Erasmus + TCA thematic seminar
Teaching sustainability competences
Jyväskylä 2-10-2023

GREENCOMP AS A TOOL FOR SUSTAINABILITY EDUCATION

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Ecf4clim

A EUROPEAN COMPETENCE FRAMEWORK FOR A LOW CARBON ECONOMY AND SUSTAINABILITY THROUGH EDUCATION

GREEN COMP

COMPETENCE AREAS

VALUES

ACTION

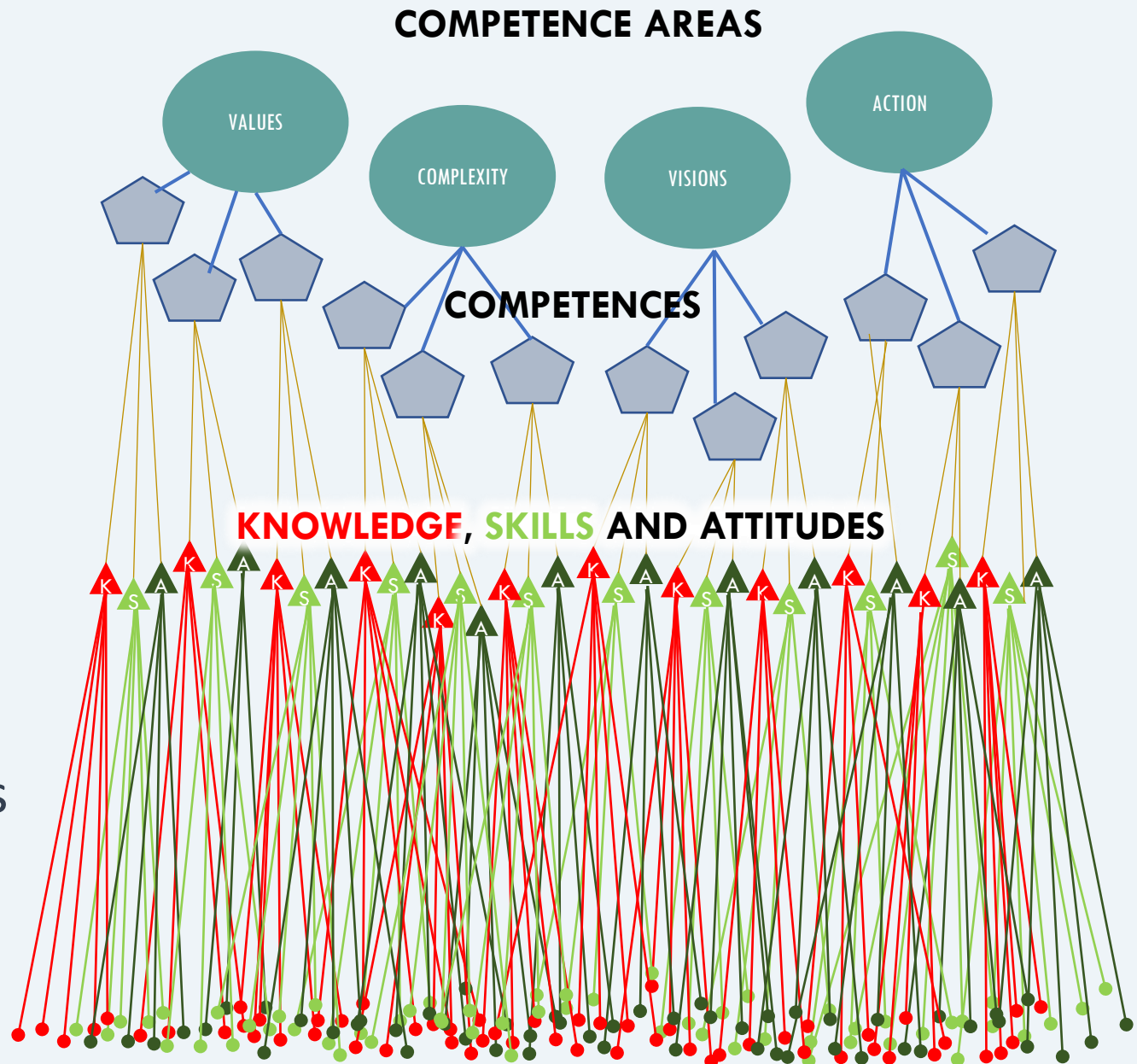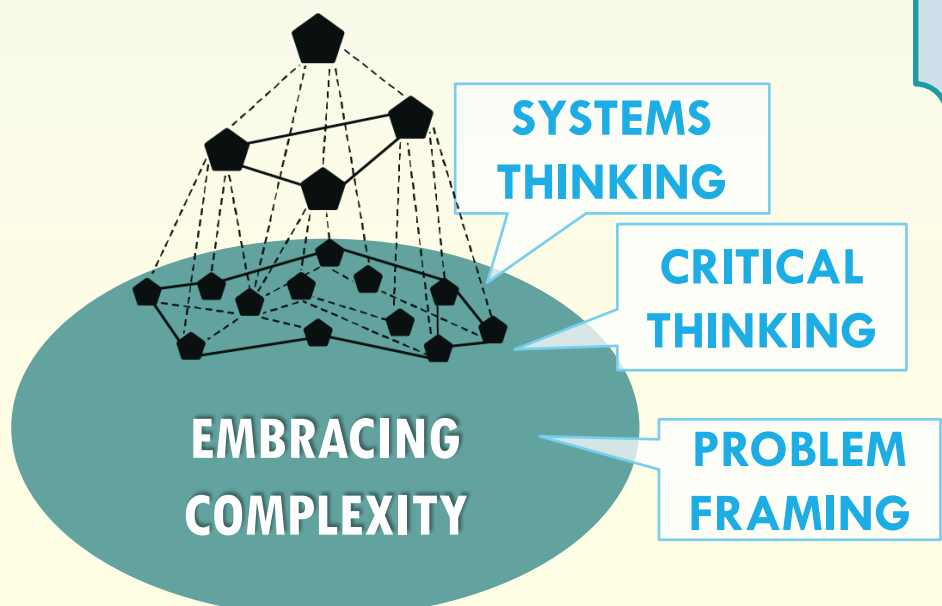COMPLEXITY

