Science for Change

TIME4CS

"The Citizen Science funding landscape"

Citizen Science at European level: Mutual Learning Exercise Outcomes

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1. What we do at SfC
2. European Support to CS
3. MLE in CS
4. Conclusions

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What we do at SfC

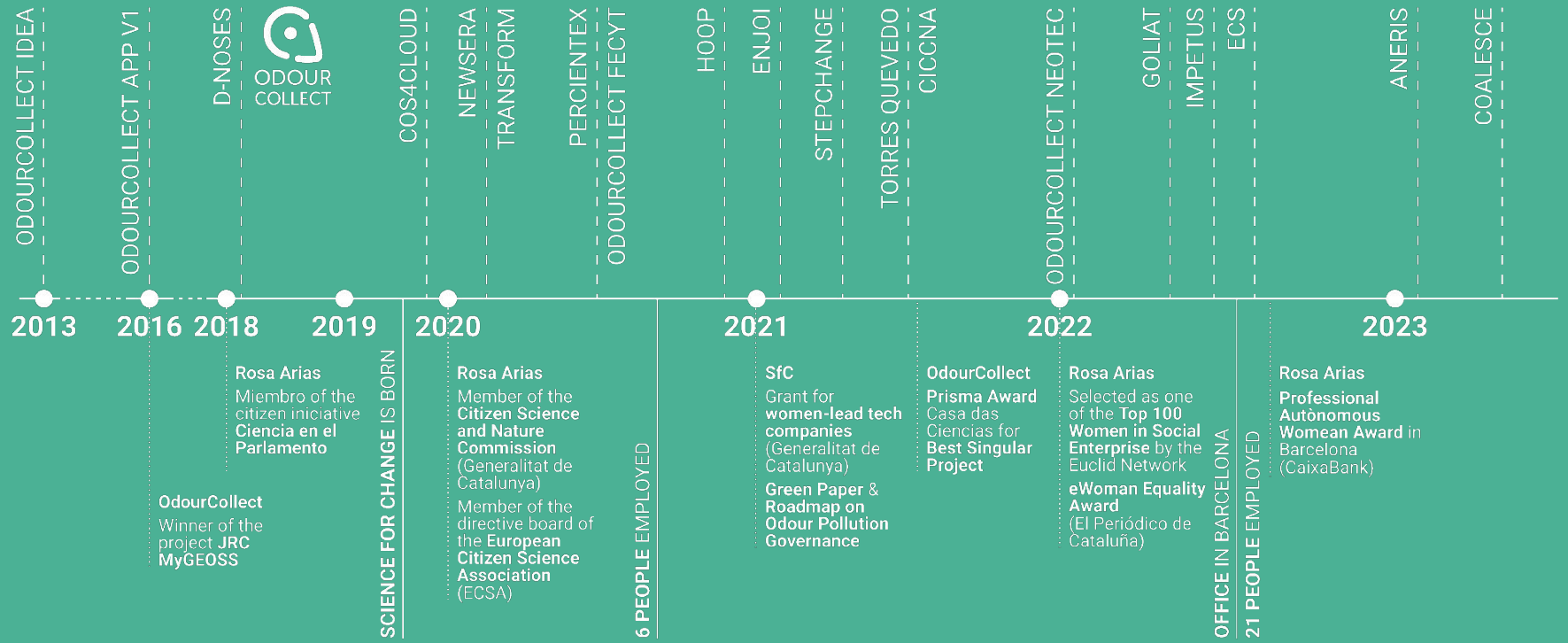


We are a **knowledge based social enterprise**, expert in collaborative research, evidence-informed policies and excellent science communication towards the 4 helix.

At **Science for Chang**e we address social, environmental and health challenges through citizen science, participatory strategies and co-creation for a positive societal impact.

Science for Change at a glance

Born to exploit the results of the D-NOSES Project (H2020) to replicate our citizen science and codesign methodologies



From April 2023 we will be co-coordinating the European Competence Centre on Science Communication (COALESCE Project)

Science for Change at a glance



We promote collaborative and inclusive research.

We boost positive societal change with citizens.

