

Design Thinking for SDGs

Pre-workshop Session 3
Monday July 20, 2020

Prof Youn-ah Kang
Prof Semee Yoon



Today's agenda

- 1) Logistics:
 - Introduction to Slack
- 2) What is Design Thinking?
 - Design Thinking for SDGs
 - What we expect at the end of the Camp
- 3) DT Step 1: Empathize
 - Empathize with your P, issues in Sustainable Development



Faculty Team -- Prof Youn-ah Kang

- Design researcher for digital products and services
- From Jeju, South Korea
- Education
 - PhD in Human-Centered Computing from Georgia Institute of Tech
 - MS in Human-Computer Interaction from U of Michigan, Ann Arbor
 - BS in Industrial Design from KAIST
- Research interests
 - User Experience Design, Design Thinking
- Non-research interests



Faculty Team -- Prof Dongwhan Kim

- Currently teaching data science and visualization classes at Design Intelligence, Yonsei University
- Education
 - Ph.D. in Communication from Seoul National University
 - Master in Human-Computer Interaction from Carnegie Mellon University
- Research Interest
 - Social Computing, Computational Journalism, Data Visualization

Faculty Team -- Prof Keeheon Lee

- Data scientist
- Education
 - PhD in Industrial Engineering from Yonsei University
 - Data Mining and Computer Simulation
 - MS in Industrial Engineering from Yonsei University
 - Diffusion using Multi-agent Simulation
 - BS in Computer Science from Yonsei University
- Research interests
 - Data Science, Human and Artificial Intelligence, Digital Transformation
- Non-research interests
 - Basketball, Singing





The Earth Institute
AT COLUMBIA UNIVERSITY

*Mobilizing the Sciences and Public Policy
to Build a Prosperous and Sustainable Future*



DESIGN FACTORY KOREA

Faculty Team

-- Prof Semee Yoon

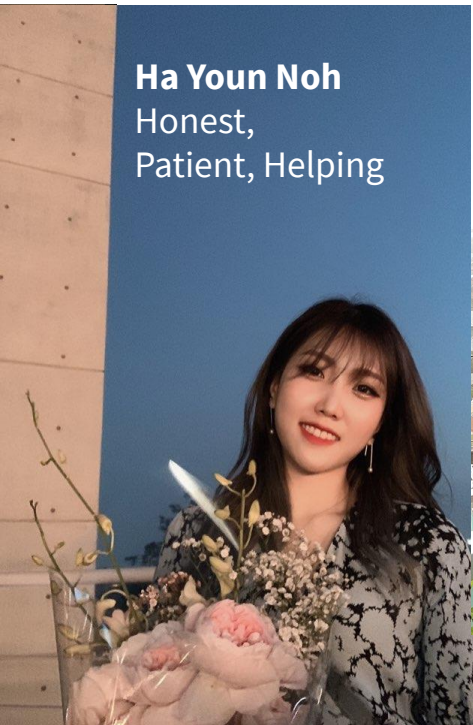
- Consultant for governments, NGOs, and international organizations
- From Seoul, South Korea
- Education - PhD in Sustainable Development from Columbia University
- Research interests
 - Environment and Development, program evaluation
- Non-research interests



Angie Ryu
 Personal Health Informatics
 New Husky
 Cheesy 90's movies & Kool-Aid



Ju Yeon Choi
 Golden retriever, Blue



Ha Youn Noh
 Honest,
 Patient, Helping

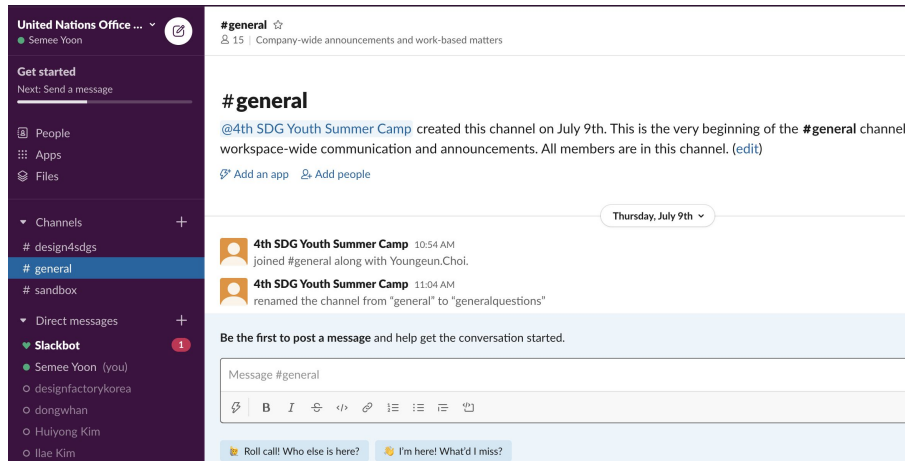


Jinyoung Kim
 Sociable, Considerate

o. Intro to Slack

On **slack**: usosd.slack.com

- Collaboration tool built on messages and Channels
 - Channels will be created for each **TEAM**
 - Available on app and desktop
- After today's session, please introduce yourself in #general channel
 - name,
 - major/year,
 - What would you do if you won a million dollars?



