



The European University of Post-Industrial Cities
Towards a collaborative approach & structure for engaged research
D2.2 UNIC4ER Mapping Policies, Strategies, and Initiatives
Supporting Engaged Research





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Towards a collaborative approach and structure for engaged research (UNIC4ER)

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Introduction

UNIC began the UNIC4ER Horizon2020 project starting in November of 2021, with a goal to “develop a research and innovation structure around the core concept of engaged research. Engaged research offers a trans-disciplinary approach and method for systematic knowledge production not only for society but also with and within society. It offers an approach for combining excellence with relevance and an innovative way to understand today’s societal challenges by engaging with societal actors and communities directly involved in such challenges. Engaged research methods require a process of boundary crossing where academia steps outside its customary domains to co-create with citizens and community” (UNIC, 2020).

In practice engaged research refers to research approaches and methodologies that aim to engage stakeholders with the shared goal of collaboratively gaining understanding and even solving societal phenomena through research. The term can in most cases be used synonymously with concepts like participatory (PAR), applied, or community-based -research. Community engagement can happen on any stage and scale of research depending on research design and resources. Engaged research techniques can also be applied within any discipline, but by its nature it is transdisciplinary research that transcends traditional academic boundaries to engage society.

Essentially, Engaged Research is an umbrella term for a wide range of rigorous research approaches and methodologies that share a common interest in collaborative engagement with society. Engaged Research aims to improve, understand, or investigate an issue of public interest or concern, including societal challenges where community partners are active collaborative participants in the research process. In this context, community partners refer to a range of public research stakeholders, including public or professional service and product users, policy makers, civil and civic society organisations (CSOs) and actors. Examples of Engaged Research can be found across all disciplines using terms such as: participatory action research, community engaged research, design thinking, open innovation, public-patient involvement, co-creation, co-production, co-operative inquiry, citizen science and many more.

The Irish Research Council lists the principles of Engaged Research as following (2017):

2. The research question, which should be formulated in dialogue between the researcher and community partner(s), must be relevant to the community and address a societal challenge or issue of public concern.
3. The research requires and acknowledges the expertise and resources of both researchers and community members.

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4. The design of the research ensures that community members and researchers are clear about the extent of their collaboration, their respective roles and responsibilities, what they can expect to gain from the research, and anticipated contributions. This includes clear roles and responsibilities in terms of programme governance and the allocation of resources.
 5. The research findings may be utilised by researchers and community members to address the societal challenge or issue of public concern.
 6. The planned outputs and outcomes of the research are agreed with stakeholders, alongside the longer-term impacts towards addressing the issue of public concern or societal challenge.

Engaged research can be carried out with a variety of different methods ranging from seminars, collaborative fieldwork, or the dissemination of research. The Engage 2020 Action Catalogue (<http://actioncatalogue.eu/>) is a useful tool for evaluating 57 different methods of Engaged Research and identifying the best option to suit specific needs and contexts.

UNIC4ER calls for a report which maps engaged research policy and practices across each partner institution (M6) and provides examples of good practice. The report incorporates findings from key stakeholder interviews and a review of policy documents. The report maps current institutional practices, policies and initiatives supporting engaged research within the UNIC partner universities. This involved each partner institution identifying and engaging with the key actors and units in their institution involved in engaged research initiatives, and mapping relevant policies, strategies and initiatives. As part of this mapping, we sought to unearth and showcase examples of good practice in engaged research across the UNIC consortia, whilst also identifying institutional gaps. We identify national policies and strategies facilitating engaged research approaches, and we will also explore the factors that promote or hinder engaged research approaches across UNIC and the partner institutions.

UNIC is an alliance of eight universities and cities, which aims to develop a new model of European inter-institutional teaching and research infrastructure built upon interrogating and addressing the issues facing post-industrial cities, particularly issues of inclusion and diversity. UNIC has a distinct focus on engaged research, which builds upon our strategic advantage as an alliance of research-intensive universities and city partners with experience in issues of post-industrial transitions and collaboration with society. This mapping exercise will provide essential baseline information as we prepare an engaged research strategy document (Task 2.4) and a Declaration on Engaged Research, in advance of signing by our eight UNIC University Presidents and City Leaders on the 15th of June 2022 in Oulu, Finland (Task 2.5).

Methods

Informing the Mapping Process

The UNIC Strategy Forum on Engaged Research brought together UNIC European University Colleagues for a series of workshops towards developing a common strategy, framework and supportive systems for involving and engaging citizens, civil society, public & city authorities and academia in joint research and innovation initiatives. The forum consisted of a series of events designed to:

- Strategically align UNIC4ER Engaged Research and UNIC Erasmus+ CityLabs initiative work plans and ambitions
- Map engaged research policies and practices within and across UNIC institutions
- Learn from engaged research best practices (Fig. 1)
- Contribute to the development of a common understanding of engaged research

The 18 January 2022 workshop explored the diverse mapping needs across UNIC4ER work packages while looking at interconnections, common methodologies, challenges and opportunities of mapping exercises. This workshop was designed to kickstart the task of ‘mapping of current institutional practices, policies and initiative supporting engaged research’ (Task 2.2). The workshop also examined considerations and opportunity for common mapping tools; approaches to support efficiencies across the wide range of mapping work being undertaken; and common data gathering techniques and language. Participant input from this workshop was collected in the Zoom Chat Stream and by Google JamBoard and was manually sorted into common themes which can be found in Appendix 2.

The mapping results presented within this deliverable report is part of a more comprehensive effort extending into WPs 3-5 and in many cases mapping surveys in these other WPs will overlap with WP2 (Fig. 2). The agreed upon survey instrument to meet the target deadline for Deliverable 2.2 is presented in Appendix 1. However, there will be ongoing development of a common survey instrument which can be further refined as we track long-term progress with regards to the integration of engaged research practices and inter- and intra-institutional knowledge gathering, self-assessment and change management goals across the UNIC consortium. This ongoing process will be developed in a stepwise manner to develop a composite data set that can be used for UNIC trans-institutional planning, and SWOT analysis.

Workshop participants agreed in principle to a common approach to mapping exercises across the UNIC4ER work packages. Participants also examined mapping approaches considered by each WP with the aim of co-developing a meta framework for mapping by building on expressed needs. The refined meta-framework was utilized to frame and develop the survey questionnaire for Task 2.2.

The Strategy Forum Mapping Workshop together with the Common Understanding Workshop were also utilized as focus sessions where Vice Rectors and Directors of Research, Senior Principal Investigators, UNIC WP5 members and UNIC4ER Taskforce members entered their strategic thoughts and ideas into Google JamBoard sheets which are found in Appendix 2. This mapping process has also informed been by weekly meeting of the UNIC4ER Taskforce.

Figure 1. Screenshot taken during the Zoom meeting with includes members of the UNIC4ER Taskforce and UNIC Work Package 5

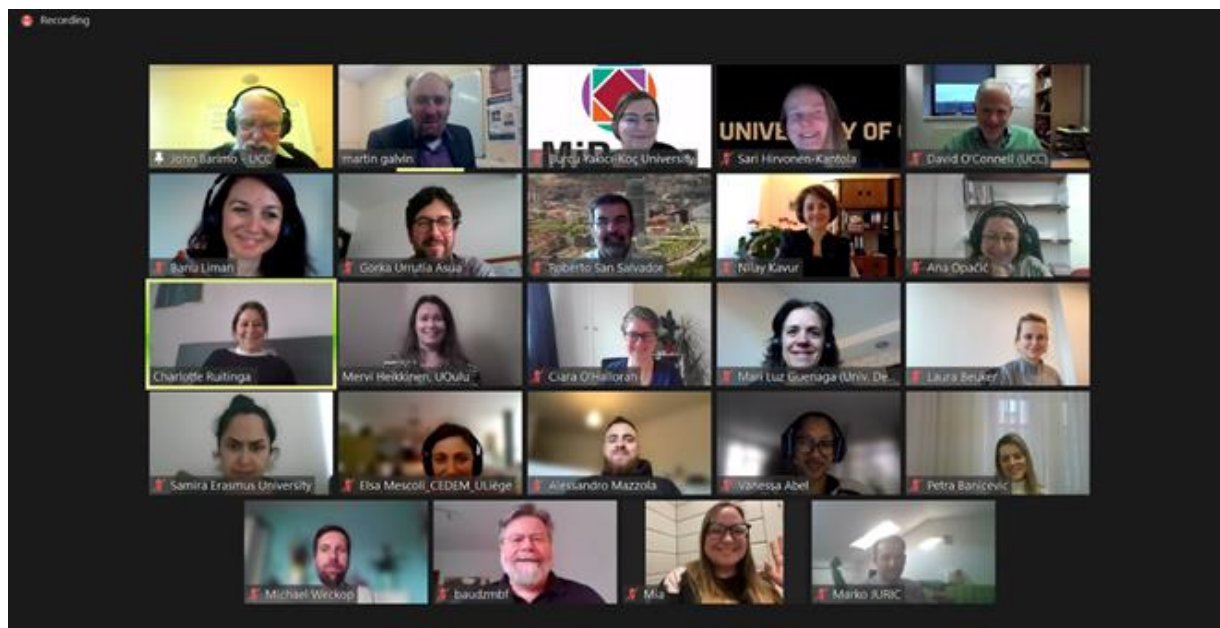
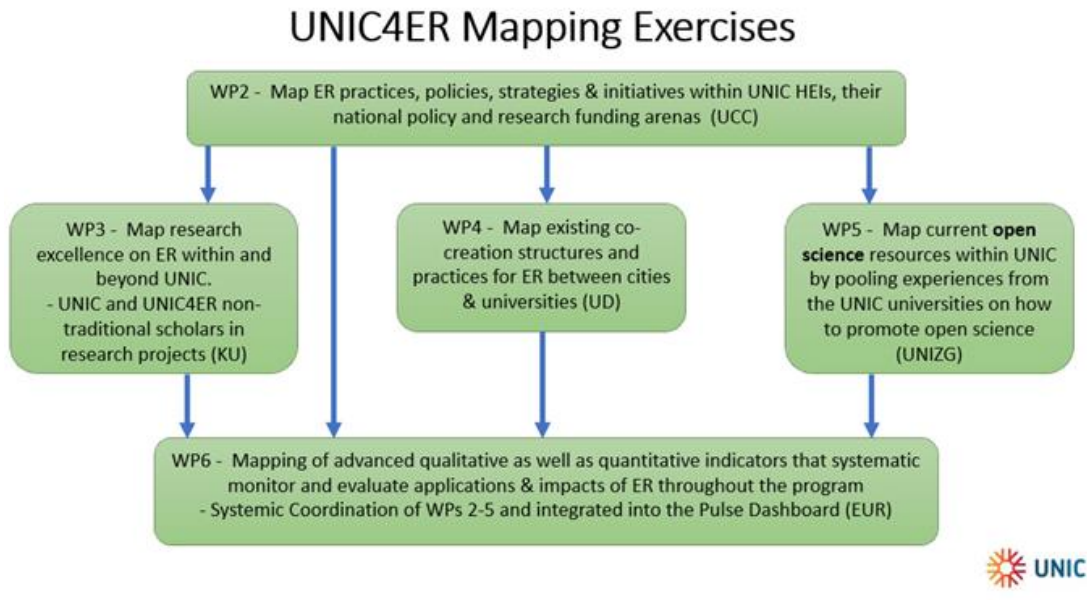


Figure 2. The following figure describes the various UNIC4ER mapping deliverables and illustrates their interrelated nature



Description of Meta Framework Domains

The following eight domains were developed to guide development of the survey instrument to holistically evaluate institutional practices and identify systemic levers and drivers affecting engaged research across the consortium.

Governance & Leadership & Policy Context - the key principles that guide the aspirations and practices within and amongst our academic institutions that enable or limit the effectiveness of engaged research. This category also includes internal governance structure(s) have responsibility for research policy.

Organizational systems, infrastructure, funding, people & incentives - all factors that enable, encourage, and sustain engaged research which include the multiplicity of dynamic interactions

amongst people, capital investment, the built environment, essentially taking a comprehensive, integrative and holistic systems-based approach.

University and Society Collaboration & Co-Creation – Strategies, policies and practices, communities of interest or practice that expand the scope of engaged research by establishing processes to enhance the reciprocal exchange of knowledge and provide networking opportunities for co-production amongst academia, government, civil society and enterprise.

Preparing & Supporting Engaged Researchers - systems, practices and capacities existing at UNIC partner institutions to assist researchers understand the significance of engaged research; align their existing research skills and expertise with engaged research objectives and methodologies; identify and connect with societal partners and other academic researchers across disciplinary lines; and to identify, secure and administer research funding.

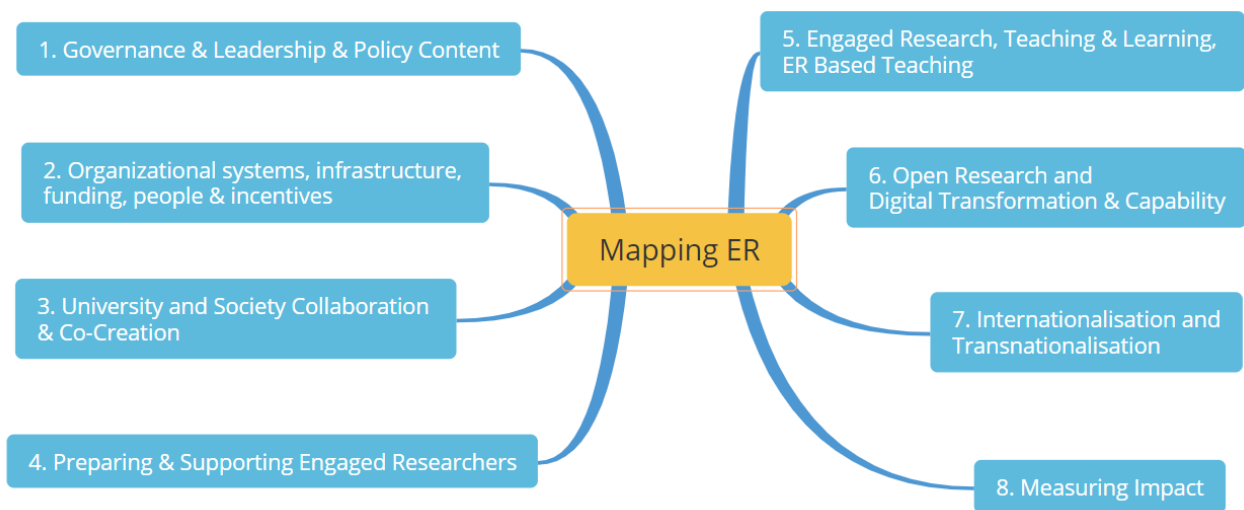
Engaged Research in Teaching & Learning and Research Based Teaching - the integration of Engaged Research, Teaching & Learning into undergraduate and postgraduate curriculum so that students learn to understand the processes and methodologies to advance the frontiers of knowledge while realizing the necessity of engaging *with* community partners rather than ‘for’ or ‘on’ them and thus helping democratize the research process.

Open Research and Digital Transformation & Capability - the open sharing of research artifacts such as publications, data, physical samples and software for broad distribution and dissemination to all levels of society to include academics, government, community organizations, engaged citizens and enterprise. Open Research includes Open Science while expanding inclusion to all disciplines such as the Arts, Humanities and Social Sciences. Open Research aims to foster transdisciplinary dialogue and research wherever feasible and bridge gaps between the Global North and South.

Internationalisation and Trans-nationalization - capacity to form engaged research partnerships and networks beyond individual nation states which allows for a pooling of academic expertise and resources to focus attention on the global challenges of our time which transcend national borders yet can have common patterns of cause and effect amongst many city regions around the world.

Measuring Impact - quantitative and qualitative methods for assessing the impact and societal benefit of engaged research within and across cities. In the UNIC context, this can be publishing academic papers, creating partnerships, generating data, or effecting policy which advances the UNIC CityLab Challenge areas, the European Urban Agenda and the SDGs.

Figure 3. The following mind map depicts the UNIC4ER mapping meta-framework which was refined during the 18 January 2022 mapping workshop at the UNIC4ER Strategy Forum.



Survey Development, Distribution, Analysis and Synthesis

A survey questionnaire was developed to address key factors within each of the above 8 domains that either promote or hinder engaged research approaches across the partner institutions. The survey also focused heavily on domains 1 and 2 which encompassed institutional practices, policies and initiatives supporting engaged research within the UNIC partner universities and national policies and strategies facilitating engaged research. The full questionnaire is found in Appendix 1.

The survey was distributed amongst UNIC4ER Taskforce members to gather information from their respective institutions. Taskforce members were advised to consult with key actors within their Research Office, Equality and Diversity Office, External Relations/Civic Engagement Office, Principal

Investigators, and Stakeholders to supplement their own desktop research of available policy and strategy documents. Taskforce members entered their data into Microsoft Word documents and returned files to the WP2 coordinators for collation and analysis to identify consortium strengths or key enablers as well as gaps which could impede collaboration amongst UNIC partners.

Task 2.2 also calls for showcasing examples of good practice in engaged research across the UNIC consortium. A novel approach was taken in that UNIC partners nominated academic or research staff to present their research in an ongoing Showcase series. The first session was held at the UNIC4ER Strategy Forum on 19 January 2022. Information on the work of all relevant ongoing nominees is added to our database of good practice. At the Strategy Forum, four initial research projects were selected to cover different stages of the research process and different city challenge areas. There was also a Panel Discussion where researchers articulated challenges and opportunities for engaged research. This allowed for the capturing of key insights and learning on engaged research.

It should be noted that this Deliverable Report represents a snapshot in time of an ongoing process with regards to the development and integration of a common survey instrument to capture the baseline of engaged research practices. It is recommended that this survey instrument be reevaluated and readministered at a future date to determine progress across the UNIC Consortium with regards to engaged research.

The following abbreviations will be used in the results section.

Engaged Research	ER
Ersmas University Rotterdam	EUR
Koç University	KU
Ruhr University Bochum	RUB
University College Cork	UCC
University of Liège	ULIEGE
University of Deusto	UD
University of Zagreb	UniZG
University Oulu	UOULU

Results

Survey Results

Surveys were completed by Taskforce members with support from key agents at their respective institutions. The mapping process proved to be a valuable discovery process across the consortium. Taskforce members' access to key resource documents did not appear uniform across the consortium with some partners expressing difficulties locating needed information. It would further appear that such lack of access could limit the effectiveness of engaged researchers who need to develop rationales to support their proposed studies. However, institutions had policies or frameworks that supported independence or autonomy in the research process allowing space for engaged research. Furthermore, all institutions and their respective nation states expressed the need for research to address societal challenges and have positive societal impacts while institutions appeared committed to issues of inequality and inclusion, which reflects a supportive context for engaged research across the institutions.

Survey results were collated into a meta framework with eight categories to facilitate analysis of key operational functions within partner institutions. The primary focus of this report however is on the institutional and national policies, practices and initiatives that support engaged research.

Governance & Leadership & Policy Context

The responses to survey questions relating to specific institutional mission statements, strategies or policies that promote, encourage, or require engaged research were collated, distilled and presented in a manner to allow for ease of comparison in gap analyses (Table 1A). There is a high degree variability to which engaged research is mentioned in institutional strategies and policies although it appears there are opportunities to strengthen this language in future strategies and policies. The precise term of *Engaged Research* was not mentioned specifically although the narrative in these documents did convey the principles of engaged research. The internal governance structures with responsibility for research policy also variable amongst UNIC partners as was the case for specific university offices with responsibility for policy development (Table 1B).

Table 1A. Distilled survey report for Domain 1: Governance, Leadership and Policy Context. Columns denote the extent to which Engage Research is promoted, encouraged, or required by policy at the university wide level and specific described language is included wherever possible. Further, Institutional Research Office or Rectorate policy documents were also evaluated.

UNIC Partner	University Wide Development Plan or Strategic Plan	
	ER Prioritisation	Descriptive Language Use
EUR	Direct	Creating positive societal impact. Societal engagement
KU	Not stated	Advance knowledge through its efforts and to serve Turkey and humanity
RUB	Indirect	Social and cultural transformation processes
UCC	Direct	UCC's Strategic Plan 2017-2022 is to "create value for our community through an international outlook and informed and creative engagement on local and global issues".
ULIEGE	Indirect	Sharing knowledge and embedding innovation for the benefit of society
UD	Direct	2022 Deusto Initiative: people and institutions transforming the world together" of the current Strategic Plan includes the strategic focus on social university engagement, which includes engaged research
UniZG	Indirect	Pursue broad scientific activities in line with social needs
UOULU	Direct	Finnish Universities Act: interact with the surrounding society and promote the social impact of university research findings

Table 1B. Internal governance structure(s) responsible for research policy amongst UNIC partner institutions.

UNIC Partner	Internal Governance Structures Responsible for Research
EUR	Decentralised institution where each faculty has the discretion to determine its own research policy and further define their priorities.
KU	Vice President for Research and Development
RUB	<ul style="list-style-type: none"> - Faculties to create development plan. - The administrative department for university development and strategy has a research support office
UCC	<ul style="list-style-type: none"> - Led by the office of the Vice-President for Research and Innovation reporting to the University Governing Body and its Strategy, Research & Innovation Committee. - Academic Council Research and Innovation Committee, a Standing Committee of Academic Council responsible for bringing forward strategy and policy
ULIEGE	<ul style="list-style-type: none"> - Research policy is led by the office of the Vice-President for Research and Innovation reporting to the University Governing Body and its Strategy, Research & Innovation Committee. - Academic Council Research and Innovation Committee is responsible for bringing forward strategy and policy to support the achievement of the University's research and innovation Strategic Plan objectives.
UD	<ul style="list-style-type: none"> - Strategic implementation of the committed research policies lies with the Vice-Rectorate for Research and Transfer. - The Vice-Rector for Research and Transfer regularly convenes the Research Board to monitor the progress of the University Strategic Research Plan. - This board is made up of the Faculties' Vice-deans of Research, the Director of Deusto International Research School (DIRS), the Director of the International Research Projects Office (IRPO) and the Director of the Office of National Projects and Transfer (DEIKER) and Research Ethics Committee.
UniZG	Responsibility for institutional research policy held by Research and Innovation Administration, Rector's Office and the University Council for Research and Valorisation

UOULU	<ul style="list-style-type: none"> - Research strategy primarily developed at University Senate level (vice-rector for research is senior leader) - Research strategy at Faculty level (Dean is the senior leader) - University Innovation Centre and Research Support Services responsible for aspects of the development and implementation of research strategy
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Organizational systems, infrastructure, funding, people & incentives

This section endeavours to determine to what extent research support office(s) function at the university wide level or at various academic units, and to determine the primary sources of extramural funding. It should be noted that these are generalized research supports and not specific to engaged research activities (Table 2A). It should be noted that there is a wide variation in the level of supporting structures which could impact collaborations across the UNIC consortium.

