ANNEXES

ANNEX 1
GLOSSARY

A

ACTION PLAN
This plan serves as the Management Plan's tangible and effective application; it identifies the operational strategies to be introduced and the projects to be implemented to support conservation of the site's integrity and authenticity.

ADVISORY BODIES
International non-governmental or intergovernmental organisations appointed by the Convention with the purpose of advising and directing the World Heritage Committee in its decisions and measures.
ICCROM – International Centre for the Study of the Preservation and Restoration of Cultural Property. Inter-governmental organisation established in Rome, Italy, in 1956 to strengthen and promote the preservation of cultural heritage, in all its forms, through research, documentation, training activities and technical assistance. Its primary function is to provide the tools, knowledge and skills to support States Parties in preserving their heritage, thereby contributing to the environmental, social and economic sustainability of communities.
ICOMOS – International Council on Monuments and Sites. International non-governmental organisation founded in 1965 with international headquarters in Paris, France, which provides assessment to the Committee on cultural and mixed properties proposed for inscription on the World Heritage List. In the case of the assessment of cultural landscapes, the organisation, which is the main reference for this category of properties, is assisted by IUCN.
IUCN – International Union for the Conservation of Nature. Non-governmental organisation founded in 1948 with headquarters in Gland, Switzerland, which provides the Committee with technical assessments concerning both natural and mixed heritage sites and reports on the State of Conservation of listed properties through its worldwide network of specialists. For more information: https://whc.unesco.org/en/advisorybodies/.

ATTRIBUTES
Elements, processes, or features of a site – both tangible and intangible- that are associated with it or express its OUV (UNESCO, 2011a). Generally understood as those aspects which substantiate and highlight the Outstanding Universal Value of the site and are essential to understand its authenticity and integrity. Therefore, attributes must be placed at the centre of the site's protection, preservation and management measures. Paragraph 82 of the OG indicates a non-exhaustive set of possible varieties of attributes, including:
- Form and design;
- Material features;
- Use and function, traditions and techniques;
- Location and context;
- Language and other forms of intangible heritage;
- Emotional and spiritual aspects;
- Other internal and external factors.

AUTHENTICITY
Authenticity, in the context of cultural heritage, refers to the requirement of credibility and genuineness, which means that a site inscribed on the World Heritage List should truly be what it claims to be. The authenticity of the cultural value is expressed through the same variety of Attributes.

B

BASIN AUTHORITY
The District Basin Authority, or the Basin Authority, is a non-economic public body established pursuant to Article 63 of Legislative Decree 152/2006. The Basin Authority, within its legally defined purposes, aims at ensuring soil conservation, hydrogeological restoration and quantitative and qualitative water resource conservation, and mainly provides for:
drafting District Basin Plans and intervention programmes;
providing opinions on the coherence of the Basin Plan's objectives with the European Union, national, regional and local plans and programmes concerning soil conservation, the fight against desertification, water conservation and water resource management.

BUFFER ZONE
Buffer area surrounding the Property. This perimeter provides an additional level of protection to the World Heritage site and is aimed at ensuring the preservation of the immediate backdrop, main views, and other structural and functional features of the site.

BUDAPEST DECLARATION
Adopted by the World Heritage Committee in 2002, the Declaration calls on States Parties to promote effective conservation by pursuing the following key strategic objectives:
- ensure an appropriate and equitable balance between conservation, sustainability, and social and economic development;
- foster communication, education, research, training and public awareness strategies;
- finally, seek to ensure the active involvement of local communities in the identification, protection and management of World Heritage properties.

C

CIVIL PROTECTION
System of entities or parties, whether public or private, that carry out activities comparable to civil defence, or in any case, that are aimed at protecting the integrity of life, property, settlements and the environment from damage or potential damage caused by disasters or accidents.

COMPONENTS
Two or more physically separated sites that are associated with one another through their historical, cultural, or natural significance, making up a serial site. Each component is identified by a reference number (e.g. Component no. 1), assigned in the Nomination Dossier during the application process. The component areas are distinguished, as with "unitary sites", into Properties and Buffer Zones.

CONSERVATION
Exercise of functions and regulation of activities directed, on the basis of adequate cognitive activity, to identify the assets constituting cultural heritage and to ensure their protection and preservation for public enjoyment.

CONVENTION CONCERNING THE PROTECTION OF THE WORLD CULTURAL AND NATURAL HERITAGE
International treaty adopted on 16 November 1972 during the 17th session of the UNESCO General Conference. It is a legally binding instrument that provides an inter-governmental framework for international cooperation, as well as to identify, protect and conserve World Cultural and Natural Heritage. It provides for the adoption of the World Heritage List, on which properties possessing Outstanding Universal Value considered unique and irreplaceable are to be inscribed (http://whc.unesco.org/en/convention/).

CULTURAL HERITAGE
Heritage comprising cultural and landscape assets, as indicated in the Cultural Heritage and Landscape Code.

CULTURAL, MUSEUM AND DOCUMENTARY HERITAGE SECTOR. UNESCO SITES. CONTEMPORARY ART – TUSCANY REGIONAL AUTHORITY
A cultural institution of regional significance tasked with the following responsibilities:
- enhancement and promotion of Museums and Eco-museums;
- interventions for the conservation, enhancement and promotion of tangible and intangible cultural heritage, as well as cultural spaces and venues;
- enhancement and promotion of Libraries, Archives and Cultural Institutions;
- planning, coordination and implementation of cultural and contemporary art projects;
- enhancement of UNESCO Sites in Tuscany.

This institution's duties also include legal deposit.

E

ENHANCEMENT
The exercise of functions and the regulations of activities designed to promote knowledge of the cultural heritage to ensure the best conditions for the public use and enjoyment of that heritage. It also includes the promotion and support of conservation interventions.

ENHANCING OUR HERITAGE TOOLKIT
This Manual provides a globally tested self-assessment methodology to evaluate the effectiveness of World Heritage site management. It assists site managers in identifying ways of improving conservation practices, management processes and resource allocation, especially when used prior to drafting or updating Management Plans.

EUROPEAN LANDSCAPE CONVENTION
Signed on 20 October 2000, in Florence, Italy, this document is a part of the Council of Europe's work on cultural and natural heritage, spatial planning and the environment. In addition to providing an unambiguous and shared definition of landscape, the Convention mandates recognition and conservation measures, which the Member States commit to implementing. The Convention defines the policies, objectives, protection measures and management related to landscape heritage, recognising its cultural, environmental, social, and historical importance as a component of European heritage and a fundamental element in ensuring the quality of life of populations.

F

FLOOD RISK MANAGEMENT PLAN
A reference operational instrument of the District Basin Authority for mapping flood hazard and risk areas, and for identifying measures to mitigate the negative impacts of floods on human health, territorial protection, cultural heritage and economic and social activities.

G

GENERAL REGULATORY PLAN
This urban planning instrument regulates building activity within a municipal territory by planning the development of its various areas (urban and suburban) and taking into account the guidelines drawn by the territorial coordination plan and external constraints.
This instrument shall contain the following information:
- the main communication routes, whether by road, rail or water;
- the division of the territory in its jurisdiction into homogeneous zones;
- the implementing legislation;
- areas dedicated to public buildings;
- landscape and historical constraints.

