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March 2022

REPORT ON FORUM OF EUROPEAN UNIVERSITIES

Arqus Research & Innovation Project

(Grant agreement No 101017448)

Introduction to the deliverable

In the context of Task 8.2 of its Grant Agreement, called “Coordination with other University Alliances”, the partners of the Arqus Research and Innovation project committed to attend and contribute to an event organized by the Forum of European Universities (FOREU) and to deliver a Report on their participation in this event, which is this deliverable, D8.2 “Report on FOREU”.

The full text in the Grant Agreement describes it like this:

“The 17 alliances selected in the first call have agreed to ensure collaboration in the implementation of their projects for developing their transformation agenda for research and innovation. This collaboration will also be open to the alliances selected in the second call. A very specific activity will be attending together a Forum of European Universities (FOREU), face-to-face if possible and if not on-line, around month 14 at which to discuss and share assessment of current practices, best practices, progress made/success stories implementing our long-term strategies and identification of barriers, whether they be legal, financial or regulatory, taking into account the level at which each barrier exists (local, regional or European).”

The planned event took place on 2nd March 2022, on-line, and was called 1st TORCH Annual Open Forum: "Sustainability in a (post?) pandemic world: asking the right questions on the role of universities in R&I today". The event was organised by TORCH (Transforming Open Responsible Research and Innovation through CHARM), the research arm of the CHARM-EU Alliance, for the group of the 41 European University Alliances funded in the two Erasmus + Pilot Calls (FOR-EU1 and FOR-EU2).

The Arqus Alliance was represented by Arqus Research and Innovation, the project developing its research dimension.

This event brought together University managers of the Alliances, policymakers and European Commission representatives to discuss how universities and, namely European Universities Alliances, can contribute to a European internal market for knowledge and maximize the impact of Research and Innovation in a (post?) pandemic world for a better, inclusive and sustainable future. The Forum fostered an in-depth debate around this perspective and its objective was not only presenting results, but more specifically, the process the Alliances have followed, the barriers found and lessons learned.

Arqus R&I took active part in the panel session devoted to “European universities: Towards a reform of the research assessment system” (see point 3.3 of the Forum Debrief in the full Report below). This session analysed the challenges and benefits of reforming such a multi-actor system to support a diverse range of outputs, activities and career directions. The panel also looked at the role that the European Universities initiative can play in driving such reform and consider whether there are benefits for teaching and other activities outside of research. The panel was chaired by Doris Alexander (Chair FOR-EU1 R&I subgroup).

The Arqus Alliance was represented in this panel by Prof. Tullio Vardanega (University of Padua), leader of Work Package 3 in the Arqus R&I project, devoted to “Alternative Assessment Approaches” of research and researchers’ careers.

Professor Vardanega presented the work done in this area in Arqus R&I: on the one hand, a best practice document was developed and on the other, a discussion paper is being prepared as a consequence of the latter. The best practices document contains an analysis of research assessment practices currently applied

in the Arqus partner universities (both “traditional” and “alternative”), makes proposals of best practices that could be (further) developed and asks a series of questions on the status quo and viability for the development of “alternative” assessment practices. The ensuing Discussion Paper will contain a summary and discussion of the replies given by each universities’ high-level officials for research assessment to those questions.

Please find below the full Report on the FOREU event.

TORCH: ANNUAL OPEN FORUM 1 REPORT

Transforming Open Responsible Research and Innovation through CHARM

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EXECUTIVE SUMMARY: ANNUAL OPEN FORUM 1 REPORT

The TORCH Project enhances CHARM-EU's academic and research networks, as it builds up the R&I dimension of CHARM-EU, promoting a challenge-driven transformative agenda with a transdisciplinary and intercultural vision laying its foundation in three Cross Cutting Principles of RRI: Interdisciplinarity, Gendered Innovation, Ethics and Integrity; and four Transformational Modules: Common R&I Agenda, Cooperation with Non-Academic Actors, Open Science Practices, Citizen Science and Public Engagement.

The first TORCH Annual Forum was a dissemination activity designed to discuss progress and results of the TORCH project and beyond. It included relevant aspects such as open science, public engagement, and Cross-cutting principles to address a transformative R&I Agenda, which were shared with other European Universities. As such, all the Alliances were invited to participate, as the event was devised as the shared activity all FOREU1 Alliances included in their proposals.

The Forum was launched under the title **Sustainability in a (post?) pandemic world: asking the right questions on the role of Universities in R&I today**. It was held online on March 2, 2022 and virtually hosted by Eötvös Loránd University Budapest (ELTE). During the event, different relevant topics were covered such as:

- Current challenges in the research assessment reform and how the European Union is approaching it and what can we learn from the work done by the European University alliances.
- Share best practices and discuss how European University alliances can impact a sustainable future through a common R&I Agenda and the role that such a common agenda may play in achieving the European Green Deal and more broadly contributing to the implementation of the SDGs.
- Discuss how universities and alliances can better work with enterprises and citizens.
- The importance of cross-cutting principles such as ethics, integrity, interdisciplinary, and gendered innovation in responsible research, as well as the challenges in developing a common implementation approaches by the European University alliances.

The event was addressed to university leadership, European University alliances, and different actors engaged in R&I and university-industry-citizen collaboration. It was also relevant for policymakers, as the European Commission's perspective was included. More than 100 participants attended the different sessions.

Representatives of different institutions' leadership (CHARM-EU Alliance: UB and ELTE; FORTHEM Alliance: JGU Mainz) opened the event in the **inaugural ceremony**.

The first **plenary session** served to frame the topic of the forum: **The R&I framework and the (post?) pandemic scenarios**. Some current trends/strategic thinking on this topic (state of play and looking forward) were discussed. As well as what we are doing to advance this agenda and the role of the European Universities initiative and their SwafS projects.

The **panel session 'European Universities: Towards a Reform of the Research Assessment System'** focused on the reform of the research assessment system for research, researchers and institutions to improve their quality, performance and impact. This session discussed the rationale, the proposed approach and principles and work to date, analyzing the challenges and benefits to reforming such a multi-actor system to support a diverse range of outputs, activities and career directions. The panel also looked at the role that the European Universities initiative can play in driving such reform and considered whether there are benefits for teaching and other activities outside of research.

The **TORCH Clusters (Crosscutting conversations across R&I topics and sustainability)** sought to combine R&I impact/actions and sustainable factors. In order to enhance policy coherence by promoting systemic approaches across the same challenges (SDGs/European Green Deal) while presenting main progresses on the TORCH project and other Alliances' SwafS projects. It was divided into four parallel thematic clusters (linked to different transformational modules):

- **Cluster 1: R&I Common Science Agenda and European Universities**. This session went over the methodology and sharing preliminary results, learning and experiences from EU alliances in its work on identifying research strongholds and using bottom-up protocols to compare institutional priorities and good practices.

- **Cluster 2: Business & Society and Academic Cooperation**. The objective of the session was to share best cases from universities on collaboration between business and university or on spin-off creation.

- **Cluster 3: Public Engagement**. During this session, some good practices and (dis)incentives for public engagement and transdisciplinary science at the individual, the university, the systemic, and the stakeholders' levels were discussed.

- **Cluster 4: Cross-Cutting Principles to Address a Transformative R&I Agenda**. Developing a common European research framework in different countries and cultures and across a number of different disciplines requires addressing the challenges of ensuring ethically fully supported interdisciplinary research while incorporating cross-cutting principles analysis into all areas of R&I processes, including career choices and opportunities as well as research project development and management. Having established our research strengths, we ask, how can we make our research even better?

The final **panel session** on **Open Science** had three alliances, CIVIS, AURORA and CHARM-EU, to introduce the Open Science practices and plans of their current SwafS projects.

1. INTRODUCTION & FORUM OBJECTIVES

CHARM-EU represents a Challenge-Driven, Accessible, Research-based and Mobile model for the co-creation of a European University aligned with the European Values and the Sustainable Development Goals (SDGs). It is an initiative formed by five research-based universities: University of Barcelona (UB), Trinity College Dublin (TCD), Utrecht University (UU), Eötvös Loránd University Budapest (ELTE), and University of Montpellier (UM).

The TORCH Project enhances CHARM-EU's academic and research networks, as it builds up the R&I dimension of CHARM-EU, promoting a challenge-driven transformative agenda with a transdisciplinary and intercultural vision, and laying its foundation in three Cross Cutting Principles of RRI: Interdisciplinarity, Gendered Innovation, Ethics and Integrity; and four Transformational Modules: Common R&I Agenda, Cooperation with Non-Academic Actors, Open Science Practices, Citizen Science and Public Engagement.

The first TORCH Annual Forum is a dissemination activity designed to discuss progress and results of the TORCH project and beyond. It includes relevant aspects such as open science, public engagement, and Cross-cutting principles to address a transformative R&I Agenda, which are shared with other European Universities. As such, all the Alliances were invited to participate, as the event was devised as the shared activity all FOREU1 Alliances included in their proposals.

Concept Note

The Open Forum was launched under the title **Sustainability in a (post?) pandemic world: asking the right questions on the role of Universities in R&I today**. Held online on March 2, 2022, and hosted by Eötvös Loránd University Budapest (ELTE).

While experts' opinions are significantly different regarding the remaining threat of COVID-19, everyone agrees that the pandemic has permanently changed the world around us from many different aspects and for many different sectors. As we work to shape our future and deal with many societal challenges, how can universities and European Universities alliances contribute to a European internal market for knowledge and maximize the impact of R&I in a (post?) pandemic world for a better, inclusive and sustainable future? In exploring the role that R&I can play, consideration needs to be given to the importance of strengthening cooperation throughout the entire knowledge square (Education-Research-Innovation-Business & Society) utilizing a responsible research and Innovation framework that is fit for purpose.

Exploring synergies and facilitating best practice exchanges with other European Universities alliances who are addressing these same challenges will facilitate all HEIs to support innovative

solutions for a greener and digital transition[1] paving the way out from the pandemic crisis in a sustainable and inclusive manner. Such sharing of knowledge also supports the values and current policy agenda of the new European Research Area Research. If R&I undergoing change, becoming more collaborative and open, then we must look also at the current research assessment system so that researchers are evaluated on the basis of appropriate criteria. Research assessment reform, such as that underway in the EU as well as being addressed through the transformational modules by many alliances, can contribute to the process of supporting the development of attractive and sustainable research careers in Europe maximizing the possibility of supporting and retaining the best talent needed to design innovative solutions to societal challenges. During the Forum, different relevant topics were covered, such as:

· What are the challenges in Research assessment reform, how is the EU approaching it and what can we learn from the work of the European Universities alliances?

· Sharing learning and discussion on how European University alliances can impact a sustainable future through a common R&I Agenda and the role that such a common agenda may play in achieving the European Green Deal and more broadly contributing to the implementation of the SDGs.

· How can Universities and alliances better work with Enterprises and with citizens.

· The importance of cross cutting principles such as Ethics, integrity, interdisciplinary, gendered innovation in responsible research, and the challenges in developing common implementation approaches by the Alliances.

Promotion & Dissemination

The event was publicized through different means in order to reach the target relevant audience. It was shared via mailing with the whole community involved in CHARM-EU and TORCH (scientific and technical staff involved in the projects' development, plus teachers and researchers participating in diverse related activities). In addition, all CHARM-EU Newsletter subscribers (+800 individuals) were invited. All five partners also distributed the invitation among their respective relevant staff. Likewise, all the European Universities were invited to join (the FOREU1 group via their SwafS coordinators; the FOREU2 via their R&I subgroup coordinator).

[1] This objective aims to support the EC's Strategic Plan 2020-2024 DG Research and Innovation in which states that *"the R&I policy is an engine of the green and digital transitions on the continent and stairways to 'the future we want'."*

Regarding social media, and following CHARM-EU dissemination strategy, it was promoted via different official channels (Twitter, Instagram, Facebook, LinkedIn, website) of CHARM-EU and the five institutions (#TORCHForum2022). Specific promotional material was designed (see Annex I).

Registration for the event was managed through Google Forms, including a privacy statement acceptance request, in compliance with GDPR.

Participants

The TORCH Forum was addressed to university leadership, European Universities members, and any actors engaged in R&I, university-industry-citizen collaboration. It was also relevant for policymakers, as the European Commission's perspective was included. The number of participants is shown in Table 1.

Table 1. TORCH Open Forum number of participants (see agenda).

No.	Sessions
189	Individual registrations prior to the event
102	Participants in the morning sessions
103	Participants in the afternoon sessions
50	Participants in the closing session

No.	Cluster Sessions
32	Participants in Cluster 1
23	Participants in Cluster 2
27	Participants in Cluster 3
20	Participants in Cluster 4

Organizing Committee

The Forum was organized by TORCH staff and members of different European Universities (after a call to find a team of representatives of the FOREU1 Alliances was issued), in close collaboration with the TORCH WP Leaders. The Forum Organizing Committee is as follows (in surnames alphabetical order):

· Ms. Doris Alexander, Trinity College Dublin (CHARM-EU Alliance). Associate Director of European Engagement, TCD.

· Dr. Nikole Birkle, JGU Mainz (FORTHEM Alliance). FIT FORTHEM Coordinator.

· Ms. Valentine de Callataÿ, Université libre de Bruxelles (CIVIS Alliance). CIVIS Liaison Officer.

· Ms. Meritxell Chaves, University of Barcelona (CHARM-EU Alliance). CHARM-EU Manager.

· Ms. Nicole Font, University of Barcelona (CHARM-EU Alliance). CHARM-EU Communications Manager.

· Ms. Julie Hyzewicz, Aix-Marseille Université (CIVIS Alliance). RIS4CIVIS Project Manager.

- Prof. Katarzyna Molek-Kozakowska, University of Opole (FORTHEM Alliance). FIT FORTHEM Dissemination and Communication.
- Dr. Jaime Llorca, University of Barcelona (CHARM-EU Alliance). TORCH Project Manager.
- Dr. Nina Straub, JGU Mainz (FORTHEM Alliance). FIT FORTHEM Project Manager.
- Dr. Ferenc Takó, Eötvös Loránd University (CHARM-EU Alliance). TORCH Project Manager.

This Report

This report constitutes TORCH's deliverable D10.4, and contains the Forum Agenda, followed by a debrief of all sessions and presentations, as well as the main conclusions drawn from the discussion. All presentations (ppt) showed during the event are collected in Annex II. The report is to be distributed among the FOREU1 Alliances.

2. Forum Programme

Sustainability in a (post?) pandemic world: asking the right questions on the role of Universities in R&I today.

1st TORCH Annual Open Forum. March 2, 2022 (online). Host: Eötvös Loránd University Budapest.

10:00 - 10:30 | Opening ceremony / Welcome address

Presenter: Prof. Enikő Magyari. Eötvös Loránd University.
Speakers:

- Prof. László Palkovics. Minister of Innovation and Technology, Hungary (video message).
- Prof. László Borhy. Rector, Eötvös Loránd University.
- Prof. Jordi Garcia. Vice Rector for Research, University of Barcelona.
- Prof. Stefan Müller-Stach. Vice President for Research, JGU Mainz. Read by Dr. Nicole Birkle, FIT FORTHEM Managing Coordinator (FORTHEM Alliance).

10:30 - 11:30 | Plenary session. R&I trends in (post?) pandemic scenario

Presenter: Prof. Enikő Magyari. Eötvös Loránd University.
Speakers:

- Ms. Apostolia Karamali. Head of Unit, Directorate-General for Research and Innovation, European Commission.
- Dr. Csilla Stéger. Manager at PwC Hungary Ltd. Government Advisory, Division responsible for HE–government relationships.
- Prof. Joan X. Comella. Director, Vall d'Hebron Institute of Research (VHIR). TORCH Quality Committee.
- Prof. Jordi Garcia. Vice Rector for Research, University of Barcelona.

Rapporteur: Dr.Jaime Llorca. TORCH Project Manager, University of Barcelona.

11:30 - 11:45 | Short break

11:45 - 12:30 | Panel session. European universities: Towards a reform of the research assessment system

Presenter: Prof. Enikő Magyari. Eötvös Loránd University.
Chair: Ms. Doris Alexander. Associate Director of European Engagement, Trinity College Dublin.
Speakers:

- Prof. Ludovic Thilly. University of Poitiers. Executive Board Chair, Coimbra Group.
- Dr. Anouk Tso. Director of International Affairs, University of Amsterdam (EPICUR Alliance).
- Dr. Tullio Vardanega. University of Padova. Research Project Supervisor (ARQUS Alliance).
- Prof. Frank Miedema. Vice Rector for Research, Utrecht University (CHARM-EU Alliance).

Rapporteur: Dr. Jaime Llorca. TORCH Project Manager, University of Barcelona.

12:30 - 13:30 | Lunch Break

13:30- 15:00 | TORCH Clusters. Crosscutting conversations across R&I topics and sustainability

· Cluster 1: R&I Common Science Agenda and European Universities

Chair: Dr. Fiona Killard. Head of Strategic Research Development, Trinity College Dublin.
Speakers:

- Prof. Albert Diaz. Director of the Institute of Complex Systems, University of Barcelona (CHARM-EU Alliance).
- Prof. Katarzyna Molek-Kozakowska, University of Opole. Dr. Maria Dolores Pitarch, University of Valencia (FORTHEM Alliance).
- Dr. Nihan Yildirim, Dr. Emrah Acar, Dr. Hür Bersam Sidal Bolat. Istanbul Technical University (EELISA Alliance).

Rapporteur: Dr. Jaime Llorca. TORCH Project Manager, University of Barcelona.

· Cluster 2: Business & Society and academic cooperation

Chair: Ms. Inese Rozensteine. TORCH Project Manager, University of Montpellier.
Speakers:

- Prof. Benoît Bardy. University of Montpellier, BEAT HEALTH Project (CHARM-EU Alliance).
- Dr. Zoltán Urbányi. Biotechnology Research Department, Eötvös Loránd University (CHARM-EU Alliance).
- Prof. Anicet Blanch. University of Barcelona, Bluephage (CHARM-EU Alliance).
- Dr. Rasa Viederyte. Klaipeda University, Manager of EU-CONEXUS Research for Society (EU-CONEXUS Alliance).
- Dr. Josep Bordonau, Dr. Juan Jesús Pérez, Dr. Cristina Aresté. Polytechnic University of Catalonia, UPC-BarcelonaTech (Unite! Alliance).

Rapporteur: Ms. Eléa Pippo. TORCH Project Manager, University of Montpellier.

· Cluster 3: Public engagement

Chair: Dr. Marjanneke Vijge. Copernicus Institute of Sustainable Development, Utrecht University.
Speakers:

- Dr. Annisa Triyanti. Copernicus Institute of Sustainable Development, Utrecht University (CHARM-EU Alliance).
- Dr. Kate Morris. Head of Campus Engage, Irish Universities Association.

· Dr. Troels Jacobsen. Director of Innovation and societal engagement, University of Stavanger (ECIU Alliance).
· Dr.Tomas Berkmanas. Faculty of Law, Vytautas Magnus University (T4Europe Alliance).

Rapporteur: Dr. Kirsten Hollaender. TORCH Project Manager, Utrecht University.

· Cluster 4: Cross-cutting principles to address a transformative R&I Agenda

Chair: Prof. Gemma Marfany. Rector Delegate for Scientific Dissemination, University of Barcelona.
Speakers:

· Prof. Lorraine Leeson. Associate Vice Provost for Equality, Diversity and Inclusion, Trinity College Dublin (CHARM-EU Alliance).
· Dr. Till Ansgar Baumhauer. Hochschule für Bildende Künste Dresden, EU4ART_differences Project Speaker & Leader (EU4ART Alliance).
· Dr. Mireille Sthijns, Maastricht University. Dr. Nuria Bautista Puig, Carlos III University of Madrid (YUFE Alliance).

Rapporteur: Mr. Jędrzej Olejniczak. University of Wroclaw.

15:00 - 15:30 | Short break

15:30 - 16:30 | Panel session. Open Science

Presenter: Dr. Ferenc Takó. Head of International Strategy Office, Eötvös Loránd University.
Chair: Dr. Aczél Balázs Zoltán. Vice Dean of Research, Faculty of Education and Psychology, Eötvös Loránd University.
Speakers:

· Dr. Ignasi Labastida. Rector's Delegate for Open Science, University of Barcelona (CHARM-EU Alliance).
· Dr. Mihnea Dobre. Humanities Division, University of Bucharest (CIVIS Alliance).
· Prof. Roberto delle Donne. University of Naples Federico II (AURORA Alliance).

Rapporteur: Ms. Anikó Gál-Bélteki. TORCH Internal Coordinator, Eötvös Loránd University.

16:30 | Closing words

Presenter: Dr. Ferenc Takó. Head of International Strategy Office, Eötvös Loránd University.
Speaker:

· Prof. Joan Guàrdia Olmos. Rector, University of Barcelona.

3. FORUM DEBRIEF

The section below shows a brief summary of the meeting development, with the minutes of all sessions and presentations.

3.1 Open Ceremony / Welcome Address

Representatives of different institutions' leadership (CHARM-EU Alliance: ELTE and UB; FORTHEM Alliance: JGU Mainz) open the event.

> OPENING CEREMONY / WELCOME ADDRESS
>
> Presenter: PROF. ENIKŐ MAGYARI. Eötvös Loránd University.
>
> Speakers:
>
> · PROF. LÁSZLÓ PALKOVICS. Minister of Innovation and Technology, Hungary (video message).
>
> · PROF. LÁSZLÓ BORHY. Rector, Eötvös Loránd University.
>
> · PROF. JORDI GARCIA. Vice Rector for Research, University of Barcelona.
>
> · PROF. STEFAN MÜLLER-STACH. Vice President for Research, JGU Mainz. Read by DR. NICOLE BIRKLE, FIT FORTHEM Managing Coordinator (FORTHEM Alliance).

The inaugural ceremony is presented by **Prof. Enikő Magyari** (ELTE), and is opened by **Prof. László Palkovics** (Hungarian Minister of Innovation and Technology), who welcomes all participants and emphasizes the essential role the higher education institutions play in Hungary's strategy. In addition, he stresses the importance of cooperation between universities and research institutions and private companies, the academic staff mobility across Europe and the creation of international research networks, as well the Open Science and Responsible Research and Innovation practices to shape the future common R&I space.

ELTE's Rector, **Prof. László Borhy**, and UB's Vice Rector for Research, **Prof. Jordi Garcia**, greet all attendees and reflect on the CHARM-EU values and objectives, achieved through the valuable collaboration of the five partner universities. The TORCH project continues this fruitful cooperation, and has the ability to transform our institutions following its cross-cutting principles (Interdisciplinarity/Transdisciplinarity; Gendered Innovation; Ethics and Integrity in research), and its four transformational modules: Common R&I Agenda; Cooperation with Non-Academic Actors; Open Science Practices; Citizen Science and Public Engagement.

Finally, **Prof. Stefan Müller-Stach** (Vice President for Research at JGU Mainz), in a message read by **Dr. Nicole Birkle** (FIT FORTHEM Coordinator), welcomes all participants, in particular the Alliances

that joined the event, as sharing experiences and progresses among the European Universities represents a key aspect to stimulate the network advances.

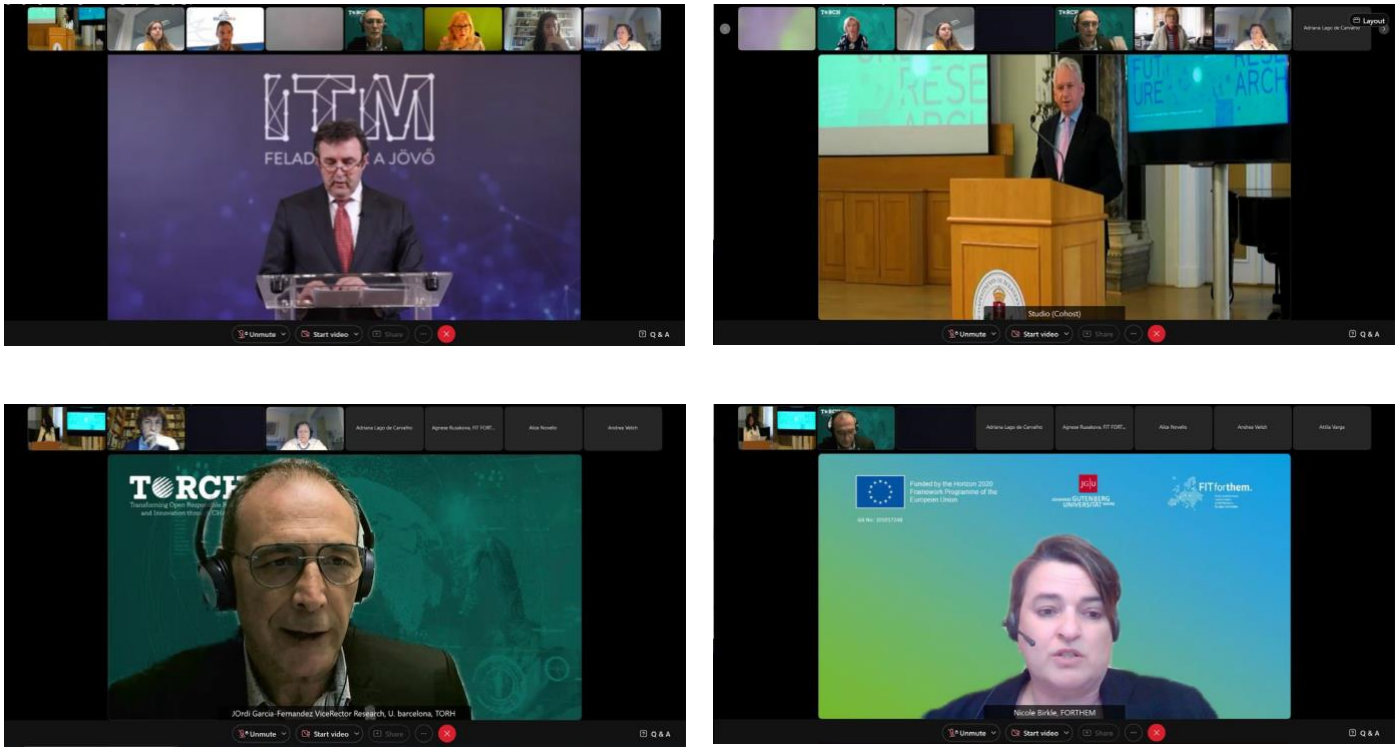


Figure 1. Open Ceremony. Speakers: Prof. László Palkovics (Hungarian Minister of Innovation and Technology); Prof. László Borhy (ELTE); Prof. Jordi Garcia (UB); Dr. Nicole Birkle (FIT FORTHEM).

3.2 Plenary Session. R&I Trends in (Post?) Pandemic Scenarios[2]

This introductory plenary session served to frame the topic: The R&I framework and the (post?) pandemic scenarios. Some current trends/strategic thinking on this topic (state of play and looking forward) were discussed. As well as what we are doing to advance this agenda and the role of the European Universities initiative and their SwafS projects.

PLENARY SESSION. R&I TRENDS IN THE (POST?) PANDEMIC SCENARIO

Presenter: PROF. ENIKŐ MAGYARI. Eötvös Loránd University.

Speakers:

- MS. APOSTOLIA KARAMALI. Head of Unit, Directorate-General for Research and Innovation, European Commission.
- DR. CSILLA STÉGER. Manager at PwC Hungary Ltd. Government Advisory, Division responsible for HE–government relationships.
- PROF. JOAN X. COMELLA. Director, Vall d'Hebron Institute of Research (VHIR). TORCH Quality Committee.
- PROF. JORDI GARCIA. Vice Rector for Research, University of Barcelona.

Rapporteur: DR. JAIME LLORCA. TORCH Project Manager, University of Barcelona.

The plenary session, entitled 'R&I Trends in the (Post?) Pandemic Scenario', was presented by **Prof. Enikő Magyari** (TORCH Project, ELTE).

Ms. Apostolia Karamali (Head of Unit, Directorate-General for Research and Innovation, European Commission) addresses the topics of the European Strategy for Universities, the new ERA and Innovation Policy, and the Horizon 2020[3].

The European Strategy for Universities[4,5] comprises four key objectives:

- Strengthen the European dimension in higher education and research. By bringing transnational cooperation to a higher level.

