

# Citizen Science

## Partnerships for Science and Society

Workshop: The LIBER Citizen Science Working Group

3. July 2024, LIBER Conference, Limassol

# Today's programme



- 1) Introduction (09.00)
- 2) Presentation of Case Reports of Library Partnerships within Citizen Science (09.15)
  - 1) LIBOCS-project (Tiberius)
  - 2) National and University Library Zabgreb (Alisa)
  - 3) TU Vienna Library (Sebastian)
  - 4) SDU CS Knowledge Center (Anne Kathrine & Thomas)
- 3) Joint Q&A (10.00)
- 4) Networking and coffee break (10.20)
- 5) Hands-On Session 1: Building a hub (BESPOC) for CS (Tiberius & all) (10.45)
- 6) Hands-On Session-2: Creating Partnership Frameworks (Anne Kathrine, Thomas & all) (11.15)
- 7) Conclusions and Key akeaways (11.45)



# Part 1 Setting the scene – policy, partnerships and libraries



RIGHT TO PARTICIPATE IN CULTURAL, ARTISTIC, AND SCIENTIFIC LIFE



### **Preamble Open Science**

The collaborative and inclusive characteristics of open science allow new social actors to engage in scientific processes, including through citizen and participatory science, thus contributing to democratization of knowledge, fighting misinformation and disinformation, addressing existing systemic inequalities and enclosures of wealth, knowledge and power and guiding scientific work towards solving problems of social importance



Unesco

### **UNESCO** Recommendations for Open Science

# Preamble:

The collaborative and inclusive characteristics of open science allow new social actors to engage in scientific processes, including through citizen and participatory science, thus contributing to democratization of knowledge, fighting misinformation and disinformation, addressing existing systemic inequalities and enclosures of wealth, knowledge and power and guiding scientific work towards solving problems of social importance

## UNESCO Recommendations for Open Science

- 1. Promoting innovative approaches for open science: developing new participatory methods and validation techniques to incorporate and value inputs from social actors beyond the traditional scientific community, including through citizen science, crowdsource-based scientific projects, citizen involvement in community-owned archival institutions, and other forms of participatory science.
- 2. Open engagement of societal actors: ... furthermore, citizen science and citizens' participation have developed as models of scientific research conducted by non-professional scientists, following scientifically valid methodologies and frequently carried out in association with formal, scientific programmes or with professional scientists with web-based platforms and social media, as well as open source hardware and software (especially low-cost sensors and mobile apps) as important agents of interaction. For the effective reuse of the outputs of citizen and participatory science by other actors, including scientists, these products should be subject to the curation, standardization and preservation methods necessary to ensure the maximum benefit to all.
- 3. Investing in open science infrastructures and services: ...Platforms for exchanges and co-creation of knowledge between scientists and society, including through predictable and sustainable funding for volunteer organizations conducting citizen science and participatory research at the local level.

# Citizen Science is integrated in Open Science

Source: Eva Mendez lecture, 2019



## The scene (scale)

About the SDU Citizen Science Knowledge Center



#### How is UCL supporting Open Science and Scholarship?











Training and Skills

Transparency and Reproducibility



Digital Colle

Metrics and Bibliometrics











Universiteit Leiden

### **Citizen Science Lab**

The Citizen Science Lab supports researchers, citizens a together. Explore this website to learn more about the C participate.



**Citizen Scie** 



EDITORIAL · 03 OCTOBER 2018

# The best research is produced when researchers and communities work together

Knowledge generated in partnership with the public and policymakers is more likely to be useful to society and should be encouraged.

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#### **RELATED ARTICLES**

Nature special: Coproduction of research



e 🕨 All Journals 🕨 Public Money & Management 🕨 List of Issues 🕨 Volume 42, Issue 2 🕨 New development: Citizen science—discove ....