GOVERNANCE
The governance system of a World Heritage Site is comprised of representatives from the institutions involved in the governance of the territory where the site is located. These representatives are tasked with contributing, each within the limits of their respective administrative regulations and statutory competences, to the overall management of the site in a consistent and coherent manner.

GUIDANCE AND TOOLKIT FOR IMPACT ASSESSMENT
Developed by UNESCO and the World Heritage Committee advisory bodies (ICCROM, ICOMOS and IUCN), this manual promotes cross-sectoral and multidisciplinary collaboration to identify solutions for World Heritage site protection, and to support appropriate, high-quality development. States Parties to the World Heritage Convention, heritage managers, decision-makers, planners and developers are encouraged to use the Manual to contribute to the collective commitment to pass our heritage on to future generations.

H

HELSINKI ACTION PLAN FOR EUROPE
Plan developed by the Focal Points of the Europe Region with the support of the World Heritage Centre in order to respond to the needs of European sites that emerged during the Second Cycle of the Periodic Reporting. The Plan can be used by the States Parties to improve the implementation of the Convention and ensure a better protection, management and promotion of World Heritage sites located in Europe. The Plan is available at the following link: https://whc.unesco.org/document/137743.
The results of the first Helsinki Action Plan Monitoring Survey were presented in 2016: (https://whc.unesco.org/document/158656).

HERITAGE IMPACT ASSESSMENT (HIA)
A methodology suitable for monitoring and measuring the effects of changes and transformations on the Outstanding Universal Value (OUV) of World Heritage sites. The key reference document for its application is the 2022 Guidance and Toolkit for Impact Assessments in a World Heritage Context, which complements the previous Guidance on Impact As-

sessment for Cultural World Heritage Properties (ICOMOS, 2011) and World Heritage Advice Note on Environmental Assessment (IUCN, 2013), which defined the model for the assessment process and the directions to follow for the related reporting. This tool proves effective in:

- identifying potential impacts of development actions/projects on the World Heritage Property's OUV and Attributes (actual and potential);
- systematically and consistently assessing these impacts;
- ultimately helping to limit negative impacts through the proposal and potential implementation of mitigation measures.

HISTORIC URBAN LANDSCAPE

An approach focused on the quality of the human environment aimed at enhancing the productive and sustainable use of urban spaces within a balanced and sustainable relationship between the urban environment and natural environment and the intangible heritage. The Recommendation on the Historic Urban Landscape (UNESCO, 2011) define the concept of HUL, considering an urban area as "the result of a historic layering of cultural and natural values and attributes, extending beyond the notion of "historic centre" or "ensemble" to include the broader urban context and its geographical setting. This broader context comprises the site's:

- topography, geomorphology, hydrology and natural features;
- built environment and its infrastructure;
- open spaces and gardens, its land use patterns and spatial organization;
- perceptions and visual relationships, as well as all other elements of the urban structure
- social and cultural practices and values, economic processes and the intangible dimensions of heritage as related to diversity and identity.

The methodological tools are the following:

- Community engagement tools: participation of local communities and stakeholders;
- Knowledge and planning tools: Urban design respectful of the integrity and authenticity of Urban Heritage Values and Attributes;
- Regulatory systems: Adoption of a system of legislative measures for the protection, conservation, enhancement and enjoyment of the Urban Heritage and landscape;
- Financial instruments: these should aim for the provision of adequate financial resources.

Finally, in line with this new approach, the process of integrated land management and its reassessment should be developed through six stages:

- research and mapping of natural, human and cultural resources;
- consensus building through participatory planning and stakeholder consultation on (additional) Values and Attributes to be protected;
- defining the levels of vulnerability of the Attributes and Values with respect to impact agents;
- Integrating Values, Attributes, and related vulnerabilities into territorial planning;
- Identifying priorities for conservation and development;
- Consolidating partnerships, identifying, and exchanging good management practices.

HYDROGEOLOGICAL STRUCTURE PLAN

A section of the Basin Plan through which actions and usage regulations aimed at conservation, defence and enhancement of the soil in areas of danger and risk linked to geomorphological processes are planned and programmed. With the forthcoming final approval of the Flood Risk Management Plan at the district level, the HSP will become the transitional plan dedicated to geomorphological risk management.

I

INSCRIPTION CRITERIA

These are necessary requirements (along with authenticity, integrity, conservation and management) for the inscription of a site on the World Heritage List. The site must meet at least one of the 10 criteria specified in paragraph 77 of the Operational Guidelines:

- Criterion I – represent a masterpiece of human creative genius;
- Criterion II – exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;
- Criterion III – bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;
- Criterion IV – be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;
- Criterion V – be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;
- Criterion VI – be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance;
- Criterion VII – contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;
- Criterion VIII - be outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features;
- Criterion IX – be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals;
- Criterion X – contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of Outstanding Universal Value from the point of view of science or conservation.

INTEGRITY

Integrity is the measure of how complete and intact the natural and/or cultural heritage and its attributes are. The integrity condition is based on three elements:

- the site includes all elements necessary to express its Outstanding Universal Value;
- the site is of adequate size to ensure the complete representation of the features and processes which convey the property's significance;
- the site is free from adverse effects of development and/or neglect;
- the concept of integrity is defined in detail in paragraphs 87-95 of the Operational Guidelines.

L

LAW 77/2006 "SPECIAL MEASURES FOR THE PROTECTION AND USE OF ITALIAN SITES AND ELEMENTS OF CULTURAL, LANDSCAPE AND ENVIRONMENTAL INTEREST, INSCRIBED ON THE "WORLD HERITAGE LIST", PLACED UNDER THE PROTECTION OF UNESCO".

This law provides for the funding to support activities for the enhancement, communication and use of the sites. Enacted on 20 February 2006, this legislation established for the first time that interventions on UNE-

SCO World Heritage sites shall have priority, as they are unique sites representing the excellence of Italy's cultural, landscape and natural heritage at an international level.

LEGISLATIVE DECREE 42/2004 "CODE OF CULTURAL HERITAGE AND LANDSCAPE, PURSUANT TO ARTICLE 10 OF LAW NO. 137 OF 6 JULY 2002"

Legislative Decree that regulates the protection of Italy's cultural and landscape heritage. The Decree defines cultural heritage as real and movable property of artistic, historical, archaeological or ethno-anthropological interest. This also includes architectural properties, collections in cultural institutions (such as museums, archives and libraries), natural heritage (such as mineralogical, petrographic, palaeontological and botanical heritage) and historical-scientific heritage, maps, as well as photographic material (photography and negatives) and audio-visual material (cinematography film). Intangible assets and landscape assets are also considered to be of cultural interest.

LIST OF WORLD HERITAGE IN DANGER

Provided for and defined by Article 11.4 of the World Heritage Convention, it lists the sites that, based upon the Report on the State of Conservation, are declared by the Committee to be in danger in terms of a possible loss or deterioration of the OUV. Paragraphs 177 through 198 of the OG provide guidelines and criteria for the inclusion of sites on the World Heritage List in Danger. Currently, 52 sites have been placed on this List due to heavy threats of various kinds.

If the States Parties to which the sites in question belong fail to provide mitigation measures for the threats and if there is evidence of severe alteration/damage to the OUV, the sites could be permanently removed from the World Heritage List, as has occurred with the sites of Dresden Elbe Valley (Germany), the Arabian Oryx Sanctuary (Oman), and the Liverpool Maritime Mercantile City (United Kingdom).

