D4.1: SMART-ER GUIDELINES FOR PUBLIC ENGAGEMENT

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Abstract

This report is summarising the results achieved in deliverable 4.1 of the SMART-ER project. The results will contribute to the development of an ECIU framework by providing a set of guidelines on how to encourage and facilitate public engagement aimed at 1) the ECIU level, 2) the individual institution and 3) the individual researcher. An important input to the guidelines was the results of the work made in task 4.1 comprising analysis of a survey made to all ECIU partners and followed up by a workshop at each university. The guidelines are providing recommendations to use and follow at the three levels. The results will also be taken up at the ECIU university alliance level.
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<td>Deliverable</td>
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<td>WP</td>
<td>Work Package</td>
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1 Introduction

The European Consortium of Innovative Universities, a network of universities united by a common profile of shared beliefs, interests, and mutual trust. The ECIU was founded in 1997, and the name underlines the European dimension of a selected group of entrepreneurial universities. The ECIU University is the first European university where learners, teachers and researchers cooperate with cities and businesses to solve real-life challenges. The ECIU University was established to create, test and evaluate a whole new educational pedagogy. This will help to focus all the university activities from education, research, administration and support through to innovation and valorisation. The ECIU University Research Institute for Smart European Regions (SMART-ER) should enable ECIU University members to jointly address complex societal challenges related to UN SDG11 with multistakeholder involvement and public engagement as core principles. To enable this vision, the ECIU University wishes to establish a framework for public engagement linking regional public engagement at the European level.

This deliverable contributes to the development of a framework by providing a set of guidelines on how to encourage and facilitate public engagement aimed at 1. the ECIU level, 2. the individual institutions and 3. the individual researchers. The development of the guidelines is based on a survey conducted with researchers and administrators at the various ECIU institutions. Furthermore, workshops were conducted at nine ECIU universities to formulate a shared vision for public engagement. The development of the guidelines has also taken into consideration the existing literature on the role of public engagement for universities and consulted with the SMART-ER public engagement expert group consisting of researchers and administrators from ECIU institutions as well as in dialogue with the Point of Contact group of work package 4 in the SMART-ER project.

The guidelines should not be regarded as a concrete recipe for how to do public engagement but rather as a set of points for consideration aimed at various levels of the ECIU organisation, from the individual researcher to institutional management and the ECIU leadership. This document is mainly focused on identifying enabling activities and frameworks that encourage public engagement by researchers in a multitude of ways. The guidelines should be read as suggestions for how to develop an enabling environment and culture in which public engagement, in its many different forms, can flourish and become an integrated and valued aspect of the ECIU university’s institutional framework and of research activities across its member universities.
2 What is public engagement?

Public engagement (PE) is not a new phenomenon in the scientific world (Stilgoe et al., 2014). Researchers across many disciplines have for decades engaged in activities that could fit under the umbrella term “public engagement”. One could also argue that public engagement has been a core mission for public universities since the founding of the first modern universities in the 19th century. Many of these universities were founded to provide the necessary knowledge to govern the emerging nation-states and regional sub-units. Most ECIU universities were founded in the post-war period in the second half of the 20th century to supply knowledge and skilled workers for their regions. Nevertheless, public engagement has received renewed attention as states and funding agencies have promoted such activities. This institutionalization of public engagement has implications for the governance and management of universities today. After decades of institutional focus on performance in terms of international scientific publications, the renewed call for public engagement can be seen as a return to the recognized societal mission of public universities. A second driver for the renewed interest in this field can be related to a perceived legitimacy crisis of science in parts of society (Lezaun & Soneryd, 2007) while a third driver is the realization that the multiple current societal crises, most notably the climate crisis, require solutions that no single sector or scientific discipline can provide alone can provide alone (Andersson et al., 2015).

Notwithstanding all the drivers and motivations for this renewed interest in public engagement in university politics, the term public engagement is difficult to define as it encompasses a host of activities ranging from research communication and commercialization to social justice and direct participation. Rather than seeking to define what falls outside and inside of specific definitions of public engagement, these guidelines are based on the definition of the European Union’s Horizon 2020 framework that defines public engagement as “...participatory multi-actor dialogues and exchanges to foster mutual understanding, co-create research and innovation outcomes, and provide input to policy agendas.”. The guidelines outlined in this report seek to be as encompassing and flexible as possible and can refer to a range of research activities with the overall mission to provide relevant and legitimate research that makes an impact in society and that goes beyond conventional one-way communication of scientific findings (Andersson et al., 2015).

Rather than defining what constitutes the ‘correct’ form of public engagement, it may be useful to think of how public engagement challenges dominant views of the role of scientific research from producing knowledge to co-producing knowledge. The co-production of knowledge means that universities and researchers must think of scientific knowledge as one form of knowledge among many as well as the social applicability of the scientific knowledge produced. This is not to degrade the value of scientific knowledge, but rather to emphasize how scientific knowledge is produced, how it engages with other forms of knowledge, how to ensure that knowledge production is useful and relevant to ‘non-scientific’ stakeholders (Norström et al., 2020; Turnhout et al., 2020).

3 Developing guidelines for the ECIU University

The development of these guidelines is based on a survey conducted with researchers and administrators (N=74) at the various ECIU institutions. Further workshops (N=162) were conducted at eleven ECIU universities to formulate a shared vision for public engagement.

3.1. Survey

The SMART-ER Public Engagement Survey was the first step, aiming to collect information about the partner universities’ activities within the area of public engagement. During summer and autumn 2021, 74 respondents completed the questionnaire of whom 33% were administrators while 90% reported they were engaged in either research or education activities or both. This means that some people were both involved in administration/management and research/education activities at their respective universities. Respondents

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1 The number of participants in each of the nine workshops varied significantly from 7 to 50. The Format of each workshop also varied significantly. Each workshop however, followed the same script.
were asked to indicate which sectors they had experience engaging with. The options provided being public sector, private sector, civil society and ‘other’. The category ‘other’ was developed to include actors that did not easily fall into the three previous categories and included incubators, cultural institutions, educational institutions and direct citizen engagement. The public and private sectors accounted for 64% of engagement activities shared evenly while Civil Society and “other” accounted for 36%. It is important to note that these numbers are not representative of engagement activities at ECIU universities, but only an expression of the experience reported by the respondents.

Regarding the forms of engagement activities, respondents indicated a wide range of undertakings ranging from membership in networks, strategic partnerships, contract collaboration and Memorandum of understanding. Most engagement activities were related to specific project collaboration. The most prevalent forms of engagement activities reported where workshops, consultations and living labs. The survey also showed that only a few had experience in public engagement that involved all the other sectors. Most activities were limited to one or two sectors. Overall, the respondents showed a broad spectrum of inter-sectoral engagements as well as different forms of engagement. The survey, however, had a limited number of engagement categories that respondents could choose from, so the results are not able to provide an exhaustive picture.

3.2. Challenges to engagement

Respondents were also asked if they could identify challenges and barriers to public engagement. These can be divided into external and institutional. Respondents indicated that there was both a lack of awareness and willingness for engagement among other sectors. For civil society engagement, it was reported that both academia and civil society needed convincing that the potential outcome of collaboration would be worth the extra effort. This was highlighted particularly regarding inclusion where it was emphasized that citizens should be allowed to make their mark on research design and research questions for them to feel the relevance and value of collaboration.

Industrial partners needed to be convinced that the university in fact had expertise that could not be found within the company. For SME’s the risks involved in collaboration with universities where the outcomes of research activities are uncertain in terms of financial benefit to the company. The asynchronous aspect was also highlighted as a potential barrier. Oftentimes the academic calendar/slowness of research and the needs of external partners may not align making it challenging to collaborate. Overall, the survey shows that engagement with other sectors requires building upon relations and develop mutual understanding of the benefits of collaboration. Relationship building is a time-consuming process and it needs to be acknowledged across sectors. Successful collaboration does not appear out of the blue, it requires effort and openness from all sides.

Institutional challenges for public engagement can be divided into two related categories: 1. Resources and 2. Recognition. When it comes to resources, respondents reported a lack of human resources in their organisation with the specific task to support and manage public engagement activities. Public engagement often requires setting up and managing complex consortia that requires administrative expertise and organisational support. This is particularly relevant for supporting researchers who have little experience with public engagement. Another aspect reported was the lack of time available. Public engagement is time consuming both in building up relations to external actors, but also to manage projects with many different stakeholders. Leaving this up to the individual researcher, except in certain cases of very experienced researchers, will tie up a significant amount of work hours.

3.3. SMART-ER Public Engagement workshops

Following the survey, 11 workshops were held at different ECIU universities to identify 1. pivotal aspects of public engagement, 2. Ideas for a shared vision and agenda for public engagement and 3. Identification of key factors for the organizational capability of SMART-ER to implement this agenda.
The workshops aimed to include researchers, administration and key external partners\(^2\) from different sectors and were held during the summer and autumn of 2021. Each workshop involved 7-50 participants. The first part of the workshops was focused on identifying enablers and barriers to public engagement. The second part of the workshops were focused on providing inputs for a shared ECIU vision and agenda for public engagement and key factors for success. The detailed results of the workshops can be found in Appendix 1.