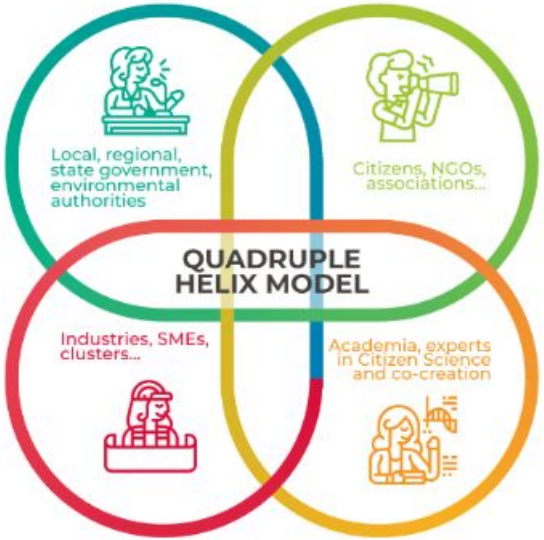
Science for Change Methodology



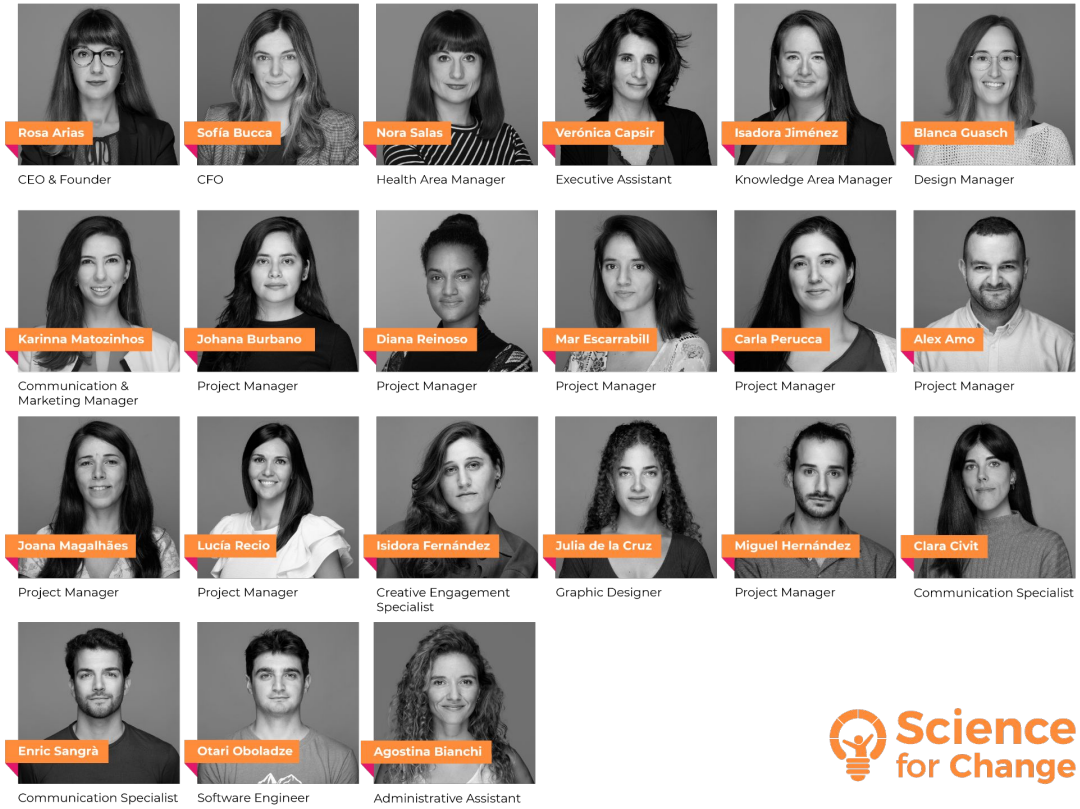


Responsible Research & Innovation





Our Interdisciplinary Team



Science for Change

We are an interdisciplinary team.

We listen, explore, connect, transform...

We are ***changers*** co-creating a positive impact on society!

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European support to CS



Why the EC is supporting Citizen Science?

Contributes to excellence

- Enlarges the scope of R&I and the quality and quantity of data collected, discussed and analysed.
- Increases the robustness of the outcomes.
- Enables innovative and creative approaches.
- Leverages collective intelligence (often excluded from contributing to R&I)

Contributes to effectiveness

- Aligns outcomes with the needs, values and expectations of society, ensuring greater relevance and uptake.
- Reduces time-to-market of innovative products and services.
- Triggers behavioural changes.

Contributes to trust of society in science

- Increases openness, transparency, and “co-ownership” of society.
- Often leads to more inclusive outcomes.
- Encourages mutual learning between science and society.

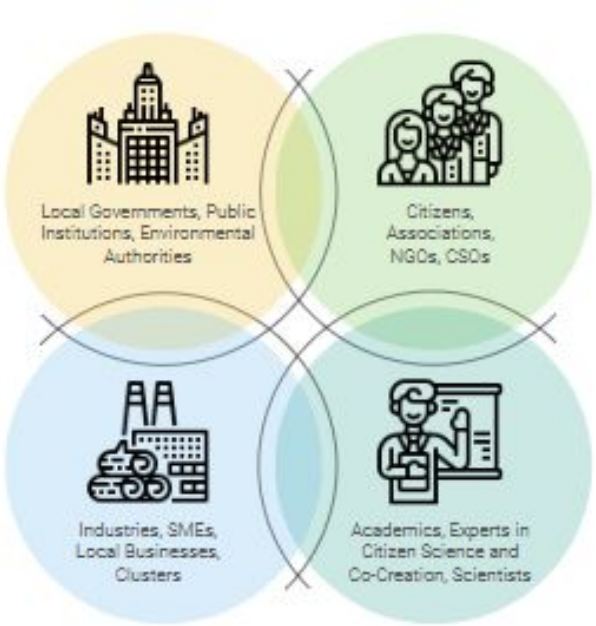
** Presentation from Linden Farrer, EC DG R&I, & Niamh Delaney, REA at EU-Citizen.Science event (27/10/2021)*

