



Guideline on ARCH co-creation approach





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List of abbreviations

Abbreviation	Meaning
DX.X	Deliverable X.X
SHAB	Stakeholder Advisory Boar
WP	Work Package



Executive Summary

This document was prepared in the framework of the research project ARCH: Advancing Resilience of historic areas against Climate-related and other Hazards, specifically Work Package 3, which concerns co-creating resilient and sustainable historic areas with the cities of Bratislava (Slovakia), Camerino (Italy), Hamburg (Germany) and Valencia (Spain). Its purpose is to establish a harmonised methodological approach and framework for the cooperation between scientific partners and city partners within the project.

More specifically, this document serves to define a common vision, principles and a practical framework ('rules') for working together, as well as identifying possible barriers and suggesting strategies to overcome these. It was developed drawing on literature review, but also input collected from the project team, through two workshops (held in Bratislava in June 2019 and in Brussels in November 2019), organised and facilitated by ICLEI.



1. Introduction

1.1. Purpose and context of this report

The purpose of this document is to ensure a harmonised methodological approach for cooperation between scientific and city partners in the research project ARCH: Advancing Resilience of historic areas against Climate-related and other Hazards.

ARCH will develop a unified disaster risk management framework for assessing and improving the resilience of historic areas to climate change-related and other hazards, by developing tools and methodologies to be combined into a collaborative disaster risk management platform for local authorities, urban/peri-urban populations, and (inter)national expert communities. To support decision-making at appropriate stages of the planning and management cycle, different models, methods, tools, and datasets will be designed and developed, including:

- Technologies determining the physical condition of cultural heritage;
- Information management of geo-referenced properties of cultural heritage;
- Information management regarding relevant hazards and risks;
- Models and simulations included in the decision support system;
- Inventory of recommended measures to improve resilience and aid reconstruction;
- Inventory of financing sources and opportunities.

The project will actively support local work in the four partner cities of Bratislava (Slovakia), Hamburg (Germany), Valencia (Spain) and Camerino (Italy). More specifically, this document serves to define a common vision, principles and a practical framework ('rules') for working together, as well as identifying possible barriers and strategies to overcome these. The target audience is the project team (researchers and city partners) directly engaged in the ARCH consortium, however it is anticipated that the framework provided may also offer a basis for city partners to engage and work effectively with their local stakeholders.

This document is relevant for the whole ARCH project and its outputs. Deliverables of specific relevance include those from Work Packages 3 (WP3) and WP7 (Framework and Integration) as follows:

- D3.2 Local partnerships and work plan for each pilot city
- D3.3 City baseline report
- D3.4 Report on co-creating the information system
- D3.5 Report on co-creating the Impact and Risk Assessment
- D3.6 Evaluation report of the ARCH management platform
- D3.7 Case studies report
- D7.3 ARCH disaster risk management framework
- D7.4 Requirements description



1.2. Structure of this report

The report is divided into five parts. Following this introduction, Part 2 provides background and the methodology used to develop this document. Part 3 reflects on definitions of co-creation from literature and other projects, before defining an ARCH project-specific vision for co-creation. Part 4 outlines six principles that will support the process as well as self-assessment questions to prompt partners to reflect on how to make these principles operational in their own working approaches. Part 5 describes potential challenges and obstacles that may arise within a co-creation process and provides recommendations on how to tackle them. Finally, Part 6 proposes an operational framework for the project team to work together.



2. Background and methodology

2.1. Background

The ARCH project team intends to adopt a co-creation process to ensure that project results are applicable and relevant in practice. This process includes all members of the project team and underpins the various strands of research that will be developed in different units during project implementation (Work Packages). The diagram below broadly illustrates the main intended research outputs to be co-created, with the framework for co-creation situated in Work Package 3 (WP3).

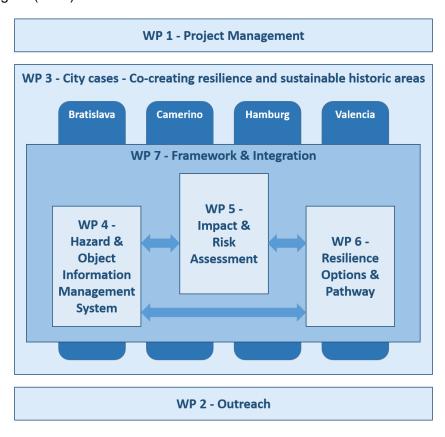


Figure 1: Relationships between ARCH Work Packages (WPs)

It is anticipated that employing such an approach will be beneficial in terms of:

- Creating and enhancing productive working modes and co-ownership of results;
- Producing knowledge that may trigger societal change for more resilient cultural heritage;
- Influencing governance and policy making;
- Engaging stakeholders in improving cultural heritage resilience;
- Increasing mutual understanding of relevant issues among technology providers (i.e. scientific partners) and users (i.e. city partners and their colleagues);
- Stimulating a continuous and productive dialogue among technology providers and users to determine needs, identify corresponding solutions and support their uptake in practice.



