



PR1A5: Practices in the Revival of European Cultural Heritage Organisations through University-Driven Open Innovation

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Version Status

Final

Submission Date

21/8/2022

Dissemination Level

PP

Deliverable Factsheet

Project Number:	2021-1-NO01-KA220-HED-000031986
Project Acronym:	eCHOing
Project Title:	Recovery of cultural heritage through higher education-driven open innovation
Title of Document:	PR1A5: Practices in the revival of European cultural heritage organisations through university-driven open innovation
Output:	PR1
Due date according to contact:	21/8/2022
Editor(s):	Paula Rice-NTNU, Christina Kanellou, Eleftheria Sarri-OSYGY
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Approved by:	All Partners
Abstract:	This document is the final outcome of project result 1 of the eCHOing project. Through desktop research, survey delivery and analysis, 10 European best practices in the revival of European cultural heritage organisations through university-driven open innovation have been identified. Opportunities and challenges for fruitful synergies between Higher Education Institutes and Cultural Heritage Organisations are also presented along with future considerations in the field.
Keyword list:	Higher Education Institutes (HEI), Cultural Heritage Organisations (CHO), Open Innovation (OI)
Copyright	Creative Commons Licence 4.0 International
Please cite as	Mavroudi, A., Angeletaki, A. 2022, PR1A5: Practices in the revival of European cultural heritage organisations through university-driven open innovation

Consortium

The consortium governing the project is adequately representing a wide range of expertise, as 4 Higher Education Institutions and 1 university library (NTNU, Scuola Superiore Sant’Anna, Sofia University ST Kliment Ohridski, University of Tartu) join hands with a web education specialist (Web2Learn) and an NGO of 16 cultural associations: OSYGY. This mix of knowledge, skills, experiences and networks guarantees a layered approach toward a diverse range of stakeholders.

	Name	Short Name	Country
1	Norwegian University of Sciences and Technology	NTNU	Norway
2	Scuola Superiore di Studi Universitari e di Perfezionamento Sant’Anna, Pisa	SA	Italy
3	Web2Learn	W2L	Greece
4	Sofia University St Kliment Ohridski	SU	Bulgaria
5	University of Tartu	UT	Estonia
6	Federation of Women Association “Kores of Cyclades”	OSYGY	Greece



Revision History

Version	Date	Revised by	Reason
V0.1	18/07/2022	Paula Rice-NTNU	Content, structure, proofreading
V0.2	26/07/2022	Erik Champion-University of South Australia	Content, structure, proofreading
V0.3	01/08/2022	Anna Mavroudi-OSYGY	Content, structure
V0.4	17/08/2022	Paula Rice-NTNU	Proofreading
V0.5	18/08/2022	Anna Mavroudi-OSYGY	Final revision
V0.6	21/08/2022	Christina Kanellou-OSYGY	Formatting, editing
V0.7	26/08/2022	Stefania Oikonomou-W2L	Final revision

Statement of originality:

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

Disclaimer:



This project has been funded with support from the European Commission. This deliverable reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



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List of Abbreviations

The following table presents the acronyms used in the deliverable in alphabetical order.

Abbreviations	Description
HEI(s)	Higher Education Institution(s)
CHO(s)	Cultural Heritage Organisation(s)
OI	Open Innovation
OIP(s)	Open Innovation Project(s)



Executive Summary

eCHOIng addresses Higher Education (HE) staff and students in the field of cultural heritage (CH), across a wide range of relevant research fields, including cultural studies, history, art history, memory studies, digital humanities, cultural economics and software engineering. It contributes to their training in inducing, governing and leveraging open innovation (OI) interventions, such as hacktivism, digital crowdsourcing and citizen driven innovation.

These OI methods and activities teach students how to make sustainable and economically viable decisions while engaging in open innovation projects (OIP) for the benefit of the cultural heritage sector. In order to optimise synergies between the two sectors, eCHOIng maps and critically assesses current practices regarding economic and social sustainability criteria. The project also develops and tests innovative approaches that higher education institutions (HEIs) can adopt to revive the cultural heritage sector, benefiting from good practices already in place in European institutions that will help to highlight the relevance and power of collaborations between HEIs and small and medium-sized cultural heritage organisations (CHOs).

This report has been produced for the eCHOIng Project Result 1 (PR1) “An open-access publication showcasing practices in the revival of European cultural organisations through open innovation”. After internal and external review, it will be developed and presented via the following means:

- (a) The PR1 publication,
- (b) The synthesis of the study, and
- (c) Open access infographics.

The synthesis and infographics will be translated into the five partner languages for maximum dissemination. All the deliverables and milestones for PR1 will be presented in a hybrid dissemination event (Multiplier Event 1) in September 2022. All project partners contributed to its delivery through desktop analysis, survey delivery and reviews.

1 The eCHOIng Project

1.1. Project Overview

Recovery of Cultural Heritage through Higher Education and Open Innovation

Erasmus+ Cooperation partnerships in higher education
(Project number: 2021-1-NO01-KA220-HED-000031986)

Duration: January 2022-June 2024

The eCHOIng project (“Recovery of cultural heritage through higher education driven open innovation”) aspires to contribute to the recovery of the higher education sector as a pillar of diversity, social inclusion, democracy and social responsibility in modern societies, all of which have been affected by the COVID-19 pandemic. The overall aim of this project is to help HEIs re-consider their academia-society relationship in the post-pandemic era and become more agile in tackling the crisis of important sectors of socio-economic activity severely hit by the pandemic, such as the cultural sector and more specifically small and medium-sized cultural heritage organisations (CHOs).

Open innovation initiatives are deemed suitable to integrate the project’s objective as most of these reflect core social values (e.g. a solution to a real need in a local community, a product co-created by researchers and civil society organisations, a mobile app for natural and cultural heritage tracking by citizens, a crowdfunding campaign for a social purpose, etc).

By the completion of this project, HEIs will have realised the importance of providing innovative forms of digitally enhanced knowledge to CHOs through OIP collaborations.