M

MANAGEMENT PLAN

The UNESCO World Heritage Centre, through its Operational Guidelines, recommends that each World Heritage site should have an adequate Management Plan (MP) that specifies how the Outstanding Universal Value is preserved, enhanced and communicated. The MP therefore analyses, through the involvement of various actors and stakeholders, the forces of change and the transformations that are taking place in the World Heritage site in question from a cultural, environmental and socio-economic point of view, and identifies short and long term objectives, as well as threats and strategic actions to be undertaken.

MEMORANDUM OF UNDERSTANDING

Governance act concluded with public or private (national or international) entities. It serves as a guiding document aimed at directing subsequent strategic actions toward objectives shared by the parties whose common interests correspond.

MITIGATION MEASURES/STRATEGIES

Measures implemented in order to avoid, reduce, or compensate for possible adverse effects of a development project or action; they may be general or site-specific. Thus, mitigation measures are defined as those measures necessary to be applied before, during, and after development of a project.

MONITORING

Monitoring represents the "ultimate test" of the effective management of a World Heritage site and is the most suitable tool for containing the risk of its Outstanding Universal Value being impaired. Through the analysis of measurable indicators, the monitoring process makes it possible to assess results achieved and the progress of projects included in the Action Plan, acquiring the information necessary for the Management Plan's future revision and updating.

MONITORING INDICATORS

These are values that make it possible to briefly characterise a phenomenon. Their function is to meaningfully represent the project activities and the outcomes achieved as a result of their realisation. Their adoption implies the identification of the particular features of the project against which their effectiveness is to be measured.

N

NATIONAL AND REGIONAL CRISIS COORDINATION UNIT

Set up at the Regional Directorate for Cultural and Landscape Heritage of the Tuscany Regional Authority, this Unit's purpose is to coordinate the territorial activities of the MiC [Ministry of Culture] Offices, whilst ensuring liaison with the Civil Protection, Firefighters Departments and Carabinieri agencies, for the protection of the cultural heritage. The tasks of the Coordination Unit also include identifying and managing survey teams, assessing damage, and providing shelters for cultural heritage. Additionally, the unit collects and evaluates all communications and reports of damage to cultural heritage in order to prepare appropriate interventions.

O

OPERATIONAL GUIDELINES FOR THE IMPLEMENTATION OF THE WORLD HERITAGE CONVENTION (LAST VERSION UPDATED TO 2019)

The guidelines are a useful tool to understand and implement the World Heritage Convention. They indicate the criteria and procedures for:

- the inclusion of a property on the World Heritage List or on the List of World Heritage in Danger;
- the protection and preservation of World Heritage sites;
- requesting international assistance from the World Heritage Fund;
- mobilising national and international support for the Convention.

The OG, first drafted in 1977, are periodically updated with new concepts, knowledge or experiences, as well as with the resolutions taken by the Committee. The text currently in force (updated in 2019) is available at the following link: http://whc.unesco.org/en/guidelines/.

OUTSTANDING UNIVERSAL VALUE (OUV)

Outstanding Universal Value (OUV) is defined in Article 49 of the Operational Guidelines as "cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity. As such, the permanent protection of this heritage is of the highest importance to the international community as a whole" (UNESCO, 2019).

For a property to be considered of Outstanding Universal Value, it must:

- meet one or more selection criteria;
- meet the conditions of integrity and authenticity;
- have an adequate protection and management system in place to ensure its conservation.

P

PERIODIC REPORTING
Monitoring tool through which the States Parties are invited, every six years, to send a report to the World Heritage Committee, in the form of an online questionnaire, indicating the respect and implementation of the Convention at the national level (Section I) and the State of Conservation and management of each site (Section II). The main objective of the Periodic Reporting is to:

- present an assessment on the application of the Convention;
- verify the permanence of the value (OUV) for which a site has been included in the World Heritage List;
- provide updated information on World Heritage sites regarding their State of Conservation and any changes;
- provide a tool for cooperation and for the exchange of information and experiences among States Parties concerning the implementation of the Convention.

The compilation of the Periodic Reporting is carried out by geographic areas in order to make the process easier. In the case of Europe, the first cycle of the Periodic Reporting was established from 2001 to 2006, the second cycle began in 2012 and ended in 2014, and the third cycle will take place in during the period 2022-2024 (https://whc.unesco.org/en/periodicreporting/).

PREFECTURE
Territorial Offices of the Government that carry out proactive actions, guidance, social mediation, intervention, consultancy and collaboration (including with respect to local authorities), in all areas of administrative activity. They execute regulations or follow established practices, promoting the simplification of administrative procedures. These offices are designated as Territorial Offices of the Government under the reform plan provided for by Legislative Decree No 300 of July 30, 1999, though they began to be called Territorial Government Offices, retaining all their competencies and assuming new ones.

PROPERTY
The term used to indicate the World Heritage Site area whose perimeter was defined during its inscription on the World Heritage List and formally recognised by the World Heritage Centre as an area of Outstanding Universal Value.

S

SERIAL SITES
A site composed of two or more components, meaning two or more parts with distinct perimeters. Serial sites are inscribed within the same procedure and through the same Statement of Outstanding Universal Value.

SERVICE II - UNESCO OFFICE (MINISTRY OF CULTURE)
Established in 2004, this office coordinates activities related to World Heritage Convention implementation at the national level, including:

- managing requests for the nomination of Italian sites or properties to the World Heritage List. The office coordinates and provides technical and scientific support for drafting nomination dossiers for newly proposed sites as well as their Management Plans, whilst attending to the subsequent phases of the process;
- through the Permanent Delegation of Italy to UNESCO, the office oversees relations with the World Heritage Centre, and with similar offices at the Ministries of Culture of other countries in order to define common strategies for the implementation of the World Heritage Convention and to promote transnational nominations;
- providing technical support to Site Managers for drafting and implementation;
- coordinating Monitoring activities, including drafting Periodic Reports on the implementation status of the World Heritage Convention in Italy;
- coordinating activities related to the verification and preparation of acts referring to potential/current risks, reported by the World Heritage Centre concerning registered sites;
- promoting and managing scientific activities, research and training initiatives and events, including Conferences, Seminars, Exhibitions etc.;
- promoting Italian cooperation activities concerning the protection and conservation of listed sites/properties in third countries.

STATE OF CONSERVATION REPORT (SOC)
It is the result of the Reactive Monitoring and Periodic Reporting processes. Reports on the State of Conservation of monitored sites are examined annually by the World Heritage Committee.
Since 1979, more than 4050 reports on nearly 600 listed sites have been compiled, analysed, collected, digitised, and made available online (https://whc.unesco.org/en/soc/). Documentation is essential for understanding and monitoring the various conservation issues connected to the sites.