The workshops provided valuable inputs that nicely supplemented the findings from the survey. In the following section we present an input for a shared vision and agenda for public engagement across ECIU as well as a suggestion for guidelines for how to institutionalize public engagement across the consortium. These guidelines should be regarded more as general suggestions or points of reflection in moving forward.

### 3.4. Shared vision and agenda

Given the nature of UN Sustainable Development Goal 11, there is a need for university commitment to research on a sustained basis to achieve long-term impact. Solving complex societal challenges in collaboration with other sectors may not show immediate and measurable goals and hence a long-term commitment from ECIU and member universities is needed if public engagement is to have a sustained impact. There was consensus that public engagement was valuable both to the individual researcher and to the university in general as well as to external partners. Furthermore, more and more funding bodies have an explicit demand for public engagement in funding calls. Public engagement was also regarded as a moral imperative both at the individual and institutional level. Our research activities should make a difference in society in the short and long term. There was also an emphasis on citizen engagement and ‘citizen science’ as a particularly desirable area of public engagement that warrants special attention. Thus, there was consensus around the importance and value of public engagement and that public engagement should be an organizational priority.

**Barriers to public engagement**

However, as both the survey and the workshops highlighted, several barriers exist that make public engagement quite challenging. At the personal level some respondents reported that some researchers may not have interest in public engagement, but this was a minor comment. It may be true that certain forms of research are poorly suited for direct engagement, and this should also be considered that direct public engagement is not always needed or desirable. However, for the most part respondents and workshop participants emphasized the lack of knowledge of how to engage and what opportunities it may bring.

![Figure 1 - Forms of engagement and resource allocation](image)

\(^2\) 7 out of 11 workshops included external partners. The workshops at INSA, University of Trento, University of Aveiro and Hamburg University of Technology featured only participants from within the organisation. For further details see appendix 1, section 2.2.
Another significant barrier was the lack of time to engage. Public engagement requires spending significant time building up relationships and trust with organizations and people, think about including these in defining research questions and design and also devote extra time it takes to develop well-suited research communication strategies and activities to share research findings (See figure 1). Public engagement also often requires additional financial support to be initiated. These time-consuming activities are not recognized in most existing institutional frameworks where research results are measured in scientific publications is the main performance indicator. This lack of incentives and recognition of the effort public engagement requires was considered one of the most important barriers. Lack of organizational support was also highlighted as a major barrier, not only in terms of the aforementioned lack of incentives and recognition. Institutional structures such as organizational support to initiate, development, and manage public engagement activities were found lacking. Most universities today have well-established units with experts dedicated to supporting external funding application and management of externally funded projects. This is not yet the case for public engagement. These findings are not really surprising and are supported by previous research on the challenges of strengthening public engagement (Bauer & Jensen, 2011; Farnell et al., 2020; Watermeyer, 2015; Watermeyer & Lewis, 2018).

4. Guidelines and toolbox for enabling public engagement

Rather than providing a toolbox for how to do public engagement, the guidelines presented here will focus more on how to create an enabling environment for public engagement across ECIU universities in general and the Research Institute SMART-ER particularly. The recommendations are recognized at three different levels: ECIU, Institutional level and individual level. It is important here to acknowledge that even though these recommendations are separated into different levels, actions at each level should not occur in isolation. It is important to focus on all three levels simultaneously to foster a supportive environment and culture for public engagement.

**Recommendations for ECIU level initiatives to enhance public engagement**

1. ECIU can play an important role as a *unified voice towards the EU* in emphasizing the need for incentives to foster greater public engagement through European funding schemes – This in turn can also influence national funding schemes.
2. ECIU can develop a suggested *institutional framework* for incentives, organizational support and recognition schemes that would be a template or source of inspiration for member universities. A good point of reference is the [TEFCE Toolbox self-reflection framework](#). The TEFCE Toolbox provides an institutional self-reflection framework for community engagement (Farnell et al., 2020).
3. SMART-ER can provide an important venue for *inter-university collaboration* on public engagement and engaged research. This can be done through various activities such as joint public engagement training programs and network building that allows researchers from different institutions to meet, discuss and refine public engagement methods. Another possible activity could be to support the establishment inter-university *communities of practice and learning* on public engagement methods. It would also be an option to allocate funding for an annual SMART-ER research symposium on public engagement research related to SDG 11.
Recommendations for Institutional level initiatives to enhance public engagement

1. **Recognize** Public engagement in line with other scientific activities such as research publications. Public engagement involves increased interaction, dialogue and communication with external stakeholders – time that may be otherwise spent on producing more recognized forms of scientific outputs.

2. **Create incentives.** Incentives can take different forms from seed funding to specific allocated time for public engagement in work portfolios – most often a combination of different incentives should be explored. Other incentives can also include more symbolic recognition such as awards to researchers who have made special efforts in public engagement.

3. **Provide training programs** in different forms of public engagement. There are many forms of public engagement, each with their own benefits and caveats and many different stakeholders one could potentially engage with. Such training programs can be designed as formal programs offered centrally or developed by supporting bottom-up learning communities initiated by researchers themselves.

4. **Provide organizational support** for public engagement. This can include assisting researchers facilitating as point of contact to stakeholders and existing regional meeting spaces, organizational support for managing projects with complex public engagement activities and provide training programs in public engagement methods to researchers.

5. **Make public engagement part of career development objectives.** Early career researchers often struggle to balance teaching and research activities and have little time for anything else. However, it may be important to encourage researchers to engage with external stakeholder early on their career through training and network building, which means allocating dedicated time for such activities as part of professional development and career advancement. Assessing and recognizing public engagement will in many cases involve the development of indicators by which public engagement can be assessed (Neresini & Bucchi, 2011). Public engagement is not easily quantifiable or easily measured in terms of number of collaborative activities, patents issued or commercialization. Public engagement may require a rethinking of performance indicators that takes on a broader understanding of societal value and the role of science, scientists and scientific knowledge production in relation to society (Thorpe & Gregory, 2010).

Guidelines for Individual Researchers

1. **Be pro-active.** seek out regional meeting spaces and establish relations with regional stakeholders.

2. **Develop interpersonal skills and competences** that are key to building relations and trust with stakeholders.

3. **Enhance** you research communication skills. Good research communication is important to building relations.

4. **Invest** time to develop long-term relationships with relevant sectors.

5. **Commit** to stakeholder engagement at every stage of the research process.

6. **Rethink** the role of the researcher from expert to also think of the researcher as facilitator.
5. Conclusion

The recommendations above are meant as guidelines and recommendations for building an enabling and supportive environment for the individual researcher to become more involved in public engagement for research purposes. ECIU’s commitment to challenge-based education and engages research could be further strengthened by taking these guidelines and recommendations into consideration. We have deliberately chosen not to prioritize or highlight any specific form or method for public engagement. This should be very much up to the individual researcher to choose based on their preferences and scope of the research activity in question.

Our survey and workshops with administrators and researchers at ECIU show great interest and commitment to public engagement in research activities, but that there is room for improvement when it comes to institutionally enabling environments that encourage, support, and recognize this kind of research. Public engagement is time and resource intensive because it requires building trust and relations to external stakeholders throughout the research process from initial conception and design to implementation, evaluation, and dissemination. There is also an untapped potential for building ECIU-wide learning communities of practice for researchers interested and involved in public engagement. The ECIU SMART-ER virtual research institute could be that inter-institutional engine and framework that could make ECIU a leader in the field of public engagement for complex societal challenges.

6. Suggestions for Further Reading

The TEFCE project (Erasmus+) has developed a self-reflection framework for Community Engagement in Higher Education. The TEFCE Toolbox for Community Engagement in Higher Education is a new framework that stimulates universities and their communities to jointly carry out a process to examine their community engagement in a robust and comprehensive way. The TEFCE Toolbox provides a framework for universities to undertake a learning journey to discover the range of ways in which their staff, students and external communities cooperate, to determine the level of mutual benefits achieved through this engagement and to discuss in a participative way how community engagement can be further improved.


The Engage2020 project (Horizon 2020) has published numerous reports and policy briefs on public engagement covering both policy and practice. http://engage2020.eu/. Engage2020 aims to increase the use of engagement methods and policies by mapping what is practiced and spreading awareness of the opportunities amongst researchers, policy makers and other interested parties. The project mapped existing policies, structures, methods, approaches, tools and instruments, as well as highlighting promising new or adapted approaches. The findings are summarized in an anthology published in 2015

7. Public Engagement Examples from ECIU Universities

**University Action Lab (UCITYLAB)- Autonomous University of Barcelona**

UCITYLAB aims to embed Europe’s education and knowledge institutions into their urban environment to unlock their innovation potential and address metropolitan challenges. The efforts will be put forward to strengthen the relationships between HEIs and their urban communities, build the understanding and practice of social innovation, entrepreneurship and urban development among HEI students, and in the long term to foster economic and social development in the cities where the partner institution are located. 