Part I. Intro to Design Thinking

What is Design Thinking?





A top-down view of a workspace used for design thinking. In the center, a large purple banner with white text reads "Design thinking". Below it, another purple banner with white text reads "What? How?". The background shows a desk with various items: a pair of black-handled scissors in the top left, a white marker in the top right, and several yellow sticky notes arranged in a flowchart. The sticky notes are labeled with terms like "PROBLEM OVERVIEW", "DIRECTING THE TREE", "USER SKETCH", "PROTOTYPE 1", "PROTOTYPE 2", "PITCH", and "TEST". There are also handwritten notes and diagrams on white paper, including a timeline with times like 10:00, 12:00, 13:00, 19:30, and 20:00. The overall scene suggests a collaborative and creative design process.

Design thinking

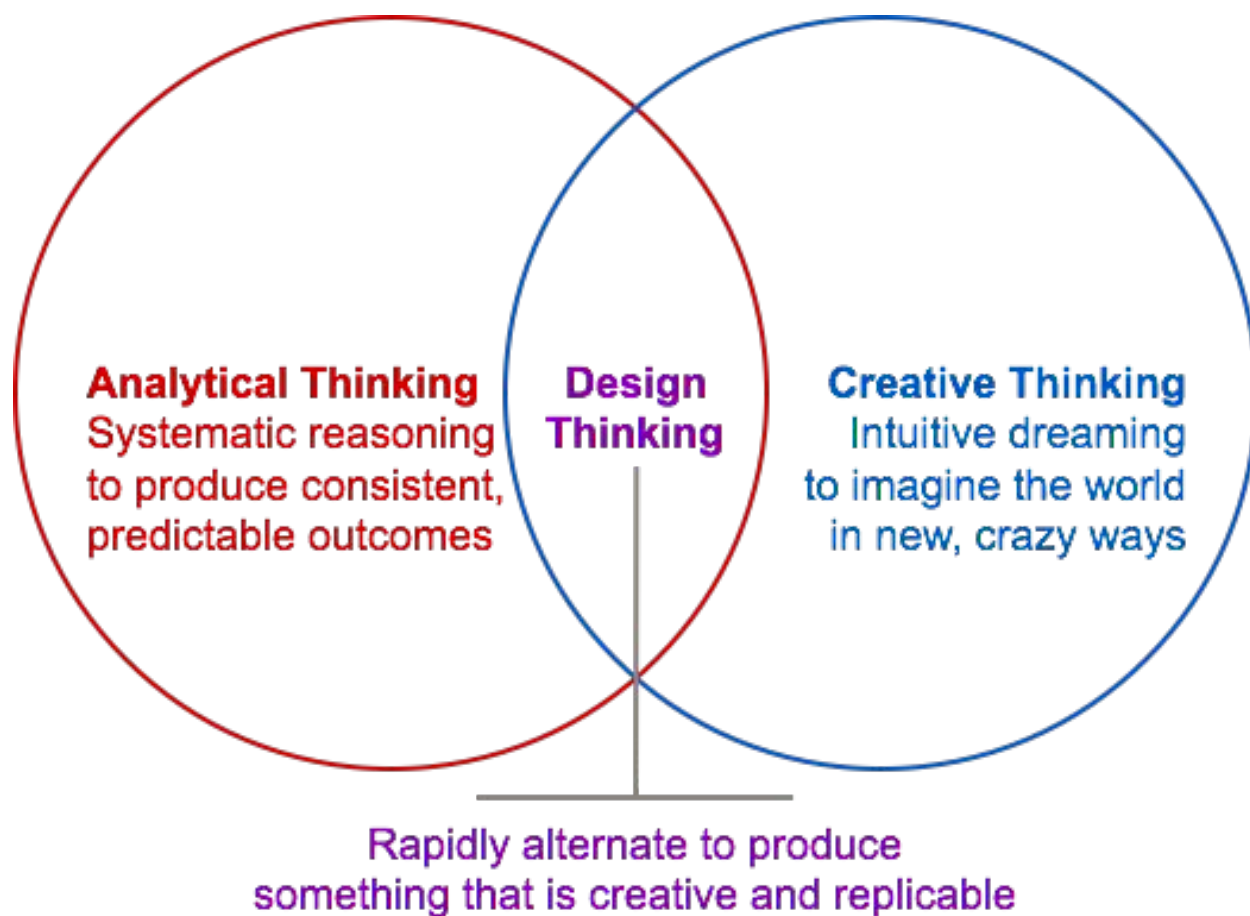
What? How?

What is Design Thinking?



No magic fix...

