



Connecting Practice

Phase IV - Part 1

Final Report

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CONTENTS

Acknowledgements

1. Introduction	1
1.1. Overview of Connecting Practice project	1
1.2. Purpose of Phase IV	1
2. Working methods: towards a resilience-thinking framework for heritage places	3
2.1. Why a resilience thinking framework?	3
2.2. Use of core concepts and definitions related to resilience thinking	5
2.3. Methodologies used as a basis to develop the resilience thinking framework	7
2.4. Timing and working steps	11
3. Challenges and lessons learned	17
3.1. Integrating heritage and social-ecological systems thinking	18
3.2. Focus on management planning and the identification of a main issue as the focus of the assessment process	20
3.3. Persistence versus transformation	21
3.4. System dynamics and cross-scale interactions: strengthening the understanding of the wider setting	23
3.5. Use of resilience terminology	24
3.6. Futures thinking and scenario planning	25
4. A future for resilience thinking in heritage management	28
References	31
Annexes	33
ANNEX A: Connecting Practice Project Brief	35
ANNEX B: Personnel	41
ANNEX C: Activity Log	43
ANNEX D: Glossary	46



Visby houses and church ruin
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1. Introduction

1.1. Overview of Connecting Practice project

Connecting Practice is a joint exploration by ICOMOS and IUCN aimed at learning and developing new approaches that recognise and harness the interconnection of natural and cultural values and processes of significant heritage landscapes and seascapes to achieve more effective, creative, and inclusive ways to care for, safeguard, and learn from them.

Since the project began in 2013, four phases have been implemented (for a summary of previous phases, see [Annex A](#)). Interdisciplinary fieldwork resulting in collective experiential learning is an integral part of the Connecting Practice working method. Indeed, throughout its four phases of implementation over nine years, Connecting Practice has confirmed that its competitive advantage lies in being experimental, a think-tank, and an innovation platform for developing and testing new ideas.

Following the successful work done in the first three phases of Connecting Practice, ICOMOS and IUCN are pleased to share the results of Phase IV of Connecting Practice. This Phase focused on the development of a resilience-thinking framework with the potential to inform long-term management planning for World Heritage properties and their broader social-ecological systems.

1.2. Purpose of Phase IV

Phase IV built on the insights and outcomes of Phase III, which explored whether and how the concept of resilience could be operationalised to better understand: (1) the interrelations among natural and cultural dimensions of heritage places; (2) the dynamics of change at the place level and (3) how to incorporate adaptative measures in management planning instruments in face of change. During Phase III, different approaches and methods were trialled at different World Heritage properties: *Saloum Delta* (Senegal), *Cultural Landscape of Honghe Hani Rice Terraces* (China), and *Landscape of the Pico Island Vineyard Culture* (Portugal) (ICOMOS and IUCN 2020). Of the methods explored, the Resilience Alliance *Assessing Resilience in Social-Ecological Systems: Workbook for Practitioners* (Resilience Alliance 2010) showed the most potential to suit the needs of heritage management and became one of the bases for explorations in Phase IV, in addition to the Wayfinder guide (Enfors-Kautsky et al. 2018). Developed in 2018 but launched as an open online platform in 2020, the Wayfinder guide is a novel conceptual framework for resilience practice, created by an international group of resilience experts, from Stockholm Resilience Centre, Resilience Alliance, and the Australian Resilience Centre.

Connecting Practice Phase III also developed a *Commentary on Nature-Culture Keywords*, in which 'resilience' was one of three families of keywords explored and analysed (ICOMOS and IUCN 2021). The Commentary aimed to better understand the origins and potential future uses of the keyword families (biocultural, resilience, traditional knowledge) within the current work of Connecting Practice and in other nature-culture projects. With regard to resilience, the aim was to better understand resilience as an approach to heritage management. The Commentary concluded that further work is needed to link resilience and management needs and that 'applying resilience requires approaches that are dynamic, reflecting situations and contexts that are constantly changing, adapting, and transforming (ibid)'.

Phase III also initiated a dialogue by ICOMOS and IUCN with the Stockholm Resilience Centre, whose work on resilience thinking is recognised worldwide. Phase IV strengthened the collaboration between the three institutions towards the adaptation of the Wayfinder guide to the needs of heritage conservation and management. The Wayfinder Heritage framework, included as Part 2 of this report, is the tangible result of Connecting Practice Phase IV. This resilience thinking framework is aimed at supporting long-term planning for World Heritage properties and other heritage places. Wayfinder Heritage was trialled at a pilot case study – the World Heritage property *Hanseatic Town of Visby* on the island of Gotland, Sweden.¹ It should be noted, however, that this is a preliminary attempt to adapt the Wayfinder guide and that further efforts will be required to make the Wayfinder Heritage fully operational.

This Part of the Connecting Practice Phase IV report (Part 1) describes the working methods used to develop the Wayfinder Heritage, the challenges encountered and lessons learned as well as future perspectives about its further development and integration with other heritage management resource materials.



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Visby from harbour area
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¹ UNESCO WORLD Heritage Centre. 'Hanseatic Town of Visby', <https://whc.unesco.org/en/list/731>

2. Working methods: towards a resilience-thinking framework for heritage places

From the onset, the intention of Connecting Practice Phase IV was to work with the Stockholm Resilience Centre (University of Sweden) to adapt and simplify the Wayfinder guide for use at heritage places. The Wayfinder guide is a process for resilience assessment, planning, and action in social-ecological systems. As such, Wayfinder was not developed with an intention that it be applied at heritage places.

Developing the Wayfinder Heritage framework has meant introducing a range of terms, methods, and tools that are not typically used in the fields of natural and cultural heritage protection and management. At its core, the Wayfinder guide 'builds on resilience thinking, which brings together ideas from complexity science and social-ecological systems thinking' (Enfors-Kautsky et al. 2018). None of these fields is familiar to most heritage practitioners.

Resilience itself is a term that is used in a diversity of ways across a range of disciplines and policies, as highlighted by the Commentary developed under Phase III of the Connecting Practice project (ICOMOS and IUCN 2021). Hence, in preparing and delivering the resilience thinking framework, it was necessary to adapt and simplify a number of working methods and contents from the Wayfinder guide for use in heritage management.

2.1. Why a resilience thinking framework?

If the main goal of inscribing properties on the World Heritage List – or designating heritage places at the national, provincial, or local levels – is to protect them for present and future generations, their management requires approaches that are rooted in the past and incorporate people's aspirations for the future. Phase III of Connecting Practice explored how a resilience thinking approach could help strengthen management plans by incorporating adaptive measures in the face of change. Lessons learned from the fieldwork case studies made clear that since management plans normally have 5 to 10-year timeframe, long-term thinking was needed. However, comprehensive management planning for 20-years, 50-years, or more years is seldom undertaken or clearly articulated even when multiple, long-term, and continuous actions are required to address certain management challenges (e.g., climate change adaptation and mitigation, loss of biodiversity, changing population dynamics, dealing with disasters).

As acknowledged in the Commentary on Nature-Culture Keywords (ICOMOS and IUCN 2021), resilience is a future- focused concept, which requires considerations of "transformation". When heritage places are designated as significant at international, national, and/or local levels, there is an assumption that the values underpinning significance must be retained and

that the attributes that convey those values will be maintained. This can sometimes lead to heritage management approaches based on a static model of the place, aiming at stability, continuity and minimal change. However, as explained by Meadows

[r]esilience is not the same as being static or constant over time... [the] distinction between static stability and resilience is important. Static stability is something you can see; it's measured by variation in the condition of a system week by week or year by year. Resilience is something that may be very hard to see, unless you exceed its limits, overwhelm and damage the balancing loops, and the system structure breaks down. Because resilience may not be obvious without a whole-system view, people often sacrifice resilience for stability, or for productivity, or for some other more immediate recognizable system property (Meadows 2008).

A resilience thinking approach can be a powerful tool for long term planning for heritage places for the following reasons:

1. Resilience thinking offers a lens to clearly identify what aspects need to persist (e.g., significant attributes); and to also recognise important processes and dynamics that sustain the heritage place.
2. Resilience thinking can assist in identifying the extent to which attributes and systems can adapt and transform whilst still maintaining significant heritage values and retaining important social dynamics, sense of place, and services and benefits.
3. While change is always occurring at multiple scales, certain types of change are neither inevitable nor desirable. By being conscious of the positive and negative aspects of change, rather than attempting to resist it, heritage managers can strive to influence what is driving change in a heritage place.
4. Resilience thinking can debunk the (mis)conception that heritage is necessarily an impediment to change, development, and 'progress'. By conceiving heritage places as dynamic systems, resilience thinking stresses that heritage can play a role in creating alternative sustainable futures.
5. By promoting systems thinking, the importance of the concept of 'wider setting' of heritage places is highlighted. That is, there is a need to consider heritage places as part of larger social-ecological systems. As such, they are affected by cross-scale interactions – i.e., processes and changes occurring at one scale affect what happens at another scale. Understanding larger system dynamics is central and critical to management planning.
6. Resilience thinking highlights heritage managers agency (or capacity) to influence big-picture decision-making processes that have consequences for the places they care for. It can assist them in thinking about the most effective opportunities to influence desired change.

2.2. Use of core concepts and definitions related to resilience thinking

The resilience concept has gained popularity in different fields over the past decade, and many different definitions of the concept exist. This often leads to multiple interpretations of what resilience means and consequently to misunderstandings and misuses of the concept. The lack of a clear definition of this concept in heritage conservation and management led to the decision from the onset of the Connecting Practice Phase IV to adopt the meaning developed by the Stockholm Resilience Centre (University of Sweden):

Resilience is the capacity of a system, be it an individual, a forest, a city, or an economy, to deal with change and continue to develop (Stockholm Resilience Centre, n.d.).

