THE HERILAND HANDBOOK

TRAINING THE NEXT GENERATION OF HERITAGE AND LANDSCAPE PROFESSIONALS

Edited by Gert-Jan Burgers and Niels van Manen

ICCROM

HERILAND
Cultural Heritage
and the Planning
of European Landscapes

THE HERILAND HANDBOOK

TRAINING THE NEXT GENERATION OF HERITAGE AND LANDSCAPE PROFESSIONALS

Edited by Gert-Jan Burgers and Niels van Manen

ICCROM

HERILAND
Cultural Heritage
and the Planning
of European Landscapes

Colophon:

PROJECT MANAGER:
Ruud van Ooijen

TEXT EDITING:
Maciej Swiderski

GRAPHIC DESIGN:
Bert Brouwenstijn, Vrije Universiteit Amsterdam

PROOF READING:
Mark Hannay

Published by the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), Via di San Michele 13, 00153 Rome, Italy; and by HERILAND Cultural Heritage and the Planning of European Landscapes, Vrije Universiteit Amsterdam.

ISBN 978-92-9077-348-1

CONTRIBUTORS:

Sophia Arbara
Nan Bai
Francesco Bandarin
Gert-Jan Burgers
Francesco Carrer
Alana Castro de Azevedo
Francesco Cellini
Massimo Craglia
Niels Dabaut
Maitri Dore
Marta Ducci
Linde Egberts
Graham Fairclough
Farnaz Faraji
Susanne Fredholm
Sennay Ghebreab
Rodney Harrison
Ron Janssen
Frank van der Hoeven
Moses Katontoka
Maurice de Kleijn
Eva Löfgren
Niels van Manen
Marilena Mela
Tinatin Meparishvili
Rusudan Mirzikashvili
Pirouz Nourian
John Pendlebury
Komal Potdar
Ana Pereira-Roders
Henk Scholten
María Margarita Segarra Lagunes
Rebecca Staats
Maciej Świderski
Anna Tonk
Mike Turner
Sam Turner
Els Verbakel
Pieter Wagenaar
Ola Wetterberg
Ana Jayone Yarza Pérez

Heriland Member Organisations

ABDR Architetti Associati Srl
Akko Municipality
Bezalel Academy of Art and Design
Cultural Heritage Agency of the Netherlands
Cultura Trust
Deutsches Zentrum für Luft und Raumfahrt e.V.
Direzione Generale Educazione e Ricerca del MIC
European Joint Research Centre
Geodan
Museum of Gothenburg
Newcastle University
NIAiU Warsaw
Northumberland National Park Authority
Organization of World Heritage Cities
Roma Capitale Assessorato all'Urbanistica
The White City Center
The Center for Urban Design Jerusalem
Trafikverket
TU Delft
UNEP/GRID Warsaw
Universitá degli studi Roma Tre
University of Gothenburg
Västarvet
Vrije Universiteit Amsterdam

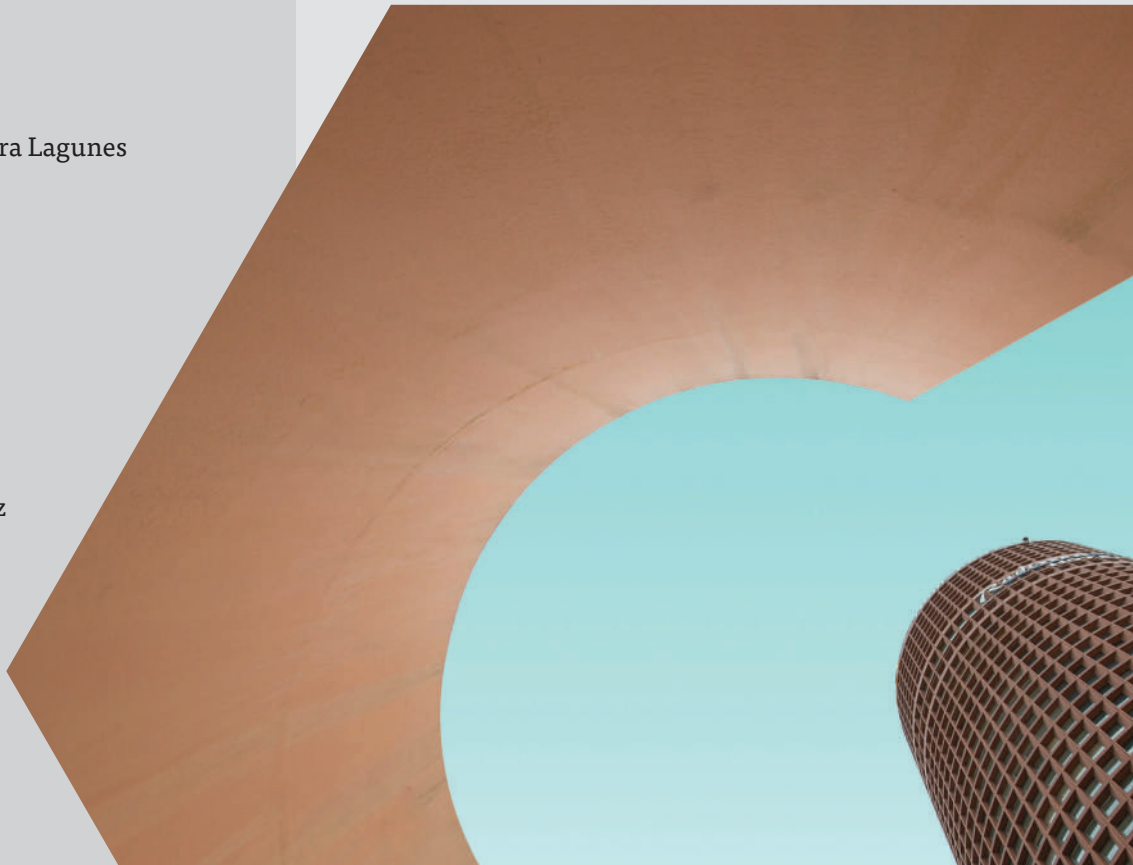
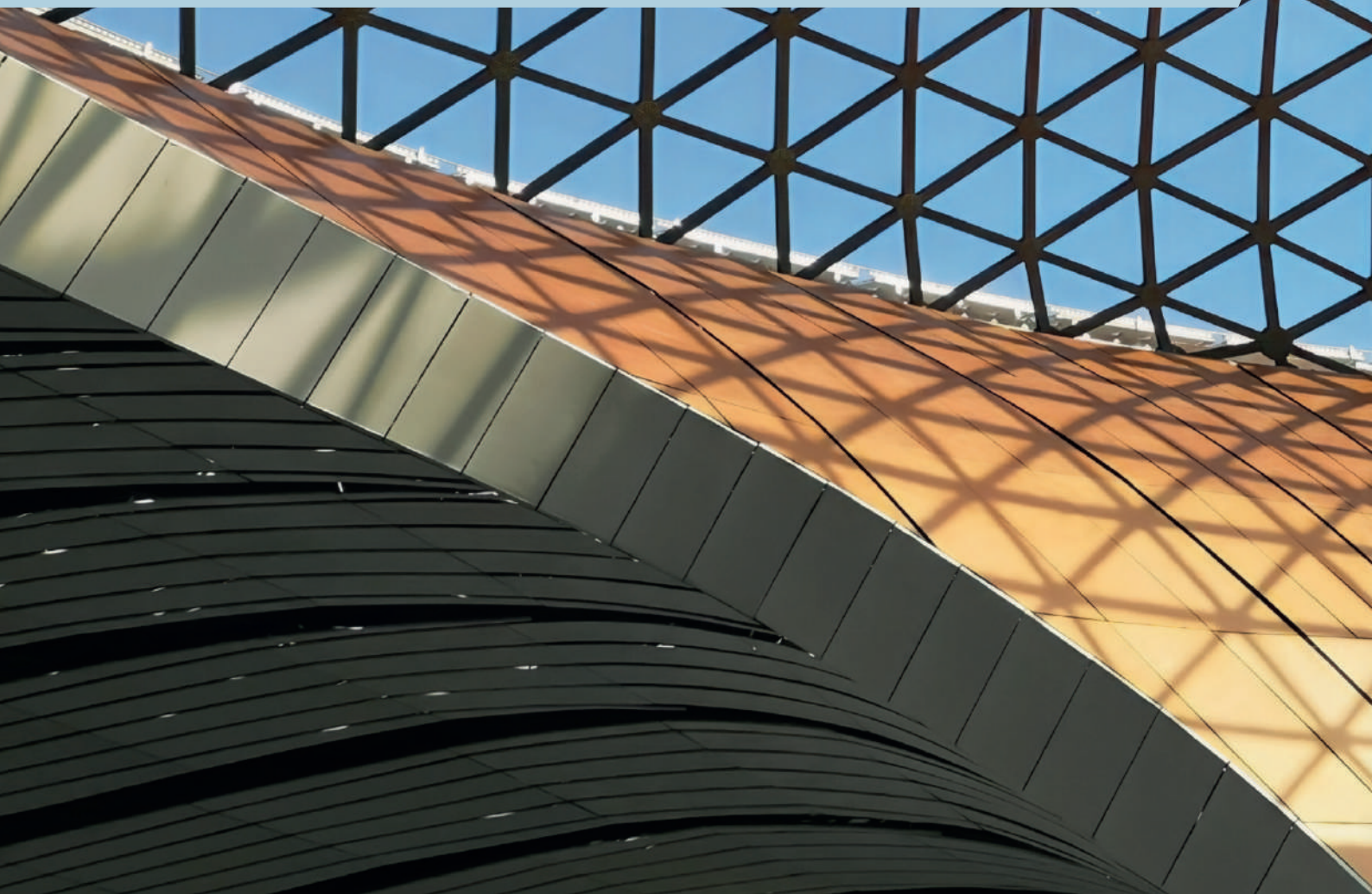


TABLE OF CONTENTS



FOREWORD

Cultural heritage serves as a foundation for identity, continuity, and creativity for communities throughout the world. Today, however, we are called upon to rethink how we engage with and care for this heritage. The accelerating pace of change that is profoundly transforming our physical environment and the ways in which we live and interact, demands that we develop new approaches and competencies to manage and plan for heritage in ways that are inclusive, forward-looking and adaptive.

The *Heriland Handbook* arrives at this pivotal moment. With a central theme of recognizing heritage as an evolving continuum that is ingrained within social and spatial transformations, this book provides valuable insights for integrating heritage into people's everyday lives. It presents not only a holistic approach to research and training, but also a practical and critical response to the urgent questions that heritage professionals, policymakers, academics and communities now face.

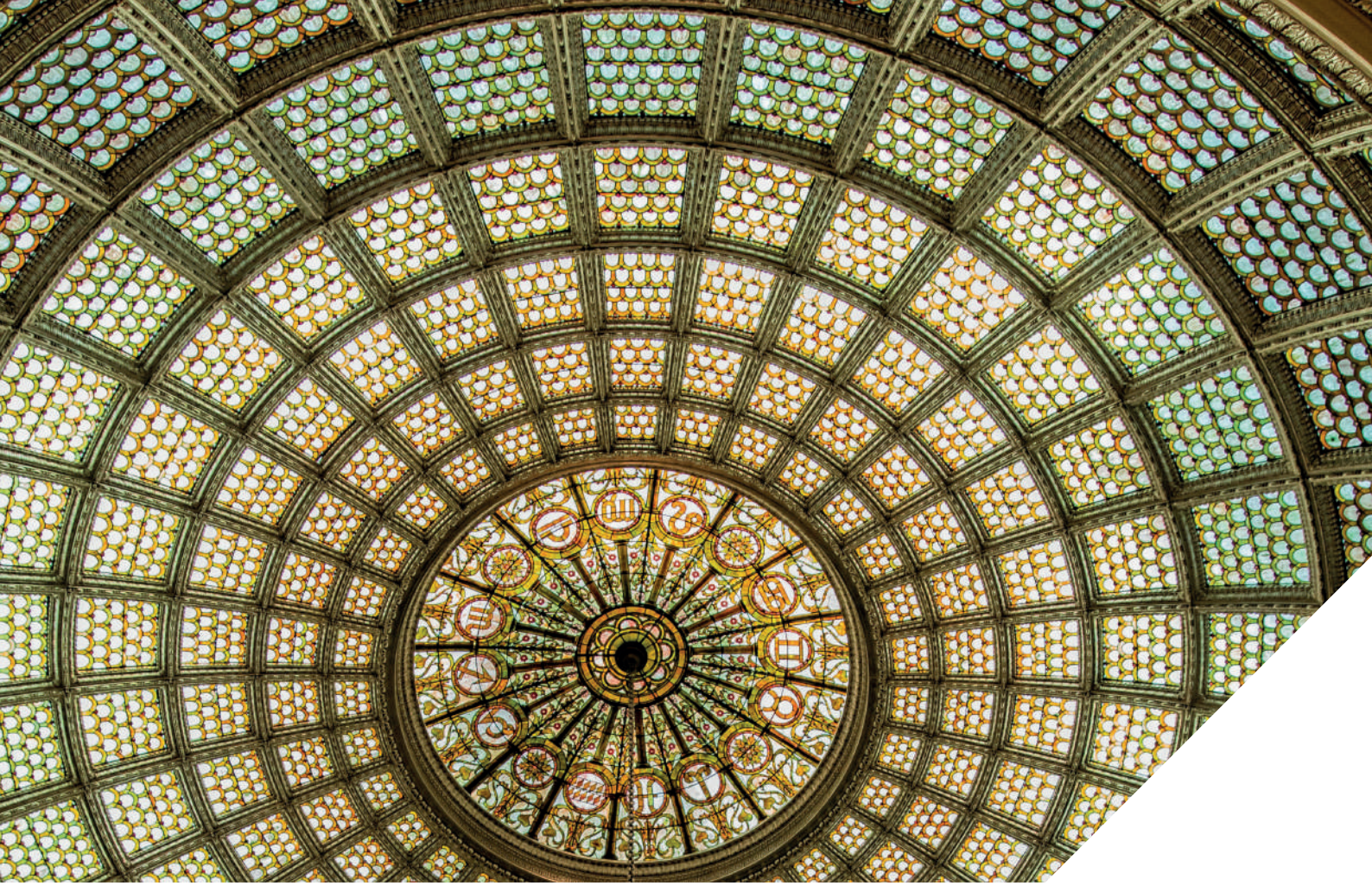
What distinguishes this publication, is its deliberate and sustained effort to move beyond disciplinary boundaries. It does so by bringing together spatial planning and critical heritage studies, theory and practice, local knowledge and academic rigour. Its firm grounding in the collaborative practice-based cases further strengthens its relevance and applicability. This responsiveness to real-world conditions, environmental and societal change, and the lived experiences of diverse communities is precisely what makes Heriland's vision so relevant.

The Heriland approach speaks to the broader societal value of cultural heritage, and also addresses the need for heritage management to engage with change – be it through digital transformation, environmental pressures, or shifting demographics and societal values. In doing so, it emphasizes inclusive governance and civic participation. The training of doctoral students in this context exemplifies a new generation of heritage professionals that is as reflective as it is proactive.

As we look to the future, we must recognize that heritage is not only about what we inherit, but also what we choose to carry forward and the futures we shape for those who come after us. The Heriland Handbook reminds us that heritage planning is, at its heart, a civic act—one that must be as inclusive as it is visionary.

I congratulate all those who have contributed to this important work, and I encourage its wide adoption by educators, practitioners and institutions committed to building more just, sustainable and resilient societies through heritage.

Aruna Francesca Maria Gujral, Director-General of ICCROM



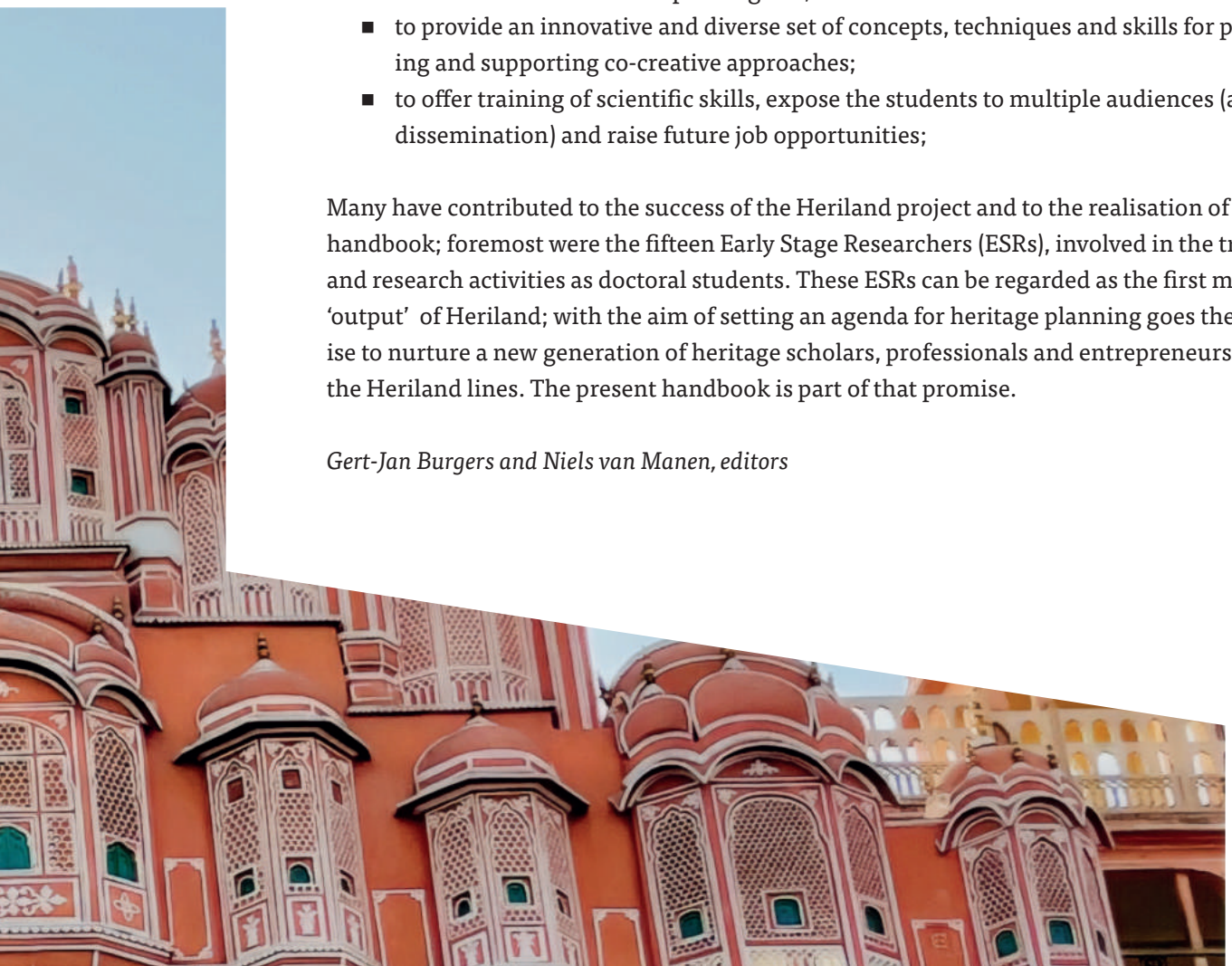
PREFACE

This handbook is one of the principal outcomes of the Heriland project, funded between 2019 and 2024 by the European Union's Horizon 2020 research and innovation programme under a Marie Skłodowska-Curie grant agreement. Heriland is the acronym for Cultural **Heri**tage and the Planning of European **Land**scapes. It is a pan-European research and training network on cultural heritage in relation to spatial planning and design; a consortium of universities, institutions with acknowledged heritage, landscape and planning expertise, civil society organisations and SMEs, located in Italy, Israel, Sweden, the UK and the Netherlands. The principal objective of Heriland is to set the agenda for a new framework for research and training in the transdisciplinary area of heritage and spatial planning and design. This handbook presents that agenda and links it to guidelines, research outcomes and experiences; these will be discussed in the contexts of the Heriland training strategies (chapter 2), societal challenges (chapter 3), the Heriland PhD projects (chapter 4), the Heriland living lab in Rome (chapter 5), concepts, methods and policy instruments (chapter 6). The handbook is directed at graduate students, early career academics and professionals, and has the following aims:

- to teach how to conceive and operationalise a transferable research design, with which to investigate at a multi-national level how heritage should be managed and planned in the context of contemporary spatial and societal transformations and related sustainable development goals;
- to provide an innovative and diverse set of concepts, techniques and skills for promoting and supporting co-creative approaches;
- to offer training of scientific skills, expose the students to multiple audiences (also in dissemination) and raise future job opportunities;

Many have contributed to the success of the Heriland project and to the realisation of this handbook; foremost were the fifteen Early Stage Researchers (ESRs), involved in the training and research activities as doctoral students. These ESRs can be regarded as the first major 'output' of Heriland; with the aim of setting an agenda for heritage planning goes the promise to nurture a new generation of heritage scholars, professionals and entrepreneurs, along the Heriland lines. The present handbook is part of that promise.

Gert-Jan Burgers and Niels van Manen, editors




CALEX

Chapter 1

A NEW FRAMEWORK FOR HERITAGE

1.1. Why a new framework for heritage?

As stated in the foreword, the main aim of the Heriland project was to set the agenda for a new framework for heritage research and training in Europe. This begs the question: why is a new framework needed? After all, European countries have a lengthy and successful history of conserving heritage and landscape assets and of capitalizing on them culturally and economically. Throughout the 20th century, particularly since the 1960s, great progress has been made in creating structures and promulgating principles (often in conjunction with the international community through UNESCO) to guide heritage and landscape conservation (Emerick, 2014; Smith, 2006; Gibson and Pendlebury, 2009; Janssen *et al.*, 2017). Some would therefore argue that the heritage field is rather in need of consolidation and, if innovation were needed at all, it should be sought in the technological realm; for example, to conserve and protect heritage objects against climate agents and other risk factors.

However, there are also strong arguments in favour of innovating theory, management and planning towards the future (e.g. Harrison, 2013; Stegmeijer, Veldpaus 2021; Heritage et al. 2023). As the 21st century proceeds, it is becoming increasingly clear that a further paradigm shift is required. New, far-reaching drivers of change have emerged, including rising and moving populations, greater connections through the digital world between communities, environmental degradation and climate change. Other societal challenges with a serious impact on heritage theory and practice include major shifts in the public-private balance within society at large and (in the face of global economic difficulties) a reinforced pressure for growth, despite warnings of the Club of Rome report and the sustainability movement. In view of all this, the significant steps forward made in heritage theory, aims and practice are no longer sufficient. Confronted with such a rapidly changing context, heritage management needs to become more proactive. More powerful ideas, tools and training are needed to ensure that heritage management and spatial planning are positively integrated with business activity, with city and rural development, and with democratic participation in decision-making. Such is the rationale behind this book, through which a new generation of academics, policy makers, practitioners, professionals and entrepreneurs shall be empowered. This new generation must be prepared to devise and guide planning and design strategies for regenerating European heritage and creating socially, economically and environmentally sustainable future landscapes.

UNESCO CONVENTION CONCERNING THE PROTECTION OF THE WORLD CULTURAL AND NATURAL HERITAGE

The Convention, signed in 1972, is one of the foundational documents of modern heritage practice. It established the institution of World Heritage Sites and formalized the international approach to nature conservation, as well as preservation and security of cultural properties. Apart from defining what types of sites can be inscribed on the World Heritage List, the Convention also stipulates that all the signatory countries have an obligation to protect the heritage sites within their boundaries and report on their status. Furthermore, the Convention details how to use and manage the World Heritage Fund. The World Heritage Convention became in 1992 the first international legal instrument to recognize and to protect cultural landscapes of outstanding universal value.

EUROPEAN LANDSCAPE CONVENTION OF THE COUNCIL OF EUROPE

Ratified in 2000 and known as the Florence Convention, it aims at protecting, managing and planning of all types of landscapes (let it be outstanding, everyday or degraded). It is the first official document of this kind addressing the issue of landscape protection and management on a European-wide level.

FARO CONVENTION

Adopted in 2005 and officially known as the Council of Europe Framework Convention on the Value of Cultural Heritage for Society, the document addresses the issue of citizens' involvement in the protection and management of heritage, recognizing their right to access it and freedom to participate in its evolution. As such, it is one of the most important documents outlining the community-oriented principles of heritage practice in modern day Europe.

HISTORIC URBAN LANDSCAPE RECOMMENDATION

Adopted during the 2011 UNESCO General Conference, the Recommendation acts as a "tool to integrate policies and practices of conservation of the built environment into the wider goals of urban development in respect of the inherited values and traditions of different cultural contexts." As such, it stands at the forefront of sustainable (both environmentally and socially) approach to heritage landscape protection and management. It is widely referred to throughout the world in various types of urban contexts exhibiting historical value.

UN SUSTAINABLE DEVELOPMENT GOALS

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.

1.2. Shifting paradigms

Heriland pursues its mission within the ongoing paradigmatic change in professional conservation ethics regarding cultural heritage in Europe (Araoz, 2011; Turner, 2011; Holtorf and Högberg, 2013; Harrison, 2013; Bandarin and van Oers, 2014; van Oers and Pereira Roders, 2014; Taylor, St. Clair and Mitchell, 2014). The outlines of this new vision on cultural heritage have emerged during the last two decades in Europe, notably in countries such as the UK, the Netherlands, Sweden, Denmark, Germany and Italy. This critical approach was partly codified by the Council of Europe in 2005 with the Council of Europe Framework Convention on the Value of Cultural Heritage for Society – known as the Faro Convention – (Council of Europe, 2005), prefigured by the European Landscape Convention in 2000 (Council of Europe, 2000). Worldwide, the new paradigm is promoted through the UNESCO Recommendation on the Historic Urban Landscape (HUL; UNESCO, 2011). Moreover, various networks, programmes, training schemes and periodicals have been launched covering specific aspects of the new approach, funded by EU and other organizations. Heriland participants are deeply engaged in many of these initiatives. They have integrated their previous successful collaborations into a new consortium which aims to take a decisive step forward and clear any hurdles that remain.

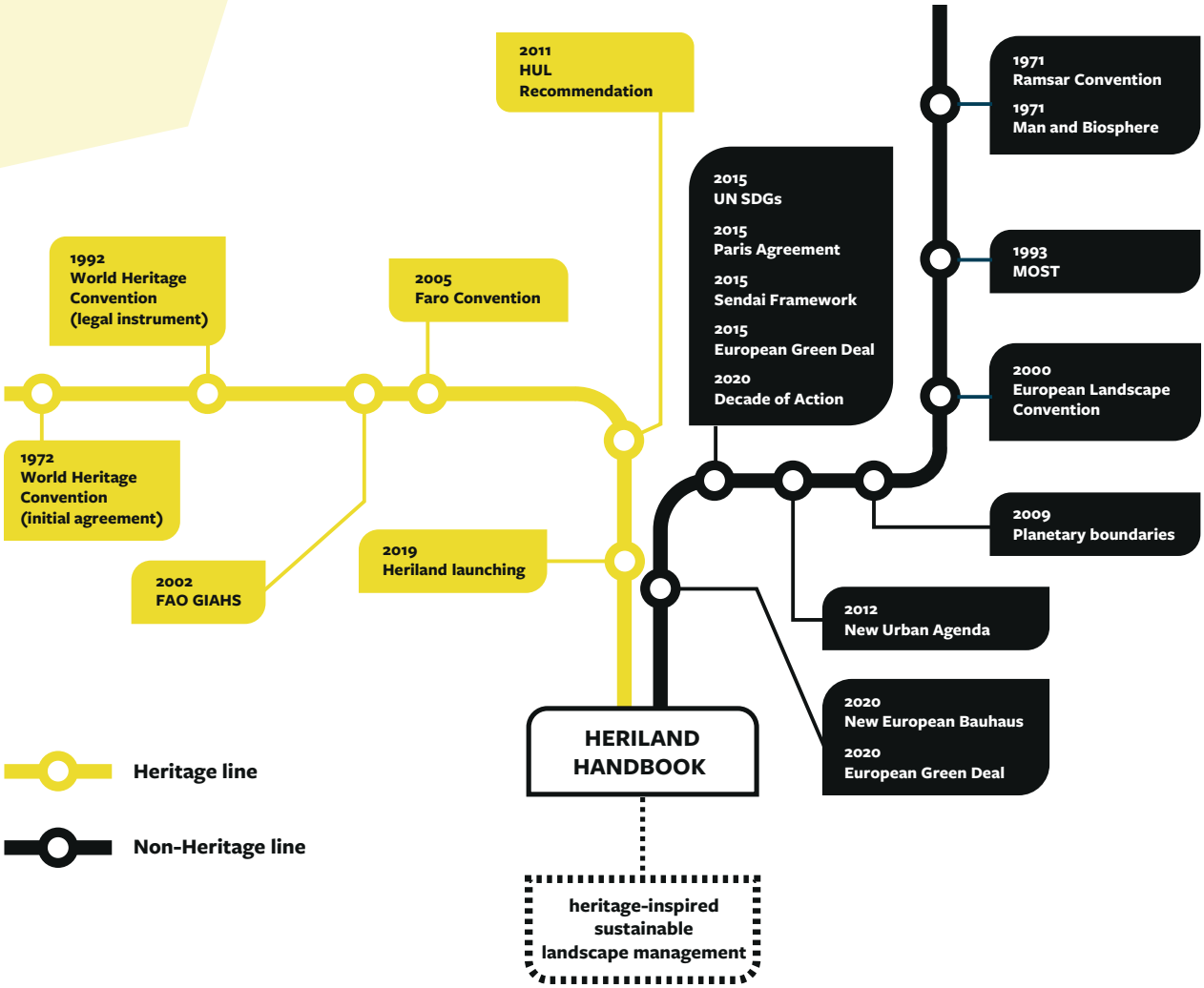


Fig. 1.1 Key international policy initiatives that have shaped the management of heritage.

1.3. Moving beyond the state of the art – setting the Heriland agenda

Notwithstanding the many advances made and broad-based support, the state of the art of heritage and spatial planning still shows significant flaws. Addressing these flaws – securing real progress beyond the state of the art – is at the heart of the Heriland agenda.

First, much cultural heritage research, training and management in Europe is still object-centred and geared towards preservation and protection against social and spatial dynamics. Such an approach, however, frequently conflicts with these dynamics. In contrast, the project's agenda advances a unifying and developmental landscape perspective, positioning heritage within spatial and social transformation processes considered key challenges to 21st-century heritage management. These are (a) *the spatial turn*; (b) *democratization*; (c) the emergence of the digital connected world and subsequent *digital transformations*; (d) *shifting demographies and contested identities*; and (e) *changing environments*. These themes play a central role in this agenda. First, in Chapter 2, they serve as guiding principles for the Heriland training strategies. In Chapter 3, they will be discussed in greater detail. In Chapter 4, they figure as the starting point of the research of the 15 Early-Stage Researchers (ESR) appointed to participate in the Heriland programme. In Chapter 5, the themes underpin the work done by the Heriland team in the Rome Living Lab – a test case

for the agenda. Finally, in Chapter 6 they offer the context for a more general discussion on concepts, methods and policy instruments for heritage planning.

Second, concepts, methods and tools to bridge the gap between heritage and landscape development still lack systematic research- and practice-based evaluation. For instance, recent conceptual frameworks such as Historic Landscape Characterisation or the Historic Urban Landscape (Chapter 6), which seek to contextualize the heritage and inform and inspire planning and design, have retained a high level of abstraction. This also goes for value assessments, frameworks for spatial design, and governance models. The second objective of this Heriland agenda is therefore to innovate, implement and test new approaches, linking theory and practice. To this aim, 15 ESRs were appointed, each evaluating and experimenting with approaches thought suitable for specific case studies. Their 15 PhD projects will be presented in Chapter 4.

Third, formal heritage policies, business interests, local citizen heritage values and landscape aspirations are often poorly aligned or out of touch with each other. While other planning domains have successfully engaged citizens through co-creation (e.g. Lee *et al.*, 2014), the same cannot be said for heritage management. Heriland aims to foster real progress in co-creation by developing tools and techniques that are grounded in theoretical reflection and have been tested in practice. These tools and techniques range from structured interviews and citizen workshops to games and geospatial digital techniques. They were also the subject of PhD research and will be discussed in Chapter 4.

Fourth, the interconnectedness of the cultural, social, economic and planning issues at stake requires an approach that transcends the still strongly institutionalized boundaries between distinct academic disciplines, governmental agencies, and professional and business fields. Heriland was purposefully set up to develop and test such an innovative approach by educating a new generation of research-based heritage planners. Considering that heritage education is also highly compartmentalized in Europe, Heriland's prime objective is to create an interdisciplinary, intersectoral and Pan-European training model, starting at the ESR level. This model is materialized in the present agenda.

1.4. Merging spatial planning and critical heritage perspectives

One aspect of Heriland's agenda that deserves particular attention here is how it merges the spatial planning approach discussed above with the critical heritage studies (CHS) approach common in the humanities and social sciences. CHS scholars adopt a critical, reflexive approach to heritage, asking questions


EKMEKCI
Coca-Cola
Coca-Cola

such as: “How is heritage defined?”, “Who is in charge?”, “Who owns heritage?” and “What are the social and political goals and mechanisms at play in using heritage?”. This subfield has developed since the 1980s, heavily influenced by critical theory.[1] CHS have adopted a more contextual and social constructivist approach, investigating the process of heritage-making and the use of heritage for socio-political goals. CHS scholars argue that landscapes, sites and monuments are the subject of *memorization* and *heritagization*, as vital strategies in socio-political and economic processes, serving to establish, enhance or contest power positions. In line with this, their research highlights conflict, contestation and exclusion. According to leading CHS scholar Laurajane Smith (2006), heritage management is most commonly part of an authorized heritage discourse which feeds an unchallenged consensual view of the past and the present. As such, this discourse quite often contrasts with heritage values of individual citizens, let alone of minority groups in society.

In Heriland, the CHS approach has been integrated into spatial heritage studies and practice. Key in this effort is the notion – common throughout the social sciences and the humanities – that landscapes, sites and objects are intimately tied up with human agency, as well as with social structures, systems of values, ideas and behaviour (Ingold, 2000; 2011; Appadurai, 2013). In can be stipulated that these networks between people and material and immaterial items, social structures and cultural values should be the subject matter of modern heritage studies. Analysing them through a critical perspective is vital for understanding how communities organize themselves and how heritage and landscape are shaped in the process, who dominates this process, and who is included (or excluded). Such analyses should not be lim-

[1] For a concise overview, see volumes 18 and 19 (Issue 6) of the *International Journal of Heritage Studies*.

ited to history, which is traditionally the domain of the humanities, but may extend to the design of future landscapes, focusing on societal needs and visions and aiming to enhance democracy, inclusion, and social justice (Winter, 2013; Holtorf and Högberg, 2013).

In this pursuit, anthropologist Arjun Appadurai can serve as a guide. While the future is traditionally the domain of urbanists, planners and economists, Appadurai forcefully argues that it is first and foremost a cultural fact (Appadurai, 2013), meaning that ideas and designs of the future are also thoroughly entrenched in and informed by the social structures and value systems that define heritage. This is why within Heriland, humanities scholars also reach out to join spatial scientists and practitioners in planning and designing the future living environment.

1.5. The Heriland College for Heritage Planning

The new heritage paradigm at the heart of Heriland has advanced simultaneously within academia and in practice. It involves a wide array of scientific disciplines and a broad range of sectors in society, from real estate to governance and from social work to smart and creative industries. For each of these sectors there exist tailor-made training facilities that pay more or less attention to cultural heritage. However, there is little or no interaction between them. Heriland has been explicitly created to fill this gap. It is meant to answer the current call for an integrative approach. To meet this challenge, all training has been organized under the banner of the Heriland College for Heritage Planning – a collaborative transnational and interdisciplinary platform which integrates existing and new training facilities of the consortium members. The Heriland College has a clear framework, with local, interlocal and network-wide training, and is informed by six guiding principles.

1) In terms of content, training in cultural heritage and spatial planning takes the potential **societal contributions** of cultural heritage as the starting point. The management needs and development potential of heritage are studied as part of wider challenges. Similarly, heritage management strategies are designed as part of broader planning schemes; thus, heritage is a cross-sectional field.
2) Training helps participants to develop **critical perspectives** on the power dynamics that shape how heritage has been defined, valued and propagated by different actors in different contexts. This means training pays attention to different strands of theory and knowledge traditions from different scientific and vernacular traditions.
3) This goes hand in hand with training in **mixed research methods** that allows participants to strengthen their ability to collect various types of data and analyse the data using qualitative and quantitative methodologies.
4) The framework also promotes that training take place in **real-life contexts** as much as possible, so that participants become aware of and gain experience in the workings of state, private and civic organizations and develop theoretical and practical insights into cultural heritage in a dialogue between academic and non-academic actors.
5) Being exposed to these contexts also makes participants aware of the **transferable skills** that heritage professionals need when assuming different roles within the heritage sector. Teaching staff makes room for such skill development.
6) Because heritage is a cross-sectional field, the design and delivery of training is built on **inter-sectoral, interdisciplinary and international collaboration**. This means teaching staff and participants have varied backgrounds in terms of their culture, field of expertise and professional orientation (either more academic or more practical).

Chapter 2 will detail the implementation of these principles in Heriland's doctoral training network.

Chapter 2

HOW TO TRAIN

Between 2019 and 2023, the Heriland Training Framework was implemented in a doctoral training network. The network comprised 15 early-stage researchers (ESRs) enrolled in PhD programmes and 30 senior researchers and professionals offering training and supervision. This chapter details the design and implementation of the training and reflects on the lessons learned. The aim is to set an example: it is hoped that through this Chapter, the reader sees the benefits of implementing the Heriland Training Framework in their own context, adapting it to their specific needs.

Table 2.1. Key terminology

TERM	EXPLANATION
Early-stage researcher (ESR)	ESRs shall, at the time of recruitment by the host organisation, be in the first four years (full-time equivalent research experience) of their research careers and have not been awarded a doctoral degree.
PhD programme / doctorate	After completing a Master's degree programme, a doctorate or PhD programme may be commenced at universities. The doctorate is at the juncture of teaching and research. At its core is the acquisition of scientific competence through a personal and original contribution to research.
Doctoral training network	The objective of Doctoral Networks is to implement doctoral programmes by partnerships of organisations from different sectors across Europe and beyond to train highly skilled doctoral candidates, stimulate their creativity, enhance their innovation capacities and boost their employability in the long-term.
Innovative Training Network (ITN)	ITN is a long-standing EU funding scheme that supports competitively selected joint research training and/or doctoral programmes, implemented by partnerships of universities, research institutions, research infrastructures, businesses, SMEs, and other socio-economic actors from different countries across Europe and beyond.
Training and Development Plan	ESRs record the goals they have towards their professional development and the training they will take in order to achieve these goals in a personal Training and Development Plan.

2.1. Why a doctoral training network?

A doctoral training network was considered the right context to advance Heriland's objectives:

1) PhD researchers conduct original research with the potential to innovate research fields in terms of theory, methods and tools. As outlined in Chapter 1, such innovation is at the core of Heriland's mission.
2) PhD researchers undergo substantial training to gain skills in support of their current research as well as for their future careers. Those who graduate with a PhD often progress to careers in which they become thought leaders and decision-makers in

academia, at NGOs and in the public and private sector; this prospect is crucial with a view to Heriland's ambition to shape future research and practice in equal measure.

3) Doctoral research and training absorb the bulk of national and European research funding. There is thus great potential that future PhD researchers will take advantage of the training developed in the Heriland Doctoral Training Network.

All in all, doctoral training was seen as a suitable context to innovate heritage planning research and practice and to develop new skills and expertise for the next generation of heritage researchers and professionals.

2.2. Who are the teaching staff and PhD candidates?

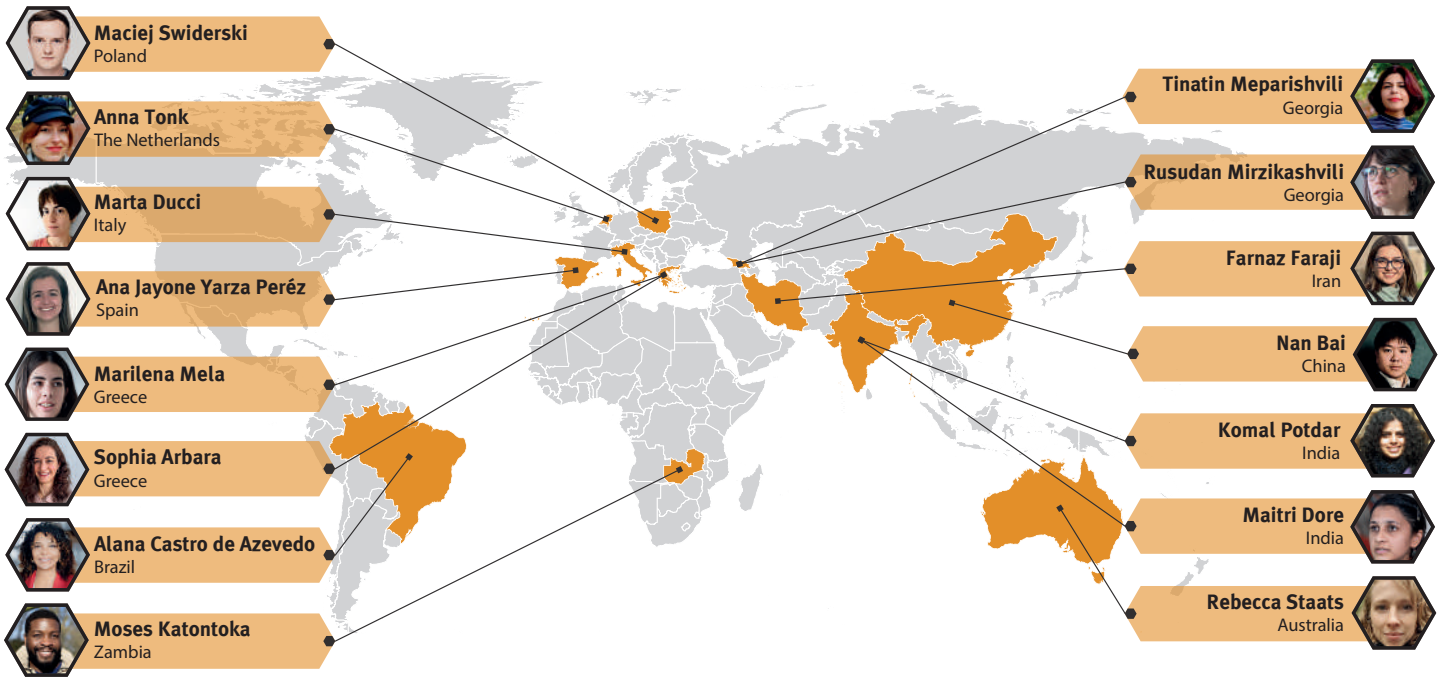


Fig. 2.1. The Heriland ESRs and their countries of origin. The six host universities.

A diverse team was involved in the training and supervision offered by the Heriland Doctoral Training Network. They included academics and practitioners from a variety of disciplinary, professional and national backgrounds affiliated with 6 universities and 25 public and private sector organisations from different parts of Europe.

2.3. Current trends in PhD training

To understand the design of Heriland training, it is important to consider relevant trends in PhD training in Europe.

A doctorate or PhD is one of the oldest academic qualifications. Traditionally, it was an academic apprenticeship; doctoral training amounted to an experienced academic mentoring the PhD candidate towards doing independent scientific research and thereby qualifying for an academic job. Training focused on academic research skills – reviewing scientific literature, collecting and analysing data, academic writing, presenting at scientific conferences – and professional development was only measured by assessing the quality of the work produced in the context of a PhD thesis. Typically, all training took place on the job and within university walls. Occasionally, PhD candidates would spend time away from their own institution to be mentored by a professor at another university.

This has changed drastically in the last 20 years. Crucially, many PhD graduates end up in careers outside academia. In the UK, only 30% PhDs still work in academia after three and a half years, and those who work outside academia (especially social sciences and arts and humanities graduates who make up the lion's share of Heriland PhDs) tend not to be in research positions. Similar trends are found across the globe.

This trend can be explained by a combination of factors. Governments, companies and NGOs recognize the value that PhD graduates represent with their creative, rigorous and critically reflective analysis skills. Investing in PhDs is considered an investment in the knowledge economy. Governments allocate an increasing share of research funding to PhD positions and encourage companies and NGOs to co-finance. As a result, new PhD graduates far outnumber the openings for permanent positions at universities, and this gap is growing every year.

Governments have also invested in transforming and universities have taken initiatives to transform PhD training (EUA, 2005; EUA, 2010; European Commission, 2011; Hasgall *et al*., 2019). New supervision models – with teams of supervisors or supervision within a community of junior and senior researchers – are increasingly replacing the traditional one-to-one model (McKenna and van Schalkwyk, 2023). Faculty-based graduate schools and discipline-based national research centres have been set up to provide much of the training. They offer courses in scientific research skills but also transferable skills, such as collaboration, entrepreneurship, project management, and teaching. PhD training networks are the latest development, which see universities and non-academic partners provide training together around specific societal challenges. As a result, this training is truly interdisciplinary (breaking the traditional walls between disciplines and faculties) and intersectoral (combining scientific and professional skill sets). This training prepares PhD candidates for future engaged research (Holliman, 2017). PhD candidates select from this offering to design a tailored Training and Development Plan, informed by the type of career they intend to pursue within academia (fundamental research, engaged research, or teaching-focused) or outside academia (in government, commercial settings, or at NGOs).

2.4. Guiding principles

Six guiding principles (see Chapter 1.5.) informed the design of the Heriland doctoral training:

1) departing from the **societal contributions** of cultural heritage;
2) developing **critical perspectives** on how actors value, define and propagate heritage;
3) attaining proficiency in **mixed research methods** to analyse various data types;
4) gaining experience in **real-life contexts**;
5) mastering **transferable skills** that are key to heritage professions;
6) training in an environment characterised by **intersectoral, interdisciplinary and international collaboration**.

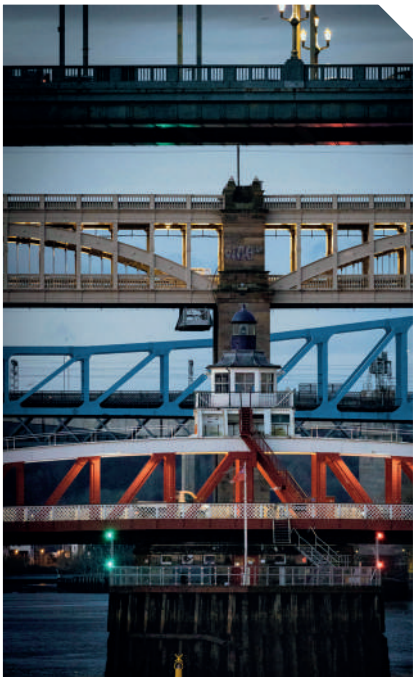
These principles are applied at three levels of training: local, inter-institutional and network-wide (Figure 2.2.).

2.5. Why three levels of training: local, interlocal, and network-wide?

The Heriland network was established with financial support from the EU Horizon Marie Skłodowska-Curie Innovative Training Networks (ITN) funding programme. ITN fund training at local, interlocal and network levels with the aim to give broad and specialised training to PhD candidates and promote cross-network collaboration in delivering joint training and sharing good training practices.

Each ESR has a home base – the university at which they and their main supervisors are employed, at which graduate school they are enrolled in a PhD programme. This **local** level is crucial to the training because it is where experienced academics can provide daily supervision and it serves as a social hub for both early-stage and senior researchers affiliated with the same department or faculty. It determines the formal requirements of the PhD programme and the training to be completed. It is also the environment in which much of the informal training-through-research takes place.

Each ESR is also part of a Heriland work package linked to one of the societal challenges that shape the context of contemporary heritage planning. Within this **interlocal** team, several ESRs and their supervisors, varying in prior disciplinary training and current university and/or industry affiliation, work alongside each other. Their joint activities – including mobility through secondments and short visits, participation in Living Labs, organizing seminars, as well as joint publications – promote intersectoral, interdisciplinary and international collaboration.



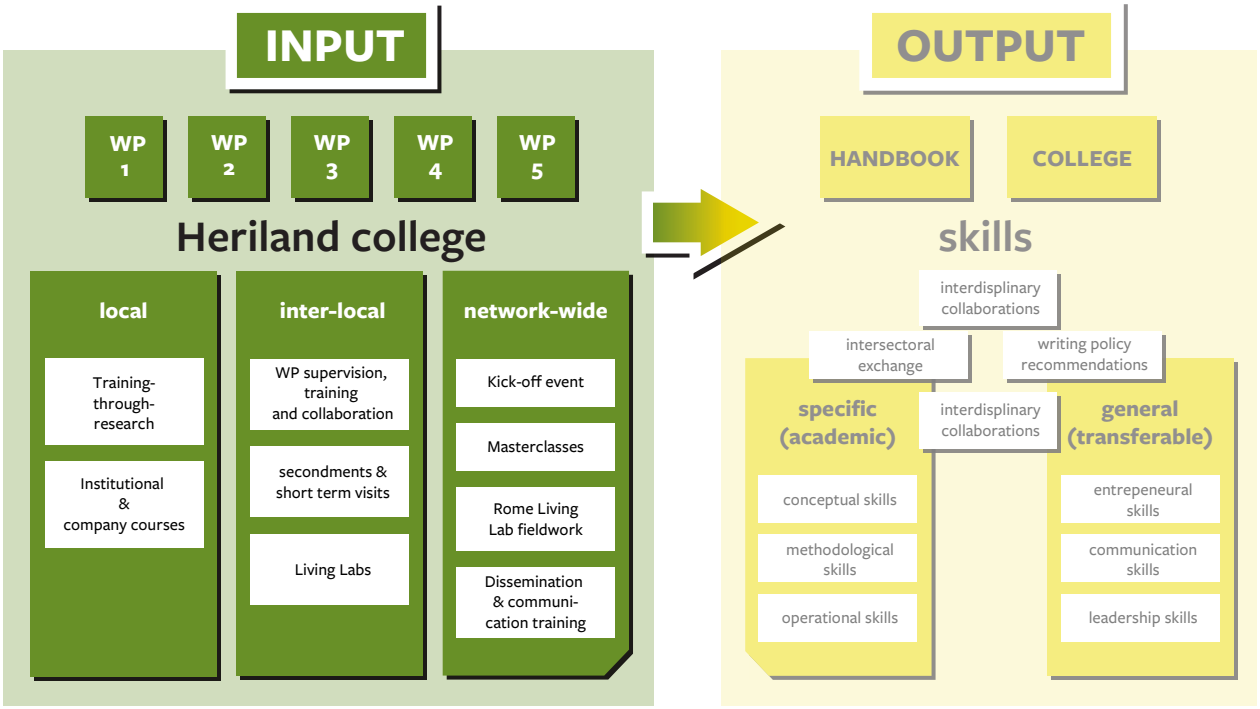


Fig. 2.2. The Heriland Training Framework.

Finally, all ESRs take part in **network-wide** training. This is where they engage with a broad range of challenges, theories, methods and tools, and put their joint skillsets to the test in realistic planning assignments. It is also the level at which transferable skills are taught that are crucial to these researchers' development as heritage professionals, but for which no suitable training is offered at the local level.

LOCAL TRAINING

Local supervision

Supervision from experienced academic researchers is still a crucial ingredient in the training programmes. Moreover, it is required by local PhD rules: supervisors are appointed to guide the research and training of the ESR. Supervision activities typically include:

- meeting regularly with the ESR to discuss progress;
- approving the Research and Training Plan drawn up by the ESR based on faculty or graduate school guidelines;
- participating in a formal progress assessment towards the end of the first year, which determines if the ESR is allowed to continue;
- working with the ESR on publications; and
- advising the faculty or graduate school about the composition of the committee tasked with the final examination of the candidate and their thesis.

Considerable variations in supervision exist between countries, universities and faculties:

- the degree of independence of the ESR;
- whether supervisors also offer pastoral support;
- whether supervision is provided primarily individually or for a group of PhDs; and
- whether supervision is provided by a team of supervisors or a single supervisor.

Training through research

Much of the training takes place through the practice of research, i.e. reading literature, selecting research methods, processing data, writing up findings, meeting with supervisors, participating in departmental or faculty seminars, and meeting informally with senior colleagues and fellow PhDs. These activities help the early-stage researcher to acquire new insights and skills.

Local courses

All ESRs are enrolled in a PhD programme, usually in a local graduate school and occasionally in a national research school or both. The PhD programme stipulates how many credits are needed and whether certain courses or training categories are obligatory. These stipulations vary greatly between countries and universities, but all programmes require a combination of academic and transferable skills training. Most PhD programmes include an induction programme helping ESRs to settle in; it includes information about national and local PhD rules, an overview of the PhD process and the training available locally, as well as initial training in research ethics and writing skills. Graduate schools tend to be faculty-based, while national research schools are mostly discipline-based. Both tend to focus on the national context, which means theory and methods courses, as well as engagement with societal partners have a limited scope. This is the void that Heriland addresses through interlocal and network-wide training.

INTERLOCAL TRAINING

Work package supervision and training

As has been mentioned above, ESRs, supervisors and non-academic partners team up in one of five work packages, each dedicated to a societal challenge. The aim is to promote interdisciplinary, intersectoral and international collaboration.

This collaboration includes online or in-person supervision meetings, mobility (secondments and short visits), along with joint training and publications. Key to the success of these activities is the involvement of academic and non-academic partners based in different countries. ESRs feel this interlocal scope enriches their research and training, as it enables them to exchange ideas with people from different disciplines, try out transdisciplinary research approaches in joint living labs (see below), and synthesize major insights derived from individual research to reach a level that transcends disciplinary, national or sectoral boundaries.

Living labs

Crucial to the ESRs' training is that they work in living labs, i.e. in actual planning contexts, alongside planning professionals and other actors. Most ESRs work in one or more local living labs (in proximity to their host university, taking advantage of the short distance and the long-standing networks established by the host), but also in ones outside their host country. The work package teams (see above) and secondments (see below) are vital instruments towards this. Working in the host country of another ESR with non-academic organizations also embedded in the work package provides the necessary access to people, training and practical support. By working in the same living lab, ESRs also have a chance to compare or combine their research approaches. The living labs thus provide excellent testing grounds and training settings.

Secondments and short visits

Formalized study periods at academic and non-academic partner institutions provide vital opportunities to put research into practice and build skills away from the host institution. ESRs spend up to 11 months of their 36-month appointment on such mobility placements, both in their host country and abroad. Secondments last longer than short visits (typically three to six months vs. one to several weeks), but both can serve a variety of purposes, including giving the ESRs opportunities to:

- study specific questions and develop skills;
- mature as independent researchers;
- acquire additional data and competences necessary for their individual projects;
- broaden their mindsets and hone their skills to be better equipped as heritage planners;
- be exposed to industry, governmental or other societal partners, to improve their career opportunities, and to experience the dynamics, constraints and chances of heritage planning practices; and
- contribute to public discussions on the role of heritage in addressing societal problems and reaching sustainable development goals.

Work package webinars, masterclasses and conference workshops

Each work package team organizes several webinars centred on their societal challenge. These online sessions are open to the entire Heriland network and include ESR presentations about their research progress and keynote lectures by external experts. The webinars offer crucial opportunities to practise presentation skills, handle peer-feedback and moderate keynote lectures.

Each work package team also organizes a one-week masterclass for all Heriland ESRs (see below, Network-wide training), again centred on a societal challenge. Although most masterclass sessions are delivered by senior researchers, the work package ESRs typically take charge of one or two sessions and are involved in the overall design of the curriculum and the practical organization of the week. This offers the ESRs a chance to gain teaching experience and develop transferable skills in running an international meeting.

Table 2.2. The main network-wide training events, conferences and contribution of beneficiaries (M stands for masterclass; TS stands for transferable skill training):

Main network-wide training event	Lead institution
M1: Democratization Masterclass	TU Delft, the Netherlands
M2: Changing Environments Masterclass	University of Gothenburg, Sweden
M3: The Spatial Turn Masterclass	Newcastle University, UK
M4: Shifting Demographies and Contested Identities Masterclass	Bezalel Academy of Art and Design, Israel
M5: Digital Transformations Masterclass	Vrije Universiteit Amsterdam, the Netherlands
TS1: Open Science: Research Data Management	Vrije Universiteit Amsterdam, the Netherlands
TS2: Open Science: Research Integrity	Vir2tue consortium, the Netherlands
TS3: Writing an Article for an International Journal	Vrije Universiteit Amsterdam, the Netherlands
TS4: Intercultural Competence and Personal Leadership	Vrije Universiteit Amsterdam, the Netherlands
TS5: Writing Retreat	University of Gothenburg, Sweden
Rome Living Lab	Roma Tre University, Italy
Final Conference	Vrije Universiteit Amsterdam, the Netherlands

Furthermore, each work package team leads a workshop at the concluding Heriland International Conference. This is an exciting chance to present and discuss research approaches and their practical implementation in various planning contexts and to receive feedback and reflections from participants thanks to the interactive setup.

NETWORK-WIDE TRAINING

Kick-off event

This three-day network meeting brings together all the ESRs, supervisors and partner organization representatives participating in Heriland. It is a great opportunity to learn about each other's backgrounds, expertise and aspirations, inform the ESRs about the training opportunities, and make plans for the implementation of the training and research at the work package and network levels.

A kick-off event consists of:

- plenary sessions with pitches by the ESRs, the universities and partner organizations;
- fieldwork tasks in smaller groups to discuss heritage management in a current planning context;
- sessions in the work package teams to discuss synergies and make plans for secondments and joint publications; and
- a public event with keynote lectures about each societal challenge and an exhibition featuring ESR poster presentations about their research and training objectives.

Masterclasses

Five masterclasses, each dedicated to a societal challenge, serve to train the ESRs in a broad range of concepts, methods and tools for heritage planning research and practice. Since all ESRs and supervisors, as well as several non-academic partner organizations, participate, the masterclasses are also a great opportunity for interdisciplinary, intersectoral and international collaboration.

Each masterclass consists of the following five components:

1) preparation assignments in which ESRs (a) explore major topics and the case study central to the masterclass, and (b) identify links to their individual training and research aims;
2) keynote lectures and a seminar to introduce and discuss the academic theories and policy frameworks most relevant to heritage planning in the context of the societal challenge addressed by the masterclass;
3) tutorials and discussion sessions about relevant research and policy methods and tools;
4) fieldwork in heterogeneous teams (i.e. ESRs from different work packages collaborating) in a local living lab to gain hands-on experience; and
5) a post-meeting assignment in which ESRs reflect on the insights and skills they have gained that will help them achieve their individual training and research objectives.

When delivered in a full-time format, each masterclass amounts to a five-day meeting.

The integration of theoretical, methodological and practical sessions, and the time taken by each ESR before and after the masterclass to consider relevant outcomes to them individually has proven highly effective. Another strong feature is that the work package teams design and deliver the training, i.e. the work package ESRs collaborate with their supervisors and non-academic partners. This gives the ESRs vital training in course design and teaching practice and the supervisors and partners insights into the needs of the target audience (i.e. the other ESRs). Finally, several consecutive days of working and socializing together provides ample opportunity for networking and an informal exchange of ideas about research, training and career opportunities.

Masterclass 1

DEMOCRATIZATION MASTERCLASS, NOVEMBER 2019, HOSTED BY TU DELFT, THE NETHERLANDS

The transformation of TU Delft's historic university campus as part of wider urban developments in the city was the central case for this Masterclass. The ESRs learned about the governance procedures that had been followed and practised with alternative models through serious gaming. This gave them hands-on experience and the chance to reflect on the distinctive characteristics and fitness for purpose of different democratic procedures.

1. **Preparation**

- The ESRs read documentation about the central case study, literature about public participation models and a policy document regarding the implementation of the Faro Convention in the Netherlands.

2. ***Theory and policy* (*keynote lectures*)**

- Dr Pieter Wagenaar (Vrije Universiteit Amsterdam), "Three Forms of Democratization in Public Administration."
- Dr Roberto Roco (TU Delft), "Development and Heritage, from Conflict to (Potential) Symbiosis."
- Prof. Dr Ana Pereira-Roders (TU Delft), "The Faro Convention. Ambitions and Progress in the Netherlands Concerning its Implementation."

3. ***Tutorials***

- Dr Francesca Noardo and Dr Pirouz Nourian (TU Delft), "Democratization, Researchers and Research Methods. How Do We (Not) Control Cultural Biases in the Choice of Methodology and the Interpretation of Results?"
- Serious-gaming exercise prepared by Dr Pieter Bots and Heriland ESR Nan Bai (TU Delft), to develop a scenario for the campus-city relationship while experiencing different levels of democratization.
- Action planning exercise prepared by Heriland ESR Maria Valese (TU Delft), adapted from Jean-Paul Corten (Erasmus University Rotterdam) to develop the scenarios from the serious game into an action plan.

