Teaser:
Beyond Disciplinarity

‘Deep learning’

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Deep learning

• Preconditions for interdisciplinarity

• A key issue in new educational curricula and transformation of competences

• Competences needed for school students and early career researchers
  – Linked to 21st century challenges:
    • Digitalization; Changing labour markets; The role of science and knowledge creation in our societies
"We educate young people for jobs that do not yet exist, to solve problems that have not yet occurred. The projected top ten in demand jobs in 2010 did not exist in 2004."

(Former US Secretary of Education Richard Riley)

- Breaking disciplinary constrains: Knowledge creation and innovation
What is deep learning?

- **Complexity**: integrating disciplinary knowledge to solve real world problems. (Pellegrino & Hilton, 2012)

  - Within disciplines (key concepts and principles)

  - Interdisciplinarity (integrating knowledge domains)

  - Transferable/Transversal competences
Ways of Thinking
- Creativity and innovation
- Critical thinking, problem solving, decision making
- Learning to learn and meta cognition

Ways of Working
- Communication
- Collaboration and teamwork

Tools for Working
- Information literacy
- ICT literacy
- Learning to learn and meta cognition

Living in the real world
- Citizenship, local and global
- Life and career
- Personal and social responsibility

Knowledge Skills Attitudes Values Ethics
Deep Learning and Interdisciplinarity

• Student competences and future researchers
  – Transferable skills to enhance early-career researchers employability and competitiveness (Eurodoc, 2018)

• Building trust in science.
  – Understanding complexity

• Need for research on educational transformations and skills developments for interdisciplinary approaches.
Thank you for your attention!