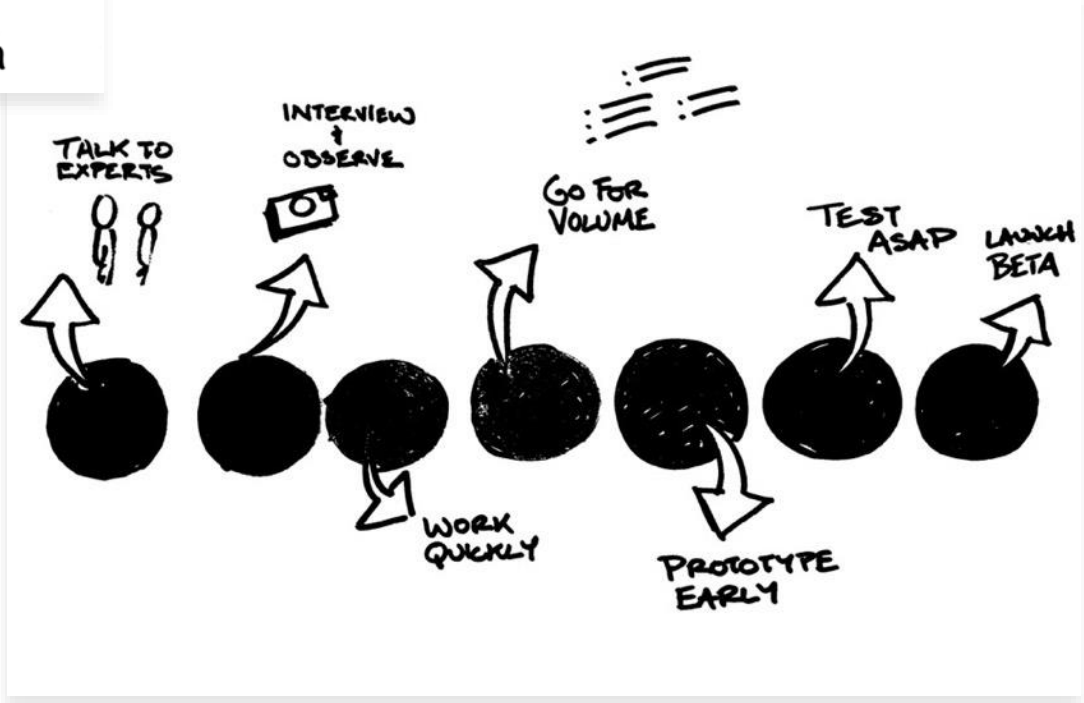
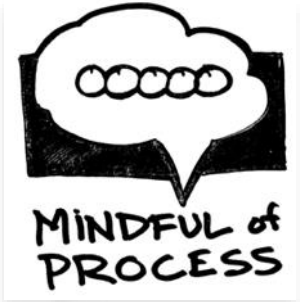
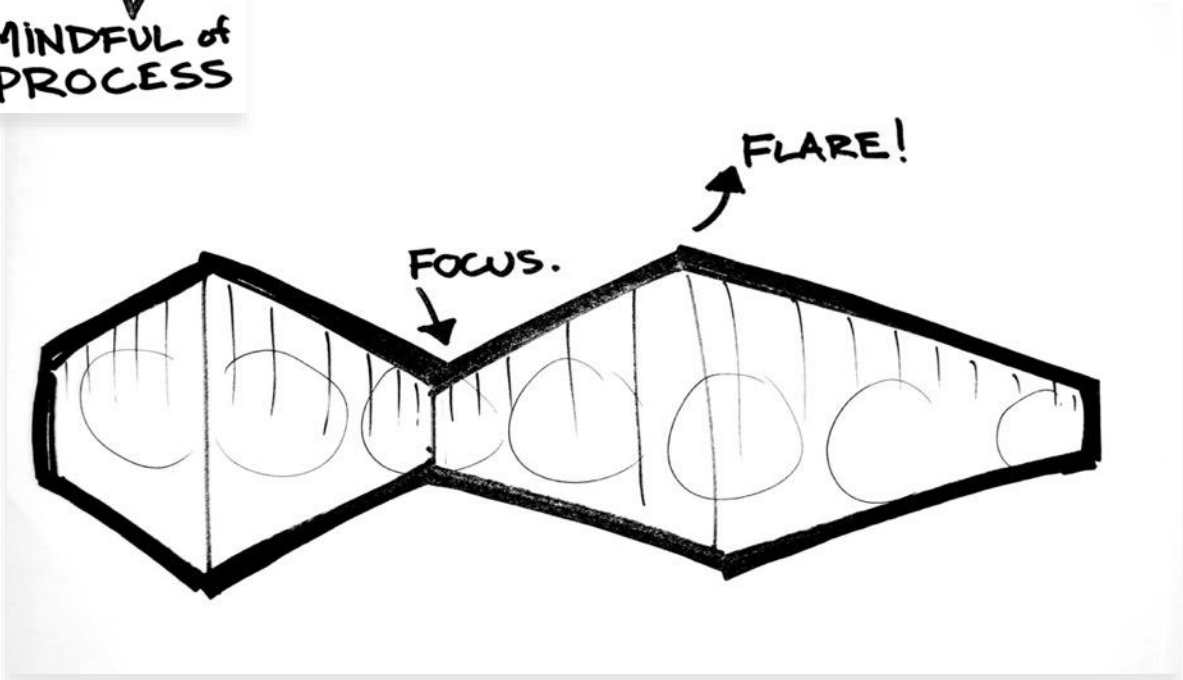


DO more TALK less





Be thoughtful of how you are working

How you can improve on your methods

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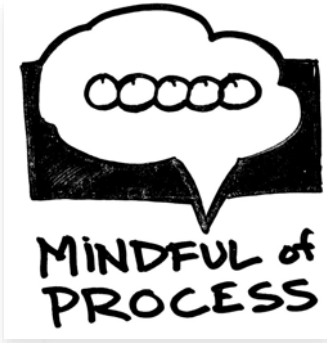