4. ***Fieldwork***

- Guided visit in and around TU Delft's historic university campus, exploring the spatial relationship between the campus and the city through time.
- Meeting stakeholders to discuss how they had experienced their participation in the democratic procedures that guided the recent transformation of the campus.

5. ***Individual reflection***

- The ESRs recorded a video message reflecting on the relevance of democratization to their PhD research and the major insights derived from the Masterclass.

Masterclass 2

CHANGING ENVIRONMENTS MASTERCLASS, MAY 2020, HOSTED BY THE UNIVERSITY OF GOTHENBURG, SWEDEN

The construction of the Westlink railway through the historic heart of Gothenburg, Sweden, was the central case for this Masterclass. The ESRs learned about how the heritage impact assessment had been carried out and about the compensation scheme implemented to boost heritage values in other parts of Gothenburg to make up for the values destroyed in favour of the new railway. This provoked discussions about how heritage values and the loss thereof should be managed in the context of changes in the environment due to responses to the climate crisis and economic needs.

1. Preparation

- The ESRs wrote two short papers about case study research and the use of questionnaire surveys in their PhD project.

2. Theory and policy (keynote lectures)

- Prof. Dr Cornelius Holtorf, "How Can Heritage Professionals Respond to Environmental Change? Managing the Relationship between Current and Future Society."
- Björn Ohlén and Anders Nilsson (Västarvet, the Cultural Development Administration for Region Västra Götaland, Sweden), "The LAB190 project. Heritage as a Driving Force in Regional Sustainable Development."
- Dr Anna Storm (Linköping University) and Dr Chiara Valli (Malmö University), "Post-industrial Landscapes, Emerging Public Spaces and Heritage Values."

3. Tutorials

- Exercise: Case study research. Discussing the appeal and potential pitfalls of using a case study approach in heritage planning research.
- Exercise: Values and quantitative surveys. A discussion about the strengths and potential challenges of using surveys as a methodology for collecting data about heritage in the context of environmental change.

4. Fieldwork

- The ESRs were introduced to the Westlink railway construction project in Gothenburg and how the destruction of heritage in the area in question was compensated with investments in heritage elsewhere in the city.

5. Individual reflection

- The ESRs wrote a concise reflective piece discussing how their own research and case(s) relate to issues of heritage, landscape planning and management, and changing environments, including deliberate planning and management measures, as well as emergent processes of structural change.

Masterclass 3

THE SPATIAL TURN MASTERCLASS, SEPTEMBER 2020, HOSTED BY NEWCASTLE UNIVERSITY, UK

The ESRs gained hands-on experience with a variety of participatory mapping methods to gather data about historic character and current heritage values as identified by professionals and citizens. They worked in teams and applied these to a landscape in the country in which their PhD was hosted. This led to rich discussion about the suitability of different methods – varying from the highly formalized nominal group technique (NGT) on one end of the spectrum, to loosely structured walk-and-talk techniques on the other end – in different cultural landscapes.

1. Preparation

- The ESRs studied literature about various participatory mapping techniques and wrote a concise reflection on the anticipated relevance of these techniques for the landscapes of their PhD research.

2. Theory and policy (keynote lectures)

- Dr Andrew Butler (SLU Swedish University of Agriculture, Alnarp), "Mapping Loss of Landscape Identity."

- Graham Fairclough and Prof. Sam Turner (Newcastle University), "Historical Landscape Characterization and Landscape Character Assessment."

3. Tutorials

- Exercise: Practical survey design. Discussion about the different methodologies for collecting data from user communities, policymakers, industry professionals and other stakeholders about the content, dynamics, values and other features of the heritage landscape under investigation. Face-to-face interviews, 'walk-and-talks' interviews, fuzzy cognitive mapping. Led by Dr Stelios Lekakis, Dr Mina Dragouni, Dr Niels Dabaut (Newcastle University).

- Exercise: Landscape Character Assessment. Historical Landscape Characterization (HLC) and Landscape Character Assessment (LCA), theory and design practical led by Graham Fairclough and Prof. Sam Turner (Newcastle University).

- Exercise: GIS for HLC led by Dr Francesco Carrer, Dr Niels Dabaut, Graham Fairclough, Prof. Sam Turner (Newcastle University).

- Exercise: Digital survey applications. Gathering survey data using web-GIS and mobile apps led by Dr Niels Dabaut, Dr Stelios Lekakis (Newcastle University).

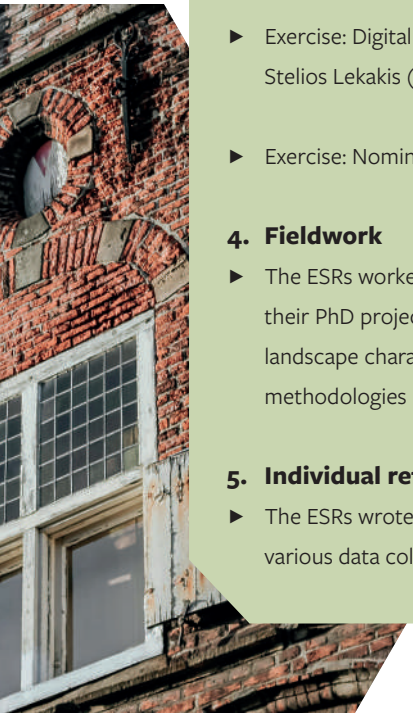
- Exercise: Nominal group technique (NGT) led by Dr Stelios Lekakis, Dr Mina Dragouni (Newcastle University).

4. Fieldwork

- The ESRs worked in teams to produce a Historic Landscape Characterisation of a landscape in the country in which their PhD project is based using historical maps and GIS-software. This was followed by a discussion about enriching the landscape character assessment thus produced by integrating qualitative and quantitative landscape data from the other methodologies in which the ESRs were trained during the Masterclass.

5. Individual reflection

- The ESRs wrote a concise reflexive piece about the landscapes central to their PhD projects and the suitability of the various data collection methods in which they had gained experience during the Masterclass.



Masterclass 4

SHIFTING DEMOGRAPHIES AND CONTESTED IDENTITIES MASTERCLASS, JUNE 2021, HOSTED BY BEZALEL ACADEMY OF ARTS AND DESIGN, ISRAEL

Lifta, a depopulated Palestinian village just outside Jerusalem, Israel, was the central case for this Masterclass. Lifta is on the UNESCO World Heritage tentative list. Various communities and authorities in and near Jerusalem associate strong values with the site and have different aspirations for its future management. The ESRs split up into four teams and each worked with one stakeholder community to first map the distinctive values and aspirations identified by their community in Lifta. They then collectively attempted to reconcile the differences between the four communities to shift the urban narrative from dissonance to reconciliation.

1. Preparation

- The ESRs read sections from M. Klein's book Lives in Common (2014) and wrote a short reflection statement – choosing the standpoint of a planner, researcher or decision maker – in response to these questions: What activities in the city could be considered common? What issues may arise from seeking to live segregated lives in proximity to one another?

- They also studied documentation about Lifta, the UNESCO nomination and the stakeholder community they represented during the Masterclass.

2. Theory and policy (keynote lectures)

- Prof. Menachem Klein (Bar-Ilan University), "Lives in Common: Arabs and Jews in Hebron, Jaffa and Jerusalem."

- Prof. Laura Vaughan (University College London), "The Significance of Urban Space in Shaping Religious Minority Environments in the East End of London."

- Prof. Michael Turner (Bezalel Academy of Arts and Design), "International Conventions and Guidelines (including SDGs, New Urban Agenda, Historic Urban Landscape Recommendations, World Heritage Convention)."

3. Tutorials

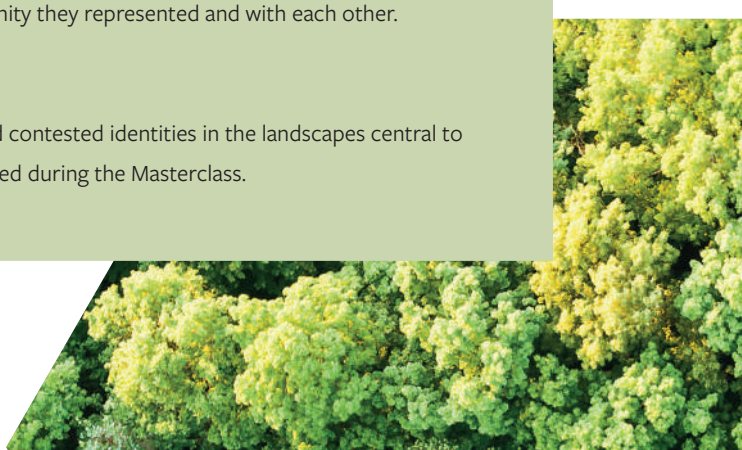
- Exercise: Heritage impact assessment and evaluation methods led by Eugene Jo (ICCROM).

4. Fieldwork

- The ESRs worked throughout the week with the Statement of Universal Values for Lifta's UNESCO nomination as well as five intervention scenarios for the area. They used these as a backdrop for working with four different stakeholder communities to (a) assess the specific values associated by each community with Lifta; (b) evaluate how these values would be affected by the proposed intervention scenarios; (c) attempt to reconcile the differences between the four communities in order to achieve a development perspective acceptable to everyone. This was a highly iterative process during which the ESRs repeatedly liaised with the specific community they represented and with each other.

5. Individual reflection

- The ESRs wrote a concise reflection on shifting demographics and contested identities in the landscapes central to their PhD research and the suitability of the methodologies adopted during the Masterclass.



Masterclass 5

DIGITAL TRANSFORMATIONS MASTERCLASS, JUNE 2021, HOSTED BY VRIJE UNIVERSITEIT AMSTERDAM, THE NETHERLANDS

The region of Puglia in the south-eastern tip of Italy was the central case for this Masterclass. The ESRs learned how to design, run and evaluate a participatory heritage planning workshop supported by collaborative digital mapping tools.

1. Preparation

- The ESRs read sections from the Digitranscope report by the European Commission's Joint Research Centre and the thought-provoking paper by S. Zuboff about surveillance capitalism to reflect on the questions: What are key features of the digital transformations of society and what drives these changes? How can digital transformations be governed with a view on ethics and fairness?

- They also collected examples of digital methodologies in heritage planning research.

2. Theory and policy (keynote lectures)

- Dr Massimo Craglia (European Commission's Joint Research Centre), "The Big Picture: Digital Transformations and (Policy) Challenges from the Perspective of Government, Industry and Academia."

- Dr Corentin Kuster and Prof. Henk Scholten (Geodan), "Digital Twins: Utilizing Digital Data for the Planning and Management of the Living Environment."

3. Tutorials

- The ESRs received hands-on training in designing a participatory planning workshop and learned to use digital collaboration tools.

4. Fieldwork

- The extensive olive plantations in the region of Apulia, Italy, are affected by an epidemic with devastating effects on the cultural landscape and the economy. The ESRs were introduced to three different intervention scenarios proposed for the area of Salento prioritizing (a) slow tourism; (b) transition to clean energy; (c) regeneration of the agricultural landscape. Each ESR team focused on a different planning scenario, prepared a workshop format, and deployed the digital tools accordingly. The teams took turns to act as moderators, participants and observers of the workshop. ESRs thus gained hands-on experience working with digital tools in various settings. This provided fertile grounds for discussing the added value of such tools for heritage planning under different circumstances.

5. Individual reflection

- The ESRs reflected on the implications of the digital transformation of society in the landscapes central to their PhD research and the potential use of digital methodologies to support participatory decision-making about landscape transformation.

Transferable skills training

Transferable skills – also referred to as human skills or soft skills – boost the ESRs' prospects, regardless of whether they choose to pursue academic or non-academic careers. Transferable skills training is offered by most graduate schools and national research schools and many skills can be trained effectively at those levels. The network level focuses on skills that are ideally taught at this level, i.e. where the training input of non-academic organizations from a variety of professional domains and the opportunity to compare good practices in different parts of Europe are most beneficial.

Transferable skills 1

OPEN SCIENCE: RESEARCH DATA MANAGEMENT, NOVEMBER 2019, LED BY VRIJE UNIVERSITEIT AMSTERDAM, THE NETHERLANDS

Open Science promotes research practices that make science accessible to, inclusive and equitable for all. Research data management is a crucial pillar, because transparent and effective storage, organization and description of data helps to ensure the usability and reusability of datasets (Borghi and van Gulick, 2022).

The ESRs received one hands-on training session on research data management at the start of their projects to help them effectively plan for the collection, management and archiving of their data and other research materials. They received two further sessions midway through their projects to practise with publishing and archiving strategies. Throughout their projects, the Heriland Data Manager supported the ESRs with data-related questions via email and online meetups.

1. Preparation

- The ESRs brought to the training an existing dataset relevant to their research topic. They also studied the research data policies of their host institution and standards or guidelines from their scientific discipline.

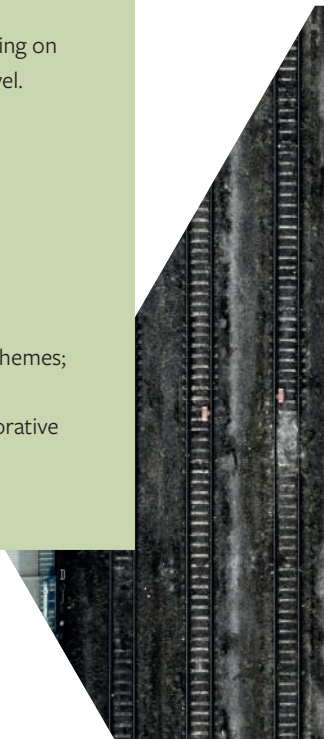
2. Theory and policy

- Research data management serves a variety of purposes, e.g. helping ESRs:
  - perform quality control;
  - prevent data getting lost or made inaccessible;
  - ensure the usability of datasets by the research team and (future) other users;
  - increase the efficiency of the research process and collaborative work; and
  - increase the transparency of the research process and thus for others to repeat and validate/ refute the process and/ or results.

- The FAIR (findability, accessibility, interoperability and reusability) guiding principles are a foundation for deciding on strategies for data management and sharing. Formal data standards are typically developed at the discipline level.

3. Tutorials

- The hands-on training included exercises in and discussions on:
  - reasons for (not) preserving or publishing your research data;
  - the importance of applying standardized file names and organizational schemes for directories;
  - best practices related to documentation, standards and metadata grounded in FAIR principles;
  - how to choose appropriate methods for backing up and archiving data;
  - data-management-related mandates and requirements, including data management plans and metadata schemes;
  - issues related to data security, privacy, licensing and citation; and
  - the dedicated Heriland Research Drive, a file and data storage platform made available by SURF, the collaborative organization for IT in Dutch education and research



Transferable skills 2

OPEN SCIENCE: RESEARCH INTEGRITY, NOVEMBER 2019, LED BY THE VIR2TUE CONSORTIUM, THE NETHERLANDS

Research integrity is a second, crucial pillar of Open Science. By following appropriate procedures, scientists ensure that their work is relevant, valid, reproducible and efficient and thereby contributes to (a) truth-finding and (b) trust-building within the scientific community and between scientists and various audiences.

The ESRs received a half-day hands-on training session on research integrity at the start of their project to learn about appropriate vocabulary, perspectives and resources when designing the research process and in managing relationships with supervisors and stakeholders. The training session was delivered by members of Virt2ue, a network of European experts on research integrity, and took the European Code of Conduct for Research Integrity as the starting point (ALLEA, 2023). Conducting research with integrity is a process of life-long learning; the topic has been covered frequently in network-wide training courses and ESRs were encouraged to discuss research integrity issues with peers, supervisors and other organizations and individuals they engaged with in their research.

1. Preparation

- The ESRs watched videos about the European Code of Conduct for Research Integrity and about virtues, values and morals in research created by the Embassy of Good Science platform (part of Vir2tue consortium). They also reflected on prior experiences with good or bad scientific practices.

2. Theory and policy

- The European Code of Conduct for Research Integrity serves the European research community as a framework for self-regulation across all scientific disciplines and for all research settings. The Code provides a set of fundamental principles for research integrity and a set of good research practices, as well as highlights the potential violations of research integrity.

- Conducting research with integrity requires the researcher to act with virtue, i.e. to do the right thing, at the right time, in the right way, in the right amount, toward the right thing or people. The virtues referenced in the Code are (a) accountability, (b) honesty, (c) reliability and (d) respectfulness, although other virtues do play a role in research. Within virtues, values show what persons and communities hold as important; norms say what has to be done in order to realize values.

3. Tutorials

- Discussions and exercises during the hands-on training session focused on:
  - the purposes of research integrity;
  - what the ESRs associate with being a “good” researcher;
  - different types of goodness: instrumental, technical and utilitarian; and
  - concepts and approaches to achieve research integrity.

Transferable skills 3

WRITING AN ARTICLE FOR AN INTERNATIONAL JOURNAL, NOVEMBER 2020, LED BY VRIJE UNIVERSITEIT AMSTERDAM AND TU DELFT, THE NETHERLANDS

Publishing research in a reputable international scholarly journal is a great way to reach other specialists in one's field, influence the future direction of said field, and expand one's professional network.

This session was led by three experienced editors affiliated with journals in domains relevant to Heriland, i.e. heritage, landscape and sustainability research. The training session had a blended format: substantial homework assignments and two hands-on sessions of half-a-day each.

1. Preparation

- Before the first session, the ESRs wrote a 200-word abstract of a potential paper based on their research; before the second, they wrote a draft introduction to their potential paper and familiarized themselves the guidelines of their target journal.

2. Theory and policy

- To publish an article, it is crucial to identify a journal that matches the scope and article type of one's research paper. The author team must then reach an agreement about what each author will contribute and – based on the author guidelines – prepare the paper with appropriate content, length and formatting. Obtaining peer-feedback through departmental seminars or conference presentations before submitting to the journal is crucial in order to refine the argumentation and evidence. After a paper is submitted, the communication with the editor and careful handling of the feedback received from the (anonymous) reviewers are also essential. This includes making arrangements about the availability of preprints and/or publishing the article open source. The final step is to carefully check the proofs and, once published, record bibliographic data in the appropriate registers.

3. Tutorials

- During the first half-day session, the training leaders explained the publishing process and introduced several journals, going into scope and article types. The participants also peer-reviewed each other's abstracts, providing anonymous comments following a double blind-review setup (i.e. author and reviewer did not know each other's name or institutional affiliation) typical for scholarly journals in this domain. Finally, the training leads gave general tips on how to approach writing an introduction.

- During the second session, the training leads explained the peer-review process typical for their journals and the participants reviewed each other's introductions based on these guidelines. Finally, the training leads explained the process of creating a writing plan for the rest of the paper and gave tips on how to approach the comments received from reviewers, as well as how to collaborate with co-authors and the journal editor.

- All participants received individual feedback on their abstract and introduction from the training leads.

Transferable skills 4

INTERCULTURAL COMPETENCE AND PERSONAL LEADERSHIP, NOVEMBER 2021, LED BY VRIJE UNIVERSITEIT AMSTERDAM, THE NETHERLANDS

Working in heterogeneous teams – with team members from different disciplinary, professional and cultural backgrounds – is very common in academic and non-academic settings. This training session sought to help ESRs strengthen their communication and leadership skills in such collaborative contexts. The session was offered in conjunction with the two-week Rome Living Lab (see below) during which the ESRs worked in mixed teams on joint heritage planning assignments. Through readings, assignments and meetups – both before and after the Living Lab – the ESRs became familiar with leadership (Covey, 2020) and communication theory (Meyer, 2015) and reflected in their own strategies for and experiences with working in mixed teams.

1. Preparation

- Before the first meetup (a workshop introducing core theory and practices), the ESRs completed four assignments:

1) Draw your personality tree depicting your values and beliefs (roots), the things that shaped you (trunk), your interests (branches), your sources of energy (leaves), your strengths (flowers) and your weaknesses (thorns).
2) Describe how your core cultural values play out in a situation of intercultural collaboration.
3) Describe how your core disciplinary values play out in a situation of interdisciplinary collaboration.
4) Apply the intercultural scales from Erin Meyer's book The Culture Map to your intercultural experience.

- Before the second meetup (i.e. the collaborative coaching session that followed the Rome Living Lab), each ESR described at least one collaborative situation during the Rome Living Lab fieldwork in which cultural and/or interdisciplinary differences came into play.

2. Theory and policy

- Two strands of theory central to the training: (a) Stephen R. Covey's concept of proactivity as a key to effective leadership and strategies to broaden your personal circle of influence; (b) Erin Meyer's concept of intercultural scales in the context of intercultural collaboration and communication.

3. Tutorials

- During the first meetup, the ESRs discussed their personality trees and practised with (a) applying cultural frameworks to intercultural collaboration and (b) reflecting on how to broaden your circle of influence.

- During the second meetup, the ESRs met in smaller groups for a collaborative coaching session. Each group chose a case study from their collaborative work during the Living Lab and investigated personal leadership issues and communication challenges.

Transferable skills 5

WRITING RETREAT, JUNE 2022, LED BY UNIVERSITY OF GOTHENBURG, SWEDEN

This training course took place over a 6-day period at a marine biology research station of Gothenburg University in a scenic, remote part of Sweden. The course aimed to create an informal, collaborative setting for the ESRs to write papers and chapters for their PhD theses. Two focused hands-on training sessions were also offered for writing effectively individually and in collaborative settings.

1. **Preparation**

- The ESRs cleared their agendas for the course; this allowed them to dedicate themselves to writing their PhD theses and discussing their writing with peers for the full six days.

2. **Tutorials**

- Writing instructors from University of Gothenburg gave the ESRs a series of exercises to support them in writing individually and collaboratively. The individual exercises centred on how to plan and nurture a daily routine when writing a substantial text; how to overcome writer's block; how to write constructive feedback on your own work; how to reflect on the process of writing in order to manage the process better in long term. The group exercises treated topics such as motivating each other by writing in the same physical space or by checking in regularly via video meetings; how to give constructive peer-feedback; how to work collaboratively on a joint text.

- The exercises were interspersed with periods when candidates wrote on their own theses, for which they had the choice to work in the training room or in their individual rooms.

- The ESRs also took the opportunity to go for walks in the surrounding forest to chat to each other about their thesis writing.

Rome Living Lab

Towards the end of the training programme, it is crucial to give the ESRs an opportunity to put all the knowledge and skills they have developed to the test. It is a reality check: what can be added to the discussion when joining a team of heritage planners working on spatial plans that can guide local heritage transformations? What unique expertise and skills do others bring that can elevate this work? It is also a training opportunity to reinforce a number of transferable skills crucial to the ESRs' future career prospects, including those related to personal leadership and interdisciplinary and intercultural collaboration and communication (see TS4). With these aims in mind, the Rome Living Lab was developed.

As a team of 15, the ESRs spend two full weeks on a heritage planning assignment set by the local authorities. They prepare twelve A1 panels with analysis and design strategies for the area along the riverbanks of the Tiber between the Testaccio/Marconi and the Ostiense San Paolo/Portuense districts. They are supported by Heriland supervisors and a team of local organisers at Roma Tre who arrange presentations by and meetings with local planning professionals and civic organisations active in the planning area, as well as a large working space well-equipped for a variety of team-based planning tasks.

Details of these activities and results are presented in detail in Chapter 5. Thus, the following list is restricted to the training objectives of the Living Lab, namely for the ESRs to:

- ❖ make strategic choices in collaborating in a multidisciplinary, intercultural team of heritage planners;
- ❖ apply concepts, methods and tools from their PhD research in order to prepare concrete plans, guidelines and recommendations to lead the local spatial (heritage) transformations;
- ❖ communicate and disseminate the results to the local community, professional stakeholders and bodies or institutions interested in the development of the area; and
- ❖ reflect on the process and outcomes of the fieldwork for their research and professional development.

FINAL CONFERENCE

The Final Conference can offer the ESRs great opportunities to practise their presentation and teaching skills and to strengthen their personal networks with a view to their future careers. With this in mind, the Heriland Final Conference was designed in 2022 as both a dissemination and a training event. The two main conference days consisted of:

- keynote lectures by heritage planning experts;
- workshops led by the work package teams centred around the five societal challenges;
- pitches by public and private organizations from the heritage planning domain about career prospects;
- pitches by the ESRs about their professional profile and career orientation;
- round table sessions about the future of heritage planning training, research and policy; and
- visits to heritage planning sites in Amsterdam.

In the Workshops, the ESRs, their supervisors and non-academic partners reflected on their experiences researching and practising heritage planning in the context of the societal challenges and living labs central to their work package. It resulted in highly engaging sessions with students, professionals and senior researchers responding to the work presented by the work package teams and discussing their own experiences and insights developed elsewhere. In this way, the outcomes of the ESRs' work were benchmarked with other heritage planning cases worldwide, leading to an evaluation of how the approach and skills developed by the project may be adapted to other contexts.

The two conference days were embedded in a 5-day residential programme. 75 participants from across Europe, Africa, Asia, Australia and the Americas took part. Besides the conference days, the residential programme included fieldwork assignments and hands-on training in key policy frameworks, including the UNESCO Recommendation for Historical Urban Landscapes and the Historic Landscape Characterisation (developed by Historic England, local authorities and academic partners in the UK but now implemented widely in Europe; see Chapter 6 for more information). Webinars and assignments before and after the residential programme enhanced the training. These focused on researching heritage planning practices and strategies in landscapes of the participants' choice. The participants greatly valued the programme and it has been continued in 2023 and 2024 in the form of an Erasmus+ Blended Intensive Programme with a similar setup.

Final conference

UNESCO HUL WORKSHOP (PART OF THE FINAL CONFERENCE), OCTOBER 2022, LED BY A TEAM FROM TU DELFT, BEZALEL ACADEMY OF ARTS AND DESIGN, THE CULTURAL HERITAGE AGENCY (THE NETHERLANDS) AND THE MUNICIPALITY OF AMSTERDAM

The main aim was to introduce the participants to HUL as a practice-based and research-informed method for integrating the attributes and elements of a World Heritage property in landscape planning (Bandarin and van Oers, 2012; Veldpaus, Pereira Roders and Colenbrander, 2013; Turner, 2015; Erkan, 2018). The participants worked in teams deploying various methods and strategies that fit the HUL Recommendation to devise spatial plans for the historic city of Amsterdam. In this way, they gained hands-on experience with how cultural values can be utilised as a driver and enabler for sustainable development.

1. Case study

Key challenge: to develop a Strategic Action Plan to address issues taking the Historic Landscape Approach, beyond the World Heritage boundaries.

The selected case study was the (UNESCO World Heritage) 17th-century canal ring area of Amsterdam, the Netherlands. The concept was to apply the HUL Recommendation and its guidelines to the broader setting and contexts, beyond the inscribed buffer zone. Given its cultural heritage and values which have transcended to a universal level due to the inscription, the area attracts a huge number of tourists. In the city, the economic model of monoculture mass tourism has seriously affected the city center.

The Municipality of Amsterdam wants to find a new equilibrium between visitors and residents, between the quality of life and hospitality. For this purpose, the "City in Balance" program has been launched with multiple programs and plans, with one of them targeting "City marketing aimed at dispersing visitors" and focusing on guiding residents and visitors to less well-known districts of Amsterdam and to the Metropolitan Area to emphasize culture). The current program lacks a systematic consideration of HUL attributes.

2. Workshop format

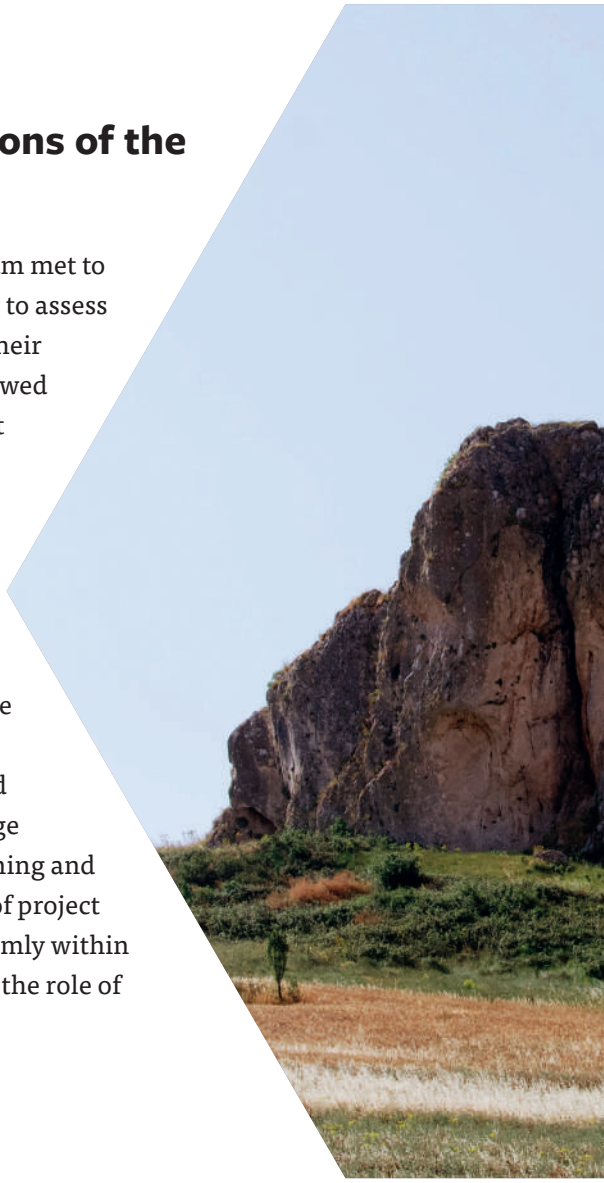
After an introductory lecture about the origins and principles of HUL, the participants were informed about the selected case study. The workshop participants were invited to conduct survey, mapping, analysis and design activities taking HUL attributes and values into account.

The participants were provided with a set of five maps demonstrating the following elements extracted from the HUL recommendations and with a boundary beyond the World Heritage property. These maps were:

- Architecture and building historical values
- Cultural-historical values of Amsterdam
- Amsterdam green spaces / water heritage
- Land use and planning
- Transport infrastructure

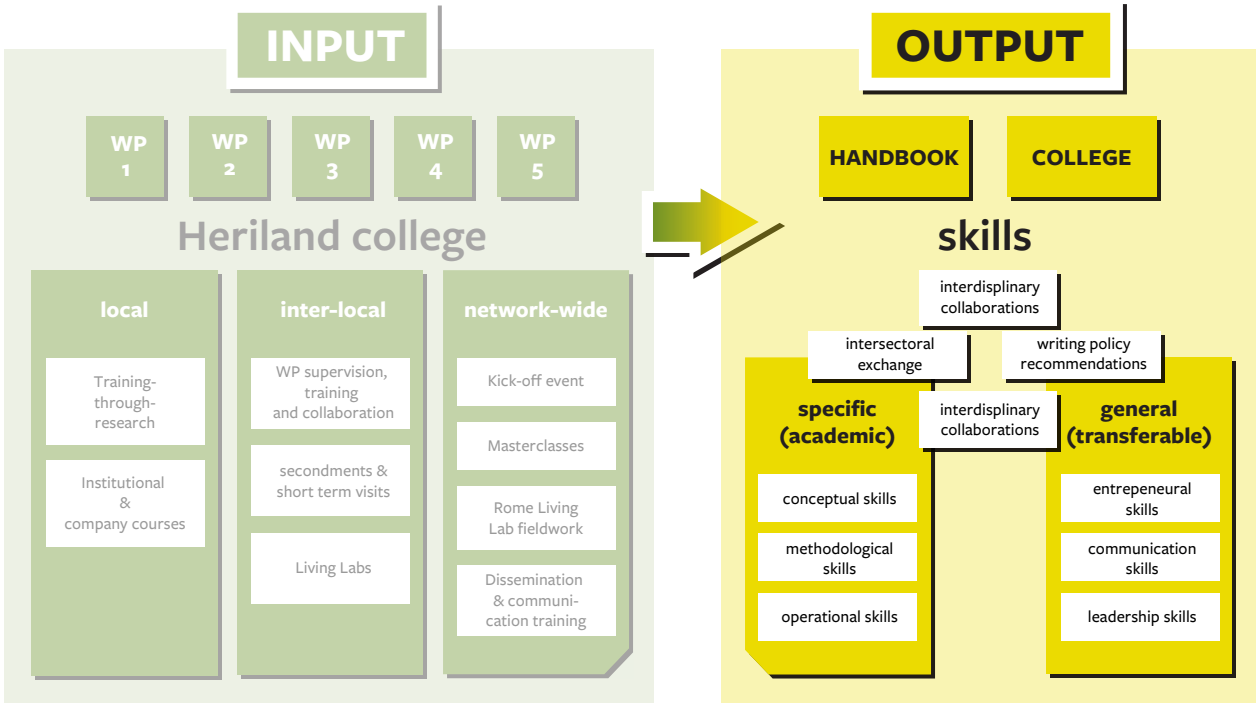
2.6. Reflection: achievements and limitations of the Heriland training

Leading up to the final conference in October 2022, the Heriland team met to review the impact of training put forward by the programme, trying to assess to what extent had the 3 years of training (a) enabled the ESRs and their supervisors to achieve the intended research innovation and (b) allowed the ESRs to develop their skillsets and professional network to boost their career prospects in heritage planning. The team also reflected on success factors and pitfalls of the programme, i.e. aspects of the setup of the network and the training that had contributed or challenged its progress.



Success factors identified include the participation of a large number and wide range of non-academic partners in the network and the diversity of the disciplinary, generational and cultural backgrounds of the participating researchers. Another positive aspect of Heriland consisted of the opportunity to work within well-established heritage planning settings, i.e. living labs, which the ESRs could join for training and research purposes. What the team also noted, was the cohesive set of project principles: all ESR projects and Heriland training rooted heritage firmly within societal and spatial challenges *and* adopted a critical perspective on the role of various actors (specialists, authorities and communities).

Fig. 2.3. The Heriland Training Framework



When preparing the network and training in 2018 and 2019, it could not be anticipated that a global pandemic would profoundly affect societies and the Heriland network for two years (from the early months of 2020 until the spring of 2022). Restrictions to manage the spread of COVID-19 hampered travel and fieldwork opportunities. Consequently, four of the five masterclasses took place online, the ESRs carried out most of their secondments remotely, and fieldwork campaigns (e.g. interviews or questionnaires, field surveys and participatory workshops) were both shortened and (partly) conducted online. The lockdowns that accompanied the pandemic also challenged the ESRs in settling into their host countries by limiting opportunities to work and socialize with colleagues in the office.

Despite these challenges, the Heriland team made great progress towards its research goals of producing innovative strategies and insights that place heritage firmly within social and spatial challenges, informed by interdisciplinary and co-creative approaches. This progress is evidenced throughout the Handbook, but in particular in the high-quality ESR work presented in Chapters 4 and 5. During the review session, the ESRs noted they took enormous pride in producing research that treated heritage-making variously (depending on the context) as a process that can help (a) understand impacts of social and spatial changes taking place; (b) inform positive social and spatial change strategies; or (c) mitigate anticipated negative impacts of proposed social and spatial transformations. The ESRs also remarked on the vital contributions made in the conception of their methodologies and the actual collection and analysis of data by supervisors, other ESRs, Heriland societal partners, and social actors in their living labs. Several ESRs had turned their analytic gaze expressly to such co-creation processes, publishing about co-creation and participatory methods. They were inspired by their own research experiences, but also by Heriland training in which co-creation was a recurring practice and topic of discussion.

Apart from research output, the research practices and training also contributed to the ESRs' intellectual and professional growth. In the review session, ESRs celebrated the freedom they had enjoyed developing

their own approaches amongst such a diverse group of researchers, and the opportunity to work directly with the local authorities and communities in implementing it in a real case study. Besides a range of research skills, these experiences strengthened their ability to communicate effectively with a variety of audiences, to recognize the value of teams with diverse skills and to manage their time and own learning effectively. The ESRs also appreciated all the new contacts they had made by participating in the programme. See Figure 2.4.

Unsurprisingly, most ESRs are confident about their post-Heriland job prospects. A striking observation emerging from the self-assessments of ESRs is the variety of potential careers they foresee themselves pursuing successfully. Clearly, Heriland has opened their eyes to the range of positions available to advance heritage planning research and practice and given them the confidence they have the right expertise and skills to apply for such positions. By the time of publishing of the Handbook, several ESRs had indeed progressed successfully into new positions both inside and outside academia or a combination thereof.

Fig. 2.4. ESR competencies strengthened in the Heriland training.

Chapter 3

CHALLENGE-BASED RESEARCH AND PRACTICE

In a departure from common practice in state-of-the-art heritage research and training, Heriland does not set the scene with a focus on specific objects, tangible or intangible. Instead, it positions heritage in the context of a set of five spatial and societal transformation processes, which can be considered key challenges to 21st-century heritage management. A separate work package is dedicated to each challenge, forming the structural framework for Heriland research and training. In each work package, three ESRs were taught to study how heritage and landscape discourses interact with these challenges, how they (can be made to) contribute to an understanding of related values, interests, tensions and conflicts, and how solutions can be proposed for some of the problems identified by the UN Sustainable Development Goals (SDGs; United Nations, 2015b). The following challenges have been identified: (a) *the spatial turn*; (b) *democratization*; (c) the emergence of the digital connected world, or *digital transformations*; (d) *shifting demographics and contested identities*; and (e) *changing environments*.

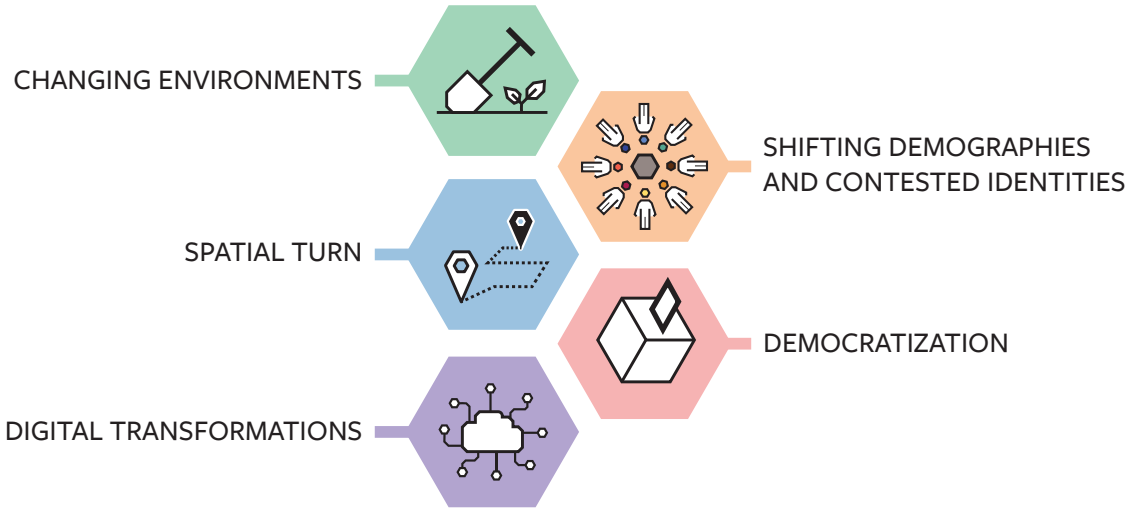


Fig. 3.1. Iconographic depiction of 5 thematic fields pertaining to Heriland work packages (WPs). These icons will be reappearing throughout the Handbook.

Table 3a. Work packages and the ESR-supervisor teams linked to them:

WORK PACKAGE	SUPERVISING TEAM	ESRs
WP1: spatial turn	**coordinator: Sam Turner (UNEW)** supervisors: Gert-Jan Burgers (VUA), Linde Egberts (VUA), Susanne Fredholm (UGOT), Eva Löfgren (UGOT), Graham Fairclough (UNEW), John Pendlebury (UNEW), Maggie Roe (UNEW)	ESR1: Marilena Mela (VUA) ESR2: Rebecca Staats (UGOT) ESR3: Rusudan Mirzikashvili (UNEW)
WP2: democratization	**coordinator: Ana Pereira Roders (TUD)** supervisors: Gert-Jan Burgers (VUA), Pieter Wagenaar (VUA), Pirouz Nourian (TUD), John Pendlebury (UNEW), Neil A. Powe (UNEW), Sam Turner (UNEW)	ESR4: Alana Castro de Azevedo (VUA) ESR5: Nan Bai (TUD) ESR6: Tinatin Meparishvili (UNEW)
WP3: digital transformations	**coordinator: Niels van Manen (VUA)** supervisors: Gert-Jan Burgers (VUA), Francesco Carrer (UNEW), Henri de Groot (VUA), Mike Turner (BEZAL), Els Verbakel (BEZAL), Franklin van der Hoeven (TUD)	ESR7: Farnaz Faraji (UNEW/VUA) ESR8: Maciej Swiderski (VUA) ESR9: Komal Potdar (BEZAL/TUD)
WP4: shifting demographies and contested identities	**coordinator: Mike Turner (BEZAL)** supervisors: Els Verbakel (BEZAL), Franklin van der Hoeven (TUD), Roberto Rocco de Campos Pereira (TUD), María Margarita Segarra Lagunes (ROMA3), Francesco Cellini (ROMA3), Anna Laura Palazzo (ROMA3), Pirouz Nourian (TUD), Ana Pereira Roders (TUD)	ESR10: Ana J. Yarza (BEZAL/TUD) ESR11: Sopia Arbara (ROMA3) ESR12: Moses Katontoka (TUD)
WP5: changing environments	**coordinator: Ola Wetterberg (UGOT)** supervisors: Susanne Fredholm (UGOT), Gert-Jan Burgers (VUA), Ron Jassen (VUA), Sam Turner (UNEW), Graham Fairclough (UNEW), John Pendlebury (UNEW)	ESR13: Maitri Dore (UGOT) ESR14: Marta Ducci (VUA) ESR15: Anna Tonk (UNEW)

3.1. Heritage and the spatial turn

At the outset of the Heriland initiative, it was understood that the *spatial turn* – greater attention for the importance of space within the theory and practice of the humanities and social sciences – was already a well-established approach in many fields, but one that still needed greater resolution and application in heritage practice. Landscape concepts – the landscape approach – informed by the European Landscape Convention (Council of Europe, 2000) and adopted by the Faro Convention (Council of Europe, 2005) and the Historic Urban Landscape (HUL; UNESCO, 2011) approach, have also become well-developed in theory in recent decades. Nevertheless, practice in heritage – including critical heritage discourse – had not yet been widely or sufficiently informed by the landscape approach. This seemed paradoxical, given that planning and development practice, or spatial planning, served as the fundamental tool of heritage management and was itself quintessentially space-based. Heriland therefore took the broad, multi-faceted concept of landscape as one of its fundamental axes. The interdisciplinary and transdisciplinary capacity of landscape enables it to address the issues of people-place interactions (whether explicitly heritage-based

or not) that lie at the heart of planning for and managing change, whilst simultaneously connecting to almost all of the challenges laid down by the SDGs through the use of land in a social context.

While inspired primarily by the European Landscape Convention, the focus of the *spatial turn* challenge was also informed by the Faro Convention and by recent developments within the field of critical heritage. Furthermore, it was possible to base Heriland's approach on earlier theory about the role of landscape in planning (Selman, 2006; Bloemers *et al.*, 2010) and on recently completed work by two other European networks, HERCULES (Shuttleworth, 2017) and – with particular attention to the overlap between heritage and landscape thinking in terms of spatial planning, democratization and participation – CHeriScape (Fairclough *et al.*, 2020; Fairclough, 2019).

Three, and later four ESRs worked as members of the project's work package on the *spatial turn*, each beginning from a landscape position but expanding into other fields of theory quite rapidly. Marilena Mela studied the confrontations at social and environmental levels that occur when renewable energy infrastructures (often presented as unarguably globally beneficial) are proposed and established in self-contained places and landscapes with strong heritage and identity. Her case studies – all islands, in Greece, Scotland, Italy and the Netherlands – demonstrate that the planning and heritage processes which ensue are also a form of long-term landscape-making. Rebecca Staats researched place-caring practices in the everyday heritage of the recently post-industrial village of Uddebo in Sweden while recognizing that heritage places are not fixed or static but rather "in process", in a state of continuous change and evolution. Within place-based management practices there must – especially where high levels of public participation are achieved – be a constant awareness (and use) of uncertainty, with goals that might not be fixed. Rusudan Mirzikashvili explored the role of landscape as heritage in integrated governance across sectors, disciplines and actors, in actual planning and in policy systems, using governance case studies in England. Inevitably, this research drew on theories from many domains: heritage, critical heritage and heritage as commons; cultural landscape theory, holistic biocultural heritage and socio-ecological systems; and governance, socio-political and economic theories in multi-scalar geographic, political, and administrative systems. Komal Potdar, initially in the *digital transformations* work package, joined the *spatial turn* group during the Heriland project because her research had led her rapidly towards spatial approaches. Her case studies in Israel examined how HUL and the New Urban Agenda (United Nations, 2016), through their emphasis on knowledge and planning, could support the sustainability of intensely historic cities by combining digital approaches with landscape. Through a process of datascaping, she sought ways to reconcile a city's complex socio-spatial and heritage structure with development processes, and therefore to reduce spatial and socio-economic segregation and gentrification while still leaving space for renewal, regeneration and retrofitting.

A significant facet of the *spatial turn* group was the difficulty of separating it from other Heriland groups. Landscape, place, neighbourhood and space run like a golden thread through the whole Heriland project, and spatial ideas underpin processes of democratization, digital approaches, issues of identity and changing environments. It is likely that all ESRs contributed to Heriland's exploration of the *spatial turn* in heritage and planning, but to take two examples, Anna Tonk's research under the aegis of the *changing environments* strand took an explicitly place- and landscape-based approach, while Farnaz Faraji in the *digital transformations* group experimented with Historic Landscape Characterisation (HLC) methods in the context of migrant identities.

Without anticipating later sections of the Handbook (including the more detailed ESR reports in Chapter 4), this introduction has already demonstrated the centrality of space-focused approaches to the future of heritage management and development planning, in urban and rural contexts, as the four ESR research projects just outlined show. It is also becoming very clear that the *spatial turn* is also a social turn. By embedding the cultural with the natural, and by insisting on the importance of human perception, landscape opens doors to broader demographic access and growing democratization, perhaps in ways that traditional heritage approaches cannot.

3.2. Heritage and democratization

Although heritage is often perceived as a domain of experts, it is in reality, like landscape, key to the daily lives of citizens. Increasingly, as in nearly all sectors of society, these citizens demand a voice in the definition and management of heritage, and in the development of planning alternatives and design solutions. Here, heritage planning aligns with another UN Sustainable Development Goal, that of inclusive and equal social justice (SDG 16: Peace, Justice, and Strong Institutions). Government agencies, heritage professionals and spatial planners are already beginning to open up to the public, aiming to increase inclusiveness, encouraged by intergovernmental institutions and doctrinal documents. Formerly led by experts, heritage planning is slowly developing more participatory methods and practices, involving broader groups of stakeholders in practices of heritage definition, planning, management and conservation.

Notwithstanding the advances made, there is very little research and much uncertainty about the constraints and potentially negative effects of this openness. There is also much debate – but little research – on current concepts, tools and procedures for *democratization* in the access to and definition, appropriation, management and planning of heritage. Key to the Heriland agenda is to train ESRs to identify how

Figure 3.2. Heriland ESRs and supervisors participating in the Democratization Masterclass (TU Delft, the Netherlands).

approaches have evolved, to critically examine them and to test and innovate best practice models, procedures and tools.

Starting points for this agenda are the concepts of participatory democracy and public participation, featuring citizen input in decision-making on matters that affect their lives. In Heriland, this has been researched with regard to heritage and in highly interdisciplinary ways, integrating disciplines such as archaeology, anthropology, history, architecture, urban planning, psychology, heritage management, public administration, (big) data sciences, computational design, computer science and electrical engineering.

Several ESRs contributed to the *democratization* theme with their individual research projects, investigating a variety of stakeholders and their role in heritage planning in a range of European cities and regions. They focused especially on voices of underprivileged groups in society. This goes first of all for the three ESRs who took *democratization* as their point of departure. Alana Castro studied the stakeholders involved in decisions regarding the installation of memorials in public spaces in Amsterdam, Lisbon and London. Tinatin Meparishvili investigated the local community perspective in a commodified historical urban environment in Rome. Nan Bai focused on the online communities and their perceptions of cities and their World Heritage, especially in Amsterdam, Suzhou and Venice. Other Heriland ESRs also touched on *democratization* and participation issues, working with citizens and in particular less researched groups. Maciej Swiderski, for instance, concentrated on the residents of modernist mass housing estates in Warsaw and Marta Ducci documented the diversity of heritage values of local communities in the district of Brindisi, in the South of Italy.

Besides the stakeholders, what makes the work of these researchers novel is their aim to actively contribute to highly relevant problem fields that reflect pressing societal challenges. Alana Castro unravelled the disputes between stakeholders over the siting, design and content of memorials commemorating the victims of the transatlantic slave trade and the Holocaust. Tinatin Meparishvili studied the impact of mass tourism on the daily lives of citizens, but also analysed legislation, policy documents, and other governmental and non-governmental publications, such as official and non-governmental statistics to contextualize her case study. Nan Bai focused on social inclusion and the role of social media platforms in actively involving online communities, local and global, in heritage-related activities. Maciej Swiderski sought to flip the hierarchy and had residents teach experts about their experiences and ambitions for their neighbourhoods. Finally, Marta Ducci developed a map-based method for integrating local heritage values into the planning of sustainable tourism.

Each researcher chose the theoretical frameworks that best fit their research questions, from Arnstein's ladder of citizen participation (1969) to Chantal Mouffe's agonistic model of democracy (1999, 2000, 2005) and Berman's (2017) desired reciprocity of public participation, where dialogue is promoted between the planning and local communities. The same goes for methods and tools, ranging from interviews and workshops to Geographic Information Systems (GIS). In all cases, the aim was to make the participatory process more deliberative than unidirectional (Innes and Booher, 2000). Linking theory to practice, international

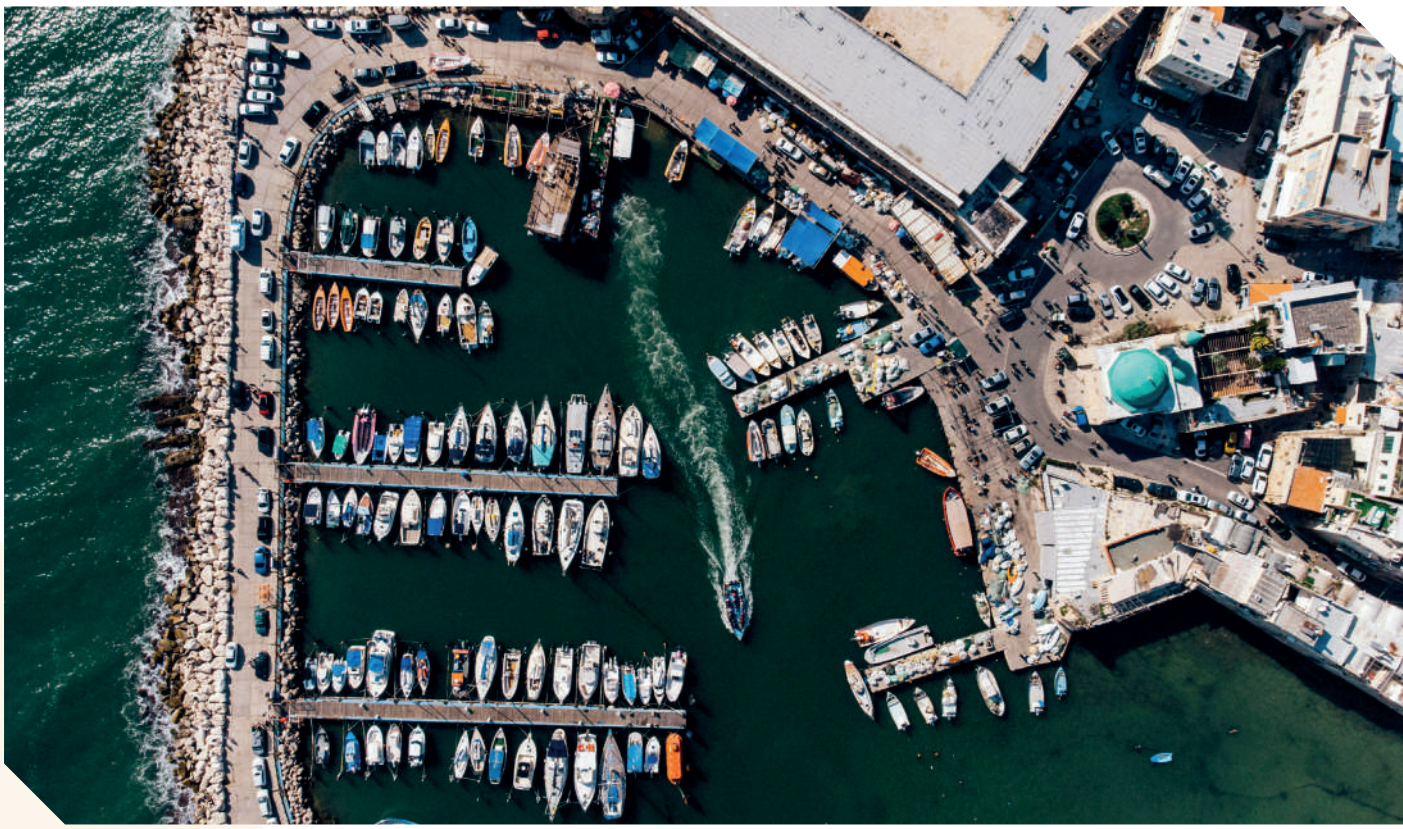
policy documents were commonly used by most ESRs to further sustain the problem field. The most prominent were the UNESCO 1972 World Heritage Convention (UNESCO, 1972), the European Landscape Convention (Council of Europe, 2000) and the Convention on the Value of Cultural Heritage for Society (Council of Europe, 2005), and the UNESCO 2011 Recommendation on the Historic Urban Landscape (UNESCO, 2011).

In the next chapters, the theme will be discussed in presentations of training sessions and specific urban and rural case studies. The above conventions figure prominently in these presentations.

3.3. Heritage and digital transformations

The global success of the digital connected world is accompanied by all-encompassing societal changes, from new forms of communication, collaboration and information exchange to new business and governance models and control mechanisms. Its impact on access to, perceptions of, and meanings and values attributed to heritage is potentially far reaching. Digital methods and tools may greatly facilitate communication and information exchange between all stakeholders involved in spatial transformation processes and they may contribute to public participation in decision-making. At the same time, they can also be manipulated by particular communities or institutions and widen the divide between state and citizens, eventually leading to increased state control. This work package set out to investigate how heritage planners can work with these opportunities and challenges in a responsible and effective way.

With these research questions and aims, the Heriland research on *digital transformations* builds on existing work in the fields of perspective mapping, digital biographies, collaborative design workspaces and serious gaming (Steinitz, 2012; De Kleijn *et al.*, 2016; Rafiee *et al.*, 2018; Deterding *et al.*, 2011). The potential



of these methodologies has been amplified by citizens' increasing familiarity with digital applications; social media and digital services such as ChatGPT have become integral parts of modern life. At the same time, there is growing unease among citizens and institutions about the downsides of these technologies (especially the threat they pose to privacy and the risk of manipulation). It is thus vital to consider both the opportunities and challenges of digital applications, especially when used to capture cultural values in the landscapes and manage these values in a responsible manner.

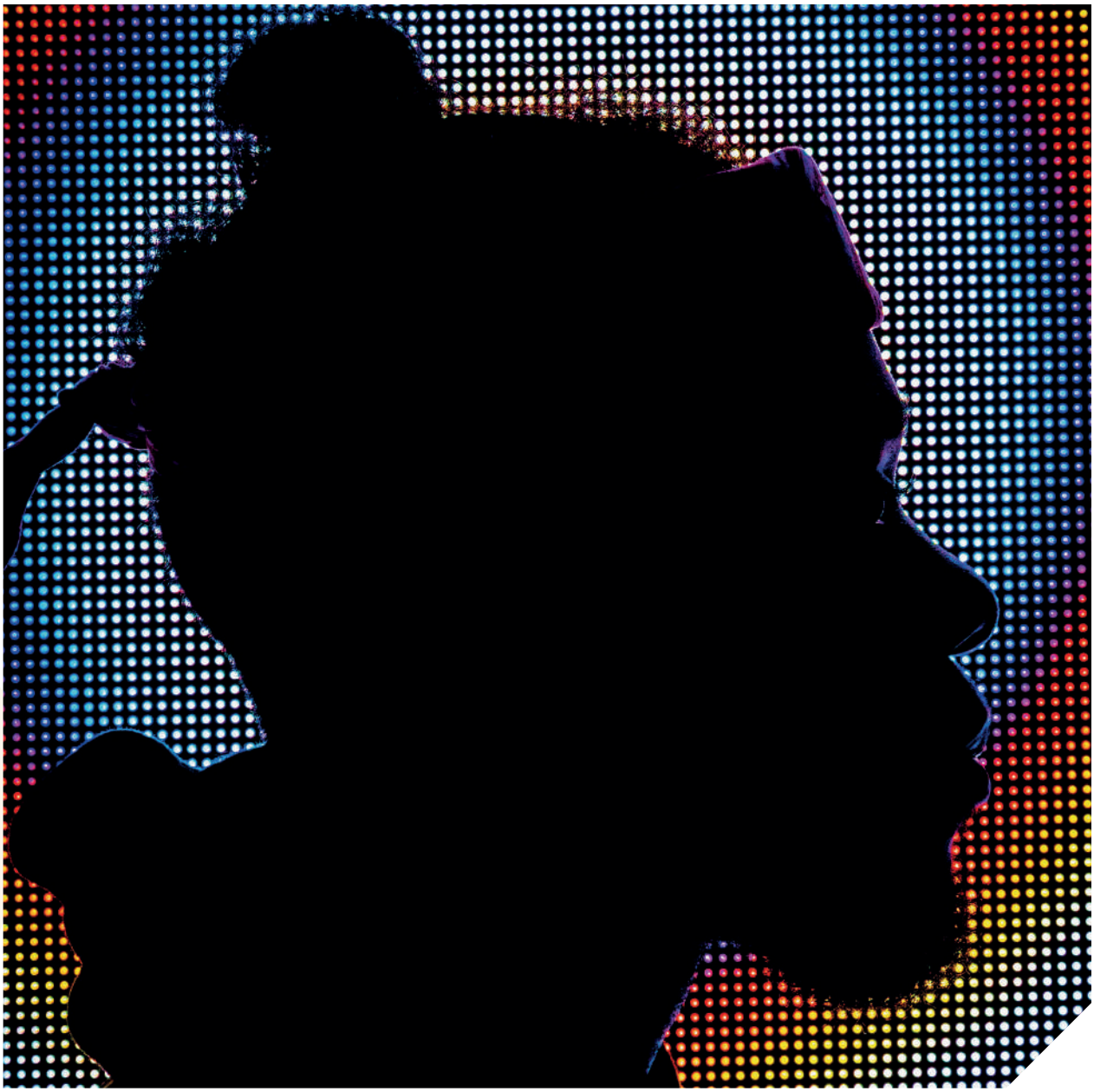
The three Heriland doctoral students in this work package embarked on their individual projects following these notions of heritage in relation to *digital transformations*. The drivers of change that they dealt with in their projects were: (a) the interpretation of the urban landscape through physical and digital engagements by migrants in Greater Manchester, United Kingdom – Farnaz Faraji; (b) capturing place-based memories as input for collaborative planning decisions by citizens and professionals in Warsaw, Poland – Maciej Swiderski; and (c) testing the use of datascaping as a tool to reconcile a city's complex socio-spatial and heritage structure with development cases in Jaffa, Israel – Komal Potdar.

All three projects deal with how to utilize digital applications to facilitate dialogue between citizens and professionals *and* to make heritage part of holistic planning decisions. In Greater Manchester, migrants' perceptions of the landscape and place-making seemingly contrast with the official Historic Landscape Characterisation drawn up by the local authorities. In Warsaw, citizens and local planners collaborate in serious gaming tasks to discover memories and identify development potential in the everyday landscape of a post-war modernist housing estate. In Israel, archival, expert and citizen data are synthesized in the same datascape as a foundation for analysis and design activities of professional urban planners. In all cases, digital applications are a vehicle for capturing cultural values and facilitating dialogue.

Other Heriland doctoral projects also touched on digital transformations to lesser or stronger degrees. For instance, Nan Bai investigated AI methods to harvest cultural values from social media posts by visitors to tourist hotspots and Sophia Arbara made elaborate use of digital data to investigate the relationship between the mobility and the presence of cultural heritage in Rome, Italy.