[2] Morning sessions recording available at: https://www.youtube.com/watch?v=UthRInHKvsA
[3] https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en
[4] https://education.ec.europa.eu/document/proposal-for-a-council-recommendation-on-building-bridges-for-effective-european-higher-education-cooperation
[5] https://education.ec.europa.eu/document/commission-communication-on-a-european-strategy-for-universities

· Consolidate universities as lighthouses of our European way of life. By: 1) strengthening quality and relevance for future-proof skills; 2) fostering diversity, inclusiveness, and gender equality; 3) promoting and protecting European democratic values.

· Empower universities as key actors of change in the twin green and digital transition. By developing skills, competences and technological innovation for the green and digital transition.

· Reinforce universities as drivers of Europe's global role and leadership. Universities are instrumental in building Europe's connection to the world.

The path towards a new European Research Area (ERA)[6] is based on:

· A pact for R&I. Setting out the fundamental R&I values and principles for the new ERA, the priority areas for ERA actions and the policy coordination mechanisms.

· ERA Governance. Responding to new ERA strategic objectives. Ensuring prioritized policy initiatives and translation into action through better coordination and engagement at all levels.

· ERA Policy Agenda. Designed to contribute to the priority areas from the Pact for R&I, setting out the voluntary ERA actions which are defined and coordinated at Union level in order to attain agreed outcomes.

The ERA Policy Agenda[7], focused on Research Careers, aims at deepening a truly functioning internal market for knowledge, via its Action 4: To Promote attractive and sustainable research careers, balanced talent circulation and international, transdisciplinary and inter-sectoral mobility across the ERA; and a set of foreseen activities.

The Innovation Policy establishes some intervention areas for further reflection, such as: Access to finance; Innovation divide; Talent; Framework conditions, including legislation; Innovation Ecosystem.

Dr. Csilla Stéger (Senior Manager at PwC Hungary) reflects on 'Today's Challenges and the need to transform higher education R&I', since R&I has become a key factor not only regarding economic growth, but also in our overall quality of life and survival. As a consequence, there is need to transform and reinvent the R&I as we know it today, via: Shorter R&I cycles; new ways of working; and better communication of outcomes.

[6] https://ec.europa.eu/info/research-and-innovation/strategy/strategy-2020-2024/our-digital-future/era_en
[7] https://ec.europa.eu/info/files/european-research-area-policy-agenda-2022-2024_en

PwC Hungary, in collaboration with Microsoft, has developed a vision for higher education transformation, and proposed a portfolio of related projects to make the vision come true, based on five pillars:

· Focus on students.

· Reimagine teaching and learning.

· Attract, retain and support excellent academic staff.

· Lead and foster research, development and innovation.

· Service-oriented and agile background processes.

In order to build a successful research ecosystem, it is essential that institutions identify, understand and address the challenges researchers face; as well as to provide those researchers with an end-to-end research career. In addition, a research strategy should be defined, to create well-structured comprehensive research offices and information systems.

Prof. Joan X. Comella (Director of the Vall d'Hebron Institute of Research) shares his thoughts on the many lessons we have learnt from the COVID pandemic that should illuminate our future and give raise to stronger collaborative research in Europe and globally. His speech addresses three main points: practical learnings on how we conduct research, considering actions we have taken and should continue doing; actions we put in practice and should stop doing or change the way we do them; and some general reflections on key issues to successfully face a crisis.

Practical learnings on how we conduct research (actions we have taken and should continue doing):

· Transnational exchange of data on patients' symptoms and responses to existing and novel medicines, to create an international shared database.

· De-bureaucratization of research. Authorization, funding, execution and transfer to the market to reduce the time of arrival to the patient. Without forgetting the quality standards particularly, the basis of the scientific method.

· Created open, international task forces to jointly tackle any scientific and health challenge.

· Opened agile communication channels with governmental institutions to facilitate the arrival of research needs (bottom-up) and the transmission of strategic objectives (top-down).

· Set up online, life sharing of the whole genome sequences of an organism in order to facilitate collaborative research and the development of a vaccine in a year.

· Facilitated and promoted public-private collaborative relationships to shorten arrival of new solutions to the market (increased openness and trust before an emergency).

· Promoted and trusted on new generational leaderships that have risen to the challenge.

· Transformed our ways of working and infrastructures into agile processes and organizational models ready to be easily adapted for the next challenge and to highly changing environments.

· Digitalized the way we work and we relate to each other (facilitation of meetings, facilitation of access to key people, facilitation of access to the patient).

· Migrated from a "just in time" to a "just in case" scenario to work in.

Actions we put in practice and should stop doing or change the way we do them:

· Failed to take pandemic prevention and preparedness seriously. No real contingency plans in place.

· Set up of a non-equitable access system for vaccines. Rich countries have surplus that should be shared.

· Applied very strict intellectual property regulations.

· Communicated what science does in a sub-optimal way.

· Science matters to take decisions but scientists are not the only relevant players. We should also consider governments and society.

General reflections on key issues to successfully face a crisis:

· Without a knowledge-based society we cannot face present and upcoming challenges and find innovative solutions to tackle them.

· Funding research an innovation in a wide range of themes and sectors is of paramount importance –we don't know where the next crisis is going to come from.

· Generous leadership and cross-sectorial collaboration are the bases for the advancement of research and innovation. Exemplified in the importance that the collaboration of clinicians, biologists, data scientists, mathematicians, engineers, informaticians, sociologists, economists (and others) had during the pandemics.

· We need a societal debate on the use of clinical data for the advancement of research and the improvement of health.

· We count on a generous society (industry, academia, citizens and individuals) that are ready to help philanthropically when needed.

· There is such thing as good competition. Under good competition, we get business and powerful people to compete for everyone else's sake (like in the case of the development of the vaccine).

· Market competition has benefits: it can yield lower costs and prices for goods and services, more choices and variety, greater efficiency and productivity, economic growth and development and more Innovation, such as helping accelerate the development of lifesaving vaccines, diagnostics and therapeutics. And also has pitfalls: It can induce people to be less cooperative, promote selfishness and free-riding and reduce contributions to public goods. Competition between countries can result in inequitable distribution of benefits.

Prof. Jordi Garcia (Vice Rector for Research, UB) closes the plenary session with a reflection on the previous speakers' presentations. He emphasizes the key role collaboration among institutions and researchers play in the new European higher education environment. This connects with the CHARM-EU aims and the TORCH Project values: Transdisciplinarity, Gendered Innovation, and Ethics and Integrity; which will reinforce our cooperation with non-academic actors, citizen science practices and public engagement, and the Open Science movement. Finally, he stresses the importance of young researchers in shaping the future R&I scenario.

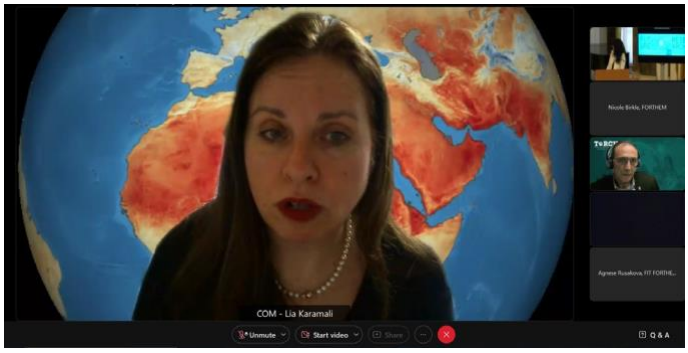


Figure 2. Plenary Session. R&I Trends in (Post?) Pandemic Scenarios. Speakers: Prof. Enikő Magyari (ELTE), Ms. Apostolia Karamali (EC Directorate-General for Research and Innovation), Dr. Csilla Stéger (PwC Hungary), Prof. Joan X. Comella (Vall d'Hebron Institute of Research), Prof. Jordi Garcia (UB).

3.3 Panel Session. European Universities: Towards a Reform of the Research Assessment System[8]

A reform of the research assessment system for research, researchers and institutions to improve their quality, performance and impact was called out as a priority area for joint action in the ERA policy agenda 2022-2024 which was approved as part of the Council conclusions on the future government of the ERA on 26th November 2021. This session discussed the rationale, the proposed approach and principles and work to date, analyzing the challenges and benefits to reforming such a multi-actor system to support a diverse range of outputs, activities and career directions. The panel also looked at the role that the European Universities initiative can play in driving such reform and considered whether there are benefits for teaching and other activities outside of research.

PANEL SESSION. EUROPEAN UNIVERSITIES: TOWARDS A REFORM OF THE RESEARCH ASSESSMENT SYSTEM

Presenter: PROF. ENIKŐ MAGYARI. Eötvös Loránd University.

Chair: MS. DORIS ALEXANDER. Associate Director of European Engagement, Trinity College Dublin.

Speakers:

· PROF. LUDOVIC THILLY. Executive Board Chair, Coimbra Group.

· DR. ANOUK TSO. Director of International Affairs, University of Amsterdam (EPICUR Alliance).

· DR. TULLIO VARDANEGA. University of Padova. Research Project Supervisor (ARQUS Alliance).

· PROF. FRANK MIEDEMA. Vice Rector for Research, Utrecht University (CHARM-EU Alliance).

Rapporteur: DR. JAIME LLORCA. TORCH Project Manager, University of Barcelona.

Prof. Enikő Magyari (TORCH Project, ELTE) presents the panel session 'European Universities: Towards a Reform of the Research Assessment System'.

Ms. Doris Alexander (CHARM-EU, TCD) chairs the session, and introduces the topic, briefly reviewing the recent development in the European higher education framework with regards to the researchers and institutions evaluation system reform. She mentions the challenges and benefits of such reform, and its linkages to the ERA strategy for 2022-2024 (Action 3). These changes need to have an effect on the whole research ecosystem, including R&I and higher education institutions, funders, and individual researchers. Gender equality and inclusiveness also must be part of this. She points out there has been a lot of consultation with the EC concerning this issue during the last year, and acknowledges the great work the European Universities have been doing through their SwafS projects, by addressing the strengthening of human capital and the rewards and incentives system,

[8] Morning sessions recording available at: https://www.youtube.com/watch?v=UthRInHKvsA

and also via other transformational modules (e.g. Open Science, academia-business cooperation), which are stepping stones to accomplish a successful reform of the assessment models.

Prof. Ludovic Thilly (University of Poitiers) presents the role and views of the Coimbra Group on reforming the research assessment system. Such revision entails a number of opportunities:

· 'European agreement and Coalition approach'. A timely initiative for universities to open the discussion on a possible reform of their research assessment.

· Bottom-up, flexible approach, commitment to concrete actions.

· A much-needed change: transition from quantitative to more qualitative assessment of research and researchers.

· An opportunity to address the 'disciplinary injustice', which has negative effects on disciplinary 'reputation', distribution of funds, development of recognized research, career opportunities…

· An opportunity to address gender bias in research.

· A good starting point for mainstreaming Open Science through an emphasis on quality and equity.

Some challenges are also foreseen, as for instance: Setting up an EU framework that respects the autonomy of institutions and allows for differences in implementation; a systemic transformation is required, which has to be implemented quickly and co-creatively, with all stakeholders, and with strong interdisciplinary leadership; the legal aspects inherent to any reform of research assessment systems; there will be no change if the reform has a negative impact on funding and careers; possible languages for/of publication and the role of English as a lingua franca are crucial issues to address.

Prof. Thilly lays out some possible solutions for the aforementioned challenges:

· Recognition of good examples/role models: willingness to sign such an agreement is led by example. The more organizations will be signing it and vocally support it, the more will be motivated to join: 'collective sense of belonging'.

· Monitoring mechanism to reflect and elaborate on how to equip academic communities and researchers with effective tools to participate, share their experiences and hold their organizations responsible.

· It is crucial that evidence-base changes be well-described, effectively communicated and widely accessible

· Dissemination and appropriation should go beyond signatories. Public debate, including early-stage researchers/future senior academics (and all other stakeholders).

· What is needed to ensure visibility and wide participation: A support instrument for the reform; a comprehensive informative web site; a platform where to discuss progress and share experiences.

· Structured support ¡: setting up a “bank of experts”, a knowledge bank of training materials; education and training on open science…

· Incentives: e.g. target & performance agreements, third-party funding…

· Links to other frameworks (e.g. HRS4R, European Competence Framework for Researchers, etc.).

· Target researchers at all career stages (not just early career) to have a systemic impact (role of trainers and evaluators).

The expectations from the Coimbra Group could be summarized in getting more details on the European agreement; on some sort of international alignment with the rest of the world; and reaching an agreement that should allow signatories to integrate previous successful activities.

Dr. Anouk Tso (University of Amsterdam, EPICUR Alliance) presents the Researcher Assessment Framework, EPIQAssess, developed by EPICUR. The main objective is to create proof-of-concept for a holistic, inter- and transdisciplinary approach for collaborative research with and for a European society driven by early career researchers, by introducing a roadmap comprising two core elements:

· Three experimental collaborative formats: EPICommunity, EPIClusters, EPIConnect.

· A set of tools to support New Ways for Researcher Assessment: EPIQAssess, EPIGame.

European Universities should create attractive, creative, safe and sustainable academic homes for their most valuable resource: their human capital. However, current research and staff assessment models are not sufficiently catering for value performance or acknowledgement of competencies and skills. Thus, there is a demand for practical models to help universities achieve these objectives.

EPIQAssess characteristics can be summarized through some key features: it constitutes a practical tool; builds on robust analysis of policy papers; has an actionable, flexible, and dynamic approach. Its guiding principles are: Researcher perspective; Entire career life cycle; multi-dimensional; quantitative and qualitative criteria; adaptable to all disciplines. The next steps foresee its experimentation at four levels:

· Deploy framework in online community: EPICUR as a testbed.

· Institutional transformation: EPICUR member universities.

· Structural impact: Could it be take-up by peer Alliances?

· Proactively influencing policy: Input to EC coalition approach.

Dr. Tullio Vardanega (University of Padova, ARQUS Alliance) introduces ARQUS R&I project, and describes its advances concerning the research evaluation models, as a result of a joint reflection from the partner institutions. The goal being to help make research assessment practices fitter to recognize, retain, and attract top talent. Firstly, the dominant criteria (currently being phased out?) have serious flaws:

· Slanted inward (peer only), single-sided (quantitative), impersonal (outsourced). Also, are specific types of publications the sole goal of research work?

· Scarcely apt to capture the diversity of research work and products, and to relate to the world outside.

The focus must be put in sustaining practices that widen the recognition of research products (Open Science) and modes of delivery (public outreach, knowledge transfer). As the main outcome, five questions to governing bodies of institutions are posed:

· How far do your research evaluation criteria capture the diversity of research disciplines, products, and cultures?

· Is the transition to Open Science a strategic priority for you?

· Do you contemplate the adoption of "narrative CV"?

· Do you contemplate the adoption of personalized objective-based evaluation attached to career- or salary-grade progression?

· Is your research-product repository adequate for emerging needs?

Prof. Frank Miedema (UU, CHARM-EU Alliance) reflects on the previous speakers' points, and insists on the importance of exchanging information on the actions we are taking in our institutions, as we are currently doing within the Alliances and LERU. Reforming research evaluation, recognition and rewards is needed to change science to the way we want science to operate. It is essential to keep in mind the higher purpose we want to achieve: more impact for society. In that sense, we need to reward researchers for spending time in building a relationship with society, as for instance, UU introduced in its Open Science strategy[9].

The evaluation system should get over old hierarchies that favored some disciplines over others (e.g. social sciences and humanities), and also flawed dynamics between the North and global South. In order to change the assessment system, we must keep in mind what is the strategy of our units,

[9] https://www.uu.nl/en/research/open-science

departments, etc. What do we want to achieve with our research, what is our mission, and what do we want to deliver to society. It is all about strategy, not only for young researchers' careers, but also for senior staff and institutional leadership, because if we change the evaluation method, we will be changing the reputation and the funding allocation system. Thus, basically, we will be changing the whole idea of what science is about. This process is, in a sense, a power game, a social and political game, since most of the resistance comes from those who might lose with the change.

Research evaluation is extremely context-dependent, and as such all types of science must be recognized and acknowledged. It is also about equality, diversity and inclusion, as diverse scientific disciplines need to be involved in producing sound advances and significant knowledge. Finally, it should not only be considered a European movement, but a global one.

After the presentations, a short interval for debate is opened, to discuss the need of connectivity (for research assessment, and across the European agenda), so that we can ensure the needs of all member states, institutions, and actors are taken into account.

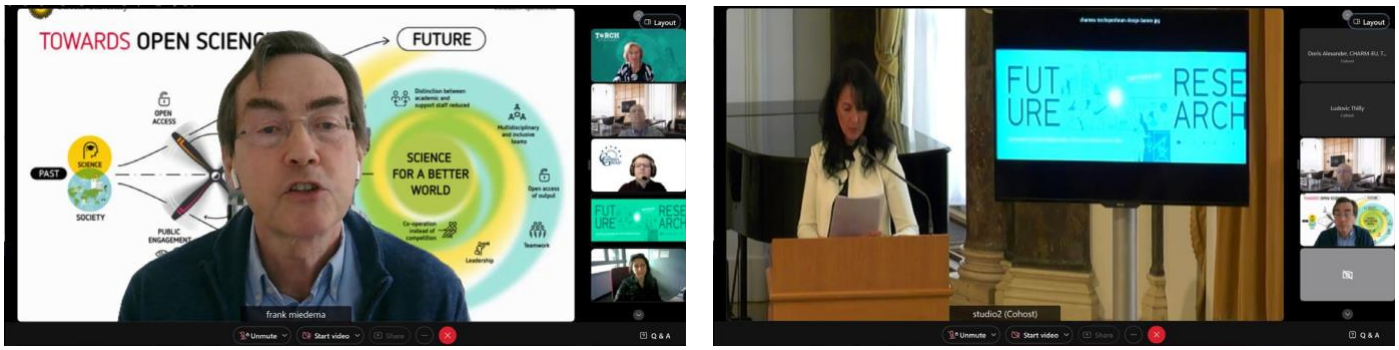


Figure 3. Panel Session. European Universities: Towards a Reform of the Research Assessment System. Speakers: Ms. Doris Alexander (TCD); Prof. Ludovic Thilly (University of Poitiers); Dr. Tullio Vardanega (University of Padova); Prof. Frank Miedema (UU), Prof. Enikő Magyari (ELTE).

3.4 TORCH Clusters. Crosscutting conversations across R&I topics and sustainability

These sessions sought to combine R&I impact/actions and sustainable factors. In order to enhance policy coherence by promoting systemic approaches across the same challenges (SDGs/European Green Deal) while presenting main progresses on the TORCH project and other Alliances' SwafS projects. It was divided into four parallel thematic clusters (linked to different transformational modules) to cover diverse topics on R&I using the European alliances experiences as a reference point.

Each group was led by a chair (to guide the session and discussion, providing questions and moderating the audience's participation), and had a rapporteur (that took notes, describing the content of the session, including results and challenges coming out of the debate).

TORCH Cluster 1: R&I Common Science Agenda and European Universities[10]

This session went over the methodology and sharing preliminary results, learning and experiences from EU alliances in its work on identifying research strongholds and using bottom-up protocols to compare institutional priorities and good practices.

Each speaker had a 10-15 minutes PowerPoint presentation followed by a discussion and ideas exchange with all participants.

> Cluster 1: R&I Common Science Agenda and European Universities
>
> Chair: Dr. Fiona Killard. Head of Strategic Research Development, Trinity College Dublin.
>
> Speakers:
>
> · Prof. Albert Diaz. Director of the Institute of Complex Systems, University of Barcelona (CHARM-EU Alliance).
>
> · Prof. Katarzyna Molek-Kozakowska, University of Opole. Dr. Maria Dolores Pitarch, University of Valencia (FORTHEM Alliance).
>
> · Dr. Nihan Yildirim, Dr. Emrah Acar, Dr. Hür Bersam Sidal Bolat. Istanbul Technical University (EELISA Alliance).
>
> Rapporteur: Dr. Jaime Llorca. TORCH Project Manager, University of Barcelona.

The session, chaired by **Dr. Fiona Killard** (TORCH Project, TCD), comprised presentations on the advances towards a common scientific agenda from three Alliances (CHARM-EU, FORTHEM, EELISA), in their SwafS projects framework.

[10] Session recording available at: https://www.youtube.com/watch?v=Cr47EQn5rDo

Prof. Albert Diaz (UB) presented TORCH's experience and progresses to date. TORCH's WP4, entitled 'Common Science Agenda', is focused on developing a list of potential research challenges CHARM-EU could tackle within each of its thematic areas, which could be developed further as pilots during the second half of the Project. These challenges, connected to the UN Sustainable Development Goals (SDGs), acknowledge the five institutions research interests, as well as their strengths and complementarities, and takes into account the state of the art, the financing mechanisms, barriers, and common infrastructures needed to implement them.

In order to achieve the WP4 goals, several sequential tasks have been carried out. First, a preliminary analysis on specialization and complementarities, mainly based on bibliometrics, was developed as an initial step. This study helped identify the main research trends within the five universities.

The second step focused on conceiving a list of potential research challenges the Alliance could develop further as pilots during the second half of the Project, from a multi -disciplinary, multi-university and gender-balanced perspective, combining curiosity-driven and utility-driven research, with a clear view on their societal impact. A multi-step participatory process was carried out, which was supported with a bibliographic analysis that helped establish the current state of authorship networks among the Alliance. The participatory process involved 389 researchers in its first phase, and led to the definition of three target SDGs, considering also each partner research priorities: SDG3 - Good health & Well-Being; SDG10 - Reduced Inequalities; SDG13 - Climate Action. A subsequent participatory step facilitated the organization of three SDG-driven focus groups, in which around 100 researchers participated, to settle on the topics that could be developed further as challenges. Six research challenges were proposed by the diverse researchers' sub-groups.

As an added value of the tasks carried out within this process, an interactive tool based on bibliographic analysis of current authorship networks was developed. This instrument will be available for the academic community of the CHARM-EU universities, and would help uncover researchers with common interests based on their scientific production.

The third and final step constituted an inquiry on financing mechanisms, barriers and existing infrastructures for the common scientific agenda to be implemented, and, more specifically, for the research challenges set out during the previous task to be pursued further.

Prof. Katarzyna Molek-Kozakowska (University of Opole) and **Dr. Maria Pitarch** (University of Valencia) presented FIT FORTHEM, and the steps and methods to collect data for a joint R&I strategy and sharing of resources within the FORTHEM Alliance.

The co-creation of common long-term R&I agendas comprised two steps:

· A SWOT analysis of the FORTHEM R&I capacities (involving focus groups and interviews with research administrators and experts).

· A survey on institutional R&I policies and practices in European Universities.

The aim was to measure awareness of institutional practices related to: Internationalization of Research; Open Science; Co-creation with external stakeholders; Science communication; Human capital. As a result, the Alliance published a book on existing best practices, including 86 good practices[11].

Concerning the connection, access and sharing of R&I resources, several steps were taken:

· Assessing the possibilities for linking of digital content for virtual access to research resources. Survey designed for, presented to, discussed with and filled in by the partners.

· Interim results. Identification of high potential research groups in SSH and PE/LS. Selection of Collections and Cultural Heritage items at partners' disposal

· Sharing the results. Bootcamp "The Social Sciences and Humanities - Strongholds of the FORTHEM Alliance!". Meeting for the next FORTHEM funding application. FORTHEM Newsletter. General Assembly meeting.

The speakers finalized their presentation by sharing results regarding existing intersections among different research groups within FORTHEM in diverse research fields, such as:

· Social Sciences and Humanities: Individuals, markets and organizations; Social policies, welfare, work and employment; Language learning and processing; Cultures and cultural production; Human mobility, environment and space.

· Physics and Engineering: Nanophysics; Physical and analytical chemical sciences; Synthetic chemistry and materials; Earth system science.

· Life Sciences: Bioinformatics and computational biology; Physiology in health, disease and ageing; Food biotechnology and bioengineering.

The third presentation was by **Dr. Nihan Yildirim**, **Dr. Emrah Acar**, and **Dr. Hür Bersam Sidal Bolat** (Istanbul Technical University), introducing the EELISA Alliance and their SwafS project InnoCORE[12]. The project focuses on the R&I dimension of the Alliance in a three-step plan:

· Make researchers and innovators know each other, create spaces for dialogue with citizens and with non-academic actors and set up a portfolio of shared scientific infrastructures; and a new networking platform that will give them access to the common research strategies.

[11] FORTHEM Alliance Universities' Selected Good Practices in R&I Towards a European University: https://www.forthem-alliance.eu/about-us/news/detail-view/t/70450/
[12] EELISA InnoCORE: https://eelisa.eu/eelisa-innocore/

· Foster and support the development of joint R&I actions and the creation of new structures (research groups, clusters, joint labs, start-ups, scientific parks).

· Optimize the outreach of R & I actions, maximizing their impact and promoting the knowledge exchange.

The InnoCORE R&I strategy for European Universities is based on: the collective nature of the EELISA Alliance; acting with a shared vision a collaborative strategy development process; comprehensive strategic understanding; attention to identifying intra- and inter-organizational resources; emphasizing the complementarities; detecting and unleashing synergies/complementarities among alliance members; combining strategic research lines and dimensions of the R&D strategy. In order to achieve these goals, a top-down and bottom-up approaches are combined.

A number of actions have been carried out within this task:

· Mapping of Strategic Research Areas of all EELISA Partners.

· Analyzing, cataloguing, and matching existing resources of the alliance members both among and across the network.

· Map existing research infrastructures and facilities: Align existing infrastructures to optimize individual member investments and identify potential areas of joint investments.

· Strengthen the organizational capital of the alliance by linking EELISA community challenges.

· Embed the novel value-added activities to the existing alliance practices and extend the social capital of the alliance by coordinating its activities across the FOREU2 network.

Two pilot areas of research on grand challenges, and 11 strategic research areas have been identified. Pilot areas: 1) Smart, Green and Resilient Cities; 2) Sustainable and Smart Industries. Strategic Research Areas: 1) Artificial intelligence; 2) Health; 3) Digital; 4) Culture, creativity and inclusive society; 5) Climate, energy and mobility; 6) Connectivity; 7) Food, bioeconomy, natural resources, agriculture and environment; 8) Social sciences and humanities; 9) Advanced material science and engineering; 10) Smart industry and space technologies; 11) Natural sciences.

These are explored according to the intervention areas of six clusters of the EU Horizon 2030 programme, as empowering research and innovation in these strategic areas within EELISA InnoCORE R&I strategy will serve the mission of contributing to a sustainable, digital and inclusive Europe. The linkages with the UN SDGs have also been explored.

The speakers' final remarks focused on the future directions of the project, in particular related to the mapping of strategic research areas within the Alliance, and involving:

· Analysis, and enhancement of Labs and facilities as infrastructures.

· Platform and Database creation on researchers, communities and clusters.

· Research Output and Efficiency Analysis: The research outputs of EELISA Innocore partners per capacity measures.

· EEELISA InnoCORE strategy will leverage the academic corporate collaboration and high impact competency of partners for creating industry linkages towards the mission and performance improvement in strategic research areas with industry collaboration.

· Additional efforts for providing a higher level of economic impact. R&I strategy also contribute to expanding funding sources.

A brief dialogue followed the presentations, focused on the challenging tasks developing a common R&I agenda across European Universities entail, as well as on different methods and tools for bibliographic analysis on institutions' collaboration and strengths.