[https://www.ucitylab.eu/](https://www.ucitylab.eu/)

**Centre for Engaged Research - Dublin City University**

The Centre for Engaged Research is a new University Designated Research Centre at DCU committed to the embedding of the principles and practices of engaged research at the university and across the island of Ireland with our active partners and networks. It is part of a wider movement to turn research into an active partnership with society to address pressing public needs. Engaged Research is not only a more inspiring ideal for academia, but also a more promising basis for a just and sustainable society.

[https://www.dcu.ie/engaged-research](https://www.dcu.ie/engaged-research)

**Research Network for Smart Sustainable Cities – University of Stavanger**

The Research Network was set up to strengthen interdisciplinary research and cross-sectoral collaboration for smart sustainable urban development in close collaboration with regional, national, and international players. Our researchers come from all six faculties at UIS covering the humanities, social sciences and natural and technical sciences. We work closely with the regional municipalities and the business community to develop Stavanger as a leader in smart sustainable solutions to urban and regional challenges. 

[https://www.uis.no/smartcity](https://www.uis.no/smartcity)

**CLab – University of Trento**

CLab Trento is a cross-disciplinary laboratory where you can be both ingredient and creator of entrepreneurship and innovation. CLab Trento offers experiential and creative space where new things take shape. What we demand: willingness to engage and to get out of your comfort zone, to work in team and curiosity. We will cover the rest by offering various training courses and challenges to face, and - above all - the competence of skilled people from different professional environments. At CLab Trento you will be coached not only by team members and teachers, but also entrepreneurs, startuppers, managers, innovation experts and consultants. 

[https://clabtrento.it/en](https://clabtrento.it/en)
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This internal Report summarises the outcomes of SMART-ER Task 4.1, focusing on the review of current practices and a shared vision and agenda of public engagement at the SMART-ER institute. This report provides an overview of two activities that were conducted by the WP 4 team, comprising (i) the SMART-ER Public Engagement Survey and (ii) the SMART-ER Public Engagement Workshops. The report concludes with a final section, summarizing and discussing the overall outcomes of these activities.
REPORT TIMELINE

SMART-ER Survey: May 2021-October 2021
SMART-ER Workshops: June 2021 – October 2021
First Draft of the Internal Task 4.1 Summary Report circulated to the WP 4 Team: Nov 1st 2021
First Draft of the Internal Task 4.1 Summary Report circulated and commented by all WP 4 PoCs by November 9th 2021
Report Finalised: 30. November 2021
Chapter 1: SMART-ER PUBLIC ENGAGEMENT SURVEY

The SMART-ER Public Engagement Survey was the first step in Task 4.1, aiming to collect information about the partner universities' activities within the area of public engagement.

By public engagement we refer to “participatory multi-actor dialogues and exchanges to foster mutual understanding, co-create research and innovation outcomes, and provide input to policy agendas.” (Horizon 2020)

The actor groups of the public addressed in the survey were:

- PUBLIC actors (e.g. representatives for local, regional, national authorities, civil servants, municipal planners, regional health care providers, state departments)
- CIVIL SOCIETY actors (e.g. 'Save the children', unions, community-based organizations, as well as NGOs such as interest organizations representing specific areas; e.g. WWF, branch organizations)
- INDUSTRY actors (e.g. private companies, industry associations)
- OTHERS (actors that are not clearly pertaining to the specified groups above, e.g. citizens, museums, publicly funded incubators, research supporting entities)

The survey was distributed via points of contact (PoC) for WP4, to approximately 8-10 respondents from research or administration at each partner institute. The survey was circulated from May 2021 until October 2021, and resulted in 74 responses.

1.1 PARTICIPANT DATA
1.2 PUBLIC ENGAGEMENT EXPERIENCE

Q5 Primary professional roles

- Research: 46
- Administration/management: 25
- Education: 21
- Other: 9

Q8 PE collaboration with actors from different sectors

- Public sector: 70
- Civil society sector: 65
- Industry sector: 40
- Others: 37
Q 10-13
In the survey questions 10-13, participants were asked about the topics that they had worked on with the different sectors. We found the following categories mostly mentioned in the replies: innovation and technology, climate and environment, urban development, education, health, citizen engagement, transport, culture, social issues, governance, management and finally scarce resources. Given the qualitative nature of the questions and replies, presenting percentages here would not be useful. Still, we found quite solid differences of the topics mentioned in public engagement with the different sectors.

Q10 In collaborations with actors from the public sector the mostly mentioned topics were education, climate and environment, urban development and scarce resources.

Q11 In collaborations with actors from civil society social issues is stated as a main topic along with climate and environment, urban development, citizen engagement as well as innovation and technology.
Q12 Topics that are underscored in the collaborations with industry are dominated by innovation and technology followed by climate and environment. Urban development, education and health are also topics described to have been dealt with in collaboration with industry actors.

Q13 In collaborations with “other” actors a new topic mentioned: management, and culture was also recurring. The mostly stated topics, though, were climate and environment along with innovation and technology.

1.3 PUBLIC ENGAGEMENT STRUCTURE
1.4 PUBLIC ENGAGEMENT TOOLS AND METHOD

Q 30 32 34 Methods for collaboration in public engagement with different sectors

38. Are there any platforms or tools facilitating these collaborations (e.g. online communication platforms)?

Almost all in the category “other” mentioned Zoom as a platform often used.
Q42 Public engagement can involve one or more stakeholders of the quadruple helix (academia, public sector, private sector/industry, civil society). What percentage (approximately) of public engagements you have been involved in/are aware of, have included: Stakeholders from TWO sectors other than academia?
Q 43 Public engagement can involve one or more stakeholders of the quadruple helix (academia, public sector, private sector/industry, civil society). What percentage (approximately) of public engagements you have been involved in/are aware of, have included: Stakeholders from ALL the three sectors other than academia?

Q 44

In this question we asked for any challenges/Barriers that the participants could identify related to the public engagement endeavors, including examples. We have categorized the replies in main- and subthemes of the barriers/challenges stated, including an exemplifying quote, which are shown in Table 1 below:
Table 1: Q44 Challenges and barriers in public engagement endeavours

<table>
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<th>Main theme</th>
<th>Sub-theme</th>
<th>Exemplifying quote</th>
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<td>Knowledge-related issues</td>
<td>awareness of opportunities</td>
<td>Civil society: People need to be convinced that the potential outcome is worth the effort.</td>
</tr>
<tr>
<td></td>
<td>knowledge exchange</td>
<td>Industry: The industrial partners need to be convinced that the academic partners have expertise that is not available within the company,</td>
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<td></td>
<td>cross-sector collaboration skills</td>
<td>Limited awareness regarding the need for flexibility in collaboration undertakings - &quot;No, we are used to do it like this.&quot;</td>
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<td></td>
<td>ownership</td>
<td>For the case of SMEs, it is more often the risk approach which is hindering SMEs to participate in living lab actions, or in other words, the actual component of innovation</td>
</tr>
<tr>
<td>Limited resources</td>
<td>funding</td>
<td>Funding issues in setting up projects,</td>
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<td></td>
<td>HR</td>
<td>The lack of human resources dedicated to public engagement, with the specific task to support and manage the activities</td>
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<td></td>
<td>time</td>
<td>Lack of time to be dedicated to Public Engagement activities in general</td>
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<td>Cross-sectoral differences</td>
<td>trust</td>
<td>There is lack of trust between partners</td>
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<td></td>
<td>time fit</td>
<td>Timing issues when fitting academic calendar to partners</td>
</tr>
<tr>
<td></td>
<td>language</td>
<td>Different language and different goals are barriers that needs to be cleared. There usually is more common ground then the language presents.</td>
</tr>
<tr>
<td></td>
<td>power</td>
<td>Power relations: overcoming existing dynamics among actors and creating open and transparent relationships</td>
</tr>
<tr>
<td>Diverging interests/motivations</td>
<td></td>
<td>Many! It starts with finding common ground and formulating the right description of the challenge</td>
</tr>
<tr>
<td>Inclusion</td>
<td></td>
<td>The most difficult aspect is to not define the project yourself (as we are used to do in academia and industry), but allow citizens to leave their mark on it as well and guide the project to those aspects that are most important/fitting/relevant for citizen</td>
</tr>
<tr>
<td>Structural constraints</td>
<td></td>
<td>There are different incentive structures for different organisations which can either inhibit or promote collaboration.</td>
</tr>
<tr>
<td>None</td>
<td></td>
<td>No barriers identified</td>
</tr>
</tbody>
</table>
In Q45 we found that the mostly common methods applied for assessment of the public engagement endeavours were: impact case studies, interviews, surveys. Some also mentioned observations and workshops as assessment methods.

Concerning the frequency asked for in the same question, there were only a few replies, mentioning exclusively: annual assessments, at project ending, in accordance with funder and project related.