VISIONS

COMPETENCES

KNOWLEDGE, SKILLS AND ATTITUDES
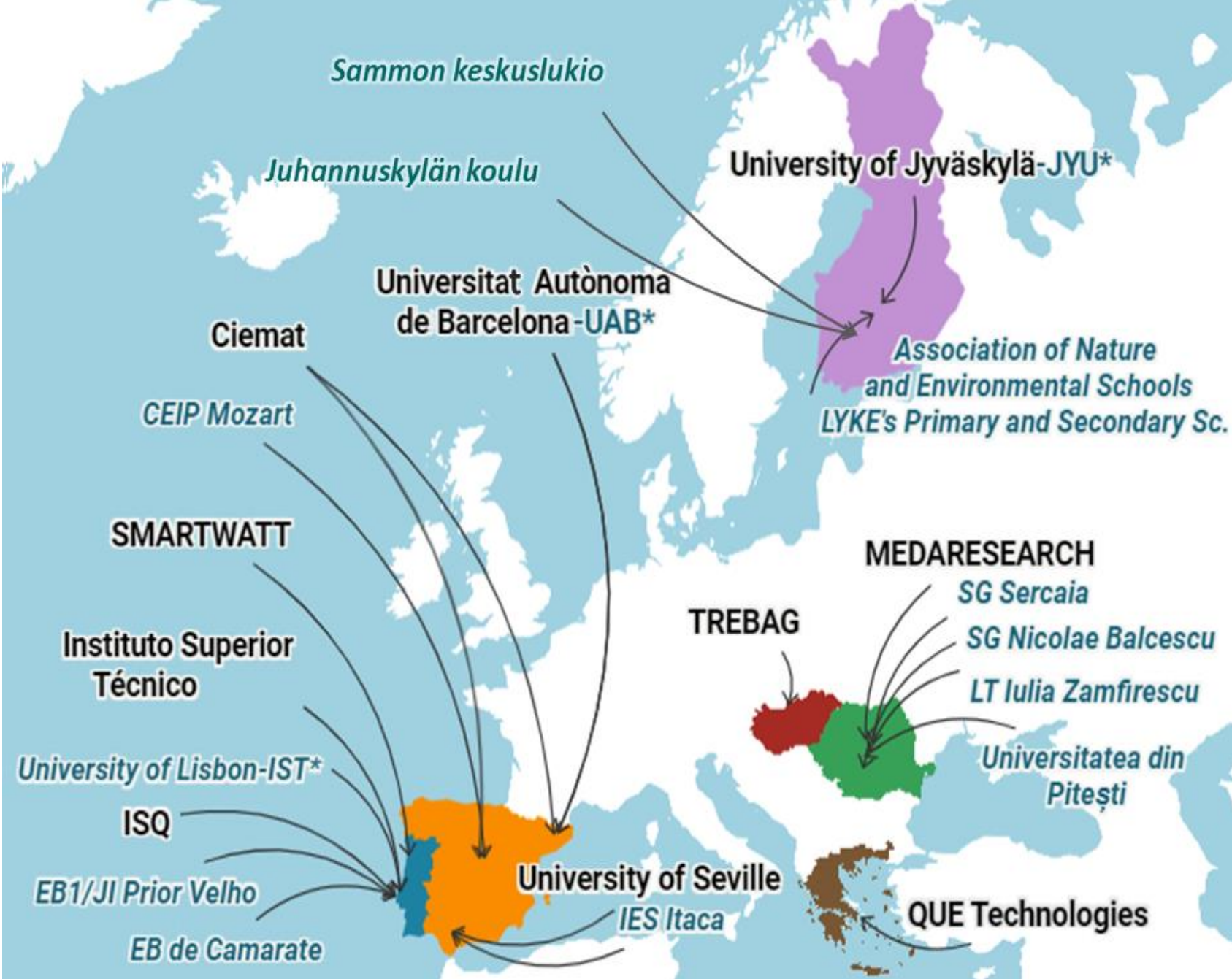
GREENCOMP