Citizen Science is an European priority

CS is one of the 8 pillars of the European Commission's **Open Science Policy**:

Open Science

An approach to the scientific process that focuses on spreading knowledge as soon as it is available using digital and collaborative technology. Expert groups, publications, news and events.

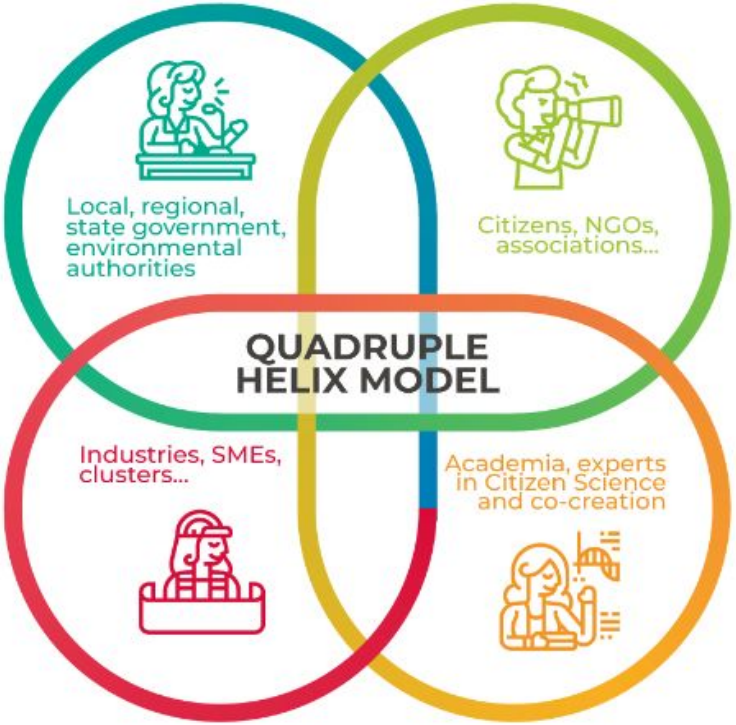


OBJECTIVES OF CS ('Science with and for Society', Horizon 2020)

1. Building effective **cooperation between science and society**
2. Recruiting **new talent** for science
3. Pairing **scientific excellence with social awareness** and responsibility
4. Ensuring a more responsible science and enabling the **development of policies more relevant to society** at large

To be embedded transversally in all Horizon Europe Missions and Clusters

CS allowing collaborative research



Dynamic and iterative process by which all involved stakeholders in a **quadruple helix engagement model** (academia, policy makers, industry & SMEs and citizens) interact and share responsibilities on results of processes of **Responsible Research and Innovation**.

Citizen Science can incorporate all dimensions of RRI

Public Engagement	Engaging **citizens and quadruple helix stakeholders** to work together within the R&I ecosystem and tackle societal challenges.
Open Access	Making **science accessible**, free of charge and without restrictions.
Ethics	Connecting research with the **10 Principles of Citizen Science** and considering ethical principles.
Science education	Boosting education through **training and participation in science**, increasing scientific literacy and critical thinking, and fostering STEM careers.
Gender	Promoting gender balance and the **inclusion of sex and gender aspects** in R&I. Gender considered in all participatory activities, including the communication used to engage girls and women into the projects.
Governance	Fostering the connection with **decision makers** for the official uptake of citizen generated data and to inform evidence-based policies.

Lots of benefits of engaging citizens in R&I

Doing citizen science is doing science ALIGNED WITH society!