Information was also collected on what intutional incentives are in place to encourage or support engaged research practitioners, e.g. institutional awards, rewards and recognition systems or procedures (Table 2B). A wide variation was noted in the responses; however, most institutions lack incentives to encourage engaged research.

Table 2A. General supports for general research not necessarily specific to engaged research provided at various levels within each institution. Further, primary sources of external funding are displayed from both public and private sources.

UNIC Partner	Research Support Infrastructure	Primary Funding Sources	
		Governmental	Private
EUR	Research data management, publishing, research quality/integrity, legal help, research ideas & opportunities	None Stated	None Stated
KU	<ul style="list-style-type: none"> • Provides guidance on national and international R&D funding • Post-grant services include implementation support both admin & financial 	<ul style="list-style-type: none"> • Scientific and Technological Research Council of Turkey • Istanbul Development Agency • Presidency of Turkish Health Institutes • Turkish Ministry of Industry and Technology • European Commission • European Molecular Biology Organization (EMBO) 	<ul style="list-style-type: none"> • Tüpraş • Arçelik A.Ş. • İş Bankası • Vehbi Koç Foundation
RUB	Research Office w/ EU fund advisors	<ul style="list-style-type: none"> • European Commission • German Research Foundation 	<ul style="list-style-type: none"> • Stiftung Mercator • Volkswagen Stiftung, • Alexander von

			Humboldt-Stiftung
UCC	<ul style="list-style-type: none"> • Pre-award identify funding opportunities and conduct trainings and forums • Post-award support implementation & financial • Individual colleges also provide supports 	<ul style="list-style-type: none"> • Science Foundation Ireland • Enterprise Ireland • SEAI • EPA <ul style="list-style-type: none"> • Health Research Board • Irish Research Council • European Commission 	
UD	<ul style="list-style-type: none"> • Master Plan Social Impact of Research. • Deusto Social Impact Briefings (DSIB). • Deusto Social Impact Storytellings (videos). • Deusto's Research Results Transfer Office (OTRI). • International Research Project Office (IRPO). • Deusto Social Innovation Centre: Innogune DeustoKabi • Interdisciplinary Research Platforms. • The CRAI (Centre for Resources of Learning and Research) 	<ul style="list-style-type: none"> • European Commission / European Research Area & Horizon Europe 2027 and EU Funds • Spanish Government / Ministry of Science and Innovation / Spanish Science, Technology and Innovation Strategy (EECTI) and Sectoral Strategies. Funding calls • Spanish Government / Ministry of Universities. Funding Calls • Basque Government / Ministry of Education / Universities and Research / Basque University Plan / Basque University & Companies Strategy / Cluster 4GUNE Engineering, Science and Technology / Cluster KSIGUNE Creative Cultural Industries / Agreements and funding calls • Basque Government / Ministry of Economic Development / Science, Technology and Innovation Plan and Network / Agreements and funding calls • Provincial Councils of Bizkaia, Gipuzkoa and Araba / Agreements and funding calls 	119 private companies, foundations and non-profits support engaged research
ULIEGE	Infrastructures and initiatives support for ER for research within the city that make scientific knowledge accessible to local citizens	<ul style="list-style-type: none"> • National Fund for Scientific Research FNRS • Belgian office for Political Research BELSPO 	Not possible to provide
UniZG	Faculties support identification of funding sources & help in proposal prep	Croatian Science Foundation	Adris Foundation

UOULU	Information on open calls, central coordination of applications and Assistance in preparation of research grant applications	<ul style="list-style-type: none"> •Academy of Finland by the Strategic Research Council •Finnish Ministry of Education, Science and Culture •Business Finland 	Aurora.fi database will merge with Research.fi in 2022
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Table 2B. Institutional supports and incentives to pursue engaged research in addition to supporting structures and policies to equitably safeguard diversity and inclusion.

UNIC Partner	Promotion Criteria	ER Hiring Preference	ER Incentives	Equality and Inclusion
EUR	None stated	None stated	Reward category of creating positive social impact	<ul style="list-style-type: none"> •Diversity and Inclusion office •social safety and social equity as integral
KU	None stated	None stated	None stated	<ul style="list-style-type: none"> •Office of Disability Services •Diversity, Inclusion and Disabled Student Unit •Gender Equality Plan
RUB	None stated	None stated	None stated	<ul style="list-style-type: none"> •Vice-rectorate for diversity, inclusion and talent development. •Gender-related appointment policy, rewards and project funding for gender balance activities
UCC	<ul style="list-style-type: none"> •Professor & Senior Lecturer to reflect 'Community Engagement' activity •Research and innovation area practice 	No process currently	<ul style="list-style-type: none"> •Recognition Awards Programme for 'Exceptional Citizen' •Annual Research Awards 	<ul style="list-style-type: none"> •Equality, Diversity and Inclusion Unit •Race Equality Forum •Strategic Action 1. 6: integrating gender equality and diversity into the design, execution and monitoring of research activity
UD	The achievement of the Deusto Research Social Impact labels entails the recognition of the dedication of the teaching-research staff.	The MGPDI application (Teaching and Research Staff Management Model) to manage and consult the distribution of	<ul style="list-style-type: none"> •The Deusto Research Social Impact labels •Deusto Santander Research Award 	<ul style="list-style-type: none"> •Vice Rectorate for University Community and Agenda 2030 •University Social Responsibility (USR) is one of the projects envisaged in the Strategic Plan: Service and Commitment. •Gender Equality Plan

		teaching and research staff. Projects of social impact are considered in this dedication, evaluation and remuneration.		<ul style="list-style-type: none"> •Inclusion and Accessibility Plan, •Social Justice Initiatives •Environmental Plan •Health Plan.
ULIEGE	None stated	None stated	Exist small-scale, nothing specific stated	Signatory of the Université Hospitalière, fully committed to the support of diversity
UniZG	ER recognized for the academic advancement			<ul style="list-style-type: none"> •HR Excellence Action plan encourages diversity & prohibits discrimination •University & most Faculties developing Gender Equality plans.
UOULU	None stated	None stated	<ul style="list-style-type: none"> •Nothing specific. •'Professors of Practice' merits in working life or enterprise outside the university 	Gender Equality and Non-Discrimination Plan supports equal assess, success and retention

University and Society Collaboration & Co-Creation

The following table contains results of an analysis of national and/or regional strategies or policies or programmes that promote, encourage, or require engaged research (Table 3). Again, there is considerable variability amongst UNIC partners.

Table 3. National or Regional policy directives that enable, support, or prioritize engaged research and example of supporting text. Please note that responses in columns 3 corresponds with entry in column 2 as denoted by the numbering scheme.

UNIC Partner	National/Regional Policy Supporting ER	Supporting Document Text
EUR	None stated	None stated
KU	1•The Scientific and Technological Research Council of Turkey (TÜBİTAK) 2•Istanbul Development Agency	1•improvement of the life standards of our society and sustainable development of our country 2•adopts a sustainable, holistic and multi-dimensional including 'Fair Sharing, Inclusive and Learning Society' and 'Joyful, Authentic Urban Spaces and Sustainable Environment'
RUB	Draft white book "Citizen Science Strategy 2030"	Through Citizen Science and Citizen knowledge we will include the perspectives of the civil society stronger into the Research
UCC	1•Irish National R&I Strategy 2•Ireland's National Strategy for Higher Education to 2030 (2011) 3•Irish University Association - CAMPUS ENGAGE Charter 4•Irish Research Council	1•address public policy needs and optimal use of research 2•established societal engagement as the Third Mission of Universities. 3•Building sector capacity around the Third Mission of the Universities, policy document supporting ER 4•objective of establishing a 'Social Innovation Community' of researchers, social innovators, citizens & policy-makers
ULIEGE	None stated	None stated
UD	1.Basque University Plan 2.Basque Science, Technology and Innovation Plan 3. Basque Country 2030 Agenda 4. Basque Urban Agenda Butzatu 2050	1.Creation of stable networks with other RVCTI actors to take advantage of synergies and opportunities. 2. "Greater integration of social challenges in the Plan. Strengthen collaboration between the different agents that form part of the RVCTI". 3. "Through comprehensive urban regeneration and regeneration and urban transformation projects, which can address the main strategic environmental, social, economic and social of innovation". 4. "Instrument to solve the main challenges of the following social challenges, aligned with the Sustainable Development Goals".

UniZG	<ul style="list-style-type: none"> 1•Strategy of the Croatian Science Foundation 2•Croatian Smart Specialisation Strategy 2016-2020 	<ul style="list-style-type: none"> 1•not stated 2•not stated
UOULU	<ul style="list-style-type: none"> 1•National strategy for sustainable urban development (6Aika) 2•Strategy for smart specialisation (S3) in Oulu Region 	<ul style="list-style-type: none"> 1•challenges of urbanisation and evolve towards ever smarter and inherently human-centric cities w/ sustainable urban development, employment and competence 2•challenges areas of climate change, digitalisation and globalization with cooperation across industries and borders

Preparing & Supporting Engaged Researchers

Our review of existing university staff capacity building programmes supporting engaged research shows that the majority of partner institutions lack this key enabling support for recruiting and developing engaged researchers (Table 4). Apart from UCC, no institution identified any external agencies or organisations fund training on good practice for engaged research.

Table 4. Review of programmes designed to expand capacity for engaged research especially with regards to staff professional development trainings and credit bearing module or course units. Please note that responses in columns 3 corresponds with entry in column 2 as denoted by the numbering scheme.

UNIC Partner	ER Capacity Building Programmes	Training in Good ER Practice
EUR	None stated	None stated
KU	Office of Learning and Teaching but no ER specific trainings stated	None stated
RUB	no specific orientation on engaged research	Campus-wide PhD-school has trainings in science communication and open science
UCC	1•Irish Universities collaborate together to develop and provide support for engaged research 2•EU TIME4CS initiative 3•UCC Research Office	1•Engaged Research & Innovation for Societal Impact 6-Week Online Course 2•Supporting and facilitating the implementation of sustainable institutional changes in research performing organisations (RPOs) to promote Citizen Science and public engagement - Currently developing a training module 3• credit bearing CPD - Research Skills Training Programme
ULIEGE	None stated	None stated
UD	Organised by the Training Area of the People Development Directorate, in collaboration with researchers, teachers and technicians.	Within the training programme aimed at researchers, teachers and administration, courses are offered on: methodology and techniques for research in general and engaged research; international research projects; service-learning subjects; social responsibility (gender equality; inclusion and accessibility; and health)
UniZG	None stated	None stated
UOULU	No dedicated support programmes	No dedicated support programmes

Engaged Research in Teaching & Learning and Research Based Teaching

The degree of engaged research into the Undergraduate and Postgraduate curricula was examined (Table 5). Details on accredited and or non-accredited engaged research programmes or modules were provided along with specific examples.

Table 5. Examples of engaged research embedded in undergraduate and graduate curriculum

UNIC Partner	Engaged Research Embedded into Undergraduate Curriculum	Engaged Research Embedded into Postgraduate Curriculum
EUR	None stated	Engaged Research programme in the Erasmus Doctoral Programme in Business and Management
KU	only partially into the undergraduate curricula	more integrated at the master's and doctorate level
RUB	<ul style="list-style-type: none"> •Certificate in Collective Violence, Holocaust and Genocide Studies (CVG) •Certificate in cultural education 	<ul style="list-style-type: none"> •Master in Humanitarian Action •Master of Arts in Development Management: •Master program Gender Studies •International Double Degree Master Programme •Transformation of urban Landscapes (TuL)
UCC	Many modules at UCC teach ER across a wide range of disciplines and approaches	<ul style="list-style-type: none"> •AP6173 Service Design and Evaluation in Applied Psychology. •PG6025 on community based participatory research
ULIEGE	None stated	Engaged research notions and directions are integrated into doctoral training and postgraduate curricula in the form of field research training and exercises, stages and internships at city CSOs and NGOs, empirical qualitative research
UD	Service-learning subjects in all degree programmes. Presence of engaged research in the chosen modality of professional internships. Dual model in degree programmes. Final degree projects linked to engaged research. Bachelor's degrees oriented towards learning-research-action.	Service-learning subjects in all degree programmes. Presence of engaged research in the chosen modality of professional internships. Dual model in master's degrees. Master's theses linked to engaged research. Master's degrees oriented towards learning-research-action. By way of example, the Master's Degree in Governance for Sustainable Urban Development designed and oriented towards the engaged research: KAIA Method and 360° CitiesLab Model

UniZG	<ul style="list-style-type: none"> • Study programmes in social work (undergraduate, graduate, postgraduate, doctoral) • Study programmes in social policy (graduate, postgraduate) • Programme in medicine at the UNIZG, in cooperation with the School of Public Health • Courses regarding research ethics (e.g. Participative journalism on the study of Communication Sciences or Sustainable Urban Development – participative approach on the study of Sociology)
UOULU	Level of integration of engaged research into teaching varies based on units' scopes

Open Research and Digital Transformation & Capability

This section review Open Research (aka Open Science) resources, policies or strategies exist at UNIC partner institutions (Table 6).

Table 6. Policies, trainings and infrastructure that supports Open Research (Open Science).

UNIC Partner	Policy	Training	Infrastructure
EUR	Open Science Community Rotterdam - goal to promote and adopt open & transparent scientific practices at every stage of the research cycle	None stated	None stated
KU	None stated	KU Main Library provides trainings on predatory publishing, management of open access & open science issues, data management, utilization of citation organizer tools, databases & successful scientific publishing	KU Main Library manage an Open Access Repository and provides full support in open access matters
RUB	Open Science Policy approved by rectorate and senate, but not yet published	PhD student skills training	RUB hosts ORCA, a regional platform for Open Educational Resources in federal state of North Rhine-Westfalia
UCC	National Open Research Forum (NORF), which is charged with the development of a national strategy for open research	Comprehensive credit bearing CPD Modules Research Skills Training Programme to academic and research staff. Training programmes to ensure reproducibility and transparency in research methodologies and in the generation and analysis of data.	<ul style="list-style-type: none"> •CORA Repository -free open access to UCC's scholarly & scientific research publications & theses •UCC Library Research Data Service - Support for research community to apply the FAIR Data Guidelines to ensure optimal availability of data •IReL - transformative open access agreements with academic publishers •UCC Research Director on steering group for HRB Open Research Platform

ULIEGE	committed to create an Open Culture and promote Open Science	None stated	Belgian copyright law, all scientific outputs from scientific research which is fully or partially funded by the Wallonia-Brussels Federation must be uploaded in an OA form in the University repository platform ORBi
UD	Strengthening Participation Platform, Open and Citizen Science Research Group “The Challenge: Understanding and promoting citizen’s engagement in the co-creation process of science”.	Organised by the Training Area of the People Development Directorate, in collaboration with researchers, teachers and technicians. Within the training programme aimed at researchers, teachers and administration, courses are offered on: methodology and techniques for research in general and open research.	<ul style="list-style-type: none"> •Within the Strengthening Participation Platform, the Open and Citizen Science Research Group aims at promoting citizens’ engagement in the co-creation process of science. •The CRAI (Centre for Resources of Learning and Research): access to the information about resources and how to locate them and how to share them. •Deusto Online.
UniZG	None stated	None stated	<ul style="list-style-type: none"> • HRČAK - Portal of Croatian scientific and professional journals, currently providing to 515 journals published in Croatia in line with the Open Access Initiative • DABAR – Digital Academic Archives and Repositories – portal facilitating maintenance of higher education and science institutions' digital assets, i.e., various digital objects produced by the institutions and their students and employees • SRCE – University Computing Centre, providing wide range of IT services to the University (authentication systems, collaborative tools, e-learning tools, plagiarism checking software)

UOULU	the Federation of Finnish Learned Societies has been responsible for the national coordination of Open Science since 2018 with funding by the Ministry of Education and Culture	<p>The open access document (web-site) is consisting the following documents:</p> <ul style="list-style-type: none"> •Principles of open science •Open access publishing •Open and FAIR research data •Open research infrastructures •Open source •Open education <p>Additionally, Six City Strategy was developed in three large-scale spearhead projects: Open data and interfaces, Open participation and customership, and Open innovation platforms</p>
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Internationalisation and Transnationalization

The following table provides examples of prior, new or developing collaborations or strategic partnerships formed with other engaged research individuals and teams internationally (Table 7).

Table 7. Policies or coalitions that enable international engaged research and specific examples of international engaged research projects

UNIC Partner	International ER Policies	Examples of International ER
EUR	None stated	None stated
KU	Strategic Internationalization Plan - 96% courses in English	<ul style="list-style-type: none"> •FIERCE: Feminist Movements Revitalizing Democracy in Europe •KIDS4ALL: Key Inclusive Development Strategies for Life Long Learning •REDEFINE: Refugee Emergency: Defining and Implementing Novel Evidence-based psychosocial interventions •STRENGTHS: Foster in responsive mental health systems in the Syrian refugee crisis •ADMIGOV: Advancing Alternative Migration Governance
RUB	Global engagement in scientific as well as civil society	Member Intn'l Sustainable Campus Network
UCC	Engage our global community	Leader of UNESCO Learning Cities, Engaged Member of the Talloires Network, GRIPP and Time4CS Network (RRI and Citizen Science in EU)
ULIEGE	Centre for Ethnic and Migration Studies within International Migration, Integration and Social Cohesion in Europe	ER example- Inter'Act Lab's project 'Ageing well in post-industrial territories'- UNIC partners RUB, UD, UOULU, & UniZG

UD	Deusto 2022 Strategic Plan / Research and Transfer Scientific and Social Impact: Platforms Impact / Internazionalization: Projects Alliances, consortiums and networks	Deusto Social Impact Research Projects Label: 56 projects <ul style="list-style-type: none"> • Gearing Roles Gender Equality Actions in Research Institutions to Transform Gender Roles https://gearingroles.eu • Inspira STEAM 2017 https://inspirasteam.net • City4Age Elderly-friendly cities services for active and healthy ageing http://www.city4ageproject.eu • SIMPATICO. Simplifying the interaction with public administration through information technology for citizens http://www.simpatico-project.eu • GREENSOUL. Eco-aware Persuasive Networked Data Devices for User Engagement in Energy Efficiency www.greensoul-h2020.eu.
UniZG	None stated	None stated
UOULU	None stated	UARTIC - northern, international science university network member with 230+ HEIs

Measuring Impact

Internal performance indicators in your university or places within your university to monitor research in general or engaged research specifically. Taskforce members were also asked to identify any regional, national, European or international indicators by their universities (Table 8)

Table 8. External and Internal Key Performance Indicators to assess impacts of overall research activity as well as engaged research

UNIC Partner	Internal Research Performance Indicators	Internal Engaged Research Performance Indicators	External Performance Indicators to Monitor Research Impacts
EUR	None stated	None stated	None stated
KU	Koç University Social Impact Forum	Koç University Social Impact Forum	<ul style="list-style-type: none"> •Entrepreneur and Innovative University Index International performance indicators: <ul style="list-style-type: none"> •Times Higher Education (THE) Impact Rankings, •THE World University Rankings, •THE Young University Rankings, •THE Emerging Economies University Rankings •QS World University Rankings, •QS Top 50 Under 50 Rankings, •QS E. Europe & C. Asia University Rankings, •QS Graduate Employability Rankings

RUB	<ul style="list-style-type: none"> •Main indicator - 3rd-party-funding •Collaborative research in bigger consortia •depending on the field - publications 	None stated	Times Higher Education impact ranking
UCC	Research indicators in UCC Strategic Plan and R&I Plan	Community based research indicators in UCC Strategic Plan	<ul style="list-style-type: none"> •Research and Societal Engagement indicators in Higher Education Authority Compact Agreement with HEI's. Times Higher Education impact ranking •Irish University Association's Campus Engage 'Societal Impact Framework' for research & innovation. •Across Horizon Europe FP 9, impact assessment - how countries, PIs, R&I end-users work together to inform and implement public policy, related legislation, community-based early intervention & prevention programmes, aligned to the UN SDGs
ULIEGE	None stated	None stated	None stated
UD	Deusto 2022 Indicators. Research and Transfer. Scientific and Social Impact Research groups and Platforms Quality, impact and dissemination Internationalization International projects Alliances, consortia and networks (10 indicators)	Deusto Strategic Plan "Evaluate the social impact of the university and its contribution to sustainable development" "UD Social Impact Model" project: to ascertain the impact of the activity carried out by UD on society and measure its contribution to the environmental, economic, social and cultural development of the territory.	<ul style="list-style-type: none"> •Times Higher Education Impact University Ranking: 100 (10th in Spain). •THE SDG Ranking: SDG 11: 97 / SDG 8: 100 •THE World University Ranking: 601-800 range. Citations (637th) and International (703rd) •THE World University Ranking by Subject: Education ranked 201-250 (3rd in Spain); Business and Economics (6th in Spain). •THE European Teaching Ranking: ranked 126-150th. •Global Teaching Excellence Award 2018 (GTEA): the world's top 6 universities. •U-Multirank Ranking: 10 vg and 6 g indicators out of 36 indicators. 100% vg/g indicators in contribution to regional development and international orientation. •CyD Ranking of Spanish universities: 21 high indicators out of 37 (its best: teaching/learning, international orientation and contribution to regional development). •U-Ranking of Spanish University System Indicators: 3rd place (2nd in teaching and 3rd in research and innovation).

			<ul style="list-style-type: none"> •AACSB and AMBA Accreditation obtained by Deusto Business School. •Shanghai Ranking: among the world's 400 best in business administration
UniZG	None stated	not actively monitored	<ul style="list-style-type: none"> •Times Higher Education •QS ranking •U-Multirank
UOULU	Vice-Rectors of Research, Education, Co-Operation regularly discuss and update w/ Board of Directors	Engaged research is discussed either by vice rector of research or vice rector of co-operation	<ul style="list-style-type: none"> •Times Higher Education •QS World Rankings •ARWU = Shanghai list

Mapping of Best Practices for Engaged Research

Through this mapping exercise we have identified exemplars or state-of-the-art examples in the adoption of engaged research initiatives across UNIC institutions. Case studies allow for capturing a wide range of perspectives, providing an opportunity to better understand the process of doing engaged research in practice. The purpose is also to facilitate common learning across UNIC and a community of practice, that brings people together to learn, and to drive performance through common learning and reflective practice.

Each organisation was presented with a criterion and asked to identify a minimum of 3 exemplars per institution. Criteria included guidance as to examples from across different disciplines, interdisciplinary and transdisciplinary. It included considerations of gender, career stage and other diversity aspects. It included a focus on exemplars that speak to the themes of UNIC, specifically post-industrial transition's and superdiversity.

