heritact

Contextual Classification of the Digital Tools

D3.1

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Deliverable

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D3.1
Contextual Classification of the Digital Tools

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Statement of Originality

This deliverable contains original unpublished work except where clearly indicated otherwise.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

Summary

Context, Methodology and Goal

The present Deliverable 3.1, under the title **"Contextual Classification of the Digital Tools"** constitutes the result of the work carried out in the context of Task 3.1 "Process Roadmap" of Work Package 3 "HeritACT Digital Toolkit Design and Development". As laid out in the Grant Agreement (GA) of the HeritACT Project, the Deliverable aims to provide a Roadmap that will:

- Enable the assignment of the HeritACT tools to specific stakeholders.
- Identify the conditions to reach Sustainable Development Goals (SDG) and New European Bauhaus (NEB) Objectives

It reports on the activities completed in the associated Task, whose stated goals are the identification of challenges to be addressed in the 3 HeritACT Pilot Demonstration Sites as well as the outlining of the enabling conditions for the deployment of the proposed HeritACT toolkit. The main outcome is a **"Matrix assigning Tools to Target Stakeholders and associating them to Specific SDG and NEB goals to be addressed."**, as defined in the GA. To achieve the goal, the methodology of the research conducted in the context of the Task involves two main parts.

- Identification and analysis of contextual reference frameworks
- Collation and representation of codified data

Three contextual frameworks are selected and analysed in the first three chapters:

- **Chapter 1 / Context:** The first chapter will map out the broader principles that will guide the contextual classification. The objective is to collect a series of salient concepts regarding Cultural Heritage as well as initiatives linking Cultural Heritage with Climate Action.
- **Chapter 2 / Pilot Sites:** Drawing on work already conducted in the context of Work Package 2 of the HeritACT Project, the second chapter reviews the input provided by Pilot Leaders in the context of WP2s activities. As with the previous chapter, the objective is to collect and codify the information to provide Tool Developers as well as other stakeholders a high-level overview of the context in the three HeritACT Pilot Sites.
- **Chapter 3 / Tool Mapping:** The third chapter collects, analyses and codifies the responses to the Tool Mapping Questionnaire that was conducted in collaboration with WP3 Leader (THINGS) during the Summer of 2023. The objective is the collection of available information in a single table that will assist in situating the specific tools in the context of the HeritACT Toolkit.

It is proposed that the results of the research, can be utilized autonomously to provide stakeholders with a preliminary Contextual Classification Framework. Furthermore, the collection and codification of the information will additionally assist in the conceptual mapping of the HeritACT Toolkit. The results as well as avenues for future research will be presented in the fourth chapter of the present deliverable:

- **Chapter 4 / Contextual Classification Models:** This chapter will provide a conclusion for the deliverable by compiling and connecting the results of the previous chapters, which in turn will provide the framework for contextualizing the HeritACT Tools. Furthermore, possible avenues of research for elaborating and expanding the model will be briefly discussed.

In conclusion the present Deliverable, besides being a report on the work carried out in the context of the related Task aims to act as a preliminary mapping exercise. As such, provides a series of **markers**, identifying and highlighting those parameters that will assist situating the Tools **in the respective frames of reference**. The resulting Tables and Figures constitute of the representation of these markers, and it is theorized that they can provide the **basis for conceptual models** to facilitate Contextual Classification and Mapping of Tools and Stakeholders.

During the development of the present Task and the related Deliverable it has been made clear that it constitutes part of an ongoing process involving multiple interconnected actors, activities, and parameters. As such it is evident that there are aspects that will require revisiting once further progress has been made in the related actions. As a final note therefore, the authors would like to highlight the status of the present deliverable as a" living document" will be revisited and elaborated upon during the project's lifetime.

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1/ Context

The purpose of this chapter is to concentrate the definitions, frameworks and themes of the project as described in the proposal and articulated in the Grant Agreement and related Deliverables in a concise and easy to access manner while simultaneously highlighting specific aspects pertaining to the HeritACT Toolkit. The result of this process is a list of guidelines and directives that will assist the Tool Development and Deployment and ensure alignment with stated objectives.

The definition of the main theme articulating the HeritACT project is the starting point of the present document. This will provide the foundation for the elaboration of the context that will be presented in the following subsections as well as providing a common "landmark" for orienting the broader work presented. The subsection is structured into two parts. The first outlines the concept of Cultural Heritage in the context of the HeritACT project, while the second highlights specific links between Cultural Heritage and Climate Action.

1.1 The Context of Cultural Heritage

The main theme that resonates throughout the HeritACT Project is that of Cultural Heritage and its reactivation through engaging experiences in the context of the project's stated methodology and goals. The first part of the present subsection will focus on outlining the salient points of this theme and is structured in three units: **definition, framework, and project context.**

1.1.1 Definition

According to UNESCO Cultural Heritage includes both tangible and intangible elements. These embody "a diversity of values including symbolic, historic, artistic, aesthetic, ethnological or anthropological, scientific and social significance". Although it escapes the purpose of the present document to provide an in-depth analysis of the aforementioned definition, it is important to highlight the concept of embedding – that is to say that intangible cultural elements are embedded in heritage artefacts and spaces. **Thus, in the context of the HeritACT project the selected sites act as focal points for both the tangible and intangible elements that make up cultural heritage.**

Furthermore, Cultural Heritage can provide a framework for addressing social and economic issues. On the one hand, in a social context, cultural heritage is a factor that provides cohesion and can act as a unifying focus for communities. Through cultural heritage citizens can structure their everyday lives and their common space. Cultural heritage can provide the necessary underpinning for social interactions while at the same time articulating and strengthening a community's sense of wellbeing and commonality. Therefore, in a social sense, the value of cultural heritage can be highlighted in its ability to help people make sense of their lives and experiences. On the other hand, in an economic sense, cultural heritage represents a valuable asset that can act as a driver for economic growth in communities. This goes beyond the obvious economic benefits inherent in the aforementioned social benefits as well as the immediate value that can be derived from

cultural heritage assets - both tangible and intangible. Specifically, one additional important economic aspect that can be highlighted here is the ability of cultural heritage to bring together different forms of knowledge. In other words, cultural heritage can provide the unifying context for the cooperation of different fields of knowledge, ranging from engineering and social sciences to art and design. It also provides a favourable environment in which high tech solutions - especially those related to digital technologies - can enter into dialogue with the historical values embedded in cultural heritage artefacts, to the benefit of both. **Bearing these points in mind, the HeritACT Project aims to utilise the cultural heritage sites selected as catalysts for broader social and economic ameliorations in the local communities.**

A final point of interest regarding cultural heritage is its broader role that transcends the specific points outlined in the previous section. In this sense, cultural heritage artefacts embody and represent a community's values and ideals acting as signifiers of concepts through embodiment and aesthetics. The comment by Lewis Mumford that "The dome and the spire, the open avenue and the closed court, tell the story, not merely of different physical accommodations, but of essentially different conceptions of man's destiny" provides an eloquent illustration of this point. In this sense, it is important to note the significant temporal aspect, and as societies and their conceptions evolve, so does their approach towards the artefacts of cultural heritage. **Thus, HeritACT Project activities should acknowledge that the value of cultural heritage is subject to a continuous revaluation and reinterpretation that evolves in parallel and in tandem with the communities in which it is situated.**

Thus, in the context of definition we highlight 3 aspects of cultural heritage:

- It involves both tangible and intangible elements as essential parts.
- It can provide the framework for broader social and economic actions.
- Is an embodiment of the evolving values and ideals of a community.

Definition of Cultural Heritage

Cultural Heritage embodies "a diversity of values including symbolic, historic, artistic, aesthetic, ethnological or anthropological, scientific and social significance".

Cultural Heritage involves both tangible and intangible elements as essential parts	TANGIBLE INTANGIBLE
Cultural Heritage can provide the framework for broader social and economic actions	SOCIAL ECONOMIC
Cultural Heritage embodies the evolving values and ideals of a community	VALUES EVOLUTION

Figure 1 - Definition and aspects of Cultural Heritage

1.1.2 Framework

Moving from the vital points of the broader definition of cultural heritage, it is important to consider the framework governing European cultural heritage. In alignment with the points outlined in the previous section, **the European Union considers that European heritage is a**

major factor in "defining Europe's place in the world" as well as adding to "its attractiveness as a place to live, work and visit".

Four specific aspects to this role are identified. Cultural heritage consists of a transgenerational resource, in the sense that it is inherited from previous generations and bequeathed to future ones. This in turn highlights our dual responsibility to preserve and enrich this shared wealth. A second aspect intertwined with this is the value of our shared cultural heritage as an irreplaceable repository of knowledge which ensures that the wisdom of previous generations is not lost and can prove of service to future ones. Thirdly, and in part due to the previous two aspects, is the important role cultural heritage can play as a driver of social and economic growth. This has already been alluded to previously, both in the context of the dual roles of cultural heritage as shared wealth and repository of knowledge as well as in the definition of cultural heritage artefacts as catalysts of communal and economic development. Finally, in the context of the broader role cultural heritage plays we must highlight its unique ability to enrich the daily lives of citizens and provide artistic inspiration. This in turn provides fertile ground for the development and evolution of cultural industries, which constitute one of Europe's comparative advantages in today's globalised environment.

Moving beyond the outline of the value of cultural heritage and the related aspects, it is important to briefly mention the **challenges facing it as acknowledged in the considered frameworks.** These challenges can be broadly grouped in the following categories. Global trends, social and economic crises and the impacts of climate change. Although it escapes the purpose of the present document to embark on a lengthy analysis of these challenges, it is important to link them to the aspects already identified regarding cultural heritage. Namely the effect of global megatrends reinforces the role of cultural heritage in reasserting and redefining Europe's place in a globalised world while economic and social challenges present opportunities for taking advantage of cultural heritage in its aforementioned role as catalyst and driver of growth. Lastly, the crucial matter of climate change and its relation to cultural heritage - being a focal part of the HeritACT Project - will be discussed in the following subsection (1.2).

It is crucial to highlight the integral role Cultural Heritage plays in Europe's response to these challenges. Cultural Heritage is a key component of the New European Bauhaus (NEB) which in turn is instrumental in the delivery of the ambitions set out by the European Green Deal (EGD). These in turn are closely aligned with the Sustainable Development Goals as laid out by the UN. Thus, one can trace a clear link between the role of Cultural Heritage in the context of the HeritACT Project with broader goals as described in the NEB, EGD and SDG frameworks. This is in line with the fact identified in Deliverable 2.1 of the HeritACT Project, namely that European Union cultural policy goals should "correspond to the vision of culture within the international covenant on economic, social and cultural rights in terms of the need to preserve heritage and traditions as well as creation and creative practices". This - as stated in the aforementioned document serves **two main objectives, namely the right of citizens to access and benefit from cultural heritage as well as assisting communities in the necessary articulation of their daily lives, through the use of cultural heritage as a medium to make sense of their lives and experiences.**

To conclude the brief consideration of frameworks, what is of note in the context of the present work is the identification of important themes that characterize them. These position cultural heritage as:

- A transgenerational asset - linking past, present and future.
- A driver and catalyst for actions aimed at addressing social and economic issues.
- An important factor in the broader spectrum of initiatives aimed at combating the effects of climate change.
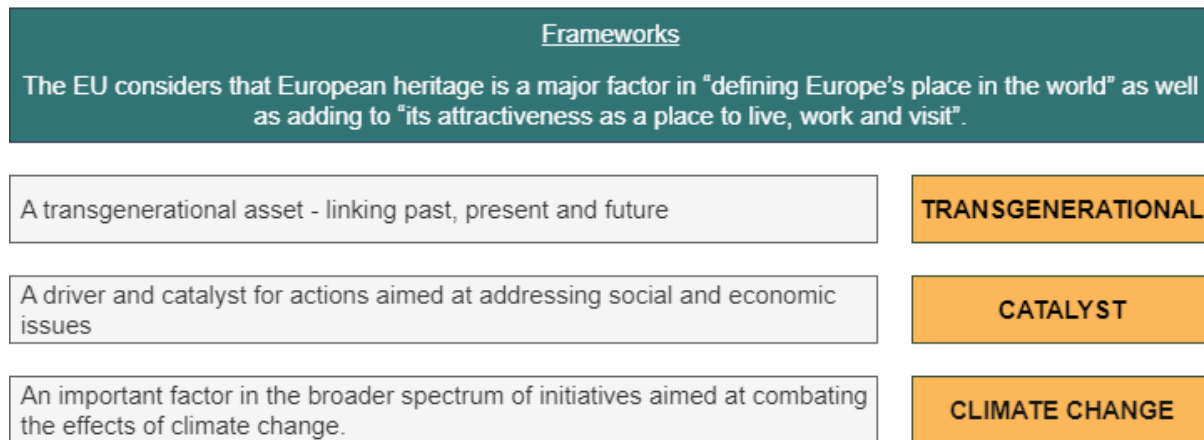
Figure 2 - Characteristics of Cultural Heritage Frameworks

1.1.3 Project

As stated in the introduction of the present report the **HeritACT project aims to reactivate Cultural Heritage through engaging experiences**. This reactivation is in line with the previously highlighted roles that cultural heritage assets can play in addressing social and economic issues while the engagement process brings to the fore the important connection with local communities. Additionally, the HeritACT project focuses on the aforementioned aspect of climate change and the role that Cultural Heritage assets can play in combating its effects. As such, the project is in line with the Council of Europe's Cultural Heritage Strategy for the 21st Century as well as the Green Deal Objectives for Sustainable Development and the new European Bauhaus goals. Therefore, the project's directives incorporate and build on the important points of the context of Cultural Heritage and aligns with the broader European and international frameworks outlined previously.

The concept of Cultural Heritage in the context of the HeritACT project considers three interconnected dimensions: i) The tangible, i.e., the physical embodiment of cultural heritage and in particular the sites and locations that are specified in the three Pilot Demonstration sites. These provide the stage for the project's actions as well as valorizing the specific buildings and the broader urban fabric in which they are situated. ii) The intangible, which includes the second aspect of cultural heritage as outlined in previous sections. This dimension concentrates on rediscovering and reinterpreting those assets that are not as immediately apparent as the physical artefacts but play an equally important part in the definition of cultural heritage, its integration into local communities as well as its activation in broader social and economic contexts. iii) Finally, the third dimension crucial to the HeritACT project's consideration of cultural heritage is the digital one. This dimension is separate from the previous two in the sense that it is not

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immediately linked to the definition of cultural heritage assets. Nevertheless, it highlights the importance of digital methods and media in thr activation of cultural heritage assets. Furthermore they can provide the means by which communities can engage with it as well as one of the main avenues via which cultural heritage assets can be utilized in actions aimed at addressing social, economic and climate related issues.

The central role of citizens in all the proposed actions and initiatives is of special note when considering the HeritACT project's approach. This aligns with the social dimension of cultural heritage that has been mentioned in previous sections. In this context, it is important to note that beside the broader focus on the participation of members of local communities, the project's focus is placed in engaging specific population groups, i.e., children and youth as well as people with disabilities. These consist two population groups of particular importance in the context of local community resilience and development, and both face specific challenges in engaging with cultural heritage. This focus on people can also be further expanded to include other population groups that face similar challenges such as minorities and low-income members of communities. This will be further elaborated over the course of the project in conjunction with the development of the HeritACT tools, solutions and activities and in close cooperation with the Leaders of the project's Pilot Demonstrations.

Finally, it is useful note the **interdisciplinary nature of the activities proposed**. HeritACT aims to encourage the understanding of the ideals, values and principles embedded in European cultural heritage, both in the particular cases of the chosen Pilot Demonstration Sites as well as a blueprint for broader implementation. Within this perspective, the project's outcomes will promote social cohesion, sustainability, foster accessibility and integration and assist in the digital transformation. These are necessary pillars that will assist in the development of community resilience. As has been already outlined the multifaceted nature of these goals requires an equally multi levelled approach that relies on the mobilization of interdisciplinary collaborations, both in the context of the development of the projects various actions as well as in their implementation. Thus, the final important point when considering the context of the project in order to situate the toolkit - is the interdisciplinarity involved. This means that all related tools and methodologies should transcend narrow professional and scientific realms and aim at a holistic approach that will bring together in fruitful collaboration actors from disparate professional, social and economic fields that are necessary for the successful implementation of the project.

Summarizing the project context in relation to the contextual classification of the digital tools, the main points that can be retained are the following:

- The three main dimensions of cultural heritage – tangible, intangible and digital
- The central role of citizens in HeritACT and fostering the integration of specific population groups.
- The transdisciplinary cooperation leading to holistic approaches to the multiple aspects of the project.

The three main dimensions of cultural heritage - tangible, intangible and digital	**TANGIBLE / INTANGIBLE** **DIGITAL**
The central role of citizens in HeritACT and fostering the integration of specific population groups	**INTEGRATION** **PARTICIPATION**
The transdisciplinary cooperation leading to holistic approaches to the multiple aspects of the project.	**HOLISTIC APPROACH** **TRANSDISICPLINARY APPROACH**
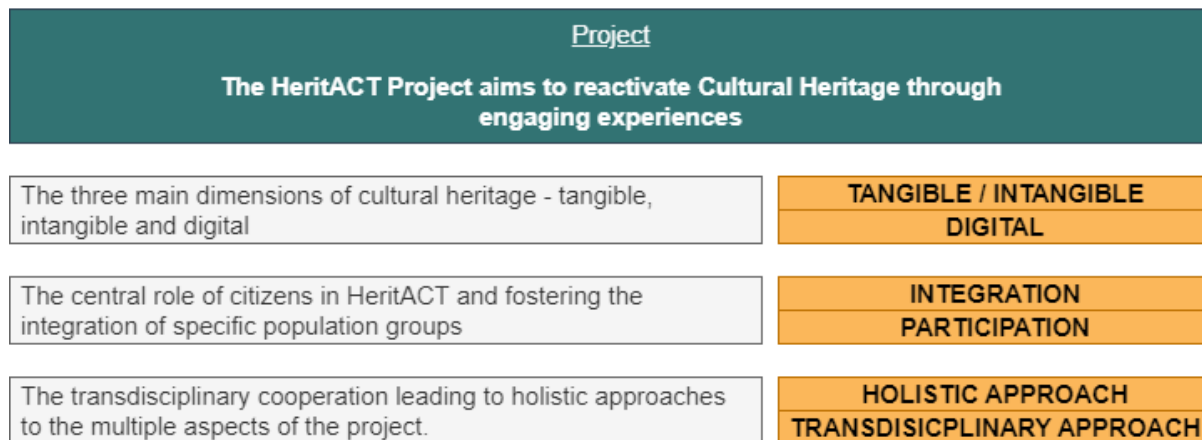
Figure 3 – HeritACT Project key concepts

1.2 Cultural Heritage and Climate Action

An important theme that resonates across the project's objectives and the broader definitions and frameworks regarding cultural heritage is that of climate change, as has been identified in previous stages of the present overview. **Cultural heritage can play an important role in strategies and initiatives aimed at addressing the challenges of the ongoing climate crisis.** The following section will briefly summarize the 5 themes related to the role of Heritage in Climate action, as identified and elaborated upon in the context of Deliverable 2.2 and focus on specific takeaways for the contextualization of the HeritACT Toolkit.

1.2.1 Heritage as a catalyst for action

The first point centres on the privileged position that cultural heritage artefacts have in the broader social context. As the impact of climate change becomes more acute – cultural heritage artefacts come under increasing threat of decay, damage and eventual destruction. Occupying a highly visible position in the public's perception – it is reasoned that they are prime candidates for illustrating the adverse effects of climate change and galvanising communities and stakeholders to take steps towards mitigating its impact.

Therefore, in the context of the project's focus on the challenges related to climate change, the first point of interest is that the **cultural heritage artefacts provide an ideal platform for demonstrating the impact of climate change and provide a broadly identifiable and relatable focal point for articulating initiatives to address them.**

1.2.2 An opportunity to mitigate Greenhouse Gas Emissions

The second point focuses on the built environment and the contribution the construction industry must make in reducing greenhouse gas emissions. In this context, the main argument is that retrofitting the existing building stock offers an environmentally friendly alternative to the ever-increasing demand for new space in urban centres. Furthermore, as containers of vernacular knowledge related to construction, often such spaces incorporate passive design features that can reduce the environmental footprint of their operation (e.g., power consumption for heating and ventilation). These aspects create an interesting overlap between the need to repurpose spaces to fit new purposes and programs and the

need to respect and preserve cultural heritage and branch out into a broader discussion regarding renovation strategies that escapes the scope of the present document.

An important aspect that need to be taken into consideration in the context examined here is the **connection between cultural heritage and building stock and additionally the development of strategies that allow for the thoughtful and considerate reutilization of cultural heritage spaces sites in a manner that satisfies modern requirements while respecting values and taking advantage of the construction know-how embedded in such sites.**

1.2.3 A contributor to community resilience

The third point identified in the context of relation between Cultural Heritage and climate actions broaches the aspect of community resilience as an integral part to address the challenges brought about by climate change. This means that apart from mitigating the effects of the ongoing climate crisis - local communities need to be able to adapt to the inevitable changes brought about by it and have the necessary tools to formulate and implement responses to the upcoming challenges.

