Academia-driven open innovation for the revival of small and medium cultural heritage organisations (CHOs)

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Highlights

- Universities, as knowledge institutions, can support revival of the cultural heritage sector by sharing expertise in innovative and participatory approaches to civic engagement with small and medium CHOs.

- Open Innovation (OI), in the form of hackathons, crowdsourcing, crowdfunding, citizen science and maker spaces, can enable CHOs' potential to reach greater audiences of supporters and build sustainable communities of volunteers.

- Digital technologies used in Open Innovation Projects (OIPs) carried out by universities in collaboration with CHOs, enhance civic engagement of involved students, educators and CH staff.

About eCHOIng

This policy brief has been curated by the project "Recovery of cultural heritage through higher education-driven open innovation" (eCHOIng, https://www.ntnu.edu/echoing/). eCHOIng investigates the ways in which HEIs support cultural heritage revival after the COVID-19 pandemic. The reflections contained in this document were inspired by the synthesis of the publication "Practices in the revival of European cultural heritage organisations through university-driven open innovation".

Setting the scene

Small and medium CHOs have been particularly hit by the consequences of the COVID-19 pandemic which further deteriorated their limited pool of human and material resources. In this challenging landscape, Higher Education Institutions (HEIs) can contribute to the revitalisation of the CH sector. Through innovative technologies and interdisciplinary approaches to participation, academia can enhance civic engagement in CHOs. Hence, closer collaboration with small and medium CHOs can provide much-needed knowledge, expertise and resources which these institutions currently lack.

Thus, to foster long-term civic engagement in CHOs specific steps are needed, such as safeguarding the pluralities of cultural identities, supporting decentralisation of CHOs and interconnectedness with communities, and promoting intergenerational and cross-sectoral participation.

Utimately, it is within the social mission of universities, as knowledge hubs and social

Fig 1. Image created from the use of VR glasses during the "Immersive museum for Virtual Archive" open innovation project organised by the Sant'Anna University, Italy.

actors, to expand collaborations with small and medium CHOs based on the exchange of innovative methodologies, know-how and engagement of academic communities in cultural heritage.

Open Innovation in academia-CHOs projects

In the eCHOIng project, collaboration between HEIs and CHOs puts emphasis on the potential of digitally-enhanced open innovation (OI) for the revival of the CH sector. Thanks to research conducted by Padilla Bejarano et al. (2023), it is shown that OI facilitates research, development, and innovation-focused knowledge transfer between universities and entities from regional innovation systems. Furthermore, Ott & Pozzi (2011) investigated how Information and Communication Technologies (ICT), as well as innovative teaching methods can enhance CH education.

Additionally, the value of OI for skills development and civic engagement in the cultural sector is highlighted by several EU-funded projects. Indicately, RICHES (2013-2016) aimed to reduce the distance between CH professionals and CH users to maximise cultural creativity and ensure that the community benefits from the social and economic potential of CH[1]. In addition, the Alliance for Research on Cultural Heritage in Europe (ARCHE) aims to engage CH actors in the co-design of research strategies that lead to innovation initiatives requiring multidisciplinary approaches and skills[2].

Box 1. Archiveathon at NTNU Library

eCHOIng partner: Norwegian University of Science and Technology (NTNU)
Beneficiary CHO: NTNU LIbrary Archives
When: October 17, 2023
Target groups: NTNU students, staff, CH staff
Student: Frida Kirkeby

This Open Innovation Project (OIP) managed to create a Digital Archive Outreach strategy plan for NTNU UB library archives. The plan focused on how to best utilise social media campaign videos and educate students about NTNU's archive services. The Gunnerus.no archives were used as a case study as the user interface does not seem very user friendly. A social media tool such as TiK Tok was chosen in order to create short, engaging clips that convey history, technology, and the university's heritage in an intriguing manner so that one would increase views and followers on different platforms.

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eCHOIng promises & action points

Building a sustainable pathway toward civic engagement in CHOs is a demanding enterprise for universities to accomplish on their own. Moreover, traditional top-down approaches for the revival of small and medium CHOs are not enough to ensure long-term resilience and capacity.

Acknowledging the need for a participatory and innovative approach to civic engagement in CH, eCHOIng leverages the power of OI to join forces with multiple stakeholders and communities, from university students, to CH staff and civil society. Hence, in eCHOIng, OI is not an abstract concept but it builds on the connection forged among digital technologies-civic engagement and bottom-up participation and co-design.

- The eCHOIng methodology:
    - adopts OI to reach broader audiences;
    - promotes flexible educational models based on universities-CHOs needs;
    - identifies opportunities for collaboration between HEIs and CHOs;
    - encourages best practices based on civic engagement and intergenerational participation;
    - assesses impact of the open innovation projects (OIPs) with relation to financial sustainability and social participation.
- To enhance effectiveness, eCHOIng meticulously mapped and evaluated prevailing practices, scrutinising them against economic and social sustainability criteria. This critical assessment serves as a foundation for optimising efficiency and paving the way for informed academia-cultural heritage collaboration.