Four exemplars were selected for a Best Practice Showcase which was held online on 18 January 2022, and 4 for a Best Practice showcase in March 2022. It is planned to hold a showcase event each quarter, with the third one in the series planned as part of the UNIC Conference and CityLab Festival in Oulu in June. Each event is facilitated, and the chair engages the presenters in a discussion to draw out key learnings, concepts and ideas. Each presenter is provided with a common template for their presentation that is based on an evidence-informed method for presenting impact case studies. This emphasises detailing the process of engaging with research participants, outlining the impact of the research and how it addresses key societal challenges, and the key lessons learned. The common template allows for the creation of cases for the UNIC Open Case Repository and a bank of learning

resources for the UNIC website. In addition, all showcase events are recorded and placed on the UNIC website as a learning resource.

The January Showcase event during the UNIC4ER Strategy Forum was public and open to all and widely attended by individuals across the consortium with over 150 registrants. The following presentations were featured:

Ageing Well in Post-Industrial Territories

Dr Catherine Elsen, University of Liege, InterAct Research Lab

This engaged research exemplar was led by a multidisciplinary team and used Design Methods to address the issue of ageing well in Liege, with a focus on housing, anticipation of aging well and perception of older people in society. The presentation asked: (1) What does it mean to age well in a city with a rich industrial past? And (2) How do the histories of each individual link together and reflect on today's realities?

UNIC CityLabs Challenge: Aging Population

Mobile Futures: Diversity, Trust, and Two-Way Integration

Dr Johanna Hiitola, University of Oulu, Gender Studies

Mobile Futures is an interdisciplinary, action-oriented engaged research exemplar that seeks to make a scientific and societal contribution to co-creating a fair and inclusive Finnish society. To achieve this goal, the project employs the Living Lab methodology, through which solutions are jointly developed by the project researchers and societal partners.

UNIC CityLabs Challenge: Diversity and Inclusion.

New Habitats for Human Development

Dr Roberto San Salvador del Valle, University of Duesto, Cities Lab Katedra

This presentation dealt with the KAIA Method (learning, research and action) and 360° CitiesLab, generated by Deusto Cities Lab. It offered a vision of a city governance model based on cross-sectoriality (institutions, companies, social entities and citizens) and transversality (environmental, economic, social and cultural development).

UNIC CityLabs Challenge: Urban Resilience & Transformation

Microbiome Study of Irish Travellers

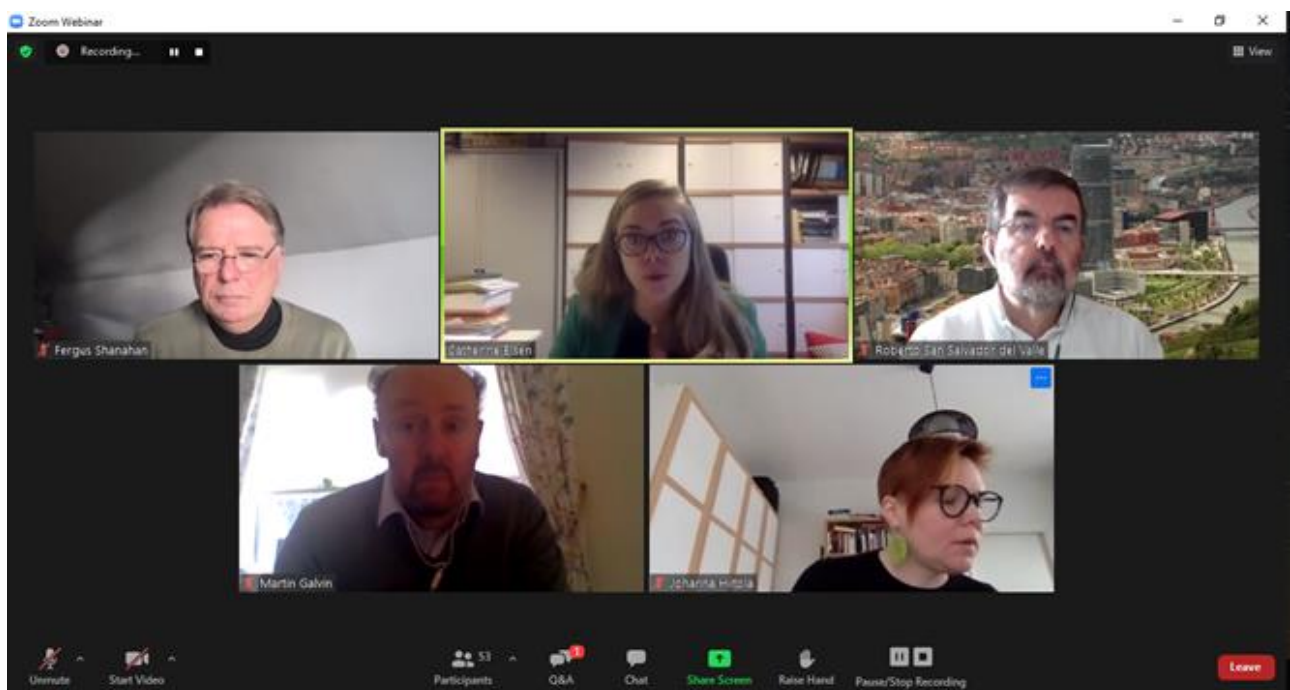
Professor Fergus Shanahan, University College Cork, APC Microbiome Ireland

This presentation asked: “What is a normal or desirable microbiome in an ethnically diverse society?” This Public Patient Involvement (PPI) represents the shared efforts of clinicians and scientists working in partnership with the insight, wisdom and input of Cork Traveller Community who not only participated in the study but also shaped its design and planning. These findings had global implications and are published in the prestigious journal Nature Medicine.

UNIC CityLabs Challenge: Health and Wellbeing

The subsequent panel discussion addressed many aspects of the Engaged Research process such as assessing short- and long-term impacts, the early stages of developing an Engaged Research project, and gaining trust with community partners and keeping true to the commitments made to those partners.

Figure 4. The photo below shows Professor Fergus Shanahan, University College Cork, Dr Catherine Elsen, University of Liege, Dr Roberto San Salvador del Valle, University of Duesto, Dr. Martin Galvin (moderator) and Dr Johanna Hiitola, University of Oulu.



To date, 37 cases of engaged research best practice have been identified (Table 9). UNIC4ER plans to continue organizing Showcase events on a quarterly basis owing to the popularity of this format where over 150 individuals registered for our first virtual Showcase event. We will continue to record

these presentations to build a video library to transfer knowledge across the UNIC Consortium and beyond.

Table 9. Current list of engaged research best practices identified amongst UNIC consortium members.

UNIC Partner	CityLab Challenge	Case Study Name	Principal Investigator
ULIEGE	Aging Population	Ageing well in post-industrial territories	Catherine Elsen
KKU	Cultural heritage	Küçükyalı ArkeoPark: Excavation, Conservation, Cultural Heritage and Public Archaeology	Assoc. Prof. Alessandra Ricci
UOULU	Digital Transition	Engaging citizens, from informal education learners to active collaborative scientists	Professor Juha Röning
UD	Digital Transition	Science, technology and gender	Mari Luz Goenaga
ZUniZG	Diversity & Inclusion	Fostering equality in and by academia	Antonija Petričušić
EUR	Diversity & Inclusion	Inclusive economic development and tourism	Mark van Ostaijen, Ass. Prof.
EUR	Diversity & Inclusion	Inclusive local elections	Mark van Ostaijen, Ass. Prof.
EUR	Diversity & Inclusion	Inclusive entrepreneurship	Rene Bakker, Ass.Prof.
KU	Diversity & Inclusion	Participatory Futures for Intercultural Meaningful Social Interactions in Public Places of Istanbul	Assistant Prof. Aykut Coşkun
KU	Diversity & Inclusion	Youth involved in the Turkish criminal justice system: Current projects and future directions	Assoc. Prof. Gizem Erdem
BoRUB	Diversity & Inclusion	Religious diversity	Volkhard Krech
UCC	Diversity & Inclusion	Global study of hip-hop music and culture	J. Griffith Rollefson
UCC	Diversity & Inclusion	Forced migration and the asylum-migration nexus	Maggie O'Neill
UD	Diversity & Inclusion	Religious diversity	Gorka Urrutia

UD	Diversity & Inclusion	Inclusive competitiveness	Miren Estensoro
UOULU	Diversity & Inclusion	Mobile Futures: Diversity, Trust, and Two-Way Integration (Strategic Research Council)	Johanna Leinonen
RUB	Green Cities	Energy transformation	Andreas Löschel
UCC	Green Cities & Sustainability	Sustainable Communities, Offshore and Inshore Islands	Siobhan O'Sullivan
UCC	Green Cities & Sustainability	Just energy transition	Brian Ó Gallachóir
UOULU	Green Cities & Sustainability	Productive interactions: Energy efficient pathway for the city transformation	Samuli Rinne & Sari Hirvonen-Kantola
RUB	Green Cities & Sustainability	Drinking water	Vanessa van den Bogaert
RUB	Green Cities & Sustainability	Mobility management	Michael Roos
Koç	Green Cities & Sustainability	Towards an agrarian question of urban metropolis: Urban farming, rural ties, and proletarian livelihoods in Istanbul	Dr. Burak Gürel
UCC	Health & Wellbeing	PPI Ignite Network @UCC	Patricia Carney
UCC	Health & Wellbeing	Microbiome study of Irish Travellers	Fergus Shanahan
UOULU	Health & Wellbeing	Exosome biomolecules as novel wellness and disease monitoring wearables	Professor Seppo Vainio
EUR	Health & Wellbeing	RRING/Join us for health	Ana Barbosa Mendes
EUR	Health & Wellbeing	SamenSpraak	Ida Korfhage, Ass. Prof.
KU	Health & Wellbeing	Prioritized Home Healthcare Scheduling and Routing (EVSAR)	Prof. Dr. Sibel Salman
KU	Health & Wellbeing	Existence of SARS-CoV-2 RNA on ambient particulate matter samples: A nationwide study in Turkey	Prof. Dr. Hasan Bayram

RUB	Health & Wellbeing	History of covid	Christian Bunnember
KU	Health & Wellbeing-Diversity & Inclusion	Scaling up Psychological Interventions with Syrian Refugees	Assoc. Prof. Ceren Acartürk
RUB	Urban Resilience & Transformation	Food security	Bernd Marschne
ROB	Urban Resilience & Transformation	Urban sprawl	Peter Mark
UOULU	Urban Resilience & Transformation	Resistant Cities. Urban planning as means of pandemic prevention	Professor Helka-Liisa Hentilä
UCC	Urban Resilience & Transformation	Urban redevelopment in marginalized communities	Cathal O'Connell
UD	Urban Resilience & Transformation	Cities Governance for Sustainable Human Development	Roberto San Salvador del Valle
EUR	Urban Resilience & Transformation	Regional Resilience: Regional economic impact mitigation of Co	Frank van Oort, Prof.

Discussion

In this section we discuss the 8 domains outlined previously in more detail, and main trends, learnings, challenges and opportunities emerging from the mapping exercise across these domains. In some parts we highlight interesting practices submitted in detail, this is to stimulate thinking and sharing of knowledge. Shining a light on some aspects over others, reflects the data available at the time, as more information is gathered and available, the narrative will evolve to present a complete picture across the consortium of all the excellent initiatives in the engaged research space.

Domain 1

We inquired into the Governance, Leadership and Policy Context

In this section we consider the specific institutional mission statements, strategies or policies that promote, encourage or require Engaged Research (or equivalent language) across the institutions. We inquired about what internal governance and leadership structure(s) have responsibility for research policy generally, engaged research policies and community research partnerships.

Mission statement, strategies or policies

At most of the universities the term Engaged Research is not called out explicitly in university mission documents. However, *addressing societal challenges* and commitment to ‘third mission’ societal engagement activities are common. For example, RUB is prioritising the 9th EU Framework Programme and further intensifying its engagement with civil society. The University of Liège’s strategic plan 2017-2021 has a focus on sharing knowledge and embedding innovation for the benefit of society, among several ambitions. The EUR Strategy 2020-2024 commits to ‘Creating positive societal impact’ and covers the whole university with a mission to make a positive impact on societal challenges. In Cork, Ireland’s National Strategy for Higher Education to 2030 (2011) established societal engagement as the Third Mission of Universities. Goal 3 of UCC’s Strategic Plan 2017-2022 is to “create value for our community through an international outlook and informed and creative engagement on local and global issues”. UCC also has a Civic and Community Engagement Plan that supports societal engagement as a Third Mission of the university. Although the engaged research is not specified as one of the strategic goals at the UNIZG in its mission statement its commitment to pursuing broad scientific activities in line with social needs and UNIZG is committed to pursue research to support the strategic needs of the Republic of Croatia. The Finnish Universities Act defines the mission of the Finnish

universities is to “interact with the surrounding society and promote the social impact of university research findings and artistic activities.” It preserves autonomy and “entails the right of universities to make their own decisions in matters related to their internal administration.” The Strategy of the University of Oulu is: The North changes the world – more sustainable, more intelligent, more humane. Deusto’s 2022 strategic plan has a focus on “people and institutions transforming the world together” and has a strategic focus on societal engagement, which includes engaged research. Indeed, the Deusto Motto includes Service and commitment, and its *raison-detre* is linked to the society that harbours it. For Deusto this is an integral part of its identity or an attitude that transcends geographical boundaries and requires thinking and acting in the interest of the common good at all times. Thus, unlike the other universities, Deusto’s Strategic Plan has an intentional focus on the measurement of the social impact of the university’s research projects. The argument is that universities, in addition to measuring the rates of academic impact, should also give account of the social impact of the research they perform. In this regard the university has articulated a compact or agreement with the Basque Government since June 2016 to promote the Social Impact of University Research.

Governance

There are processes within each university for institutionalising engaged research. For example, RUBs ‘Rectorate Agreements’ with faculty on objectives. RUB has no research strategy, but strategic goals for disciplinary and thematic areas are articulated in the university development plan, in close collaboration with the senate and the advisory board. Within this framework faculties are encouraged to develop their own localised development plans. In UNIZG the research strategy is primarily developed at the University Senate level. The specific disciplines have their own councils at the University level, comprising of members from all faculties. Each faculty has their own faculty council that is responsible for the research strategy on the faculty level. On the University level the vice-rector for research is the senior leader for the development of research strategy. Similar is the role of vice-dean for research, at the faculty level. The University has the Centre for Research, development and technology transfer, along with a Research Office, Technology Transfer Office and EU Projects Office who are responsible for various aspects of the development and implementation of research strategy. In KOC the Vice President for Research and Development (VPRD) is responsible for Koç University’s research policies, with a specific goal to significantly increase externally sponsored research and strengthen Koç University’s position in research. The VPRD can develop new research policies, such as ER.

UCC is governed by a Governing Body. Academic Council is the primary internal authority responsible for academic affairs. It is chaired by the President of UCC. The University Management Team, comprised of the President, Vice-Presidents and College Heads, oversees all day-to-day operational matters. The university is comprised of 4 Colleges, each governed by a college Council, that is chaired by a Head of College. UCC has a range of research institutes, each reporting to a Director and College Head. Colleges are governed by College Councils. Research policy development is led by the office of

the Vice-President for Research and Innovation (VPRI) reporting to the University Governing Body and its *Strategy, Research & Innovation Committee*. Academic Council Research and Innovation Committee (ACRIC) is a Standing Committee of Academic Council and is responsible for bringing forward strategy and policy to support the achievement of the University's research and innovation Strategic Plan objectives. Engaged research and impact is central to UCC's research strategy, addressing societal challenges through implementing the Campus Engage national report 'Engaged Research – Society & Higher Education Working Together to Address Grand Societal Challenges'. Ireland gives national policy direction for university societal engagement, which includes engaged research, through its National Strategy for Higher Education. Ireland has an agreed national policy implementation framework for societal engagement that is overseen by the Irish Universities Association Campus Engage initiative. It has a national Engaged Research Working Group comprising 1 member from each University.

In Oulu governance structures developing research policy include a Vice Rector for Research who oversees research strategy preparation (national sc. profiling actions) together with the eight Faculty Deans, five Focus Institute Directors, Research Unit Leaders and Professors. The Vice Rector for Research is responsible for the productivity of the University's research activities and services supporting them, and the quality and development of research. Objectives directing the operation include internationality, high quality and interdisciplinary research. In addition, efficient utilisation of up-to-date infrastructures, and promotion of open and responsible science are emphasised. The Vice Rector for Cooperation is responsible for the University's relationships with institutes of higher education, research institutions and companies. Key responsibilities include strengthening research-based innovation activities, promotion of international innovation partnerships and EU influencing.

In the University of Oulu, multidisciplinary research is fostered in five focus areas. The basis for applied multidisciplinary research is created by long-term basic research which is encompassed by five focus areas which are sustainable materials and systems; lifelong health; digitalization and smart society; changing climate and northern environment; and understanding humans in change. A Development Director leads university-level strategic development or Strategy and Science Policy (STY). The unit is responsible for knowledge management and supports the University's decision-making, quality assurance and research assessment. The unit coordinates international affairs and policies for sustainable development, open science and responsible research. Research support services helps researchers to apply for external funding. It is also the first contact point for research contracts. Research funding specialists, research coordinators and planning officers provide support in all steps of the applications phase. Controllers and project secretaries assist in budgeting and project implementation and reporting. There is a Management Group for Research, which is led by a Vice Rector for Research and Faculty Deans (8), University of Graduate School Dean, and focus institute directors (4). The Research Council acts as a preparatory body and makes proposals on the above-mentioned topics to the Management Group of Research. The Research Council supports the University Board in research-related matters. The highest decision-making body is the University Board, which has 11 members. The Board decides, for example, on the central goals, strategy, and direction of the University's operations and economy. The Board consists of the following groups: university

professors, other teaching and research staff and other staff, students, and (5) non-university community members.

In Deusto, responsibility for research lies with the Vice-Rectorate for Research and Transfer, who convenes a Research Board to monitor the progress of the University Strategic Research Plan. This board is made up of the Faculties' Vice-deans of Research, the Director of Deusto International Research School (DIRS), the Director of the International Research Projects Office (IRPO) and the Director of the Office of National Projects and Transfer (OTRI-Deiker). The Vice-Rectorate for Research and Transfer has two specialised units to support the management of research. Analyse and monitor applied research resources. The International Research Project Office (IRPO) supports the internationalisation of Deusto's research, with an emphasis on social impact.

Central University Supports

Centralised support also varies. Some universities are very centralised while others are very diffuse. In most responsibility for engaged research is differentiated and distributed. In RUR, the administrative department for university development and strategy has a research support office as one of its parts. This office supports the rectorate in decision-making as well as researchers regarding questions of funding, collaborative research etc. They have a team of EU fund advisers as well (especially to Horizon Europe). Erasmus University Rotterdam (EUR) is a very decentralised institution where each faculty has the discretion to determine its own research policy. There is the overarching EUR strategy (described above), but it is the faculties themselves that further define their priorities. Similarly, the University of Liège does not have a specific strategic board or leader for the implementation of engaged research. Responsibility for institutional research policy is held by the Research and Innovation Administration in collaboration with the Rector's Office and the University Council for Research and Valorisation (CURV). CURV is integrated by three Sectoral Councils (CSRV) Human Sciences; Health Sciences and Science and Technology. CURV and the CRVS are responsible for the analysis and evaluation of Faculty-level and Research Unit-level research strategies and the allocation of research funds. Operational strategies follow a bottom-up process as they are elaborated by the Faculties and the Research Units within them and approved by the higher governance structures mentioned above.

UCC has a central Research Office and Innovation office under the Office of the Vice-President for Research and Innovation. It has a Director of Research Support and Policy. The UCC *Principal Investigator Forum*, connects all researchers with research funding to each other and the Research Office. Each of UCC's 4 Colleges has a dedicated Research Officer that is responsible for research capacity building within their respective colleges and funding call support, including engaged research. PRIME provides consultancy support to researchers and groups. UCC Innovation is responsible for supporting commercialisation, UCC's patent portfolio management, the Gateway UCC incubation centre and Ignite Graduate Business Innovation Programme.

Domain 2

We inquired into organizational systems, infrastructure, funding, people & incentives for engaged research.

Recognition

It appears a majority of universities do not have institutional awards or recognition systems or procedures for community engagement or societal contribution. These kinds of activities are not typically called out in promotion criteria for academic, research or other staff. There is no special focus on it in hiring. However in UCC, following sustained input from the UCC Civic & Community Engagement Committee, promotion criteria to Professor and Senior Lecturer was revised to reflect academics 'External Community Engagement' activity including engaged research. The UCC Staff Recognition Awards Programme has an award category for 'Exceptional Citizen'. Beginning in 2022, the UCC's Annual Research Awards will have a number of awards related to engaged research: a) Engaged Research Award; b) Creating a Culture for Responsible Conduct of Research; c) Interdisciplinary Research; d) Research Collaboration of the Year; and e) Research Impacting the SDG's & Supporting Sustainability.

There is a very interesting national programme in the Netherlands for the reform of rewards and recognition systems in HEIs, and EUR has developed a highly strategic change initiative centred on three main thematic areas: Creating positive social impact; Differentiated career paths and team science and Stimulating Academic Leadership. For EUR creating social impact will be the basis of all endeavours at EUR going forward, and is one of the five key areas of activity in the university. EUR will expect academics to undertake a certain number of impact-related activities, such as socially relevant research, weaving social impact into educational activities and knowledge creation through outreach activities. In addition, EUR is developing impact-driven career profiles, in which academics develop their research and teaching in close collaboration with societal stakeholders (co-creation), or in which they pursue the entrepreneurial possibilities yielded by their research.

At the University of Oulu there are no awards, rewards or recognition systems for engaged research. However, Professors of Practice are recognised, whose merits must be beneficial to the teaching, research or societal activity of the university. Deusto have a very interesting focus on recognising Social Impact of Research across their operations as a key performance indicator. They have devised branding around Research Social Impact to recognise research projects that demonstrate a potential social

impact. As part of Deusto's Social Impact activities, every year the University selects a number of outstanding research projects with a high potential of social impact. Their results are published in the form of Deusto Social Impact Briefings (DSIB). Social Impact Storytelling is aimed at underlining the value and the social impact of Deusto research. Videos show how Deusto teams work in collaboration with other European teams, how they can help with social change and wellbeing, whilst focusing on important issues for social justice and inclusion, such as migration, the application of technology innovations in life, as well as the improvement of policy decisions in the area of health.

