

# Design Thinking for SDGs

Session 1 Empathize and  
Session 3 Define

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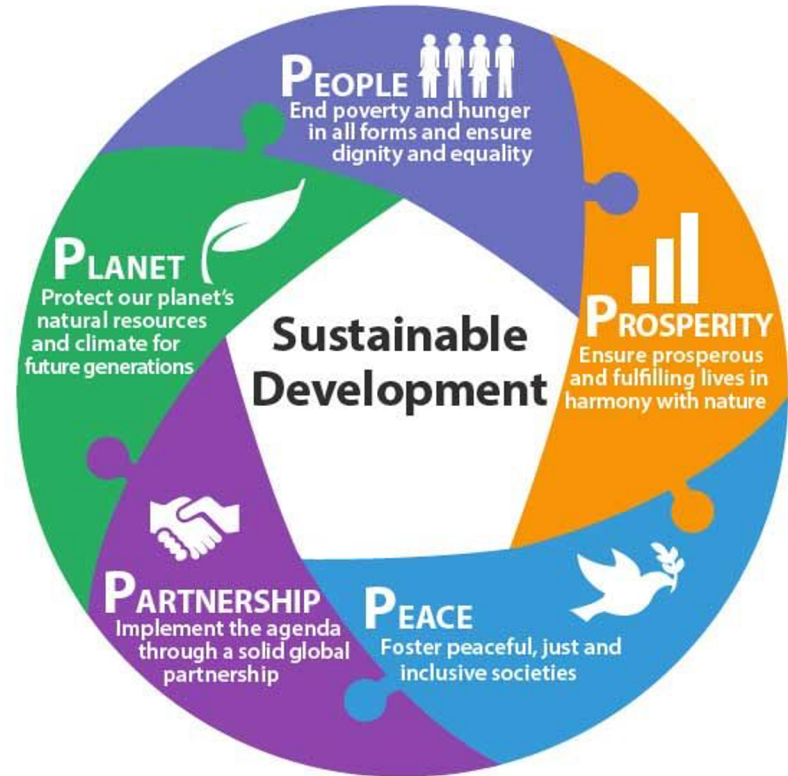
# Today's agenda

## 1) DT Step 1: Empathize

- Empathize with your P, issues in Sustainable Development
- Activity: Empathize recap