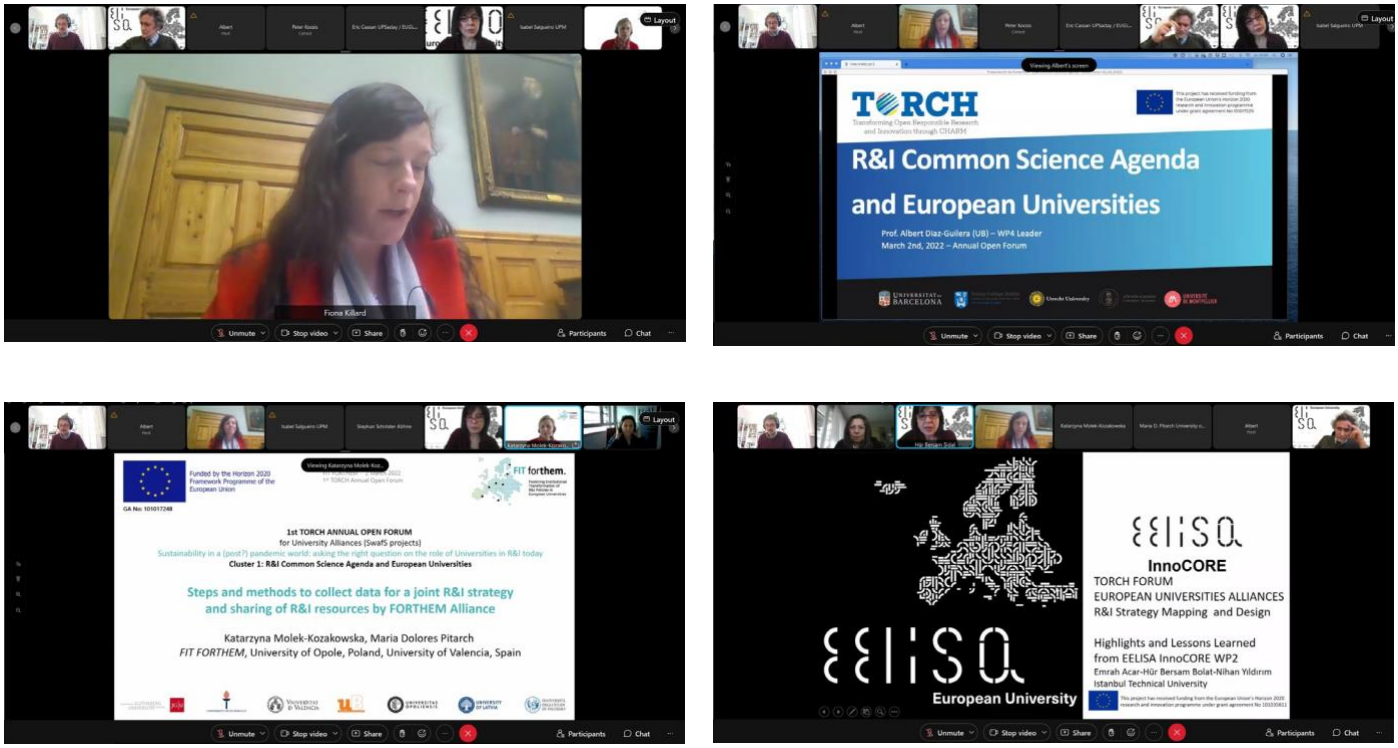


Figure 4. TORCH Cluster 1: R&I Common Science Agenda and European Universities. Speakers: Dr. Fiona Killard (TCD); Prof. Albert Diaz (UB); Dr. Katarzyna Molek-Kozakowska (University of Opole); Dr. Maria Dolores Pitarch (University of Valencia); Dr. Nihan Yildirim, Dr. Emrah Acar, Dr. Hür Bersam Sidal Bolat (Istanbul Technical University).

TORCH Cluster 2: Business & Society and Academic Cooperation[13]

The objective of the session was to share best cases from universities on collaboration between business and university or on spin-off creation. A few discussion questions were laid out prior to the meeting, in order to steer the conversation:

- Based on these good experiences/best cases, how to go beyond and improve even more the cooperation between academia and Business and Society?
- How did the 2 years of sanitary crises impact this cooperation? (Share positive elements).
- How to go beyond national borders and create a common way of cooperation between academia in the EU and business?

Each speaker had a 10-15 minutes PowerPoint presentation followed by a discussion and ideas exchange with all participants.

> Cluster 2: Business & Society and academic cooperation
>
> Chair: Ms. Inese Rozensteine. TORCH Project Manager, University of Montpellier.
>
> Speakers:
>
> - Prof. Benoît Bardy. University of Montpellier, BEAT HEALTH Project (CHARM-EU Alliance).
> - Dr. Zoltán Urbányi. Biotechnology Research Department, Eötvös Loránd University (CHARM-EU Alliance).
> - Prof. Anicet Blanch. University of Barcelona, Bluephage (CHARM-EU Alliance).
> - Dr. Rasa Viederyte. Klaipeda University, Manager of EU-CONEXUS Research for Society (EU-CONEXUS Alliance).
> - Dr. Josep Bordonau, Dr. Juan Jesús Pérez, Dr. Cristina Aresté. Polytechnic University of Catalonia, UPC-BarcelonaTech (Unite! Alliance).
>
> Rapporteur: Ms. Eléa Pippo. TORCH Project Manager, University of Montpellier.

TORCH WP5 identified different success stories coming from partner universities. These success stories include cooperation of researchers with different non-academic actors, creation of spin-offs/start-ups, boosting innovations and other activities. The objective of the cluster was to present these initiatives and demonstrate how they are contributing to sustainability in post pandemic world. During the cluster, three TORCH universities and two other European University Alliances were asked to present a success story of an academic spin-off creation or collaboration between a

[13] Session recording available at: https://www.youtube.com/watch?v=k7wWpHsjIGk

researcher/a research group/ a university and an enterprise that had an innovative and sustainable impact in addressing specific end-user needs or societal challenges, related to TORCH focus areas. To emphasize a focus on knowledge and technology transfer, each presentation could include an explanation and how the university's TTO has supported the project presented. The session is chaired by **Inese Rozensteine** (TORCH Project, UM).

Prof. Benoît Bardy (UM) presented the project BEAT HEALTH[14], a musical application for the rehabilitation of Parkinson's patients and the training of athletes. From 2013 to 2016, BeatHealth was a collaborative project (STREP) co-funded by the European Union under the Seventh Framework Programme (FP7). The project is one of the winners of the ICT 2013 Call 10 in the Challenge 5.1 (Personalized health, active ageing, and independent living). From 2017 to 2021, the project beneficiated from maturation funding with the support of the University of Montpellier and the SATT AxLR tech transfer society and the Region Occitanie.

The project resulted in an international patent and was laureate of several innovation competitions (for instance Companies on Campus from Montpellier University of Excellence, Time-to-market Factory from the SATT AxLR, Deep Tech Funds from BPI France). The objective of the Beat-Health project was to develop an intelligent smartphone application that guarantees optimal and personalized synchronization between the person's pace and the music. The application is connected to movement sensors on the person and sends the data to a computing server which in turn adjusts the rhythm of the music to optimize the person's movement, in a real-time dynamic feedback loop.

A study was conducted on the neurological mechanism that links movement and music. It found that music acts as a distraction from effort or suffering, and is a source of motivation. In fact, it acts as a natural synchronizer and helps to stabilize walking or running. Progress has been noted for Parkinson's patients, particularly in reducing the number of falls. A cognitive architecture was developed, including the synchronization algorithm, its customization according to the profile of the users (patients and athletes), and a smartphone application adapted to patients (BeatPark) and athletes (BeatRun) was developed. A dozen experiments were carried out with healthy volunteers and with patients suffering from Parkinson's disease, quantifying the interest and effectiveness of BEAT-HEALTH for rehabilitation and sport.

The project has resulted in twenty international publications and a patent. Given these encouraging results, a multi-center clinical study was undertaken to validate the device on a very large number of patients and athletes. The technology transfer to the medical and sports world has begun. During the summer 2021, BeatHealth SAS was created with seven associates. The society now employs 10 persons. The society commercializes five solutions for rhythmical abilities.

[14] Beat Health: http://www.euromov.eu/beathealth/homepage

To sum up, Prof. Bardy presented the keys elements of success for science-bases entrepreneurial project:

· Be open to innovation activities.

· Societal impact from first clinical trial results a clear push.

· Decisive and operational role of the SATT AxLR.

· Facilitating role of the University of Montpellier.

Prof. Anicet Blanch (UB) presented Bluephage[15], a biotechnological spin-off specialized in producing testing kits to identify fecal and viral indicators within water. They developed a new approach for analyzing coliphages as viral indicators of water quality.

Prof. Blanch started his presentation with key numbers to explain why microbial water quality assessment and monitoring is critical for water safety plans and sanitation safety plans. Indeed, bacterial indicators are limited and cannot detect the presence of viral pathogens, while coliphages can. He then presented what is coliphages and how to analyze them. Then, he presented the Bluephage approach and technology: a patented bacterial host strain for coliphages that turns its growing culture into blue color in presence of infective virus. The Bluephage method allows to provide results in a working-day on average six hours. They have decided to create a spin-off to transform and transfer knowledge to market, outside of the university at industrial level.

Prof. Blanch highlighted having a very good experience working with research groups, with the sharing and creation of new knowledge, the creation of a patent. He highlighted the importance of seed capital support and of competitive public funding to support valorization of public research and transfer to industrial level.

The research-based start-up has received several funding and awards from its constitution in 2017 up to now, for instance the Proof of Concept from the Bosch i Gimpera Foundation of the University of Barcelona in 2017, the SME Award from « Water Europe Innovation Award » in 2020, just to take a few examples. In addition, Bluephage has beneficiated from the European Commission funding 'Seal of Excellence' twice in 2020.

The third speaker was **Dr. Rasa Viederyte** (Klaipeda University, EU-CONEXUS Research for Society). She spoke on the subject 'Towards more efficient cooperation: First steps are done. What are the second ones?'. Her presentation focused on Innovation Roadmap for accessing innovation communities, mainly of the strategic steps to be done in order to get closer to business and society.

[15] Bluephage: https://bluephage.com/

As the EU-CONEXUS core thematic area is Smart Urban Coastal Sustainability, the presentation also shortly outlined collaboration strategic direction towards ports and cities. Additionally, she presented an example of Inobiostar[16], a spin-off from Klaipeda University, as part of EU-CONEXUS. This spin-off has developed an aerogel - a paper-based material that absorbs only oil and not water, and thus allows oil from the environment to be removed quickly, efficiently and in an environmentally friendly way. In 2020, they filed an EU patent. In 2021, the took part of ClimAccelerator, an accelerator programme for science, innovation and technology. The product launch is planned for October 2022, and the sale and marketing strategy and entrance on the market for 2023. The end-users of the product developed by Inobiostar are manufacturing, shipping industries, ship building industries.

Forthcoming, the spin-off will apply for Women Tech EU from the European Commission and the EIC-EIT Climate-KIC from the European Innovation Council, a call co-funded by the European Union.

Then, **Dr. Zoltán Urbányi** (ELTE) presented the very active and living collaboration between the two entities. There are four main fields of the ELTE-Richter collaboration:

· Common research projects.

· Common R&D grants.

· "Contract Research Organization" university as a service provider.

· Education

First of all, ELTE is a service provider to the company for developing analytic network and perform research tasks. Moreover, Richter Plc and ELTE University are working on a common research project currently in preclinical phase: ACE2-Fc to develop fusion protein for the treatment of COVID-19 disease. The project was initiated in March 2020 by ELTE and supported by the Hungarian Ministry of the Innovation and Technology. It involves ELTE, Gedeon Richter, University of Pécs and Immunogens Ltd. Finally, Richter Plc is involved in the education programmes of the ELTE university, notably with a Biotechnology Mcs Program, which train future talents for the Biopharmaceutical industry, internships, invited lecturers etc.

This presentation has allowed to present a multi-faced collaboration between the academia and an enterprise in various activities, to train students, conduct joint research and valorize public research in order to create goods and services useful for society in a pandemic scenario, such as COVID-19 treatment.

[16] Inobiostar: http://www.inobiostar.com/

The final speaker was a representative of UNITE![17], **Dr. Joseph Bordonau** (Polytechnic University of Barcelona) presented the UNITE! progress to create an "Open Innovation Community" within the consortium and to develop Regional Innovation Strategies to share the agendas with companies in three main areas of collaboration: Smart Specialization Strategies (S3), Lifelong learning, and Ethics in Sustainable Engineering. He highlighted the need for lifelong training in regions to upscale, reset and keep up-to-date skills.

The UNITE! Alliance has developed a classification grid to classify and rank their different partners and external actors to see which strategy they should follow to approach and manage them according to their profile. From this classification grid, different categories of actors (+450 actors) have been identified:

· Associations, Community and Coworking.

· Education and Research.

· Incubators, BICs, Accelerators and Science Parks.

· Investors.

· Public institutions to co-build the agenda.

· Trade Unions.

· Non-profit organizations can contribute thematically.

· Companies.

· Industry associations allow SMEs to be involved. Usually SMEs do not have the capacity to be involved so approaching industry associations is an effective way to include them.

Inese Rozensteine, chair of the session, suggested the speakers to answer one or more questions of their choice from the three proposed questions for discussion (see above).

Prof. Bardy was happy to underline the numerous similarities between the paths of the different speakers on public research valorization and transfer, similarities in the way to do things, even if coming from different countries. He votes for the European model to boost collaborations between academia and business and for more collaboration between European countries. He really appreciates the European Union context for collaboration, the mix of cultures and actors. The European Union context allows to bound together, learn together and create confidence. He believes that the European Commission Seal for Excellence is an excellent idea and he is in favor for more European mechanisms to push for collaboration between academia and business. Would also

[17] UNITE! University: https://www.unite-university.eu/

like to see more incentives to support scientists to engage in public research valorization and transfer. He gave the example of reducing the teaching time of lecturers-researchers being involved in a technology transfer process. To go beyond and improve collaboration between business, society and academia, Prof. Bardy calls for even more FACILITATION mechanisms from universities and local, national and European institutions.

Prof. Blanch deplores the lack of funding/budget accessible to support public research valorization and technology transfer. In addition, he notices that there are a lot of legislative limitations within Europe that limit models of transfer available and that sometimes result in brain drain, good scientists running away from the European stage and from the European market. Also, he notes that the DMOs are not always fitted for tech transfer.

Then, Dr. Viederyte presented four key elements in order to go beyond and develop more collaboration between business and academia:

· Focus on joint research and development projects.

· Focus on open access centers, capacities and resources.

· Strengthen Technology Transfer Offices and Centers.

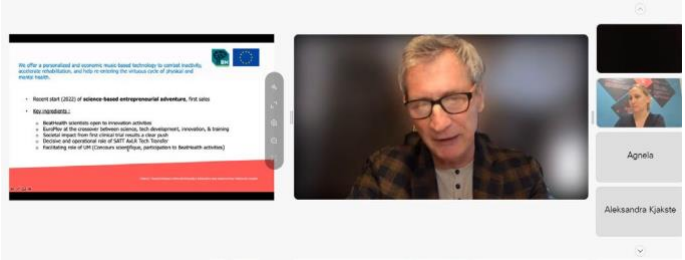
· Continuous communication and valorization of research, sharing good practices, more inclusive participation.

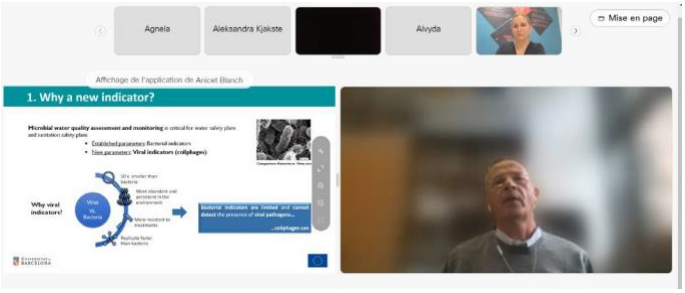
She also notes that it is essential for the universities, their scientists and research to be visible. Answering the second proposed question for discussion, Rasa Viederyte shared the positive elements that emerged from the Covid-19 pandemic and its impact on Research and Innovation. The Research and Innovation has beneficiated from the common positive outcomes of Covid-19 when it comes to working remotely, such as online meetings and other remote digital tools. The remote working has allowed research groups and universities to improve their capacities in transfer networks, sharing of common activities and strengthening remote cooperation. Finally, Rasa Viederyte gave some answer elements for the proposed third question on how to go beyond national borders to improve collaboration within the European Union and beyond. She believes that do so, we must start by working on building capacities with our internal existing resources and that we should work as a system. In order to enter new markets, we firstly need to identify the demand areas for such cooperation.

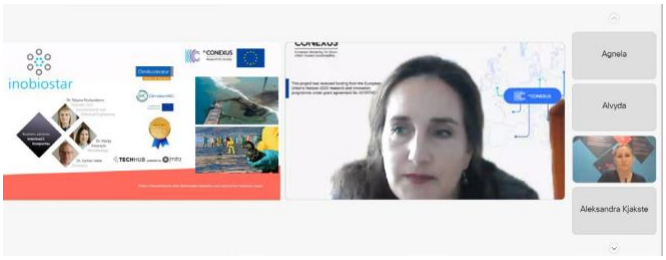
Dr. Bordonau shared to be very enthusiastic seeing and hearing about these success stories and believes that using novel effect is very useful to raise awareness about what some researchers are doing to valorize and transfer public research. Universities and European Alliances must all joint the common strategy lead by the European Commission. It is also important to define and use indicators to valorize research generated from the research groups and see is the market is effectively

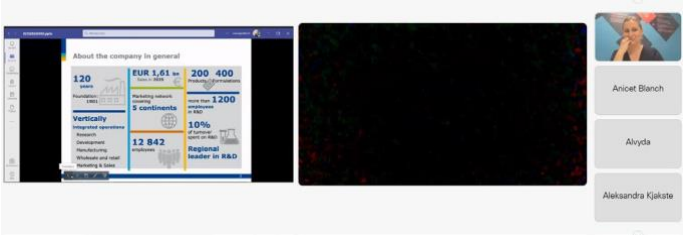
addressed. Finally, he highlighted the importance of pro-activity of researchers, research groups, universities and Alliances in showing and proving to society and politics that we are able as academic community to do applied research and provide useful and economically viable solutions, goods and services for a sustainable world. As a first start, a simplification of bureaucracy in the formalization of collaboration between scientists and enterprises would be welcome.

As a closing remark, it was very interesting to meet between European Universities Alliances and to share best cases. It has allowed us to see the similarities between our Alliances, between Business & Society and academic cooperation, and the paths of spin-off creation. The presentations have also shown the importance of having access to various source of funding at different stages of the process of research valorization and technology transfer. Speakers were also able to share some avenues for reflection to go beyond and strengthen theses collaborations, at different level (local, national, European or even international).









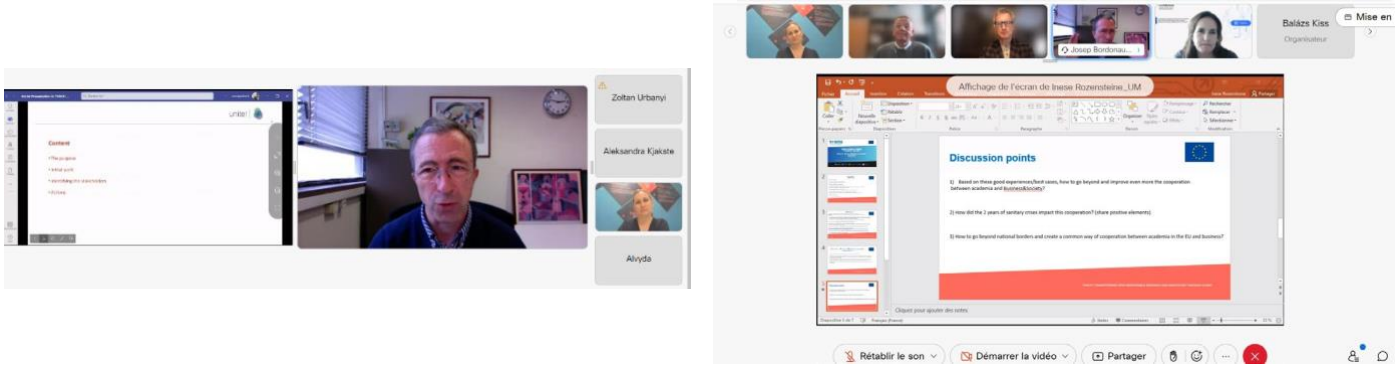


Figure 5. TORCH Cluster 2: Business & Society and Academic Cooperation. Speakers: Prof. Benoît Bardy (UM); Prof. Anicet Blanch (UB); Dr. Rasa Viederyte (Klaipeda University); Dr. Zoltán Urbányi (ELTE); Dr. Josep Bordonau (Polytechnic University of Catalonia); Inese Rozensteine (UM).

TORCH Cluster 3: Public Engagement[18]

Public engagement and transdisciplinary science are key in realizing Open Science and in engaging societal actors in the generation and use of (scientific) knowledge. Many universities around the globe, including European Universities, are navigating their way to develop an understanding of these concepts, and to integrate these into their core mandates and operationalize these in both research and education. What are the current modalities and good practices for stimulating public engagement and transdisciplinary science? And what are the incentives and disincentives in doing so? During this session, some of the good practices and (dis)incentives for public engagement and transdisciplinary science at the individual level, the university level, the systemic levels, and the level of stakeholders were discussed. A variety of speakers were invited representing these different levels and engaging in a discussion of existing opportunities and challenges, as well as to explore future steps to reach and/or push the boundaries of Open Science.

Each speaker had a 10-15 minutes PowerPoint presentation followed by a discussion and ideas exchange with all participants.

> Cluster 3: Public engagement
>
> Chair: Dr. Marjanneke Vijge. Copernicus Institute of Sustainable Development, Utrecht University.
>
> Speakers:
>
> · Dr. Annisa Triyanti. Copernicus Institute of Sustainable Development, Utrecht University (CHARM-EU Alliance).
>
> · Dr. Kate Morris. Head of Campus Engage, Irish Universities Association.
>
> · Dr. Troels Jacobsen. Director of Innovation and societal engagement, University of Stavanger (ECIU Alliance).
>
> · Dr. Tomas Berkmanas. Faculty of Law, Vytautas Magnus University (T4Europe Alliance).
>
> Rapporteur: Dr. Kirsten Hollaender. TORCH Project Manager, Utrecht University.

The session, chaired by **Dr. Marjanneke Vijge** (TORCH project, UU), which drew 21 participants, opened with a presentation on TORCH Work Package 7 on (dis)incentives for public engagement and transdisciplinary science" by Dr. Annisa Triyanti (TORCH project, UU), followed by two representatives of two other European University Alliances: Dr. Troels Jacobsen (ECIU Alliance, University of Stavanger), Dr. Tomas Berkamanas (ECIU Alliance, Vytautas Magnus University). The fourth presenter was Dr. Kate Morris (Irish Universities Association).

[18] Session recording available at: https://www.youtube.com/watch?v=SdF7twfpEHo

Dr. Annisa Triyanti (UU) shared results from WP7's empirical research at five TORCH partner universities focusing on (dis)incentives of public engagement and transdisciplinary science practices as part of the open science debate. TORCH WP7 on public engagement deals with practices for stimulating co-creation of challenge-driven research and innovation with societal stakeholders and furthering "democratization of science" by collecting and sharing existing practices. The research shows that recognition and rewards systems are key enablers for public engagement and transdisciplinary science. The team identified topics to address in the future such as harnessing open science as a way to become more inclusive and the need for institutional models to mainstream public engagement and transdisciplinary science within the larger open science movement. Universities can act as testbeds for innovation to support public engagement and transdisciplinary science and contribute to reducing inequalities.

Dr. Troels Jacobsen (University of Stavanger, ECIU Alliance) is also involved in the SwafS project SMART-ER, and explained their background and pointed to parallels with TORCH: both have work packages on Public Engagement and developing Research Strategies. ECIU has developed a joint long-term research strategy for SDG11. Their SMARTER- Academy addresses a.o. Public Engagement, citizen science, public engagement and Challenge based learning, focused on training and mutual learning of partners. Concerning incentives, they allocated seed funding to different research topics.

Dr. Tomas Berkmanas (Vytautas Magnus University, T4Europe Alliance) explained the approach of T4ERI (TRANSFORM4EUROPE Alliance). They have a strong participation from Eastern Europe. Also, they focus on Public Engagement, Open Science and Citizen Science. The latter is still not so well known or developed, for instance the national Bird Count day is a popular example, but approaches could be broader than this. During the discussion it became clear that activities in this area are more prominent in natural sciences and more difficult to be implemented on SSH fields, or even legal studies are more difficult to involve.

Dr. Kate Morris (Irish Universities Association) presented the Campus Engage programme of the Irish University Association which kicked off in 2014. One key element in their approach is to help researchers think backwards from the desired impact to identify steps how to achieve this. The many trainings they offer are growing in popularity, and to date more than 800 staff attended those with the latest one having a 400% over subscription. Their website is www.campusengage with many resources for how-to guides and policy briefings. Sharing successes and pioneering works, Dr. Morris also pointed to the need for knowledge transfer metrics. She shared their motto which is: If you want to go fast, go alone. If you want to go far, go together.

All participants agreed that it is challenging to sustain citizen engagement in projects beyond singular events. Also, they agreed that the terminology is understood and applied in diverse ways, concerning Public Engagement vs. Citizen Science.

Overall, there is a need to develop a more strategic approach for Public Engagement and citizen science, to date many activities are still fragmented and knowledge sharing is limited and although generally there is an agreement that this is important, there is no clear responsibility assigned. The participating experts indicated that the sharing of ideas and experiences in this pioneering field is very fruitful and would welcome more in-depth exchange in the future.

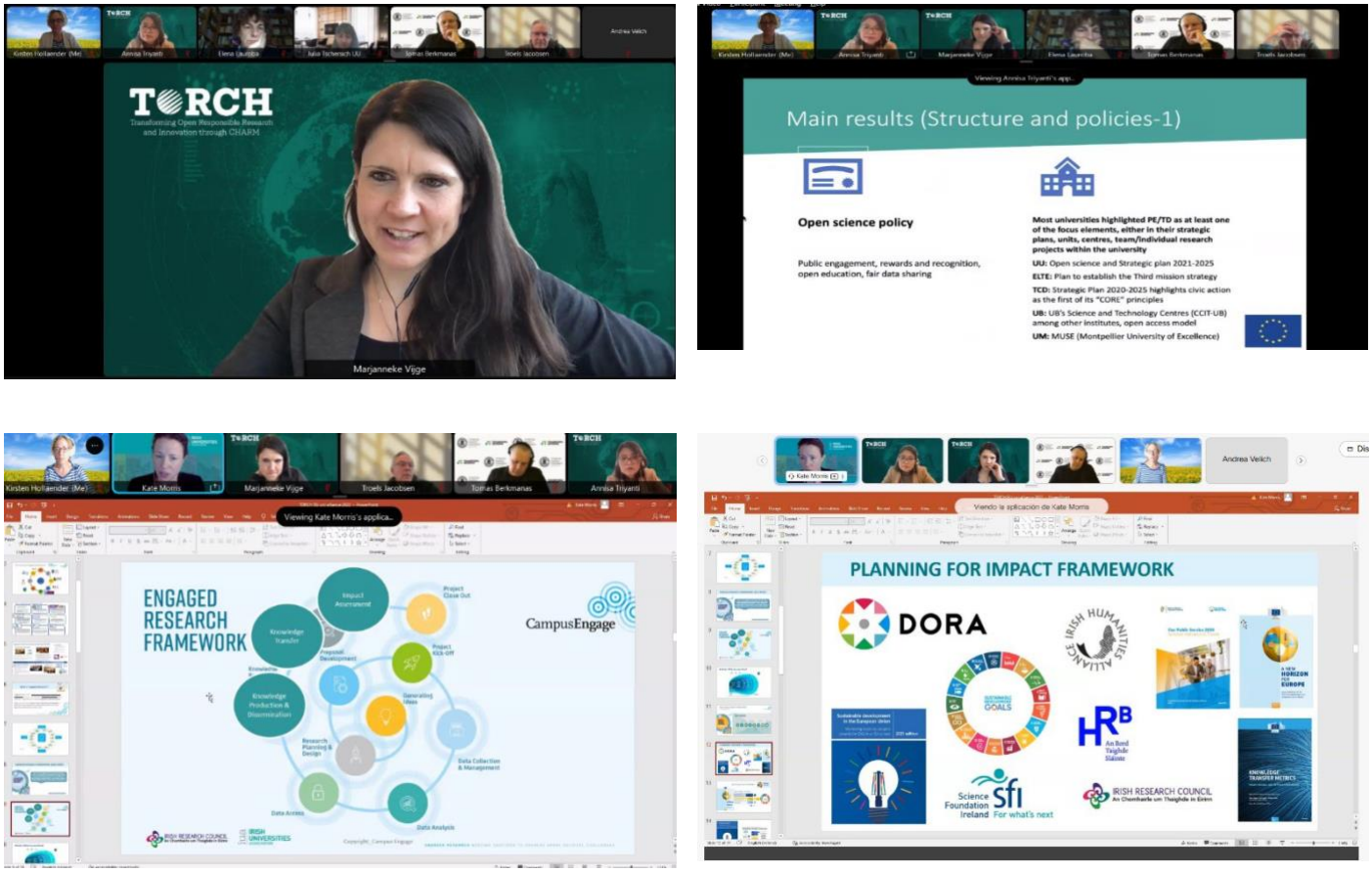


Figure 6. TORCH Cluster 3: Public Engagement. Speakers: Dr. Marjanneke Vijge (UU); Dr. Annisa Triyanti (UU); Dr. Troels Jacobsen (University of Stavanger); Dr. Tomas Berkamanas (Vytautas Magnus University). Dr. Kate Morris (Irish Universities Association).