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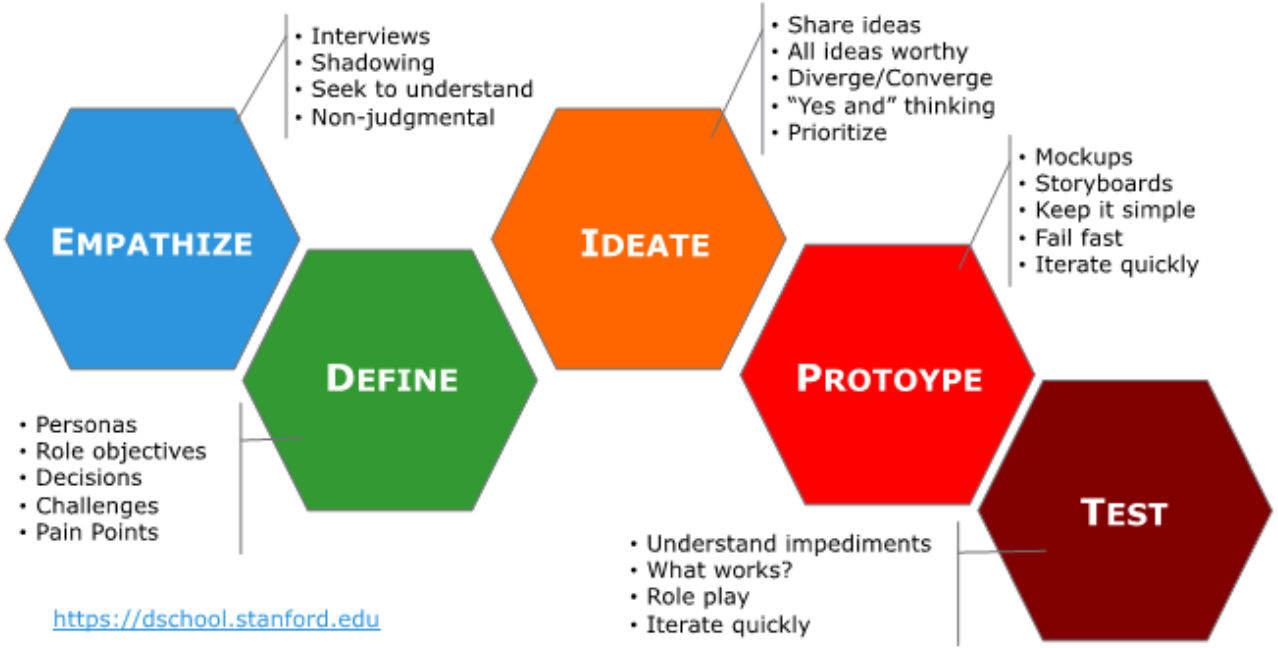
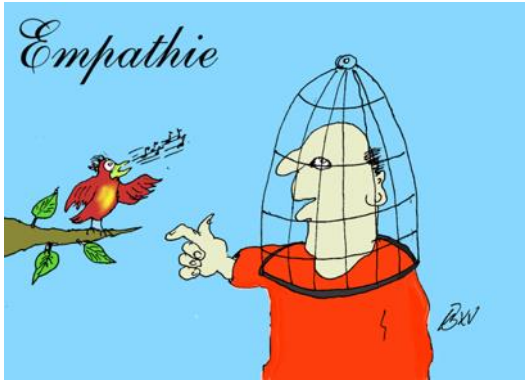
Stanford d.school Design Thinking Process



https://dschool.stanford.edu

Empathize

- **WHAT** is the Empathize mode
  - The work you do to **understand people** within the **context** of your design challenge
- **WHY** Empathize
  - You are designing for someone else, not yourself
- **HOW** to Empathize
  - Observe, Engage, Watch and Listen
  - DO NOT JUDGE (its difficult!)
- **Transition**: Empathize >> Define
  - Unpack and share
  - Derive Insights – authentic, non-obvious, revealing



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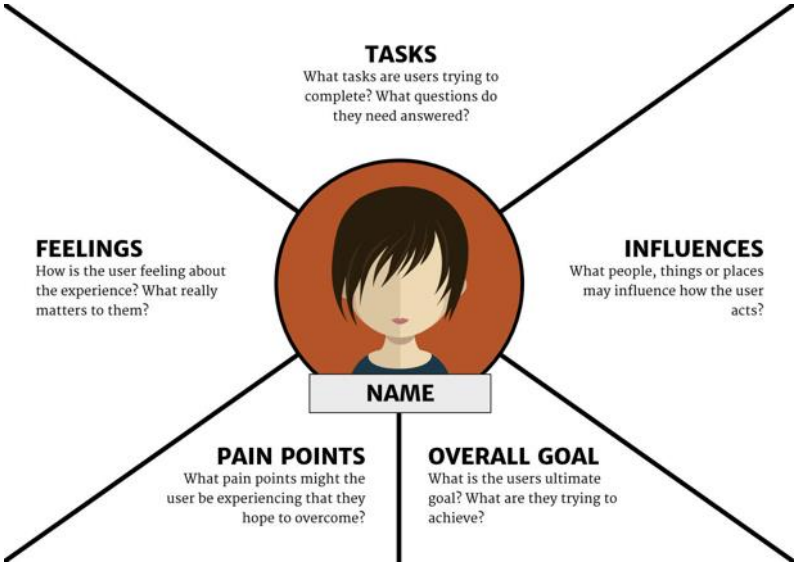
Empathy Maps



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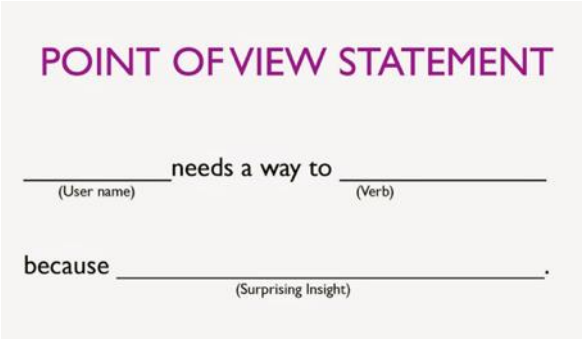
Define

- **WHAT** is the Define mode
  - Crafting a **meaningful** and **actionable** problem statement – a **“point of view”**
- **WHY** Define
  - Identify the **right** challenge to address
- **HOW** to Define
  - Understand your USER; Identify NEEDS; Derive INSIGHTS
- **Transition** from Define >> Ideate
  - “How might we…” tackle subsets of the problem



“Framing the right problem is the only way to create the right solution”

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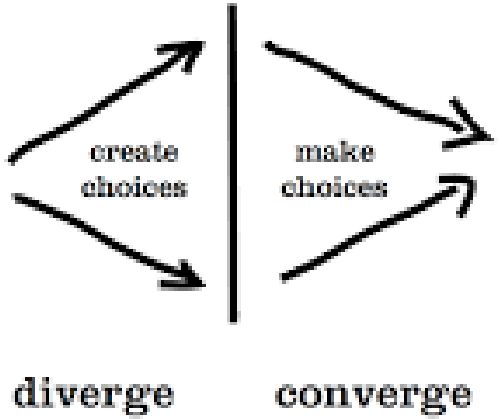
Ideate

- **WHAT** is the Ideate mode
  - Idea generation
  - Diverge and create as many choices
  - Not about finding the **BEST** solution
- **WHY** Ideate
  - Transition from problem to potential solution
- **HOW** to Ideate
  - Ideate individually, Ideate in groups
  - Bodystorming, mindmapping, sketching
  - DEFER judgement



- **Transition** from Ideate >> Prototype
  - Converge using “Considered Selection”
  - As a team designate three voting criteria
  - For example:
    - “the idea that will most delight the customer”
    - “the most unexpected”
    - “the rational choice”
  - Pick 2-3 ideas

