



Report on Vision Building Workshops for SE Europe



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ABSTRACT

This document outlines two online vision-building workshops involving CeOS stakeholders on April 18 and May 21, 2024. The results of both workshops will help create a CeOS vision for the Southeast European region.

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REPORT ON VISION BUILDING FOR SE EUROPE

AGENDA 1st Online Vision Building Workshop

Thursday, 18 April 2024

<i>Time</i>	<i>Duration</i>	<i>Title</i>	<i>Organisation</i>
14:00 – 14:10	00:05	INTRODUCTION	LIBER
		<i>Welcome to Participants– Aims of the meeting – Agenda (10')</i>	LIBER
14:05 – 14:45	00:40	<i>Citizen science initiatives developed in collaboration between academic and public libraries.</i>	NSK/UNILIB
	00:10	<i>The goals of PR-2: Implementation of citizen-enhanced open science in various open knowledge hubs in SE Europe</i>	NSK
	00:05	<i>What activities can be part of citizen science?</i>	NSK
	00:10	<i>Survey results and landscape in SE Europe</i>	NSK
	00:15	<i>CS Activities/Examples of Good Practice</i>	NSK/UNILB
14:45 – 15:35	00:15	<i>PR4: Roadmap on CeOS in the Balkans</i>	UNILB
	00:15	<i>Description – Action Points – Next Steps</i>	UNILB
	0:30	<i>Discussion: What is the potential to further develop CeOS in SE Europe?</i>	ALL
	0:05	<i>Summary, Closing Remarks and Thank You</i>	LIBER

A) Citizen science initiatives developed in collaboration between academic and public libraries.

PR2 facilitated transfer and participation in SE Europe between university libraries (project partners) and public libraries (associated partners). It sought to trigger and build up the dialogue and partnership between the mentioned types of libraries as knowledge and innovation hubs in SE Europe, which will be carried out together in CS activities. The first vision-building workshop presented all PR2 activities, including the survey:

- **PR2A1.** Collection of practices of university and public libraries' collaboration in SE Europe to mainstream CEOS – **survey**
- **PR2A2. A report** on citizen science co-created activities by university and public libraries and application to SE Europe
- **PR2A3. Study:** Upscaling collaboration between academic and public libraries for CEOS in SE Europe

Higher education libraries that cooperate with public libraries in organising citizen science activities have a positive attitude toward cooperation. Obstacles like lack of resources, financial barriers, and awareness and knowledge about Citizen science still play an important role. However, on the side of libraries, certain points could be improved like:

- mapping of transferable skills to know exactly the human resources in libraries,
- better leadership and prioritisation
- Citizen science activities become the basic activities of the library,
- collegiality is crucial for carrying out these activities.

The interaction with the stakeholders showed that 45 % of present stakeholders organised citizen science activities in collaboration with another type of library; however, 55% of present stakeholders haven't yet organised citizen science activities in collaboration with a different kind of library. In the organisation of CS activities, they found challenging particular times, lack of staff and finance, managing expectations and the same understanding of CS. They found that the advantages of collaboration with another library in organising citizen science lay in particular that public libraries are closer to the local

communities, share human effort, share knowledge, have greater reach, have a more extensive network, and have various target groups. CS is a challenge as it is a new area. Good cases from small communities are essential for popularising the CS. An excellent structured approach gives you a 360-degree view of the partners involving nature and public schools (SDU case).

PR4: Roadmap on CeOS in the Balkans

The roadmap assists Higher Education Institutions (HEIs) and research libraries in enhancing their OS/CS activities, providing guidance on organising activities effectively and measuring their impact. It also outlines essential skills for librarians engaged in Citizen Science initiatives and offers strategic reflections and operational actions for research libraries. Overall, the roadmap is valuable for anyone looking to promote and engage in OS and CS activities. Key points of the Roadmap include:

- **Open Science and Citizen Science:** The roadmap explains the relationship between OS and CS, highlighting how both promote public engagement, transparency, and collaboration in scientific research.
- **Role of Higher Education Institutions (HEIs):** HEIs are seen as crucial in promoting OS and CS activities and enhancing the social, educational, and scientific impact of these practices through hackathons, fab labs, and innovation sprints.
- **Challenges and Opportunities:** The report identifies challenges in the Balkan region related to a lack of awareness, infrastructure, and resources for CS. Cultural and economic barriers to engaging citizens in science and language barriers also pose problems.
- **University Libraries' Role:** Libraries are positioned as central hubs to promote and implement OS/CS activities, engage citizens, and support collaborative research.
- **The CeOS_SE Project** aims to support Southeastern European countries in adopting OS and CS practices through the development of policies, training opportunities, and partnerships between academic, public, and other institutions.