As explained in the Commentary on Nature-Culture Keywords (ICOMOS and IUCN 2021), the understanding of this concept has evolved into the development of an understanding of resilience thinking, which goes beyond using resilience as an objective but instead enabling a focus on understanding processes of change (Ibid). In turn, resilience thinking is defined as:

... a theoretical lens that help us understand dynamic change in complex social-ecological systems. It has roots in complexity and social-ecological systems thinking (Enfors-Kautsky et al. 2018).

Hence the term 'resilience-thinking' synthesises a collection of other concepts and ideas that must be equally understood and which are also intertwined with the definition of resilience included above.

Box 2.2. Core concepts related to resilience thinking

System refers to a set of elements or parts that is coherently organised and interconnected in a pattern of structure that produces a characteristic set of behaviours, often classified as its "function" or "purpose" (Meadows 2008).

System identity refers to the defining characteristics and qualities of a system (Enfors-Kautsky et al. 2018).

System dynamics reflect how different parts of a system interact in ways that combine to determine a system's overall structure, function, and behaviour (Ibid).

Social-ecological systems are integrated systems of people and nature. The term emphasises that humans are part of nature and that the delineation between social and ecological systems is artificial (Ibid).

Complex systems, such as social-ecological systems, are composed of many interacting components. Typical properties in complex systems are non-linearity, feedbacks, and emergent behaviour (Ibid).

The concept of "system identity" is particularly important for heritage conservation and management since heritage places should be managed to maintain heritage values and conserve the attributes that convey those values. As Folke explained

Resilience is the capacity of a system to absorb disturbance and reorganise while undergoing change so as to still retain essentially the same function, structure, and feedbacks, and therefore identity, that is, the capacity to change in order to sustain identity (Folke, C. 2016).

The capacity of a heritage place to deal with change and continue to develop is therefore dependent on its ability to maintain its system identity, that is its defining characteristics and qualities. For heritage, "system identity" can be equated with maintaining the heritage values of a place and conserving the attributes that convey those values. If those defining characteristics and qualities (or the attributes and values) are not maintaining in space and over time, the system (or heritage place) will develop in a way that may result in a completely new identity (Cumming, G. S., and J. Collier. 2005).

For these reasons, for the purpose of the Wayfinder Heritage framework, ICOMOS and IUCN decided to add the notion of "identity" to the definition of resilience as follows:

Resilience is the capacity of a system, be it an individual, a forest, a city, or an economy, to deal with change and continue to develop [sustainably while maintaining its identity].

Resilience thinking as promoted by the Stockholm Resilience Centre reflects an approach that integrates notions of persistence, adaptability and transformability. While resilience is often associated mainly with persistence, in social-ecological systems certain adaptations and transformations can support the overall persistence of the system's distinctive identity. That is, in resilience thinking,

Adaptability is part of resilience. It represents the capacity to adjust responses to changing external drivers and internal processes and thereby allow for development along the current trajectory (stability domain). Transformability is the capacity to cross thresholds into new development trajectories. Transformational change at smaller scales enables resilience at larger scales (Folke et al. 2010).

The application of resilience thinking is associated with many other concepts that are not commonly used in heritage conservation and management such as "tipping points", "leverage points", "feedbacks" and "cross-scale interactions". How to use this terminology, how to identify equivalent terms already used in heritage conservation and management practice and how to select which new terms to adopt were among the main challenges in this Phase IV. These challenges and how they were dealt with are explained in detail in [section 3.5](#).

2.3. Methodologies used as a basis to develop the resilience thinking framework

During Phase III of Connecting Practice, different resilience assessment methodologies were used. At the Saloum Delta (Senegal), two frameworks were applied: Ostrom's *General Framework for Analyzing Sustainability of Social-ecological Systems* (Ostrom 2009) and Poe et al.'s *Cultural Dimensions of Socioecological Systems: Key Connections and Guiding Principles for Conservation in Coastal Environments* (Poe et al. 2014). In the Honghe Hani Rice Terraces (China), the field team chose the *Toolkit for the Indicators of Resilience in Socio-ecological Production Landscapes and Seascapes (SEPLS)* (UNU-IAS et al 2014). This Toolkit was developed jointly by the United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS), Bioversity International, the Institute for Global Environmental Strategies (IGES), and the United Nations Development Programme (UNDP) under the International Partnership for the Satoyama Initiative (IPSI). At the Landscape of the Pico Island Vineyard Culture (Portugal), the Resilience Alliance's *Assessing resilience in social-ecological systems: Workbook for practitioners* (Resilience Alliance 2010) was tried. Established in 1999, the Resilience Alliance is an interdisciplinary network of member institutions, namely the Stockholm Resilience Centre.

When they defined the purpose and scope of Phase IV, ICOMOS and IUCN considered that the Resilience Alliance's Workbook for practitioners provided a more flexible framework compared with the other methodologies tested. However, at the start of the implementation phase, ICOMOS and IUCN became aware of the online publication of the Wayfinder guide. Although it was initially developed in 2018, the guide was mainly promoted by the Stockholm Resilience Centre as an open online platform in 2020. Rooted in previous assessment approaches, it was positioned as representing a major innovation in resilience practice, synthesising scientific advances in resilience and sustainability thinking, since the publication of the Resilience Alliance's Workbook for practitioners, almost a decade earlier.

The Wayfinder guide is based on a participatory process consisting of five phases. Each phase is divided into modules, which together consist of a set of 40 'steps' called work cards² that describe specific concepts, tasks, and activities. Conducting a full Wayfinder process requires skilled facilitation over a period of up to 12 months. Wayfinder was developed to address challenges of sustainable development and global environmental concerns in the 21st century, and how social-ecological systems develop through processes of adaptation and transformation.

² Whereas the Wayfinder guide is presented as containing 40 workcards, in practice there are 40 steps or units containing the explanations and theoretical background, which is then supported by workcards presented as discussions guides or activity sheets. For these reasons and for the purposes of this report, ICOMOS and IUCN have decided to call them units, rather than workcards.

Wayfinder was not developed with the intention that it be applied to heritage places, in which persistence needs to be the focus for resilience thinking. The emphasis on transformation in the Wayfinder guide proved one of the main challenges of the project and was the object of a lot of the discussions with the Stockholm Resilience Centre. Another major challenge was the complexity and length of the application of the Wayfinder process, which ICOMOS and IUCN considered unfeasible for the needs of many World Heritage properties and other heritage places, with limited human capacity and financial resources. For these reasons, it was determined that a framework tailored to the needs of heritage places had to fulfil the following requirements:

- To complement existing management processes rather than creating completely new ones – hence the focus on futures-thinking and long-term management planning horizons (30, 50, and more years), which were considered as gaps;
- To ensure that the persistence of the heritage values and the attributes that convey those values are the focus of those processes (whereas the focus of the Wayfinder guide is on systems adaptation and transformation);
- To make the framework usable and applicable by heritage managers without the need for skilled facilitation or external expertise;
- To respect the limited time available to heritage place managers to take on, undertake, and implement such a framework.

An effort was made to maintain as much as possible the overall structure of the Wayfinder. In terms of number of phases however, the number of units had to be considerably reduced (i.e. from 40 to 18 units). [Table 2.3](#) presents the parallels between the structures of the Wayfinder guide and the Wayfinder Heritage framework. The final structure of the Wayfinder Heritage is the result of the following considerations:

- Keeping the five-phase approach and as much as possible the order of the units (or workcards).
- In each phase, maintaining the core conceptual units while aligning them with the aims of developing the framework to inform long-term planning processes and emphasising persistent approaches.
- Focusing on the units (or workcards) whose content provides parallels with existing heritage conservation and management processes, even though the terminology used may be different.
- Where the objectives of some of the units in the Wayfinder guide diverged considerably from the needs of heritage places, the units were excluded, or some aspects were included in the other units. A few units were replaced by elements included in the Resilience Alliance's Workbook for practitioners because their content and simplicity of use were better aligned with heritage considerations. Others were tested but proved too challenging during the testing phase and were later excluded or simplified.
- Structuring the overall process around a series of workshops with a limited time duration.

Chapter 3 explains in detail the challenges faced during this process and the reasons why certain decisions were made. The Wayfinder Heritage framework included as Part 2 of this report is the result of a number of iterations and refinements, informed by regular discussions with the Stockholm Resilience Centre.

Table 2.3. Links between the structures of the Wayfinder guide and the Wayfinder Heritage framework

WAYFINDER GUIDE	WAYFINDER HERITAGE FRAMEWORK
PHASE 1: BUILDING A COALITION FOR CHANGE	PHASE 1: GETTING STARTED
Module A: Getting people on board	
1. Assembling the team	• Assembling the implementation team
2. Agreeing on principles for good practice	(not covered in detail)
3. Developing system literacy and reflexive practice	(covered in phase 2 under 'develop resilience literacy')
Module B: Designing the process	
4. Tailoring the process	• Tailoring the process
5. Deciding on principles for stakeholder participation	• Deciding who to involve
6. Setting up a system for information management and learning	• Setting up a system for information management and learning
	PHASE 2: FRAMING THE PROCESS
	• Developing resilience literacy
	• Identifying the main issue(s)
	• Defining the social-ecological system
Module C: Initial system exploration	
7. Mapping available data and information	• Mapping available data and information
8. Articulating assumptions about how to achieve systemic change	(not covered in detail)
PHASE 2: CREATING A SHARED UNDERSTANDING OF SYSTEM IDENTITY	PHASE 3: UNDERSTANDING THE SYSTEM
	• Understanding system identity
Module A: Understanding aspirations and sustainability challenges	
9. Broad aspirations	(covered in Phase 4)
10. System benefits	(not covered in detail)
11. Social-ecological dilemmas	• Understanding factors affecting the system
12. Historical development of the system	(not covered in detail)
Module B: System components and organisation	
13. Key system components	(covered under 'understand system identity')
14. Connections and networks	(not covered in detail)
15. Cross-scale interactions	• Understanding interactions in the system
Module C: Towards a systems model and a change narrative	
16. Building a conceptual model	(not covered)
17. Developing your initial Change Narrative	(not covered)
	• Understanding key challenges