## 2) DT Step 2: Define your problem

- Activity: How Might We question and Problem Statement



# Session 3

Define  
+  
Case study of  
SDG-incorporated solution

## Understand

Experience, empathize;  
users and stakeholders  
Research, benchmark

## Ideate

Possible solutions  
Co-create  
Combine, prioritize,  
select

## Prototype

Build to test  
...to understand  
...to ideate  
Tell stories

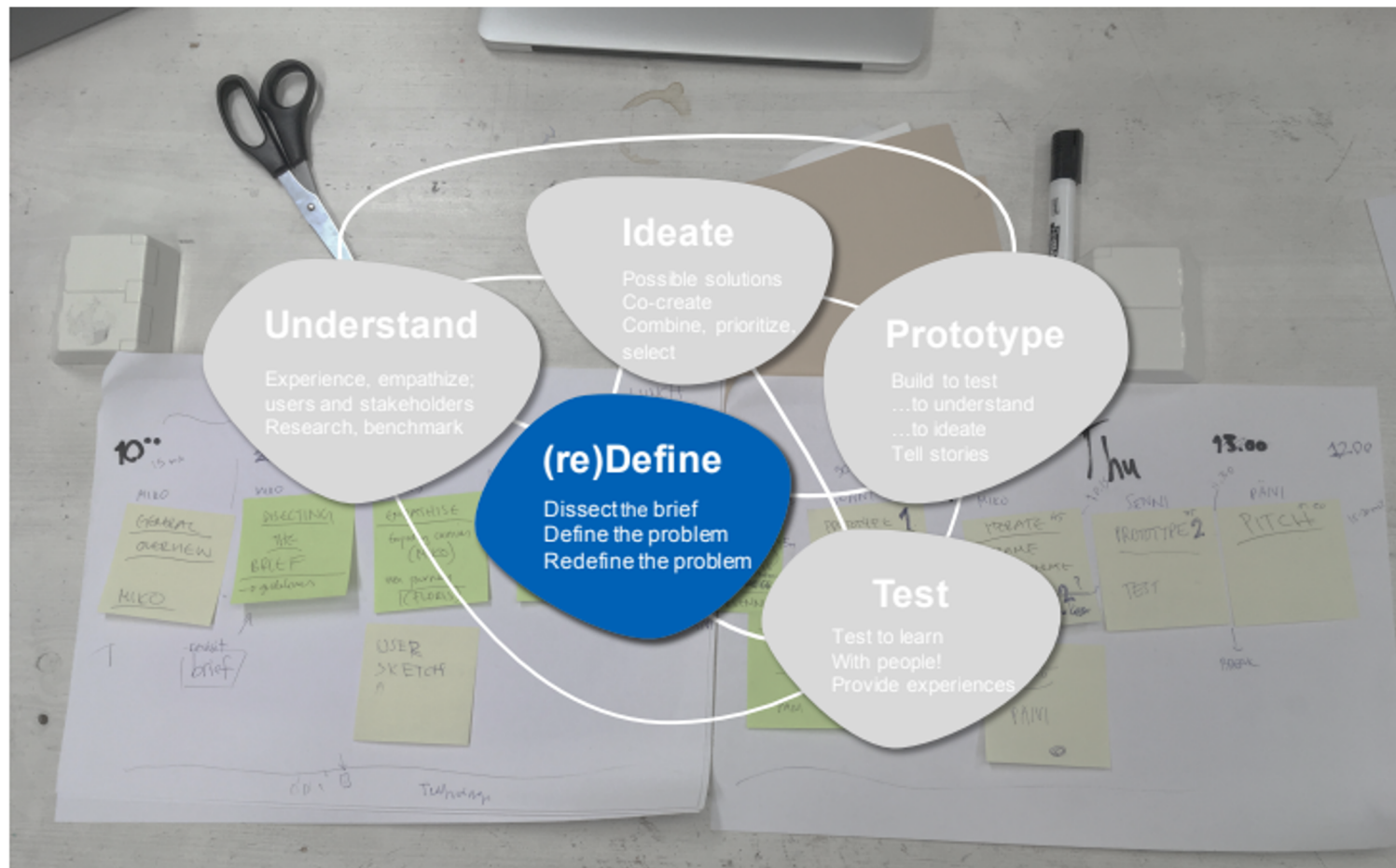
## (re)Define

Dissect the brief  
Define the problem  
Redefine the problem

## Test

Test to learn  
With people!  
Provide experiences





# From DT Step 1 Empathizing with Users

Interpretation transforms your stories into meaningful insights.

Observations, field visits, or just a simple conversation can be great inspiration—but finding meaning in that and **turning it into actionable opportunities for design** is not an easy task.

It involves storytelling, as well as sorting and condensing thoughts until you've found a **compelling point of view and clear direction for ideation**.

# Search for Meaning to Define the Problem

## Empathize

Find Themes

Make sense of findings

Define Insights

## Define

What is the actual problem  
we are trying to solve?

Who is really affected by it?

What are the different ways  
of solving the problem?

# Simple technique to identify underlying causes and motivations to get to the bottom of a problem.

1. **"Why did the robot stop?"**  
The circuit has overloaded, causing a fuse to blow.
2. **"Why is the circuit overloaded?"**  
There was insufficient lubrication on the bearings, so they locked up.
3. **"Why was there insufficient lubrication on the bearings?"**  
The oil pump on the robot is not circulating sufficient oil.
4. **"Why is the pump not circulating sufficient oil?"**  
The pump intake is clogged with metal shavings.
5. **"Why is the intake clogged with metal shavings?"**  
Because there is no filter on the pump.