TORCH Cluster 4: Cross-Cutting Principles to Address a Transformative R&I Agenda[19]

The TORCH Project aroused to strengthen CHARM-EU's academic and research networks by promoting a challenge-driven transformative agenda with a transdisciplinary and intercultural vision. At the Project's foundation lies Responsible Research & Innovation: three cross-cutting principles of Gendered Innovation, Ethics & Integrity, and Interdisciplinarity/Transdisciplinarity. These principles are strongly connected with four other areas of the Project: Common R&I agenda; Cooperation with Non-academic Actors; Open Science Practices; and Citizen Science & Public Engagement. The research the CHARM-EU alliance intends to strive towards will be based on the common strengths of the alliance institutions; it will involve cooperation with non-academic stakeholders; it will involve Open Science practices; and it will engage with citizen science and public engagement. The three cross-cutting principles are present throughout all these aspects of research. Developing a common European research framework in different countries and cultures and across a number of different disciplines requires addressing the challenges of ensuring ethically fully supported interdisciplinary research while incorporating cross-cutting principles analysis into all areas of R&I processes including career choices and opportunities as well as research project development and management. Having established our research strengths, we ask, how can we make our research even better?

Each speaker had a 10-15 minutes PowerPoint presentation followed by a discussion and ideas exchange with all participants.

Cluster 4: Cross-cutting principles to address a transformative R&I Agenda

Chair: Prof. Gemma Marfany. Rector Delegate for Scientific Dissemination, University of Barcelona.

Speakers:

- Prof. Lorraine Leeson. Associate Vice Provost for Equality, Diversity and Inclusion, Trinity College Dublin (CHARM-EU Alliance).
- Dr. Till Ansgar Baumhauer. Hochschule für Bildende Künste Dresden, EU4ART_differences Project Speaker & Leader (EU4ART Alliance).
- Dr. Mireille Sthijns, Maastricht University. Dr. Nuria Bautista Puig, Carlos III University of Madrid (YUFE Alliance).

Rapporteur: Mr. Jędrzej Olejniczak. University of Wroclaw.

[19] Session recording available at: https://www.youtube.com/watch?v=--L1IX07LkA

Prof. Gemma Marfany (TORCH project, UB) chaired the session, and introduced some topics that could steer the conversation after the presentations: Open Science and social responsibility of academics; gender gap/inclusivity; research integrity and ethics; multiculturality.

Dr. Till Ansgar Baumhauer (Hochschule für Bildende Künste Dresden, EU4ART) first discussed the background of artistic research. Artistic practice can be approached as research to provide insight and knowledge. The topic has been approached from a variety of perspectives and methodologies, some of which are nation-specific; with regard to that last point, not all degrees can be obtained everywhere, e.g. Saxony cannot award a PhD in fine arts. The scope of artistic research encompasses a wide range of art-related topics, i.e., fine arts, music, film, theater. The project involves a number of aspects, such as fostering artistic practice and research, Third Cycle at art universities, internationalization, inclusivity, managing employees and staff as well as third mission. The difficulties of the project include the peculiarities of the system of education for arts and the questions of ethics and integrity.

The speaker addressed the gender inequality issues, mentioning the gender equity plans and gender gap, as well as intersectionality. For Dresden it is 60-40 F-M students, whereas on the job market the proportion shifts to 30-70 F-M.

The speaker then mentioned that artistic research involves the debate of the notion of acceptance and visibility thereof, as well as the methodologies of teaching (them being process oriented) and the legibility of the artistic outcome. Finally, artistic research emphasizes the inter-/trans-disciplinarity and it is very successful in doing so; this facilitates the co-supervision across multiple disciplines, hands-on skill-focused teaching methodologies that involve the new digital technologies. Finally, he tackled the Western focus on aesthetics and artistic excellence and the questions of insight and knowledge production.

Prof. Marfany suggested that most of research is interdisciplinary, while research in Art often transcends that and facilitates the deeper, transdisciplinary level that involves more involved relationships between the disciplines.

Prof. Lorraine Leeson (TCD) discussed the ways in which we can make research easier in terms of collaboration, equity, ethics and multidisciplinarity in a European University Alliance

The speaker discussed the CHARM-EU R&I Dimensions Model: Inter/transdisciplinarity, Gender innovation and Ethics/integrity; all of those involve the research activity which is becoming professionalized, which thus comes with additional obligations (researchers have to engage with new types of activities). These encompass the transformational modules focused on shared strengths of the members of the alliance, such as the common R&I agenda. Engaging in this requires roadmaps and plans, which are fortunately available through project networks. The question

remains as to how to connect all those different, individually-developed pieces, develop joint policies etc.

Research ethics and integrity is an essential element of responsible R&I - making joint research easier requires streamlining the way in which implementing joint administrative processes are handled on the cross-institutional level. In terms of inclusiveness, gendered equality and other equality grounds the speaker stressed that it is important to bring together several lines of expertise; she also stressed that the research is what matters, rather than the background from which the researchers come from. Overall response to equality was also deemed inconsistent as the universities have very disparate responses to equality and its different facets, which should be streamlined.

In terms of inter/trans/multidisciplinarity, the process needs to be developed to facilitate these kinds of research. Most universities are mostly monodisciplinary and time-consuming cultural shifts are required to make the shift to inter/trans/multidisciplinary research projects happen.

The speaker also discussed the challenges and opportunities, stressing the consortium-wide gender equality plans & consortium good research practices.

Dr. Mireille Sthijns (Maastricht University) and **Dr. Nuria Bautista** (Carlos III University) introduced YUFERING: The YUFE model towards a community engaged model of R&I, a leading model of student-centered, open and inclusive European University open to all people; the project aims to create a university that emphasizes those features. YUFE is a top scoring alliance which has been created from bottom-up. The speaker introduced a number of YUFE projects: Erasmus+ EUI pilot, DIOSI (H2020), YUFERING focused on Europe-wide knowledge transfer and INNO4YUFE focused on innovation.

The presentation itself then focused on YUFERING, facilitating the creation of shared research structures, sharing best practices; the approach is to be scalable, effective and impactful. YUFERING encompasses a number of subtasks - mapping best practices in community-engaged research, YUFE-Wide analysis of existing R&I policies, support and decision making,

The presentation focused on the community-engaged R&I. The survey conducted indicated that over 50% of researchers thinks about the community engagement when considering what their job offers, stressing how important community-based research is. 67% respondents indicated the importance of involvement in community-based research; 45% participated in knowledge transfer activities. The first subtask mapped, defined and tested the approach, which defined the community engagement in research, resulting in the definition of community-engaged research and innovation. Community-based research and innovation's most important part is the social impact, active involvement of the affected community partners and implementation of the research outcomes and solutions.

The challenges for the projects involved logistics (time and funding), proper partners for collaboration as well as the principle-related issues. The future of the project is to map existing R&I policies, support and decision-making processes. Nuria Bautista Puig emphasized the importance of having units that facilitate inter-university communication on the matters pertinent to this. Dr. Sthijns stressed the fact that one of the main challenges in a university where research is student- and community-centered is to maintain high quality of the research performed, and they were addressing how to measure this quality.

The first part of the debate focused on Open Science and the way in which scientists and academics interact with the society. Much emphasis was put on the ways in which scientists can indeed interact with the society itself and how realistic these prospects are. It was stressed that since most universities are publicly funded, they are indebted to the society and need to repay that debt by properly disseminating the research results. Then, emphasis was placed on the fact that the researchers should not be overburdened by the formal responsibilities placed on them.

Prof. Leeson indicated the importance of open science and asked: is it right and fair that we expect everyone to engage with all these things. Dr. Sthiijns responded that it is important to tackle the societal challenges; there should be some shared ownership for the research for all parties involved. Dr. Baumhauer remarked that artistic practice cannot be replaced by society-related practice. They intend to open the discourse and go beyond the 'ivory tower', making the research achievements provide benefits to the society. Prof. Marfany indicated that the approach is very interesting but cannot be the only/unique component of the development of science. Universities face different challenges that go beyond just doing research for the sake of doing research. She asked as to how they envision the actual implementation of the project.

Dr. Baumhauer remarked that working with alliances causes certain things to happen, forcing negotiation, discussion and looking for intersections that allow for cooperation and joint work. It is hard to pin down how the developments will go but these are taking place nonetheless. Prof. Marfany remarked that the projects make scientists and universities a part of the community; being publicly tax-funded, universities have the obligation to "return the favor" to the community and disseminate it. Prof. Leeson responded to how funding bodies place too much different tasks on the shoulders of the researchers, forcing an individual to cope with a multitude of different issues; she emphasized how this can be alleviated by cooperation of many researchers who share the responsibilities.

Dr. Sthijns indicated that the societal challenge faced by the research groups varies across fields/disciplines; for some disciplines, it is easier to involve the non-academic actors in dissemination, for some in implementation - the process is strongly reliant on the type of research one is dealing with. Thus, it is important to consider this notion and to standardize how it is approach to a certain extent. Prof. Marfany responded stressing the point of Lorraine - not everyone can be good at everything and thus the sharing of responsibilities indeed becomes very important. Dr.

Bautista remarked on the importance of the evaluation/how cooperation is assessed, appraised and rewarded - currently its value is heavily underemphasized.

The second part of the debate addressed the gender gap and inclusivity discussion. It was pointed out that the job profile development is still mostly patriarchal. Importantly, the system evaluates achievements through the masculine view of the world. Hence, achieving higher positions and competing with men requires women to become, act and compete like men. Then it was brought to attention that the gender equality practices should be shared/promoted cross-institutionally.

Dr. Baumhauer remarked on how tricky this issue is, the system of success of job profile development of artists is beyond the academia and thus not within the control of the universities. The system is still male-focused. Many aspects of the problems cannot be explained by rational discussion/elaboration. The universities are open to all the types of diversities, though; this being said, not all countries facilitate diversity equally, which means this issue cannot be easily regulated.

Prof. Leeson reflected that it is important to monitor the change over time and foresee it to a certain extent. The process of achieving equality takes a lot of time; importantly, it is important to establish how this can be effectively done and how the gender equality achievements can be extrapolated to facilitating other types of equalities. She discussed the step by step approach which cumulatively brings large changes.

Dr. Sthijns indicated that YUFERING does also focus on the equality, also in the interviews for their positions. She stressed how important is to identify the specific barriers that exist and to handle them appropriately.

Prof. Marfany explained that improving the number of female students did not translate well to the actual count/proportions of PhD students and academic employees. The system has empowered the more vulnerable communities but at the same time, the competition itself is not fair as it is easier for the competitive, masculine view of the world to attain the goals needed to attain certain positions. It is not the opportunities that need to be improved but to fix the “bottleneck” - the criteria used to set goals and hire scientists. Successful women should also mentor younger women so that the latter can learn about the barriers and the ways in which those barriers can be circumvented.

Prof. Leeson asked about implementing the gender equality plans on the alliance level, rather than on the level of particular institutions, what practices could be used, shared and leveraged. Prof. Marfany responded that these practices should indeed be considered cross-culturally and institutionally.

The third part of the debate focused on research ethics and integrity. The discussion encompassed implementing research ethics in everyday life. It was emphasized that the validity of research is defined by the fact that the research is conducted with best possible efforts and in line with ethical

standards. It was, however, also mentioned that sometimes research ethics regulations are too strict, which might prevent some of the underprivileged groups from being involved in science in the first place.

Prof. Marfany asked how Europe should implement research ethics and integrity in everyday life. Dr. Baumhauer, speaking in the context of research in arts, mentioned the issue of freedom of artistic expression (which is frequently discussed) - does politics limit the expression? Can the label of artistic freedom be used to allow for behavior that goes beyond “normal social interaction”? Dr. Sthijns responded to the notion of research integrity. She spoke of publicly available research and how that affects community. Then she mentioned the importance of involving community actors.

Prof. Marfany mentioned that research can only be referred to as “good” if it is done in line with ethical standards and conducted with best possible efforts so that it does not diminish other research in the field.

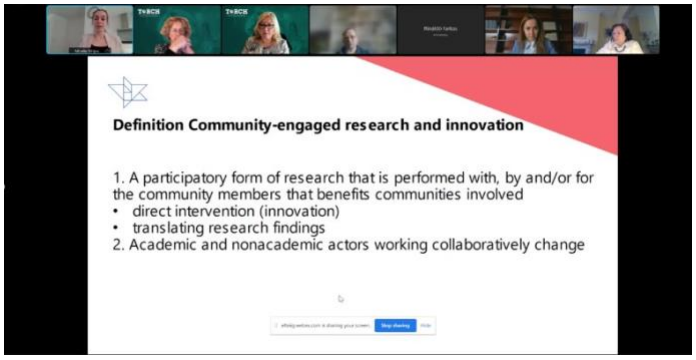
Prof. Leeson mentioned that as we codify our research ethics approaches and work towards protecting people, we do not marginalize groups that should in fact be considered because getting through the research ethics requirements are too stringent. Prof. Marfany added that people can be taught to produce content that is in line with those requirements; it is difficult through, but should be stressed nonetheless and will come naturally if it is indeed instructed properly.

The final part of the debate was centered on multiculturality. The discussion encompassed the norms of conducting and presenting research that would permit more inclusivity of the less privileged groups. Example of the deaf sign language users was brought into attention, as this group requires access to texts that are multimodal.

Dr. Sthijns indicated that it is important that academic and non-academic actors represent the community overall (reflecting the differences in both genders and cultures).

Dr. Baumhauer claimed that it is important to decipher visual symbolization of different cultures - getting into an intercultural exchange requires one to understand the background. We need to re-define what we consider to be “valid” ways of doing research - this has to be intensified to make it possible to include people into our societies.

Prof. Leeson used the example of deaf sign language users. She said we must remember in research that not all languages are written, discussing the notion of inclusivity of sign language community and the multimodality of dissemination of research.



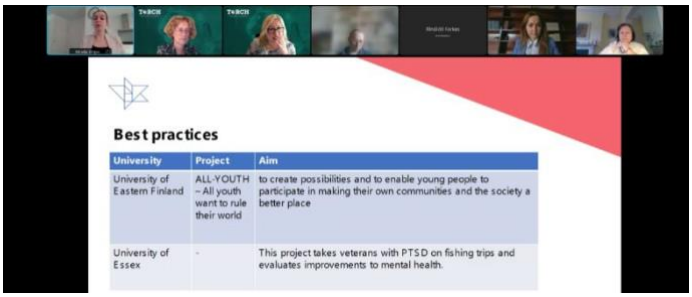


Figure 7. TORCH Cluster 4: Cross-Cutting Principles to Address a Transformative R&I Agenda. Speakers: Prof. Gemma Marfany (UB); Dr. Till Ansgar Baumhauer (Hochschule für Bildende Künste Dresden); Prof. Lorraine Leeson (TCD); Dr. Mireille Sthijns (Maastricht University); Dr. Nuria Bautista (Carlos III University).

3.5 Panel Session. Open Science[20]

In this panel, three alliances, CIVIS, AURORA and CHARM-EU, introduced the Open Science practices and plans of their current SwafS projects. Among others, the panel discussed the following overarching questions:

- How can the different universities and alliances support each other in their Open Science activities?
- What are the main limitations of introducing Open Science practices in research and student communities?
- What sort of incentives were found to be effective in promoting Open Science among researchers?
- What's the role of Open Science communities in pursuing cultural change at the different universities?

Each speaker had a 10 minutes PowerPoint presentation followed by a discussion and ideas exchange with all participants.

> PANEL SESSION. OPEN SCIENCE
>
> Presenter: DR. FERENC TAKÓ. Head of International Strategy Office, Eötvös Loránd University.
>
> Chair: DR. ACZÉL BALÁZS ZOLTÁN. Vice Dean of Research, Faculty of Education and Psychology, Eötvös Loránd University.
>
> Speakers:
>
> - DR. IGNASI LABASTIDA. Rector's Delegate for Open Science, University of Barcelona (CHARM-EU Alliance).
> - DR. MIHNEA DOBRE. Humanities Division, University of Bucharest (CIVIS Alliance).
> - PROF. ROBERTO DELLE DONNE. University of Naples Federico II (AURORA Alliance).
>
> Rapporteur: Ms. Anikó Gal-Bélteki. TORCH Internal Coordinator, Eötvös Loránd University.

CIVIS, AURORA and CHARM-EU, introduced the Open Science practices of their projects. Presentations were followed by an interactive discussion. The session was chaired by **Dr. Balázs Aczél** (TORCH Project, ELTE) and introduced by **Dr. Ferenc Takó** (TORCH Project, ELTE).

[20] Afternoon sessions recording available at: https://www.youtube.com/watch?v=HTOWf6bMfpk

Dr. Mihnea Dobre (University of Bucharest, CIVIS Alliance) presents the CIVIS Alliance' SwafS project, which is titled RIS4CIVIS. Module 5 deals with Open Science. The presentation focuses on next steps and a collaborative discussion. Initial phase: surveying Open Science landscape at CIVIS universities. The survey built on LERU questionnaire specifying the eight pillars of Open Science. As expected, a large variety of OS policies and local OS support exists at each CIVIS university and most of them are involved in European discussions about OS. However, adoption of OS policies and frameworks is largely connected to the OS development of each country.

Next step, two general goals for further action:

· 1. Raise awareness about OS policies/practices within each university community.

· 2. Increase collaboration between the alliance's universities.

Goals to be achieved through promoting OS training and searching the way to develop a recognition system. Discussion points raised:

· OS policies are needed but not sufficient; double actions needed: bottom-up and top-down, as well; need to familiarize community with Open Science practices; offer trainings in Open Science; support OS infrastructure – i.e. *make Open Science a service as knowledge base* for researchers and academic staff.

· Global approach: Related to some discussions in the morning panel session: there's a need for general transformation in the system of rewards and incentives at the universities. Needs to discuss this issue with other (e.g. Human Resources Management) departments. It is important not only to promote new ways but also to explain why and how we're going to do this. Only by expanding the discussion can we achieve the desired cultural change.

Prof. Roberto delle Donne (University of Naples Federico II) introduces the AURORA Alliance, which comprises of 10 universities committed to social impact of their academic excellence. SwafS Programme objectives: their students be social entrepreneurs, tackle major challenges of society, pioneer in sustainability, address SDGs. Pilot domains: Sustainability and climate change; Digital society; Health and well-being; Culture: diversity and identity.

AURORA: SwafS Programme work packages briefly introduced –WP6/Open Science started recently. Goal: sharing and implementing Open Science practices –lead Naples University, co-lead Amsterdam University; sharing research sources. Open Science should be defined in this regard. AURORA's Scope of Open Science: FAIR and responsible research; Public engagement and valorization; FAIR education; Recognition and rewards; Policy; Community; Support-Skills- Knowledge; Infrastructure.

AURORA's Open Science deliverables:

· D6.1 - an Open Science function to their SDG dashboard.

· D6.2 - a shared knowledge base of Open Science resources, policies and best practices.

· D6.3 - Open Science training modules for young researchers.

· D6.4 Open Science community starter kit and a platform for these communities to interact.

Open Science-related project objectives: OS makes use of AURORA's *Open Education Database*; research students/PhDs to become OS ambassadors; social entrepreneurship and research for society; AURORA support agenda for research and innovation; best practices for pooling research infrastructures, expertise; data and resources; build an OS researchers' network; shared knowledge base and joint strategy (OS, OA); barrier solution in sharing OS infrastructure; etc. OS communities: to create bottom-up learning communities of researchers as students.

Survey on the actual Open Science experience in AURORA universities, e.g. Open Data Stewardship. In all AURORA universities there are some OS practices in place, but partners are at different level of involvement, expertise, practice or focus. (E.g. most of them are committed to Open Science principles, such as Open Access, FAIR data, linked Open Data, but some have more focus on OA publishing or OA university press or sharing research data). The most important is to exchange experiences and learn from each other.

Dr. Ignasi Labastida (UB) introduces the TORCH project conducts very similar activity regarding Open Science to that of AURORA's project. 1st deliverable: Our survey on the current situation was also based on the LERU Open Science Roadmap describing the 8 pillars of Open Science. As a 9th pillar, related to leadership, we defined the need of cultural change in our universities. For that reason, we applied a "traffic light survey", a color coding of preparedness. Green means e.g. that OS policy or practice is already in place, yellow means policy is in process, although more aspects needs to be added here, while red means it is not yet available. This allows to show the different starting point of each institution and their progress in time. For example:

· Education and skills: these are the layers we are most ready in OS, we're all committed to train our staff on OS.

· Recognitions and awards: color codes are mostly yellow and red – i.e. we need to work on this issue the most.

How we go ahead? We monitor the change. The 2nd deliverable: Tool for this: Open Science Dashboard (see model display) - We follow not only the outputs by pillars but also how the changes in behavior related to Open Science evolve. We plan to share here events, trainings, etc. It is an initial proposal, details are still under discussion. The final version will be shared with the alliance's colleagues.

The debate section, led by Dr. Aczél, centered on three main questions regarding collaboration between universities and Alliances, limitations to introduce Open Science practices, and incentives to promote it.

Question 1: How can the different universities and alliances support each other in their Open Science activities?

Dr. Dobre: Collaboration between universities is the most important. Just keep the conversation going on and do not force institutions to do something they are not ready for. Prepare and support institutions who have not implemented Open Science practices yet. Organize trainings, webinars. Offer local support to local academic community: speakers, expertise or even small local funding. Good example: universities are at different level: some has got an Open Science unit while others have almost nothing. Open Science policies are needed at the universities. Offer sufficient space for discussion for each partner university to promote Open Science further. E.g. discuss reforms on research awarding and evaluation. It is important to know each university's aim and needs in the field of Open Science. Interactions at the institutional and national level as well as the expertise provided by large organizations are important alike. However, this should be a community-based approach – this cannot be done neither bottom-up nor top-down solely.

Dr. Labastida: Share as much experience as you can, get inspiration, see how policies are evolving (e.g. in the Netherlands every university has got Open Science practitioners.) People needs to be put together in order to establish an Open Science community and to learn from each other.

Prof. delle Donne: agrees that sharing experience and learning is important. Some universities are more specialized in certain fields of Open Science than others are. There's a need for a minimum level of sharing: create share platforms. There's also different level of knowledge at the universities reflected in general policy level. We should reach a common level that we can improve together. We operate in different context that leads to the development of different infrastructure (e.g. university press). AURORA is at the beginning of common work, but sees already opportunities for common development.

Dr. Aczél: Open Science does not happen on its own, it needs facilitators and needs to be encouraged through events and tools like the mentioned Educational Database or Open data Stewardship. Open Science has got many pillars, some of them are more in focus than others.

Question 2: What are the main limitations of introducing Open Science practices in research and student communities?

Prof. delle Donne: diffusion of Open Science in various scientific communities: bibliometric and non-bibliometric sectors, linked to national assessment criteria >> available platforms that make publishing scientific results in an effective way; governments can be influencers, e.g. in Italy the STM (science-technology-medicine) sector opens up publications >> may have fewer positive

consequences due to market aspects. It is easier to foster Open Science in the non-bibliometric sector.

Dr. Labastida: Agrees. Motivation and incentives must be clear. However, at every case of change we need to support the change for Open Science at institutional level. Combined efforts of the individual researcher and the university are needed. The cultural change has limitations.

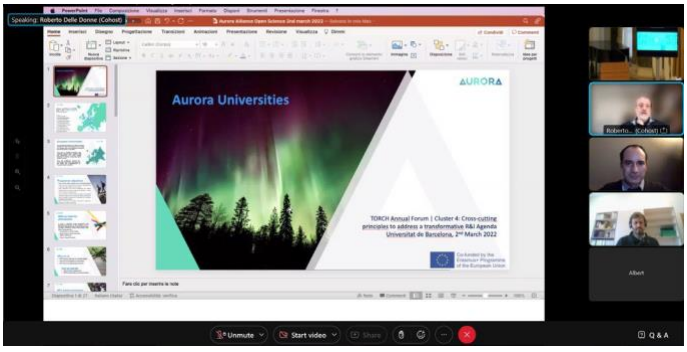
Question 3: What sort of incentives were found to be effective in promoting Open Science among researchers?

Dr. Dobre: We need to work at several levels, explain Open Science needs to an academic and non-academic community.

Prof. delle Donne: It depends on the level. If you finance research and push researcher to publish in Open Access way and ask them to publish not only the final results but also that of intermediate research phases, then provide funding for that. Evaluation: give recognition to the research in Open Access publishing. In Italy, Open Science practices are not yet specifically or not better evaluated than others.

Dr. Labastida: The main incentive is time. When researchers are obliged to publish in Open Science repository, do it in an optimal way. Show that Data Management Plan is not just another element of bureaucracy. Help them: prove that choosing this way will save time for them. Provide services, facilities, infrastructure.

Dr. Aczél: Agrees. Researchers should understand the core of Open Science; external incentives are not enough. Adopt new practices to support the change/ the approach. Help them decrease the boundaries. Academia, following Open Science practices, can help researchers in many ways, there are proofs for that. But researchers have to be dedicated. It's important to understand the research arena.



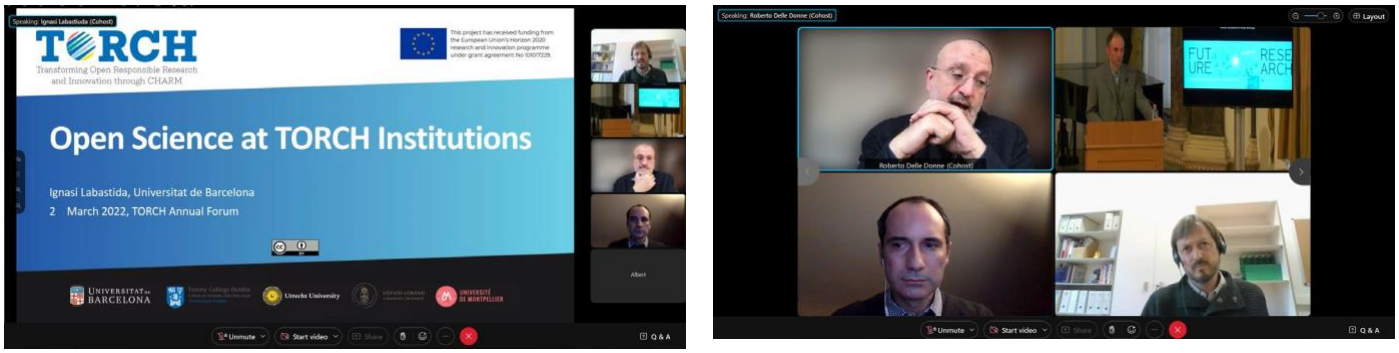


Figure 8. Panel Session. Open Science. Speakers: Dr. Balázs Aczél (ELTE); Dr. Ferenc Takó (ELTE); Dr. Mihnea Dobre (University of Bucharest); Prof. Roberto delle Donne (University of Naples Federico II); Dr. Ignasi Labastida (UB).