In this sense, the aspects already identified in the previous sections concerning Cultural Heritage can be considered. These include its embodiment of communal values and principles, its role in articulating responses to social and economic issues as well as its transgenerational nature as a repository of knowledge and wealth linking past, present and future. **Along these lines, we can underline the role of Cultural Heritage as an underpinning element to revitalise local communities, providing agency and empowerment for them to rise to the challenges posed by climate change.**

1.2.4 A resource for the future

The fourth point approaches Cultural Heritage as a container for transmitting knowledge and values across generations. This applies to the whole spectrum of common knowledge. It ranges from specific technical knowledge - such as the vernacular architectural solutions that can aid in reducing buildings' environmental footprint - to more abstract values and ideals that underpin a community.

In this context, it can prove a valuable resource for both communicating valuable know-how as well as embodying related values and principles that can assist in developing solutions addressing climate change. Moreover, Cultural Heritage relates to broader time frames than those that are usually considered in the context of public dialogue (i.e., relative to individual human lifespans). In this sense, it can act as a unifying element, symbolising the ongoing challenge of climate change that is an issue that similarly to Cultural Heritage transcends generations.

1.2.5 A driver for cultural change

The final point mentioned in the description linking Cultural Heritage and Climate action adopts a broader view - highlighting that any response to the challenges brought about by climate change is first and foremost a matter of cultural change. Communities and societies must adopt new paradigms to renegotiate our relation to natural environments and achieve a green transition to our social and economic frameworks while ensuring that this is done in an inclusive and participatory manner.

While this is admittedly a complex and multifaceted issue which cannot be adequately addressed by a single element or intervention -keeping in mind its aforementioned roles as container of knowledge and transgenerational link – what a cultural heritage can offer is a framework for reevaluating our culture in relation to climate change. In other words, **cultural heritage artefacts, as embodiments of communal ideals and knowledge offer a privileged environment where past values can enter into fruitful dialogue with present challenges in order to outline future paradigms.**

Cultural Heritage and Climate Action

Heritage as a catalyst for action

Cultural heritage artefacts provide an ideal platform for demonstrating the impact of climate change and provide a broadly identifiable and relatable focal point for articulating initiatives to address them.

An opportunity to mitigate Greenhouse Gas Emissions

Connection between cultural heritage and building stock and additionally the development of strategies that allow for the thoughtful and considerate reutilization of cultural heritage spaces sites in a manner that satisfies modern requirements while respecting values and taking advantage of the construction know-how embedded in such sites.

A contributor to community resilience

Role of Cultural Heritage as an underpinning element to revitalise local communities, providing agency and empowerment for them to rise to the challenges posed by climate change.

A resource for the future

In this context, it can prove a valuable resource for both communicating valuable know-how as well as embodying related values and principles that can assist in developing solutions addressing climate change / act as a unifying element, symbolising the ongoing challenge of climate change that is an issue that similarly to Cultural Heritage transcends generations.

A driver for cultural change

Cultural heritage artefacts, as embodiments of communal ideals and knowledge offer a privileged environment where past values can enter into fruitful dialogue with present challenges in order to outline future paradigms.

Figure 4 - Roles of Cultural Heritage and Climate Action

1.3. Discussion & Collected Data

The brief analysis presented in the previous chapter highlights concepts that define Cultural Heritage on multiple levels such as definition, scope and impact. Furthermore, specific methods by which cultural heritage can support climate action are identified.

This data, as collected and codified in the Figures 1-4 can be presented in a condensed form as shown in Figure 5.
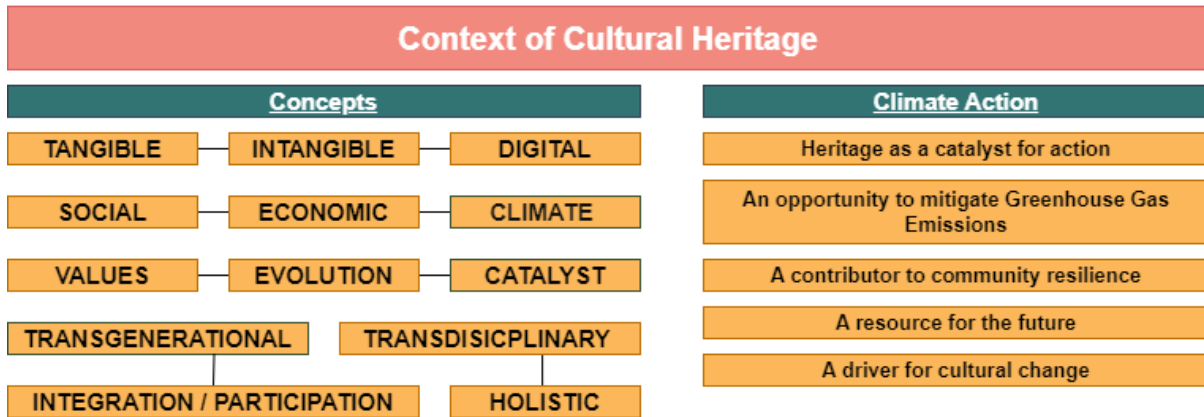

Figure 5 - Example of Cultural Heritage Context Reference

To provide the collated information to interested parties, the results of the research conducted in the present Task are illustrated in Figure 6. These provide a first Template for the Contextual Classification of Digital Tools vis a vis broader concepts.
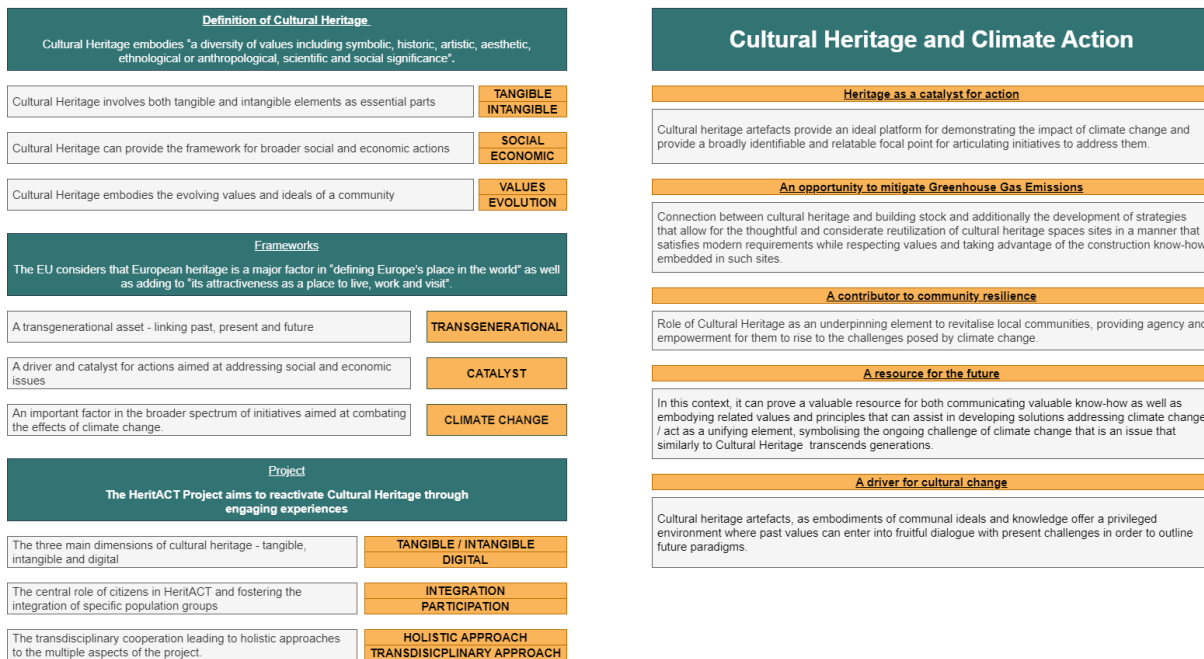

Figure 6 - Cultural Heritage Collected Reference

2/ Pilot Sites

2.1 Introduction

Building upon the foundation of the results derived from Work Package 2 (WP2), the goal of this chapter is the mapping of stakeholder expectations, which will guide the development and implementation of the HeritACT Toolkit. This chapter represents a pivotal phase in the process, as it lays the groundwork for bridging the gap between the overarching project objectives and the current conditions at the three Pilot Demonstration Sites (Eleusis, Milan, Ballina).

To commence the task, **it is important to consider the context in which these sites operate.** The preliminary description of these pilot sites, as initially outlined in the Project's GA, serves as a starting point. However, this initial description is broad and requires a deeper exploration of the actual situation on the ground. To accomplish this, a detailed mapping process has already been undertaken in the context of WP2. This mapping involves a comprehensive examination of various aspects of the pilot sites, including:

- Stakeholders.
- Resources.
- Challenges.
- Opportunities.

The goal is to gain a more precise **understanding of the specific dynamics, needs, and intricacies of each of these sites.**

In line with the project's iterative approach, this phase is also concerned **with mapping stakeholder expectations**. By systematically mapping these expectations, the project consortium gains invaluable insights into what various stakeholders hope to achieve or experience as a result of the project. These stakeholder expectations play a pivotal role in informing the development and eventual deployment of the HeritACT Toolkit, which is a key component of the project. The Toolkit is designed to provide practical tools, strategies, and guidance to address the identified challenges and advance the project's objectives effectively. **By aligning the Toolkit with the expectations and needs of stakeholders, the project ensures that it will be a valuable and relevant resource in the context of each specific pilot site.**

In summary, this chapter is about creating a robust link between the project's overarching goals, the actual conditions at the pilot sites, and the tools that will be used to achieve those goals. It is a critical phase that helps ensure that the project's efforts are both informed by the reality on the ground and responsive to the expectations of the diverse stakeholders involved.

2.2 Eleusis

2.2.1 Innovative Concept

The concept of **Green Tensegrity Installations** in the Neighbourhoods-Industrial Heritage sites network represents a novel approach to integrating art, sustainability, and community engagement in Eleusis. These installations not only serve as aesthetically pleasing landmarks but also embody the principles of tensegrity, emphasizing the equilibrium between tension and compression in their structural design. They offer a unique blend of modern artistic expression within the context of industrial heritage, creating a visual contrast that draws attention to the coexistence of the old and the new.

The idea of a **Migrating Landmark Pavilion** is particularly intriguing, as it suggests a dynamic and adaptable structure that can shift its location to different areas within the network of industrial heritage sites. This mobility allows for the exploration of various spaces, providing an ever-changing experience for visitors and a fresh perspective on the industrial heritage of the region.

Creative Workshop Hubs within the Network of Industrial Heritage buildings underscore the potential for repurposing historical structures. These hubs can serve as vibrant centres for artistic innovation and collaboration, breathing new life into old spaces while preserving their historical significance. They offer a platform for artists, craftsmen, and creators to interact and develop their craft while contributing to the revitalization of industrial heritage sites.

The concept of an **Urban Mobile Furniture Workshop** at Steki in Eleusina, utilizing Augmented Reality (AR) for site selection and implementation, reflects a forward-thinking approach to urban planning and design. Physical and Virtual Exhibitions hosted at Eleourgio encompass the convergence of the physical and digital realms, allowing for a dynamic showcase of art and culture. Visitors can engage with exhibitions in person while also having the option to explore virtual extensions, expanding accessibility and reach beyond geographical boundaries. Lastly, **Projection Mapping** on a kinetic surface merged with augmented reality represents a cutting-edge fusion of technology and art. This multimedia approach creates immersive and interactive experiences, where visual narratives come to life on dynamic surfaces, blurring the line between the physical and virtual worlds. It offers an exciting way to tell stories, engage audiences, and transform spaces into captivating canvases.

Overall, these innovative concepts demonstrate a forward-looking approach to cultural and industrial heritage preservation, revitalization, and community engagement in Eleusis. They harness the power of art, technology, and collaboration to create a multifaceted experience that respects the past while embracing the future.

Innovative Concepts	
Green Tensegrity Installations	Integrate art, sustainability and community engagement
Migrating Landmark Pavilion	Mobility allows for the exploration of various spaces
Creative Workshop Hubs	Centers for artistic innovation and collaboration, breathing new life into old spaces while preserving their historical significance
Urban Mobile Furniture Workshop	Forward-thinking approach to urban planning
Physical and Virtual Exhibitions	Convergence of the physical and digital realms, allowing for a dynamic showcase of art and culture
Projection Mapping on kinetic surface merged with AR	Represents a cutting-edge fusion of technology and art. This multimedia approach creates immersive and interactive experiences

Figure 7 - Eleusis Pilot Site Innovative Concepts

2.2.2 National Level

A pivotal force for Greece's socio-economic progress lies in the endeavour to **update and harmonize the legal framework governing the safeguarding of its rich cultural heritage.** This initiative signifies a profound commitment to preserving the nation's historical and artistic legacy, ensuring its continued vitality and accessibility.

Concurrently, efforts to **bolster the cultural and creative economy** serve as a cornerstone for broader development objectives. This burgeoning sector not only fosters artistic expression but also fuels economic growth, generating employment opportunities and enhancing Greece's global cultural footprint. Within this context, the symbiotic relationship between culture and economic and social advancement comes to the forefront. Culture, in all its facets, emerges as a catalyst for innovation, inclusivity, and community cohesion, contributing significantly to the nation's well-being.

Furthermore, Greece's embrace of **transnational and cross-border collaborations** in the cultural sphere positions it as an international cultural nucleus, fostering dialogue and exchange of ideas that transcend geographical boundaries.

Concurrently, the **protection and promotion of both historical cultural heritage and contemporary creative endeavours** form the essence of Greece's cultural strategy. These endeavours bridge the past and the present, celebrating the nation's rich heritage while nurturing the flourishing contemporary artistic scene. Moreover, interventions aimed at streamlining and modernizing the Ministry of Internal Affairs, simplifying administrative processes, and championing e-governance underscore Greece's commitment to efficient governance. This not only enhances the government's effectiveness but also contributes to **an enabling environment for cultural innovation and progress.**

National Level Priorities

Update and harmonize the legal framework governing the safeguarding of its rich cultural heritage

Bolster the cultural and creative economy serve as a cornerstone for broader development objectives

Embrace transnational and cross-border collaborations in the cultural sphere as an international cultural nucleus

Protection and promotion of both historical cultural heritage and contemporary creative endeavor

Increasing the efficiency of central administrative frameworks, strategies and processes

Figure 8 - Eleusis Pilot Site National Level Priorities

2.2.3 Local Level

The **commitment to innovation and contemporary cultural production** in Greece is not merely a pursuit of artistic novelty but a profound endeavour that enriches knowledge, education, reflection, imagination, and curiosity. These elements are intrinsically linked to creativity, shaping a vibrant cultural landscape that transcends artistic boundaries. Simultaneously, **a focus on strengthening the cultural profile** of cities and enhancing citizen participation plays a pivotal role in fostering a city's new identity, bolstering internal confidence, and garnering external recognition. This multifaceted approach underscores the transformative power of culture, infusing vibrancy into urban life. Entertainment, as an essential component of cultural vitality, offers a direct channel to enjoyment through play, recreation, fun, diversion, and relaxation. It caters to the human need for leisure and amusement, enriching the quality of life for citizens and visitors alike. Additionally, the economic impact of arts and culture takes centre stage, emphasizing the imperative of empowering the employability of cultural practitioners and ensuring the **sustainability of the cultural sector** in the context of a modern economic environment. In parallel, the **leverage and enhancement of cultural activities** demonstrate a commitment to not only preserving heritage but also fostering its evolution. This approach revitalizes cultural practices and traditions, ensuring their relevance in contemporary society. Simultaneously, the reinforcement of cultural infrastructure and the development of the arts sector's capacity are crucial for creating a fertile ground for artistic expression and innovation.

Ultimately, these multifaceted strategies align with the goal of cultivating a sustainable urban economy that thrives on cultural vibrancy. They seek to integrate culture into citizens' everyday lives, positioning it as an integral part of the community and the functions of the Municipality of Eleusis. In doing so, they breathe life into the cultural ecosystem, contributing to the holistic development of Greece's cities and enriching the lives of its citizens.

Local Level Priorities

Commitment to innovation and contemporary cultural production

Focus on strengthening the cultural profile of cities and enhancing citizen participation

Empowering the employability of cultural practitioners and ensuring the sustainability of the cultural sector

Leveraging cultural activities in order to preserve heritage and foster its evolution.

Figure 9 - Eleusis Pilot Site Local Level Priorities

2.2.4 Baseline Condition

The collaborative approach followed in Work Package 2 fostered the identification of potential synergies among the different pilot sites, allowing participants to recognize areas of shared challenges, as well as opportunities for cooperation. This was particularly significant as it not only promoted knowledge sharing but also created a forum for discussing risks and strategies to mitigate them. In essence, this session served as a catalyst for enhancing the understanding of the pilot's situation and encouraged a more holistic and inclusive approach to the revitalization of buildings and sites within the HeritACT project.

The following buildings have been chosen for reactivation in Eleusis:

- Old Oil Mill Factory
- Iris Factory
- Oasis Former Campsite
- Cine – Eleusis
- Old Canteen

Eleusis boasts a multitude of **strengths** that make it a vital cornerstone of our cultural landscape. Owned and operated by the Ministry of Environment, its presence is not only multifunctional but also deeply rooted in the preservation and promotion of its intangible cultural heritage. Its spacious venues offer a large capacity, accommodating a wide range of activities, from art exhibitions to live performances. What truly sets it apart is its unique ability to serve as a unifying force, as it is conveniently located in close proximity to various other cultural and recreational destinations, forming a cohesive network that fosters the exchange of ideas and artistic expression. This vibrant city is further enriched by the active presence of cultural associations, which contribute to its dynamic atmosphere and outreach. With its diverse offerings and accessibility, it consistently succeeds in drawing in audiences of all backgrounds, reflecting its status as a true cultural nexus in our community.

Despite its numerous strengths, Eleusis also faces several **challenges** that warrant attention and improvement. One of the primary challenges lies in navigating political intricacies, which can sometimes hinder the smooth operation and development of the city. Coordination poses another hurdle, as the city comprises multiple locations with varying

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needs, necessitating more streamlined communication and planning. Inconsistent funding sources can lead to financial uncertainties, affecting the sustainability of its initiatives and events, occasionally resulting in periods of discontinuous operation. Furthermore, there's a pressing need for enhanced infrastructure to support the city's diverse activities effectively. Accessibility is a concern, especially for visitors traveling from Athens, as transportation options may be limited. Additionally, the city grapples with a shortage of available cultural spaces, which can restrict the variety of activities it can host simultaneously. Recognizing and addressing these weaknesses is crucial to ensuring that Eleusis continues to thrive and serve as a vital cultural resource for the community.

Eleusis holds significant potential for capitalizing on a range of **opportunities** that can further enhance its impact and reach. Firstly, there is the exciting prospect of contributing to environmental improvements and the well-being of the community, aligning with contemporary sustainability goals and promoting a harmonious relationship between culture and nature. Moreover, the city has the unique advantage of utilizing the rich intangible history associated with its spaces, allowing for the creation of engaging narratives and experiences that connect the past with the present. The industrial heritage of Eleusis' locations presents an opportunity to develop best practices in heritage preservation and interpretation, setting a standard for similar sites globally. Additionally, exploring partnerships with industries, especially those that share a vested interest in culture and heritage, could serve as a valuable source of funding, ensuring the sustainability of the city's operations. As the European Capital of Culture (ECoC) legacy evolves, Eleusis can actively contribute to and benefit from this evolution, solidifying its place as a regional cultural powerhouse. Perhaps most promising is the opportunity to establish fully operational cultural spaces within Eleusis, addressing the current limitations and expanding the range of activities and programs it can offer to the community. Embracing these opportunities can further elevate Eleusis' significance and impact, solidifying its role as a dynamic and transformative force in our cultural landscape.

While Eleusis stands poised for growth and development, it faces certain **threats** that must be navigated to ensure its continued success. Political obstacles remain a persistent concern, potentially leading to bureaucratic challenges that can impede its initiatives and expansion. A more immediate threat lies in the risk of underutilization stemming from a lack of community interest, which could undermine the city's mission and relevance. The limited accessibility to the city, especially during times of transportation disruptions, poses a considerable threat, as it could deter potential visitors and hinder the realization of its full potential. The broader financial challenges faced by Cultural and Creative Industries (CCIs) could also adversely impact the city's operations and sustainability. Climate change presents a dual threat, with increased temperatures potentially impacting the comfort of visitors and performers, particularly in outdoor spaces. Additionally, unpredictable weather conditions can affect the usability of these outdoor areas, potentially disrupting planned events and programming. Addressing these threats requires proactive planning, community engagement, and a commitment to adapt and evolve in the face of changing circumstances, ensuring that Eleusis remains resilient and vital to our cultural landscape.