STATEMENT OF OUTSTANDING UNIVERSAL VALUE
Reference document concerning the protection and management of the site, in which the reasons for the inclusion of the property on the World Heritage List are outlined. It is the official declaration adopted by the World Heritage Committee at the time of the inscription of a site on the World Heritage List, which can be subsequently updated by the Committee itself through consultation with the State Party and revised by the Advisory Bodies. The requirement to structure the Statement, introduced by the OG in 2005, came into effect in 2007. The Statement, as specified in item 155 of the OG, must include:

- brief description of the site;
- summary of the decision of the World Heritage Committee for which the site was considered as having Outstanding Universal Value;
- justification of the Selection Criteria for which the site was inscribed, with examples of attributes or key aspects that contribute to the OUV of the site;
- assessment of the conditions of Integrity and, for cultural and mixed sites only, of Authenticity;
- statement of the existing Heritage Protection and Management System and of the actions contemplated.

STATES PARTIES
Countries which ratified the 1972 World Heritage Convention and agreed to identify and nominate potential sites located in their territories for inclusion in the World Heritage List. In case of inclusion, the States Parties are required to provide for the protection and monitoring of their sites and to periodically communicate the State of Conservation to the World Heritage Committee.

STEERING COMMITTEE
The institution responsible for updating and implementing the Management Plan.
The Committee in the event of special situations concerning the World Heritage site and recognizes a main site representative who is responsible for coordinating all responsible parties, carrying out secretarial duties, and monitoring the Management Plan.

5C STRATEGY

This strategy is indicated in the UNESCO World Heritage declaration of Budapest in 2002 and aims to:

- strengthen the credibility of the World Heritage list (CREDIBILITY);
- ensure the effective protection of sites (CONSERVATION);
- facilitate and promote world heritage training (CAPACITY BUILDING);
- raise public awareness through communication (COMMUNICATION);
- involve resident population when applying the convention therefore strengthening the role of the community (COMMUNITY).

For more information: https://whc.unesco.org/document/125624 .

STRUCTURAL PLAN

Conceptually innovating the old General Regulatory Plan (GRP), the Municipal Structural Plan serves as an urban planning tool prepared by the municipality to outline the cultural identity, strategic development choices, and protect the physical and environmental integrity of its territory.
Unlike the GRP, which had a prescriptive nature, the MSP does not directly determine land buildability but provides guidelines for future land management. It considers, among other things, the enhancement of existing resources and their economic and social development, with a strong focus on urban and environmental quality and the sustainability of planning choices.

SUSTAINABLE DEVELOPMENT GOALS

Approved together with the 2030 Agenda for Sustainable Development in September 2015 by the representatives of 193 countries that met at the United Nations General Assembly. On the basis of the 8 Millennium Development Goals (https://www.un.org/millenniumgoals/), Member States commit to 17 Sustainable Development Goals (SDGs) by 2030, organised into 169 targets, aimed at improving the living conditions of millions of people around the world. Sustainable Development is identified as development that meets the requirements of the present without compromising the possibility for future generations to meet their own needs. To achieve Sustainable Development, it is important to harmonise three fundamental elements: economic growth, social inclusion and environmental protection (https://sustainabledevelopment.un.org/?menu=1300).
The 17 Objectives are articulated as follows:

- Objective 1: End poverty in all its forms everywhere;
- Objective 2: End hunger, achieve food security, improve nutrition and promote sustainable agriculture;
- Objective 3: Ensure healthy lives and promote well-being for all at all ages;
- Objective 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all;
- Objective 5: Achieve gender equality and empower all women and girls;
- Objective 6: Ensure availability and sustainable management of water and sanitation for all;
- Objective 7: Ensure access to affordable, reliable, sustainable and modern energy for all;
- Objective 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all;
- Objective 9: Build resilient infrastructure, promoting inclusive and sustainable industrialisation and foster innovation;
- Objective 10: Reduce inequality within and among countries;
- Objective 11: Make cities and human settlements inclusive, safe, resilient and sustainable;
- Objective 12: Ensure sustainable consumption and production patterns;
- Objective 13: Take urgent action to combat climate change and its impacts;
- Objective 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development;
- Objective 15: Protect, restore and promote the sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss;
- Objective 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels;
- Objective 17: Strengthen the means of implementation and revitalising the global partnership for sustainable development.

SWOT ANALYSIS

A SWOT analysis is a response to the need for rationalization of decision-making processes. Used for territorial analysis, it is based on a preliminary identification of endogenous factors (strengths and weaknesses) and exogenous factors (opportunities and threats), allowing for the subsequent evaluationof possible choices to be implemented.

T

TECHNICAL OFFICE

The notion of UNESCO Office - Permanent Monitoring Centre, commonly known as the Technical Office, is detailed in Articles 3 and 4 of the 2013 Memorandum of Understanding. This Office serves as the "technical-administrative component" of the site's current governance structure. It complements the Steering Committee, which represents the "political-institutional" aspect of governance. The Technical Office was established by the Steering Committee so that it could receive practical and operational support in the day-to-day management of the property.

TECHNICAL REVIEW

A technical evaluation process that provides feedback to sites during the nomination phase, as well as for identifying possibly feasible and administrative improvements related to the management of sites already recognised as World Heritage.

THREATS AFFECTING THE PROPERTY

List of threats affecting the OUV of the Property, adopted in 2008 by the World Heritage Committee with the main purpose of facilitating the compilation of the Periodic Report and the State of Conservation report. It consists of 14 primary risk factors and secondary factors. The full list of factors can be found at: https://whc.unesco.org/en/factors/.

U

UNESCO

UNESCO (United Nations Educational, Scientific, and Cultural Organization) was founded in London in November 1945 as an agency specialized in education culture and science at the United Nations. Its headquarters are in Paris and its constitution states that "since wars began in the minds of men it is the minds of men that the defences of peace must be built". The objective of the organization is in fact to "contribute to peace and security promoting cooperation between nations through education, science and culture in order to ensure universal respect for justice, law, the human rights and fundamental freedoms recognized by the charter of the United Nations for all peoples, irrespective of race, sex, language or religion." UNESCO is organized into five educational sectors including natural sciences social and

human sciences communication and information as well as culture.
UNESCO currently has 194 Member States and 12 Associate Members (https://www.unesco.org/en/countries).
The institutional bodies of UNESCO are divided into:

- Governmental bodies: the general conference and the executive council;
- Executive organ: the secretariat.

The general conference convenes all Member States every two years in order to establish their organizations' policies programs and budget.
It also elects the members of the executive council and, every four years, the general director. The overall management of UNESCO, the work and the monitoring of the implementation of the decisions taken by the general conference are carried out by the executive council which consists of 58 Member States, including Italy and which meets twice a year. The executive body of UNESCO is the secretariat made up of the director general and its staff. The director is responsible for enforcing the commitments made by the member states. Currently the Director General of UNESCO is Audrey Azouley, elected in 2017.

UNESCO WORLD HERITAGE CENTRE
The UNESCO World Heritage Centre, established in 1992 and based in Paris at Place de Fontenoy 7, coordinates all UNESCO World Heritage activities. The Centre is primarily responsible for the management and implementation of the 1972 World Heritage Convention, the organisation of the World Heritage Committee's annual meetings, and the communications and instruction provided to the public and the many actors involved in World Heritage issues. The Centre's operations are divided into regional areas of expertise (Africa, Arab States, Asia and the Pacific, Europe and North America, Latin America and the Caribbean) and intersecting themes. The Centre's website (https://whc.unesco.org/) offers a wealth of information and documentation useful to the general public and, specifically, to heritage and site managers.

