Sustainability

Perspectives and values

WAT-E1100

Meeri Karvinen Oct 2 2020

Aalto University
School of Engineering

Seminar agenda

- **Warm-up for debates** (15 min)
- **The global development goals and values behind them** (25 min)

---------- BREAK ----------

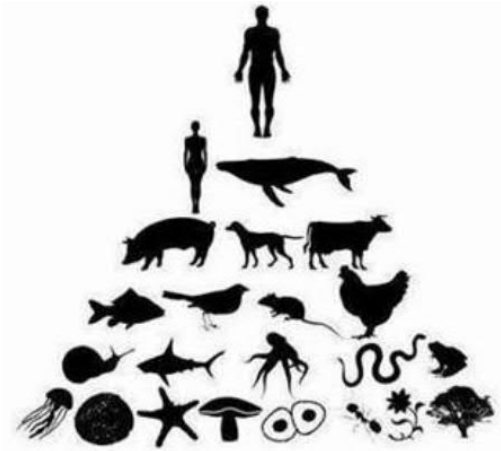
- **Playing Dilemma** (60 min)

  Break announced during the game
- **Debriefing** (25 min)

---------- LUNCH BREAK ----------

- **Introduction to the follow-up task & group discussion**
- **Time allocated for the follow-up task ~13.30-16.00**

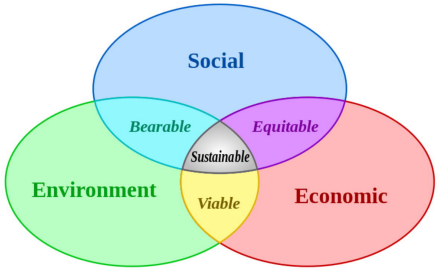
http://glancesideways.com/2012/10/progression-and-conceptual-adjustment/

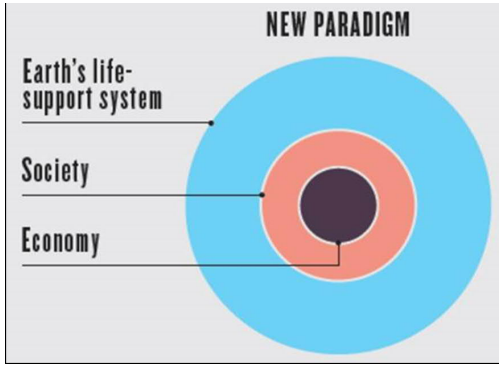


World as a resource
“Anthropocentric”

Interconnected

Regenerative
“Ecocentric”





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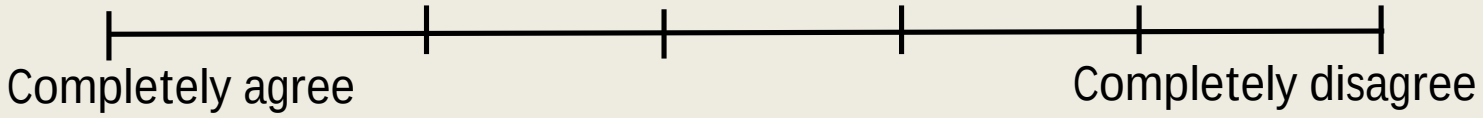
https://www.timemachinego.com/linkmachinego/2014/02/20/maslows-hierarchy-of-needs-updated-with-wifi/

Which necessities? And whose?

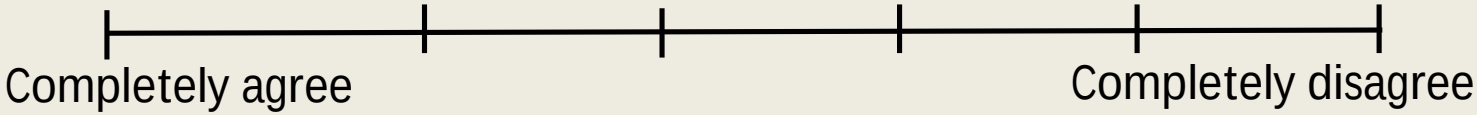
The Ojnareskogen perspectives:

1. Break the lime on the site to ensure that there are still local jobs on Gotland and ensure that mankind's increased need for lime are met.
2. Preserving Ojnareskogen, since access to groundwater and other types of ecosystem services might otherwise be destroyed.
3. Preserving Ojnareskogen, because the unique forest environment and the species that live there need those conditions to prevail.