Chapter 2: SMART-ER PUBLIC ENGAGEMENT WORKSHOPS

2.1 AIM AND OUTLINE OF THE WORKSHOPS

The aim of the SMART-ER workshops was to co-create a shared vision and agenda of public engagement in the context of the SMART-ER Institute, addressing questions such as:

- What do we want to achieve through public engagement?
- What are the ways we can engage the public?
- What added value can the SMART-ER institute bring to public engagement?

Furthermore, the workshops aimed to define pivotal aspects of public engagement, and to develop a shared vision and agenda for public engagement and on the main factors that may influence the capability of the SMART-ER to implement this.

Instructions for the workshops were provided by the WP 4 team and contained slides that presented the preliminary results from the SMART-ER PUBLIC ENGAGEMENT SURVEY, as well as a step-by-step outline for the three workshop exercises.

Due to the pandemic, all co-creation most workshops were organized as online meetings, organized, and facilitated by each PoC at the partner institute. The general recommendations were to gather 5-8 participants comprising university personnel (preferably those that responded to the survey) and their ‘key stakeholders’ (plus the PoC/moderator and a rapporteur). Workshops were intended to be approximately 1.5-2 hours.

Envisioned outcomes of the workshops were (i) a list of pivotal aspects of public engagement, outlined at each workshop; (ii) ideas for a shared vision and agenda for public engagement, and (iii) identification of key factors for the Capability to allow SMART-ER to implement this agenda. The approaches and the outcomes will form the basis for task 4.2 “SMART-ER Guidelines and Toolbox for Public Engagement”.

While workshops were intended to be held between June 25 and August 31 2021, the last workshops are still outstanding (expected by the end of October 2021).

This chapter is based on the reports that were submitted from all workshops by each partner institutes Point of Contact (PoC).

2.2 BACKGROUND INFORMATION

Between June and October, nine of the SMART-ER institutes organized workshops at each institute. In x of the institutes, these were organized as single events, bringing together external partners from different types of organizations and university partners from research and administration. In two of the partner institutes, the workshop was integrated in other engagement activities. Table x presents the details for each of the workshops.
<table>
<thead>
<tr>
<th>Partner Institute</th>
<th>Workshop Date</th>
<th>Number of Participants</th>
<th>Other relevant information</th>
</tr>
</thead>
<tbody>
<tr>
<td>UiS</td>
<td>2021-08-30</td>
<td>6</td>
<td>Excluding moderators (maybe add?)</td>
</tr>
<tr>
<td>INSA</td>
<td>2021-10-01</td>
<td>8</td>
<td>8 participants to the workshop in total for INSA (including the 3 moderators), pls confirm if these were only INSA internal participants</td>
</tr>
<tr>
<td>LiU</td>
<td>2021-08-20</td>
<td>11</td>
<td>Including moderators</td>
</tr>
<tr>
<td>KTU</td>
<td>2021-06-28</td>
<td>8</td>
<td>Including moderators</td>
</tr>
<tr>
<td>Tampere</td>
<td>2021-08-27</td>
<td>11</td>
<td>9 workshop participants (incl moderator) plus 3 additional interviews</td>
</tr>
<tr>
<td>UniTN</td>
<td>2021-09-28</td>
<td>20</td>
<td>20 people attended the workshop. Participants from UniTN were: - administrative staff, notably from the Directorate of Research Services and Valorization and the Directorate of Communications and External Relations; - PhDs and post-doctoral students; - Professors from different Departments (Mathematics, Humanities, Economics, etc). There was also a participant from HIT - Hub Innovation Trentino, the local agency for technology transfer and research valorisation.</td>
</tr>
<tr>
<td>DCU</td>
<td>2021-09-xx</td>
<td>7</td>
<td>The participants in the workshop comprised of members of the Steering Committee of the DCU Centre for Engaged Research.</td>
</tr>
<tr>
<td>UAB</td>
<td>April 26th; June 22nd; June 16th; June 23rd; September 27th</td>
<td>In total over 50 participants</td>
<td>UAB included the different aspects addressed in the workshop in a series of Workshops Action 1: 26th April 2021. Preparatory session with 19 UAB researchers (senior and PhD students) and 7 administrative staff (1h30min). Action 2: 22nd June 2021. Half day workshops with: UAB Governing Board representatives. 20 UAB researchers presenting their Citizen Science Projects; 4 Representatives from 4 External institutions carrying out public engagement in the context of Citizen Science; 4 Representatives from UAB infrastructures and services. Open debate for identifying barriers and opportunities. Action 3: Three sessions on 16th June, 23rd June and 27th September 2021, in the context</td>
</tr>
</tbody>
</table>
2.3 ENABLERS AND BARRIERS FOR PUBLIC ENGAGEMENT

2.3.1 ENABLERS

2.3.1.1 UiS

Incentive structures

- Targeted incentives (improve quality of public collaboration for those who already do it / encourage those who do not yet work with public engagement)
- More locally financed research that encourages public engagement.
- Regional Research Funds to address regional problems
- Sources of funding that encourages public engagement

Communication and dissemination

- International conferences aimed at practice in / working life,
- UiS as a knowledge and skills resource for the public sector,
- Open webinars on relevant topics,

Student involvement

- Master theses as facilitators for public engagement,
- Actively use student recruitment into companies and public administration to forge better connections.
- Hackathons and challenge-based learning,

Relationship building

- Long term partnerships with sector actors outside of the university
- Participation in external regional networks (Grønn by, Nordic Edge)
- Invite the Universities to join citizen panels,
- Develop common goals across the sectors,
- More platforms for citizen involvement
- Synergy with the public debate on a current topic
- Industrial PhD / Public Sector PhD (Co-financed by university and industry/public sector/civil society)
- Regional Value creation forum
- Better interaction with Brussel offices
2.3.1.2 INSA

Individual motivation: Regarding individual motivations, one of the participants mentioned the development of one ECIU challenge that she is currently working on with seven other ECIU universities on interculturality during which students have to work in groups on a project linked to citizen science (i.e. the objective is to bring science closer to the public). This way of “living” the experiment instead of teaching it is especially interesting for her.

Institutional framework: Several participants mentioned that it is more and more required nowadays to include the public engagement dimension in the teaching content. At the level of INSA institutions, contacting services like “Culture and patrimoine” can also be helpful and make the necessary links between researchers and the general public for some projects when needed.

At regional level, the calls for projects require research projects to include this public engagement dimension in order to be selected (example related to the Centre Val de Loire Region). INTERREG was also mentioned as a funding instrument which requires public engagement to be included in the projects. Funding instruments’ incentive was highlighted by the participants as a strong enabler for public engagement.

As another example existing at the regional level, it was mentioned by one participant that some regions in France (i.e. Centre Val de Loire Region) are currently financing PHD thesis which include a master thesis in social science tackling the subject of the PHD thesis. This allows the PHD student to work in collaboration with a Master student on a topic including specifically public engagement.

Finally, it was highlighted from the discussions that incentive for researchers to participate to events allowing discussions between researchers and citizens are important in order to promote such initiatives.

Regional/local meeting spaces: As highlighted during the workshop, students are in needs to work on topics which can contribute to ODD11 such as sustainable development. In this regard it is easier for a researcher to mobilise citizens who are already interested and engaged in a particular topic instead of mobilising the general public.

It was also highlighted from the discussions that researchers should get closer to these spaces/events allowing discussions with citizens. For this, there is a need to identify the opportunities for events allowing the discussions between citizens and researchers (e.g. the Researchers’ night, the Architect’s nights).

Support function: Project managers supporting researchers in organizing events such as this workshop (allowing the discussions between researchers and citizens) and coordinating them should be recognized in terms of HR funding.

2.3.1.3 LiU

- Internal Support and Strategic prioritization of Public Engagement (within the organization)
- Strategic Collaboration Agreement between the organization and LiU
- Time was raised by several participants as a necessity and an important enabler
- Collaboration as an academic merit
- Joint interests, curiosity (inspiring if the research is requested/used)
- Inspiring research challenges
• Need for champions (key persons on both sides) that want to engage in collaboration, personal relationships
• Networks and communication (arenas for presenting research for external partners)
• Joint interest to provide knowledge to meet sustainability challenges
• Administrative support (e.g. to find collaboration partners, contract support)
• Possibility to influence
• Win-win situations, collaboration cannot be commanded, but can be enabled

2.3.1.4 KTU

• Communication and dissemination of the University’s scientific achievements in the media through the communication department (media briefs, various forms of social media etc.).
• Involvement of the University as an organisation and its individual researchers in various advisory groups, expert academic and non-academic organisations. In this way, scientific expertise is passed on in the form of recommendations and expertise.
• The participation of university departments and individual researchers in nonformal educational processes, workshops, seminars, or public lectures organised by the university and other organisations and institutions ensures the direct transfer of scientific expertise to the public.
• Part of the research projects aims at various form of cooperation with state institutions, public organisations, and other social actors. Some of the research projects have open access databases as an integral tool for knowledge sharing and pooling (i.e. in the social sciences, there are databases that store data from social surveys).
• Public and expert activities and social impact indicators are an important part of the annual evaluation of the units.
• Some of the financing programmes of the Lithuanian Research Council suggest R&D implementation schemes relevant for economic sectors and that could subsequently be commercialised. In these projects, a university, a public administration body, or a business entity cannot act alone but only in partnership.