URBAN PLANNING REGULATIONS
(TODAY THE MUNICIPAL OPERATIONAL PLAN)
The purpose of this government act is to regulate urban planning and building activities on the municipal territory. It serves as the instrument that enables the implementation of the guidelines and planning choices set out in the Structural Plan. This instrument specifies in detail which territorial transformation processes are to be halted or, conversely, supported and enhanced, which areas or structures are to be protected, and which are to be completed or transformed.

V

VALUES
Outstanding Universal Value represents the reason a property is considered to be of common importance for present and future generations, leading to its inscription on the World Heritage List. For each property, a range of Values that contribute to making its heritage outstanding in the global panorama is recognised. Therefore, it is essential that these Values are accurately identified so that the Property management system can incorporate them into future conservation and enhancement strategies.

W

WORLD HERITAGE COMMITTEE
Inter-governmental committee consisting of 21 States Parties to the Convention, whose representatives are elected by rotation by the General Assembly. The Committee meets annually for the purpose of:

- implementing the World Heritage Convention;
- determining the use of the World Heritage Fund;
- granting financial assistance to requesting States Parties;
- deciding on the inscription of a site on the World Heritage List;
- examine reports on the State of Conservation of listed sites;
- requesting appropriate interventions and actions from States Parties for inadequately managed sites;
- deciding on the inscription of a site on the World Heritage List in Danger or its removal.

The current composition of the Committee, approved by the 23rd General Assembly of the States Parties to the World Heritage Convention from November 24-26, 2021, is the following:
Argentina, Belgium, Bulgaria, Egypt, Ethiopia, Greece, India, Italy, Japan, Mali, Mexico, Nigeria, Oman, Qatar, Russian Federation, Rwanda, Saint Vincent and the Grenadines, Saudi Arabia, South Africa, Thailand, and Zambia.
For more information: https://whc.unesco.org/en/committee/.

WORLD HERITAGE LIST
Provided for and defined by Article 11.2 of the World Heritage Convention, it lists the sites – cultural, natural or mixed – possessing Outstanding Universal Value which meet the requirements of the Convention. Following the 45th Session of the World Heritage Committee in Riyadh, the sites inscribed on the List total 1199. The list is continuously updated (https://whc.unesco.org/en/list/).

WORLD HERITAGE SITE
Cultural, natural or mixed sites defined in accordance with Articles 1 and 2 of the 1972 World Heritage Convention considered as possessing Outstanding Universal Value, which meet one or more of the selection criteria (i)-(x) as specified in the OG. As unique properties with international value, established at the moment of inscription on the World Heritage List, they must be protected, preserved and enhanced through all available means. World Heritage properties are categorised into cultural heritage, natural heritage, mixed sites, and cultural landscapes.

ANNEX 2
BRIEF HISTORY OF THE COMPONENTS

VILLA OF CAFAGGIOLO

The Villa of Cafaggiolo is one of the oldest Medici properties. In 1359, it was providing abundant farm production whilst already bearing the dignity of a noble residence. In the first land register, dating back to 1427, Averardo di Francesco di Bicci de'Medici stated that it was "*un habituro acto a fortezza*" [a fortress dwelling]. When in 1451, Cosimo the Elder took possession of the Villa, Michelozzo intervened with remarkable works, defining the building's rectangular shape that it still has today. Rooms with halls that follow one after the other were built on the loggias. Michelozzo's extension works placed a walkway all around, a second tower, the moat with its walls and the outer defensive-walls and the drawbridge. His project also delimited the square out front with walls erected to the east and north, along with the "row of houses" on the south side, still called "the long sleeve", and the vegetable garden in the rear. Moreover, as Vasari indicated in his brief but incisive reference he dedicated to Cafaggiolo with just a few lines, Michelozzo's opus also extended to the organisation of "*the farms, the roads, the gardens, the fountains and the woods around them, whilst also planting ragnaie groves* [tall trees planted closely and equipped with bird-catching nets that resembled spider-webs]*, and other things from very honoured villas*". When Cosimo I took possession of the Villa, he enlarged the building by inserting a clearly legible block on the building's eastern façade, less developed than what had been there before. This block had ground floor rooms with steeply sloped cross vault ceilings and exposed beams, whilst the upper floor comprised a vast hall with a decorated wooden ceiling, to which a loggia was later added. He also enlarged the property by building a large walled Barco [park-garden]. This was actually a private hunting reserve where he would introduce rare animals, whilst on the left he had the stables built. Before 1788, during the Lorraine Duchy, the massive older central tower, documented in the more ancient depictions of the villa, was demolished. In 1864, one day after the annexation of the Grand Duchy of Tuscany into the Kingdom of Italy, Cafaggiolo was sold by the State to Prince Borghese, who decided to make some changes to the building. The Prince, entrusting the work to the engineer Giovanni Piancastelli, gave the villa its current layout and transformed the garden into a small romantic park embellished with exotic plants. Borghese also had some ground floor rooms frescoed in the Neo-Renaissance style in 1887. Subsequently, the villa was sold to the Gerini family and then in 1936 to Enrico Scaretti. Afterwards, it was passed to the Congregation of Trappist Friars, who transformed the villa into a convent, a kindergarten and a cheese factory. After 1965 it was bought by several enterprises that administered it for ceremonies and conventions. In 2008 Cafaggiolo was bought by the Argentinean magnate Alfredo Lowenstein, who fostered its restoration with the intention of turning it into a hotel complex.

VILLA OF TREBBIO

The first time the Villa of Trebbio was alluded to was in a conveyance in the land register of 1427. At that time, the patriarch of the Medici fortunes, Giovanni di Bicci, stated that he possessed "*a place that was suitable as a fortress for my dwelling with sufficient household goods and furnishings* [...] *called Trebbio*". To date, there is not enough information available to precisely identify the client or the architect of the Villa of Trebbio. Nevertheless, well-established tradition has assigned the renovations of the medieval Trebbio castle to the architect Michelozzo, who was commissioned by Cosimo il Vecchio, who took possession of it in 1428. Michelozzo's interventions unified the pre-existing structures by adding newly built rooms, inserting elements drawn from the ancient and harmonising them using medieval architectural language. The outcome can be found in the rustic and compact simplicity of the comfortable country residence, which was already oriented towards the new concept of the patrician villa, with its courtyard and broad areas of garden and lawn as well as two vineyards. The building's structure remained essentially unchanged from Michelozzo's time to the time of Ferdinando I. The entire property was then sold by Ferdinando II to Giuliano Serragli, who donated it to the Philippine Fathers of the Oratory of San Firenze upon his death. Between the late 18th and the early 19th century, the property was sold to Marcantonio Del Rosso and, later, to the Florentine church. In 1865, the Italian government decreed the expropriation of the Church's assets, so the property was auctioned off and purchased by private parties, first by the Colibò family and then later by Prince Marcantonio Borghese. Until this time, the ancient complex remained in its original form, with the 15th-century garden and chapel still intact. After being bought by the Scaretti family, the castle underwent restoration work in the years 1936-37. Specifically, the courtyard loggia was brought back to light, whilst a large articulated construction attached to the villa's south-eastern side was demolished. Marjory Scaretti was also responsible for certain modifications around the house and in the garden. In front of the house, where the lawn with the topiary pavilions, depicted in Utens's lunette, was located, a simple formal garden was designed featuring boxwood and roses. On the right, adjacent to the perimeter wall of the architecture, a rock garden took shape, in the typical English style, with an orchard even further to the right. At the rear, sheltered by a thick screen of cypress trees, a lawn was planted with a special area for outdoor games. More recently, the Corsini family bought the property.