Baseline Condition

Pilot Buildings

Old Oil Mill Factory
Iris Factory
Oasis Former Campsite
Cine Eleusis
Old Canteen

STRENGTHS
- Presence of multifunctional spaces.
- Ownership by the Ministry of Environment.
- Proximity of locations.
- Large capacity of spaces.
- Connection to intangible cultural heritage.
- Existence of active cultural associations.
- Ability to attract diverse audiences

WEAKNESSES
- Political Challenges
- Coordination issues(multiple locations & needs)
- Inconsistent funding.
- Lack of continuous operation
- Insufficient infrastructure
- Accessibility challenges from Athens.
- Limited availability of cultural spaces.

OPPORTUNITIES
- Potential for improving environmental conditions & well-being.
- Utilisation of the intangible history associated with the spaces.
- Leveraging industrial heritage to develop best practices.
- Possibility of industries serving as funders.
- Evolution of the ECoC legacy.
- Establishment of fully operational cultural spaces.

THREATS
- Political obstacles.
- Lack of interest leading to underutilization.
- Limited accessibility to the city.
- General financing challenges for CCIs
- Impact of the climate crisis,
- Weather conditions affecting the usability of outdoor spaces.

Figure 10 - Eleusis Pilot Site Baseline Condition – Buildings and SWOT

The Fishbone Diagram created in Deliverable D2.2 revealed a crucial core problem/challenge at the heart of Eleusis operations: **"Governance of spaces over time".** This central challenge is influenced by several key causes, which, when addressed, can significantly enhance the city's effectiveness and sustainability. One critical aspect contributing to this challenge is the source of funds. The city relies on a mix of funding sources, including regional and local budgets, as well as external sponsors. However, these sources often operate on different timelines and have varying levels of commitment. The time window of funding, in particular, can be limited, making it challenging to plan for the city's long-term sustainability effectively. Budget allocation is another cause that warrants attention. The allocation of funds to different aspects of the Eleusis' operations lacks a structured assessment process, often missing a well-defined business plan. This absence of a clear financial strategy can lead to inefficiencies and mismanagement of resources. Additionally, the city encounters difficulties in harmonizing the support it receives from sponsors. These sponsors tend to support re-activations individually, potentially leading to fragmented efforts and a lack of cohesive planning. Lastly, the challenge is compounded by different stakeholders having varying definitions of priorities, making it essential to establish a unified vision for the city's governance. Addressing these root causes will be instrumental in optimizing the governance of spaces over time and ensuring the long-term success of Eleusis. The governance model for this city presents a complex landscape with various elements that can be both advantageous and challenging. Public ownership of the

buildings offers stability and a strong foundation for its operations, as it ensures long-term control and commitment to its mission. However, several issues need attention and improvement within this model.

Another notable challenge is the lack of sufficient staff to manage and oversee the city's day-to-day activities effectively. Adequate staffing is crucial for program development, maintenance, and the provision of quality services to visitors and artists. Continuous assessment of the use of the buildings is a positive aspect of the governance model, allowing for flexibility and adaptation to changing needs and priorities. However, the presence of endless procedures can hamper efficiency and decision-making, potentially hindering the city's ability to respond quickly to emerging opportunities or challenges. A significant area for improvement lies in the lack of a clear, overarching strategy, both for the city as a whole and for individual buildings or spaces within it. Developing a holistic strategic plan can provide direction and coherence to the city's operations, aligning them with its long-term goals and objectives. **In summary, while the public ownership of buildings provides a strong foundation, the governance model of Eleusis faces challenges related to staffing, bureaucratic procedures, and the need for comprehensive strategic planning. Addressing these issues can lead to a more efficient, dynamic, and impactful cultural city.**

An important component that contributes to the aforementioned problem is the number of buildings within Eleusis, which not only presents opportunities but also brings about complexities that are instrumental in shaping its holistic development. Selective top-down renovations in certain buildings can serve as focal points for rejuvenating the city, acting as cultural magnets that attract both visitors and artists while setting high standards for aesthetics and functionality. Furthermore, the urban development process necessitates meticulous coordination and planning, especially given the multiplicity of buildings; a well-managed transition can seamlessly integrate Eleusis into its surrounding urban landscape, bolstering its accessibility and allure. Additionally, the historical significance of many buildings offers the prospect of forging a profound connection to the city's heritage, evoking a sense of cultural continuity and authenticity. The emergence of new neighbourhoods around specific buildings provides a unique opportunity to engage a fresh audience, calling for community-building initiatives that enrich the local impact. Building a sense of community within these burgeoning neighbourhoods is pivotal, with social and cultural events, outreach programs, and partnerships with local businesses fostering a strong sense of belonging and support. Lastly, prudent budget allocation appears to make the problem more apparent. Incorporating these considerations into the management and development of Eleusis' numerous buildings can contribute to a more vibrant, inclusive, and impactful cultural space that resonates with both local residents and visitors from afar.

Discussions during the Workshops held for Work Package 2, have generated a comprehensive set of potential solutions aimed at addressing the identified challenges and fortifying the city. These proposed remedies span a spectrum of governance, engagement, funding, and technological aspects. To foster a sense of community, initiatives should be implemented to engage and recognize new residents, welcoming them into the city's cultural tapestry. Simultaneously, updating the business plan for the spaces is essential, ensuring a clear roadmap for financial strategies, resource allocation, and long-term sustainability, ultimately optimizing resource utilization. Diversifying funding sources is

crucial, including seeking European funding in conjunction with national and regional support, offering a robust financial backbone to the city and facilitating its multifaceted initiatives. Building a collaborative environment by fostering connections with a wide range of stakeholders, encompassing government entities, cultural organizations, and local businesses, can harness collective resources and expertise. Bolstering the city's workforce by hiring new staff with specialized skills can enhance operational efficiency and coordination. Simultaneously, collaboration among various organizations within the cultural and creative sectors can create synergies, mitigating redundant efforts and amplifying overall impact. Maintaining community engagement through bottom-up procedures and methodologies ensures that residents' voices remain central to decision-making, reinforcing the city's responsiveness to evolving needs and aspirations. Additionally, building upon the European Capital of Culture (ECoC) legacy requires continuous innovation, expanding the city's offerings to stay relevant and inspirational. The integration of virtual reality (VR) and augmented reality (AR) technologies into the Eleusis solutions can make cultural activities more immersive and accessible, enhancing the visitor experience. Moreover, forging partnerships with a diverse array of stakeholders, including businesses, underrepresented communities, youth and senior groups, event organizers, tourism providers, charities, and educational institutions, can extend the reach and inclusivity of the city ensuring it serves as a vibrant and sustainable cultural nucleus. Collectively, these multifaceted solutions lay the foundation for a robust, adaptable, and impactful Cultural Hub in Eleusis.

The vision/mission statement for Eleusis was revised as follows at the completion of the stakeholder needs analysis framework in D2.2: **"Develop an effective governance model for reactivated spaces within the HeritACT Project."**

The recommendations put forth here signify a well-thought-out strategic approach designed to confront the challenges that have been identified in Eleusis, while simultaneously tapping into the inherent strengths and untapped potential of this unique cultural landscape. These recommendations are not isolated endeavours but the result of a collaborative effort involving dedicated partners who are committed to forging a vibrant and sustainable cultural milieu within the municipality. This shared vision places a paramount emphasis on community engagement, recognizing that the active participation of local residents and stakeholders is fundamental to the success and longevity of the city. It also highlights the importance of innovative funding strategies, recognizing that securing financial support from various sources, including European funding, is pivotal for sustaining the city's diverse initiatives. Collaborative initiatives and strategic partnerships are also central to this approach, as they can amplify the city's impact by pooling resources, knowledge, and expertise. Aligned with the overarching goal of the Eleusis pilot, which is to establish a reliable and efficient governance structure for the revitalized spaces, the updated vision and mission statement serve as a compass guiding the initiative. Governance emerges as a critical linchpin in this endeavour, as it provides the necessary framework for decision-making, resource allocation, and coordination. The renewed vision and mission statement underscore the significance of developing a robust governance framework tailored to the unique needs of Eleusis. This framework will be instrumental in aligning the project's objectives with the broader goals of the HeritACT Project, ensuring cohesion and synergy in cultural revitalization efforts across Europe.

Ultimately, these collective endeavours, grounded in community engagement, innovative financing, collaboration, and effective governance, aim to create a dynamic, inclusive, and enduring cultural hub in Eleusis. The goal is to establish a cultural epicentre that not only thrives but also resonates deeply with the essence and heritage of this remarkable municipality, becoming a source of pride and inspiration for all its residents and visitors.

Baseline Condition

Core problem/challenge : "Governance of spaces over time."

Source of funds	Governance model	Number of buildings:
Time window of funding.	Public ownership of the buildings.	Top-down renovation in some buildings.
Regional and local budgets.	Lack of staff.	Transition of the urban development process.
Budget allocation.	Continuous assessment of the use of the buildings.	Context of historic development.
Lack of assessment for budget allocation (no business plan).	Time and effort consuming procedures	Buildings now surrounded by new neighbourhoods.
Sponsors supporting re-activations individually.	Stable financial funding for the re-activation over time.	Creating a sense of community in the new neighbourhoods around the buildings.
Different stakeholders defining priorities.	Lack of strategy (overall and individual).	Budget allocation.

Mitigation Measures

Community recognition and engagement activities for new residents.
Updating the business plan for the spaces.
Seeking European funding as an addition to national/regional funding.
Building a collaborative environment and creating connections with different stakeholders.
Employing new staff.
Collaboration among different organisations to optimise efforts.
Keeping bottom-up procedures through community engagement methodologies.
Evolving the European Capital of Culture (ECoC) legacy.
Utilising virtual reality (VR) and augmented reality (AR) technologies to enhance the solutions.
Forming partnerships with businesses, underrepresented communities, youth/senior groups, event organisers, tourism providers, charities, and educational institutions.

Figure 11 - - Eleusis Pilot Site Baseline Condition – Main challenge and Mitigation Measures

2.2.5 Conclusion

In the realm of cultural revitalization, preservation, and development, Greece unveils a comprehensive and forward-thinking strategy that transcends boundaries and embraces the rich tapestry of its heritage. At its core, these recommendations reflect a resolute commitment to preserving and celebrating the nation's cultural legacy while fostering innovation, community engagement, and economic prosperity. Eleusis, in particular, emerges as a microcosm of this vision, where a collaborative effort among dedicated partners seeks to confront challenges and harness inherent strengths. Community engagement takes centre stage, recognizing that the active participation of local residents and stakeholders is fundamental to shaping the Eleusina's cultural identity and ensuring its success. The cultivation of innovative funding strategies, including the exploration of

European funding opportunities, is emphasized as essential for sustaining the city's diverse initiatives, ultimately securing their long-term viability. Effective governance is identified as a linchpin in this cultural journey, with the updated vision and mission statement serving as a guiding compass. The partners are resolutely dedicated not only to revitalizing but also effectively managing the reactivated buildings and sites, with governance providing the necessary framework for sound decision-making and coordination. Furthermore, these collective endeavours aim to **cultivate a dynamic, inclusive, and enduring cultural hub in Eleusis, one deeply rooted in the municipality's heritage and aspirations, resonating as a source of pride and inspiration for all its residents and visitors.**

2.3 Milan

2.3.1 Innovative Concept

In the realm of innovative approaches to environmental sustainability and community development, several transformative ideas stand out for the city of Milan. The concept of **Green Tensegrity Installation** for climate adaptation represents not just a physical structure but a symbol of resilience and adaptation in the face of climate change. These installations, characterized by their intricate balance of tension and compression, not only serve as striking architectural landmarks but also play a functional role in climate adaptation. The **digitally fabricated vegetable garden**, designed for local education and capacity building, goes beyond traditional gardening. It leverages digital technology to empower communities with knowledge and skills related to sustainable agriculture. This garden becomes an interactive classroom, fostering a deeper connection between people and the environment while simultaneously addressing local food security and sustainability. Moreover, the **reactivation of open spaces through Nature-Based Solutions (NBS)** not only enhances the quality of urban experiences but also promotes biodiversity. This approach recognizes that cities can be hubs of both culture and nature, with green spaces serving as essential connectors between the two. Lastly, the **integration of Augmented Reality (AR)** into human-space interaction is a groundbreaking step in enhancing memorization and interconnectivity within urban environments. By overlaying digital information onto physical spaces, AR creates a dynamic, informative, and interactive landscape. It not only aids in education and information dissemination but also fosters a sense of connection between people, their surroundings, and the cultural and historical narratives embedded in the built environment.

These innovative concepts collectively represent a holistic approach to urban development of Milan, one that prioritizes sustainability, education, biodiversity, and cultural enrichment. They illustrate how thoughtful design and technological integration can create resilient, vibrant, and interconnected communities in an era where environmental challenges and urbanization are on the rise.

Innovative Concepts	
Green Tensegrity Installations	Not just a physical structure but a symbol of resilience and adaptation in the face of climate change
Digitally fabricated vegetable garden	Leverages digital technology to empower communities with knowledge and skills related to sustainable agriculture
Reactivation of open spaces through NBS	Enhances the quality of urban experiences but also promotes biodiversity
Integration of AR into human-space interaction	Step in enhancing memorization and interconnectivity within urban environments

Figure 12 - Milan Pilot Site Innovative Concepts

2.3.2 National level

At the core of Milan's advanced approach to landscape management is a **multidimensional strategy that promotes methods for coping with the complexity of the surrounding environment.** This approach seeks to simplify the **complexities of the landscape**, acknowledging that the intricacies of terrain, ecosystems, and human interaction require innovative and adaptable strategies for preservation and development. Moreover, it emphasizes the **pivotal role of education and training** in cultivating an enduring culture and knowledge base centred around the landscape. This educational aspect ensures that both current and future generations possess the tools and insights necessary to understand, appreciate, and responsibly preserve the environment. Simultaneously, this approach recognizes the **landscape as more than just a picturesque backdrop but as a dynamic instrument of cohesion, legality, sustainable development**, and well-being, extending its influence to economic prosperity. It underscores that fostering the health and vitality of the landscapes transcends aesthetic considerations; it encompasses legal frameworks, sustainable practices, and economic opportunities. By protecting and enhancing the landscape, we not only preserve natural beauty but also fortify the foundations of communities, ensuring they thrive both in ecological harmony and economic stability. In essence, this holistic perspective on landscape management underscores its significance as an integral component of our collective well-being, sustainability, and progress.

National Level Priorities
Multidimensional strategy that promotes methods for coping with the complexity of the surrounding environment
Acknowledging that the intricacies of terrain, ecosystems, and human interaction require innovative and adaptable strategies for preservation and development
Pivotal role of education and training in cultivating an enduring culture and knowledge base centered around the landscape
Recognizes the landscape as more than just a picturesque backdrop but as a dynamic instrument of cohesion, legality, sustainable development, and well-being

Figure 13 - Milan Pilot Site National Level Priorities

2.3.3 Local Level

The overall approach to rural development encompasses a series of interconnected strategies aimed at **harnessing the full potential of agricultural areas in Milan**. These strategies include the promotion of integrated projects that **leverage agricultural spaces for multiple uses**, fostering their revitalization and enriching the municipal green system and provincial green networks. Furthermore, the **evaluation of historical-testimonial rural building heritage of the city** underscores its significance in the context of sustainable tourism and fruitful utilization. These initiatives align with policies and programs geared towards agro-environmental measures, emphasizing the multifaceted potential of rural spaces, considering landscape, environmental, and productive aspects. This multifunctional approach not only revitalizes historical roots of Milan, but also promotes sustainable tourism, resolves settlement challenges, establishes a robust green network, and introduces landscape enjoyment routes, fostering both economic growth and cultural preservation. Additionally, **the adoption of Nature-Based Solutions (NBS)** assumes a central role in achieving hydrological rebalancing of the Metropolitan City. These solutions extend their impact to the regulation of microclimates and mitigation of heat islands, creating more resilient urban environments. NBS, in conjunction with Green and Blue Infrastructure (GBI), are instrumental in the reorganization of settlement margins and peri-urban open spaces, contributing to urban development that prioritizes sustainability and climate resilience. The agricultural front underscores the importance of competitiveness in the market and equitable incomes for farmers. This not only bolsters the agricultural sector of the city but also safeguards soils, surface, and groundwater from pollution, preserving their natural fertility. Moreover, a concerted effort is made to **conserve fauna, flora, and ecosystems unique to the park area**, including the identification of ecological corridors and the extensive use of native species.

These actions underscore a commitment to ecological sustainability and the protection of natural assets, ensuring that rural areas of Milan thrive as vibrant, productive, and environmentally responsible landscapes.

Local Level Priorities

Series of interconnected strategies aimed at harnessing the full potential of agricultural areas in Milan

Promotion of integrated projects that leverage agricultural spaces for multiple uses, fostering their revitalization and enriching the municipal green system and provincial green networks

Evaluation of historical-testimonial rural building heritage of the city underscores its significance in the context of sustainable tourism and fruitful utilization

Adoption of Nature-Based Solutions (NBS) assumes a central role in achieving hydrological rebalancing of the Metropolitan City. These solutions extend their impact to the regulation of microclimates and mitigation of heat islands, creating more resilient urban environments.

Conserve fauna, flora, and ecosystems unique to the park area, including the identification of ecological corridors and the extensive use of native species

Figure 14 - Milan Pilot Site Local Level Priorities

2.3.4 Baseline Condition

As stated previously, the workshop conducted within WP2 promoted an enhanced and inclusive approach acted as a catalyst for improving knowledge of the pilot's situation. A detailed analysis concerning key-aspects for the city of Milan is presented.

The buildings selected for reactivation in Milan are:

- Cascina Sant'Ambrogio.
- Cascina Linterno.

The **strengths** of the city of Milan encompass a range of assets that contribute to its vibrancy and sustainability. Firstly, the presence of active and running businesses stands as a pillar of economic resilience. These businesses not only generate revenue but also provide employment opportunities for local residents, bolstering the local economy of the city. Furthermore, Milan boasts a diverse range of activities, spanning education, farming, and social cohesion initiatives. Education programs and farming activities not only impart knowledge but also promote a culture of learning, fostering intellectual growth within the community. Lastly, the emphasis on social cohesion initiatives underscores the city's role in fostering a sense of belonging and unity among community members. These multifaceted activities collectively create a dynamic and inclusive environment, where economic, educational, agricultural, and social facets converge to build a resilient and harmonious community in Milan.

The **weaknesses** within Mialn reveal areas in need of attention and improvement to maximize its potential. One notable challenge is the deficiency of resources, encompassing limitations in terms of time, budget, and skills. A shortage of time can impede the implementation of comprehensive plans and initiatives, while a restricted budget limits the capacity to invest in necessary improvements and expansions. Additionally, the scarcity of specific skills or expertise can hinder the city's ability to execute certain projects or activities effectively. Furthermore, accessibility challenges within the sites and neighbourhoods present an obstacle to the city's inclusivity and reach. Physical barriers or inadequate transportation options can restrict access for community members, limiting their participation in educational, agricultural, and social activities. These accessibility challenges can result in certain segments of the population being excluded from the benefits and opportunities that Milan offers. Addressing these weaknesses through strategic planning, resource allocation, and infrastructure improvements is essential to unlocking the city's full potential and ensuring it serves as an equitable and accessible community resource.

Milan is poised to leverage several promising **opportunities** that can further enhance its impact and reach. One significant opportunity lies in the city's established collaborations and the potential for future partnerships. Existing collaborations demonstrate a commitment to working together with like-minded organizations and entities, fostering a sense of community and shared purpose. Additionally, the potential for future collaborations holds the promise of forging new connections and alliances, which can lead to innovative projects and initiatives that benefit the community. Moreover, the city stands to benefit from the growing interest in the role and activities of Cascine, historic agricultural estates. This burgeoning interest not only highlights the cultural and historical

significance of these estates but also presents an opportunity to showcase their relevance in contemporary society. Cascine can serve as living testaments to sustainable agriculture, biodiversity conservation, and educational activities. As interest in these aspects continues to grow, the city can position itself as a valuable resource and partner in initiatives related to Cascine, further solidifying its role as a hub of community engagement and environmental stewardship. These opportunities align with the city's mission to foster growth, inclusivity, and sustainability within the community, ensuring a brighter future for all involved.

There are several potential **threats** that necessitate careful consideration. One significant threat is the persistence of accessibility issues, both within the sites and the surrounding neighbourhoods of Milan. Additionally, bureaucracy and the protected status of the buildings pose a threat to the city's development and adaptability. The presence of bureaucratic hurdles can slow down decision-making processes and hinder the implementation of innovative projects or renovations. Moreover, the protected status of the buildings of Milan, while essential for preserving cultural heritage, can impose restrictions that may limit the city's ability to make necessary modifications or improvements. Striking a balance between preservation and adaptability is a key challenge. Furthermore, the availability and openness of potential stakeholders represent another threat. Milan relies on the engagement and support of various stakeholders, including local authorities, businesses, and community members. Any reluctance or lack of commitment from these stakeholders can slow down progress and limit the city's ability to mobilize resources and expertise. Mitigating these threats requires a strategic approach that addresses accessibility issues, streamlines bureaucratic processes, and fosters open and collaborative relationships with stakeholders. By proactively addressing these challenges, Milan can safeguard its mission and continue to thrive as a dynamic and inclusive community resource.