2.3.1.5 Tampere

• Strategic approach towards collaboration as part of European and global environment
• Impact orientation and multidisciplinary problem solving
• Student engagement to ensure the availability of skillful experts to meet the needs of sustainable development
• Shared language and fluent communication
• Strong collaboration culture and strong regional clusters
• Presence of researchers in company steering groups
• Researchers and teachers working periodically in private sector
• Visibility and easy access of University services - one-stop shop
• Measuring the collaboration between universities and private sector
• Ready-made agreement templates for collaboration

2.3.1.6 UniTN

Individual motivation of young researchers and PHDs for engaging in activities with the public, especially with students from middle and high schools, and with the elderly;

Personal contacts: personal contacts with associations and non-profit organizations are essential, as these actors can easily activate the civil society;
European projects requirements: with Horizon Europe, research is not only a matter of scientific excellence, but should include also Public Engagement, science communication and dissemination activities;

ECIU: being part of the ECIU network has given a strong boost to PE activities, widening the scope of such activities to companies and lifelong learners;

Institutional framework: ANVUR, the Italian national agency for the evaluation of universities and research institutes, asks Universities to provide a multi-annual evaluation of research activities, including Public Engagement;

Local meetings spaces: the Local Authority (Autonomous Province of Trento) has recently re-launched a multi-stakeholder roundtable for research and science communication, involving UniTN and the other two main Research Centers of the Region.

2.3.1.7 DCU

Training: While university-wide training in engagement is lacking (see below in the Barriers section), participants highlighted the training facilitated by particular institutions (such as PPI Ignite and the Centre for Engaged Research) as helpful with regard to building capacity for public engagement.

Communication: The university’s nimble and efficient communications team was highlighted by participants. Within the context of DCU, it is relatively simple to promote and disseminate engagement endeavours.

Support from specific university centres/organisations dedicated to engagement: Further to the training point listed above, centres within DCU dedicated to engagement were identified by participants as a key enabler for engagement, offering expertise and enthusiasm in facilitating public engagement endeavours of DCU researchers.

Funding calls placing more emphasis on engagement: Participants highlighted wider developments in funding calls as enablers of engagement. At national and European level, engagement is increasingly

Recognition that engagement is a moral imperative: Participants argued that alongside the practical imperatives arising from funders’ increasing emphasis on engagement, there is also a growing sense of engagement as a moral responsibility for researchers to ensure their work has a positive impact on wider society.

2.3.1.8 UAB

The UAB workshops specifically identified enablers for citizens to connect with science and Enablers for researchers to connect with society.

<table>
<thead>
<tr>
<th>Enablers for citizens to connect with science</th>
<th>Enablers for researchers to connect with society</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Strong volunteering presence</td>
<td>• There is interest from the side of the professional scientists</td>
</tr>
<tr>
<td>• Professional scientist welcome citizen scientists to work on their projects.</td>
<td>• In recent years air pollution, traffic issues and climate change have impacted people’s lives. Thus, they are interested to solve them/a</td>
</tr>
<tr>
<td>• International experts</td>
<td>• Creation of a Community of CS at a number of Universities acts as a great enabler for the scientists</td>
</tr>
<tr>
<td>• A number of our universities are a great place for start-ups (receiving policies and government support)</td>
<td></td>
</tr>
</tbody>
</table>
2.3.1.9 UT

Collaboration:

• Synergies in shared goals: creating a safe space for citizen science

Enablers for citizens to connect with science

• Strong community involvement in the region
• Project-based approach of the UT
• Experience with citizen science

Enablers for researchers to connect with society

• Ecosystem already co-created
• Public institutions are an important stakeholder
• Companies and public institutions are already integrated in the curriculum

2.3.2 BARRIERS

2.3.2.1 UIS

Individual

• Depends on personal interesse, knowledge of the regional players and networks/contacts.
• Very demanding with large projects

Incentive structure

• Resources. Time-consuming and demanding
• Time pressure
• Lack of methodology and platforms,
• Lack of incentives (Mobility/meeting places)
• Little incentives for researchers to work for/with the public / private sector /civil society,
• It is demanding to follow up on research (from the public sector),
• Other sectors must also have incentives,
• Applied research vs. Consulting
Communication and dissemination

1. Added values of cooperation is often unclear for all sectors (incentive structures),
2. Poor sales job - we do not know what the researchers are working on
3. Lack of communication and emphasis on applied research,
4. Research/reports are placed in a drawer and never used

Relationship building

1. Do researchers/public / private sector speak the same language?
5. Do researchers/public / private sector have the same ambitions/goals?
6. No level playing field, we rarely speak the same language

2.3.2.2 INSA

Several barriers were discussed and are summarized as follows:

- “What can expect the public from this research?” This question is currently not considered regarding the time required from citizens to participate to this research process. The interest from researchers is clear, nevertheless it is not well identified for citizens.
- There is a need for the researchers to reach out to citizens.
- There is also a contractual dimension which is important and both sides need to respect the rules of this specific engagement (e.g. regarding the collection of anonymous data for example)
- The university has distanced itself from citizens in favour of scientific mediators
- There is a lack of time and meeting spaces for citizens and scientists/ researchers to meet.
- Open science allows currently citizens to access data from research, but the citizen involvement takes place at the end of the process instead of happening at the beginning of the research process (because of this distance between citizens and the Research).

2.3.2.3 LiU

- Lack of time and incentives
- Lack of funding
- Time limitations for researchers, full calendars and many other ‘mandatory’ tasks, lack of support from management to prioritize PE
- Different epistemologies, perspectives on knowledge creation, requires an understanding for each other’s perspectives and entry points.
- Frequent focus on those with strong positions
- Lack of continuity for networking – building trust and getting to know each other takes time
- Lack of specific goals/objectives
- Implementation gap; “Not invented here’ mentality

2.3.2.4 KTU

- Active communities often have clear expectations; however, they are not aware about the opportunities of collaboration with universities. Often, the contact between the community and the research institution depends only on the personal initiative of the researcher.
- The lack of funds in all types of organisations reduces the chances of placing orders with the university.
- Project funding does not guarantee long-term cooperation, even if a specific project aims at cross-sectoral collaboration.
• Lack of collaborative initiatives at an early, pre-project stage where strategic objectives and expectations for collaboration are identified. In this way, different types of organisations do not foresee university as possible strategic partner.
• Although social impact is an important criterion for evaluating performance at the unit level, there is a lack of tools to motivate socially oriented activities of the individual researcher.

2.3.2.5 Tampere
• Collaborative connections are often based on certain personal relationships or projects which can cause discontinuity and narrow collaboration scopes
• Uncertainty of public funding instruments, and differences between themes of funding instruments and R&D agendas
• Actors have different R&D time horizons, R&D agendas, and societal perspectives
• Difficulties to recognize and understand capabilities of other regional actors

2.3.2.6 UniTN
• Resources: PE activities require a long preparation and dedicated people, and University staff is not only available, as those activities are beyond the usual workload. For the organization of events like festivals and Fab LABs on trucks, staff and researchers often need to ask for support to cultural associations or cooperatives.
• Time: PE activities are often carried out by PhD students, beside their research activity, which is very time-demanding and consuming.
• Local landscape: Trentino is a peripheral Region, with only 2 centres (Trento and Rovereto) that are well connected. The majority of the Region consists in villages in the mountains, which makes it difficult to reach the public who lives in these areas.
• Format and target: when doing PE activities, one must have clearly in mind the target before choosing format, content, and language. Otherwise, there is a concrete risk of having a big gap between the public and the content of the PE activities.
• Monitoring and reporting: it’s difficult to measure the impact of PE activities, and to define monitoring standards for this kind of activities. For example, in the context of activities with middle and high schools, how do you monitor if students finally end up enrolling at the University? It’s hard to measure the effects of this kind of activity in such a long span.

2.3.2.7 DCU
• Lack of formal recognition for engagement work: While universities make public pronouncements about the importance of engagement, there are few internal structures incentivising or facilitating engagement. Aside from those based in particular internal institutions dedicated to engagement (detailed above in the Enablers section), researchers must conduct engagement in their own time, balancing it with teaching, research and admin responsibilities.
• Lack of formal training in engaged research: While some participants praised the work of institutions dedicated to engagement, it was discussed that on a university-wide level there is a lack of formal training structures aimed at encouraging, and building capacity for, engaged research. Within DCU, CER’s recent venture in instituting a postgraduate module dedicated to Engaged Research helps remedy this, but further training is needed.
• Lack of confidence among researchers in engaging civil society partners: As a consequence of the lack of formal training structures detailed above, there is a notable hesitancy among some researchers to engage with civil society partners. This is particularly pertinent when it comes to research concerning ethically sensitive issues. Wary of unknowingly causing harm or offence, some
researchers opt not to engage with societal stakeholders and focus on contributing to the field at a distance, so to speak.