1.2. eCHOIng Rationale: “Bridging the Gap”

In the post-pandemic world, aspects of everyday life that were abruptly severed due to travel restrictions, isolation and social distancing policies, are slowly being reintroduced. Nevertheless, it is evident that not all sectors have re-emerged from the crisis the same way. Specifically, in the field of humanities, it is obvious that the pandemic enriched it with new and exciting resources, but at the same time, intensified the disconnection between HEIs and the general public whose daily customs, communities and actions we seek to observe and understand.

The people who envisioned and designed eCHOIng invited 29 cultural organisations of different sizes to participate, as stakeholders and partners, in mapping the existing gap in the cultural sector that has been exacerbated by the pandemic, based on their own needs and requirements. From HEIs to neighbouring cultural entities, and from a pan-European project such as Erasmus+ to the small, grassroots CHOs, the innovative binding construction that is eCHOIng, aims to reconnect severed channels as well as create multiple new ones.

For those working throughout Europe in small and medium CHOs with limited resources and volunteering personnel, the pandemic has posed numerous new challenges. Our hypothesis is that “through encouraging HEIs to adopt OI tools to address the challenges faced by CHOs and create collaborative solutions together, they can contribute to the recovery of the HE sector as a

pillar of diversity, social inclusion and social responsibility in modern societies”. Our main focus is, “...to help HEIs reconsider their relationship with society and become more agile in tackling the crisis in important sectors of socio-economic activity, such as the cultural sector, that have been severely hit by the pandemic”¹.

CHOs can expand their knowledge through OI collaborations, enabling them to increase their competitiveness, bring them up to date with academic practices in their respective fields, and contribute to the creation of a much more resilient environment in which they can flourish. Sharing academic expertise and making small CHOs part of the conversation instead of treating them as if they are at the bottom of the cultural pyramid, will enrich their experience, rejuvenate the momentum, and revivify their relationship with academia and the public.

On the other hand, the academic staff, students and researchers, will be empowered –with the proper training and incentives– to focus on CH once again. With access to OI, and project goals specifically tied to the background and capabilities of each partner university, eCHOIng will enable HEIs to contribute to the strengthening of European identity, to revitalise the plurality and diversity of its cultural values and practices and safeguard its cultural capital by introducing state-of-the-art methods and practices.

Through the training and opportunities developed by eCHOIng, the relationship between society and academia will be strengthened in relation to European cultural heritage. The impact that this project will have will be evaluated by participants themselves, as they will be called to assess whether their needs and expectations are indeed met, and whether they are enabled to plan changes when needed.

1.3. Open-Innovation at the Heart of eCHOIng

eCHOIng defines open innovation as: “A situation where an organisation doesn’t just rely on their own internal knowledge, sources and resources (such as their own staff or R&D) for innovation (of products, services, business models, processes, etc.) but also uses multiple external sources (such as customer feedback, published patents, competitors, external agencies, the public, etc.) to drive innovation” (1). For the purpose of this project, OI is used as a means to create a collaborative space between HEIs and associated partners (APs) from the cultural sector, where free flow of ideas between different stakeholders and individuals can be established. Some of its essential features include collaboration, implementation of new ideas or activities, and engagement.

Existing studies in the field of open innovation initiatives in the cultural sector have shown that it is beneficial to foster the engagement between citizens and cultural heritage, as the cultural sector is still “unexplored, traditionally considered conservative, whereas it shows a strong need for innovation in order to increase its competitiveness” (2). Moreover, the eCHOIng team holds that by creating OI collaborative projects, smaller CHOs can be supported to offer more competitive activities, fine-tuned to the interests of their communities, and so, attract new users to engage with their activities.

¹ <https://echoing.eu/about-the-project/> About the project: An innovative approach.

Thus, OI can offer the opportunity for HEIs to renew and deepen their community engagement in response to the COVID-19 pandemic. Such engagement may include, social engagement and volunteering, not only for students, but also for the general public.

In this context, OI is understood as a set of digitally-enhanced participatory activities whose main forms are:

- a. Hacktivism (activism by means of hacking for a social purpose, such as Hackathons/Datathons, 24-hour sprints),
- b. The Maker movement,
- c. Citizen-driven innovation, and
- d. Crowd-initiated initiatives such as crowdfunding and crowdsourcing.

By adopting these forms, the eCHOing project advances the social dynamics of technology-enhanced participation through OI to improve HE curricula and to enhance the agility and resilience of the cultural sector. Therefore, the overall aim of the project is to increase the capacity, resilience and extroversion of HEIs by using OI to contribute to the revival of cultural heritage in times of crisis.

The target groups of the eCHOing project are the following:

1. HEIs' staff and students. These are the cultural heritage professionals of tomorrow – HE staff, undergraduate and graduate students are a crucial target audience, both in terms of developing and transferring the insights gained from the project.
2. Members of small and medium-sized CHOs, including governing boards, working staff and volunteers (local and national museums, craft networks, cultural clubs or associations).

The eCHOing project is structured around the following 14 objectives:

1. Map the current situation:
 - a. Analyse ways through which cultural heritage can benefit from knowledge production and circulation in HEIs that assist CHOs in overcoming the post-pandemic crisis, as well as defining the role HEIs may play in their revival.
 - b. Produce a collection of practices where HEIs act as catalysts for CHO revival through OI.
 - c. Identify citizen-enhanced OI initiatives to serve as examples to HEIs and CHOs
2. Offer a robust and replicable methodology for OI projects driven by HEIs' students.
3. Design and implement OIP; assessment of the added value of the co-creation projects between HEIs and small CHOs.
4. Provide HEIs with tools to benefit from OI methods and practices
5. Leverage knowledge of HEI staff by introducing innovative teaching practices into conventional HE curricula.

6. Broaden the knowledge of HEI students by introducing innovative learning practices, enhance HEIs students' initiatives, boost their active participation in learning, and improve their professional skills.
7. Update CHOs' methods, resources and tools by upskilling CHOs' members and co-creating OIPs.
8. Provide all stakeholders with a cooperation framework to maximise commitment, effectiveness and replicability.
9. Address real-life CHOs' challenges in local communities by implementing HEIs-driven OIPs.
10. Enable people from CHOs with fewer opportunities, especially from rural areas and of diverse cultural and linguistic backgrounds, to benefit from HEIs expertise and experience in their domain of interest.
11. Assess the added value of the co-creation projects between HEIs and small CHOs by designing and implementing OIPs.
12. Provide a policy framework for HEIs "Actions for revival of CHOs through civic engagement and open innovation".
13. Assess and showcase the sustainability of crowd-based CH projects by HEIs, from the perspective of the financial and social viability.
14. Provide an exemplar sustainability strategy for HEIs-driven OIP².