Figure 15 - Milan Pilot Site Baseline Condition – Buildings and SWOT

The primary challenge of Milan was identified by the Fishbone Diagram developed in Deliverable D2.2: **"How might we realise the potential of the Cascine for social and ecological benefits (attractiveness and sustainability)."**

The challenge at hand, centred around optimizing the Cascine's potential, is intricately woven with a set of underlying causes that warrant an extensive approach. Firstly, the constraint of limited time availability emerges as a significant hurdle, hindering the realization of the Cascine's full potential. Simultaneously, the Cascine grapples with a shortage of human resources, both in terms of personnel and specific skill sets. This scarcity of dedicated personnel and specialized skills, particularly in areas like communication and event planning, hampers the execution of activities that complement the core mission and hinder the establishment and management of collaborations with external stakeholders. Budgetary constraints add another layer of complexity, as maintaining the Cascine demands substantial financial investment, while simultaneously requiring the organization of financially sustainable activities to support its operations. This financial balancing act poses inherent challenges, necessitating creative funding strategies and resource allocation. Lastly, bureaucracy and administrative processes emerge as formidable barriers, entailing red tape that can impede progress and decision-making. Overcoming these administrative hurdles requires a nuanced approach that streamlines processes without compromising the integrity of the Cascine's operations.

The challenge associated with integrating digital technologies into the Cascine is intertwined with several key factors that require careful consideration. There is a prevalent fear or resistance within the Cascine community towards adopting digital technologies. This hesitancy may be driven by concerns about the complexity of digital tools, issues related to privacy, or simply a lack of familiarity with such technologies. Simultaneously, there is a generational gap, leading to differing perspectives and preferences among various age groups within the Cascine community. These differences can result in disparities in how readily and effectively digital resources are embraced and utilized by different segments of the community. Furthermore, an additional layer of complexity arises from the inadequacy or inefficiency of communication and storytelling strategies employed to showcase the Cascine's potential. The challenge lies in effectively conveying the value and opportunities offered by the Cascine, and the current communication strategies may fall short in engaging both the community and external stakeholders effectively. These approaches should resonate with individuals of diverse age groups and alleviate concerns or reservations regarding the adoption of digital technologies within the Cascine.

Accessibility within the Cascine encompasses a multifaceted challenge that requires a holistic approach for resolution. There are notable challenges related to onsite and site-specific access, involving difficulties in navigating and moving within the Cascine area. This encompasses issues such as uneven terrain or inadequate pathways, which can impede the movement of visitors. Additionally, the availability of parking spaces poses a challenge, with insufficient or inconvenient facilities for visitors contributing to accessibility issues. Furthermore, the Cascine faces limitations in terms of pedestrian and bike mobility infrastructure both within and around its boundaries. Moreover, essential services such as shops and public transport options are insufficiently available around the Cascine, limiting the convenience and amenities accessible to visitors. Lastly, the area struggles with difficulties relating to navigation and signage, with insufficient information and guidance for visitors. This can lead to confusion and difficulties in locating specific areas or points of interest within the Cascine.

The Cascine area faces distinctive challenges rooted in its physical conditions and the broader context in which it operates. There is a dual-edged aspect to the recent surge in interest and attention directed towards the Cascine. While this newfound enthusiasm holds the potential to bolster its development, managing and harnessing this interest effectively requires a finely-tuned and strategic approach. Additionally, the impact of heatwaves on the usability of outdoor spaces within the Cascine presents a noteworthy concern. Extreme heat conditions can curtail the practicality and comfort of outdoor areas, potentially affecting the quality of visitor experiences and their ability to engage in various activities. Furthermore, the Cascine strugles with a deficiency in coordination among the different entities and stakeholders connected to its development and functioning. This lack of synergy and collaboration among these parties can lead to fragmented efforts and missed opportunities for collective progress.

A spectrum of innovative strategies surfaced as potential solutions to overcome identified challenges in the city of Milan, as noted in the deliverable D2.2. A design thinking approach was proposed, with a focus on actively engaging communities in the Cascine's development and revitalization. This methodology fosters collaboration, empathy, and co-creation, ensuring that the offerings and activities within the Cascine align with the community's desires while remaining feasible and economically viable. Additionally, there is an emphasis on defining offerings that are desirable, feasible, and economically viable through holistic research, stakeholder input, and a deep understanding of the target audience's needs. Moreover, building and reinforcing collaborations among diverse stakeholders, including community organizations, local businesses, government entities, and non-profit organizations, are seen as critical. These partnerships promote stakeholder engagement and collective efforts toward the Cascine's development and sustainable management. Lastly, the approach underscores experimentation and testing of activities, programs, and initiatives within the Cascine. By piloting and iteratively evaluating these endeavors, valuable insights can be gleaned, sustainable strategies can be identified, and successful approaches can be scaled up for broader impact, ensuring the Cascine's continued vibrancy and relevance.

The vision/mission statement for Milan was modified at the conclusion of the stakeholder requirement analysis framework to **"...establish a network of resilient and community hubs to deliver social and ecological benefits to local communities...through feasible, desirable, and viable solutions* * Both for the targets and the sites' manager."**

The proposed strategies for Milan's Cascine represent an extensive approach to addressing the challenges that have impeded the realization of the area's full potential. By actively engaging with these solutions, Milan can overcome the hurdles that have hindered the Cascine's ability to provide both social and ecological benefits to the community. These strategic approaches are built upon core principles such as community engagement, collaboration, and experimentation. These principles are essential in reinvigorating and sustaining the Cascina area. The redefined vision and mission statement serve as guiding principles for the entire endeavor. They emphasize not only the creation of hubs that offer social and ecological benefits but also the importance of making these initiatives practical and attractive while ensuring their economic viability. This holistic approach considers the needs of both the local communities and site managers, fostering a spirit of cooperation and sustainability.

Baseline Condition

Core problem/challenge : "How might we realise the potential of the Cascine for social and ecological benefits (attractiveness and sustainability)."			
Resources	**Figure & narrative**	**Accessibility**	**Physical conditions & context**
Time	Fear for the digital	Onsite and to the sites	Recent interest in the Cascine
Human resources	Generational gap	Parking space	Heatwaves
Budget	Storytelling and communication strategy	Pedestrian or bike paths	Lack of coordination between entities
Bureaucracy		Services around Cascine	
		Signage	

Mitigation Measures
Design thinking approach to engage communities
Defining desirable, feasible, and viable offerings
Reinforcing and building collaborations
Experimentation and testing activities

Figure 16 - Milan Pilot Site Baseline Condition – Main challenge and Mitigation Measures

2.3.5 Conclusion

This multifaceted approach to rural development encompasses strategies to harness the full potential of agricultural areas. It involves integrated projects for multiple uses of agricultural spaces, revitalizing green networks, evaluating historical heritage for sustainable tourism, and embracing agro-environmental measures. Nature-Based Solutions (NBS) play a central role in achieving hydrological rebalancing and mitigating climate-related challenges, while high-quality agricultural production safeguards soil and water resources. Conservation of fauna, flora, and ecosystems of Milan underscores a commitment to ecological sustainability. In essence, this overall management approach recognizes the interplay of ecological, economic, and cultural factors in fostering vibrant, productive, and environmentally responsible spaces in Milan. Ultimately, the goal is to transform the Cascine into a dynamic and inclusive asset, promoting social well-being, ecological health, and collaboration among all stakeholders involved. This holistic strategy aims to breathe new life into Milan's Cascine and make it a vibrant and enduring centerpiece for the community.

2.4 Ballina

2.4.1 Innovative Concept

The proposed initiatives for the city of Ballina encompass a diverse range of creative endeavours aimed at revitalizing urban spaces and fostering community engagement. A **small-scale pavilion structure** serves as a versatile and adaptable focal point, offering a dynamic space for various activities and events, such as cultural exhibitions, community gatherings, and educational programs. Concurrently, the **digitally fabricated vegetable garden** represents a harmonious blend of technology and sustainability, not only providing a source of fresh produce but also serving as a hands-on learning platform for local residents, promoting self-sufficiency and environmental consciousness. **Temporary structures crafted from recycled materials** contribute to sustainable practices and offer flexible spaces for pop-up shops, art installations, and interactive exhibits, adding vibrancy

and versatility to the urban landscape of Ballina. The **reactivation of open spaces through Nature-Based Solutions** (NBS) exemplifies an innovative approach to urban planning, creating green oases that enhance biodiversity, mitigate environmental challenges, and provide recreational opportunities in the city. **Projection mapping on kinetic surfaces and augmented reality** (AR) enriched human-space interaction introduce immersive and interactive elements to the urban environment, transcending traditional notions of public spaces. These technologies have the potential to transform mundane spaces into captivating and educational hubs, offering visual storytelling, historical context, and a deeper connection to the urban surroundings. Collectively, these initiatives represent a forward-thinking approach to urban revitalization of Ballina, where creativity, sustainability, and technology converge to create dynamic, inclusive, and engaging urban spaces that reflect the evolving needs and aspirations of the community.

Innovative Concepts	
Small-scale pavilion structure	Serves as a versatile and adaptable focal point, offering a dynamic space for various activities and events
Digitally fabricated vegetable garden	Harmonious blend of technology and sustainability, not only providing a source of fresh produce but also serving as a hands-on learning platform for local residents, promoting self-sufficiency and environmental consciousness
Temporary structures crafted from recycled materials	Contribute to sustainable practices and offer flexible spaces for pop-up shops, art installations, and interactive exhibits, adding vibrancy and versatility to the urban landscape of Ballina
Reactivation of open spaces through NBS	Innovative approach to urban planning, creating green oases that enhance biodiversity, mitigate environmental challenges, and provide recreational opportunities in the city
Projection mapping on kinetic surfaces & AR	Introduce immersive and interactive elements to the urban environment, transcending traditional notions of public spaces.

Figure 17 - Ballina Pilot Site Innovative Concepts

2.4.2 National Level

The ambitious vision outlined here aims to address multiple facets of Ireland's future development and sustainability. Firstly, the goal of creating an additional 660,000 jobs by 2040 represents a significant economic aspiration. **Achieving full employment** would not only bolster the country's economic stability but also enhance the overall quality of life for its citizens. Simultaneously, the need for 550,000 more homes is indicative of a proactive approach to housing, recognizing the importance of adequate and **affordable housing for the growing population**. Furthermore, the objective of **enabling people to live closer to their workplaces** addresses a critical issue of sustainability. By reducing the necessity for long and unsustainable commutes, Ireland can alleviate the associated environmental, infrastructural, and social challenges. This shift towards more localized living patterns contributes to a more eco-friendly and balanced lifestyle. The goal of **regenerating rural Ireland** while promoting environmentally sustainable growth patterns is pivotal for achieving a harmonious and ecologically responsible future. This approach recognizes the

value of rural communities and the importance of equitable development across the country. Moreover, planning for a **better distribution of regional growth**, both in terms of jobs and prosperity, is a step towards achieving a more balanced and equitable society. This approach aims to reduce regional disparities and ensure that opportunities for economic advancement are accessible across the nation. The **transformative potential of imaginative urban regeneration** is a key element of this vision. Revitalizing cities, towns, and villages not only rejuvenates their cultural and social fabric but also attracts businesses and investments. This urban renewal strategy brings life and job opportunities back to urban areas, fostering dynamic and thriving communities. Lastly, the **coordination of infrastructure and services delivery**, along with growth management, is essential for achieving a sustainable and efficient future. The National Planning Framework, the National Investment Plan, and consistent sectoral plans are invaluable tools for ensuring that development aligns with infrastructure and service provision, mitigating issues related to congestion and improving overall quality of life.

In summary, this multifaceted vision represents a holistic strategy to Ireland's future development, encompassing economic prosperity, sustainable living, rural revitalization, regional equity, urban renewal, and efficient governance. These ambitious goals acknowledge the challenges and opportunities that lie ahead and provide a roadmap for a more inclusive, sustainable, and vibrant future for Ireland and its citizens.

National Level Priorities

Goal of creating an additional 660,000 jobs by 2040

Adequate and affordable housing for the growing population

Enabling people to live closer to their workplaces

Regenerating rural Ireland while promoting environmentally sustainable growth patterns

Planning for a better distribution of regional growth, both in terms of jobs and prosperity

Coordination of infrastructure and services delivery, along with growth management

Figure 18 - Ballina Pilot Site National Level Priorities

2.4.3 Local Level

The goals listed below offer an extensive outlook for the future growth, sustainability, and standard of living of Ireland. First and foremost, **addressing population growth** is a fundamental challenge. By **planning for sustainable growth and balanced regional development**, Ireland can manage its increasing population while ensuring that resources and opportunities are equitably distributed. **Improving the quality of life** for citizens and communities is a core aspiration. Employment and investment play a vital component in achieving this goal**. Creating job opportunities and attracting investments** contribute not only to economic prosperity but also to stronger and more resilient communities.

Prioritizing a low carbon and climate-resilient county reflects Ireland's commitment to environmental sustainability. Also, **mitigating climate change** impacts and adapting to a changing climate are critical imperatives, where sustainable communities that are eco-friendly and resilient is key to this effort. **Inclusivity** is another guiding principle, emphasizing that no one should be left behind. An inclusive society ensures that all citizens have access to opportunities, services, and resources, promoting social equity and cohesion**. Preserving Ireland's unique landscapes, heritage, and biodiversity is essential for future generations**. This commitment extends to supporting rural areas, recognizing their significance and potential in sustainable development. The incorporation of **ecological impact assessments**, appropriate assessments, strategic environmental assessments, and strategic flood risk assessments demonstrates a commitment to responsible planning and development. These assessments ensure that environmental considerations are integrated into decision-making processes. Aligning with national and regional objectives is crucial for harmonious and coordinated development. This strategic alignment fosters efficient governance and resource allocation, reducing fragmentation and inefficiency. Urban renewal and regeneration efforts are key components of the vision. Finally, integrated land use and transportation planning underpin the entire vision. Coordinated planning ensures that development is sustainable, accessible, and efficient, reducing congestion and enhancing the overall quality of life.

Local Level Priorities

Planning for sustainable growth and balanced regional development

Improving the quality of life for citizens and communities

Creating job opportunities and attracting investments

Prioritizing a low carbon and climate-resilient county

Mitigating climate change impacts and adapting to a changing climate

Inclusivity is another guiding principle, emphasizing that no one should be left behind

Preserving Ireland's unique landscapes, heritage, and biodiversity

Environmental considerations are integrated into decision-making processes

Efficient governance and resource allocation, reducing fragmentation and inefficiency

Urban renewal and regeneration efforts

Integrated land use and transportation planning

Figure 19 - Ballina Pilot Site Local Level Priorities

2.4.4 Baseline Conditions

In relation to the preservation of social, cultural, and artistic history and the integration of new communities, Ballina examines the potential of institutional buildings and sites to create scattered centers for the EU Green Deal and the NEB in Irish cities. In order to transform the lived experiences of all community members, the pilot proposes using an artist-led/culture-led urban regeneration strategy, reintroducing spaces into the community's memory and experience of the town through an interventionist approach, and demonstrating the potential of the reuse of institutional sites and buildings to foster a

sense of belonging, attachment, and inclusion while boosting social cohesion and community resilience. A crucial element in Ballina's development strategy is gaining a holistic understanding of institutional sites and buildings and their intricate connections with diverse natural and human systems. This knowledge serves as a foundation for promoting sustainability, fostering inclusivity, and enhancing overall well-being within the community.

The buildings selected for reactivation in Ballina are:

- Jackie Clarke Collection.
- Walsh Street.
- Former Ballina Garda Síochána Station.
- Ballina Presbyterian Church.
- Former Convent of the Immaculate Conception.
- Mixed Tenure.
- Saint Michael's Church.
- Ballina Methodist Church and Associated Structures.
- Former Ballina Church of Ireland National School.
- Former Orphanage/ Children's home.
- Former Manse.
- Former National School, former Convent of the Immaculate.
- Conception/ All Hallows Convent.

The **strengths** of Ballina are noteworthy and form the foundation for its continued development and revitalization. The presence of a compact, authentic historic town core holds immense potential. This core serves as the cultural and historical heart of the community, preserving the built heritage and natural elements that are essential to the city's identity. The historic fabric of the area not only provides a sense of continuity but also offers opportunities for adaptive reuse and heritage preservation, ensuring that the city's rich history remains alive and accessible to both residents and visitors. One of the key strengths lies in the active street frontages adorned with independent retailers. These vibrant, pedestrian-friendly streetscapes contribute to Ballina's character and vitality. Independent retailers add a unique charm and diversity to the area, creating a sense of place and community. Pedestrian permeability, facilitated by these active street frontages, enhances the overall accessibility and walkability of the city, promoting social interaction and economic activity. Another strength worth highlighting is the presence of engaged stakeholders and voluntary inter-generational groups. The active involvement of various stakeholders, including local residents, community organizations, and inter-generational groups, signifies a collective commitment to the city's well-being and development. These groups bring a wealth of knowledge, skills, and enthusiasm to the table, actively participating in initiatives, projects, and activities that enhance Ballina's social fabric and cultural vibrancy. In essence, these strengths underscore the unique character and potential of the urban area. The combination of historical authenticity, vibrant street life, and engaged community members sets the stage for a collaborative and inclusive approach to revitalization, where the preservation of heritage, economic vitality, and social cohesion go hand in hand. Building upon these strengths can serve as a catalyst for the city's continued growth and transformation into a dynamic and thriving community hub.

The identified **weaknesses** in the context of Ballina's development and sustainability are multifaceted and warrant detailed consideration. High vacancy levels and dereliction stand as prominent issues. These factors not only mar the visual appeal of urban and rural areas but also represent untapped potential for revitalization. Addressing dereliction through strategic urban renewal and regeneration efforts can not only enhance the aesthetics of communities but also create economic opportunities. Another critical weakness of the city is the lack of comprehensive data on the tenure and use of properties. This data gap impedes informed decision-making regarding land use, development, and housing policies. Acquiring accurate and up-to-date information on property tenure and usage is imperative for effective planning, resource allocation, and addressing housing needs. Additionally, the prevalence of car usage in transportation is a significant challenge.

Exploring the identified **opportunities** reveals promising avenues for Ballina's development and sustainability efforts. One notable opportunity lies in mapping data on vacant structures to inform revitalization efforts, systematically cataloging and analyzing these structures to identify prime candidates for urban renewal and regeneration, reducing vacancy levels, and laying the groundwork for sustainable and strategic development. Additionally, the utilization of historic structures and their surroundings for events and installations represents an exciting opportunity, breathing new life into historical landmarks, attracting visitors, fostering tourism, and stimulating economic growth. The changing landscape of work culture, with an increasing trend toward remote work and flexible arrangements, presents a unique opportunity to promote environmental and societal benefits by encouraging telecommuting and shared workspaces, reducing carbon footprints, easing traffic congestion, and creating more balanced and sustainable communities. Furthermore, Ballina can harness the potential for increasing diversity and inclusivity through community engagement, involving a broader range of voices in decision-making processes, fostering social equity and cohesion, and resulting in more inclusive and vibrant neighborhoods. These opportunities underscore the importance of strategic planning, data utilization, cultural preservation, and community involvement in Ireland's journey toward a more prosperous, sustainable, and inclusive future, paving the way for holistic development that benefits both its citizens and the environment.

The identified **threats** present significant challenges to the development and sustainability goals of Ballina. One primary threat is the ongoing dereliction and potential demolition of historic structures, erasing valuable cultural and architectural heritage and contributing to vacant spaces that detract from neighborhood appeal. Effective preservation and revitalization strategies are essential, balancing heritage preservation with modern functionality. Socio-economic stratification within communities is another threat, leading to social exclusion and unequal access to resources. Addressing this challenge necessitates equitable economic development, access to education, healthcare, and affordable housing, alongside community engagement initiatives. Lastly, the increased risk of climate-related damage to historic cores due to climate change impacts, such as flooding and extreme weather events, threatens both infrastructure and cultural significance.

Baseline Condition

Pilot Buildings

Jackie Clarke Collection	Ballina Methodist Church and Associated Structures
Walsh Street	Former Ballina Church of Ireland National School
Former Ballina Garda Síochána Station	Former Orphanage/ Children's home
Ballina Presbyterian Church	Former Manse
Former Convent of the Immaculate Conception	Former National School, former Convent of the Immaculate Conception/ All Hallows Convent
Mixed Tenure	
Saint Michael's Church	

STRENGTHS

Compact authentic historic town core with built and natural heritage.

Active street frontages with independent retailers and pedestrian permeability.

Engaged stakeholders and voluntary inter-generational groups.

WEAKNESSES

High vacancy levels and dereliction.

Lack of data on tenure and use of properties.

Prevalence of car usage.

OPPORTUNITIES

Mapping data on vacant structures to inform revitalization efforts.

Utilising historic structures and their surroundings for events and installations.

Leveraging shifts in work culture to promote environmental and societal benefits.

Potential for increasing diversity and inclusivity through community engagement.

THREATS

Continued dereliction and potential demolition of historic structures.

Socio-economic stratification within the community.