WAYFINDER GUIDE	WAYFINDER HERITAGE FRAMEWORK
PHASE 3: EXPLORING SYSTEM DYNAMICS	
Module A: Understanding social-ecological interactions across scales	
18. Developing simple models of key interactions	(covered partly under 'understand interactions in the system')
19. Identifying thresholds and traps	(not covered)
20. Cycles of change linked across scales	(not covered)
Module B: Exploring option space	
21. Developing locally relevant option space indicators	(not covered)
22. Analysing trends in option space over time	(not covered)
	PHASE 4: PLANNING FOR THE FUTURE
	• Broad aspirations
Module C: Looking at alternative future trajectories	
23. Horizon scanning	• Horizon scanning
24. Developing plausible scenarios	• Developing plausible scenarios
PHASE 4: DEVELOPING INNOVATIVE STRATEGIES FOR CHANGE	
	• Starting to develop a strategy
Module A: Preparing the ground for innovative solutions	
25. Establishing an open and innovative mind-set	(not covered)
26. Articulating a high-level goal for the Wayfinder process	(not covered)
Module B: Developing specific actions to address dilemmas and option space	
27. Identifying actions that target leverage points	(covered partly in phase 5 under 'Developing a long-term strategy')
28. Analysing agency and opportunity context	(covered partly in phase 5 under 'Developing a long-term strategy')
29. Filtering your actions: feasibility & effectiveness	(covered partly in phase 5 under 'Developing a long-term strategy')
30. Considering unintended consequences, uncertainty, and option space	(covered partly in phase 5 under 'Developing a long-term strategy')
Module C: Turning actions into strategies for change	
31. Developing a strategy	(covered under 'starting to develop a strategy')
32. Packaging and communicating the Action Plan	(covered partly in phase 5 under 'Developing a long-term strategy')
33. Reflecting on the new change narrative	(not covered)

2.4.1. Preparatory work

Following the establishment of the organisational structure, work was undertaken to select the pilot case study and explore the differences between the methodologies used as supporting foundations to develop a resilience thinking framework adapted to the needs of heritage places. In particular, this required initial meetings between the Project Team and the Stockholm Resilience Centre staff.

The World Heritage site of *Hanseatic Town of Visby* (Visby), an area of 105 hectares, was subsequently selected and the managers of the property were agreeable and enthusiastic about taking part in the project. Visby was inscribed on the World Heritage List as a cultural property in 1995. The reasons for the selection of Visby as the pilot test case included: (1) it is an urban centre (with associated harbour) and Connecting Practice had not worked with an urban heritage site before; (2) its heritage values relate to being both an 'historic walled town' and a 'living town', therefore its potential future development must take into consideration its historical values and the persistence of the attributes that convey its medieval past; and (3) while the 'natural features' of Visby and its surroundings may not be immediately apparent in the 'cultural site', it is clear that the place is shaped by its environmental context and its location within the Baltic Sea (Figure 2.4.1). Additionally, being an island environment meant that global climate change is a significant factor in the future management of the place.

Figure 2.4.1.

A. Location map showing the island of Gotland.³



B. Map showing Visby and the World Heritage Area.⁴



³ Source: World Easy Guides. <http://www.worldeasyguides.com/europe/sweden/gotland/where-is-gotland-on-map-of-sweden/>

⁴ UNESCO World Heritage Centre. 'Hanseatic Town of Visby', <https://whc.unesco.org/en/list/731/maps/>

Initial work with Visby required the establishment of an Implementation Team. The Team needed to comprise representatives of the managers of the World Heritage property. The group would be responsible for designing, implementing, guiding, facilitating, and documenting the implementation of the Wayfinder Heritage process. The Implementation Team comprised three people: the site manager for Visby, and representatives from Region Gotland and the County Administrative Board (see [Annex B](#)).

2.4.2. Developing the draft framework and testing it during fieldwork

This step required work to be undertaken to understand the Wayfinder guide and to explore ways in which it might be adapted and simplified for use at heritage places. The framework was developed in different stages and through trial and error during four facilitated workshops for the pilot case study site of Visby. Workshops 1 and 4 were held on-line and workshops 2 and 3 were held in-person in Visby.

The development of the Wayfinder Heritage framework was as much about process as content. As described previously, one of the features of the framework was to be that a heritage place management team could implement it without the need for skilled facilitation or external expertise.

In delivering each workshop, the Project Team members were cognisant of being the facilitators of the workshop (i.e., presenting content in easy-to-understand ways), but also allowing the Implementation Team in Visby to take responsibility for leading group exercises and reporting on activities undertaken. At times, this required the Project Team to leave the room and allow the Implementation Team and workshop participants to work through activities as best they could without external facilitation. That is, a facilitated learning process was required in which Implementation Team members were encouraged to take control of the learning process – as well as learning themselves.

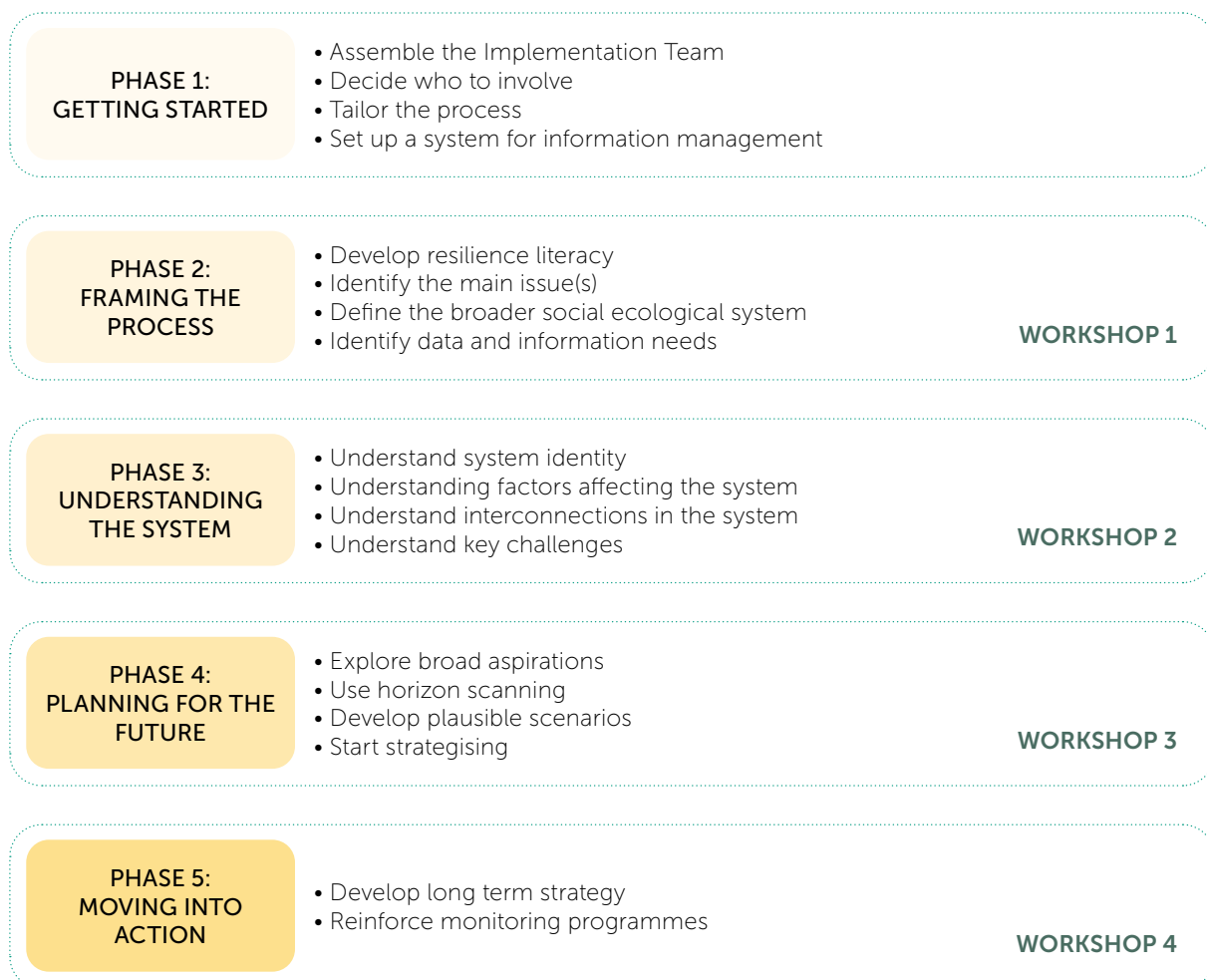
2.4.3. Writing the framework

The final draft structure of the framework, presented in [Figure 2.4.3](#) is based on the process that was developed for testing at the pilot case study site of Visby, and was refined and amended as the project unfolded (i.e., a learning-by-doing approach). The five-phase approach initially proposed was retained, although the content of each phase has been reworked to varying degrees.

Writing Wayfinder Heritage required focus on accuracy in describing the framework, as well as clarity and readability for end users (i.e., heritage place managers and custodians). Thus, the goals were:

- To keep the document relatively short (approximately 50 pages).
- To use plain English to explain underlying concepts, methods, and the process itself.
- To use language that is understood by heritage place managers and custodians with a working knowledge of heritage conservation and practice, but no knowledge of resilience thinking, complexity science, or social-ecological systems thinking.
- To strike a balance between a focus on: (1) resilience aspects of the Wayfinder Heritage framework (i.e., the process); and (2) an explanation of how to implement and manage the process (i.e., logistics and organisation).
- To design the framework so that it is suited to different typologies of heritage places.
- To recognise that this is a preliminary exploration that would need to be developed through testing at other heritage places.

Figure 2.4.3. Wayfinder Heritage is a framework comprising five phases. The process should be guided by an Implementation Team and requires four workshops, each workshop comprising participants from manager groups and rights-holders and key stakeholder communities.