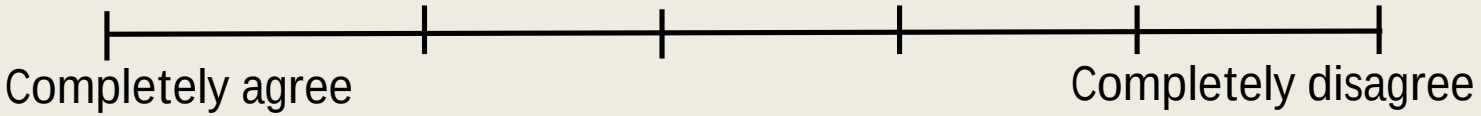
Valuation exercise – the line



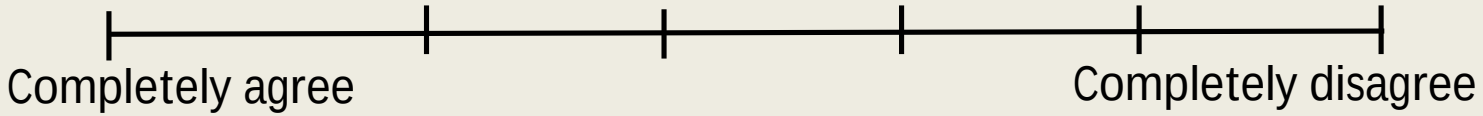
”We in the western world must change our lifestyles in order to make a sustainable development possible!”



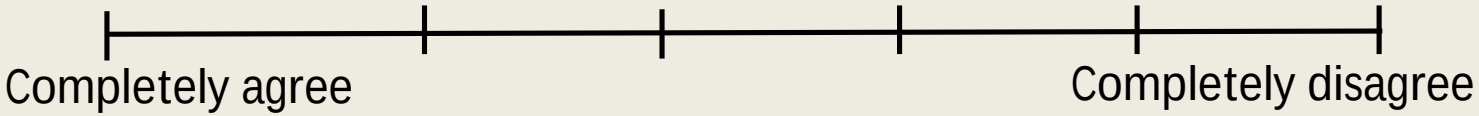
”All countries have equal responsibility in stopping climate change.”



”The world is only becoming better and better.”



”In my future profession I will benefit from knowing about sustainable development.”



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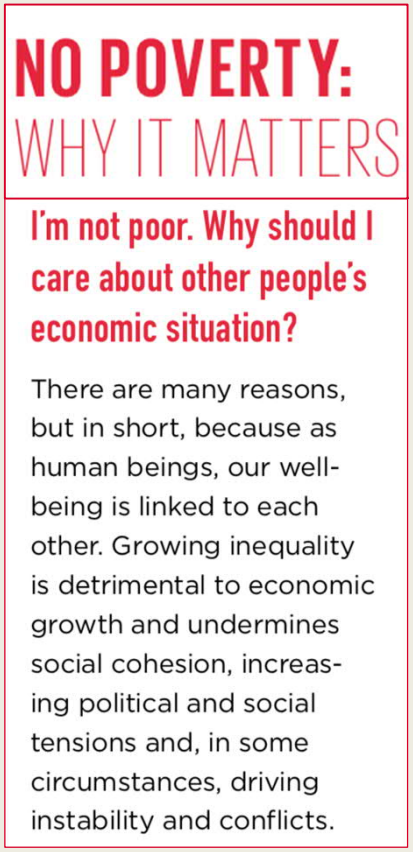
SDG's: What, why and how?

1. What does the goal indicate?

- Eradicate extreme poverty
- Reduce at least by half the proportion of men, women and children living in poverty according to national definitions
- Implement nationally appropriate social protection systems and measures for all
- ...

2. Why do we want to achieve it?



NO POVERTY:
WHY IT MATTERS

I'm not poor. Why should I care about other people's economic situation?

There are many reasons, but in short, because as human beings, our well-being is linked to each other. Growing inequality is detrimental to economic growth and undermines social cohesion, increas-ing political and social tensions and, in some circumstances, driving instability and conflicts.

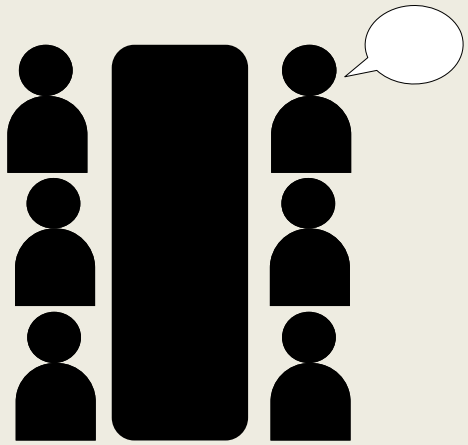
1. Inequality is detrimental to economic growth.
2. Inequality undermines social cohesion
3. ...