The roadmap aims to guide future activities in the Balkans, promote collaboration, build regional trust, and foster long-term engagement with OS/CS practices.

Conclusions of the 1st Vision Building Workshop:

1. University libraries CAN organise Citizen Science in cooperation with public libraries, regardless of whether they are located in developed or less developed European countries.
2. Public libraries can help organisationally in several ways: by offering their own space, attracting users, promoting Citizen Science to the local community in which they operate, offering collections, offering staff...
3. University libraries can collaborate with public libraries and include other external partners in implementing Citizen science.
4. The CSA must be designed so that it is comprehensible to citizens and that they can easily participate in it.
5. It is important to transfer knowledge about the importance of Citizen Science to citizens and professionals, with an emphasis on librarians.
6. Enthusiasm is more necessary than finances to conduct a Citizen Science.
7. The key to a successful Citizen Science is collegiality.

AGENDA 2nd Online Vision Building Workshop

“CeOS in HE Curricula in SE Europe”

Tuesday, 21 May 2024

<i>Time</i>	<i>Duration</i>	<i>Title</i>	<i>Organisation</i>
14:00 – 14:10	00:05	INTRODUCTION	LIBER
		<i>Welcome to Participants– Aims of the meeting – Agenda (10’)</i>	LIBER
14:05 – 14:45	00:40	<i>PR-3: Implementation of citizen-enhanced open science and staff training for academic libraries in SE Europe</i>	UNITO
	00:15	<i>Report on implementation of the CeOS activities and staff training for academic libraries</i>	UNITO
	00:15	<i>Self-assessment tool for delivery of the CEOS activities</i>	UNITO
	00:10	<i>CS Activities/Examples of good practice</i>	All
14:45 – 15:35	00:15	<i>PR5: CeOS in Higher Education Curricula and teaching practice in the SE Europe</i>	PP
	00:15	<i>Landscape Analysis, findings</i>	PP
	0:30	<i>Discussion: What is the potential to further develop CeOS in SE Europe?</i>	ALL
	0:05	<i>Summary, Closing Remarks and Thank You</i>	LIBER

PR-3: Implementation of citizen-enhanced open science and staff training for academic libraries in SE Europe

Report on the implementation of the CeOS activities and staff training for academic libraries

a) Methodology:

- Train of the Trainers and Learning by Doing

The PR3 took a two-pronged approach and focused on training activities and learning by doing activities. CeOS tried to upskill additional trainers/multipliers to assist researchers, administrative personnel, public libraries, and citizens in CS projects and CSA by employing a Train-the-Trainer methodology.

Training activities were supported by events carried out using a Learning-by-doing approach to engage the public in actual co-creation activities for a social purpose and using an open science approach.

From July to November 2022, project partners organised 20 events. 12 Train the trainer's activities (including 2 UT training events directed to the CeOS partners) and 8 Learning by doing events. A total of 4808 stakeholders took part in the training activities and events, including academic librarians, public libraries, national libraries, researchers, university students, citizens and other citizen science stakeholders

a. Self-assessment tool for delivery of the CEOS activities

CS Activities were assessed through 3 questioners:

- Ex-ante (54%responses)
- 1Ex-post (64 % responses) questionnaire to assess the Training
- One satisfaction questionnaire (62 % responses) to assess Learning by doing activities

One of the exciting questions in the ex-ante questionnaire was about why libraries were involved in citizen science (CS). Some of the responses indicated that this involvement was

related to inclusion. Many participants felt it was important for both their professional and personal development. They also believed that engaging in citizen science could enhance library services and foster greater interaction between citizens and libraries.