# Make Insights Actionable

## Task 2: Develop Your Problem Statement

# DT Step 2: Define

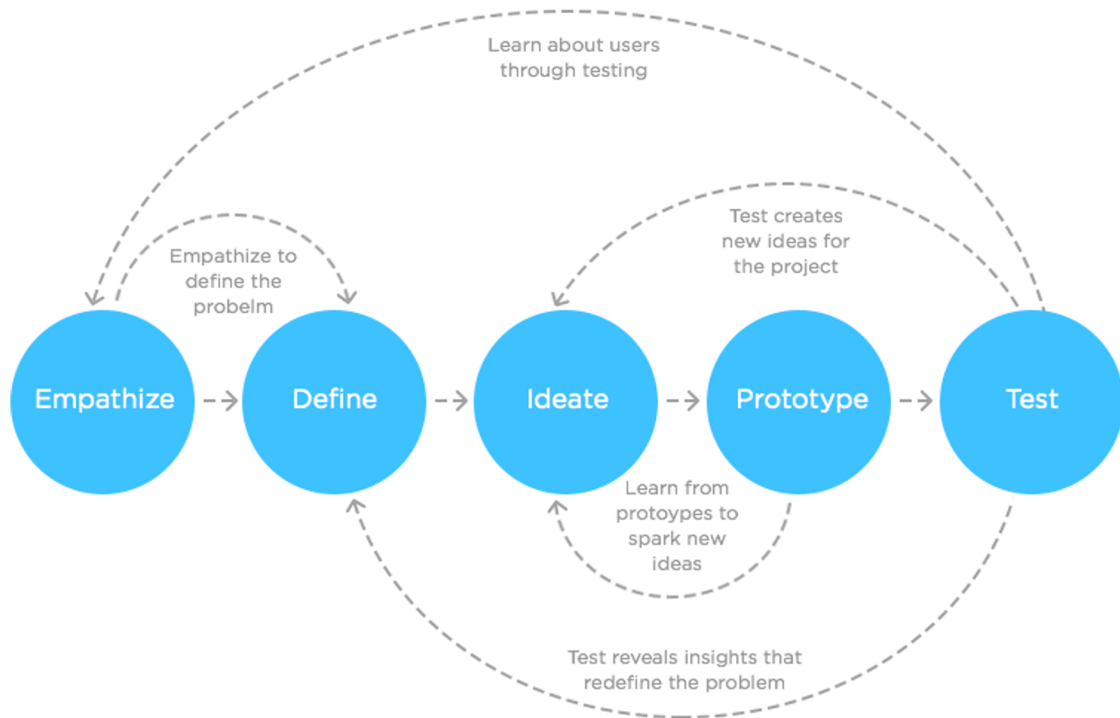
Reframe and define the problem in human-centered ways

To find a solution that is:

- Technically feasible
- Economically viable
- Desirable for the user

## DESIGN THINKING:

A non-linear process





# Define: Problem Statement

- **Human-centered:**
  - About the people that the team is trying to help
- **Broad enough for creative freedom:**
  - Should not focus too narrowly on a specific method or list technical requirements
- **Narrow enough for management:**
  - sufficient constraints so that not too daunting  
counter-ex) “improve the human condition”

# Define: Point of View

- Goal-oriented manner
- **3 elements**
  - Who is your user?
  - What is their deep, unmet need?
  - Why is this insightful?
    - insights gained from empathize