- **Time constraints:** As is outlined above, the lack of formal structures for, and recognition of, the facilitation of public engagement mean that researchers must accommodate engagement activities within a range of working responsibilities. Some participants cited a communication difficulty when conducting engagement with private enterprises, wherein researchers can only commit a limited amount of time to the venture (as it is outside their contracted responsibilities), while enterprise employs people with specific responsibility for engagement, thus leading to a clash in expectations with regard to scheduling and commitment.

- **Funding structures:** With universities not prioritising engagement as a key responsibility for researchers, opportunities for engagement are largely dependent on obtaining funding for a project focused on engagement. However, such engagement can only practically commence once the funding has been granted, thus ruling out the possibility of engaging community stakeholders in the research design process—a key tenet of engaged research. Engaging with them prior to obtaining funding risks straining relationships with non-academic stakeholders if they feel imposed on in committing time and energy to a project that may not reach fruition.

- **Communication difficulties:** Community stakeholders may be unsettled by unfamiliar or opaque-seeming academic language. However, outputs for funded projects will inevitably involve the production of reports and papers which necessitate the use of such language. Researchers conducting public engagement must therefore navigate between different vocabularies in communicating with funding bodies and academic stakeholders, and community organisations and private enterprise.

### 2.3.2.8 UAB

The UAB workshops specifically identified barriers for citizens to connect with science and barriers for researchers to connect with society.

<table>
<thead>
<tr>
<th>Barriers for citizens to connect with science</th>
<th>Barriers for researchers to connect with society</th>
</tr>
</thead>
<tbody>
<tr>
<td>• No structure or incentive to keep them engaged</td>
<td>• No structure or guidance</td>
</tr>
<tr>
<td>• CS is something very new</td>
<td>• Projects go unreported/uncatalogued, since some professional scientists do not know how to label their work.</td>
</tr>
<tr>
<td>• Lack of interest in science</td>
<td>• Lack of respect/interest in science perceived from the scientists with respect to citizens</td>
</tr>
<tr>
<td>• No partnerships between universities</td>
<td>• Poor citizen engagement</td>
</tr>
<tr>
<td>• No partnerships between businesses and universities</td>
<td>• Researchers and other actors not aware of the benefits of CS</td>
</tr>
<tr>
<td>• Citizens need a connection between doing science work and the benefits in their lives.</td>
<td>• Lack of citizen participation in science</td>
</tr>
<tr>
<td>• Time constraints</td>
<td>• Rigid structural legal framework</td>
</tr>
<tr>
<td>• Technological challenges</td>
<td>• Lack of incentives and acknowledgement for researchers to carry out CS</td>
</tr>
<tr>
<td>• Lack of willingness to commit in decision-making processes</td>
<td>• Campus not easily accessible for all citizens</td>
</tr>
<tr>
<td>• Academic approaches to challenge-Based learning not fully implemented</td>
<td>• Lack of citizen participation in science</td>
</tr>
<tr>
<td>• Technological challenges</td>
<td>• Strong in-group out-group effect</td>
</tr>
<tr>
<td>• Low science literacy</td>
<td>• Lack of financial incentive</td>
</tr>
<tr>
<td>• Lower amount of high-educated individuals</td>
<td>• Not always possible to state the necessity of the research</td>
</tr>
<tr>
<td>• Lower English proficiency among older generations</td>
<td>• Lack of technical infrastructures</td>
</tr>
<tr>
<td></td>
<td>• Lack of legal support</td>
</tr>
<tr>
<td></td>
<td>• Lack of data management support</td>
</tr>
</tbody>
</table>
2.3.2.9 UT

Collaboration:
- Frictions in terms of organizational goals & values
- Friction in terms of citizen perspectives on specific people or organizations

Barriers for citizens to connect with science
- Low science illiteracy
- Low proficiency of English

Barriers for researchers to connect with society
- Strong in-group, out-group effect
- Lack of financial incentives
- Not always possible to state the necessity of the research

2.4 VISION FOR PUBLIC ENGAGEMENT

2.4.1 UiS
- Community Involvement must be rewarded / not punished,
- More Science dissemination for the people through public venues (libraries, community centers, etc),
- Research/Science podcast,
- Several public events at cultural institutions
- Publish the presentation of master's theses to the public
- Define target groups and arenas so that it is easier for researchers to reach the right audiences
- Local involvement and international publication should not be contradictions,
- An institutional mechanism that recognizes collaboration,
- UiS research is relevant to me as a citizen,
- More collaboration,
- Innoasis Science talks (https://nordicedge.org/blog/2020/10/29/watch-innoasis-science-talks/)
- Innovative dissemination of research projects (NFR-requirements?)
- Webinars
- Dissemination via cultural institutions
- Communication of science for example on the municipality intranet

2.4.2 INSA
- First, for researchers it was highlighted that there shouldn’t be too much that is expected from their collaboration with citizens and required as added value as public engagement should naturally be part of their work (financed by public funding). However, there is a clear added value for researchers regarding this collaboration (collection of data but also dissemination of the research results etc).
- The industry is in needs to receive the opinion from citizens in order to solve current societal challenges.
- Besides, there is a need to rebuild trust between citizens and sciences.
- Giving the citizens the space to contribute to research and science is also an added value that could be expected from citizens.
Finally, promoting public engagement is also the way to implement Quintuple Helix in Research.

2.4.3 LiU
- To connect with our partners, meet in each other’s environments
- Create joint inspiring environments
- Re-organize research funding, so that strong actors can be part in e.g. proposals
- Strategic support from the central organization to
- ”We want to get further than without collaboration – we want to get further ahead together!”

2.4.4 KTU
Cooperation between research institutions and non-academic communities ensures the dialogue between academia and citizens; ensures that research has greater relevance and impact in the specific field and society at large; embodies aspirations for greater participation and sharing in science through open educational resources, open scientific data, and open access publishing; reduces the time lag for new research evidence to be translated into practice and enhance value for end-users. In this way, the university becomes an active and open hub/catalyst for information exchange.

2.4.5 Tampere
- Global competitiveness, abilities and know-how are nurturing each other in our region
- We engage citizens and organizations by making things happen
- We join the vision of future, research, and daily life to ensure the best quality of life in Europe

2.4.6 UniTN
- Win-win relationship: when science meets the public, they both benefit from mutual learning (inputs from the public “feed” researchers).
- Responsible research: public engagement is one of the items that defined the RRI framework. With integrity, gender balance, open access, it represents a fundamental dimension of research activities
- Impact of research: the long-term impact, including social impact, of research is more and more important (see for example the Horizon Europe impact pathway). PE activities contribute to make this impact on society more effective.
- A more aware society

2.4.7 DCU
Given the multi-faceted nature of the workshop, with researchers across diverse disciplines, no single unilateral vision for public engagement was agreed upon. However, across the contributions and suggestions of all participants, there emerged evident common tenets of the purpose of public engagement. Firstly, there is a commitment to research with long term impact. Multiple participants cited sustainability as key to engagement; developing research goals with a lifespan beyond that of a given project, aimed at having a lasting impact, not only on the field of research concerned, but also on the sections of society it addresses. Particular aims were identified in this regard, such as inspiring future researchers and increasing public knowledge of the research. Ergo, education was seen as key to engagement, both in building capacity for future researchers and enriching the public’s awareness of the complexities behind everyday events. Secondly, inclusivity was identified as key to genuine public engagement. Participants cited appropriate communication as particularly important in this
regard. Researchers must strive to ensure that they do not employ opaque or overly specialist language in dealing with public stakeholders. This was seen as essential to ensuring these stakeholders are engaged with as research partners, rather than research subjects, a core aim of engaged research. Lastly, refreshing the researcher’s own knowledge of their field was cited as a key consequence of engagement. Participants were aware that there may be gaps in the knowledge of even the most experienced academic experts of a given field and that it is imperative that academics continue to engage with what might be termed the grassroots of the field – the everyday concerns of society concerning the research area and consequences of research developments on that society. Engagement was viewed as important to guarding against complacency, ensuring a balance of theory and practise.

Ultimately, the vision for engaged research that developed from the workshop was one characterised by a commitment to social justice. Engagement was not seen as a PR opportunity for researchers or universities, nor was it seen solely in terms of its potential to generate interesting and unique data. Rather, it was seen as an ethical commitment from researchers and universities to have a long term, positive impact on society. The honing of the researcher’s skills and knowledge, and the opportunities for unique contributions to an academic field are undoubtedly results of effective engagement, but it’s ultimate aim must be based within ethical and holistic considerations.

2.4.8 UAB

The UAB regional context grows from the region of Western Vallès, the metropolitan ring and city of Barcelona, and finally, Catalonia. The Spanish and European Ecosystem are the fundamental national and transnational fields of work.