→ Values that shine through the text: Economic growth is important and social cohesion is good.

3. How do we want to contribute to the goal?

What do you want to do to contribute to the goal (in your personal or professional life)?

Exercise: What, why and how?



3 minutes/person!

1. Present one of your goals.
2. Why do we want to achieve it? What values lie behind the goal?
   (Have you ever personally found yourself in a situation that made you want to achieve this goal?)
3. What do you want to do to contribute to the goal (in your personal or professional live)?

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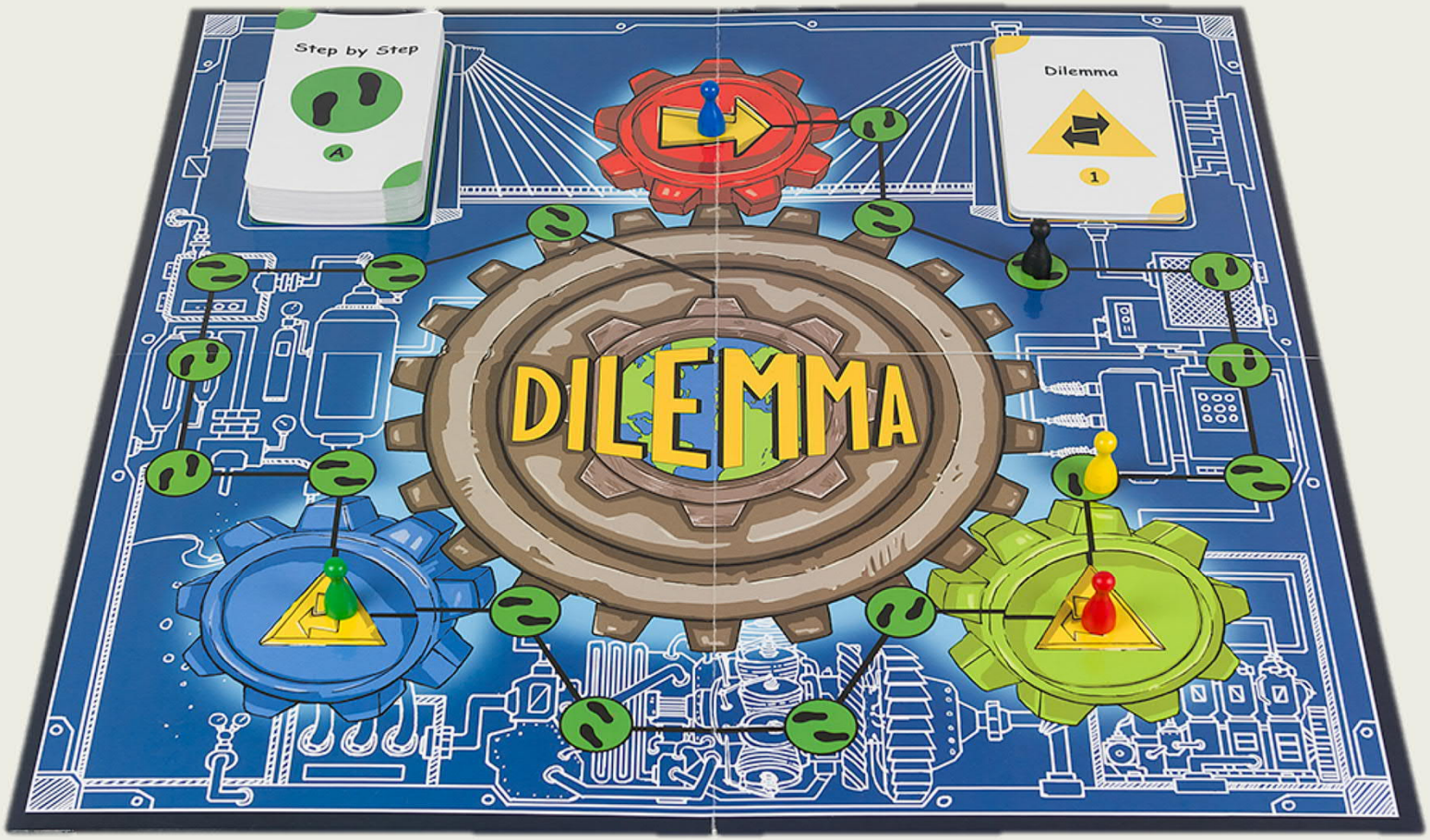
The goal of playing & reflecting

- The game provides an opportunity to study sustainable development together in a more fun way!
- You will come across new concepts and such you may have heard sometime, but do not remember.
- Being able to reason about order of magnitude is important for engineers
  - Reasoning helps: use the knowledge you already have!
  - Also qualified guesses allowed!
- In addition, you will practice debate