Support

In Liege support to ER is provided by the central Research and Innovation Administration. In EUR, a new department was introduced named 'Erasmus Research Services' (ERS). This department aims to support all researchers across the various faculties in relation to funding, research data management, publishing, research quality and integrity, legal aspects of research, and research ideas and opportunities. Previously, research support was carried out at faculty-level rather than at central level. The programme manager of UNIC4ER, and programme assistant are both part of ERS and it is anticipated that many of the UNIC4ER activities and infrastructure will be embedded as part of this department. At University of Oulu there is a research support service that assists in preparation of research grant applications, but ER is not part of their job description. In Cork, the Vice President Research and Innovation is the senior leader that has responsibility for engaged research policy. UCC Research has established a dedicated engaged research role, the UNIC Engaged Research Officer funded by the UNIC4ER Horizon 2020 award. UCC has a Vice President for External Relations, an office which supports the universities external engagement mission. It supports a University Civic and Community Engagement Office and Committee that in line with a national policy framework, helps builds university capacity, policy and practice and partnerships for community engagement, including engaged research. The University of Deusto's Research Results Transfer Office (OTRI) is in charge of attracting, promoting, managing and transferring national and regional research and its results. The OTRI/DEIKER centralises relationships between researchers, the university and public and private entities promoting national and regional research projects. The International Research Project Office (IRPO) supports the internationalisation of Deusto's research, promoting the generation of an attractive environment of excellent connected science, with strong projection and social impact.

Diversity

Diversity and inclusion policies are very prominent on each campus. RUB has a gender-related appointment policy, rewards and project funding for gender balance activities, actions for a family-friendly RUB and for inclusion. It has an equal opportunities office, an office for family services, a Consulting Center on Inclusion. It has EU-Project RESET (Redesigning Equality and Scientific Excellence Together) and a vice-rectorate for diversity, inclusion and talent development, with a think tank on

diversity to develop a mission statement for the university. Several non-traditional researchers are part of this think tank, and it's expected that the think tank will reflect on the topic of non-traditional scholar's participation in research. At EUR, there is a 'Diversity and Inclusion (D&I)' office that focuses on creating targeted and effective policies that promote a safe learning and working environment and social equity for all. There is also a D&I officer in each faculty. The University of Liège is a signatory of the *Université Hospitalière* and is fully committed to the support of diversity in its education and research areas. It has a focus on fostering the access of vulnerable people such as migrants, raising community awareness; and taking concrete action to support refugee students and researchers to obtain a visa, facilitate the equivalence of diplomas, etc. In Oulu, a Gender Equality and Non-Discrimination Plan supports equal access, success and retention. In UNIZG its HR excellence Action plan encourages diversity and explicitly prohibits discrimination. Along with this University and almost all faculties are developing Gender Equality plans.

In KOC the University is bound by the Labour Act of Turkey which aims to regulate the working conditions and work-related rights and obligations of employers and employees working under an employment contract. In the Act, the article 5 has a provision directly ensuring non-discrimination at the university. The Office of Disability Services supports students with disabilities for access to campus facilities and integration to campus life, and the unit also provides services to this community for personal and academic development. There is now also a Diversity, Inclusion and Disabled Student Unit. This unit enables every student who has differences such as religion, gender, language, disability, and cultural characteristics to participate in equal university life within the Koç University. English is used to prevent discrimination based on language. There is a Center for Gender Studies and the Gender Equality Plan (GEP) of Koç University is a mandatory requirement for Horizon Europe framework programme of European Commission.

UCC has an Equality, Diversity and Inclusion Unit, which develops and supports policy advancement in the area across the university. It has a director and staff. UCC's Athena SWAN action plan and supports diversity and inclusion policies across UCC. It has the specific goal of achieving equality in academic, research and professional career progression. For example, the Epigeum Professional Skills for Research Leaders course is specifically run for female Postdoctoral and Senior Postdoctoral Researchers. Returning from Maternity Leave small grants are provided in some Colleges to academics. The Research Strategy aims to enhance research excellence and impact by integrating gender equality and diversity into the design, execution and monitoring of research activity. UCC has a Race Equality Forum led by Black and minority ethnic (BAME) staff, which identifies specific actions to support race equality in UCC and take a more explicit, leading, public anti-racist organisational approach.

Funding

The funding context for engaged research varies across the countries, regions and Institutions. All of the UNIC are responding to Horizon Europe which has prioritised challenge-based missions to be co-designed with citizens, stakeholders, the European Parliament and Member States. “The future missions and European Partnerships in particular, will promote societal, ecological and economic transformations by involving, collaborating with - and building consensus among citizens and practitioners on research and innovation roadmaps and priorities.” “The programme part will also help reinforce interactions between science, society and education by strengthening the research dimension of the European Universities, including within smart specialisation processes, bringing attention to the highest standards of ethics and integrity and enabling citizens and society become co-producers of scientific knowledge.” The European Commission's Science with and for Society (SWAFS) programme also highlighted that “Europe cannot thrive without ensuring the best possible match between the immense potential achievements science has to offer and the needs, values and aspirations of citizens”. It prioritised citizens and civil society organisations in co-designing and co-creating responsible research and innovation agendas among other aspects.

The funding context in Finland appears to be very well developed, with close interaction between government and the university sector in prioritising research challenge areas, many with a societal and engaged research focus. All national private sector funding sources as well as philanthropic funding organisations funding sources are listed in a funding database for science and arts called Aurora.fi. For Oulu, the largest national research funding agency is the Academy of Finland with a budget of €437 million in 2021. The Academy of Finland is an expert organisation in science and research that funds high-quality scientific research, provides expertise in science and science policy and strengthens the position of science and research. They are a government agency within the administrative branch of the Finnish Ministry of Education, Science and Culture. Business Finland is the Finnish government organization for innovation funding and trade, travel and investment promotion. It provides funding and contacts for research organizations and promote collaboration between research and business around co-creation, co-innovation and commercialization. The Academy of Finland funding granted by the Strategic Research Council (SRC) is intended for extensive, multidisciplinary research consortia that carry out research with an emphasis on active interaction and engagement with users and beneficiaries of research. The European Regional Development Fund (ERDF) is also important for Oulu, and indeed the Six City Strategy would appear to be an exemplary model in Finland. It is a part of the implementation of Finland’s structural fund programme for sustainable growth and jobs 2014–2020. The European Regional Development Fund (ERDF), the Six Cities and the State of Finland along with other project implementers are funding the Six City projects to the tune of nearly 80 million euros.

In Ireland the funding context for engaged research is emerging. Compared to Finland, there are not yet clearly articulated challenge areas from government, but much work is being done to create this approach via a new national research strategy. UCC Cork, Exchequer Funding for Research (provided by Government of Ireland) was 68% in 2021, and came from the following sources: Science Foundation Ireland; Enterprise Ireland; Health Research Board; Irish Research Council and Various government

departments. Non-Exchequer Funding was 32% in 2021 and came from Horizon Europe and other EU directives, private enterprises and relatively insignificant amounts from philanthropic funding organisations. Some government agencies have prioritised research. For example, Inter-and transdisciplinary collaboration is encouraged by the Sustainable Energy Authority of Ireland (SEAI) National Energy Research Development and Demonstration funding. The Irish Research Council has a range of funding programmes to encourage transdisciplinary approaches with stakeholder partners including Enterprise Partnership Schemes, IRC COALESCE, CAROLINE, IRC New Foundations Call, which specifically calls for a partnership between academic and civic society organisations. All Science Foundation Ireland (SFI) research centres are required to provide evidence of engaged research activity as part of their key performance indicators. The Environmental Protection Agency's ten-year high-level framework for research programming (EPA Research 2030) calls for more 'multi-disciplinary, cross-sectoral and multi-stakeholder partnership projects. The Department of Agriculture, Food and Marine 2021 Research Call requires applicants 'to engage through partnerships with other departments and agencies and to encourage relevant collaboration, partnership and multi/inter-disciplinary approaches in research and innovation through the call process, across research participants, institutions, all academic disciplines and market sectors.

For UNIZG the Croatian Science Foundation and the Adris Foundation are important funding bodies. Private sector funding sources is mentioned by RUB, such as from Stiftung Mercator, Volkswagen Stiftung, Alexander von Humboldt-Stiftung in RUB. In Liege, a Scholarship and Heritage Foundation Department collects and allocates individual donations and legacies for scholarships, fellowships, awards, subsidies for teaching and research. In Liege there appears to be a more developed philanthropic context, as there are numerous foundations that support research and researchers at ULiège. KOC has a particularly interesting "Seed Research Fund (KU-SRF) Program" which is designed to support innovative early-stage research projects from all disciplines represented in the University (science, medicine, engineering, administrative sciences, economics, social sciences and humanities, law and nursing). The Seed Fund Program is open to all full-time KU faculty and post-doctoral researchers to plant the seed of an innovative idea, which one imagines can potentially include engaged research.

Infrastructure

There are a large number of research institutes, centres, units, research clusters, programmes, or initiatives and spaces that have an ER as a focus or approach, either partially or fully. Some of the universities have dedicated spaces such as Makerspaces. RUB are working on an initiative called House of Knowledge of the City of Bochum and have a wide range of networks with links to ER with external stakeholders such as a Science Shop linked to the Living knowledge Network. At Liège several initiatives aim to support research within the city and make scientific knowledge accessible to

local citizens. These include the Maison des Sciences de l'Homme MSH, the Maison de la Science, the Aquarium-Museum, the scientific and technical centre Embarcadère, the Espaces Botaniques, the House of Metallurgy and Industry. Among the most relevant institutional ER initiatives, it is worth mentioning the Liège Creative Forum, a meeting-conference platform that brings together university researchers and research centres, private stakeholders, organizations and the public sector. The platform aims to develop multi-stakeholder research partnerships oriented towards innovation, creativity and entrepreneurship. The University of Oulu as a northern, international science university, has a focus on Arctic research, education and collaboration encompassing all our research fields, and which is based on strong multidisciplinary competence.

Engaged research is a leading strategic focus of many of UCC's Research Institutes. For example, the Environmental Research Institute Strategic Plan is entitled "Engaged Research for a Sustainable Future (2018-2022)". The globally leading APC Microbiome Ireland Research Centre has a mission to "involve non-specialist stakeholders through Engaged Research to maximise the societal impact of our research programme". ISS21 focusses on social science co-creative research approaches *with* community and voluntary organisations, as well as policymakers. UCC has extensive connections with city and regional networks, providing leadership, expertise and research from across the university as part of its commitment to civic engagement. These include Cork Health Cities, City of Learning, Age Friendly City and County, Cork Food Policy Council, Cork Smart Gateway, Cork City and County Public Participation Networks, Regional Skills Fora, Carbon Neutral Zone.

Many of KU's Research Institutes have engagement with society as a central aspect of their work e.g. Vehbi Koç Ankara Studies Research Center (VEKAM); the Center for Research on Globalization, Peace, and Democratic Governance (GLODEM); the Koç University Center for Gender Studies (KOÇ-KAM); the Migration Research Center; the Social Policy Application and Research Center (KU-SPM); University Center for Civil Society and Philanthropy Research and many more. Similarly, Deusto has a wide range of centres that have an engaged research aspect to their work e.g. The Human Rights Institute, The Institute of Basque Studies ; Institute of Leisure Studies; Centre for Applied Ethics; Deusto Psych; Institute of Cooperative Studies and Deusto Cities Lab.

Deusto has a very interesting initiative that utilises the idea of platforms, aligned with the EU Research and Innovation Programme, Horizon Europe, the Science, Technology and Innovation Plan Euskadi 2030 and the 2030 Agenda for Sustainable Development. Through Inter/transdisciplinary Research Platforms they promote collaborative and inclusive research that addresses local, regional and/or global challenges. The platforms bring together researchers from the different faculties, teams and research units of the University, who then work in collaboration and co-creation with other actors of the regional territory, advancing research and innovation in the themes of Ageing and Wellbeing, Creative Industries and Cities, Gender dimension, Social Justice and Inclusion and Strengthening Participation.

Domain 3

We inquired into University and Society Collaboration & Co-Creation specifically national, regional, EU strategies or policies or programmes that promote, encourage or require Engaged Research.

There are many strategies and practices across the various countries, regions, cities and universities that support the context for university and societal collaboration. Notably, the European Research Area Strategic plan 2020-2024 – Research and Innovation which states that “most of the R&I activities and measures will be co-designed and co-created with citizens and stakeholders, thus strengthening a common ownership of research and innovation policy and promoting the common research and innovation values.” In its Mission statement it specifies an “aim to have a high scientific, technological and societal impact, built on scientific evidence and strong input from citizens and industry.” It various “missions will also strengthen citizens’ involvement in the ‘European Green Deal’ by engaging citizens and social society organizations in creating and implementing ‘green’ solutions.” The European Research Area Policy Agenda is very clear that “EU Missions are a new way to bring concrete solutions to some of our greatest challenges... by engaging citizens”. “To reach the ambitious targets of the European Green Deal, broad public mobilisation and engagement is required. Citizens and local communities need to be empowered and activated to take action. To create stronger public understanding, connection and engagement should be promoted through regular citizen science campaigns as well as education and training activities. New R&I solutions need to be co-designed and co-implemented together with citizens to ensure that there is societal uptake of these new solutions and approaches”. One of the main goals is to strengthen the trust in the various ways society is influenced by science and, on the other hand, how science is influenced by choices, dilemmas and responsibilities that arise in society.” Importantly, societal engagement is a priority of the EC Joint Research Centre - Strategic Plan 2020-2024 which is focused on strategically supporting “initiatives and creating contexts for interacting with citizens and their representatives at EU, national and regional level, empowering them in their daily choices as well as restoring the trust in experts and science and the role they play in defining evidence-based policies, realising principles of codesign, co-creation and collaboration.”

In Germany there is a very interesting national process of writing a “Citizen Science Strategy 2030” which involves contributions from RUB. The current SPD, Green party and FDP coalition government agreement defines Citizen Science as a strategic element of modern research. Citizen Science and

Citizen knowledge are seen as a means of including the perspective of civil society in research. Germany also has a number of Citizen Science platforms, including the Living Knowledge, Social Impact Lab Duisburg, Science et Cité, The Expert Council on Integration and Migration, Science in dialogue, and Think-and-Do-Tank for the transformation of the cultural sector. For UNIC, going forward there is much to learn from this exciting national initiative.

For Oulu there is a particular focus on its Smart City, which is jointly developed and maintained by the university, city organisation as well as private businesses. There are similar platforms provided by other Finnish smart cities available. The University of Oulu, specifically, has a number of high-quality, interdisciplinary infrastructures supporting research and business. The university has services for companies and organizations regardless of size or area of business. There are 3 fully operational Digital Innovation Hubs, the Oulu Health, Super IoT, and Arctic Drone Labs. Open innovation platforms focused on citizen engagement are supported by the University of Oulu 'Fab Lab Oulu', which is a small digital manufacturing working area (fabrication laboratory) that complies with open innovation concept developed by MIT in the United States. In a Fab Lab it is possible to design your own product or hardware from scratch. In Finland, the '6Aika' is a national strategy for sustainable urban development. It is a joint strategy of the six largest cities in Finland. Together, they are tackling the challenges of urbanisation in the first joint urban development strategy in Europe involving multiple, geographically separate cities. This Six City Strategy is a vast entity that includes dozens of projects related to urban development. The Oulu Innovation Alliance is a strategic coalition of organisations and an active roundtable of leaders whose aim to promote innovations and sustainable growth both locally and globally. In addition, Patiolla.fi brings together product or service developers and potential users for co-creation.

The Scientific and Technological Research Council of Turkey is the leading agency for management, funding and conduct of research in Turkey. The Council is an autonomous institution and is governed by a Scientific Board whose members are selected from prominent scholars from universities, industry and research institutions. TÜBİTAK is responsible for promoting, developing, organizing, conducting and coordinating research and development in line with national targets and priorities. TÜBİTAK acts as an advisory agency to the Turkish Government on science and research issues and is the secretariat of the Supreme Council for Science and Technology (SCST), the highest S&T policy making body in Turkey. It has a vision as to be an innovative, guiding, participating and cooperating institution in the fields of science and technology to serve the improvement of the life standards of society and sustainable development. At the regional level, the Istanbul Regional Plan published by the Istanbul Development Agency, sets out an overall regional development vision, strategies, and objectives to guide planning and investment decisions for Istanbul city. It has a sustainable, holistic and multi-dimensional approach on local development to address a variety of topics ranging from industrial transformation and entrepreneurship to health and education, institutional capacity and governance, transport, energy and environment, listed under three broad development areas "Globally Decisive, High Value-Added, Innovative and Creative Economy", "Fair Sharing, Inclusive and Learning Society", and "Joyful, Authentic Urban Spaces and Sustainable Environment". Overall, it aims to transform Istanbul to a global city, while preserving its unique tenets and improving life standards for its citizens.

In Ireland, a country of under 5 million people, there is a strong centralised government system, with very limited local government powers. Thus, the primary drivers for societal collaboration have been traditionally from the University sector. The Higher Education Authority has been immensely supportive, and increasingly the societal engagement agenda is emerging within other government departments. The National Strategy for Higher Education to 2030 (2011) established societal engagement as the Third Mission of Universities. It charges higher education institutions with finding new ways to address their responsibilities towards the communities with which they engage, in order to meet societal needs, while recognising that strong community engagement requires resource allocation and metrics for assessing impact. In response to this strategy, Irish Universities under the umbrella of the Irish University Association (IUA) established Campus Engage to build sector capacity around the Third Mission of the Universities. It launched a Charter for Civic & Community Engagement which was signed by all university presidents. Subsequently Campus Engage mapped Engaged Research in Ireland and launched a policy document to support the implementation of Engaged Research & Innovation for Societal Impact across the system. The Irish Higher Education Authority 2018-2022 Strategic Plan commits to nurturing research performance that will develop in accordance with national economic and societal priorities and in line with national innovation targets and the UN's Sustainable Development Goals. Following advocacy from Campus Engage, the Irish Research Council's 2019-2024 Strategy made a commitment to support knowledge exchange and engaged research for impact. Its Strategic Goal 3 calls for Partnership on Engaged Research and its Key Action 4.2 is about supporting the development of policy and practice on 'engaged research' in Ireland. In turn, the Science Foundation Ireland Strategy 2025 was influenced by Campus Engage and is as a result committed to growing the SFI public engagement programmes to support engagement with and participation of a broader range of civil society and community groups. Science Foundation Ireland funded Research Centres, are required to provide evidence of engaged research activity as part of their key performance indicators. Similarly, the Health Research Board's 2021-2025 Strategy now prioritises engaged research. Currently the Irish National R&I Strategy is in development. A consultation paper calls for a mission-oriented approach to tackle grand challenges such as climate and digital transitions, and to address public policy needs and optimal use of research. Ireland has set aside €71m of mission-oriented funding in the National Grand Challenges Programme as part of the National Recovery & Resilience Plan 2021. In a more niche but important area for Ireland, the Irish National Volunteering Strategy 2021-2025, aims to recognise, support and promote the unique value and contribution of volunteers to Irish society. It has an explicit goal to fund volunteering research in partnership with civil society.

Unlike Ireland, in Rotterdam local government has devolved decision making responsibilities over many areas of infrastructure development and social policy. EUR is engaged in partnership with the Municipality of Rotterdam to cooperate in many areas, not only education and research, but also student housing, making the campus more sustainable and increasing mobility. Some prominent examples that have emerged from this collaboration are the Knowledge Workshops and the Erasmus University College. Recently there is the Convergence Alliance in which Erasmus MC, Erasmus University Rotterdam and T.U. Delft work together and the municipality of Rotterdam plays an important role. Interestingly from a UNIC CityLabs perspective, the City of Rotterdam and Erasmus

University have established an interface around developing the city's knowledge infrastructure. This entails Rotterdam policymakers and city stakeholders working together in Knowledge Workshop Partnerships (KWP), very similar to CityLabs, on issues that are important for Rotterdam and for the resilience of the city and its residents. For example, in a KWP called 'Livable Neighborhoods' there is a focus on improving the quality of life in Rotterdam neighborhoods. This KWP aims to make explicit use of existing knowledge and experience in the field of quality-of-life improvement through co-creation of knowledge processes. A KWP called CARE Lab Rotterdam focuses on conducting action research and improving support for people. 14 organizations across the youth support chain work together within ST-RAW to ensure that all young people have equal opportunities in Rotterdam's youth policy. To meet the port of Rotterdam's need for thorough knowledge, EUR has bundled its maritime and port-related research and education into SmartPort@Erasmus. In addition, students are encouraged to engage more intensively with metropolitan issues. The student initiative Erasmus Connects is part of EUR's strategy and aims to involve students more in working on solutions for issues in the city. In addition, Erasmus Master's students can participate in the annual Rotterdam Thesis Award, which is awarded to a thesis that is relevant to Rotterdam.

Domain 4

We inquired into the systems for preparing & supporting engaged researchers, specifically looking at internal and external staff capacity building programmes, accredited or otherwise for engaged research.

In many of the universities there is no specific engaged research programmes or trainings. RUB's Research School (campuswide PhD-school) has trainings in science communication and open science. EUR have a dedicated Engaged Research programme in the Erasmus Doctoral Programme in Business and Management. At the University of Oulu there is not yet dedicated support programmes, for engaged research. The Koç University Office of Learning and Teaching (KOLT) offers programs and services for KU researchers, which may be a place going forward to locate some training on engaged research. In Ireland there is a relatively well-developed professional development context for engaged research. All of the Irish Universities collaborate together to develop and provide support for engaged research, as part of the national Campus Engage civic and community engagement programme of work under the Irish Universities Association. Recently the universities, Campus Engage, the Higher Education Authority, and The National Forum for the Enhancement of Teaching and Learning collaborated to develop and offer an *Engaged Research & Innovation for Societal Impact 6-Week Online Course* which will develop a trainer(s) in each university. UCC is the lead in a Royal Irish Academy (RIA) national initiative to bring the research community in Ireland together to support the development of engaged research to address the climate crisis. The UCC Tyndall Institute is a partner in the EU TIME4CS initiative, and is supported by UCC's Civic and Community Engagement Office. UCC has a PPI Ignite Network@UCC initiative which promotes excellence and inspires

innovation in public and patient involvement (PPI) in health and social care research in Ireland. The EU GRIPP project, based at the SFI MaREI Centre, focusses on Responsible Research and Innovation (RRI practices) and is supported by the UCC Civic & Community Engagement Office. UCC Research offers a Research Skills Training Programme which has recently added an Engaged Research one hour Workshop.

Domain 5

We inquired about the integration of engaged research in the curriculum and research-based teaching.