3.6 Closing Words

Dr. Ferenc Takó (Head of International Strategy Office, ELTE) presented the closing ceremony, and gave the floor to **Prof. Joan Guàrdia** (Rector, UB), who thanked all the speakers and participants and offered a concluding speech, reflecting on the CHARM-EU and TORCH values and goals, as well as in the European Universities enterprise.

Prof. Guàrdia reflects on the importance of initiatives like CHARM-EU, since the future of knowledge generation is transnational, and, as such, the TORCH Project plays an essential role in the joint task the five partner universities are carrying out. The future of higher education institutions, in order to shape the forthcoming R&I scenario, relies on three main aspects. Firstly, forming robust Alliances between universities, that empower Open Science and collaboration (for which TORCH is a great example). Furthermore, science is the only means to build a new community around knowledge, that contemplates the European shared values. Finally, inclusiveness must be the cornerstone of the new reality we are creating, a reality in which all the diverse European realities have room.

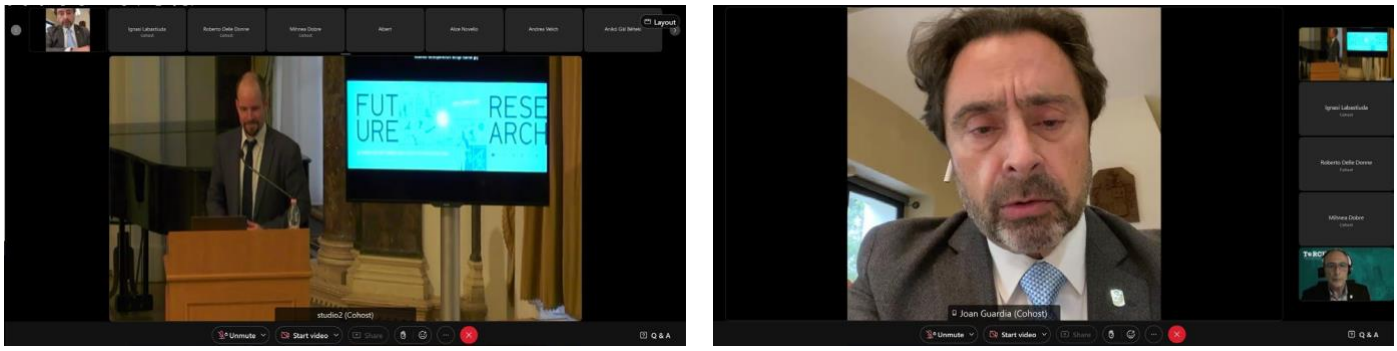


Figure 9. Closing words. Speakers: Dr. Ferenc Takó (ELTE); Prof. Joan Guàrdia (UB).

4. Concluding Remarks

The first TORCH Open Forum under the title **'Sustainability in a (post?) pandemic world: asking the right questions on the role of Universities in R&I today'** was held online on March 2, 2022, hosted by Eötvös Loránd University Budapest (ELTE).

The meeting was addressed to diverse relevant collectives: university leadership, academic and technical staff, as well as any actors engaged in R&I, university-industry-citizen collaboration. It was also relevant for policymakers, as the European Commission's perspective was included. More than 100 participants attended the different sessions, in which 42 chairs and speakers took part. All sessions were recorded and will be available in the CHARM-EU YouTube Channel. Updates on the event were also live-tweeted (Table 2).

Table 2. TORCH Open Forum social media engagement.

Platform	Reach
Twitter (during the event)	8.759 impressions
	168 interactions
LinkedIn (highlights campaign)	504 impressions
	246 views
Facebook / Instagram (highlights campaign)	1045 reach
	45 likes / interactions

The event was conceived as a dissemination activity not only to share and discuss the TORCH Project progresses and beyond, but also as the shared activity all FOREU1 Alliances included in their proposals. As such, all the European Universities were invited to participate, since the topics covered were relevant to their development:

- What are the challenges in Research assessment reform, how is the EU approaching it and what can we learn from the work of the European Universities alliances?
- Sharing learning and discussion on how European University alliances can impact a sustainable future through a common R&I Agenda and the role that such agenda may play in achieving the European Green Deal and more broadly contributing to the implementation of the SDGs.
- How can universities and Alliances better work with enterprises and citizens.
- The importance the Alliances face concerning ethics, integrity, interdisciplinary, gendered innovation in responsible research and innovation.

The plenary session **'The R&I framework and the (post?) pandemic scenarios'** put together a diverse panel of speakers who discussed the current trends on this topic, including: the European

Strategy for Universities and the new ERA and Innovation Policy from the EC perspective; the challenges and need to transform the higher education and R&I sectors, from the business environment point of view; and the many lessons we have learnt from the COVID pandemic that should illuminate our future and give raise to stronger collaborative research in Europe.

The panel session **'European Universities: Towards a Reform of the Research Assessment System'** focused on the revision of the evaluation system for research-performing institutions, researchers, and funding agencies. Representatives from European Universities and University Associations conversed about the challenges and needs to achieve this reform, since it will change the way we do science, and, more importantly, the impact science has on society, which constitutes the higher purpose.

The **TORCH Clusters ('Crosscutting conversations across R&I topics and sustainability'**) served the purpose of exchanging experiences and practices among several Alliances concerning a number of transformational modules:

- Cluster 1: **R&I Common Science Agenda** and European Universities. Three Alliances (CHARM-EU, FORTHEM, EELISA) shared their progresses and challenges in advancing towards a common scientific strategy within their SwafS projects.

- Cluster 2: **Business & Society and Academic Cooperation**. Five examples of academia-business environment cooperation were shared, in the form of spin-off creation or academic-enterprise collaboration. Cases from CHARM-EU, EU-CONEXUS, and UNITE! were presented. Participants were also able to debate the needs and avenues to go beyond and strengthen collaboration at an institutional, local, national and European levels.

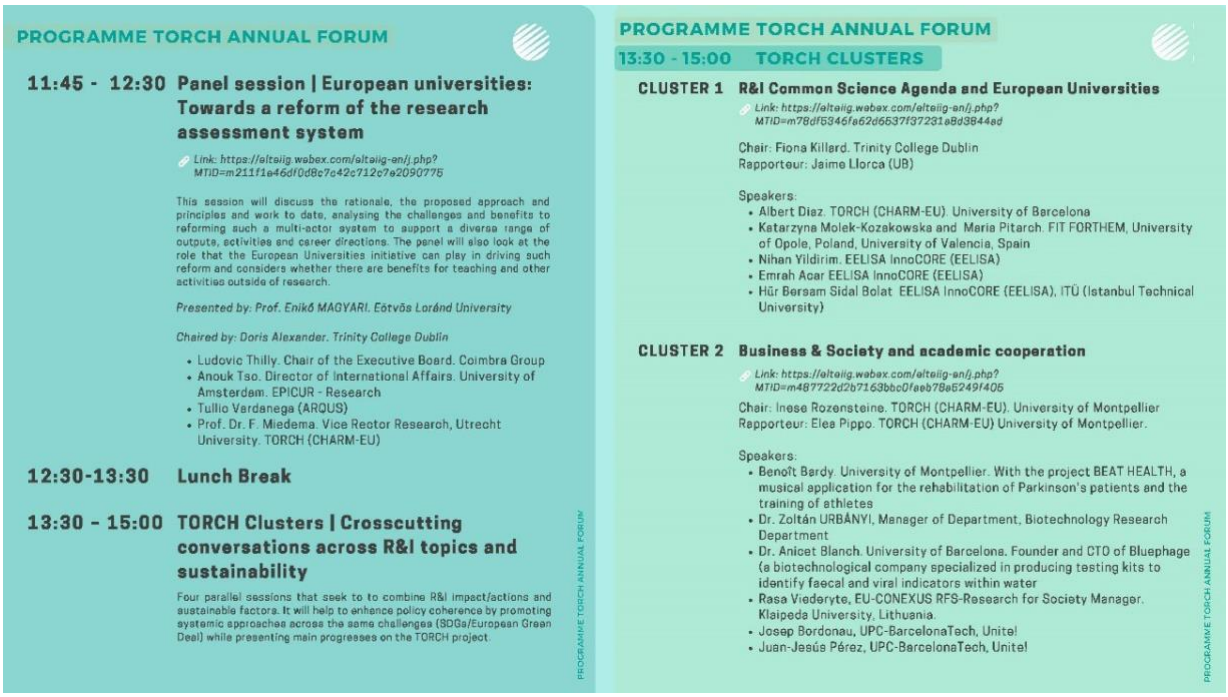
- Cluster 3: **Public Engagement**. Good practices and (dis)incentives to foster public engagement and transdisciplinarity were presented, working at different levels: individual (researcher); university level; systemic level; and societal level. Speakers (from CHARM-EU, ECIU, T4EUROPE, and the Irish Universities Association) agreed on the need to develop a comprehensive approach for public engagement and citizen science, as to date many activities are still fragmented and knowledge sharing is limited.

- Cluster 4: **Cross-Cutting Principles to Address a Transformative R&I Agenda**. Developing a common European framework across different countries, cultures, and scientific disciplines, requires addressing the challenge of ensuring ethical research, by incorporating some cross-cutting principles into all areas: Open Science and social responsibility of academics; gender gap/inclusivity; research integrity and ethics; and multiculturality. Participants from CHARM-EU, EU4ART, and YUFE discussed how these aims could be integrated within the diverse institutions and the European Universities initiative.

The panel session on **Open Science** had representatives from CIVIS, AURORA and CHARM-EU, who introduced the advances and good practices in their respective institutions and Alliances. The debate centered on potential limitations and incentives to implement a common Open Science roadmap, as well as on how to encourage collaboration and exchange of experiences among universities.

ANNEX I: PUBLIC PROGRAMME AND PROMOTIONAL MATERIAL

Public Programme



PROGRAMME TORCH ANNUAL FORUM

11:45 - 12:30 Panel session | European universities: Towards a reform of the research assessment system

Link: https://elteiig.webex.com/elteiig-en/j.php?MTID=m211f1e46df0d8c7c42c712c7e2090775

This session will discuss the rationale, the proposed approach and principles and work to date, analysing the challenges and benefits to reforming such a multi-actor system to support a diverse range of outputs, activities and career directions. The panel will also look at the role that the European Universities initiative can play in driving such reform and considers whether there are benefits for teaching and other activities outside of research.

Presented by: Prof. Enikő MAGYARI. Eötvös Loránd University

Chaired by: Doris Alexander. Trinity College Dublin

- Ludovic Thilly. Chair of the Executive Board. Coimbra Group
- Anouk Tso. Director of International Affairs. University of Amsterdam. EPICUR - Research
- Tullio Vardanega (ARQUS)
- Prof. Dr. F. Miedema. Vice Rector Research, Utrecht University. TORCH (CHARM-EU)

12:30-13:30 Lunch Break

13:30 - 15:00 TORCH Clusters | Crosscutting conversations across R&I topics and sustainability

Four parallel sessions that seek to to combine R&I impact/actions and sustainable factors. It will help to enhance policy coherence by promoting systemic approaches across the same challenges (SDGs/European Green Deal) while presenting main progresses on the TORCH project.

PROGRAMME TORCH ANNUAL FORUM

PROGRAMME TORCH ANNUAL FORUM

13:30 - 15:00 TORCH CLUSTERS

CLUSTER 1 R&I Common Science Agenda and European Universities

Link: https://elteiig.webex.com/elteiig-en/j.php?MTID=m78df5346fa62d6537f37231a8d3844ad

Chair: Fiona Killard. Trinity College Dublin
Rapporteur: Jaime Llorca (UB)

Speakers:
- Albert Diaz. TORCH (CHARM-EU). University of Barcelona
- Katarzyna Molek-Kozakowska and Maria Pitarch. FIT FORTHEM, University of Opole, Poland, University of Valencia, Spain
- Nihan Yildirim. EELISA InnoCORE (EELISA)
- Emrah Acar EELISA InnoCORE (EELISA)
- Hür Bersam Sidal Bolat EELISA InnoCORE (EELISA), ITÜ (Istanbul Technical University)

CLUSTER 2 Business & Society and academic cooperation

Link: https://elteiig.webex.com/elteiig-en/j.php?MTID=m487722d2b7163bbc0faeb78e52491405

Chair: Inese Rozensteine. TORCH (CHARM-EU). University of Montpellier
Rapporteur: Elea Pippo. TORCH (CHARM-EU) University of Montpellier.

Speakers:
- Benoît Bardy. University of Montpellier. With the project BEAT HEALTH, a musical application for the rehabilitation of Parkinson's patients and the training of athletes
- Dr. Zoltán URBÁNYI, Manager of Department, Biotechnology Research Department
- Dr. Anicet Blanch. University of Barcelona. Founder and CTO of Bluephage (a biotechnological company specialized in producing testing kits to identify faecal and viral indicators within water
- Rasa Viederyte, EU-CONEXUS RFS-Research for Society Manager. Klaipeda University, Lithuania.
- Josep Bordonau, UPC-BarcelonaTech, Unite!
- Juan-Jesús Pérez, UPC-BarcelonaTech, Unite!

PROGRAMME TORCH ANNUAL FORUM

13:30 - 15:00 TORCH CLUSTERS

CLUSTER 3 Public engagement

Link: https://elteiig.webex.com/elteiig-en/j.php?MTID=me90b505d0bc8f343cc241eab10505be9

Chair: Dr. Marjanneke Vijge, CHARM-EU. Utrecht University
Rapporteur: Kirsten Hollaender (UU)

Speakers:
- Dr. Annisa Triyanti, TORCH. Utrecht University. Presenting the findings from WP7 on (dis)incentives for public engagement and transdisciplinary science
- Kate Morris. Head of Campus Engage at the Irish Universities Association.
- Troels Jacobsen. University of Stavanger. Director of Innovation and societal engagement. ECIU Alliance
- Prof. Tomas Berkmanas. Associate Professor at the Faculty of Law, Vytautas Magnus University. T4ERI (T4Europe)

CLUSTER 4 Cross-cutting principles to address a transformative R&I Agenda

Link: https://elteiig.webex.com/elteiig-en/j.php?MTID=m680f470ebe386ced8b82c87d0c8236ee

Chair: Gemma Marfany, TORCH (CHARM-EU). University of Barcelona
Rapporteur: Jedrzej Olejniczak. FORTHEM

Speakers:
- Lorraine Leeson. TORCH (CHARM-EU). Trinity College Dublin.
- Till Ansgar Baumhauer. Project Speaker & Leader. EU4ART_differences. EU4ART
- Mireille Sthijns. Leading of the community-engaged research and innovation (CERI) work package in YUFERING (YUFE)
- Nuria Bautista Puig. R&D Technical Support at YUFERING and researcher at Carlos III University of Madrid.

15:00 - 15:30 Short break

PROGRAMME TORCH ANNUAL FORUM

PROGRAMME TORCH ANNUAL FORUM

15:30 - 16:30 Panel session | Open Science

Link: https://elteiig.webex.com/elteiig-en/j.php?MTID=m211f1e46df0d8c7c42c712c7e2090775

In this panel, three alliances, CIVIS, AURORA and CHARM-EU, will introduce the Open Science practices and plans of their current SWAF projects.

Presented by: Prof. Enikő MAGYARI. Eötvös Loránd University
Chair: Dr. Aczél Balázs Zoltán (ELTE)
Rapporteur: Anikó Gál-Belteki (ELTE)

Speakers:
- Ignasi Labastida. TORCH (CHARM-EU). CRAI Research Unit. University of Barcelona
- Mihnea Dobre, researcher and affiliate Professor at the Humanities Division of the University of Bucharest, and he is also the leader of the module on Open Science within RIS4CIVIS.
- Roberto delle Donna. Work Package leader for Open Science in AURORA RI (AURORA)

16:30 Closing

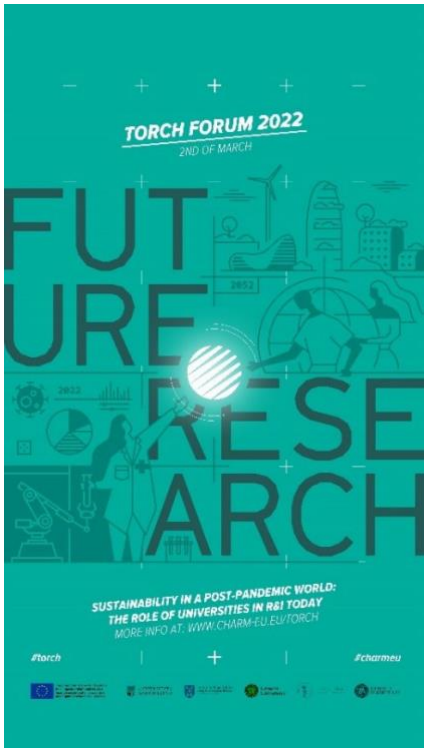
Presented by: Prof. Enikő MAGYARI. Eötvös Loránd University

- Closing words by Prof. Dr. Joan Guàrdia Olmos. Rector. University of Barcelona (TORCH Coordinator)

PROGRAMME TORCH ANNUAL FORUM

Banner

Twitter & Instagram

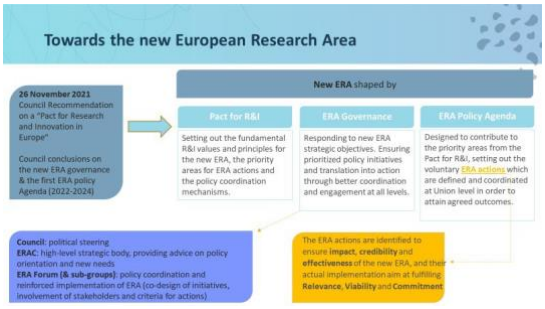


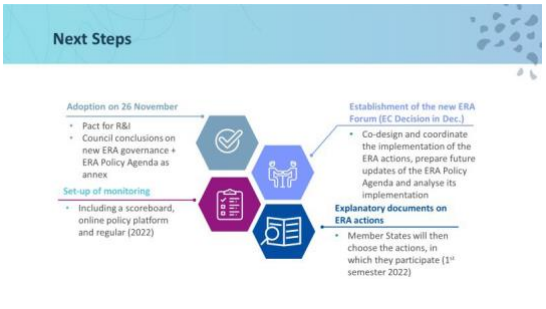
Social Media Promotion and Live Tweets (examples)

ANNEX II: PRESENTATIONS

Plenary Session: R&I Trends in (Post?) Pandemic Scenarios

MS. APOSTOLIA KARAMALI. Head of Unit, Directorate-General for Research and Innovation, European Commission.





Plenary Session: R&I Trends in (Post?) Pandemic Scenarios

DR. CSILLA STÉGER. Manager at PwC Hungary Ltd. Government Advisory, Division responsible for HE–government relationships.

Due to the nature of today's challenges R&I became a key factor not only in economic growth but also in overall quality of life and survival

Today's challenges are

- Global
- High stakes
- Pressing
- Can't be solved by already known ways
- Effect all of society and the economy
- Require a level of innovation and collaboration never seen before

Old and existing truths, solutions, technologies and organisational patterns hasn't and can't provide the required answers altogether or not fast enough. New solutions, new methods, new technologies and new ways of working together will only be able to meet global challenges.

Therefore the success of research and innovation becomes a key factor in not only economic growth but overall quality of life and survival.

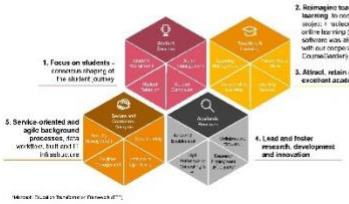
This all means the need for the transformation and reinvention of R&I as we know today

Shorter R&I cycles	New ways of working	Better communication of outcomes
• Quick outreach to and setup of heterogeneous collaborative groups (researchers of wide range competences, accommodation labs, sandboxes, testers, early adopters etc.)	• „End of" silos and individual excellence as new norm: a **group excellence** as new set of competences is required: hand **core science** has to be accompanied by **soft skills**	• R&I work to do with academic writing competence development
• Shortening the time needed for publishing results	• **Collaboration and peer learning** as R&I strive on **idea sharing**, application of existing knowledge in **new, unrelated areas**	• Also more effort to **non-scientific communication** to a wider public
	• Provision of all **support** to R&I teams as collaboration platforms, supporting **co-creation** yet providing strong protection from the outside, PM support, ethical support, technological support, etc.	

In CEE PwC and Microsoft has been working on supporting higher education in order for institutions to meet these new challenges

In collaboration with Microsoft we developed a vision for higher education transformation and proposed a portfolio of related projects to make the vision come true

Transformation of higher education - vision and transformative project collection along the ETF* in the following 5 pillars:



See our thought leadership here

We found that there are common trends in CEE in R&I

Common challenges in CEE	Existing good practices in CEE	Opportunities offered by technology and digitalisation
• Often, there is a **lack of RDI focus deriving from institutional strategy.** • **Culture** of collaboration is underdeveloped, there is **low activity in EU research networks.** • **Weak RDI monitoring and evaluation** mechanisms in place. • **Less** success **in leading international research consortia** in practice. • **No project management support** provided to manage large scale international RDI projects. • **Less intensive publication activity in** leading international journals than in the EU (challenges still prevail in foreign languages and high level academic writing skills)	• **Real centers of excellence** in science. • **Numerous Incubation Hubs, HE-industry collaboration platforms** have been launched. • **European Universities research network** has been established. • **Research with the use of AI** has begun. • **Introduction** of **cooperative doctoral programmes** – targeted at a specific applied research project of an industry partner in Hungary	• **Automation of simple, manual and time consuming** tasks to make RDI projects faster. • **Big data, data analytics and visualization** open new methodologies and offer deeper understanding of existing data in all fields of science. • **With the use of AI (deep learning, machine learning, natural language processing)** new insights are gained in all fields. • **The use of project management and collaboration tools** raise efficiency of research projects.

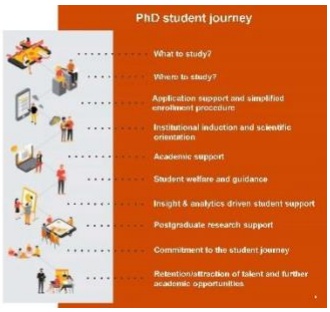
In order to build a successful research ecosystem, it is essential that the institution...

...identify, understand and address the challenges facing researchers!

Researcher career support and the development of a clear, unambiguous, balanced performance appraisal system provide more room for manoeuvre and better results in research

First step of the „researcher journey" the PhD experience

Reimagine the PhD student journey in your institution and assure the first research experiences to be positive & inspiring



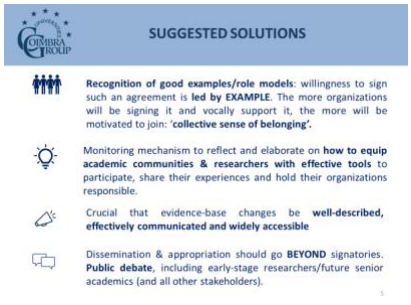
In order to build a successful research ecosystem, it is essential that the institution...

...provides researchers with an end-to-end research career!

Involvement of all stakeholders can identify challenges for researchers, the remedying of which may assist the promotion, attraction and retention of researchers.

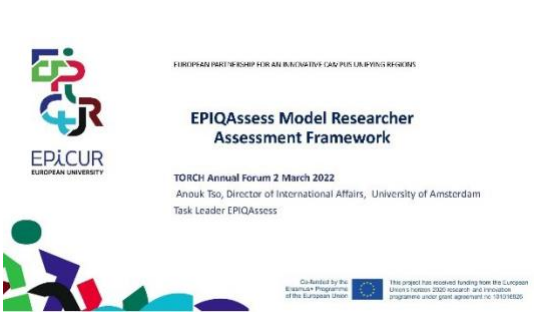
Panel Session: European Universities: Towards a Reform of the Research Assessment System

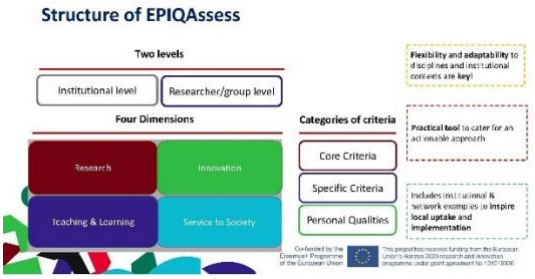
PROF. LUDOVIC THILLY. University of Poitiers. Executive Board Chair, Coimbra Group.

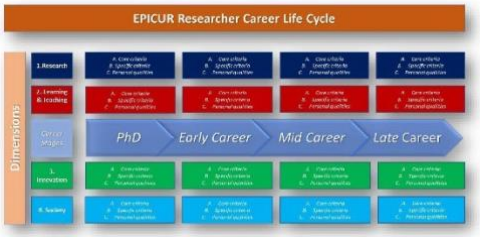


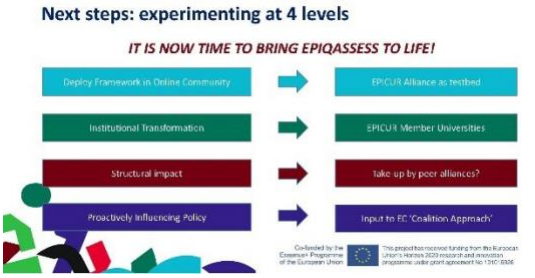
Panel Session: European Universities: Towards a Reform of the Research Assessment System

DR. ANOUK TSO. Director of International Affairs, University of Amsterdam (EPICUR Alliance).



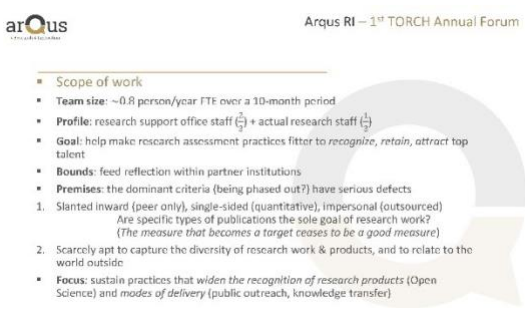


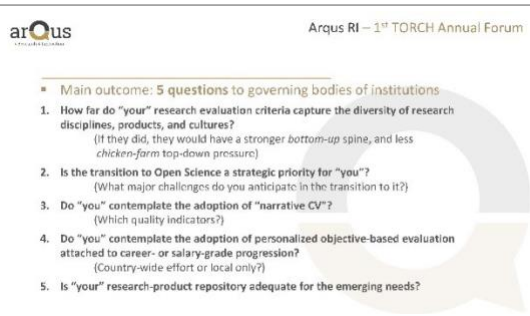




Panel Session: European Universities: Towards a Reform of the Research Assessment System

DR. TULLIO VARDANEGA. University of Padova. Research Project Supervisor (ARQUS Alliance).





Cluster 1: R&I Common Science Agenda and European Universities

PROF. ALBERT DIAZ. Director of the Institute of Complex Systems, University of Barcelona (CHARM-EU Alliance).

TORCH
Transforming Open Responsible Research and Innovation through CHARM

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101017225

R&I Common Science Agenda and European Universities

Prof. Albert Diaz-Guilera (UB) – WP4 Leader
March 2nd, 2022 – Annual Open Forum

WP4 Common Science Agenda

Deliverables in WP4

Deliverable Number[14]	Deliverable Title	Lead beneficiary	Type[15]	Dissemination level[16]	Due Date (in months)[17]
D4.1	Strengths and complementarity report	1 - UB	Report	Confidential, only for members of the consortium (including the Commission Services)	4
D4.2	Common Science Agenda challenge list	1 - UB	Report	Public	8
D4.3	Implementation analysis report	1 - UB	Report	Confidential, only for members of the consortium (including the Commission Services)	15

D4.2 Common Science Agenda Challenge List

D4.2 'Common Science Agenda Challenge List'

Work package number	WP4	Lead beneficiary	1 - UB
Work package title	Common Science Agenda		
Start month	1	End month	

Objectives

The overall main objective of this WP is to develop the list of challenges the CHARM-EU alliance will face in each thematic area, from institutions strengths and complementarity, taking into consideration the state-ofthe-art, the financing mechanisms, barriers and common infrastructure needed to implement them. To this purpose, we have identified the following operational objectives:
O4.1 Analyse the research strengths and complementarity in each institution.
O4.2 List the challenges to face given the diversity and complementarity of our research strengths. Focus on inter- and transdisciplinary cooperation, combining curiosity-driven and utility-driven research, with a close view on its impact, with particular importance to societal challenges and the needs of the community.
O4.3 Study financing instruments, barriers and infrastructure to implement the common science agenda.