# Part 2 Citizen Science and libraries

## The scene (new partnerships)



### **Citizen Science**

### We All Do Better When We Work Together: LIBER, ..

Posted 28-03-2022

 $\rightarrow$ 



### **Citizen Science**

Press Release — LIBER Signs MoU with the European Citizen ..

Posted 24-02-2022

 $\rightarrow$ 

osted 03-02-2022



### **Citizen Science**

Press Release – LIBER and SciStarter Sign Memorandum of Understanding (..

-)

## The scene (LIBER's effort)









# LIBER Citizen Science Working Group 2019->

Developing the Working Group (currently 45 members)

Developing the field of Citizen Science

Research libraries as an integral part of Citizen Science



# We create new partnerships





scistarter People-powered science.



SDU 4



Section 1 **CITIZEN SCIENCE SKILLING FOR** LIBRARY STAFF, **RESEARCHERS**, **AND THE PUBLIC** 

Citizen Science for Research Libraries – A Guide

Masterclass on Citizen Science for Library Executives

7-8 May 2024





Funded by the European Union

## The directions of Citizen Science hubs



The

**Open Science** Southeastern Europe







# Examples of Citizen Science hubs in Europe



### UNIVERSITY OF TWENTE.























# Implementing BESPOC For Citizen Science Central Services in the Baltic Region

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**LIBER Annual Conference** 

4th of July, 2024

Limassol, Cyprus

Erasmus+ KA2 Strategic Partnerships program

Project number: 2021-1-EE01-KA220-HED-000031125







# Credit:

# in this presentation, all ideas are man-made while most images are AI-made (some are not).



# **Overview of the project**

- University libraries strengthening the academia-society connection through citizen science in the Baltics
- Duration: 01.01.2022 –30.06.2024
- Partners: University of Tartu Library, TalTech, University of Latvia, Kaunas Technological University, Vytautas Magnus University, Web2Learn and Immer Besser GmBH + associated partners (public libraries)
- https://www.libocs.ut.ee





# **Need for the project**

- Academic libraries in Baltic states have been actively involved in OS activities
- The need of Baltic universities and libraries to fully integrate Open Science (OS) and Citizen Science (CS)
- Involvement in CS is still in the development phase
- Lack of knowledge base



# **Project outcomes**



- 1) **Report on drivers and barriers** of civic engagement in open science and the role of university libraries in the Baltics
- 2) **Study and an information campaign**: the transformative role of university libraries for citizen and open science in the Baltics
- 3) A collection of resources for staff training in Baltic academic libraries on the topic of civic engagement in open science
- 4) 5 module MOOC for librarians <u>https://tinyurl.com/LIBOCSonline</u>
- 5) Institutional change: Series of consulting activities with partner universities policy+culture change
- 6) A toolkit for librarians on CS/OS

All milestones with documents are available <a href="https://www.libocs.ut.ee/milestones/">https://www.libocs.ut.ee/milestones/</a>



Funded by the European Union

### **BROAD ENGAGEMENT IN SCIENCE, POINT OF CONTACT**







# BESPOC **beyond citizen science:** institutional support for **Science-Society Engagement**



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### BROAD ENGAGEMENT IN SCIENCE, POINT OF CONTACT



BESPOC Brief Presentation video: https://vimeo.com/870255373/2d a1ea4990

https://vimeo.com/478021537

https://insights.uksg.org/articles/1 0.1629/uksg.501/





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# BESPOC Prototype > BESPOC Model 1st version: 2022







## Imagine a project: Knowledge4All

a participatory science project run by a consortium of research libraries



The project aims to understand the impact of open-access scientific literature published between 2010-2022 on the general public in the field of public health.

Volunteers are recruited to help researchers on the following tasks:

- identify the utility of open-access scientific content for increasing trust in science
- determine how much the lay citizens understand the open-access content
- determine how much lay citizens are able to re-use the open-access content
- what are the **positive** sides of having access to that content
- what are the concerns regarding having the content open to the public
- help the researchers to communicate Knowledge4All final results

- support the researchers to **engage** with policymakers and **promote** the necessary changes, according to the project findings.