**... but a tool- and a
mindset to solve
problems.**



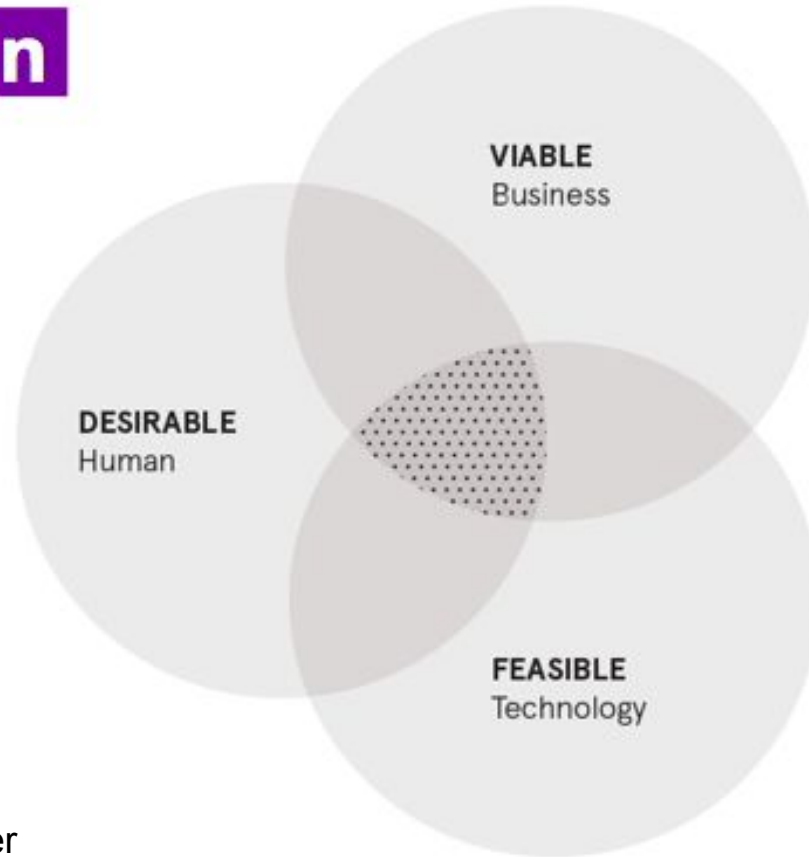
“

A human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success



What is Design Thinking?

Start here

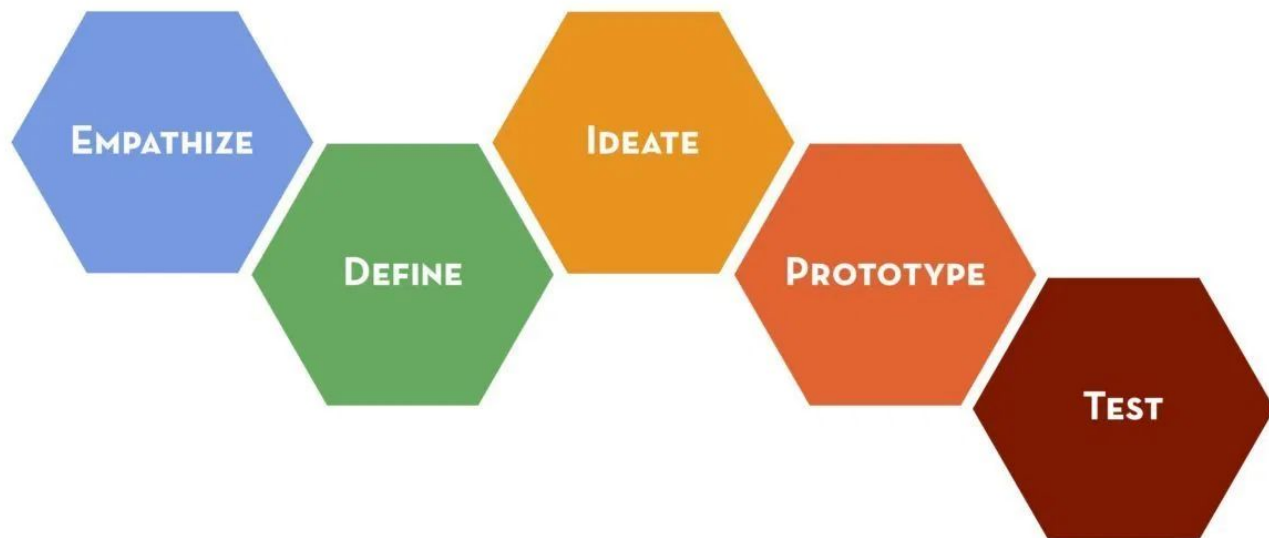


To find a solution that is:

- Technically feasible
- Economically viable
- Desirable for the user

Design Thinking Process

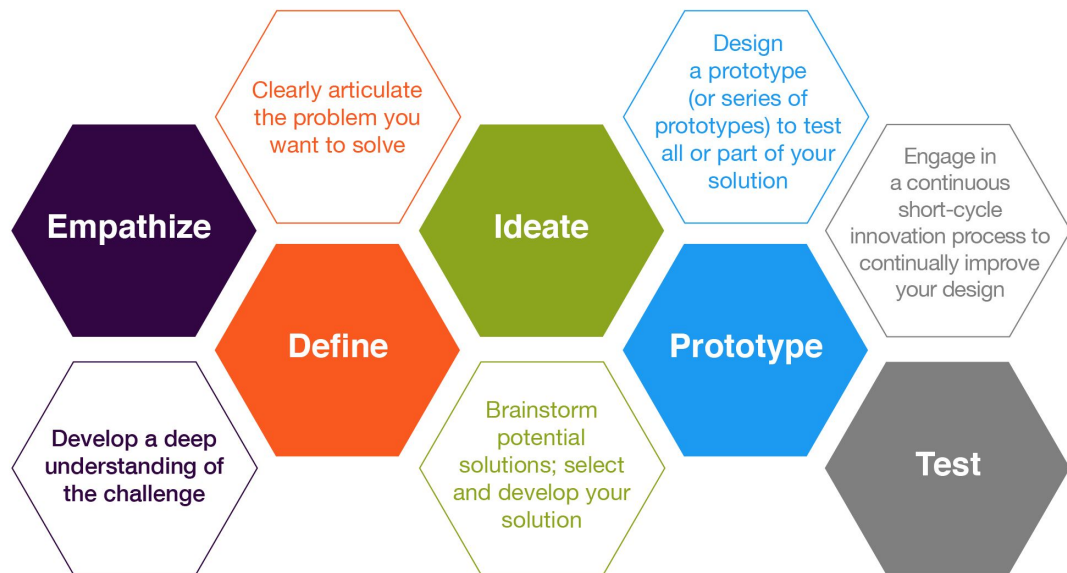
- Define the problem and then implement the solutions, always with the needs of the user demographic.
- Focus on needfinding, understanding, creating, thinking, and doing.



Step 1. Empathize

Learn about the audience by observation and interview.

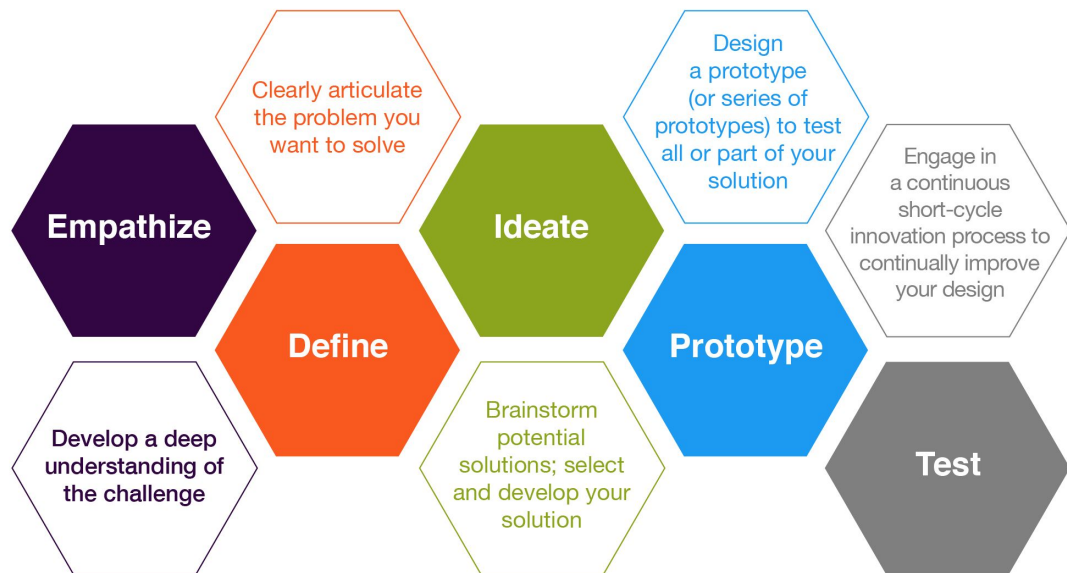
- What is my user?
- What matters to this person?



Step 2. Define

Create a point of view based on user needs and insights.