Increased risk of climate-related damage to the historic core.

Figure 20 - Ballina Pilot Site Baseline Condition – Buildings and SWOT

The following core challenge/problem regarding the city of Ballina was identified by the Fishbone Diagram produced in Deliverable D2.2: **"Unrealized potential of Ballina as a thriving historic town with sustainable neighbourhoods."** The primary factors that contribute to this challenge are: The challenge of high vacancy and dereliction in Ballina's historic areas is a complex issue influenced by various contributing factors. Demography, including social characteristics and statistical trends, significantly impacts this problem as shifts in population dynamics, such as urbanization and migration patterns, can result in historic neighborhoods grappling with vacant properties. Property tenure and financing present another critical facet of the issue. Complex ownership structures and governance frameworks also contribute to the challenge, affecting decision-making and coordinated actions. Streamlining ownership arrangements and enhancing collaborative governance mechanisms that involve local authorities, community stakeholders, and property owners are essential for more effective strategies in revitalization and preservation of the city. Additionally, the fear of compliance with regulations is a common hurdle that can discourage property owners from renovating or redeveloping vacant structures.

Another challenge is the redundant historic structures in Ballina, which encompasses various contributing factors, including demographic shifts impacting abandonment, unclear

ownership, financial constraints, complex governance, and regulatory compliance concerns.

The challenge of traffic congestion in Ballina involves several underlying causes, each impacting the flow of traffic and urban planning. Resistance to pedestrianisation can hinder traffic decongestion in urban areas as reluctance to restrict vehicular access in certain zones contributes to persistent congestion problems. Simultaneously, the lack of links from catchment areas can exacerbate congestion in specific regions, as inadequate infrastructure connecting residential areas to employment hubs or commercial centers leads to concentrated traffic on limited routes. Furthermore, the lack of additional river crossings strains existing bridge infrastructure, causing traffic bottlenecks.

The challenges posed by climate change in Ballina encompass various interrelated factors that impact both human infrastructure and the natural environment. Increased intensity of rainfall and associated flooding events presents a significant concern, as these can lead to widespread damage to structures and pose a threat to public safety. Additionally, climate change poses a risk of increased damage to nature, including ecosystems and biodiversity.

The aforementioned challenges faced by Ballina are complex and encompass a range of factors that currently hinder the city's ability to fully realize its potential as a thriving historic town with sustainable neighborhoods. These challenges, which include high vacancy and dereliction, redundant historic structures, traffic congestion, and climate change-related issues, collectively pose significant obstacles to Ballina's development and sustainability. In response to these challenges, a series of proposed solutions has been identified. These solutions are designed to activate vacant spaces, promote adaptive re-use of existing structures, enhance pedestrian accessibility, and bolster resilience within the community. Implementing these strategies represents a critical step toward realizing Ballina's potential as a thriving historic town with sustainable neighborhoods. Furthermore, the vision and mission statement provided encapsulates the overarching objective of these efforts. It underscores a commitment to revitalizing and repurposing historic assets, preserving and enriching the natural environment, and cultivating community resilience. **Leveraging Ballina's rich heritage and natural resources, the ultimate goal is to create a sustainable and vibrant community that not only cherishes its historical roots but also champions environmental stewardship and prioritizes the well-being of its residents**. Through these concerted efforts, Ballina strives to overcome its challenges and chart a course toward a brighter and more prosperous future.

Baseline Condition

Core problem/challenge :"Unrealized potential of Ballina as a thriving historic town with sustainable neighbourhoods."			
High Vacancy & Dereliction:	**Redundant Historic Structures**	**Traffic Congestion**	**Climate Change Issues**
Demography - social characteristics & statistics.		Resistance to pedestrianisation.	Increased intensity of rainfall & associated flooding.
Tenure & Finance.		Lack of links from catchment area.	Increased damage to structures.
Ownership & Governance.		Lack of additional river crossings.	Increased damage to nature.
Fear of compliance with regulations.			

Mitigation Measures
Activation of structures and lands through meanwhile uses including cultural & community activation.
Education & awareness of exemplary adaptive re-use projects in other locations & the instigation of pilot projects to demonstrate best practice.
Trial pedestrianisation on specific days
Adaptation for future resilience:

Figure 21 - Ballina Pilot Site Baseline Condition – Main challenge and Mitigation Measures

2.4.5 Conclusion

The multifaceted vision for Ireland's future development and sustainability outlined here encompasses various critical aspects of the nation's growth and well-being. By planning for a more equitable distribution of regional growth, both in terms of jobs and prosperity, Ireland aims to reduce regional disparities and ensure that opportunities for advancement are accessible across the nation. Urban renewal and regeneration efforts are central to the vision, with a focus on breathing new life into urban areas. Integrated land use and transportation planning underpin the entire vision, aiming to ensure that development is sustainable, accessible, and efficient, thereby reducing congestion and enhancing overall quality of life. In response to the aforementioned challenges in Ballina, a diverse array of potential strategies emerges, each offering a multifaceted solution that encapsulates various dimensions of community development and sustainability. Through temporary activations, these techniques seek to unlock the potential of derelict buildings and areas in order to revitalize Ballina, promoting education and awareness of successful adaptive re-use projects, experimenting with pedestrianization, and fortifying the community's resilience to future challenges, particularly those posed by climate change and shifting community needs. Collectively, these strategies chart a path towards a more vibrant, inclusive, and sustainable Ballina, fostering community engagement, knowledge sharing, and long-term adaptability to the evolving urban landscape.

In summary, this holistic vision reflects Ireland's commitment to creating a more prosperous, equitable, and resilient nation for its citizens. It addresses economic growth, sustainability, social inclusion, environmental protection, and efficient governance, acknowledging the challenges and opportunities on the horizon and providing a roadmap for a more inclusive, sustainable, and vibrant future for Ireland and its people.

2.5 Discussion & Collected Data

In the domain of cultural revitalization, preservation, and development, Greece presents a holistic and forward-looking strategy that transcends boundaries, celebrating its rich cultural heritage while promoting innovation, community engagement, and economic growth. Eleusis epitomizes this vision, where collaborative efforts among dedicated partners address challenges and leverage inherent strengths. Community involvement takes center stage, recognizing the crucial role of local residents and stakeholders in shaping the city's cultural identity. Innovative funding avenues, including exploring European opportunities, are emphasized for sustaining diverse initiatives. Effective governance serves as a linchpin, with a revised vision and mission statement guiding these endeavors, aiming to not only revitalize but also efficiently manage reactivated buildings and sites, fostering a dynamic, inclusive, and enduring cultural hub in Eleusis. On a national scale, Greece's commitment to modernize its cultural heritage protection laws signifies dedication to preserving its historical and artistic treasures, ensuring their accessibility for future generations. The focus on bolstering the cultural and creative economy underscores culture's role as a catalyst for innovation, inclusivity, and economic prosperity. Greece's emergence as an international cultural hub through cross-border collaborations bridges historical and contemporary cultural heritage, while streamlined administrative processes and e-governance reflect a commitment to efficient governance. These recommendations and strategies collectively shape a holistic vision for Greece's cultural future, blending tradition and innovation, heritage and creativity, community engagement, and economic vitality, exemplifying culture's transformative influence on vibrant, inclusive communities and enriched lives.

In envisioning the future of Milan's Cascine and the broader landscape of rural development, a strategic approach is paramount. This approach, deeply rooted in principles of community engagement, collaboration, and experimentation, seeks to unlock the full potential of these areas. At its core is a commitment to ensuring that local residents and stakeholders actively participate in shaping their communities. Experimentation serves as a catalyst, allowing initiatives to align with community preferences while remaining economically sustainable. The redefined vision and mission statement act as compass points, emphasizing the creation of hubs that provide both social well-being and ecological benefits. This holistic strategy aims to transform Cascine into a dynamic asset fostering social cohesion, ecological vitality, and collaboration among all stakeholders. Furthermore, this multifaceted approach extends beyond Cascine to encompass rural development throughout Milan, encompassing strategies for agricultural optimization, green network revitalization, heritage preservation for sustainable tourism, and agro-environmental measures. Nature-Based Solutions (NBS) take center stage, addressing hydrological rebalancing and climate-related challenges while preserving soil and water resources. The commitment to conserving Milan's fauna, flora, and ecosystems underscores a dedication to ecological sustainability. In essence, this comprehensive management approach recognizes the intricate interplay of ecological, economic, and cultural elements, aiming to nurture vibrant, productive, and environmentally responsible spaces, both in Cascine and across Milan, charting a course toward a future where these areas thrive as dynamic, inclusive, and sustainable communities.

In response to the identified challenges in Ballina, a diverse array of potential strategies emerges, each offering a multifaceted solution that encapsulates various dimensions of community development and sustainability. Through temporary activations, these techniques seek to unlock the potential of derelict buildings and areas to revitalize Ballina, promoting education and awareness of successful adaptive re-use projects, experimenting with pedestrianization, and fortifying the community's resilience to future challenges, particularly those posed by climate change and shifting community needs. Collectively, these strategies chart a path towards a more vibrant, inclusive, and sustainable Ballina, fostering community engagement, knowledge sharing, and long-term adaptability to the evolving urban landscape. In this overall overview, we explored these strategies, highlighting their significance and potential impact in addressing the challenges faced by Ballina, ultimately guiding the town towards a brighter, more sustainable future.

In the same context as the results from the previous Chapter, the data collected and codified in the present chapter can be utilized as a second Template to classify and contextualize the Project's Digital Tools. Specifically, this information, as presented in Figure 22, provides a Second Template for the Contextual Classification, mapping the stakeholders involved in the project.

Column 1 (Eleusis)

Innovative Concepts

Green Tensegrity Installations	Integrate art, sustainability and community engagement
Migrating Landmark Pavilion	Mobility allows for the exploration of various spaces
Creative Workshop Hubs	Centers for artistic innovation and collaboration, breathing new life into old spaces while preserving their historical significance
Urban Mobile Furniture Workshop	Forward-thinking approach to urban planning
Physical and Virtual Exhibitions	Convergence of the physical and digital realms, allowing for a dynamic showcase of art and culture
Projection Mapping on kinetic surface merged with AR	Represents a cutting-edge fusion of technology and art. This multimedia approach creates immersive and interactive experiences

Overall, these innovative concepts demonstrate a forward looking approach to cultural and industrial heritage preservation, revitalization, and community engagement in Eleusis. They harness the power of art, technology, and collaboration to create a multifaceted experience that respects the past while embracing the future.

National Level Priorities

Update and harmonize the legal framework governing the safeguarding of its rich cultural heritage

Bolster the cultural and creative economy serve as a cornerstone for broader development objectives

Bolster the cultural and creative economy serve as a cornerstone for broader development objectives

Embrace transnational and cross-border collaborations in the cultural sphere as an international cultural nucleus

Protection and promotion of both historical cultural heritage and contemporary creative endeavor

Increasing the efficiency of central administrative frameworks, strategies and processes

Local Level Priorities

Commitment to innovation and contemporary cultural production

Focus on strengthening the cultural profile of cities and enhancing citizen participation

Empowering the employability of cultural practitioners and ensuring the sustainability of the cultural sector

Leveraging cultural activities in order to preserve heritage and foster its evolution.

Baseline Condition

Pilot Buildings
- Old Oil Mill Factory
- Iris Factory
- Oasis Former Campsite
- Cine Eleusis
- Old Canteen

STRENGTHS	WEAKNESSES
Presence of multifunctional spaces. Ownership by the Ministry of Environment. Proximity of locations. Large capacity of spaces. Connection to intangible cultural heritage. Existence of active cultural associations. Ability to attract diverse audiences.	Political Challenges Coordination issues(multiple locations & needs) Inconsistent funding. Lack of continuous operation. Insufficient infrastructure. Accessibility challenges from Athens. Limited availability of cultural spaces.
OPPORTUNITIES	**THREATS**
Potential for improving environmental conditions & well-being. Utilization of the intangible history associated with the spaces. Leveraging industrial heritage to develop best practices. Possibility of industries serving as funders. Evolution of the ECoC legacy. Establishment of fully operational cultural spaces.	Political obstacles. Lack of interest leading to underutilization. Limited accessibility to the city. General financing challenges for CCIs. Impact of the climate crisis. Weather conditions affecting the usability of outdoor spaces.

Baseline Condition

Core problem/challenge : "Governance of spaces over time."

Source of funds	Governance model	Number of buildings:
Time window of funding. Regional and local budgets. Budget allocation. Lack of assessment for budget allocation (no business plan). Sponsors supporting re-activations individually. Different stakeholders defining priorities.	Public ownership of the buildings. Lack of staff. Continuous assessment of the use of the buildings. Time and effort consuming procedures. Stable financial funding for the re-activation over time. Lack of strategy (overall and individual).	Top-down renovation in some buildings. Transition of the urban development process. Context of historic development. Buildings now surrounded by new neighbourhoods. Creating a sense of community in the new neighbourhoods around the buildings. Budget allocation.

Mitigation Measures

Community recognition and engagement activities for new residents.
Updating the business plan for the spaces.
Seeking European funding as an addition to national/regional funding.
Building a collaborative environment and creating connections with different stakeholders.
Employing new staff.
Collaboration among different organisations to optimise efforts.
Keeping bottom-up procedures through community engagement methodologies.
Evolving the European Capital of Culture (ECoC) legacy.
Utilising virtual reality (VR) and augmented reality (AR) technologies to enhance the solutions.
Forming partnerships with businesses, underrepresented communities, youth/senior groups, event organisers, tourism providers, charities, and educational institutions.

At the conclusion of the stakeholder requirement analysis framework, the vision/mission statement for Eleusis was redefined as follows: "Develop an effective governance model for reactivated spaces within the HeritACT Project."

Column 2 (Milan)

Innovative Concepts

Green Tensegrity Installations	Not just a physical structure but a symbol of resilience and adaptation in the face of climate change
Digitally fabricated vegetable garden	Leverages digital technology to empower communities with knowledge and skills related to sustainable agriculture
Reactivation of open spaces through NBS	Enhances the quality of urban experiences but also promotes biodiversity
Integration of AR into human-space interaction	Step in enhancing memorization and interconnectivity within urban environments

These innovative concepts collectively represent a holistic approach to urban development of Milan, one that prioritizes sustainability, education, biodiversity, and cultural enrichment. They illustrate how thoughtful design and technological integration can create resilient, vibrant, and interconnected communities in an era where environmental challenges and urbanization are on the rise.

National Level Priorities

Multidimensional strategy that promotes methods for coping with the complexity of the surrounding environment

Acknowledging that the intricacies of terrain, ecosystems, and human interaction require innovative and adaptable strategies for preservation and development

Pivotal role of education and training in cultivating an enduring culture and knowledge base centered around the landscape

Recognizes the landscape as more than just a picturesque backdrop but as a dynamic instrument of cohesion, legality, sustainable development, and well-being

Local Level Priorities

Series of interconnected strategies aimed at harnessing the full potential of agricultural areas in Milan

Promotion of integrated projects that leverage agricultural spaces for multiple uses, fostering their revitalization and enriching the municipal green system and provincial green networks

Evaluation of historical-testimonial rural building heritage of the city underscores its significance in the context of sustainable tourism and fruitful utilization

Adoption of Nature-Based Solutions (NBS) assumes a central role in achieving hydrological rebalancing of the Metropolitan City. These solutions extend their impact to the regulation of microclimates and mitigation of heat islands, creating more resilient urban environments

Conserve fauna, flora, and ecosystems unique to the park area, including the identification of ecological corridors and the extensive use of native species

Baseline Condition

Pilot Buildings
- Cascina Sant'Ambrogio
- Cascina Linterno

STRENGTHS	WEAKNESSES
Active and running businesses. Diverse range of activities including education, farming, and social cohesion.	Lack of resources in terms of time, budget, and skills. Accessibility challenges within the sites and neighbourhood.
OPPORTUNITIES	**THREATS**
Established collaborations and potential future collaborations. Growing interest in the role and activities of Cascina (historic agricultural estates).	Accessibility issues for both the sites and the neighbourhood. Bureaucracy and the protected status of the buildings. Availability and openness of potential stakeholders.

Baseline Condition

Core problem/challenge : "How might we realise the potential of the Cascine for social and ecological benefits (attractiveness and sustainability)."

Resources	Figure & narrative	Accessibility	Physical conditions & context
Time Human resources Budget Bureaucracy	Fear for the digital Generational gap Storytelling and communication strategy	Onsite and to the sites Parking space Pedestrian or bike paths Services around Cascine Signage	Recent interest in the Cascine Heatwaves Lack of coordination between entities

Mitigation Measures

Design thinking approach to engage communities
Defining desirable, feasible, and viable offerings
Reinforcing and building collaborations
Experimentation and testing activities

At the conclusion of the stakeholder requirement analysis framework, the vision/mission statement for Milan was redefined as to establish "...a network of resilient and community hubs to deliver social and ecological benefits to local communities ...through feasible, desirable, and viable solutions" " Both for the targets and the sites' manager"

Column 3 (Ballina)

Innovative Concepts

Small-scale pavilion structure	Serves as a versatile and adaptable focal point, offering a dynamic space for various activities and events
Digitally fabricated vegetable garden	Harmonious blend of technology and sustainability, not only providing a source of fresh produce but also serving as a hands-on learning platform for local residents, promoting self-sufficiency and environmental consciousness
Temporary structures crafted from recycled materials	Contribute to sustainable practices and offer flexible spaces for pop-up shops, art installations, and interactive exhibits, adding vibrancy and versatility to the urban landscape of Ballina
Reactivation of open spaces through NBS	Innovative approach to urban planning, creating green oases that enhance biodiversity, mitigate environmental challenges, and provide recreational opportunities in the city
Projection mapping on kinetic surfaces & AR	Introduce immersive and interactive elements to the urban environment, transcending traditional notions of public spaces

These technologies have the potential to transform mundane spaces into captivating and educational hubs, offering visual storytelling, historical context, and a deeper connection to the urban surroundings. Collectively, these initiatives represent a forward-thinking approach to urban revitalization of Ballina, where creativity, sustainability, and technology converge to create dynamic, inclusive, and engaging urban spaces that reflect the evolving needs and aspirations of the community.

National Level Priorities

Goal of creating an additional 660,000 jobs by 2040

Adequate and affordable housing for the growing population

Enabling people to live closer to their workplaces

Regenerating rural Ireland while promoting environmentally sustainable growth patterns

Planning for a better distribution of regional growth, both in terms of jobs and prosperity

Coordination of infrastructure and services delivery, along with growth management

Local Level Priorities

Planning for sustainable growth and balanced regional development

Improving the quality of life for citizens and communities

Creating job opportunities and attracting investments

Prioritizing a low carbon and climate-resilient county

Mitigating climate change impacts and adapting to a changing climate

Inclusivity is another guiding principle, emphasizing that no one should be left behind

Preserving Ireland's unique landscapes, heritage, and biodiversity

Environmental considerations are integrated into decision making processes

Efficient governance and resource allocation, reducing fragmentation and inefficiency

Urban renewal and regeneration efforts

Integrated land use and transportation planning

Baseline Condition

Pilot Buildings

Jackie Clarke Collection	Ballina Methodist Church and Associated Structures
Walsh Street	Former Ballina Church of Ireland National School
Former Ballina Garda Siochana Station	Former Manse
Ballina Presbyterian Church	Former Orphanage/ Children's home
Former Convent of the Immaculate Conception	Former National School, former Convent of the Immaculate
Mixed Tenure	Conception/ All Hallows Convent
Saint Michael's Church	

STRENGTHS	WEAKNESSES
Compact authentic historic town core with built and natural heritage. Active street frontage with independent retailers and pedestrian permeability. Engaged stakeholders and voluntary inter-generational groups.	High vacancy levels and dereliction. Lack of data on tenure and use of properties. Prevalence of car usage.
OPPORTUNITIES	**THREATS**
Mapping data on vacant structures to inform revitalization efforts. Utilising historic structures and their surroundings for events and installations. Leveraging shifts in work culture to promote environmental and societal benefits. Potential for increasing diversity and inclusivity through community engagement.	Continued dereliction and potential demolition of historic structures. Socio-economic stratification within the community. Increased risk of climate-related damage to the historic core.

Baseline Condition

Core problem/challenge :"Unrealized potential of Ballina as a thriving historic town with sustainable neighbourhoods."

High Vacancy & Dereliction:	Redundant Historic Structures	Traffic Congestion	Climate Change Issues
Demography - social characteristics & statistics. Tenure & Finance. Ownership & Governance. Fear of compliance with regulations.		Resistance to pedestrianisation. Lack of links from catchment area. Lack of additional river crossings.	Increased intensity of rainfall & associated flooding. Increased damage to structures. Increased damage to nature.

Mitigation Measures

Activation of structures and lands through meanwhile uses including cultural & community activation.
Education & awareness of exemplary adaptive re-use projects in other locations & the instigation of pilot projects to demonstrate best practice.
Trial pedestrianisation on specific days
Adaptation for future resilience.

At the conclusion of the stakeholder requirement analysis framework, the vision/mission statement for Ballina was redefined as follows: "To build community resilience through the re-activation of historic structures, historically designed landscapes, and natural environments, including woodland and water courses."