## **KNOWLEDGE4ALL**



# the Knowledge4All Consortia is supported by a BESPOC office





## Wouldn't it be great if

### all the following are available to you before even starting...





Volunteer recruitment form	80% ready
Consent Form Template	80% ready
Data Collection Sheet	60% ready
Volunteer Feedback Form	70% ready
Conflict Management Checklist	80% ready
Qualitative Interview Template: Understanding of Open Access Articles	30% ready
Volunteer Guide: Helping Researchers Communicate Final Results	70% ready
Knowledge4U Researcher Guide: Recruiting, Training, and Collaborating with Volunteers for Dissemination	40% ready
How to engage with outside communities (a guide)	80% relevant
How to secure and improve data usability (a guide)	90% relevant
and much more	
KNOWLEDGE4ALL	



Strong connections with partners and networks outside your institution	Ready to listen you
Your institution has a clear strategy to support public engagement in research	Road map, strategy
Your CRIS system has tools and metrics to support participatory science	Ready to use
Your institution has a training kit for communicating science to society	Updated, ready to use
Your PhD schools include participatory science in their curricula	The norm
The Research Office support public engagement in research and are collaborative	Strong relationship
You have the right tools to promote policymaking based on your research findings	Trust, collaboration
Your Legal team and Safety Office is responsive and collaborative when you need them	Strong relationship
Your institution has a programme to nurture and cultivate communities of interested and active citizens that support research	Clear Strategy
and much more	

### **KNOWLEDGE4ALL**
#### BROAD ENGAGEMENT IN SCIENCE, POINT OF CONTACT



BESPOC Brief Presentation video: https://vimeo.com/870255373/2d a1ea4990

https://vimeo.com/478021537

https://insights.uksg.org/articles/1 0.1629/uksg.501/



#### Policy and Development Plans for Citizen Science (P&D-CS)



#### The BESPOC Model modules at a glance (1)

PUBLIC ENGAGEWENT AND CITIZEN SCIENCE ACTIVITI

#### **Policy & Development Plans (P&D-CS)**

This module is focused on the development and periodic updating of policies specific to

citizen science, aiming to institutionalize these practices within academic settings.

It ensures the effective communication and engagement of these policies across the

institution.



**Activities Portal (AP)** 



The BESPOC Model modules at a glance (2)

#### **Activities Portal (AP)**

ACTIVITIES PORTAL

Acting as a central hub, the Activities Portal facilitates the transformation of policies into

actionable projects and campaigns.

It supports project engagement, dissemination, and collaboration, serving as a vital

resource for citizen science endeavors.



Partnership Frameworks (PFs)



#### The BESPOC Model modules at a glance (3)

#### Partnership Frameworks (PFs)

BESPOC emphasises establishing collaborative relationships with various stakeholders,

outlining the structure, roles, responsibilities, and objectives of these partnerships.

This framework enhances the impact of citizen science both in academia and in broader

society.

MOU (MEMORANDUM OF UNDERSTANDING)



Templates for Citizen Science Projects (TCSP)



#### **Templates for Citizen Science Projects (TCSP)**

Provides essential, (almost) ready to use resources for initiating and executing CS

projects.

Includes consent forms, data collection sheets, and safety protocols, ethical

compliance tools, effective communication templates, and many more.

We hope for a community-driven **BESPOC Repository** to start sharing such templates!



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Specific Citizen Science Communication (SCSC)

INCLUSIVITY COMPREHENSION

#### The BESPOC Model modules at a glance (5)

#### **Specific Citizen Science Communication (SCSC)**

Tailored to address the unique challenges of communicating complex research to non-

professionals.

Promotes accessibility, engagement, and two-way communication, fostering

transparency and adherence to OS principles.