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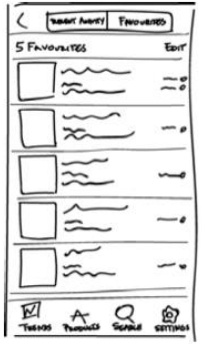
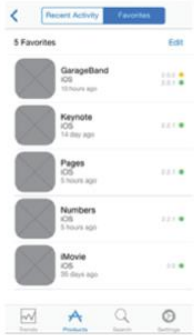
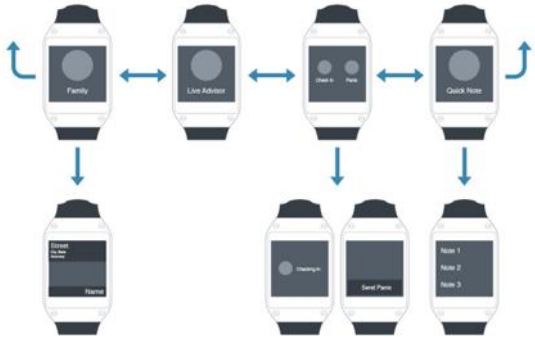
Prototype

- **WHAT** is the prototype mode
  - iterative generation of artifacts intended to answer questions that get you closer to your final solution.
  - Anything that a user can interact with
- **WHY** Prototype
  - To communicate, to start a conversation, to fail quickly and cheaply, test possibilities, manage solution building process
- **HOW** to Prototype
  - Prototypes are built to test ideas, identify what you are testing
  - Anything goes! Get creative
  - Don’t spend too long on one prototype
- **Transition**: Prototype >>Test
  - More of an iterative cycle







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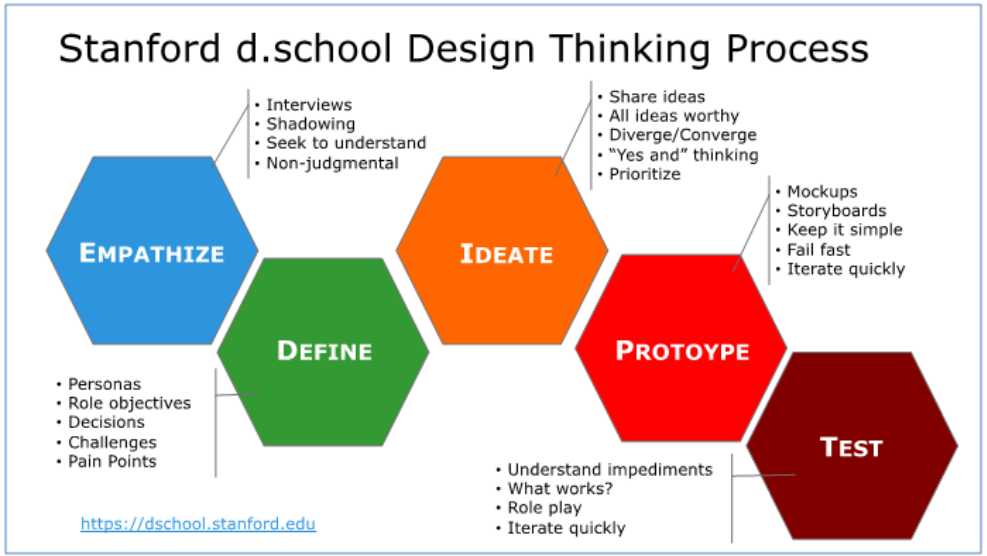
Test

- **WHAT** is the Test mode
  - Solicit feedback from users, gain empathy again
  - Focus on what you can learn more about your user
- **WHY** Test
  - **Refine prototypes** and solutions, learn more about your **user**, refine your **POV**
- **HOW** to Test
    - Show don't tell! - let your users experience/use the prototype'
    - Observe how they use (misuse) the prototype
- Iteration and making the process **your own**
  - This was only one way to structure

In summary: Design Thinking = Mindset + Process



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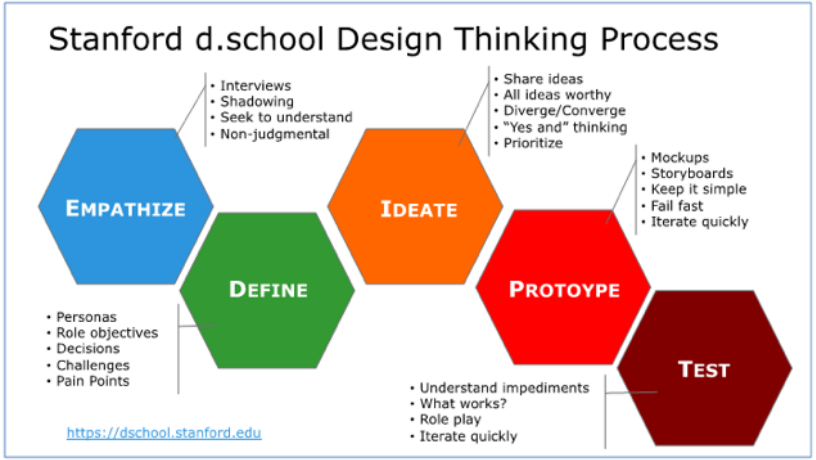
Design Thinking for Business Analysis

- **BA skill set: a gentle reminder**
  - Eliciting requirements
  - Customer interaction
  - Facilitation between business and tech
  - Change management
- **BA and Design Thinking**
  - Multiple synergies
  - Focus on Problem Discovery, Ideation, Prototyping (for technical prototypes)
  - ”Design Thinking is BA done well”



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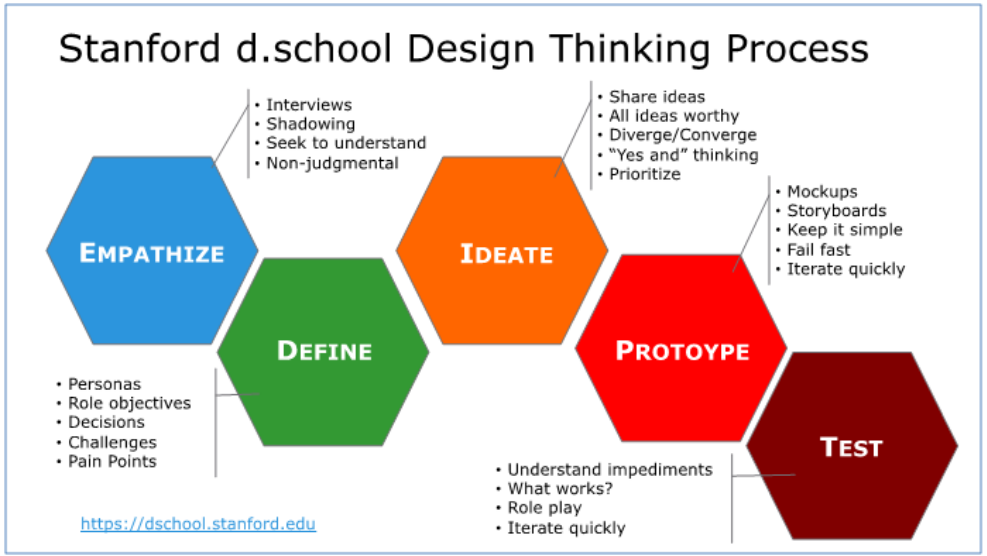
Design Thinking II