Figure 22 Collected Pilot Site Reference Information

3 / Tool Mapping

3.1 Introduction

The present chapter presents the results of a Mapping Questionnaire disseminated to the Tool developers of the HeritACT Project. The seven Tools that constitute the HeritACT Toolkit are:

- **Particimap Tool**
  ParticiMap tool will be developed to allow collect spatial distributed observations/design proposals/actions, but also to store multimedia data (text, image, video, audio) and will also include social media features (like/dislike buttons, comments). In person and online participatory mapping initiatives will be developed in all three pilots to engage citizens in the observation and interpretation of local data (e.g., cultural value mapping, participatory consultation, etc.)

- **NegoDesign tool**
  A digital open source negotiation tool will be developed based on Geodesign and Gaming, as an emergent planning approach that involves the co-creation of design solutions for multi-stakeholder and multi-system spatial decision situations where there may be conflicting perspectives. It will act as an approach to engage communities and local authorities in collaboratively developing ideas and strategies through negotiation.

- **SustainACT**
  This tool will be developed as an online assessment and visual communication tool used by several stakeholders to map their actions to Green Deal principles and SDGs and communicate their impact. Individuals and community groups will be able to input to a design process by using this tool. The tool will translate the sustainability goals in a way that actors unfamiliar with technical terms understand. It will be used to evaluate the process against sustainability throughout each stage of the project. In early stages the evaluation will point to opportunities to be explored and act as a discussion and collaboration tool between stakeholders. In later stages it will help record the performance of each action through the lens of sustainable development.

- **SuperBarrio – DesignYourHeritage**
  This digital tool will provide a number of different NEB based solutions to help the community to raise awareness about the level of complexity that each decision has and the effect on their daily life. Players can visualise icons representing the different solutions included in the catalogue and explore their possible use in their neighbourhoods. By dragging each solution icon into the urban space 3D representation, players will make suggestions about their desired HERITAGE space and can visualise its impact, as the App will calculate and provide a performance score considering indicators such as sustainability, aesthetics, inclusiveness.

- **Fund4Act**
  HeritACT aims at utilizing edge technology towards creating an application for crowdfunding art, culture and sustainability driven projects that will be conducted within the community. The application will lay its basis for design and development

on the fundamental principles of the GoFundME platform, raising money for a short-term goal. Each stakeholder interested in organizing an event (e.g., new piece of art, live concerts, etc.) in the community, will be able to create an account and will be provided with a toolkit for presenting their idea, so for the people of the community to be able to support the causes they want to see come true. This will lead - among others - to significant reductions in cost, achieving more efficient use of available resources for the delivery of the best possible level of events. HeritACT team, intends to work on providing the communities that will use the suggested tool with a road map, that will cover all aspects of the crowdfunding process. In addition, the Fund4Act platform to be developed will be linked to a loyalty system, for the people who will support an event, to be able to redeem points for services within the city e.g., controlled parking fees or event tickets with discounts or full costs coverage.

- **HeriCRAFT**
  HeritACT will push beyond the state of the art by developing a platform based on Minecraft for gamified codesign of interventions for both pupils and adults. This solution takes into consideration the built environment characteristics which will be imported from LiDAR or other existing 3D dataset of the pilots, overcoming the limitation of voxelization exercise by interpreting and refining the semantic properties of heritage scenarios. Specifically, local data will be imported in Minecraft to reproduce some large-scale features of the area (e.g., terrain, coarse buildings for the area outside the pilot). This will create a starting point for the co-creation activities to be run with adults and pupils. The development process with include a series of collaborative design workshops with local communities. By navigating a three-dimensional world, workshop participants will be able to express themselves in new ways, and previously issues of disagreements regarding for example the placement, size or form of new construction, throughout the process, could be resolved. The game will allow participants to easily visualize and even navigate the plans, improving the level of understanding and engagement. It will also be used to communicate the three-dimensional designs at the end of the participation process.

- **Usersence**
  HeritACT will develop appropriate tools and methods for utilizing biosensors and video capture devices in order to track important aspects of the affective and aesthetic state of the user during the experience, including uncertainty, boredom, being in a state of flow, valence and arousal, and intense stress. HeritACT will emphasize in the study and use of dedicated sensors for psycho-physiological signals of users, as they offer objective measures as indicators for the users' emotional/aesthetic state during their experience with the product or service that is being evaluated. It is already known that biological signals such as respiration, galvanic skin response, blood volume pulse, electrocardiogram and electroencephalogram (EEG) can be automatically processed to characterize specific affective states of the user. EEG headsets, such as Emotiv Epoc, configurable kits with multiple biosignal sensors, such as BiosignalsPlux, and wristbands with physiological sensors such as Empatica E4. will be used for recording users' affective states during experience studies. The first two cases are more appropriate and will be used for laboratory testing, where the user is mostly seated or restricted

in a controlled area, while the wristband sensors will be used in real-world field studies and require minimum calibration. Besides specialized sensors, commercial video cameras, such as webcams and mobile cameras will be also used for the automatic extraction of important features for user experience through pattern recognition and machine learning. Facial emotion recognition algorithms can identify emotions from facial expressions and thus provide an additional signal for the user's affective state, whilst eye tracking algorithms can reveal information about user attention and shift of focus during the study. Given the notable diversity in terms of methods and tools.

The following subsections will present an analysis and codification to the responses of the Questionnaire. The Questions can also be found in Annex 1 of the present Deliverable.

3.1 ParticiMap Tool

3.1.1 Short Description and Functionality

ParticiMap allows you to create online and interactive location-based surveys to collect spatially distributed and local content, knowledge and ideas from citizens and their places. The tool is designed to manage user roles as participants or map makers, having the ability to design and configure new custom geosurveys for specific participatory mapping and data collection needs.

In addition to facilitating data collection, this tool enables map-based community feedback on a place`s entry on the map and its content. Citizens can like or support a place, share it on social media, or start conversations on the map to spark community discussions, facilitating online social interaction for greater public engagement around places and the issues and interests of those who live in them. Also, it integrates gamification strategies based on participants activity and outcomes to foster further participant motivation based on social identity, awards and peer recognition, community and place identity and ownership, social competition, challenges and special quests.

With this tool, participatory mapping initiatives in person and online can be developed in the three pilots to involve citizens in the observation and interpretation of local data (for example, cultural values mapping, participatory consultation, etc.) and be part of more inclusive cultural and urban planning, design, and decision-making processes in their cities. ParticiMap turns intangible communities' insights into real geospatial data, ready for analysis and accessible for community members and stakeholders.

3.1.2 Stakeholders

The ParticiMap tool is designed to engage a range of targeted stakeholders, catering to different levels of autonomy and support within the local community. It aims to empower the local community in an autonomous manner. This approach emphasizes the tool's user-friendliness and accessibility, enabling community members to take ownership of their

mapping initiatives. Additionally, the tool accommodates local communities that may require assistance by offering support through a designated project team. This two-tiered approach recognizes the diversity of community needs and capacities, ensuring that the ParticiMap tool can be tailored to suit the preferences and capabilities of different stakeholder groups, ultimately promoting inclusivity and enhancing the quality of community engagement efforts.

This tool targets only on adult stakeholders.

ParticiMap can be configured for any community member to create and configure its own map. However a possibility (to be discussed) is that only users with "map creator" role can do it. For that case of users, a more top-button participatory process will be in place, targeting specific stakeholders searching to gather community insights. For urban planners, cultural managers, environmental managers, municipalities, decision makers, or researchers, etc.

The ParitciMap tool will be deployed in the three pilot sites, Eleusina, Milan and Ballina.

The particular challenges this tool aims to address are:

- Eleusina:
  o Budgeting allocation assessment.
  o Create a sense of community in new neighborhoods.
  o Create a sense of ownership around buildings.
  o Different stakeholders priorities.
  o Community collaborative engagement.
  o Identify ecological issues.
  o Lack of green areas.
- Milan:
  o Poor collaboration among associations.
  o Online presence.
  o Lack of attractiveness of "Cascina"
  o Understand and engage with local communities.
- Ballina:
  o Lack of understanding / appreciation.
  o Flood risk management.
  o Historic structures seen as negative for owners.
  o Water benefits and value (sense of place).

3.1.3 Enabling Conditions

The deployment of the ParticiMap tool necessitates certain enabling conditions, particularly in terms of infrastructure and community engagement. ParticiMap runs on the UCD Spatial Dynamics Lab`s server. To utilize the tool effectively, users should have access to a personal computer with an internet connection, highlighting the importance of digital infrastructure and online accessibility. For those engaging in outdoor or in-situ mapping, a mobile smartphone device is recommended, emphasizing the significance of mobile technology in enhancing the tool's functionality. Furthermore, having consistent internet connectivity on mobile devices is imperative for data collection and storage on the go.

These enabling conditions underscore the tool's reliance on modern technological infrastructure and highlight the role of community engagement in utilizing digital resources to enhance participatory mapping efforts.

As stated in the answers of the questionnaire, there are no prerequisites regarding user knowledge and skills for using this tool nor for knowledge regarding what NEB and SDG are, as it will not influence the result of the application or usage of the tool.

Also, Online documentation (in English or Greek and Italian) will be created mainly concerning about:

- How participants can explore and find current mapping initiatives in their city, and how to subscribe to mapping activity updates.
- How participants can create a place input on a map and can interact with the entries made by other participants.
- How map makers can build a new map and design its geosurvey for data collection.
- How geospatial data outputs from a participatory map can be accessible for community members (participant, map makers, or any stakeholders).

3.1.4 Accessibility

The ParticiMap tool places a strong emphasis on addressing issues related to user accessibility by prioritizing the design of an intuitive user interface. This design approach incorporates various strategies to ensure that the interface is not only visually appealing but also highly functional for all users, including those with diverse accessibility needs. Specifically, the tool employs thoughtful styling choices, organizes the user interface elements effectively, and optimizes element sizing to enhance readability, accessibility, and overall usability. By adopting these design principles, ParticiMap aims to create an inclusive and user-friendly experience that accommodates a wide range of users, promoting accessibility and usability as core tenets of its interface design strategy.

3.1.5 Expected impact and outcomes

The tool exhibits a strong alignment with the principles of Natural and Cultural Heritage for Sustainable Development (NEB) and several United Nations Sustainable Development Goals (SDGs). Notably, it reinforces the NEB's focus on fostering sustainability and interconnectedness. Furthermore, the tool significantly contributes to the achievement of specific SDGs, such as Goal 4, which centers on quality education, as it facilitates informed decision-making and knowledge dissemination. Additionally, it plays a pivotal role in advancing Goal 11, dedicated to sustainable cities and communities, by promoting sustainable urban development practices. Moreover, the tool's emphasis on climate action and environmental conservation makes it a valuable asset in realizing Goal 13, which addresses the urgent need for climate action and resilience building. In essence, the tool's versatility and alignment with NEB and SDGs underscore its potential as a catalyst for promoting sustainability, education, and climate resilience on a global scale.

- NEB
    - Together/Sustainability
- SDG
    - Goal 4 - Quality education

o   Goal 11 - Sustainable cities and communities
o   Goal 13 - Climate action

The deployment of the ParticiMap tool is envisioned to have a significant impact and yield several outcomes aligned with the tool's objectives. The tool aims to gather valuable insights from community stakeholders, which can be instrumental in informing and enhancing urban planning and design processes. By actively involving local communities, ParticiMap seeks to promote inclusivity in these processes, ensuring that community interests, knowledge, and local values are adequately represented and integrated into planning and design decisions. Furthermore, the tool aspires to foster increased citizen engagement in the shaping of their places and communities. This engagement, facilitated by ParticiMap, is expected to catalyze collaborative efforts aimed at the reactivation of open spaces, transforming them into vibrant and dynamic community hubs. In summary, the expected impact and outcomes of deploying ParticiMap encompass informed and inclusive urban planning, heightened citizen engagement, and the revitalization of open spaces through community-driven initiatives, ultimately contributing to more vibrant and resilient communities.

PracticiMap Tool

Short Description & Functionality

Creates online and interactive location-based surveys to collect spatially distributed and local content, knowledge and ideas from citizens and their places.

Facilitates data collection

Allows map-based community feedback

Integrates gamification strategies

Stakeholders

Envisioned Stakeholders

Aims to empower the local community in an autonomous manner.

Engages a range of targeted stakeholders

Accommodates local communities that may require assistance by offering support through a designated project team

Intended Userbase Age Group

Adults

Specific Stakeholder Groups

Any community member

However a possibility (to be discussed) is that only users with "map creator" role can do it. For that case of users, a more top-button participatory process will be in place, targeting specific stakeholders searching to gather community insights.

Pilot Sites Deployed

Eleusina

Milan

Ballina

Particular Challenges Addressed

Eleusina

- Budgeting allocation assessment.
- Create a sense of community in new neighborhoods.
- Create a sense of ownership around buildings.
- Different stakeholders priorities.
- Community collaborative engagement.
- Identify ecological issues.
- Lack of green areas.

Milan

- Poor collaboration among associations
- Online presence
- Lack of attractiveness of "Cascina"
- Understand and engage with local communities

Ballina

- Lack of understanding / appreciation
- Flood risk management
- Historic structures seen as negative for owners
- Water benefits and value (sense of place).

Enabling Conditions

Specific Enabling Conditions

ParticiMap runs on the UCD Spatial Dynamics Lab`s server.

Users should have access to a personal computer with an internet connection.

For those engaging in outdoor or in-situ mapping, a mobile smartphone device is recommended.

Consistent internet connectivity on mobile devices is imperative for data collection and storage on the go

User Knowledge Prerequisites

No prerequisites regarding user knowledge

Knowledge regarding SDG & NEB Goals

No prerequisites regarding NEB and SDG

Support and Documentation

Online support and documentation

How-to tutorials for participants

Accessibility

Intuitive UI accounting for diverse accessibility needs

Expected Impact & Outcomes

Association with NEB & SDG Objectives

NEB
Together / Sustainability

SDG
Goal 04 - Quality Education
Goal 11 - Sustainable Cities and Communities
Goal 13 - Climate Action

Figure 23 - ParticiMap Tool Mapping

3.2 NegoDesign tool

3.2.1 Short description and functionality

A digital open-source negotiation tool will be developed based on Geodesign and Gaming, as an emergent planning approach that involves the co-creation of design solutions for multiplayer and multi-system spatial decision situations where there may be conflicting

perspectives. It will act as an approach to engage communities and local authorities in collaboratively developing ideas and strategies through negotiation.

3.2.2 Stakeholders

The NegoDesign tool envisions a diverse range of targeted stakeholders who can engage with it in various capacities. The tool is designed to empower the local community, allowing them to utilize it autonomously. Also, the tool recognizes the value of collaborative efforts and offers support to the local community when facilitated by a designated project team.

This tool targets only on adult stakeholders.

The NegoDesign tool is intentionally inclusive and accessible, targeting a broad demographic of stakeholders. Among those envisioned to benefit from this tool are adults of any age who possess knowledge of the local built and natural environment. This diverse group of stakeholders can contribute valuable insights and expertise, drawing from their understanding of the community's surroundings.

The NegoDesign tool will be deployed I the three pilot sites, Eleusina, Milan, Ballina.

The insights gleaned from Deliverable 2.2 have been instrumental in addressing specific challenges and priorities across the HeritACT pilot sites, including Eleusis, Milan, and Ballina. In Eleusis, the tool serves as a means to support a deeper understanding of the priorities among various stakeholders. Meanwhile, in Milan, the tool confronts challenges related to online presence and bridging the generation gap. Finally, in Ballina, the tool plays a pivotal role in addressing issues such as traffic management, crowd-sourced information on property tenure and dereliction, and bolstering the historic core's resilience to climate change impacts. These specific use cases exemplify the adaptability and effectiveness of the tool in catering to the unique challenges and priorities of each pilot site within the HeritACT project, ultimately contributing to the overarching goal of revitalizing heritage areas and fostering community engagement.

3.2.3 Enabling conditions

There are no specific enabling conditions for NegoDesign tool.

Also, As indicated in the questionnaire responses, there are no specific requirements in terms of user expertise or familiarity with NEB and SDG concepts when using this tool. Such prior knowledge or skills are not necessary and will not impact the tool's effectiveness or outcomes.

Certainly, support and guidance for users will be readily available. The tool will feature in-game instructions (in the three project languages; English, Greek and Italian)and tips to assist players in understanding how to navigate and utilize its features effectively. These in-game instructions will provide step-by-step guidance on how to play, ensuring a user-friendly experience. This support system aims to make the tool accessible and user-friendly for all players, regardless of their prior experience with similar applications.

3.2.4 Accessibility

The tool places a strong emphasis on user accessibility by adopting web-based game technology that aligns with industry standards for enhanced accessibility. It ensures

compatibility with essential assistive technologies, including text-to-speech, screen readers, and screen magnification. This proactive approach guarantees that the tool is inclusive and can be easily navigated and understood by a diverse range of users, including those with visual or auditory impairments. By adhering to these web standards, the tool promotes accessibility as a fundamental aspect of its design, fostering an environment where all users can engage with the tool's content and features seamlessly.

3.2.5 Expected impact and outcomes

In the context of NEB, it particularly resonates with the concept of "Together" and "Sustainability." These principles underscore the importance of collaborative and sustainable approaches to address environmental and community challenges. Regarding SDGs, the tool is intricately linked to Goal 4, which pertains to "Quality education." By fostering engagement and knowledge sharing among stakeholders, the tool contributes to enhancing the quality of education and awareness surrounding community development and sustainability. Additionally, it aligns with Goal 11, focusing on "Sustainable cities and communities," as it supports more inclusive and sustainable urban planning processes. Lastly, it directly addresses Goal 13, "Climate action," by providing a platform to discuss climate-related challenges and potential mitigation strategies. In essence, the tool's association with these NEB and SDG goals signifies its potential to drive positive social, environmental, and educational impacts within communities.

- NEB
  - Together/Sustainability
- SDG
  - Goal 4 - Quality education
  - Goal 11 - Sustainable cities and communities
  - Goal 13 - Climate action

The anticipated impact and outcomes of deploying the tool are multifaceted and hold the potential to significantly enhance stakeholder engagement and community involvement. Firstly, the tool seeks to facilitate more effective stakeholder negotiations by providing a dynamic and interactive platform for discussions and decision-making. Secondly, it aims to bolster digital and online capabilities for engaging with local communities, bridging the gap between traditional methods and innovative, gamified approaches. One notable feature is the rapid game rounds, with an estimated average duration of approximately 10 minutes for each round involving four players. This expeditious engagement process ensures that participants can efficiently contribute their insights and preferences, fostering a sense of inclusivity and efficiency in community interactions. Overall, the tool envisions a transformative impact by promoting collaborative and gamified community engagement processes, streamlining communication, and expediting decision-making in a dynamic and digital environment.

NegoDesign Tool

Short Description & Functionality

A digital open-source negotiation tool will be developed based on Geodesign and Gaming

Emergent planning approach

Co-creation of design solutions

Collaboratively developing ideas & strategies via negotiation

Stakeholders

Envisioned Stakeholders

Aims to empower the local community in an autonomous manner.

Engages a range of targeted stakeholders

Accommodates local communities that may require assistance by offering support through a designated project team

Intended Userbase Age Group

Adults

Specific Stakeholder Groups

Broad demographic of stakeholders

Among those envisioned to benefit from this tool are adults of any age who possess knowledge of the local built and natural environment.

Pilot Sites Deployed

Eleusina

Milan

Ballina

Particular Challenges Addressed

Eleusina

- The tool serves as a means to support a deeper understanding of the priorities among various stakeholders.

Milan

- The tool confronts challenges related to online presence and bridging the generation gap

Ballina

- The tool plays a pivotal role in addressing issues such as traffic management, crowd-sourced information on property tenure and dereliction, and bolstering the historic core's resilience to climate change impacts

Enabling Conditions

Specific Enabling Conditions

No specific enabling conditions

User Knowledge Prerequisites

No prerequisites regarding user knowledge

Knowledge regarding SDG & NEB Goals

No prerequisites regarding NEB and SDG

Support and Documentation

Support and guidance for users will be readily available

In-game instructions (in the three project languages; English, Greek and Italian)

Tips to assist players

Step-by-step guidance on how to play

Accessibility

Adopting web-based game technology that aligns with industry standards for enhanced accessibility

Compatibility with essential assistive technologies

Ease - to - navigate & understand design for a diverse range of users, including those with visual or auditory impairments

Expected Impact & Outcomes

Association with NEB & SDG Objectives

NEB
Together / Sustainability

SDG
Goal 04 - Quality Education
Goal 11 - Sustainable Cities and Communities
Goal 13 - Climate Action

Figure 24 - NegoDesign Tool Mapping

3.3 SustainACT

3.3.1. Short description and functionality

The SustainACT tool will be developed as an online assessment and visual communication tool used by several stakeholders to map their actions to Green Deal principles and SDGs and communicate their impact. Individuals and community groups will be able to input to a design process by using this tool. The tool will translate the sustainability goals in a way that actors unfamiliar with technical terms understand. It will be used to evaluate the process against sustainability throughout each stage of the project. In early stages the evaluation will point to opportunities to be explored and act as a discussion and

collaboration tool between stakeholders. In later stages it will help record the performance of each action through the lens of sustainable development.

