

**AURORA**

# AURORA Research and Innovation

*An Engagement Capacity Matrix*

Deliverable 7.2

Authors: Willemine Willems & Sem Barendse



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## Executive summary

The aim of Work Package 7 (WP7) of the AURORA RI project is threefold:

1. Build on the vast amount of work on citizen and (local) public authorities' engagement and RRI concepts, methodologies and practices in the community and beyond.
2. Shift the participation attention from hardware (i.e. tools, formats, procedures) to software (values, assumptions, mindsets, participatory culture) and “orgware” (embedding, institutionalisation).
3. Follow the systemic turn in participation. Shift focus from isolated activities or events to building and nurturing an ecology of participation around the different Aurora partners, connecting the universities to local communities, authorities and organisations, building long-term relationships with citizens, civil society organisations and public authorities, issues and communities in a participatory ecosystem.

This report is the second deliverable of WP7 and is submitted along with the third deliverable, wherein a training program for Aurora Universities support staff is laid out. This report describes the design of an engagement capacity matrix, curated to help staff and faculty reflect on their organisational structure and how it engages with the public. Data from staff and faculty members was gathered through an exploratory qualitative study. The process and methodology is described below, and the actual matrix is available in Annex 1.

## Project Abstract

The [AURORA RI](#) project develops closer research and innovation support structures to complement the excellent research and innovation activities within the Aurora Alliance, a European Universities Initiative funded by the European Commission. It will further deepen and expand the cooperation among these universities and strengthen their identity as research-intensive universities dedicated to societal impact and engagement. The aim of AURORA RI is to develop a research and innovation support agenda framed by the SDGs and based on the four priority domains of the Alliance:

- i) Sustainability and Climate Change;**
- ii) Digital Society and Global Citizenship;**
- iii) Health and Wellbeing; and**
- iv) Culture, Diversity.**

The project focus is to identify and achieve an understanding of best practices and policies on sharing research infrastructure and resources, cooperation on open science and entrepreneurial activity, empowering human capital, and mainstreaming citizen engagement. Throughout the project we analyse and map best practices already in place, learn from each other. We define barriers to cooperation at national and international level and find ways to overcome them where possible. The findings will create the basis for our R&I support agenda and will be shared with the other European Universities and beyond. The actions implemented during the project period aim at creating a platform for cooperation that will sustain beyond the lifetime of the project and equip researchers and students at Aurora Alliance Universities with a broad toolkit to conduct excellent research and disruptive innovation. In addition, being part of FOREU2 we would like to have a common understanding among the 24 Alliances of the modus operandi and share experiences and knowledge. This first combined FOREU2 report is about practices and measures taken/to be taken to ensure the mainstreaming of gender dimension in R&I long-term strategies.

## 1. Introduction

Since 1990s, the relation between science and society has become of growing concern for policy, as well as societal organizations and knowledge institutes such as universities. In short, the influence of science and technology on how we live is growing by the day, as well as the role of science in the diverse problems and risks that our societies currently face. Increasingly, universities are expected to not only open the doors, and break down the ivory tower, but also to actively work on aligning science with societal needs and concerns, by taking the initiative to engage with citizens and societal organizations.

The Aurora Alliance is a collaboration of European universities focused on enhancing societal impact through research and education. The primary goal of Aurora is to foster community engagement to drive social change and integrate this impact-focused approach into academic programs. Work Package 7 (WP7) of the AURORA RI Project, a complement to the Aurora Alliance, focusses on embedding CSE (CSE) within research and education. It specifically focuses on how to successfully embed CSE in research and educational activities.

For WP7 we view CSE as an overarching term referring to a variety of approaches that are actively used to involve citizens or societal organizations, including those in disadvantaged communities, in the production of scientific knowledge and (technological) solutions for societal challenges. Engagement approaches can range from consultation – where citizens are informed or consulted – to more deliberative and co-productive approaches – where citizens have more decision-making control (de Weger 2022). As such, engagement approaches can take many different forms, including more bottom-up mobilisation or more structured and organised involvement of citizens in agenda-setting, decision-making and knowledge production processes. For example, citizens may be involved in scientific research as data collectors, interpreters, or co-designers. Ultimately, the aim is to increase the meaningful engagement of a wider group of citizens, civil society and public/city authorities in research, innovation, and education.