The objectives are served by the five Project Results (PRs) shown in **Table I**, each assigned to a project partner to lead its delivery:

Table I

Project Result No	Title	Leading Organisation
PR1	Open access publication showcasing HE engagement practices in the revival of European cultural organisations through open innovation	OSYGY

² <https://echoing.eu/>

PR2	Online course on higher-education open innovation for the benefit of cultural organisations	TARTU ULIKOOL
PR3	Methodology for open innovation projects driven by HEIs for the benefit of European cultural organisations	NORGES TEKNISK-NATURVITENSKAPE LIGE UNIVERSITET NTNU
PR4	Report “Lessons learned and recommendations to HEIs” resulting from implementation of OI projects by HEIs for the benefit of CHOs	SOFIA UNIVERSITY ST KLIMENT OHRIDSKI
PR5	Impact report: economic and social sustainability of open innovation in Higher Education and beyond	Web2Learn

2 Project Result

2.1. Framework and Objectives

PR1 aims to produce an open-access publication showcasing best practices of HE engagement in the revival of CHOs by means of OI on a regional, national and European level. In particular, it will:

- 1) Produce a collection of practices in which HEIs act as catalysts of CHOs’ revival through OI.
- 2) Identify ways through which cultural heritage can benefit from knowledge production and circulation in HEIs that assist CHOs in overcoming the post-pandemic crisis.
- 3) Analyse the role HEIs may play in the revival of CHOs.

In the eCHOing proposal³, a hypothesis (see p.6) has been made as to the existence of good practices of OI collaboration initiatives or projects between HEIs and CHOs, based on the following two fundamental questions:

A. Can CHOs benefit from open innovation methods and practices to demonstrate how HEIs' staff and students can support CHOs to overcome the crisis, especially those CHOs most affected by the pandemic?

The pandemic severely affected not only the culture sector, but CHOs as well, who experienced dramatic consequences. Based on large-scale studies conducted in 2020 and 2021 by international organisations, the pandemic created sizable inequalities between big and small CHOs and severely affected the way they responded to the unexpected conditions of the pandemic. This is prominently depicted in the pan-European study by the Network of European Museum Organisations (NEMO) (13), in which it is shown that 50% of larger European museums were more successful in seeking alternative sources of funding than smaller museums (39%).

In practice, this means that small CHOs have not been able to adapt as quickly as larger ones. Moreover, CHOs were forced to consider whether they should continue functioning or not, lacking flexible tools to face crises. Therefore, there is a need to support CHOs that lack the necessary staff, skills, digital infrastructures, business models, audience engagement, and ultimately, to enhance their social role as actors engaged in the benefit of society, as it has been pointed out by the ICOMOS study (3), and the UNESCO report (4) from 2020. Undeniably, the pandemic's impact was dire for the smaller CHOs whom this project is focused on reinforcing.

B. Is Open Innovation a transformative approach to the academia-society continuum for more inclusive societies and digital transformation of HEIs?

Open innovation, as a set of digitally-enhanced participatory activities, seems to be increasingly adapted and used by HEIs (5). In PR1, we studied the different types of OI in order to use them as examples of such practices⁴ for the associated partners of the eCHOing's projects to follow. Thus, a table of 10 OI projects can serve as a springboard for the overall production of the project results for the eCHOing project.

2.2. PR1 Structure⁵

PR1 Activity 1 (PR1A1): A desktop research conducted to identify 30 European practices of HEI engagement in cultural heritage revival through OI. Examples of engagement of HE students and staff in the revival of CHOs are identified. The focus here is for OI to become a driver of change. Based on certain agreed criteria (e.g. size, location [urban-rural, south-north], type of CH [tangible-intangible]), the collection brings forward the dynamics of the HE engagement in CH revival.

PR1 Activity 2 (PR1A2): Direct a survey of CH and HE stakeholders about their readiness to reach out to CHOs and benefit from OI. The survey is directed at CH and HE stakeholders and aims to identify practices in which HEIs assisted CHOs in their recovery. The survey seeks to identify

³ <https://echoing.eu/>.

⁴ see Section B in "Qualitative Criteria"

⁵ approved eCHOing project proposal, p.51.

opportunities for synergies, as well as understand and tackle the barriers of these processes. The aim is to receive at least 60 replies to the survey (10 per country).

PR1 Activity 3 (PR1A3): Data analysis (Desktop Research and Survey), selection of 10 outstanding practices and further analysis. The desktop research results of PR1A1 and the survey replies of PR1A2 will be analysed. Ten outstanding practices are identified according to specific criteria (see Table IV in section 6) and analysed further. In particular, barriers and opportunities are synthesised into clear bullet points. Based on certain agreed criteria (such as relevance, degree of feasibility, impact on communities), the 10 best practices are selected as inspiring examples of HEI in CH revival.

PR1 Activity 4 (PR1A4): Internal and external review of the report. The analysis conducted in PR1A3 leads to a first draft of the study which is reviewed internally and externally. CHOs as external reviewers ensure relevance, credibility, and fruitfulness from another perspective.

PR1 Activity 5 (PR1A5): Release of an open access publication: The study will be released as an attractive, open access publication and disseminated through the partners channels, or uploaded to the project and partner websites

PR1 Activity 6 (PR1A6): Infographics on HEI sector for the revival of small CHOs are released in English and in partner languages. Animated representations of results to be used for dissemination purposes. These contain key information on the topic in a concise, easy-to-grasp way and are translated into five partner languages.

PR1A7 (PR1A7): A synthesis of the study. A synopsis of key findings and a presentation of the 10 selected best practices on synergies between HEIs and CHOs through open innovation will be completed. These are translated into five partner languages.

2.3. Impact

PR1 positively impacts the stakeholders in the HE and CH sector by offering a transparent, accessible set of practices in Europe. In addition, a more nuanced and clear understanding of their scalability and transferability potential will also be of value to other HEIs and the cultural/creative sector at large.

