

## EMBEDDING CITIZENS AND SOCIETY IN SCIENCE

FORMULATING NEW TOOLS AND CONSTRUCTING NETWORKS TO STRENGTHEN THE BONDS BETWEEN RESEARCH AND SOCIETY



### EXECUTIVE SUMMARY

Embedding Science with Citizens is an appealing concept for both researchers and society. This integration, closely associated with the concepts of Citizen Science, Science Communication and Open Innovation, aims to actively involve non-scientist actors in various steps of research.

To achieve this integration, a triple enhancement is required:

- An increase of public participation in science activities
- An improvement in public understanding of science
- A higher public acceptance of research

This threefold mission has been a major pillar of Module 6 of RIS4CIVIS project, funded by Horizon 2020. Module 6 has played a main role in shaping action plan and conducting case studies that aim to connecting citizens and research on a European University Alliance.

Efforts were conducted to address current situation within the CIVIS Alliance and to map both commonalities and asymmetries, as well as to benchmark practices and draw lessons from more advanced universities.

In essence, the integration of Citizen Science and Science Communication as one of the main components of research and education within institutions or alliances is essential to becoming more inclusive, engaged and connected universities.

### INTRODUCTION

Module 6 focuses on increasing the involvement of citizens within science not only to foster a deeper appreciation and understanding of research but to also ensure a more effective transfer of knowledge from both sides.

Indeed, it reunites various perspectives, a more trans-disciplinary collaboration and as a result, it strengthens knowledge democratization and transparency and allows for other type of knowledge provided by non-scientist-actors.

Our objectives are to develop and share common tools, practices, concepts, and training that open research to citizens and society, increasing the quality and efficacy of three basic aspects that are key elements in the development of research:

- Science Communication (SC)
- Citizen Science (CS)
- Open Innovation (OI), social innovations, and challenge-driven innovations

Promoting deeper embedment of Citizens and Science required first to address institutional changes, such as:

- Promoting a global vision of citizens engagement activities within Universities and Alliance
- Identifying and acknowledging contributions and efforts made by individuals or groups to foster citizens and science collaboration
- Integrating Citizen Science and Science Dissemination contents as part of the under and postgraduate courses, to ensure that students develop relevant skills in that field and that universities train their academic and administrative staff on that sense

- Providing adequate funding for implementing effective changes
- Setting up spaces to develop this within the research community and more broadly within the universities

To achieve these objectives, the initial phase of the work involved gathering information related to the current level of development of Citizen Science and Communication Science in each university. The data collected showed significant disparities in the development of these topics including divergent university regulation related to data sharing and collaborative research.

Based on the insights obtained during the first data collection phase, the second stage of our work focused on the definition of the desired purposes to be achieved and set up case studies to be executed within the timeframe of the RIS4CIVIS project.

As a result, 5 case studies were identified to pursue our work:

- A Database of Science Communication and Citizen Science Experts
- Guidelines for Good Practices in Science Communication and Citizen Science
- Training Programme on Science Communication
- Research Assessment Reform pilot case study
- Citizen Science and Science Communication Award

## KEY FINDINGS

The main results at this stage include:

### 1. The creation of a training programme

During spring/early summer 2022, Modules 6, 5 and 4 designed and implemented a CIVIS joint micro-programme on Science Communication.

The program was designed to provide young researchers with the necessary concepts and tools to approach the dissemination of their current and future research activities and technical knowledge to the public; an activity that is increasingly in demand by society, research centers, universities, and public administrations.

The course registration was very successful, with 154

candidates for 25 vacancies.

Then an equally successful second edition was carried out, showing the interest of researchers in this field and the necessity for financing research institutions to support these initiatives.

### 2. A Guideline for Good Practices in Science Communication and Citizen Science

The creation of a useful tool for a suitable promotion of SC/ CS actions is another fundamental aspect to be achieved within Module 6. For that purpose, we agreed to design a manual or documentation about identified practices to be published on the Digital Campus targeting the CIVIS community including academics, students, and administrative staff.

The purpose is to foster the development of CS and SC and contribute to making science more participative, easily available and understood by the general public, engaging society in CS and SC actions, and supporting the translation of theory into practice in all CIVIS universities.

To do so, we are elaborating a Good Practices Guidelines that will provide some rationale, tips, and examples for developing Citizen Science and Science Dissemination campaigns.