VILLA OF CAREGGI

On 17 June 1417, Giovanni di Bicci dei Medici purchased a property from Tommaso Lippi called Monterivecchi on the hill. This was a villa with a tower, a courtyard, a loggia, a cellar, a stable, a well, a vegetable garden and two houses. Commissioned by Cosimo the Elder, Michelozzo designed and supervised its transformation works in two successive phases. The first, involving the building with the courtyard and adjacent rooms, was completed in 1440. The second, with the building of the two loggias on the western side ground floor, was completed in 1459. Lorenzo the Magnificent, who chose Careggi as his preferred residence, established the Neoplatonic Academy there, making the villa one of the most significant cultural and artistic centres of excellence of the early Renaissance. It is likely that the panoramic loggia on the first floor, attributed to Giuliano da Sangallo, dates back to this period. Regardless of any attributions or dating, the architectural element of an open loggia became a typical feature of the Renaissance villa, determining a new relationship between architecture and nature, as the typologies of medieval space were being surpassed. Although, in 1529, a fire caused extensive damage to the villa's architectural structure, Duke Alessandro provided for the necessary repairs to be made to the building. Owned by Grand Duke Ferdinando I himself, in 1609 the villa passed into the hands of Carlo de'Medici who, having been appointed cardinal in 1615, undertook an extensive restoration project. There were in the basement of the villa, a nymphaeum with a fountain adorned with sponges and an enamelled ambrogette tile floor, with wardrobes and paintings on the walls. Cardinal de'Medici also commissioned Michelangelo Cinganelli to fresco the ground floor hall, the small study and the loggia ceiling. Having been passed on to the Lorraine administration, in 1780 Grand Duke Pietro Leopoldo sold it to Vincenzo Orsi. In 1848, the villa was purchased by Francis Joseph Sloane, who collected works of art there together with furniture and artefacts to form a sort of Medici gallery. With great high-handedness, Sloane transformed the architectural structure and the garden as he saw fit. In particular, he tried to isolate the body of

the villa by Michelozzo, whilst remodelling some of the interior rooms according to a late Renaissance design. The green spaces were also renewed. New ponds and rare and exotic plants were introduced in the old south facing garden. Enclosing the complex was a ring of greenery composed according to landscape garden schemes. Sloane died in the villa in 1871 and left all his assets to Augusto Bouturlin. In the early 20th century the villa was sold to Carlo Segrè and was then passed on to the Arcispedale di Santa Maria Nuova in 1936. Finally, in 2004 the villa was purchased by the Tuscan Regional Authority, which is promoting its complete restoration in order to return it to public use.

VILLA IN FIESOLE

The Villa in Fiesole was built over a pre-existing dwelling belonging to Niccolò Baldi. In 1458, it was purchased by Cosimo the Elder de' Medici for his son Giovanni. As Vasari recalled, Giovanni commissioned Michelozzo to build "*a magnificent and honoured palace, situated on the lower part of the* [Fiesole] *hill slope, at great expense, but not without a great return*". Working together with Michelozzo were Rossellino and Antonio Manetti, also known as the Ciaccheri, whose presence on the work site was documented in 1455. From 1451 to 1455 the building was under construction. This continued until 1457 with the culmination of the agricultural preparation of the land, the planting of the orchards, and the installation of the fixtures and furnishings, including two Madonnas commissioned from Donatello. Upon the death of Giovanni de' Medici in 1463, the villa was inherited by Piero di Cosimo de' Medici, also called "il Gottoso". Then Lorenzo the Magnificent, who inherited it in 1469, enlarged it by considerably increasing its income, with the purchase of several plots of land and four stone quarries. In the Laurentian period, having become a literary meeting place frequented by Marsilio Ficino and Agnolo Poliziano, who wrote Rusticus in this isolated and fine refuge, the villa gave prominence to its function as a spiritual retreat and cultural circle in the humanistic spirit, which had already been evident in Giovanni's time. Having been deemed inadequate for the needs of the Medici court, Grand Duke Cosimo III decided to sell the villa to the state councillor Cosimo Del Sera in 1671. Immediately, Del Sera began a major restoration of the entire property. It was then sold to the Durazzini family and, in 1722, the villa was purchased by the Borgherini family, who lived there permanently until 1768. When the last of the Borgherini family died off in 1771, it belonged to Albergotto Albergotti for a very short time. In 1772, Albergotti sold it to Margaret Rolle d'Ayton, Countess of Orford, who had moved to Italy from England. With the addition of a piece of wall annexed to the north side, Lady Orford enlarged the pre-existing architecture, bringing it to its present proportions of a large cube with even development on all sides. After Giulio Mozzi inherited the villa in 1781, it was bought by the English painter and art dealer William Blundell Spence in 1862. In 1897, it was sold to Lady Sybil Cutting and Harry Mac Calmans (who transformed the property with the intervention of the English architect Cecil Pinsent). In 1938, Lady Cutting gave it to her daughter Iris Cutting Origo, who sold it in 1959 to Aldo Mazzini of Prato.

VILLA OF CASTELLO

The origins of this villa are linked to the presence of the Roman aqueduct of Valdimarina, between Sesto and Florence, and a cistern called castellum, from which today's toponym "castello" derives. The villa is the outcome of a series stratified construction interventions starting from an older nucleus, comprising a defensive tower with a small 12th century annex. As early as the 14th century, this structure had already lost the air of a fortress to take on the appearance of a residence. On the advice of Lorenzo the Magnificent, Lorenzo and Giovanni di Pierfrancesco de'Medici purchased the villa belonging to the della Stufa family In 1477. The villa was transformed and enlarged in size and became Giovanni di Pierfrancesco de' Medici's residence. Subsequently, in 1538, Cosimo I had additional works done, which were entrusted to Niccolò di Raffaello Pericoli, known as il Tribolo, both for the building and the garden. Pericoli redesigned the building in relation to the environmental organisation of the surrounding area, making it the pivot of an ideal axis between the Arno river and Mount Morello. According to Vasari's analysis, the project should have taken into consideration the complex allegorical programme centred on the combination of the Medici dynasty and the city of Florence conceived by Benedetto Varchi. Although the garden elements had already been formed by 1580, Castello could only be said to have been completed between 1588 and 1593, during the reign of Ferdinando I, when work on the villa, which had been extended to its east side, was completed. In 1828, work on the Citrus Tree Hall was consolidated, whilst the architect Nini designed a new gate for the villa's entry roadway. Contemporaneously, Joseph Frietsch was transforming the land above and to the sides of the villa's Renaissance garden into a landscape park. With the construction of a carriage roadway connecting Petraia and Castello with the Villa del Gondo, in 1832, the work was completed. At the end of the First World War, Victor Emmanuel III donated the Castello farm to the Opera dei Combattenti [veterans service organisation]. Whereas, the villa and garden became state property in 1924. The villa has housed the Accademia della Crusca Since 1974 and the Opera del Vocabolario Italiano [Historical Dictionary of the Italian language National Research Council Institute] since 2001. The garden was officially acknowledged as equivalent to a National Museum in 1984.