■ Describes what are sustainable development and sustainability competences -knowledge, skills and attitudes

■ Part of the policy actions by EU (Green Deal), based on research and discussions of stakeholders

https://ec.europa.eu/jrc/en/greencomp

GreenComp

EMBODYING SUSTAINABILITY VALUES
- VALUING SUSTAINABILITY
- SUPPORTING FAIRNESS
- PROMOTING NATURE

ENVISIONING SUSTAINABLE FUTURES
- FUTURES LITERACY
- ADAPTABILITY
- EXPLORATORY THINKING

EMBRACING COMPLEXITY
- SYSTEMS THINKING
- CRITICAL THINKING
- PROBLEM FRAMING

ACTING FOR SUSTAINABILITY
- INDIVIDUAL INITIATIVES
- COLLECTIVE ACTION
- POLITICAL AGENCY

Each competence has 4-6 specifying statements

This page is an example about Systems thinking

- Knows that every human action has environmental, social, cultural and economic impacts.

- Can assess how humans and nature interact across space and time.

- Has a holistic grasp of connections and interactions between natural events and human actions.

Embracing complexity in sustainability		
2.1 **Systems thinking**		To approach a sustainability problem from all sides; to consider time, space and context in order to understand how elements interact within and between systems.
KSA		Statements
Knowledge	1	Knows that every human action has environmental, social, cultural and economic impacts.
	2	Knows that human action influences outcomes across time and space, leading to positive, neutral or negative results.
	3	Knows about life cycle thinking and its relevance for sustainable production and consumption.
	4	Knows the main concepts and aspects of complex systems (synthesis, emergence, interconnectedness, feedback loops and cascade effects) and their implications for sustainability.
	5	Knows the United Nations SDGs and is aware of interconnections and possible tensions between individual goals.
Skills	1	Can describe sustainability as a holistic concept that includes environmental, economic, social, and cultural issues.
	2	Can assess interactions between environmental, economic, social, and cultural aspects of sustainability action, events and crises (e.g. migration caused by climate change or wars caused by resource scarcity).
	3	Can assess how humans and nature interact across space and time.
	4	Can use life cycle thinking to analyse the risks and benefits of human action.
	5	Can identify in a system those challenges and opportunities that have the greatest potential to trigger change for sustainability.
Attitudes	1	Acknowledges the root causes of unsustainability for which humans are responsible, such as climate change.
	2	Has a holistic grasp of connections and interactions between natural events and human actions.
	3	Is concerned about the short- and long-term impacts of personal actions on others and the planet.
	4	Cares about systemic consequences of environmental crises for current and future generations and for other species.
	5	Is concerned about unpredictable cascade effects of human action.