Step by Step
A
Dilemma
1
DILEMMA

Playing the online game

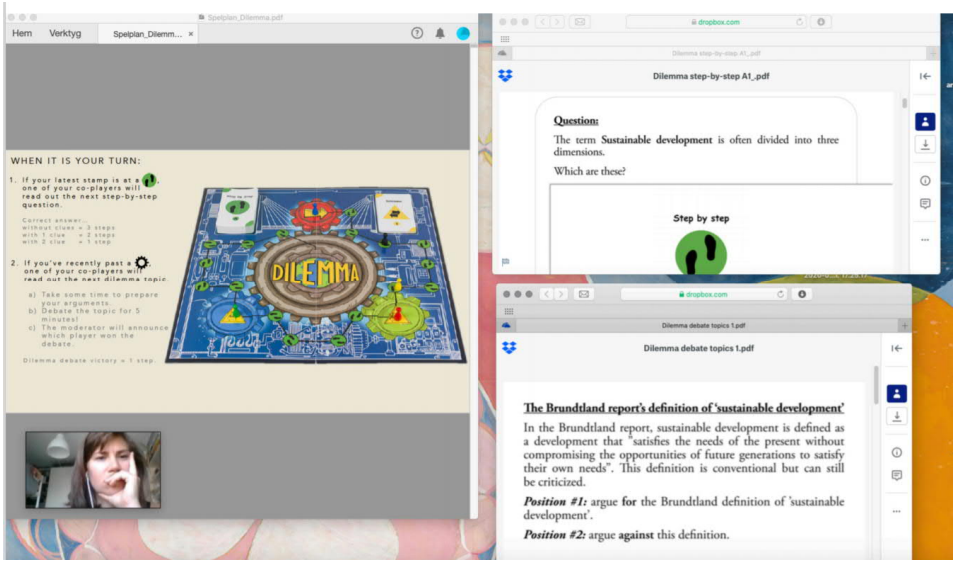
- **One member of your group is also the facilitator of your game:**
  - Shares the screen: Game board, Questions and Debate topics
- **Each of you selects an own stamp to be able to move in the game board**
  - View options → Annotate → stamp (you'll find this when someone is sharing the screen)
  - When you answer correctly, move your stamp: "Clear own drawings" and then put a new stamp

Setting up the online game

1. Everybody reads the rules

2. Only one player from each team will open the game parts (open each in their own window):

You'll find them in MyCourses, Snowflake Platform:
"Board game seminar"



How did it go?

How did this debate go?

Organic farming

More and more consumers are choosing to buy organically produced agricultural products to show their support for what they consider to be a more sustainable way of farming. Organic farming means less use of synthetic fertilizers, pesticides, growth hormones, antibiotics and genetically modified organisms. However, all these techniques exist in conventional agriculture to increase productivity which means that ecological farming is often less productive.

Position #1: argue **for why** one should choose organic food.

Position #2: argue **against why** one should choose organic food.

How did this debate go?

Technological solutions to the climate problem

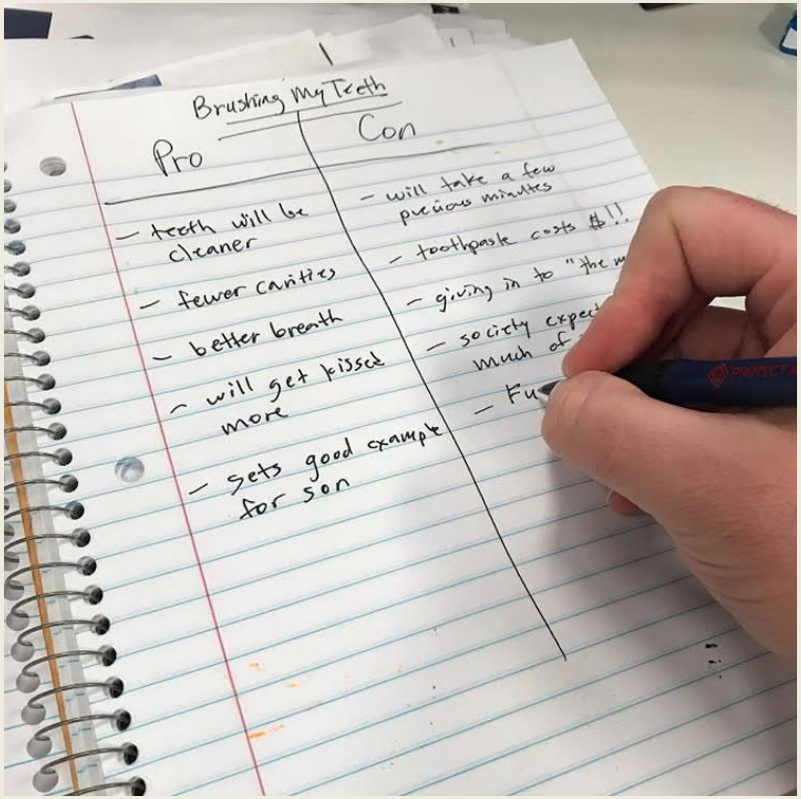
There are many ideas on technological solutions which together have the potential to almost completely replace fossil fuels by sources such as fusion energy, biofuels, nuclear, wind, solar and wave power. At the same time, it seems extremely difficult to implement these solutions in sufficiently large scales.