3.3.2 Stakeholders

The envisioned targeted stakeholders for the SustainACT tool encompass a diverse spectrum of participants. This tool is designed to engage the local community both autonomously and in collaboration with a designated project team. Additionally, the tool extends its reach to the designated project team on-site, enabling them to facilitate and coordinate sustainability efforts effectively. This inclusive approach ensures that various stakeholders, from self-driven community members to organized project teams, can collectively work towards the common goal of advancing sustainability within their locality.

SustainACT tool targets only on adult stakeholders.

The SustainACT tool will be deployed in the three pilot sites, Eleusina, Milan and Ballina.

The primary focus of the SustainACT tool is to address specific challenges identified within the pilot sites, which revolve around the assessment, communication, and enhancement of the environmental, economic, and social impacts of local projects. Ultimately, the SustainACT tool aims to bridge the gap between project initiatives and their consequences, enabling informed decision-making, fostering sustainable development, and promoting holistic well-being within the pilot site communities.

3.3.3 Enabling conditions

For the deployment of the SustainACT tool, several enabling conditions must be met. Users need access to an internet connection and a personal laptop to engage with the tool effectively. Additionally, access to guidance videos is essential to ensure that users can navigate and utilize the tool to its full potential. These enabling conditions collectively create a supportive environment that empowers stakeholders in the pilot sites to engage with the tool and leverage its capabilities to assess and enhance the environmental, economic, and social impact of local projects, ultimately contributing to the advancement of sustainability within their communities.

Regarding the prerequisites for using the SustainACT tool, it has been intentionally designed to be user-friendly and accessible, such that stakeholders should not require prior knowledge of the Sustainable Development Goals (SDGs). However, it's worth noting that the tool may include some terminology related to sustainable development, which, although accompanied by definitions within the tool, might be complex for certain user groups to grasp independently. In such cases, users may benefit from assistance provided by a dedicated project team familiar with sustainable development concepts. This approach ensures inclusivity and accessibility for a wide range of stakeholders, allowing them to engage effectively with the tool and contribute to the assessment and improvement of local project impacts related to environmental, economic, and social sustainability.

There is no required knowledge regarding NEB and SDG goals, as it will not influence the result of the application or usage of the Tool.

To support users in effectively utilizing the SustainACT tool, there are currently guidance videos available. At this stage it is not applicable to accompany the support in multiple

languages. These instructional resources serve as valuable aids in helping stakeholders navigate and make the most of the tool's features and functionalities. The guidance videos offer a visual and step-by-step approach to using the tool, enhancing user understanding and proficiency. This availability of supportive materials ensures that users, regardless of their prior experience or familiarity with the tool, can confidently engage with it and contribute to the assessment and enhancement of local project impacts concerning environmental, economic, and social sustainability.

3.3.4 Accessibility

N/A

3.3.5 Expected impact and outcomes

Built in the spirit of SDG 17, SustainACT uses the NEB Compass as the framework for community groups to rate and communicate their actions' local and wider impacts. Our team is building the 6 NEB Compass scales of "beautiful, sustainable, together, participatory process, multi-level engagement and transdisciplinary approach" into the SustainACT action upload process.

A better understanding of a project's current and potential environmental, economic and social impact by all user groups.

SustainACT Tool

Short Description & Functionality

Online assessment and visual communication tool used by several stakeholders to map their actions to Green Deal principles and SDGs and communicate their impact

Individuals and community groups will be able to input to a design process by using this tool.

The tool will translate the sustainability goals in a way that actors unfamiliar with technical terms understand

Evaluate the process against sustainability throughout each stage of the project

Stakeholders

Envisioned Stakeholders

Aims to empower the local community in an autonomous manner.

Engages a range of targeted stakeholders

Designed to engage the local community both autonomously and in collaboration with a designated project team

Designated project team on-site, enabling them to facilitate and coordinate sustainability efforts effectively

Intended Userbase Age Group

Adults

Specific Stakeholder Groups

Pilot Sites Deployed

Eleusina

Milan

Ballina

Particular Challenges Addressed

Address specific challenges identified within the pilot sites, which revolve around the assessment, communication, and enhancement of the environmental, economic, and social impacts of local projects

Bridge the gap between project initiatives and their consequences, enabling informed decision-making, fostering sustainable development, and promoting holistic well-being within the pilot site communities

Enabling Conditions

Specific Enabling Conditions

Internet connection and a personal laptop

Access to guidance videos is essential to ensure that users can navigate and utilize the tool to its full potential

User Knowledge Prerequisites

Some terminology related to sustainable development might be complex for certain user groups to grasp independently.

Users may benefit from assistance provided by a dedicated project team familiar with sustainable development concepts.

Knowledge regarding SDG & NEB Goals

No prerequisites regarding NEB and SDG

Support and Documentation

Guidance videos available. At this stage it is not applicable to accompany the support in multiple languages.

Accessibility

Expected Impact & Outcomes

Association with NEB & SDG Objectives

NEB
Beautiful, sustainable, together
Participatory process, multi-level engagement and transdisciplinary approach

SDG
Goal 17 – Partnership for the goals

Figure 25 - SustainACT Tool Mapping

3.4 SuperBarrio - DesignYourHeritage

3.4.1 Short description and functionality

SuperBarrio - DesignYourHeritage is a cutting-edge digital tool that empowers local communities to actively engage in the design and reactivation of their heritage spaces. The tool invites participants to explore, envision, and contribute to the future of their local heritage sites. With its dynamic and user-friendly interface, participation in the design process is playful and engaging. The tool provides a catalogue of design solutions, developed by HeritACT partners, based on the principles of the New European Bauhaus initiative. The users can choose which solution they find the most suitable for their heritage space and drag them into the 3D representation of the area. By placing the chosen solution(s) to the area, the tool calculates a performance score based on diverse indicators

like culture, community, biodiversity, local economy, and experience, offering a holistic view of each design's potential impact.

3.4.2 Stakeholders

The envisioned targeted stakeholders for the DesignYourHeritage tool encompass the local community, both autonomously and with the support of a designated project team. Whether individuals within the community choose to participate independently or with the guidance and support of a dedicated project team, the tool aims to empower them to actively contribute to the preservation and revitalization of their cultural heritage. This collaborative approach not only enriches the heritage reactivation process but also ensures that the community's unique insights and values are integrated into the overall revitalization efforts, ultimately leading to a more vibrant and culturally enriched community.

This tool targets only on adult stakeholders.

The DesignYourHeritage tool is designed to be inclusive, catering to a wide audience that includes both children and adults. Its versatility ensures accessibility to participants of various age groups, making it an engaging platform for both young individuals and adults. Furthermore, the tool serves as an inclusive solution, allowing individuals who may not have the opportunity to visit the pilot sites in person to actively participate in the participatory planning process. By extending its reach to those who cannot physically be present at the heritage sites, the tool promotes inclusivity and ensures that a broader range of stakeholders can contribute their insights and perspectives to heritage revitalization efforts.

The ParitciMap tool will be deployed in the three pilot sites: Eleusina, Milan and Ballina.

The DesignYourHeritage tool addresses specific challenges unique to each pilot site, with in-depth discussions between solution developers and the respective municipalities scheduled during dedicated workshops in September 2023. In a broader sense, the tool encompasses several overarching objectives designed to tackle common challenges faced by the pilot sites. It also aims to serve as a means of raising awareness among stakeholders about the principles of Nature-Based Solutions and their relevance to heritage revitalization. Secondly, the tool intends to introduce these NEB concepts to a wide and diverse audience, including individuals who may not be familiar with European Union policies and initiatives, thereby democratizing access to this valuable knowledge. Lastly, the tool aspires to contribute to the reactivation of the heritage sites, ensuring that they become vibrant and meaningful spaces within their respective communities.

3.4.3 Enabling conditions

For the effective deployment of the DesignYourHeritage tool, community engagement plays a pivotal role. While the tool can be utilized autonomously, its full potential is unlocked through dedicated participatory workshops. These workshops are essential for introducing participants to the tool, guiding them on its functionalities, and fostering a collaborative atmosphere where individuals can collectively engage with the heritage reactivation process. This emphasis on community engagement ensures that the tool aligns

with the unique needs and aspirations of the local community, making it a valuable asset in the revitalization of heritage sites.

To effectively utilize the DesignYourHeritage tool, users are required to have basic computer skills and a solid understanding of the pilot heritage sites. Workshops will be thoughtfully organized to provide participants with comprehensive insights into the principles of Nature-Based Solutions (NEB) and the Sustainable Development Goals (SDGs). These workshops serve as a valuable educational resource, ensuring that participants are well-prepared and informed when engaging with the tool, ultimately enhancing their ability to contribute to the heritage reactivation process.

Whether users possess low or no prior understanding of NEB and SDG goals, it will not impact their ability to effectively utilize the tool.

DesignYourHeritage is committed to providing support and guidance to users. The language of the tool and/or the accompanying documentation will be defined at a later stage. To facilitate a smooth experience, the tool will offer a range of resources, including a short video introduction and written documentation. These resources will serve as valuable aids, ensuring that users can easily navigate and utilize the tool effectively. Whether users prefer visual demonstrations or written instructions, the availability of both formats enhances accessibility and user-friendliness, making the heritage reactivation process more accessible to a diverse audience.

3.4.4 Accessibility

The DesignYourHeritage (DYH) tool is designed with inclusivity in mind, striving to accommodate users with various sensory impairments. For individuals with visual impairments, DYH offers alternative approaches to the tool's experience. They may choose to work with a facilitator who can vividly describe the site, the tool's solutions, and their respective impacts. Alternatively, a collaborative experience involving a physical visit to the site alongside a facilitator can bridge the gap between the physical and digital realms. To address hearing impairments, DYH recognizes the need for clear communication. Text-based instructions and explanations are prepared in advance, ensuring that participants with hearing impairments receive the necessary information. Additionally, tutorial videos, which provide insights into using the tool, will feature captions for enhanced accessibility. When it comes to touch impairments, where drag-and-drop actions might be challenging, DYH acknowledges the importance of support. Users with touch impairments can rely on assistance to navigate the tool effectively. Importantly, the tool's activities do not involve smell or taste functions, making it an accessible platform for all participants, regardless of these sensory functions. Inclusivity is at the heart of DYH's design, ensuring that everyone can actively engage in the heritage reactivation process.

3.4.5 Expected impact and outcomes

Within the SDG framework, DYH actively supports SDG 8, aiming to foster pride in local heritage and encouraging the reactivation of heritage sites, thereby promoting sustainable heritage tourism. It also advances SDG 10 by enhancing social cohesion and inclusion through increased participation. In terms of SDG 11, DYH significantly contributes to multiple targets, such as 11.3, 11.4, 11.6, and 11.b, by raising awareness of New European Bauhaus principles and the European Green Deal. This is achieved by incorporating

Nature-based Solutions and sustainable material designs, ultimately promoting comprehensive local sustainability. Additionally, SDG 12 is addressed through solutions like 'Temporary Structures from Recycled Material, which promotes sustainable consumption by utilizing organic waste. On the NEB front, DYH advocates for NEB sustainability by integrating Nature-based Solutions and sustainable material designs, contributing to overall local sustainability. It also embraces NEB aesthetics by tailoring predefined design solutions to each site's unique aesthetics and functionality, ultimately facilitating the revival of heritage sites. Furthermore, DYH actively promotes NEB inclusion by enhancing participation, fostering greater social cohesion and inclusion within communities.

- SDGs
  - SDG 8 (Target 8.9): The tool fosters pride in local heritage and encourages reactivation of heritage sites, thus proposing a form of sustainable heritage tourism.
  - SDG 10 (Target 10.2): The tool promotes increased social cohesion and inclusion by enhancing participation.
  - SDG 11 (Target 11.3, 11.4, 11.6, 11.b): The tool enhances awareness of the New European Bauhaus principles and the European Green Deal. It achieves this by incorporating Nature-based Solutions and sustainable material designs to reactivate heritage sites, thereby promoting comprehensive local sustainability.
  - SDG 12 (Target 12.3, 12.7, 12.8): One of the solutions 'Temporary Structures from Recycled Material is fabricated from organic waste thus promoting sustainable consumption.
- NEB
  - NEB sustainability: The tool advocates for the integration of Nature-based Solutions and sustainable material designs, contributing to comprehensive local sustainability.
  - NEB aesthetics: The predefined design solutions are tailored to each site's aesthetics and functionality, and contribute to the revival of the heritage sites.
  - NEB inclusion: The tool promotes increased social cohesion and inclusion by enhancing participation.

The expected impact and outcomes of deploying the DesignYourHeritage tool are multifaceted and promise to be highly beneficial for the community, heritage sites, and sustainability initiatives. The tool has the potential to generate a significant positive impact on the community by fostering local pride in cultural heritage and nurturing a sense of belonging among residents. It encourages active participation, empowering individuals to become more engaged with their heritage and its revitalization. Furthermore, the data collected through the tool's participatory game sessions will serve as valuable inputs for designers, enabling them to design and implement tailored solutions that align with the community's preferences and needs. This process promotes a more community-centric approach to heritage reactivation. Moreover, the deployment of DYH is expected to contribute to increased awareness and understanding of the New European Bauhaus and the European Green Deal initiatives among users. By incorporating NEB principles, nature-based solutions, and sustainable material designs into the heritage reactivation

process, the tool serves as an educational platform, enlightening users about these vital sustainability frameworks. Overall, the envisioned impact of DYH encompasses empowering communities, promoting sustainability, and facilitating informed engagement with European initiatives, making it a valuable tool for heritage revitalization and sustainability efforts.

SuperBarrio - DesignYourHeritage

Short Description & Functionality

Empowers local communities to actively engage in the design and reactivation of their heritage spaces. Invites participants to explore, envision, and contribute to the future of their local heritage sites

The tool provides a catalogue of design solutions, developed by Heritact partners, based on the principles of the NEB

The users can choose which solution they find the most suitable for their heritage space and drag them into the 3D representation of the area

Tool calculates a performance score based on diverse indicators like culture, community, biodiversity, local economy, and experience, offering a holistic view of each design's potential impact.

Stakeholders

Envisioned Stakeholders

Aims to empower stakeholders to actively contribute to the preservation and revitalization of their cultural heritage..

Engages a range of targeted stakeholders

Designed to engage the local community both autonomously and in collaboration with a designated project team

Intended Userbase Age Group

Adults

Specific Stakeholder Groups

A wide audience that includes both children and adult

Inclusive, taking into account individuals who may not have the opportunity to visit the pilot sites in person to actively participate in the participatory planning process

Pilot Sites Deployed

Eleusina

Milan

Ballina

Particular Challenges Addressed

The DesignYourHeritage tool addresses specific challenges unique to each pilot site, with in-depth discussions between solution developers and the respective municipalities scheduled during dedicated workshops in September 2023.

Encompasses several overarching objectives designed to tackle common challenges faced by the pilot sites

Raising awareness among stakeholders about the principles of NBS and their relevance to heritage revitalization

Introduce NEB concepts to a wide and diverse audience,

Contribute to the reactivation of the heritage sites

Enabling Conditions

Specific Enabling Conditions

Community engagement plays a pivotal role. While the tool can be utilized autonomously, its full potential is unlocked through dedicated participatory workshops.

User Knowledge Prerequisites

Basic computer skills and a solid understanding of the pilot heritage sites

Workshops will be thoughtfully organized to provide participants with comprehensive insights into the principles of NBS & SDGs.

Knowledge regarding SDG & NEB Goals

No prerequisites regarding NEB and SDG

Support and Documentation

Range of resources, including a short video introduction and written documentation

The language of the tool and/or the accompanying documentation will be defined at a later stage.

Accessibility

Accommodate users with various sensory impairments

Facilitators who can vividly describe the site, the tool's solutions, and their respective impacts

Collaborative experience involving a physical visit to the site alongside a facilitator can bridge the gap between physical and digital realms.

Expected Impact & Outcomes

Association with NEB & SDG Objectives

NEB
Sustainability / Aesthetics / Inclusion

SDG
SDG 8 (Target 8.9)
SDG 10 (Target 10.2)
SDG 11 (Target 11.3, 11.4, 11.6, 11.b)
SDG 12 (Target 12.3, 12.7, 12.8):

Figure 26 - SuperBarrio - DesignYourHeritage. Tool Mapping

3.5 Fund4Act

3.5.1 Short description and functionality

Community Groups struggle to access funding for their heritage projects because of:

- a difficultly effectively communicating competence
- a difficulty effectively communicating impact
- an inefficient and time consuming funding process

Fund4ACT tackles these problems by:

- enabling community groups to demonstrate competence through a pre-qualification process
- enabling community groups to communicate their actions local and wider impacts through the NEB Compass
- providing an efficient and real-time digital process

By using Fund4ACT, Community Groups can show that they are a competent "bankable" organisation and potential funders including local individuals and SMEs have more confidence in investing in their heritage projects.

3.5.2 Stakeholders

The envisioned targeted stakeholders for Fund4ACT encompass a spectrum of participants and collaborators, reflecting the tool's inclusive approach to fostering community engagement and action. These stakeholders include the local community, which can use the tool autonomously, as well as the local community with the support of a designated project team. Additionally, the designated project team itself is a key stakeholder, directly involved in on-site activities and initiatives. Fund4ACT's flexibility in accommodating various user groups empowers local residents to participate in community-driven actions independently or with the guidance and support of dedicated project teams. This approach aims to maximize the tool's effectiveness in facilitating sustainable actions and promoting a sense of collective responsibility for achieving environmental, economic, and social impact objectives within communities.

Fund4ACT targets only on adult stakeholders.

Fund4ACT aims to specifically target local individuals and SMEs during its funding period for the particular action. By tailoring its focus to these stakeholder groups, Fund4ACT can effectively engage and support local residents and SMEs in their sustainability efforts. The tool recognizes that these groups play a vital role in driving community-driven actions and sustainable initiatives within their local context. Through targeted outreach and engagement strategies, Fund4ACT can empower local individuals and SMEs to actively participate in and benefit from the tool's capabilities, contributing to the broader objectives of promoting sustainability, inclusivity, and community-driven impact. This targeted approach aligns with the tool's mission to facilitate and amplify sustainable actions within communities, fostering positive outcomes that resonate with NEB and SDG goals.

The Fund4ACT tool will be deployed in the three pilot sites, Eleusina, Milan and Ballina.

Fund4ACT sets its sights on addressing specific challenges at the abandoned Ballina Convent, with a focus on providing partial financing for future HeritACT-inspired events and projects within this unique site. By targeting this particular challenge, Fund4ACT aims to support and catalyze the revitalization of the Ballina Convent, a historic and culturally significant location. The tool recognizes the potential of this site as a hub for community-driven initiatives and aims to overcome financial barriers that may hinder the realization of impactful events and projects. Through its funding mechanisms and engagement strategies, Fund4ACT seeks to unlock the latent potential of the Ballina Convent, fostering a vibrant and culturally rich space that aligns with NEB and SDG goals. This tailored approach allows Fund4ACT to directly contribute to the transformation of this historic site, breathing new life into it and promoting sustainability, community engagement, and inclusivity in Ballina.

3.5.3 Enabling conditions

Prior to deploying the Fund4ACT tool, certain enabling conditions and prerequisites must be met to ensure its effective implementation. Specifically, the tool requires the prequalification of a suitable community group on the platform. This prequalification process serves as a foundational step, ensuring that community groups align with the tool's objectives and criteria. Additionally, the key action or project seeking funding through Fund4ACT must undergo a thorough cost assessment and evaluation via the platform. This involves the active participation of the community group in rating the local and wider impacts of their proposed actions using the 6 NEB Compass Scales. These scales, encompassing attributes such as beauty, sustainability, collaboration, participatory processes, multi-level engagement, and a transdisciplinary approach, serve as a comprehensive framework for assessing the potential impacts of community initiatives. By adhering to these conditions, Fund4ACT aims to promote informed and inclusive decision-making, ensuring that funded actions align with NEB and SDG goals and contribute to positive environmental, economic, and social outcomes within the pilot sites.

Fund4ACT has been thoughtfully designed to ensure that users, regardless of their prior knowledge or technical skills, can effectively utilize the tool. When it comes to user prerequisites, Fund4ACT takes a user-friendly and inclusive approach. For community groups seeking to become "prequalified" on the platform, the tool offers valuable Best Practice advice and practical guidance. For instance, one of the documents required for prequalification is a Community Group Constitution. To assist community groups in this process, Fund4ACT provides an example template and comprehensive advice on how an unconstituted group can become constituted, thereby meeting the prequalification criteria. Regarding the assessment of actions using the NEB Compass framework, Fund4ACT aims to make the process as straightforward as possible. The tool offers a step-by-step assessment process, guiding community groups through each stage. To ensure clarity and understanding, Fund4ACT provides explainers for each of the NEB Compass Action points, enabling users to comprehensively evaluate the local and wider impacts of their proposed actions. User-friendliness and accessibility are central principles in Fund4ACT's design, emphasizing inclusivity and ensuring that all stakeholders, regardless of their prior knowledge or technical proficiency, can engage with the tool effectively. This approach aligns with the tool's commitment to promoting informed decision-making and enhancing

the capacity of community groups to contribute to the goals of NEB and SDGs within the pilot sites.