Embodying sustainability values

- **Valuing sustainability:** To reflect on personal values; identify how values vary among people and over time, while critically evaluating how they align with sustainability values.

- **Supporting fairness:** Equity and justice for current and future generations and learn from previous generations for sustainability.

- **Promoting nature:** Humans are part of nature; and respect the needs and rights of other species and of nature itself in order to restore and regenerate healthy and resilient ecosystems.

EMBODYING VALUES

ENGAGEMENT
Why and how to promote sustainability?

HOW TO MOTIVATE AND ACTIVATE?
PARTICIPATORY APPROACH

WHY WE MUST ACT?
SUSTAINABILITY KNOWLEDGE

RESPECT DIFFERENT PERSPECTIVES
INCLUSIVE VALUE REFLECTION AND DIALOGUE

Juhannuskylä primary and lower secondary (K-12)

Teacher Kirsi Koukkari-Halme

(mathematics, physics, chemistry)

- What has engaged you in sustainability education?
- How have you managed to motivate others?

Video greetings from students Elias and Fanni, Juhannuskylä school

https://youtu.be/X9n8DckyETM

Embracing complexity in sustainability

- **Systems thinking:** To approach a sustainability problem from all sides; to consider time, space and context in order to understand how elements interact within and between systems: interconnectedness of economy, society and environment.

- **Critical thinking:** To assess information and arguments, identify assumptions, challenge the status quo, and reflect on how personal, social and cultural backgrounds influence thinking and conclusions.

- **Problem framing** related to difficulty, people involved, time and geographical scope, in order to identify suitable approaches to mitigate and adapt to already existing problems in which everybody is involved.

EMBRACING COMPLEXITY
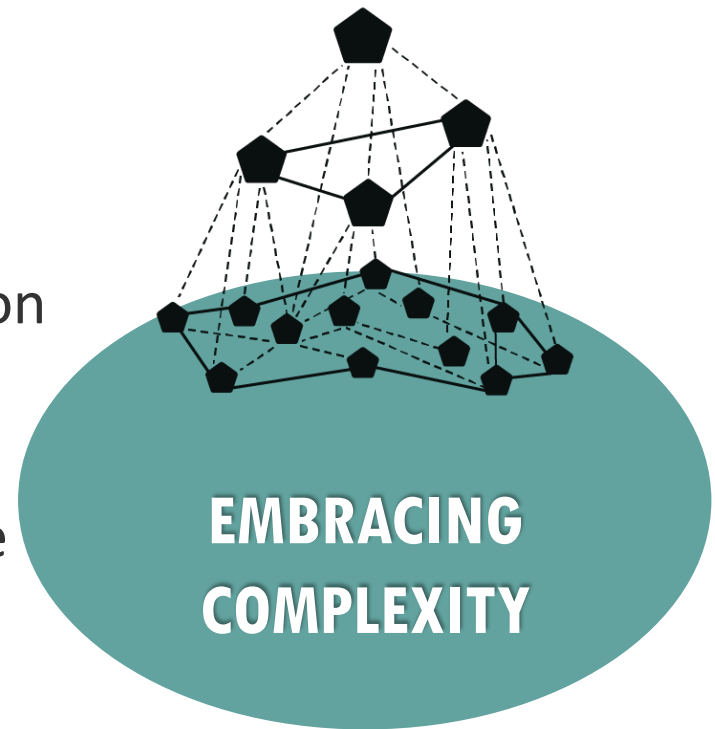
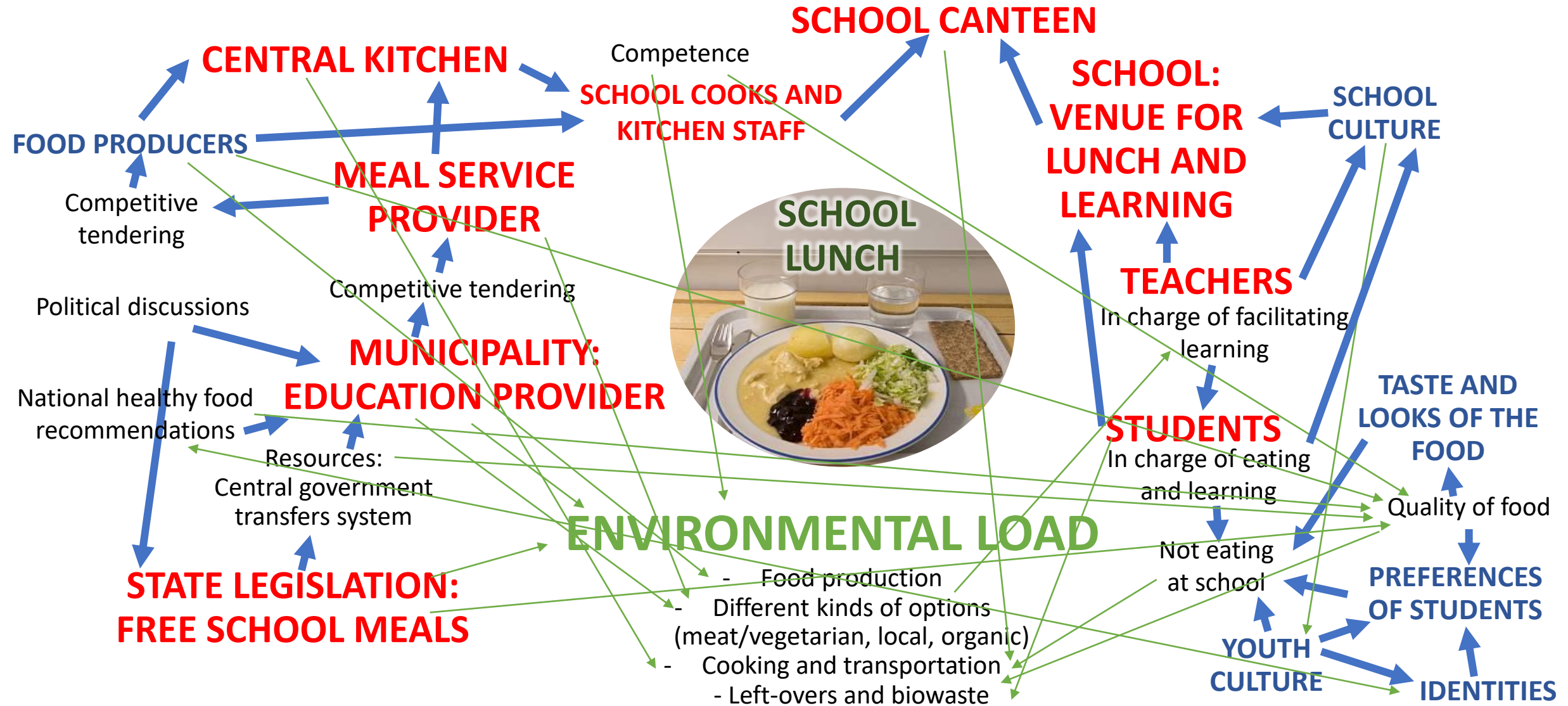# CONNECTIONS
How to frame the problem?