Week 10 Recap: Design Thinking = Mindset + Process



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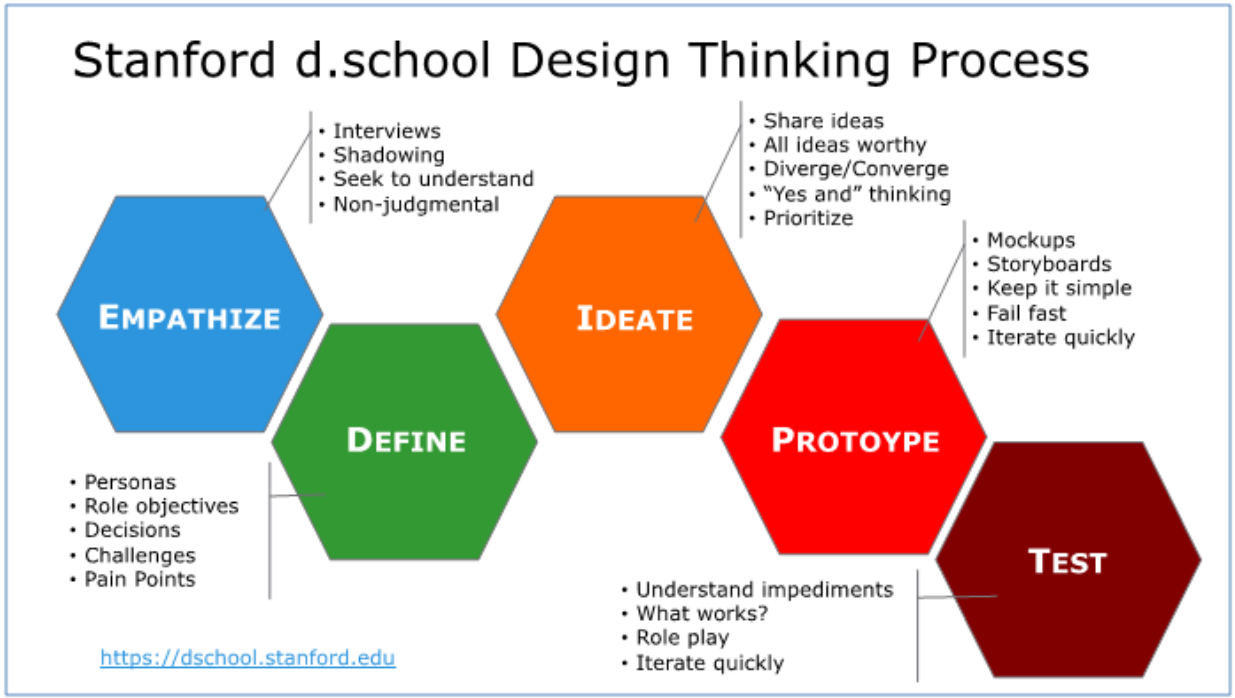
Design Thinking Tools & Techniques



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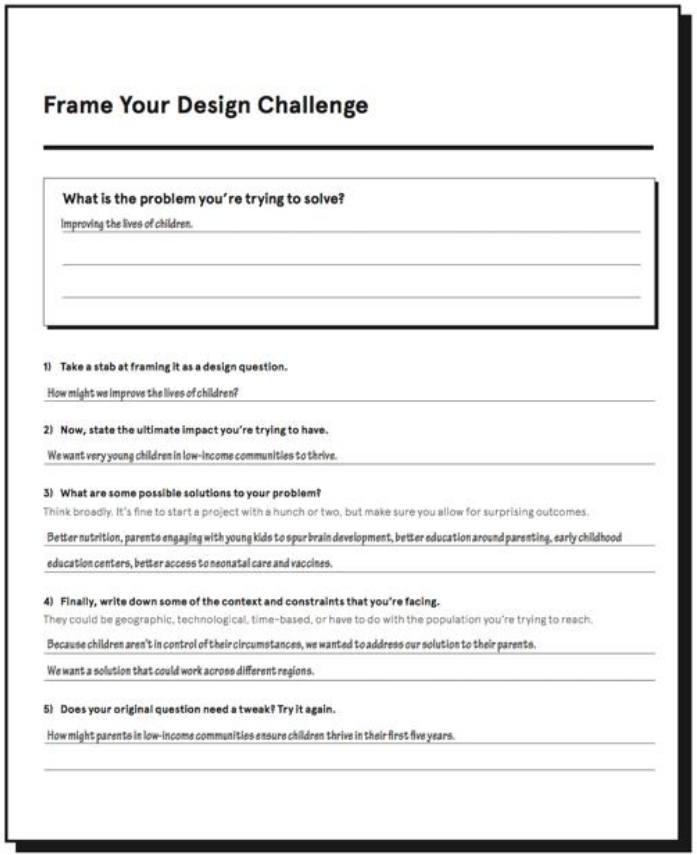
Pre-Process stage: Frame Your Design Challenge



Frame Your Design Challenge

What is the problem you're trying to solve?

Improving the lives of children.

1) **Take a stab at framing it as a design question.**

How might we improve the lives of children?

2) **Now, state the ultimate impact you're trying to have.**

We want very young children in low-income communities to thrive.

3) **What are some possible solutions to your problem?**

Think broadly. It's fine to start a project with a hunch or two, but make sure you allow for surprising outcomes.

Better nutrition, parents engaging with young kids to spur brain development, better education around parenting, early childhood education centers, better access to neonatal care and vaccines.

4) **Finally, write down some of the context and constraints that you're facing.**

They could be geographic, technological, time-based, or have to do with the population you're trying to reach.

Because children aren't in control of their circumstances, we wanted to address our solution to their parents.

We want a solution that could work across different regions.

5) **Does your original question need a tweak? Try it again.**

How might parents in low-income communities ensure children thrive in their first five years.