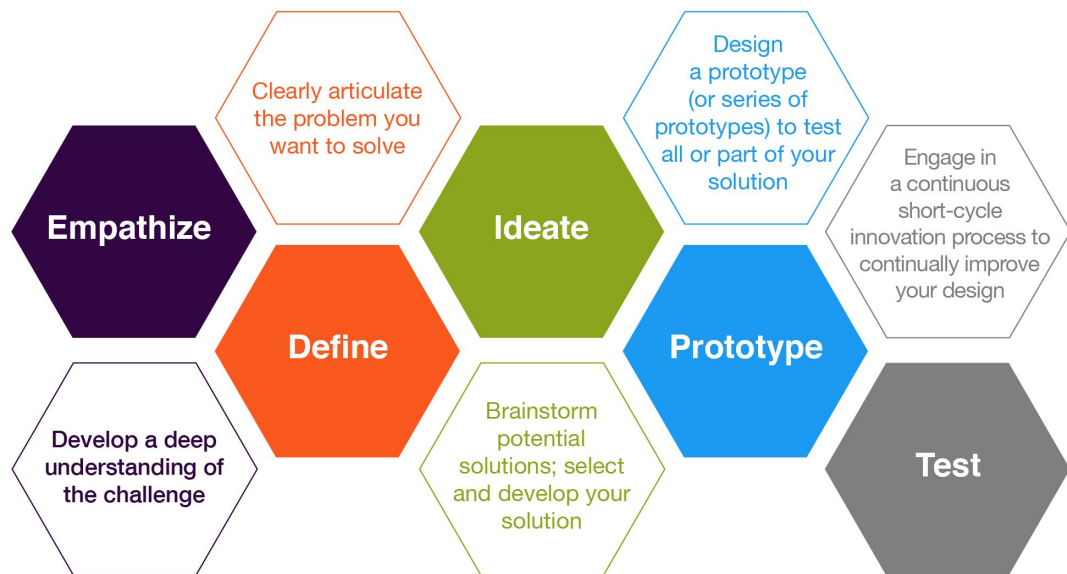
- What are their needs?



Step 3. Ideate

Brainstorm and come up with as many creative solutions as possible.

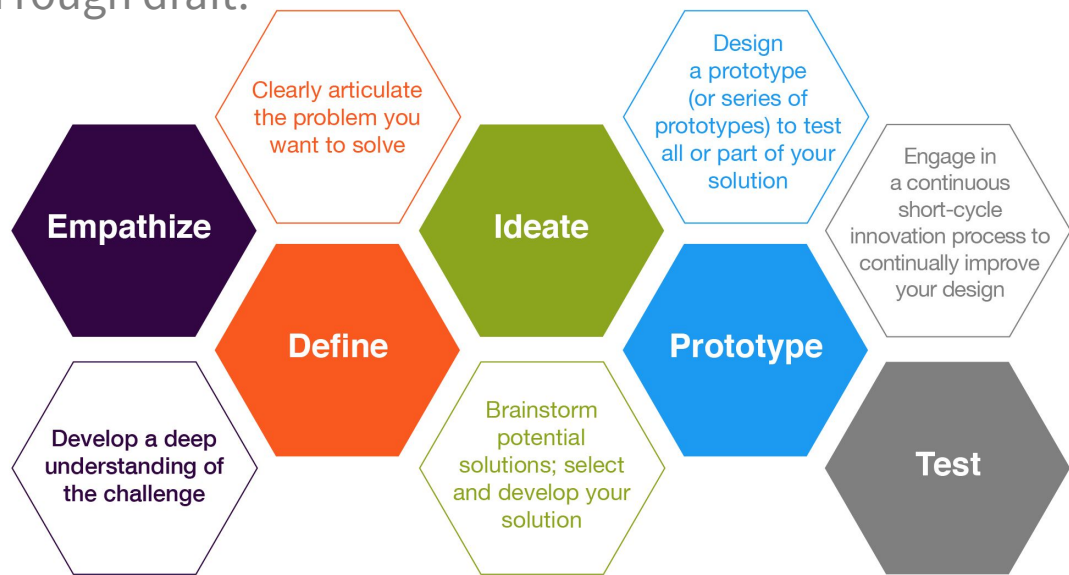
- Wild ideas encouraged!



Step 4: Prototype

Build a representation of one or more of your ideas to show to others.

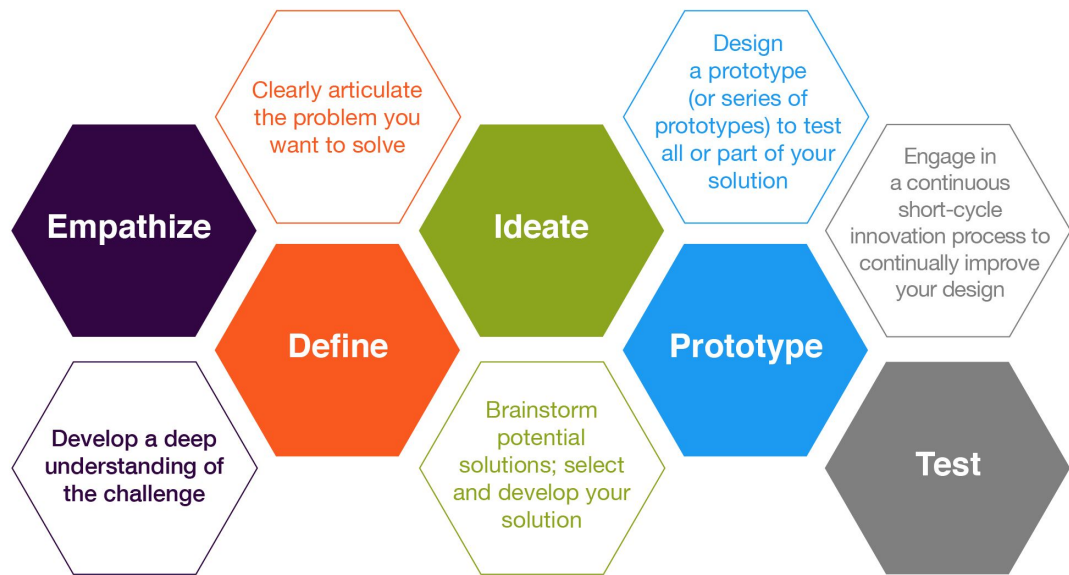
- How can I show my idea?
- Remember: a prototype is just a rough draft!