Description of work and role of par

WP4 - Common Science Agenda [Months: 1-15]
UB, TCD, UU, ELTE, UM
WP4 will be conducted with the participation of each University.
Task 4.1 Institutions strengths and complementarity analysis for each thematic area - (M1-M4) - Lead UB – Participate: all. This task will analyse and identify the strengths of each institution, with special focus on complementarity in each thematic area. Desk-based research will be used to conduct this analysis. A report will be developed summarizing the strengths of each institution and the complementarity between partners.
Task 4.2 Transdisciplinarity common challenge agenda and state of the art - (M5-M8) - Lead UB – Participate: all. This task will use the analysis from T4.1 as a baseline to list the different societal challenges CHARM-EU wants to face in each thematic area. The list of challenges will take into consideration the expertise of each institution, its complementarity and the critical research mass the collaboration will reach that could not be reached by each institution by itself. A state-of-the-art study and a proposal of a Knowledge Creation Tunnel® (KCT), with the inclusion of non-academic actors and cooperation with other sectors, will be added to each challenge. A report will be developed with the list of societal challenges, the justification of the selection and a proposal of KCT for each challenge.
Task 4.3 Implementing the Common Science Agenda, an analysis on financing mechanisms, barriers and common

D4.2 'Common Science Agenda Challenge List'

1. INTRODUCTION
2. METHODOLOGY
2.1. Research Challenges Formulation
Research Areas Questionnaire (Data collection)
Institutional Analysis
Challenges Production
2.2. Bibliometrics
Data collection
3. STATE OF THE ART
4. RESULTS & RESEARCH CHALLENGES LIST
4.1. Participatory process
Research Areas Questionnaire (Data collection)
Institutional Analysis
Challenges Production
4.2. Research Challenges List
Challenge Proposals: SDG3 - Good Health & Well-Being
Challenge Proposals: SDG10 - Reduced Inequalities
Challenge Proposals: SDG13 - Climate Action
5. CONCLUSIONS & NEXT STEPS
ANNEX I: RESEARCH AREAS QUESTIONNAIRE
ANNEX II: RESEARCH CHALLENGES FOCUS GROUPS QUESTIONNAIRE
ANNEX III: RESEARCH CHALLENGE PROPOSAL TEMPLATE
ANNEX IV: RESEARCH CHALLENGES FOCUS GROUPS - TEAMS OF RESEARCHERS

D4.2 - Methodology

D4.2 – Participatory Process

Researchers invited to participate:

- Each institution followed tis own approach: 50 – 1860
- Response: 6.6% - 74%
- Number of researchers: 33 - 123

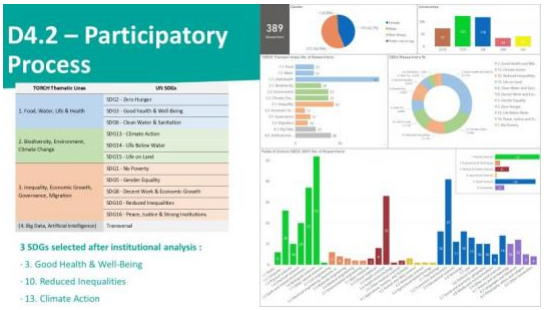
D4.2 – Institutional analysis

Each partner examines results:

- Institution Research Strategic Plan
- Priority Research Areas & SDG at each institution
- Compared to choices by the researchers according to TORCH Thematic areas

- Final decision taken by WP4: 3 SDG's in a broad sense

D4.2 – Participatory Process



3 SDGs selected after institutional analysis :

- 3. Good Health & Well-Being
- 10. Reduced Inequalities
- 13. Climate Action

D4.2 – Challenges Formulation

Researchers are invited to fill a questionaire:

- Outline a research challenge -> SDG
- Assign researchers to SDG
- Creation of the Focus Groups

D4.2 – Challenges Formulation

Focus Group on SDG3 – Good Health & Well-Being

Proposals:

SDG3-C1: ACTIVE: Adult Child and Teenage participation in physical actiVity across Europe.

SDG3-C2: Prevention and preparedness of negative effects of climate change on vector-borne infectious diseases.

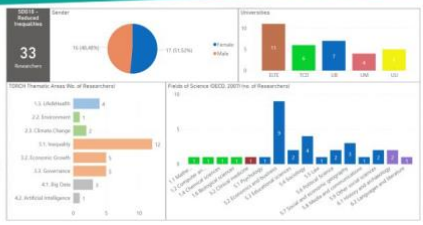
D4.2 – Challenges Formulation

Focus Group on SDG10 - Reduced Inequalities

Proposals:

SDG10-C1: Coping with digitalization and the transformation of the world of work as a new source of inequalities.

SDG10-C2: Designing better universities to fight against inequalities.



D4.2 – Challenges Formulation

Focus Group on SDG13 - Climate Action

Proposals:

SDG13-C1: Preventive Water Sustainable Management of Freshwater resources within the Global Change.

SDG13-C2: Mapping Risks, Joining Funds, Taking Actions – Fostering Nature-based Solutions to Mitigate Climate-related Hazards.

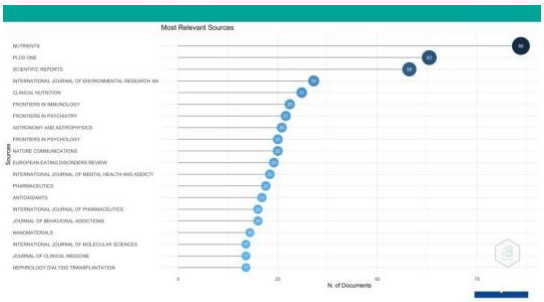
Available Bibliometrics (SDG3) (Albert Diaz, UB)

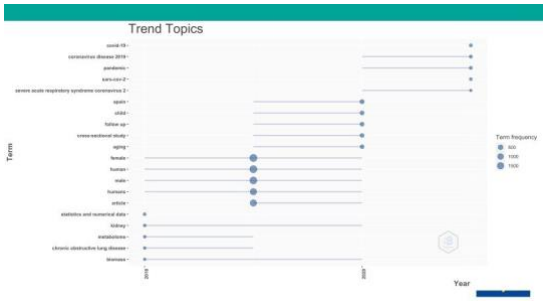
Bibliometric analysis (SDG3)

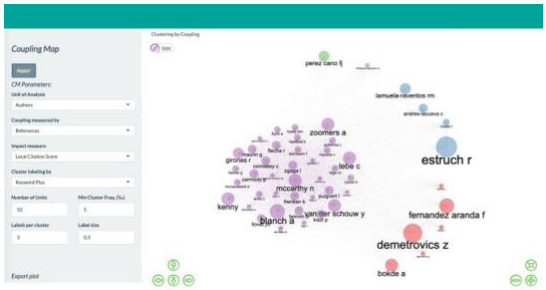
- authors identified with SDG3 + TL1, from questionnaire
- Searched in Scopus YEARPUB AFT 2017
- BIB file with complete information
  - Authors (filtered AU-ID), title, affiliations
  - Citations, references, keywords, abstracts
- STATIC
- DYNAMIC

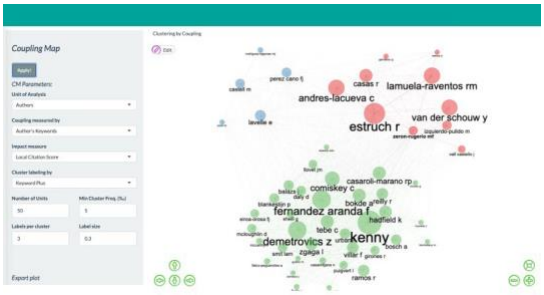
STATIC: Bibliometrix -> Biblioshiny

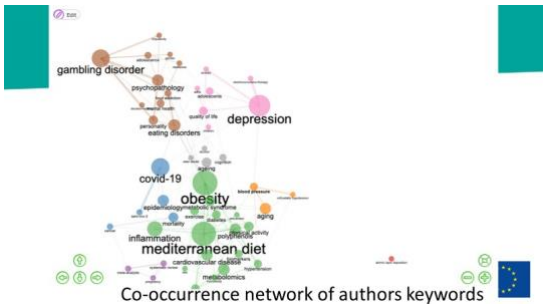
- Sources
- Papers
- Authors
- Institutions
- Countries
- Keywords
- Titles
- Abstracts
- References



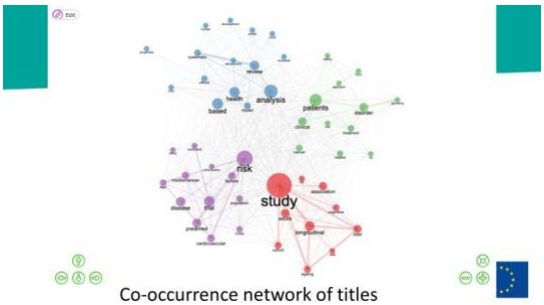




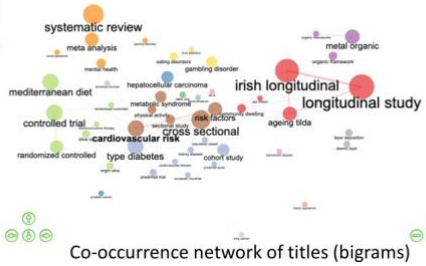




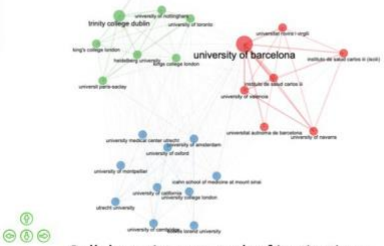
Co-occurrence network of authors keywords



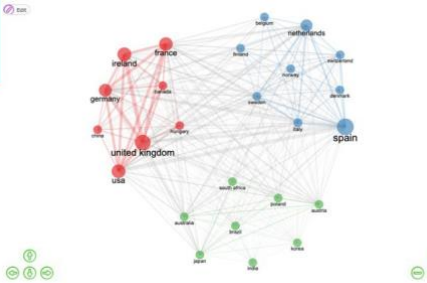
Co-occurrence network of titles



Co-occurrence network of titles (bigrams)



Collaboration network of institutions



DYNAMIC: Bibliometrix -> Our own tools

- Interactive application.
- Access: https://www.charm-eu.eu/torchlibrary/
- Nodes are always authors from the collection
- Node shapes indicate the different universities
- Nodes of the same color belong to the same community (they are similar)

DYNAMIC: Bibliometrix -> Our own tools

In the top menu you can choose among 3 types of networks:

- **Collaboration**: links correspond to collaborations (authors not in the list have been removed)
- **Coupling by references**: links are weighted according to the number of references shared among authors
- **Coupling by keywords**: links are weighted according to the number of keywords shared among authors

DYNAMIC: Bibliometrix -> Our own tools

- Nodes can be dragged and dropped anywhere
- Clicking in one node opens a small window with information about the author (name, university, department, keywords, and publications)
- Clicking on any of the publications opens a window directly on the published paper
- To close all windows, double-click on any area outside the window

D4.2 - Conclusions

· 389 researchers participated in the first phase (Research Areas Questionnaire), that helped identify common research interests with a bottom-up approach.

· Based on researchers input and the five universities priorities, three UN SDGs were established as the target scientific areas the challenges would be linked to: SDG3 (Good Health & Well-Being), SDG10 (Reduced Inequalities), and SDG13 (Climate Action).

· Around 100 researchers participated in three SDG-driven focus groups, in order to determine the research challenges specific topics and assemble small teams to formulate them.

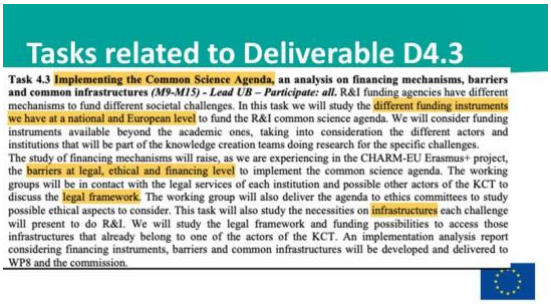
· 6 research challenges (teams: multi-disciplinary, multi-university, gender balanced).

Challenges -> WP8 & WP9

· Published in D4.2 (public report).
· Shared with the Alliance's academic community.

Annual Forum
· Presented and discussed in TORCH Annual Forum (Budapest, March 2022), in order to incorporate the non-academic actors insight.

2nd Half of the Project
· Submitted to CHARM-EU Vice-Rectors Committee and Rectors Assembly. Which of them will be developed further during 2022-2023 as pilots (TORCH WP9 'Action Plans and Pilots').
· Encouraged to apply for international and national funding opportunities that will allow implementing them as research projects from 2023 onwards.
· Ethics Committees review.



Cluster 1: R&I Common Science Agenda and European Universities

PROF. KATARZYNA MOLEK-KOZAKOWSKA, University of Opole. DR. MARIA DOLORES PITARCH, University of Valencia (FORTHEM Alliance).

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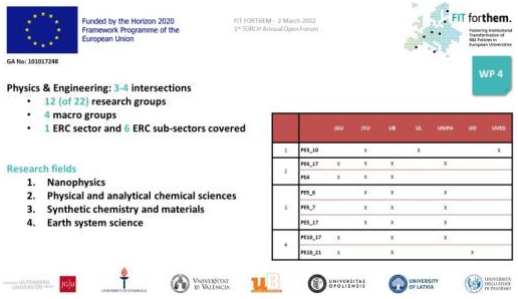
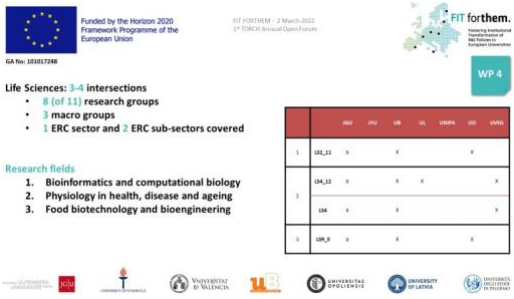
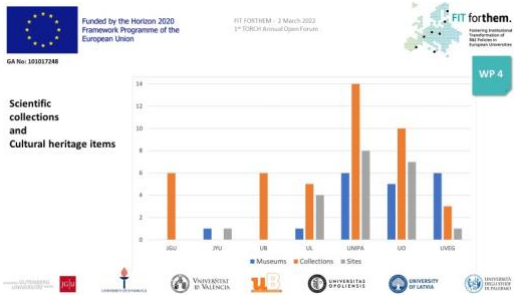
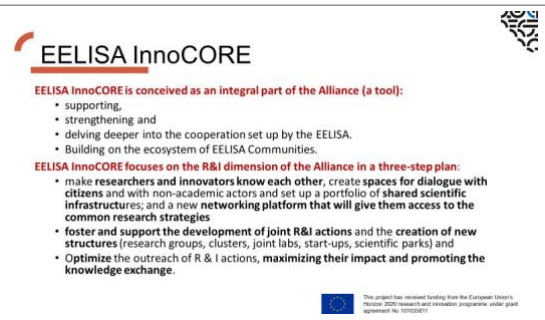


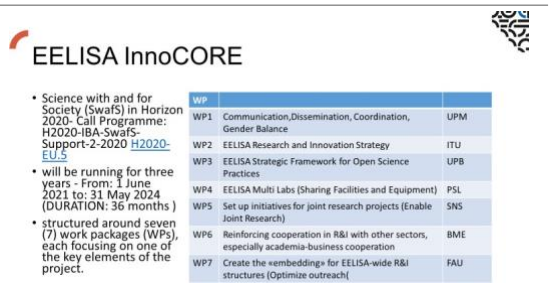


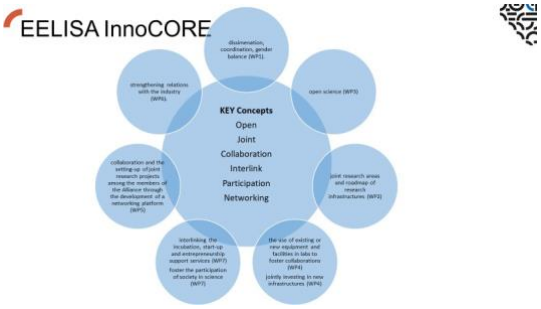


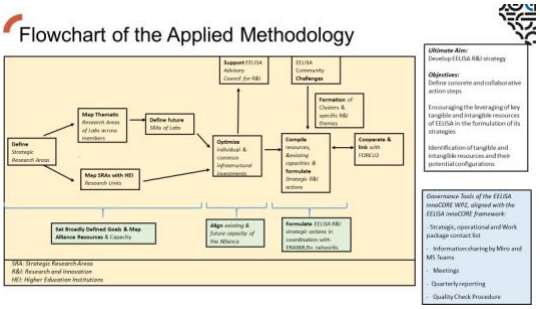
Cluster 1: R&I Common Science Agenda and European Universities

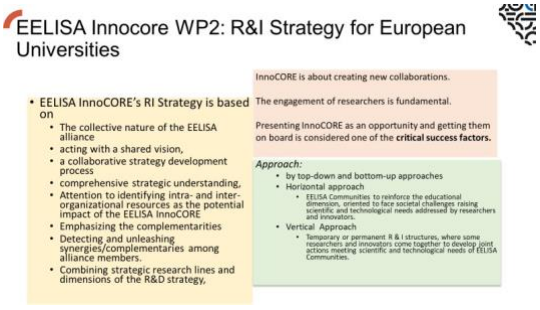
DR. NIHAN YILDIRIM, DR. EMRAH ACAR, DR. HÜR BERSAM SIDAL BOLAT. Istanbul Technical University (EELISA Alliance).

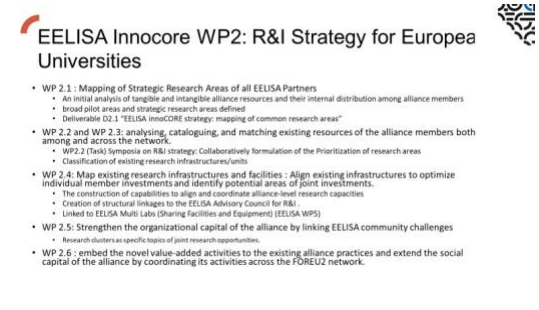










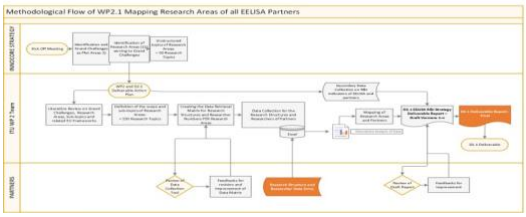


EELISA Innocore WP2.1: Mapping of Strategic Research Areas of all EELISA Partners

- Identify the strategic research areas for the alliance
- Map the existing research capacities of each HEI in accordance with these strategic research areas.
- Mapping of existing research units across EELISA Innocore member institutions is designed following these principles.

Strategic research areas :
broad categories of research areas that are ***prioritized for the potential development of the joint strategic research efforts***.

Mapping of Common Research Areas
D2.1 "EELISA InnoCORE strategy: mapping of common research areas"



Pilot Areas of Research on Two Pilot Areas (Grand Challenges) and Strategic Research Areas

Two pilot areas of research on grand challenges – In EELISA Grant Agreement	**Strategic research areas identified during the kick-off meeting**
Pilot Areas, which concentrate the focus of EELISA Innocore R&I efforts, are defined as: **I - «SMART, GREEN & RESILIENT CITIES»** **II - «SUSTAINABLE & SMART INDUSTRIES»**	1. Artificial intelligence 2. Health 3. Digital 4. Culture, creativity and inclusive society 5. Climate, energy and mobility 6. Connectivity 7. Food, bioeconomy, natural resources, agriculture and environment 8. Social sciences and humanities 9. Advanced material science and engineering 10. Smart industry and space technologies 11. Natural sciences

Pilot Areas of Research on Two Pilot Areas (Grand Challenges) and Strategic Research Areas

Nr	Strategic Research Areas	EELISA InnoCore Pilot Areas 1 Sustainable and Smart Industries	 2 Smart, Green and Resilient Cities
1	AI for smart industry	x	
	AI for smart city :		x
2	Connectivity	x	x
3	Social sciences and humanities	x	x
4	Digitalization	x	
5	Health		x
6	Smart industry and space technologies	x	
7	Advanced material science and engineering	x	x
8	Culture, creativity and inclusive society		x
9	Food, bioeconomy, natural resources, agriculture and environment		x
10	Climate, energy and mobility	x	x
11	Natural Sciences		

Strategic Research Areas and Sub-topics

Sub-topics of Research Areas

Data Collection Methods and Tools - Challenges

- Data declared by partners on Research Structures and researchers in these structures
- Descriptive and focus analysis of partners
- EELISA Partners' varying organizational structures and unit hierarchies.
- *The Research Structure definition* : primary measures of Research Structures of EELISA Partners.
- *Research infrastructures:* The laboratories as facilities and equipment inventory to be included as a capacity measure in further steps

- The term "Research Structures" includes
  - **centers,**
  - **hubs,**
  - **units,**
  - **Groups,**
  - **labs,**
  - **institutes,**

with a research focus, having research outcomes representing a R&I capacity.

Initial Indicators Used in WP2.1 Mapping of Strategic Research Areas of all EELISA Partners

- Per Partner Indicators
  - Total Nr. of Researchers
  - Total Nr. of Research Structures
  - Nr. of Research Structures by Research Areas
  - Nr. of Researchers by Research Area
- EELISA All Partners Indicators:
  - Total Nr. of Researchers
  - Total Nr. of Research Structures
  - Total Nr. of Research Structures by Research Areas
  - Total Nr. of Researchers by Research Area
  - Researcher numbers per Pilot Area
  - Research Structures Per Pilot Area

Data Collection Methods and Tools – Further Steps

- Since the deliverables indicate living documents, the mapping of strategic partners and R&I strategies should be iterative and evolve with the unfolding activities of the project.
- Actions to be taken for including some additional components of R&I strategy, and mapping of research areas in further steps:
  - Sub-topics of each broad subject area will be completed at a later step.
  - Research groups/laboratories can be tagged with keywords at a later step.

EELISA
European University

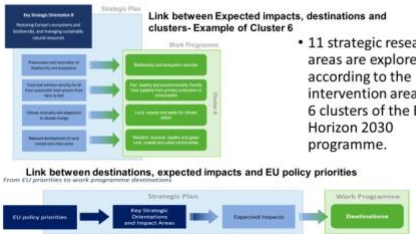
arQus
▸Research & Innovation

Co-funded by the H2020 Programm of the European Union

Policy Analysis with literature review and secondary data / content analysis

- Building linkages with strategy and policies of EC, and Horizon Europe Clusters, Intervention Areas and Research Areas,
- Linkages with SDGs.

Linkages of EELISA InnoCore Strategic Research Areas with EU Horizon Clusters

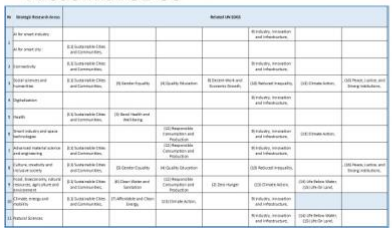


- 11 strategic research areas are explored according to the intervention areas of 6 clusters of the EU Horizon 2030 programme.

Linkages of EELISA InnoCore Strategic Research Areas and two pilot areas with EU Horizon Clusters

- 11 strategic research areas are aligned with the EU Horizon Clusters
- Empowering research and innovation in these strategic research areas within EELISA InnoCORE R&I strategy will serve the mission of EELISA InnoCORE on contributing to a sustainable, digital and inclusive Europe.

Linkages of EELISA InnoCore Strategic Research Areas with SDGs



11 strategic research areas are related to various SDGs.

Data Collection Methods and Tools – Secondary Data : Secondary data retrieval and analysis of Research Outputs of Partners

Final remarks and Future directions on EELISA Innocore WP2.1: Mapping of Strategic Research Areas of all EELISA Partners

- Community building towards R&I
- Existing plan is dynamic and iterative. It is closely linked with strategic planning and timing of the outputs in other work packages.
- The process requires **extensive collaboration** and joint efforts
- Strategic research areas are strongly linked with the pilot research areas of EELISA, but they are also associated strongly with the EU R&I framework and sustainable development goals.
- Primary content covered by the deliverable focused on mapping thematic research areas with the descriptive analysis of research capacity (number of research structures and researchers) of EELISA members.
- Even so, the analyses have shed light on the distribution of research capacity across research areas and the degree of discrepancy between alliance members by research area.

Future directions on EELISA Innocore WP2.1: Mapping of Strategic Research Areas of all EELISA Partners

- Analysis, and enhancement of Labs and facilities as infrastructures
  - to be integrated to the presented analysis of RSs and researcher capacity for an overall evaluation covering all dimensions of R&I capacity.
- Platform and Database creation on researchers, communities and clusters
- Research Output and Efficiency Analysis: The research outputs of EELISA Innocore partners per capacity measures
  - The deliverable results will be used in the symposium (WP2.2) among partners to initiate **concrete collaborative actions** for **creating complementarities across each alliance member**
- EEELISA InnoCORE strategy will leverage the academic corporate collaboration and high impact competency of partners for **creating industry linkages** towards the mission and performance improvement in strategic research areas with **industry collaboration.**
- Additional efforts for providing a higher level of economic impact. R&I strategy also contribute to expanding funding sources.

https://eelisa.eu/
https://eelisa.eu/eelisa-innocore/

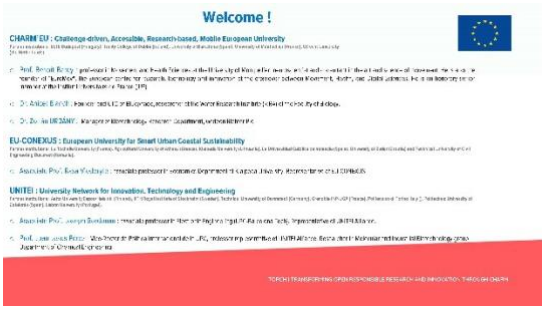
FEEDBACK

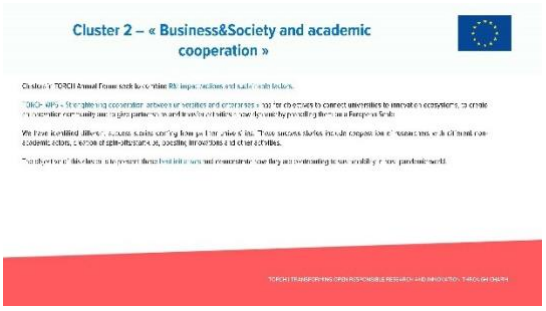
İTÜ

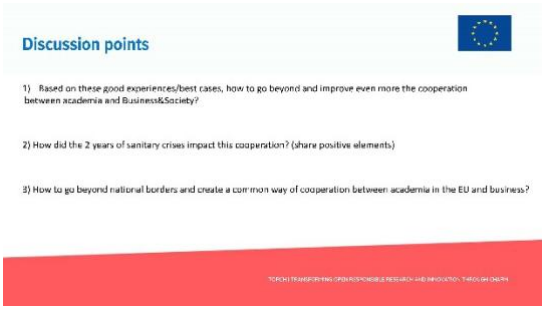
European University

Cluster 2: Business & Society and Academic Cooperation

MS. INESE ROZENSTEINE. TORCH Project Manager, University of Montpellier.