For many UNIC institutions, engaged research is not a required part of curricula, it depends on the teaching of individual lecturers and professors. Rub has an 'Optionalbereich' which is a mandatory study area for around 10.000 students, and it provides certain certificates that have an engaged research focus incorporated called the Certificate in Collective Violence, Holocaust and Genocide Studies (CVG), and one on cultural education Certificate in Cultural Education. There will be two more, one on sustainability and one on entrepreneurship, starting in April 2022. Others, where it is incorporated include the Master in Humanitarian Action, the Master of Arts in Development Management, Master programme Gender Studies, International Double Degree Master Programme 'Transformation of urban Landscapes (TuL). There are doctoral trainings and colleges related to engaged research such as the Joint Doctorate o Eradicating Poverty: Pathways towards Achieving the Sustainable Development Goals and a Doctoral research training group called Regional Disparities and Economic Policy funded by the German Research Foundation (DFG). There is a Research College called "Sustainable Energy Systems in Neighbourhoods. In Liege Engaged research is integrated into doctoral training and postgraduate curricula in the form of field research training and internships at city CSOs and NGOs, focused on qualitative research. It is more integrated at the master's and doctorate level but only partially into the undergraduate curricula. UCC Civic and Community Engagement supports an EU Science Shop called CARL that facilitates the integration of engaged research in the curriculum, particularly at the Masters/PG level. UCC Civic and Community Engagement has played a lead role with Campus Engage in developing an Accredited community engaged learning & research training programme. There are a range of modules throughout the university that teach engaged research across a wide range of disciplines and approaches e.g. AP6173 Service Design and Evaluation in Applied Psychology, PG6025 Module on community based participatory research, is offered to all PhD Students in UCC through our Graduate Studies Office. Digital Badges (micro-credential) develop competence in societal engagement such as in Conducting Responsible Research and Innovation. University Wide 5-credit modules support societal engagement e.g. Science in Society, Sustainability, Global Citizenship and Development etc.

Domain 6

We inquired into open science and digital transformation capability, specifically looking at what open science resources, policies or strategies exist at the institutions.

For RUB an Open Science Policy has recently been approved by the rectorate and senate, but it has not been published yet. RUB is the home of ORCA, a regional platform for Open Educational Resources for the federal state of North Rhine-Westfalia. In EUR the Open Science Community Rotterdam (OSCR) comprises academics and support staff working at Erasmus University Rotterdam and Erasmus MC. The common goal is to promote and adopt open and transparent scientific practices at every stage of the research cycle, from the initial idea to the final product. In Liege, Open Science is part of the Universities culture, in line with Belgian copyright law, which specifies that all scientific outputs resulting from scientific research, fully or partially funded by the Wallonia-Brussels Federation, have to be uploaded in an OA form in the University repository platform ORBi. The University of Oulu is committed to promoting openness in its strategy. The university's approach is closely informed by national and international requirements for open and responsible research. In 2018, the University of Oulu published the Program of Responsible Research, according to which openness is part of the University of Oulu's research activities, researchers' work and career development at all levels. In Finland, the Federation of Finnish Learned Societies has been responsible for the national coordination of Open Science since 2018 with funding by the Ministry of Education and Culture. The KU Main Library (Suna Kiraç Library) provides trainings open access and open science issues. They also manage an Open Access Repository and provides full support in open access matters. Ireland has a National Open Research Forum (NORF), which is charged with the development of a national strategy for open research. This function is due to move to the new Department of Higher and Further Education, Research, Innovation and Science in the near future. Ireland's National Framework on the Transition to an Open Research Environment, developed by NORF and launched in July 2019, sets out the aims and intent of the research community across five key areas of open research: open access to research publications; enabling FAIR research data; infrastructures for access to and preservation of research; skills and competencies; and incentives and rewards. UCC has an open repository called CORA which gives free open access to University College Cork's scholarly and scientific research publications and theses. The UCC Library Research Data Service provides

Support for the research community to apply the FAIR Data Guidelines to ensure optimal availability of research data. UCC's Research Director sits on the national steering group of the HRB Open Research Platform which is an innovative open access publishing platform offering rapid publication and open peer review, whilst supporting data deposition and sharing. The UCC Research Office offers Open Science trainings as part of its Research Skills Training initiative.

Domain 7

We inquired into aspects of internationalisation and trans-nationalization, specifically asking about collaborations and strategic partnerships formed with other engaged research individuals/ teams internationally.

The University of Liège's research units have numerous collaborations with international research partners which are relevant for ER activity. One example is the Inter'Act Lab's project 'Ageing well in post-industrial territories' involving partners from Ruhr-Universität Bochum, University of Deusto, University of Oulu and University of Zagreb. Numerous relevant initiatives are also conducted by the Centre for Ethnic and Migration Studies (CEDEM) within the international network IMISCOE (International Migration, Integration and Social Cohesion in Europe), Europe's largest interdisciplinary research network in the field of migration, integration and diversity studies. RUB has no special international strategic partnership for engaged research. However, RUB is a new member of the ISCN international-sustainable-campus-network. University of Oulu is a member of the University of the Arctic (UArctic) which is a network of more than 230 universities, colleges, research institutes, and other organizations concerned with education and research in and about the North. UArctic builds and strengthens collective resources and infrastructures that enable member institutions to better serve their constituents and their regions. KU has many trans-national engaged research initiatives such as an initiative called 'Feminist Movements Revitalizing Democracy in Europe', and another called 'Refugee Emergency: Defining and Implementing Novel Evidence-based psychosocial interventions'. UCC is involved in the Time4CS Network (Citizen Science in EU) consortium which aims at supporting and facilitating the implementation of sustainable Institutional Changes in Research Performing Organisations (RPOs) to promote Citizen Science and public engagement. UCC is an engaged member of the Talloires Network and also plays a leading role in the UNESCO Global Network of Learning Cities.

Domain 8

We asked about how impact is measured and what impact frameworks the universities are aligning with. We asked about internal and external performance indicators.

The EU Commission is taking a leadership role in the field of impact. Across Horizon Europe impact assessment will be based on how countries, researchers, R&I end-users, are working *together* to inform and implement new public policy, related legislation, development of community-based early intervention and prevention programmes, aligned to the UN Sustainable Development Goals (SDGs). The Times Higher Education Impact Ranking global performance tables now assess universities against the United Nations' Sustainable Development Goals, including engagement with local, national and international civic society organisations.

In EUR there is a strategic project named 'Evaluating Societal Impact' where they aspire to encourage researchers to undertake more impact-focused research and systematically plan and monitor their research by planning and assessing their impact. This is a new project however, is still in its starting phase. For RUB there are no clearly defined performance indicators, except third-party-funding goals. Publications are often typically used as a performance indicator for research. Currently, RUB has joined for the first time The Times Higher Education impact ranking, but the indicators used in this context have not been implemented in internal monitoring up to the present. UOULU has a procedure in place where vice-rectors of each core function (research, education, co-operation) regularly discuss and update their sub-strategies with the University Board of Directors. As a rule, this discussion takes place once a year for each core function, at a specified date in the annual cycle. In these discussions, a set of strategic indicators have been selected, and are being followed. Engaged research will be discussed either by vice rector of research or vice rector of co-operation. UOULU participates in the data collection of most important university ranking institutes (e.g., Times Higher Education, QS World Rankings, ARWU = Shanghai list). Most recently, UOULU has also participated in Times Higher Education's Impact Ranking, which is structured around UN's sustainable development goals (SDG). Annual results of these main rankings are being interpreted and presented to and discussed by the University Board of Directors. However, results from rankings are not being used in place or as surrogates for analysis of success in strategy implementation. Instead, ranking results are treated as rough and general information on UOULU's positioning in the global higher education landscape. In UNIZG the monitoring of research is actively present on many levels. It serves both practical purposes regarding the definition and adjustment of strategies, and it is also an important metric for the acquisition of funding. Engaged research is currently not actively monitored. UOULU provides the data for Times Higher Education, QS ranking and U-Multirank and other relevant international studies.

University College Cork places a leading emphasis on its Third Mission, societal engagement and impact. UCC Cork has benchmarked itself through the Carnegie Foundation Ireland Project. Carnegie is the leading international classification for HEI societal engagement. UCC is a leading signatory to the Irish University Association's Civic and Community Engagement Charter (2014). As part of the IUA's 'Campus Engage' initiative, UCC works with seven other Irish Universities, to embed a common evidence-based framework for societal engagement across all operations. UCC is ranked 8th in The Times Impact Rankings 2021, and in 2019 it was 1st in Ireland for working towards the UN goal of 'peace, justice and strong institutions' (12th globally). UCC is ranked 9th globally in the UI Green Metric World University Ranking and was the first university outside of North America to be awarded a Gold Star from the Association for the Advancement of Sustainability in Higher Education.

At the university level; Koç University Social Impact Forum (KUSIF) acts as the leading organization. Koç University Social Impact Forum (KUSIF) was founded in 2012 within Koç University as a research and practice centre on social impact to foster social innovation through research, education and collaboration. KUSIF is one of the leading organizations on social impact field in Turkey and has become a reference point in social impact studies. KUSIF has been leading the Turkish Social Impact Group and working to set standards for social impact measurement and management in Turkey. KUSIF publicized many resources and implemented research on social impact for civil society organizations, funders, private sector and social entrepreneurs; and led several capacity-building projects including training, consultancy and dissemination of knowledge through national and international conferences in Turkey. KU Entrepreneur and Innovative University Index Times Higher Education (THE) Impact Rankings, HE World University Rankings, THE Young University Rankings, THE Emerging Economies University Rankings, QS World University Rankings, QS Top 50 Under 50 Rankings, QS Eastern Europe and Central Asia University Rankings, QS Graduate Employability Rankings.

Gaps and Challenges

With regards to Domains 1-8, we inquired into perspectives regarding ongoing gaps and challenges to advancing engaged research within and across the institutions.

In their reflections on challenges, EUR have captured some challenges that apply to EUR, but have much resonance across UNIC institutions. So, it is worth sharing and presenting their thoughts in more detail. For EUR, which is a dynamic and exemplary university by all accounts, there is limited understanding and consistency in terms of understanding what engaged research is. This is a question of reaching a definition and building a common understanding, transformative work that is underway via UNIC4ER. While there is certainly Engaged Research being undertaken across the university, there is no central location where this information is captured and stored. There is no clear overview of which faculties/staff are engaged in this type of research and how they can be supported. Nor is there a clear

overview of the stakeholders they engage with. While the overarching EUR strategy focuses specifically on ‘impact’ in research, and there are an array of strategic projects in place to realise a more impact-focused approach to research, this cultural change is still in its infancy. There is also currently limited alignment between the strategic projects, despite their common aims. Progress is being made in relation to streamlining initiatives and creating synergies, however this has only recently been initiated. Given the decentralised nature of the EUR as well, a concrete challenge will be communicating around a research strategy and programme’s offerings across all faculties and securing buy-in from the relevant individuals (at all levels of the hierarchy). There is definite support for more Engaged Research at the top-levels of the EUR strategic bodies, but the trickle-down effect to the different research departments of the faculties is a challenge. A common approach to communicating with faculties and researchers is being defined with the other strategic projects and the Strategy Office. There is also still limited recognition and reward for researchers/educators that focus on impact-related activities. While there is also strategic movement in relation to this issue, this also requires a cultural change that will require more time to be realised.

For *RUB* there is a small but growing awareness of engaged research as a potential speciality or part of a specific profile. However, there are currently no special support structures. For *Liège* there are deep ties and collaborations across the QH which hold great potential for ER practices to be developed in the city of *Liège*. However, challenges include aligning academic research with ‘street-level’ projects and a lack of awareness regarding engaged research from non-academic actors, which in turn is connected to the current lack of clear and univocal definition and criteria of ER. For *Oulu*, challenges include the Finnish funding model for universities which rewards research units primarily for their success in external funding acquisition and publishing, and the number of granted degrees. The model does not currently reward community engagement and engaged research. At the University level engaged research cuts across existing management structures (research, education, co-operation) and topics (responsible science, continuous learning, innovation), which will require a level of integration across these domains. At the researcher level, engaged research may be perceived as a laborious and time-consuming research strategy, requiring support. For *UNIZG* the most important aspect is the lack of national funding that hinders the opportunities for engaged research. There is also an issue of cultural shift, especially in STEM areas which are lagging in the absorption of the engaged research value system. *Koç* University can still be considered as a young university and the concept of engaged research is not yet fully comprehended at the national and regional level. Therefore, the advancement of engaged research at all levels is not totally achieved yet. For *Cork*, challenges include the need for national funding for capacity building at the individual institutional level. Engaged Research requires support to enable long term deep and transformative holistic partnerships with societal actors, whereas research national funding cycles are often single issue based, transitory and transactional.

Conclusions

Key Early Learning and Early Reflections from the Mapping Exercises

Ultimately the work above is helping us along a journey towards drafting a UNIC Engaged Research Strategy (D.2.4). Thus, early comments on the learning from the mapping may seem premature, given that the mapping exercise and strategy will be continuously developing over the course of the current phases of the UNIC4ER initiative. However, there is room to signpost some key learnings, if anything purely as a means of synthesis.

One of the issues which has become clear from the mapping exercise is that there is a need for a Knowledge Management plan and a more systematic approach to knowing what the current engaged research activity is! That is, we don't know what we don't know. Currently, it is difficult to get a line of sight on the engaged research activity within and across systems – between different institutions, different disciplines, and different supports, projects and programmes. It is not easy to discover what engaged research is being undertaken, where and how it is being undertaken. The potential for engaged research and for the societal impact of UNIC research is severely constrained when basic information about the existence of the research is not easily accessible. The current mapping exercise and the mapping framework across different domains is a very good start, but there is much more to be done.

The mapping is an important means of information-sharing, which in turn is moving us also towards embedding open research practices. This greatly increases access to engaged research activity and thus maximises the value and impact of publicly funded research. Supporting the free availability and exchange of high-quality research information by implementing the UNIC Open Science strategy will allow internal and external stakeholders ready access to the latest research, speed up certain aspects of the research process, allowing faster implementation of findings and also contribute to a more egalitarian knowledge society, where research data and informed analysis are freely available to those outside UNIC.

Of course, it is one thing to know what and where research is being undertaken. It is quite another to be able to forge links and relationships to join the research and external city stakeholders. It will be possible via UNICs plans to reach alignment on a strategic basis to support UNIC researchers and societal partners to navigate opportunities and build connections. Thought could usefully be given to though to the need for research management approaches in this regard, including innovative peer review and evaluation processes. In this regard it is essential to leverage the UNIC4ER seed funding calls and their design, aims and objectives. The potential in UNIC to design a collective societal interface is there and is planned. However, a systematic focus on building the architecture to do this is vital. UNIC CityLabs working concretely with UNIC4ER toward the realisation of a strong cohesive

UNIC interface offers a means to achieve this, but will require a sustained and laser like focus, which is within our purview and gift.

Funding calls play a central role in deciding on what research gets prioritised and funded. It is worth giving some specific consideration to the issues that arise in this context. The evidence from the UNIC4ER mapping is that there are a number of streams of funding into the different national research systems, but they can be broadly categorised as institution-specific funding, national research funding (IRC, SFI, HRB, EI, etc. in the Irish context), European Union funding, and philanthropic funding. There appears to be a multiplicity of funding programmes, the majority of which are discipline driven. Advocacy and making room in a structured way for trans-disciplinarity, and a shift in thinking away from a discipline-driven funding systems, is an important part of the overall process of change to enable engaged research. National Government Departments overseeing higher education have an important role to play as they often manage the core funding for higher education systems and monitoring and system performance or key objectives for the systems. System Performance Frameworks in the various countries could, on the next review, include specific material and objectives to support the connect between research and society in a more direct way.

Some of the areas which could usefully be considered from a whole of system or European Research Area perspective include *capacity building*, how funding programmes can allow for additional resources to support engaged research development as a strategic part of overall capacity building in the national sectors. Gaining substantial funding, through the European Commission's highly competitive programmes, for world-class research projects based in or led from UNIC enhances the capacity and reputation of UNIC and its institutions. It attracts international talent, economic and additional benefits, while such projects make valuable contributions to solving European and global challenges. Resources needed are financial supports to help bring guidance and assistance on societal partnership development for engaged research, on professional development for researchers, on integration with curriculum etc. There is an important role for philanthropic research funding as an integral part of UNIC, which also needs to be considered, given its mission and focus on cities, diversity and inclusion.

There are important actions to be taken at the individual institutional level regarding the professional formation of academics. While some Universities have explicitly recognised community engagement societal contribution in their promotion criteria and awards systems, others have not. A clear articulation of the importance of the societal connect is an essential starting point, and creating a specific space within Researcher Career Frameworks, and support on an ongoing basis through hiring, induction, coaching, mentoring supports, and professional development offered to academics would help to deepen and develop the relevant skills for engaging with society. In this regard, it is important that we consider how best to leverage EU programmes on an integrated basis to support the development of the university-societal-partnership infrastructure. This is an opportune moment to do so, as Horizon Europe funding arrangements are put in place.

How to develop research to benefit society is at the heart of Engaged Research. While engagement means different things to different people, all agree on the underlying principle of benefit to society, and co-creating and developing innovative solutions to pressing challenges. There is strong potential, evident in the mapping for UNIC via UNIC4ER, to be the place in Europe for engaged research that influences and shapes the Urban policy lifecycle in collaboration *with* society, that is alongside societal stakeholders, in understanding and investigating issues of public interest. Horizon Europe Research and Innovation policies across Europe, including the Green Deal, actively promote and support engaged research and innovation for policy and practice change. Producing rigorous scientific engaged research evidence to inform EU and governments policy and practice, builds trust with diverse local and national communities and stakeholders, facilitates participation of traditionally under-represented, or marginalised groups in policy research, design and implementation, and results in better implementation, support and impact of public policies.

Here we need to enlist the EUA, which has an important leadership role to play in ensuring that UNIC achieves its full impact. We have seen the establishment of the Universities Policy Engagement Network (UPEN) in the UK to harness the collective research power and expertise of the 60 member universities and to make it easier for civil society and policymakers to draw on it to improve policy. It would be very useful for UNIC and the EUA to have a dialogue about these kinds of initiatives and to think how, they would support us in a strategic approach to urban engaged research.

Contemporary societal challenge-based frameworks such as the Urban Agenda for the EU, demonstrate the need for research that involves beneficiaries from the very beginning to realise societal transformation. This co-design (top-down & bottom-up) approach at the heart of UNIC and UNIC4ER not only maximizes opportunity for increased human capabilities, new or improved public policy, services, and products, it addresses the societal participation needed to engender research informed policy and practices - that will address urban challenges. As part of the UNIC4ER strategy a UNIC 'Societal Impact Framework' is needed, that is populated with case studies that demonstrate the value and direct impacts of engaged research for all members of society. There is a need to access, track, and benchmark UNIC's engagement and broader societal impacts aligned with EU and global frameworks such as the Urban Agenda for the EU and SDG's, along with public policy making; improvement of society's health and well-being; diversity and inclusion, climate action, sustainability or cultural issues etc. Continued work on demonstrating engagement best practices begun in the best practice showcase and in time aligning UNIC4ER research with an impact Case Study format and related tools to support researchers, will be an important goal.

For UNIC, it is important to envision engaged research and its role as central to an agenda emerging in relation to interdisciplinary and transdisciplinary research. A recent paper from the OECD, *Addressing Societal Challenges Using Transdisciplinary Research*, makes an important contribution to this debate. The OECD notes that there are a number of societal challenges, often involving complex systems, that are not fully understood and for which solutions are urgently required. The impacts of global warming, biodiversity loss, natural disasters, economic migration and health pandemics require both technological and social innovations. OECD concludes that 'In order to achieve this,

different scientific disciplines, including natural and social sciences and humanities need to work together and with society across the quadruple helix, to fully engage citizens, public sector actors, including policymakers, and the private sector. In its view solutions cannot to be generated based solely on disciplinary research but require a paradigm shift to trans-disciplinary engaged research practice.

There are enormous potential benefits to an across UNIC approach to building relationships and working together to strengthen the overall engaged research base, in order to identify and address shared European societal challenges and issues. Our goal should be to maximise the impact of UNIC research in a wider European and global setting. The need, and indeed, the opportunity to do so depends on establishing a robust and integrated systems to accomplish this aim. Therefore, the initial first step of mapping is a crucial one that needs to continue and be refined on an ongoing basis. The central importance for UNIC in building and supporting the relationships between researchers and cities and communities, is a most a vital one. The prize of a strong UNIC engaged research infrastructure which is well connected to the cities is an important one for Europe, and one which is within our grasp if we can begin to reimagine and weave together the important pieces, that have been mapped in this research exercise, into a stronger whole.

Thus, finally, the overall message from this admittedly very early partial mapping exercise, which is just a glimpse at a very promising context, is that much more *connective tissue* is required. Engaged research is a complex agenda in a complex landscape. It is clear that making progress requires concerted action on the part of a number of actors, specifically the universities, but also in tandem with our cities, civil society, national and EU actors, and funders; each group needs to better understand the domain of the other. We are at a starting point, but there is a need to engender a structural dialogue. That is, to make progress on a meaningful engaged research agenda, action needs to be initiated, in these distinct but overlapping and interrelated spaces: in the research community itself, within local, national and EU government, civil society, and in the research funding agencies. We must grow and *design* the connective tissue which enables them to come together to engage positively with UNIC European University engaged research ambition and mission into the future.

Further Information

This report was compiled by the UNIC4ER Taskforce on Engaged Research and drafted by University College Cork on behalf of the UNIC Partners. We wish to thank all of the Taskforce members for their detailed, thoughtful and considerate submissions. Mapping is always partial, and always a work in progress, thus sustaining our knowledge gathering will be important over the next number of years, as we work towards an ever increasing and complete view of the context for engaged research across UNIC.

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Appendix 1

The Task 2.1 Mapping Survey Instrument

DEFINITION OF ENGAGED RESEARCH

Engaged Research is an umbrella term for a wide range of rigorous research approaches and methodologies that share a common interest in collaborative engagement with society. Engaged Research aims to improve, understand, or investigate an issue of public interest or concern, including societal challenges where community partners are active collaborative participants in the research process. In this context, community partners refer to a range of public research stakeholders, including public or professional service and product users, policy makers, civil and civic society organisations (CSOs) and actors. Examples of Engaged Research can be found across all disciplines using terms such as: participatory action research, community engaged research, design thinking, open innovation, public-patient involvement, co-creation, co-production, co-operative inquiry, citizen science and many more.

COMMON MAPPING

In the UNIC4ER Strategy Forum in January 2022 it was agreed by the UNIC4ER Taskforce that all UNIC4ER Mapping Questions and information requests would be combined into a common survey or questionnaire using a common framework. Through this combined approach and using a common framework with 8 different domains, it was agreed that UNIC4ER would develop a more coordinated and comprehensive mapping, and more robust baseline understanding of engaged research across the UNIC consortium, which will then form the basis of a more informed UNIC4ER Engaged Research Strategy and Agenda.

Subsequently it was deemed necessary to seek immediate information for the purposes of deliverable reporting, while the common mapping tool is being developed and refined. Below are some questions needed for this purpose and for your immediate attention. Please return the short survey to j.barimo@ucc.ie by close of business on Feb 18th.

IMMEDIATE MAPPING TASK FOR UNIC4ER TASKFORCE MEMBERS BY FEB 18TH

UNIC Taskforce members are asked to immediately help with mapping relevant policies, strategies and initiatives in their universities. They are also asked to help identify any national policies and strategies facilitating engaged research. As part of this work, Taskforce members will also help to

identify any factors that promote or hinder engaged research approaches across the partner institutions.