VILLA OF POGGIO A CAIANO

Purchased by Lorenzo de' Medici in 1474, together with other properties that formed the extensive farming estate known as the Cascine di Tavola, the Villa of Poggio a Caiano stands on the site of an ancient manor house that once belonged to the Cancellieri, Strozzi, and Rucellai families. Around 1485, Lorenzo assigned Giuliano da Sangallo to design a new villa. The new dwelling was to be conceived according to Lorenzo the Magnificent's humanistic rationalism, which is very clear in Giusto Utens' depiction. The artist's lunette shows how the relatively isolated building dominated the landscape with its empty square out front, whilst the regularly laid out garden and surrounding fields were clearly subordinated to the villa. Construction on the estate was suspended in 1494 with the exile of Piero, Lorenzo's son; to be resumed with the return of the Medici family to Florence in 1512. The architectural work was perfected by Lorenzo the Magnificent's other son, Giovanni, during a second construction phase. It is likely that Giovanni, who ascended to the papacy as Pope Leo X, completed the work on the estate at the end of the second decade of the 16th century. Much of the decoration in the central hall, inspired entirely by a celebration of the house of Medici, can also be attributed to Leo X. Responsibility for the further characterisation of the villa's interior embellishment belongs to Cosimo I de' Medici, who was elected Duke of Florence in 1537. Specifically, the Duke's contribution concerned the weaving of a series of tapestries with hunting scenes, which were to adorn the walls of twenty rooms, and which were executed based on cartoons first by Stradano and then by Allori. Cosimo I promoted other initiatives that further defined the surrounding environment and the architecture of the outbuildings. These included the creation of the annexed gardens and bastions, whose design was assigned to well-known artists and architects of the time, namely: Niccolò Pericoli (AKA Tribolo), Giorgio Vasari, Gherardo Mechini, Alfonso Parigi and Davide Fortini. Two construction interventions were undertaken

during the late 18th century during the Lorraine period. The first was the raising of the central crowning of the façade, where the clock is featured, into a position above where the eaves overhang and situated on an axis with Sangallo's pronaos. The second was the covering of the external galleries on the second floor, which characterise the villa's side elevations. Moreover, in 1807, Pasquale Poccianti replaced the original access staircase symmetrically articulated in twin straight flights, which were orthogonal and parallel to the façade, by designing the construction of a new staircase with two converging curvilinear flights. Though the villa gardens were also redesigned after 1811, they did not completely follow the project drawn up by the engineer Giuseppe Manetti. Upon commission by Elisa Baciocchi, the park was given an irregular shape, which was used to create a landscape garden, a pond and a temple dedicated to Diana. The villa, which was placed under the jurisdiction of the Ministry of Education in 1923, was recognised as a National Museum in 1984. Since 2007, Poggio a Caiano has been home to the Museo della Natura morta (Still Life Museum), where an important selection of works from the Medici and Grand Ducal collections are exhibited on the second floor.

VILLA LA PETRAIA

This ancient fortress built in the early medieval period, it belonged first to the Brunelleschi family from 1364, and then to the Strozzi family from 1422. The first evidence that the Villa la Petraia was a Medici property dates back to October 1544. Donated by Cosimo I to his son Cardinal Ferdinando in 1568, it was enlarged and transformed into a villa on the Cardinal's initiative. Significant refurbishments were undertaken in the years 1573-1574, and between 1591 and 1597. The interventions brought about an addition to the north side of the villa, the creation of a new inner courtyard with two porticoes and two loggias, and the raising of the tower. In 1589, Bernardino Barbatelli, known as Poccetti, with the collaboration of Cosimo Daddi, frescoed the chapel on the first floor. In 1609, Villa la Petraia was passed on to Don Lorenzo de' Medici, who made significant changes to the property. In 1622, the tower was consolidated. In addition, a very rich picture gallery was installed, comprising works by Florentine artists such as Cesare Dandini, Giovanni da San Giovanni, Carlo Dolci and Stefano della Bella. In 1636, Ferdinando II commissioned Baldassarre Franceschini, known as the Volterrano, with the execution of a cycle of frescoes in the central courtyard, on themes that sought to exalt the splendour of the house of Medici and the deeds of the Knights of St. Stephen. Between 1783 and 1785, Pietro Leopoldo had the fountain with Giambologna's VenusFiorenza moved from Castello to Villa la Petraia, where it was placed in the centre of the east garden, henceforth known as the "Piano della Figurina". In 1822, the lemon house was built on the east side of the garden, whilst in 1825, the tepidarium was raised to protect a collection of exotic plants. Between 1836 and 1850, the landscape park was planted according to the design of the Bohemian gardener Joseph Frietsch. The project was completed with the construction of an avenue connecting the Villa of Castello with the Villa la Petraia. This composition included paths and alleys that climbed the hill, opened onto panoramic views and ran alongside streams and ponds. Many modernisation works were undertaken on the villa when Florence was the capital of Italy. Among other things, the courtyard was covered with an iron and glass skylight, transforming it into a ballroom. Still during this period, two ponds to be used for water storage were built in the upper park, along with two hunting lodges. Two large iron aviaries, which were removed in the early 20th century, were erected in the "Piano della Figurina". In 1919, the farmland annexed to Villa la Petraia was ceded by the Crown to the Italian State, which then assigned it to the Opera Nazionale Combattenti [veterans service organisation]. Since 1984 it has been home to a National Museum.

BOBOLI GARDENS

Bound to the role of royal palace garden for nearly four centuries, the Boboli Gardens represented the power and splendour of the Medici family. The park, among the most famous in Europe, was a theatre for court life, sumptuous stage settings and hunts. Though the grounds have not suffered any periods of severe degradation or abandonment, they have, at times, had major changes made to their layout. In 1549, Eleonora di Toledo's purchase of the Pitti Palace and orchard meant that the entire hill at Boboli was to be turned into a garden-park according to the design by Niccolò Pericoli also known as *il Tribolo*. Upon Pericoli's premature demise in September 1550, the work was continued until 1554 under the guidance of Davide Fortini and Luca Martini. And then later Giorgio Vasari, Bartolomeo Ammannati, and Bernardo Buontalenti were brought in to provide their services. The construction of the *Grotticina di Madama*, the oldest of the grottoes in Boboli, built between 1553 and 1555 at the behest of Eleonora to celebrate the virtues of her husband Cosimo I, dates back to this earlier period. At the same time, the old *pietra forte* [fine grained sandstone] quarry, where the stone with which the palazzo had been built was extracted, was transformed into a green space shaped like an amphitheatre. A series of mainly deciduous trees were planted on the surrounding terraces, whilst earthworks and embankments were installed with great effort to provide stability to the nearby steep slopes. After the Medici principality was devolved to Francesco I, the *Grotta Grande* was built between 1583 and 1587. This grotto, adapted from an earlier nursery designed by Buontalenti to house Michelangelo's Four Prisoners, gave full expression to the Florentine Mannerist style. Boboli was then expanded with extensions begun by Cosimo II and completed by his son Ferdinando II in the 17th century. Work was begun in 1612 under the direction of Giulio Parigi, a former collaborator of Buontalenti. This intervention led to an addition that reached *Porta Romana* through a cypress-lined walkway, interrupted only by the water composition known as the *Vasca dell'Isola*. During the same period, the green-space amphitheatre was replaced by one made of masonry, which was intended to be used for large performances. The house of Habsburg-Lorraine, which succeeded the Medici family, completely restored Boboli and provided it with a monumental Hall of the Citrus Trees as well as the Kaffeehaus pavilion, below the ramparts of the Forte di Belvedere, where the Grand Duke's family would gather together frequently. Many ancient artefacts were transferred to Boboli in 1788-89 from the Villa Medici in Rome, including the Egyptian Obelisk and the Dacian Prisoners. The most substantial intervention of the 19th century was the removal of three large 17th-century labyrinths from the park so that a serpentine carriage road, which led from the Isola area to the *Viale dei Cipressi*, could be built. Boboli garden-park, which is an integral part of the Pitti Palace aggregation, is today one of the museum complexes gathered under the auspices of the Uffizi Galleries.