This document was developed drawing on literature review and the experience of the authors in facilitating collaborative research. In addition, it synthesises input collected from the ARCH research team, through two workshops (held in Bratislava in June 2019 and Brussels in November 2019), organised and facilitated by ICLEI - Local Governments for Sustainability (ICLEI Europe). The first half-day workshop was divided in two parts. The first part focused on exploring definition, principles, obstacles and operational framework in small rotating groups. The second part focused on defining city needs in relation to their key heritage assets. The second workshop was a shorter session that involved critically reviewing and further developing this draft guideline, again divided into small groups.

2.2. Gender statement

This document has been developed taking into consideration the guidance on gender in research provided in the Project Handbook (D1.2). The need for gender mainstreaming arises from historical and continuing disparities in power distribution between people of different gender identities (including between men and women, but also the LGBTI community). This is significant to a process of co-creation, where imbalances in power, e.g. between scientific partners and city partners, may serve to impede an effective and positive collaboration. The ARCH co-creation process is based on equality (see Part 4 Principles). During the process, equal opportunity should be provided to all members of the consortium (and external participants, if and when involved) - regardless of their sex, religion or gender - to express views, knowledge, experience and suggestions. This is partly the role of the ICLEI WP3 team as facilitator of the process, but also a responsibility of those partners who will be involved in leading meetings, workshops and other events. Partners in this position should review relevant guidance on the subject, such as (e.g. the gender sensitive checklist for facilitators in the City of Vienna's Gender Mainstreaming Made Easy1). All partners should also review the discussion in State-of-the-art Report 5: Gender mainstreaming in building cultural heritage resilience (D7.1) to become familiar with the objectives of gender mainstreaming and strategies.

¹ The publication *Gender Mainstreaming Made Easy* includes advice on planning and facilitating events. See https://www.wien.gv.at/english/administration/gendermainstreaming/principles/manual.html



3. Our vision: what does co-creation mean to the ARCH team?

3.1. What is co-creation?

There is growing interest in the concept of co-creation among researchers and funders of research (particularly in Europe) with a view to securing greater research impact and uptake of new knowledge by end-users. The term has become prominent in research on urban resilience, environmental and disaster risk management, but there is no consensus on how best to do it.

According to the ACCOMPLISSH project, "The definitions of co-creation are varied, and the terminology used to describe the processes equally so. The general focus of co-creation, however, is on a process by which different people come together to work on common issues towards a mutually agreed goal" [3].

In practice, co-creation can involve different activities, different levels of intensity and different degrees of ownership over the results – depending on the field, the participants and the aims [1]. For example, the level of participation in cultural heritage conservation may differ from emergency response when it comes to who participates, who takes decisions or influences them, who is involved, to what extent and with what purpose. In addition, levels of co-creation can differ in the course of a project, or several roles can be present (or not) at the same time.

Looking at the field of public innovation, Voorberg et al. assert that co-creation is "the active engagement of actors who hold different types of knowledge and resources with the aim to generate collaboratively outcomes openly defined by the facilitators of the process. Outcomes can vary and can include vision narratives, new understandings of problems and opportunities, hybrids of solutions, agendas or other" [2].

3.1.1. The ARCH co-creation definition

The RESIN project team found that "while there is no single normatively 'good' definition of cocreation or associated methods, there is evidence to suggest that research adopting a cocreative approach can benefit from a clear, common understanding of the concept and process established at the outset" [1].

While the ARCH Grant Agreement provides a starting point for a project-specific understanding, project partners have refined that definition as follows:

"Within the ARCH project, co-creation is the democratically governed creation and joint development of knowledge, models, methods, tools, services, policies, and strategies by the project partners and their stakeholders based on trust, transparency and effective communication. The co-creation process in ARCH takes an adaptive approach that responds to changing realities and endeavours to transfer results to local governments."



4. Co-creation Principles

This section defines six principles of co-creation for the ARCH project, following their initial identification at the kick-off meeting in Bratislava. These principles are presented together with a series of self-assessment questions for partners to reflect on in order to actively incorporate these principles into their research methodologies and working approaches.

1. Equality

A successful co-creation process is based on equal collaboration between the parties involved; this means equality in contribution to shared tasks, but also that partners will be equally respected and considered equally relevant for the project, despite their different roles and responsibilities.