The draft framework was subject to two rounds of reviews. Individuals associated with the Connecting Practice Phase IV project provided initial feedback on an incomplete draft. These reviewers commented on: (1) The overall structure of the document; (2) The aim and purpose of implementing the framework; and (3) The flow and comprehensibility of the guidance offered.

Reviewers for the second round were provided a complete draft document. The reviewers comprised a range of individuals external to the development of the Wayfinder Heritage framework, including site managers, academics, and heritage specialists who work primarily in either cultural or natural heritage conservation.

In general, the feedback received was strongly supportive of resilience and futures thinking for World Heritage properties and other heritage places. There were important points made about the process, as well as a diversity of perspectives on the way in which the content is presented (specifically, the balance between resilience aspects and logistics; and the use of second-person pronouns).

ICOMOS and IUCN recognise that the framework requires further testing to explore how it might be adapted and used in different cultural contexts worldwide. Therefore, feedback on the framework – its content, application, and usefulness – that can contribute to its further refinement is welcomed.

While fostering resilience thinking and heritage futures perspectives are intended outcomes of the Wayfinder Heritage framework, a key output is a “long-term strategy” (i.e., 20, 50 and more years) for the heritage place. The strategy is intended as a management planning instrument that identifies goals, actions, and actors that assist managers to navigate towards a preferred future for a heritage place.

2.4.4. Evaluating the process

As part of the process of developing the Wayfinder Heritage framework, Katja Malmberg (University of Bergen, representing the Stockholm Resilience Centre) undertook a separate evaluation study. Throughout the period during which the framework was being trialled in Visby, participants (i.e., Project Team, Implementation Team, Consultation Group) were periodically surveyed and/or interviewed about their impressions, thoughts, and reflections about the workshops. Participants were asked the following questions:

- What did you find particularly interesting in this workshop?
- What did you learn? Did you have any “aha”-moments?
- Was there anything you found confusing or hard to grasp?
- Is there anything that you think was missing or should have received more attention?
- What do you think about the workshop process as a whole this far?

The study and its outcomes will be published separately from this Final Report. The study will make a significant contribution to understanding the way in which the Wayfinder Heritage has been delivered and the improvements that could be made to the process (and content) in future iterations.



Visby Workshop 3
presenting groupwork
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Visby Workshop 3 groupwork 1
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Visby Workshop 3 presenters
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3. Challenges and lessons learned

This part of the report describes the challenges faced throughout the development of the Wayfinder Heritage framework, the choices made to address them and lessons learned during and from the project.

Applying the Wayfinder guide in its totality involves a process structured around 40 units, requiring skilled facilitation and intense work over a period of 6 to 12 months. From the beginning of the project, it was clear this would pose considerable challenges for many heritage places. Therefore, initial discussions with colleagues from the Stockholm Resilience Centre explored the possibility of simplifying the overall process and reducing the number of units as well as the implementation timeframe.

The proposed structure of 18 units in the Wayfinder Heritage framework (see [Figure 2.4.3](#)), expected to require up to six-months of work, is therefore the result of the following needs:

1. To reduce the complexity and length of the process while maintaining most of the critical structuring elements of the Wayfinder guide;
2. To combine the five-phase structure with a series of workshops of limited duration, requiring the involvement of a larger group of actors; and
3. To provide practical and clear guidance on how to implement the framework via a series of practical steps and exercises.

Tying the phases with the workshops has advantages and disadvantages. From a positive viewpoint, it provides a clear approach and timeframe for the involvement of a wider consultation group while limiting the amount of time people need to dedicate to the process. It also helps to better manage the time dedicated to discussions and to produce concrete outputs during and after each workshop. The practical guidance and exercises included in the framework are very important in this regard. On the other hand, this approach risks giving the wrong impression that the process is limited to conducting the workshops. In practice, the process requires an implementation team to conduct work in preparation and following each workshop, which can be demanding in terms of workload. Hence, the emphasis given to phase 1, dedicated to the design and planning of the process. The framework includes detailed practical guidance on how to conduct this preparatory work.

An approximate fifty per cent reduction both in terms of number of units and months required to implement the Wayfinder Heritage framework compared with the Wayfinder guide had a significant impact on the content. The choices and adaptations made in this regard are explained in the following sections.

3.1. Integrating heritage and social-ecological systems thinking

As stated in [Section 1.1](#), Connecting Practice started as a joint exploration by ICOMOS and IUCN aimed at learning and developing new approaches that recognise and harness the interconnection of natural and cultural heritage. Almost a decade later, significant progress has been made in bridging the divide between the two fields and multi-disciplinary fieldwork resulting in collective experimental learning is an integral part of the Connecting Practice working methods. This was an essential part of Connecting Practice Phase IV. This phase involved individuals from a wide range of academic backgrounds and organisations (see [Annex B](#)), as well as across the fields of cultural and natural heritage conservation, while the workshops at Visby involved a diversity of practice-based professionals and individuals from a range of civil society organisations.

The Wayfinder Heritage framework incorporates ideas from social-ecological systems thinking which are in line with the core approach and working methods of Connecting Practice to connect cultural and natural heritage. However, this was not without challenges. While there is often a tendency to refer to the “interconnections between nature and culture” and “the interconnections between natural and cultural heritage” in an interchangeable way, they are not the same; these different terms have different meanings. While the initial perception of the concept of social-ecological system seemed appropriate to recognise interconnections between people and nature in heritage places, the reality proved far more complex.

The concept of ‘social-ecological systems’ is used to emphasise that humans are part of nature.

Berkes and Folke (1998) started to use the concept of social-ecological systems as an integrated approach of humans-in-nature and related the concept to resilience. In this approach the social refers to the human dimension of people, communities, societies in its diverse facets (e.g., economic, political, institutional, cultural) and the ecological to the biosphere, the thin layer around planet Earth where there is life, human life included [...]. In essence, the social-ecological approach emphasizes that people, communities, economies, societies, cultures are embedded parts of the biosphere and shape ecosystems, from local to global scales, from the past to the future. At the same time people, communities, economies, societies, cultures are fundamentally dependent on the capacity of the biosphere to sustain human development [...]. It represents a biosphere-based sustainability science with resilience thinking as a central ingredient (Folke 2016).

This approach can be applied to any place. Therefore, in an initial exploration of the Wayfinder guide, all elements of a place (and interconnections between them) seem to be equally important. Therefore, one of the first steps of the Wayfinder guide involves documenting people’s aspirations for the system and what benefits they currently derive from the system, providing focus to the process.

For heritage places and particularly World Heritage properties, the premise is by default different: while people's aspirations are important of course, the protection of the heritage is paramount and must be the driving force for the whole process. Since the ultimate goal of heritage protection is to conserve it for present and future generations, it is necessary to ensure that people's current aspirations do not undermine potential interests of future generations nor the conservation of the heritage in the long-term. Which is why in the Wayfinder Heritage framework, a conscious choice was made to include people's aspirations in a later stage of the process and in relation to key challenges identified as well as the potential pathways for addressing them in the future.

The conceptualisation of a place as heritage acts almost as a filtering lens, rendering certain elements of that heritage place more salient than others. This is particularly the case of World Heritage properties, which are inscribed in the World Heritage List for a particular combination of values and the attributes that convey those values. This means that for heritage purposes, the system identity of the heritage place could be understood as the system of values and attributes of that place. From this perspective, the identity of the system is already "pre-defined" and therefore some explorations of a resilience thinking process should be relatively straightforward. As a result, some of the units included in Phases 1 and 2 of the Wayfinder guide, such as "Key system components" and "Building a conceptual model" were not incorporated in the Wayfinder Heritage.

Resilience thinking recognises that systems can be nested within systems both at smaller and larger scales. For the purpose of the Wayfinder Heritage, the heritage place is conceived as the "smaller scale" system embedded in a larger social-ecological system. For instance, in the case of Visby, the World Heritage property is considered within the broader social-ecological system of the island of Gotland, although other systems scales could have been defined (e.g. at a smaller scale, different areas within the walled town, and at a larger scale, the municipality of Visby or Sweden as a whole). The choice to consider only one larger scale was made with the view of simplifying the process since testing showed that the idea of a larger social-ecological system was challenging enough.

The Wayfinder guide specifically targets the challenge of navigating towards sustainable, safe and just development trajectories in the Anthropocene (Enfors-Kautsky, et al. 2018) hence the focus on strategies for adaptive or transformative change. The Wayfinder Heritage framework acknowledges that while change is inherent to heritage places, not all change is inevitable or desirable. Therefore, the goal is to actively manage or influence change in heritage places but not promoting it as in the Wayfinder guide – unless certain changes are needed to address factors affecting the state of conservation of the heritage place.

This approach raised two main challenges. First, how to define the overall purpose of doing a resilience thinking assessment for heritage places. Second, although the Wayfinder Heritage framework embraces the notion of resilience as persistence, adaptability and transformability, for heritage places the focus must be first and foremost on persistence. Reflections on these two challenges, and how to address them, led to some of the critical adaptations of the Wayfinder guide and are therefore explained in detail in the next two sections.

3.2. Focus on management planning and the identification of a main issue as the focus of the assessment process

Wayfinder is informed by a set of core insights about the sustainable development challenge that humanity faces today: We now live in the Anthropocene where humans have become the major force of change on Earth. In this new era, we need to find development trajectories that stay within critical planetary boundaries while at the same time meeting the needs and rights of people (Folke 2016).

As explained in [Section 2.1](#), some explorations on how resilience thinking approaches could be adapted to the needs of heritage protection and management, started during Phase III of Connecting Practice. From the beginning, the aim was to use such approaches to strengthen management planning processes and long-term thinking. This aim differed from the Wayfinder guide core purpose of addressing sustainability challenges. In addition, ICOMOS and IUCN considered that, to be practical, a resilience assessment framework needed to have a clear focus that would generate a need or interest for its application.