Connector with the Office of Research Management and Administration (RMA-C)



#### The BESPOC Model modules at a glance (6)

#### **Research Management & Administration Connector (RMA-C)**

This connector integrates CS activities with existing research management systems and

offices, facilitating efficient workflows, policy integration, and enhanced support for citizen

science projects within the institution.





Strengthens the connections between research activities and decision-making

processes.



Legal Office and Safety Office Connector (LS-C)

#### The BESPOC Model modules at a glance (8)

#### Legal & Safety Office Connector (LS-C)

Ensures legal and safety compliance in citizen science projects.

Facilitates understanding and responses to legal and safety matters, safeguarding

participants, researchers, and the institution.





Community Builder (CB)



#### The BESPOC Model modules at a glance (9)

#### **Communities Builder (CB)**

Focused on cultivating sustainable communities around citizen science projects (well-

maintained bridges, beyond projects).

Supports the development of and the transition from **Communities of Interest to Communities of Knowledge, and to Communities of Practice**, encouraging personal and collective growth within these communities.



IMMUNITIES OF INTEREST TO COMMUNITIES OF KNOWLEDGE AND COMMUNITIES OF PRACTIC



### **BESPOC implementations in** *LibOCS*





















#### **The BESPOC Implementation Methodology in LibOCS**



Collaborative Tools and Communication Platforms

Priority Setting and Custom Workshops

Diverse Participant Recruitment Comprehensive Module Implementation

Analytical Framework

## 05.06.2023 - 25.10.2023 - 01.03.2024





#### **The Implementation Score (1 to 10)**















The cross-institutional analysis recognize the unique specificity and priorities of each university.

The BESPOC implementation focuses on valuing collaboration over competition, encouraging mutual support, sharing practices, and engaging in meaningful dialogue.



## 6 Activities + 2 Multiplier Events (9 Milestones) ocs

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## The 2 Events (2 Milestones)

#### **ME with CS Practitioners**

Registrants: 175 Actual Participants: 75

#### **ME with research libraries**

Registrants: 196 Actual Participants: 54

MMER

ME5 Speaking BESPOC with Practitioners (w. ECSA) 01.03.2024 Milestone 32

> Multiplier events

> > ME6 Speaking BESPOC with Research Libraries (w. LIBER) **30.03.2024** Milestone 33



## Follow us:



#### Zenodo collection:

### University libraries strengthening the academia-society connection

through citizen science in the Baltics | Zenodo

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		libocs				Q	Sort by	Bes	t match	1
	University libraries strengthening the academia-s connection through citizen science in the Baltics						society			





#### **Recommendation 1: Enhance stakeholder engagement**

Develop targeted communication strategies to better engage researchers, administrators, and students, highlighting the mutual benefits of citizen science for academia and society.

Organize interdisciplinary forums and workshops that bring together stakeholders from within and outside the university to foster collaboration and share best practices in citizen science.

Steadily build up this kind of engagement. Getting the large variety of stakeholders on board for citizen science or academic public engagement takes time, perseverance and is a long-term commitment.



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#### **Recommendation 2: Expand public outreach and education**

Increase public awareness and understanding of citizen science through regular public lectures, exhibitions, and media outreach.

Place citizen science in the larger context of public engagement activities for your organisation and connect your efforts with similar ones from your colleagues responsible for the educational programs

Offer citizen science (participatory science) training programs for the public to enhance their scientific literacy and skills, making it easier for them to contribute to research projects.

Actively contribute to transitioning existing communities of interest to communities of knowledge and further on, to communities of practice and showcase the added value of your university or research organisation.



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### **Recommendation 3: Develop the existing or new digital platforms and systems (p1)**

Develop or enhance your existing online portals that facilitate the sharing of research projects and results, allowing for greater transparency, participation, and dissemination of knowledge. While not all your research projects are suitable for citizen science, it is important to responsibly present your ambitions and results to the larger public.

Explore if your existing CRIS system is suitable for expanding towards a more public interface, including more interoperability with your institutional repository.