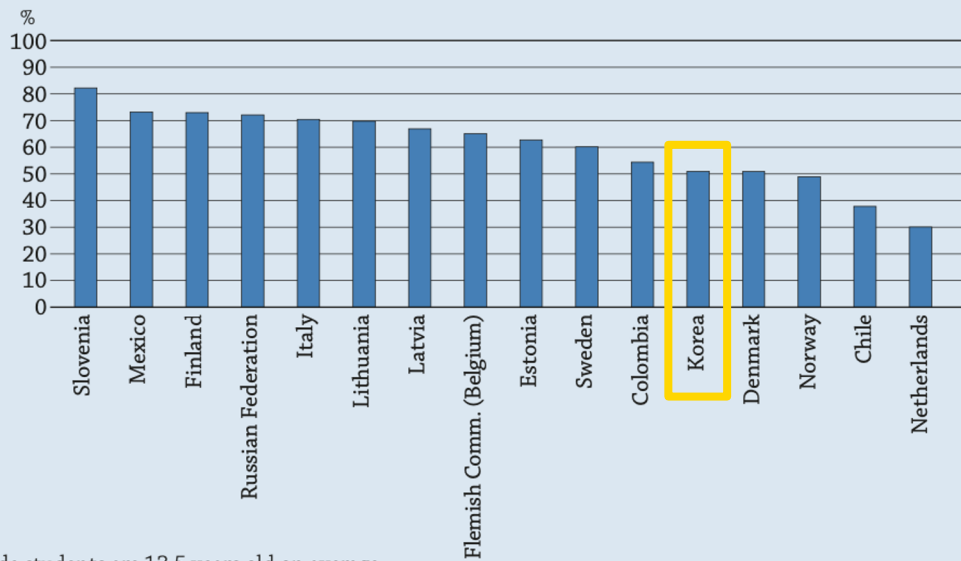
User... (descriptive) needs \_\_\_\_\_ (verb),  
because \_\_\_\_\_ (insight, compelling).

# Define: Point of View

Resources gathered  
from DT Step 1:  
Empathize

**Figure A6.a. Percentage of schools where all or most of the eighth-grade students take part in internal or external school activities related to environmental sustainability (2016)**

*International Civics and Citizenship Education Study*



**Note:** Eighth-grade students are 13.5 years old on average.

**Source:** International Civics and Citizenship Education Study (2016). See *Source* section for more information and Annex 3 for notes (<http://dx.doi.org/10.1787/eag-2018-36-en>).

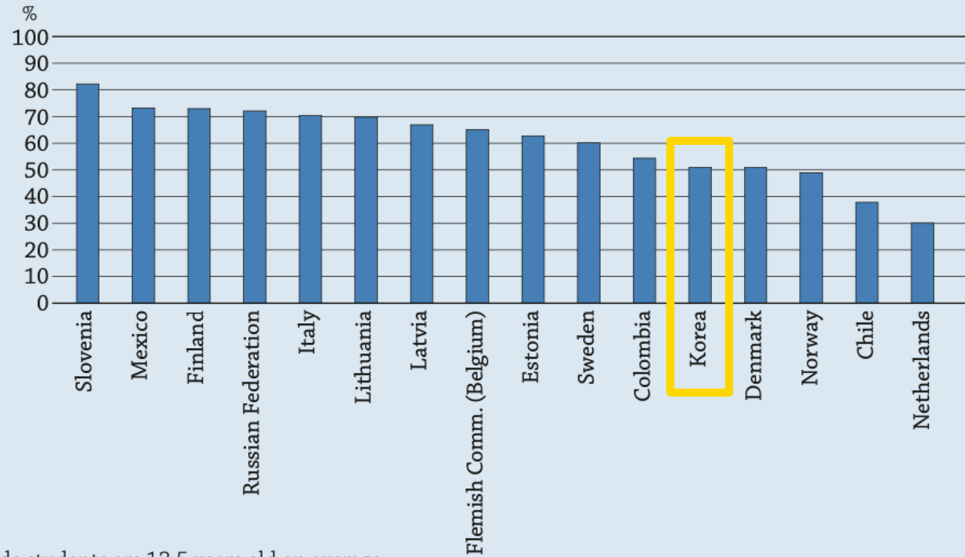
**StatLink**  <https://doi.org/10.1787/888933802760>

# Define: Point of View

Korean youth needs to experience activities related to environmental sustainability, b/c schools are unable to do so + lack of awareness will led to inaction on environmental issues.


**Figure A6.a. Percentage of schools where all or most of the eighth-grade students take part in internal or external school activities related to environmental sustainability (2016)**

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# Define: Point of View

Korean youth needs  
to gain experiential learning  
activities related to climate  
change, because

1) the current curriculum does not  
incorporate risks and  
opportunities of climate change &  
2) hands-on experience has been  
found to influence behavior and  
action.