Fund4ACT is committed to facilitating the user experience by providing comprehensive support, tutorials, and documentation. Users can expect a range of resources to enhance their understanding and usage of the platform. Fund4ACT's approach includes the provision of Best Practice Supporting Text, Tutorials, and Template Documents, ensuring that users have access to valuable guidance and practical assistance. Fund4ACT's commitment to user support and knowledge-sharing underscores its dedication to empowering community groups and stakeholders. These resources are designed to enhance users' capacity to participate in the funding and assessment processes, promoting transparency, informed decision-making, and successful project outcomes aligned with NEB and SDGs. Fund4ACT will be delivered in English.

3.5.4 Accessibility

Fund4ACT prioritizes user accessibility as an essential element of its platform design. To ensure that users, including community groups and stakeholders, can easily engage with the tool, Fund4ACT has implemented several strategies. Fund4ACT boasts a clear User Interface, promoting intuitive navigation and a user-friendly experience. The platform's design emphasizes simplicity and clarity, reducing complexity and enhancing accessibility. Users can confidently explore and interact with the platform without encountering unnecessary jargon or confusing terminology. Fund4ACT simplifies this process by providing clear and straightforward guidance, ensuring that users can comprehensively assess their actions' local and wider impacts without encountering barriers related to technical language or complexity.

3.5.5 Expected impact and outcomes

Fund4ACT is firmly rooted in its alignment with specific NEB and SDG objectives, recognizing their paramount importance in guiding its mission and activities. The tool operates in the spirit of SDG 17, which emphasizes the importance of partnerships for sustainable development. Fund4ACT leverages the NEB Compass as its foundational framework for community engagement and decision-making. Within this framework, community groups are empowered to assess, rate, and communicate the local and wider impacts of their proposed actions. Fund4ACT's commitment to this alignment goes beyond rhetoric, as its development team actively incorporates the six NEB Compass scales into the Fund4ACT action upload process. These scales encompass essential dimensions such as "beautiful, sustainable, together, participatory process, multi-level engagement, and transdisciplinary approach." By seamlessly integrating these scales, Fund4ACT ensures that community groups can holistically evaluate their actions, considering factors ranging from environmental sustainability to social inclusivity. In essence, Fund4ACT embodies the principles of partnership, sustainability, and inclusivity embedded within SDG 17 and the NEB Compass framework. By providing a structured and accessible platform for community groups to assess and communicate their actions' impacts, Fund4ACT contributes to the broader global agenda of achieving sustainability and advancing nature-based solutions for a better, more inclusive world.

- NEB compass
  - Together /Sustainability / Beautiful

  o Participatory process / Multi-level engagement / Transdisciplinary approach
- SDG
  o Goal 17 – Partnership for the goals

The deployment of the Fund4ACT tool carries a distinct vision of enhancing the impact and outcomes of future HeritACT events and projects. Fund4ACT envisions itself as a pivotal instrument in providing part-financial support for these initiatives, thereby catalyzing their success and amplifying their positive influence. Fund4ACT's anticipated impact transcends financial support; it aspires to foster a dynamic ecosystem where community-driven actions receive the backing they need to thrive. Furthermore, Fund4ACT envisions a ripple effect, where the tool's deployment triggers greater community engagement, amplifies the reach of HeritACT events and projects, and ultimately leads to more sustainable, inclusive, and impactful outcomes.

Figure 27 - Fund4Act. Tool Mapping

3.6 HERIcraft

3.6.1 Short description and functionality

HERIcraft employs Minecraft to provide an engaging experience within a widely popular video game among young people. It combines a custom immersive virtual environment in Minecraft, created from geospatial data, with collaborative game mechanics. The gameplay experience is tailored to encourage children to participate in joint design workshops in their local communities. The multiplayer gameplay is facilitated by an online server (third-party), which logs players activities which are later analysed to get insights from participants actions. The tool is designed to be used for citizen engagement events with children.

3.6.2 Stakeholders

The envisioned targeted stakeholders for the HERIcraft tool primarily encompass the local community, particularly those who seek to initiate community-driven actions and projects. It also extends its scope to include the local community with the backing of a designated project team. In essence, HERIcraft strives to empower local communities to take ownership of their initiatives while offering the necessary support for those who may benefit from additional resources and guidance.

HERIcraft targets on children or young adults.

HERIcraft primarily targets two distinct age groups within its stakeholder focus. The first group comprises children ranging from 7 to 18 years old, while the second encompasses young adults aged 19 to 25 years old. HERIcraft's strategy recognizes the importance of engaging both these demographic segments in its creative and educational initiatives. By tailoring its approach to these age groups, the tool seeks to cater to the unique needs, interests, and developmental stages of children and young adults. This dual focus ensures that HERIcraft's impact spans a broad spectrum of youth, nurturing their creativity, environmental awareness, and community engagement.

The HERIcraft tool will be deployed in the three pilot sites, Eleusina, Milan and Ballina.

The specific challenges addressed by the tool in the various pilot sites include enhancing the sense of community and public ownership in Eleusis, improving online presence and attractiveness while bridging generation gaps in Milan, and addressing issues related to understanding and appreciating the local history and resources in Ballina. These challenges serve as focal points for the respective tools' interventions, aiming to create positive impacts and contribute to the revitalization and sustainability of these pilot sites.

3.6.3 Enabling conditions

The deployment of the tool necessitates specific enabling conditions, including server hosting through a third-party service at a cost of 30 EUR per month. Additionally, licenses may be required for participants who do not have their own, priced at 30 EUR each with lifelong access. In on-site or in-person events, the availability of laptops or tablets is essential to facilitate the tool's usage effectively. These infrastructure and engagement requirements are crucial for the tool's successful deployment and functionality.

For the effective use of the tool, facilitators are required to possess basic knowledge of computer-related skills. This prerequisite ensures that those guiding the tool's deployment are equipped to support its usage and assist participants as needed.

Regarding the required knowledge, of the targeted stakeholders regarding NEB and SDG goals it is minimal or none. It is not necessary for users to be familiar with the concepts of NEB and SDG goals, as their knowledge or lack thereof will not impact the application or usage of the tool.

Also support, tutorials, and documentation will be available for users of the tool, in English. Versions for Italian and Greek will depend on partners availability to validate translations. This includes video tutorials that guide users on how to install, run, and facilitate an event in the game. Additionally, there will be documentation provided on setting up the game, which covers aspects of Minecraft game and server management. These resources aim to assist users in effectively utilizing the tool for their needs.

3.6.4 Accessibility
HERIcraft addresses issues of user accessibility through several means. It includes a native audio description option, enhancing accessibility for users with visual impairments. Additionally, the tool may require the assistance of a mediator to facilitate user interface control, especially for users who may have difficulty operating devices like a mouse, keyboard, or touchscreen. Furthermore, to ensure accessibility for all participants, those who do not have access to a Minecraft license will need to be provided with one, enabling them to fully engage with the game. These measures aim to make the tool inclusive and accessible to a wide range of users.

3.6.5 Expected impact and outcomes
HERIcraft in terms of NEB, aligns with the goals of Beauty and Inclusion, emphasizing the importance of creating aesthetically pleasing and inclusive environments. Regarding SDGs, the tool contributes to Goal 4, which focuses on Quality Education, by offering an educational platform for users. It also supports Goal 11, which pertains to Sustainable Cities and Communities, by promoting sustainable urban planning and development. Additionally, the tool aligns with Goal 13, which addresses Climate Action, by providing a platform for community engagement and collaborative efforts to address climate-related challenges. These associations underscore the tool's commitment to fostering sustainability, education, and community well-being.

- NEB
    - Beauty and Inclusion/Together
- SDG
    - Goal 4 - Quality education
    - Goal 11 - Sustainable cities and communities
    - Goal 13 - Climate action

The expected impact and outcome of deploying the tool are aimed at increasing the engagement of children and providing them with a platform where their voices can be heard in the heritage reactivation process. By involving children, the tool seeks to create a more inclusive and participatory approach to heritage projects, fostering a sense of ownership

and community among younger generations. This engagement not only enriches the heritage reactivation efforts but also helps in building a stronger connection between children and their cultural heritage, ensuring its preservation for the future. Ultimately, the tool's deployment aims to empower children to actively contribute to the revitalization of their cultural surroundings, thereby fostering a more vibrant and culturally rich community.

HERIcraft

Short Description & Functionality

It combines a custom immersive virtual environment in Minecraft, created from geospatial data, with collaborative game mechanics. The gameplay experience is tailored to encourage children to participate in joint design workshops in their local communities

Stakeholders

Envisioned Stakeholders
Local community, particularly those who seek to initiate community-driven actions and projects.

Local community with the backing of a designated project team

Intended Userbase Age Group
Children or young adults

Specific Stakeholder Groups
The tool seeks to cater to the unique needs, interests, and developmental stages of children and young adults

- Children ranging from 7 to 18 years old,
- Young adults aged 19 to 25 years old

Pilot Sites Deployed
Eleusina

Milan

Ballina

Particular Challenges Addressed
Eleusina

- Enhancing the sense of community and public ownership

Milan

- Improving online presence and attractiveness while bridging generation gaps

Ballina

- Addressing issues related to understanding and appreciating the local history and resources

Enabling Conditions

Specific Enabling Conditions
Server hosting through a third-party service at a cost of 30 EUR per month

Licenses may be required for participants who do not have their own, priced at 30 EUR each with lifelong access

In on-site or in-person events, the availability of laptops or tablets is essential

User Knowledge Prerequisites
facilitators are required to possess basic knowledge of computer-related skills. This prerequisite ensuresthat those guiding the tool's deployment are equipped to support its usage and assist participants as needed.

Knowledge regarding SDG & NEB Goals
No prerequisites regarding NEB and SDG

Support and Documentation
Support, tutorials, and documentation will be available for users of the tool, in English

Versions for Italian and Greek will depend on partners availability to validate translations.

Accessibility
Native audio description option, enhancing accessibility for users with visual impairments

May require the assistance of a mediator to facilitate user interface control, especially for users who may have difficulty operating devices like a mouse, keyboard, or touchscreen.

Those who do not have access to a Minecraft license will need to be provided with one

Expected Impact & Outcomes

Association with NEB & SDG Objectives
NEB:
Beauty and Inclusion/Together

SDG:

Goal 4 - Quality education;
Goal 11 - Sustainable cities and communities; Goal 13 - Climate action

Figure 28 - HERIcraft Tool Mapping

3.7 Usersence

3.7.1 Short description and functionality

Usersense tool collects, analyzes, and visualizes data based on bio-sensors and with a selection of the appropriate methods assists in evaluating the design of a user experience by summarising and analyzing a range of metrics in order to be able to draw critical conclusions about the design. In general, is a set of tools and protocols to select the appropriate method and equipment depending on the context.

3.7.2 Stakeholders

The envisioned targeted stakeholders for the Usersence tool include the designated project team on-site. This specific group plays a crucial role in the heritage revitalization process, and Usersence aims to facilitate their active engagement and decision-making by providing them with a user-friendly platform for gathering community input and preferences.

This tool targets only on adults stakeholders.

The primary focus of the Usersence tool is on user experience evaluators, making them the main target group. These evaluators are tasked with conducting evaluations tailored to the specific constraints and needs of each case. They play a pivotal role in selecting participants for the evaluation process, following the instructions and steps outlined by the evaluators themselves. By targeting user experience evaluators, Usersence aims to empower them with a platform that streamlines the evaluation process and facilitates their crucial role in assessing and improving user experiences across various contexts.

This tool will be deployed in the three pilot sites, Eleusina, Milan and Ballina.

The Usersence tool is designed to address specific challenges within the pilot sites by offering evaluators the opportunity to utilize a set of tools in the field. Through the implementation of a structured evaluation plan, evaluators can gain valuable insights into the outcomes and potential impacts of various design decisions on the overall user experience. This approach aims to enhance the understanding of user interactions within the context of the pilot sites, contributing to more informed and effective design choices that align with the project's objectives.

3.7.3 Enabling conditions

The deployment of the Usersence tool in field scenarios necessitates specific enabling conditions to ensure its effectiveness and functionality. These conditions encompass several key factors:

- Internet Access: Reliable internet connectivity is essential, which can be achieved through wireless (Wi-Fi) availability or a wired Ethernet connection. A combination of both connection types may be required, depending on the devices involved, to ensure a stable and secure data transfer environment.
- Power Supply: Adequate power supply infrastructure is crucial to support the operation of wearable devices and other portable equipment used during the evaluation process. This ensures that devices remain operational throughout the evaluation, even in emergency situations.

- Support for Evaluation: Consideration should be given to the well-being and comfort of participants and evaluators. This includes protection from excessive sun exposure, as well as providing suitable furniture such as chairs and tables to accommodate the necessary equipment setup and participant interactions. These resources contribute to a safe and organized evaluation process, including the explanation of procedures and the completion of consent forms, among other activities.

Evaluators should be familiar with evaluation processes, either in the field of Human-Computer Interaction or the broader field of User Experience. Also, the use of the tool requires knowledge of using a computer, as well as wearable or portable devices.

Medium - basic knowledge is requested to interact with the Tool (e.g., some top levels of difficulty depend on the answers which are directly related to the topics).

Additionaly, Support, tutorials, and comprehensive documentation will be available to facilitate the use of the Usersence tool, ensuring that evaluators have the necessary resources for successful deployment. The documentation will only be offered in English as it combines different software and devices, that often are not available in multiple languages. These resources will be provided in various formats, enhancing accessibility and usability:

- Written Texts: Detailed documentation will be available in the form of document files (.DOC), offering step-by-step guidance, instructions, and reference materials. This written content will serve as a valuable reference for evaluators during their work.
- Webinars and Seminars: To further support evaluators interested in utilizing the Usersence tool, webinars and seminars will be organized. These interactive sessions will provide a platform for in-depth discussions, demonstrations, and Q&A sessions. They offer evaluators the opportunity to engage with experts, share experiences, and gain a deeper understanding of the tool's capabilities and applications.

3.7.4 Accessibility

The Usersence tool prioritizes user accessibility and flexibility in its approach to evaluation. To address issues related to user accessibility, the tool offers adaptability and a range of options. The evaluation plan can be modified to accommodate the specific needs and limitations of participants, ensuring inclusivity. Additionally, Usersence supports the use of alternative evaluation methodologies and tools as needed, recognizing that participants may have diverse preferences or limitations.

3.7.5 Expected impact and Outcomes

By guiding evaluators through a step-by-step approach to collect, analyze, and visualize User Experience metrics through bio-sensors, Usersence tool offers an opportunity to ensure optimal levels of inclusion during the evaluation period by creating alternative evaluation approaches depending on the needs and limitations of the participants. Moreover, the evaluation process is an important aspect of developing innovative design and architecture solutions to activate European heritage because it provides feedback back to the designers and the local community about the organized actions and the experiences that are being shaped.

The expected impact and outcome of deploying the Usersence tool are substantial. Evaluators who utilize this tool will gain the capability to efficiently organize and execute evaluations based on the Usersence evaluation plan. They will have the capacity to collect, process, analyze, and visualize data gathered from wearable devices, offering a comprehensive view of the user experience. Usersence also enables the integration of sensor data with questionnaire responses, allowing evaluators to delve deeper into how users perceive and engage with the evaluated experience. Ultimately, this tool empowers evaluators to gain valuable insights into users' feelings and thoughts, enhancing their ability to optimize and refine user experiences effectively.

Figure 29 - Usersence Tool Mapping

3.8 Discussion & Collected Data

From the responses to the Tool Mapping Questionnaire the present Deliverable is able to present a first outline of the various elements of the HeritACT Toolkit, vis a vis certain question concerning:

- Description and Functionality
- Stakeholders
- Enabling Conditions
- Accessibility
- Expected Impact and Outcomes

These provide the Third Template for the Contextual Classification of the Digital Tools. The collated information, as shown in Figure 30 provides a holistic representation of the HeritACT Toolkit.

Figure 30 - Tool Mapping Questionnaire Reference Information

4 / Conclusion

The objective of the present deliverable is to provide a Roadmap that will:

- Enable the assignment of the HeritACT tools to specific stakeholders.
- Identify the conditions to reach Sustainable Development Goals (SDG) and New European Bauhaus (NEB) Objectives

This would be achieved through the main outcome of the related Task, which is a **"Matrix assigning Tools to Target Stakeholders and associating them to Specific SDG and NEB goals to be addressed"**.

During the research, it became apparent that the multiple potential frameworks for assigning tools to stakeholders and the broader goals require **a common frame of reference.** In other words, in order to be able to connect the various elements of the HeritACT Toolkit with broader considerations (i.e., Goals, Stakeholders or Expectations) it is necessary to establish a common understanding of what these elements actually entail. This can be achieved by identifying and codifying central concepts from each selected framework.

In this context, the previous chapters explored three selected frames of reference:

- Broader concepts regarding cultural heritage and climate action
- Parameters and objectives related to Pilot Sites
- Design and specification of Tools

The collected information, as presented in the Discussion of each chapter as 'Data collection', is a codification of the main points from each frame. These constitute the tools for establishing the common frame of reference. **The resulting tables, as represented in Figures 6, 22 and 30 are therefore the main outcome of the present Deliverable, providing a three-dimensional Template for Contextualizing the Digital Tools.** These documents are hosted online and available to involved stakeholders.

The present document was composed based on preliminary information available either from external documents (UN SDGs, EDG, NEB) either from the results of other Work Packages, that have been active in the collection analysis and presentation of related data. Further information was provided by the Grant Agreement and the Project Proposal. Thus, it is important to keep in mind that due to the dynamic nature of the project and the planned Tasks, further additions, elaborations, or corrections may need to be made to the proposed Contextual Framework in the future. These include additional detail on Pilots and Tools as well as the mapping of the HeritACT Solutions and other activities as an additional vector in the proposed contextualization framework.

Finally, the elaboration of the proposed contextual model and how it can be best utilized will be pursued. The possibility of representing reference frameworks in a multi-dimensional matrix can be further explored. This research can assist in the development of versatile conceptual framework for characterizing, situating, and contextualizing digital tools involved in cultural heritage initiatives.

Reference documents

- D2.1 - Heritage as an integral dimension of NEB and Green Deal (Lead Partner: UCD)
- D2.2 - Stakeholder analysis and methodology report (Lead Partner: UCD)
- D2.3 – Accessibility, usability and inclusiveness requirements (Lead Partner: AEGEAN)
- D2.4 - HERITACT Community led design framework (Lead Partner: AEGEAN)
- HeritACT Grant Agreement No.101094998
- HeritACT Consortium Agreement

Annex

Annex 1 – Questionnaire

[HeritACT]_ Tool Mapping Questionnaire

1. Name of tool

   _____

2. Please provide a short description of the tool and its functionality

   _____
   _____
   _____
   _____

3. What is the association of the tool with specific NEB and SDG goals and objectives?

   _____
   _____
   _____
   _____

4. At what Pilot Sites will your tool be deployed?

☐ Ballina
☐ Elefsina

☐ Milan

5. What particular Pilot Site challenges does your tool aim to address?

_____

_____

_____

_____

_____

6. Are there any specific enabling conditions (infrastructure or community engagement wise) required for the deployment of your tool?

_____

_____

_____

_____

_____

7. Who are the envisioned targeted stakeholders?

☐ Local community - with a support of designated project team

☐ Local community - autonomously

☐ Designated project team on site

8. What is the envisioned age group of your tool's intended userbase?

◯ Children

◯ Adults

9. Please specify if there are more specific stakeholder or age groups your tool is targeted at.

_____

_____

_____

_____

_____

10. Are there any prerequisites regarding user knowledge and skills for using the tool? (i.e. knowledge surrounding NEB & SDG or computer related skills)? If there are multiple targeted stakeholders / age groups please specify any prerequisite knowledge by group.

_____

_____

_____

_____

_____

11. What is the required knowledge of the targeted stakeholders regarding NEB and SDG goals?

     ( ) Low or None - no matter if the User knows what NEB & SDG goals are (it won't influence the result of the application/usage of the Tool);

     ( ) Medium - basic knowledge is requested to interact with the Tool (e.g. some top levels of difficulty depend on the answers which are directly related to the topics);

     ( ) High - no usage or progress can be performed in using the Tool if the User has no clear understanding of NEB & SDG goals;

12. Will there be support, tutorials and documentation available?(please specify type, format etc)

_____

_____

_____

_____

_____

13. Will the tool and / or accompanying documentation be available in multiple languages?

_____

_____

_____

_____

_____

14. How does your tool address issues regarding user accessibility?

_____
_____
_____
_____
_____

15. What do you envision to be the expected impact and outcome of your tool's deployment?

_____
_____
_____
_____
_____

16. Contact person for any follow up questions regarding the tool.

_____