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### **Recommendation 3: Develop the existing or new digital platforms and systems (p2)**

Understand the special requirements of engaging and communicating with the public, including among others the language, the format, and the frequency of your digital communications.

Utilise social media in a responsible way to engage broader audiences and create communities around specific research topics or projects. Support social media platforms and tools that nurture a healthy audience (e.g. filter disinformation and prevent opinion polarisation).

Grow your audience in a way that actively supports you in identifying accounts that misleadingly present themselves as being part of (or connected to) your organisation. In return, offer curated and trustful information through your platforms and develop engagement programmes openly available for those interested in connecting with research activities.



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#### Milestone 29: [doi.org/10.5281/zenodo.10949874]

## Lib 💥 OCS

#### **Citizen Science Institutional Change Through BESCPOC**

Implementations

#### **Recommendation 4: Institutionalize citizen science**

Incorporate citizen science into university curricula by developing courses or modules that cover its principles, methods, and ethics, encouraging future researchers to engage with the public.

Establish dedicated support structures within universities, such as offices or centres for public engagement and citizen science, to provide guidance, resources, and support to projects involving public participation.

Aim for streamlining research-related public engagement and participatory science, moving away from strategies that align with the typically short lifespan of projects and embracing long-term strategies.



#### **Recommendation 5: Other recommendations (p1)**

Allow your BESPOC service to gain greater adaptability of the BESPOC model to fit your specific needs, cultures, and structures, enabling more tailored approaches to implementing citizen (or participatory) science.

Adapt your service to modular implementation strategies that allow you to prioritize certain aspects of the BESPOC model based on your immediate goals and capabilities.

Consider the detailed guidelines and resources for each BESPOC module, including case studies, templates, and best practices, to assist your researchers in the practical aspects of implementation.

A NETWORK



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#### Milestone 29: [doi.org/10.5281/zenodo.10949874]



#### Citizen Science Institutional Change Through BESCPOC Implementations

#### **Recommendation 5: Other recommendations (p2)**

When necessary, consider external training and consultancy services, ensuring that your organisation has access to expert advice and support throughout the implementation process.

Support the creation of a network among institutions implementing the BESPOC model (or similar) to encourage the exchange of experiences, challenges, and successes.

Encourage collaborative projects that involve multiple institutions, leveraging the strengths and resources of each to tackle larger societal challenges through citizen science and research-related public engagement.

Build professional connections and attract enough resources to develop comprehensive guidelines on legal and ethical issues related to citizen science, such as data privacy, intellectual property, and participant consent, to assist your research communities in navigating these complex areas.





[doi.org/10.5281/zenodo.11067939] Forward-Looking to Public-Scholarly Engagement in Baltic HEIs

**Milestone 30:** 

What the Future Could Hold?

The Significance of Institutional and Policy Change in Advancing Public-Scholarly Engagement for the Future

A Call for Further Action





## You can find us:

Website: <a href="https://www.libocs.ut.ee/">https://www.libocs.ut.ee/</a>

**Facebook:** <u>https://www.facebook.com/LibOCSproject/</u>

Youtube channel https://www.youtube.com/@LibOCSproject

X: (11) #LibOCS - Twitter Search / Twitter

**Zenodo collection**: <u>University libraries strengthening the academia-</u> society connection through citizen science in the Baltics | Zenodo





### **Dr Tiberius Ignat**

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https://crowdhelix.com/public-profile/18080







# Libray Partnerships within Citizen Science

Case Report

National and University Library in Zagreb







- Bees, life, people
- Self-help and well-being in online academic environment
- HAWathon
- Dendroteka
- Musical intelligence in the service of national heritage



## Main focus

- organisation of scientific research with a focus on library collections
- connecting with internal and external library partners.
- targeted groups with a focus on youth

# Bees, life, people

## **Internal partners**

- Croatian Web Archive
- Marketing and Communications department



## **Partnership lession:**



collaboration with the public library enables greater outreach to citizen scientists



## **External partners**

• public library highschool



## **Partnership lession:**



collaboration with targeted partners enables outreach to the specific group of citizen scientists

## **External partners**

# HAWathon



## **Partnership lession:**



as partners, high school teachers can implement short citizen science activities in their curricula

## **External partners**

# Dendroteka



## **Partnership lession:**



catchy titles can attract a large number of media outlets and citizen scientists.