Despite the increased call and attention for societal and citizens engagement in science and technology, in practice it is still often an afterthought; it becomes priority after all other more important tasks such as the actual research, writing the publications, and teaching has been done (Kupper et al. 2022). If research groups and universities are involved in CSE activities, they commonly focus more on 'hardware' —the practical tools, methods, and instruments — that helps involve people and community groups in different projects, then on software (values, mindsets, participatory culture) or orgware (embedding, institutionalization). A focus on hardware will not be enough for a university to structurally be in dialogue with society. For that reason, WP7 aims to nurture and further develop insights in software and orgware of engagement because these are crucial for how engagement is done, and whether it can be embedded structurally (Hueske, Willems & Hockerts 2023).

In line with the overarching aim of the work package, in the first deliverable of WP7 (D7.1), we created an inventory of 22 inspiring practices of CSE practices amongst the Aurora Alliance partners and beyond. We did not collect these practices ourselves but requested each Aurora partner to contribute one to three examples of CSE from their university. The goal was to not only collect a diverse set of European inspiring practices but also to foster conversations among Aurora partner and their stakeholders, thereby expanding our collective understanding

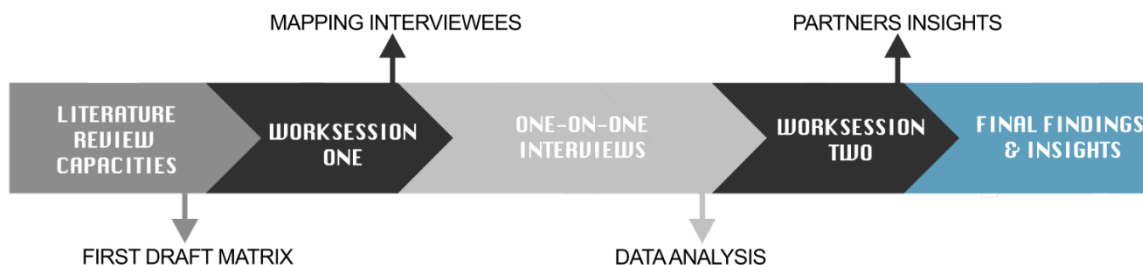
of engagement. To support this conversation, we developed a framework that served as a guiding framework. It was constructed based on the concepts of hardware, software and orgware (Hueske, Willems & Hockerts 2023; Schuijjer 2020; De Weger 2022; Wilsdon et al 2005).

This deliverable (7.2) is the follow-up of 7.1. Departing from 7.1 and building on existing tools and literature, workshops and interviews with staff and faculty from Aurora universities and beyond, we have developed an “Engagement Capacity Matrix”, which can help staff and faculty to reflect on and assess their own orgware and software of CSE. The aim of the matrix is to help staff and faculty to shift focus from the isolated activities and events they host and are involved in, towards understanding what is needed to nurture a culture, or an ecology of participation.

## 2. Methodology

The aim of the research work conducted for this deliverable is to design an “engagement capacity matrix”. A capacity matrix is a tool for evaluating strengths and weaknesses, in the context of the Aurora project this pertains to the CSE capacity of Aurora universities. As such the tool should help staff and faculty involved in CSE practices to reflect on their organizational structure, required skills/values/capacities for public engagement, and areas for improvement.

To build and design the Engagement Capacity Matrix we conducted an exploratory qualitative study into a variety of perspectives of staff and faculty members of the Aurora Universities. The exploratory qualitative study consisted of five stages: reviewing (grey) literature, work session 1, one-on-one interviews, work session 2, synthesis of final findings and insights.