3 Methodology

The methodology adopted in the implementation process will be described below:

3.1. Desktop Research

The first activity for the identification of 30 European practices of HEIs' engagement in CHOs' revival through OI follows a methodological framework based on desktop research on the internet. Project partners were asked to collect the 10 best practices per country to build the final compilation, delivered in a common document so as to enable peer support and exchange of ideas. The activity was implemented from January to February 2022. The final compilation includes 38 practices, exceeding the quantitative benchmark originally set.

The scope of the desktop research was to map the current situation whilst collecting good practices of HEIs-CHOs collaborations on OI initiatives, digitally-enhanced or not, that could serve as a guide to these institutions and enhance the replicability of OI projects.

In general, this qualitative desktop research does not claim to produce “objectively defined knowledge” as “Methodologies are based on assumptions that researchers hold; they are strategies researchers employ, based on the fundamental philosophies and beliefs of the researchers and research questions” (6, pg 8). In our case, PR1A1 is considered to be a systematic collection of data through subjective interpretations of the particular questions to be answered from the above-mentioned assumptions.

The desktop research involved searching online libraries, digital archives and internet resources and collecting secondary data from published reports, articles, websites and web-based sources of information on the use of open innovation as a collaboration frame between HEIs and CHOs. The applied expertise of the eCHOIng partners and their experience in similar initiatives and projects, as partners and collaborators, provided important contributions to the task.

3.1.1. Supplementary Tools

To ensure relevance and validity of the results, as well as to guarantee a common approach to OI, three additional documents - tools - were created, as described below. These were not incorporated in the project proposal but have been useful in terms of setting a common ground for the implementation of this forward-looking project.

a. QUALITATIVE CRITERIA⁶

Approaching the field of OI initiatives and collecting such examples so as to map possible practices where HEIs act as catalysts for CHOs (performance-wise, in terms of engagement from their public through citizen driven initiatives in open innovation, etc) is a challenging task. To better conduct our research, we developed some concrete criteria, all listed in **Table II below**.

Table II

Operational Impact	Social Impact	Economic Impact
<ol style="list-style-type: none"> 1. Use of innovative technology. 2. Promote digital literacy for small CHOs. 3. Transfer of skills through effective 	<ol style="list-style-type: none"> 1. Increase participation of end users. 2. Citizens actively involved. 3. Openly share outcomes with immediate communities. 	<ol style="list-style-type: none"> 1. Effective plans for economic recovery. 2. International visibility. 3. Transfer of knowledge for capacity building. 4. Increase sustainability parameters.

⁶ ANNEX 4.

collaboration.	4. Safeguard diversity.	
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Participatory approaches include capacity building for organisations (HEIs & CHOs), facilitating transfer of knowledge from HEIs, recognising disadvantaged areas in terms of socio-economic status, targeting specific population groups (e.g. rural vs urban, gender-wise, disabled and their intersectionality), adjusting the level and multiplicity of funding sources, creating effective collaboration procedures, establishing international visibility, and delivering digital skills where needed. These were all dimensions discussed between partners in order to reach group consensus.

The criteria by which eCHOing will evaluate success when it comes to transferability of OI initiatives for CHOs encompass numerous challenges, as pointed out by several researchers. Since OI is a term borrowed from the business sector, the utilisation of heritage crowdsourcing practices “is often at odds with important aspects of its use in museums and heritage organisations. These differences include the motivations of volunteers (monetary versus personal), ethical issues (paid work and anonymous online interactions versus community engagement in natural and cultural heritage), and the degree of volunteer interest in the content or material at the heart of the activity” (9, pg.6).

In **Table III**, an attempt is made to interrelate qualitative criteria from the Desktop Research with the expected impact of the project.

Table III:

Aim	Possible Impact
Involving citizens.	Becoming more resilient, up-to-date, more relevant to society’s needs and more competitive through the acquisition and broadening of knowledge and tools on innovative learning and teaching practices of OI initiatives.
Allowing capacity building for organisations (HEIs & CHOs).	<ol style="list-style-type: none"> 1. Increase their capacity and level of expertise in general project development and management, resource development, stakeholder engagement and quality assurance processes. 2. Strengthen their influence position in their national and local area, as the experts in cultural heritage for the post-pandemic recovery. 3. Gain new knowledge of OI methods that can be applied after the end of the project to enrich conventional teaching, specifying in culture management and dissemination strategy implementation.

	<ol style="list-style-type: none"> 4. Gain theoretical know-how and practical experience, and hands-on consolidation that will help them use OI methods in their future professional work. 5. Develop professional skills and personal attributes such as communication, problem solving, collaboration, leadership and confidence. 6. Increase sustainability parameters of grassroot organisations. 7. Increase their capacity and level of expertise for CHOs. 8. New knowledge of OI methods for CHOs. 9. Modernise the ways CHOs appeal to the public.
Recognising disadvantaged areas (socio-economic dimension).	
Targeting specific population groups (rural vs urban, gender-wise, disabled).	Empowerment of rurality versus metropolitan/urbanity, Inclusion of diverse communities & identities.
Distinguish different types of cultural heritage (tangible-intangible).	Safeguard diversity.
Adjusting the level & multiplicity of funding sources etc.)	Clear financing mechanisms.
Facilitating transfer of knowledge from HEIs.	Enrich conventional teaching, specific to culture management and dissemination strategy implementation for both.
Creating effective Collaboration procedures.	<ol style="list-style-type: none"> 1. Foster business-academia-civil society cooperation and extension of their networks across a wider range of stakeholders and countries. 2. Promote the HE-driven multi-stakeholder approach.
Using state-of-the-art technology.	Contribute to the revival of CH through digital transformation .