Any type of social and environmental challenges, including SSH or health



Data generation



Potential to inform public policies and regulations



Mobilising behavioural changes



Encouraging transparency and confidence

Increase public acceptance of research

Increase the scientific knowledge of society

Promote critical thinking & fight fake news

Font: Citizen Science Cluster Event Report. EUROPEAN COMMISSION RESEARCH EXECUTIVE AGENCY, 2019

Science with and for society programme H2020



Objectives:

- Build effective cooperation between science and society
- Seek incorporation of new talent in doing science
- Connect scientific excellence with social awareness

2018-2020: strategic orientations towards public participation

- Build the territorial dimension of the SwafS
- Explore support to CS
- Strengthen knowledge through SwafS

Table 1: Number of citizen science and citizen engagement projects in Horizon 2020, as of 15/07/2020

# of projects \ SwafS theme	Citizen science & citizen engagement
Finished	5
Running (at least 1 review held)	5
Running (1st review to be completed)	5
Just started (Q4 2019 / Q1 2020)	7
TOTAL GAs signed, as of 15/05/2020	22
Forecast of 2020 call	7
TOTAL H2020	**29**

European Citizen Science

eu-citizen.science

Welcome to the platform for sharing citizen science projects, resources, tools, training and much more

COST Action in CS and support from the JRC



The volume of knowledge on environmental issues generated by CS projects in Europe offers a unique opportunity to meet the Green Deal and other European priorities, and to promote public participation in decision-making processes.

Great interest: 204 projects were submitted to the Green Deal program!

Under the Horizon Europe program, CS and co-creation can be transversally integrated into all clusters and missions.

Support for CS in the Green Deal Call

73 projects accepted, 7 specific projects on Citizen Science (out of 204 proposals submitted to the Citizen Science topic).

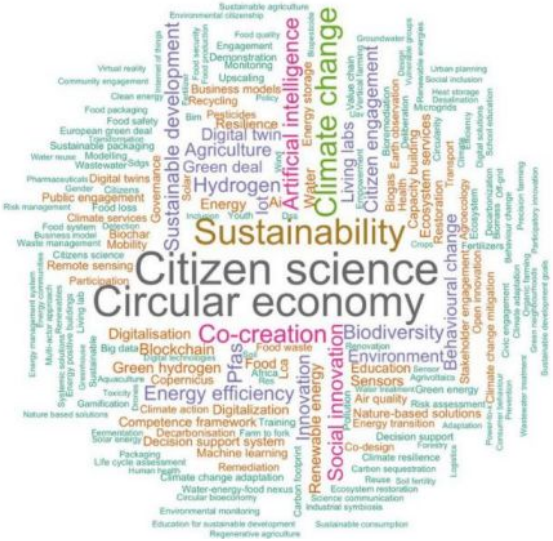
Mariya Gabriel @GabrielMariya · Jan 19

European funded research & innovation contributes to driving 🛣️ the green transition & making Europe more 🌿 sustainable!

- 1 billion euro invested
- 73 projects received 💰
- 26.000 collaborations between 75 countries

#HorizonEU for #EUGreenDeal

👉europa.eu/!gGc7vt



7 reasons to say YES to Citizen Science

1. **Aligns science with societal needs**

2. Allows **new data** to be generated to fill **knowledge gaps**

3. It covers **all scientific disciplines**, including the social sciences.

4. It has great potential to **inform public policies**

5. Raises **awareness** and **behavioural change**

6. It has great **educational potential** and encourages **critical thinking**.

7. It has great **communicative potential** and contributes to the **fight against misinformation.**

Support to CS in Horizon Europe

Co-design and co-creation, and **engagement of citizens** and civil society organisations, are **mainstreamed** across the programme



Art 2.5: 'Open science' means an approach to the scientific process based on **open cooperative work, tools and diffusing** knowledge;

Art. 7.11: The programme shall promote **co-creation and co-design** through **engagement of citizens**;

Art 14.4: Other open science practices shall be promoted and encouraged, including for the **benefit of SMEs**;

Art. 39: The work programme may provide for additional incentives or obligations for the purpose of adhering to **Open Science practices**.

The **current increase of CS projects** in the EU clearly shows the **growing participation of society in research and innovation**. Scientists, research organisations, and agencies are still discovering the benefits.

State of CS across Europe

The **presence of CS activities and strategies in Europe is highly contextualised**.

Multi-level governance structures are building up

Are there any shared/common working documents/practices supporting Citizen Science in your country? (multiple choice)

eu-citizen.science

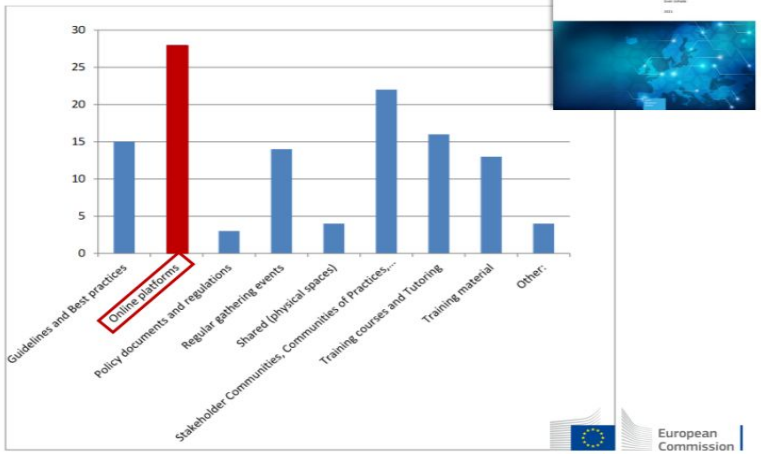


Figure 9. Overview of tools and resources



* Survey carried out in **2019** in the framework of the COST Action on CS (WG3 “Improve society-science-policy interface”)

* **45 responses** from all EU Member States, as well as Switzerland, Norway, Albania, Turkey, North Macedonia and Israel, for a total of **33 countries**.