For these reasons, it was decided to use the approach of the Resilience Alliance's Workbook for practitioners designed to assist in resolving specific issues and helping to frame the resilience assessment. 'In many cases, the issue(s) to be considered are readily apparent, such as soil salinization, over-harvesting of resources, or threatened ecosystem services. The issue itself may be highlighted by the motivation to do a resilience assessment (Resilience Alliance 2010)'. This approach was therefore incorporated at the beginning of phase 2 of the Wayfinder Heritage process. Hence, the two operational steps "Identifying the main issue(s)" and "Defining the social-ecological system" build largely on the methods of the Resilience Alliance's Workbook.

Testing in Visby showed that the focus on a main issue from the onset (i.e., to retain the social dynamics that contribute to the liveability and sense of place of the walled town of Visby) facilitated the process. However, during the final stages of the testing it became clear that this approach limited the scope of the long-term strategy. A potential solution to address this challenge would be to consider from the beginning all or the most important main issues that require long-term thinking and expand the explorations throughout the different steps of the Wayfinder Heritage framework. However, this would significantly expand the time needed to go through the whole process and possibly making it less appealing to many heritage managers.

On the other hand, despite the initial focus on a main issue, the testing showed that throughout the process other "issues" became apparent because of the explorations on interconnections. For instance, in Visby, the initial focus was on social dynamics or "lack of liveability" but later participants explored how other factors affecting the World Heritage property were contributing to the problems and how those factors were interrelated. Therefore, a step called "Understand key challenges" was introduced at the end of phase 3 of the Wayfinder Heritage

framework. This allows an expansion of the understanding of the initial main issue and sets the foundations for the explorations on futures-thinking in phase 4, through horizon scanning and scenarios planning methods.

While it is important that the Wayfinder Heritage framework produces tangible results that heritage managers can use to inform their work, it is critical to stress that the methodology above all promotes a new way of looking at heritage places, that is, as complex dynamic systems. It also fosters futures-thinking about their management and how fast and slow (and cumulative) change can lead to adaptations and transformations, which in the long-term may impact the identity of the heritage place, that is the ability to maintain its heritage values and conserve its attributes. For instance, one of the clearest examples explored by the colleagues in Visby was how “desired” climate change adaptations such as installing air conditioning could in fact be “mal-adaptations” when applied to historic buildings. Hence, the thinking and learning process resulting of the application of the Wayfinder Heritage framework must be seen as important as the output, in the form of a long-term strategy.

3.3. Persistence versus transformation

Resilience as a concept in relation to the environment, or more specifically to ecosystems, was proposed by C.S. Holling in 1973 ‘as a concept to understand how ecosystems can absorb change (ICOMOS and IUCN 2021). This concept, and in particular resilience thinking, evolved over time to include notions of adaptability and transformability⁵. However, definitions of these three elements vary across resilience thinking literature and so do interpretations of how they can be conceived together or in relation to each other. In the Wayfinder guide, these elements are interpreted both as different degrees of change and as different capacities of a system. The definitions provided are:

Persistence refers to the capacity of a system to conserve what it has and to recover to what it was, in the face of primarily known types of shocks, stresses, and change....

Adaptation reflects a system’s capacity to sustain, innovate and improve its performance on the current development trajectory, which is required when conditions are changing, for example in the face of climate change....

Transformation reflects a more radical form of change, whereby a system embarks on substantively different trajectory of development.... transformation is not just ‘a bit more’ adaptation, but reflects a different type of change process, whereby the system dynamics change so much that new types feedbacks become dominating and start to steer the system’s development (Enfors-Kautsky et al. 2018).

⁵ The Wayfriend guide uses the terms “adaptation” and “transformation”. However, for the purpose of the Wayfinder Heritage framework, the terms “adaptability” and “transformability” as used by Folke (2016) are preferred to emphasise that they are aspects of resilience.

At its core, the Wayfinder guide promotes transformation, considering that persistence is of limited use to tackle current sustainable development challenges and that in many cases even adaptation will be insufficient (Ibid). From a heritage perspective, persistence of the attributes must be the focus, therefore the focus on transformation in the Wayfinder posed challenges for the following reasons.

First, while the understanding of the degree of change between persistence, adaptation and transformation is helpful, any change must be considered in relation to certain elements or interconnections in a system, not in terms of the overall system identity. That is, the change must be about parts of the system, not its totality, nor a significant part of it, nor its defining characteristics. For heritage places, this means the heritage values must be maintained. In terms of the attributes, whereas the adaptation of certain attributes can be acceptable in some heritage places, in others it may not. For example, the adaptation of certain built structures in an organically evolved landscape may be adequate but perhaps not in a relic landscape. In the latter, for most cases, the evolutionary process came to an end at some time in the past therefore the persistence of the attributes is critical, and change must be strictly controlled. Even within the same heritage place, some attributes (or aspects of it) may adapt over time (as in the case of the adaptation of historic residential buildings in Visby to modern amenities) but others should persist without changes except for those that cannot be controlled (for example as in the case of the town wall where conservation works were needed after the collapse of a part of it).

Second, not all elements of a heritage place are necessarily attributes. For instance, in a forest recognised by its biodiversity not all plant species will be considered as attributes. This will certainly be the case of invasive species. In such cases, transformation, in the sense of eradication or at least control, of those species is desirable. This means that sometimes certain elements in a system need to adapt and even transform for others to persist. Therefore, transformation in a heritage place must be considered but in relation to the elements of the heritage place that are not considered attributes.

Figure 3.3. Relative focus on persistence versus adaptability and transformability in the Wayfinder guide and the Wayfinder Heritage framework



How to utilise these three elements in combination in a heritage place? How to identify what degree of change is acceptable or even desirable when it comes to the attributes or other elements of the place and in relation to what? Answering these questions can be extremely challenging. Hence the importance of one key resilience thinking questions (or expression): *resilience of what, to what?*

To provide guidance on how to utilise these concepts and how to identify the “right” combination for each heritage place is a complex task. Therefore, the effort when developing the Wayfinder Heritage revolved about promoting a good understanding of 1) the heritage values and attributes of a heritage place, 2) the interconnections between the attributes and other elements of the place and 3) the interconnections between the place and the broader social-ecological system. Together these explorations serve as a basis to help people understand the resilience of what (i.e. what is it that must persist and how?) in relation to what (i.e. what is causing change and what types and degree of change?)

To a large extent this approach is not new: the identification of the values and attributes of a place is critical to its recognition as heritage, especially as a World Heritage property. The novel ingredient in the Wayfinder Heritage, drawn from resilience thinking, is the emphasis on interconnections and system dynamics.

3.4. System dynamics and cross-scale interactions: strengthening the understanding of the wider setting

The understanding of the interconnections between the attributes that convey the values of a heritage place is critical for the resilience thinking approach embedded in the Wayfinder Heritage framework. In addition, the approach also looks at other internal connections between the attributes and other elements within the heritage place as well as external connections with elements of the broader social-ecological system. It is well recognised in heritage conservation that it is impossible to manage a heritage place in isolation from its buffer zone (if one exists) and the wider setting. However, these concepts are generally used in relation to factors affecting the World Heritage property or other heritage place, originating outside its boundaries. The Wayfinder Heritage framework promotes the understanding of the positive and often critical connections with the wider setting.

However, it is important to keep in mind that these two concepts, i.e. wider setting and broader social-ecological context, are not necessarily the same since they have been defined for very different purposes. As already mentioned, in relation to World Heritage, the term “wider setting” is mostly used in relation to the factors affecting the property, mostly seen as negative. At the same time, it is important to recall that the Operational Guidelines state that,

The wider setting may relate to the property’s topography, natural and built environment, and other elements such as infrastructure, land use patterns, spatial organization, and visual relationships. It may also include related social and cultural practices, economic processes and other intangible dimensions of heritage such as perceptions and associations (UNESCO World Heritage Centre 2021).

This approach is better aligned with the definition of a broader social-ecological system promoted in the Wayfinder Heritage. Unlike in other cases, where the equivalent heritage term was preferred, IUCN and ICOMOS decided to use the term “social-ecological system” to better reflect a resilience-thinking approach and to avoid confusions in which the term “wider setting” is commonly used.

The work of this Phase IV of Connecting Practice has also emphasised the need to consider the social, economic and environmental context in which each heritage place is situated. The collection of data and information about this context in phase 2 of the Wayfinder Heritage framework is critical to gather a multi-faceted understanding of the main issue(s) selected as the focus of the resilience assessment. Resilience thinking promotes deep learning and looking beyond the identified issue to examine the underlying dynamics that are generating and contributing to it.

That said, it is necessary to acknowledge that the concept of system dynamics in the Wayfinder guide is broader than how the term is interpreted in the Wayfinder Heritage framework. In the latter, the exploration on system dynamics is limited to the connections or relationships between the attributes and other elements of the heritage place and of the broader social-ecological system. In the Wayfinder guide, the understanding of social dynamics includes the identification of thresholds of potential concern, as well as potential “lock-ins”, where the system gets trapped by reinforcing feedbacks that perpetuate an undesirable situation. The concepts of “thresholds”, “feedbacks” and “traps” are essential in resilience thinking but were not included in the Wayfinder Heritage framework at this point, for the reasons explained hereafter.

3.5. Use of resilience terminology

It is necessary to recognise, and further reflect upon, the complexity of terms, concepts, and methods derived from resilience thinking as in many instances, they will be unfamiliar to practitioners working the field of heritage conservation. Considerable effort was put into finding parallels between resilience thinking and heritage terms and adding as few terms as possible. For instance, the essence of the term “dilemmas” corresponds to a large extent to “factors affecting the property”, therefore the latter was preferred and used instead. The Wayfinder guide glossary provided a basis for this work but some adaptations to the definitions were made. Based on the lessons learned from Visby, the following “new” terms were selected⁶:

- Resilience
- Resilience-thinking
- Persistence
- Adaptability
- Transformability
- Complex systems
- System identity
- Social-ecological system
- Agency
- Aspirations
- Leverage points
- Scenario

⁶ The glossary included in the Wayfinder guide includes a total of 54 terms (see [Annex D](#)).