Public engagement is conducted together with a number of relevant actors, which include:

- The researchers at UAB. The UAB is setting up a strong community in Citizen Science, which acts as one of the relevant actors for citizen engagement with more than 20 active projects. In the UAB vision, the Citizen Science Community will co-create the agenda for needed services and infrastructures and will provide the mapping for relevant stakeholders currently involved in actions in the territory, including associations in the civil society.
- The municipalities around UAB. The HUB-B30 project acts as a strategic reference point to engage with not only the municipalities, but also with private actors and civil society in a Shared Agenda. Particularly, this is done in the context of SDG-11 in topics such as waste management and circular economies.
- The province and City of Barcelona. Citizen Science arises as one pilar for public engagement to happen. One fundamental actor is the Municipality of Barcelona, in which public engagement can be developed through the Barcelona Office of Citizen Science. Actors such as the Barcelona Provincial Council is using Citizen Science in the public libraries to study and co-create solutions together with all the stakeholders. Public libraries appear as science and innovation hubs. Public Institutions for Higher Education appear also as useful actors in our context, since in Catalunya it is compulsory to have a final year scientific project for all the secondary school students. This also paths the way to a challenge-based learning injected by UAB into the secondary schools, facilitating the implication of students with public and private stakeholders at early stages and prior to the higher education level.
- The Catalan Government. The Generalitat is having an active role in boosting citizen science in this context too. The Department of Economy is working with the UAB in the use of Citizen Science as a tool for policy innovation and development, using the municipalities at the HUB-B30 and others as testing environments for challenge-based learning (with open actions in municipalities as Sabadell, Mollet and other cities). The vision is tackling here the user-centric
multi-stakeholder approach for problem solving, in which UAB students and researchers can contribute to the transformative process. Particularly, the Department implements the Shared Agenda methodology to develop the Regional Smart Specialization Strategy (RIS3Cat), where innovation plays a relevant role, and Citizen Science is (one more) tool for policy innovation through co-creation processes with the citizens.

- Observatory and ECSA. At a supra-regional level, the Observatory for Citizen Science and the ECSA are organizations in which UAB is developing strong links, with representatives at leading working groups. The vision is projecting the actions from local to global, consolidating UAB as a Citizen Science Hub.

### 2.4.9 UT

In the Co-creation workshop, we did several exercises to explore how our ideal Citizen Science Hub would look like. Key values that were identified are: equity, respect, integrity, learning, reciprocity, honesty, responsibility, openness, authority, and economic growth.

The CSH is considered to serve as a basis for collaboration, to raise awareness and to increase citizen’s autonomy. It is a facility that aims to bring existing scientific knowledge in practice, it wants to become a place for citizens and society to interact with science. It supports people with providing scientific methodology, contribute to evidence-based research and find practical solutions with citizens for societal challenges. Major activities will be training, communication & dissemination and providing (online) tools & collaborative spaces.

### 2.5 KEY FACTORS FOR SUCCESS

#### 2.5.1 UiS

1. Systematized dissemination plan outside the university
2. Working life and citizens must be invited
3. A clear mandate for UiS employees/researchers to work with ‘public engagement.’
4. Pitch and communication training for researchers,
5. Training the new employees or Phd on Public Engagement,
6. Five questions for each sector,
7. Researchers must leave UiS – and be where residents and businesses are
8. level the playing field - low threshold research?

#### 2.5.2 INSA

The ranking suggested by some participants was the following:

1. Identify needs, interests, etc. present in society at a given time
2. Use the different scenes to profile yourself on these hot questions
3. Support a science animation / mediation position for and with audiences
4. Respond to project calls related to these specific questions identified before.

Other priority aspects were also identified during the discussions:

- Promote transversal events in which science can contribute
- Encourage researchers to open up more (recognition in their working time/career development)
- Identify topics that might interest the public in engaging
• Rebuild trust with the public
• Invent a place of expression/meeting
• Finance MEDIATION / HR supports

2.5.3 LiU

Please note that our ranking was not entirely final, but we prioritized the following aspects from a large list of potential enablers:

• Funding and internal support, also connected to meriting
• Internal support – engagement of the University/Organizations’ leadership
• PE as a core value for the organization
• Win-Win situations: incentive on both sides that collaboration is understood as a ‘possibility’ not a ‘must’.
• Forum for Self-reflection and evaluation, there is also poor public engagement, but reflection is required to single these out, and avoid.
• TOOLS: time, money, merits
• Curiosity!
• Good communication that this support exists, and provision of ‘good examples’ of PE
• We need to generate a better understanding what ‘good’ public engagement is from a university perspective.
• We need to make space for both Applied and Blue-sky collaborative research (not either or)

2.5.4 KTU

• Public engagement official as a separate position in university, who would actively promote the University’s openness to cross-sectoral synergies. This function may also be delegated to the Communications Department.
• Establish an innovative social engagement tool (living lab, citizen science lab, etc.) that would act as a moderator between society and scientists. This would create a platform for the dissemination of scientific results and act as enabler of different types of social partnership.
• Support in innovative tools for knowledge dissemination (academic publications can be insufficient for new knowledge to reach different communities and achieve impact). One of such instruments could be Policy Briefs as a serial publication at university and consortium level aimed to reach policy makers at European and national level. Research Briefs as a serial publication and White Papers as a project publication would also increase the visibility of the scientific research results to the general public.
• High-level annual cross-sectoral international events to exchange views on specific issues of public interest.
• Social engagement and impact should be an important criterion in the evaluation of the proposal for the research project. This would be an encouragement for both researchers and communities.
• Cascade funding or seed funding could serve as a tool to finance smaller social initiatives. This could have an instrumental effect in building diverse stakeholder partnerships and participation of non-academic parties.
• Increasing funding allocation mechanisms for project follow-up activities to enhance impact.
• Each individual scientist, not just the department, should be properly motivated for social impact and public engagement activities.
• Larger support required for open access publications and data sharing initiatives.

2.5.5 Tampere
• Science communication that facilitates impact and continuous interaction
• Visionary activities; proactive instead of reactive
• Visible and transparent projects and project portfolios
• Rewarding students for contributing the research, e.g. credits
• Synergies between regional and EU funding

2.5.6 UniTN

• COLLABORATION among different Departments and disciplines within the University, and among the other regional stakeholders involved in research, in order to share instruments and resources;
• DATA COLLECTION and MONITORING of activities
• COORDINATION among stakeholders (Local authority, other Research Centers, etc);
• COMMUNICATION (cross-channel: press releases, social media, websites, etc);
• BLENDING of disciplines (humanities and technical) and of stakeholders (researchers, companies, students);

2.5.7 DCU

Participants identified many key considerations concerning how our vision for engagement can be realised, ranging from individual commitments, such as the attitude and approach of the researchers involved, to institutional changes needed to facilitate substantial engagement on a university-wide basis. While suggestions were varied, certain common themes emerged. They are outlined below in descending order of importance. First and foremost, ensuring institutional support structures was argued to be key. As is outlined above, lack of formal university-wide structures was identified as a significant barrier to public engagement. The need to recognise, facilitate and promote engagement was emphasised. Engagement was too often viewed as an ‘added extra’ for researchers to explore on the time outside of their contractual responsibilities (such as teaching and research). Participants argued that it should be factored into the contracts of staff and, consequently, formally recognised by the institution, with time allocated for engagement and due recognition of its significance. With such changes in place, it was argued, researchers would have professional genuine incentives to pursue engagement and increased capacity to do so. Secondly, several suggestions revolved around how to build capacity for continuing and future engagement. Steps involved in these efforts included the foundation of research centres dedicated to facilitating engagement and the provision of detailed training for staff, students and early stage researchers. In this category, DCU could be seen as somewhat successful, as the recent establishment of the DCU Centre for Engaged Research and that Centre’s subsequent initiation of a post graduate module on engaged research (the first of its kind in Ireland) paving the way for future engagement. However, the ultimate success of such measures is dependent on matters pertaining to the above detailed need for greater institutional support structures. Lastly, there were several suggestions that can be grouped under the heading of personal approaches. These are suggestions as to how individual researchers can adapt attitudes beneficial to navigating public engagement with due care and nuance. Patience, perseverance and reflexivity were cited as important qualities for the engaged researcher. Participants outlined why such qualities were necessary based on their experience of conducting public engagement: they characterised engagement as an unpredictable process. Researchers should not attempt to map the rhythms or patterns of normal academic collaboration onto their engagement work, but rather, approach it with flexibility, adapting their expectations and attitudes to best fit the groups they are engaging with.
2.5.8 UAB

1. UAB perceives as a priority stage the consolidation of a Community of Citizen Science, which includes researchers, supporting staff. This Community acts as the reference point for knowledge exchange and provides the agenda for priorities. Actions within this community would include, among others:
   a. Regular Webinars
   b. Meetings for co-creation of public engagement strategies with relevant stakeholders.
   c. Knowledge exchange and capacity building actions.
   d. Transdisciplinary consortia building.

2. It is essential for the UAB researchers to perceive a pro-active bet in support from the UAB in terms of:
   a. Technical Support: Website tools, data tools, mobile tools, e-forms and documents etc.
   b. Legal Support: Data management, official forms, etc.
   c. Communication and dissemination: Multimedia platforms and tools.
   d. Capacity Building: Basic and deep understanding about Citizen Science methods, tools and projects.
   e. Project management: Essential does and don’ts on Citizen Science projects.
   f. Projection: European and international networking within the Citizen Science platforms and communities.