In all projects, the latest international policies on safe use of digital data and services were used as a starting point. These policies deal increasingly with ethical questions (protection of privacy, fair representation) as well as the need to promote digital literacy among those who use the growing number


IESVS NAZARE
NVS REX IVDA



of digital services available. When fostering the use of digital applications in heritage planning, it is the specialists' duty to make people aware of both the opportunities and risks that come with it. These risks and opportunities are at the heart of some of the training sessions and keynote lectures presented in the next chapters. The most striking in this regard are Henk Scholten's and Sennay Ghebreab's keynotes about digital twinning, which explore the potential for embedding tangible and intangible heritage in 4D virtual copies of the living environment to make heritage part of planning decisions.

3.4. Heritage, shifting demographies and contested identities

People are on the move in almost all parts of the world on a possibly unprecedented scale, whether due to refugee crises, both political and economic, or long-term processes of urbanization. The social, cultural and economic transformations that accompany such migrations are no less far reaching than the spatial

ones. What comes to mind here is the emergence of urban multicultural melting pots or, on the other side of the scale, rural depression and post-industrial urban abandonment.

The making or protection of heritage is intimately linked to these transformations, as it is about creating, safeguarding or contesting identities and communities, whether urban or rural. Hence, it has become common practice in spatial planning to use heritage as a tool to reach development goals such as social cohesion and economic sustainability. But how to do this successfully and how to identify potential risks and dangers still needs proper investigation. This work package studied the diverse practices and success factors for developing and testing procedures and tools that can challenge key social-demographic issues in Europe, such as gentrification, multiculturalism and population decline and growth.

Addressing these research questions highlights the need to engage with seminal documents on contested heritage and the demographic changes in the identities of the guardians and their interpretations of the residual and adaptive built environment (Cuba and Hummon, 1993). These include the Nara Document on Authenticity and the Code on the Ethics of Co-existence in Conserving Significant Places of the Burra Charter (ICOMOS, 1994) together with the 2011 UNESCO Recommendation on the Historic Urban Landscape and the 2016 UN-Habitat New Urban Agenda. Beyond these official documents, one can enumerate significant contributions to the theme of this work package, such as Tunbridge and Ashworth's discussion of the past as a resource in conflict (1996); Langfield, Logan and Craith's analysis of the intersections in theory and practice of cultural diversity, heritage and human rights (2009).

The interconnection between shifting demographies and contested identities was evident in the diverse cultural backgrounds of the four Heriland ESRs that worked in this work package, just as it was in the contexts of their research. The adaptive reuse of urban heritage in contested societies was tested in Acre, Israel by Ana J. Yarza; the Roman street spaces provided the perspective for the studies of Sophia Arbara on the cultural aspects of mobility and its effects on the built environment; and tools for assessment of urbanization trends and patterns were provided for Heritage Zoning and Urbanization by Moses Katontoka. Furthermore, close connections were built with the work package on digital transformations with Farnaz Faraji's study of

Iranian migrants' perceptions of Manchester's urban landscape and the cultural translations pertinent to this work package's theme.

The projects contained in this work package all aimed at generating theory-based practical processes. They saw the UNESCO HUL Recommendation as a point of departure, further underlining its importance by cross-referencing it with the Sustainable Development Goals put forward by the UN in 2015. The participants of the work package utilized the masterclass on Lifta (see Chapter 2) to demonstrate their interim findings.

Finally, the objectives of the work package on shifting demographies and contested identities were summarized and contextualized in the Final Conference's keynote lecture by Francesco Bandarin (for details, see Chapter 6.2.). He outlined changing approaches to heritage – from Viollet le Duc, Ruskin and Giovannoni to the subsequent charters and recommendations of Athens (Congress of Athens, 1931) and Venice (ICOMOS, 1964). He highlighted the oxymoronic nature of urban change and architectural preservation set against the need to consider what actually constitutes a historic city and wondering about whose heritage it represents, which values it encompasses and how sustainability is to be defined in this specific context. Bandarin concluded with the message that the key to managing shifting demographies and contested identities lies in providing tools and mechanisms to balance the changing interests of the city – something that all the ESRs involved in this work package strove to achieve in their respective studies.

3.5. Heritage and changing environments

UNESCO identifies changes to environments, whether due to natural or cultural agents, as one of the major challenges for the future that block the road towards sustainable development. They will also, of course, affect heritage in every aspect. Landscapes will undergo thorough transformations with increasing urbanization and de-industrialization, impacting urban and rural geographies alike, from historic city centres to industrial plants and agricultural and pastoral land use patterns. Climate change, in particular global warming, will have pervasive consequences for traditional water management and energy supply systems, calling for adjustments of sea defences and dikes, and for the development of alternative, sustainable energy sources. Adaptation to these changes through spatial planning is vital, but the opportunities for and challenges to heritage design have not yet been thoroughly investigated. This Heriland work package revolves around the role of heritage in environmental adaptation, in particular with regard to urban-rural interactions and the future of post-industrial landscapes.

With these research questions and aims, Heriland research on changing environments dips into critical heritage studies, in its understanding that heritage is not static, and that 'change' is necessary (Harrison, 2013; Harvey, 2015; Roe and Taylor, 2014; DeSilvey *et al.*, 2021). Heritage, as landscape, is seen as a process, which may sometimes require letting go. In this view, rather than attempting to prevent historic environments from changing, it is imperative to find ways to navigate change to help build a future that is sustainable in myriad ways. In this sense, heritage can help mitigate the negative effects of fast-paced social, cultural and even environmental change (Dessein *et al.*, 2015; Riesto *et al.*, 2022).

Based on these notions of heritage in relation to changing environments, the three Heriland doctoral students in this work package embarked on their individual projects, also drawing on theories of planning, landscapes, change, environments and human agency. The drivers of change that they dealt with in their projects were: (a) the energy transition and all-invasive plant disease in the rural region of Apulia, Italy – Marta Ducci; (b) urban connectivity and in particular a train tunnel being constructed through the historical city centre of Gothenburg, Sweden – Maitri Dore; and (c) rural shrinking accompanied by gentrification around the Nääs factory in southwest Sweden – Anna Tonk.

In thinking about how to define "environments", demarcate change, and who or what drives change in these three case studies, the question of agency is crucial. All three research projects have, in one way or

another, covertly and overtly, to do with the agency of people and the landscape alike. In Apulia, community participation is ever more important in determining the future of a rapidly transforming rural landscape. In Gothenburg, new infrastructure that will enable greater human connectivity must be weighed against valuable historic, built and natural environments. In Nääs, heritage professionals are criticizing how rural historical environments are often neglected or irreparably changed by gentrification and urbanization and how little there is to be done against it. In all cases, change can be seen as affecting everyone, and coming from many different sources and places of power.

Other Heriland doctoral projects also touched on changing environments, to lesser or greater degrees. Marilena Mela, for instance, studied how in four European archipelagos, renewable energy infrastructures have become interwoven with local stories and practices, while Komal Potdar and Ana J. Yarza investigated how displacement of long-time residents and gentrification have impacted the urban fabric in World Heritage Port Cities.

Most projects used the European Landscape Convention (ELC) as a starting point, interpreting landscape as "an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors" (Council of Europe, 2000: 9). The ELC definition prioritizes human perception and processes, rather than approaching landscapes as a 'view' in the more classical European sense (Wylie, 2009). These processes are propelled by myriad actors and the question of power and agency is therefore important in discussing what and how changes are implemented, or how heritage and landscape can be holistically managed as a process that is inclusive of multiple actors and values.

The latter is at the heart of some of the training sessions and keynote lectures presented in the next chapters. The most striking is Rodney Harrison's keynote (see Chapter 6.4.), which explores the potential for heritage and museums to become agents for radical forms of climate action, and to find alternatives to present practices that offer solutions to the global environmental emergency.

Fig. 3.3. Future Landscapes Symposium organized together with TERRANOVA in February 2021 (VU Amsterdam, the Netherlands).

Chapter 4

HERITAGE PLANNING RESEARCH IN ACTION

THE HERILAND LIVING LABS

Whilst the ESRs worked in collaborative work packages centred on heritage planning in the context of one of the five spatial and societal challenges discussed in the previous chapters, each ESR focused on specific research topics in concrete living labs, i.e. real-life heritage planning and design contexts. These labs were vital in enhancing knowledge exchange and collaboration between individual WPs and ESRs. In these labs, the ESRs learned to translate theory into practice by carrying out assessments, interviews, action research, fieldwork and more. They were challenged to test new skills, combining specific sets of traditional and new, disciplinary and transdisciplinary methodologies, and approaches needed to answer their research questions. The labs offered test cases for comparative cross-regional analyses and for the evaluation of best practices and critical success factors. In these labs, the five Heriland key challenges guided research topic selection. Below, we present the individual projects, focusing on **(a) the underlying premises, (b) the main theories tested, (c) the methods used and (d) the major findings of the projects**. The order of the presentations follows the work packages: the first three projects belonged to the *spatial turn* work package, projects four to six tackled the *democratization* challenge, projects seven to nine took the *digital transformations* as their point of departure, projects ten to twelve that of *shifting demographies and contested identities*, whilst projects thirteen to fifteen were guided by the *changing environments* theme.

Table 4a: List of ESRs, their countries of origin, academic affiliation and supervisors:

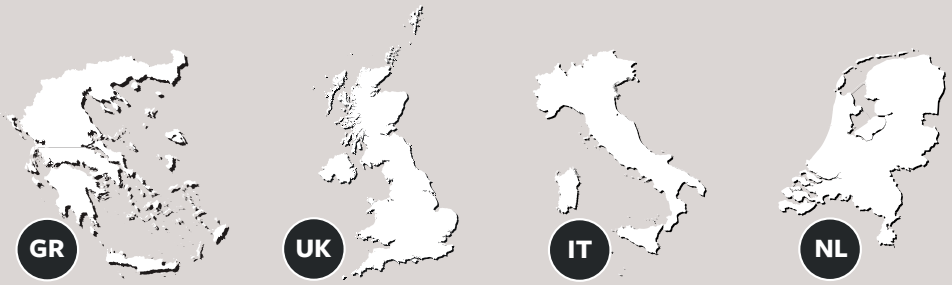
	NAME	COUNTRY OF ORIGIN	AFFILIATION	SUPERVISORS
ESR1	**Marilena Mela**	Greece	Vrije Universiteit Amsterdam	Gert-Jan Burgers (VUA), Linde Egberts (VUA)
ESR2	**Rebecca Staats**	Australia	University of Gothenburg	Eva Löfgren (UGOT), Susanne Fredholm (UGOT)
ESR3	**Rusudan Mirzikashvili**	Georgia	Newcastle University	Sam Turner (UNEW), Graham Fairclough (UNEW), Maggie Roe (UNEW)
ESR4	**Alana Castro de Azevedo**	Brazil	Vrije Universiteit Amsterdam	Gert-Jan Burgers (VUA), Pieter Wagenaar (VUA)
ESR5	**Nan Bai**	China	TU Delft	Ana Pereira Roders (TUD), Pirouz Nourian (TUD)
ESR6	**Tinatin Meparishvili**	Georgia	Newcastle University	John Pendlebury (UNEW), Neil A. Powe (UNEW), Sam Turner (UNEW)
ESR7	**Farnaz Faraji**	Iran	Newcastle University / Vrije Universiteit Amsterdam	Gert-Jan Burgers (VUA), Francesco Carrer (UNEW), Niels van Manen (VUA)
ESR8	**Maciej Swiderski**	Poland	Vrije Universiteit Amsterdam	Gert-Jan Burgers (VUA), Henri de Groot (VUA), Niels van Manen (VUA)
ESR9	**Komal Potdar**	India	Bezalel Academy of Art and Design / TU Delft	Els Verbakel (BEZAL), Mike Turner (BEZAL), Franklin van der Hoeven (TUD)
ESR10	**Ana J. Yarza**	Spain	Bezalel Academy of Art and Design / TU Delft	Els Verbakel (BEZAL), Mike Turner (BEZAL), Franklin van der Hoeven (TUD), Roberto Rocco de Campos Pereira (TUD)
ESR11	**Sophia Arbara**	Greece	Roma Tre	María Margarita Segarra Lagunes (ROMA3), Francesco Cellini (ROMA3), Anna Laura Palazzo (ROMA3), Gert-Jan Burgers (VUA)
ESR12	**Moses Katontoka**	Zambia	TU Delft	Ana Pereira Roders (TUD), Pirouz Nourian (TUD)
ESR13	**Maitri Dore**	India	University of Gothenburg	Ola Wetterberg (UGOT), Susanne Fredholm (UGOT)
ESR14	**Marta Ducci**	Italy	Vrije Universiteit Amsterdam	Gert-Jan Burgers (VUA), Ron Janssen (VUA), Francesco Rotondo (UNIVPM*)
ESR15	**Anna Tonk**	the Netherlands	Newcastle University	Sam Turner (UNEW), Graham Fairclough (UNEW), John Pendlebury (UNEW)

*UNIVPM: Università Politecnica delle Marche (Polytechnic University of Marche)

4.1. The roles of heritage in just and sustainable landscape transformations

Exploring cases from the Mediterranean, the North Sea, and the Atlantic edge

Marilena Mela participated in the Heriland project as a PhD candidate and Marie Skłodowska-Curie fellow based at the Faculty of Humanities of Vrije Universiteit Amsterdam. She holds a Diploma in Architectural Engineering and a Postgraduate Diploma in Architectural Research from the National Technical University of Athens. She works as an assistant professor in Heritage Studies at Vrije Universiteit Amsterdam and collaborates with grassroots heritage initiatives in Greece.



Keywords:

RENEWABLE ENERGY | INSULAR LANDSCAPE IDENTITY | PLACE-CARING RESISTANCE

THE CASE

Marilena's study investigates the relationship between spatial planning of renewable energy infrastructures and heritage and place identity in four archipelagos around Europe: in Greece, Scotland, Italy and the Netherlands. Approaching heritage through a landscape lens, the study positions itself strongly within the *spatial turn* central to Heriland. At the same time, it develops an understanding of how environments change in their complex, multitemporal diversity. Through such an understanding, the study aims to showcase the interwoven nature of global, national and local processes, as expressed in spatial planning practices and as negotiated by heritage policies.

PREMISES

This study is based on several key premises. First, the notion that heritage goes beyond official definitions and site designations, with Marilena arguing that wider landscapes can be perceived as heritage, as they hold meaning and value for communities and individuals. It thus follows that spatial planning, the discipline of organizing activities in space, is inextricably linked to the future of landscapes and their heritage values.

Marilena's second key premise is that landscape transformations achieved through centralized planning can be seen as conflicts about the past and the future, implying that there is substantial heritage knowledge in resistance and contestation. Thirdly, Marilena holds that each and every landscape nurtures its own stories and practices – its distinctive heritage – which must be understood for any sustainable transformation to occur. This means that focused, place-based, comparative, interdisciplinary research is needed in order to articulate any conclusion about the relationships of heritage with planning projects. Finally, this study holds that such research must stay open to unexpected findings – the past of remote landscapes might reveal solutions of governance, place-making and community-making that are alternatives to the main global paradigm of progress and development, often achieved at the cost of displacement and exploitation.

THEORY

Marilena's study explores theories from Marxist geography, planning theory, cultural anthropology, science and technology studies and environmental humanities. Diverse as these strands might appear, they are all relevant in the context of specific landscapes and their multi-scalar and multi-temporal dimensions. Marilena thus casts landscapes as loci of uneven development and resource exploitation (Apostolopoulou, 2020), as territories governed by differently situated power hierarchies (Healey, 2007), as milieus of continuous dwelling in the *longue durée* (Bender, 1993), as contestations between valued pasts and technological futures (Watts, 2019), and as entanglements of kinship between humans and non-humans (Haraway, 2016).

As far as heritage is concerned, Marilena positions her research in the recent scholarly tradition which sees it as a process through which people formulate the past and the future of their surroundings (Harrison *et al.*, 2020). Heritage is not a fossilized past, but a living and complex configuration of stories and practices that binds people and landscapes together in distinct, unique temporalities. Researchers in critical heritage recognize that the aims of those in power have often imposed their hegemony over subaltern heritage, thus unjustly impacting long-standing links between communities and land. Such approaches highlight the inescapably political, but also potentially emancipatory nature of heritage: its role as place-caring resistance against unjust power hierarchies (Simpson, 2017).

METHODS

Marilena argues that the affective qualities of infrastructural projects can only be understood within the longer context of landscape making. Methodologically, this understanding required getting to know four diverse, insular places, through travel, sensing, reading, discussing, and imagining. In doing so, this study (a) captured links between communities and landscapes that point towards just and sustainable futures;

(b) it mapped the ways these relate to spatial transformations; and (c) illustrated the relevance of such place-specific knowledge beyond a specific place, thus pointing towards alternative pasts and futures (Massey, 2005). More specifically, methods included in-person fieldwork, allowing for landscape observation, research in local archives, photography, and auto-ethnographic notes. Also, interviews were conducted with key rights-holders in each landscape. Spatial plans, policies and georeferenced data were collected and analyzed. The study also employed discourse analysis of local and national media publications and of a wide body of literature on local history, geography, anthropology and heritage.

FINDINGS

This study tells the energy-and-heritage stories of four archipelagos in Greece, Scotland, Italy and the Netherlands. Each chapter is a story about the making of the landscape, from the *longue durée* to the event. In these stories, volcanoes erupt, tectonic plates move, mountains emerge out of the water; life populates pieces of land and transforms them into places; communities dwell in these places and co-shape their form and image. At a certain historical moment, the nation-state and the neoliberal market become forces of change, peripheralization and commodification. Sustainability emerges as a global aim and a central objective of centralized planning. In the four archipelagoes, renewable energy infrastructure projects are

Fig. 4.1.1. Impressions of four island landscapes. From left to right: Aeolian islands (Stromboli); Wadden Islands (Ameland); Shetland islands (Unst); Cyclades (Tinos).

initiated, embraced or fought against; they act as agents of resilience and emancipation or of damage and exploitation; they become interwoven with local stories and practices.

With these findings, this study contributes to the *spatial turn* and the understanding of *changing environments* in the following three ways: First, to knowledge creation about landscape-making, community agency, and the power dynamics of spatial planning. Second, to innovation in planning and governance, towards the consideration of often overlooked heritage values and processes and encouraging meaningful inclusion. Third, to the empowerment of local, often peripheralized communities by revealing the immense value that lies in local knowledge, practices and stories – often uncovered through conflict and contestation. Many currents of dissemination have been already activated to this end, from informal discussions during field trips, to roundtable organization, presentations at international conferences and publication in peer-reviewed journals (see, for instance, Mela, 2023).

4.2. Thinking with care

Understanding place-centric activities through an interdisciplinary lens

Australian-born **Rebecca Staats** participated in the Heriland project as a PhD candidate and Marie Skłodowska-Curie fellow at the University of Gothenburg in Sweden. She holds a Bachelor of Arts in Archaeology and Anthropology from the University of Sydney, Australia, and a Master of Arts in International Cultural Heritage Management from Durham University in the UK. Her research interests include place, heritage, identity and interdisciplinary approaches.

Keywords:

PLACE-CENTRIC ACTIVITIES | PRACTICES AND ETHICS OF CARE | POST-STRUCTURALIST PLANNING THEORIES

THE CASE

Places – from villages to cities – are today subject to a range of activities seeking to improve them. These structured and unstructured initiatives are referred to in this work as place-centric activities. However, the goals and methods of these activities vary in theory and practice. Working within the *spatial turn* research theme and drawing from the fields of planning, place branding and heritage studies, Rebecca has explored disciplinary differences in approaches to place-centric activities. In order to examine these disciplinarily diverse approaches, Rebecca develops a conceptual framework of place care. The utility of the place care framework as an analytical lens for understanding place-centric activities is tested through analysis of two case studies: Uddebo, a small village in Västra Götalandsregionen, Sweden, and Northumberland National Park in the United Kingdom.

Fig. 4.2.1. Two contrasting case study contexts: Reuse of an industrial textile factory as a bakery in Uddebo.

PREMISES

Current models for working with place – often structured initiatives centred on developing desired future states, brands or identities – are largely limited by funding and project timelines. Despite best efforts and interest from scholars and practitioners in holistic approaches to shaping place futures, place-centric activities are often limited by discipline-specific approaches and terminologies; these silos in knowledge and practice pose a barrier to the application of interdisciplinary thinking.

To address these challenges, this study presents an exploration of the concept of care as an analytical lens through which to understand place-centric activities. Drawing knowledge from planning, place branding, heritage studies, and beyond, this study develops a conceptual framework to examine the actors and actions involved in place-centric activities. In doing so, Rebecca identifies differences and similarities in approaches and goals to highlight where approaches might conflict or connect. This is a necessary step in finding opportunities for a more holistic approach that can work between knowledge silos and explore alternatives to caring for places beyond strict project timelines.

The case studies used to test the utility of the place care framework are deliberately different. The Swedish case study focuses on a local scale, where residential groups and actors alongside regional planners play a part in shaping the future of the post-industrial village. By contrast, the second case study applies the place care framework to a landscape scale, examining the positioning of heritage in planning and branding approaches applied in Northumberland National Park. The use of two contrasting case studies allows for an exploration of how this conceptual tool can be both scaled down and scaled up depending on the case at hand.

THEORY

The theoretical framework of this study begins with a critical conceptualization of care as set out by Maria Puig de la Bellacasa (2017). Foundational to this conceptualization of care is the recognition that there are different ways to care; care is not uniform, or even uniformly good. Rather, it involves making choices about how to care and for what. This conceptualization of care is relevant to questions about heritage and practices and ethics of care are emerging as important concepts within heritage studies literature (e.g. Harrison *et al.*, 2020; Veldpaus and Szemző, 2021).

Fig. 4.2.2. An iconic section of the World Heritage Site Hadrian's Wall in Northumberland National Park.

Building on this critical conceptualization of care, Rebecca draws on a processual heritage perspective to develop the conceptual framework of place care. A processual heritage mindset understands cultural heritage primarily as a process of meaning making in the present. Heritage understood in this way is multivocal and dynamic: the same heritage object can be understood differently by different people, and the meanings and values of heritage can also change over time. Present, and increasingly future uses and values of heritage are considered (Harvey, 2015; Harrison *et al.*, 2020; Holtorf and Bolin, 2022); these aspects are relevant to the questions about place futures implicated in place-centric activities.

In thinking about places, this work understands them in a similar vein to how landscapes are approached in heritage studies: as dynamic entities undergoing change (Fairclough, 2019). Accordingly, a place, like landscape, provides a frame for a holistic approach that connects material characteristics with contemporary uses and values.

In addition, Rebecca draws on planning theories that focus on emergence and future uncertainty. Post-structuralist planning theories consider uncertainty and complexity as part of the conditions of planning, where future outcomes are unknown. Rather than focusing on the achievement of predefined goals or images (as is often the case in place branding and placemaking contexts), the planning process is one of "undefined becoming", where the focus shifts from planning content to planning conditions that allow future outcomes to emerge (Boelens and de Roo, 2016: 43). These post-structuralist planning approaches have potential for tackling the complexity and uncertainty that characterize the continual shaping of place futures by place-centric activities and are thus relevant to the conceptual framework of place care.

Drawing from these theoretical perspectives, the place care framework proposed here provides a conceptual tool to map out the different caring actions undertaken by different actors. Mapping out the actors and actions involved in place-centric activities is beneficial, as it shows how actors may strive for similar goals by different means. The framework also identifies the different values and uses heritage resources given by the stakeholders involved. In particular, it provides a means to see relationships between discipline-specific methods and goals, which can help broaden the scope of place futures that are considered possible and desirable.

METHODS

Rebecca used a combination of qualitative research methods across the two case studies. A case study approach was considered appropriate as it provided a way to address the complexity of practice-based situations (Ragin, 1989; Flyvbjerg, 2006). Although the cases have different geographical and cultural contexts, these differences can be considered as a strength and opportunity to extend analysis (McFarlane and Robinson, 2012), providing a wider opportunity to explore the utility of thinking with place care.

In both case studies, qualitative interviews were used to gather data. In addition to interviews conducted online (a necessity due to the restrictions during COVID-19) and in person, document analysis and fieldwork were also utilized. The document analysis consisted of analysing official planning, project, and management documents to identify key concepts and priorities. This analysis was performed with the help of Atlas.ti qualitative analysis software. Fieldwork consisted of in-person visits to the case study sites. During the fieldwork, field observations provided data on the spatial characteristics of the site. Photographs were taken to provide visual reference points and develop an understanding of key buildings or parts of the site. A qualitative mapping exercise was undertaken in both cases in complement to the interviews, for which respondents were asked to indicate on a map of the case study area sites of meaning or significance for them. The mapping exercise was useful in identifying areas of shared significance whilst also showing the diversity of meanings and uses of significant areas. One finding of this exercise was that the mapping exercise was more effective in the smaller-scale Swedish case study than in the larger-scale English case.

FINDINGS

A framework of place care has potential as a cognitive tool for mapping the actors and actions involved in place-centric activities. Distilling the diverse motivations and approaches utilized by a range of professional and lay actors can improve our understanding of place-centric activities. Such a framework moves beyond disciplinary-specific activities and methods to paint a broader picture of place-centric activities and how they shape place futures. Although explored solely on conceptual grounds in this work, mapping places in this way also has potential for practitioners involved in place-centric activities to see connections and common goals that could support more inclusive and holistic efforts in the unfolding of place futures.

This study also confirms that there is a lack of connected thinking in theory and practice between planning (including placemaking efforts), place branding and heritage management. Despite a shared concern with sustainable place futures, differences in terminology and conceptual foundations mean that knowledge is often not shared across (or, in some cases, within) disciplines. For instance, the literature on culture-led development largely misses the connection with material culture and the built environment. This observation drawn from a study of the literature is further supported by data from the case studies; the empirical material points to the importance of the historic built environment in cultural initiatives that are at the core of place-centric activities. Increased integration of disciplinary knowledge is required to recognize the diverse ways in which places are currently cared for, and to imagine how they may function, be cared for, and be valued in the future.

4.3. Landscape and heritage

Exploring the trans-sectoral connections and their role in participatory governance

Rusudan Mirzikashvili participated in the Heriland project as a PhD candidate and a Marie Skłodowska-Curie fellow at Newcastle University, UK. She studied Architecture at the Tbilisi State Academy of fine Arts and holds postgraduate degrees in Conservation of Monuments and Sites (University of Leuven) and World Heritage Management (University College Dublin). Her research focuses on historical landscapes, community-led local development, and participatory governance.

Keywords:

DEMOCRATIC GOVERNANCE | TRANS-SECTORAL APPROACH | POLICY ANALYSIS

THE CASE

Rusudan's work examined the potential of the *landscape as heritage* approach as a driver for trans-sectoral participatory governance. It employed qualitative methods, based on a case study of the heritage and landscape governance system in England. The point of departure of this work was Heriland's *spatial turn* theme, which explores the role of landscape and heritage in fostering transformative societal changes. The objectives of Rusudan's project were to analyse existing theories and models that link heritage and landscapes and to explore governance with particular attention to participation and social inclusion.

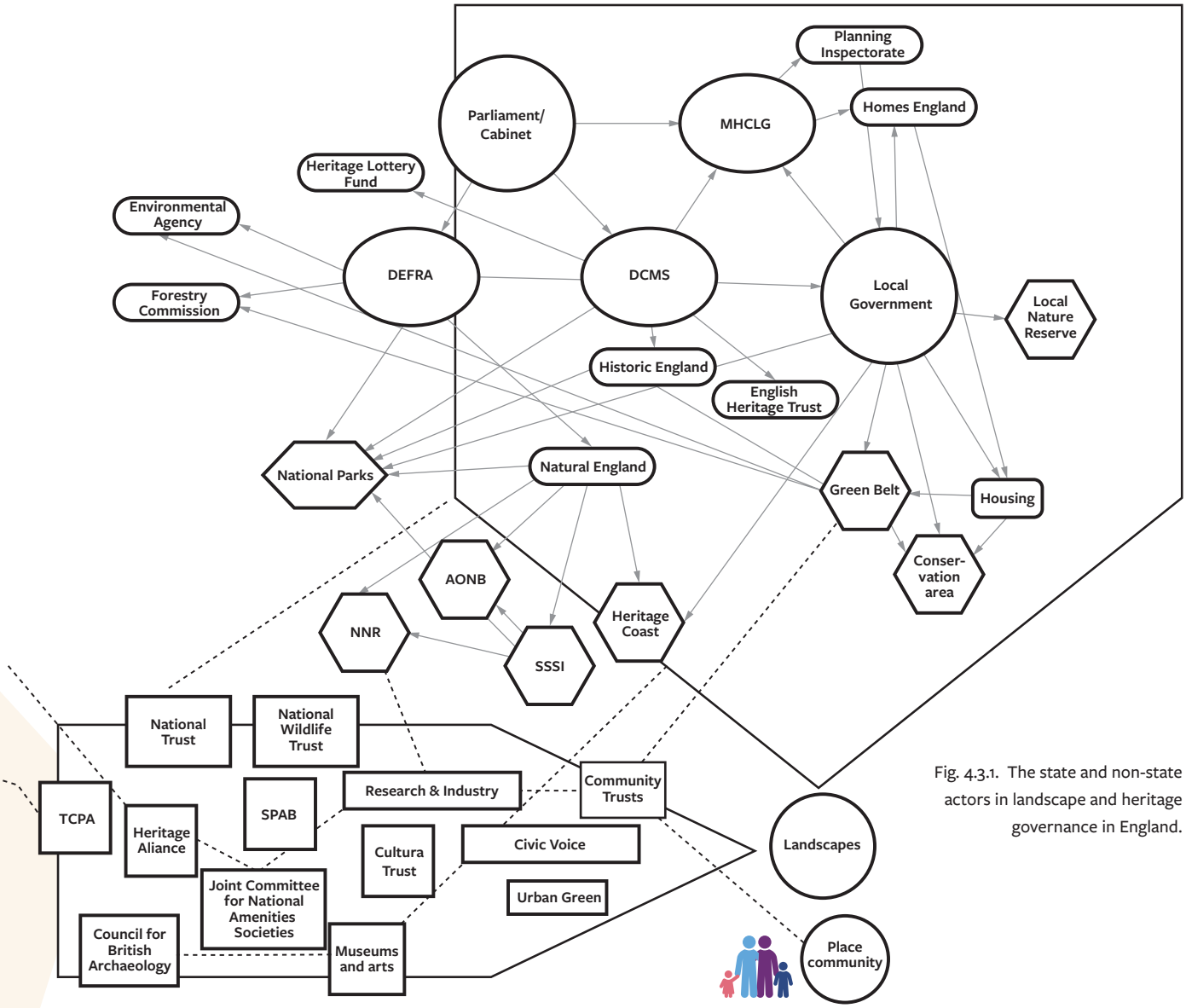


Fig. 4.3.1. The state and non-state actors in landscape and heritage governance in England.

PREMISES

Over the past few decades, the *landscape as heritage* concept has gained broad recognition in Western heritage philosophy and management practice. A growing body of academic research has investigated the value systems, socioeconomic characteristics and other features acquired through human intervention and non-intervention in the environment. A range of sectoral experiences, policy tools and implementation mechanisms revolving around *landscapes as heritage* has also been developed. However, the interpretation of the concept is still framed by disciplinary boundaries. In theory and practice, there exist an array of nature and culture-centric, conservation and development-led approaches to landscapes, which can sometimes be divergent and difficult to reconcile in decision-making. Work is yet to be done to advance the theoretical understanding and the practical application of the integrative potential of the *landscape as heritage* concept in relation to broader governance questions. The project argues that recognizing this potential, the concept could foster more democratic governance across sectoral silos, governance scales and perspectives. The main question of this study was therefore: What are the potential and conditions of the *landscape as heritage* concept to become a driver and a connecting platform for trans-sectoral participatory governance? Sub-questions focused on: identifying the determinants for the transition to a *landscape as heritage* thinking (RQ1); the integration of the *landscape as heritage* concept in national and local governance systems (RQ2); and characteristics and conditions of trans-sectoral participatory governance (RQ3).

THEORIES

Over the last few decades, the concept of heritage has expanded and diversified, while the dimensions of heritage have shifted to an increasingly dominant spatiality. The understanding of heritage has been enriched and augmented through landscape and space and its continuous re-making and re-invention as a subjective representation of symbolic values. At the same time, the broadened scope of heritage and development of critical scholarship in human geography and cultural studies have highlighted sociocultural and symbolic meanings in material landscape and its interpretation through the complex medium of culture. The parallel developments in heritage and landscape fields have sparked the recognition of spatiality in heritage and temporality in landscape and shaped a more holistic view of culture and nature (Harvey, 2015; Olwig, 2005). Landscape and heritage studies have actively sought synergies, adopting and enhancing ideas such as socio-ecological systems (Lindholm and Ekblom, 2019), biocultural heritage (Colding and Barthel, 2019), post-humanist and non-representational heritage (Sterling, 2020; Waterton, 2018) and heritage futures (Harrison *et al.*, 2020). The cultural landscapes, cultural diversity and social values of heritage have emerged as universally adopted principles, which have found their way into international and national policies of various kinds.

These theoretical evolutions can be seen to support a more intensive use of heritage and landscapes in place-making and branding, planning and economic development, environmental preservation and social well-being. However, the experiences with heritage-led development and understanding of heritage as a social process have also fostered critical reflection on the contested nature of heritage and its relationship to power and identity (Baird, 2014; Dicks, 2000; Gentry and Smith, 2019; Mitchell, 2003; Smith, 2006; Winter, 2013). Nonetheless, heritage has also demonstrated a significant capacity for cultivating cohesion

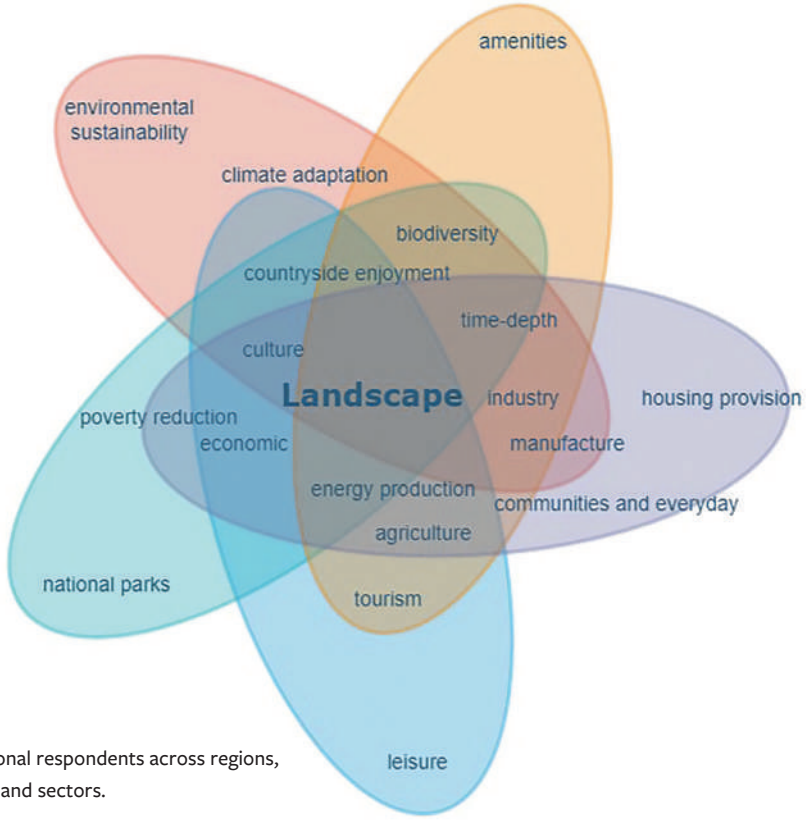


Fig. 4.3.2. Institutional respondents across regions, organization types, and sectors.

within social groups and communities. The influence of Ostrom's (1990) work on governing and managing commons spurred a critical investigation of the integrative properties of heritage as common resources (Gould, 2017; Lekakis, 2020).

Like theories of heritage and landscape, theories of governance changed considerably in the late 20th century. In Western countries, more decentralized, networked governance concepts became influential along with the New Public Management approaches (Rhodes, 2007). Critical reflections have highlighted how diffused governance may not directly equate to more democratic politics (Purcell, 2006). Despite repeated attempts to overcome this challenge at various scales (Russel, 2019), addressing inequality at different scales of social, economic and political organization persists as the ultimate test for democratic governance (Bennet *et al.*, 2009; Savage, 2015; Standing, 2014).

METHODS

The methodological approach of this study was based on the use of qualitative methods with a case study at the core. The case study afforded an in-depth examination of *landscape as heritage* theories in a time-and-place-specific context, with respective cross-sectoral governance networks. The landscape and heritage governance system in England was selected as the main subject of the case study. The system was defined as a complex set of interrelated institutional, policy and legal arrangements produced by and for a specific political and socioeconomic context. The Northumberland National Park and the South Downs National Park were highlighted as local examples of cross-sectoral governance arrangements with different population densities, degrees of urbanization, economic bases, income levels and administrative capacity.

The data collection from primary and secondary sources consisted of the documentation study, including legislation, policies, official statistics, reports and publications, as well as semi-structured interviews with various actors of the *landscape as heritage* governance system. The interviewees were representatives

from different sectors and levels of governance: national and local government executives and politicians, professionals, representatives of non-state actors, and representatives of local communities in the target areas. Most interviews were conducted online via Zoom, as the UK government had imposed COVID-19-related restrictions at the time. The interview transcripts were processed and analysed with the help of NVivo. Participant observation and autoethnography were used to assist the data collection, analysis and verification processes, while personal engagement in local community affairs and the complex local planning and decision-making mechanisms strengthened the credibility of the research findings.

MAJOR FINDINGS

The work produced further evidence for the need for cross-sectoral integration and shed light on the institutional divides that place landscape and heritage into different silos. At the same time, the research outcomes supported the opinion that a broader application of the *landscape as heritage* concept could potentially encourage closer cross-sectoral collaboration and more inclusive and consolidated governance. *Landscape as heritage* appeared to support social and ecological cohesion among diverse human and non-human actors, fostering a holistic trans-sectoral understanding. *Landscape as heritage* was also seen to bridge local, regional, national and supranational spatial and governance tiers, offering a suitable scale to integrate decentered, polycentric governance and meta-governance approaches, allowing for the dynamic reproduction of dialectical confrontation between bottom-up and top-down governance forces.

The outcomes strengthened the idea that the study of heritage values needs insights into broader, sociocultural, political, economic and ecological realms. The work showed that it was crucial for *landscape as heritage* governance to be located within social-ecological and economic systems and, at the same time, remain rooted in and informed by local particularities, grasping the complexity of social patterns within and across their perceived boundaries. The social class approach emerged as a key instrument for enabling a critical understanding of places and communities.

Landscape as heritage, embodying the diverse values assigned by different social groups and communities, was highlighted as a shared cultural space for practicing values alternative to formal, authorized heritage. As such, it could be considered more closely aligned with principles of social justice, participatory governance and inclusive citizen engagement.

The outcomes also shed some light on the conundrum of political representation and direct democracy, suggesting that state and non-state institutions should strive to exercise at least some form of inclusive and direct citizen engagement. While not-for-profit actors, thematic and professional organizations and trade unions appear as an institutional base for participation, direct interaction between citizens and government institutions and among citizens, remains crucial for meaningful dialogue and collaborative action. The planning process, for example, can be seen as a platform for such exchange and collaboration, interlocking the issues-based and place-based governance on the local, regional and national scales.

The findings also stimulated reflection on the role of individuals, personal commitment, skills and visions in governance decision-making. Social, cultural and economic capital were shown to be a prerequisite for shaping individuals as bold public thinkers, enthusiastic innovators and risk-takers and keen contributors to the common good. Thus, improving citizens' well-being and quality of life was reaffirmed as an essential ingredient of the governance of *landscape as heritage*.

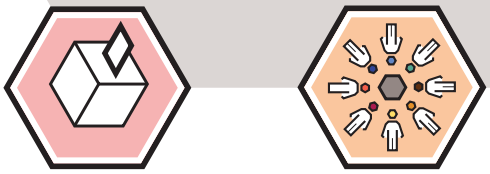
4.4. From antagonism to agonism

How an open-ended planning process can reconcile divergent views on sensitive heritage

Alana Castro de Azevedo participated in the Heriland project as a PhD candidate and a Marie Skłodowska-Curie fellow at the Faculty of Social Sciences, Vrije Universiteit Amsterdam, the Netherlands. She holds a bachelor's degree in anthropology from Federal University of Paraná, Brazil, and a master's degree in cultural landscapes management through the Erasmus Mundus+ JMD DYCLAM.

Keywords:

OPEN-ENDED PARTICIPATION | PUBLIC MEMORIALS | SENSITIVE HERITAGE



THE CASE

This study analysed conflicts over the siting, design and content of Holocaust and slavery memorials in Amsterdam, Lisbon and London. Its point of departure is the *democratic turn* in the heritage field. Observing that decision making on such sensitive monuments is often accompanied by strong antagonism, Alana asks whether an open-ended participation process helps stakeholders to move beyond antagonistic positions.

PREMISES

Installing memorials in public spaces is a widespread form of heritage-making. By commemorating historic events, societies inscribe the landscape with a particular interpretation. Public memorials hold promise in terms of fostering dialogue, educating about human rights and promoting democratic ideals. Equally, they can also bring to the surface or deepen society's conflicts over identity, history and their representa-

tions. Throughout human history – but more intensely so in recent years – monuments erected by past generations have been contested; take the recent (at times violent) clashes between opponents and advocates of altering or taking down offensive statues. The process through which memorials and monuments are created also involve complex negotiations about their content, design, intended meaning and location, which, more often than not, result in conflicts.

One complaint that seems to be at the root of such outcomes is a sense among citizen groups that planning procedures do not promote meaningful participation. To better grasp why antagonism occurs and how it can be regulated in ways that are compatible with democratic values, Alana analysed the specific context of conflicts between stakeholders over the inception of sensitive memorials, i.e. those commemorating the victims of the Transatlantic Slave Trade and the Holocaust. The aim was to understand why these conflicts emerge and how they can be managed so that destructive planning outcomes are avoided (e.g. intractable planning disputes or protracted legal battles). In particular, the research assessed whether the emergence of antagonistic conflicts is contingent on the degree of openness in participation which can be defined as the extent of opportunities for stakeholders to become involved in planning and decision-making.

To answer these questions, Alana researched the process underlying the creation of three memorials in the Netherlands, Portugal and the United Kingdom (Figure 4.4.1-3). These were selected because they (a) featured different participation arrangements and (b) approaches to collaboration (bottom-up and top-down approaches); (c) they involved a wide range of stakeholders; and (d) were highly controversial.

Besides unveiling the specific dynamics of governance around public memorials, the study contributed insights to the broader Heriland theme of *democratization*. What new forms of democratic and non-democratic governance are emerging? What potential do these have in different heritage planning contexts? By focusing on decision-making about public memorials for the Transatlantic Slave Trade and the Holocaust, the research also shed light on the theme of *shifting demographies and contested identities*. What conflicts and contestations occur between different communities in decision-making about sensitive heritage? What dos and don'ts should heritage planners bear in mind in increasingly diverse and globally connected societies? What are the most appropriate tools to transform antagonism into agonism?

THEORY

The theoretical framework of the research built on Chantal Mouffe's agonistic model of democracy (1999, 2000, 2005, 2013), which has inspired agonistic planning theory (Hillier, 2003; Pløger, 2004, 2021), and Philip E. Tetlock's concept of "sacred values" (2000). Chantal Mouffe states that *antagonism* – or conflict – is a constitutive reality and a challenge for democratic politics, and rather than being eradicated, it should be transformed into *agonism*. While antagonism refers to a confrontation between *enemies*, agonism is a confrontation between *adversaries*, which is why Mouffe concludes that a real democracy should allow the free expression of political dissent, passions and agonistic conflicts.

The increasing antagonism in societies worldwide is spilling over into planning practices. Such antagonism is not adequately addressed by the communicative approach to planning, with its focus on consensus-building, cooperation, and closure. Many authors have therefore advocated applying the agonistic approach from political science to the field of planning. Within agonistic planning theory, the transformation of antagonism into agonism occurs when the channels of public participation enable the expression of difference, conflicts of interest, and values (Pløger, 2004: 72). The main strength of the agonistic approach here is that it addresses the conflicts, passions, and power struggles that often characterize processes of memorialization.

It is also important to emphasize that antagonistic conflicts can take different forms. Hence, the concept of *sacred values* has been used to explain how antagonisms are expressed in negotiations over

memorials. Values are deemed sacred when people state an emotional unwillingness to compromise them (Tetlock *et al.*, 2003). According to Tetlock *et al.* (2003), this resistance stems from the fact that sacred values are central to one's identity.

METHODS

Between 2020 and 2022, Alana conducted field observations and in-depth interviews with 45 individuals (e.g. politicians, civil servants, urban planners, developers, artists, memory activists and local residents). These interpretive research methods were chosen to illuminate the experience and interpretation of disputes by actors with differing stakes and roles. During the interviews, Alana asked respondents to describe the participation process with the overall aim of ascertaining their familiarity with the process, identifying patterns of conflict and helping her understand each case. In the second part, she asked interviewees to talk about their interactions with other stakeholders, as well as to identify democratic principles they believed to be key to the participation process.

A downside of conducting interviews on a sensitive topic is the high likelihood of participant self-selection bias. Some people deliberately choose not to participate in the study for personal and/or political reasons, while others proved reluctant to answer questions about protesters' campaigns, delays in construction and litigation. Alana therefore had to supplement the interview data with minutes of public participation meetings, government reports and an extensive press review to fill in the data collection gaps. Additionally, the topic of research proved to be emotive for all involved, including herself, and required a great amount of emotional labour and debriefing with a range of different people (supervisors, partner, friends, family).

FINDINGS

Analysing the data in light of Mouffe's democratic theory and Tetlock's sacred values, Alana found that conflicts over memorial sites do not necessarily arise because of the openness of the participatory process. Instead, they arise because some participants attribute a sacred status to memorials (Tetlock *et al.*, 2003) and tend to think of any negotiation as immoral (e.g. some actors are unwilling to relocate a memorial to another site or alter its design even when they are assured that this compromise will preserve the integrity of a park). As sacred values are usually framed as non-negotiable, planning disputes quickly degenerate into antagonistic conflicts (Mouffe, 2000) that need to be solved legally. The presence of sacred values ensured a persistent antagonism in processes of memorialization investigated here.

These findings contribute insights to the broader theme of *democratization* in heritage planning, enriching the ongoing debate on agonistic planning theory by extending the discussion to processes of memorialization. Alana also points out the limits of conventional forms of participation in planning by illustrating why controversies involving memorial sites can turn into antagonistic conflicts. Finally, she shows how sacred values can be at the very heart of intractable planning disputes. Taken together, all these insights can help developing more democratic and inclusive participation practices, especially when planning involves identity-related issues. Such issues are frequent, as heritage planning increasingly takes on sensitive topics and takes place within societies that experience *shifting demographies* – ageing, migration and acknowledgment of gender diversity, to name a few factors.

4.5. Artificial intelligence for social inclusion

How machines can represent the views of communities and thus promote inclusive heritage planning practices

Nan Bai participated in the Heriland project as a PhD Candidate and Marie Skłodowska-Curie fellow with the Faculty of Architecture and Built Environment at TU Delft. A Tsinghua University and TU Berlin graduate with master's degrees in Architecture and Urban Design and bachelor's degrees in Architecture and Psychology, Nan has always specialized in the application of computational social science in heritage settings, as well as in architectural psychology and Big Data research in heritage studies.

Keywords:

MULTI-MODAL MACHINE LEARNING | SOCIAL MEDIA | CITIZENS AND TOURISTS

THE CASE

This research analysed social media posts by local residents and tourists in Amsterdam, Suzhou and Venice to identify their heritage values and attributes. The project's point of departure is the theme of *democratization*. Observing that artificial intelligence has the potential to consistently analyse social media images, texts and locations, Nan asks whether machines can represent the views of communities and thus promote inclusive heritage planning practices. By incorporating social media data and computational methods, his project also links strongly to the *digital transformations*, thus highlighting the (potential) interconnections between several of the themes central to Heriland.

PREMISES

Social inclusion has become a critical issue in heritage planning practice. It is widely recognized that local citizens and tourists can and should provide input in the analysis of heritage values (why to conserve) and attributes (what to conserve). Their input – alongside the views of different experts – is deemed essential

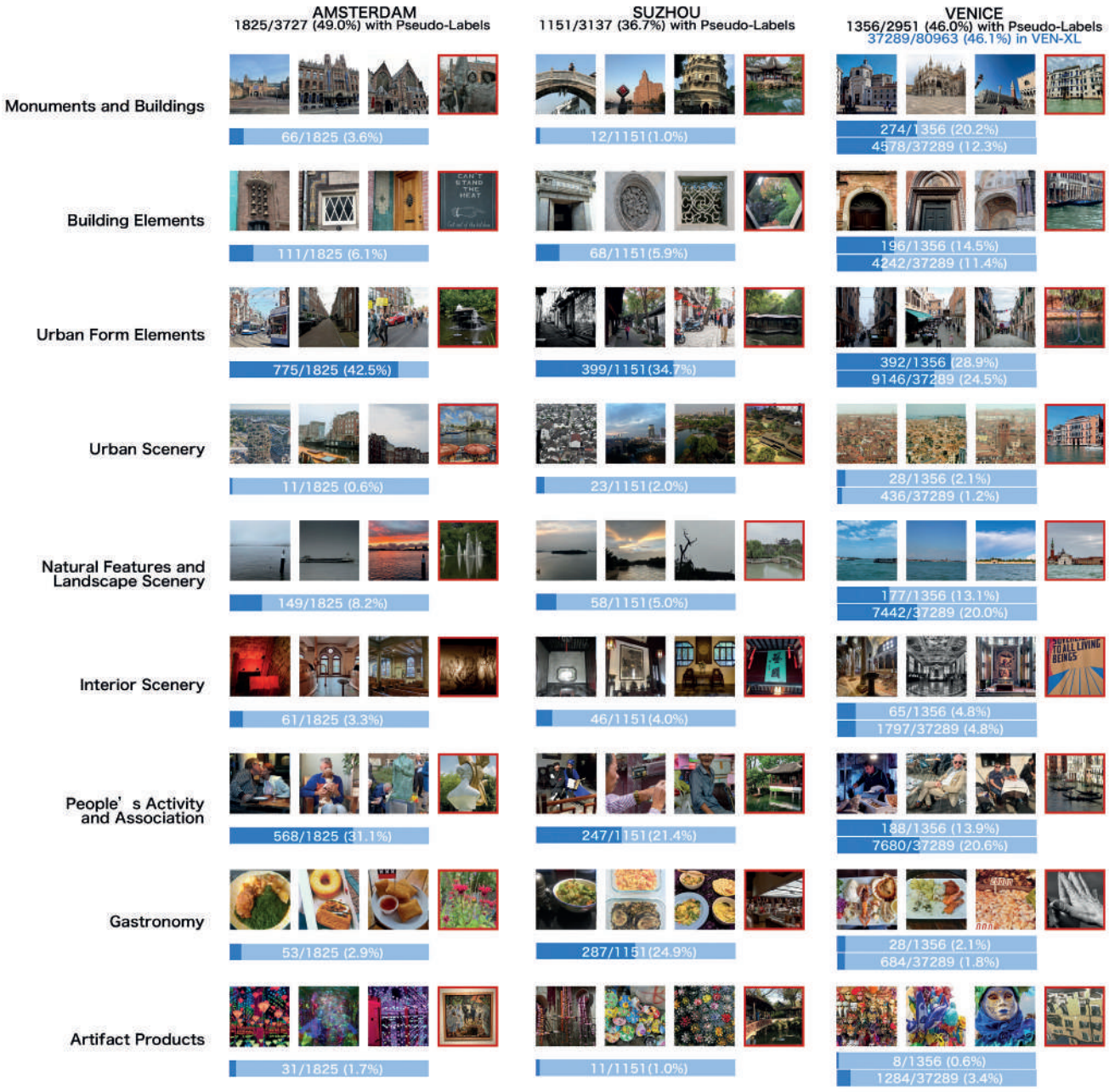


Fig. 4.5.1. Typical image examples in each case study city labelled as each heritage attribute category (depicted scene) with three positive examples and one negative example (Bai et al., 2022).

for understanding the significance and meaning of heritage, and for formulating more comprehensive and socially relevant management plans.

Whereas the 2011 UNESCO Recommendation on the Historic Urban Landscape (HUL) called for tools of civic engagement and knowledge documentation, social media already function as a platform for online communities to actively involve themselves in heritage-related activities (UNESCO, 2011). In the past decade, analyses have been performed on user-generated content (UGC) from social media platforms to actively collect opinions of the online public and to map heritage values and attributes conveyed by various stakeholders in urban environments. Machine learning, deep learning or, more generally, artificial intelligence (AI) are shown to be indispensable for organizing, processing and analysing massive data from social media efficiently and systematically.

Most AI-based heritage research, however, has looked at one modality in isolation (i.e. either tags, visual content, social interaction or the geographical distribution of posts). Multi-modal machine learning (MML) studies outside the heritage domain show that to properly grasp the meanings of the social media posts, including complementary and contradictory messages, it is necessary to study the heterogeneous multi-modal information they contain. Nan's research therefore aimed to develop and test MML methodologies for the heritage domain, asking: while heritage values and attributes have historically been based on site visits and document review by experts, can mapping and mining multi-modal social media data lead to more consistent and inclusive heritage management?

THEORY

Nan's work discusses and advances theories from both the field of heritage studies and computational social sciences.

As for heritage studies, the most essential guideline for the AI to learn from is the theoretical framework of heritage values and attributes on why and what to conserve. Because Nan's study aimed to develop a reproducible methodological framework that could be tested in cases worldwide, the ten selection criteria applied in the context of the UNESCO 1972 World Heritage Convention to justify the Outstanding Universal Value (OUV) of World Heritage properties were taken as baseline (UNESCO, 1972). In other words, the AI models were trained to categorize the social media posts of citizens and tourists based on the UNESCO OUV selection criteria, with Amsterdam, Suzhou and Venice being chosen as cases because they

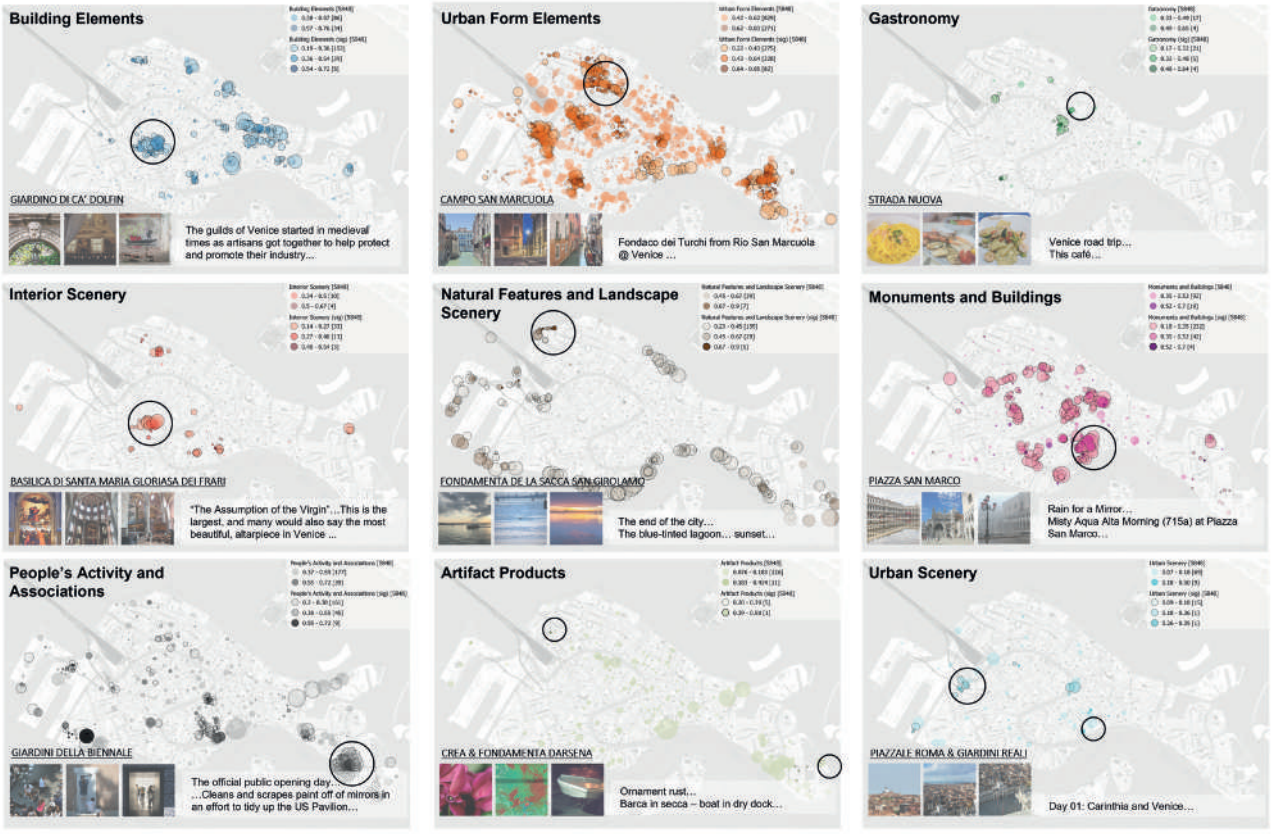


Fig. 4.5.2. Location identified as relevant to each heritage attribute category (depicted scene) in Venice with three visual examples and one textual example (Bai et al., 2023).

are home to World Heritage List sites. However, different categories and taxonomies for heritage values and attributes have been developed in policy and research, *not only* to define OUV in the specific context of the World Heritage List, but sites of all kinds of significance, ranging from listed to unlisted, natural to cultural, tangible to intangible, and from global, regional and local sites. Future AI-based research may use alternative categories and taxonomies.

As for computational social sciences, the main aim was to understand the urban environment as a connected graph (network) with social, spatial and temporal links, in which information can be shared with nearby neighbours, reflecting the so-called First Law of Geography (Tobler, 1970). Multi-modal machine learning is a helpful approach to achieve this. Previous MML studies highlight how heterogeneous multi-model information from social media posts can be analysed in order to (a) retrieve visual and/or textual information related to certain heritage values and attributes, and (b) aggregate individual posts in different geographical and administrative levels as the collective summarized knowledge of a place.

METHODS

Nan's project applied, nurtured and tested state-of-the-art AI methods, including ideas and models from natural language processing, image recognition, graph neural networks, semi-supervised classification, multi-modal machine learning, and more.

UGC datasets on social media platforms were collected and structured as social and spatial graphs. AI-based models were then used to help analyse this massive amount of information to derive the heritage values and attributes perceived by the online community in case study cities of Venice, Suzhou and Amsterdam. The results were further analysed and visualized using methods borrowed from spatial statistics and spatial analysis.

The AI-based methods were trained to classify a social media post with textual and visual information into its related heritage values and attributes categories. To perform this classification task, machine learning and deep learning models were obtained as a machine replica of the authoritative view. These models are now ready to be used for big data analysis at scale. An important caveat is that these models are always biased based on the training data and training methods, which can sometimes produce suboptimal solutions. The models always suffer from a shortage of data in certain categories, which needs to be further augmented and improved. Furthermore, the use of one specific social media platform as the data source may make painting a comprehensive picture significantly more difficult. As with all AI-related studies, privacy and data security issues must also be considered.

FINDINGS

Nan's study found that cultural significance perceived by and conveyed to the online community is strongly embedded in their spatiotemporal and socio-economic contexts, proving that the First Law of Geography also applies to urban heritage on social media. Heritage values and attributes were shown to be perceived and expressed by social media users at a broad variety of locations in cities with UNESCO World Heritage properties that differed from conventional tourist destinations. Therefore, the AI-based methodological framework is shown to be able to collect information and map the knowledge of the community about the cultural significance of heritage, satisfying the expectation and requirement of HUL, while providing useful and informative insights for future socially inclusive heritage management processes.

As an illustrative example, Figure 4.5.1 shows the classification result from the AI-based models trained on a manually annotated dataset of heritage attributes with images from Tripoli, Lebanon from an earlier

study. It managed to extract relevant images from Amsterdam, Suzhou and Venice, which were unseen by the models during training. As can be seen from the captured image examples, the type of monuments, building elements and interior scenes are substantially different in all three cities and reflect the cities' own respective historic and cultural traditions. This proves that the models are generally applicable to other cases worldwide. Furthermore, Figure 4.5.1. also provides a distribution of all the collected social media images classified into heritage attribute categories. For all cities, "Urban Form Element" and "People's Activity and Association" are the most significant and dominant categories, consistent with the observation that social media posts usually feature images taken on streets and revolving around people's urban lives. The heritage attribute categories of Venice can be found in Figure 4.5.2.