Position #1: argue **for** the development of technological solutions to replace fossil fuels and explain how this could be implemented.

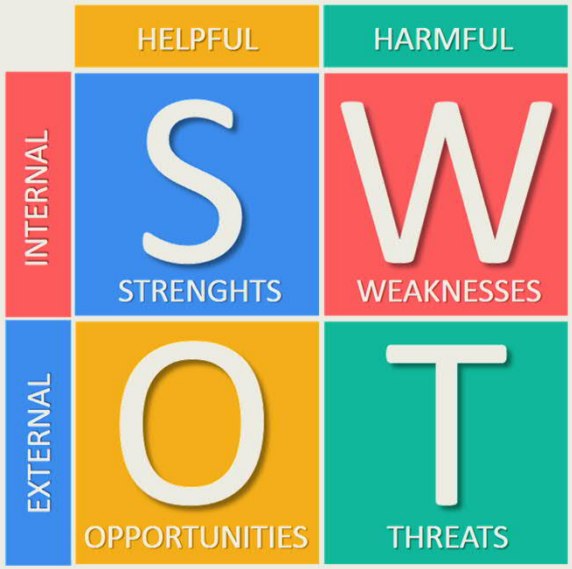
Position #2: argue **against** that technological solutions alone can solve the climate problems.

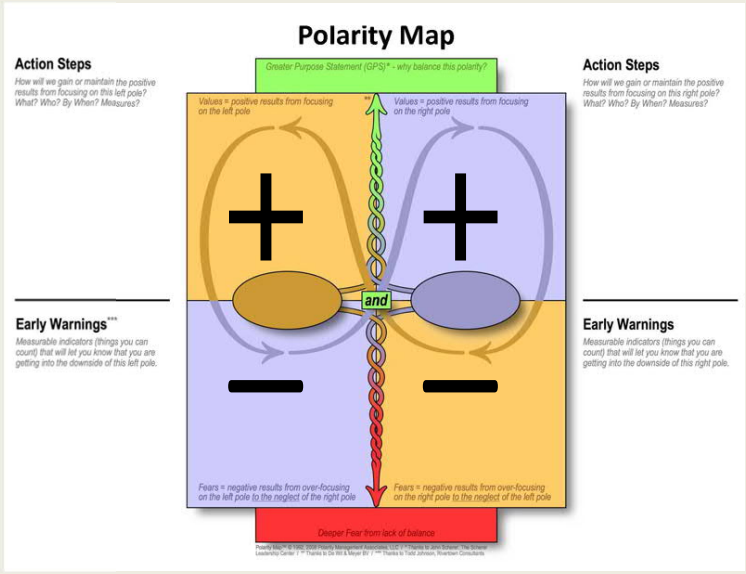
Everything
is not black or white...

Get help from pros and cons-lists!



Example: tools for decision making





TIME FOR FEEDBACK

In order to improve, we collect (a lot of) feedback. Please, take the next 10 minutes for answering the following 3 points.

The three points:

I. Key learning points: New things and already familiar things
II. What was good in the content and implementation
III. Suggestions for improvement (content & implementation)

You can evaluate the 2,5 days as a whole, or each session separately:

1. Wednesday introductory session (values & perspectives, Keller's video & exercises based on it)
2. Preparatory sub-tasks 1-4
3. Board game session & debriefing

https://mycourses.aalto.fi/mod/feedback/view.php?id=634956

Follow-up assignment

Two parts:

1. Group discussion:
   - how you experienced the 2,5 days & key learnings

2. Individual assignment to be submitted:
   a) Reflections from the group discussion and learnings
   b) Identify a value-based dilemma from the field of water and env. Engineering, and write a few debate arguments both, for and against.

→ Detailed instructions in Snowflake platform

Thank you for today!