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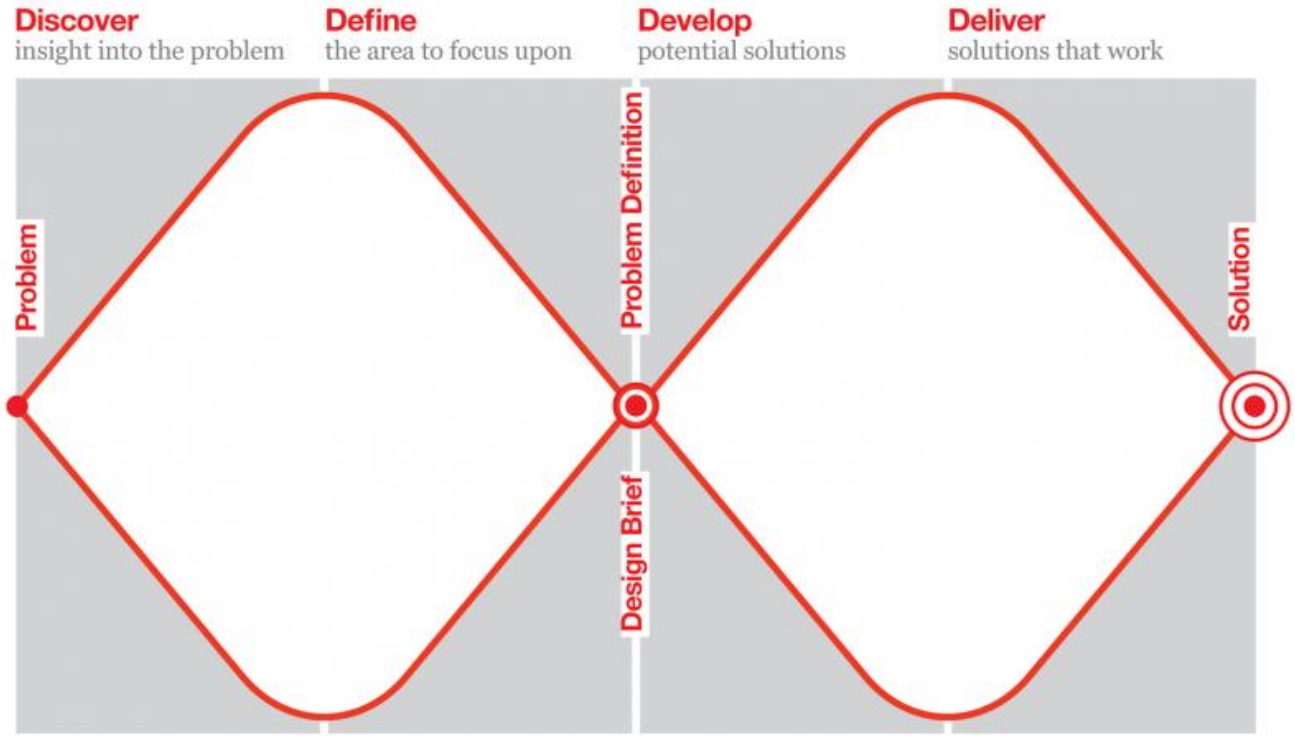
The “Double Diamond”: Framework for Design Thinking



Source: http://www.designcouncil.org.uk/news-opinion/design-process-what-double-diamond

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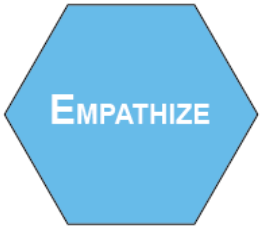
Empathize Phase

Process



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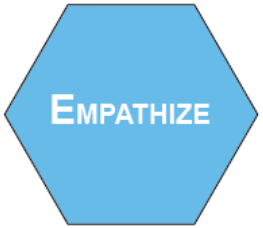
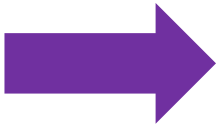
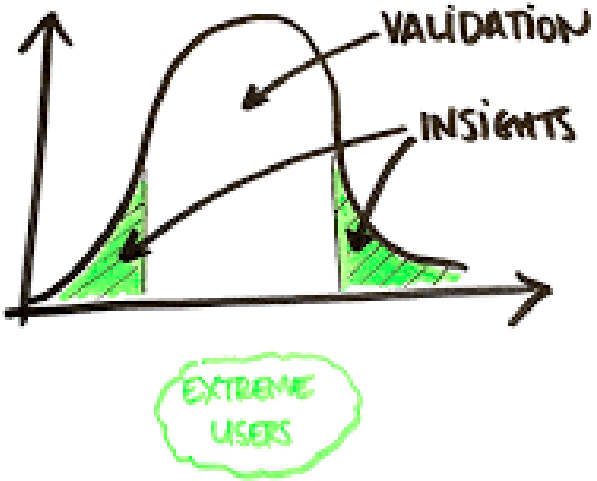
Empathize Phase – Identify Users



User Sampling





Needs of extreme users are amplified
Reflects needs of a wider population

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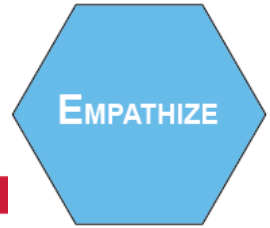
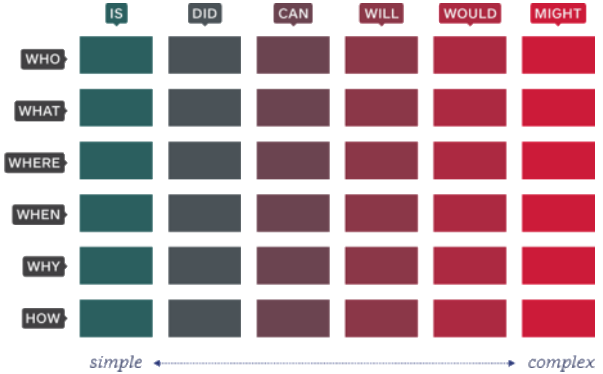
Empathize Phase – Gain Empathy



User Interviews

- Interview
  - Laddering
- Group interview
- Expert interview



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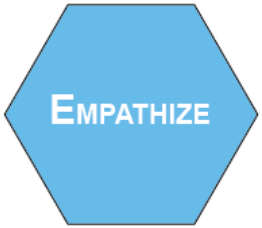
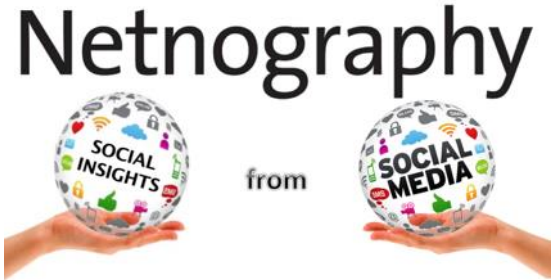
Empathize Phase – Gain Empathy



Observations: In Person

- State the obvious – do not over interpret
- Look for workarounds and adaptations
- Look for things people care about – hidden passions
- Look for anything that surprises you
- Challenge is not to be judgmental - tell **fact** from **judgment**