As mentioned before, some critical resilience thinking concepts were not incorporated (i.e. thresholds, feedbacks and traps) despite initially intending to do so. This must be acknowledged as one of the gaps in the framework. Discussions during the testing in Visby showed that the use of the term “threshold” in resilience thinking differs considerably from how it is used in heritage (in relation to monitoring of the state of conservation). Initially, the possibility of finding a different term was explored. However, this was later excluded, when testing showed that it was challenging enough for participants to follow the thinking process suggested for phase 3 of the Wayfinder Heritage focusing on system identity.

It is necessary to recognise that phase 3 of the framework requires the understanding of heritage terms such as “values”, “attributes” and “factors affecting the property”, which are challenging on their own. In addition, the need to keep the collective explorations via the workshops to a short duration of time required compromises. Furthermore, the exploration of thresholds and feedbacks in a system goes hand in hand with the need for specific data and information about the system and the issues of concern, which would be extremely challenging in some heritage places. Therefore, the difficult choice was made to not cover these concepts in the Wayfinder Heritage in this first iteration of the framework. It is hoped that when resilience thinking is further embedded in heritage management in the future, and once the framework is further tested and used, a more complete version will be developed, where these concepts will be incorporated.

3.6. Futures thinking and scenario planning

Phase 3 of the Wayfinder Heritage framework is about gaining a new understanding of the heritage place as a system, nested in a broader social-ecological system, and of the cross-scale interactions between them. Phase 4 then looks towards the future and the multiple possibilities of how that future may unfold. This phase is structured around two main subjects or topics: horizon scanning and scenario planning. This part of the work was one of the most challenging ones, both in terms of the development of the content of the Wayfinder Heritage framework and in terms of testing.

In the Wayfinder guide, horizon scanning and developing plausible scenarios are grouped together under a module on looking at alternative future trajectories. The guide includes workcards with several questions to support the discussions around these topics. However, initial explorations on how to translate the questions into heritage practice concluded that the questions were too broad. Therefore, ICOMOS and IUCN raised their concerns about the lack of concrete methods to support a practical exploration of those topics with the Stockholm Resilience Centre. With their support, several methods were identified and explored.

The following two methods were used as the foundation to develop the series of methodological steps, via seven interrelated exercises, that structure the content of phase 4 of the Wayfinder Heritage framework:

1. **The Futures Wheels** is a way of organising thinking and questioning about the future. It is a method for identifying and packaging the effects or consequences of a particular challenge and exploring associated trends, events, drivers, and future possible decisions (Glen n.d.).
2. **The Three Horizons** is a methodological approach, which applies a 'simple' framework for structured and guided dialogue around different patterns of change. The approach is structured around three different patterns: an established first horizon pattern giving way over time to a merging third horizon, via transitional activity in the second horizon. The framework can be used to work with uncertain futures in imaginative ways, while also retaining important current system elements, functions, and processes from the present. The approach is important for generating agency (that is, the capacity of an actor or group of actors to influence and shape change) (Sharpe et al. 2016).

Elements of these methods were then combined with scenario planning approaches. In simple terms, a scenario is a description of how things might happen in the future. Scenario planning is a method that uses a few contrasting possible and potential futures, allowing for conceivable change (e.g., changing climate, demographic shifts, economic fluctuations) and unforeseen events (e.g., disasters, economic upheavals, political unrest, technological innovation).

The methodological approach included in phase 4 of the Wayfinder Heritage framework results from the combination of different elements of these three different futures-thinking methods and lessons learned from the testing in Visby. Thinking about and particularly describing potential futures scenarios proved an extremely difficult exercise. One of the key difficulties seemed to be the tendency for people to reason in terms of finding immediate solutions to identified key challenges rather than conceiving a short narrative describing how the future may unfold in relation to an identified challenge if certain trends continue or revert (and new trends emerge).

Overcoming this difficulty and the temptation to follow a simplistic thinking process of "problem-solution" is critical for futures-thinking and long-term planning of heritage places. By exploring a challenge in its full complexity and thinking about it in a systematic way, people may realise that a "short-term solution" may have unintended consequences later and become a challenge in the future.

Despite the difficulties and the compromises made as a result of the lessons learned during the testing, horizon scanning and scenario planning are used as the foundations for the development of long-term planning strategies. Together and when supported by

the methodological steps included in Wayfinder Heritage framework, these methods can constitute powerful tools for heritage managers to conceive and understand the possibility of very different futures for a heritage place; particularly if certain challenges are ignored, or insufficiently tackled, or addressed too late.



View over Walled town of Visby

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4. A future for resilience thinking in heritage management

Attempting to bring new ways of thinking and working into heritage practice is always challenging. The importance of the Connecting Practice project as an innovation platform for developing and testing new ideas cannot be overstated. This part of the report includes some observations and suggestions on the potential of resilience thinking to become better integrated into the work of heritage management practice.

Since the Wayfinder Heritage framework was tested at only a single pilot case study site, it is unclear the degree to which it is readily transferable to different cultural contexts and different categories of heritage places (e.g., natural places, sacred and religious places or archaeological sites, where adaptation and transformation are not desirable for the most part). While the framework has been developed to be flexible and adaptable to different contexts, it would benefit from further testing.

The Wayfinder Heritage is a preliminary and promising exploration. However, there are a number of elements of the framework that raise questions and would benefit from further work.

1. Can a heritage management team implement the framework without the use of external facilitators? The framework requires a certain level of resilience literacy. While the framework includes references to additional resources on resilience thinking, such resources are not heritage specific. The framework also assumes a good knowledge of the heritage place, its values and attributes and its governance and management arrangements. Without these pre-requisites, the implementation of the framework will likely be challenging.
2. How many management teams will be open to embark on a process requiring the involvement of external actors with different aspirations, experiences and skillsets to apply the framework? The experience at Visby demonstrated the effectiveness of having multi-disciplinary and diverse teams. It helps to have established working relationships with rights-holder and key stakeholder groups and organisations, required to drive and participate in the Wayfinder Heritage framework. However, this will require additional financial resources and time, which may reduce the willingness of many heritage sites to implement such processes.
3. In the instance where the managers of a heritage place are considering trialling Wayfinder Heritage, a commitment and allocation of time and resources (including personnel) is required from senior management. The framework is designed to be implemented over a six-month period (timing will vary in relation to the scale and complexity of the heritage place) with key staff working part-time on it. High-level support is therefore fundamental for implementing the framework, as well as a commitment to integrate its outcomes into existing management planning processes.

A further challenge relates to whether and how resilience thinking and the Wayfinder Heritage framework can become a standard part of management planning processes for heritage places. As outlined in [section 2.1](#), long-term planning is necessary to tackle existing and anticipated management challenges that require a long-term perspective, as well as multiple continuous actions over extended periods of time, such as climate change adaptation and mitigation, changing population dynamics, or large-scale conservation works following disasters. In addition, the challenge of navigating towards sustainable, safe and just development trajectories in the Anthropocene, highlighted in the Wayfinder guide, is equally relevant for heritage places. Our planetary systems are under severe stress from global warming and severe weather events, unsustainable resource extraction practices, loss of biodiversity, food insecurity, conflict, financial instability and societal inequalities. These matters of concern will lead to transformations at the local and global scales and will have profound implications on the social, economic and environmental contexts of many heritage places and the ability of heritage practitioners to protect them and manage them effectively. Work in the field of heritage futures has been able to identify how 'certain contemporary practices and assumptions actively realise and produce certain kinds of futures that may be problematic, conflicting or unanticipated'; and recognised that many forms of conventional heritage practices are unsustainable (e.g., managing for stability and halting change) (Harrison et al 2020).

It is important to recognise that resilience thinking is not the only way or approach to undertake long-term strategic planning. There are a number of other ways of thinking and working that are fruitful and have the potential to be integrated into the Wayfinder Heritage framework in the future. Work in the field of sustainable development offers opportunities to be integrated, or at least work alongside, resilience thinking – as we touched on previously ([Section 2.1](#)). Another area of potential overlap is the field of disaster risk management, where resilience is also commonly used within disaster risk reduction strategies and post-disaster responses.

Finally, a considerable part of the Wayfinder Heritage framework is relevant to other heritage management processes. For instance, the content of phase 3 on understanding the system offers insights that can be helpful for values assessment, attributes identification and boundaries delimitations. Likewise, horizon scanning and scenario planning methods can be used for shorter and medium-term management planning processes. Therefore, it would be useful to explore how these approaches could be incorporated into other resource materials and guidance for heritage protection and management.

Wayfinder Heritage, included as Part 2 of this report, is the tangible result of the work undertaken by Phase IV of the Connecting Practice project over 15 months. Although the framework is not considered final, there is confidence in its content and the benefits its application could bring to many heritage places. The framework constitutes the adaptation of the Wayfinder guide, which has been developed and tested by the Stockholm Resilience Centre, in collaboration with other partners. ICOMOS and IUCN very grateful for their organisational support throughout the project.

Wayfinder Heritage is also the result of the lessons learned during its testing in Visby. The managers and key stakeholders of that World Heritage property consistently demonstrated a commitment to exploring and trialling the framework, even when some of the concepts and exercises proved difficult to fully understand and undertake. ICOMOS and IUCN greatly appreciated the persistence of those involved ([Annex B](#)) in this collaborative work over an eight-month period.

To reach the full potential of the Wayfinder Heritage, ICOMOS and IUCN are keen to support further testing of the framework at other heritage places and adapt the framework according to the outcomes of the testing.



Visby Workshop 3 participants
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ANNEXES

Table of content

ANNEX A: Connecting Practice Project Brief	35
ANNEX B: Personnel	41
ANNEX C: Activity Log	43
ANNEX D: Glossary	46

ANNEX A. Connecting Practice Project Brief

Background and context

The Connecting Practice project, launched in October 2013, is a collaborative project between ICOMOS (International Council on Monuments and Sites) and IUCN (International Union for Conservation of Nature). It aims to define new methods and strategies to better integrate natural and cultural heritage within the World Heritage system and conservation practice in general. To date, the project has comprised three phases – each addressing a particular aim and based on working with site managers and communities at specific World Heritage properties. The aims and study sites for each phase are presented below.