IT IS SO COMPLICATED!
COMPLEXITY AND ROOT CAUSES

WHY DO WE THINK AS WE THINK?
UNDERLYING ASSUMPTIONS

FOOTPRINT AND HANDPRINT OF SCHOOL
CURRENT STATE OF PRACTICE

Finnish school meals

SCHOOL CANTEEN

Competence

CENTRAL KITCHEN

SCHOOL COOKS AND KITCHEN STAFF

SCHOOL: VENUE FOR LUNCH AND LEARNING

SCHOOL CULTURE

FOOD PRODUCERS

Competitive tendering

MEAL SERVICE PROVIDER

Competitive tendering

SCHOOL LUNCH

TEACHERS

In charge of facilitating learning

Political discussions

MUNICIPALITY: EDUCATION PROVIDER

STUDENTS

In charge of eating and learning

TASTE AND LOOKS OF THE FOOD

National healthy food recommendations

Resources: Central government transfers system

Quality of food

Not eating at school

PREFERENCES OF STUDENTS

STATE LEGISLATION: FREE SCHOOL MEALS

ENVIRONMENTAL LOAD
- Food production
- Different kinds of options (meat/vegetarian, local, organic)
- Cooking and transportation
- Left-overs and biowaste

YOUTH CULTURE

IDENTITIES

Photo: https://commons.wikimedia.org/wiki/File:Finnish_school_lunch.jpg#/media/File:Finnish_school_lunch.jpg

Juhannuskylä school

- What kind of connections have you had in your food project?

- How about connections of your own subject with environmental impacts of school?