INSTRUCTIONS FOR COMPLETING THE SHORT SURVEY

This survey is designed to capture key information within your institution, city, region, and nation. Some of the survey questions can be answered by desktop research. However, it may also require you to engage with key individuals within your Offices of Research, External Relations, Diversity/Inclusion as well as PI's and societal stakeholders. It is helpful if references and web-links are provided where asked for, if possible.

SURVEY QUESTIONNAIRE

Domain 1: *Governance, Leadership and Policy Context*

1. Please provide a list of specific institutional: mission statement, strategies or policies that promote, encourage or require Engaged Research (or equivalent language). i.e. Where is there commitments to engaged research in institutional or other strategic plans, or embedded into research, innovation, teaching and learning activities? *Include a reference and Web-link. Indicate if this is a whole institutional level document or for a specific research institute, research centre college, school, department, or other unit.*
2. What internal governance structure(s) have responsibility for research policy? What university entities develop research policy? e.g. academic councils, faculty senates, department, discipline, clusters etc. What university offices have responsibility for research policy? Is there a senior leader that has responsibility for strategically implementing engaged research policies? Is there a senior leader with responsibility for advancing relationships, supports and infrastructure to promote and support higher education institution-community research partnerships?

Domain 2: Organizational systems, infrastructure, funding, people & incentives

3. Describe any institutional awards, rewards and recognition systems or procedures for engaged research? Are Engaged Research activities included or encouraged in promotion criteria for academic, research or other staff? Is it reflected in hiring procedures?
4. Is there a research support office(s), local and / or central that assist with supporting engaged research? Is there any office(s) that helps to identify funding opportunities and grant proposal preparation? Please list and describe.
5. List and describe any policies or supports within your university provides to encourage non-traditional scholars participation in research? Are there inclusive policies to support superdiversity variables amongst research staff (e.g., gender, ethnic, race, religion, socio-economic, etc).
6. Please provide a list of the most prominent university/ national and / or city/ regional research funding calls/ opportunities and funding agencies?
 - Public sector funding sources?
 - Private sector funding sources?
 - Prominent philanthropic funding organisations?
7. Please list and describe any of your university research institutes, centres, units, research clusters, programmes, or initiatives that have ER as a focus or approach, partially or fully? List or describe any spaces or facilities (physical and virtual) that your university has to support research and innovation co-creation with external stakeholders?

Domain 3: University and Society Collaboration & Co-Creation

8. Please provide an annotated list of national and / or regional strategies or policies or programmes that promote, encourage or require Engaged Research. Are there any examples of where engaged research is embedded in other national and / or regional policies. Please provide a list of national and / or regional organisations that promote, encourage or support engaged research, that are known to you? For example, please provide a link to your smart specialization strategy (S3), in case it has relevance to your university (information on [smart specialization](#) can be found here).

Domain 4: Preparing & Supporting Engaged Researchers

9. Does your university provide staff capacity building programmes, accredited or otherwise for engaged research? Do any external agencies or organisations fund training on good practice for engaged research? Is there training on good practice for engaged research, in partnership with public or professional service and product users, policy-makers, civil and civic society organisations, and members of the public?

Domain 5: Engaged Research in Teaching & Learning and Research Based Teaching (undergraduate and postgraduate curriculum)

10. Is engaged research generally, partially or not at all integrated into undergraduate curricula? Postgraduate curricula? Doctoral training? Provide examples. Are there accredited and or non-accredited engaged research programmes or modules?

Domain 6: Open Science and Digital Transformation & Capability

11. What Open Science resources, policies or strategies exist at your institution?

Domain 7: Internationalisation and Trans-nationalization

12. List some examples of prior, new or developing collaborations or strategic partnerships formed with other engaged research individuals/ teams internationally?

Domain 8: Measuring Impact

13. Are there internal performance indicators in your university or places within your university to monitor research? To monitor engaged research? Are there regional, national, European or international indicators that your university uses, subscribes to or addresses, e.g. The Times Higher Education impact rankings? The UN SDG's? Others?

Domains 1-8

14. WHAT ARE THE ONGOING GAPS AND CHALLENGES TO ADVANCING ENGAGED RESEARCH IN ANY OR ALL OF THE ABOVE 8 DOMAINS? Specifically consider any factors that promote or hinder engaged research within and across your institution.

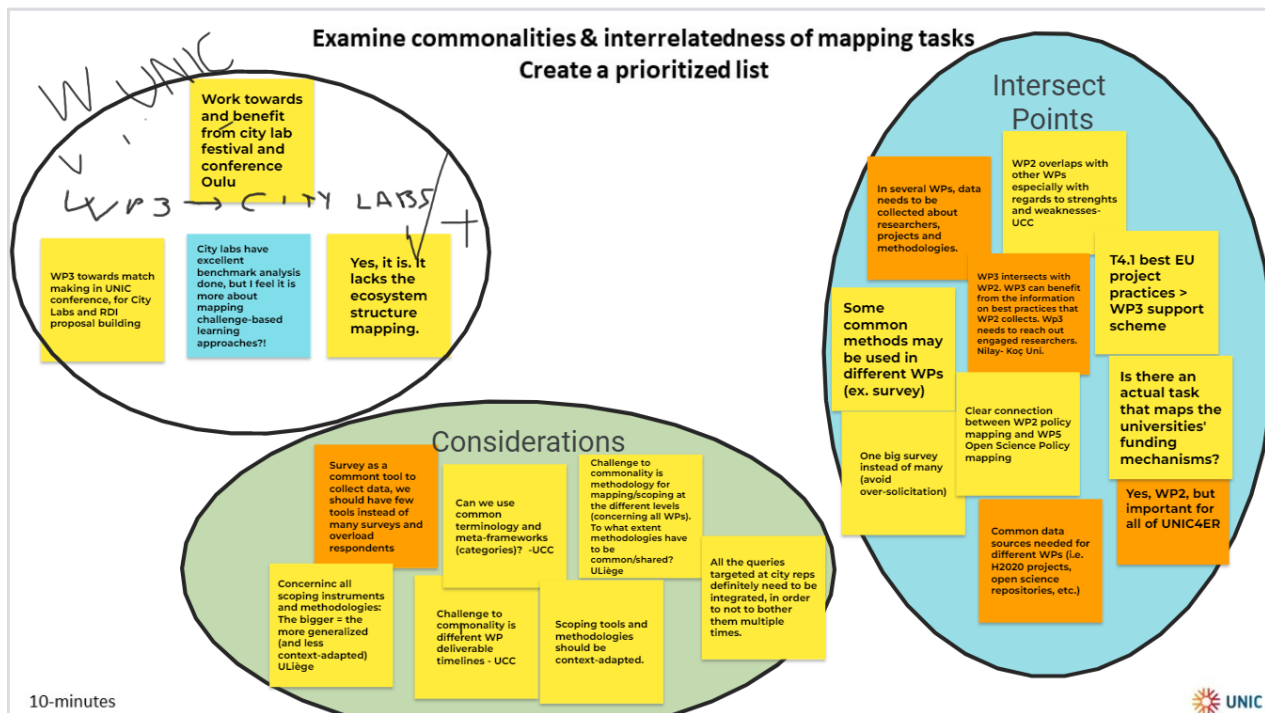
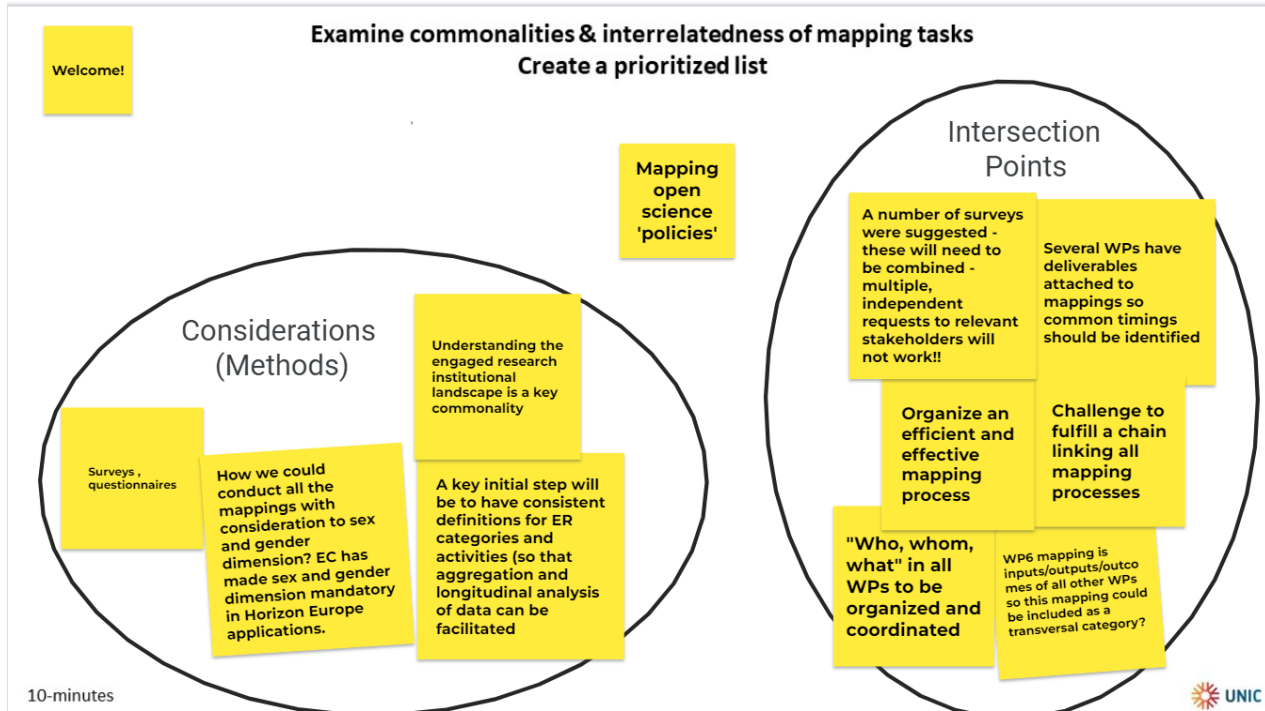
Appendix 2

Strategy Forum: Barriers to Engaged Research at Your Institution?

Quick response question (1 min): What is the number one barrier or obstacle to engaged research at your institution? This was an icebreaker exercise at the beginning of Workshop 2 where participants were asked to enter their comments into the MS Teams chat stream. The participant's name and institution are associated with their corresponding comments. These data were collected on 18 January 2022

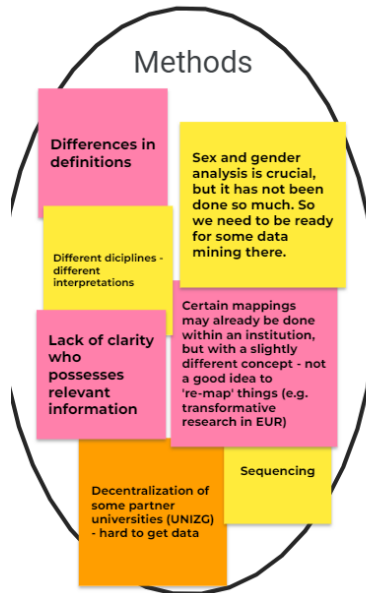
1. Charlotte Ruitinga (EUR): Decentralised nature of our research offices across faculties
2. Nilay Kavur (Koc): lack of an understanding on the definition of engaged research
3. Elsa Mescoli_CEDEM (Liège): Define engaged research in ways that "speak" to all disciplinary fields
4. David O'Connell (UCC): Inconsistent definitions and metrics
5. Sari Hirvonen-Kantola (Oulu): Who does recognize his/herself as an ER researcher?
6. Charlotte Ruitinga (EUR): Inconsistent terminology
7. Mari Luz Guenaga (Deusto): The great diversity of methods, people, data sources, etc.
8. Laura Beuker (Liège): Decentralized nature of researches between faculties
9. Michael Baudzus (Bochum): Missing qualified personal
10. Banu Liman (Koc): Alignment on the meaning and typologies of engaged research
11. Gorka Urrutia Asua (Deusto): common understanding of engaged research
12. Mervi Heikkinen (Oulu): Number of people and time restrictions
13. Mia Kemppaala (Oulu): Getting hold of all researchers
14. Ana Opačić (Zagreb): What is engaged, or is there social research that is not engaged :)
15. Roberto San Salvador (Deusto): Lack of resources
16. Mia Kemppaala (Oulu): Different interpretations of the concept
17. Laura Beuker (Liège): Polysemous and often understood as dissemination
18. Sari Hirvonen-Kantola (Oulu): The researcher needs to see the benefit in participating in the mapping exercise.

Strategy Forum: Mapping Engaged Research within UNIC



Common Mapping Approaches

Challenges

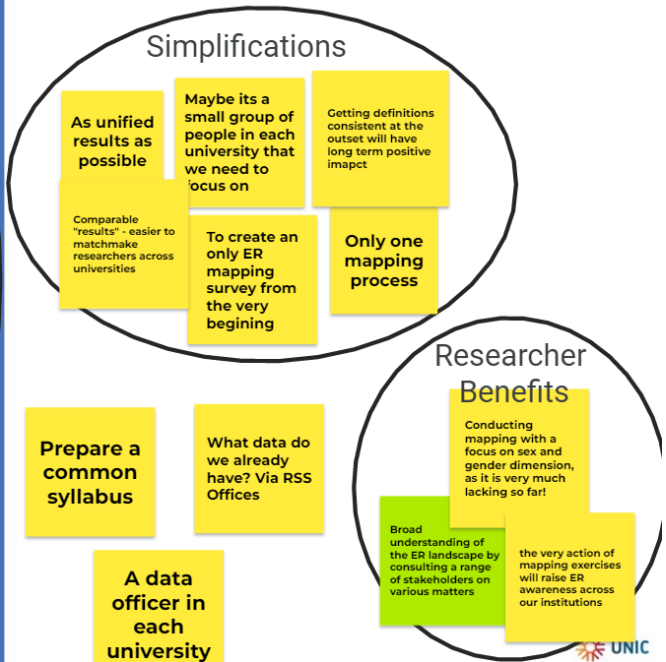


10-minutes

WPs Needs Met?

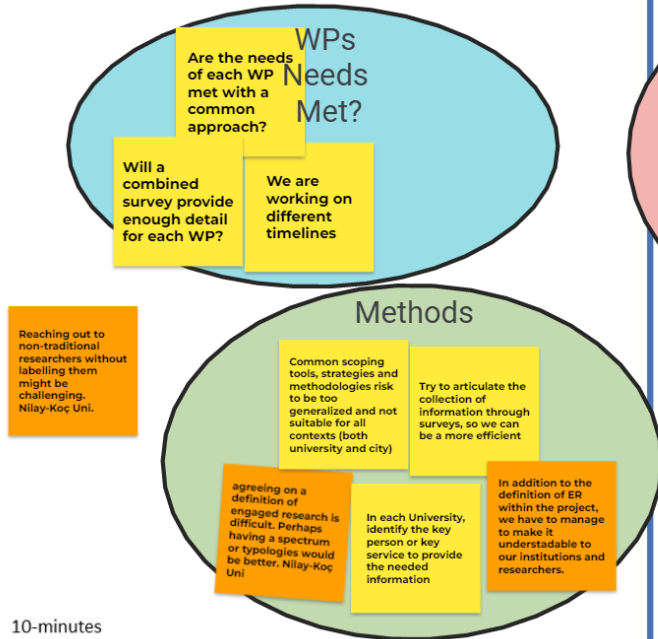


Opportunities

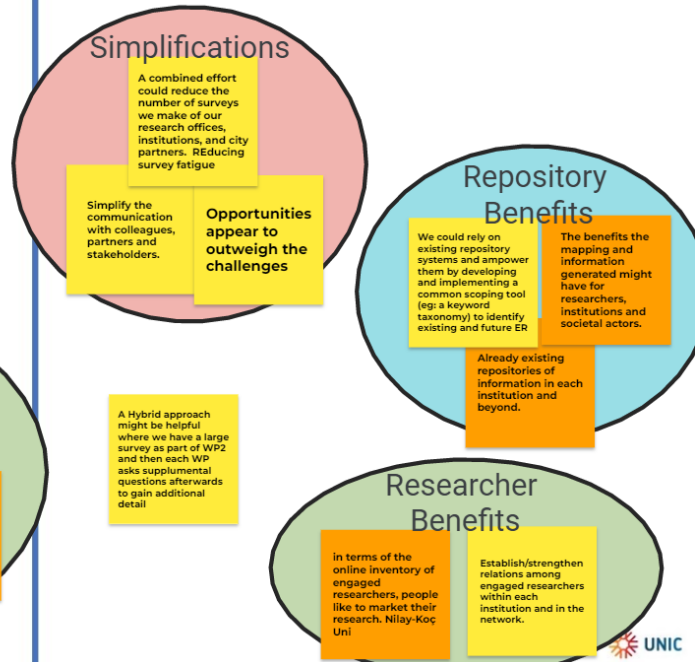


Common Mapping Approaches

Challenges



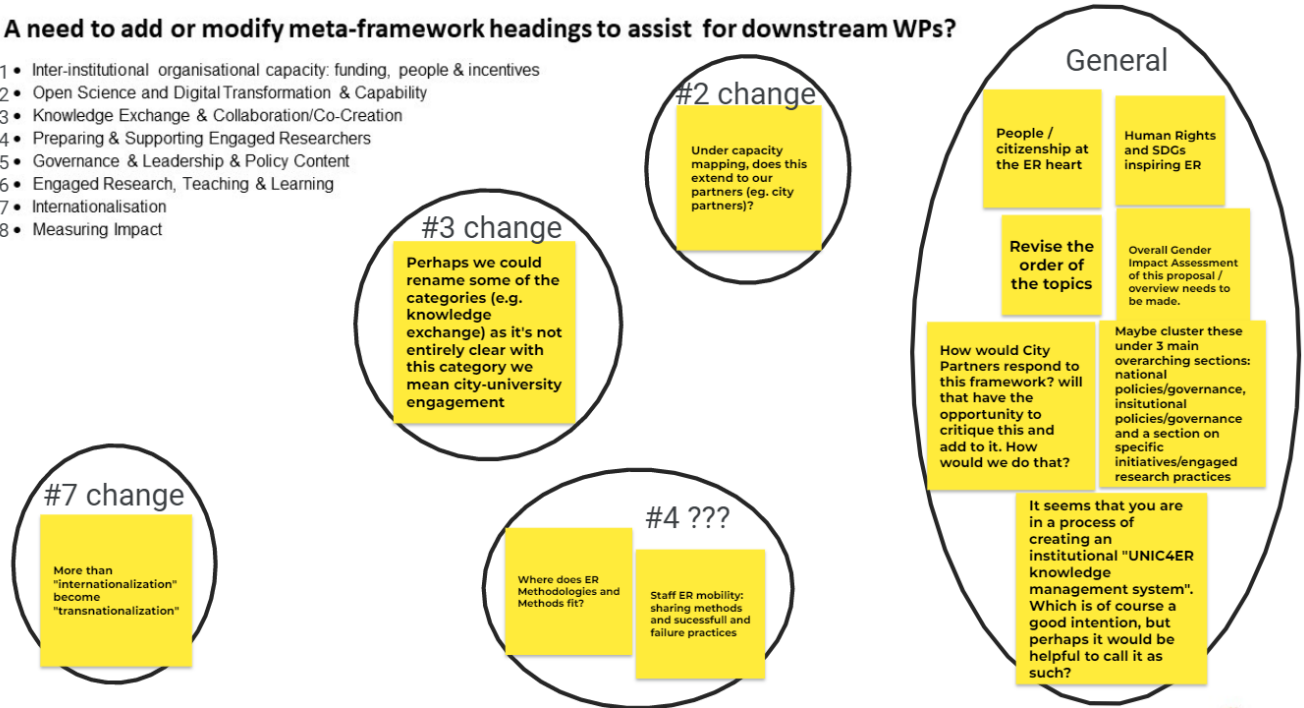
Opportunities



Part 2 Jamboard Sheets

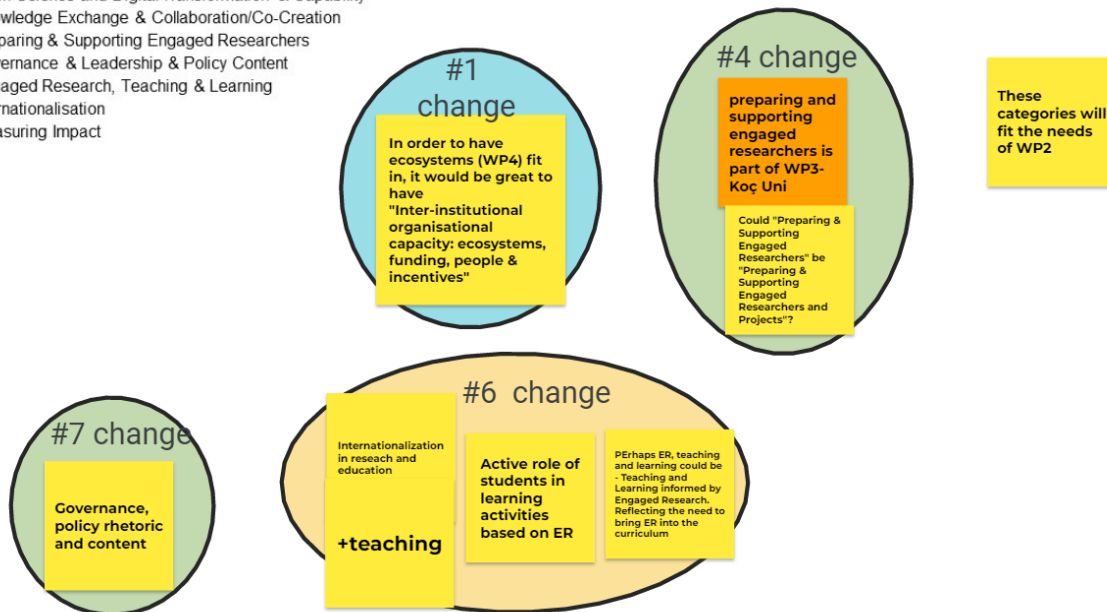
A need to add or modify meta-framework headings to assist for downstream WPs?

- 1 • Inter-institutional organisational capacity: funding, people & incentives
- 2 • Open Science and Digital Transformation & Capability
- 3 • Knowledge Exchange & Collaboration/Co-Creation
- 4 • Preparing & Supporting Engaged Researchers
- 5 • Governance & Leadership & Policy Content
- 6 • Engaged Research, Teaching & Learning
- 7 • Internationalisation
- 8 • Measuring Impact



A need to add or modify meta-framework headings to assist for downstream WPs?