Supporting research and promoting citizen science is essential. Improving library service systems and broadening the audience of academic libraries is equally important. Additionally, some respondents highlighted the opportunity to strengthen the relationship between libraries and local communities.

An analysis of satisfaction levels revealed that all training events were highly successful. Many participants appreciated the interactive brainstorming sessions among librarians, which facilitated the development of new ideas.

Some attendees emphasised the importance of a positive atmosphere, particularly valuing the "learning by doing" approach that focused on concrete examples. Students enjoyed participating in citizen science activities, which allowed them to engage in research. Several individuals highlighted that citizen science can truly make a difference, moving beyond mere slogans to real impact.

b. Impact

The training and Citizen Science Awareness (CSA) activities by CeOS partners had a positive impact, benefiting both organisers and participants. The European CeOS partners developed a structured approach to training librarians on Open Science (OS) and Citizen Science (CS) topics. Three partners—UT, NSK, and UNILIB—successfully implemented organised training. UT partnered with its public engagement office to host a Citizen Science event on May 11, 2023, targeting local schools at the Campus Luigi Einaudi in Turin. NSK offered seven accredited webinars called "Citizen Science in Libraries. ", which was attended by 479 library specialists. UNILIB also gained national accreditation for a Citizen Science training course in Serbia, held on March 8 in Novi Sad. The course featured around 200 participants, including public, school, and academic librarians.

c. Collaborations

Throughout the project, productive collaborations were established among partners and local stakeholders. The "Train the Trainers" and "Learning by Doing" activities engaged various stakeholders, allowing CeOS members to strengthen internal and external connections. The UP

organised the "Learning by Doing" activity in collaboration with the CSI -COP project. NSK worked with the University of Zagreb and local organisations on Croatia's citizen science (CS) projects. The UT training was developed in partnership with Alessia Smaniotto from COESO and Andrea Sforzi, President of the new Italian Citizen Science Association.

UCY enhanced its partnership with the Municipality of Strovolos and Web2Learn, while UniBIT collaborated with the Bulgarian National Library and public libraries in Sofia. UNILIB strengthened ties with Serbian library communities and researchers, and the SDU library affirmed its role among SDU researchers in CS projects.

d. Conclusions

Based on the assessment of the PR3 events, we can draw the following conclusions:

1. Librarians are eager to receive training on innovative topics such as Open Science (OS) and Citizen Science (CS); they are curious and proactive.
2. Librarians in Southeast European countries recognise the importance of Citizen Science for their libraries and society at large.
3. Librarians from these countries believe they have a role in promoting Open Science and Citizen Science within their countries.
4. Librarians in Southeast European countries are aware of the need to update their knowledge in the fields of Open Science and Citizen Science.
5. Libraries in Southeast European countries require sufficient staff and funding to prioritise OS and CS courses in their agendas.
6. Libraries should identify relevant case studies to achieve successful training programs. We believe that project partners will become important case studies in the future.

To face the challenges of gathering the participants, lack of staff and lack of funding, libraries should:

- Follow the innovative topics
- Strive to play a role in CS
- Strive to have adequate staff and funding
- Identify relevant case studies
- Involve various stakeholders
- Upskill librarians in communication
- Work in a team.

PR5: CeOS in Higher Education Curricula and teaching practice in the SE Europe

The University of Patras conducted a study to explore how Citizen Science influences change within Higher Education Institutions (HEIs), focusing specifically on curricula. The objective was to ensure that the relationship between HEIs and society, as demonstrated through Citizen Science events, goes beyond mere external involvement. The aim is to promote advancements and improvements in HE curricula and teaching/learning methods, modernising them to align with current open knowledge and innovation trends.

Methodology:

The main research questions about CS in HEI Curricula were:

- Is it visible in the curricula?
- Is it being used in the curricula?
- Can it become a permanent part of curricula?
- What are the good practices in HEIs?