Step 5: Test

Share your prototyped idea with your original user for feedback

- What worked?
- What didn't?



Your Mindset

It's Human-Centered. Design Thinking begins from deep empathy and understanding of needs and motivations of people—who make up your everyday world.

It's Collaborative. Several great minds are always stronger when solving a challenge than just one. Design Thinking benefits greatly from the views of multiple perspectives, and others' creativity bolstering your own.

It's Optimistic. Design Thinking is the fundamental belief that we all can create change—no matter how big a problem, how little time or how small a budget. No matter what constraints exist around you, designing can be an enjoyable process.

It's Experimental. Design Thinking gives you permission to fail and to learn from your mistakes, because you come up with new ideas, get feedback on them, then iterate. Your work will never be finished or “solved.” It is always in progress.

Your Mindset

It is all about **learning by doing.**

Be confident that new, better things are possible and that you can make them happen!



Assignment 1: Think Globally, Act Locally

- You may want consider the health of the entire planet and global issues

BUT!

- Take action in your own communities and cities, in your everyday lives
- Think about recent new articles, hot topics last year.



Part II. Design Thinking & SDGs

How can we create a solution to accelerate SDG implementation?



**Sustainability = leading keyword for
global framework for cooperation**



Design Thinking for Solving Wicked Problems

www.good.is

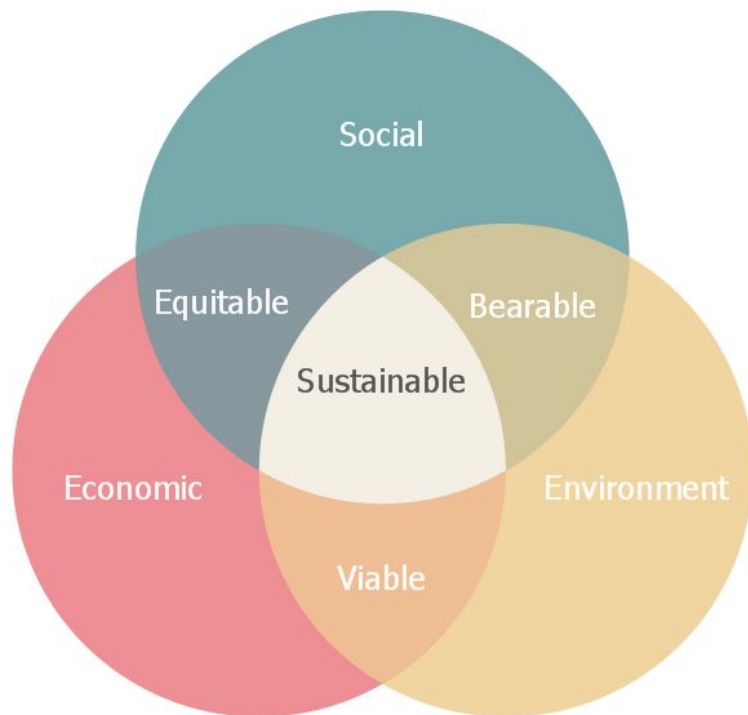
Solving Wicked
Problems: Using
Systems Thinking in
Design | GOOD



Sustainable Development Defined:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

From Our Common Future, aka the Bruntland Report by the World Commission on Environment and Development (1987)



Part III.

Design Thinking

Step 1 -- Empathize

Empathize with the issue at
hand



What do we need to live sustainably?



What do we need to live sustainably?