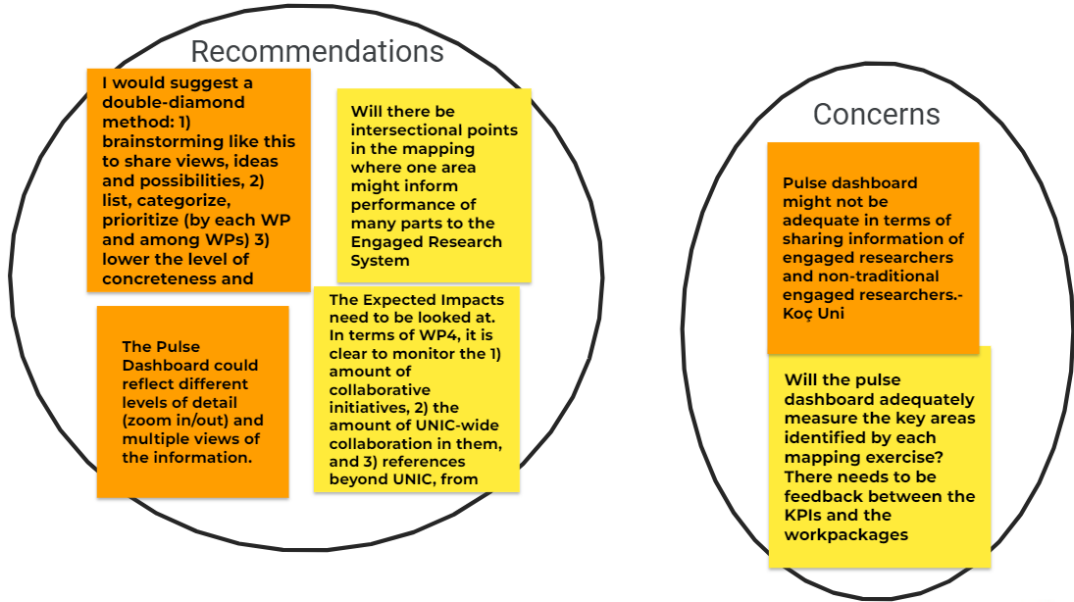
- 1 • Inter-institutional organisational capacity: funding, people & incentives
- 2 • Open Science and Digital Transformation & Capability
- 3 • Knowledge Exchange & Collaboration/Co-Creation
- 4 • Preparing & Supporting Engaged Researchers
- 5 • Governance & Leadership & Policy Content
- 6 • Engaged Research, Teaching & Learning
- 7 • Internationalisation
- 8 • Measuring Impact



7-minutes



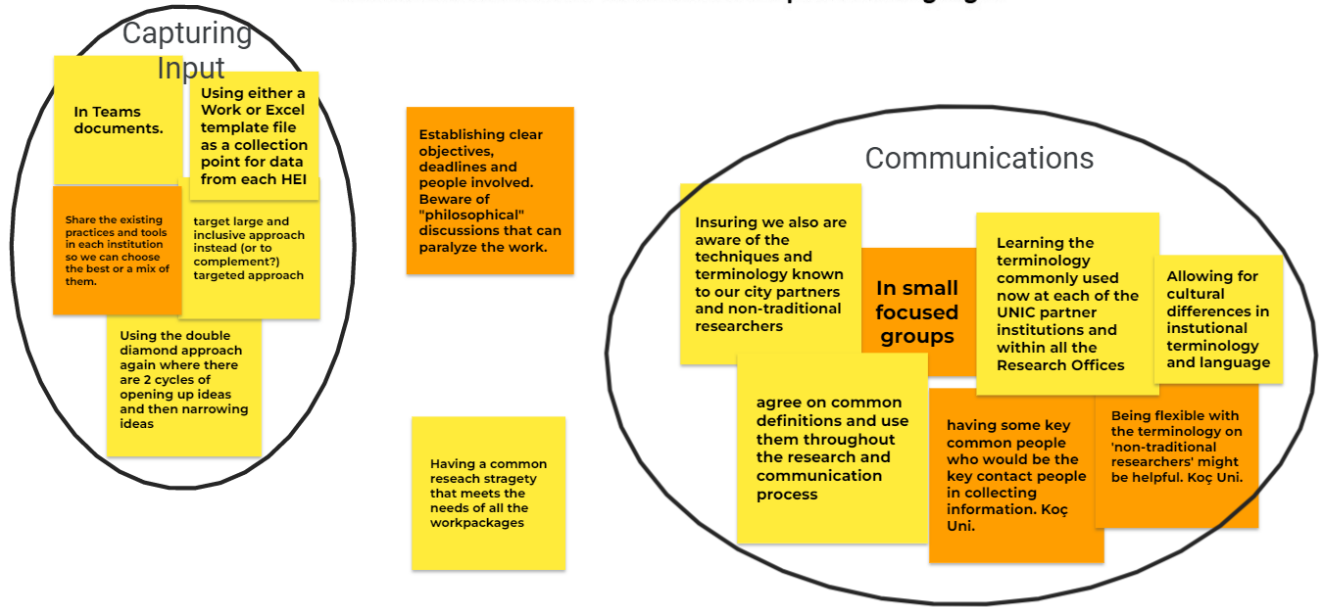
Is this format adequate for all WP mapping data eventually feeding the Pulse Dashboard?



6-minutes



How best to work with common techniques and language?



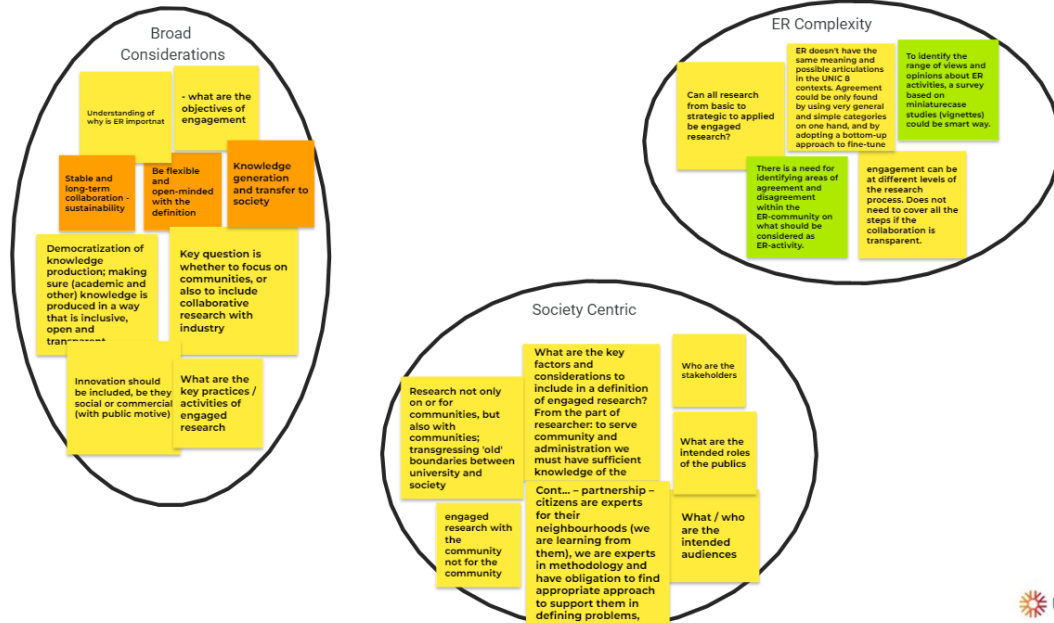
7-minutes



Strategy Forum: Co-Producing a Common Understanding of Engaged Research

PART 1 of 2

Key factors & considerations for defining ER? Shared key principles & values to include in a definition of ER?

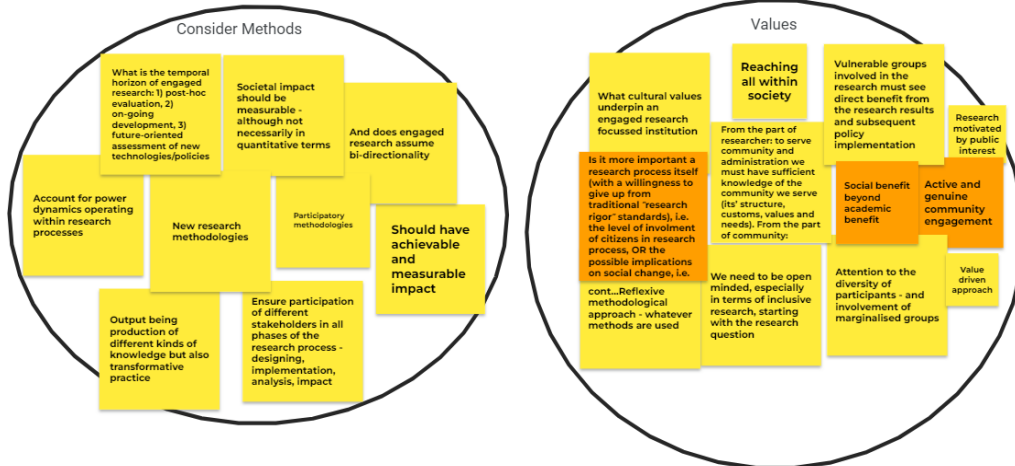


25-minutes

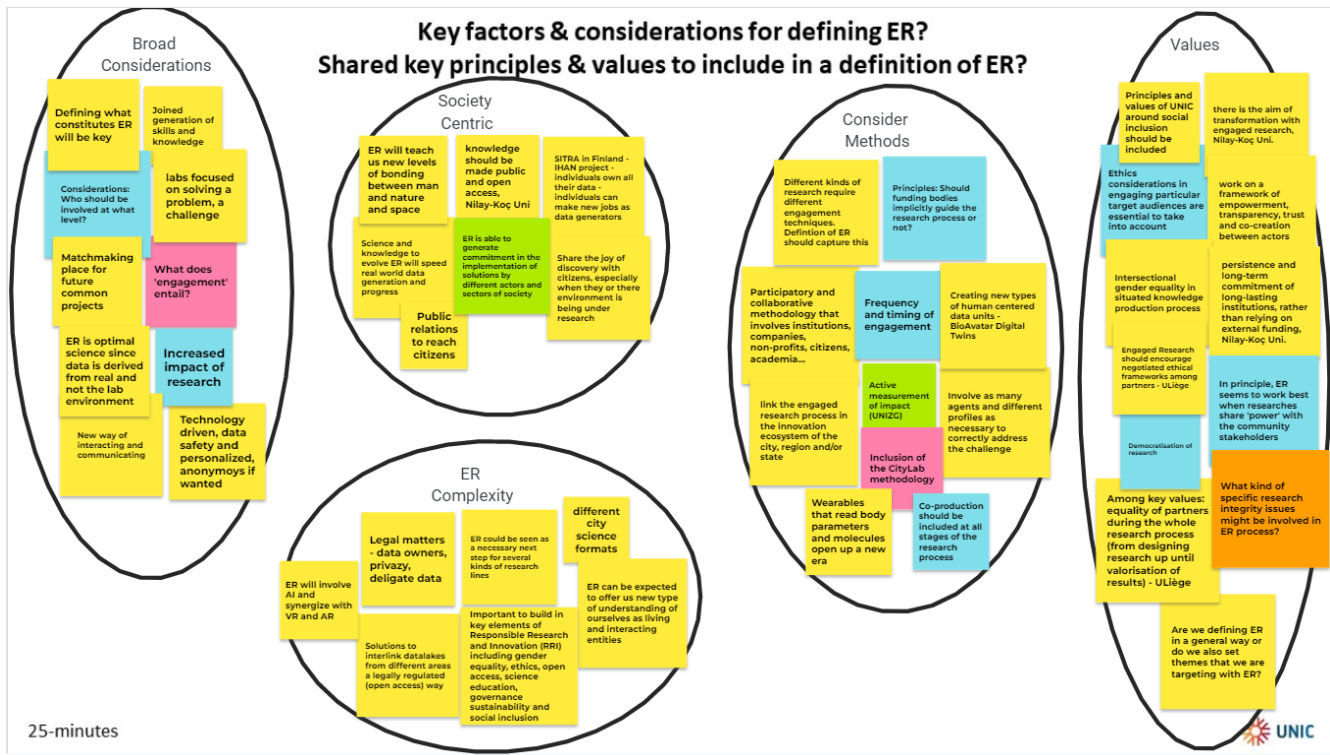


PART 2 of 2

Key factors & considerations for defining ER? Shared key principles & values to include in a definition of ER?

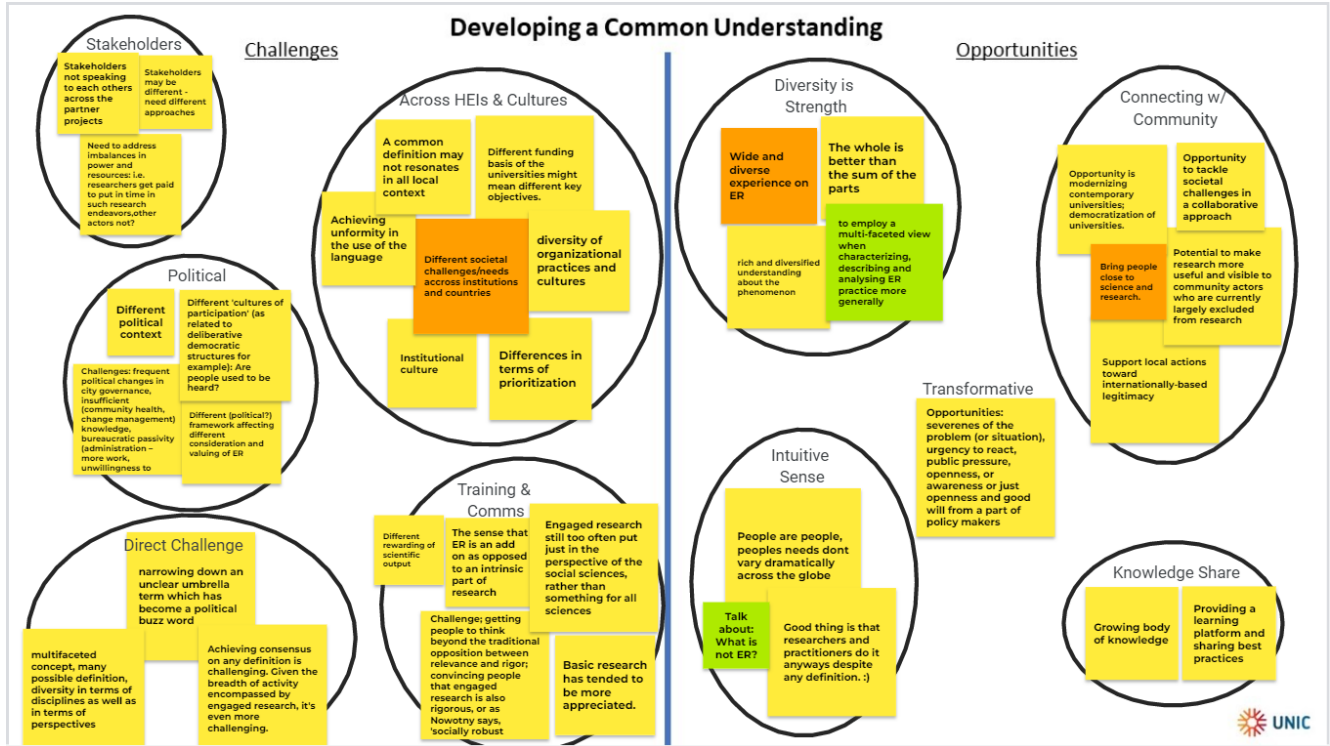


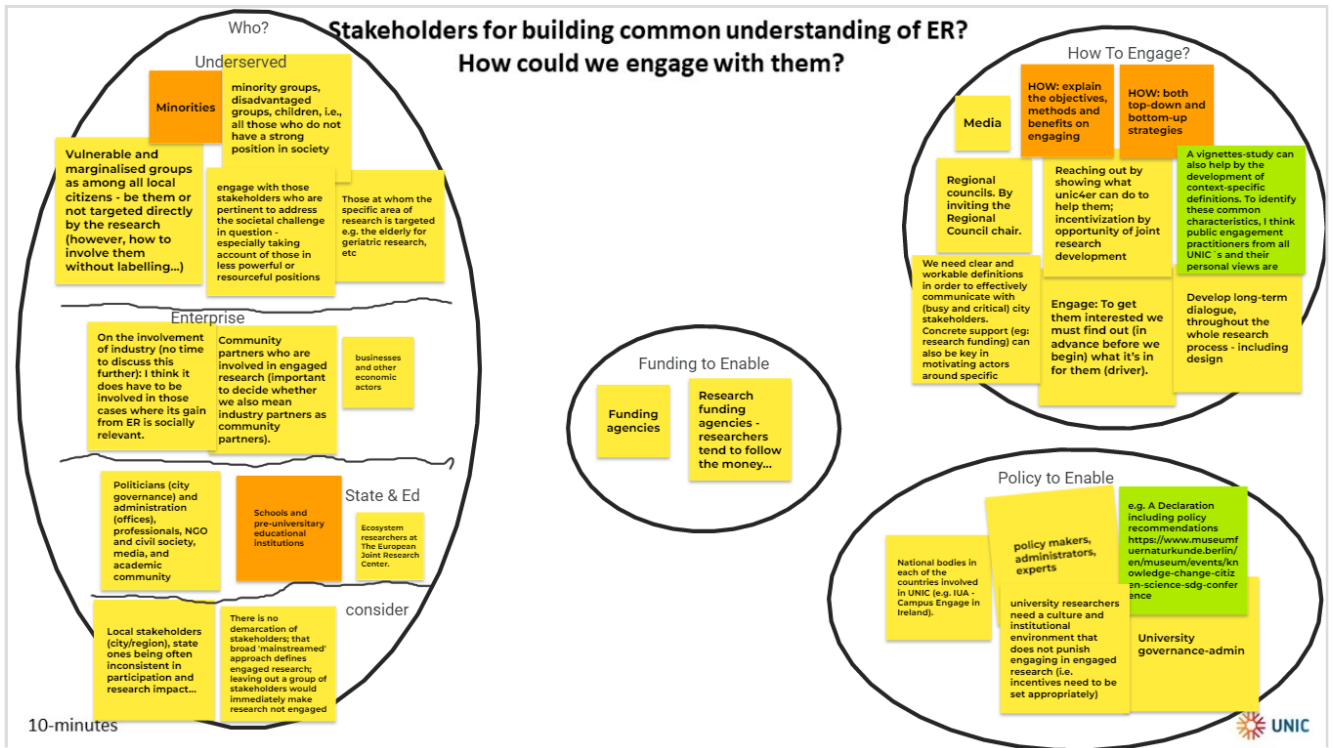
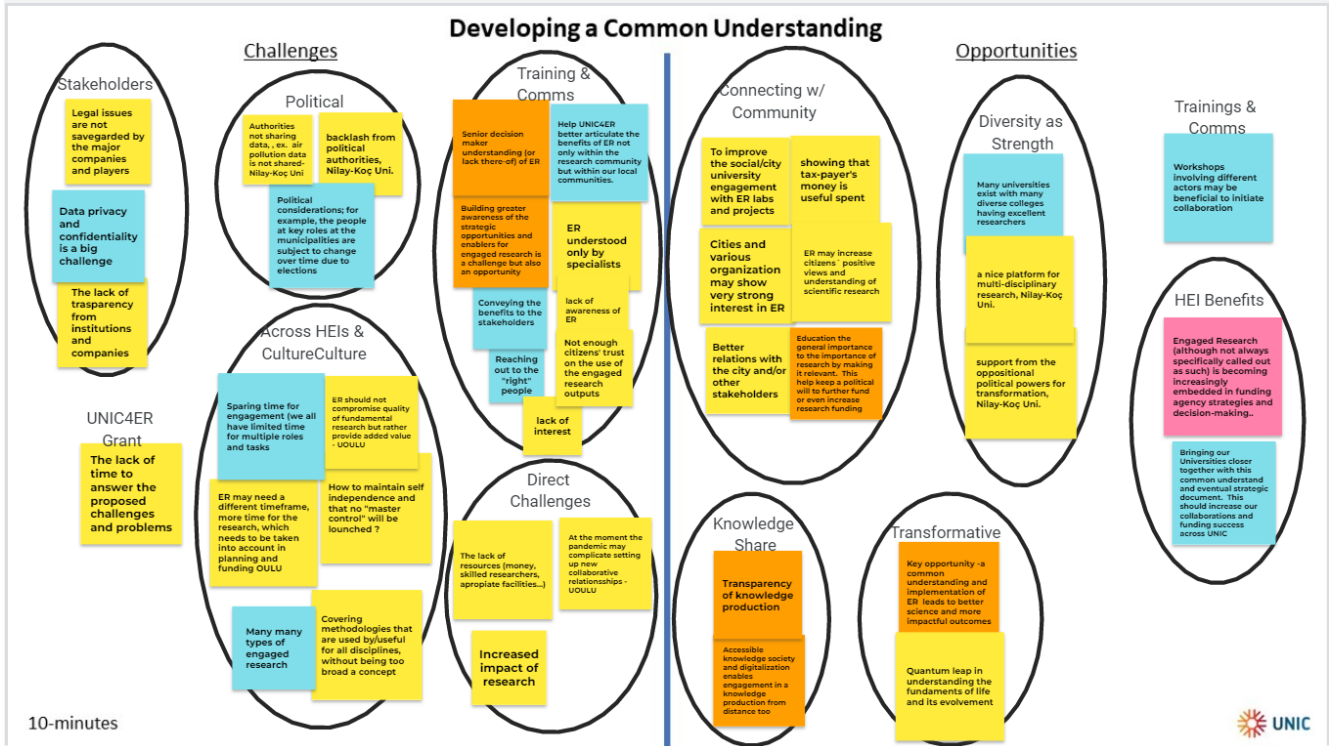
25-minutes