### i. Literature review

One of the researchers of the VU team did a short review into grey and academic literature to gain a more in-depth understanding of organizational and institutional capacities, CSE and tools for assessing both. On the basis of the review, we made a draft of the engagement capacity matrix.

## **ii. Work session one**

The results of the review and the first draft of the matrix fed into the design of the first work session in which we came up with steps important for further developing the matrix, we mapped relevant stakeholders to interview and we gathered ideas on what we need to learn from the interviews. It was a small work session with only a few key partners of work package 7 and a CSE expert from the Copenhagen Business School.

## **iii. Interviews**

One of the researchers in the team conducted a series of in-depth follow-up interviews with individuals involved in the inspiring practices of Deliverable 7.1. While the initial two-pagers provided some insights into the hardware, software, and orgware of engagement practices within the Aurora Alliance universities, they often lacked detailed explanations. This limitation was partly due to the early stage we were in when conducting the work for WP 7. Then, the partners conducting the interviews for the two-pagers were not fully aware of all the dimensions of the theoretical framework of hardware, software, and orgware. Furthermore, two pages is not enough to describe all aspects.

To gain a better understanding of the engagement practices, particularly their software and orgware, we initiated further conversations with the inspiring practices. Our aim was to uncover the underlying structures, perspectives, and assumptions that came to light in the two-pagers. We believed that face-to-face (online) interviews would be more effective in achieving this depth compared to written communication. Therefore, we contacted all groups that had contributed an inspiring practice in Deliverable 7.1 and invited them for follow-up interviews. This approach led to nine interviews in which we explored the orgware structures of the practices and identified the specific capabilities, or software, that researchers consider essential in the context of engagement. These interviews allowed for a more nuanced understanding of the engagement practices within the Aurora Alliance network and led to some of the capacities as described in the capacity matrix (see Results section).

Another researcher of our team conducted interviews with engagement trainers across the various Aurora Alliance universities with a stronger emphasis on software of engagement. The methodology applied and findings can be found in Deliverable 7.3

Both interviews gave us insights about what is needed to organize meaningful CSE and nurture a flourishing CSE culture at universities.

## **iv. Work session two**

Based on the data collected by the work session one and the interviews, we designed work session two. To this work session, all Aurora partners were invited, and they provided insights and feedback on the findings from the previous work session and the in-depth interviews. The workshop was used to foster knowledge of the conceptual framework, and the Matrix was further developed to better support the Aurora partners' needs. After this workshop, all data were analysed.

## **v. Working towards a capacity matrix**

The engagement capacity matrix presented in the results section is the outcome of a synthesis of the collected data in combination with two frameworks from (grey) literature.

### **3. Results: An Engagement Capacity Matrix**

#### **i. Orgware**

With regards to orgware, discussions highlighted the challenges of embedding public engagement within institutional frameworks. There is a need for universities to support and maximize the impact of public engagement, balancing the imposition of programs with the creation of a participatory environment. The group discussed the differences amongst Aurora Alliance universities in how public engagement is incentivized and institutionalized, including different funding schemes and awards. It was noted that public engagement is often only seen as a dissemination activity rather than genuine co-creation.

More specific themes that the interviewees (interview rounds 7.1 & 7.2) brought up are the following:

- 1) lack of support in terms of time, money and space
- 2) interviewees felt a lack of felt urgency and priority within their organization, because CSE is not being mentioned in vision and mission statements.
- 3) interviewees felt a lack of urgency and priority within their organization, because CSE is not encouraged or even spoken about by supervisors or senior management
- 4) the lack of integration between engagement initiatives and the skills of individuals involved in projects
- 5) the need for encouraging institutions to support and maximize the impact of public engagement, while finding a balance between imposing programs and creating a participatory environment
- 6) the prioritization that some universities give to research for society rather than working with society
- 7) specific funding schemes as barriers to CSE

#### **ii. Software**

In the data collection process, many participants mentioned software aspects. They can be categorized in three broad groups: 1) understanding of what CSE entails, 2) assumptions and mindsets for CSE and 3) CSE skills.

