Webinar
Sectorial Variation of RRI and OS

18 June 2019

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Key Questions

- How do RRI-related dynamics vary across sectors, national contexts and other contextual factors?

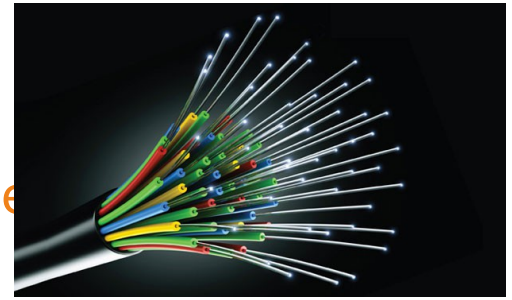
- How to understand the level of variability and the factors producing such a variability?

Five analytical interests

- General trends
  - What is happening to RRI/OS or related phenomena in the different disciplinary and research sectors?
- Barriers
  - What are the barriers to RRI/OS or similar concerns in different disciplinary and research sectors? What are the factors producing the science/society gap?
- Drivers
  - What are the drivers of RRI/OS or similar concerns in different disciplinary and research sectors? What are the factors contrasting the gap?
- Interests and values
  - What are the interests and values involved with RRI/OS or similar concerns in different disciplinary and research sectors? What are the interpretations, social recognitions and expectations to RRI/OS?
- Experiences
  - Are there successful experiences of RRI/OS or similar initiatives in different disciplinary and research sectors?

Explored sectors

- Sustainable energy
  - and, if possible, specifically zero-emission innovations for the built environment
- Materials science
  - and, if possible, specifically new coatings
- Information and communication technologie
  - and, if possible, specifically big data
- Biotechnology
  - and, if possible, specifically stem cell research and pilots, and personalised medicine
- Photonics
  - and, if possible, specifically glass fibre technologies and new light-electron chips



Method and steps

- Step 1
  - Literature review of sectors
  - Promises, concerns, societal engagement
  - Submitted Month 6
- Step 2
  - National differences in workshops
  - Norway, Italy, Portugal, Finland, Netherlands
  - Promises, concerns, societal engagement
  - More or less according to plan; internally distributed
- Conclusion
  - Integrating Step 1 and Step 2
  - To be used in WP 3 and 4
  - Submitted Month 15

Method: Literature Review & Information Gathering

- Preparation of an internal note (May 2017)
  - Refinement of the five core technological sectors to be compared
  - A methodological background for WP2
  - Structure of the literature review and information gathering
- Presentation and discussion at Kick-off Meeting (June 2017)
- First round of analysis of the literature(May to October 2017)
  - Five core technological sectors
  - First draft of the Report on the Literature Review
- Presentation of the first draft at the Trondheim Meeting (Nov 2017)
  - Alignment of Task 2.1 and Task 2.2 (sectoral workshops)
- Second round of analysis (November to December 2017)
  - Review of the text (completed on November 2017)
- Development of the final version (December 2017)
  - Submission of the report

Method: Workshops

- Refinement of the five core technological sectors (May 2017)
  - and further refinement of the questions to be explored.
- Preparation of the workshop format (July- September 2017)
  - by NTNU
- Testing of the format (Sept - October 2017)
  - by NTNU in Trondheim
- Demonstration of the format at Trondheim Meeting (Nov 2017)
  - and last refinement
- Workshops according to agreed format (Nov 2017-Feb 2018)
  - in The Netherlands, Portugal, Italy and Finland
- Reports of the workshops prepared (March 2018)
  - and sent to NTNU
- Preparation of the Report from Task 2.2 (April 2018)
  - by NTNU, with input from UH, K&I, UM and CVIVA

Participants in Workshops
(excluding the organizers)

- 43 representatives
  - from research and industry
- five countries
  - Norway, The Netherlands, Portugal, Italy and Finland
- five sectors
  - Sustainable Energy, Materials, ICT, Biotechnology, Photonics

- numbers and diversity
  - unfit for statistical analysis
  - fit for revealing challenges and chances for RRI and OS in Research Funding and Performing Organisations (RFPO's).

Results literature review RRI and OS in different sectors

- Sustainable energy (buildings)
  - still promising and hardly contested
  - established actors position themselves in the new outlooks
- Materials science (new coatings)
  - societally less visible
  - RRI and OS enter through research and science policy
- ICT (big data)
  - societal visibility of promise and concern (including big data, AI)
  - mature sector with industry as highly influential in research
- Biotechnology (stem cell and personalised medicine)
  - longer tradition of discussion about desirability and ethics
  - distance between research and application differ
- Photonics (glass fibre and new light-electron chips)
  - appears as ingredient of data-driven knowledge society
  - r asymmetries in digital infrastructures

Results sectorial workshops

- National differences in RRI and OS
  - institutions
  - national systems of research funding
  - less differences in views and strategies of participants
- Sectorial differences
  - promises of the research
  - links to industry
  - communication with wider public

Sectorial and national variability: other factors

- Participants truly care about RRI and OS
  - But not necessarily in the same language
- Many challenges for research
  - the pressure of economic interests
- Many, different suggestions for RRI and OS
  - depending on individual experiences
- Ambiguous relationship to industry
  - important as user, supporter and partner
  - yet sometimes too directive

General lessons for RRI and OS

- Relating to industry
  - Ambiguous role of industry: helps to connect to society but can be too forceful a well
- Public engagement
  - Go beyond one-way communication (explaining to the public) and connect to other views, concerns and priorities
- Target and route
  - Improving research ethics or connect with views and needs of stakeholders
- Timeframes
  - Short-term (applications) or long-term gains of research and innovation (agenda
- Revolutionary
  - RRI and OS are not totally new but not business as usual either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