SDGs and Social Innovation-- localizing the SDGs

*“Social innovation is the process of **developing and deploying effective solutions** to challenging and often systemic **social and environmental issues** in support of social progress.”*

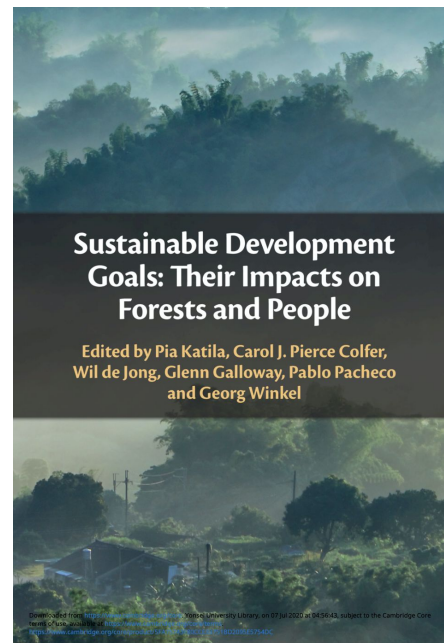
Stanford Business School

*“They are innovations that are **not only good for society but also enhance society’s capacity to act.**”*

European Commission Bureau of European Policy Advisors



Which SDG is the most important?



Introduction	1
1 SDG 1: No Poverty – Impacts of Social Protection, Tenure Security and Building Resilience on Forests <i>Kathleen Lawlor, Erin Sills, Stibniati Atmadja, Liwei Lin and Kamjana Songwathana</i>	17
2 SDG 2: Zero Hunger – Challenging the Hegemony of Monoculture Agriculture for Forests and People <i>Terry C. H. Sunderland, Alida O'Connor, Giulia Muir, Lauren Nerfa, Giulia Rota Nodari, Camilla Widmark, Nur Bahar and Amy Ickowitz</i>	48
3 SDG 3: Good Health and Well-Being – Framing Targets to Maximise Co-Benefits for Forests and People <i>Rosemary A. McFarlane, John Barry, Guéladio Cissé, Maya Gislason, Marta Gruca, Kerry Higgs, Pierre Horwitz, Giang Huu Nguyen, Jane O'Sullivan, Subhashis Sahu and Colin D. Butler</i>	72
4 SDG 4: Quality Education and Forests – 'The Golden Thread' <i>Peter Kanowski, Dollie Yao and Stephen Wyatt</i>	108
5 SDG 5: Gender Equality – A Precondition for Sustainable Forestry <i>Seema Arora-Jonsson, Shruti Agarwal, Carol J. Pierce Colfer, Stephanie Keene, Priya Kurian and Anne M. Larson</i>	146



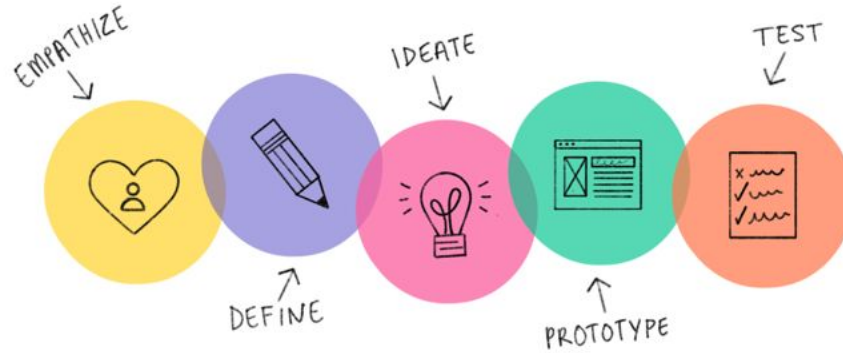
The Future We Want: Rio+20 Summit (aka UNCSD, Earth Summit 2012)

- We also reaffirm the need to achieve sustainable development by promoting sustained, inclusive and equitable economic growth, creating greater opportunities for all, reducing inequalities, raising basic standards of living, fostering equitable social development and inclusion, and promoting the integrated and sustainable management of natural resources and ecosystems that supports, inter alia, economic, social and human development while facilitating ecosystem conservation, regeneration and restoration and resilience in the face of new and emerging challenges.

