

Track 1 - Transformations in the research and innovation system and Mission Oriented research and innovation

(Alexander Myklebust, NTNU; Christian Wittrock, OsloMet; Ellen-Marie Forsberg, NORSUS)

Wednesday 28th 13.30-15:30 – Session 1 – Transformations in the research and innovation system

Chair: Christian Wittrock

Wednesday 28th 17:00-18:15 – Session 2 – Mission oriented research and innovation

Chair: Alexander Myklebust

Session 2

Chair: Alexander Myklebust, NTNU, Trondheim, Norway

Abstracts

REINFORCING RRI in mission contexts: lessons learned in key support and implementation activities

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Over the past 10 years, the concept of Responsible Research and Innovation (RRI) has largely evolved. New and current actors in the field often see themselves confronted with the need to familiarize with fast evolving methodological approaches (e.g., citizen science, knowledge valorisation), growing requirements (e.g., gender plans and sound data management approaches), new and old ways of calling RRI (e.g. the recent shift to Open and Responsible Research and Innovation, ORRI, and the lack of references to RRI in HEU's Work programme 2021-2022 and Strategic plan 2021-2024) and, above all, newly defined strategic priorities and pathways to respond to societal challenges (e.g., Mission-oriented R&I policies).

In the past, missions were often related to a well-defined outcome, such as putting a man on the moon, which mostly entailed technological challenges. However, modern missions, ranging from the demographic/ageing problem being faced by Western nations to the global challenges concerning climate crisis, are more complex because there are fewer clear technological challenges and outcomes are less clearly defined. At the same time, the directionality of missions demands new requirements, starting from the combination of top-down processes with bottomup approaches, including citizens in research and innovation processes. Mission-oriented strategies require support from specific sectors, but they are not

sectoral policies; they are policies that get many sectors and actors to work together in new ways in all the phases of R&I unfolding, from design, to implementation and assessment.

Both (O)RRI and mission-oriented approaches move in the wake of giving orientation to research and innovation, bringing a series of common requirements (e.g., institutional change, openness and inclusion, responsiveness, anticipation of futures, etc.) and methodologies (participatory approaches, foresight exercises, technology assessment). The vast knowledge gathered through decades of EU projects and practices around (O)RRI can play a key role in supporting inclusive and fair research and innovation in mission-like contexts, starting from how meaningfully and seriously engaging all quadruple-helix actors in the generation and valorization of scientific knowledge.

Despite a strong EC's policy support towards key elements of RRI (such as citizen engagement) within Mission-oriented approaches, concrete examples of meaningful translations and experiences of RRI's four dimensions within Missions are still scarce. Through this abstract, authors aim at sharing two recent successful experiences which have and are currently contributing to critical engagement with mission-oriented innovation.

The first example consists of the pioneering experiences that have been run within the context of the EU-funded H2020 MOSAIC - Mission-Oriented Swafs to Advance innovation through Co-creation – project, in which multi-stakeholder engagement in the Mission “Cities” have been researched and tested, leading to open innovation outcomes. The second examples describe further efforts which are being implemented in order to reinforce and value the Open Responsible Research and Innovation (ORRI) legacy in the EU Missions. Such efforts are being implemented within the context of the EU-funded Horizon Europe initiatives REINFORCING - Responsible tErritories and Institutions eNable and Foster Open Research and inClusive Innovation for traNsitions Governance. REINFORCING is building a much-needed European central point of expertise on ORRI, providing access to resources and tools, delivering capacity building and mentoring services, assigning cascading grants through 7 open calls to institutions and organisations committed in either embarking on ORRI or consolidating their ORRI experience.

One of these open calls is planned for summer 2024 and will entails proposals aimed at implementing ORRI in Mission-like contexts. The details and the scope of the call are being shaped through engagement activities (namely workshops) with the members of both ORRI and Mission communities, identifying specific topics and challenges.