The figures below also demonstrate two of the main limitations of the AI-based methods used in this study: (a) training images taken from social media may disproportionately reflect the categories that they are to be classified into, harming the performance of AI models, as smaller categories need not be insignificant; (b) training images from social media may simply depict day-to-day reality rather than culturally significant scenes, which does not qualify as valuable heritage meriting preservation for future generation. However, the classification algorithms still force the models to make predictions in these cases. Therefore, model output must always be scrutinized with a critical mind.

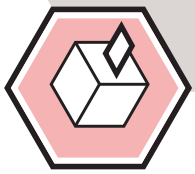
4.6. Mass tourism and urban heritage

The impact of mass tourism on sense of place and ownership in historic cities

Georgia native, **Tinatin Meparishvili** participated in the Heriland project as a PhD candidate and a Marie Skłodowska-Curie fellow at Roma Tre University in Italy and later at the Centre for Landscape of Newcastle University in the UK. She holds a bachelor's degree in Architecture from the Academy of Arts in Tbilisi. Tinatin then expanded her academic horizons by pursuing a Master of Arts in Heritage Conservation and Site Management at Brandenburg Technical University in Germany.

Keywords:

EXCESS TOURISM | HERITAGE VULNERABILITY | POLICY ANALYSIS



THE CASE

Tinatin's research adopts a qualitative approach to investigate how mass tourism impacts heritage values, focusing on the Monti neighbourhood of Rome, Italy. The methodological framework relies on a case study strategy, integrating primary and secondary sources. She utilizes semi-structured interviews with heritage communities to delve into the challenges the locals face in the touristified urban environment of Monti, capturing perspectives on urban transformation and the community's sense of place and ownership. The method applied helps to understand the social phenomena of mass tourism, emphasizing subjective meanings and social patterns. Tinatin's project is part of the Heriland work package on *democratization* and has evident links with the theme of *shifting demographies and contested identities*.

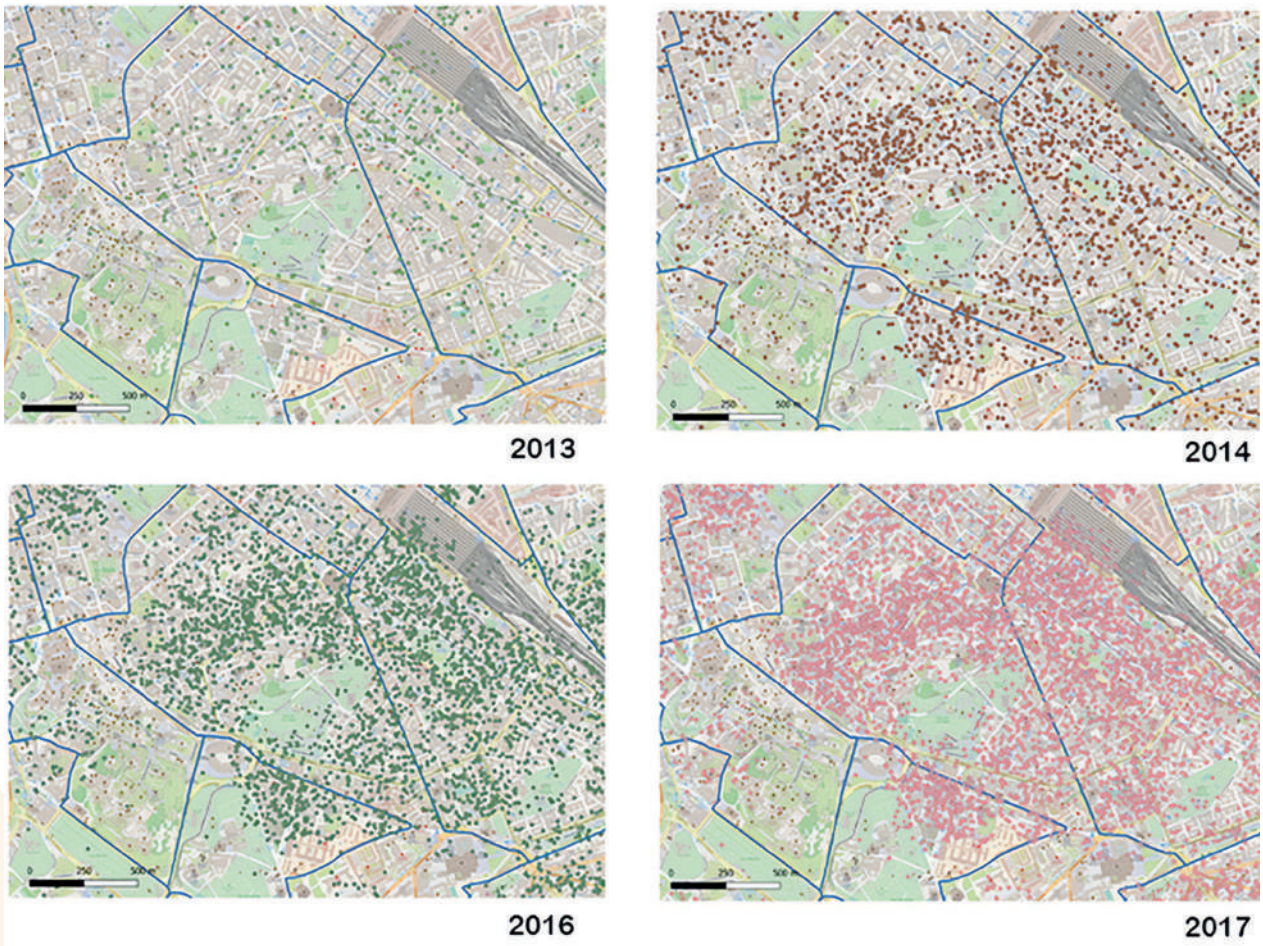


Fig. 4.6.1. Airbnb taking over the historic centre of Rome, illustration elaborated by the author based on Airbnb data.

PREMISES

The study is driven by the need to comprehensively understand the profound implications of cultural tourism on historic European cities, particularly in the context of the transformative impact brought about by advancements in the travel industry (García-Hernández *et al.*, 2017). With the economic multiplier effect of urban tourism being widely recognized, it has become a strategic imperative for numerous countries (World Tourism Organization, 2018). As a vital economic activity, tourism generates employment and is a pivotal revenue source for many cities, contributing significantly to economic development (Exceltur, 2013; Williams and Shaw, 1998).

However, the gradual transformation of urban areas has introduced challenges, leading to a loss of human scale and a substantial alteration of the sense of place in various cities and towns (Biagi *et al.*, 2019). The tangible and intangible heritage of tourist destinations, including their cultural, historical and human aspects, has become increasingly vulnerable and commodified, transforming into mass-market products with diminished value. This commodification is fuelled by neoliberalist ideology and global capitalism, sparking ongoing debates on the costs and benefits of the tourism sector (Richards, 1996).

The strain of excessive tourism on local environments has created tensions between visitors and residents, intensified by platforms such as Airbnb transforming residential areas into tourist hubs (Garcia-Ayllon, 2018). Poor regulations, coupled with the proliferation of low-cost flights and mass tourism, have disrupted communities, impacted the environment and diminished the overall value of destinations, with sustainable, high-quality tourism making way for a more rapid tourism model.

This cultural shift is significant, as tourism has transformed the once dynamic process of culture into a commodified product (Richards, 1996). Cities most adversely affected by tourism are those heavily dependent on the sector economically, with commercial activities posing a risk to historic resources (Ashworth and Page, 2011; Ho and McKercher, 2004). Attempts to preserve these resources by resisting socio-economic development may result in economic impoverishment (Colacchio and Vergori, 2023).

In light of these challenges, balancing urban heritage conservation and tourism management is crucial for socio-economic and cultural development. Led by Tinatin, this research project aims to explore the nuanced responses of local communities to the commodification of living heritage, evaluate their sense of place and ownership, and analyse the profound impact of these factors on the heritage itself. The study thus promises valuable insights into the relationship between cultural tourism, urban transformation and heritage preservation.

THEORY

This project is firmly grounded in the principles outlined by the Council of Europe Framework Convention on the Value of Cultural Heritage for Society (Council of Europe, 2005), which places a central focus on the ultimate goals of human development and enhancing the quality of life through the conservation and sustainable use of cultural heritage. The Convention underscores the significance of studying individuals who play key roles in tangible and intangible heritage, asserting that their perspectives can serve as linchpins for effective conservation solutions. This perspective aligns with the understanding that culture is a multi-faceted entity, both a social and individual construct (Matsumoto, 1996). It is dynamic and subject to continuous change (Ferraro, 1998), wherefore exploring various layers of cultural understanding is crucial.

Schein's (1992) conceptualization of cultural layers provides a valuable framework for this exploration, delineating three levels for study: (a) the unconscious and invisible assumptions that underpin culture; (b) the values that explain the "why" behind cultural behaviours; and (c) the observable artefacts that represent the "how" and "what" of cultural expression. Tinatin's research unpacks these layers by examining urban features, observing local community values, and exploring the profound impact of mass tourism on the sense of ownership and the sense of place (Rypkema, 2005) in a historic urban environment.

Fig. 4.6.2. Case Study Area- Rione Monti, map elaborated by the author based on Open Street Map, photos by author.

Tinatin's research reveals the relationship between tangible and intangible cultural heritage elements by investigating these layers. The study not only explores the visible changes in urban landscapes but also seeks to understand the underlying assumptions and values that shape the cultural fabric of a community. This holistic approach is aligned with the Faro Convention's emphasis on the human dimension of cultural heritage, highlighting the dynamic relationship between individuals, communities and the evolving cultural landscape.

METHODS

During the initial phase of her research, Tinatin employed environmental scanning and policy analysis, focusing on documents published by authoritative bodies responsible for tourism management, city planning, regional and municipal planning and cultural heritage conservation. Additionally, she scrutinized international policies and charters governing tourism and heritage-related matters to provide a contextual framework for the collected information. Tinatin consulted with representatives from UNWTO and UNESCO, both within and outside Italy. Preceding the refinement of the case study area, she conducted exploratory fieldwork utilizing observation techniques and informal interviews with various stakeholders. This preliminary investigation aimed to delineate the macro and microenvironment within the Roman neighbourhoods of Monti and Campo Marzio.

Tinatin adopted a qualitative research methodology to underpin her project, using both primary and secondary sources for data collection. Several methods were deployed, including semi-structured interviews designed to probe into the challenges the local community faces in a touristified urban environment. The insights gained through this approach facilitated an in-depth comprehension of the local perspective on urban transformation, the perception of tourism as a catalyst for change, and the evolving sentiments toward their residential area, encompassing the sense of place and the sense of ownership, particularly in response to heightened tourist activity.

Furthermore, an ethnographic method was employed to conceptualize the research subject and grasp the social phenomena associated with mass tourism. Secondary data analysis was instrumental in investigating the research question on a broader scale, extending beyond the specific case study to encompass relevant data on the larger scale of Rome. This entailed a comprehensive review of documentation, including legislation, policy documents and various governmental and non-governmental publications, incorporating official and non-governmental statistical sources. Collectively, these methodological approaches provided a robust foundation for Tinatin's extensive examination of the impact of mass tourism on the cultural and urban fabric of the studied Roman neighbourhoods.

FINDINGS

Tinatin's research findings contribute to defining the balance between enhancing cultural heritage accessibility through mass tourism and preserving livability and conserving the local lifestyle within commodified urban environments. By unpacking the dynamics between heritage, tourism and local communities, Tinatin unravelled the complexities of these relationships. She identified and discussed the catalysts driving transformative changes in these heritage-rich environments through her study sample. Importantly, Tinatin extended the significance of her case study findings by contextualizing them within a global framework, offering insights into how macro-level factors influence micro-scale issues. Overall, her research sheds light on the challenges heritage communities face and provides a nuanced understanding of the broader implications for cultural heritage conservation in the face of mass tourism and urban commodification.

4.7. Cultural translations of landscapes

The landscape perception of Iranian migrants and the historic landscape characterisation of greater manchester

Farnaz Faraji participated in Heriland as a Marie Skłodowska-Curie fellow at the Centre for Landscape, Newcastle University, UK and as a PhD candidate at the Faculty of Humanities, Vrije Universiteit Amsterdam, the Netherlands. She obtained her B.Sc. in Architecture from the University of Tabriz and completed a Masters in Conservation and Revitalization of Historic Sites and Buildings- Urban Heritage Conservation at the University of Tehran. She previously worked at NGOs as a research manager and conservationist and conducted applied research for the Municipality of Tehran.

Keywords:

MIGRANT COMMUNITIES | PLACE-MAKING | WALK-AND-TALK INTERVIEWS

THE CASE

In this research, Farnaz investigated Iranian migrants' cultural translations of places. She focused on the sense of belonging and heritage practices influencing migrants' perception of their surrounding landscapes. The main aim was to map the perceptions of Iranian migrants in Manchester city centre, using Historic Landscape Characterisation. With this aim, the research contributed to the Heriland theme of *shifting demographies and contested identities*. Moreover, by revealing new quantitative data application possibilities in geospatial analysis, she also contributed to Heriland's *digital transformations* theme. Through her work, Farnaz tried to investigate to what extent can public engagement platforms be used to conduct studies on sensitive ethnographical groups such as migrants and whether geospatial analysis can be combined with public participation platforms to provide multivocality and future forecasts.

The Diagram of Research Methodology

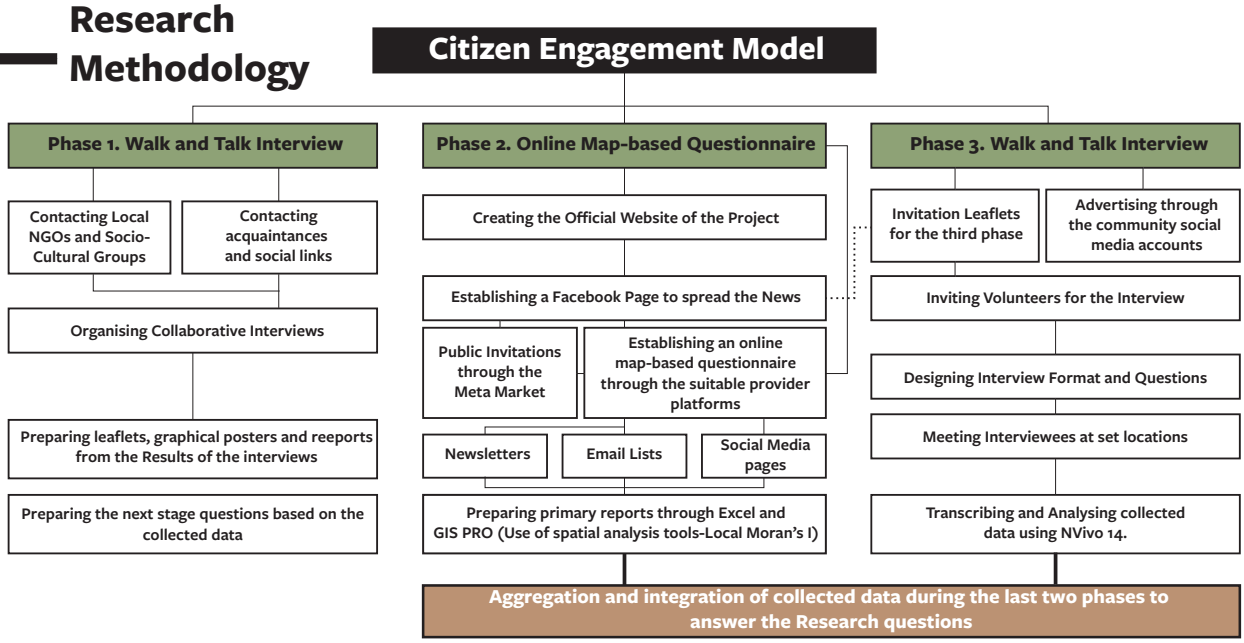


Fig. 4.7.1. Diagram of the research methodology based on the citizen engagement models proposed by Mecardo-Alonso et al. (2018) and Dabaut (2021).

PREMISES

This study follows the premises of the European Landscape Convention (ELC) (Council of Europe, 2000), in arguing that public perception of landscape character should be a significant aspect of landscape policy and research. Farnaz investigates how this can be achieved with regard to the Historic Landscape Characterisation (HLC) approach, which was developed by Historic England in collaboration with city councils to secure high-quality, well-designed and sustainable places, to integrate government policy objectives and community aspirations, and to plan policy delivery.

With this aim, the study also touches on the United Nations Sustainable Development Goal 11 which calls for building inclusive urban environments. Since massive migration trends have led to multicultural living environments, urban landscapes have come to serve as a setting for multivocal narratives of place. Different approaches can be taken to this multivocality brought on by migrants (Graham *et al.*, 2000). The degree to which migrants and their heritage-making practices are included depends on the host society and national regulations. Drawing on critical heritage studies, Farnaz observes that common places have different meanings for migrants. She examines how migrants' landscape perceptions can be integrated into urban and regional planning decision-making.

THEORY

In light of the critical heritage studies viewpoint, the theoretical framework of this research revolves around the discussion of the social action potential of heritage as an unofficial heritage narrative. The role of heritage in forming individual and collective identities has been stressed, among others, by Hall (2000) or Appadurai (2013). Byrne (2008) also emphasizes the importance of cultural work to local place-making, suggesting that heritage practices have both spatial and identity aspects. Communities also define locality

in terms of time, space and symbols in physical entities (Bhugra and Becker, 2005). In the case of migrants and diasporic communities, they commonly define their relationship with the majority society by selecting specific characteristics of their past (Harrison, 2010). This process of selection serves to convert places from physical entities into mnemonic devices that connect them to home. In this way, the memories connected with personal and social life affect their identity and sense of belonging. Over time, migrants' place-making actions transform into heritage-making practices (Antonsich, 2010).

Farnaz's work also references Gill's (2010) linear place-making model, which helps to address the dilemma of migrants' place-making practices. According to Gill, the process of place-making among migrant populations helps establishing the validity and aspirations – both physically and conceptually – of a specific community. However, not all migrants go through this process. The importance of local place-making is paramount for new migrants. In order to shape and perceive experiences and landscapes, people use narratives which offer insight into how landscapes are shaped by perceptions and contribute to place-making. It is in this sense that people are shaped by their personal narratives and stories. As such, spatial narratives may be silent, but still leave a longer-lasting impression than lingual narratives (Yazdani, 2017).

Fig. 4.7.2.
Screenshot of the main page at Rozaan. commonplace.is: the online, map-based questionnaire for citizen engagement.

METHODS

Throughout her research, Farnaz employed both qualitative and quantitative data collection methods. To investigate how Iranian memories are incorporated into urban spaces without leaving physical traces, she first employed walk-and-talk interviews. Moreover, to collect Iranian migrants' memories, stories, and practices, she used Commonplace (a map-based, public engagement survey) to gather opinions on a particular location in Manchester city centre.

Community engagement platforms have gained popularity, since they are valuable tools to quickly collect data, which can then also be used for geospatial analysis. Farnaz conducted another series of walk-and-talk interviews with respondents as part of the last phase of data collection. With these interviews, she observed people interacting with their everyday landscapes.

During this study, Farnaz encountered various downsides of surveys and interviews. As protests in Iran flared and the Iranian diaspora (including herself) experienced trauma abroad, communication with participants became challenging. As a means of overcoming this challenge, Farnaz created a website, used social media, communicated with Persian clubs, societies and NGOs, sampled snowballs with friends and acquaintances in Manchester, distributed flyers, etc. To engage the Iranian diaspora, she also took into account weather conditions and participants' ability to walk for an hour. In overcoming these challenges, supervisors, friends, experts and the Iranian community stakeholders played a vital role.

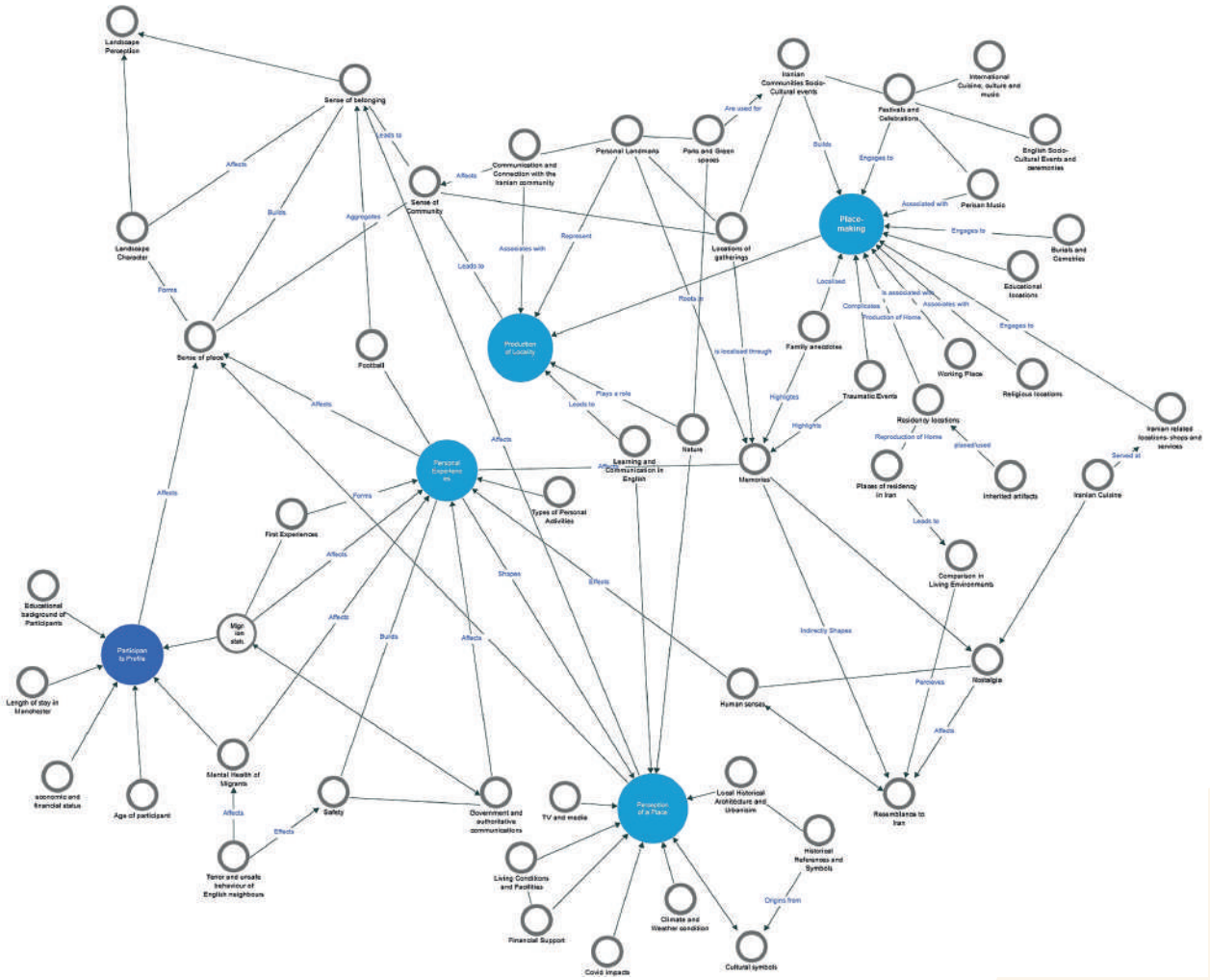


Fig. 4.7.3. The relationship matrix among the main codes obtained from the final phase of research: walk-and-talk interviews show influential factors in the creation and development of the sense of belonging for Iranian migrants living in the Greater Manchester area.

FINDINGS

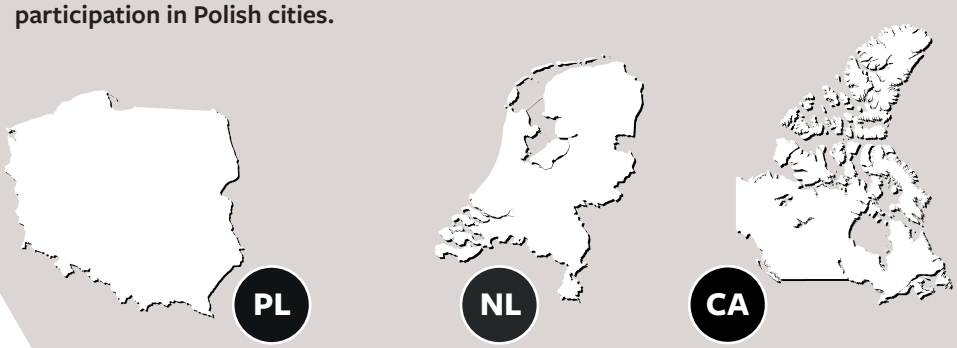
Analysing the data in light of the Historic Landscape Characterisation methodology, Farnaz created heat maps of Iranian migrants' perceptions of Manchester city centre's landscape character. Compiling the heat maps with the existing HLC maps showed that even in the multicultural landscape of Manchester, Iranian migrants associate the cognitive character of this landscape with multilayered memories, feelings and socio-cultural experiences. Even though Iranian migrants have agreed on a common identity through places, they have attempted to hide within the official narratives of their hosts to find a place within their respective societies. Therefore, Manchester's landscape reflected the contrast of cultures in their perception. In terms of critical heritage studies, the results demonstrate that host societies do not leave room for unofficial, narratives reflecting otherness.

These findings contribute insights to the broader themes of *digital transformations* as well as *shifting demographies and contested identities* in landscape management. Throughout the local landscape, they enhance the ongoing debate over who heritage belongs to and whose rights are validated through it. They also points out the limits of host societies in embracing and including social minorities' place-making practices. Last but not least, the findings highlight the importance of focusing heritage and planning disputes on local place-making practices, particularly those of locals with diverse cultural backgrounds. From a methodological perspective, this analysis indicates that geospatial technologies can facilitate a more collaborative and comprehensive landscape management approach

4.8. Playing with the past to refine the future

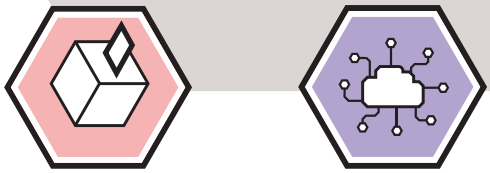
Gamification strategies for collaborative heritage planning

Maciej Jakub Swiderski participated in Heriland as a PhD candidate and Marie Skłodowska-Curie fellow at the School of Business and Economics and the Faculty of Humanities, Vrije Universiteit Amsterdam, the Netherlands. He graduated with honors from the University of Warsaw, Poland, with a master's degree in American Studies and obtained a second degree in the 4Cities Master programme in Urban Studies organized by six universities across Europe. His master's research led him to become one of the main initiators of the first Polish translation of Jane Jacobs' The Death and Life of Great American Cities. He was also involved with various urban and architecture-themed NGOs devising strategies to increase active public participation in Polish cities.



Keywords:

PERSONAL MEMORIES | GAMIFIED DESIGN | EVERYDAY ARCHITECTURE



THE CASE

The main objective of this study consists of finding adequate ways to integrate bottom-up knowledge within planning processes by seeking inspiration in gamified designs as well as in methods grounded in spatial heritage studies. Taking a mass housing neighbourhood of Warsaw, Poland (Figure 4.8.1) as the primary case study, the work relies on eliciting memories from the residents and maps the emotional and mnemonic importance of everyday spaces within these seemingly repetitive landscapes in order to reuse them in discussing the spatial problems of the area. With these aims, the study contributes in particular to the Heriland theme of *democratization*, while at the same time building on digital tools common for the *digital transformations* and the concepts of the *spatial turn*.

Fig. 4.8.1. The Ursynów neighbourhood in Warsaw.

PREMISES

A key premise of Maciej's research is that a higher level of participatory democracy can be achieved when planning discussions start with topics that are easier to grasp by residents (such as their own memories) rather than with technical problematizations of planning issues at stake. Similarly, by letting residents *teach* the specialists about their environment, this re-focusing can stimulate the creation of a more equilibrated dialogue between local and professional communities.

The methodological quest of this study is positioned in a compelling heritage context – one in which the tangible artifacts of the past often seem too insignificant for preservation, simultaneously forming the building blocks of a rich cultural landscape, filled with meanings and symbology crucial for the self-identification of those who reside within it. Together, these two components can be seen as closely following the UNESCO Recommendation on Historic Urban Landscape, published in 2011, especially in relation to the notions such as the continuity of the historic urban landscape and its importance for the solidification of local identities. Particularly considering the latter, this project, which looks at some of the most mundane urban landscapes of the 20th century, urges a rethink of the ways in which heritage professionals – despite ongoing shifts in the field (Harrison, 2013) – tend to construe narratives of value. As they often fail to embrace the intricate layers of intangible meanings embedded in the elements of urban fabric that seem trivial (Smith, 2006), they are prone to dismissing vast swaths of local knowledge – a type of insider understanding of the landscape that can easily hold an entire local community together.

Addressing the role of heritage-based methods for ennobling this type of spatial mundanity has a major potential for enriching the ways in which urban planning consultations are designed. Simultaneously helping local residents feel acknowledged and granting the specialists a unique perspective into

the emotional and mnemonic dimension of spatiality, the methodologies developed by this project aim at improving the dialogue between these two, often conflicted groups of city users.

THEORY

Since one of the premises of the research is to enhance the dialogue between different types of stakeholders involved in the planning process, the theoretical framework was largely focused on the desired reciprocity of public participation. Berman (2017) posits that such a dialogue is the most important objective from the perspective of the planning community – urban planners' professional knowledge tends to lack a local perspective, so engaging the local community in sharing their expertise about the area in question helps enrich planning practice. At the same time, when the general public is asked to share their *knowledge* rather than merely their *input*, the participatory process can be regarded – using the terminology proposed by Innes and Booher (2000) – as more deliberative than unidirectional. This, in turn, should help in bringing the planning process towards the highest rungs of Arnstein's ladder of citizen participation (1969), namely *partnership*, *delegated power* and *citizen control*.

The point of departure for the analysis was the model of the Landscape Identity Circle (LIC) put forward by Stobbelaar and Pedroli (2011). This model characterizes the trajectory singular local identities go through when forming a collective identity that can then change the meanings attributed to the elements of the local landscape. More simply put, it is a spatially dictated evolution from me-feelings to we-feelings. The abridged LIC model (Figure 4.8.2) further exemplifies how this process manifests itself in a more planning-oriented context. Given that the study looks closely at how the planning processes could be tweaked

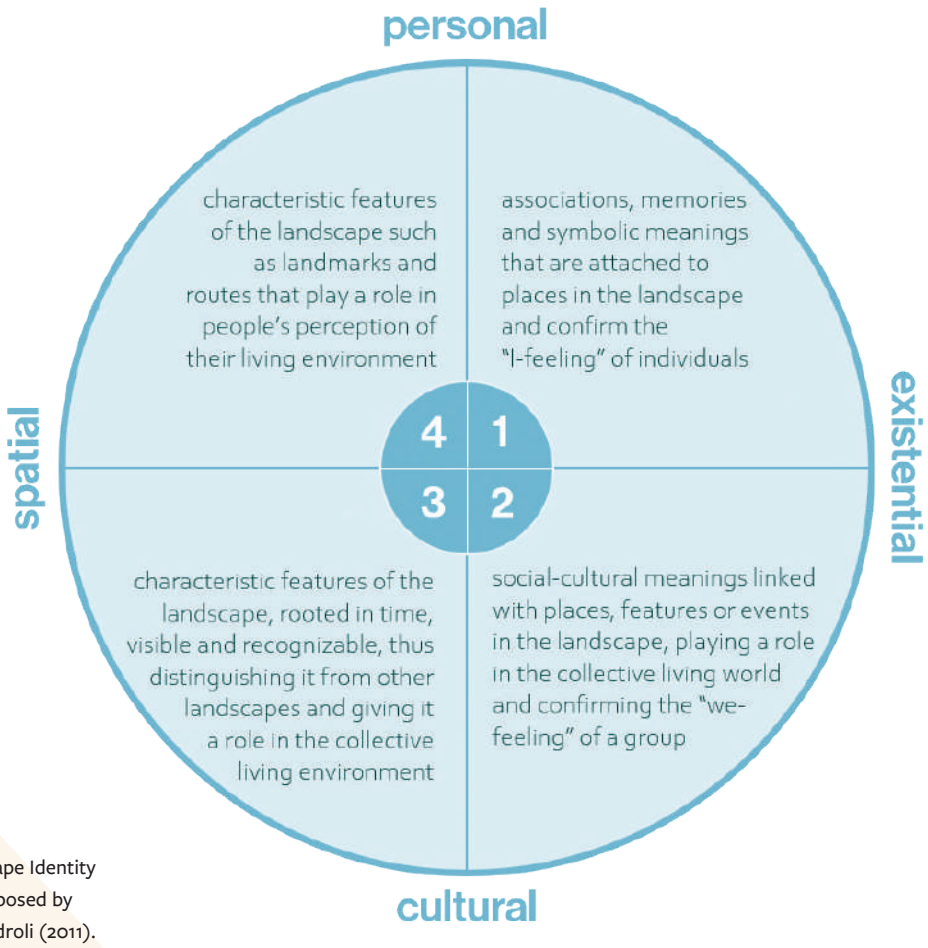


Fig. 4.8.2. Landscape Identity Circle (LIC) as proposed by Stobbelaar and Pedroli (2011).

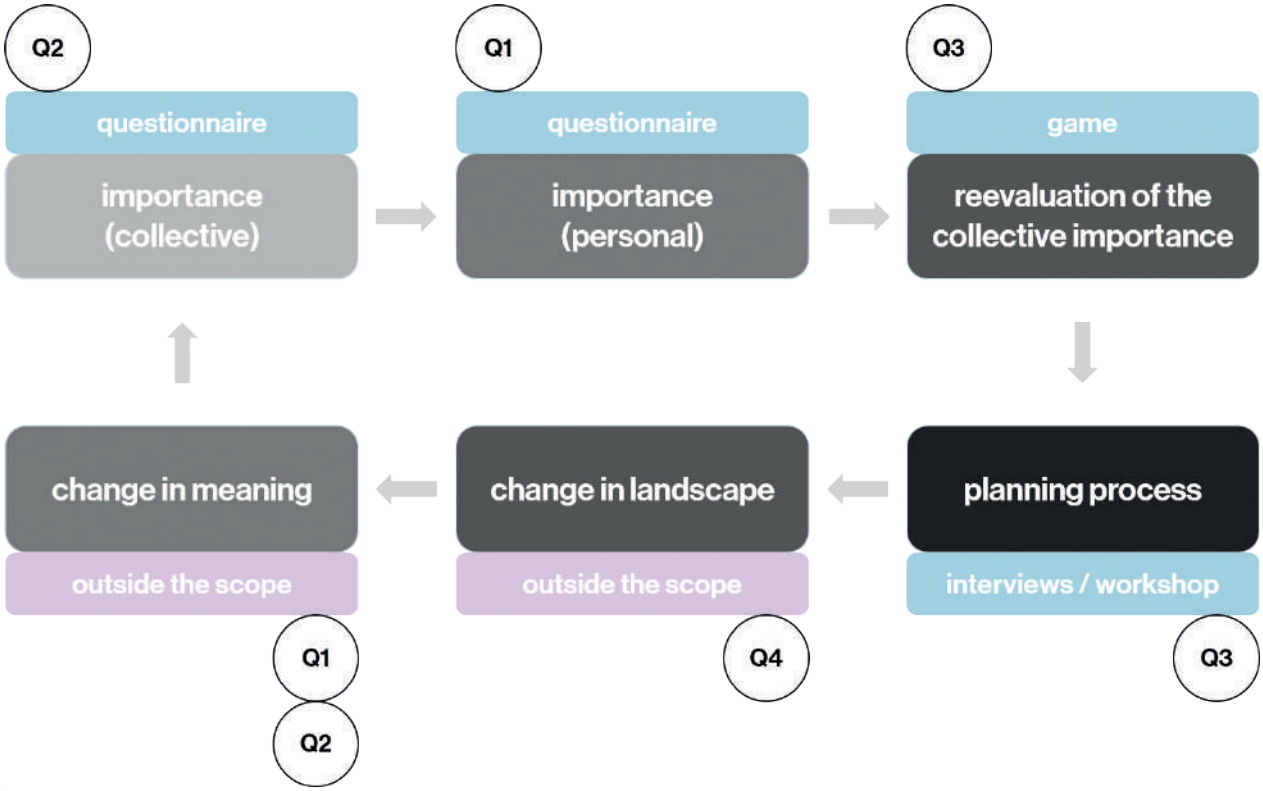


Fig. 4.8.3. Abridged version of the LIC developed for the purpose of this study. Each section corresponds to the component of the empirical research process, as well as to the quadrant of the original LIC.

to achieve a more egalitarian dialogue between specialists and residents, it is vital here to concentrate on the steps that precede them – ranging from personal importance to the reevaluation of it – and reflect on how to underscore their importance. Maciej's study stipulates that the skillful inclusion of an adjusted LIC model into the planning process can help generate more interest from the local community, shedding light on new types of data for the professional community, and, most importantly, clearing the path for more socially sustainable methodologies for urban planning.

METHODS

The empirical part of the study had to be built from scratch. Collection of the memories was achieved over a period of 2 months by means of an online, map-based questionnaire. The questionnaire, following the LIC model, looked at the memories on two different scales – personal and communal – as well as asking the respondents to delineate areas worth preserving for the future (Figure 4.8.3). In addition to the questionnaire, the study also had to follow an extensive outreach campaign consisting of social media posts and leaflets and posters distributed among local businesses. The social media campaign and the website accompanying the questionnaire featured several mnemonic nudges such as evocative visual design (concrete panels and colour schemes reminiscent of 1980s estate designs), fictional memories in form of short stories, as well as pictures shared by intrigued residents. In total, the questionnaire yielded 1129 long, geolocalized answers effectively establishing the database needed to investigate the relation between memories and urban planning.

The dataset was then analysed using three different code frames. Each code frame was subsequently compared with another and linked to the current spatial problems within the neighbourhood, as defined

by official planning documents put forward by the district hall between July 2021 and April 2022.

In order to assess the efficacity of this mnemonic approach in conjunction with gamified designs which, at least theoretically, should enhance participation, a game-based event was held in March 2023 as the second major component of the research project, consisting of two parts – a game itself and a planning workshop. The game took some of the memories submitted through the 2021 questionnaire and adapted them to fit into a narrative resembling a treasure hunt or a pick-your-own-story adventure. The workshop stage culminated with group presentations.

FINDINGS

The results of the questionnaire provided an extremely elaborate dataset that revealed numerous connections between the quadrants of the LIC, proving that memories shape spatially grounded local knowledge which, in turn, influences the way residents problematize their surroundings. This constatation can be understood as valuable information for planners (revealing new angles which were formerly not considered) and heritage specialists (revealing ways of finding emotional value in mundane landscapes). Comparing the answers with the problem areas designated by the district hall revealed several discrepancies between what was cherished by respondents and what officials planned to drastically change. This observation further underlines the potential of including memories in the planning process – both as a way of democratizing it and paving the way for better understanding of the local heritage.

The initial analysis of the interviews conducted with all the participants of the game-based event reveals that both groups feel as if the mnemonic and emotional approach to spatial issues could, or even should form an integral part of broader deliberations in the urban planning processes. Interestingly, as much as the specialist group tends to see it rather as an interesting addition on top of an already well-elaborated structure of public consultations, residents perceive it more in terms of a unique opportunity to showcase what is really dear to them.

These local, Ursynów-related findings will be further discussed with specialists from different spatial and professional contexts in the Netherlands and Canada with the aim of amplifying the scope of the research project by hinting at the (im)possibilities of replication and generalizability of the methodology utilized in Ursynów.

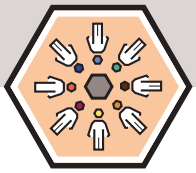

HOTDOGS AND MORE
HOTDOGS AND MORE
MALIBU
CALIFORNIA

4.9. Datascaping for historic urban landscapes. On developing a method

Komal Potdar participated in Heriland as a Marie Skłodowska-Curie fellow at Bezalel Academy of Arts and Design, Israel and as a PhD candidate at the Faculty of Architecture and Built Environment, TU Delft, the Netherlands. She is an alumna of the School of Planning and Architecture, New Delhi and Sir J.J. College of Architecture, Mumbai, both in India. She also holds a P.G. Diploma in Sustainable Management of Natural Resources and Nature Conservation from the Ecological Society, Pune. She has extensive professional experience in architecture conservation and heritage management.

Keywords:

SPATIAL ATTRIBUTES AND VALUE | EIDETIC MAPPING | KNOWLEDGE AND PLANNING TOOLS



THE CASE

Komal Potdar examined how the Recommendation on Historic Urban Landscapes (HUL; UNESCO, 2011) and UN-Habitat's New Urban Agenda (United Nations, 2016), through their emphasis on knowledge and planning, can support the sustainability of historic cities. Key to her research were digital, spatial analyses of historic urban landscapes in a series of Israeli case studies. While part of the *shifting demographies* team, Komal's work has evident links also with the other Heriland themes of *digital transformations* and the *spatial turn*. Her final aim was to develop and test the method of datascaping as a tool to reconcile a city's complex socio-spatial and heritage structure with development processes.

PREMISES

The point of departure of Komal's work are the international guidelines adopted following UNESCO's 2011 HUL Recommendation and the New Urban Agenda. Amongst the four key tools outlined by the HUL Recommendation, she has focused on those concerning knowledge and planning, with an emphasis on the as-

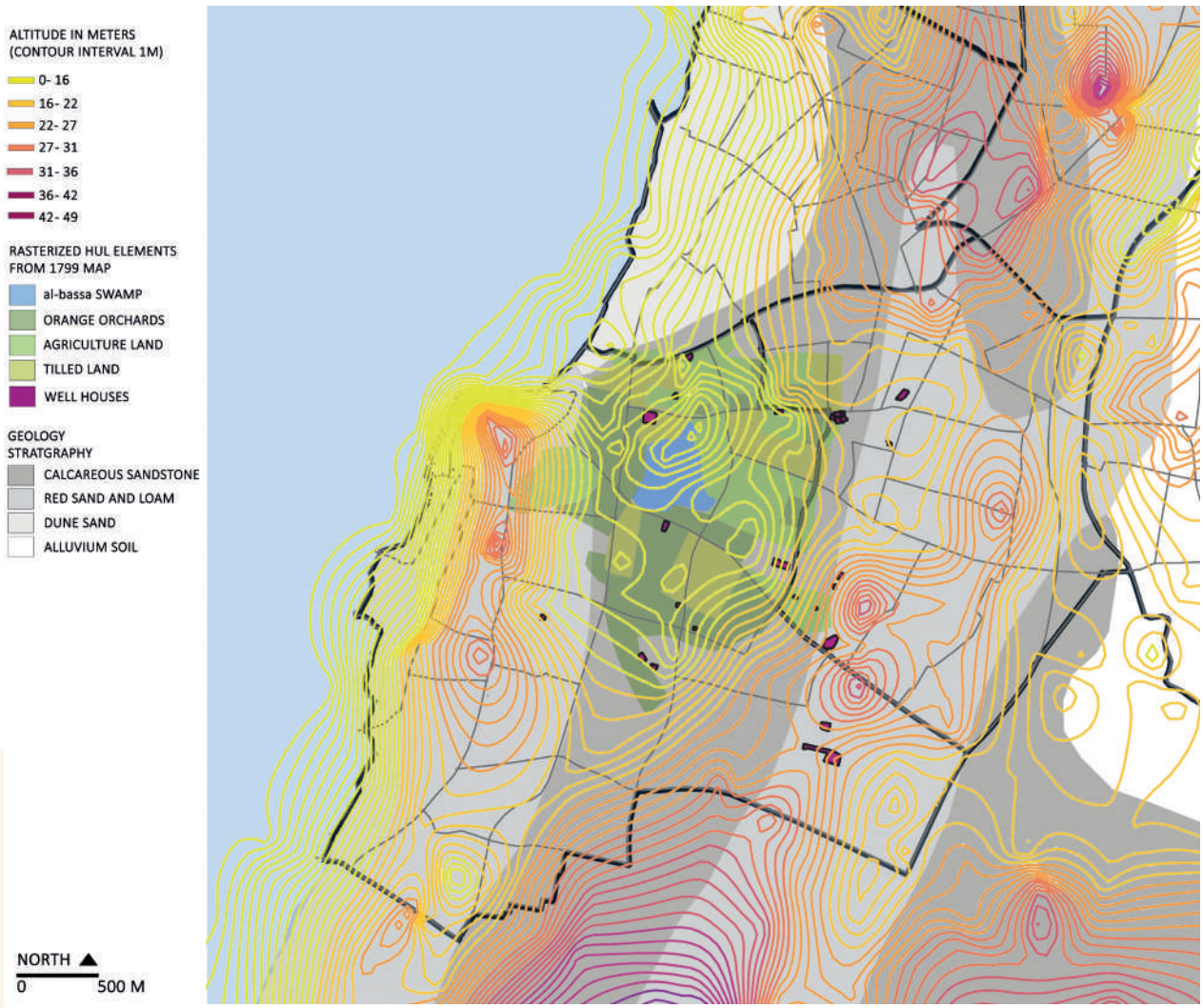


Fig. 4.9.1. An eidetic map prepared by extracting layers from historic maps, in accordance with the HUL approach. The circled area is the focus of analysis, which identifies the low-lying areas with contour levels and the traditional uses allocated for agricultural and orange orchards. Maps also document the layer of geology and presence of calcareous sandstone, which is a conducive material for aquifers, known locally as kurkars.

pects of space, knowledge documentation and assessments, in conjunction with other tools of regulatory systems and community participation. A major premise of HUL and the New Urban Agenda is that spatial visualization through methods such as datascaping can be a powerful tool of geographical science and can aid active practice in the complex construction and communication of spatial knowledge. Komal has investigated the opportunities that datascaping offers for the analysis and communication of the spatial attributes of historic cities.

THEORY

The main theories that inspire Komal's research are those underlying the UNESCO Recommendation on Historic Urban Landscape, which defines historic cities as embodiments of large, complex and dynamic spatial systems. In other words, the spatial complexity of historic urban landscapes is due to a myriad of social, economic, environmental and cultural forces and their interaction over centuries (Healey, 2007). The HUL Recommendation emphasize the need for identifying and protecting this historic stratification in urban environments and to integrate it in public policies.

The adoption of the HUL Recommendation was a significant move towards the acknowledgment of the role that landscapes and geographies play in the diachronic evolution of historic cities and urban environments. The significance of HUL in addressing the social, economic and ecological configurations of a given city cannot be underestimated. Urban planners and conservation professionals show little appreciation of how the form taken by the urban landscape is connected to the historical grain of the city (Whitehand and Gu, 2010). Since most contemporary processes of urbanization and development pose a challenge to the resilience of historic urban environments, the conservation and at the same time sustainable development of these areas requires the integration of the HUL approach in urban design, planning and decision-making. As per the 2005 Vienna Memorandum, the future of our historic urban landscape calls for mutual understanding between policymakers, urban planners, city developers, architects, conservationists, property owners, investors and concerned citizens, working together to preserve the urban heritage while considering the modernization and development of society in a culturally and historic sensitive manner, strengthening identity and social cohesion (UNESCO, 2005). This mutual understanding can be facilitated by building common ground by mapping the complexity of spatial layers of the urban landscape. The aim of this study is to help create this common ground.

METHODS

In her work, Komal explores specific mapping methods and eidetic mapping in particular (Figure 4.9.1). Eidetic maps differ from the quantitative maps of conventional planning in that they reveal not only spatial effects of influential elements of regulations, economic or legal frameworks, but document the space-time

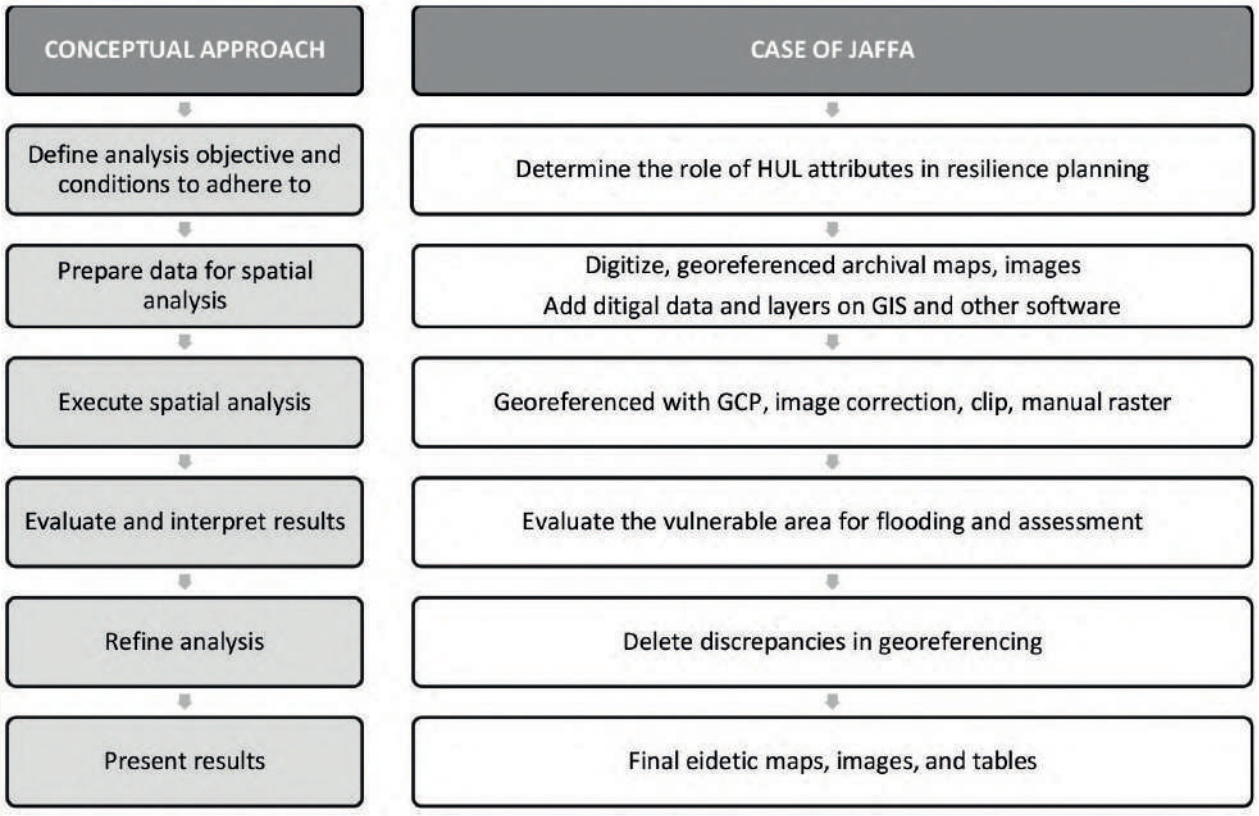


Fig. 4.9.2. The conceptual framework information visualisation and spatial analysis adapted from Geographical Information Science and maps (Kraak and Ormeling, 2013) and illustrated application to the case of Jaffa, Israel.

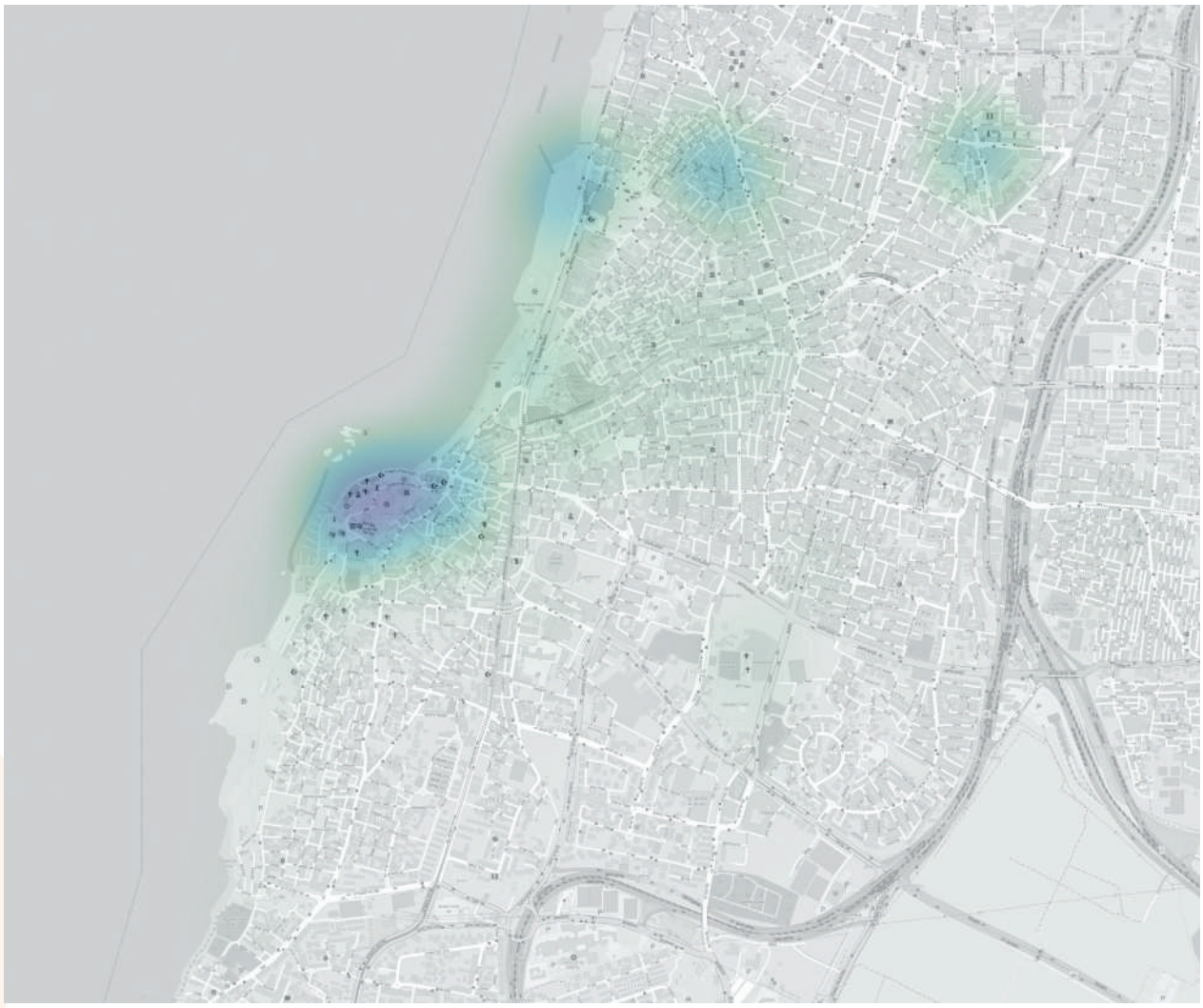


Fig. 4.9.3. Datascaping exploration through Machine learning as a tool for analysis of cultural ecosystem services in historic urban landscapes. Data were acquired through crowdsourcing, analysed, and classified into Cultural ecosystem services by identified elements and attributes. AI-based smart systems were used to prepare spatial-temporal visualisations that can contribute to policy- making in historic cities.

continuum and present an argument for further consideration. Komal's research question is how to apply methods of eidetic mapping to visually represent the diachronicity and socio-spatial configurations of historic urban landscapes in such a way as to aid in urban design and planning decision-making processes toward more resilient and sustainable versions of urban development and urbanization. The case study of the ancient port town of Jaffa, Israel, served as an empirical context for developing this method (Figure 4.9.2).

Based as it is on historical information, this study can be categorized as qualitative research with a descriptive-analytic approach, while the combination with digital tools sees it take a heuristic approach. Komal processed data from primary sources of old maps, photographs and other information and explorations through visualizations. This experiment, using archival records and integrating them with GIS tools as an integral part of the HUL approach, reveals the potential of the eidetic mapping method in the process of sustainable and resilient urban design and planning for historic urban environments.

Also, taking the HUL approach as her point of departure for the Israeli case studies, Komal conducted field observations and in-depth interviews with 19 professionals (representatives from Tel Aviv's municipal departments of Spatial Planning, Tourism, and Heritage Preservation, district and regional planning committees, and expert consultants such conservation architects, architect, sociologists and ecologists)

FINDINGS

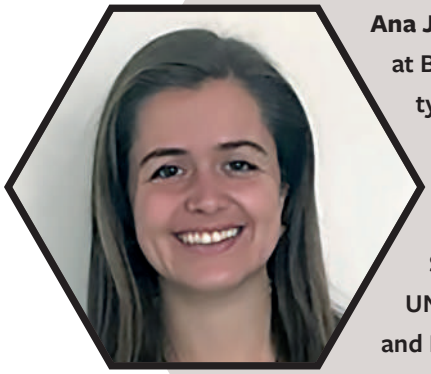
The interviews provided crucial insights into document agendas, mandates, inclinations and the treatment of urban heritage within planning and policy. It resulted in an overview of the frameworks of planning, design, policymaking and the various levels of urban heritage attributes that feature in terms of respective applicability and significance.

The background work of generating the datascapes used as primary discussion materials for interviews was done through field observations and secondary information obtained from various sources such as municipality data GIS, census information, satellite imagery, crowdsourcing, private and commercial websites, archival photographs and maps combined with detailed analysis of master plans, strategic action plans and various design interventions proposed for the city. In only few instances did poor availability of open data hamper datascape generation. This limitation of uniformly available data was overcome by opting to represent different urban scales from micro to macro levels, which aided the analysis of various challenges facing urban conservation at a building, neighbourhood, district, city and metropolis level. This builds on the guidelines of HUL Recommendation that stresses the importance on various levels of application.

Overall, the research has delivered pluralistic datasets of attributes such as geomorphology, hydrology, socio-economic status and census migration data overlaid with dynamic information of flooding, crime, real estate prices, bike routes, tourist footfall and reviews from tourist sites. Multi-layered information and overlays of datascapes revealed issues related to winter flooding, lack of planning in alignment with geographical features, drastic shifts in historic land use patterns, highly dynamic real estate prices impacting migration in the selected areas, high influx of tourism and spatial fragmentations due to urban renewal projects, and more. The plurality of information and, in particular, the diverse spatial and temporal layers of landscapes provided information beyond the traditional boundaries of planning, management and design.

4.10. Adaptive reuse of urban heritage in contested societies

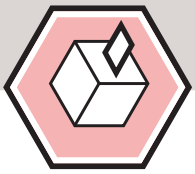
The case of acre, Israel



Ana Jayone Yarza Pérez participated in Heriland as a Marie Skłodowska-Curie fellow at Bezalel Academy of Arts and Design, Israel, and as a PhD candidate at the Faculty of Architecture and Built Environment, TU Delft, the Netherlands. She holds a master's degree in Architecture from the Polytechnical University of Catalonia in Barcelona and a master's degree in Strategies and Technologies for Development from the Complutense and Polytechnical Universities in Madrid, both in Spain. Ana has ample international professional experience, amongst others as a UNESCO Heritage Expert in Nepal and a member of the UN–Habitat Urban Planning and Design LAB in Kenya.

Keywords:

HERITAGE READAPTATION | CULTURAL MAPPING | EVIDENCE-BASED URBAN DESIGN



THE CASE

Ana's research project aimed to develop an integrative methodology to evaluate urban heritage adaptive reuse alternatives in contested societies. Her leitmotif was the Sustainable Development Goal (SDG) 11: "Make cities and human settlements inclusive, safe, resilient and sustainable" (United Nations, 2015b). The study focused on the critical role of resilience in the evaluation of change, as well as on the key role of unveiling the multiplicity of voices present in the city, currently and over time. With these aims, Ana is an essential member of the Heriland research team on *shifting demographies and contested identities*, while also contributing to the Heriland theme of *democratization*.

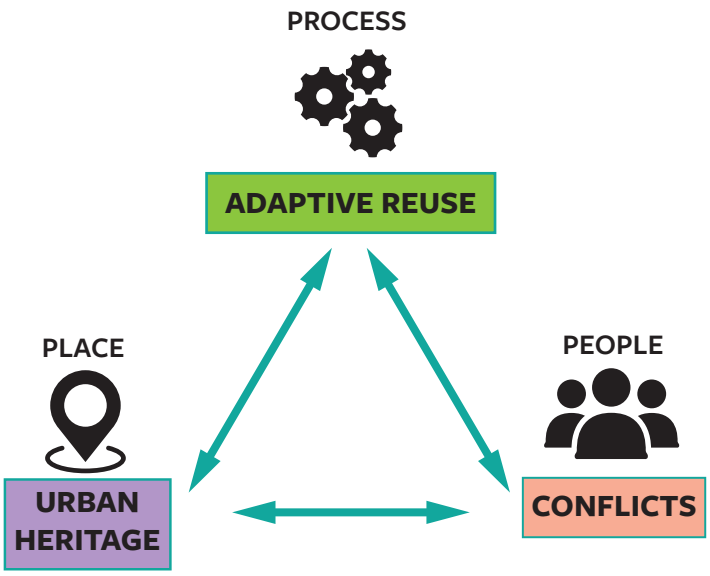


Fig. 4.10.1. Relationships between Place - Communities – Process.