## **External partners**

## Musical intelligence in the service of national heritage

## **Internal partners**

- NSK Music Collection
- Marketing and Communications department

## **Partnership lession:**



collaboration between libraries and educational institutions

can effectively engage young people in preserving and

exploring national heritage through citizen science initiative



## **External partners**

### • 5 music schools
## Conclusion

- internally, libraries can collaborate with different departments or teams within the library, fostering a multidisciplinary approach to citizen science projects
- externally, libraries can establish partnerships with external organizations, research institutions, community groups, or other stakeholders involved in citizen science
- these collaborative efforts contribute to the library's ability to support and enhance citizen science activities, broaden its network, and create a more robust ecosystem of shared knowledge and resources

## Thank you!

Alisa Martek, amartek@nsk.l Dolores Mumelaš, dmumelas@r



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nsk.hr		



## Citizen Science & Libraries

### Bridging the gap between Science and Society

Anne Kathrine Overgaard Thomas Kaarsted

3 July 2024, LIBER 2024



## Who we are?



SDU



### Anne Kathrine Overgaard: <a href="mailto:ako@sdu.dk">ako@sdu.dk</a>

Head of Research & Innovation Support, SDU Health Sciences
Co-founder of SDU Citizen Science
LIBER Citizen Science Working Group member
"Citizen Science advocate and project manager of several CS-projects"



### Thomas Kaarsted: <u>thk@bib.sdu.dk</u>

Deputy Library Director, SDU Library Co-founder of SDU Citizen Science LIBER Citizen Science Working Group vice-chair "Daily manager of SDU Citizen Science in the university library" Professor Josep Perello

## "If libraries can loan out books why not a citizen science project?"

Citizen Science Symposium, SDU, 2019.





## What is Citizen Science?

Source: Golumbic et al. 2017



## 2016: The first CS-workshop

30 participants

- Professors from most faculties & the University Hospital
- Media
- Museums
- Citizens

Aim: Can we describe a Citizen Science project?

Idea: Make citizens prioritize which research project that should be funded with 1 mio. DKK. (133.333 EUR)





## A HEALTHIER SOUTHERN DENMARK

	2017 ESF	2018 ESF	2019 ESS	2020 ESS	2022 ESS	2023 ESS
Total Reach	272.725	192.889	487.452	338.328	1.031.359	651.418
Facebook (videos viewed)	134.279	130.552	151.930	Ikke oplyst	499.586	538.080
Web (articles wiewed)	44.003	51.518	74.682	91.591	86.000	81.559
Votes	11.895	6.985	14.895	8.000	10.899	9.520

Recruitment of user communities Collaboration with media

ETSUNDEREFYN

### SDU 🎓 **SDU Citizen Science** Mission: To bring citizens closer to science - a partnership - and scientists closer to society ፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟ $\bigcirc$ ightarrow $\overline{}$ ይ ይይይ ይይ Library Faculty Media, NGO's, Policy Researchers The CS Center Public Engagement Output



### SDU 🍲

### **SDU Citizen Science offer:**

- Project conception
- Grants writing
- Access to networks and partners
- Project management and coordination
- Pedagogical knowledge
- Community management
- Events, workshops, faciliation
- Communication
- Media liason
- Research Data Management
- Evaluation
- Administration