PHASE / DATES	DESCRIPTION	STUDY SITES
Phase I / 2013–2015	Applied a 'learning-by-doing' methodology to defining 'strategies to deliver a more connected approach to considering natural and cultural heritage'; while developing a critique of the 'practices and institutional cultures of IUCN and ICOMOS' (Leitão et al. 2019, p.152). A core achievement was the establishment of a shared work process between IUCN and ICOMOS.	<ul style="list-style-type: none"> • <i>Petroglyphic Complexes of the Mongolian Altai</i> (Mongolia); • <i>Konso Cultural Landscape</i> (Ethiopia); • <i>Sian Ka'an</i> (Mexico)
Phase II / 2016–2017	Translated lessons learned from the first phase 'into practical interventions aimed at strengthening governance and management arrangements for the protection of [World Heritage] sites' (Leitão et al. 2019, p.154). This phase explored the potential to adapt the Enhancing Our Heritage Toolkit (Hocking et al. 2008) – a natural heritage management effectiveness methodology – to cultural heritage sites.	<ul style="list-style-type: none"> • <i>Hortobágy National Park - the Puszta</i> (Hungary); • <i>Maloti-Drakensberg Park</i> (South Africa / Lesotho)
Phase III / 2019–2021	This phase focused on three main axes: promoting biocultural approaches to the conservation and management of continually evolved cultural and agricultural landscapes; exploring the relevance and operational translatability of the concept of resilience in designing management responses; and reaching out to other partners to increase the multidisciplinary of the project. An output is a Commentary on Nature–Culture Keywords (de Marco et al. 2020). This phase also included a survey among site managers of cultural landscapes and mixed properties on nature-culture connections at their sites. Phase III provided the opportunity to reflect on the three phases of the project; to clarify its achievements alongside other culture-nature initiatives, platforms, or projects; and to outline perspectives and actions for the future.	<ul style="list-style-type: none"> • <i>Cultural Sites of Al Ain</i> (United Arab Emirates); • <i>Saloum Delta</i> (Senegal); • <i>Landscape of the Pico Island Vineyard Culture</i> (Portugal); • <i>Cultural Landscape of Honghe Hani Rice Terraces</i> (China)

The successful collaboration between ICOMOS and IUCN during these three phases demonstrates that there is a significant need and opportunity to expand collective efforts to improve the interconnection between natural, cultural, and social aspects within the World Heritage system and conservation practice in general, and to consolidate the achievements of the previous phases of Connecting Practice.

Objective

Connecting Practice Phase IV will further explore resilience thinking in the governance and management of World Heritage sites. Phase III demonstrated how a resilience-thinking framework can inform management planning for World Heritage properties and their wider social-ecological systems. Such work requires collaboration with local communities, and can draw on methodologies developed by institutions such as the Stockholm Resilience Centre and the Resilience Alliance. Therefore, the aim of Phase IV is to develop a resilience-thinking framework, specific to the needs of World Heritage sites and heritage practice in general. Continuity and change require adaptive, flexible, and inclusive governance and management approaches that maintain the Outstanding Universal Value as well as associated national and local values of World Heritage sites.

Key aspects of delivering the objectives of Connecting Practice Phase IV will include:

- Collaboration with partner organisations – Stockholm Resilience Centre, *Laponiatjuottjudus* (Laponian Area management authority) and ICCROM – as well as associated heritage practitioners and scholars;
- Dialogue across knowledge systems based on respect, equity, reciprocity, and benefit-sharing;
- A focus on biocultural approaches and resilience-thinking in ways that are relevant to World Heritage sites and the Indigenous peoples and local communities associated with them, but also extend to non-World Heritage listed heritage places;
- Promotion of the goals of the *World Heritage Convention* related to conservation and protection through inter-cultural cooperation, and respect for cultural diversity and human rights, as well intergenerational transmission.
- Continued emphasis on processes and practices that better integrate natural and cultural heritage and make the most of synergies that exist between biodiversity and cultural diversity.

Approach and methods

1. Collaborate with the Stockholm Resilience Centre to adapt the *Wayfinder Guide* ('Wayfinder'; Stockholm Resilience Centre, 2018) to the needs of World Heritage sites, drawing from the work of Connecting Practice Phase III.
2. Co-design and co-create a process with the site managers of Laponian Area, Sweden, a World Heritage Mixed site, that explores resilience-thinking in the management of that property and supports the adaption of the *Wayfinder Guide* to World Heritage sites.
3. Refine a first draft of the Resilience-Thinking Framework with those site managers of properties involved with former Connecting Practice phases that are willing to contribute. This step would be undertaken via email exchanges and one or more virtual workshops.
4. Enable the *Laponian Area* site managers and community to show the Connecting Practice team how they tailored and applied the Resilience-Thinking Framework to suit their needs. This will be achieved through two field visits.
5. Produce a final-draft Resilience-Thinking Framework and make it available to World Heritage sites (and other heritage places) in order to contribute to global dialogues across professional and practitioner networks and organisations.

Deliverables

1. A Resilience-Thinking Framework for improved governance and management of World Heritage sites;
2. Connecting Practice – Phase IV Final Report;
3. A communication strategy for delivery of key Connecting Practice messages and outputs.

Expected outcomes

- Influence a shift in conceptual paradigms and practical arrangements for the consideration of culture and nature within the implementation of the World Heritage Convention, in partnership with organisations;
- Use the visibility of World Heritage sites to contribute to influencing change in global heritage management practices and policies, with a focus on fostering equitable governance and supporting and sustaining traditional management practices;
- Improve the ability for the implementation of the World Heritage Convention, and heritage conservation generally, to meet its goals of conservation and protection through intercultural cooperation and respect for cultural diversity and human rights;
- Encourage the understanding of World Heritage properties as complex and dynamic systems, nested in larger social-ecological systems, by incorporating resilience thinking approaches to management planning processes;

- Improve the understanding and integration of biocultural practices within the institutional frameworks of ICOMOS and IUCN, and at site level, at cultural, natural, and mixed World Heritage sites.

Administrative structure

1. Executive Group

The Executive Group will comprise representatives from the key partner organisations: ICOMOS, IUCN, ICCROM, Stockholm Resilience Centre, Laponian Area site management, and the Christensen Fund. The role of the Group is to provide oversight and high-level input into Connecting Practice – Phase IV, and to enable connections with individuals and organisations that can benefit the project. It is anticipated that the Executive Group will meet three times during the period of the project (October 2021-December 2022).

2. Task Force

The Task Force will comprise the group responsible for reviewing the project outputs. It is anticipated the Task Force will meet four or five times.

3. Implementation Team

The role of the Team is to undertake the project work required for Connecting Practice – Phase IV, including leading the development of the Resilience-Thinking Framework, as well as work with the Stockholm Resilience Centre and Laponian Area.

4. Advisory Group

The Advisory Group will be an ad hoc group of heritage experts willing to provide peer review and expert advice on the preparation and development of a Resilience-Thinking Framework applicable to World Heritage properties and beyond. The group will include World Heritage site managers and technical experts, and heritage practitioners.

Timeline and milestones

		2021			2022											
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
TASK	1. Preparatory work (including methods)															
	2. Develop draft Resilience Framework															
	3. Field Visits and Testing – <i>Laponian Area</i>						1			2						
	4. Desk Work with other WH Site Managers															
	4. Finalise Resilience Framework															
	5. Wrap-up Project; Final Report															

Milestones:

- Early March 2022: Completion of draft Resilience-Thinking Framework
- Mid-March 2022: Field Trip 1 to Laponian Area⁷
- Mid-March to Late-June 2022: Laponian Area test/use draft Resilience-Thinking Framework
- Late-June 2022: Field Trip 2 to Laponian Area
- July 2022: Draft Field Study Report prepared
- October 2022: Final Draft Resilience-Thinking Framework
- December 2022: Final Project Report completed

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ANNEX B. Personnel

Project Team

Lead project advisor: Steve Brown (Heritage Consultant)

Lead content advisor: Leticia Leitão (Heritage Consultant)

Resilience advisor: Katja Malmborg (Postdoctoral Research Fellow, University of Bergen)

Project coordinator: Maureen Thibault (Communication and Project Manager, ICOMOS Secretariat)

Project assistant : Délie Ronsin-Quéchon (Project Assistant, ICOMOS)

Executive Group

Gwenaëlle Bourdin (Director, ICOMOS Evaluation Unit)

Nupur Prothi Khanna (ICOMOS Board Member and Culture-Nature Lead)

Tim Badman (Director of Nature Culture Initiative, IUCN)

Clemens Küpper (Evaluations and Operations Officer, IUCN World Heritage Programme)

Eugene Jo (World Heritage Leadership Programme Coordinator, ICCROM)

Hassan Roba (Programme Officer, The Christensen Fund)

Pernilla Malmer (Senior Advisor, SwedBio, Stockholm Resilience Centre).