In the first part of the research, the University of Patras created a survey targeting students to collect their views on citizen science. They collected data on the following topics:

- Students' views on citizen science
- Whether their institutions offer any curriculum related to citizen science
- Their openness to the idea of incorporating citizen science into their curricula

A digital showcase of at least eight video interviews taken from professors and researchers informing us of the following:

- the integration of CS into their curricula
- their participation in CS projects

In the second part of their research, they created a digital showcase featuring at least eight video interviews with professors and researchers. These interviews provided information about:

- The integration of citizen science into their curricula
- Their participation in citizen science projects

Before sending out the surveys, the UP team conducted a brief landscape research study on the curricula available online. This research analysed existing online platforms and included nine interviews from various countries: Bulgaria, Croatia (2), Greece (3), Italy, and Serbia (2).

In preparation for the survey, the UP team encountered several limitations:

- There were not enough online platforms with information about the on-site curricula offered by higher education institutions (HEIs).
- Few HEIs in South-Eastern Europe make their curricula accessible on online platforms.
- Language barriers were an issue, as the research focused solely on platforms available in English, with no examples of curricula in other languages.

The survey was conducted over approximately two months, from September 20, 2023, to November 10, 2023. This period was extended due to the start of academic semesters in South-Eastern European countries in October. The survey was designed to be short and easy to complete, aiming to gather valuable insights into the student population's views on integrating computer science (CS) into their curricula. A total of 277 students responded to the survey, including 161 undergraduates, 64 graduate students, 26 postgraduate students, and 26 postdoctoral researchers, most of whom were from Southeast Europe.

When asked about the most appropriate curriculum level for including a CS course, the majority of responses indicated undergraduate (46%) and postgraduate (42%) levels, while a much smaller percentage (12%) felt it should be at the PhD level. This result is expected, as PhD-level researchers should already possess the skills necessary to conduct CS research.

Regarding knowledge of Open Science, a significant number of respondents (158) indicated they were unfamiliar with the concept, compared to 117 who responded positively. On the topic of Citizen Science, the majority (223) stated they did not know what it was, while only 54 respondents answered affirmatively.

It can be concluded that knowledge of Open Science is better than that of Citizen Science. This suggests that, even if students wanted to, they could not identify the concept of Citizen Science in the curriculum. While knowledge of Open Science is more evenly distributed, the overall level of awareness of Citizen Science remains significantly lower.

The second part of the research involved video interviews featured on the YouTube CeOS channel. These interviews explored the obstacles to the uptake of CeOS and the adoption of good practices in higher education curricula and teaching methods. It was essential to highlight both sides of the issue: the challenges faced and the successful practices being implemented.

Interaction with the stakeholders

In the interactive part of the presentation, the participants were asked to express their opinion on the preparedness of the HEIs to introduce Open Science/Citizen Science in their curricula.

a. How do research libraries support and promote CS?

One of the key findings was that research libraries have a lot to offer in sustaining the citizen science momentum in Southeast Europe. For instance, Serbian librarians have established an accreditation program for CS and secured some government funding. In Croatia, the two most prominent universities, Zagreb and Zadar, have already begun integrating CS into their educational programs, which is crucial as it provides formal education in CS from respected higher education institutions. The National and University Library in Zagreb (NSK) plays a vital role in this effort, actively promoting the integration of CS concepts into collection development.

b. Hubs on the CS? What is the roadmap for establishing CS hubs?

The challenge in Southeast Europe is that the lack of funding results in library staff taking on additional responsibilities related to citizen science (CS), creating a challenging working environment. CS is often not explicitly labelled as such and tends to overlap with digital

humanities. However, in humanities, more than quantitative measures is required to meet all the requirements, unlike in the natural sciences.

c. How much are the government institutions prepared to support the integration of the CS into curricula?

Most institutions within Higher Education Institutions (HEIs) have adopted specific policies regarding community service (CS). However, the quality of these policies varies across different faculties and disciplines. Some faculties are well-connected with the community, while others remain highly theoretical and show little interest in engaging in CS.

The government should consider providing incentives for CS in scientific communications to make it an integral part of this field. Universities are also participating in initiatives to promote open science, particularly in areas such as fair data, open access, and research assessment. These initiatives have positively influenced the inclusion and development of CS practices. This beneficial impact is evident in the design of PhD courses, and much of the knowledge about CS has been derived from the CeOS project.