Addressing urgent, real-life challenges.	<ol style="list-style-type: none"> 1. Create positive impact for the local communities. 2. Become more resilient, up-to-date, and more relevant to society's needs (both HEIs and CHOs).
Establish international visibility.	Greater audience engagement.
Deliver digital skills needed.	The possibility of a long-term positive impact on HEIs as they will be able to use and share the innovative educational methodology tools and practices produced by eCHOIng.

b. MAPPING AND MATCHING GUIDE

The criteria by which participants evaluate success are crucial in terms of clarity, usefulness, and relevance to the project's context. In addition, they also need to be scalable and transferrable to other CH contexts. In order for such a process to be successful, a guide containing types of OI with brief descriptions and examples, as well as the types of CHOs they can potentially be matched with, was produced. Creating the guide is a dynamic process as, within the next months, its content will be evolved into an interactive tool for communication with associated partners, supporting them to choose the most adequate open innovation type to address their needs.

c. GLOSSARY⁷

Key concepts and terms have been compiled to formulate a practical reference tool for partners and APs alike. Partner 6 - OSYGY (P6) translated it into Greek to serve its APs, all of which are non-profit, grassroots cultural organisations. The need to develop this tool was brought to light through the implementation of PR1 and through communication with the people working or volunteering in the cultural heritage sector. From our search on similar terminology guide-glossary released in any form, digital or hard-copy, it became evident that there were no prior results. Thus, we hold that the compilation of key terms related to this topic is an interesting idea to further explore and analyse in the future.

3.2. Survey Results & Analysis

Survey to CH and HE stakeholders about HEIs' readiness to reach out to CHOs and benefit from OI⁸

The next phase entailed the creation of a survey in Google form that was delivered among the eCHOIng partners networks. Its main aim was to establish an understanding on how collaborative projects can empower the recovery of the cultural heritage sector in the

⁷ ANNEX 5.

⁸ Disclaimers: the validity of the survey results is dependent upon the following restrictions (1) as presented in Table 1, the number of respondents differs from country to country(2) Not all respondents answered the same number of questions, as no relative ban to proceed was placed initially in the survey for respondents to progress.

post-pandemic period. Secondly, the survey intended to gather information about whether HEIs can help CHOs overcome the post-pandemic crisis and thus reveal in which ways CHOs can benefit the most from HEIs' transfer of knowledge .

The survey contained 28 questions divided into three sections: "Personal Information and Experience", "Mapping the Current Situation", "Challenges and Obstacles", and "Potential Solutions and Opportunities". The questions to which the participants were called to answer can be found in ANNEX 2. Question types included multiple choice, open-ended, and numerical rating scale questions. Section 5 of this report is based both on the tables as well as on the open-ended questions, which have been processed and analysed by the authors.

The survey collected a total of 130 responses from five different countries. It was then translated into partner languages, namely Norwegian, Italian, Estonian, Bulgarian Greek and English, and distributed through the project's networks. Respondents included academic staff/students and CHOs' staff/volunteers, etc., who were invited to answer questions based on their capacity and status. The survey was also distributed to the 29 APs who signed a letter of intent to support the project on a voluntary basis.

Online survey tools are indeed an easy and cost-effective way of collecting information from respondents. This methodological choice had to be based on sound decisions, and in our case, these were the assumptions we made in the description of our project for the "existence of best practices" between HEIs and CHOs (7). It was an assumption, not one that was very easy to prove, based on our findings (Annex 3).

This is a known problem in such research procedures when "presuppositions" might affect the research process (6, pg. 26). In order to avoid this, we focused on questions that would serve in collecting the "core idea" and the "experience" of the respondents. As pointed out by several researchers, one can discuss the validity or the success of such an endeavour, especially through a digitally-shared survey, where you cannot really have a clear overview of who will answer and when they will answer (6). As with the launch of our project, we decided to keep the form anonymous, not collecting personal names and age, but concentrating more on the occupational status of the respondent. In retrospect, a review of the initial questions and final answers and a reflection on which survey questions eCHOIng would have used again, if given the opportunity, would provide us with a more focused and thorough landscape analysis.

Thus, exceptionally diverse people -in terms of educational level, professional background, voluntary or paid engagement with cultural heritage, direct or indirect involvement in cultural heritage management- constituted the target groups of the survey, who are also the direct and indirect beneficiaries of the project proposal. This is indicated in Table IV, containing answers to survey questions 1a. and 1b. from the personal information and experience section.

Table IV. Respondents Role per Country⁹

Role	Norway	Italy	Estonia	Bulgaria	Greece	Total %
Professional from the culture/creative industries	16.1	10	19.2	6.5	13.6	13.1
Academic University staff member	24.5	10	15.4	12.9	4.5	13.4
Researcher	9.6	10	0	3.2	13.6	7.2
Museum staff	17.5	10	11.5	64.5	4.5	21.6
Culture worker	0	10	3.8	3.2	0	3.4
Artist	1.9	20	0	0	4.5	5.2
Cultural Organisation volunteer	0	10	3.8	0	40.9	10.9
Student at Masters level	23.95	10	42.3	6.5	9.1	18.4

Hence, the answers collected were part of the so-called “participative form of inquiry”, as the respondents themselves could choose whether to answer or not, and they were not obliged to participate but only invited through different networks and social media or websites and emails. Thus, they are acknowledged here as “knowing subjects who bring with them their motivations and intentions in their ability to both reflect and rationalise their experience (6, pg. 136). The introductory text of the survey was translated into five different languages.

3.3. Analysis of Country-Specific Survey Results

The third phase consisted of the analysis of the survey responses. In order to enable the contextualisation of this analysis, and to gain more insightful information, the project leader asked project partners for a country-specific analysis of the respective responses. This also brought into play the expertise of eCHOInG scholars who delivered the survey to their respondents. This task was not foreseen in the project outline, but it significantly contributed to creating a broader understanding of the results.

In addition, it also gave the consortium the opportunity to think about the desktop research as a digital mapping tool and as a research method, not just for making or illustrating arguments, but as a way to combine and explore heterogeneous responses, while eCHOInG partners used their insights and expertise in the field of OIs, as has been done in similar other digital projects (7, pg 166).

⁹ To facilitate reading, the tables included in the analysis boxes with numbers in percentages (%) colored in green show the total of recipients in all project countries, while light orange colored boxes show the highest score in individual countries. The % are only indicative and not representative of each country.