References

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Mission-critical – Mission-oriented innovation and its dis/contents

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Research and innovation policies in Europe are increasingly oriented towards societal challenges (e.g. Grand Societal Challenges) or social benefit. This can for example be seen in the current framework programme of the European Commission, Horizon Europe. Its Mission Programme, which is highlighted as its most distinctive new feature, aims to steer research and innovation in the direction of five ambitious EU Missions (e.g. “Adaptation to Climate Change: Support at least 150 European regions and communities to become climate resilient by 2030”). These missions are to drive societal transformation, by asserting the dedication to socio-ethical value as funding condition for research and innovation. But what kinds of omnipotent imaginaries of governance and control do these mission discourses bring to the management of scientific research and technoscientific innovation? Directing research and innovation towards societal goals includes a shift in roles and responsibilities, or at least putting these into renewed question. What is the ‘new role’ that is assigned to research and innovation for society - what is actually transformed in the process? And, what happens to democratic politics in the name of complete transformation?

The practice of EU Missions is still in its early stages, is evoking many questions and a new discourse as well as newly forming communities of practice. By critically exploring the emergence of mission-oriented innovation imaginaries within these communities, I argue that the discourse and practice around missions by policymakers involves (an attempt of) a powerful shift in focus of technoscientific governance from responsibility as individual moral decision-making (assigned to the scientific practitioner) to missions as the undeniable trajectory that technoscience must take to meet planetary-scale challenges such as climate change. These imaginations come to heads with established practice, unearthing deeper (and well known) tensions within what missions are aiming for with the help of science, for example between societal good and the growth paradigm.

Through the discourse of missions – including all of the connotations connecting missions to white Christian saviourism and the military – Europe’s position as an “innovation leader” through large-scale infrastructural projects, is justified. In the process, local politics with its layered conflicts and ambiguities is neglected in favour of omnipotent visions of the greater universal good. Mission-oriented innovation threatens to obscure the subjective and tacit conditions and processes that bring about collective decisions through an idealised and universally understood “common good”. Through the study of policy documents, interviews with policymakers, and grey literature on mission-oriented innovation in Europe,

I explore how the totalising fantasies of missions are produced via forms of speech and legitimation, tacit value decisions about the common good, the articulation of challenges, questions, and conflicts. I argue that by placing the sites in which decisions in the name of a common good are to be taken within science and innovation projects, possible political questions and decisions are decentralised (Griggs et al., 2014) and neutralised – positioned within a context that still holds epistemic authority in order to make consensus more likely and yet threatening just that authority. My work connects to previous work on responsible innovation (RRI), in the hope that it could contribute to re-vitalize previous discussions (Shanley, 2021). Similar deficit logics as have been much criticised previously might be underlying these new policies, even if this may not be immediately apparent (Frahm et al., 2021).

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The mission to restore our oceans and waters – experiences from Brussels to Gjøvik

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In this presentation the concept of mission-oriented research and innovation will be discussed in relation to some specific experiences with the practical implementation of the approach in ocean and water-related research and innovation. The presentation is divided into three main parts:

The first part takes an overall look on the European Commission's "Mission Restore our Oceans and Waters by 2030", one of the five missions of Horizon Europe, from its initial phase in 2019-2020 to the current discussions regarding the status of the missions and their potential (dis-)continuation in the 10th European framework program. This part draws especially on experiences with citizen engagement processes in the implementation phase, and on participation in different EC Mission Ocean forums.

The second part focuses on the construction of Mission Mjøsa as a broad research program initiated and led from NTNU and featuring a large number of public and private partners. Mission Mjøsa has been "pledged" as a Norwegian contribution to the so-called "Mission Charter", an initiative by the European Commission's Mission Ocean management. Mission Mjøsa aims to implement some of the key features of mission-oriented research and innovation, with a particular emphasis on interdisciplinarity and public engagement.

On the background of these experiences, the third part of the paper discusses some of the opportunities and challenges that come with a mission-oriented approach to research and innovation. In particular, the discussion will revolve around two inherent conflicts of the concept: Between top-down vs. bottom-up approaches, and between the objective of inclusiveness vs. that of purposefulness. Further, the concept of mission-oriented research and innovation is put into relief by comparing and contrasting it with the concepts of responsible and/or transformative research and innovation, concepts which may provide tools for critical engagement with the idea of mission-oriented research and innovation.