Using design thinking for

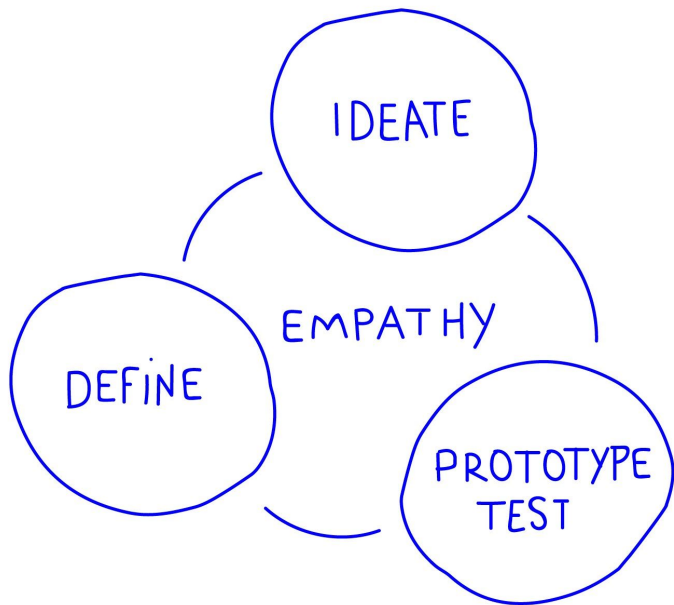


SUSTAINABLE
DEVELOPMENT GOALS



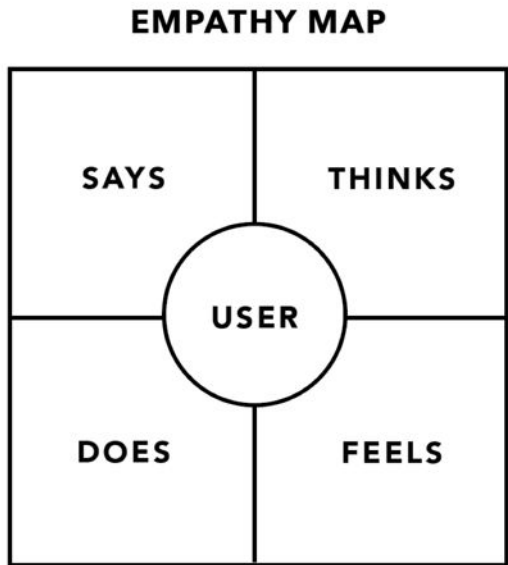
- To find a solution that is:
 - Technically feasible
 - Economically viable
 - Desirable for the user
- Empathise: understand the human NEEDS involved

Step 1: Empathize



- **What:** engage with the issue and observe who may become your target audience
- **Why:**
paint a clear picture of who your end users are
what challenges they face
what needs and expectations must be met
- **How:** background research, conduct surveys, interviews, etc

Empathy map

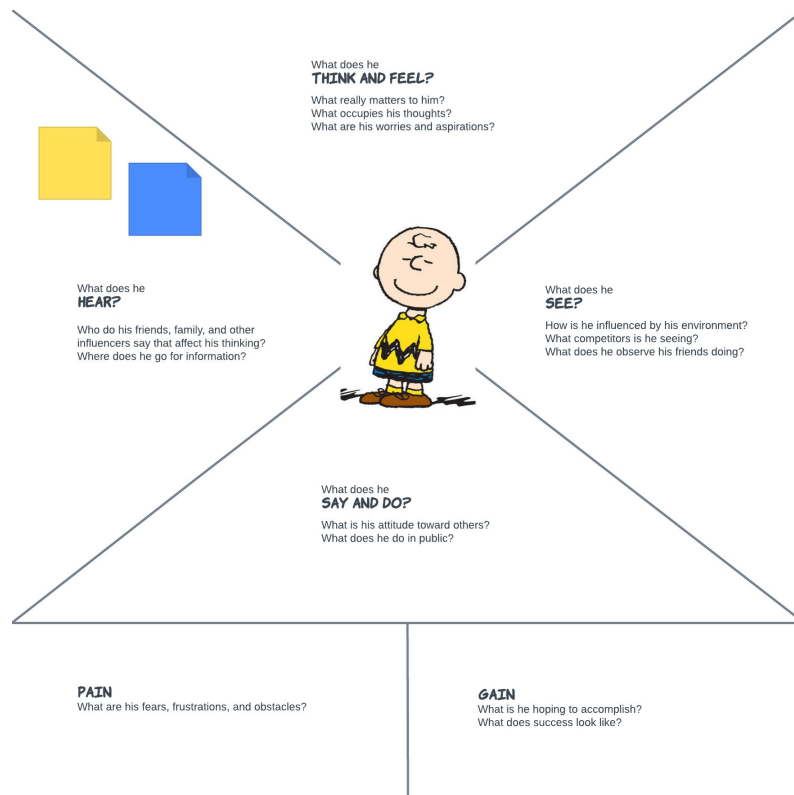


NNGROUP.COM NN/g

- **Says:** whatever the user says out loud, direct quotes from research
- **Thinks:** what occupies the user's thoughts? what matters to the user?
- **Does:** what does user physically do? how does user go about doing it?
- **Feels:** what worries the user? what does the user get excited about? how does the user feel about the experience?

How to build an empathy map

1. Define scope and goals
 1. Which issue will you map?
 2. Define primary purpose — align the team or to analyze research
2. Gather materials
3. Collect research: field studies, qualitative surveys, user interviews, etc
4. Individually generate sticky notes for each quadrant
5. Converge to cluster and synthesize
6. Policy plan



Assignment 2:

Choose 1+ SDG relevant to your accelerator

Explore current good practices of SDG implementation. Conduct SWOT analysis of relevant practices.

<https://sustainabledevelopment.un.org/partnerships/goodpractices>

Explore existing SDG Acceleration Actions. Analyze how well these actions “empathized” with the issue.

<https://sustainabledevelopment.un.org/sdgactions>



Appendix

UN SDG Tracker: <https://sdg-tracker.org/no-poverty>