Video greetings from students Elias and Fanni, Juhannuskylä school

https://youtu.be/tP6fpc9Od8s

Discussion in pairs
## 10 min
Choose a question you want to talk about

Tell about your experiences at your own school

- VALUES: How have you been able to motivate and engage people in sustainability education?

- COMPLEXITY: What kind of cooperation has been important in sustainability issues?

Envisioning sustainable futures

- **Futures literacy:** To envision alternative sustainable futures by imagining and developing alternative scenarios and identifying the steps needed to achieve a preferred sustainable future

- **Adaptability:** To manage transitions and challenges in complex sustainability situations and make decisions related to the future in the face of uncertainty, ambiguity and risk

- **Exploratory thinking:** To adopt a relational way of thinking by exploring and linking different disciplines, using creativity and experimentation with novel ideas or methods

ENVISIONING FUTURES
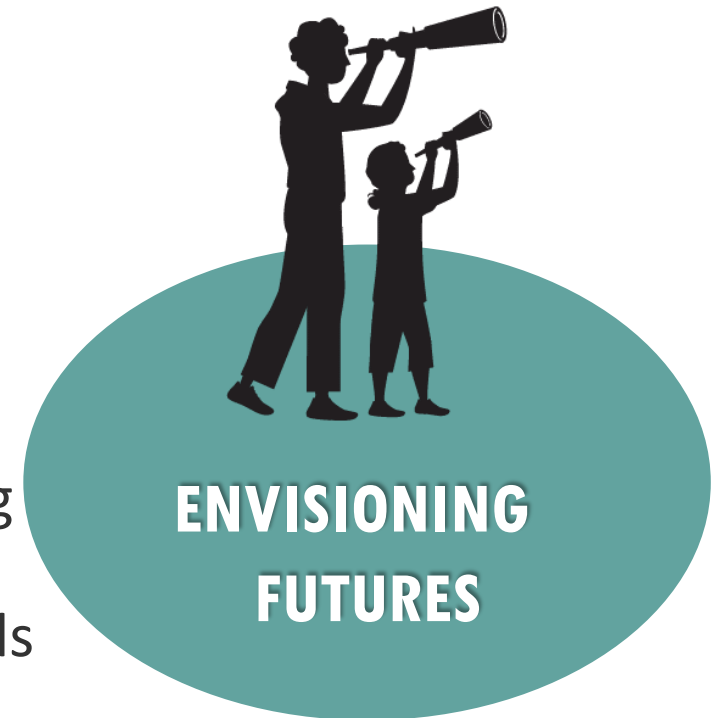
VISIONS
What are the possible futures in our context?

FUTURE IS IN OUR HANDS
ENVISIONING LIKELY AND PREFERRED FUTURES AND
SHORT-TERM SCENARIOS

MAKING A CHANGE IS NOT EASY

EMOTIONAL, COGNITIVE AND BEHAVIORAL ADAPTABILITY

THINKING OUT OF THE BOX!

EXPLORATION THROUGH CREATIVE AND RELATIONAL KNOWING

Video greetings from students Elias and Fanni, Juhannuskylä school

https://youtu.be/0xzys0coSdQ

Juhannuskylä

What is your dream – what should change in your school concerning sustainability? What could help to make it true?

Acting for sustainability

- **Political agency:** To navigate the political system, <mark>identify</mark> political responsibility and accountability for unsustainable behaviour, and <mark>demand effective policies</mark> for sustainability

- **Collective action:** To act for change in <mark>collaboration</mark> with others

- **Individual initiative:** To identify <mark>own potential</mark> for sustainability and to actively contribute to improving prospects for the community and the planet

ACTING FOR
SUSTAINABILITY

JYVÄSKYLÄN YLIOPISTO
UNIVERSITY OF JYVÄSKYLÄ

Ecf4clim

ACTION
How to proceed?

PLACES FOR SUSTAINABLE ACTIVITY

STRUCTURES FOR CHANGE

WELL PLANNED IS HALF DONE

ACTION PLAN

MONEY, TIME AND WELLBEING
ENABLE ACTIVITY

RESOURCES

Juhannuskylä

What have been the most successful activities
at your school?

What is teachers role in the activities?