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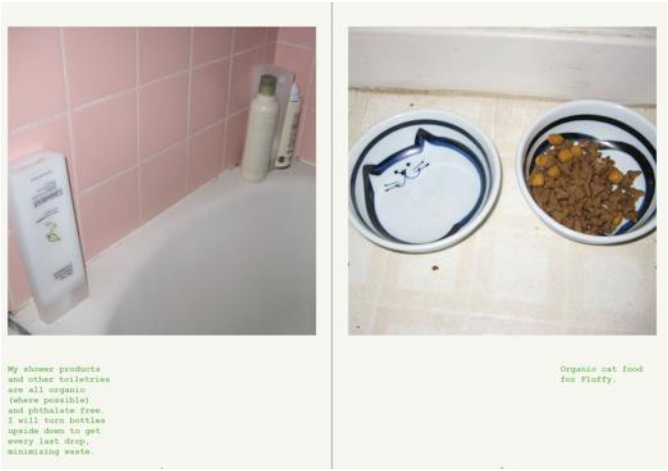
Empathize Phase – Gain Empathy

EMPATHIZE

Observations: User Generated

- User documented journeys –through images and videos



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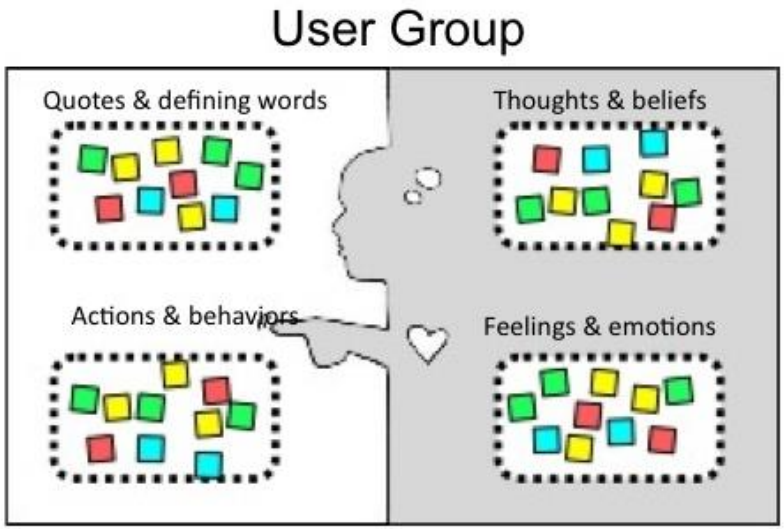
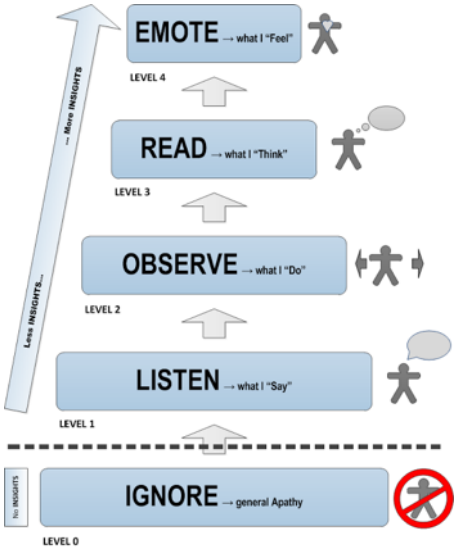
Empathize Phase – Consolidate findings

EMPATHIZE

Empathy Maps





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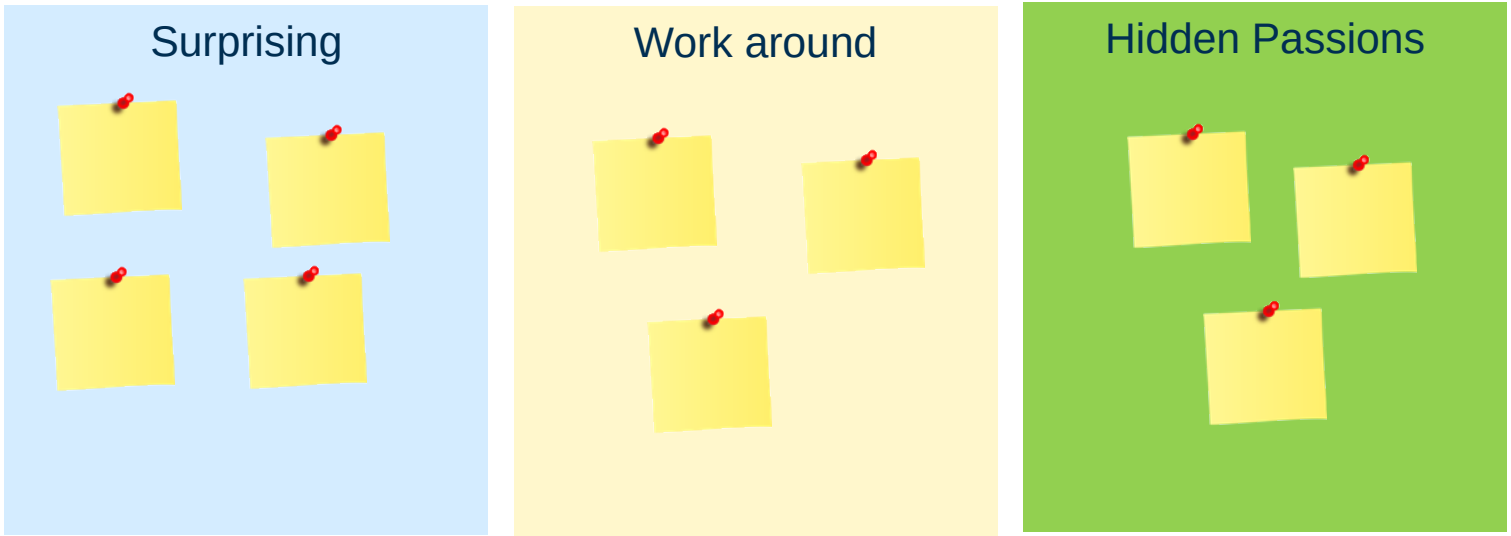
Empathize Phase – Consolidate findings

EMPATHIZE

Observation Grids



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Define Phase

Process

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Define Phase – Consolidate findings

DEFINE

Visualise

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Define Phase – Consolidate findings