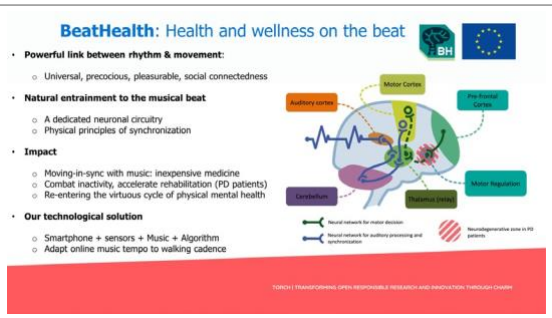


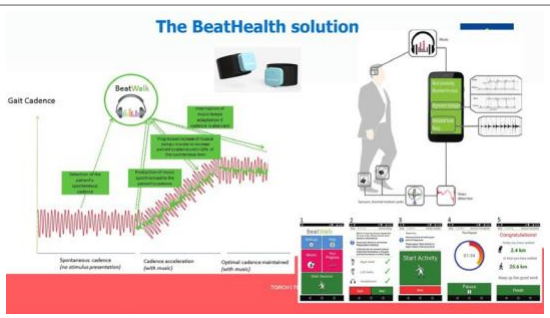




Cluster 2: Business & Society and Academic Cooperation

PROF. BENOÎT BARDY. University of Montpellier, BEAT HEALTH Project (CHARM-EU Alliance).

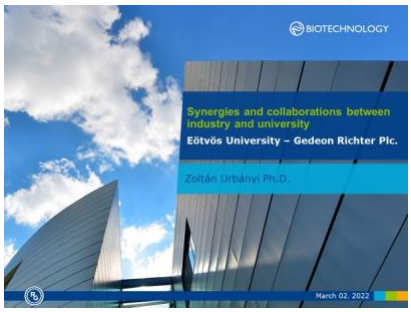




https://www.youtube.com/watch?v=4H5wUbYEuOo

Cluster 2: Business & Society and Academic Cooperation

DR. ZOLTÁN URBÁNYI. Biotechnology Research Department, Eötvös Loránd University (CHARM-EU Alliance).



About the company in general

Strategic pillars of Gedeon Richter

Richter Group

The main fields of the ELTE – Richter collaborations

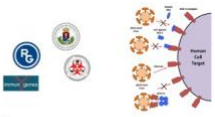
- **Common research projects**
- **Common R&D grants**
- **„Contract Research Organization" – university as a service provider**
- **Education**

Confidential 5

Common Research Project

Development of ACE2-Fc fusion protein for the treatment of Covid-19 desease

- **March 2020: Project was initiated by ELTE and supported by the Hungarian Ministry of the Innovation and Technology**
- **Collaborating partners:**
  - **Eötvös University**
  - **Gedeon Richter**
  - **University of Pécs**
  - **Immunogenes Ltd.**

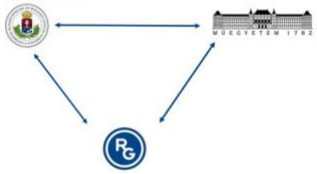


- **The project is in preclinical phase**

Confidential 6

Education

Biotechnology MSc



To find and train talents for the biopharmaceutical industry

Confidential 7

Education

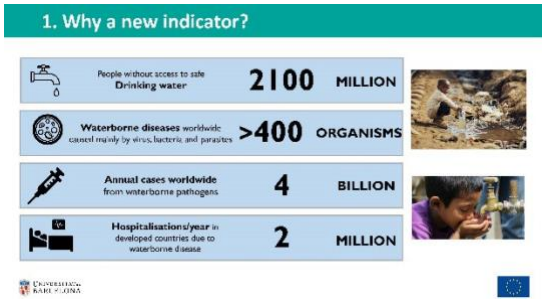
Richter scientists actively support the education at the Eötvös University

- **Biotechnology MSc program**
- **Course in the MSc training in Chemistry**
- **Invited lectures**
- **Internships**

Confidential 8

Cluster 2: Business & Society and Academic Cooperation

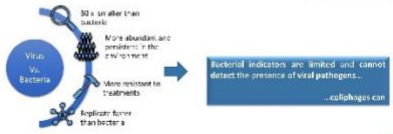
PROF. ANICET BLANCH. University of Barcelona, Bluephage (CHARM-EU Alliance).



1. Why a new indicator?

Microbial water quality assessment and monitoring is critical for water safety plans and sanitation safety plans

- Established parameters: Bacterial indicators
- New parameters: **Viral indicators (coliphages)**



2. Coliphages. How are they?

Bacteriophages: virus of enteric bacteria

- **Different groups of bacteriophages** have been proposed as indicators of faecal and / or viral contamination in water, biosolids and food.
- Bacteriophage groups are **defined with respect to the host bacterial strain** that is used for their detection.
- Bacteriophages are **bacterial viruses**, and in aspects such as their composition, structure, morphology and size of the capsid, they **share many properties with animal and human viruses**.

2. Coliphages. How are they?

Bacteriophages behave like animal and human viruses attending to:

- Circulation through filters (membranes, ultrafiltration, "soil", etc.)
- Adsorption to surfaces (particles, membranes, etc.)
- Resistance to physical and chemical disinfection
- Environmental persistence

2. Coliphages. How are they?

The relationships observed between bacteriophages and human infectious viruses are essential for risk models

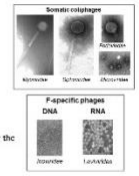
$10^4 – 10^5$ Somatic Coliphages for 1 Infectious Enterovirus

Ratio in secondary and tertiary treatments

2. Coliphages. How are they?

Groups of Bacteriophages proposed as indicators

Defined according to the host bacteria that they infect



COLIPHAGES

Somatic coliphages
- They infect *E. coli* through the cell wall
- Host (non written agreement) strains CN13,WG5 derived from *E. coli* C (ATCC13706)

F-specific coliphages
- They infect *E. coli* and other enterobacteria through the sex pili encoded by the plasmid
- Host strain *Salmonella typhimurium* WG49 and *E. coli* HS

***Bacteroides fragilis* bacteriophages**

They infect *Bacteroides fragilis* through the cell wall (HSP40, RYC2056)

3. Coliphages in Guidelines, Regulations and Directives

	Biosolids	Groundwater	Recreational water	Drinking water Reclaimed water	Irrigation applications & UV	Direct Potable reuse
Australia	2012 (WHO)		2008	2011 [1]	Queensland 2010 WA 2011	
Canada			2008	2001 (Québec)		
Colombia	2014					
EE.UU.		2006	2018	2011	2015	2015
EU				2020 2020		
Italy	Draft 2018					
France	2021			2014		
South Africa				1996 *		
WHO				2017 [2] 2017		2017 [2]

" Guidelines

4. How to analyse coliphages? – Standard Methods

International Standardization Office. ISO

10705-1: 2002. Water quality. Detection and enumeration of bacteriophages.

Part 1: Enumeration of F-specific RNA bacteriophages

10705-2: 2002. Water quality. Detection and enumeration of bacteriophages.

Part 2. **Enumeration of somatic coliphages**

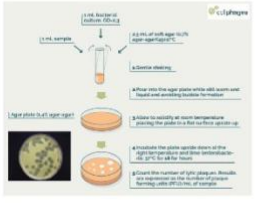
10705-3: 2003. Water quality. Detection and enumeration of bacteriophages.

Part 3: Validation of methods for **concentration** of bacteriophages **from water**

10705-4: 2001. Water quality. Detection and enumeration of bacteriophages.

Part 4. Enumeration of **bacteriophages** infecting ***Bacteroides fragilis***

4. How to analyse coliphages? – Standard Methods



still **multi-step processes** that require several media and operations, pre-preparation of calibrated control and reference materials and...

Applying Standard Methods still > 16h! (> overnight)

To know more .....

UBtv

Extraction of bacteriophages from sludges, soils and treated biowastes
https://www.ub.edu/labvirology/extraction-of-bacteriophages-from-sludges-soils-or-treated-biowastes

www.coliphages.com

CEN/ISO working document: http://diposit.ub.edu/dspace/handle/2445/170949

Detection and enumeration of somatic coliphages
https://www.ub.edu/labvirology/detection-and-enumeration-of-somatic-coliphages

Preparation of culture reference material
http://www.ub.edu/labvirology/preparation-of-culture-reference-material

Bacteriophages preparation of a highly concentrated control stock
http://www.ub.edu/labvirology/bacteriophages-preparation-of-a-highly-concentrated-control-stock

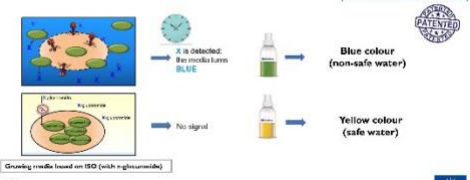
5. Bluephage approach. How it works?

Technology:

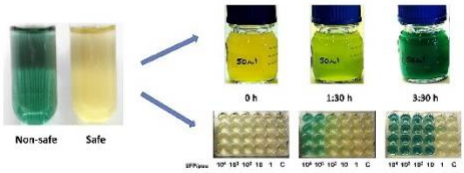
A **patented bacterial host strain** for coliphages that turns its growing culture into **blue colour** in presence of infective virus.

US Patent Granted US 9.932.645 B2 (April 3rd 2018)

EPO 3068894 (April 17th, 2019)



5. Bluephage approach. How it works?



- Adaptable to miniaturized systems and 100 mL volumes

References of interest

Bluephage related scientific publications

1. Muniesa, M., F. Ballesté, I. Imamovic, M. Pascual-Benito, D. Toribio-Avedillo, F. Lucena, A. R. Blanch, and J. Jofre. 2018. B. aphage: A rapid method for the detection of somatic coliphages used as indicators of fecal pollution in water. Water Res. 128:10-19. https://doi-org.sire.ub.edu/10.1016/j.watres.2017.10.032
2. Toribio-Avedillo, D., J. M. Díaz, J. Jofre, A. R. Blanch, and M. Muniesa. 2019. New approach for the simultaneous detection of somatic coliphages and F-specific RNA coliphages as indicators of fecal pollution. Sci. Total Environ. 653:263-272. https://doi-org.sire.ub.edu/10.1016/j.scitotenv.2018.10.398
3. Toribio-Avedillo, D., J. Martín-Díaz, P. Blanco-Picazo, A. R. Blanch, and M. Muniesa. 2020. F-specific coliphage detection by the B. aphage method. Water Res. 184:116116. https://doi-org.sire.ub.edu/10.1016/j.watres.2020.116215
4. Méndez, J., Toribio-Avedillo, D., Huegas-Casas, R., Martínez-Guerrero, J. 2020. Bluephage, a method for efficient detection of somatic coliphages in one hundred millilitre water samples. Sci Rep 10, 2977 (2020). https://doi-org.sire.ub.edu/10.1038/s41598-020-60071-w

Some review on coliphages as indicators

1. Blanch, A. R., F. Lucena, M. Muniesa, and J. Jofre. 2020. Fast and easy methods for the detection of coliphages. J Microbiol Methods 173:105940. https://doi-org.sire.ub.edu/10.1016/j.mimet.2020.105940
2. Jofre, J., F. Lucena, A. R. Blanch, and M. Muniesa. 2016. Coliphages as Model Organisms in the Characterization and Management of Water Resources. Water 8:199. https://doi.org/10.3390/w8050199

6. Bluephage S.L., a spin-off from University of Barcelona

bluephage
Viral indicators for Safety

Universitat de Barcelona

Safe water for a better world

November 2016

6. Bluephage S.L., a spin-off from University of Barcelona

Parameter	ISO	Bluephage EASY KIT	Bluephage RAPID KIT
Sensitivity	1 PFU/mL	1 PFU/1 ml 1 PFU/100mL	1 PFU/100mL*
Ease to use	*	**	***
Applicability	Water, Food, Biosolids	Water, Food, Biosolids	Water, Food, Biosolids
Availability of strains	Not included	Included	Included
Preparation of material (h) (previous steps)	48-60	0	0
Preparation of inoculum culture (h)	3-4	2	0,16
Results time (h)	18-20h	18-20	6
Hours Technician	4	1	<0.5

*Sensitivity 79% and Accuracy 92.6%
**Not very easy ***Easy ****Very easy
Dependent on Glutamate medium

bluephage

6. Bluephage S.L., a spin-off from University of Barcelona

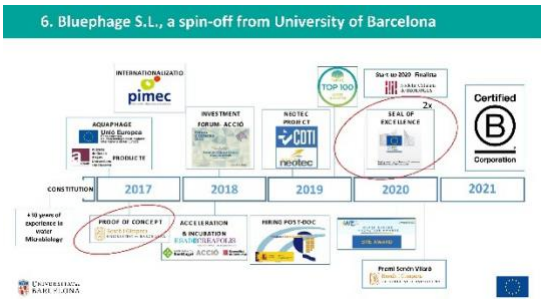
6. Bluephage S.L., a spin-off from University of Barcelona

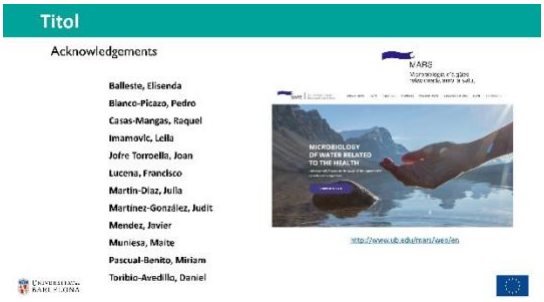
- Somatic coliphage analysis
- All kinds of water matrices
- Sample volume 100 mL
- Results in pfu / 100mL
- Results after 6 hours of incubation

- Camera device (mobile, tablet...)
- APP Download
- Photography
- Reading results

How is it quantified?

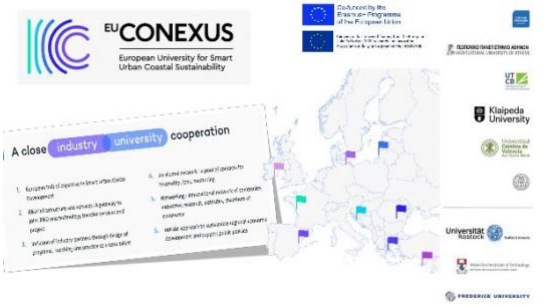
Digitization of colour change through image analysis and mathematical calculation. A confidence interval, automation and traceability of samples are established.

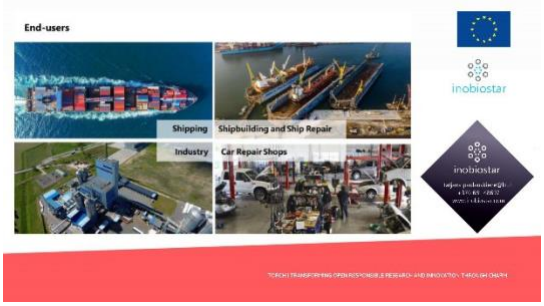




Cluster 2: Business & Society and Academic Cooperation

DR. RASA VIEDERYTE. Klaipeda University, Manager of EU-CONEXUS Research for Society (EU-CONEXUS Alliance).





Cluster 2: Business & Society and Academic Cooperation

DR. JOSEP BORDONAU, DR. JUAN JESÚS PÉREZ, DR. CRISTINA ARESTÉ. Polytechnic University of Catalonia, UPC-BarcelonaTech (Unite! Alliance).

TORCH
Transforming Open Responsible Research and Innovation through CHARM

Unite!
Open Innovation Community integrating different stakeholders

Josep Bordonau, Juan-Jesús Pérez, Cristina Aresté
UPC-BarcelonaTech

THIS PROJECT HAS RECEIVED FUNDING FROM THE EUROPEAN UNION'S HORIZON 2020 RESEARCH AND INNOVATION PROGRAMME UNDER GRANT AGREEMENT NO 101017229

unite! 2

Content

- The purpose
- Initial work
- Identifying the stakeholders
- Actions

unite! 3

The purpose

- Creation of an Open Innovation Community within Unite!

- Develop Regional Innovation Strategies through Unite!
  - Smart Specialization Strategies (S3)
  - Lifelong Learning
  - Ethics in Sustainable Engineering

unite! 4

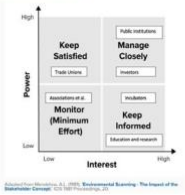
Initial work

- Internal analysis: identification of initiatives that can be:
  - replicated
  - extended
  - shared
- External analysis
  - Stakeholders
  - Experiences (inspirational)
  - Opportunities
  - Barriers

unite! 5

Identifying the Stakeholders (1 of 2)

- Stakeholder Analysis



unite! 6

Identifying the Stakeholders (2 of 2)

- The categories of +450 Stakeholders we have considered:
  - Associations, Community and Coworking
  - Education and Research
  - Incubators, BICs, Accelerators and Science Parks
  - Investors
  - Public Institutions
  - Trade Unions
  - Non Profit Organizations
  - Companies
  - Industry Associations

unite! 7

Actions

- During the 4th Unite! Dialogue in Barcelona (Nov 29th – Dec 1st 2021):
  - Match-making event
  - Event on bridging the gap academia-business

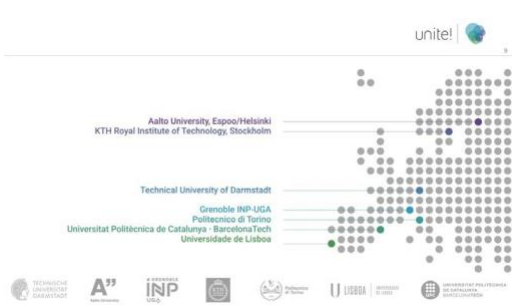
Open Day in Darmstadt (May 25th 2021)

- The Collider opens the ecosystem from Spain and Portugal to Europe

TORCH
Transforming Open Responsible Research and Innovation through CHARM

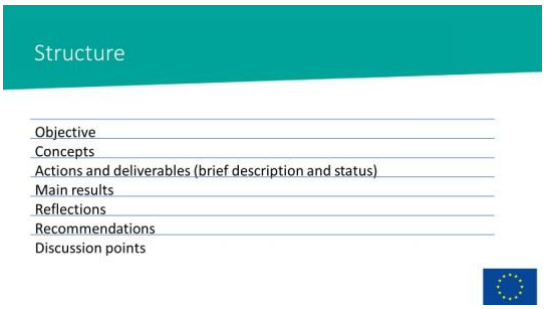
MOLTES GRÀCIES
MUCHAS GRACIAS
FORÇA GRACIAS
MANY THANKS
GO RAIBH MAITH AGAT
HEEL ERG BEDANKT
MERCI BEAUCOUP
NAGYON KÖSZÖNÖM
DANKE SCHÖN!

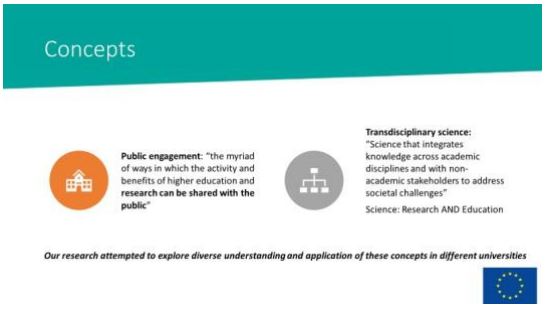
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101017229

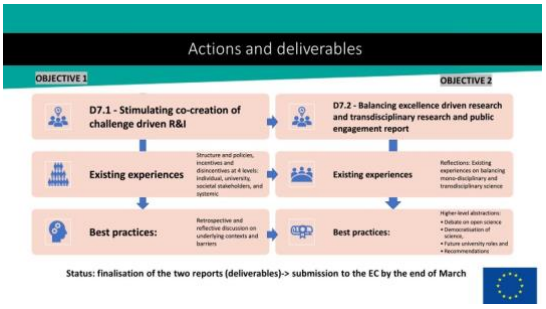


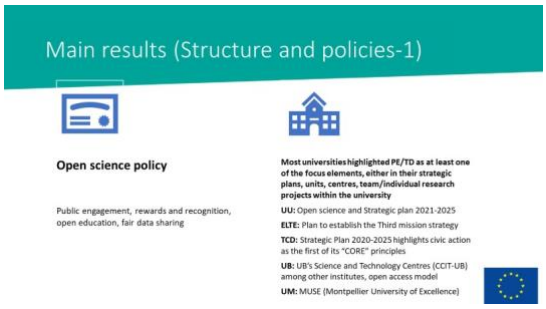
Cluster 3: Public Engagement

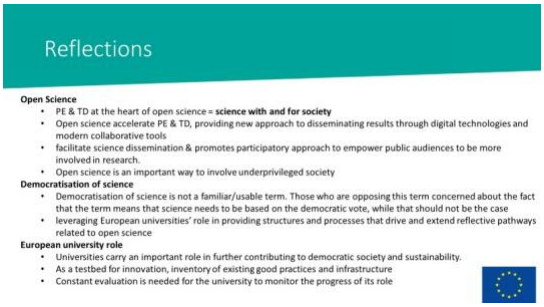
DR. ANNISA TRIYANTI. Copernicus Institute of Sustainable Development, Utrecht University (CHARM-EU Alliance).

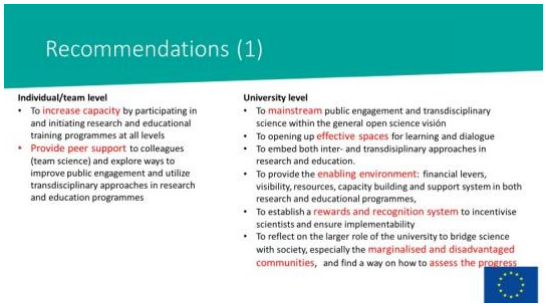


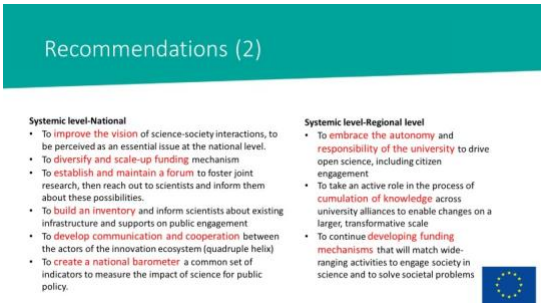












Cluster 3: Public Engagement

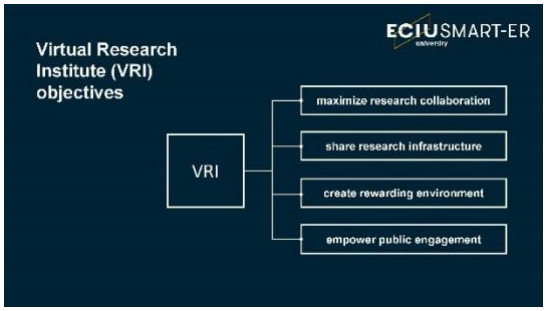
DR. TROELS JACOBSEN. Director of Innovation and societal engagement, University of Stavanger (ECIU Alliance).

Members

University of Twente (Netherlands)
Aalborg University (Denmark)
Dublin City University (Ireland)
Hamburg University of Technology (Germany)
Kaunas University of Technology (Lithuania)
Linköping University (Sweden)
Tampere University (Finland)
Universitat Autònoma de Barcelona (Spain)
University of Aveiro (Portugal)
University of Stavanger (Norway)
University of Trento (Italy)
Institut National des Sciences Appliquées (France)
TEC de Monterrey (Mexico)

The ECIU University
Research Institute for Smart European Regions:

1. New model of barrier-free research and innovation, based on a virtual collaboration environment
2. Framework for joint research that delivers solutions to current and future UN SDG11 challenges
3. Science- society cooperation and citizen science initiatives in practice, to help overcome the limitations of disciplines, sectors and countries.



WP 4 - Public Engagement

- TASK 4.1 Review of current practices and co-creation of a shared vision and agenda of public engagement
- Task 4.2: Development of Public Engagement guidelines
- Task 4.3: Establishment of Public Engagement community of practice

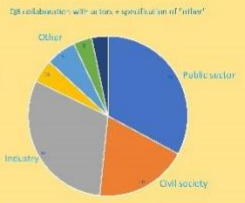
More Information: https://www.eciu.org/smart-er-for-researchers

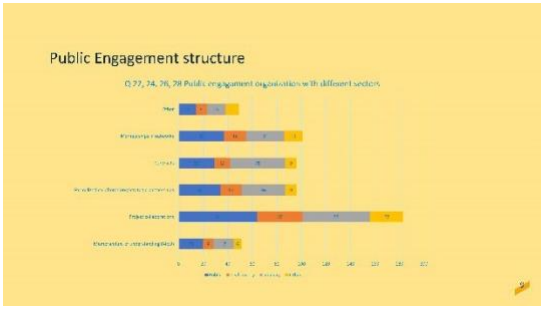
By public engagement we refer to "*participatory multi-actor dialogues and exchanges to foster mutual understanding, co-create research and innovation outcomes, and provide input to policy agendas.*" (Horizon 2020)

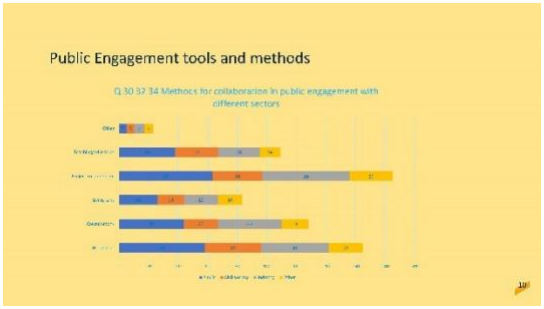
The actor groups of the public addressed in the survey were:
- **PUBLIC actors** (e.g. representatives for local, regional, national authorities, civil servants, municipal planners, regional health care providers, state departments)
- **CIVIL SOCIETY actors** (e.g. 'Save the children', unions, community-based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

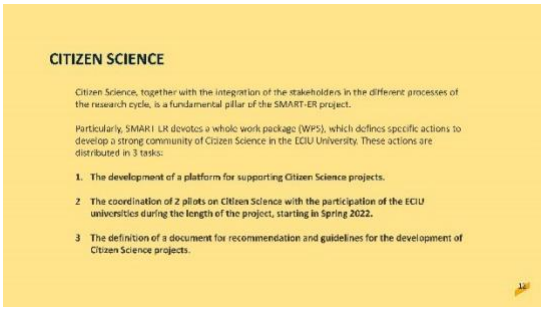
Task 4.1 Survey and workshops

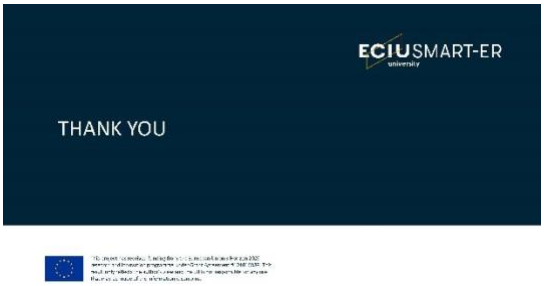
- Survey with 44 questions
  (74 responses - multiple choice possible)
- Workshops (11 workshops with 7- 12 participants on average)











Cluster 4: Cross-Cutting Principles to Address a Transformative R&I Agenda

PROF. LORRAINE LEESON. Associate Vice Provost for Equality, Diversity and Inclusion, Trinity College Dublin (CHARM-EU Alliance).

TORCH
Transforming Open Responsible Research and Innovation through CHARM

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101017223

Key Question:

How do we make it easier to do collaborative, equitable, ethical, multidisciplinary research in a European University Alliance?

CHARM-EU R&I Dimensions Model

Cross Cutting Principles

- Interdisciplinarity / Transdisciplinarity
- Gendered innovation
- Ethics and Integrity

Transformational Modules

- Common RI/ Agenda and Action Plan
- Cooperation with Non-academic Actors
- Open Science Practices
- Citizen Science and Public Engagement

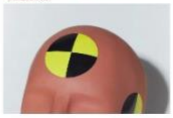
Research Integrity & Research Ethics

- ***Research ethics & integrity*** is – of course - an essential element of Responsible R&I. Developing a common research framework across our institutions and across a number of different disciplines requires addressing the challenges of ensuring ethically supported interdisciplinary research in an alliance of different institutions, countries and cultures.
- **Key challenges:**
  - Moving towards an alliance RRI Handbook, with a single Research Ethics process or agreed process of mutual recognition.
    - How do we do this without increasing the burden (administrative, timescale, etc.?)
    - What would a seamless, singular, simple but rigorous process look like in a multilingual, multicultural Alliance?
    - CHARM-EU has the ambition to be built to be inclusive - how does this play out in RI & ethical processes? What does success look like?