3. From a strategic perspective, the UAB aims at providing a number of infrastructures to allow Citizen Science to take place, and they will have to be integrated in the concept of Citizen Science Hub. Particularly, our Campus appear as a city in itself, and the value proposition of the campus as an arena for citizen science to happen has to be supported institutionally.

4. Other infrastructures such as the UAB OpenLabs can be seen as in-campus infrastructures for design and co-creation, including fast prototyping, open to the UAB community and to the territory. Beyond fast-prototyping facilities, multimedia appears as an essential entry point for the dissemination of knowledge and actions, and capacity building and technological support on high-quality multimedia contents appear as a key element for high quality citizen science contributions.

5. Finally, Citizen Science appears at UAB as a relevant tool for innovation in policies, through a participatory approach to anticipatory regulation and learning tool. The link of citizen science with areas of social innovation such as waste management, housing, energy transitions or early adoption of trustworthy AI-based solutions can help consolidating instruments such as Citizen Science in the context of public engagement.

2.5.9 UT

The workshops at Twente have not yet identified the key factors for success.

Chapter 3: SUMMARIZING CONCLUSIONS

3.1 PIVOTAL ASPECTS FOR PUBLIC ENGAGEMENT - IDENTIFIED BARRIERS AND ENABLERS FOR PUBLIC ENGAGEMENT

The outcomes of the surveys and workshops reflect a wide scope of aspects that can facilitate or hinder public engagement and are frequently reflecting the specific context of the partner institute. While 7
of the partner institutes reflected on public engagement in a wider sense as part of the workshops, two institutes (UAB&UT) focused particularly on citizen engagement and citizen science.

Below we summarise a number of common aspects that can be identified from the outcomes of the survey and workshops:

ENABLERS:

- Communication
- Incentives and facilitation
- Meeting spaces
  - Network meetings
  - Workshops
  - Collaboration office
  - Open lectures

The enabling features for public engagement stated in the workshops were foremost communication, incentives, and facilitation as well as meeting spaces. From the survey, instead, we can for instance see that the forms of motivation for public engagement were network meetings, workshops, most and then collaboration office/unit/service, open lectures.

The findings from the different data sets apparently are differing, but we conclude this is due to the different types of questions that were posed. No open questions concerning enablers were posed in the survey, while this question was posed in the workshops. Hence, in this compilation of results, we consider the different enablers as complimentary rather than opposing. A common theme, as we also see in the following section concerning barriers, concerns communication as central for public engagement endeavours to take place, but also what type of spaces that are needed/applied for these.

BARRIERS:

The main barriers identified from the workshops were:

- Time and funding
- Priorities/ academic incentives
- Infrastructure: here, both lack of administrative, technical and other support were raised.

The main barriers identified from the survey were:

- Knowledge-related issues: awareness of opportunities, knowledge exchange, cross-sector collaboration skills, ownership.
- Limited resources: funding, HR, time
- Cross-sectoral differences: trust, time fit, language, power
- Diverging interests/motivations
- Inclusion
- Structural constraints
As we can see from the summary of the barriers identified in the workshops and the survey, there are several elements that overlap. The main issue that was stated in both datasets was not surprisingly the lack of resources in terms of time and funding. But also, the structural constraints in the actual infrastructure where these public engagement endeavours are supposed to be executed were identified as a strong barrier. Not only do the different organizations have diverse structures, but participants also emphasized that the basis of the academic incentive system does not support public engagement.

Furthermore, knowledge related issues were also defined as barriers in terms of the lack of awareness of opportunities etc. Furthermore, differences between the involved organizations were raised as causing difficulties in terms of understanding each other and general communication aspects. However, barriers most often mentioned concerning differences between the sectors were the diverging interests and motivations for participating in public engagement endeavours. Here perhaps, this could be connected to the lack of cross-sector collaboration skills (that were also mentioned), which, as it seems, remain a not often used tool to overcome one of the largest barriers mentioned by the participants in this study.

3.2 SHARED VISION AND AGENDA FOR PUBLIC ENGAGEMENT

Based on the outcomes from the different workshops, no distinct ‘shared vision’ can be established, as discussions concerned both overarching goals and objectives, specific elements of a future public engagement hub as well as a more generic issues that would ensure the quality of public engagement at the SMART-ER Institute.

Nevertheless, several workshop reports provided visions, or overarching goals and objectives, that can guide future discussions towards the SMART-ER guidelines on Public Engagement.

One of the themes was linked to the joint contribution to sustainable development, which was also a point of departure for the dialogues, as part of the core focus on SDG 11 – Sustainable Cities and Communities. In line with this, ‘commitment to research with long term impact’ (DCU), jointly solving societal and sustainability challenges, collaboratively working for a sustainable future, and capacity building for research that gains society and societal transformation were recurring themes in the workshops. The DCU workshop further specifically outline the ‘commitment to social justice’ to be a characteristic for public engagement, linked to an ‘ethical commitment from researchers and universities to have a long term, positive impact on society’ (DCU). References were made to the RRI framework, in which responsible research includes “integrity, gender balance, open access” as fundamental dimensions of research activities (UniTN), but also inclusivity and transparency were highlighted as important aspects for public engagement.

Collaboration between academic and non-academic communities was envisioned to create ‘greater relevance and impact in the specific field and society at large’ (KTU). Increased participation could hence facilitate a more immediate exchange of resources, data and knowledge so that “the university becomes an active and open hub/catalyst for information exchange.” (KTU). The vision for
collaboration was further outlined as an added value for both the academic and non-academic partners (“the public”), and described as the necessity of a “win-win” relationship, allowing both the academic partners and the public to benefit from collaborative learning. As one of the LiU external partners stated: “We want to get further than without collaboration – we want to get further ahead together!”

Other important aspects were the creation of inspiring environments, and ensuring dialogue, relevance and impact for individual citizens and society at large. Specific elements to achieve this were communication, meeting places, and activities that support building trust between science/academic research and ‘the public’.

Visions specifically focused on citizen science, were provided by UAB and UT. In particular, the vision for the Citizen Science Hub was outlined as a platform for collaboration between citizens and science, awareness arising and ‘to increase citizen’s autonomy’ (UT), providing opportunities and tools for training, communication and dissemination. UAB specifically outlines a vision for a ‘user-centric multi-stakeholder approach’ to contribute to transformative processes.

### 3.3 Key Factors for the Capability of Public Engagement

General categories of key factors that were outlined include:

**Institutional Prioritisation:** General notion on the need to clarify that PE is a priority, this includes generic support from academic and organizational leadership, making PE a strategic priority in the organization, is accounted for in academic meriting etc.

DCU formulates this to the point as: “the need to recognise, facilitate and promote engagement”

Several workshops raised the need to include and formalise PE as part of work contracts to ensure that it is “formally recognised by the institution, with time allocated for engagement and due recognition of its significance” (DCU, but evident in several reports), to avoid that PE is considered a voluntary add-on. Seed funding from the university!

**Practical Support:** Organizations need to provide for time, funding, administrative (and legal) support., UAB provides a comprehensive list, consisting of: Technical Support (Website tools, data tools, mobile tools, e-forms and documents etc.); Legal Support (Data management, official forms, etc.); Communication and dissemination (Multimedia platforms and tools); Capacity Building (Basic and deep understanding about Citizen Science methods, tools and projects); Project management (Essential does and don’ts on Citizen Science projects); and Projection (European and international networking within the Citizen Science platforms and communities). [note: we separate some of these in the following point]

These could also include specific positions (E.g. a PE official at central admin level) or organizational frameworks and platforms (e.g. innovative social engagement tool (living lab, citizen science lab, etc.) that would act as a moderator between society and scientists) – both examples from KTU.

**Communication and Dissemination:** Several types on communication aspects were raised including the need for communicative support, cross-channel communication, such as press releases, social media, websites, etc (UniTR), Regular Webinars, Meetings for co-creation of public engagement
strategies with relevant stakeholders, Knowledge exchange and capacity building actions. (UAB), Pitch and communication training for researchers; Systematised Communication Plans (UiS), Support a science animation / mediation position for and with audiences (INSA), Support innovative tools for dissemination (KTU), International high-level events (KTU), Larger support required for open access publications and data sharing initiatives. Visible and transparent projects and project portfolios (Tampere)

CAPACITY BUILDING/TRAINING/INDIVIDUAL COMMITMENT: Exchange between research and practise environments, PE training for researchers, identify needs, interests, etc. present in society at a given time (INSA). Several reports raised the need for individual commitment on both sides, which however also Each individual scientist, not just the department, should be properly motivated for social impact and public engagement activities. Visionary activities, proactive instead of reactive (Tampere),

Further aspects concerned collaboration in general, data collection and monitoring activities, and transdisciplinary research (UniTN), as well as providing a forum for self-reflection and evaluation to ensure quality in PE (LiU).

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