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MLE in Citizen Science



The MLE on Citizen Science

PSF CHALLENGE – MUTUAL LEARNING EXERCISE (MLE)

An increasing number of citizen science projects and initiatives are being implemented across Europe. This rapidly emerging mode of research and innovation shows substantial potential in terms of achieving greater societal impact and increasing trust in science, by leveraging collective societal capabilities, by enlarging the scope of the R&I, and by increasing relevance, responsiveness and transparency. The following topics of interest have been identified for the MLE:

- Topic 1: Introduction and overview on citizen science
- Topic 2: Ensuring good practices and impacts
- Topic 3: Maximising the relevance and excellence of citizen science
- Topic 4: Enabling environments and sustaining citizen science
- Topic 5: Scaling up citizen science

Visit the website for more information: https://ec.europa.eu/research-and-innovation/en/statistics/policy-support-facility

Participating countries: Austria, Belgium, France, Germany, Hungary, Italy, Norway, Portugal, Romania, Slovenia and Sweden.



Chair

Alan Irwin

Rapporteur

Margaret Gold (Rapporteur and Expert on Topic 4)

Independent Experts

Muki Haklay (Expert on Topic 1)

Rosa Arias (Expert on Topic 2)

Marzia Mazzonetto (Expert on Topic 3)

Antonella Radicchi (Expert on Topic 5)

Ingeborg Meijer (Support Rapporteur and Support Expert on Topic 4)

DG R&I Policy Officers

Annamaria Zonno (Policy Support Facility)
Annamaria.ZONNO@ec.europa.eu

Gabriella Leo (Open Science)
Gabriella.LEO@ec.europa.eu

Scheduled meetings

March 2022
Topic 2 meeting

October 2022
Topic 3 meeting

December 2022
Final Meeting



KI-AX-22-007-EN-N

The MLE on Citizen Science: barriers detected

Main challenges detected in CS Projects

1. Citizen Engagement
2. Data Quality
3. Demonstrating Impact
4. Sustainability
5. Academic Scientists
6. Scientific Recognition



Impact of CS projects

CS can create a **positive impact** in:

1. Environmental management
2. Evidence for policy
3. Behavioural change processes
4. Social network championing
5. Political advocacy
6. Community change (local knowledge)
7. Increased trust and ownership



Lessons learnt in CS projects can help to involve citizens in the policy cycle to include deliberative practices at each stage of policy-making processes. Traceability of data usage *in policy and science is needed.*

What does the scientific community need?

- **Recognition of practice** in the academic curricula
- **Training, learning, mutual events** to share best practices and mistakes, allowing to reuse of existing technologies
- **Support for the national CS Observatories** and the creation of specific thematic networks
- Common **repositories and infrastructures**
- Tools to facilitate the **sustainability, scalability, and replicability of existing CS projects** that have demonstrated their impact
- Introducing innovations to the market, **new business models** that make it possible
- Appropriate channels to facilitate **greater connection between science and policy** for the benefit of society.

MLE on Citizen Science: the sustainability challenge

- **Lack of resources** to maintain technological tools (e.g. apps or platforms).
- Maintaining **engagement** (participation fatigue).
- **Financial** sustainability to ensure a **long-term perspective**.
- **Upscaling and replicability** mechanisms to cover wider areas or fields.



MLE on Citizen Science: the sustainability questions

- Is there any type of **recognition** for doing CS at a professional level?
- Do **citizens receive any type of recognition** for their participation?
- Is the **data** produced **integrated in any official database**?
- Were **policymakers engaged** in the project? At which governance level?
- Is there an **exploitation plan** for the project?
- Is the project **replicable** at a different scale or **different geography**?
- Is the project **methodology replicable**?
- Have you **planned the legacy** of the project at the design phase?

MLE: sustainability mitigation strategies

- Define the **exploitation plan** and **new business models** at the beginning of the project
- Try to find **additional resources** (either public or private) beyond gran fundings
- Plan how to **scale up or spread** the activities, outcomes and impacts of the project, at the geographical level, but also by replicating the methodology in other communities, or to tackle similar social challenges
- Creating a **community around the project** that embraces the project as their own
- Integrating **project's data to official repositories**
- **Improvements in the tools** used during the project (more funding needed!)