PREMISES

The world is facing global challenges that are dramatically changing the social and physical environments, resulting in cultural confrontation and conflict. Rapid urban growth, displacement and gentrification increase urban pressure while jeopardizing social cohesion, multicultural values and local economies. In addition, environmental factors associated with climate change challenge the way cities respond and adapt. One response to these challenges is adaptive reuse, which is the transformation of the function of an underused structure into a new use. This process turns urban elements that were previously in decline into catalysts of development (Pereira Roders and van Oers, 2011). Adaptation to these changes is often a source of conflict, as urban policies lack citizen engagement in the redefinition of public space, resulting in more disagreement and inefficient use of resources. This issue is particularly acute in contested communities, as their continuous evolution and emergence directly influence the adaptation of cultural heritage, being under constant threat and in need for repair (Berlin, 2000).

Building on these premises, the objective of Ana's research was to develop an integrative methodology to evaluate urban heritage adaptive reuse alternatives in contested societies concentrating on the role of resilience in the evaluation of change. The final outcome was as a tool for decision-makers and urban planners that provides evidence-based results to be applied in urban design practice. Aiming to translate theory into practice and to bridge the gap between global goals and local issues, this tool is based on the case study of Acre, Israel, with the intention of being generalized to other cities with contested societies.

THEORY

The theoretical framework was built on the premise that cultural heritage can be a source of conflict or consensus, depending on context, place and time (Chilton and Silberman, 2010; Turner, 2021). Examples of conflicts connected to material heritage abound, such as the destruction of the Buddhas of Bamiyan in Afghanistan or the disagreements over the Temple Mount Haram esh-Sharif in Jerusalem, Israel (Chilton and Silberman, 2010; Holtorf, 2013). Disputed heritage is perceived as vulnerable and, in many cases, threatened (Holtorf, 2013), becoming an easy target. Consequently, it is likely to be utilized as a political or identity tool and contested by different parties.

Ana also explored theoretical debates on: (a) urban heritage – embracing the recent redefinition of the term by UNESCO, which expands the definition of heritage beyond the historic centre (and the isolated monument) to also include urban landscapes understood in their complexity (UNESCO, 2011); (b) adaptive reuse – a strategic process to address the deteriorated elements and areas in the city, with a solid understanding of the corresponding economic, environmental, and economic benefits; (c) conflict – omnipresent in human history and therefore an inseparable element in the development of cities and heritage; and (d) cultural resilience – understood as the capacity of a cultural system to deal with adversity and change, while continuing to develop (Holtorf, 2013; Gilbert and Bower, 2002; Bandarin *et al*., 2011; Bandarin and van Oers, 2012).

The primary studies that informed this work revolved around the theories of sustainable development. International frameworks published by the United Nations system, such as the Agenda 2030 (United Nations, 2015b), the New Urban Agenda (NUA; United Nations, 2016), and the UNESCO Recommendation on the Historic Urban Landscape (HUL; UNESCO, 2011) served as the conceptual baseline.

Other studies provided guidelines to address more specific topics. Amartya Sen, for instance, offers a social perspective on multiculturalism and justice (Sen, 2009). Isaiah Berlin, in turn, structures the principles of conflict and dissonance, highlighting their inherent connection to human nature and thus the impossibility of permanent peace (Berlin, 1969). The latter aligns with the agonistic nature of urban development, which highlights the positive opportunities of certain forms of conflict, as conflict destabilizes authoritative identities and fixed universal principles leading to possible renegotiations of power, agency, authority and meaning (Howarth, 2008).

METHODS

Ana's study started from the hypothesis that the adaptive reuse of urban heritage can mitigate conflict. She therefore applied several methods to understand how this can be achieved, revolving around three main research topics: *urban heritage*, *contested societies* and *adaptive reuse*. *Urban heritage* materializes in the place, the *contested societies* are the communities with different narratives, and *adaptive reuse* is the selected underlying approach to tackle dissonance.

Fig. 4.10.2. Adaptive Reuse proposal for Nur Factory in Acre.

Fig. 4.10.3. Map showing the Natural Features, the Urban Elements, and the Urban Heritage of Acre.

The following methods were used:

1. Understanding the place from the perspective of communities: identification of the urban heritage in Acre by analysing past and present narratives about the city of Acre.
2. Understanding the place over time: analysis of the evolution of the urban heritage in Acre – continuity, adaptation or erasure.
3. Understanding how various communities use the place: surveying and interviewing the people on their habits, use and vision of the city, as well as social media analysis.
4. Uncovering the layers of the place: cultural mapping of the city of Acre, including natural features, urban elements and socio-economic data.
5. Alternative adaptive reuse proposals towards a consensus: research by design through scenario building and evaluation by stakeholders.

FINDINGS

The methodology developed in this study proved to be relevant to the fields of urban design and heritage, and it is of great significance for the city of Acre. First of all, the need to bridge theory and practice urges researchers to test their methods in real cases and to align them with professional requirements. In this case, the existing processes to tackle adaptive reuse interventions tend to be limited, as they depend on the developer's interest and the availability of funds. Therefore, developing a tool for practitioners was not only relevant, but was also a successful way to combine academic knowledge with experiences from practice.

Moreover, it can be concluded that a reassessment of how heritage is planned and how heritage elements are treated can support a more holistic approach to heritage and expand the academic body of knowledge on the topic. Similarly, narrowing the research down to contested societies was a double-edged sword that, on the one hand facilitated understanding the multiplicity of voices, as contested contexts usually provide a wider range and more polarized perceptions. On the other hand, it meant dealing with highly politicized matters that increase bias, that are opaque or that are challenging to tackle properly and fairly.

Finally, aligning the research with SDG 11 was a wise decision, as it set a clear and solid framework to work with. The guidelines and observations provided by the global frameworks are internationally accepted and broad enough to be translated into local contexts. Also, having a global vision from the beginning of the research was useful for maintaining a steady direction and, when in doubt, always having an anchor.

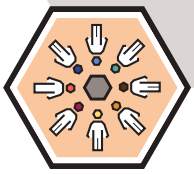
4.11. Mobility and cultural heritage

Multi-scalar and diachronic explorations on Roman street spaces

Sophia Arbara participated in Heriland as a PhD candidate and Marie Skłodowska-Curie fellow at the Department of Architecture, Roma Tre University, Italy. She holds a master's degree in Architectural Engineering from the National Technical University of Athens and a master's degree in Urban Design from the University of California, Berkeley. Sophia has practiced architecture and urban design, engaging in multi-scalar projects including the future of urban mobility, strategic urban design, infrastructural resilience and data-driven spatial analysis. She is currently working as a post-doctoral researcher in the Delta Urbanism group at TU Delft.

Keywords:

STREET SPACES | CULTURAL MOVEMENT | MULTIPLE URBAN SCALES



THE CASE

Sophia's research investigated the relationship between mobility and cultural heritage, focusing on three street spaces in Rome, Italy. It explored whether and how the built environment and particular street spaces have agency in both the valorization of urban areas as cultural spaces and in enabling cultural movement. To assess specifically how the built environment contributes to enabling cultural movement, on the one hand, and to adding value to cultural spaces, on the other, this study identified and described interrelations between spatial attributes, cultural attractors and movement. The spatial element selected to frame this study is the street space, as a "container" of mobility and heritage sites, while the territory of Rome became the operational ground of this study (Giudici, 2014). Sophia's study was carried out under the umbrella of the Heriland theme of *shifting demographies*, but it also has clear links with the *spatial turn*.

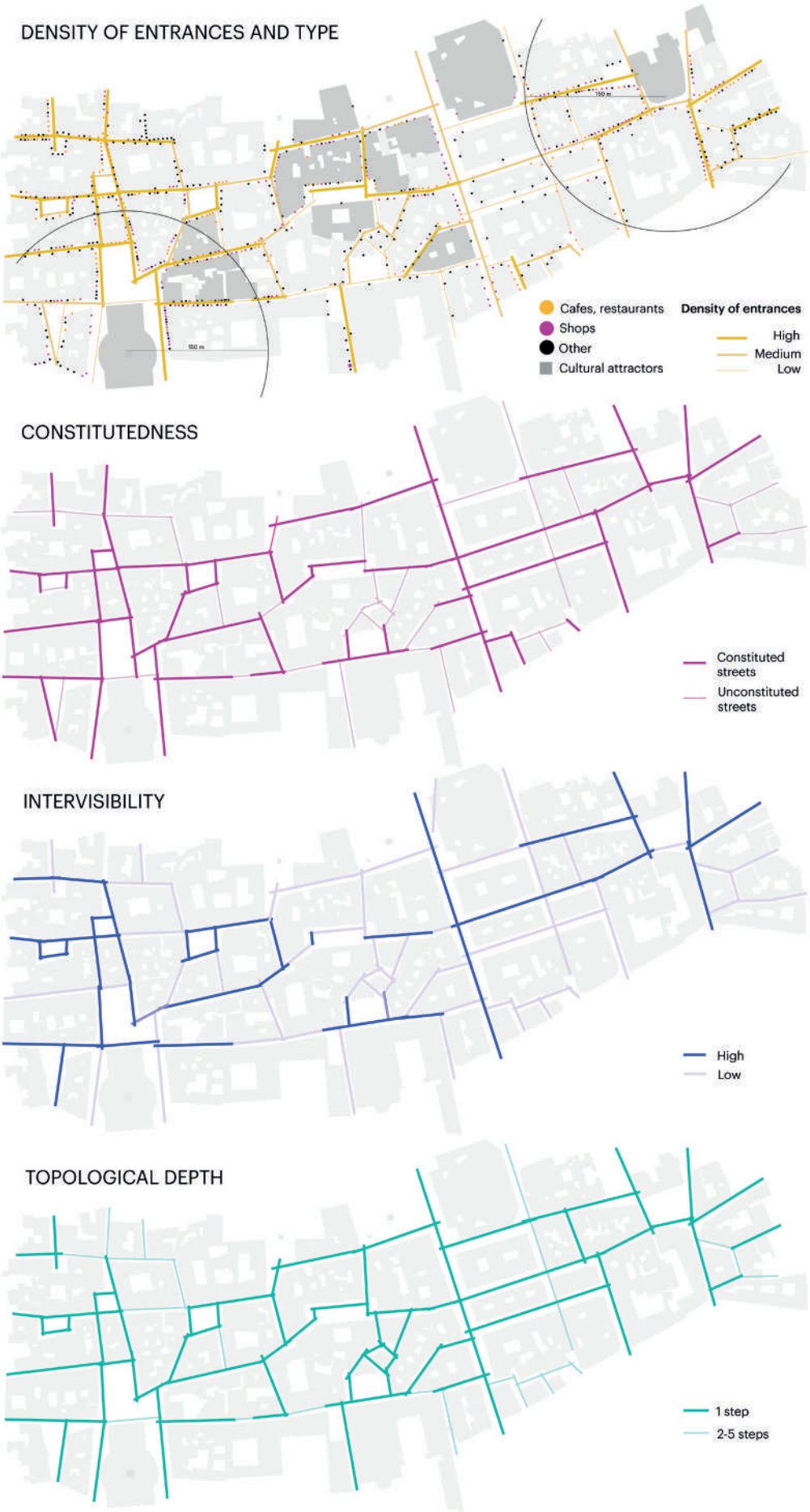


Fig. 4.11.1. Microspatial parameters in the Trevi – Pantheon routes (Arbara et al., 2023).

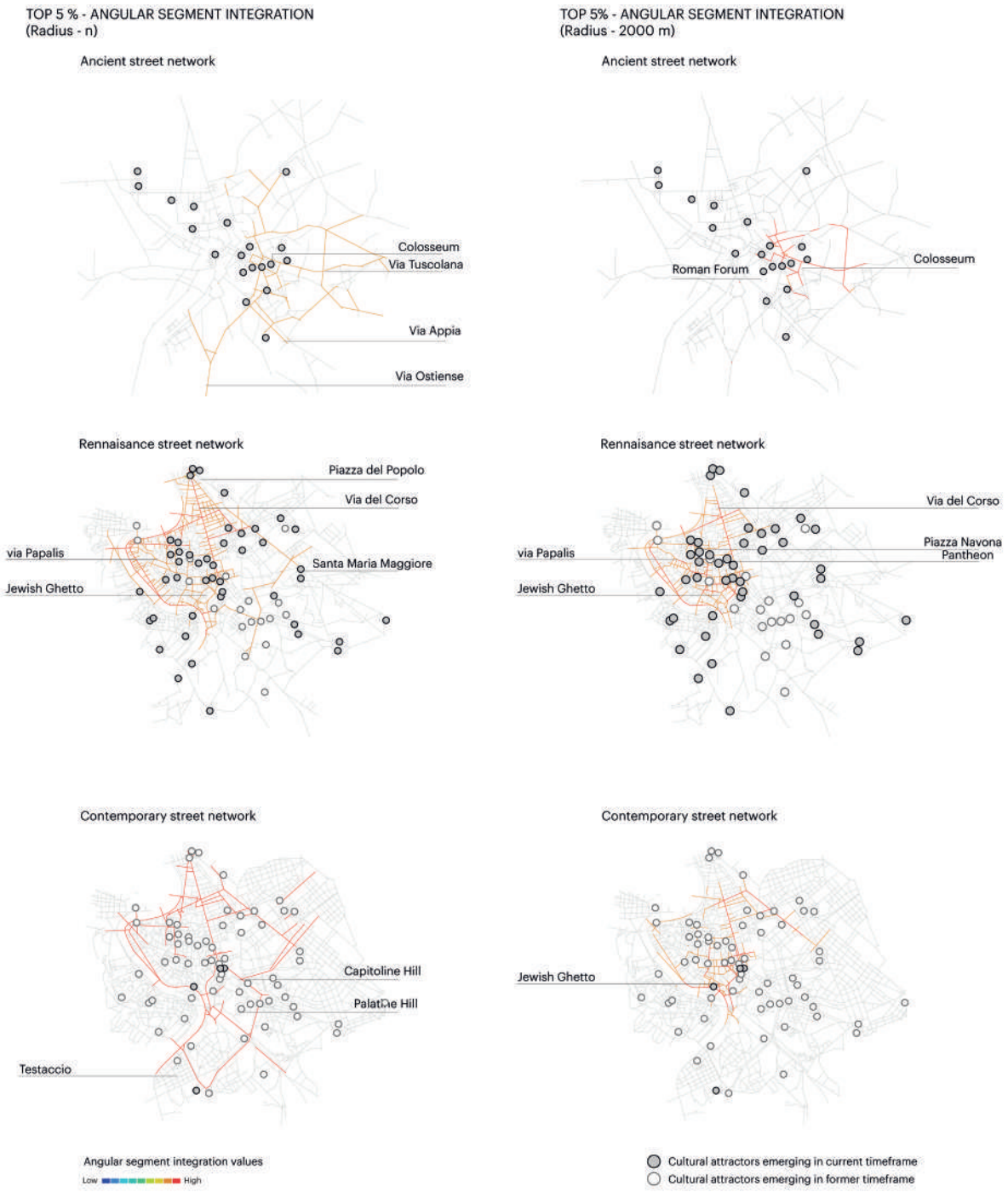


Fig. 4.11.2. 5% of the most integrated street network (angular segment integration R – N, R – 2000) and the position of today's cultural heritage attractions in the historic urban area of Rome for three timeframes (Arbara et al., 2023).

PREMISES

Sophia began by exploring the premise that cultural heritage sites, being both enablers and "results" of mobility have agency in the shaping of the built environment (here, the street space). Testing this premise, the following questions were asked: (a) how does mobility relate to today's cultural heritage spaces (be it a small-scale artefact, an architectural site or a larger urban or natural landscape); and (b) how has the urban space (here, the street space) been affected by this reciprocity?

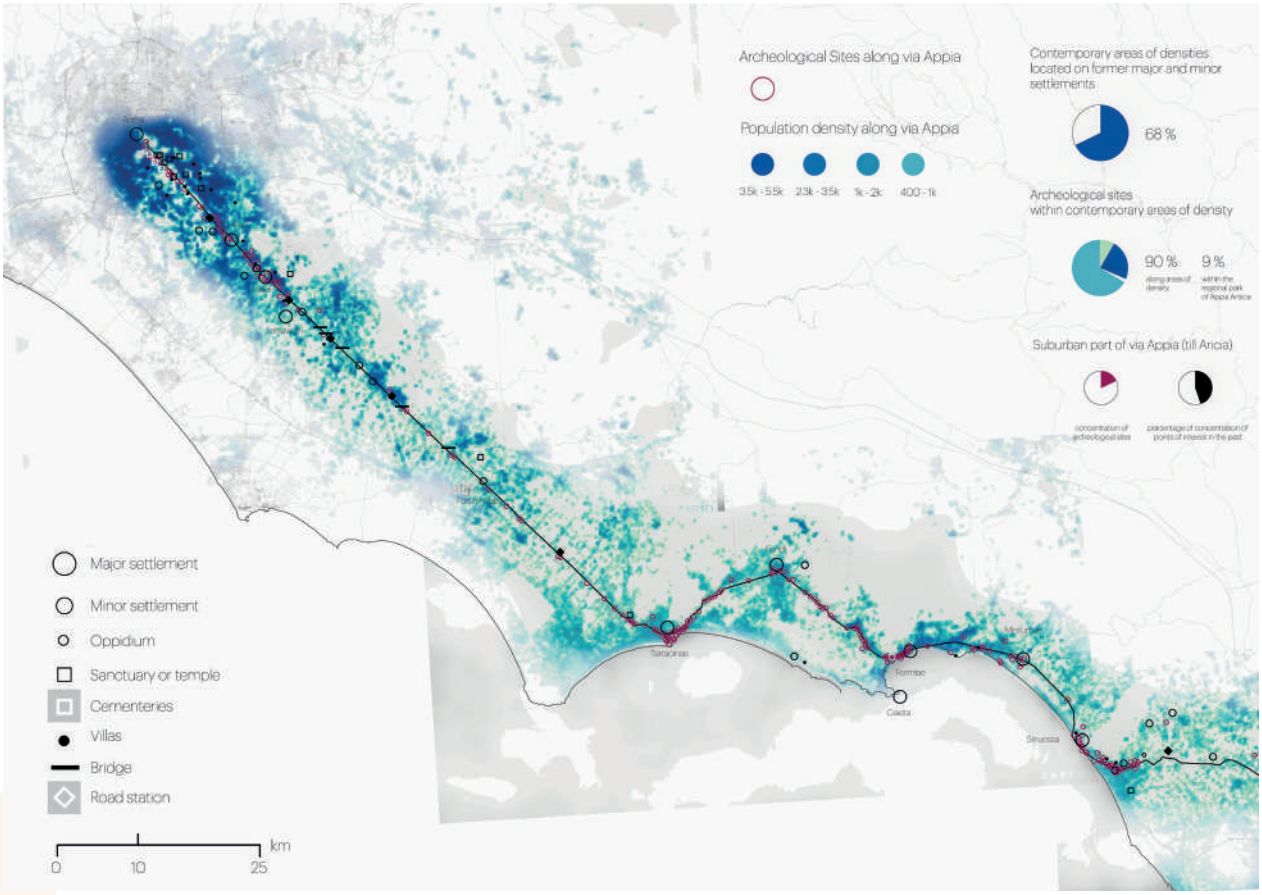


Fig. 4.11.3. The first segment of the Via Appia: cultural routes design methodology of past and present urbanisation patterns.

To address these questions, this project took an approach spanning both temporal and spatial scales. In the contemporary scene, cultural heritage sites serve as pedestrian movement attractors, especially in historic urban areas. These sizeable fluxes of visitors – notably in historic urban areas – have drawn the attention of various disciplines, such as tourism studies, economics, sociology and urban planning, which tried to assess, monitor and develop policies and models that would mitigate the negative externalities of visitor flows. While the morphological aspect of historic urban areas is quite consolidated, the emergence of specific routes within the city is altering the urban landscape, enabling culture-led pedestrian movement flows. These alterations are not necessarily reflected in drastic changes in the urban morphology of a historic area, but changes in microspatial attributes such as density, type of use and signage, do impact the intensity and type of movement within historic areas, creating high-flux environments whose imprint is spatially visible.

Aside from investigating the link between heritage sites and mobility at a single street level, the second scale of analysis focused on larger networks of streets. Lastly, the third part of Sophia's project focused on exploring how mobility serves as a cultural enabler at the scale of larger territories. At this level, the analysis focused on the role of mobility in the emergence of cultural routes.

THEORY

Aiming to bridge the gap between heritage-related questions and urban space, the theoretical framework of Sophia's work was built at the intersections of urbanization theory, critical heritage discourse and research branches sparked by the mobilities turn (Jensen, 2010, 2013; Sheller and Urry, 2006). While scholars

and practitioners argue for shared objectives and shared problems between cities and heritage disciplines (Bandarin and van Oers, 2014), at the same time, as the notion of heritage has been shifting, the means for studying and understanding the phenomena of contemporary urbanization have also been subject to change. This change has been driven primarily by the tendency to question the urban age thesis and challenge on one hand the empirical methods measuring and defining urban population and on the other the theoretical assumptions underlying the definitions of "urban". Consequently, the socio-spatial dimensions of urbanization have recently been reframed into polymorphic, variable, and dynamic dimensions with the aim of understanding urbanization not as a universal form but as a historical process which needs to be understood at a variety of scales and time spans (Brenner, 2019).

This spatial approach opened up and emphasized trajectories prioritizing movement and connections, instead of location (Batty, 2013). Within that frame, cultural spaces are perceived as elements ranging from artefacts to historic urban areas and the hinterland as intertwined and reciprocally informed systems of planetary processes. Along with the question of scale, since cultural processes play out over historical time, the question of time became equally important to understand the interplay between movement and culture in space. Therefore, aside from a focus on the interconnected contemporary scene (Graham and Marvin, 2001; Massey, 1991), diachronic approaches become an important framework, due to the dynamic nature of even the most traditional cultures (Greenblatt, 2009).

METHODS

Sophia's project approached the research questions with mixed methods, primarily investigating three case studies in Rome: (a) the routes connecting the Trevi fountain to the Pantheon; (b) the historic urban area of Rome within the Aurelian walls and its cultural artefacts; and (c) the Via Appia as a cultural route. All three case studies followed a predominantly spatial approach. However, given the different scales and temporal frames, the methods differed from case to case and were not comparable, ranging from qualitative mapping (Corner, 2011; Amoroso, 2010) to space syntax theory and methods (Hillier and Hanson, 1986; Hillier *et al*., 1993), and micro-macro spatial analysis (van Nes and López, 2010). The Trevi-Pantheon routes were analysed by examining micro-spatial parameters. The historic urban area of Rome, the second subject of inquiry, was approached through the lens of spatial configuration. The case of Via Appia, at the territorial scale, was explored through exploratory mapping techniques aiming to build upon a culture routes design (Elder, 2020).

FINDINGS

The outcomes of this research project can best be broken down by case study. First, the analysis of the Trevi-Pantheon case highlighted the fact that in historic urban areas, even minimal spatial interventions such as pedestrianization of a street, may multiply microspatial parameters and movement. Also, factors such as proximity to important heritage sites, density of land uses and adequate signage were also linked to high movement patterns.

Spatial configurative analysis on the historic urban area of Rome and the application of natural movement theory revealed possible correlations between spatial configuration and cultural attractors. In addition, adapting natural movement theory to cultural attractions offered a systematic framework through which to analyse the position of popular heritage attractors in historic urban areas and to bridge the gap between heritage-related studies and urban design and planning. When studying cultural attractors and their position in an urban setting, a diachronic spatial analysis was key, as it revealed the link between spa-

tial configuration and attraction in cases that these were still active parts of the city and still retained their former uses (Arbara *et al.*, 2023).

In the third case, the analysis of past movement patterns and cultural exchange along the Via Appia indicated the formation of a future cultural landscape for two main reasons. On one hand, the rhythm and speed of movement reciprocally informed the emergence of points of interest and the spatial organization of the settlements bypassing the road. On the other, studying the users-travellers who would move through the consular roads carrying and exchanging goods, information, and services provided additional insights into the creation of cultural processes through movement in long historical processes.

As a final outcome, this thesis proposed new trajectories for the research and design of historic urban landscapes, highlighting the reciprocities between mobility, cultural heritage, and urban space. By challenging established notions of culture and focusing instead "*on routes rather than roots*" (Cresswell, 2006) through the territory of Rome, a territory traditionally interpreted by its monuments, new notions have emerged.

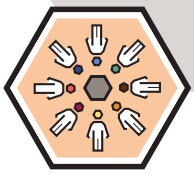
4.12. World Heritage and urbanization

Does heritage zoning effectively prevent the harmful impact of urbanization?

Moses Katontoka participated in Heriland as an early-stage researcher at the Faculty of Architecture, TU Delft, the Netherlands. He holds a bachelor's degree in Environmental Engineering from Copperbelt University, Zambia, and a master's degree in Geoinformation Science and Earth Observation from the University of Twente, the Netherlands, and specializes in urban planning and management. During his studies, Moses developed a broad interest in the use of spatial models, spatial statistics and agent-based modelling to answer urban-related problems such as the protection of special landscapes including heritage properties, transportation, spatial planning and urbanization.

Keywords:

OUTSTANDING UNIVERSAL | EVOLUTION OF HERITAGE PROPERTIES | GEOSPATIAL ANALYSIS



THE CASE

This project analysed if and how urbanization is affecting World Heritage. The point of departure is the harmful impact urbanization can have on the Outstanding Universal Value (OUV) of World Heritage properties. Previous studies indicate that in all UNESCO regions, reports are increasing of properties facing the threat of urban development, properties listed as endangered, and properties being delisted. Moses' research is the first to analyse how urbanization is affecting World Heritage globally. Using high-resolution longitudinal satellite data, he has assessed changes in the urban built-up area from the past 30 years in global heritage properties listed on the World Heritage list by UNESCO (Figure 4.12.1). The research contributes to the Heriland themes of *shifting demographies and contested identities* and the *spatial turn* by investigating how changing demographics and economic development are impacting urbanization patterns, and how urbanization is affecting heritage landscapes.

Fig. 4.12.1. Overview of UNESCO World Heritage sites.

PREMISES

Urbanization is a global issue that is transforming landforms and subsequently influencing heritage properties. Heritage properties investigated by UNESCO are managed with the idea that development is inevitable and can have a positive impact on heritage values. World Heritage properties are managed through heritage zoning, which is meant to guarantee the conservation of areas of OUV and prevent urbanization within and around them. UNESCO recommends the creation of a *core zone* that stipulates the area of OUV that must be conserved. Some World Heritage properties also have a *buffer zone* around the core as an extra layer of protection (Li *et al*., 2020).

A second premise tested in this study is that urbanization may still occur within and around World Heritage sites because management practices vary. Variations can be observed in how natural, cultural and mixed World Heritage properties are managed, as they are managed by state parties and national practices vary. State parties manage different needs, and the need to improve the standard of living often leads to policies aimed at development and growth through urbanization.

A third premise to verify is that heritage itself may encourage urbanization. Heritage listing leads to greater awareness of the heritage values of an area. This attracts tourists, new residents and businesses to the area (van Dommelen and Pen, 2013), which in turn encourages investment and urbanization.

World Heritage properties have been documented to be under threat from various urban developments such as land use change, industrial activities, housing projects, mineral extraction and tourism. The problem appears to be acute in all UNESCO regions, as evidenced by the exponential increase in reports of properties facing the threat of urban development, properties being listed as endangered, and properties being delisted.

As global demographics continue to shift and further economic growth and development are expected, especially in regions such as Africa, Asia and South America, more World Heritage properties will be affected by urbanization. Without adequate monitoring and management practices, it is likely that heritage values will be compromised and properties will lose their OUV. Moses' research addresses this challenge by investigating global urbanization patterns within and around World Heritage properties. By assessing over 400 properties globally (a third of all the properties currently listed), Moses analyses World Heritage across the world, highlighting the land cover changes that have occurred during the past 30 years.

THEORY

Two theories were central to this research project. First, UNESCO recommended the zoning of heritage properties through the delineation of *core zones* and *buffers* based on the idea that zoning can effectively prevent urbanization in heritage properties (UNESCO, 2021). Second, several scholars have suggested that heritage itself drives urbanization (Nocca, 2017; Perić *et al*., 2021). This theory suggests that heritage attracts development, for example, by spotlighting world heritage properties for tourists. Due to the influx of tourists, many cities and state parties have resorted to creating accommodation, entertainment centres and restaurants near or inside world heritage properties (Borges and Carbone, 2011; Buckley, 2018).

METHODS

Is heritage indeed attracting urbanization, how can we measure these changes and how they impact heritage properties and how can heritage values be protected effectively? To investigate these questions, Moses designed and implemented a spatiotemporal analysis of the built-up land cover within and around World Heritage properties. The project received data input from the International Centre on Space Technologies for Natural and Cultural Heritage (HIST) and the German Aerospace Centre (DLR). HIST provided GIS data for areas surrounding World Heritage properties. Additional information such as whether individual properties under investigation were reporting urban development or not, and/or the UNESCO region of the property was collected from the UNESCO website. DLR provided the World Settlement Footprint layer (WSF) at 30 m spatial resolution from 1985 to 2015, as validated with a large global sample. The WSF measures an area of 900 m^2 for built-up surfaces on the surface of the earth.

A sample of 400 World Heritage properties was selected, including properties from all UNESCO regions, and the properties were grouped into those reporting on urban development and those not reporting. This measurement was then used as a proxy to predict the amount and rate of evolution of heritage properties.

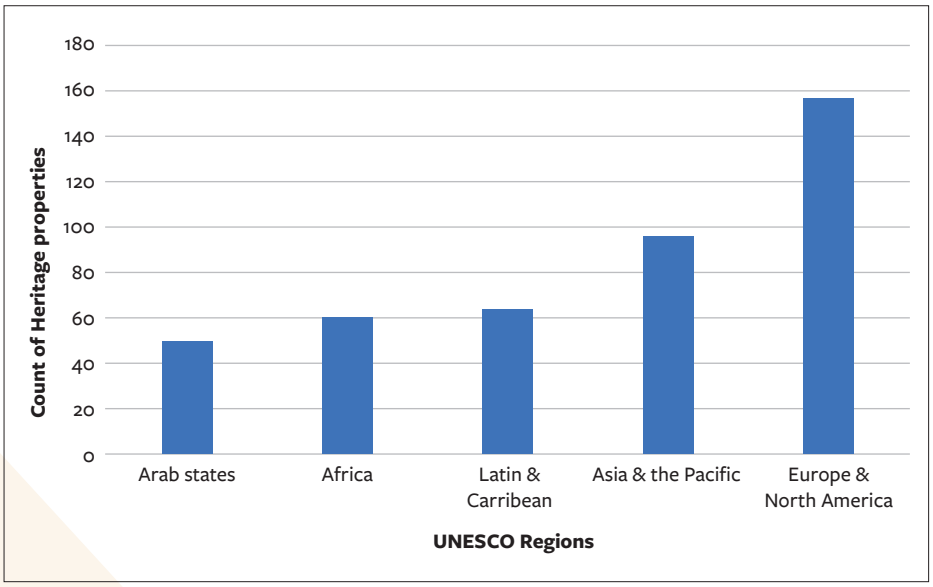


Fig. 4.12.2. The number of heritage properties reporting on urban development in every UNESCO region.

FINDINGS

The most novel contribution of this project is the use of a large dataset to monitor the evolution of heritage properties. The potential of this approach is that it provides insight into the effectiveness of heritage zoning and nomination thus far, and as such informs future decisions on heritage management and protection at a global scale.

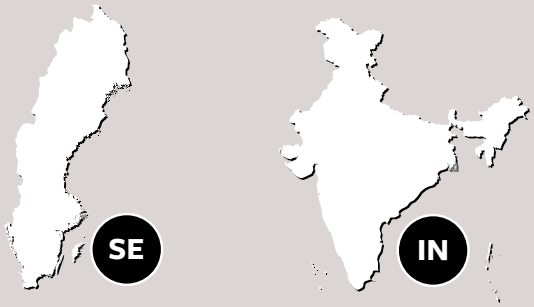
The main finding of the study is a general trend of urbanization among World Heritage properties in the past 30 years. Housing, ground transport infrastructure, visitor accommodation (tourists) and land conversion are the major developments influencing heritage properties. Moses found that Europe and North America, Asia and the Pacific report the highest level of urban development in and around heritage properties (see Figure 4.12.2). Regardless of whether properties did or did not report on urban development, they have been affected significantly by urban development for the past 30 years. These findings seem to suggest that there is a lack of adequate management at all scales or that properties might not be reporting effectively on urban threats.

Furthermore, an investigation into the current authenticity of heritage properties and the nomination status is compromised by urban development. Moses also found that the rate of urban development varies among UNESCO regions. Asia, the Pacific, Latin America and the Caribbean, for example, show high urban development rates in properties that do not report on urban development compared to the properties that do. Europe, North America and Africa, on the other hand, show a high level of urbanization in heritage properties. This can suggest that heritage properties are changing slowly but surely and that this change may threaten their authenticity. As urban developments are predicted to increase especially in Africa, Asia and South America, it can be expected that heritage properties will also be affected significantly. More intense and effective monitoring and management practices therefore need to be implemented.

4.13. Heritage development in large-scale infrastructure projects

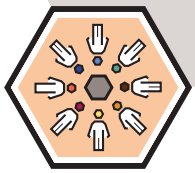
Exploring compensation for cultural heritage loss

Maitri Dore participated in Heriland as a PhD candidate and Marie Skłodowska-Curie fellow at the Department of Conservation, University of Gothenburg, Sweden. She holds a bachelor's degree in Architecture from Kamla Raheja Vidyanidhi Institute for Architecture (KRVIA), Mumbai, India, and a master's degree in Urban Studies through the Erasmus Mundus+ 4Cities programme. In the past, Maitri has worked in architectural practice – designing sustainable homes in Bangalore and on research on affordable housing in Mumbai. She also assisted in the exhibition and book: Critical Care: Architecture and Urbanism for a Broken Planet at the Austrian Architecture Museum in Vienna.



Keywords:

URBAN INFRASTRUCTURE | HERITAGE LOSS AND COMPENSATION | LARGE-SCALE PLANNING



THE CASE

Maitri studied how cultural heritage is dealt with in new urban infrastructure projects. More specifically, her research aimed to understand the ways in which compensation as an approach can be mobilized in large urban transformations in areas officially designated as heritage. Her study was carried out in the context of the Heriland theme of *changing environments*, but it is also clearly inspired by the *spatial turn* theme. It seeks to enrich heritage planning in practice by understanding compensation as a response to loss of cultural heritage. Maitri uses the cases of the West Link train tunnel in Gothenburg, Sweden, and the Mumbai Metro in Mumbai, India, to study the phenomenon in two different contexts.

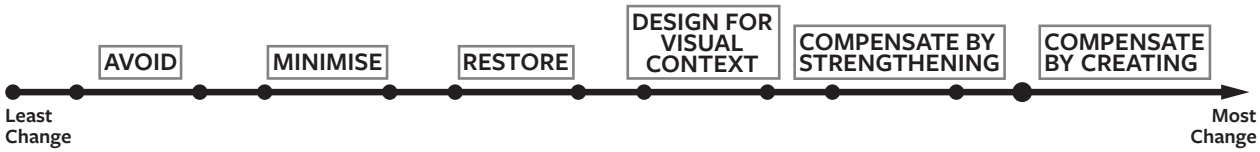


Fig. 4.13.1. Compensation and other responses from least to most change-oriented in the analytical tool.

PREMISES

Maitri's work is based on the premise that both urban planning projects and heritage conservation are necessities and that the management of the urban environment must therefore strive to achieve a balance between these twin goals. Conservation, in this view, is the dynamic and thoughtful management of change (Feilden, 1982: 3; Ashworth, 1991; Fairclough, 2006; Veldpaus *et al.*, 2013: 11). Heritage planning, as understood by Ashworth (1991: 26) encapsulates these ideas, insisting that "the capacity to change must itself be preserved". Similarly, conservation in contemporary times considers cultural heritage as a substrate for the *meanings* that people attach to built fabric rather than its actual materiality (Muñoz Viñas, 2005). Taking these positions as a starting point, Maitri attempts to understand the negotiation of built environment values through compensation for loss of cultural heritage caused by large-scale urban planning. While compensation for natural heritage loss is fairly established in theory, policy and practice, this is much less so for cultural heritage loss. The present work addresses this gap, exploring the concept of compensation both theoretically and practically, in a way that is specifically suited for use in a cultural heritage context.

THEORIES

This work explores compensation through three lenses: law and policy, theory, and practice. The theoretical lens is twofold, consisting firstly of a more general understanding of conservation as the management of, rather than resistance to, change. This is the approach to the analysis of the cases. Maitri harnesses Ashworth's (2011) three paradigms – preservation, conservation and heritage – for the changing approaches to conservation with respect to spatial planning. This theory encompasses ideas about the integration of conservation and planning in general in both western and Indian contexts (Ashworth, 1991; Pendlebury, 2008; Pendlebury *et al.*, 2014; Menon, 2003, 2008; Mehrotra, 2007). It also includes the work of critical heritage scholars who decry a fixation on the material aspects of heritage and its interpretation by experts (Smith, 2006; Harrison, 2013) and loss aversion (Holtorf, 2015). This strand of theory also calls for letting go of material altogether in the face of inevitable change (DeSilvey, 2017; DeSilvey *et al.*, 2021; DeSilvey *et al.*, 2022).

The second strand of theory is focused on cultural heritage compensation more specifically. It stems from the work of scholars in the Swedish planning context who are trying to characterize various responses in planning as compensation (Grahn Danielson *et al.*, 2013; Rönn *et al.*, 2017; and others). They see compensation through the lens of potentially creative acts in response to planning projects.

This work ties the two theoretical strands together by briefly touching on the deep cities approach (Fouseki *et al.*, 2020). The deep cities approach focuses on all the various aspects of cities, including tangible, intangible, historical, social, environmental, and economic facets, while also seeing change as a heritage value (Fouseki *et al.*, 2020: 6).

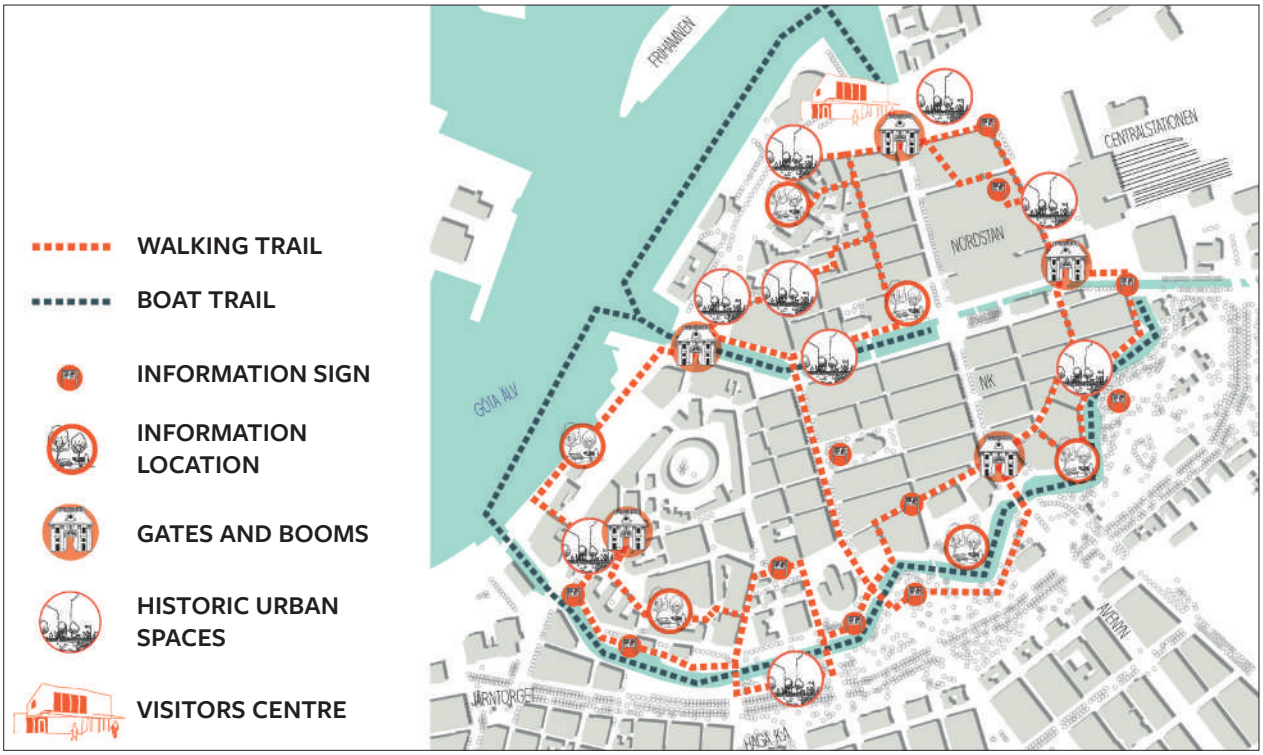


Fig. 4.13.2. Storytelling proposals for the former fortified city of Gothenburg. Source: Gothenburg City Museum.

METHODS

In order to investigate the key issue of this study, Maitri embraced a descriptive case study methodology, using specific case studies as real-life situations offering an entry point for more general phenomena, in our case about compensation of cultural heritage loss in the planning and design of large urban infrastructure projects. The main case, on which the study is based, is the West Link train tunnel in Gothenburg, Sweden. The secondary case is the Mumbai Metro in Mumbai, India.

The West Link is a construction project currently underway in Gothenburg. It was started in 2016 and involves extending the existing railway line and adding three new stations. It is due to be completed in 2030. The project passes through the city's 17th-century fortifications, ancient agricultural properties, and historical parks. These are considered to be heritage assets, officially listed by the government as being part of the national interest. In light of the project's impact on heritage, the government required the project developers to take concrete actions highlighting the city's history to compensate for the loss of heritage.

The Mumbai Metro, whose construction began in 2014, has also encountered heritage issues. It passes under a listed precinct that is home to several neo-Gothic colonial-era structures. The effects were discussed by heritage professionals, with one of the main concerns being damage to the physical aspects of the listed heritage.

Both projects, despite taking place in highly dissimilar contexts, share clear similarities: they are both massive infrastructure projects, result in significant alterations to existing official heritage and involve negotiations between public actors and professionals in a formal process on responding to the loss.

In both cases, data on how the heritage is dealt with were derived from the public actors and their negotiations; these used a variety of methods, notably semi-structured interviews, workshops between the actors, informal interviews, meeting minutes, and documentary and news media analyses. In terms of

accessing data, access to authorities who had partnered with Heriland proved very helpful in the Swedish case, as was working in a system with ample documentation and public information. In the Mumbai case, material was a bigger problem, as was access to public officials.

FINDINGS

The main conclusion that can be drawn from this study is that compensation for cultural heritage loss can take the form of storytelling about the historic city, as seen in the West Link case. Compensation lies largely within the conservation paradigm (Ashworth, 2011), which seeks to integrate planning and heritage conservation. Compensation is a productive, dynamic way to deal change driven by urban planning that goes beyond preserving material, which is the predominant response in the Mumbai Metro case. As such, it is in line with Ashworth's (2011) preservation paradigm, in which change is a threat and should be prevented.

Both preservation and compensation however emerge through highly complex planning processes, and are mediated by various institutional mandates and frameworks, and multiple actors and constraints. The responses also evince varying degrees of authorized views in the decision making, by way of selection and interpretation of heritage by experts.

4.14. Changing Landscapes of Apulia

How to employ gis-based co-design methods for cultural landscape planning

Marta Ducci participated in Heriland as a PhD Candidate and Marie Skłodowska-Curie fellow at the Faculty of Humanities, Vrije Universiteit Amsterdam, the Netherlands. She holds a master's degree in Architecture from Ferrara University and a postgraduate master's degree in Urban and Territorial Planning from the Polytechnic University of Marche, both in Italy. In her studies and early work experiences as an architect and urban planner, she addressed issues related to urban planning through nature-based solutions, slow mobility and ecosystem services, as well as strategic planning based on sustainable development and local resource valorization.

Keywords:

DIGITAL MAPPING | CULTURAL LANDSCAPE | DEGRADED RURAL LANDSCAPE DEVELOPMENT

THE CASE

Marta investigates how participatory methods based on digital mapping software can help disseminate the concept and practice of public participation in the planning of cultural landscapes. A three-step approach was developed and tested in a case study area in the Italian region of Apulia, where the local community was called upon to band together with experts and other stakeholders to plan a strategic vision for the local cultural landscape development. Marta's project is part of the Heriland team working on *changing environments* and it also has evident links to the themes of *democratization* and *digital transformations*.

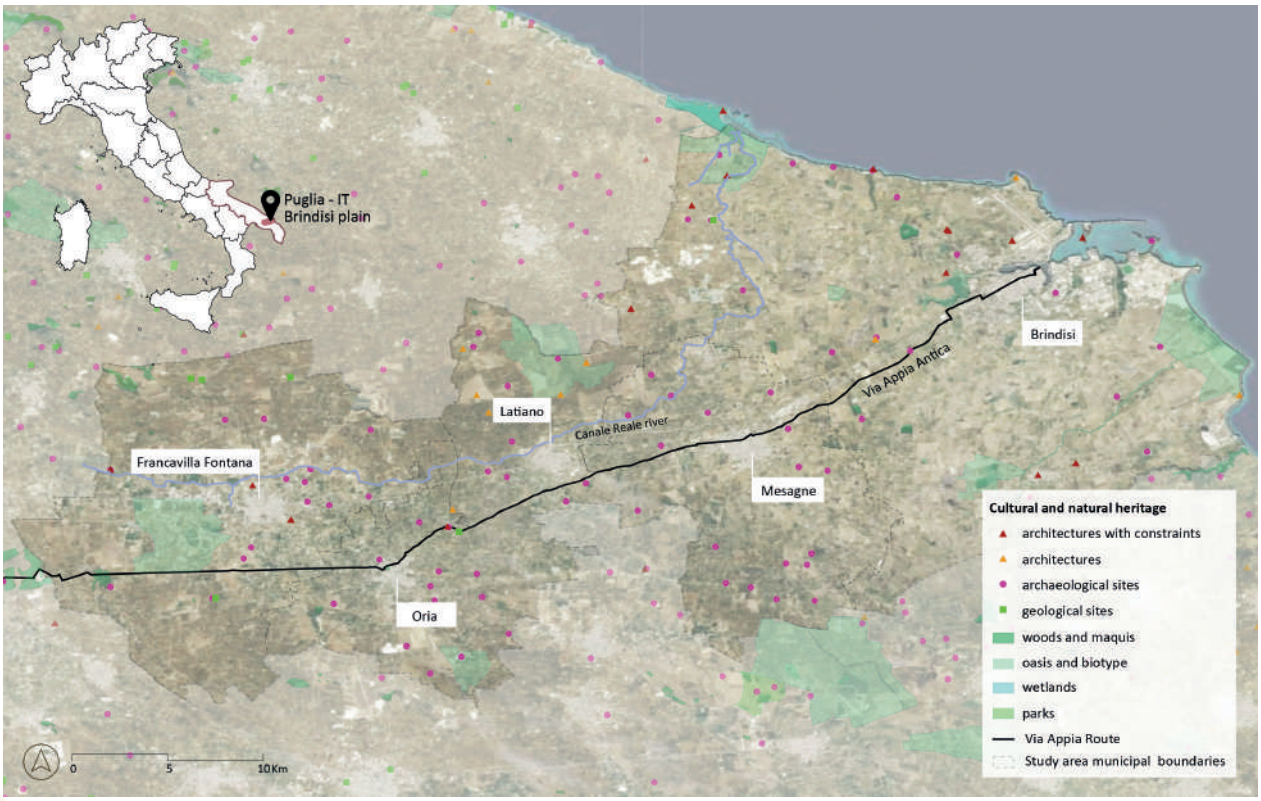


Fig. 4.14. 1. Case study area.

PREMISES

This study shares the premises of the European Landscape Convention in acknowledging the value of everyday and degraded landscapes for the local identity and well-being of citizens, and in promoting the engagement of communities in the definition, management and planning of landscapes (Council of Europe, 2000, 2005). While twenty years have passed since this treaty was ratified, it remains difficult to implement in practice (Jones and Stenseke, 2011; Conrad *et al.*, 2011). Heritage planning and valorization practices rarely involve the general public in defining and planning cultural landscapes (Rotondo *et al.*, 2016; Álvarez Larrain and McCall, 2019). To address this gap, Marta's study aimed to evaluate the added value of Geographic Information Systems (GIS)-based methods for community participation in cultural landscape settings on the Apulian Brindisi Plain.

THEORY

Marta's study was influenced by the work of several critical theory scholars and practitioners who analysed the various participatory methods developed in the last 50 years (see Nanz and Fritsche, 2014), pointing out both the benefits and limitations of participatory practices. Among the various criticisms is that participation is mainly used as an exercise of power and that citizens and local stakeholders are typically involved in the information gathering or consultation phases but have little influence on the idea gathering, design or decision-making phases (Arnstein, 1969; Fung, 2006; Gottwald *et al.*, 2021; Rodenberg *et al.*, 2023). This lack of comprehensive involvement is due, amongst others, to power relations in society (Cooke and Kothari, 2001) and issues of technology and communication, such as those between different social groups with different interests and knowledge frames, or between different institutional approaches (Gottwald *et al.*, 2020).

In a similar vein, critical studies highlight that the medium and venue greatly determine who participates and who is empowered (Fung, 2006; Chambers, 2006). The use of geo-design methods and other map-based tools has significantly increased in the last two decades with a view to empowering a broader pool of participants (Steinitz, 2012; Chambers, 2006; McCall, 2019). Digital map-based tools with simple and user-friendly interfaces have been demonstrated to be an effective means of communication and exchange of ideas between laypersons and professionals (Gottwald *et al.*, 2021; Opmeer *et al.*, 2019). Thanks to their specific settings, they can help prevent power relationships from influencing and intimidating participants in their engagement during the participatory activities – for instance, by allowing all the participants to submit individual and anonymous input. Furthermore, digital maps can be used as a common language between different stakeholder groups or disciplinary knowledge systems, translating knowledge, concepts and ideas into spatial information (Gottwald *et al.*, 2020, 2021).

METHOD

Drawing on these critical evaluations, Marta developed a methodology consisting of a three-step co-design approach using map-based tools to develop landscape design proposals. Specifically, she assessed a PPGIS (Public Participation Georeferenced Information System) questionnaire and two sets of geo-design workshops to investigate citizens' perception of the local cultural landscape and to co-design with experts and other stakeholders a spatial strategy for the sustainable development of the area.

To this end, the Brindisi Plain in south Italy was chosen as a case study area, and the local community was invited to participate in different phases of the landscape planning process, including the idea-gathering and design phases. This approach opposes the dominance of expert knowledge and proposes a methodology in which the vision of citizens and experts is equally represented, valued and integrated. For this purpose, the community was involved in defining local cultural landscape elements and identifying spatial strategies for their valorization. The three-step approach consists of (a) inventory, (b) design and (c) integration phases, which follow one another and each build on the results of the previous phase.

Specifically, the case study focused on developing a cultural landscape valorization strategy based on slow tourism, taking account of ongoing projects and transformations in the area. The first step was to inventory what local communities perceive as heritage elements in the landscape, which was done through

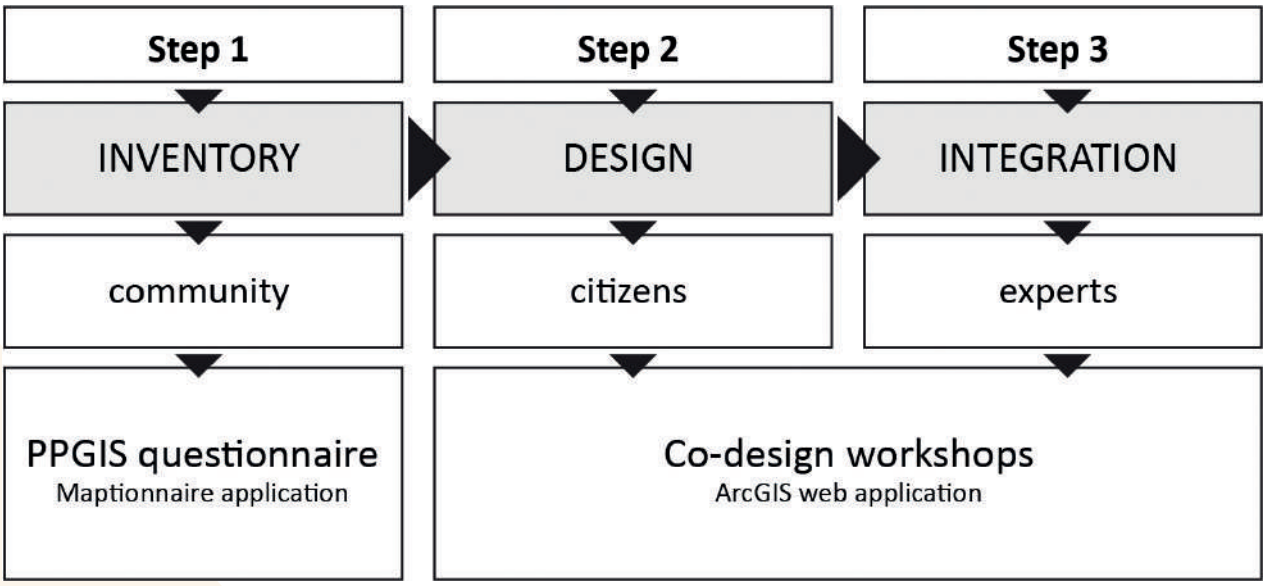


Fig. 4.14.2. Research methodology.

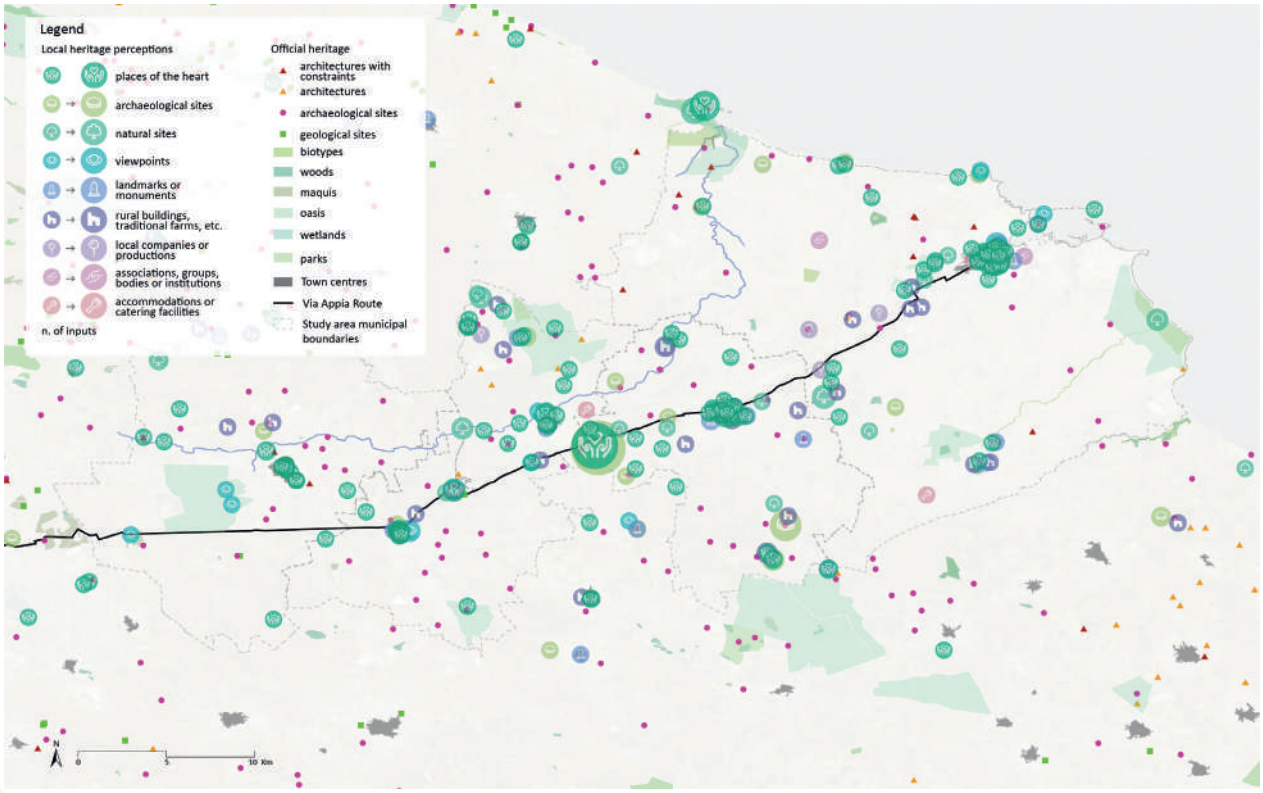


Fig. 4.14.3. Questionnaire mapping results.

a questionnaire open to the entire community. A PPGIS application called Maptionnaire was used to map and evaluate the local heritage values through questions based on maps and images. The aim of this inventory was to map not only official, authorized heritage, but also to include the unofficial heritage, i.e. heritage as perceived by the local community (Ducci *et al*., 2023a).

Starting from the inventory results, the second step consisted of asking citizens to design possible strategies for enhancing the local cultural landscape, particularly by focusing on the development of slow tourism in the area. An online GIS application was specially designed (through ArcGIS App Builder) for these workshops, which allowed participants to draw their inputs on the map.

As a third step, representatives of institutions and associations were involved in integrating their perspectives and knowledge with those of the citizens through two further co-design workshops. The division on different days and phases between the citizens' and experts' groups was made to allow the group of citizens to express their design ideas freely, without being influenced or subjugated by power relationships or by the knowledge and professional experience of the other group, while at the same time resulting in an integrated project. Input of all stakeholders was ultimately integrated, as the questionnaire results were first used as a starting point for the first two days of workshops with citizens, after which citizens' input was used for the expert sessions on the next two days (Ducci *et al*., 2023b).

FINDINGS

The integration of three phases made it possible to draw up strategic proposals for the development of slow tourism and the enhancement of the cultural landscape of the Brindisi Plain. This three-stage approach proved suitable for integrating citizen input and expert knowledge to define a spatial planning strategy. The tools and methodology used facilitated the representation and exchange of values and ideas, helped avoid

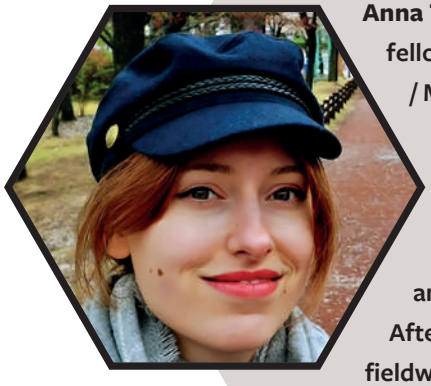
Fig. 4.14.4. Workshop in action.

conflict, and ensured that everyone could express themselves freely without being intimidated by power relations or expert knowledge. It can be concluded that this methodology positively contributes to applying the principles of the European Landscape Convention in planning practices by involving communities in defining landscape heritage values and identifying strategies for its protection, management and planning.

Despite all these positive aspects, it is also necessary to consider the limitations of the approach. The questionnaire still showed limitations in engaging certain groups of people (e.g. the less educated) and handling larger groups of people in the workshops proved challenging. Combining input from both methods is therefore crucial. Further attention should be paid to including a larger sample of participants and researching alternative GIS-based approaches that can help further mitigate these limitations in the future.

4.15. Future Imaginaries of Historical Landscape

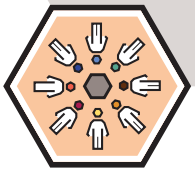
How to get people to critically engage with heritage as a vehicle for sustainable change



Anna Tonk participated in Heriland as a PhD candidate and Marie Skłodowska-Curie fellow based at Newcastle University. She holds a BA in Language and Culture Studies / Modern European Art History from Utrecht University. At Leiden University, she was the first student to successfully finish the MA Double Degree in Critical Heritage Studies of Asia and Europe, before obtaining a second MA (Korean Studies / International Studies) at Yonsei University, South Korea. There, she studied the social aspects of a redevelopment process of a Seoul neighbourhood and wrote a critical thesis on political narratives in (ceramic) heritage museums. After briefly working in the heritage sector in the Netherlands, she also conducted fieldwork in a Portuguese mountain area in decline.

Keywords:

HERITAGE AS FUTURE-MAKING | SUSTAINABILITY | ETHNOGRAPHIC FIELD STUDY



THE CASE

Anna aimed to develop a methodology for critically engaging with the role of heritage as a vehicle for sustainable change. Heriland's point of departure for this was the theme of *changing environments*, but Anna's research touches on all of the Heriland themes, especially the *spatial turn*. First, Anna questioned how heritage can theoretically be considered to support processual and holistic thinking about creating a future for itself and beyond itself. Second, she interrogated the values and tensions within heritage practitioners' everyday work in two historical environments – Sweden and the UK – to ultimately explore whether heritage as a practice has or can have a role in making sustainable futures, especially in post-productive (post-industrial) rural areas.