### +30 PROJECTS SINCE 2017

## Push and Pull Factors

PUSH	VS	PULL
EXPERIMENTATION (PILOTS)	VS	DEMAND-DRIVEN
MAPPING CITIZEN SCIENCE	VS	RESPECTING RESEARCH TRADITIONS
SCANNING THE GRANTS LANDSCAPE	VS	TRUSTING GRANTS OFFICERS
INVESTIGATING INSTITUTIONAL CAPACITY	VS	RESPECTING SILOS
A COALITION OF THE WILLING	VS	WAITING FOR THE INSTITUTIONAL MOVE
INNOVATION CULTURE	VS	LIBRARY CULTURE
PARTNERSHIPS	VS	GOVERNANCE





# Towards societal impact

## WHY – Relevance for Society

- Trust in research and science facts instead of personal opions
- Engagement and involvement in scientific research can enhance behavioral change (climate, sustainability, health, ..)
- Societal Impact -> Translating new research knowledge and innovation to be used in society by both professionals and citizens
- Set of research methods with potential in relation to 'the wicked global challenges' (Hodgkinson et al. 2022)



"Working together as part of a community with professionals, citizen scientists can play an important part in genuine scientific discovery, experiments, data collection and analysis."

"Through citizen science, ordinary people can take part in extraordinary research."





## Why promote Citizen Science?



SDU

- Can contribute to excellence
  - Enlarged scope of R&I through additional research questions
  - Higher quantity and quality of data collected
  - More angles of discussion and analysis
  - Increased robustness, if high quality methodology
- Can contribute to effectiveness
  - R&I more closely aligned with needs, values and expectations of society
  - Triggering behavioral changes
  - More likely to lead to quicker and larger uptake of R&I results
- Can contribute to trust in science
  - Opening R&I systems to society
  - More variety on supply side
  - Increased transparency and mutual learning

### Gabrielle Leo, Policy Officer, EU Commision, CERN 2023

Different perspectives on Citizen Science:

# Different focus on impact

Source: Passani et al. (2022)

dimension considers how the project can influence scientific community and research and educational organisations	dimension considers how CS can support community creation, empowerme nt and inclusiveness, the acquisition of new knowledge and skills by participants and how this can influence way of thinking and behaviours. Impact on citizens' health is also considered in this dimension	dimension explores if and to what extent CS can have a positive impact on CS leaders' organisations and participants in terms of employment, cost saving and financial empowerme nt of local communities.	dimension investigates if the participation in CS projects increases citizen's civic and political participation beyond the project boundaries and if the project is able to influence the policy agenda and stimulate new and/or better policies (including those to CS)	dimension considers how the project can contribute to the conservation of natural assets and support pollution reduction
<ul> <li>Dimensions</li> <li>Scientific knowledge</li> <li>New research fields and interdisciplinarity</li> <li>New knowledge resources</li> <li>Innovation in education</li> </ul>	Dimensions Community building and empowerment Social inclusion Researchers and research community growth and empowerment Knowledge, skills and competences Changes in way of thinking, attitude and values Behavioural change Impact on health and wellbeing	<ul> <li>Dimensions</li> <li>Impact on employment</li> <li>Cost saving</li> <li>Income and revenue generation for leading organisations</li> <li>Economic impact on the local communities</li> </ul>	Dimensions • Impact on policy process • Political participation • Self-governance • Political support for citizen science	Dimensions • Impact on ecosystem • Impact on biodiversity • Impact on soil quality • Impact on water quality • Impact on air quality



### Framework: From idea to impact – the process needs focus, support, and funding

This joint framework is building on '21th Century Model for Participatory Engegement and Decision-making' (Farooque & Cavalier, 2016) & 'SDU Citizen Science & Impact Model' (Kaarsted & Overgaard, 2024)

Professor Josep Perello

## "If libraries can loan out books why not a citizen science project?"

Citizen Science Symposium, SDU, 2019.