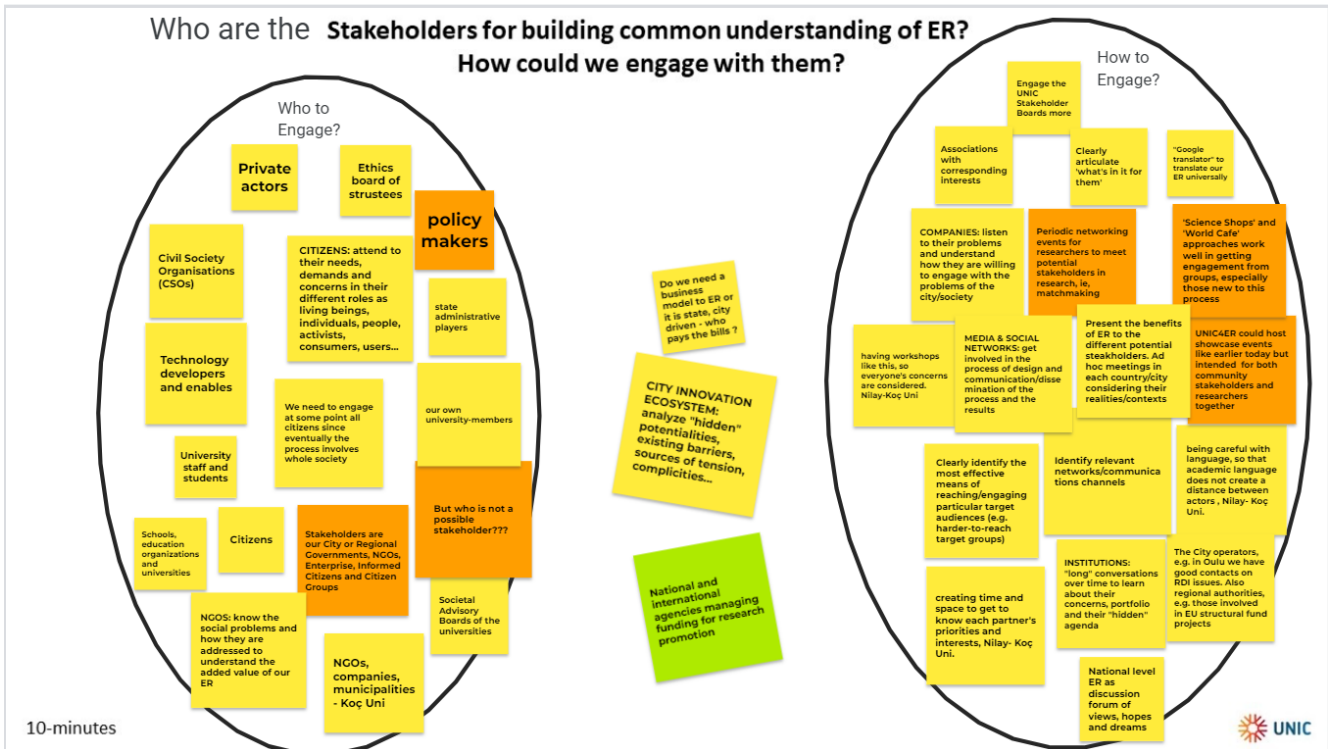
25-minutes



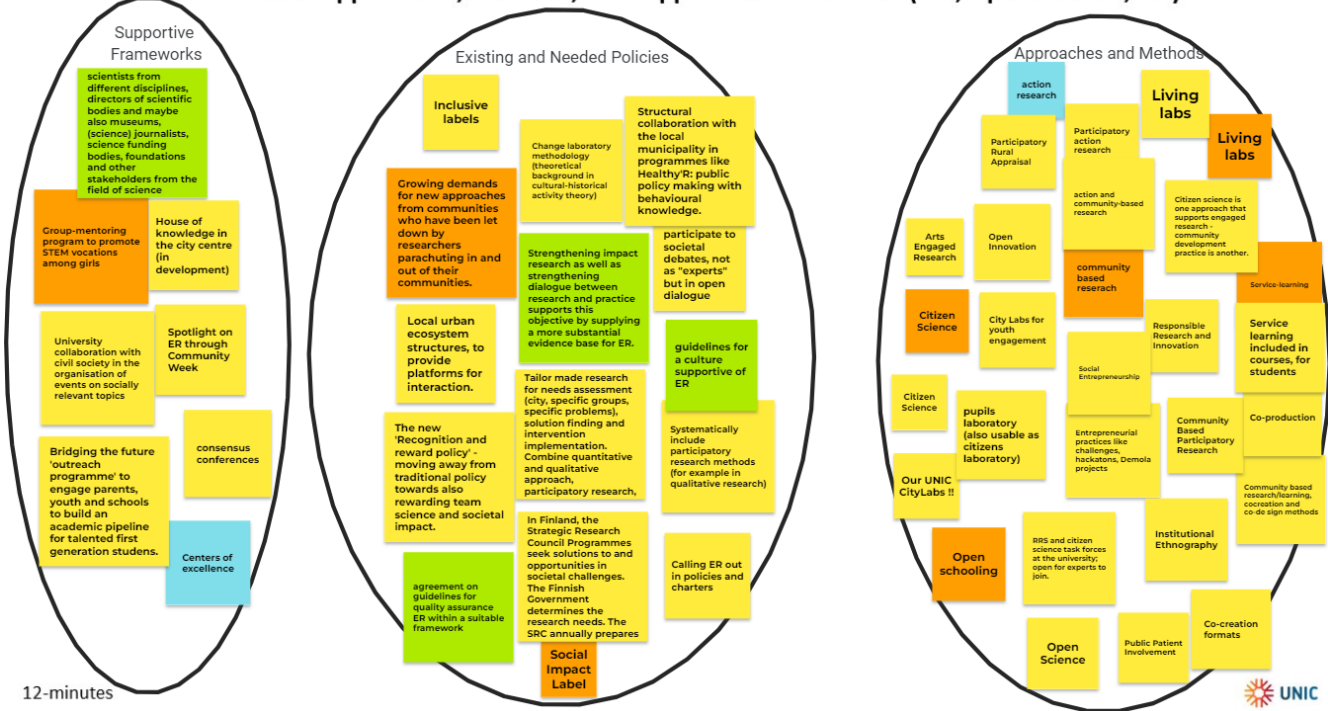




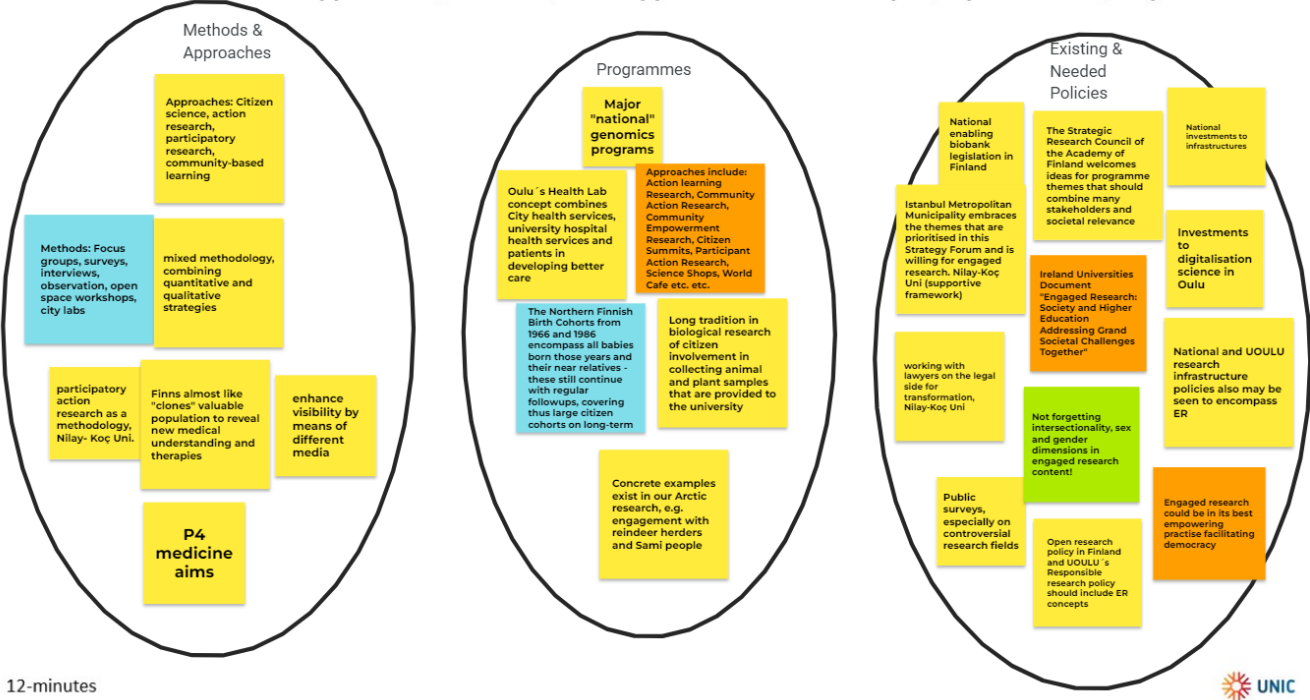
Who are the Stakeholders for building common understanding of ER? How could we engage with them?



Discuss diverse approaches, methods, and supportive frameworks (RRI, Open Science, etc)



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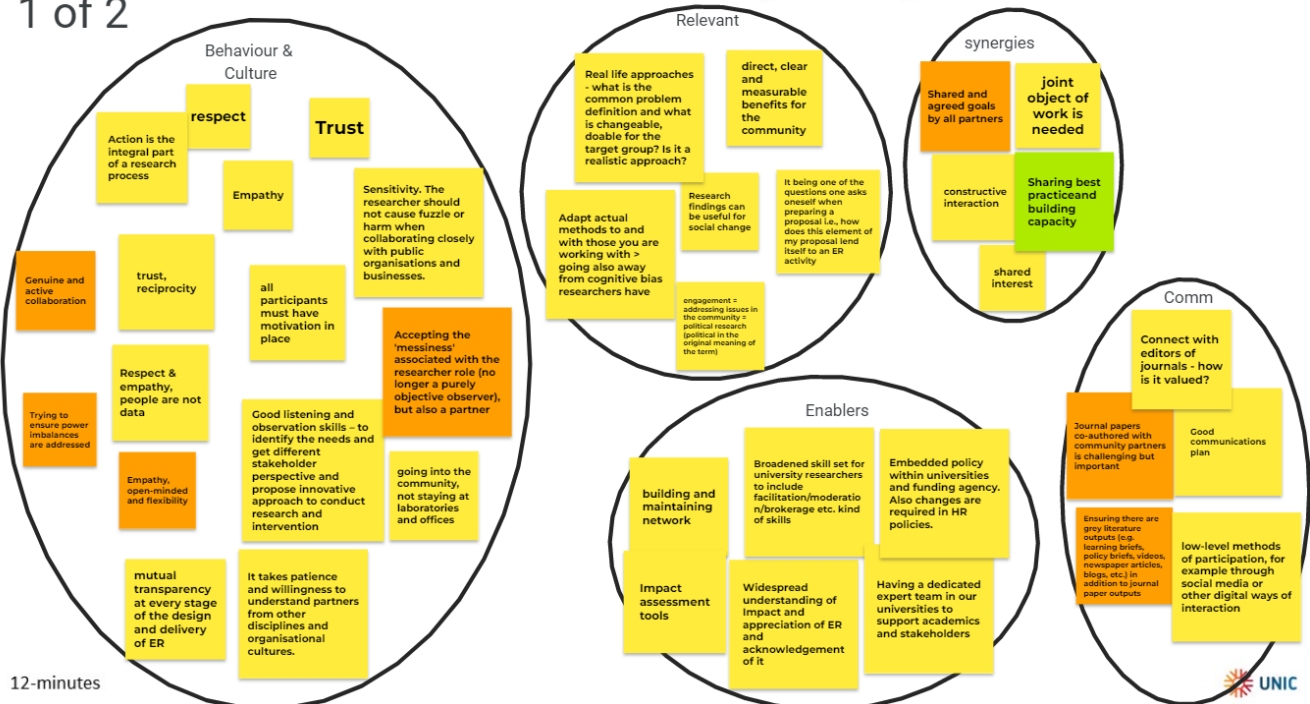


12-minutes



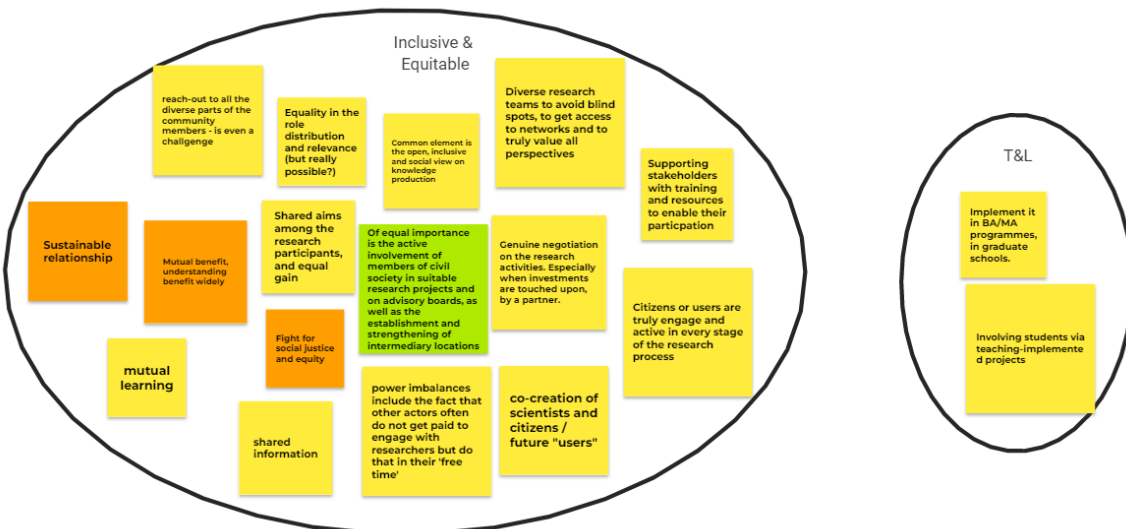
1 of 2

What are the common elements in the design & delivery of ER?

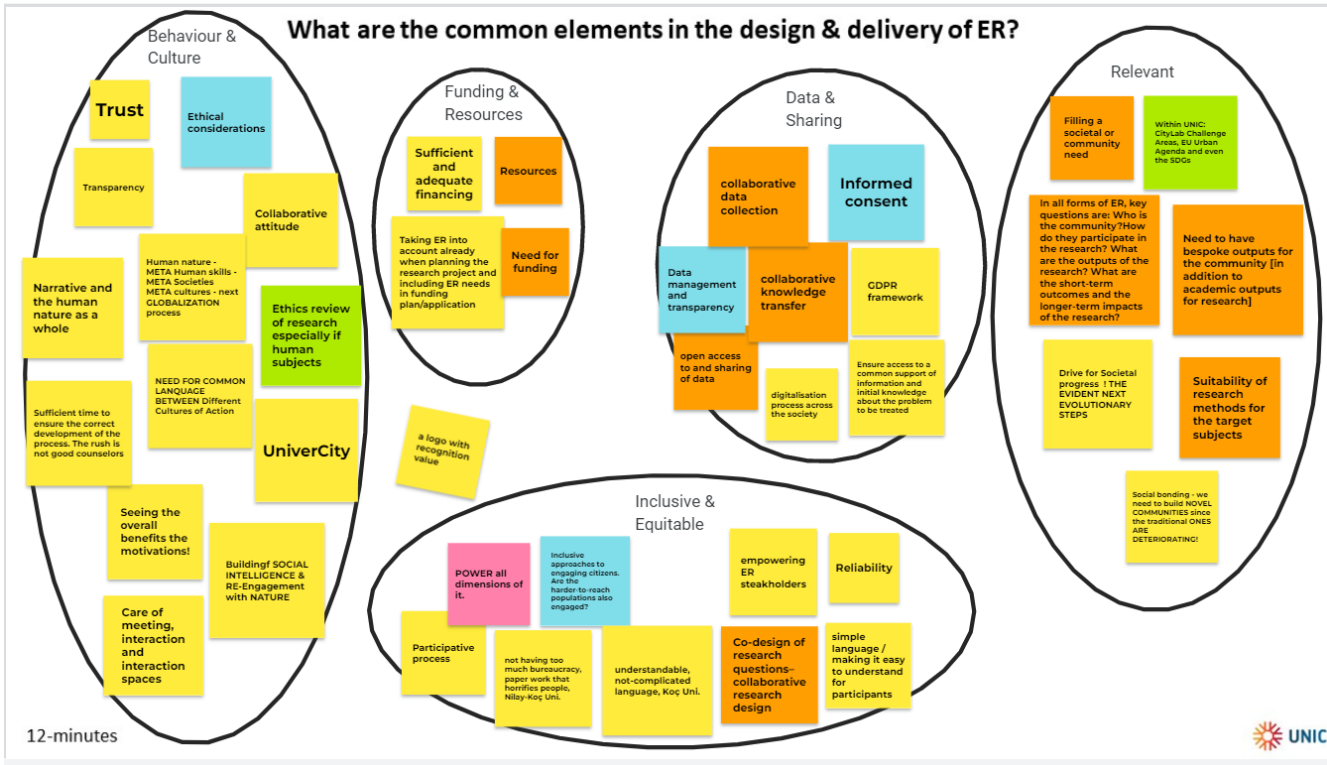


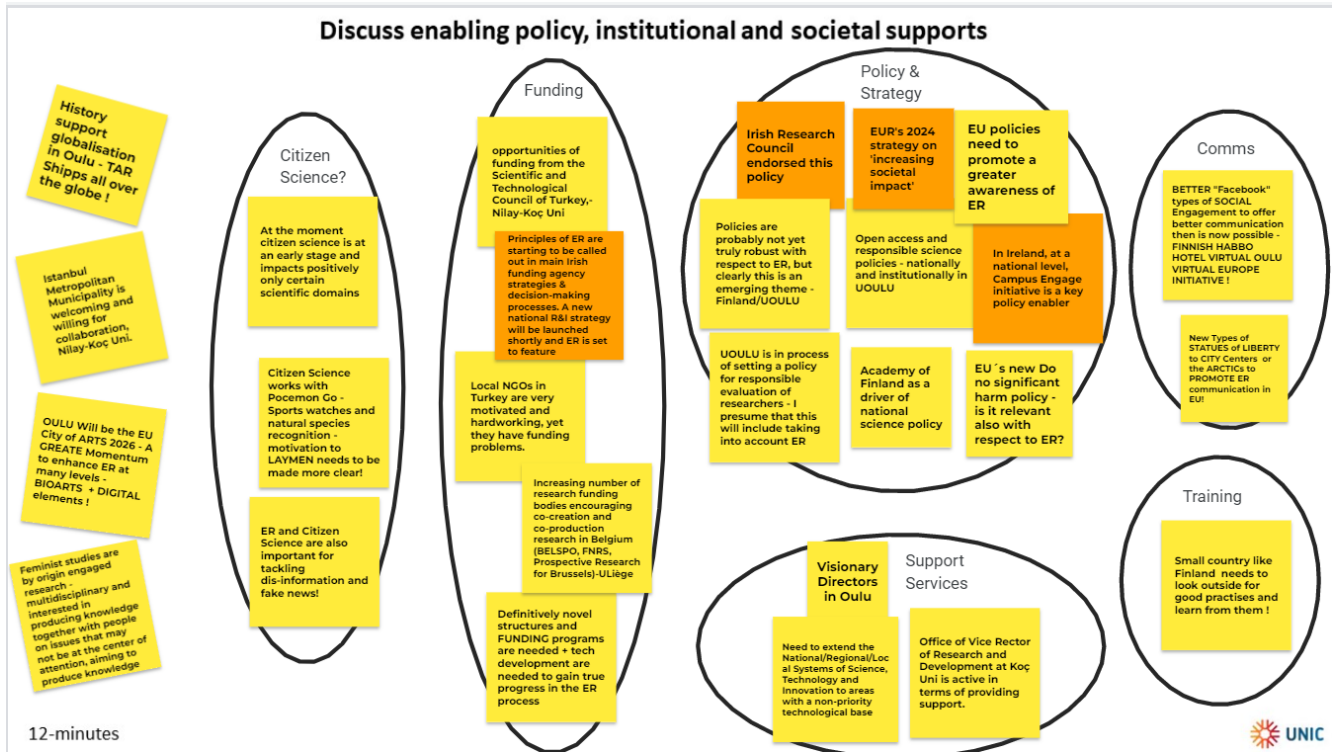
2 of 2

What are the common elements in the design & delivery of ER?

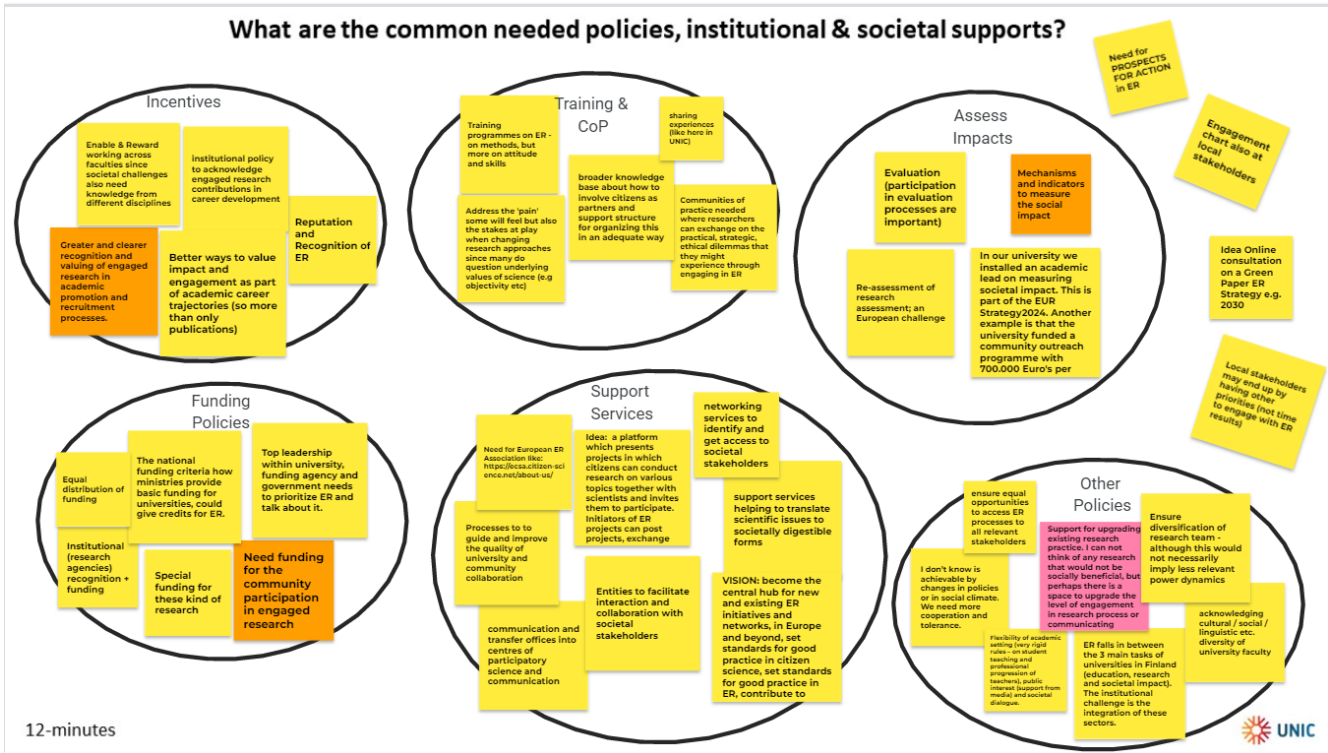


What are the common elements in the design & delivery of ER?





What are the common needed policies, institutional & societal supports?



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