State of Art of National Support to CS across Europe



Regarding the funding opportunities, two thirds of the countries do not have specific calls for CS, meaning that projects need to compete with other types of research projects or reach alternative sources for securing funding.

CS platforms and networks in MLE member states

Country	Network	Webpage
Austria	Centre for Citizen Science	https://zentrumfuercitizenscience.at/en/
	The Citizen Science Network Austria	https://www.citizen-science.at/en/network
Belgium (Flanders)	Scivil.be	https://www.scivil.be/over-scivil.
	Iedereenwetenschapper	www.iedereenwetenschapper.be
Belgium (Wallonia)	Natagora	https://www.natagora.be/
Belgium (Brussels)	Natuurpunt	https://www.natuurpunt.be/pagina/over-natuurpunt
Germany	Bürger schaffen Wissen	https://www.buergerschaffenwissen.de
Portugal	Rede Ciência Cidadã	https://www.cienciacidada.pt/
Italy	Italian SNPA Citizen Science Group	https://www.snpambiente.it/category/temi/comunicazione-educazione-partecipazione/citizen-science/
Norway	Norwegian Network for Citizen Science	https://www.globe.gov/web/norway-citizen-science/home
Sweden	Medbordgarforskning	https://medborgarforskning.se/

Among the 11 participating member states, 4 did not have a specific national observatory or network aggregating CS initiatives. The remaining countries have centres and networks that have been created recently.

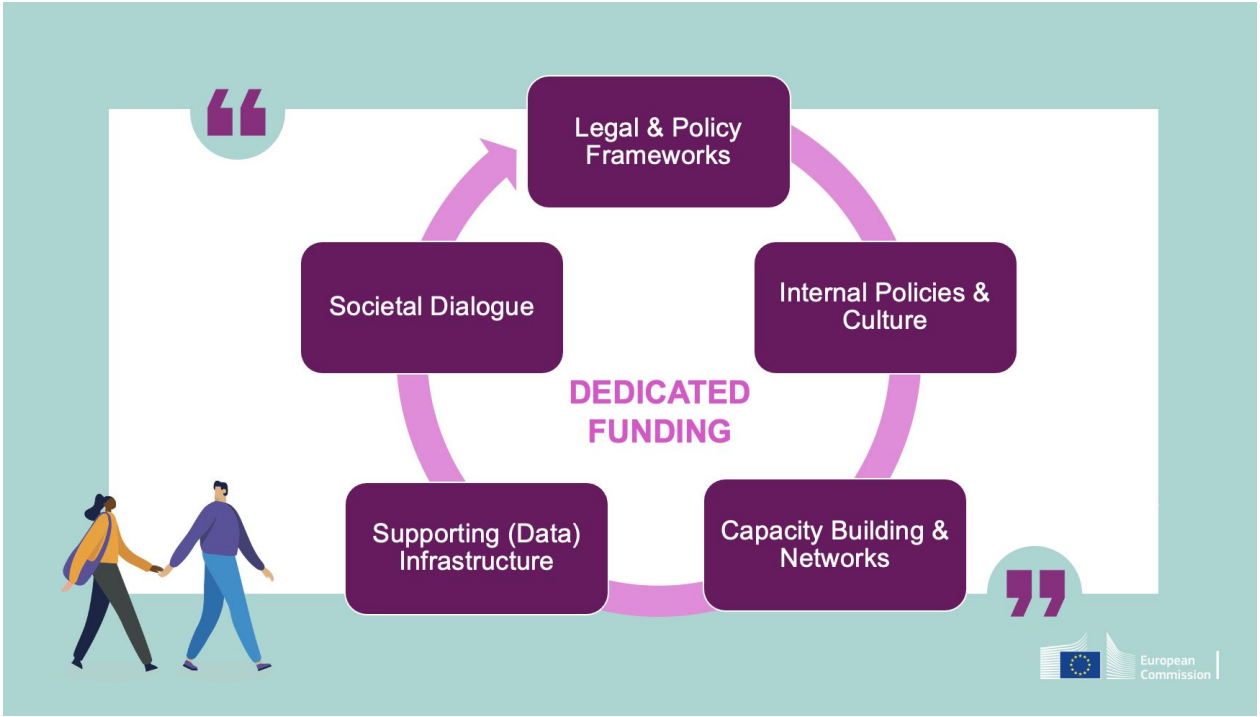
Further cooperation and knowledge sharing is needed.

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Conclusions



Enabling factors for supporting and sustaining CS



MLE on Citizen Science Final Conclusions Messages

5 elements to **achieving a national strategic vision** for partnership between Science, Society & Policy that can fully deliver on the potential of CS.