3.3.1. Findings

- ❖ Despite the differences (geographical, socioeconomic and sectoral in the culture and education) of the survey respondents, some common patterns, attitudes and beliefs are emergent. The cultural capital of respondents holds dear the idea of cultural heritage as a safeguard of the past, a reservoir of collective memory and a valuable beacon for the national and European future. Simultaneously, there is strong support and desire to experiment with innovative forms. Forward-looking concepts, such as OI, necessitate resources, skills and time to be acquired, so as to engage in, start or sustain relevant projects.
- ❖ There is a difficulty inherent in the survey to connect the capacity of the respondent with the actual event/activity in which they have taken part. A further step with another questionnaire or a focus group would enable matching the role of respondent with the activity and would yield even more stimulating results. Even so, country-specific results (e.g. Norwegian and Bulgarian answers), if subjected to further comparison, may also produce interesting results.
- ❖ Although synergies between HEIs and CHOs are not totally unknown to respondents ([Survey Analysis, Table 2¹⁰](#)), the nature of such synergies, whether they were bottom-up or top-down, was not further explored.
- ❖ Results in [Survey Analysis, Table 3](#), as well as in the open question regarding the type of synergy respondents have participated in, shows a great variety of collaboration, most of which appears to be top-down. It would have been interesting to further investigate the level of participatory approach of the design and implementation, so as to determine the imbalance between bottom-up and top-down models of collaboration.
- ❖ Correlation of [Survey Analysis, Tables 4, 5 and 7](#), allows us to conclude that for most respondents in all countries -either from grassroots cultural organisations or the academic sector- OI constitutes a “terra incognita”.
- ❖ The disruption of interaction with cultural activities also brought about new challenges: new inequalities emerged regarding access to the internet (lack of skills and limited or obsolete infrastructure) further expanding the digital divide among different socio-economic strata and people from diverse age groups and educational backgrounds.

¹⁰ All of the graphics from Survey Analysis can be found at ANNEX3 [PR1A3_DATAANALYSIS](#)

- ❖ Findings in [Survey Analysis, Tables 12 and 13](#) delivered as open ended answers, indicate the support of respondents in all project countries for HEIs-CHOs synergies. Either as a capacity-building tool for HEIs to reach wider audiences or as a significant opportunity to support CHOs in the post-crisis era. Collaborations attract unanimous popularity and there is indeed an untapped potential, as written in the project proposal.
- ❖ Comparing [Survey Analysis, Tables 6 and 7](#), it appears that familiarity and participation scores diverge significantly. These differences in familiarity and participation rates may show that people have heard of OI (events, concepts, etc) but they have never had the opportunity to join/organise an OI event or they felt insufficiently acquainted with these to be confident about their role. Therefore, they need to be supported in becoming familiar with OI. In a further stage, it would be interesting to look into the reasons why they have not taken part in OI initiatives so far.
- ❖ Results from [Survey Analysis Table 8](#) regarding the capacity in which respondents participated in OI initiatives, challenge the common belief that HEIs would be more agile in the field, more willing to experiment and embrace new approaches. On the other hand, people who either work in CHOs, or express a personal interest in culture, appear to have taken a more progressive step.
- ❖ In relation to the business dimension, we can compare findings in [Survey Analysis, Tables 3, 13 and 14](#), to reveal the discrepancy between them. On one hand, we notice low scores in (a) familiarity/participation rates and (b) acknowledgement of business' contribution for potential capacity-building. On the other hand, we have high scores in much needed stronger HEIs' support for capacity-building between the business sector and the cultural sector. Here, we can safely conclude that there is a niche to be further explored, and synergies which converse with the business sector ought to be supported. However, as it is shown in the results in [Survey Analysis Table 15](#), the support is given not on a profit-production basis, but rather in a way to establish new projects with cultural associations and businesses, in order to help policy makers, and provide students with real life problems and solutions. Therefore, respondents seem to have chosen business contributions as a means to this end.
- ❖ Findings recorded in [Survey Analysis, Table 14](#) "HEI capacity-building enhancing tools", strongly support the rationale of the eCHOInG project proposal: the need for collaboration with CHOs as the most fruitful tool for HEIs' capacity building. Project-based learning and interdisciplinary modules, both components of the eCHOInG underlying project idea, are equally recognised by HEIs as important tools.
- ❖ Despite some similarities in the demographic profile of Estonian and Greek respondents (women interested in cultural heritage issues), an important factor explaining differences is the educational framework provided to the former: an adult learner, is more ready to engage in activities which allow him/her to progress, no matter how difficult or unknown they seem at first.

- ❖ The rapidity by which technological advances and innovative practices emerge and evolve in daily life, leaves a large number of people unable to keep up with the changes, ever widening the digital gap. Relying exclusively on digitally-mediated contact to perform academic or cultural activities, along with the pace at which this passage to web environments has taken place, has widened the gap between those with expertise and skills and those who work in the field, usually on a voluntary basis.
- ❖ Motivation for embracing OI relies heavily on (1) financial support and investment in human resources, (2) understanding its relevance to cultural heritage practitioners/participants, its usefulness, and its potential impact. In addition, it is necessary to justify its objectives (e.g., why OI in cultural heritage? To encourage, enlighten, facilitate, provide better and easier access to, provide resources, etc).
- ❖ To a variable extent, depending on several factors, a desire to experiment with innovative forms is evident throughout the open-ended responses in the survey.

4 The Untapped Potential

Role of HEIs in the revival of CHOs and how to boost them in overcoming the post-pandemic crisis

The cornerstone of the proposal has been that “There is an untapped potential of connecting the added value of digitally-enhanced open innovation initiatives with university teaching and learning practices that have the ultimate goal to strengthen the societal mission of HEIs”¹¹.

eCHOing proposes a solution to unravel the potential of such collaborations between HEIs and CHOs through **the digital transformation of HE teaching and learning practices and academic curricula by embracing new forms of citizen-driven innovation**. This component will thus be a way to test whether HEIs are resilient enough -in a post-crisis period- to adjust curricula, teaching and learning methods and practices, in order to align with the increasing number of extra-curricular forms of knowledge creation and circulation in which university students and staff are called to participate in during their studies. OI methods are already adopted in academic lifestyle, with examples ranging from participation in international competitions for students, to tele-collaborations and virtual exchanges, etc.