DEFINE

Thematic analysis

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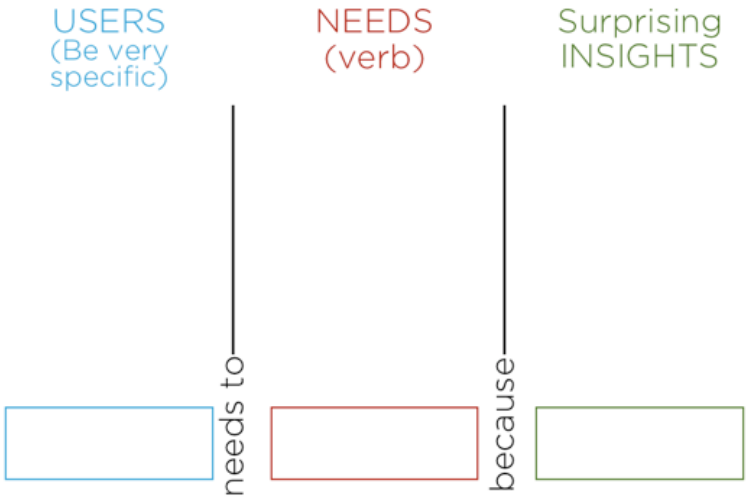
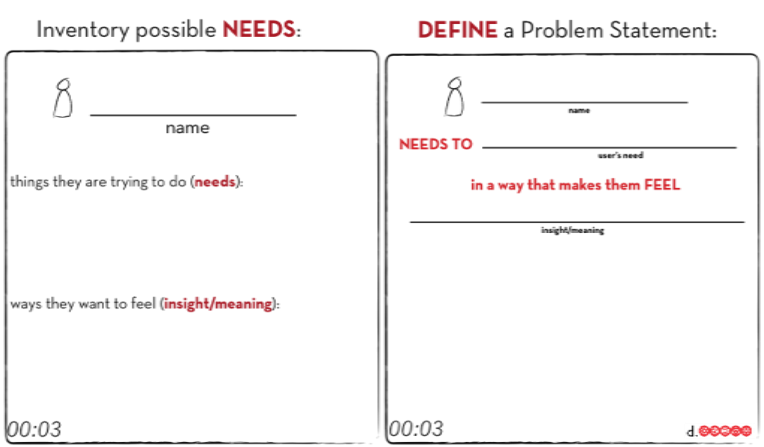
Define Phase – Deriving Insights

Point of View Statement





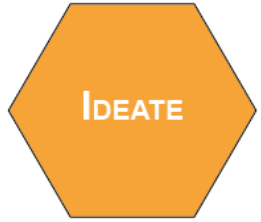
Define Phase – Deriving Insights

Point of View Statement Examples

Point of View: A desperate parent living in a remote village who needs the means to give her dying baby the chance to survive

Ideate Phase

Process

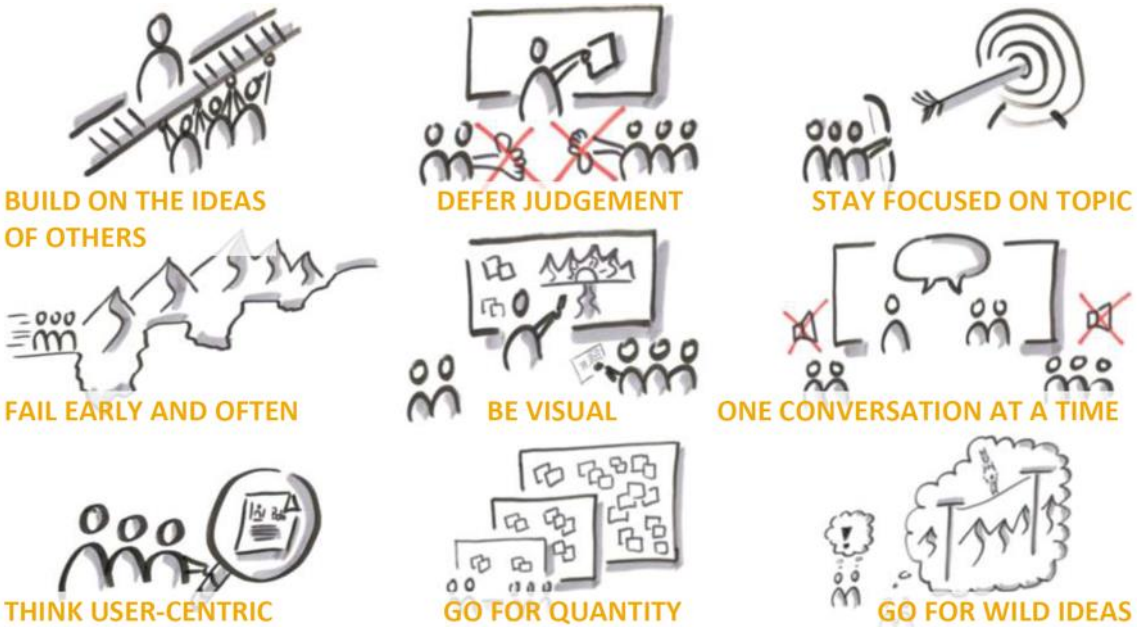


Diverge → Converge on potential Solutions

Ideate Phase - Diverge

IDEATE

Guidelines



Source: http://www.gavinoleary.com/design-thinking-ideate-phase-4/

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Ideate Phase - Diverge

Sketch!

IDEATE

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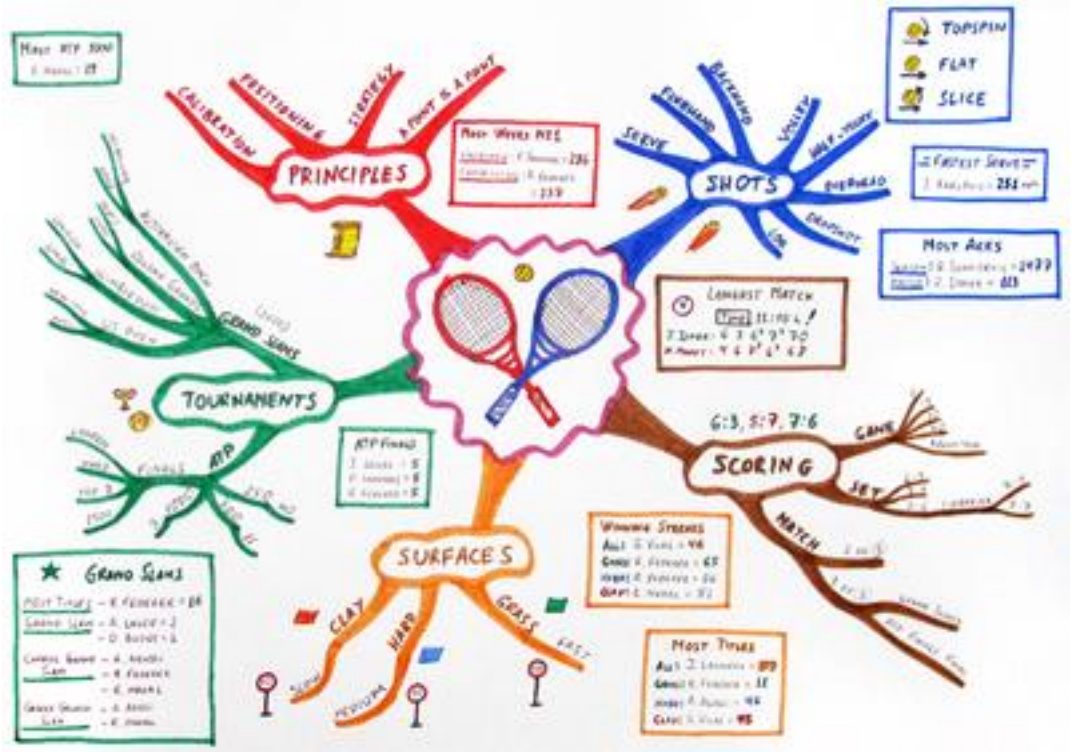
Ideate Phase – Diverge