1. Embed CS as part of mainstream research, funding, education and innovation processes.

2. Integrate CS Data into mainstream processes for research, policy making and decision making.

3. Support CS Practices by identifying and addressing the needs of the wide range of different actors initiating, leading, and participating in CS.

4. Strengthen CS Networks and enable an active national community of CS practitioners who collaborate closely with other key stakeholders across the 4H.

5. Make Knowledge Production inclusive that all stakeholders interested in the outcomes of scientific R&I have the opportunity to participate in collaborative processes of scientific knowledge creation, evaluation, and communication, in all domains of research.

MLE conclusions regarding funding support strategies

National support is one of the best ways of mainstreaming CS, building on the investments made so far (from Horizon 2020 and Horizon Europe, to local efforts).

It is necessary to **start and continue funding** dedicated CS actions at **national level** to:

- strengthen networks
- reinforce training and capacity building efforts
- help overcome institutional barriers
- push recognition
- facilitate data infrastructures
- organise joint events
- contribute to demonstrate CS impacts
- coordinate and communicate among projects in Europe



With the support from the EC, national support to CS helps to improve the practice of CS.

How to promote funding of CS

- Take into account the **implementation challenges** to define the scope of the call.
- Do not underestimate **resources**
- Think of the **geographical scope** that you want to achieve
- Think of the **main objectives and impacts** that you want to achieve
- **Make it simple and trustworthy** for practitioners and applicants
- Define evaluation criteria that are relevant to the implementation of CS practices
- If using **general calls**, highlight your interest in using CS, or include other aspects such as public engagement or co-creation under the evaluation criteria.
- Think of **different mechanisms of financial support** to promote the sustainability of CS projects **once they have ended**
- Try to understand the **institutional barriers faced by practitioners**
- Think of **other ways of supporting the community**
- **Incubator models** are another great example of promoting CS

MLE conclusions regarding additional support

Network-building infraestructures (Observatories or Platforms) are important in providing support:

- They **make CS projects more visible and accessible**
- They **facilitate connection** to learn from each other, **reuse** existing resources and maximise their outcomes.
- Can **provide authorities with necessary information** on topics affecting public agendas.
- Relevant for **scientists** to access **new data and to conduct research**
- For **CS practitioners** wishing to **replicate an initiative**

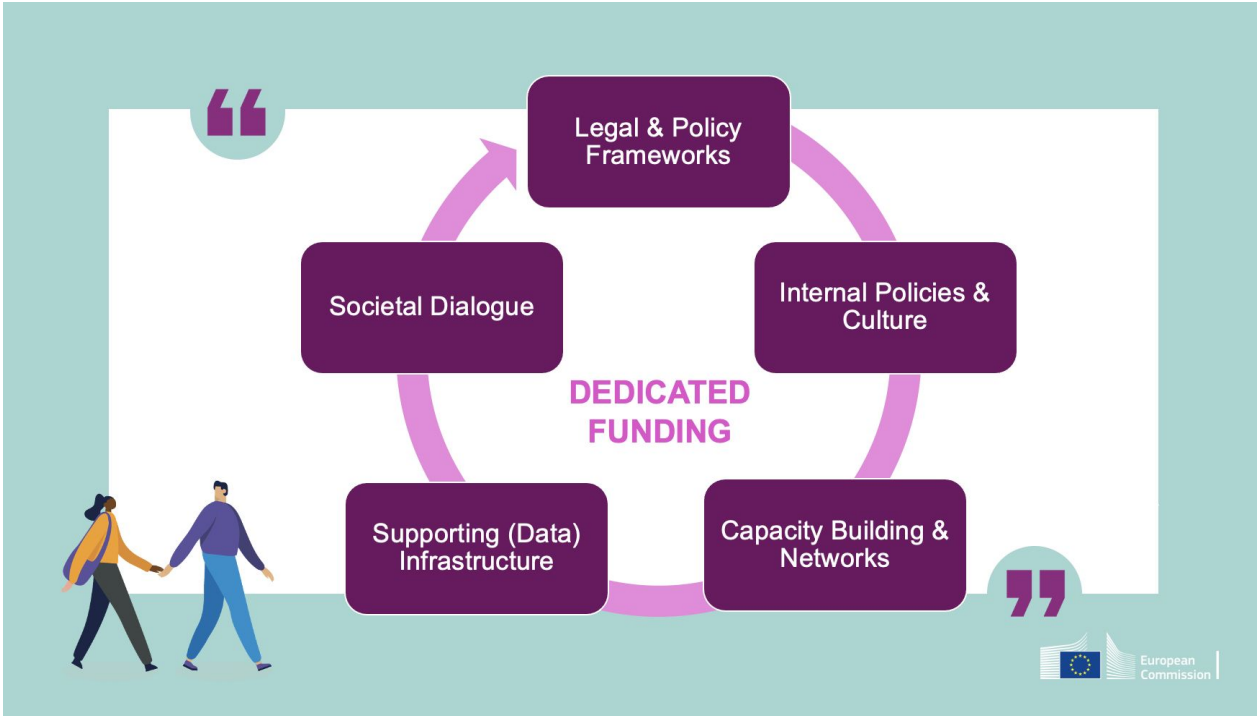
Promote national CS observatories and networks that take into account:

1. technical components
2. communication strategies
3. openness and flexibility
4. more interactive platforms
5. shared resources
6. networking capabilities
7. promotion of joint events
8. contents addressed to citizens

In addition, it is necessary to continue **funding** to support projects, strengthen **networks**, boost **communication** among projects, and support newcomers to this field.