All these new forms of OI, not only urge HEIs to rethink how niches of knowledge creation and circulation happen outside of their institutions, but also to look into how students and staff are benefited from them. Undoubtedly, such an approach can be incorporated and used to upgrade their curricula and study programs (9, pgs. 6-7).

¹¹ eCHOing proposal, p.6.

4.1. Future Considerations

A. CHOs status and needs analysis

It is obvious that structural and functional traits of CHOs delineated the framework within which respondents working in CHOs answered the survey questions. Some of the underlying quantitative elements include:

- ❖ Size of the institute.
- ❖ Funding opportunities and available financial resources.
- ❖ Number of volunteers.
- ❖ Number of outreach/education staff.

Moreover, some important qualitative characteristics can be:

- ❖ Variations in missions, scope and aims of CHOs.
- ❖ Location of CHOs (e.g. based in a regional or metropolitan area).

These also play a significant role in determining the needs and expectations of CHOs' members.

These parameters largely determine the actual diverse backgrounds of the CHOs and their need to be considered when planning strategies, so that they can receive the benefits from the eCHOing project. In the next stages of the project, they will be taken into consideration, in order to outline the methodology of HEIs-CHOs collaboration and the action plans for the open innovation projects (OIPs).

B. Matching OI concepts/tools/methods to CHOs as a key success factor

Open innovation (OI) concepts present varying degrees of contextuality, feasibility, scalability and transferability. Keeping in mind point A above, different OI methods and tools can be useful and easy to transfer in some CHOs, but difficult in others. In other words, the success of the HEIs-OI transfer to CHOs, largely depends on the appropriate matching: some OI methods are more contextual, while others are not, requiring a completely different frame of mind, set of skills and resources. Therefore, analysing OI concepts in terms of contextuality, feasibility, scalability and transferability before the application of a collaborative action plan (e.g. to smaller CHOs) is a step towards securing the sustainability of the endeavour.

C. Increasing OI visibility

The survey has been built to address the diverse beneficiaries of the project who, as respondents of the survey, were not required to have any prior knowledge of OI. As such, respondents answered the relevant question on participation in projects, not having to decide and state how open and innovative the methods and projects in which they participated actually were. Since this has been an attempt to explore a relatively unknown field, questions were meant to form an initial landscape analysis and therefore key points were introduced as follows: (a) Participation in HEIs-CHOs collaboration/Synergy per country ([Survey Analysis Table 3¹²](#)), (b) HEIs-CHOs collaboration/Synergy type in which they participated ([Survey](#)

¹² All of the graphics from Survey Analysis can be found at ANNEX3 [PR1A3_DATAANALYSIS](#)

Analysis Table 4), (c) Degree of familiarity with OI concepts per country (Survey Analysis Table 7), and (d) Participation in OI initiatives per country (Survey Analysis Table 8). Further exploring the degree of openness and innovation of projects, participants could provide insight to future researchers on the intuitiveness of OI methods and projects.

D. Country-specific and region-specific (NUT2) insights

Disparities across European countries and regions have long been recorded in policy papers (11), so further research into opportunities and limitations imposed by the country and/or region characteristics could shed light on elements such as potential knowledge and skills deficits, lack of cooperation mechanisms, etc. Focusing on country-specific and region-specific data will enable the adaptation of relevant methodologies and strategies for HEIs and CHOs cooperation in OI projects.

E. Impact of HEIs open innovation completed projects

An interesting path to explore in the future is whether any of these OI projects and strategies have led to more OI projects by the HE members or to more commerce-related activities. Relevant feedback from HEIs' OI projects can contribute to our understanding of the particularities of knowledge and skills transmission, of the potentiality for business involvement, and of the possibility and readiness to expand and improve the role of HEIs in the field for the benefit of CH.

F. Open access of OI projects

Looking into the open access dimension of OI, the survey assumed that it constitutes a key element of OIPs. Therefore, no question was introduced on whether projects were freemium or provided for free with charges for specific modifications. Consequently, there is a need to investigate the financial aspect, which in turn brings about issues of equal opportunities and citizen engagement. Different audiences, such as researchers, cultural practitioners, the general public, and so on, may enjoy different degrees of openness.

G. Multimodality and interactiveness

Multimodality and interactiveness is an integral part of OI either digitally or non-digitally performed. Being included by the OIP organisers into mainstream publications, poses a challenge to all stakeholders involved. Transferring knowledge, skills and competences with clarity, along with the necessary emphasis on practicality and usefulness to end-users, is an intriguing task for those wishing to pursue the topic further.

H. A much-needed methodology for the revival of CHOs through university-driven OI

Identifying successful strategies and ways to share them with other CHOs requires further research and analysis. A methodological tool to consolidate the findings and enable both HEIs and CHOs to improve their readiness is the next step of the eCHOIng process.

I. Revival of CHOs through university-driven OI: a multifactorial challenge

Identifying the factors holding back CHOs as well as defining ways CHOs can use and leverage OI more effectively with local businesses and small government departments/NGOs has been a key objective. For example, specifying new funding avenues and industry partners for smaller

CHOs could untap their potential. In the next stages of the eCHOIng project, concrete guidance will be provided through the project results.

4.2. Solutions & Opportunities

- 1) **Acceptance and prior experience:** The wealth of prior experience of collaboration between HEIs and CHOs, coupled with the strong support for closer and more regular cooperation, provides an excellent launchpad for HEIs' open innovation-driven synergies.
- 2) **Desire to experiment:** Face-to-face contact and physical implementation of activities and events is undeniably indispensable. Usually, the disruption of cultural activities has not been compensated by online formats, in terms of quality or impact. As physical interaction with cultural activities/events had been heavily disrupted during the pandemic, respondents tried to continue engaging. This willingness to make the most out of an unprecedented situation (severe social distancing measures, shutting down venues and activities, etc) is another important aspect we need to investigate further in our project.
- 3) **Concrete, real-life examples:** Highlighting all possible lines of action for OI is very important. Best practices and inspiring examples play a decisive role in explaining the importance of OI. They also help to reduce the conflict of values between culture and business¹³.
- 4) **Establish dialogue space and plans:** In order to establish participatory OI project initiatives between HEIs and CHOs, we should establish models of dialogue between the two that are only not top-down. Co-production of knowledge as the product of participatory work is a highly process-focused activity which encourages setting common goals and enhancing mutual understanding between the participants.
- 5) **Invest in lifelong learning:** In order to popularise knowledge, skills and innovation-friendly attitudes, education and training should be re-introduced as a top priority. Lifelong learning and popular university courses have also been beneficial to the general public in order to bridge this gap.
- 6) **Adopt interdisciplinary approaches:** From pitching ideas to designing, implementing and assessing an OI cultural activity/event, HEIs and CHOs will benefit immensely from interdisciplinary approaches to real-life challenges and from project-based learning.