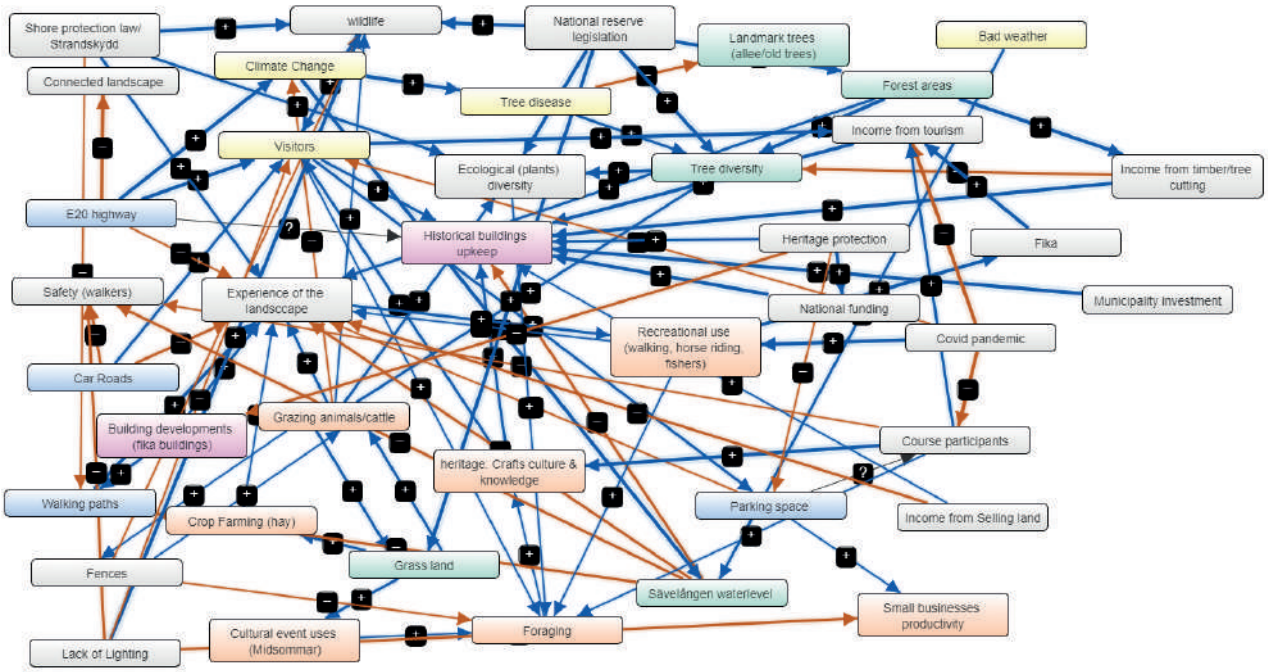


Fig. 4.15.1. Final Fuzzy cognitive map of the Nääs landscape system and how people perceive the interrelations between heritage and the environment/landscape. Grey: Entered during the workshop. Orange: Land uses by humans. Purple: Historical buildings. Blue: Infrastructure. Yellow: Fast changing factors. Green: Natural elements.

PREMISES

Core to Anna's analysis is the way the future is generally perceived in official heritage discourses, as a realm in which heritage is usually regarded as being at risk, or an unrenewable asset. This anxious concern for the future is usually thought as the *raison d'être* for heritage as a modern concept (Hobsbawn and Ranger, 2012). Anna argues that the sustainability agenda embraces a similar rhetoric: environmental decline and neglect are but several issues enhancing risk for all species (IPCC, 2018). To move beyond a merely material conception of heritage and enter into a fruitful dialogue with the changing environments heritage is part of, there may be a need to readdress the role of heritage in relation with sustainability as a process. As argued by Holtorf, the socio-cultural role of identity formation that heritage once fulfilled, no longer exists (2018: 10-11). Perhaps more radically, in the face of the looming crises in all domains (ecological, economic, social and cultural) preserving heritage in the sense of safeguarding material objects for the sake their current values is no longer deemed ethical. Holtorf articulates that a "new cultural heritage employs heritage for the sake of people, not the other way around" (2018: 12). Anna's study explores how these premises may impact practice; how do local heritage practitioners perceive the future and what are their concerns? Do they see the inherent tension underlying heritage development for the sake of heritage preservation, or do they see beyond materiality, perceiving heritage as a way to engage with a sustainable future?

The goal of this study is to come to an understanding of different overlapping and interacting values and narratives present in the cultures of heritage practices dealing with the development and redevelopment of a post-productive cultural landscape. The focus is on how landscape, heritage and sustainability discourses interact in the field and how local heritage practitioners perceive their own challenges, opportunities and constraints (agency) in caring for cultural landscape.

THEORIES

Anna has developed a methodology which she calls “Future Imaginaries of Cultural Landscape”, for which she combines the idea of spatial and geographical imaginaries, two common notions in human geography, with critical heritage discourse around future heritage (Harrison *et al*., 2020). Her starting point is the reconceptualization of heritage as future-making, as a radical processual heritage ontology beyond nature-culture dichotomies. Second, this methodology approaches heritage through the lens of landscape as well as practice led by discourses (Smith, 2006), where dominant heritage values such as authenticity (materialism) often determine the outcome of projects and the future of historical environments (Labadi, 2010). All parts of Anna’s methodology are thus informed by the idea of dialogue and process in heritage and landscape, focusing on the human role. In short, the theory is an ideological approach to heritage-as-future-making through landscape.

METHODS

Anna’s study consisted mostly of looking at cultural landscape management and heritage development through a grounded anthropological lens of multi-sited ethnography and participant observation. Concrete methods were highly contextual and experimental as COVID-19 ruled out the original plan for a walk-and-talk method (Ingold and Vergunst, 2008). In response to this unprecedented situation, Anna developed a mixed field method with different approaches to cognitive mapping, alongside interviews. Data

Fig. 4.15.2. Map of Gayle Mill in the environment of Hawes village. Drawn on are the answers to the questions prompts: black: ‘what to preserve?’, Green: ’positive landscape change’, Red: ‘negative landscape change’, Orange: ‘The future landscape’

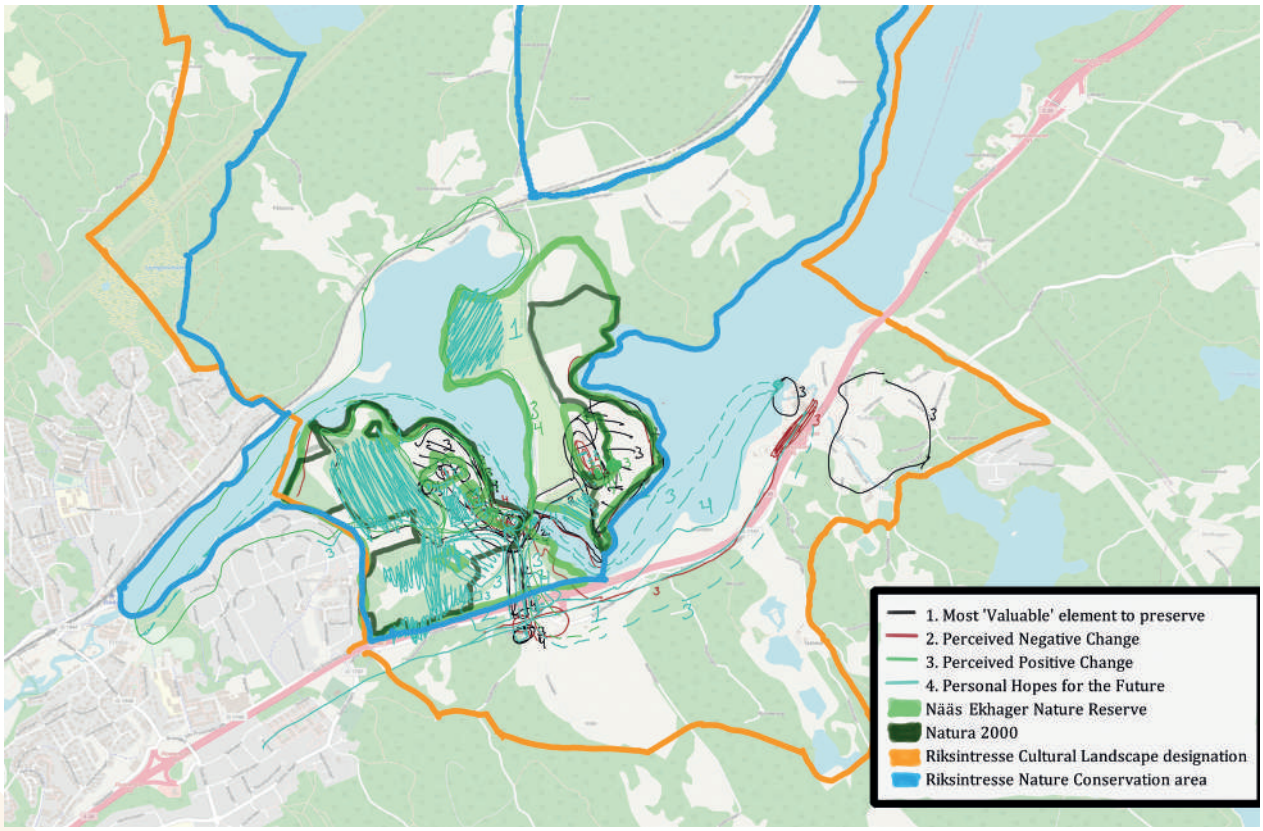


Fig. 4.15.3. Map of Nääs with all mapping workshop prompts answers and overview of legislative borders

collection was mainly done through (digital remote) fieldwork, followed by an experimental workshop method focusing on meaningful dialogue with local professional heritage workers. The two case study landscapes were Gayle Mill in the Yorkshire Dales in the UK, and the Nääs area along lake Sävelången in Sweden's Västra Götaland.

Anna also used critical discourse analysis (CDA) to add to the overall ethnographic field study, resulting in a thematic analysis approach focusing on intersecting values in the nexus of heritage, landscape and future sustainability. It provided a second lens through which to critically analyse the impacts and interactions of the values found within the cultures of heritage practice (UK and Sweden).

Later, a cognitive mapping workshop was held during fieldwork in Västra Götaland, Sweden. The heritage practitioners were asked to identify the landscape and the different drivers of change and mapped their own ideas for the future of the landscape. The workshop consisted amongst others of fuzzy cognitive mapping (Gray *et al*., 2014), with participants collecting landscape elements and values and learning about the landscape together, combined with drawing on maps, asking participants to evaluate and point out what heritage means to them in the spatial context, and then plan changes for a more sustainable relationship with heritage and landscape.

FINDINGS

The analysis proved there were multiple problems and power or legal issues when it came to the challenge and possibility of creating heritage sites that are sustainable on multiple fronts (economic, environmental, social and even cultural). For example, the systemic problems regarding funding and challenges of the heritage charity management model were found in both locations. In some key interviews, the argument was

often made that the cultural uses and events at the site alone were not enough for support, as the buildings needed upkeep to ensure continuity (as a site and museum). Even in the UK case, which focused heavily on the implementation of the EU sustainability policy, material preservation was prioritized over the plans for biodiversity, as laws dictated that safety regulations and visitors' needs had to be met. In the scheme of heritage as a planning tool or propellor of sustainability, funding thus remains a huge issue keeping heritage practice from true holistic integration into landscape management.

Heritage and landscape values tend to be more materialistic when economic sustainability is the main focus or inevitable challenge, oftentimes due to the fact that landscape or management policy laws are enacted, precluding heritage foundations from turning a profit or, as in the Swedish case, charging entry fees for public landscapes. In the UK, heritage foundations are legally required to perform building upkeep to guarantee safety before giving thought to a zero-carbon future or biodiversity. Nevertheless, working with heritage specialists and some other stakeholders did clearly highlight a desire to adopt a more holistic approach.

The cognitive mapping workshop method in Sweden provided very different results. When asked how individuals envisioned the future of the historical landscape, they focused on a small number of elements. Interestingly, when the collective was asked about the future landscape, people proved capable of coming up with many solutions for self-identified issues by connecting intangible and tangible aspects of heritage to the needs of the wider landscape. An important conclusion in line with the issues found in common planning practices is therefore that active participation, in conjunction with empowering people in their understanding of their environment are key in addressing the future and role of heritage in a wider landscape setting.

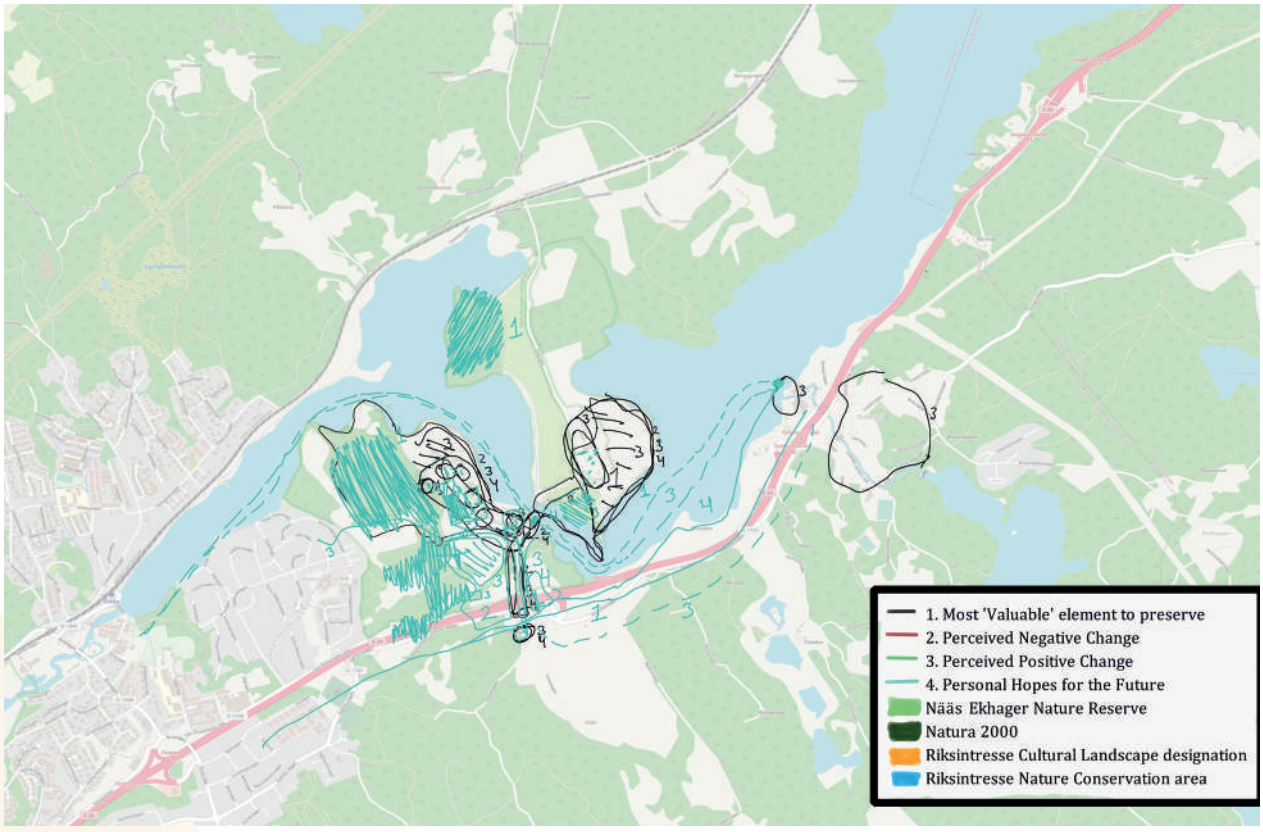


Fig. 4.15.4. Map of Nääs with mapping workshop prompt answers on 'what to preserve?' and 'what future do you envision?' where many engagement ideas were drawn on the nature reserve areas, all around the initial heritage site. Local transport by ferry was also a dear wish.

Chapter 5

PUTTING HERILAND TO THE TEST: THE ROME LIVING LAB

The Rome Living Lab was a key part of Heriland's training activities. It took place from November 22 to December 5, 2021, with its headquarters at the Department of Architecture of Roma Tre University.1 The aim of the Lab was to bring all ESRs, their theoretical knowledge and practical skills together, and to make a collaborative effort towards tackling a specific heritage planning and design assignment. In the process, all different interdisciplinary and intersectoral perspectives and skills were operationalized and tested. The study area in question was situated along the well-known Tiber River, the objective was to create a master plan for the reconnection and regeneration of the two riverbanks revolving around cultural heritage. The challenge was to analyse cases together (e.g. area descriptions, interviews, value assessments or archival research) and prepare concrete plans and recommendations to guide the local spatial (heritage) transformations. To that aim, the ESRs cooperated with public and private stakeholders, including citizen groups, as well as presented and disseminated the results.

5.1. The assignment

The area examined in the Rome Living Lab covers the Tiber riverbanks between the districts of Testaccio/Marconi and Ostiense San Paolo/Portuense. Once a flourishing industrial area, it has progressively been abandoned and is now in a heavily degraded state. It has lost its character as a central element of the image and identity of Rome and is no longer a lived, inhabited, navigated landscape, an essential part of urban life and activity. Yet it still has great potential, not in the least because of its rich historical, archaeological, architectural and environmental values. During the Living Lab, all the possible values were approached as layers in a highly stratified urban landscape with the aim of harnessing them to inspire the urban transformation challenge and to reintroduce them, if possible, in a feasible and realistic way.

The riverfront progressively transforms throughout the study area. At the eastern end, it is characterized by massive stone wall embankments, whereas at its western end by natural tree-lined banks. For the purpose of the assignment, the area in between was divided into four distinct zones (see Figure 5.1.1.), each corresponding to a different planning and design challenge. Each zone has a different character, a different landscape, different inhabitant expectations, and different land uses. For the assignment, the ESRs were

1 The Living Lab was generously hosted by the Department of Architecture of Roma Tre University. It was coordinated by Maria Segarra Lagunes and Francesco Cellini, of Roma Tre University, Ola Wetterberg of Gothenburg University and Niels van Manen and Gert-Jan Burgers of Vrije Universiteit Amsterdam. They were assisted by a team of architects from Roma Tre University: Antonio Belmonte, Marta Rabazo, Flaminia Valchera.

Fig. 5.1.1. Four zones of the Tiber used as case studies for the Living Lab.

organized into four teams, each corresponding to one of the zones. The teams were encouraged to work together, just as colleagues or departments at a planning and design agency would.

The learning goals of the Living Lab have already been discussed in Chapter 2.5. As to the deliverables, each project (one for each of the four assigned areas) was to produce:

- three vertical A1 tables (containing architectural drawings, diagrams, photographs and sketches);
- a text illustrating the criteria and principles adopted, structured as follows:
- critical analysis of the area and its problems (max. 4000 characters including spaces, 6-10 images);
- a brief description of the strengths and values of the area, including the heritage (max. 4000 characters including spaces, 6-10 images);
- a description of the intervention proposals at the strategic, socio-economic, urban and architectural level (max. 4000 characters including spaces, 6-10 images); and
- a statement explaining the rationale of the overall design and how the intervention(s) enhance the role of heritage (max. 2000 characters).
- a PowerPoint presentation discussing the team's strategy (i.e. how the team approached the assignment) and the results.

The proposals were evaluated based on their alignment with Heriland guiding principles (see Chapter 1.5.), also taking into account:

- the ability to propose effective, realistic and balanced interventions;
- the enhancement of the role of heritage in the contemporary city and in the social life of its inhabitants; and
- the ability of each group to effectively combine the different skills and competences of its members.

The Rome Living Lab was an intensive two-week programme. Throughout this time, the Roma Tre University organizers and Heriland supervisors were available on site to offer feedback and guidance as needed. The first week was dedicated to analysing each group's specific area, identifying the broader societal challenges at the city and regional level and grasping the needs of various stakeholder groups. This was done through a series of keynote lectures, round-table meetings with stakeholders, visits to the study area and internal discussions amongst the Heriland team.

The second week saw the ESR teams develop planning strategies and spatial designs for their specific sub-areas. For the entire week, they were given a large room, in which they could work with their own teams and collaborate with the others. The schedule for the second week was deliberately left quite open to allow the ESRs to organize their time at their own discretion. The Living Lab was concluded by a public event in the assembly hall of the Roma Tre University Department of Architecture, at which the ESR teams presented their final proposals for an audience of community stakeholders, scientific experts and others interested in the output of the Living Lab.

5.2. Shifting banks. Reconnecting the banks of Tiber between Testaccio and Trastevere

Authors: Ana J. Yarza, Marilena Mela, Rebecca Staats and Anna Tonk.

Thanks to the strong interdisciplinarity of the ESR collaboration, the analyses and design proposals for the four zones along the Tiber managed to cover all major challenges facing the regeneration of the area. By way of an example, the presentation of one of the teams – comprising Ana J. Yarza, Marilena Mela, Rebecca Staats

and Anna Tonk – will be showcased below. Their zone was delimited by Ponte Sublicio and Ponte Testaccio and included the river with its adjacent banks and streets. The analysis and intervention also included parts of the neighborhoods of Trastevere (and specifically the area around Porta Portese) and Ostiense. In their proposal, the four ESRs approached the multiple living heritages of the site from a processual planning perspective, aiming to highlight the value of the river as a meeting place for its various inhabitants and users.

Critical analysis: cats, care and neglect

Disconnections between heritage sites and the banks due to blocked access points were a main concern of this ESR team. Because the space was not actively used, it was deemed unsafe for most daily users. Addressing this issue was a key priority.

Fig. 5.2.1. Images taken along the riversides showing neglect and decay.

The analytical model for disconnection shows disconnects on the longitudinal, transverse and vertical axes because of the entryways to and views of the banks are blocked. Overgrown, thick and thorny vegetation (Figure 5.2.1.) makes using the riverside paths impossible and means that users cannot access the riverside. There is also a temporal disconnect due to the neglected archeological remains of the Emporium river harbour, the Porticus Aemilia (and Ripa Grande), and other nearby heritage remains such as the Arsenale. The mercantile history of this place is not experienced and thus not reconnected to current mercantile practices of the Porta Portese and Clivio market areas. Both the river's history and materiality are thus hidden away.

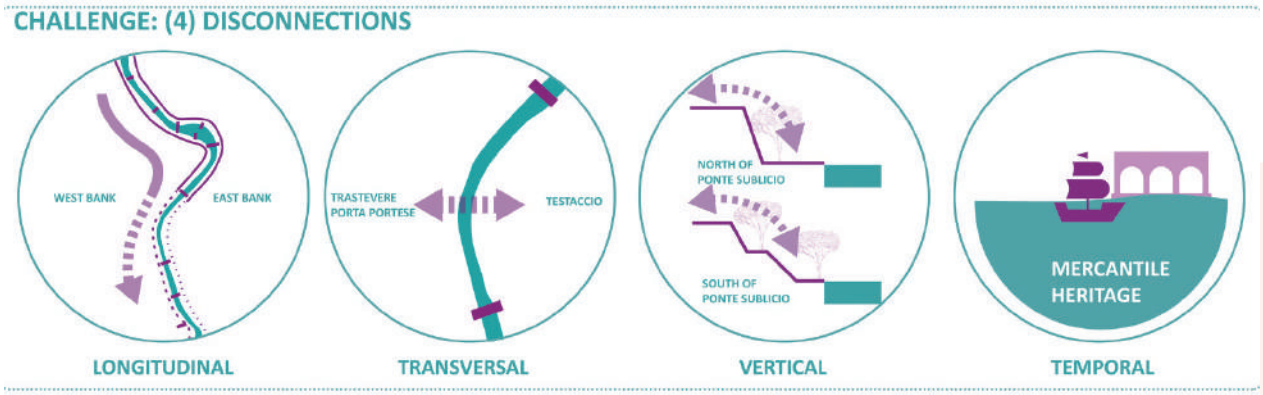


Fig. 5.2.2. Types of disconnections identified along the studied section of the Tiber.

The visually obstructed nature of the banks makes them a good shelter for groups of homeless people and colonies of stray cats – some of the large-scale issues that should be addressed ethically and holistically as their presence is often the result of greater socio-economic dynamics. This informal and emergent use of the space will be ethically addressed later in the text.

Fig. 5.2.3. Informal use of the space and the non-human settlers.

Lastly, some multiscalar issues linked to climate change and river health in general were identified. Pollution and litter around the river make it an unattractive place to engage with nature, raising awareness of the need to address the issues at different scales and levels of governance. This prompted the creation of the following proposal, demonstrating hopes for who can take responsibility for what issue.

Strengths and values

The analysis and the proposal put forward by the team are based on three central axes (Figure 5.2.4.). The first is accessibility and connectivity, the second relates to social justice, and the third to sustainability and nature-culture relationships.

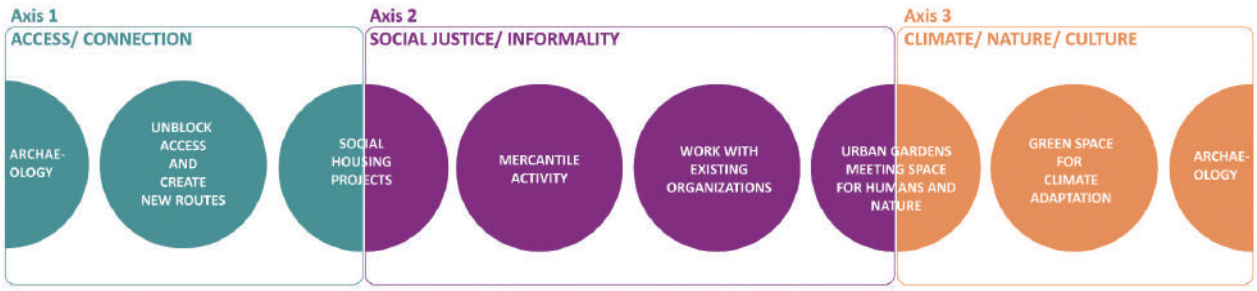


Fig. 5.2.4. The three main axes of the project.

A. Accessibility and connectivity

From the perspective of urban connectivity, the area has the privilege of being adjacent to the historic centre of Rome. The Tiber banks to the south of Ponte Sublicio are now hard to access but they could provide a continuation of the Lungotevere[2] and could be used for sports or recreation after cleaning. The banks are

[2] Boulevard running along the riverbanks on both sides of the Tiber.

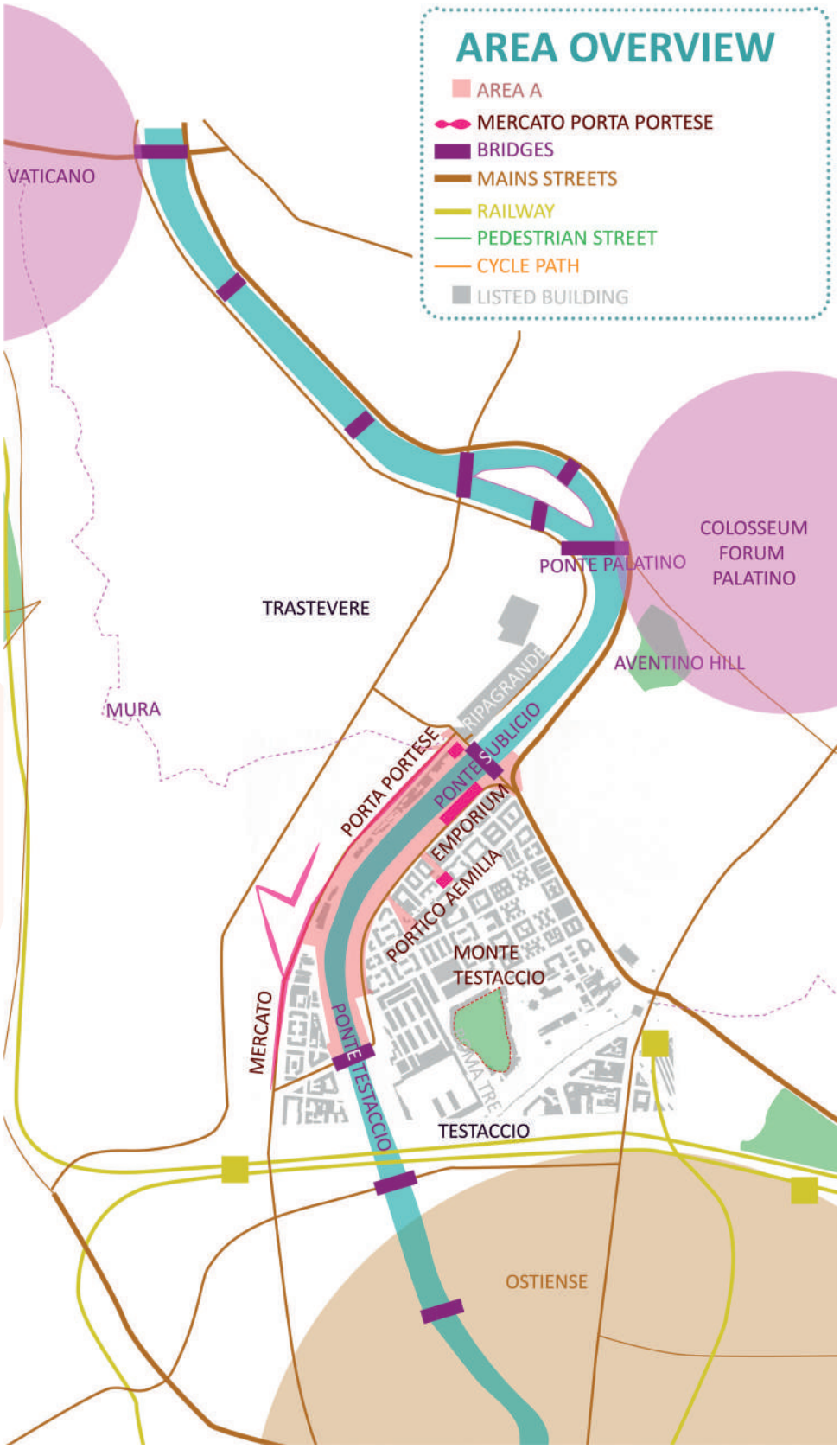


Fig. 5.2.5. Connectivity overview.

already used in these contexts, but some spatial characteristics make their use challenging. These characteristics include the lack of exits, intense vegetation, lack of lighting infrastructure and a cycling path along the bank on Trastevere side that makes walking difficult.

In terms of visual connection, the current design of the walls provides an important opportunity: while the levee wall system (muraglioni) in the northern part of the Lungotevere is steep and blocks any connection with the upper level, the design changes south of Ponte Sublicio. The slope is much more subtle here

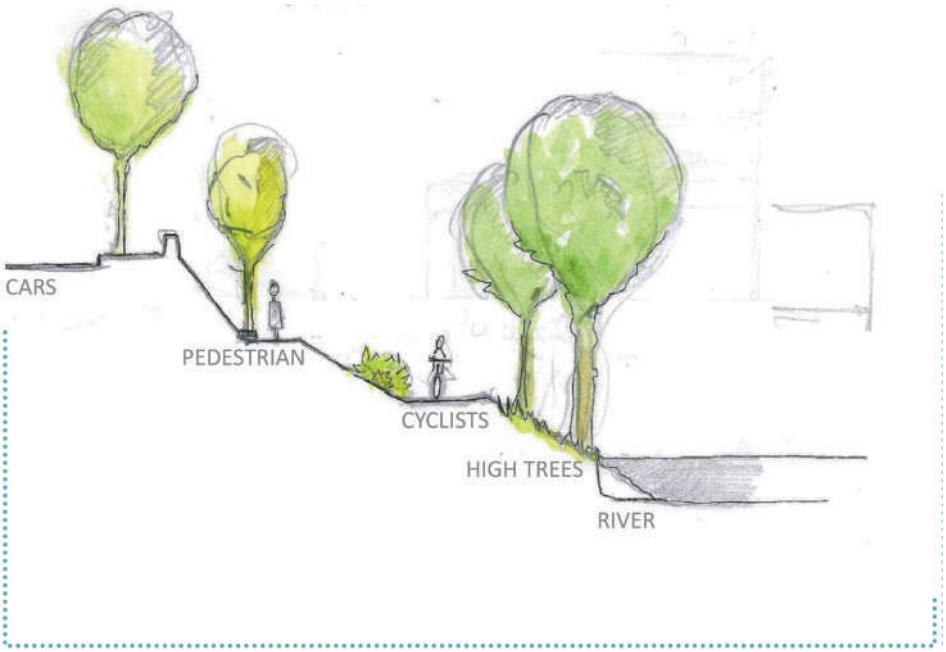


Fig. 5.2.6. Typical cross-section along the Tiber.

and there is an intermediate level that was initially designed as a walking path maintaining a better visual link both with the river level and the street level. This plan has been abandoned and the path has been taken over by vegetation and informal uses. Nevertheless, it can be easily reused.

Finally, the temporal depth of the area is manifested by several historic structures, which connect it to the wider urban history of Rome and can serve as opportunities for change. To list but a few: the Testaccio banks are home to the ancient Emporium river port that connects to the Porticus Aemilia; on the Trastevere side of the river, similar integration can be achieved around the areas of Arsenale Pontificio and Porta Portese; more modern histories include the Testaccio social housing complexes and the Porta Portese Market – focal points that could serve as attractors and densifiers of urban life.

B. Spatial justice and informality

As the previous section already hints, informal or spontaneous practices take place on the banks and the adjacent roads. Informality expresses itself in various ways, such as the presence of homeless people (in temporary or semi-permanent settings), the mercantile activity of Porta Portese and the shopping area of Clivio, but also the development of a wild ecosystem of plants and animals on the riverbanks, which emerged due to the lack of planning. These attributes can be seen as opportunities and values – Rome, a city developed through overlapping layers of habitation and the gradual consolidation and formalization of initially informal structures, is itself a model of continuity amidst spatial change. At the same time, the proposed intervention puts forward the need to protect the interests of the less powerful, marginalized

right-holders of this landscape, the current state of which reflects the systemic injustice present in the cities.

C. Nature-culture relationships

The presence of the river means that the site requires a wider environmental analysis, inventorying the anthropogenic damage to resources and the climate. The team's investigation revealed the existence of a small natural-cultural ecosystem in this seemingly neglected site, which should be enhanced and made more accessible with proposed interventions. The big trees, green walls and grassy areas provide the potential for a vibrant, shared public space. In an urban context, wild vegetation is commonly seen as a negative, a result of abandonment. It is easy to see that the wild green spaces on the banks of the Tiber actually support life, as they have created an area shared as a living space by homeless people and an adjacent cat colony. With a little attention, small acts of care became apparent, such as various informal gardens and seating areas created by a local volunteering organization, as well as daily visits of people coming to feed the cats. These acts contribute to the function of the ecosystem and show the way towards a sustainable future use of this space.

Intervention proposals

A. Master plan

The proposed master plan covers the riversides between the bridges of Sublicio and Testaccio, the latter not being included (Figure 5.2.7.). The area also includes the vicinity of Porta Portese and the beginning of Via Beniamino Franklin and Via Rubattino. The core idea is to enhance the connection between the riversides and between the upper and lower cities along the river. Moreover, improving the environmental qualities

	TYPE OF INTERVENTION		
	■ accessibility ■ public space	environmental ■ water ■ vegetation	■ economic ■ social ■ cultural
LOCATION			
Left riverside			
Arsenale	■ stairs (lower/higher city) ■ boat ramp ■ seating area	■ river clean-up	■ boat access
Clivio	■ street widening	■ landscaping (more trees – urban lung)	■ social housing (low-cost communal kitchen) ■ local economy
Right riverside			
Emporium	■ access to museums ■ paths	■ landscaping (removal of damaging vegetation)	■ boat café ■ museums (open air museum)
Via Portuense	■ pedestrian bridge ■ seating area ■ park	■ landscaping (public / community gardens)	■ cat feeding areas
Both sides			
Lungotevere	■ seating areas ■ belvedere	■ water clean-up ■ landscaping	■ public, living, breathing area for the city

Table 5.2.1. Table depicting the Action Zones in the study area and the type of intervention in each of them:

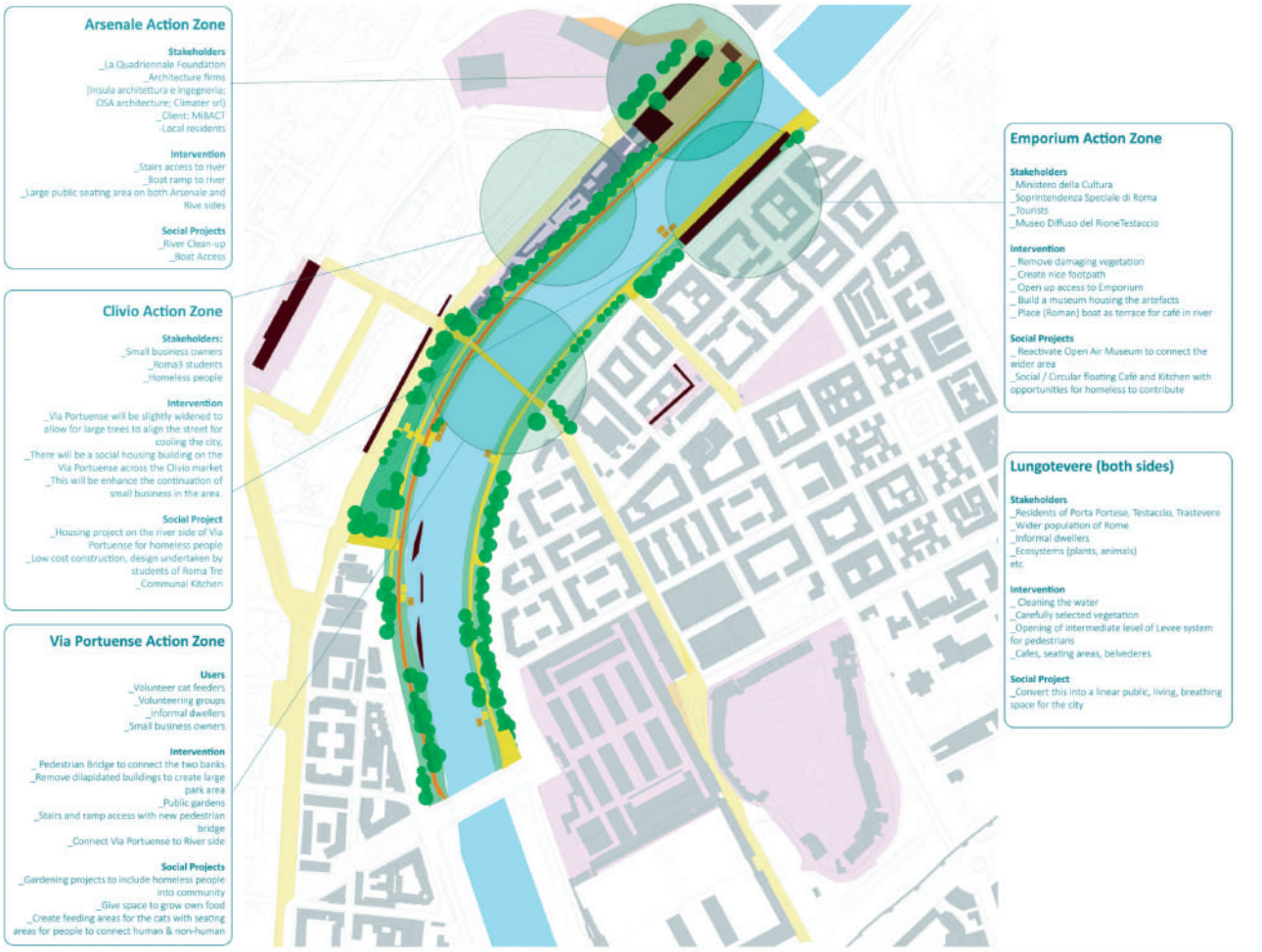


Fig. 5.2.7. Proposed master plan.

of the area through landscaping and river recovery is also important. All interventions have a holistic approach, tackling economic, social, environmental and cultural issues. With this in mind, the action zones are the following (see Table 5.2.1.).

B. Design principles

The design principles are based on connectivity, flood mitigation and nature recovery, social inclusion, and boosting the local economy. Each intervention tackles the issues holistically, aiming for inclusive, just and sustainable solutions, and flexibly leaving space for change, which is one of the identity attributes of the area.

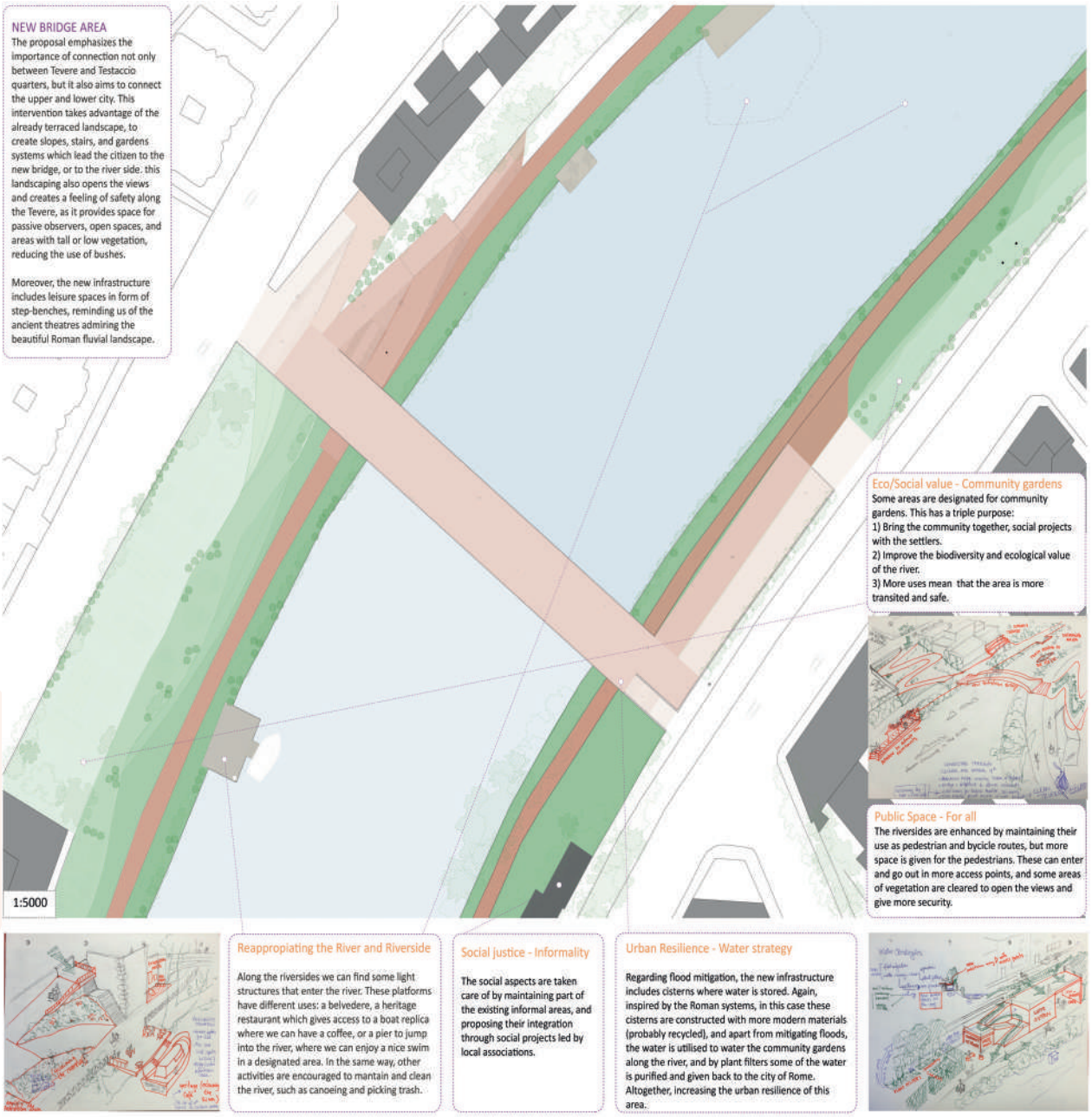


Fig. 5.2.8. Plan of the New Bridge area.

C. *Connectivity as a starting point*

The starting point for the proposal is connectivity along the river, between the riversides and between the upper and lower cities. To this aim, a physical connection is proposed: a pedestrian bridge situated between the existing two bridges. This urban element serves as the focal point for additional interventions – access to the bridge is provided by a series of slopes that adapt to the unevenness of the terrain, connecting the upper and lower cities. The structure also includes stairs which convert into terraced levees, inspired by Roman theatres, that can serve as cat feeding spots or seating areas.

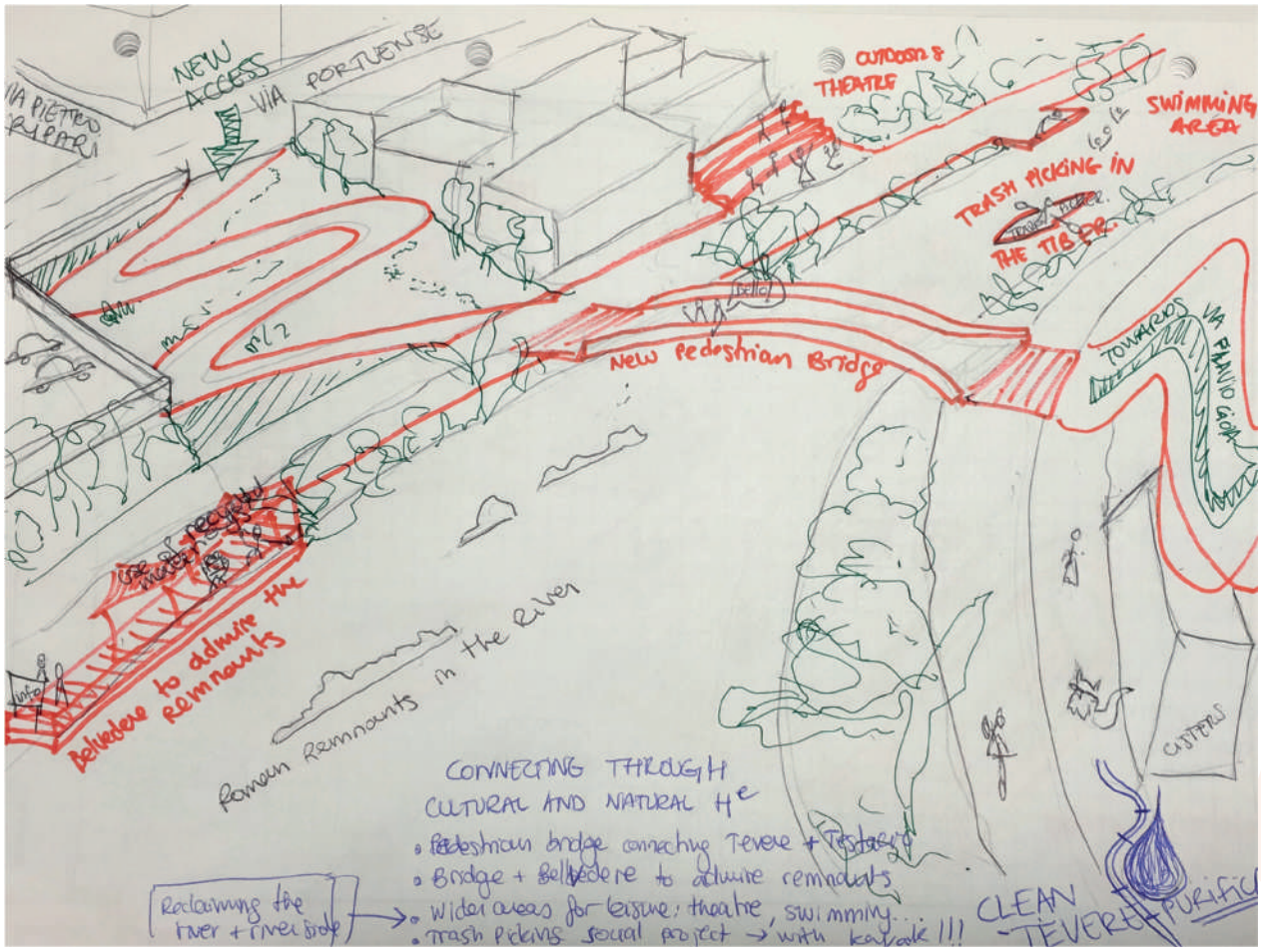


Fig. 5.2.9. Sketch showing the New Bridge area, two new access points, a belvedere and a seating area on the left side of the river, as well as activities on the Tiber, such as swimming and canoeing.

D. Landscaping to connect, open and bring the communities together

This new structure is accompanied by landscaping work to open the views, combining high and low vegetation, improving the visual connection between the riversides. In the same way, the new infrastructure is designed to encourage other uses. For example, the spaces below the slopes can accommodate water cisterns connected to the Tiber, which serve as flood mitigation systems, as well as a new water source for the gardens, and, if filtered, this water could also be given back to the city of Rome and mitigate the consequences of water shortages in summer. The plan would thus increase the city' resilience and stabilize the riverbanks.

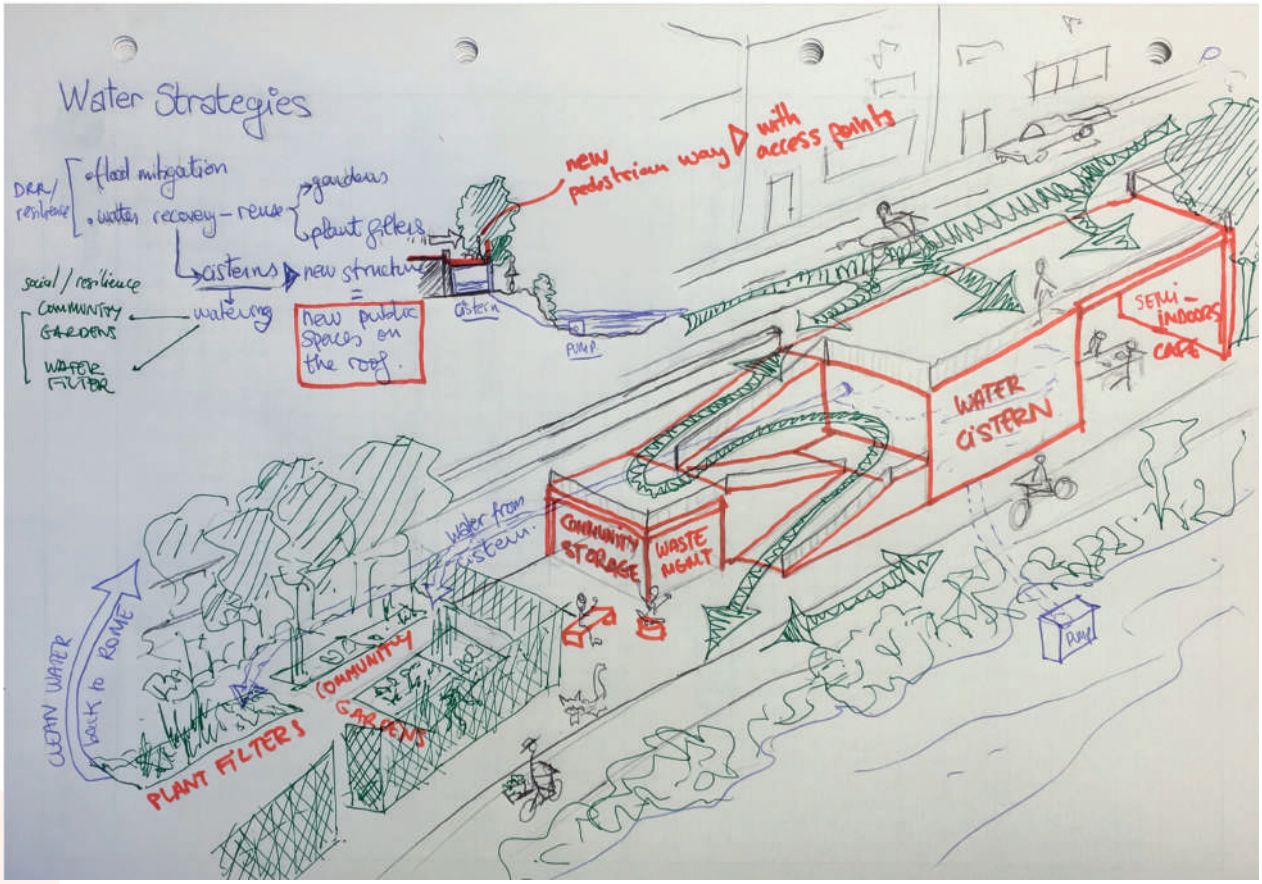


Fig. 5.2.10. Sketch showing the access structure with slopes and social gardens, illustrating how this new infrastructure holds other uses such as water retention or provision of community storage space.

The connectivity along the riversides is enhanced by maintaining and adding pedestrian and cycle paths, following the current routes. It is also worth mentioning that the plan respects informality by avoiding a unique approach and leaving some places unfinished or untouched. Connectivity is again promoted in the heritage sites of Arsenale and Emporium, opening them up to the public and the riverside. Arsenale is key as a point of access to Porta Portese market, adding to the connectivity strategy. Moreover, the views towards the river are enhanced in these two areas, being part of the landscaping strategy, which also includes social gardens connecting the citizens of the area and Rome to nature. These garden spaces become points of integration between different users, homeless participation and community gathering, and a connection to nature. It is worth highlighting that most of the existing informal areas would remain untouched, respecting informality and its intricacies, as it was not encouraged to homogenize different needs of informal dwellers.

VEGETATION ZONING AND LANDSCAPING

The proposal emphasizes the importance of connection not only between Tevere and Testaccio quarters, but it also aims to connect the upper and lower city. This intervention takes advantage of the already terraced landscape, to create slopes, stairs, and gardens systems which lead the citizen to the new bridge, or to the river side. this landscaping also opens the views and creates a feeling of safety along the Tevere, as it provides space for passive observers, open spaces, and areas with tall or low vegetation, reducing the use of bushes.

Moreover, the new infrastructure includes leisure spaces in form of step-benches, reminding us of the ancient theatres admiring the beautiful Roman fluvial landscape.

Fig. 5.2.11. Vegetation zoning and landscaping proposal.

E. New business models: circular-natural-cultural-social

These new activities along the Tiber create opportunities for new businesses that could promote circular economy – the food grown in the social gardens could be sold at the Porta Portese market or in new cafés along the riverbanks. This would promote the links between nature, social facets and the economy, but also stimulate culture through a floating heritage site café, which could also use local produce. Other activities are also proposed, specifically with a view to culture, such as street art projects connecting the banks of Testaccio, Trastevere and Ostiense.; and walking tours with Emporium as central hub, to spread out and alleviate tourism pressures in Rome. Moreover, river clean-ups by canoe could be organized from several starting points along the river, thus promoting environmental values.

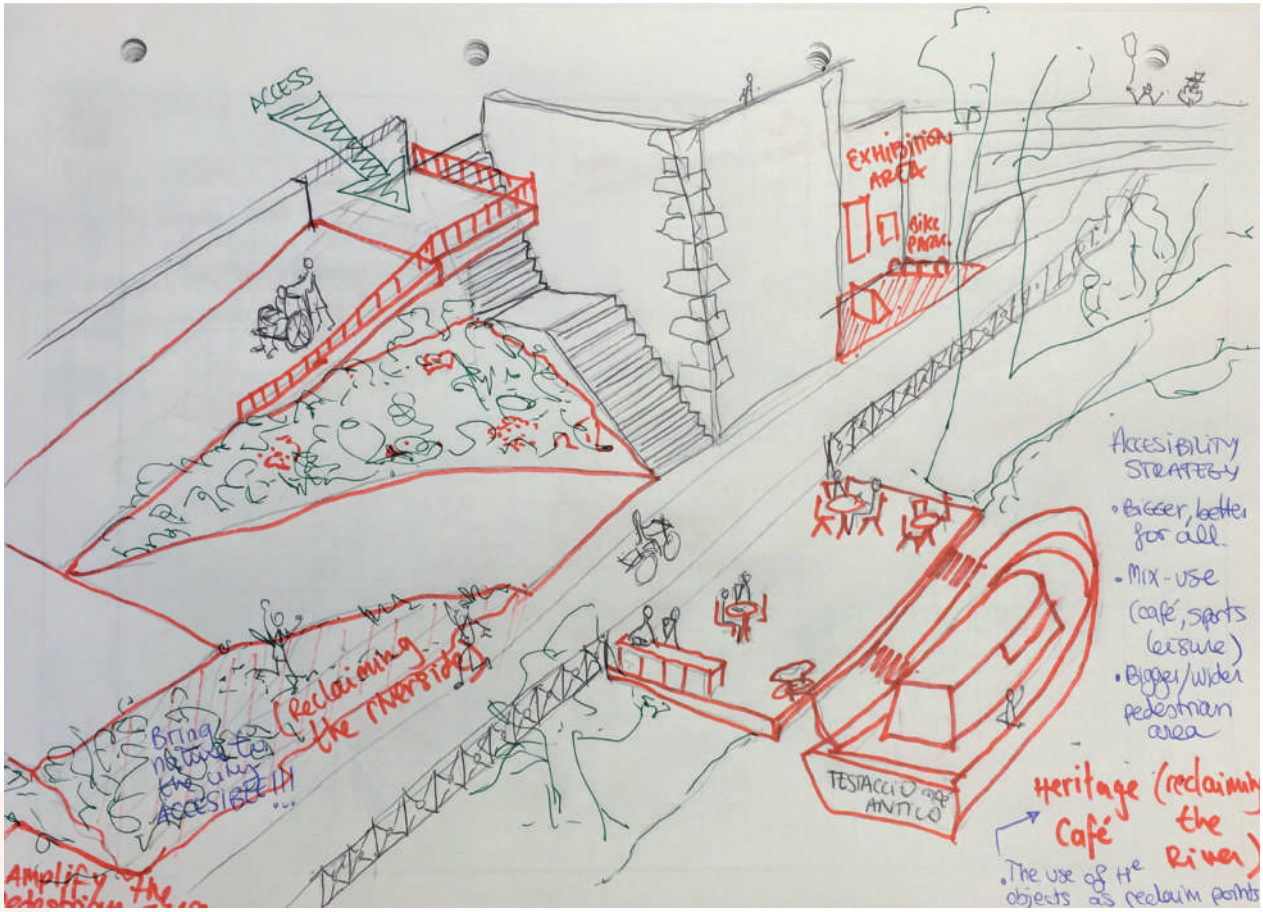


Fig. 5.2.12. Sketch showing a new access point on the left side of the river and the Heritage Café in a Roman boat replica.

Rationale for the overall design: the role of heritage

The interventions proposed for the area follow a central strategy which stresses the role of heritage as a continuous process and cross-cutting element that interconnects the area chronologically (past–present–future), as well as with regard to spheres of sustainable development (social, economic and environmental). One of the main issues that is aimed for exploration is an alternative approach to informality and a culturally appropriate way of working that also respects the distinctiveness of place.