## References

Hodgkinson, Ian R., Sahar Mousavi and Paul Hughes (2022). New development: Citizen science—discovering (new) solutions to wicked problems. *Public Money and Policy*, vol. 42, issue 2. <u>https://doi.org/10.1080/09540962.2021.1967630</u>

Hvidtfelt, Kristian, Torben Nielsen and Thomas Kaarsted (2020): *Citizen Science in Denmark*. <u>https://unipress.dk/media/17720/9788772194448\_citizen-science.pdf</u>

Ignat, Tiberius and Paul Ayris, 2020. Built to Last! Embedding Open Science Principles and Practice into European Universities. *Insights* 33 (1): 9. DOI: <u>http://doi.org/10.1629/uksg.501</u>

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## Speedstorming4CS

a speedstorming exercise Citizen Science WG at the LIBER Annual Conference 2024

### What is Speedstorming

is a variation of brainstorming focused on **rapid idea generation**. Here are some typical guidelines:

- 1. Time limitation
  - The time is strictly timed (20 minutes) and typically lasts only a few minutes. This encourages quick thinking and prevents overthinking, which is crucial for generating a wide range of ideas rapidly. Don't pick your best words; just say your idea quickly!
- 2. No criticism
  - Ideas should not be criticised. All ideas are welcome to ensure a free flow of creativity, no matter how unconventional or preliminary.
- 3. High volume of ideas (in speedstorming, Quantity over Quality; don't worry, it's just a step)
  - The goal is to generate as many ideas as possible within the time limit. During the initial phases, quantity over quality is the mantra.
- 4. Rapid sharing
  - Share ideas spontaneously, possibly shouting them out or writing them without structure. Speed is key, so there's little to no discussion or elaboration during speedstorming.
- 5. Building on ideas
  - Build on others' ideas. This can lead to improved or composite ideas that combine elements from multiple participants.
- 6. Diverse participation
  - All participants should have an opportunity to contribute. The rapid nature of the session should ideally prevent domination by any single participant.

### What's up?

#### Develop a support service for public engagement in science.

The management views supporting participatory science (citizen science) as central to this new service.

You are asked to produce a concept note for this service.

You have 20 minutes to imagine how the service should generally look.

Give particular attention to one of its pillars (of your choice).

### Examples of questions to kick off your creative session

#### Don't limit yourself to the following thoughts!

- 1. Identify the needs this service will address.
  - what problems will be solved?
  - what opportunities will open?
- 2. Do you find the BESPOC Modules sufficient to guide your development of this service?
  - If yes, in which priority order will you start developing the BESPOC modules (you can use their acronyms from above).
- 3. Determine what resources (staff, technology, funding) are realistically necessary. Don't think of constraints.
  - Discuss how these resources can be acquired or mobilised.
- 4. Seedstorm the steps needed to implement your service.
  - Identify potential challenges and solutions.



Finish in time (20 minutes) and discuss who will present the results.

The result of your session should be presented in 1 minute.

Unleash your creativity at the highest speed!

### 20 minutes start now!



### Enjoy speedstorming!

### SDU 🎓

## Round Two: Who could you work with?

Source: Skarlatidou et al. (2019: The Value of Stakeholder Mapping to Enhance Co-Creation in Citizen Science Initiatives. Citizen Science: Theory & Practice, 4, 1.

CIVIL SOCIETY: NGO's Public Service Media Communities Volunteers Clubs Associations	GOVERNMENT: Agencies Municipalities Regional Government National Government EU level
EDUCATION: Public schools High schools Colege and university students Life long learning	PRIVATE SECTOR Small and mid-sized business Industry Newspapers

### SDU 🎓

## Round Two: Who could you work with?

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CIVIL SOCIETY	GOVERNMENT
EDUCATION	PRIVATE SECTOR

## Partners at SDU Citizen Science

INTERNALLY	EKSTERNALLY
Communications department(s)	Public service media
Grants office(s)	NGO's
SDU RIO	Danish Grants foundations
SDU Climate Cluster	EU Grants foundations
The Faculties	Regional Goverments
Facility Services	Munipicalities
The Library	Private sector companies



## Q: Explore your partners

INTERNALLY	EKSTERNALLY