Self-assessment questions:

- Does my organisation consider all partners equally important in decision-making processes within the project?
- Is each participant from my organisation, department or institution equally heard in project meetings?
- Does each participant have enough time to present their ideas or doubts about processes and activities within the project?

2. Openness

A successful co-creation process demands the active and engaged involvement of all partners from the early stages of the project. All interests, opinions and ideas should be treated with the same consideration and respect, in order to maximise trust, legitimacy and co-ownership of results. Meetings should offer safe environments for project partners to exchange ideas and brainstorm, as a breeding ground for creative thinking.

Self-assessment questions:

- Is acquired knowledge shared with other partners?
- Is the extent of knowledge shared adequate for partners to understand the nature of the implemented activities?
- Do project meetings provide opportunities for open exchange on objectives, plans and strategies among partners?

3. Transparency

A successful co-creation process demands everyone involved to be transparent, honest, and realistic about the desired outcome(s) of the project, its scope of action, and the limits of partner involvement and participation. For scientific partners, this is particularly important throughout design, planning and implementation, in order to maintain commitment and promote the uptake of results. In the interest of transparency, all information needs to be accessible to all partners (and potentially key stakeholders).



Self-assessment questions:

- Is my organisation willing to share information and results, generated within the project in a timely manner with partners?
- Are there limits to my capacity that I need to communicate to other partners?
- Will our interest in transparency be affected if we are exposed to different and potentially challenging situations, unlike the way we are used to doing things?

4. Flexibility

A successful co-creation process demands that processes, plans, and activities within the project should allow for flexibility and be ready to adaptively respond to changing needs and priorities. Flexibility relates to the content of the project (e.g. topical issues, agreed objectives, plans, and activities), interaction processes (e.g. working modes) and ways of exchange between partners.

Self-assessment questions:

- Is my organisation prepared to interact and communicate with the rest of the partners in informal and 'unplanned' ways?
- Does my organisation provide a safe space for continuous testing, evaluating, and adjusting of tools and methods?
- Is my organisation ready to accept different working modes or changes in processes, plans and activities, following discussion and consideration of the full consortium or the partners involved in a specific WP?
- Is my organisation open to accepting and acting upon changes to objectives, plans, activities and priorities based on changing needs?

5. Inclusiveness and reflexive / iterative learning

A successful co-creation process demands active and inclusive involvement of all project partners from the early stages of the project, something that is key to success, as is maintaining a 'continuum of participation' (with changing intensity and types of participation). Iterative learning and reflexivity form an integral part of the experimentation process and the consolidation of outputs. Effective learning environments should be created to let the involved partners create and test new processes, while a continuous feedback cycle of evaluating results and adjusting actions and activities, helps to improve results.

Self-assessment questions:

- Does my organisation ensure that day-to-day activities at work and steps taken within the project support inclusiveness of all voices, partners and involved stakeholders?
- Is my organisation updating constantly relevant actions that will ensure the inclusiveness of all partners in our activities?



6. Trust, accountability and credibility

For a successful co-creation process, each partner needs to feel a sense of obligation or willingness to accept responsibility for decisions, but also for the implementation of actions and activities within their scope of work, effectively and on time. This is also crucial to building trust between partners. Each partner needs to assign responsibilities within their own teams, but also key persons to undertake specific actions, according to their background, capacities and capabilities, and make sure that other partners are aware of who is handling what. These key persons will also be responsible to assign and communicate adequately about responsibilities with the rest of the co-creation partners, respecting other deadlines, functions, tasks and activities.

Self-assessment questions:

- Is it clear who in my organisation is leading on specific tasks accountable to deliver expected outcomes?
- Is there a clear, mutually agreed long-term vision for the project and its expected outcomes (e.g. in the form of a formal or informal manifesto or terms of reference)?
- Does my organisation (and relevant teams) make sure that day-to-day activities at work and steps taken within the project align with that vision?
- Are the timelines that my organisation sets for tasks and outputs (and those defined by the Grant Agreement) discussed with contributors and adjusted if necessary (and if possible, without adversely impacting the work of others)?
- Do I do what I say I will?
- Do project meetings provide opportunities for informal exchange outside of formal business (e.g. dinners, extended breaks, site visits), as a means to build relationships and strengthen trust?



5. Dealing with obstacles

Co-creation is not necessarily easy. For this reason, it is useful to consider early in the process potential challenges and obstacles that may arise. The following table lists some of these obstacles, and provides recommendations on how to tackle them.