Figure 5.2.13. provides a visual depiction of the processual heritage approach and how it can be used to combine different components of place:

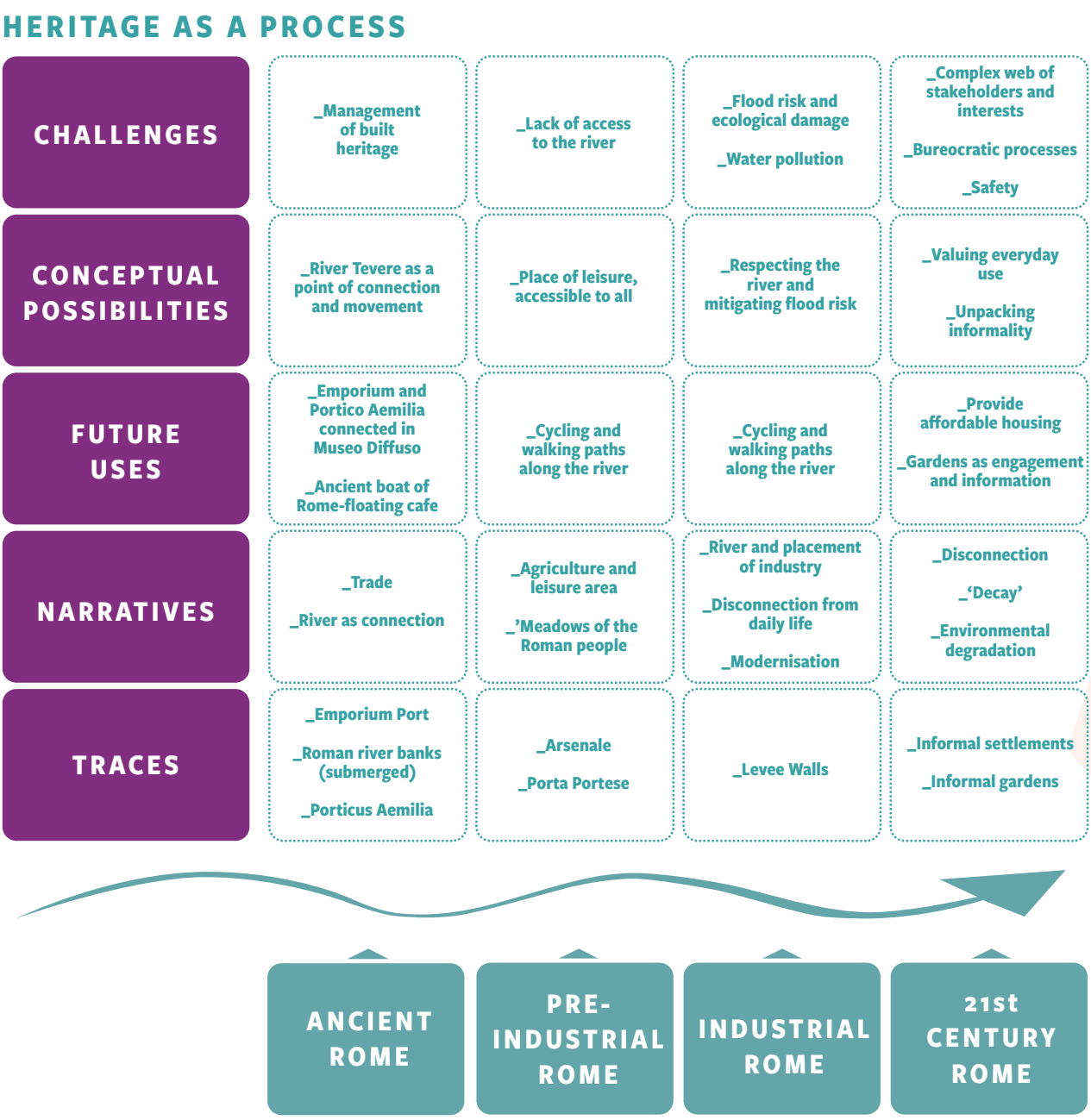


Fig. 5.2.13. Processual heritage approach employed in the study.

The curved line at the bottom represents the shifting temporal transitions at the site, which at various points transitions to new uses and meanings. As indicated by the arrow, this temporal line is continuous – seeing heritage as an ongoing process does justice to the fact that the uses, meanings and values of the site will change again in the future, and allows designing interventions that respond to current needs rather than seeing them as fixed-end states for the site. Recognizing this temporal depth informed proposals such as the reconnection of the Arsenale and Emporium heritage sites, and the creation of a riverbank heritage site café (see sections D and E above). This temporal line also helps looking at broader trends over time. A key example for this proposal is the notion that informality is part of the heritage of Rome – the city itself has evolved through informal components that have eventually become more permanent parts of the urban fabric. Embracing informality opens up space for an alternative, more positive narrative that allows to come up with solutions incorporating rather than erasing informality. This is why the proposal leaves some areas of vegetation untouched (see section D above).

In this processual conception, heritage connects physical traces of the past with intangible narratives and identities of place that provide a frame of possibilities for future uses. It aids the formation of narratives of place that are locally appropriate and helps ensure that the interventions speak to the needs of this area in particular as opposed to generic interventions that lack local connection. In this way, this approach can also be used to think about the challenges that might arise when working with aspects of the place, to best prepare for the hurdles in implementing this proposal.

Chapter 6

CONCEPTS, METHODS AND POLICY INSTRUMENTS

Crucial to the paradigm shift at the heart of this Handbook are new concepts, methods and strategic instruments that inspire and guide new ways of researching and managing heritage. The five approaches presented in this chapter are amongst the most influential. Discussed by the specialists involved with their immediate usage, they are drawn from a series of lectures, webinars and conference contributions organized by the Heriland College. Together, they underpin much of the innovative work presented in the Handbook and it can be anticipated that they will continue to inform new directions in heritage planning in the years to come. By explaining the background, rationale and experiences from practical implementation for each of the toolsets, the chapter aims to encourage readers to implement one or a combination of these approaches in their own context.

The **first approach**, Historic Landscape Characterisation (HLC), discussed by a team of Heriland teaching staff from Newcastle University, comprises a tool helping with the management of changes that both rural and urban landscapes are continuously subject to, effectively impacting the very *character* of places. It looks beyond the traditional monument-oriented approaches to heritage management and, in turn, focuses on the *backbone* of the landscape – patterns and networks of boundaries, patterns of fields, roads, pathways, etc. The **second approach**, UNESCO's Recommendation on the Historic Urban Landscape (HUL), presented by Francesco Bandarin, similarly draws attention to the historical layeredness of landscapes and the totality of historic landscape features (natural, cultural and socio-economic). It comprises four toolsets and a six-step workflow that can guide a more holistic and stakeholder-informed management of change in historic cities. The **third approach**, digital twinning introduced by three Amsterdam-based specialists affiliated with GIS technologies, takes full advantage of the growing quantities of digital data about the living environments (historic and current). By creating a 3D virtual replica of the landscape to which researchers, professional planners and citizens can add data and models of how the landscape has evolved in the past and could evolve in the future, digital twinning can be regarded as a powerful instrument for data-informed and collaborative decision-making about the future of historic landscapes. In his discussion of the **fourth approach**, Rodney Harrison presents a research strategy in which heritage and museums become agents for radical forms of climate action in the face of a planetary emergency that makes traditional heritage and museology practices – focused on documentation, collection, planning, management and conservation – potentially meaningless and trivial. Finally, Sennay Ghebreab's **fifth approach**, focusing on socially intelligent artificial intelligence, harnesses digital heritage approaches to develop and research heritage applications that promote social equity and empower citizens.

6.1. Historic Landscape Characterisation (HLC)

Sam Turner is Professor of Archaeology and co-Director of the McCord Centre for Landscape at Newcastle University, UK. His research focusses on the historic landscapes of Britain and Europe and his expertise lies in landscape archaeology and interdisciplinary approaches to landscape management.

Graham Fairclough is Principal Research Associate at the Centre for Landscape at Newcastle University, UK. He is a researcher and policy advisor in heritage and landscape, with ample experience at European level, notably with the Council of Europe. His long career at English Heritage included leading its national Characterisation Programme (2002-2012) and Monuments Protection Programme (1995-2002).

Niels Dabaut obtained his PhD from Newcastle University, UK, focusing on landscape perception, qualitative GIS and Historic Landscape Characterisation. He is a guest professor at Antwerp University and the director of Regionaal Landschap Westhoek vzw, an organization that translates the concept of landscape into practical, real-life stories.

Historic Landscape Characterisation (HLC) was first developed in the United Kingdom in the mid-1990s. It was designed as a response to the long-felt need among heritage officers for strategic tools that could help manage changes to the combined historic assemblages of features in rural or urban landscapes which shape the *character* of places. Conventional catalogues of historic monuments used in planning would list many individual features but rarely described the relationships between them. The representation of sites as simple dots on a map therefore encouraged planners, archaeologists and conservation officers to consider them as isolated features, not as part of a wider whole. In practical planning, the most extensive patterns and networks of e.g. boundaries, fields patterns, roads or pathways – which often form the oldest "skeleton" of the landscape – tended to be overlooked. Landscape architects, archaeologists and other landscape specialists recognized that it was the articulation between such features and their relationships that combined to create *landscape character*.

Several experiments were carried out in the early 1990s to examine methods that might be used to define and represent historic character, notably the first HLC covering Bodmin Moor in south-west England (Fairclough *et al*., 1999). They concluded that methods loosely akin to Landscape Character Assessment (LCA) were likely to be most suitable, not least because they also offered a relatively straightforward way to integrate with less historically oriented understandings of landscape (Fairclough and Macinnes, 2003; Fairclough and Herring, 2016: 193; Herring, 2020). HLC was developed with the intention of connecting archaeological and historical studies to the wider context of landscape research and protection, and this remains one of its most useful capacities. What it adds to LCA, partly because it operates at a different but complementary scale, is a greater focus on how historic processes and land-uses have shaped the landscape over the last few thousand years. For this reason, it can be considered an archaeological approach to landscape heritage (Turner, 2018). In those terms, HLC lies midway between the detailed forensic examinations of archaeological field surveys and the very broad interpretations presented through generalized studies of environmental data.

There are two important precepts of such methods. First, there are no "blank" areas on either LCA or HLC maps, because landscape is a seamless whole, with all places being recognized as having a character of

some type (thus quite different to conventional archaeological maps or catalogues of other heritage assets, which tend to identify specific sites as dots on maps or with tightly drawn boundaries). Second, what is being mapped is the historic dimension of the present-day landscape, and its trajectory from the past into various potential futures (thus quite different from traditional reconstruction maps of past landscapes).

How an HLC interpretation of an area is to be used in practice fundamentally affects how an HLC project is designed and carried out: it affects the scale at which the characterization is produced, the types of data that need to be captured in the GIS database, and the range of Historic Landscape Character types that will be used to interpret the landscape. Peter Herring described the process which underpinned the first major HLC in Cornwall in south-west England as follows:

> *Closer examination [of the landscape] reveals that particular groupings and patterns of components which recur throughout the county can be seen to have been determined by similar histories. Cornwall's historic landscape can, therefore, be characterised, mapped and described, using a finite number of categories or types of "historic landscape character". (Herring, 1998: 11).*

As these words imply, for every HLC project it is necessary first to understand the key historical (or prehistoric) processes that have shaped the landscape with which it is concerned. Such understanding is typically derived from existing archaeological, historical and geographical studies. This knowledge helps the HLC researcher to interpret how the most important forces driving continuity and change in the landscape have contributed to shaping specific types of landscape character. A limited number of HLC types are selected for use in each HLC project. At the same time, the project designer must consider the data that are available to underpin their interpretative HLC mapping, normally a series of modern and historic maps and aerial images as base data, though recently the range of sources being used has extended to include remote sensing data from lidar or satellite imagery, or other open access sources like Google Streetview. Especially in urban and metropolitan landscapes, HLC projects must deal with highly diverse, complex and often frequently changed character, and more detailed spatial and temporal scales are often required (Thomas, 2006; Quigley and Shaw, 2010). HLC methods have also been used to characterize the coastal areas and seas around England, resulting in a national-scale Historic Seascape Characterisation (HSC) dataset.

Over the last 10 years, characterizations have been implemented in an increasing number of countries besides the UK (Fairclough *et al.*, 2018). For example, a pilot project in Catalonia, Spain, was designed to understand how long-term landscape change had shaped historic character since Roman times (Bolòs, 2010); the resulting methods have underpinned historic characterizations completed for a series of local municipalities (e.g. Bolòs and Bonales, 2015). Government heritage agencies in countries such as Ireland and the Netherlands have carried out characterization projects to address particular challenges at local or national levels (Lambrick *et al.*, 2013; RCE, 2017).

Given that HLC datasets are GIS-based, they can be applied flexibly to address challenges at different scales alongside a range of other spatial data. All the different types of historic characterization produced with sponsorship from UK heritage agencies were designed primarily to inform landscape planning and management. Applications range from very local development issues, for example understanding how community members value local landscapes (Dabaut, 2021), up to much larger strategic issues, for example urban expansion, major developments like airports or power stations, or the construction of new highways (Clark *et al.*, 2004). Characterization methods have been integrated directly into policy guidance, for example marine management (Natural England, 2012) and road construction (Highways Agency, 2007). HLC is suited to assessing various landscape qualities, for example the sensitivity or capacity of landscapes to change (Herring, 2022) or to modelling what future landscapes might be like under different scenarios (Erdoğan *et al.*, 2020). Indeed, HLCs are currently being used to explore how historic landscapes may afford opportunities to address global challenges like adaptation for future climate change (Herring *et al.*, 2022).

6.2. Recommendation on the Historic Urban Landscape (HUL)

Francesco Bandarin is an Italian architect and urbanist specializing in urban conservation. From 2000 to 2010, he was director of the UNESCO World Heritage Centre. From 2010 to 2018, he served as Assistant Director-General of UNESCO for Culture. He is currently advisor to ICCROM and the Aga Khan Foundation.

In recent decades, urban heritage has acquired paramount importance at the international level, as evidenced by the fact that the World Heritage List (conceived as part of the 1972 World Heritage Convention), which today has almost 1200 sites, contains more than 300 urban sites.

If we review the history of the evolution of the concept of heritage in the last century and a half, we can see that cultural heritage has initially and for a long time consisted mainly of monuments or historical buildings of great importance, such as palaces, cathedrals or archaeological zones. It was only after the Second World War that urban heritage became an important category of heritage internationally and was protected by new legislation initially promoted in Europe in France and Italy before later spreading throughout the world. Despite these important developments, the definition of a historic city was affected by a concept of *monumental heritage*.

To better focus on this aspect, in the early 2000s, UNESCO began the preparation of a new normative instrument, the Recommendation on the Historic Urban Landscape. After much work, in 2011 the Recommendation was approved by the General Conference and today represents an important advance in the interpretation of urban heritage that seeks to go beyond the monumental vision.

In particular, the Recommendation on the Historic Urban Landscape highlights the stratified character of the urban heritage, that is, it looks at the city as the result of a historical stratification. In addition, it conceives the city in an integrated way with its natural dimension, of enormous importance to understanding the values accumulated over time and to defining conservation processes. Finally, the Recommendation highlights the importance of the socioeconomic structure that makes up the city, as part of the values to be preserved.

This innovative vision has made it possible to closely link the conservation of urban heritage with the theme of sustainable development. In 2015, the United Nations approved the Sustainable Development Goals – with the work carried out by UNESCO, the issue of cultural and natural heritage was recognized as part of international strategies to promote economic, social and environmental sustainability. In 2016, the United Nations endorsed the New Urban Agenda that highlighted the cultural and heritage dimension of cities as a factor of sustainable *urban* development.

In recent years, the application of the Historic Urban Landscape Recommendation and its four toolsets has yielded interesting results for the management of urban heritage (Pereira-Roders and Bandarin, 2019). The following paragraphs will briefly outline these toolsets.

Cities consult citizens and visitors using **participatory tools** to verify what their expectations are regarding heritage conservation. These attempts to move away from a top-down vision of heritage have already led in many cases to important changes in the traditional historical perimeters.

Cities use **knowledge and planning tools** to uncover the stratification of historical and natural values, accumulated over the centuries. These include consideration of, for example, the urban ecology (cities are inserts in a natural space, ecosystems have evolved in dialogue with human habitation through time); the urban archaeology (physical remnants of the human-nature interactions including buildings, underground and above ground infrastructure); or the urban culture (artistic expressions, cultural practices and memories).

Cities use both **regulatory tools** and **financial tools** to manage the heritage values that thus come to the fore. It is crucial that the authorities do not leave urban transformation solely in the hands of private developers, whose main objective is to maximize profits. Through legislation and financial incentives, urban authorities regulate the transformation processes taking place in a city, including its three-dimensional profile (high-rise, low-rise, open spaces), the axes of mobility and main views (infrastructure), but also the land and building uses (zoning plans), as well as artistic cultural expressions (festivals, leisure activities) that give character to urban life.

If approached following the recommended seven-step action plan (see Fig. 6.2.2.), as well as by combining them with the historical characteristics and the continuous reassessment of urban heritage values, these four toolsets become an integral part of the successful management of urban change.

Document name	Year ratified	Objectives / interests
Venice Charter	1964	The heritage environment as an element to consider
Nairobi Recommendation	1971	The importance of conserving historic areas
Washington Charter	1987	Dedicated specifically to urban heritage conservation
Recommendation on the Historic Urban Landscapes	2011	The entire urban fabric and intangible urban heritage as part of managing urban change
Sustainable Development Goals	2015	Strengthening cultural and natural heritage as part of SDG 11: make cities and human settlements inclusive, safe, resilient and sustainable
New Urban Agenda	2016	Cultural and heritage dimensions integrated in sustainable urban development

Table 6.2.1. Urban heritage conservation in the policies of the United Nations:

6.3. Digital twinning for heritage planning

Henk Scholten is the founder and Director of Innovation at Geodan, one of the largest European companies specializing in geospatial information technology. He is also emeritus professor of Spatial Informatics at the School of Business and Economics of the Vrije Universiteit Amsterdam. Throughout his career, he has directed numerous national and international research projects, most recently the European Commission's Joint Research Centre's project "Digitranscope: The governance of digitally transformed society".

Maurice de Kleijn is a Senior Software Engineer at the Netherlands eScience Centre. He holds a PhD in Geographical Information Science from the Vrije Universiteit Amsterdam based on a dissertation in which he applied and developed GIS technologies (e.g. spatial analysis, 3D participatory planning support and spatial simulation modelling) for the fields of history, archeology and heritage landscape research.

Niels van Manen is lecturer in GIS at the School of Business and Economics of the Vrije Universiteit Amsterdam. He co-directs the research programme on Inclusive Landscape Transformations at the interfaculty research institute CLUE+. He teaches on various professional development programmes at the VU's Centre for Teaching and Learning and co-directs the CTL's Scholarship of Teaching and Learning (SOTL) research programme.

Digital twinning aims to bridge the gap between the physical and the digital world by bringing real world data and models into a virtual environment. Such a virtual replica of the physical world can facilitate data-driven working and lead to more efficient decision-making and asset management in an ever-digitizing society. It also supports participatory decision-making, giving all stakeholders access to data visualization within a 3D environment that accurately depicts the real world they are familiar with.

Digital twins are increasingly used for spatial policy and planning. In light of the enormous drive for the digitization of architectural historic buildings, archaeological sites, historic landscape features and intangible cultural heritage (see e.g. the European Commission on a Common European Data Space; European Commission, 2021), this chapter explores the potential and challenges of digital twinning for heritage planning.

Digital twinning in spatial planning originated in discussions in the 1990s about taking a data-driven approach to tackling social issues (e.g. Eikelboom and Janssen, 2017; Dias *et al*., 2013; Salter *et al*., 2009). These led to major projects aimed at integrating and improving access to government data through legal directives, including the Federal Geographic Data Committee in the USA and Inspire in Europe (Masser and Wegener, 2016). This gave rise to Spatial Data Infrastructures (SDIs), containing up-to-date, structured, digital 2D geographic data that could be easily found (metadata standards), viewed (web map) and reused (data and technology standards) (de Kleijn *et al*., 2014).

Over time, SDIs have become more comprehensive in scope and friendly in use for a variety of users. The Atlas for the Living Environment (https://www.atlasleefomgeving.nl/en), in the Netherlands, includes both "hard" geographic data about soil type, vegetation and air pollution, as well as "soft" data about how people perceive the safety, noise and attractiveness of green spaces in their neighbourhood. The data from the Atlas can be viewed and downloaded in any web browser, supplemented by an elaborate website contextualizing the data to ease understanding by policymakers and citizens.

SDIs are used widely in planning at local, regional and (inter)national scales, but we have recently seen a pull and push to go beyond 2D map layers. Pull factors include the wish for more efficient maintenance of buildings and infrastructure above and below ground through accurate monitoring. Also, it is believed

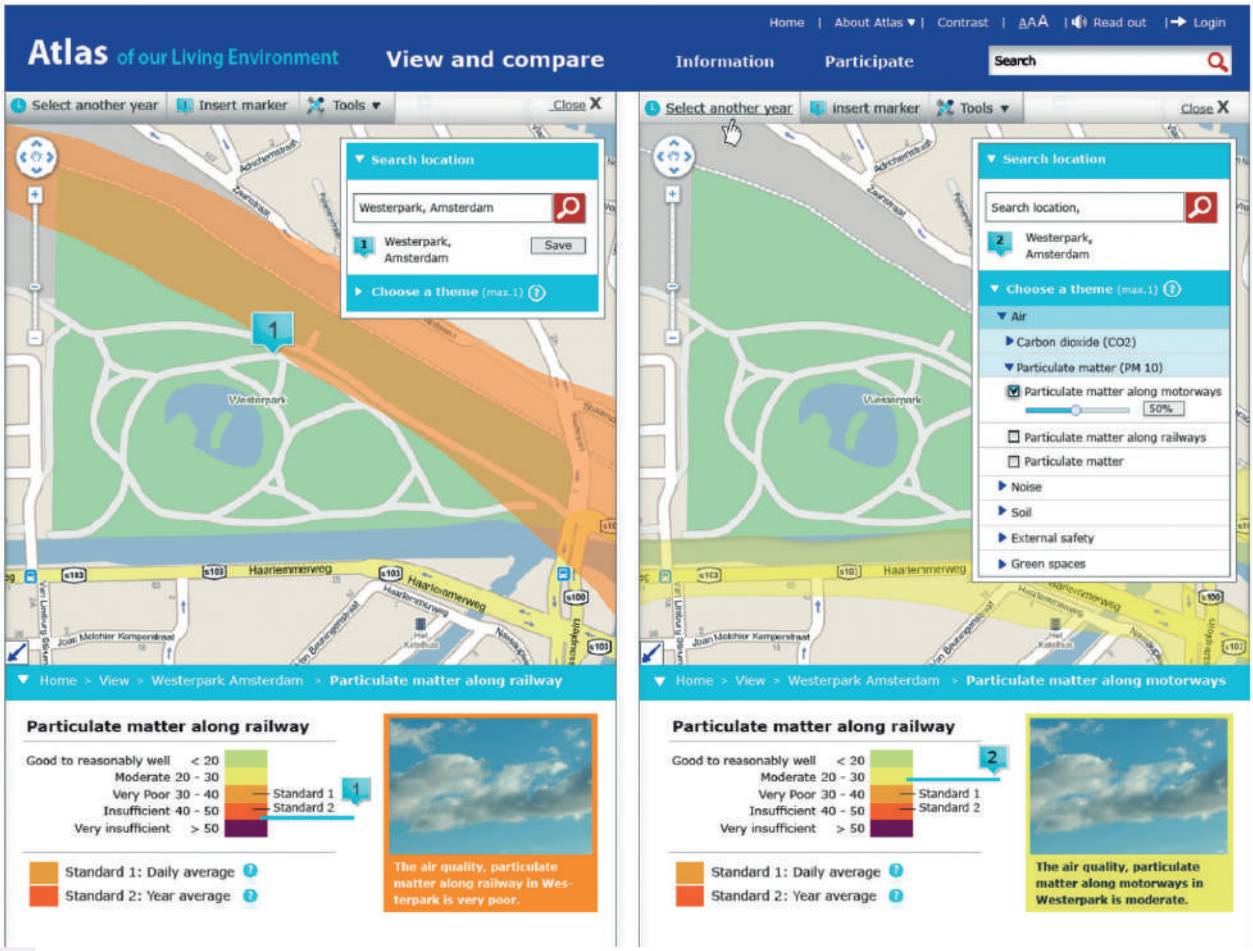


Fig. 6.3.1. Atlas of our Living Environment. UNECE Workshop 2010, https://unece.org/fileadmin/DAM/env/pp/workshops/SEE-EITWorkshop2010/Presentations/atlas_of_our_living_environment_Quarles.pdf

that more effective participatory planning processes can be achieved by simulating the impact of proposed interventions in an intuitive 3D virtual environment. Push factors include the enormous growth in data and developments in artificial intelligence and cloud computing. Thanks to sensors, we are able to measure processes above and below the surface almost every second. Algorithms allow us to identify 3D objects in the sensor data, to locate them accurately in geographic space, and to model the status of and interaction between spatial entities. With the recent developments in artificial intelligence, automation is anticipated to increase even more. Cloud computing technologies make it possible to handle enormous data loads and visualize the data within a 3D virtual replica of the real world.

Within urban and environmental planning, digital twinning presumes a 3D virtual copy of the real world that is geospatially accurate and to which all relevant attribute data are connected; a replica that integrates models that simulate dynamic processes (e.g. decay); an intelligent system that is continuously improved based on data collected in the real world. Within this domain, digital twinning is mainly used for inspection (Pan and Zhang, 2021) and predictive maintenance of built assets (bridges, roads, buildings, etc.), combining 3D objects with sensor data and model results (Khajavi *et al.*, 2019).

Similar applications have been developed for listed buildings (Lerario and Varasano, 2020) and entire archaeological landscapes, such as the Via Appia Antica near Rome (de Kleijn *et al.*, 2016). These highlight the potential and challenges of applying digital twinning to heritage buildings and sites. Thanks to the collaboration of data scientists with architectural historians and archaeologists, accurate digital 3D copies of the layered complex archaeological landscape along the Via Appia Antica were created and placed in their

geographic context. This provides the researchers with new research instruments and avenues to develop and test various models and hypotheses of what the original structure may have looked like, as well as the subsequent processes of transformation and decay, naturally done under a considerable degree of uncertainty. The challenge was therefore not to visualize in the digital twin a single model as a definitive answer, but rather to present multiple models as scientifically valid reconstructions (de Kleijn *et al*., 2016). Applying digital twinning for heritage purposes thus required the data scientists to create a digital twin that is capable of showing multiple realities and required the heritage researchers to develop the computational skills to prepare virtual reconstructions that meet the data and technology standards needed for including the reconstructions in the digital twin.

The aforementioned example features digital twins of a single physical system. However, the continuous improvement in data processing techniques, cloud computing, AI, sensor technologies and 3D modelling algorithms open up the opportunity to develop advanced digital twin infrastructures that bring together data from multiple physical systems. As an example, one can mention the Digital Twins for the Physical Living Environment in the Netherlands (DTFL; Geonovum, 2021), which integrate geospatial data of physical and geographic objects on a regional scale along with sensor data of dynamic processes. Such applications pave the way to supporting urban and environmental planning, including heritage dimensions.

The Amsterdam Time Machine is another promising example. What started as a digital twin of the 750-year history of Amsterdam is now being enhanced with current data and simulations of future changes. The aim is to create a platform that supports citizens, policymakers and planners and helps them understand current challenges and design solutions by creating awareness of how similar challenges were handled previously in the city and what impact these responses had historically (see Chapter 6.5. by Sennay Ghebreab).

Attempts like these – to apply digital twinning to entire historic urban landscapes for the sake of sustainability planning – come up against practical, intellectual and technical challenges. In order to recreate the historic landscape to a level of detail and accuracy comparable to a virtual copy of the current landscape, heritage scholars and data scientists need to develop data and metadata standards that allow

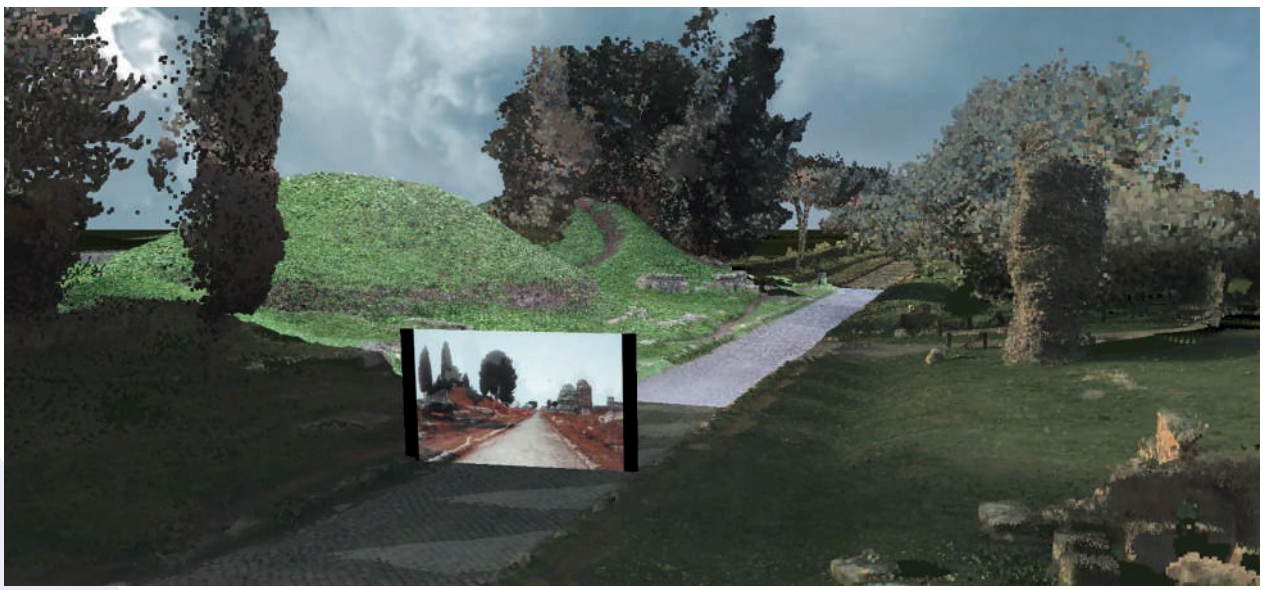


Fig. 6.3.2. The Via Appia Antica Digital Twin with referenced 3D images (see https://revisited-via-appia.nl/en/ to access the viewer).

them to digitize and visualize historic data created and archived with a very different logic to that of data typically integrated in a digital twin. This can be an exciting and valuable exercise if approached from the perspective of a wider need to use "soft" data and qualitative epistemologies (e.g. the Atlas for the Living Environment is dealing with datasets that tackle similar challenges).

The success of Europeana, a digital platform through which 3 000 heritage institutions across Europe have digitized and made accessible over 52 million heritage items, shows that the heritage sector is capable of developing and applying data and metadata standards. *The Common European Data Space for Cultural Heritage* (European Commission, 2021) will expand the digitization effort with an additional 40 million items by 2025, including 3D digitalization of buildings, sites, landscapes and intangible heritage. By 2030, EU Member States are encouraged to "digitize in 3D all monuments and sites deemed at risk, 50% of the most physically visited cultural and heritage monuments, buildings and sites, and pay special attention to specific categories of heritage assets with low level of digitization". These efforts could give a huge boost to the integration of heritage in digital twins in support of urban and environmental planning.

6.4. Beyond endangerment

Rethinking heritage and museums for climate action

Rodney Harrison is a Professor of Heritage Studies at the Institute of Archaeology, University College London. His current research is concerned with different forms of natural and cultural heritage conservation as future-making practices in the Anthropocene and the future role of heritage and museums in the context of Black Lives Matter, the extinction crisis and the climate emergency.

INTRODUCTION

While much consideration is currently being given to the current and potential future impacts of climate change on aspects of cultural heritage, and significant efforts are underway to mitigate those impacts, one could argue that these responses are somewhat like playing the fiddle while Rome burns. By this I mean that the heritage sector has largely responded to the threat of climate change with a renewed sense of moral purpose to continue to do what it has always done – to document, collect, plan, manage, conserve – even in the face of what we now know to be a planetary emergency which renders such approaches potentially meaningless and trivial. In contrast, this chapter aims to explore the potential for heritage and museums to become agents for radical forms of climate action, and to find alternatives to present practices.

A flurry of recent policy documents and reports point to the ways in which what my former PhD student Janna Oud Ammerveld refers to as an "authorized climate heritage discourse" has settled on the sector. A statement from the ICOMOS report on the future of our past is typical of such documents, emphasizing the heightened risks to the historic environment caused by climate change, and the need to adapt to these changes. But can we imagine forms of cultural heritage practice which work with, rather than against, inevitable ecological, climatological and/or social change? What might such a form of heritage practice which moves beyond the tropes of endangerment and rescue look like? And what benefits might it bring?

This chapter draws on several recent international collaborative research projects which aimed to address the role of heritage organizations and conservation practices in supporting action for climate and in realizing more sustainable futures. These projects have been characterized by collaborative partnerships with heritage sector organizations and other actors which have sought to intervene not only critically, but also practically in the role of natural and cultural heritage preservation within the climate and extinction crises. They did so by engaging organizations and publics as co-researchers in the research process and in aiming to rethink the conscious practical role of heritage in building distinctive future worlds.

HERITAGE FUTURES

Heritage Futures was a four-year collaborative international research programme (2015-2019) funded by a UK Arts and Humanities Research Council (AHRC) "Care for the Future" Theme Large Grant and supported additionally by its host universities and partner organizations. The research programme involved ambitious interdisciplinary research to explore the potential for innovation and creative exchange across a broad range of heritage and related fields or domains of practice, in partnership with a number of academic and non-academic institutions and interest groups. It was distinctive in its comparative approach which aims to bring heritage conservation practices of various forms into closer dialogue with the management

Fig. 6.3.3. Screenshot of the website of the Climate Museum in New York: www.climatemuseum.org

of other material and virtual legacies such as nuclear waste management. It was also distinctive in its exploration of different forms of heritage as distinctive future-making practices.

The project involved an international and interdisciplinary project team, composed of sixteen researchers, each of whom worked across one or more of our four main themes in collaboration with our 25-odd academic and non-academic partner organizations. Empirically, the project drew on the results of comparative research with these organizations which represent a diverse range of interests in the preservation or conservation of natural and cultural heritage. Our research collaborators included museums and museum professional organizations, endangered language documentation programmes, cultural heritage and protected area site management agencies, frozen zoos, herbaria, seed banks, botanical gardens, and landscape rewilding projects, as well as a range of government and non-government organizations tasked with representing the interests of natural and cultural heritage preservation in a number of different ways.

Central to the project was the idea that futures are not simply emergent, but that futures are designed. What I mean by this is that futures are built and assembled as a result of actions in the present which are formed out of particular constellations of things, persons, places and practices, and their coming together – in conflict or collaboration – at a particular moment in time. We used the term conservation broadly to refer to the maintenance of plants, animals, languages, practices, ideas, persons, things, traces, residues and materials from the past, in the present, for the future (and we often hear this claim made for heritage as being something from the past which is conserved for "future generations"). But most importantly, we see that different forms of conservation practices often work towards assembling quite different futures and quite divergent worlds – and in doing so they have the potential to undermine or come into conflict with one another. The project asked its partner organizations to think through the different kinds of futures which they are involved in making within their own organizations through their own specific conservation practices, and to explore how they might relate to others. In this sense, the project aimed to encourage its partners to develop shared, integrated responses to common problems, many of which touch on issues of global concern.

REIMAGINING MUSEUMS FOR CLIMATE ACTION

By contrast with the last project, Reimagining Museums for Climate Action, co-led with Colin Sterling (University of Amsterdam) in collaboration with Henry McGhie of Curating Tomorrow and Emma Woodham and colleagues at the Glasgow Science Centre, aimed to collaborate with a range of actors outside of the heritage and museums sector in reimagining the futures of museums and heritage.

Reimagining Museums for Climate Action began life as a design and ideas competition, launched on International Museum Day 2020. Responding to the two main pillars of climate action – mitigation and adaptation – the competition asked how museums could help society make the deep, transformative changes needed to achieve a net-zero or zero-carbon world. Rather than focus on a specific location or type of museum, the competition invited proposals that aimed to unsettle and subvert the very foundations of museological thinking to support and encourage meaningful climate action. We specifically asked for design and concept proposals that were radically different from the traditional museum, or that explored new ways for traditional museums to operate. The responses, which could address any aspect of museum design and activity, ranged from the fantastical to the highly practical.

The competition closed on the 15 September 2020 and attracted over 500 expressions of interest and more than 250 formal submissions from almost 50 different countries. Working with the Glasgow Science Centre and our team of international judges, eight teams were invited to develop their proposals for an exhibition at Glasgow Science Centre, the official "Green Zone" for COP26 in November 2021.

The exhibition featured proposals from Brazil, Indonesia, Singapore, the United States and the UK. The exhibits ranged from interactive models to concept designs, to apps and short films, including the short film *Elephant in the Room*, produced by Design Earth and featuring Donna Haraway as its narrator. The global scope of the proposals shows that museums have an important role to play in addressing climate change at an international level, tailored to their local context, and the ambition from both outside and within the sector to reimagine museums to address complex contemporary problems.

The exhibition was accompanied by a series of events and activities, both online and in person, side events during COP26, a museums and climate toolkit, and exhibition book – all of which available in open access through the project's website. We also ran a series of national and international workshops with a range of partners to promote and encourage practitioners to use the toolkit during this final year of the UK's COP presidency.

CONCLUSIONS

Enabling, empowering and mobilizing public action on climate will be crucial to the goal of maintaining global heating at or below 1.5°C, and to reimagining and recreating a net-zero or zero-carbon world. The Framework Convention on Climate Change (United Nations, 1992) and the Paris Agreement (United Nations, 2015a) both recognize the crucial importance of involving the public in climate action. They both specify the importance of public education, training of key groups of staff, public awareness campaigns, public participation in climate change decision making, public access to information relating to science and policy regarding climate change, and international co-operation. These six areas are known informally as Action for Climate Empowerment, or ACE. Heritage sites, organizations, managers, and policy makers have a key role to play in mobilizing action for climate.

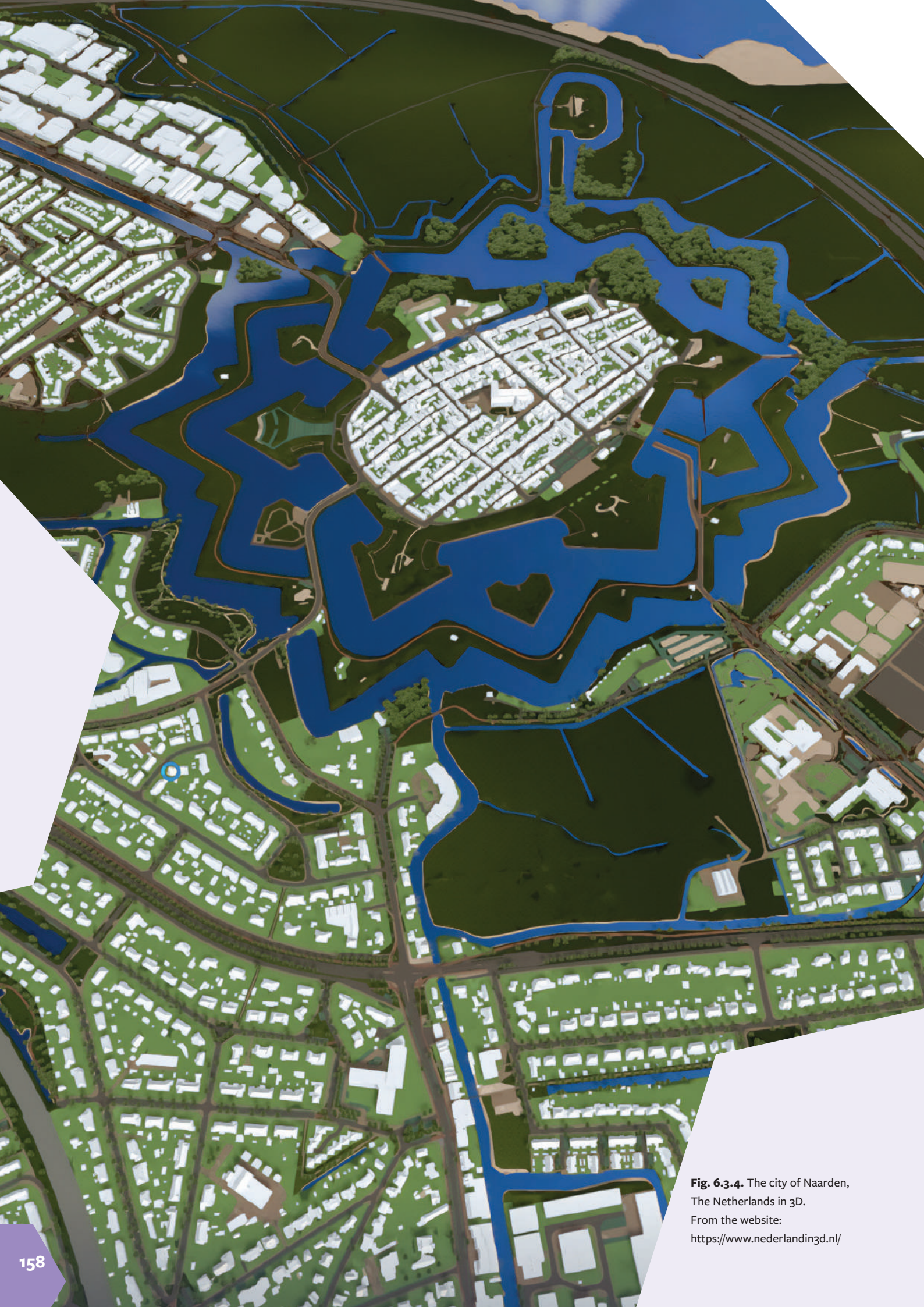


Fig. 6.3.4. The city of Naarden, The Netherlands in 3D. From the website: https://www.nederlandin3d.nl/

6.5. AI, heritage and the Four Worlds of 2050

Socially intelligent ai applications to promote social equity and empower citizens

Sennay Ghebreab is a Professor of Socially Intelligent AI and Scientific Director of the Civic AI Lab. The Lab, a collaboration between the Ministry of the Interior and Kingdom Relations, the City of Amsterdam, Vrije Universiteit Amsterdam and the University of Amsterdam, develops AI technology to increase equal opportunities in the fields of education, welfare, environment, mobility, and health.

INTRODUCTION

Much effort is put into to applying digital technologies to historic buildings, landscapes, prints and artefacts. Platforms such as Europeana, a web portal which contains the cultural heritage collections of over 3 000 institutions across Europe, have successfully catalogued and made accessible vast quantities of historical and heritage resources to scientists and wider publics. Most of these initiatives remain firmly within the realms of history and heritage. In contrast, this chapter aims to highlight how – with the help of socially intelligent artificial intelligence (AI) – such platforms can be further harnessed to empower citizens to take inspiration from heritage and to participate in discussions about the future of society.

As director of the Social AI Lab, I aim to develop and research with my team AI applications that promote social equity and empower citizens. This chapter draws on our collaboration with the Amsterdam Time Machine, an exciting project led by Julia Noordergraaf, Professor of Digital Heritage at the University of Amsterdam. The Amsterdam Time Machine contains a wealth of digital resources about the city's 750-year past. We are extending it into the future (including current data and simulations of possible futures) and integrating AI tooling that enables citizens to share their histories and desires for the future.

The first part of the paper is based on an essay that I wrote a few years ago titled "The New Society Calls for Digital Literacy and Numeracy". In this essay, I describe the need for and the importance of digital engagement for contemporary but also future societies. In the second part, I focus on how we can imagine and shape the future based on the Amsterdam Time Machine.

A HIGHLY DIVERSE, DYNAMIC AND DIGITAL SOCIETY

Fundamental changes are underway in Europe and the rest of the world. Institutions that connected people and served as social hubs, such as churches and trade unions, are losing members and are giving way to digital echo chambers. Individualization, privatization and the influence of the market are rapidly changing the public domain. In politics, there is a shift from an emphasis on the politics of *ideology* to the politics of *identity*.

These fundamental changes are leading to uncertainty about the societies we live in. As the British neurobiologist, writer and political commentator Kenan Malik notes, society is increasingly no longer defined in ideological terms, but in terms of ethnicity, culture, or lifestyle (Malik, 2013). People are less likely to ask "what kind of society do I want to live in?", and more likely, focus on the questions "who are we?" and "who am I?". These changes permeate the very capillaries of society.

There are two key drivers: diversification and digitalization. This combination is resulting in highly diverse, dynamic and digital communities. Communities with overlapping, but also conflicting and chang-

ing identities. These dynamics make it difficult for people to envision a common future. They also make it hard for policymakers to know communities, their needs and what they are able to contribute to society.

FOUR SCENARIOS FOR FUTURE SOCIETY

The report "Citizens Bringing the Future Forward" by the Forum for the Future (2017) describes four scenarios for society in the year 2050. Each represents a radically different future compared to the world we are living in now. The four scenarios are defined along two axes: top-down vs. bottom-up governance; global vs. local orientation. In reality, we will probably end up with in-between forms, and different places will have their own different ways of living together. But it is helpful to consider these four extremes because they can trigger our thinking about the future we aspire to and about how we can move in that direction.

Dominating the discussion about the future and the role of AI therein are Big Tech companies, who promote working towards a future in which citizens are part of their business or control model. A future with a global orientation, top-down governance and with the citizen as an economic unit. This scenario will not last in a society with a growing diversity of people and a growing call for democratization of AI and technology in general. The other three future scenarios with the local orientation and/or bottom-up governance have a chance of success only if citizens sit down at the drawing board. This requires that citizens are able to reimagine their future, while at the same time facing their own history and heritage.

AMSTERDAM TIME MACHINE

This is where we believe socially intelligent AI applications such as the Amsterdam Time Machine could play a crucial part. Through the Time Machine and extensions we are currently developing, we attempt to create a drawing board on which citizens and communities, together with civil servants, other professionals and organizations, are able to re-imagine and drive their futures in part based on their past, both collective and personal.

The basic idea of the Time Machine is a digital twin of the City of Amsterdam (see Scholten, de Kleijn and van Manen in Chapter 6.3.). A virtual 3D replica that provides all citizens of Amsterdam access to all data about their city – past, present and (simulated) future. The virtual 3D replica has time stamps allowing citizens to witness the construction and development of the city, including the 17th-century canal belt (recently declared UNESCO World Heritage), but also the 19th-century working-class neighbourhoods and the current transformation of the docklands. Because many Amsterdam archives and libraries have connected their digital sources to the Time Machine, users can access enormous amounts of historical information on their PC in a structured way, from the level of person, location, object or event to the larger pattern of urban life and culture in the past. We are extending this with features to allow citizens to upload data stories, their own memories and the values they attribute to a specific place or event. Other citizens can view these stories and add their own. In this way, the Amsterdam Time Machine connects citizens with each other, but also with their city, on the basis of identity, on the basis of *heritage*.

Heritage and history play an important role in the Time Machine, because in order to know who you are and where you are going, it is important to know where you come from. This harks back to Malik's perspective (Malik, 2013). There is a shift away from a common vision for the future to questions about the past: "Who am I? Where do I come from?". In a way, we are trying to connect the individual, the past with the tools that can help individuals re-imagine a common future.

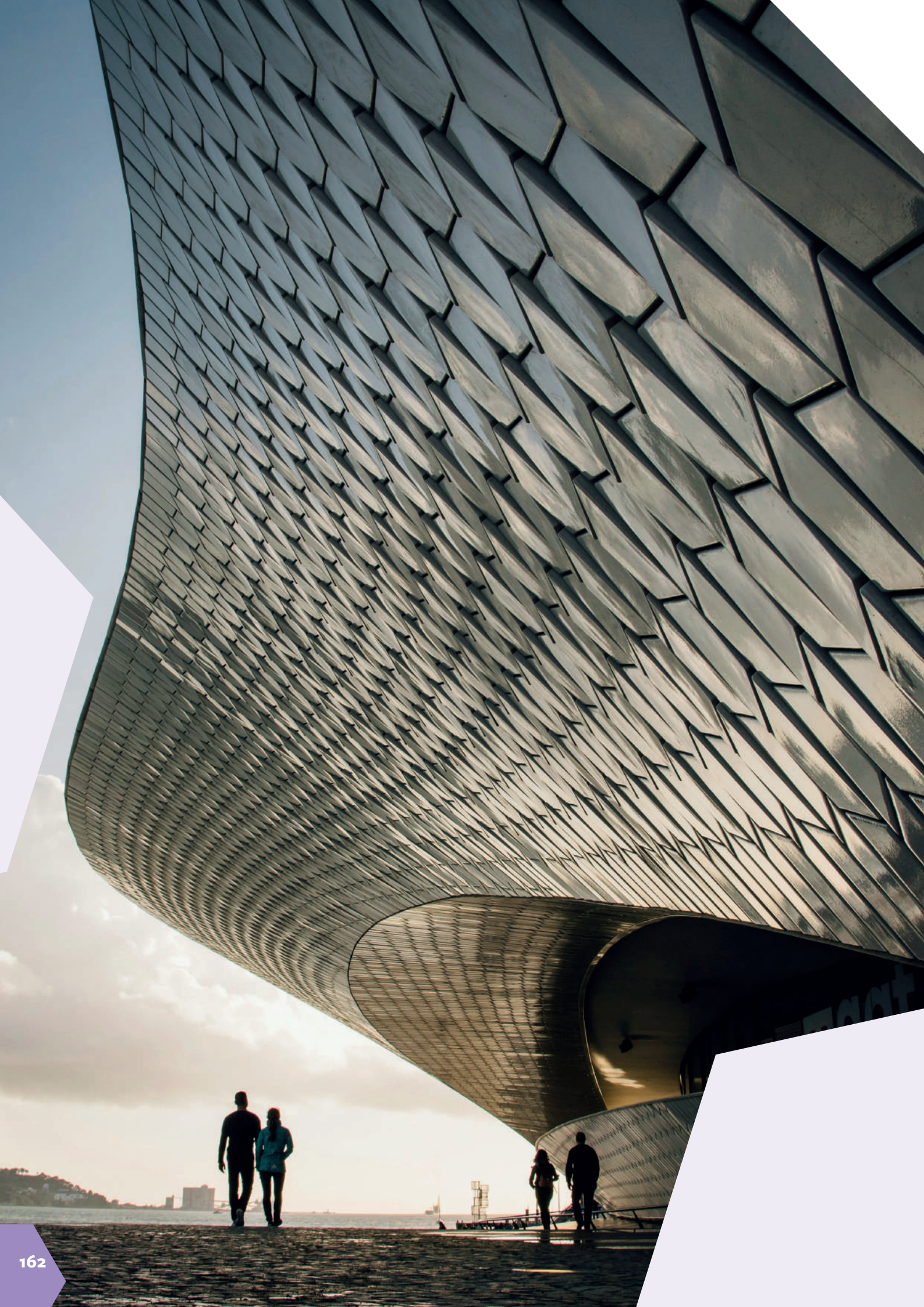
To this end, we also work with public and private organizations to add current data and simulations of future changes to the Amsterdam Time Machine. These organizations have valuable data on contemporary

Fig. 6.3.5. Screenshot from the Amsterdam Time Machine website: diaries.amsterdamtimemachine.nl

issues such as the energy transition, housing, transportation, water management and cultural activities in the city, which we can combine with the historical data present in the Time Machine to analyse the impact of past interventions and simulate the impact of proposed future ones. We invite citizens to add their ideas and wishes for their future neighbourhood; to respond to proposals made by other citizens, the local authorities and other institutions. In this way, the Amsterdam Time Machine becomes a powerful tool for shaping the city of the future in a just and equitable manner, considering the impact of all kinds of decisions, interventions on different communities and people in the city.

Working together on AI in this way will tell us there is a lot of bias – because of the bias in the training data we take from historical or current data sets, the AI models we build from them will also be biased. In other words, AI is not the source of bias, the bias comes from society. If we can use AI and the adverse effects of AI as the mirror that shows us where things go wrong, then we can use AI for social good, for equal opportunity, for different treatment, and so on.

That is why we believe our work as Social AI Lab with the Amsterdam Time Machine team can serve as a model; other historical and heritage platforms, like Europeana, can similarly be furnished with socially intelligent AI to serve as interactive drawing boards for citizens and other stakeholders to make a more equitable future together, to make worlds that might be different in the way that it is composed, in terms of governance, the role of technology, and so on.



Chapter 7

IMPACT AND AFTERLIFE

From the outset, creating academic and societal impact has been a primary goal of Heriland, to be reached first and foremost through the research and training model that has been amply discussed in the previous chapters. A Marie Skłodowska-Curie doctoral training network has turned out to be an essential step towards establishing this goal, allowing to build a large consortium of key players that jointly defined, evaluated and grounded such a model. Between 2020 and 2023, the model was used to train fifteen early-stage PhD researchers (ESRs). It was also used to mould and inspire teachings at the level of master and bachelor curriculums at the five participating universities in Europe and in Israel, reaching hundreds of students. In this way, Heriland achieved its mission of training a new generation of academics, policymakers and professionals able to guide innovative planning and design strategies for regenerating European heritage and landscape. The previous chapters have demonstrated the impact Heriland has managed to achieve, addressing the project in general and through individual cases. Below, this impact will be summarized at various levels, starting from career perspectives and employability (Chapter 7.1.), before going into doctoral training at the European level in general (Chapter 7.2.) and finally focusing on the outreach and dissemination (Chapter 7.3.).

7.1. Enhancing career perspectives and employability

Career perspectives and employability of the ESRs (or trainees) have been amongst the central objectives of Heriland. Thanks to the variety of profiles of the beneficiary and partner organizations, the Heriland College has been able to train its researchers for academic careers, as well as for management positions at heritage and landscape-related local, regional, national and international public bodies and private organizations. Besides the interdisciplinary and transnational research and training programme, the secondments outside academia added on-the-job experience, as well as direct exposure to the job market. From national heritage boards and municipalities to planning, development and design agencies, and from academic institutions to NGOs and SMEs, the wide variety of public and private Heriland partner organizations make up training partners, end users, as well as potential future employers for the trainees. The programme has empowered trainees to have real societal impact and meet requirements in today's labour constellation, in which specialists are expected to work towards attaining inclusive, vibrant and accessible communities, as well as to foster strategies for smart spatial transformations and improve transdisciplinary and trans-sectoral co-creation. The following paragraphs will briefly outline these responsibilities, pointing to the components of Heriland College that have helped the ESRs developing this desired skillset.

INCLUSIVE, VIBRANT AND ACCESSIBLE COMMUNITIES

The trainees have developed a deep understanding of European cultural heritage as an asset to promote social cohesion and integration. The Heriland College is designed to create awareness of multi-cultural

meaning-making with regard to heritage. The skills that they develop through the individual living labs, for instance, address a plurality of citizens, from long-established residents to newcomers such as immigrants, inviting both to actively participate in defining heritage values and formulating transformation and conservation aims. Trainees also produce guidelines about how participatory solutions can improve spatial quality and human-space interaction. All these are qualities increasingly pertinent for heritage practice.

STRATEGIES FOR SMART SPATIAL TRANSFORMATION

Just as crucial in the current heritage field is an understanding of the interplay between cities and surrounding regions, in terms of heritage development, tourism and quality of life. This is another skill the Heriland trainees develop, enabling them to analyse the social, cultural and economic impact of heritage; as a result, they can offer cities and regions in which they work, a powerful, research-based instrument consisting of using heritage as a driver for change, e.g. for the redevelopment of vacant buildings and spaces. Moreover, Heriland trainees are well prepared to assist local governments in mapping different interests at stake in tourism policies and related spatial strategies, among others, by measuring perceived values of both costs (e.g. crowdedness) and benefits (e.g. well-being and income).

TRANSDISCIPLINARY AND TRANS-SECTORAL CO-CREATION

Heriland training also satisfies labour market needs in that it educates researchers to develop co-creative planning methods. This is a strong requirement in jobs where location is important for understanding meaning and sociocultural importance (buildings, landscapes, etc.). Skills acquired through Heriland College stimulate growth in location-based cultural heritage and geospatial management. The programme's transdisciplinary approach also encourages dialogue between past-oriented experts (including archaeologists), future-oriented professionals (such as urbanists), and civil society.

The above impact and career perspectives were emphasized in individual ESR career development plans. They were also strengthened during the project's lifetime by ongoing exchange and dialogue with key players in the labour market, amongst others in the form of a matching event, to which key players were invited to meet and scout ESRs in "speed dating" sessions aimed at exploring fitness for job opportunities. Ready for the future, equipped with knowledge and skills tailored to creating impact and aligning with the labour market, the ESRs themselves are a prime product and impact factor of the Heriland project. This is enhanced through the project's emphasis on additional transversal practical and entrepreneurial skills (e.g. project design/management, fundraising, logistic and financial planning, taking care of administrative and legal issues, and reporting on projects and activities).

7.2. Contribution to structuring doctoral training at the European level

Heriland has significantly enhanced transnational cooperation in the fields of cultural heritage and spatial planning. It has strengthened the partnership network and the international profile of its participants and improved the transfer of knowledge between disciplines, sectors and countries. Such an active, Europe-wide networking has a structuring impact on research training in cultural heritage management. By crossing and linking existing partnerships and training programmes, the Heriland College contributes

to decreasing fragmentation, avoiding duplications in academic curriculums and increasing the overall scientific quality of training to the benefit of the emerging researchers and future practitioners. The broad spectrum of research and innovation activities, the cross-disciplinary perspective and the transnational mobility of the trainees are fully aligned with the EU's Principles for Innovative Doctoral Training and contribute to outlining a novel early-stage training and education model.

The new heritage paradigm which is at the heart of Heriland has simultaneously advanced academically and practically. It involves a wide array of scientific disciplines and a broad range of sectors in society, from the real estate world to governance and from social work to smart and creative industries. For each of these sectors there exist tailor-made training facilities, although at the PhD level their number is relatively low and very few of them explicitly adopt an intersectoral approach. There is also great geographical variance in the nature and intensity of such training and transdisciplinary collaboration is not usually a priority. These constraints are strengthened by the sheer width of this emerging domain, which makes it impossible for a single institution to cover all fields or to train heritage planning in all its aspects, let alone to strive also for innovation. Heriland fills this gap, answering the call for an interdisciplinary and intersectoral approach.

In doing so, the project innovates in bridging in particular the gap between cultural heritage management on the one hand and spatial development, planning and urbanism on the other. Heriland also takes heritage out of its comfort zone, positioning it in the context of socio-political, economic and demographic challenges and SDGs. Moreover, as the previous sections of this chapter have demonstrated, its trainees have acquired a highly diverse set of scientific and complementary professional skills relevant to academic, private and public sector jobs. These skills bring research beyond the state of the art in that they:

- produce research-based insights into the differences and similarities in current European heritage management ethics and practice, in particular in relation to spatial planning;
- invent new, sustainable ways of bringing historical and heritage research to bear on contemporary and future landscape, as well as urban planning challenges and related policies;
- conceive new participative concepts supporting citizens and experts in defining heritage values in a reflexive manner and in making these an integral part of heritage planning;
- provide new tools and services that capture academic, professional, public and private perspectives and communicate these in formats that promote mutual understanding of viewpoints; and
- conceptualize new sets of co-creative frameworks, procedures and methods fostering democratic decision-making about heritage management in relation to urban change.

7.3. Outreach and dissemination

Heriland's impact has benefited much from a well-defined strategy for outreach and dissemination. The following events and actions proved to be particularly effective instruments in this pursuit:

1) A series of six network-wide workshops in Amsterdam/Delft (on site), Gothenburg, Newcastle and Jerusalem/Lifta (online). During these one-week events, members of the network and the wider research and professional community shared knowledge. For the workshops, relevant scholars and researchers from outside the network were invited as keynote speakers or discussants, and special efforts were made to attract young researchers from countries not involved in the network. The project's trainees used the occasions to have their research progress peer-reviewed on a regular basis, engaging with professionals who were not part of the Heriland network. At the workshops, public meetings were also organized to communicate and debate the project's aims, concepts and first results with a wider audience, consisting mainly of scholars, professionals, managers and administrators in the field of cultural heritage.

2) The individual living labs, discussed in Chapter 4, enabled the ESRs not only to carry out their individual studies, but also to exchange experience and widen their academic and professional networks with external researchers and invited experts. The individual living labs also allowed the ESRs to cooperate with public and private stakeholders and with citizen groups. The results of these living labs were shared with academic and professional peers through the workshops, the final conference, and the Heriland Handbook;
3) Heriland participants have communicated and discussed the project's aims, concepts and results through successful symposiums and conferences in Rome and Amsterdam and with paper presentations at scientific conferences, within the Heriland consortium, as well as at other venues (e.g. the Royal Netherlands Institute in Rome, the Association of Critical Heritage Studies, the Landscape Archaeology Conference, and the European Conference of Geodesdign+BIM)
4) Various (social) media tactics were adopted to reach a broad audience with project updates and outcomes. Academic, formal and semi-formal content was regularly shared to arouse followers' interest. To that aim, the project also produced live broadcasts, webinars, conference keynote speeches and blog posts. A trailer video and high-quality recordings of one of the symposiums continue to reach audiences to ensure awareness of the project and its outcomes.
5) The research projects conducted under the banner of Heriland have led to a range of scientific publications, contributing to the dissemination of knowledge within the scientific and professional community. These include, among others, the evolving PhD dissertations, or peer-review journal articles stemming from the doctoral research projects.

7.4. Afterlife

Heriland was set up with a long-term mission of building a new generation of heritage researchers and professionals. To that aim, the Heriland College has now been transformed into an international graduate school under a new consortium agreement, securing its afterlife. The new agreement was signed in 2024 under the same project name and will run initially until 2029. Thus, the Heriland College continues to add and sustain the master and PhD curriculums in heritage-related disciplines at partner institutions, whilst also serving as a platform for collaborative research and training, open to students and ESRs from other institutions worldwide. Following the original Heriland philosophy, current training is offered in:

- a research design with which to investigate at a multi-national level how heritage should be managed and planned in the context of contemporary spatial and societal transformations and related SDGs;
- a skillset with innovative analytical concepts, methods and tools, which are to be implemented and evaluated in practice;
- an innovative and diverse set of concepts, techniques and skills for promoting and supporting co-creative approaches; and
- scientific and complementary professional skills ("on-the-job" training) and exposure to multiple audiences (also in dissemination).