Gendered Equality and Gendered Innovation

Sexism on the Covid-19 frontline: 'PPE is made for a 6ft 3in rugby player'

The deadly truth about a world built for men – from stab vests to car crashes



Gendered Equality and Gendered Innovation

Award Criteria: Integration of the gender dimension

EXCELLENCE criterion for RIAs/IAs

- Clarity and pertinence of the **project's objectives**, and the extent to which the proposed work is ambitious, and goes beyond the state-of-the-art.
- **Soundness of the proposed methodology** including the underlying concepts, [illegible] **appropriate consideration of the gender dimension in research and innovation content** and the quality of open science practices including sharing and management of research outputs and engagement of citizens, civil society and end users where appropriate.

Gender Equality

Horizon 2020-SwafS Gender Projects

Inclusiveness...Interdisciplinarity...Ethics

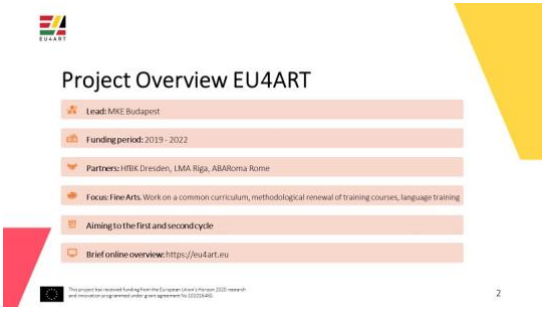
- Gender Equality
- Other Equality Grounds

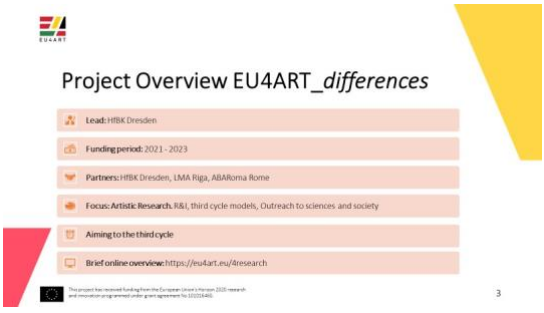
Interdisciplinarity/ Transdisciplinarity/ Multidisciplinarity

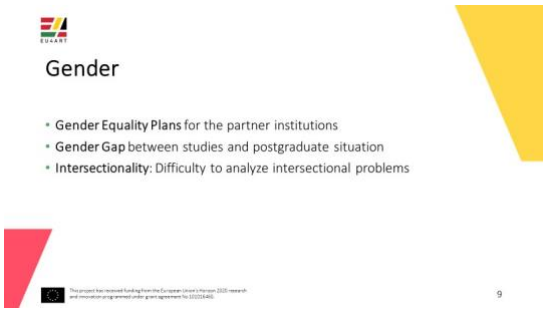
- In TORCH, we define ***interdisciplinarity*** as an activity involving the integration of knowledge, theories or methods from different disciplines, resulting in holistic and systemic outcomes (Huutoniemi et al. 2010).
- In related terms, ***multidisciplinarity*** is defined as a juxtaposition of components from different disciplines.
- ***Transdisciplinarity*** is defined as interdisciplinary integration alongside the involvement of non-academic stakeholders in the research process (Lyall et al 2015).

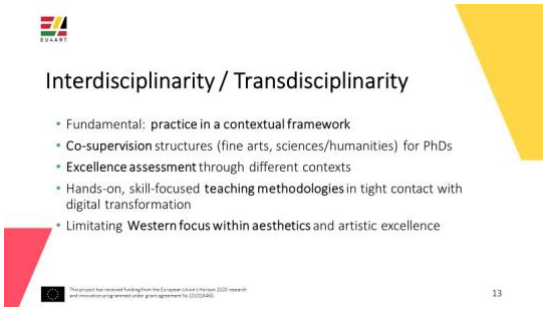
Cluster 4: Cross-Cutting Principles to Address a Transformative R&I Agenda

DR. TILL ANSGAR BAUMHAUER. Hochschule für Bildende Künste Dresden, EU4ART_differences Project Speaker & Leader (EU4ART Alliance).









Cluster 4: Cross-Cutting Principles to Address a Transformative R&I Agenda

DR. MIREILLE STHIJNS, Maastricht University. DR. NURIA BAUTISTA PUIG, Carlos III University of Madrid (YUFE Alliance).

Young Universities for the Future of Europe

YUFE vision and mission: the Dream!

- A leading model of a **student-centered, open and inclusive** European University **open to all**
- **Individualized and flexible life-long learning and career pathways** for students, staff, and citizens
- Truly innovative **research- and work-based ecosystems** based on interdisciplinary and inter-sectoral approach in education, R&I and service to society (**knowledge square**)
- Civic engagement and social responsibility as core values

Blueprint of a Europe thriving on diversity, inclusion, collaboration, synergies and empathy

Young Universities for the Future of Europe

YUFE partners

10 universities

4 non-academic organisations

11 countries

15 cities

All EU regions

Young Universities for the Future of Europe

YUFE Partners

University of Cyprus
Maastricht University
University of Antwerp
uc3m Universidad Carlos III de Madrid
University of Bremen
University of Eastern Finland
University of Essex
Tor Vergata
unifi
Nicolaus Copernicus University in Torun

Young Universities for the Future of Europe

YUFE key facts

- **Top-scoring alliance** 1st pilot Erasmus+ call for European Universities Initiative
- Bottom-up **co-creation**, top-down support and commitment
- Three year pilot phase **(12/2019 – 11/2021)**
- Not a project, but **transformative initiative**

Young Universities for the Future of Europe

All YUFE projects to date (Feb' 2022)

- **Erasmus+ EUI pilot**
  YUFE model of European University; Coord. Maastricht University
- **DIOSI – H2020 SwafS**
  Hands-on training on Open science and Open Innovation for ECRs; Coord. University of Antwerp
- **YUFERING – H2020 SwafS/EUI pilot top-up for R&I**
  YUFE Transforming R&I through Europe-wide Knowledge transfer; Coord. University of Cyprus
- **Inno4YUFE – EIT HEI pilot**
  Towards a pioneering European University that powers a new generation of student entrepreneurs and innovators; Coord. Maastricht University

Young Universities for the Future of Europe

YUFERING Project objectives

YUFERING

- YUFE community-engaged R&I agenda for an excellent and inclusive European University
- Catalyst of flipped knowledge transfer and deployment in society
- Recognition, reward and circulation of talents and teams across Europe
- YUFE Open Science Strategy
- Shared research support structures, mechanisms and infrastructures amongst YUFERING partners
- Broader impact on the R&I community and the society
- System-level impact: joint structures and share best practices

Young Universities for the Future of Europe YUFERING

Aim of YUFERING WP2

To develop and establish a YUFE-wide community engagement-based R&I approach

- Scalable
- Effective
- Impactful

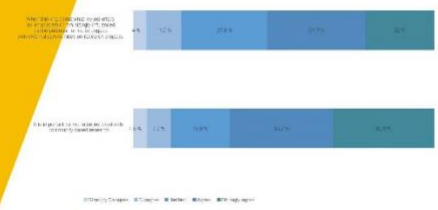
An example for other European University alliances

Young Universities for the Future of Europe YUFERING

Different tasks YUFERING WP2

- **Task 2.1** Map best practices in community-engaged research at YUFE universities *[Month 1-9; Task leader: UNIRI]*
- **Task 2.2** YUFE-wide analysis of existing R&I policies, support and decision-making processes *[Month 1-18; Task leader: UEssex]*
- **Task 2.3** Piloting a YUFE-wide community-engagement based research & innovation model *[Month 1-36; Task leader: UAntwerp]*
- **Task 2.4** Development of training programmes on community-engaged R&I *[Month 1-36; Task leader: UM]*
- **Task 2.5** Foster YUFE science outreach as means of community engagement and service to society *[Month 1-36; Task leader: UNIRI]*
- **Task 2.6** Development of a joint strategy towards a common YUFE research infrastructure agenda *[Month 1-36; Task leader: UCY]*

Relevance Community-Engaged Research and Innovation



Importance Community-Engaged Research and Innovation

- 573 total respondents: 15% PhD students and 78% academics (mostly teaching and research)
- 67% important to be involved with community-based research
- 45% participated in knowledge transfer related activities (including CERI) within the last 3 years
- 64% of these 45% were specifically engaged in CERI
- An average (median) time spent of 15 days

Aim subtask 2.1: Map best practices in community-engaged research at YUFE universities

- To map, define and test YUFE-wide community engagement-based R&I best practices and tools.
- Aim to foster multi-thematic approaches.

Approach to map best practices in community-engaged research at YUFE universities

- Defining community-engagement based research
- Mapping best practices of community-engagement based research within YUFE via surveys and/or science databases along with interviews of research group representatives
- Identify success factors, challenges and /tools within these best practices

Definition Community-engaged research and innovation

1. A participatory form of research that is performed with, by and/or for the community members that benefits communities involved
   - direct intervention (innovation)
   - translating research findings
2. Academic and nonacademic actors working collaboratively change
3. Principles of reciprocity, including the shared ownership of research

Characteristics: Community-engaged research and innovation

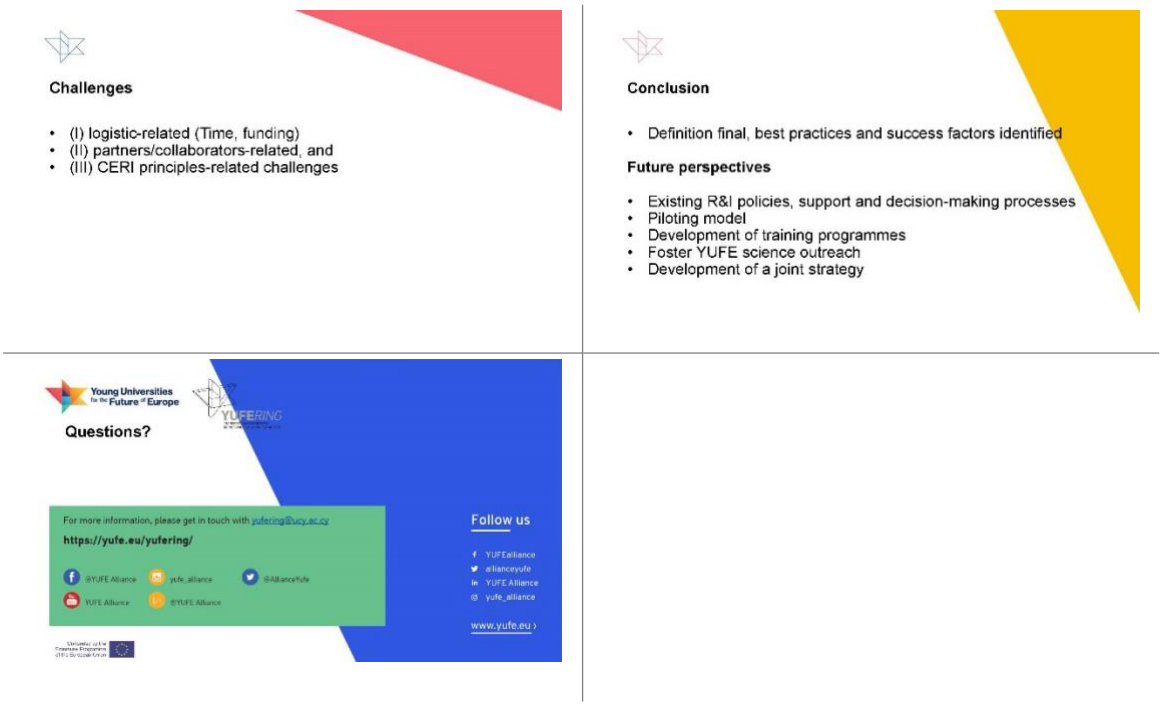
- Social impact
- Actively involves affected community partners (non-academic communities) in one or more phases
- Implementation of the research outcomes and innovative solutions
- Bi-directional relationships

Best practices

University	Project	Aim
University of Eastern Finland	ALL-YOUTH – All youth want to rule their world	to create possibilities and to enable young people to participate in making their own communities and the society a better place
University of Essex	-	This project takes veterans with PTSD on fishing trips and evaluates improvements to mental health.

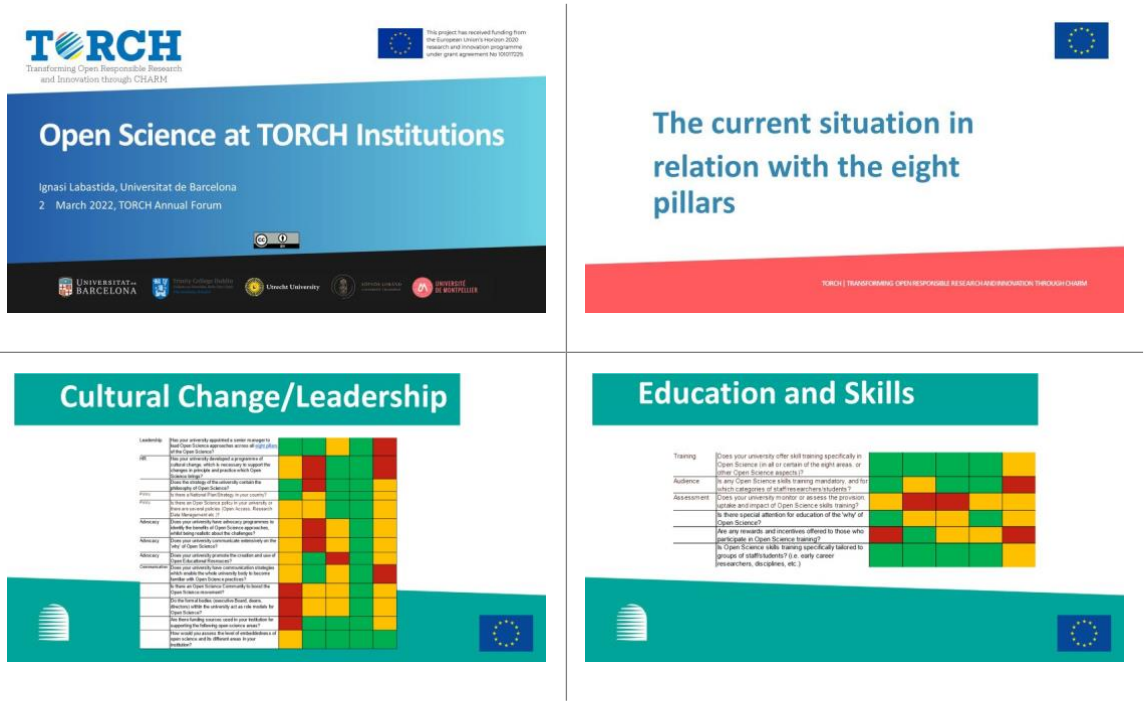
Success factors

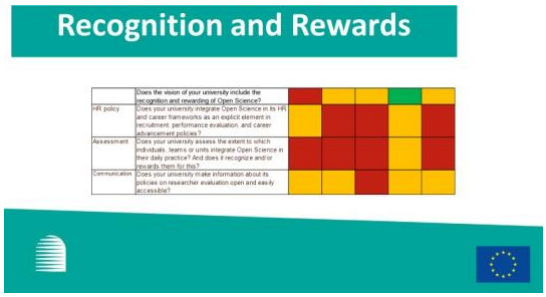
- diversity and contextuality
- (I) research process co-design, knowledge sharing and
- co-production
- (II) continuity, structure, cyclical approach and impact
- (III) multiplying effects of working together in a trusting relationship
- (IV) learning, growing and changing together by introducing innovative services/programmes

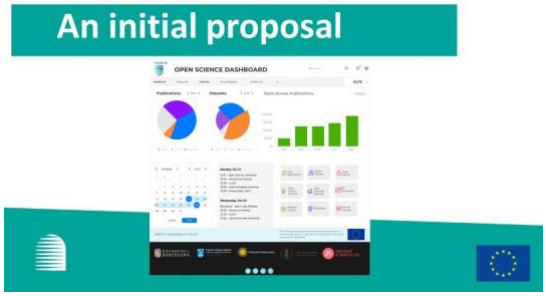


Panel Session: Open Science

DR. IGNASI LABASTIDA. Rector's Delegate for Open Science, University of Barcelona (CHARM-EU Alliance).







Panel Session: Open Science

PROF. ROBERTO DELLE DONNE. University of Naples Federico II (AURORA Alliance).

AURORA

What we stand for: pilot domains

In order to effectively bridge programmes and disciplinary boundaries we have defined a set of four pilot "challenge domains" in which Aurora social innovation in teaching, research and outreach take effect. The domains are:

- Sustainability & Climate Change
- Digital Society & Global Citizenship
- Health & Well-being
- Culture: Diversity & Identity

AURORA

What we do

- WP3 Aurora Learning for Societal Impact
- WP4 Aurora Engaging Communities
- WP5 Aurora Sustainability Pioneers

How we operate

- WP2 Quality management
- WP6 Sustainability and dissemination

AURORA

WP3 Aurora Learning for Societal Impact

- Aurora Competences Framework
- Aurora Pilot Domains
- Aurora Social Transformation
- Aurora Borderless Learning
- Aurora Teaching For Societal Impact
- Aurora Learning Analytics

AURORA

WP4 Engaging Communities

- Aurora Co-creation Practice
- Aurora Academic Collaboration
- Social Entrepreneurship & Innovation
- Aurora Capacity Development Support
- Aurora Institute

WP5 Sustainability Pioneers

- Aurora SDG Research and Education
- Aurora Sustainable Campus Action Plan

AURORA

WP2 Quality Management

- Quality System
- Quality Culture
- Internal Quality Evaluation
- External Quality Monitoring
- Quality Enhancement

WP6 Sustainability & Dissemination

- Aurora Alliance Sustainability Plan
- Aurora Dissemination Plan

AURORA

SWAFS-WP6

Sharing and Implementing Open Science practices

Lead: UNINA
Co-lead: VU

AURORA

SWAFS PROJECT

The focus of the project is to achieve an understanding of best practices and policies on sharing of research infrastructure and resources, cooperation on entrepreneurial activity, empowering human capital, mainstreaming open science and citizen engagement.

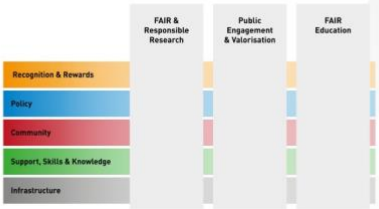
AURORA

OPEN SCIENCE

Open Science is the practice of science in such a way that others can collaborate and contribute, where research data, lab notes and other research processes are freely available, under terms that enable reuse, redistribution and reproduction of the research and its underlying data and methods (www.fosteropenscience.eu).

AURORA

The scope of Open Science



AURORA

WP. 6

WORK PACKAGE 6	SHARING AND IMPLEMENTING OPEN SCIENCE PRACTICES	
LEAD	UNINA	D6.2 A shared knowledge base of Open Science resources, policies, and best practices D6.3 Open Science training modules
CO-LEAD	VU	D6.1: Open science function to the SDG dashboard D6.4: Open Science Community starter kit and a platform for these communities to interact

Deliverables

D6.1. An open science function to our SDG dashboard (M18)
D6.2. A shared knowledge base of Open Science resources, policies and best practices (M24)
D6.3. Open Science trainingmodulesfor young researchers (M24)

AURORA

WP6. Objectives

- Building a shared knowledge base for OS resources, policies and practices, establishing joint training programme on OA
- Creation of network of OS researchers' communities within and between Aurora institutions
- Identification and solution to barriers identified for sharing of research infrastructures and for the development of a strategy for Open Science

AURORA

WP 6 Objectives

- OS makes use of the Open Educational database that is part of the Aurora Alliance Erasmus+ project
- Stimulating students to take up an active role in social entrepreneurship and participating in research for society
- Mobilize research students, PhDs and young researchers to become ambassadors for Open Science.
- Encouraging OS to impact on the future synergies between Horizon Europe and the Erasmus+ programmes.

AURORA

OS Specific objectives

- Development of an Aurora support agenda for research and innovation
- Development of best practices for pooling research infrastructures, expertise, data and resources
- Strengthen cooperation on entrepreneurial activity and creating an Aurora innovation ecosystem

AURORA

OS Specific objectives

- Develop the capacities and capabilities of Aurora researchers and support staff
- Sharing best practices on Open Science
- Embedding Citizens and societal engagement further into our research activities
- Maximise impact through collaboration with other European Universities

AURORA

Open Science Communities

"bottom-up learning communities of researchers and students for learning and sharing about Open Science"

AURORA

OS a Survey

In order to facilitate the AURORA network in making informed decisions in the complex topics of Open Science, the survey aims to collects data relating to:

the **actual practices of Open Science in Aurora universities**, with special attention to statutes, policies, publication of journals, book series, research data, adoption of Open Data FAIR standards, SDG keywords implementation, strategies for Open Science Training and Open Data Stewardship, etc.)

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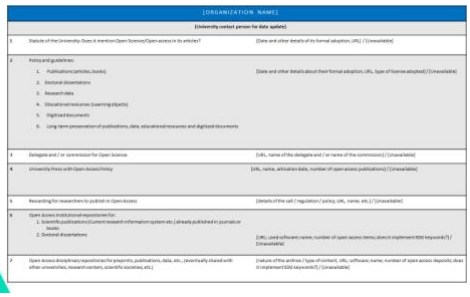
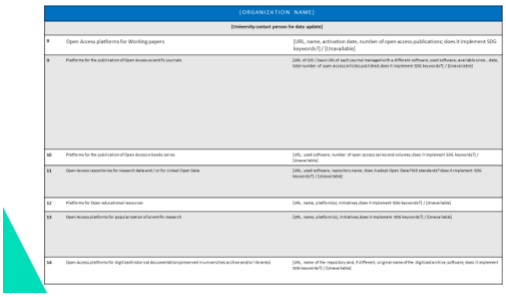
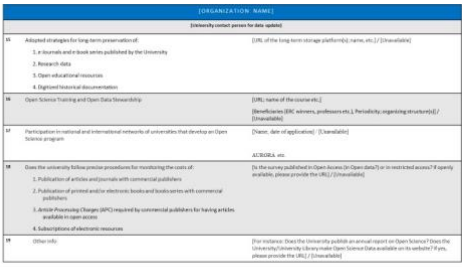


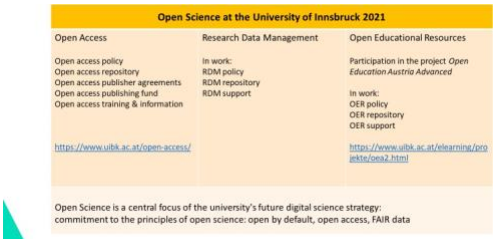
[ORGANIZATION NAME]	
[University contact person for data update]	
1	Statute of the University: Does it mention Open Science/Open access in its articles? [Date and other details of its formal adoption; URL] / [Unavailable]
2	Policy and guidelines: 1. Publications (articles, books) 2. Doctoral dissertations 3. Research data 4. Educational resources (Learning objects) 5. Digitized documents 6. Long-term preservation of publications, data, educational resources and digitized documents [Date and other details about their formal adoption; URL; type of license adopted] / [Unavailable]
3	Delegate and / or commission for Open Science [URL; name of the delegate and / or name of the commission] / [Unavailable]
4	University Press with Open Access Policy [URL; name, activation date, number of open access publications] / [Unavailable]
5	Rewarding for researchers to publish in Open Access [details of the call / regulation / policy; URL; name, etc.] / [Unavailable]
6	Open Access institutional repositories for: 1. Scientific publications (Current research information system etc.) already published in journals or books 2. Doctoral dissertations [URL; used software; name; number of open access items; does it implement SDG keywords?] / [Unavailable]
7	Open Access disciplinary repositories for preprints, publications, data, etc., (eventually shared with other universities, research centers, scientific societies, etc.) [nature of the archive / type of content; URL; software; name; number of open access deposits; does it implement SDG keywords?] / [Unavailable]



[ORGANIZATION NAME]	
[University contact person for data update]	
9	Open Access platforms for Working papers [URL; name, activation date, number of open access publications; does it implement SDG keywords?] / [Unavailable]
9	Platforms for the publication of Open Access scientific journals [URL of OJS / basic URL of each journal managed with a different software; used software; available since ; date; total number of open access articles published; does it implement SDG keywords?] / [Unavailable]
10	Platforms for the publication of Open Access e-books series [URL; used software; number of open access series and volumes; does it implement SDG keywords?] / [Unavailable]
11	Open Access repositories for research data and / or for linked Open Data [URL; used software; repository name; does it adopt Open Data FAIR standards? does it implement SDG keywords?] / [Unavailable]
12	Platforms for Open educational resources [URL; name, platform(s); initiatives; does it implement SDG keywords?] / [Unavailable]
13	Open Access platforms for popularisation of scientific research [URL; name, platform (s); initiatives; does it implement SDG keywords?] / [Unavailable]
14	Open Access platforms for digitized historical documentation (preserved in universities archives and/or libraries) [URL; name of the repository and, if different, original name of the digitized archive; software; does it implement SDG keywords?] / [Unavailable]



[ORGANIZATION NAME]	
[University contact person for data update]	
15	Adopted strategies for long-term preservation of: 1. e-Journals and e-book series published by the University 2. Research data 3. Open educational resources 4. Digitized historical documentation [URL of the long-term storage platform(s); name, etc.] / [Unavailable]
16	Open Science Training and Open Data Stewardship [URL; name of the course etc.] [Beneficiaries (ERC winners, professors etc.), Periodicity; organizing structure(s)] / [Unavailable]
17	Participation in national and international networks of universities that develop an Open Science program [Name; date of application] / [Unavailable] AUSEN4 etc.
18	Does the university follow precise procedures for monitoring the costs of: 1. Publication of articles and journals with commercial publishers 2. Publication of printed and/or electronic books and books series with commercial publishers 3. Article Processing Charges (APC) required by commercial publishers for having articles available in open access 4. Subscriptions of electronic resources [Is the survey published in Open Access (in Open data?) or in restricted access? If openly available, please provide the URL] / [Unavailable]
19	Other info [For instance: Does the University publish an annual report on Open Science? Does the University/University Library make Open Science Data available on its website? If yes, please provide the URL] / [Unavailable]



Open Science at the University of Innsbruck 2021

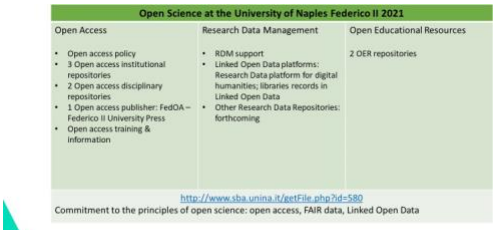
Open Access	Research Data Management	Open Educational Resources
Open access policy Open access repository Open access publisher agreements Open access publishing fund Open access training & information https://www.uibk.ac.at/open-access/	In work: RDM policy RDM repository RDM support	Participation in the project *Open Education Austria Advanced* In work: OER policy OER repository OER support https://www.uibk.ac.at/elearning/projekte/oea2.html

Open Science is a central focus of the university's future digital science strategy: commitment to the principles of open science: open by default, open access, FAIR data

Open Science at the University Duisburg Essen 2021

Open Access	Research Data Management	Open Educational Resources
Open access policy Open access repository Green open access Open access publisher agreements Open access funding Open access training & information In work: publication guidelines https://www.uni-due.de/ub/publikationsdienste/openaccess.php	RDM policy Research Data Services: RDM support RDM trainings RDM tools &infrastructure In work: data repository Projects for RDM in collaborative research centers (DFG funded research consortia) https://www.uni-due.de/rds/	OER repository OER support In work: OER policy OER repository OER trainings (01/2022) https://www.uni-due.de/ub/en/eoer.php

An overall digital strategy for science, administration and teaching is planned – Open Science including Open access, OER and FAIR data will be part of it.



Open Science at the University of Naples Federico II 2021

Open Access	Research Data Management	Open Educational Resources
• Open access policy • 3 Open access institutional repositories • 2 Open access disciplinary repositories • 1 Open access publisher: FedOA – Federico II University Press • Open access training & information	• RDM support • Linked Open Data platforms: Research Data platform for digital humanities; libraries records in Linked Open Data • Other Research Data Repositories: forthcoming	2 OER repositories

http://www.sba.unina.it/getFile.php?id=580

Commitment to the principles of open science: open access, FAIR data, Linked Open Data

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