Enabling factors for supporting and sustaining CS

Final report will be out soon. Stay tuned!!



5 strategic elements of an Enabling environment for CS

Enabling Factors → / Strategic Elements ↓	National Law & Policy	Internal Policy & Culture	Capacity & Networks	(Data) Infrastructures	Societal Dialogue
1. Citizen Science is Embedded	✓✓	✓✓	✓	✓	✓
2. Citizen Science Data is Integrated	✓	✓	✓✓	✓✓	
3. Citizen Science Practices are Supported	✓✓	✓✓	✓✓	✓	✓
4. Citizen Science Networks are Strengthened	✓	✓	✓✓	✓	
5. Knowledge Production is Inclusive	✓	✓✓	✓		✓✓

The MLE on Citizen Science Key Messages

1. Open Science, Citizen Science and RRI are key approaches to align societal needs with scientific objectives and tackle major societal challenges.

2. R&I can benefit from Citizen Science to produce new knowledge and **advance towards participatory democracy**.

3. Citizen Science actively **contributes to Open Science and RRI**.

4. Citizen Science needs to be **aligned with responsible funding** programmes to ensure project implementation and sustainability.

5. Institutional changes are needed to foster research incentives and mainstream CS into the European Research Area.

Science for Change

Engage with us!



Join the Eu-Citizen.Science Community!!

European Citizen Science (ECS)

1.The main objective of ECS is to make Europe a world leader in Citizen Science

2.The project has a consortium of 12 partners and 9 affiliated entities. Started september 2022 and will last for 4 years.

eu-citizen.science

European Citizen Science

Activities in which you can participate:

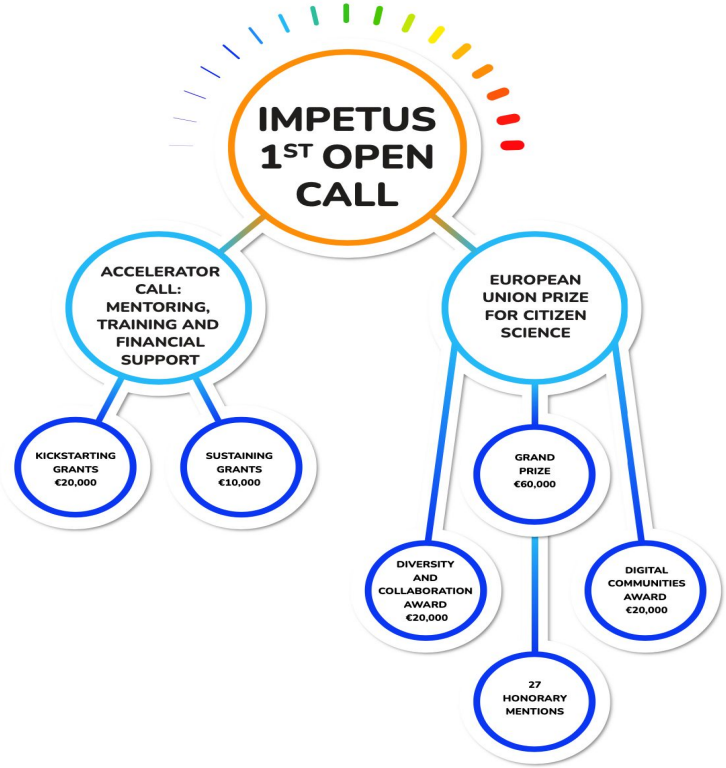
- 2 Mutual Learning Exercises Sessions each year
- Participate in Datathons and Hackathons
- Workshops and brainstorming sessions to co-create the EU-citizen.science platform
- Supporting 28 CS National Ambassadors in your country
- Connecting & participating in training sessions on CS implementation

Register in the EU-citizen.science platform and engage!

You can follow the project on Twitter @eucitsciproject

MLE on Citizen Science: new opportunities in Europe





The clock is ticking to the end of the **1st Open Call**

Hurry to submit it your application: **13th March 2023, 12:00 pm**
Know more: impetus4cs.eu/opencall/



Science for Change

Thanks!

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