#### **iii. Understanding of what CSE entails**

We regularly encountered inspiring practices that did not engage citizens as fully as they could have because of the understanding of what CSE entails. For example, citizens were merely engaged in the collection of data without any influence on how the research was set up or how the problems were defined. Much of the CSE is actually transmitting scientific results to audiences, and there is no co-creation aspect to it. Or participants have noticed that when put in practice, CSE gets a completely different meaning.

#### **iv. Assumptions and mindsets for CSE**

Another source of limitation was related to assumptions about the groups of citizens intended to be engaged. For example, even though the practice was seen as one of CSE, the primary motive to engaging people was for them to learn from the researchers. They considered the participants to be lacking knowledge and understanding of certain practices and problems.

## **v. CSE skills**

By far the most mentioned software components can be described as the skills that participants consider crucial for CSE: brokering, network skills needed to work with community groups, sensitivity for context (allow for imperfection, think in terms of add-ons instead of critique), engagement competences (modesty, perspective taking, participatory, tension management, innovation diffusion), language proficiency, entrepreneurial skills, personal leadership skills, and ability to navigate tensions and complexities. But also more basic communication skills such as the ability to make messages concise and use the right words and language.

## **4. Engagement Capacity Matrix**

The engagement capacity matrix that followed from the above consists of two parts: Orgware (part I) and Software (part II).

### **Part I**

For this part we adopted the Edge tool self-assessment matrix<sup>1</sup>, which proved to be a perfect fit to the above-described results.

Three groups of three distinctions are made in this tool (descriptions are all copied from the Edge tool website):

#### **i. Purpose**

- 1) Mission: Have you created a shared understanding of what engagement means and why it matters?
- 2) Leadership: Do you have individuals across your organisation who champion and lead engagement?
- 3) Communication: Do you communicate consistent messages about engagement, and do so in an open, reciprocal way?

#### **ii. Process**

- 4) Support: Do you coordinate and target your support for engagement, to foster innovation and good practice?
- 5) Learning: What opportunities do you provide for learning and reflection about high quality public engagement?
- 6) Recognition: How do you recognize and celebrate people's involvement in public engagement?

#### **iii. People**

- 7) Staff: Do you ensure all staff - in academic and support roles - have opportunities to get involved?
- 8) Students: How are students involved and do they have opportunities contribute their expertise and energy?

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<sup>1</sup> NCCPE Edge tool self assessment matrix, accessed on November 26, 2023 at [https://www.publicengagement.ac.uk/sites/default/files/2023-06/nccpe\\_edge\\_tool\\_self\\_assessment\\_matrix\\_2.pdf](https://www.publicengagement.ac.uk/sites/default/files/2023-06/nccpe_edge_tool_self_assessment_matrix_2.pdf)

- 9) Public: Do you involve the public in shaping your activity, and maximise opportunities for their involvement?

## Part II

The distinctions made in part II are based on (Irwin, 2021). Irwin argues that traditional approaches to science communication, which rely on experts conveying information to the public, are no longer sufficient in a world where science and technology are deeply intertwined with society and culture. Instead, Irwin advocates for a more nuanced approach that takes into account the social and cultural context of scientific knowledge, as well as the values and beliefs of different audiences. He proposes third order thinking in science communication, which involves engaging the public in dialogue and co-creating knowledge, rather than just transmitting information. This shift from first to second, and then to third order, represents a move from a one-way dissemination of scientific information (1st order) to a two-way dialogue with the public (2nd order), and finally, in third order, to a more integrated and critically reflective approach that considers the wider societal implications of scientific and technological developments (3rd order).

We have adopted the distinction between three orders of communication in the matrix, because they can help researchers and staff to critically reflect on their own work practice. It helps them to understand what models of communication are implicit in their practices, in how they view and preconceive their publics and to reflect on science-society relations, and the broader societal, ethical and cultural implications of their research.

The matrix itself is available in Annex I.

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