- The project outputs go beyond theoretical application as all university partners applied in practice open innovation through projects carried out in collaboration with CHOs.

- eCHOIng acknowledges that sharing resources, data, and information can provide HEIs with access to a broader range of cultural artifacts, and archives, enhancing the quality and depth of cultural heritage studies.

eCHOIng and international insights on OI for cultural heritage

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[1] The RICHES project: https://www.riches-project.eu/
[2] The ARCHE project: https://www.heritageresearch-hub.eu/arche-home/about-arche/

OI refers to the use of external resources to drive and maximise innovation capital of an institution or community. In the CH sector, it translates into initiatives or activities where CHOs co-create or co-develop project ideas in collaboration with citizens, students and institutions from other sectors or industries.

The value of innovation for the CH sector is further testified in the "Cultural Heritage Innovation report" by UNESCO (2019). The report highlights a critical requirement for knowledge exchange and collaboration and their role to increase digital and civic engagement in CHOs. In its investigation, UNESCO (2019) approaches innovation also as a means for CHOs in obtaining the funding and resources required to implement their vision:

"The recurring reference to networks shows how important personal and institutional connections are in developing projects and in raising funding from multiple sources…Many of the projects are providing open access solutions or sharing their research publicly […]. Respondents also indicate that they would benefit from learning more of others' approaches and having more opportunities to promote their own projects." (UNESCO, 2019).

Box 2. VR Lab in Museo Leonardiano di Vinci

eCHOIng partner: Scuola Superiore Sant'Anna
Beneficiary CHOs: Museo Leonardiano di Vinci, Museo San Matteo, Museo della Grafica (Italy)
When: April-October 2023
Target groups: HE & CH students, staff, general public

In a synergy between Scuola Sant'Anna and the Museo Leonardiano, the project team organised a VR Lab event which included a series of training activities to provide a memorable and educational experience for students. The intended outcomes of this open innovation project (OIP) were twofold: a) to introduce students to the exciting possibilities of virtual reality, and b) to assess their engagement and feedback on the VR applications showcased. In the words of one of the partners when asked to summarise the event's impact "It was a fantastic opportunity to see first-hand the power of technology to spark students' curiosity and imagination".

Concluding remarks

- By leveraging OI in several forms, from archiveathons to crowdsourcing and citizen science actions, eCHOIng builds sustainable pathways for the revival of the CH sector.

- A key outcome of eCHOIng is its commitment to efficiency optimisation. Through meticulous mapping of current practices in civic engagement in CH against economic and social sustainability criteria, the project provides a solid foundation for refining existing methods and enhancing the effectiveness of OIPs.

- By drawing on the potential created by digital technologies, eCHOIng not only offers innovative approaches for HEIs but also expands forms of civic engagement in small and medium CHOs. Hence, eCHOIng stands at the forefront of academia-driven OI for the benefit of the CH sector.

The eCHOIng online module courses

Target groups: HE staff and students; CH staff

The 6 open access modules:
1. Open innovation in academia-society cooperation: examples of cultural heritage preservation in a crisis situation (**Web2Learn**)

2. Datafication of Collections: Opportunities for Innovation in the novel European Data Space for Cultural Heritage (**Sofia University**)

3. Development of an Open Innovation approach through the co-creation of Immersive Virtual Heritage applications (**Scuola Superiore Sant'Anna di Pisa**)

4. Craft as an empowering tool for community and cultural heritage (**University of Tartu**)

5. Diversity, Inclusivity and the Gender Perspective: Women and Cultural Heritage, a how-to crash course (**Federation of Women Association "Kores of Cyclades"**)

6. Co-designing projects for the cultural sector. Discover the important processes, tools, and skills needed (**Norwegian University of Science and Technology**)

Key messages to policy makers

➤ Establish strong and long-term partnerships between academic and cultural heritage institutions based on social values and citizen engagement.

➤ Adopt participatory actions (e.g. crowdsourcing, hackathons, citizen science, etc.) that open up cultural heritage sites and collections to wider publics.
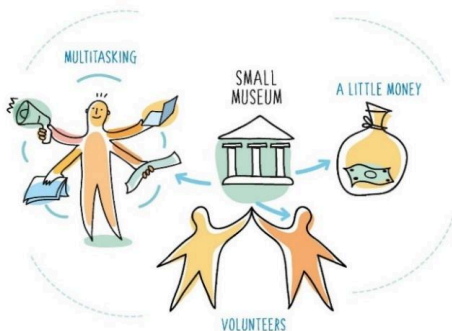
Acknowledgements

Figure 2 Small museums are about restricted budget, multitasking staff and volunteers' involvement. CC-BY-ND. DISTILL project (https://distill.page/). Image by Radostina Penev

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