# Develop “how might we” questions

- Create generative questions around your insights.
- Start each statement with “How might we...?” or “What if...?” as an invitation for input, suggestions, and exploration.
- Generate multiple questions for every insight. Write them in plain language, simple and concise.



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  - Start each statement with “How might we...?” or “What if...?” as an invitation for input, suggestions, and exploration.
  - Generate multiple questions for every insight. Write them in plain language, simple and concise.
- Using POV, “how might we” questions will help with ideation & set some helpful boundaries
    - HMW create a cone to eat ice cream without dripping
    - HMW redesign dessert
    - HMW redesign ice cream to be more portable

# Some tips

- HMW Statement should be focused, not vague
  - How might we *resolve the user's problems*?
  - How might we *meet user's needs*?
  - How might we *leverage existing strengths*?
- Create a ton of HMW statements

## **Too broad:**

HMW redesign  
dessert?

## **Too narrow:**

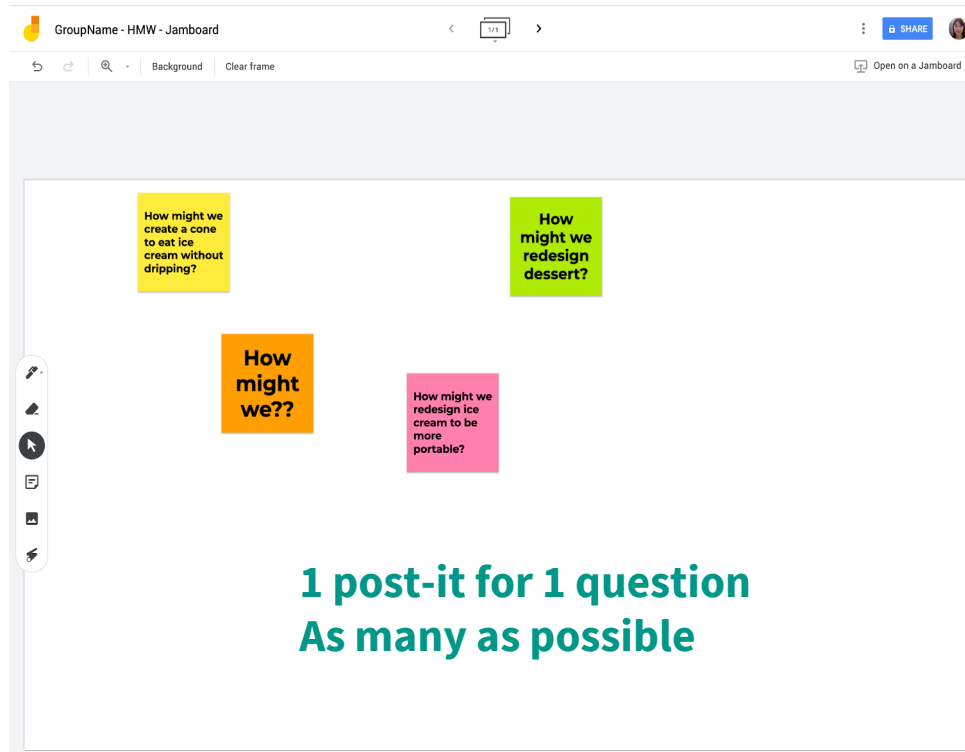
HMW create a cone  
to eat ice cream  
without dripping?

## **Just right:**

HMW redesign ice  
cream to be more  
portable?

# Task: HMW questions + Problem Statement

- Today: write down “HMW” q’s on the jamboard.
- Wednesday: pick one problem statement after discussion.
  - Trust your gut feeling: choose those questions that feel exciting and help you think of ideas right away.
  - Select the questions that are most important to address, even if they feel difficult to solve for.



**In the beginning of the next session,  
each team will briefly pitch their  
POV problem statement**

# Due beginning of the 1st session on WEDNESDAY

Slide one: sentence problem statement

Slide two or more : Background research on your users (empathy step)

# Appendix