What obstacles can we expect?	Recommendations to overcome these obstacles	
Mismatched terminology	 For all: Create a project glossary Use definitions and repeat regularly Ask for clarifications Avoid using (technical/scientific) jargon 	
'Lost in translation' feeling	If needed, and following agreement with the coordinator, shift budget within WPs and ensure that translation services are covered for key materials Use online translation tools for "standardised" simple translation and keep texts simple. Provide a translation protocol	
Unrealistic or mismatched expectations	 For scientific partners: Provide examples of intended outcomes Be honest about what can and cannot be achieved in the project Adjust objectives defined within Grant Agreement if needed to better match local situations. Be clear about the necessary amount of work and resources required for intensive work phases For all: Discuss principles and what these mean to the group in practice If a new staff member joins the project, provide this cocreation guide, as well as a briefing on work done so far. 	



What obstacles can we expect?	Recommendations to overcome these obstacles	
Difficulties in engaging stakeholders	 For city partners: Figure out what stakeholders need – communicate this to research partners. Clarify budget issues with stakeholders outside the project team, make clear to them that they gain nonmonetary benefits from the project. Keep in mind that partners at the local level have their own needs and routines and try to respect them, even if this means that certain project demands cannot be met. Get stakeholders involved early! Develop a protocol for engaging local stakeholders Be responsive and flexible where possible For scientific partners: Ask about needs, listen to answers; look to project activities to see how these can support. Fluent communication between research partners and others stakeholders and cities. 	
Lack of integration and leadership	Establish a timeline for coordinating activities and revisit throughout project If an anticipated time conflict appears, mention it to the project team as early as possible	
Lack of capacities, time, and resources	 For city partners: Look at resource gaps and identify where the proje might be able to support Ask research partners if they can support Coordinate internally for more support, try turning to your local stakeholders if they can support in any w 	
	Communicate possible capacity issues (e.g. staff member leaving) in advance If a commitment / deadline cannot be met, say so as soon as possible	



What obstacles can we expect?	Recommendations to overcome these obstacles	
Lack of skills and knowledge	Be honest if there is a lack of knowledge and try to find out what is needed to "close" the gap Look for existing guides and information sources Look to the project team for support	
Remote, insufficient or intransparent communication	 For all: Be honest about barriers and arising issues If something cannot be achieved, say so. Do not make vague promises and then not follow through Make the most of face-to-face meetings (or online meetings) to clarify needs and expectations Introduce and explain communication and collaboration tools, be clear about how and when to use them Be mindful of time, i.e. not too many meetings / calls Have a single point of contact for stakeholders to be efficient in communication 	
Being too fixed in roles / professional background and not being adaptable	 For all: Be aware of the different roles and backgrounds project members bring to the team Reflect about your usual approach to your work, how this project might be different, and if anything needs to change 	
Imbalances in power relations	Acknowledge possible imbalances in power Reflect about your usual approach to your work, how this project might be different, and if anything needs to change.	
Lack of conflict resolution process	Communicate concerns to ICLEI WP team as the process facilitator Use conflict resolution mechanisms within organisations Mistakes can happen, find solutions and alternatives instead of fixating on the mistake	



What obstacles can we expect?	Recommendations to overcome these obstacles	
Intellectual property rights	 For all: Make agreements, if possible; these should be made as early as possible Consult the ARCH Grant Agreement or the Project Handbook if needed 	



6. Operational Framework

Based on the vision, principles and likely obstacles outlined above, we propose the following framework for the project team to work together, divided between an overview of the management framework that will practically support the team, and a checklist for partners.

6.1. How we plan to manage quality

The following is a list of mechanisms that are already in place to manage the co-creation process. The list includes mechanisms described in the Grant Agreement and others that have been agreed upon during the first months of the project.

- This guideline itself serves as a fundamental departure point for the co-creation process, acting as 'terms of reference' for the project team. It will be evaluated and revised by ICLEI with input from the project team halfway through the project.
- The stakeholder advisory board (SHAB), defined in the management structure of the project (see ARCH Grant Agreement, Part B, Section 3.2) mirrors the executive board, providing a parallel avenue for city partners to share experiences and concerns, to then be taken to the executive board by the SHAB chair.
- A local research (academic) partner is assigned to every city to provide technical support and capacity sensitive to local needs.
- The ICLEI (WP3) team will facilitate the co-creation process in order to ensure that
 activities take place in a coordinated manner and to provide a further avenue to address
 concerns.
- Regular joint calls for all city partners and their local research partners (monthly at first
 due to intensity of project tasks, likely reducing in frequency from 2020 on). Other
 research partners invited to attend. Focus of calls: early on focused on WP3 tasks for
 delivery in first year of project and peer-to-peer updates.
- Documentation of joint calls will be shared with all partners (upload on Confluence).
- Four co-creation workshops will be held over the lifespan of the project. The final three will provide time and space to reflect on the co-creation process and address concerns.