IDEATE

Mind mapping



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Ideate Phase - Diverge

Bodystorming

IDEATE

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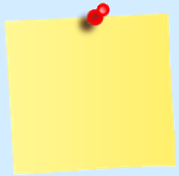
Ideate Phase - Converge

Criteria-based choice making

IDEATE

the rational choice	the most unexpected	the most likely to delight
		

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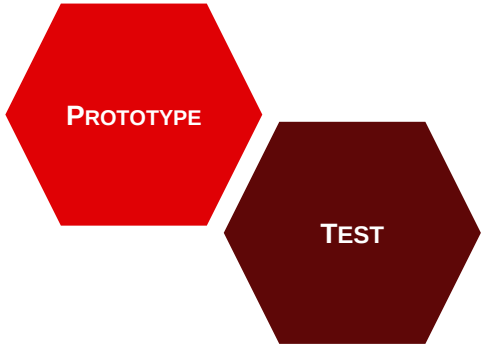
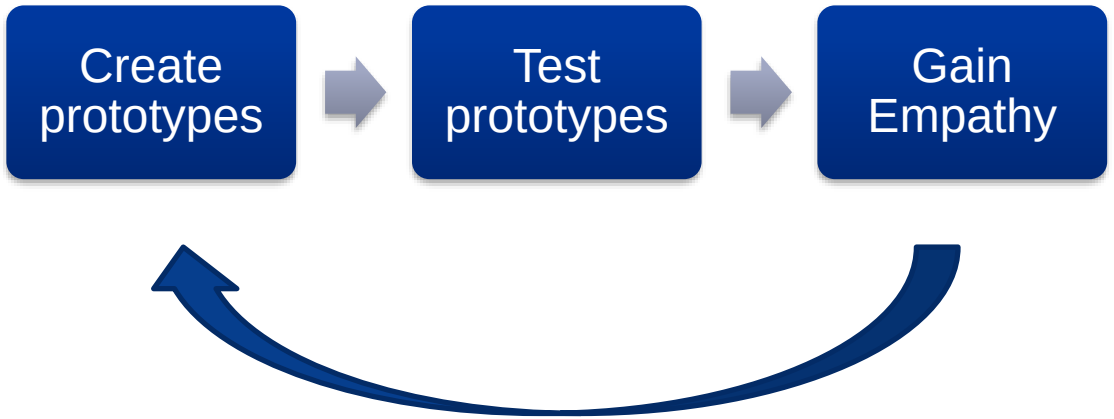
Prototype-Test Phase

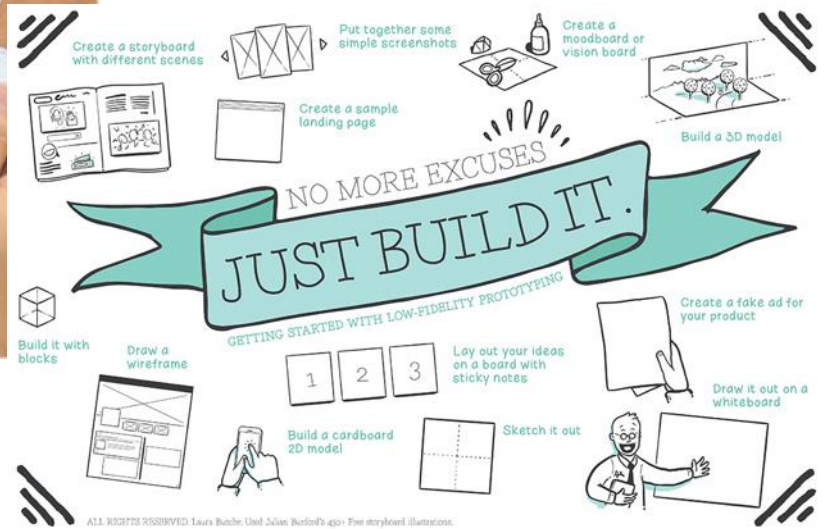
Process





Prototype-Test Phase

Experimenting + Rapid Prototyping



PROTOTYPE

TEST

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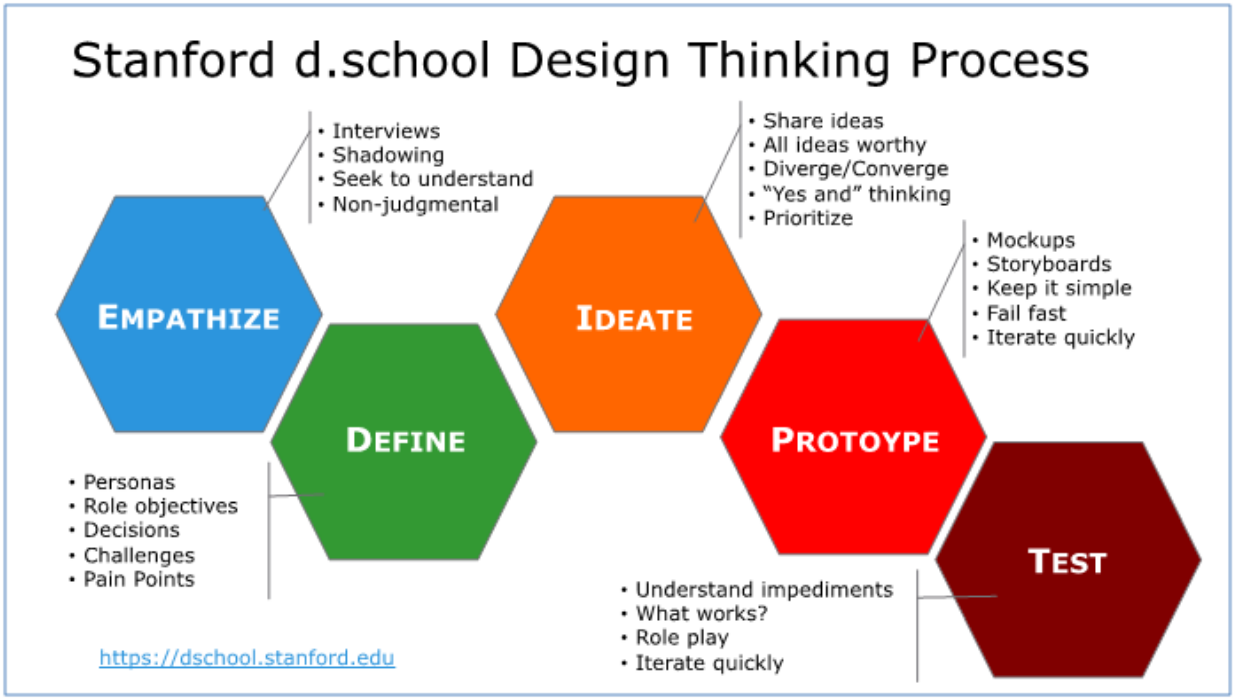
In summary



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