¹³[Tartu SURVEY ANALYSIS TEMPLATE.tu](#), p. 16.

- 7) **Use the power of intergenerational and cross-european cooperation potential:** Considering the Norwegian situation for example, it is evident that youth is more conversant with innovation and digital tools. Thus, it would have served the survey to collect some demographic data to determine the degree in which age constitutes a significant factor for deviation in the responses.

4.3. Challenge & Barriers

- ❖ **Funding:** Financial support is a key factor for CHOs to initiate, promote and sustain collaborative projects. Likewise, funding for laboratories, outreach projects and innovative methodologies is equally important for HEIs. As it is expected in times of crisis, funds are absorbed to urgently tackle the situation. Available funding for the culture/creative sector has been diverted to COVID-19 related needs. Therefore, funding resources are necessary for any sustainable future collaboration.
- ❖ **Access to resources:** Access to other forms of resources, such as infrastructure is one of the most important deterrents for collaborations, capacity-building, open innovation, etc.
- ❖ **Difficulty in comprehending the usefulness and impact of open innovation**
- ❖ **Conflicts and fear of the unknown:** Attitudes verging of technophobia or techno-distrust are still present among some grassroots organisations. Also, there is a two-sided attitude towards the business dimension that is seen as both incompatible with cultural heritage and at the same time, acknowledged as an important source of information, skills, and funding.
- ❖ **Delicate balance:** Cultural heritage in local communities is strongly linked with a sense of belonging and identity building. It is essential for any future endeavours that collaborative practices respect this attitude and do not disrupt or undermine it. On the contrary, they ought to strengthen the pride and connection people feel.
- ❖ **Incomprehensible language-novelty of concepts:** There's a pressing need to explain what OI is in different languages using examples, and sharing this with our APs for the smooth progress of the project. Moreover, OP terminology needs to be popularised for HEIs and CHOs alike, as well as the purposes it serves. The answers of the academic respondents in the survey have shown that many seem to be acquainted with terms such as citizen engagement and social media campaigns but not with hackathon or hacktivism. In general, hacking is considered to be linked to cybersecurity issues while hackathons and hacktivism are concepts that have been used by business and IT companies in the last years without being so well known among humanities scholars and students or the cultural organisations staff.

5 Selection of 10 Best Practices

In **Table V**, 10 initiatives were selected to comprise the final list for the Open Access Publication:

Table V: Best Practices of OI collaboration:

C: Category	Best Practices	
C1. Hacktivism For Museums and HEIs collaborations	1	Hack yourself into Danish culture, 2014
	2	Guide your Guide, 2020
C2. Maker culture (spaces) Digitally or non-digitally enhanced For HEIs, NGOs and small CHOs collaborations	3	TYPA Printing and Paper Museum, 2010-ongoing
C3. Innovation Labs Digitally or non-digitally enhanced for small CHOs, NGOs in collaboration with students from HEIs	4	DISTILL project,2021
C4. Crowdsourcing platforms For all APs	5	Art. Pluriverse, 2020
C5. Citizen science Digitally or non-digitally enhanced For Libraries, Small Museums,	6	Who is a Citizen Scientist? – Parthenos training, 2016

NGOs, CHOs in collaboration with citizens.		
C6. Citizen-driven innovation Digitally or non-digitally enhanced	7	7.Examples of Digital Action inside and beyond universities during the pandemic, Heidi Project, 2021-ongoing
	8	Knitters' Replica Club, ongoing
	9	PROJECTS - HERitage Management e-Society (eng), 2015-ongoing
	10	Memory in the present-The covid-19 File. 2021

6 Conclusion

Collaboration among diverse stakeholders forms always a complex endeavour because of factors such as different visions, time-consumption, divergence of aims and approaches, as well as cultural capital hierarchy issues and lack of allocated funds and resources.

Several fundamental questions underlie the present survey and the project proposal as a whole:

- How do we enable/facilitate universities to reach out to CHOs? Why should they do so? What purpose shall they serve?
- What are the barriers that HEIs and CHOs are facing in the post-pandemic era? Can open innovation tackle them?
- What are the opportunities HEIs and CHOs are facing in the post-pandemic era? Can open innovation seize them and render them towards progress?
- How do we enable CHOs to benefit from HEIs open innovation?
- What concrete results do we expect from their future open innovation-driven

The present publication sought to tackle the needs of small and medium-sized CHOs in Europe by making resilient and in quickly adapting to the new post-pandemic realities ¹⁴We hope that more studies will pursue this endeavour.

¹⁴ See publications of the European network of museums- NEMO-, 2020 and International Council of Museums-ICOM- in 2020 & 2021 (12, 13, 15).

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Annexes

1 eCHOing Project Results

Project Result Number	Title	Leading Organisation
PR1	Open access publication showcasing HE engagement practices in the revival of European CHOs through OI	OSYGY
PR2	Online course on higher-education OI for the benefit of CHOs	TARTU ULIKOOL
PR3	Methodology for OIPs driven by HEIs for the benefit of European CHOs	NTNU
PR4	Report “Lessons learned and recommendations to HEIs” resulting from implementation of OI projects by HEIs for the benefit of CHOs	SOFIA UNIVERSITY ST KLIMENT OHRIDSKI
PR5	Impact report: economic and social sustainability of OI in Higher Education and beyond	Web2Learn

2 [Copy of Survey_eCHOing_19_02_2022](#)

3 [PR1A3_DATAANALYSIS](#)



Recovery of cultural heritage through
higher education-driven open innovation

4 Mapping and Matching Guide (coming)