To reach these aims, a series of collaborative training activities is being organized, ranging from secondments and exchange opportunities, to online webinars, reading clubs and blended intensive workshops

In addition to the collaborative initiative, the individual partners' curriculums to lesser or stronger degrees have come to align with the Heriland scheme. As an example, Bezalel Academy's Urban Design Graduate Programme has integrated the Heriland case study experiences in Israel in a new study track on heritage and conservation. Heriland spin-offs and further actions also include: Erasmus+ funded workshops on Cultural Heritage and Spatial Planning; the Erasmus+ Strategic Partnership EDICULA, which is

an innovative approach to develop an educational framework that fuses interdisciplinary collaboration among the sectors of applied sciences in the protection of monuments; or the creation of Heritopolis, an international initiative linking heritage and metropolitan issues towards sustainable urban development within the framework of UN-Habitat University partnerships.

Most importantly, as we have already emphasized, the Heriland project operates within an ongoing paradigm shift in professional conservation ethics regarding cultural heritage in Europe in general. This was partly preFig.d by the European Landscape Convention of 2000 and the 2005 Faro Convention on the Value of Heritage for Society. Numerous networks, programmes, trainings and periodicals are now active, covering specific aspects of this trend, from the Association of Critical Heritage Studies to the Journal of Cultural Heritage Management and Sustainable Development. In sum, Heriland's afterlife is all but isolated.

Chapter 8
CONCLUSIONS

Heriland set out to develop an agenda that informs and inspires a new generation of academics, policy-makers, practitioners, professionals and entrepreneurs who work at the intersection of heritage and landscape change. Over a period of 48 months, 15 ESRs, their academic supervisors and partners from industry, NGOs and the public sector collaborated on the agenda. This Handbook has presented its building blocks and illustrated how they – when applied in unison – can positively transform research, training and planning practices.

The building blocks of the agenda are – as outlined in Chapter 1:

First To embrace a unifying and developmental landscape perspective, in which heritage is positioned within spatial and social transformation processes.

Second To seek co-creation processes that welcome and support various actors and communities to deliberate together how heritage values can enhance (and in turn be enhanced by) spatial and social changes.

Third To adopt concepts, methods and tools that are capable of informing co-creation and heritage-informed landscape transformation processes, and to review how these work out in practice in different planning settings.

Fourth To adopt a training framework that integrates all the previous building blocks in order to support cohesive, life-long training for all students, researchers and practitioners working at the intersection of heritage and landscape change.

Whilst Chapter 2 introduces the reader to the educational details of the training framework, Chapter 3 presents the key to Heriland, which guides all training and research, i.e. five societal challenges that are currently considered to have major impacts on heritage and living environments across the globe. All Heriland work has been organized accordingly, in five work packages, each of which was dedicated to one challenge:

1) Increasing holistic understandings of tangible and intangible aspects of our living environments: *the spatial turn*;
2) Challenges to long-standing forms of democratic governance: *democratization*;
3) The increasing digital connectedness of people: *digital transformations*;
4) Large-scale demographic shifts due to aging, conflict, and migration: *shifting demographies and contested identities*; and
5) Environmental shifts resulting from the climate crisis and climate adaptation measures: *changing environments*.

We consider these challenges the necessary backdrop to heritage and landscape practices but also view them as transformations to which these practices should make positive contributions.

Each of the work packages saw three ESRs engage in individual, but interrelated projects. The fifteen projects (or individual living labs) discussed in Chapter 4 highlight the positive societal impacts and scientific insights that can be achieved if all the building blocks of the agenda are implemented in a cohesive manner.

The *spatial turn* research has clearly demonstrated the added value of space-centred approaches for the future of heritage management and development planning. It has made very clear that the spatial turn is also a cultural turn that requires attention be paid to the perception of and access to landscape. Marilena Mela's study of four islands in Greece, Scotland, Italy and the Netherlands showed how social and environmental confrontations occur when renewable energy infrastructures are established in self-contained places and landscapes with strong heritage and identity. Rebecca Staats developed and tested a conceptual framework of place care as an analytical lens for understanding place-centric activities. Rusudan Mirzikashvili's case studies in England highlighted the importance of landscape as heritage in integrated governance, across sectors, disciplines and actors, in planning and policy systems.

In the *democratization* work package, researchers focused on the concepts of participatory democracy and public participation, featuring citizen input in decision-making on heritage matters. Alana Castro unravelled the disputes between stakeholders over the siting, design and content of memorials commemorating the victims of the transatlantic slave trade and the Holocaust. Tinatin Meparishvili studied the impact of mass tourism on the daily lives of citizens and Nan Bai demonstrated how social media platforms actively involve online communities, local and global, in heritage-related activities.

All three ESRs working in the *digital transformations* work package elaborated on digital applications to facilitate dialogue between citizens and professionals *and* to make heritage part of holistic planning decisions. Farnaz Faraji investigated the interpretation of the urban landscape through physical and digital engagements by migrants in Greater Manchester, United Kingdom. Maciej Swiderski captured place-based memories as input for collaborative planning decisions by citizens and professionals in Warsaw, Poland, and Komal Potdar tested the use of datascaping as a tool to reconcile a city's complex socio-spatial and heritage structure with development processes in various cases in Israel.

The three ESRs working on *shifting demographies and contested identities* successfully developed and tested procedures and tools that challenge European key social-demographic issues such as gentrification, multiculturalism, and population decline and growth. Ana J. Yarza tested the adaptive reuse of urban heritage in contested contexts in Acre, Israel; Sophia Arbara revealed the cultural aspects of mobility and its effects on the built environment, working with Roman street spaces; and Moses Katontoka provided tools to assess the relationship between heritage zoning and urbanization.

The *changing environments* work package focused on the role of heritage in environmental adaptation, in particular with regard to urban-rural interactions and the future of post-industrial landscapes. Maitri Dore sought to enrich heritage planning in practice by developing models of compensation as a response to loss of cultural heritage, based on two large urban infrastructural cases in Gothenburg, Sweden, and Mumbai, India. Marta Ducci tested innovative co-creation methods based on digital mapping software to help citizens to participate in the planning of landscape transformations in the Italian region of Apulia. Anna Tonk developed a methodology for critically engaging with the role of heritage as a vehicle for sustainable change.

Whilst the ESR projects demonstrate what can be reached through individual, in-depth multi-annual studies, the network-wide Rome Living Lab, discussed in Chapter 5, successfully showed the strength of interdisciplinary teamwork, putting the collective ESR team to the challenge of a major, real-life heritage planning assignment for which they had only two weeks. The outcome of this living lab was a series of master plans for the reconnection and regeneration of abandoned parts of the two Tiber riverbanks, in which cultural heritage has a central role. These plans have been elaborated collectively through various steps of analysis (e.g. with regard to connectivity, spatial justice or sustainability), stakeholder participation and landscaping. In conclusion, the living lab concept – as tested in Rome – offers an ideal ground to make a collaborative effort in operationalizing and testing all different disciplinary, interdisciplinary and intersectoral perspectives and skills in interaction with each other.

As has been frequently emphasized in this handbook, the Heriland training and research presented above are part of a much broader paradigm shift in the approach towards heritage and landscape manage-

ment. In contrast to traditional conservation ethics, which have a strongly protectionist and isolationist focus on iconic heritage objects, monuments and sites, the new paradigm emphasizes the potential role of heritage values as a major resource for regeneration and a sustainable future. In Chapter 6, this paradigm shift is exemplified in a series of keynotes of senior Heriland staff and colleagues in the field who provided helicopter views of specific methods, concepts and policy instruments, from Historic Landscape Characterisation and UNESCO's Historic Urban Landscape Recommendation to digital twinning, climate activism and socially intelligent artificial intelligence.

Various conclusions can be drawn from these contributions. First, all keynotes adopt a wide geographical and societal perspective, recognizing that heritage and landscape definitions are in essence social processes and expanding the spectrum of potential heritage values beyond traditional, emblematic values to include cultural landscapes at large. The focus is no longer on localized heritage objects, monuments or sites preserved in isolation from the social and spatial contexts around them, but rather on these very same broader contexts. Also, the five keynotes manifest a general acknowledgement of the multiple temporal as well as social layeredness of heritage and landscapes, and an insistence on accessibility as a human right, on social equity and the empowerment of citizens. Intimately linked to this, heritage and landscape care are approached as holistic and co-creative change management, in some cases even of radical forms of change, for instance through climate action (see Chapter 6.4.). Furthermore, it may be concluded from the two keynotes on digital twinning and AI, respectively, that digital heritage approaches offer multiple users – from researchers to planners and citizens – a powerful instrument not only to monitor past landscape change, but also to participate in data-informed and collaborative decision-making about future changes.

With the above, the Heriland endeavour has made a significant contribution to the new paradigm. A conclusion on impact is presented in Chapter 7. To summarize, the impact of Heriland is manifest at various levels, from that of outreach and dissemination to that of offering career perspectives and employability to its trainees. But foremost, Heriland's impact can be argued to be significant at a more general level, in that it contributes to educating a new generation of academics, policymakers and professionals able to guide innovative planning and design strategies for regenerating European heritage and landscape. Heriland provides for the first time a comprehensive transdisciplinary and transnational doctoral training programme in this field, inspiring teaching at the level of doctoral, master and bachelor curriculums throughout Europe. In doing so, the project innovates in particular in bridging the gap between cultural heritage management on the one hand and spatial development, planning and urbanism on the other. Likewise, it transcends the still strongly institutionalized boundaries between distinct academic disciplines, governmental agencies and professional and business fields.

As the Heriland College approaches its 5-year anniversary, the partners continue to demonstrate an unwavering dedication to its mission, fuelled by the conviction that today's pressing societal challenges require the implementation and further development of the Heriland agenda.

We would like to close with an open invitation to readers to make the agenda their own and join hands with us.

Bibliography

ALLEA. 2023. *The European Code of Conduct for Research Integrity - Revised Edition*. Berlin. https://allea.org/code-of-conduct/

Álvarez Larrain, A. & McCall, M.K. 2019. Participatory Mapping and Participatory GIS for Historical and Archaeological Landscape Studies: a Critical Review. *Journal of Archaeological Method and Theory*, 26(2): 643–678. https://doi.org/10.1007/s10816-018-9385-z

Amoroso, N. 2010. *The Exposed City: Mapping the Urban Invisibles*. Hoboken, Taylor & Francis. http://www.myilibrary.com?id=258973

Antonsich, M. 2010. Searching for Belonging – An Analytical Framework. *Geography Compass*, 4(6): 644–659. https://doi.org/10.1111/j.1749-8198.2009.00317.x

Apostolopoulou, E. 2020. *Nature Swapped and Nature Lost: Biodiversity Offsetting, Urbanization and Social Justice*. Cham, Switzerland, Palgrave Macmillan.

Appadurai, A. 2013. *The Future as a Cultural Fact: Essays on the Global Condition*. London, Verso.

Araoz, G. 2011. Preserving heritage places under a new paradigm. *Journal of Cultural Heritage Management and Sustainable Development*, 1: 55–60. https://doi.org/10.1108/20441261111129933

Arbara, S., van Nes, A. & Pereira Roders, A. 2023. Cultural Heritage Attractors: Does Spatial Configuration Matter?: Applications of Macro- and Micro-Spatial Configurative Analysis in the Historic Urban Area of Rome. *Urban Morphology*, 27: 121–142. https://doi.org/10.51347/UM27.0012

Arnstein, S.R. 1969. A Ladder of Citizen Participation. *Journal of the American Institute of Planners*, 35(4): 216–224.

Ashworth, G. & Page, S.J. 2011. Urban Tourism Research: Recent Progress and Current Paradoxes. *Tourism Management*, 32(1): 1–15. https://doi.org/10.1016/j.tourman.2010.02.002

Ashworth, G. 2011. Preservation, Conservation and Heritage: Approaches to the Past in the Present through the Built Environment. *Asian Anthropology*, 10: 1–18.

Ashworth, G.J., Graham, B.J. & Tunbridge, J.E. 2007. *Pluralising Pasts: Heritage, Identity and Place in Multicultural Societies*. London, Pluto Press. http://bvbr.bib-bvb.de:8991/F?func=service&doc_library=BVB01&doc_number=018000110&line_number=0001&func_code=DB_RECORDS&service_type=MEDIA

Ashworth, G.J. 1991. *Heritage Planning: Conservation as the Management of Urban Change*. Groningen, Geo Pers.

Bai, N., Nourian, P., Luo, R., Cheng, T. & Pereira Roders, A. 2023. Screening the Stones of Venice: Mapping Social Perceptions of Cultural Significance through Graph-Based Semi-Supervised Classification. *ISPRS Journal of Photogrammetry and Remote Sensing*, 203: 135–164. https://doi.org/10.1016/j.isprsjprs.2023.07.018

Bai, N., Nourian, P., Luo, R. & Roders, A.P. 2022. Heri-Graphs: A Dataset Creation Framework for Multi-Modal Machine Learning on Graphs of Heritage Values and Attributes with Social Media. *ISPRS International Journal of Geo-Information*, 11(9): 469. https://doi.org/10.3390/ijgi11090469

Baird, M.F. 2014. Heritage, Human Rights, and Social Justice. *Heritage & Society*, 7(2): 139–155. https://doi.org/10.1179/2159032X14Z.00000000031

Bandarin, F., Hosagrahar, J. & Sailer Albernaz, F. 2011. Why Development Needs Culture. *Journal of Cultural Heritage Management and Sustainable Development*, 1(1): 15–25. https://doi.org/10.1108/20441261111129906

Bandarin, F. & van Oers, R. 2012. *The Historic Urban Landscape: Managing Heritage in an Urban Century*. Wiley-Blackwell.

Bandarin, F. & van Oers, R. 2014. *Reconnecting the City: The Historic Urban Landscape Approach and the Future of Urban Heritage*. https://doi.org/10.1002/9781118383940

Batty, M. 2013. *The New Science of Cities*. Cambridge, Massachusetts, MIT Press.

Bender, B. 1993. *Landscape: Politics and Perspectives*. Explorations in anthropology. Providence, Berg. http://bvbr.bib-bvb.de:8991/F?func=service&doc_library=BVB01&doc_number=006038185&line_number=0001&func_code=DB_RECORDS&service_type=MEDIA

Bennett, T., Savage, M., Silva, E., Warde, A., Gayo-Cal, M. & Wright, D. 2009. *Culture, Class, Distinction*. Culture, economy and the social. London, Routledge, Taylor & Francis Group.

Berlin, I. 1969. *Four Concepts of Liberty*. Oxford University Press.

Berlin, I. 2000. *The Proper Study of Mankind: An Anthology of Essays*. First Edition edition. H. Hardy, ed. New York, Farrar, Straus and Giroux.

Berman, T. 2017. *Public Participation as a Tool for Integrating Local Knowledge into Spatial Planning*. Planning, Participation, and Knowledge. Springer International Publishing. https://doi.org/10.1007/978-3-319-48063-3

Bhugra, D. & Becker, M.A. 2005. Migration, Cultural Bereavement and Cultural Identity. *World Psychiatry*, 4(1): 18–24.

Biagi, B., Ladu, M.G., Meleddu, M. & Royuela, V. 2019. Tourism and the City: The Impact on Residents' Quality of Life. *International Journal of Tourism Research*, 22. https://doi.org/10.1002/jtr.2326

Bloemers, J.H.F., Kars, H., van der Valk, A. & Wijnen, M. 2010. *The Cultural Landscape & Heritage Paradox: Protection and Development of the Dutch Archaeological-historical Landscape and Its European Dimension*. Landscape & heritage series. Amsterdam, Amsterdam University Press.

Boelens, L. & de Roo, G. 2016. Planning of Undefined Becoming: First Encounters of Planners beyond the Plan. *Planning Theory*, 15(1): 42–67. https://doi.org/10.1177/1473095214542631

Bolòs, J. & Bonales, J. 2015. *Atles històric d'Almacelles*. Almacelles, Ajuntament d'Almacelles. https://www.academia.edu/35449201/ATLES_HIST%C3%92RIC_DALMACELLES_EL_PAISATGE_HIST%C3%92RIC_DUN_MUNICIPI_DE_LA_COMARCA_DEL_SEGRI%C3%80_DES_DE_LA_PREHIST%C3%92RIA_FINS_A_LACTUALITAT

Bolòs, J. 2010. PaHisCat: A Project to Discover the Landscape of the Past and Manage the Countries of the Future. In: *Territori i societat: el paisatge historic*. pp. 371–407. Lleida, Edicions de la Universitat de Lleida.

Borges, M.A. & Carbone, G. 2011. Sustainable tourism and Natural World Heritage. Priorities for Action. [Cited 10 June 2024]. https://www.iucn.org/resources/publication/sustainable-tourism-and-natural-world-heritage-priorities-action

Borghi, J. & van Gulick, A. 2022. Promoting Open Science through Research Data Management. *Harvard Data Science Review*, 4(3). https://doi.org/10.1162/99608f92.9497f68e

Brenner, N. 2019. *New Urban Spaces: Urban Theory and the Scale Question*. New York, NY, Oxford University Press.

Buckley, R. 2018. Tourism and Natural World Heritage: A Complicated Relationship. *Journal of Travel Research*, 57(5): 563–578. https://doi.org/10.1177/0047287517713723

Byrne, D. 2008. Western Hegemony in Archaeological Heritage Management. In: G. Fairclough, J. Jameson Jnr & J. Schofield, eds. *The Heritage Reader*. pp. 229–235. London, Routledge.

Chambers, R. 2006. Participatory Mapping and Geographic Information Systems: Whose Map? Who is Empowered and Who Disempowered? Who Gains and Who Loses? *The Electronic Journal of Information Systems in Developing Countries*, 25(1): 1–11. https://doi.org/10.1002/j.1681-4835.2006.tb00163.x

Chilton, E. & Silberman, N. 2010. Heritage in Conflict and Consensus: Towards an International Agenda for the Twenty-First Century. *Museum International*. https://www.tandfonline.com/doi/abs/10.1111/j.1468-0033.2010.01725.x

Clark, J., Darlington, J. & Fairclough, G. 2004. *Using Historic Landscape Characterisation*. English Heritage and Lancashire County Council.

Colacchio, G. & Vergori, A.S. 2023. Tourism Development and Italian Economic Growth: The Weight of the Regional Economies. *Journal of Risk and Financial Management*, 16(4): 245. https://doi.org/10.3390/jrfm16040245

Colding, J. & Barthel, S. 2019. Exploring the Social-Ecological Systems Discourse 20 Years Later. *Ecology and Society*, 24(1): 2. https://doi.org/10.5751/ES-10598-240102

Congress of Athens. 1931. *The Athens Charter for the Restoration of Historic Monuments*. Athens, First International Congress of Architects and Technicians of Historic Monuments. https://www.icomos.org/en/167-the-athens-charter-for-the-restoration-of-historic-monuments

Conrad, E., F. Cassar, L., Jones, M., Eiter, S., Izaovičová, Z., Barankova, Z., Christie, M. & Fazey, I. 2011. Rhetoric and Reporting of Public Participation in Landscape Policy. *Journal of Environmental Policy & Planning*, 13(1): 23–47. https://doi.org/10.1080/1523908X.2011.560449

Cooke, B. & Kothari, U., eds. 2001. *Participation: The New Tyranny?* London, Zed Books.

Corner, J. 2011. The Agency of Mapping: Speculation, Critique and Invention. In: M. Dodge, R. Kitchin & C. Perkins, eds. *The Map Reader*. pp. 89–101. Chichester, UK, John Wiley & Sons Inc. http://dx.doi.org/10.1002/9780470979587.ch12

Council of Europe. 2000. European Landscape Convention, European Treaty Series 176 (Florence Convention). Council of Europe.

Council of Europe. 2005. *Council of Europe Framework Convention on the Value of Cultural Heritage for Society (Faro Convention)*. Faro, Council of Europe.

Covey, S.R. 2020. *The 7 Habits of Highly Effective People: Powerful Lessons in Personal Change*. London, Simon & Schuster.

Cresswell, T. 2006. *On the Move: Mobility in the Modern Western World*. London, Routledge.

Cuba, L. & Hummon, D.M. 1993. A Place to Call Home: Identification With Dwelling, Community, and Region. *The Sociological Quarterly*, 34(1): 111–131. https://doi.org/10.1111/j.1533-8525.1993.tb00133.x

Dabaut, N. 2021. *Landscape Character and Public Perception: A Participatory Historic Landscape Characterisation Approach in Northumberland*. Newcastle University. Thesis. http://theses.ncl.ac.uk/jspui/handle/10443/5473

DeSilvey, C., Fredheim, H., Blundell, A. & Harrison, R. 2022. Identifying Opportunities for Integrated Adaptive Management of Heritage Change and Transformation in England: A Review of Relevant Policy and Current Practice. Historic England. [Cited 10 June 2024]. https://historicengland.org.uk/research/results/reports/18-2022

DeSilvey, C., Fredheim, H., Fluck, H., Hails, R., Harrison, R., Samuel, I. & Blundell, A. 2021. When Loss is More: From Managed Decline to Adaptive Release. *The Historic Environment: Policy & Practice*, 12(3–4): 418–433. https://doi.org/10.1080/17567505.2021.1957263

DeSilvey, C. 2017. *Curated Decay: Heritage beyond Saving*. Minneapolis, University of Minnesota Press. https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=1424658

Dessein, J., Soini, K., Birkeland, I., Fairclough, G., Horlings, L., De Beukelaer, C., Matejic, J. *et al.* 2015. *Culture in, for and as Sustainable Development. Conclusions of COST Action IS 1007 Investigating Cultural Sustainability*. https://doi.org/10.13140/RG.2.1.3380.7844

Deterding, S., Dixon, D., Khaled, R. & Nacke, L. 2011. *From Game Design Elements to Gamefulness: Defining Gamification*. In: *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments*. 2011. https://doi.org/10.1145/2181037.2181040

Dias, E., Linde, M., Rafiee, A., Koomen, E. & Scholten, H. 2013. Beauty and Brains: Integrating Easy Spatial Design and Advanced Urban Sustainability Models. pp. 469–484. https://doi.org/10.1007/978-3-642-37533-0_27

Dicks, B. 2000. *Heritage, Place, and Community*. Cardiff, University of Wales Press.

van Dommelen, S., Pen, C.J. & Platform31. 2013. *Cultureel erfgoed op waarde geschat: economische waardering, verevening en erfgoedbeleid*. Den Haag, Platform31.

Ducci, M., Janssen, R., Burgers, G.-J. & Rotondo, F. 2023a. Co-Design Workshops for Cultural Landscape Planning. *Landscape Research*, 48(7): 900–916. https://doi.org/10.1080/01426397.2023.2204222

Ducci, M., Janssen, R., Burgers, G.-J. & Rotondo, F. 2023b. Mapping Local Perceptions for the Planning of Cultural Landscapes. *International Journal of E-Planning Research (IJEPR)*, 12(1): 1–27. https://doi.org/10.4018/IJEPR.317378

Eikelboom, T. & Janssen, R. 2017. Collaborative Use of Geodesign Tools to Support Decision-Making on Adaptation to Climate Change. *Mitigation and Adaptation Strategies for Global Change*, 22(2): 247–266. https://doi.org/10.1007/s11027-015-9633-4

Elder, E.S. 2020. *Designing Retracement: Evaluating National Historic Trails as Artifact, Strategy, and Experiment in Flow*. UC Berkeley. https://escholarship.org/uc/item/6kn5h0k6

Emerick, K. 2014. *Conserving and Managing Ancient Monuments: Heritage, Democracy, and Inclusion*. Heritage matters series volume 14. Woodbridge, Boydell & Brewer.

Erdoğan, N., Carrer, F., Tonyaloğlu, E.E., Çavdar, B., Varinlioğlu, G., Şerifoğlu, T.E., Jackson, M. *et al.* 2020. Simulating Change in Cultural Landscapes: The Integration of Historic Landscape Characterisation and Computer Modelling. *Landscapes*, 21(2): 168–182. https://doi.org/10.1080/14662035.2021.1964767

Erkan, Y. 2018. The Way Forward with Historic Urban Landscape Approach Towards Sustainable Urban Development. *Built Heritage*, 2(4): 82–89. https://doi.org/10.1186/BF03545686

EUA. 2005. *Bologna Seminar on "Doctoral Programmes for the European Knowledge Society"*. Bologna, European University Association.

EUA. 2010. *Salzburg II - Recommendations. European Universities' Achievements since 2005 in Implementing the Salzburg Principles*. European University Association.

European Commission. 2011. *Report of Mapping Exercise on Doctoral Training in Europe, "Towards a Common Approach"*. Brussels.

European Commission. 2021. *Commission Recommendation on a Common European Data Space for Cultural Heritage*. L 401 (EU) 2021/1970. European Commission.

Exceltur. 2013. *Urbantur 2012: Monitor de competitividad turística de los destinos urbanos españoles*. Exceltur.

Fairclough, G., Baas, H., Bele, B., Dabaut, N., Hovstad, K.A., Jerpasen, G., Larsen, K. *et al.* 2020. The CHeriScape Project, 2014–2016: Key Messages from CHeriScape – Cultural Solutions for Cultural Problems. *Journal of European Landscapes*, 1(1): 31–36. https://doi.org/10.5117/JEL.2020.1.47037

Fairclough, G. & Herring, P. 2016. Lens, Mirror, Window: Interactions between Historic Landscape Characterisation and Landscape Character Assessment. *Landscape Research*, 41(2): 186–198. https://doi.org/10.1080/01426397.2015.1135318

Fairclough, G., Lambrick, G. & McNab, A. 1999. *Yesterday's World, Tomorrow's Landscape*. English Heritage.

Fairclough, G. & Macinnes, L. 2003. *Understanding Historic Landscape Character*. Topic Paper 5: Landscape Character Assessment Guidance for England and Scotland. Natural England. https://publications.naturalengland.org.uk/publication/4670824246149120

Fairclough, G., Särlov-Herlin, I. & Swanwick, C., eds. 2018. *Routledge Handbook of Landscape Character Assessment: Current Approaches to Characterisation and Assessment*. London, Routledge. https://doi.org/10.4324/9781315753423

Fairclough, G. 2006. A New Landscape for Cultural Heritage Management: Characterisation as a Management Tool. In: L.R. Lozny, ed. *Landscapes Under Pressure : Theory and Practice of Cultural Heritage Research and Preservation*. p. 55. http://dx.doi.org/10.1007/0-387-28461-3_4

Fairclough, G. 2019. Landscape and Heritage: Ideas from Europe for Culturally Based Solutions in Rural Environments. *Journal of Environmental Planning and Management*, 62(7): 1149–1165. https://doi.org/10.1080/09640568.2018.1476026

Feilden, B.M. 1982. *Conservation of Historic Buildings*. Technical studies in the arts, archaeology, and architecture. London, Butterworth Scientific.

Ferraro, G.P. 1998. *Cultural Anthropology: An Applied Perspective*. 3rd ed edition. Belmont, CA, West/Wadsworth.

Flyvbjerg, B. 2006. Five Misunderstandings about Case-Study Research. *Qualitative Inquiry*, 12(2): 219–245. https://doi.org/10.1177/1077800405284363

Forum for the Future. 2017. *Citizens Bringing the Future Forward*. London.

Fouseki, K., Guttormsen, T.S. & Swensen, G. 2020. *Heritage and Sustainable Urban Transformations. Deep Cities*. Routledge studies in heritage. Abingdon, Oxon, Routledge/Taylor & Francis Group.

Fung, A. 2006. Varieties of Participation in Complex Governance. *Public Administration Review*, 66: 66–75.

Garcia-Ayllon, S. 2018. Urban Transformations as an Indicator of Unsustainability in the P2P Mass Tourism Phenomenon: The Airbnb Case in Spain through Three Case Studies. *Sustainability*, 10: 2933. https://doi.org/10.3390/su10082933

García-Hernández, M., De la Calle-Vaquero, M. & Yubero, C. 2017. Cultural Heritage and Urban Tourism: Historic City Centres under Pressure. *Sustainability*, 9(8): 1346. https://doi.org/10.3390/su9081346

Gentry, K. & Smith, L. 2019. Critical Heritage Studies and the Legacies of the Late-Twentieth Century Heritage Canon. *International Journal of Heritage Studies*, 25(11): 1148–1168. https://doi.org/10.1080/13527258.2019.1570964

Geonovum. 2021. *National Digital Twin of the Physical Living Environment*. Summary of the investment proposal. Geonovum.

Gibson, L. & Pendlebury, J. 2009. *Valuing Historic Environments*. https://doi.org/10.4324/9781315548449

Gilbert, C. & Bower, J.L. 2002. Disruptive Change. When Trying Harder Is Part of the Problem. *Harvard Business Review*, 80(5): 94–101, 134.

Gill, N. 2010. Pathologies of Migrant Place-Making: The Case of Polish Migrants to the UK. *Environment and Planning A: Economy and Space*, 42(5): 1157–1173. https://doi.org/10.1068/a42219

Giudici, M.S. 2014. *The Street as a Project. The Space of the City and the Construction of the Modern Subject*. Delft, TU Delft.

Gottwald, S., Brenner, J., Albert, C. & Janssen, R. 2021. Integrating Sense of Place into Participatory Landscape Planning: Merging Mapping Surveys and Geodesign Workshops. *Landscape Research*, 46(8): 1041–1056. https://doi.org/10.1080/01426397.2021.1939288

Gottwald, S., Brenner, J., Janssen, R. & Albert, C. 2020. Using Geodesign as a Boundary Management Process for Planning Nature-Based Solutions in River Landscapes. *Ambio: A Journal of Environment and Society*, 50(8): 1477–1496. https://doi.org/10.1007/s13280-020-01435-4

Gould, P.G. 2017. Considerations on Governing Heritage as a Commons Resource. In: *Collision or Collaboration : Archaeology Encounters Economic Development*. p. 171. One World Archaeology. http://dx.doi.org/10.1007/978-3-319-44515-1_12

Graham, B.J., Ashworth, G.J. & Tunbridge, J.E. 2000. *A Geography of Heritage Power, Culture and Economy*. London, Routledge.

Graham, S. & Marvin, S. 2001. *Splintering Urbanism. Networked Infrastructures, Technological Mobilities and the Urban Condition*. London, Routledge.

Grahn Danielson, B., Rönn, M. & Swedberg, S. 2013. *Policies and Compensation Measures: The Impact of Land Development on the Values of Cultural Heritage Sites in a Democratic Landscape*. Meeting of the European Association of Archaeologists, Pilsen, Czech Republic, 2013.

Gray, S.A., Zanre, E. & Gray, S.R.J. 2014. Fuzzy Cognitive Maps as Representations of Mental Models and Group Beliefs. In: E.I. Papageorgiou, ed. *Fuzzy Cognitive Maps for Applied Sciences and Engineering: From Fundamentals to Extensions and Learning Algorithms*. pp. 29–48. Berlin, Heidelberg, Springer. https://doi.org/10.1007/978-3-642-39739-4_2

Greenblatt, S.J. 2009. *Cultural Mobility: A Manifesto*. Cambridge, Cambridge University Press.

Hall, S. 2000. Whose Heritage? Un-Settling 'The Heritage', Re-Imagining the Post-Nation. In: G. Fairclough, J. Jameson Jnr & J. Schofield, eds. *The Heritage Reader*. pp. 219–229. London, Routledge Publications.

Haraway, D.J. 2016. *Staying with the Trouble: Making Kin in the Chthulucene*. Experimental futures. Durham, Duke University Press. https://books.google.com.tr/books?id=ZvDgDAAAQBAJ&lpg=PA1&dq=Staying%20with%20the%20trouble%20:%20making%20kin%20in%20the%20Chthulucene&hl=tr&pg=PA1#v=onepage&q=Staying%20with%20the%20trouble%20:%20making%20kin%20in%20the%20Chthulucene&f=false

Heritage, A., Iwasaki, A, Wollentz, G. 2023. Anticipating Futures for Heritage. ICCROM Foresight Initiative Horizon Scan Study 2021, Rome: ICCROM

Harrison, R., DeSilvey, C., Holtorf, C., Macdonald, S., Bartolini, N., Breithoff, E., Fredheim, H. *et al.* 2020. *Heritage Futures: Comparative Approaches to Natural and Cultural Heritage Practices*. UCL Press. https://doi.org/10.14324/111.9781787356009

Harrison, R. 2010. Heritage as Social Action. In: S. West, ed. *Understanding Heritage in Practice*. pp. 240–277. Understanding Global Heritage. Manchester University Publishing. https://www.academia.edu/776657/Heritage_as_Social_Action

Harrison, R. 2013. *Heritage: Critical Approaches*. Milton Park, Abingdon, Routledge. http://www.dawsonera.com/depp/reader/protected/external/AbstractView/S9780203108857

Harvey, D. 2015. Landscape and Heritage: Trajectories and Consequences. *Landscape Research*, 40(8): 911–924. https://doi.org/10.1080/01426397.2014.967668

Hasgall, A., Saenen, B. & Borrell-Damian, L. 2019. *Doctoral Education in Europe Today: Approaches and Institutional Structures*. Survey. European University Association.

Healey, P. 2007. *Urban Complexity and Spatial Strategies: Towards a Relational Planning for our Times*. RTPI library series. London, Routledge.

Herring, P., Turner, S. & Sevara, C. 2022. *The Historic Landscape: Assessing Opportunity for Change | Historic England*. Historic England Research Report Series 69/2022. https://historicengland.org.uk/research/results/reports/69-2022

Herring, P. 1998. *Cornwall's Historic Landscape. Presenting a Method of Historic Landscape Character Assessment*. Truro, Cornwall County Council.

Herring, P. 2020. Back to the Beginning, and into the Future: Historic Landscape Characterisation, a Review from Cornwall. *Landscapes*, 21(2): 113–134. https://doi.org/10.1080/14662035.2020.1942050

Herring, P. 2022. *Strategically Assessing the Historic Landscape's Sensitivity and Capacity in Relation to Change: A Discussion Document to Inform Preparation of Advice*. Historic England Research Report Series 91/2022. Historic England. https://historicengland.org.uk/research/results/reports/91-2022

Highways Agency. 2007. *Assessing the Effect of Road Schemes on Historic Landscape Character*. https://historicengland.org.uk/images-books/publications/assessing-the-effect-of-road-schemes-on-historic-landscape-character/

Hillier, B. & Hanson, J. 1986. *The Social Logic of Space*. 1st published, Reprinted edition. Cambridge, Cambridge University press.

Hillier, B., Penn, A., Hanson, J., Grajewski, T. & Xu, J. 1993. Natural Movement: Or, Configuration and Attraction in Urban Pedestrian Movement. *Environment and Planning B: Planning and Design*, 20(1): 29–66. https://doi.org/10.1068/b200029

Hillier, J. 2003. "Agon"izing Over Consensus: Why Habermasian Ideals cannot be "Real". *Planning Theory*, 2(1): 37–59. https://doi.org/10.1177/1473095203002001005

Ho, P. & McKercher, B. 2004. Managing Heritage Resources as Tourism Products. *Asia Pacific Journal of Tourism Research*, 9: 255–266. https://doi.org/10.1080/1094166042000290655

Hobsbawm, E. & Ranger, T., eds. 2012. *The Invention of Tradition*. Canto Classics. Cambridge, Cambridge University Press. https://doi.org/10.1017/CBO9781107295636

Holliman, R. 2017. Supporting Excellence in Engaged Research. *Journal of Science Communication*, 16. https://doi.org/10.22323/2.16050304

Holtorf, C. & Bolin, A. 2022. Heritage Futures: A Conversation. *Journal of Cultural Heritage Management and Sustainable Development*, 14(2): 252–265. https://doi.org/10.1108/JCHMSD-09-2021-0156

Holtorf, C. & Högberg, A. 2013. Heritage Futures and the Future of Heritage. In: *Counterpoint: Essays in Archaeology and Heritage Studies in Honour of Professor Kristian Kristiansen*. pp. 739–746. BAR International Series 2508. Oxford, Archaeopress Publishers of British Archaeological Reports. https://www.academia.edu/9345111/_Heritage_Futures_and_the_Future_of_Heritage_In_S_Bergerbrant_and_S_Sabatini_eds_2013_Counterpoint_Essays_in_Archaeology_and_Heritage_Studies_in_Honour_of_Professor_Kristian_Kristiansen_pp_739_746_BAR_Int_Ser_2508_Oxford_Archaeopress

Holtorf, C. 2013. Cultural Heritage and the Challenge of Sustainability. *Heritage & Society*, 6(2): 199–204.

Holtorf, C. 2015. Averting Loss Aversion in Cultural Heritage. *International Journal of Heritage Studies*, 21(4): 405–421. https://doi.org/10.1080/13527258.2014.938766

Holtorf, C. 2018. Conservation and Heritage as Future-Making. *ICOMOS University Forum*, 1: 1–13.

Howarth, D.R. 2008. Ethos, Agonism and Populism: William Connolly and the Case for Radical Democracy. *The British Journal of Politics & International Relations*, 10(2): 171–193. https://doi.org/10.1111/j.1467-856X.2007.00308.x

ICOMOS Australia. 1988. *The Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (the Burra Charter): Guidelines to the Burra Charter: Cultural Siginificance and Conservation Policy*. 1987th edition. Sydney, ICOMOS Australia.

ICOMOS. 1964. *The Venice Charter - International Council on Monuments and Sites*. Venice. https://www.icomos.org/en/participer/179-articles-en-francais/ressources/charters-and-standards/157-thevenice-charter

Ingold, T. & Vergunst, J.L. 2008. *Ways of Walking: Ethnography and Practice on Foot*. Anthropological studies of creativity and perception. Aldershot, England, Ashgate.

Ingold, T. 2000. *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill*. London, Routledge. https://doi.org/10.4324/9780203466025

Ingold, T. 2011. *Being Alive: Essays on Movement, Knowledge and Description*. London, Routledge. https://doi.org/10.4324/9780203818336

Innes, J.E. & Booher, D.E. 2000. *Public Participation in Planning: New Strategies for the 21st Century*. Working paper (University of California, Berkeley. Institute of Urban & Regional Development) 2000. Berkeley, Calif., Institute of Urban and Regional Development, University of California.

IPCC, ed. 2018. Summary for Policymakers. In: *Global Warming of 1.5°C: IPCC Special Report on Impacts of Global Warming of 1.5°C above Pre-industrial Levels in Context of Strengthening Response to Climate Change, Sustainable Development, and Efforts to Eradicate Poverty*. pp. 1–24. Cambridge, Cambridge University Press. https://doi.org/10.1017/9781009157940.001

Janssen, J., Luiten, E., Renes, H. & Stegmeijer, E. 2017. Heritage as Sector, Factor and Vector: Conceptualizing the Shifting Relationship between Heritage Management and Spatial Planning. *European Planning Studies*, 25(9): 1654–1672. https://doi.org/10.1080/09654313.2017.1329410

Jensen, O.B. 2010. Negotiation in Motion: Unpacking a Geography of Mobility. *Space and Culture*, 13(4): 389–402. https://doi.org/10.1177/1206331210374149

Jensen, O.B. 2013. *Staging Mobilities*. International library of sociology. Hoboken, Taylor and Francis.

Jones, M. & Stenseke, M. 2011. *The European Landscape Convention: Challenges of Participation*. Landscape series; v. 13; vol. 13. Dordrecht, Springer.

Khajavi, S.H., Motlagh, N.H., Jaribion, A., Werner, L.C. & Holmström, J. 2019. Digital Twin: Vision, Benefits, Boundaries, and Creation for Buildings. *IEEE Access*, 7: 147406–147419. https://doi.org/10.1109/ACCESS.2019.2946515

de Kleijn, M., Dias, E. & Burgers, G.-J. 2016. The Digital Cultural Biography, a Tool for Interdisciplinary Knowledge Exchange on the History and Heritage of the Urban Landscape. *Journal of Cultural Heritage Management and Sustainable Development*, 6: 72–94. https://doi.org/10.1108/JCHMSD-04-2015-0015

de Kleijn, M., de Hond, R. & Martinez-Rubi, O. 2016. A 3D Spatial Data Infrastructure for "Mapping the Via Appia". *Digital Applications in Archaeology and Cultural Heritage*, 3(2): 23–32. https://doi.org/10.1016/j.daach.2016.03.001

de Kleijn, M., van Manen, N., Kolen, J. & Scholten, H. 2014. Towards a User-Centric SDI Framework for Historical and Heritage European Landscape Research. *International Journal of Spatial Data Infrastructures Research*, 9(0): 1–35.

Kraak, M.-J. & Ormeling, F.J. 2013. *Cartography: Visualization of Spatial Data*. Third edition. London, Routledge. https://doi.org/10.4324/9781315847184

Labadi, S. 2010. World Heritage, authenticity and post-authenticity: International and national perspectives. In: *Heritage and Globalisation*. Routledge.

Lambrick, G., Hind, J. & Wain, I. 2013. *Historic Landscape Characterisation in Ireland: Best Practice Guidance*. Dublin, An Chomhairle Oidhreachta = The Heritage Council.

Langfield, M., Logan, W. & Craith, M.N., eds. 2009. *Cultural Diversity, Heritage and Human Rights: Intersections in Theory and Practice*. London, Routledge. https://doi.org/10.4324/9780203863015

Lee, D., Dias, E. & Scholten, H. 2014. *Geodesign by Integrating Design and Geospatial Sciences*. https://doi.org/10.1007/978-3-319-08299-8

Lekakis, S. 2020. *Cultural Heritage in the Realm of the Commons*. Online access: OAPEN DOAB Directory of Open Access Books. S.l., Ubiquity Press. https://library.oapen.org/bitstream/20.500.12657/42588/1/cultural-heritage-in-the-realm-of-the-commons.pdf

Lerario, A. & Varasano, A. 2020. An IoT Smart Infrastructure for S. Domenico Church in Matera's "Sassi'': A Multiscale Perspective to Built Heritage Conservation. *Sustainability*, 12(16): 6553. https://doi.org/10.3390/su12166553

Li, Q., Li, X., Ma, Y., Lu, L., Wang, X., Luo, L., Cheng, Y. & Wu, R. 2020. Urbanization Monitoring Using Big Earth Observation Data for World Heritage Sites of China. *IOP Conference Series: Earth and Environmental Science*, 502(1): 012049. https://doi.org/10.1088/1755-1315/502/1/012049

Lindholm, K.-J. & Ekblom, A. 2019. A Framework for Exploring and Managing Biocultural Heritage. *Anthropocene*, 25. https://doi.org/10.1016/j.ancene.2019.100195

Malik, K. 2013. *Multiculturalism and Its Discontents: Rethinking Diversity after 9/11*. Manifestos for the 21st century. London, Seagull Books.

Masser, I. & Wegener, M. 2016. Brave New GIS Worlds Revisited. *Environment and Planning B: Planning and Design*, 43(6): 1155–1161. https://doi.org/10.1177/0265813516665619

Massey, D.B. 1991. A Global Sense of Place. *Marxism Today*(38): 24–29.

Massey, D.B. 2005. *For Space*. London, SAGE. http://catdir.loc.gov/catdir/enhancements/fy0657/2004094666-t.html

Matsumoto, D. 1996. *Culture and Psychology*. Pacific Grove, Brooks/Cole.

McCall, M.K. 2019. Participatory Mapping and Participatory GIS for Historical and Archaeological Landscape Studies: a Critical Review. *Journal of Archaeological Method and Theory*, 26(2): 643–678. https://doi.org/10.1007/s10816-018-9385-z

McFarlane, C. & Robinson, J. 2012. Introduction-Experiments in Comparative Urbanism. *Urban Geography*, 33(6): 765–773. https://doi.org/10.2747/0272-3638.33.6.765

McKenna, S. & van Schalkwyk, S. 2023. A Scoping Review of the Changing Landscape of Doctoral Education. *Compare: A Journal of Comparative and International Education*, 0(0): 1–18. https://doi.org/10.1080/03057925.2023.2168121

Mehrotra, R. 2007. Conservation and Change: Questions for Conservation Education in Urban India. *Built Environment (1978-)*, 33(3): 342–356.

Mela, M. 2023. From GIS to Marble Crafts: Mundane Representations of Renewable Energy Landscapes and Their Roles towards Just Transitions. *Dialectic : The Journal of the School of Architecture at the University of Utah vol.10 (2023) p.37-48*. https://research.vu.nl/en/publications/13aa47a7-7522-4d27-b06a-5683c4560d12

Menon, A.G.K. 2003. *The Case for an Indian Charter*. Restoration and Renewal - A Symposium on Preserving Our Cultural Heritage, New Delhi, India, 2003.

Menon, A.G.K. 2017. The Idea of Place in the Practice of Restoration and Replication in India. In: K. Weiler & N. Gutschow, eds. *Authenticity in Architectural Heritage Conservation: Discourses, Opinions, Experiences in Europe, South and East Asia*. pp. 87–92. Cham, Springer International Publishing. https://doi.org/10.1007/978-3-319-30523-3_3

Mercado-Alonso, I., Fernández-Tabales, A. & Muñoz-Yules, O. 2018. Perceptions and Social Valuations of Landscape. Objectives and Methodology for Citizen Participation in Landscape Policies. *Landscape Research*, 43(1): 95–111. https://doi.org/10.1080/01426397.2017.1302570

Meyer, E. 2015. *The Culture Map: Decoding How People Think, Lead, and Get Things Done Across Cultures*. International edition edition. New York, PublicAffairs.

Mitchell, D. 2003. Cultural Landscapes: Just Landscapes or Landscapes of Justice? *Progress in Human Geography*, 27(6): 787–796. https://doi.org/10.1191/0309132503ph464pr

Mouffe, C. 1999. Deliberative Democracy or Agonistic Pluralism? *Social Research*, 66(3): 745–758.

Mouffe, C. 2000. *The Democratic Paradox*. Radical thinkers. London, Verso.

Mouffe, C. 2005. *On the Political*. Thinking in action. London, Routledge.

Mouffe, C. 2013. *Agonistics: Thinking the World Politically*. London, Verso.

Muñoz Viñas, S. 2005. *Contemporary Theory of Conservation*. Amsterdam, Elsevier.

Nanz, P. & Fritsche, M. 2014. *La partecipazione dei cittadini: un manuale: metodi partecipativi: protagonisti, opportunità e limiti*. Bologna, Assemblea legislativa della Regione Emilia-Romagna.

Natural England. 2012. *An Approach to Seascape Character Assessment*. Natural England.

van Nes, A. & López, M.J. 2010. Macro and Micro Scale Spatial Variables and the Distribution of Residential Burglaries and Theft from Cars: An Investigation of Space and Crime in the Dutch Cities of Alkmaar and Gouda. *The Journal of Space Syntax: architecture urbanism society*, 1(2): 296–314.

Nocca, F. 2017. The Role of Cultural Heritage in Sustainable Development: Multidimensional Indicators as Decision-Making Tool. *Sustainability*, 9(10): 1882. https://doi.org/10.3390/su9101882

van Oers, R. & Pereira Roders, A. 2014. Aligning Agendas for Sustainable Development in the Post 2015 World. *Journal of Cultural Heritage Management and Sustainable Development*, 4(2): 122–132. https://doi.org/10.1108/JCHMSD-09-2014-0035

Olwig, K. 2005. Introduction: The Nature of Cultural Heritage, and the Culture of Natural Heritage - Northern Perspectives on a Contested Patrimony. *International Journal of Heritage Studies*, 11(1): 3–7. https://doi.org/10.1080/13527250500036742

Opmeer, M., Burgers, G., Bruinsma, R., Janssen, R., Napolitano, C. & Ricci, I. 2019. Geospatial technologies in support of community enhancement and creating inclusive historical narratives: Investigating the affordances of collaborative mapping software, location-based applications and 3D reconstructions to facilitate place-based digital literacies for the Ecomuseo della Via Appia in Latiano, Italy. In: D. Pyles, R.M. Rish & J. Warner, eds. *Negotiating Place and Space Through Digital Literacies*. pp. 177–195. Digital Media and Learning Series. EBSCO Publishing. https://www.infoagepub.com/series/Digital-Media-and-Learning

Ostrom, E. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Canto classics. Cambridge, Cambridge University Press. https://doi.org/10.1017/CBO9781316423936

Pan, Y. & Zhang, L. 2021. A BIM-Data Mining Integrated Digital Twin Framework for Advanced Project Management. *Automation in Construction*, 124: 103564. https://doi.org/10.1016/j.autcon.2021.103564

Pendlebury, J., Hamza, N. & Sharr, A. 2014. Conservation Values, Conservation Planning and Climate Change. *disP - The Planning Review*, 50: 43–54. https://doi.org/10.1080/02513625.2014.979042

Pendlebury, J. 2008. *Conservation in the Age of Consensus*. Hoboken, Taylor & Francis.

Pereira Roders, A. & Bandarin, F. 2019. *Reshaping Urban Conservation: The Historic Urban Landscape Approach in Action*. Creativity, heritage and the city; 2; Volume 2. Singapore, Springer Nature.

Pereira Roders, A. & van Oers, R. 2011. Editorial: Bridging Cultural Heritage and Sustainable Development. *Journal of Cultural Heritage Management and Sustainable Development*, 1: 5–14. https://doi.org/10.1108/20441261111129898

Perić, B.Š., Šimundić**, B., Muštra, V. & Vugdelija, M.** 2021. The Role of UNESCO Cultural Heritage and Cultural Sector in Tourism Development: The Case of EU Countries. *Sustainability*, 13(10): 5473. https://doi.org/10.3390/su13105473

Pløger, J. 2004. Strife: Urban Planning and Agonism. *Planning Theory*, 3(1): 71–92. https://doi.org/10.1177/1473095204042318

Pløger, J. 2021. Politics, Planning, and Ruling: The Art of Taming Public Participation. *International Planning Studies*, 26(4): 426–440. https://doi.org/10.1080/13563475.2021.1883422

Puig de la Bellacasa, M. 2017. *Matters of Care: Speculative Ethics in More Than Human Worlds*. Posthumanities 41. Minneapolis, MN, University of Minnesota Press.

Purcell, M. 2006. Urban Democracy and the Local Trap. *Urban Studies*, 43(11): 1921–1941.

Quigley, P. & Shaw, M. 2010. Characterization in an Urban Setting: The Experience of the Black Country. *The Historic Environment: Policy & Practice*, 1(1): 27–51. https://doi.org/10.1179/175675010X12662480109117

Rafiee, A., van Der Male, P., Dias, E. & Scholten, H. 2018. Interactive 3D Geodesign Tool for Multidisciplinary Wind Turbine Planning. *Journal of Environmental Management*, 205: 107–124. https://doi.org/10.1016/j.jenvman.2017.09.042

Ragin, C.C. 1989. *The Comparative Method: Moving beyond Qualitative and Quantitative Strategies*. 1st paperback printing edition. Berkeley, Calif., University of California Press.

RCE. 2017. *Historic Landscape Characterisation of the Netherlands*. The Hague, Rijksdienst voor het Cultureel Erfgoed.

Rhodes, R.A.W. 2007. Understanding Governance: Ten Years On. *Organization Studies*, 28(8): 1243–1264. https://doi.org/10.1177/0170840607076586

Richards, G. 1996. *Cultural Tourism in Europe*. Repr edition. Oxon etc., CAB International.

Riesto, S., Egberts, L., Lund, A.A. & Jørgensen, G. 2022. Plans for Uncertain Futures: Heritage and Climate Imaginaries in Coastal Climate Adaptation. *International Journal of Heritage Studies*, 28(3): 358–375. https://doi.org/10.1080/13527258.2021.2009538

Rodenberg, J., Wagenaar, P. & Burgers, G.-J.L.M. 2023. *Calling on the Community: Understanding Participation in the Heritage Sector, an Interactive Governance Perspective*. Explorations in heritage studies; v. 7; volume 7. New York, Berghahn Books. https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=3308348

Roe, M.H. & Taylor, K. 2014. *New Cultural Landscapes*. London, Routledge, Taylor & Francis Group.

Rönn, M., Danielsson, B.G. & Swedberg, S. 2017. Cultural Heritage: Changing Ideas on Compensation in Planning. *Architectural Research in Finland*, 1(1): 75–92.

Rotondo, F., Selicato, F., Marin, V. & Galdeano, J.L., eds. 2016. *Cultural Territorial Systems: Landscape and Cultural Heritage as a Key to Sustainable and Local Development in Eastern Europe*. Springer geography. Switzerland, Springer. https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=1174921

Russell, B. 2019. Beyond the Local Trap: New Municipalism and the Rise of the Fearless Cities. *Antipode*, 51(3): 989–1010. https://doi.org/10.1111/anti.12520

Rypkema, D.D. 2005. Globalization, Heritage Buildings, and the 21st Century Economy. *Global Urban Development Magazine*, 1(1). https://www.globalurban.org/Issue1PIMag05/Rypkema%20article.htm

Salter, J.D., Campbell, C., Journeay, M. & Sheppard, S.R.J. 2009. The Digital Workshop: Exploring the Use of Interactive and Immersive Visualisation Tools in Participatory Planning. *Journal of Environmental Management*, 90(6): 2090–2101. https://doi.org/10.1016/j.jenvman.2007.08.023

Savage, M. 2015. *Social Class in the 21st Century*. Pelican introduction 10. London, Pelican, an imprint of Penguin Books.

Schein, E.H. 1992. *Organizational Culture and Leadership*. 2nd ed edition. Jossey-Bass management series. San Francisco, Calif., Jossey-Bass.

Selman, P.H. 2006. *Planning at the Landscape Scale*. RTPI library series 12. London, Routledge.

Sen, A. 2009. *The Idea of Justice*. Harvard University Press.

Sheller, M. & Urry, J. 2006. The New Mobilities Paradigm. *Environment and Planning A: Economy and Space*, 38(2): 207–226. https://doi.org/10.1068/a37268

Shuttleworth, S. 2017. Editorial annex: Key Findings and Recommendations from the HERCULES Research Project, and the Need for a Landscape Approach to Enviromental Governance. *Landscape Research*, 42(8): 819–830. https://doi.org/10.1080/01426397.2017.1385751

Simpson, L.B. 2017. *As We Have Always Done: Indigenous Freedom through Radical Resistance*. Indigenous Americas. Minneapolis, University of Minnesota Press.

Smith, L. 2006. *Uses of Heritage*. London, Routledge.

Standing, G. 2014. The Precariat and Class Struggle. *Revista Crítica de Ciências Sociais*, 103. https://doi.org/10.4000/rccs.5521

Stegmeijer, E, Veldpaus, L. (eds) 2021. A research agenda for heritage planning perspectives from Europe, Cheltenham: Edward Elgar Publishing Limited

Steinitz, C. 2012. *A Framework for Geodesign: Changing Geography by Design*. First edition edition. Redlands, Calf., Esri.

Sterling, C. 2020. Critical Heritage and the Posthumanities: Problems and Prospects. *International Journal of Heritage Studies*, 26(11): 1029–1046. https://doi.org/10.1080/13527258.2020.1715464

Stobbelaar, D.J. & Pedroli, B. 2011. Perspectives on Landscape Identity: A Conceptual Challenge. *Landscape Research*, 36(3): 321–339. https://doi.org/10.1080/01426397.2011.564860

Taylor, K., St. Clair, A. & Mitchell, N.J., eds. 2014. *Conserving Cultural Landscapes: Challenges and New Directions*. New York, Routledge. https://doi.org/10.4324/9781315813226

Tetlock, P.E., Kristel, O.V., Elson, S.B., Green, M.C. & Lerner, J.S. 2000. The Psychology of the Unthinkable: Taboo Trade-Offs, Forbidden Base Rates, and Heretical Counterfactuals. *Journal of Personality and Social Psychology*, 78(5): 853–870. https://doi.org/10.1037/0022-3514.78.5.853

Tetlock, P.E. 2003. Thinking the Unthinkable: Sacred Values and Taboo Cognitions. *Trends in cognitive sciences*, 7(7): 320–324.

Thomas, R.M. 2006. Mapping the Towns: English Heritage's Urban Survey and Characterisation Programme. *Landscapes*, 7(1): 68–92. https://doi.org/10.1179/lan.2006.7.1.68

Tobler, W.R. 1970. A Computer Movie Simulating Urban Growth in the Detroit Region. *Economic Geography*, 46: 234–240. https://doi.org/10.2307/143141

Tunbridge, J.E. & Ashworth, G.J. 1996. *Dissonant Heritage: The Management of the Past as a Resource in Conflict*. Chichester, J. Wiley.

Turner, M. 2011. *The Heritage of the City. Europe's Future: New Opportunities through Integrated Urban Development*. Berlin, Federal Ministry of Transport, Building and Urban Development.

Turner, M. 2015. Social Sustainability of the Historic Urban Landscape. In: M.-T. Albert, ed. *Social Sustainability of the Historic Urban Landscape*. pp. 99–112. De Gruyter. https://doi.org/10.1515/9783110415278-009

Turner, M. 2021. Adaptive Reuse within Urban Areas. In: K. Cummer & L.D. DiStefano, eds. *Asian Revitalization: Adaptive Reuse in Hong Kong, Shanghai, and Singapore*. Hong Kong, Hong Kong University Press.

Turner, S. 2018. Historic Landscape Characterisation: An Archaeological Approach to Landscape Heritage. In: G. Fairclough, I. Särlov-Herlin & C. Swanwick, eds. *Routledge Handbook of Landscape Character Assessment*. Routledge.

UNESCO. 1972. Convention Concerning the Protection of the World Cultural and Natural Heritage. [Cited 11 June 2024]. https://whc.unesco.org/en/conventiontext/

UNESCO. 2005. Vienna Memorandum on "World Heritage and Contemporary Architecture - Managing the Historic Urban Landscape" and Decision 29 COM 5D

UNESCO. 2011. *Recommendation on the Historic Urban Landscape*. UNESCO's General Conference, 2011.

UNESCO. 2021. The Operational Guidelines for the Implementation of the World Heritage Convention. [Cited 10 June 2024]. https://whc.unesco.org/en/guidelines/

United Nations. 1992. *United Nations Framework Convention on Climate Change*. Rio de Janeiro.

United Nations. 2015a. *Paris Agreement under the United Nations Framework Convention on Climate Change*. Paris.

United Nations. 2015b. The 2030 Agenda for Sustainable Development. [Cited 16 June 2024]. https://sdgs.un.org/2030agenda

United Nations. 2016. *The New Urban Agenda*. United Nations Conference on Housing and Sustainable Urban Development (Habitat III), Quito, Ecuador, 2016.

Veldpaus, L., Pereira Roders, A.R. & Colenbrander, B.J.F. 2013. Urban Heritage: Putting the Past into the Future. *The Historic Environment: Policy & Practice*, 4(1): 3–18. https://doi.org/10.1179/1756750513Z.00000000022

Veldpaus, L. & Szemző, H. 2021. Heritage as a Matter of Care, and Conservation as Caring for the Matter. In: *Care and the City*. Routledge.

Waterton, E. 2018. More-than-Representational Landscapes. In: *The Routledge Companion to Landscape Studies*. Second edition, p. Routledge.

Watts, L. 2018. *Energy at the End of the World: An Orkney Islands Saga*. Infrastructures series. Cambridge, MA, The MIT Press.

Whitehand, J.W.R. & Gu, K. 2010. Conserving Urban Landscape Heritage: a Geographical Approach. *Procedia - Social and Behavioral Sciences*, 2(5): 6948–6953. https://doi.org/10.1016/j.sbspro.2010.05.047

Williams, A.M. & Shaw, G. 1998. *Tourism and Economic Development: European Experiences*. 3rd ed edition. Chichester, J. Wiley.

Winter, T. 2013. Clarifying the Critical in Critical Heritage Studies. *International Journal of Heritage Studies*, 19(6): 532–545. https://doi.org/10.1080/13527258.2012.720997

World Tourism Organization. 2018. *Tourism and Its Economic Multiplier Effect*. http://www.unwto.org.

Wylie, J. 2007. *Landscape*. Key ideas in geography. London, Routledge.

Yazdani, N. 2017. *Migration, Landscape, and Culture: Urban Parks and Iranian Immigrants in Melbourne*. Deakin University. thesis. https://dro.deakin.edu.au/articles/thesis/Migration_landscape_and_culture_urban_parks_and_Iranian_immigrants_in_Melbourne/21111946/1

The Forum Romanun in Rome, Italy

ICCROM

International Centre for the Study of the Preservation and Restoration of Cultural Property

Address: Via di San Michele 13 – Rome, Italy
Tel: (+39) 06.585-531
Email: iccrom@iccrom.org
Web: www.iccrom.org

HERILAND
Cultural Heritage and the Planning of European Landscapes

Vrije Universiteit Amsterdam
Address: Faculty of Social Sciences and Humanities
De Boelelaan 1105
1081 HV Amsterdam, The Netherlands
Email: heriland.fgw@vu.nl
Web: www.heriland.eu

ISBN 978-92-9077-348-1

ISBN 978-92-9077-348-1
9 789290 773481 >