Video greetings from students Elias and Fanni, Juhannuskylä school
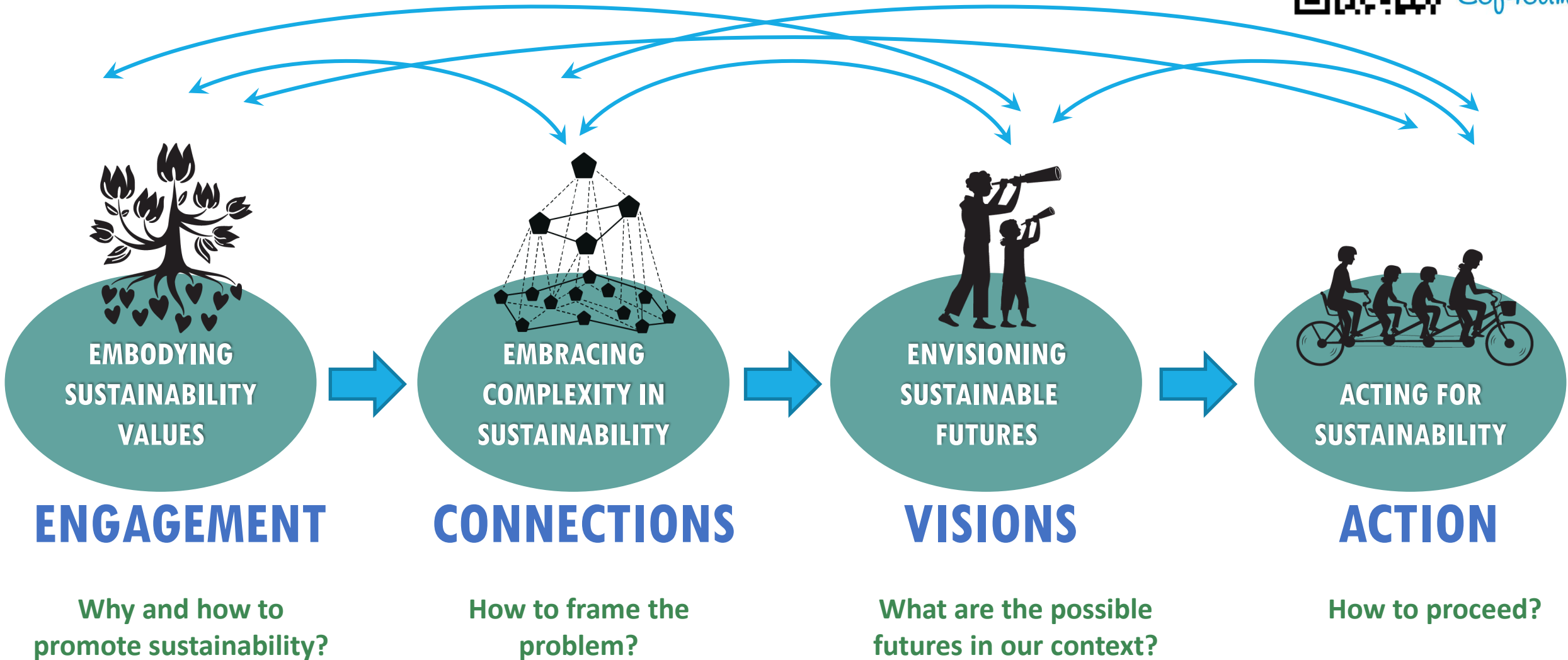
https://youtu.be/I1rqijKQrXM

Discussion in pairs 10 min

Choose a question you want to talk about

- VISION: If you could change one thing at school to promote sustainability, what would it be? What could enable this change?

- ACTION: What has been the most successful activity for sustainability at your school? How can you support the action of students?

ROADMAP FOR SUSTAINABILITY EDUCATION

https://mappa.fi/greencomp-roadmap/

EMBODYING SUSTAINABILITY VALUES

EMBRACING COMPLEXITY IN SUSTAINABILITY

ENVISIONING SUSTAINABLE FUTURES

ACTING FOR SUSTAINABILITY

ENGAGEMENT

CONNECTIONS

VISIONS

ACTION

Why and how to promote sustainability?

How to frame the problem?

What are the possible futures in our context?

How to proceed?

Heikkinen, Nokkala, Lehtonen & Mykrä (2022) Based on GreenComp: The European sustainability competence framework (Bianchi, Pisiotis & Cabrera Giraldez 2022)

PROMOTING SUSTAINABILITY IN EDUCATION

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