### 3. The Promotion and Recognition of CS, SC and OI practices

The need to recognize the variety of outcomes and actions produced by academics is now a well-known fact, and notably the actions related to SC and CS which suffer from a lack of recognition. Substantial recognition and adequate financial support for these activities could provide truthful citizen engagement and a growth of activities in the CIVIS Universities.

The purpose is to motivate researchers to participate in these actions. The smart cooperation between academy and society would increase mutual understanding and recognition of benefits for both in order to contribute to a more resilient society and democracy, and finally, help to tackle the main challenges our society are facing nowadays, such as the SDGs.

In light of these purposes, two case studies have been carried out:

*a) Award for Science Communication*

The aim of this award is to recognise the best contributions to the societal dissemination of science in digital and conventional media with the purpose of highlighting the labour of science communication as a strategic activity to establish trust in science, generate social consensus, and raise awareness about the importance of science activities.

The 1st RIS4CIVIS Science Communication Award is aimed to encourage and reward Science Communication initiatives across the CIVIS Network.

*b) Research Assessment Reform pilot case study.*

Since March 2023, we have been working on creating a list of new criteria for assessing research careers (including qualitative CV), while ensuring that it remains in line with the evolution of the debates taking place at the European level, and especially within the CoARA (Coalition for Advancing Research Assessment)

Some representatives of the RAR Working Group have been working on a Working Group proposal for the CoARA ("Challenges of the research assessment reform in the European University Alliances"), together with other international research institutions (CSIC-Spain, CNRS-France, Associazione Italiana per la Promozione della Scienza Aperta - Italy, University Medical Center Groningen – Netherlands, and The Leibniz Association – Germany). Although the proposal has not been successful, it shows the importance of such topic at the level of broader institutions such as University Alliances.

And it remains extremely relevant to continue with the discussions regarding research careers, evaluation criteria, local institutional structures, and national legislation inside of the CIVIS Alliance. For tackling various concerns resulting from all these topics is fundamental to continue with the debate as a way to share good practices and encourage a faster and smoother transition to new evaluation practices.

#### **4. A Database of Science Communication and Citizen Science Experts**

The purpose of this database is to generate a network of CS and SC experts. This network started with the identification of a list of experts and later with the publication of this list in the CIVIS Digital Campus.

The aim of the network is to promote new ideas on CS/SC and exchange good practices, activities, events, and projects, as well as to identify challenges in these fields. The final aim of those experts' exchanges will be to create CS/SC strategies to boost initiatives in this field.

This network could also support the researchers and students willing to develop citizen science actions and make available resources for other actions such as courses and training actions, best practice manuals, etc.

In summary, the main output was the huge interest and availability of people to engage in actions related to Science Communication and Citizen Science, crossing institutional boundaries. The current findings should be taken advantage of to foster the bonds between society and academy.

However, the most important outcome was a cultural change produced by the joint work all along RIS4CIVIS. We are now in a better position to carry out common projects. One example is the approval of the project ScienceUs in the last Horizon Europe WIDERA call. It was a joint work with most of the universities that were working together in Module 6.

## MAIN RECOMMENDATIONS

At this stage, we have three main recommendations to address:

- One of the key policy recommendations is to provide (funding) mechanisms to support discussion on good Citizen Science and Science Communication practices at the European level, including the European University Alliances.
- For this purpose, the creation of a Science Culture and Open Science units at each university is crucial for disseminating Citizen Science and Science Dissemination activities. This would further allow better networking in CIVIS and successfully promote Citizen Science and Science Dissemination as fields of Open Science.

Some steps in these directions have been taken during the project (e.g., sharing information about Citizen Science and Science Communication on the CIVIS website, creating Experts Database and future Experts Platform, formulating the Guidelines of Good Practices in SC and CS, carrying out training on SD, and discussing and developing tools for better assessing research). However, this is an ongoing process, that needs to be moved forward diligently through a variety of dedicated actions.

- Finally, encouraging policymakers, for instance, to disseminate contributions and efforts made by individuals or groups at the EU level. It would increase knowledge on what is achieved within universities or the Alliance.

## ADDITIONAL INFORMATION

Research and Innovation Strategy for CIVIS (RIS4CIVIS) is 3-year project co-financed by the European Commission under the Horizon 2020 «Science with and for Society» programme. RIS4CIVIS will define a common Research & Innovation strategy for the CIVIS European University Alliance and transpose the strategy into an Institutional Transformation Model to serve as a source of inspiration for other European Alliances and universities.

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