6.2. Who does what?

The following provides an overview of general division of tasks and responsibilities between the project partners, but it is not a comprehensive list. See the Grant Agreement for more details.

City partners will:

 Actively participate in regular joint calls with all cities and their local research (academic) partners.



- Identify local stakeholders, establish a partnership with selected ones, develop a corresponding work plan and establish a mechanism for regular engagement for the duration of the project.
- Support all research partners in understanding local needs, collecting data, and identifying and engaging end users for the tools under development.
- Engage directly in the tool development process (by identifying needs, trying out prototypes, providing feedback etc.) and / or identify end users willing and able to do so.

Local research (academic) partners will:

- Attend and actively support preparation of city partners for regular joint calls with all cities and their local research (academic) partners.
- Support city partners as-needed in completing project tasks and with technical support and guidance related to their expertise.

All research partners will:

- Attend joint cities calls on an as-needed basis to stay in touch with city updates and provide technical expertise if needed.
- Participate in each of the four co-creation workshops held throughout the project.
- Support city partners with technical support and guidance related to their expertise.

Co-creation facilitator (ICLEI) will:

- Establish the framework for co-creation.
- Facilitate joint partner calls and four co-creation workshops.
- Provide feedback on proposed agendas for workshops and meetings.

Local stakeholders will:

- Engage with activities identified in local work plans as led by city partners.
- Possibly engage in project activities (workshops, meetings, calls etc.) as deemed of use and interest.



The table below outlines responsibilities for specific tasks.

Task	Who	When
Co-creation workshops (i.e. the four over the course of the project) and regular joint calls: invitations, minutes and agenda	ICLEI	Circulate agenda for information during the week before call / workshop. Circulate minutes within three weeks of call / workshop.
Other workshops and calls: invitations, minutes and agenda	Leading organisation (i.e. research partner or city partner)	Circulate agenda for information during the week before call / workshop. Circulate minutes within three weeks of call / workshop.
Information gathering and dissemination: questionnaires, interviews, meeting / workshop agendas	ENEA, SOGESCA, INGV, DIN, Tecnalia, Fraunhofer, UNICAM, Bratislava, Camerino, Hamburg, Valencia	

6.3. Checklist

6.3.1. For all partners

- Make sure new team members joining the project (i.e. the consortium) receive this document when they join and confirm by WP3 lead having read.
- Make reference regularly to the common vision established with this document.
- Refer to the common definitions established in the state-of-the-art-report (WP7) in the live Glossary on Confluence. Appoint a Glossary manager to inform the team of any changes or additions.
- When refining research questions and designing tasks, refer to the self-assessment questions (Part 4) and ideas for dealing with obstacles (Part 5) outlined in this document.
- Copy the relevant local research partner(s) in **all** correspondence with city partners (using distribution list for each city research team).
- Copy the ICLEI (WP3) team in key correspondence with city partners and their local research partners (using distribution list for this purpose). Key correspondence includes: agenda / minutes of meetings held between research partners, city partners (and additional local stakeholders).
- Raise concerns with the ICLEI WP3 team at the earliest opportunity (e.g. excessive requests, unclear information, and lack of response). ICLEI will attempt to address this



with the persons involved and in accordance with D1.2 guidance. If not possible to resolve, the next step will be to raise with Project Coordinator.

- Use joint calls and face-to-face meetings to raise questions and resolve outstanding issues. Communicate answers to questions of broader relevance to broader group.
 Dedicate time in meetings and calls to address outstanding issues needing further action (e.g. use of project management platform).
- Keep emails concise as much as possible and highlight action points!

6.3.2. For academic partners developing tools and methods

- Identify user groups for planned outputs early on and discuss expectations and needs.
- Adopt an agile research / development process: After early discussions of user expectations and needs, create prototypes / mock-ups for users to get feedback and further requirements in order to move the process forward in manageable increments aimed at user-needs.
- Aim to gather input via structured interviews or informal conversations face-to-face or by phone rather than questionnaires if possible. Be aware of language barriers.
- Anticipate language barriers by allowing time to translate guidance materials or interview questions into the local language, and enlisting support to conduct interviews from city partners and local research partners.
- Try to reconcile mismatches between user expectations and researcher capacity if something cannot be done within the scope of the project say so - clearly, specifically and as early as possible.
- Obtain feedback from the ICLEI (WP3) team before circulating major requests for input to city partners, e.g. surveys, interviews, workshop agendas. Communicate clearly when the feedback is needed and allow at least two weeks for review and response.



7. References

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