Stockholm Resilience Centre (SRC), Stockholm University

Pernilla Malmer (Senior Advisor at SwedBio)

Maria Tengö (Principal Researcher)

Erik Andersson (Professor, principal researcher)

Jamila Haider (Researcher)

Miriam Huitric (Director of studies - Bachelor and Master's level)

Sara Elfstrand (Programme coordinator)

Implementation Team, Visby

Louise Hoffman Borgö (Site Manager, Region Gotland)

Kristin Löfstrand (County Administrative Board)

Maria James (Region Gotland)

Consultation Group, Visby

Lennart Edlund (*De badade vännerna*, Member of World Heritage Council)

Gunnel Lindby (Region Gotland, Politician and Chair of World Heritage Council)

Magnus Olsson (Visby Centrum, Member of World Heritage Council)

Lisa Johansson (Gotlands Museum, Member of World Heritage Council)

Caroline Mossvall (Visby Centrum)

Mats Forsslund (*Fastighetsägarna* Gotland, Member of World Heritage Council)

Eva Backlund (*Visby innerstadsförening*, Member of World Heritage Council)

Elin Sander (Climate Change Coordinator, County Administrative Board)

Caisa Skoggren (Gender Equality Strategist, County Administrative Board)

Petra Eriksson (Assistant Professor Cultural Heritage, Uppsala University Campus Gotland, Member of World Heritage Council)

Therese Sonehag (Adviser, National Heritage Board)

Elene Negussie (National Heritage Board, former World Heritage Coordinator for Visby)

ANNEX C. Activity Log

Abbreviations: Connecting Practice Phase IV (CP IV; the project); Stockholm Resilience Centre (SRC); The Cristensen Fund (TCF); Steve Brown (SB); Leticia Leitão (LL); Maureen Thibault (MT); Katja Malmborg (KM); Délie Ronsin-Quéchon (DR-Q); Gwenaëlle Bourdin (GB); Nupur Prothi Khanna (NKP); Tim Badman (TB); Clemens Küpper (CK); Eugene Jo (EJ); Hassan Roba (HR); Pernilla Malmer (PM); Louise Hoffman Borgö (LHB); Kristin Lövstrand (KL); Maria James (MJ); Åsa Nordin-Jonsson (AN-J); Maria Tengö (MT); Jamila Haider (JH); Miriam Huitric (MH); Sara Elfstrand (SE); Gunnel Lindby (GL);

Note: The activity log does not include the many short online meetings held in the final stages of preparing Wayfinder Heritage and the Final Report.

DATE	ACTIVITY
7 July 2020	Application for CP IV funding submitted by ICOMOS Secretariat to TCF. The funding was awarded. Request to delay commencement due to global Covid-19 pandemic approved.
Aug. – Oct. 2021	Project start-up and appointment of team members.
29 Oct.	Initial online meeting between Project Team (SB, LL, MT) and SRC (PM)
5 Nov.	Letter of invitation provided to Stockholm Resilience (PM) to confirm participation in CP IV.
5 Nov.	Letter of invitation provided to Laponian Area (ANJ) to confirm participation as pilot case study for CP IV
5 Nov.	Initial version of CP IV Project Brief drafted.
mid-Nov	Revised Project Brief provided to TCF to formally request project delay. Invite to HR to join CP IV Executive Group.
30 Nov.	Online meeting of Project Team (SB, LL, MT)
3 Dec	Online meeting between Project Team (SB, LL, MT, NKP) with SRC (PM, KM, MT, JH, MH, SE). Discussion on how to adapt the Wayfinder guide for use in the field of heritage.
9 Dec.	Online meeting of Project Team members (SB, LL)
16 Dec	Online meeting between project Team (SB, LL, MT) with Laponian Area (ANJ). Discussion of the Wayfinder guide, pilot case study process, and potential fieldwork dates.
17 Dec	Executive Group Meeting #1 Formal commencement of Connecting Practice Phase IV
Dec. 2021 / Jan. 2022	Prepare draft approach to applying Wayfinder to World Heritage contexts (LL, SB)
20 January	CP IV Project Brief – Final Draft
21 Jan.	Online meeting of Project Team (SB, LL, MT) with Visby site managers (LHB, KL, GL)
28 Jan.	Online meeting to discuss draft Wayfinder heritage framework (LL, SB)
February	Show SRC the draft approach and obtain feedback
February	Task Force (GB, MT, NKP, LL, SB) meeting to share draft resilience framework

Late February	Task Force (GB, MT, NKP, LL, SB) meeting for final feedback before desk work commences and before first field visit
Late-February / March onward	Further development of draft approach for testing
17 March	Online meeting of Task Force group (GB, MT, NKP, LL, SB) to discuss draft framework and prepare for meeting with Visby.
18 March	Online meeting between Project Team (SB, LL, MT) and Visby group (LHB, KL, MJ) to confirm participation as the pilot case study.
1 April	Online planning meeting of Project Team (SB, LL, MT, KB)
8 April	Executive Group Meeting #2 to report on field trip 1
22 April	WORKSHOP 1, VISBY (online)
28 May	Online meeting between Project Team (SB, LL, MT, KB) and Visby group (LHB, KL) to plan for Workshop 2
31 May	Online meeting of Project Team (MT, LL, KM, SB) to discuss preparations for Field Trip 1 to Visby
6-10 June	FIELD TRIP 1, VISBY (Facilitators: LL, MT, KB) WORKSHOP 2 (8-9 June)
12 July	Report on Field Trip 1, Visby (prepared by MT) sent to the Visby Implementation Team (LHB, KL, MJ)
20 July	Online meeting of Project Team (SB, LL, MT) with Implementation Team, Visby (LHB, KL, MJ) to review work to date and plan for next steps
22 July	Executive Group Meeting #3
22 August	Online meeting of Project Team (SB, MT, LL, KM) with Implementation Team (KL) to discuss preparations for Field Trip 2 to Visby
29 Aug.-2 Sept.	FIELD TRIP 2, VISBY (Facilitators: LL, KB, SB, NKP) WORKSHOP 2 (31 Aug. – 1 Sept.)
21 Sept.	Report on Field Trip 2, Visby (prepared by SB), sent to the Visby Implementation Team (LHB, KL, MJ)
27 Sept.	Abstract on CP IV submitted for the ICOMOS 2023 Scientific Symposium (4-9 Sept 2023; Sydney, Australia)
13 October	Meeting of Project Team (SB, LL) with Round 1 reviewers (KM, NKP, CK, GB) to present draft framework and discuss desired feedback.
17 Oct.	Initial Draft Wayfinder Heritage framework prepared (LL, SB)
17-20 Oct.	Review period 1: Initial reviews of Draft Wayfinder Heritage framework. Four reviews received (KC, KM, NKP, MT).
20-23 Oct.	Draft Wayfinder Heritage framework revised (LL, SB)
24 Oct. – 6 Nov.	Review period 2: Reviews of revised Draft Wayfinder Heritage framework. 10 reviews received.
31 Oct.	Online meeting between Project Tam (LL, SB, MT) and Implementation Team, Visby (KL). Discussion of draft Long-term Strategy.
12 Nov.	Meeting between LL and SB to discuss development of Wayfinder Heritage

15 Nov.	WORKSHOP 4, VISBY (online) Draft Long-term Strategy presented and discussed
17 Nov.	Online meeting (GB, LL, SB, DR-Q) to agree on dates for submitting final documents to ICOMOS Secretariat.
30 Nov.	Official end date of CP IV.
7 Nov. – 5 Dec.	Draft Final version of Wayfinder heritage framework prepared.
5 Dec.	Draft Wayfinder Heritage document and draft Final Report submitted to ICOMOS Secretariat for design layout and translation.
31 Dec.	Due date for submission of the Final Report and financial report to The Christensen Fund. Agreement to extend date to 15 January 2023.
January 2023	Executive Group Meeting #4 Presentation of final results
January 2023	CP IV Final Report (English and French versions) and Wayfinder Heritage framework submitted to The Christensen Fund.

ANNEX D. Glossary

The definitions and meanings provided below are largely drawn from the Wayfinder guide glossary and from the World Heritage Leadership Programme Glossary, currently being developed. A large portion have been adapted to suit the needs of the Wayfinder Heritage Framework.

Adaptability reflects the capacity to respond to change by making incremental adjustments to maintain the overall identity of the system

Agency reflects the capacity of an actor or a group of actors to shape change in a given context.

Attributes are the elements of a heritage place which convey its heritage values and enable an understanding of those values. They can be physical qualities, material fabric and other tangible features, but can also be intangible aspects such as processes, social arrangements or cultural practices, as well as associations and relationships which are reflected in physical elements of the property.

For cultural heritage places, they can be buildings or other built structures and their forms, materials, design, uses and functions but also urban layouts, agricultural processes, religious ceremonies, building techniques, visual relationships and spiritual connections. For natural properties, they can be specific landscape features, areas of habitat, flagship species, aspects relating to environmental quality (such as intactness, high/pristine environmental quality), scale and naturalness of habitats, and size and viability of wildlife populations.

Buffer zone. For the purposes of effective protection of a World Heritage property, a buffer zone is an area surrounding the property which has complementary legal and/or customary restrictions placed on its use and development in order to give an added layer of protection to the property.

Aspirations reflect shared ambitions and understandings of what it is people want for the future of a heritage place.

Complex systems, such as social-ecological systems, are composed of many interacting elements.

Factors affecting the place (or the system, when the place is conceived as a system). Everything that can affect, positively and negatively, the values and attributes of the heritage place and its state of conservation. Negative factors are usually called threats. How factors affect a property needs to be analysed through a series of parameters namely the underlying causes that are the source of the factor, their origin (if originating within or outside the property), the current and potential impacts deriving from the factor and the extent and severity of the impacts on the attributes of the heritage place.

Leverage points. Places in complex systems that can be targeted for interventions because a small shift can lead to larger change for the whole system.

Persistence refers to the capacity to conserve what exists or recover what existed before in the face of change.

Resilience is the capacity of a system, be it an individual, a forest, a city, or an economy, to deal with change and continue to develop sustainably while maintaining its identity.

Resilience-thinking is a theoretical lens that helps us understand dynamic change in complex social-ecological systems. It has its roots in complexity and social-ecological systems thinking.

Rightsholders. Actors with legal or customary rights with respect to heritage resources.

Scenario is a plausible narrative about the future.

Social-ecological systems are integrated systems of people and nature. The term emphasizes that humans are part of nature and that the delineation between social and ecological systems is artificial.

Stakeholder is a person or a group of people who possesses direct or indirect interests and concerns about heritage resources, but does not necessarily enjoy a legally or socially recognized entitlement to them.

System identity in resilience thinking refers to the defining characteristics and qualities of a system. For a heritage place, maintaining system identity equates with maintaining its heritage values and conserving the attributes that convey those values.

Transformability reflects a radical form of change in parts of the system, without the overall system losing identity.