VILLA OF CERRETO GUIDI

During the 15th and even more so in the 16th century, the Medici family recognised the opportunities to be had in profitable harvests, formidable hunting parties and productive fishing expeditions. Thus, through significant new acquisitions as a part of an extensive programme of property investments in the countryside and inheritances from the branch of Cosimo the Elder and Lorenzo the Magnificent, they were able to accumulate a considerable landed estate in Cerreto Guidi. That is precisely where the Medici erected a majestic villa as an emblem of their very specific relationship of authority and dominion over the territory. Although Cosimo I's purchases in the castle and the countryside of Cerreto Guidi and Vinci districts did not begin until the winter of 1564, his interest in Cerreto Guidi had begun long before. Indeed, many letters attest that from 1542 henceforth, Cosimo took every opportunity to take long hunting trips and sojourns in this area. It appears that work on the construction of the original nucleus of the villa, which was at first a simple hunting lodge, were begun, by order of the Duke, around 1555. Regardless, documentary sources date the start of the demanding work on this Medici villa construction site in November of 1564. This date then leads to the well-founded assumption that the architect Bernardo Buontalenti, an expert in consolidation works, who was

at that time a mature designer working for the Medici patrons, was also involved in the work. To many scholars, the architectural characteristics of this austere complex are evidence of Buontalenti's contribution. Indeed, his ideas stand out especially in the conception of space and monumentality that characterises the 'stepped' access ramps, which required a large part of the castle walls to be demolished for their construction. Pietro Leopoldo of Lorraine sold the Cerreto Guidi property to Antonio Tonini of Pescia In 1781. The Tonini family then sold it to the Maggi family of Livorno who then sold it in 1885 to Filicaja's widow, Maddalena Dotto, who gifted it to her son-in-law Giovanni Geddes. During the Second World War, the villa was made headquarters of the local military garrison and was looted. After purchasing the property from Rodolfo Geddes in 1966, the engineer Galliano Boldrini, a native of Cerreto Guidi, donated it to the Italian State in 1969, with a constraint that it become a National Museum. Since 2002 it has been the home of the Historical Museum of Hunting and the Territory.

VILLA IN SERAVEZZA

The construction of the Villa of Seravezza was commissioned by Cosimo I de' Medici so he could personally oversee the rich marble and mineral quarry operations in the area. In fact, not only was that locality rich in marble, but in nearby Stazzema, known since medieval times, there were deposits of metalliferous veins of mercury, argentiferous lead, cinnabar, and ferrous carbonate. Amongst the most valuable stones quarried were the white marbles selected by Michelangelo for the basilica of San Lorenzo in Florence, and the breccia marbles known as *Breccia Medicea* or *Breccia di Seravezza*. Construction work was directed by Davide Fortini, between 1561 and 1563, under the oversight of Bartolomeo Ammannati. Subsequently, the Medici princes and in particular Cosimo I, Francesco I, and Ferdinando I with his wife, Christine of Lorraine, who was passionate about fishing, spent summers at the villa. Upon the death of her husband in 1609, Christine received the government legate of the Captaincy of Pietrasanta. Hence, some works at the villa can be attributed to her, such as the construction of the chapel outside the building, the design of which has been attributed to Buontalenti. Later, in 1784, Grand Duke Pietro Leopoldo donated the villa to the Municipality of Seravezza, reserving a portion of it as a summer residence for his vicarage of Pietrasanta. In 1786, the municipality returned the property to the Grand Duke due to the excessive burden of its maintenance. The property was then assigned to the Magona as the seat of administration and as a warehouse for an ironworks established in Ruosina. In the same period, a portion of the stables attached to the villa was transformed into a theatre by the town's notables who joined together in what they called the Accademia dei Costanti. Instead, in the place of the trout hatchery on the property, an ironworks was built. With the Ruosina ironworks having been privatised in 1835, Leopold II completely restored the villa as a summer residence for his daughters. In 1855, following a cholera epidemic that struck the area, the very same Grand Duke Leopold II had the building used temporarily as a hospital. After the Unification of Italy, the villa was given to the State, which again donated it to the Municipality of Seravezza in 1864. Today, after housing the Town Hall (until 1967), the villa has become home to the town Library, the Municipal Historical Archives, the Antiquarium and the Museum of Work and Popular Traditions of Versilia.

PRATOLINO GARDENS

Francesco I de' Medici purchased the Pratolino property In 1568. The next year, work began, as agreed with the prince, on a project drawn up by Bernardo Buontalenti. Ample basins, large nurseries, and a sequence of Gamberaie ponds replaced the vessels of the fountains that previously embellished the more traditional "Italianate garden". Several grottoes substituted the many niches and the more modest Renaissance waterlilies. Laurel espaliers, fir coppices and oak groves were planted in the place of box and myrtle hedges. Pratolino was conceived as a large modern park. Under the prince's watchful guidance, Bernardo Buontalenti, Bonaventura da Orvieto, Goceramo da Parma and Tommaso Francini realised the "magnificent creations", "miraculous works", and "astounding artifices" that gave Pratolino such fame and celebrity that it became known as a "garden of wonders". Visitors would be amazed by the music from the water organs, the spectacle offered by numerous small theatres of automata driven by hydraulic energy, and by the birdsong produced by Heronian machines. At one time, the terms Pratolino, Giardino and Paradiso became synonymous. Whilst illustrious men of letters described Pratolino's grottoes, fountains and water features, at the same time, renowned artists reproduced them in their sketch books, and architects and hydraulic experts tried to arrogate the technical solutions adopted by Francesco de' Medici. Michel de Montaigne was the first to recall the villa and park in minute detail. Ten years later, it was Fynes Moryson's turn. Later, artists and architects such as Giovanni Guerra, Solomon De Caus and Heinrich Schichkart came along for a visit. Then, the diffusion of Stefano della Bella's engravings contributed in no small measure to the consecration of Pratolino as a European ideal of garden art. Artists who had trained at the Pratolino work site, such as Costantino de' Servi and Francesco Cioli, hydraulic specialists such as Tommaso Francini and Cosimo Lotti, architects such as Baccio del Bianco, were then called on to go to Paris, London, Prague, Madrid, and even Lebanon by Fakhr-ad-Din, Prince of the Druze. Even Tommaso Francini, the esteemed builder of a number of automata, was the progenitor of a family that for generations could vaunt its responsibility as the "General Superintendent of the Waters and Fountains of France". For economic reasons, in the second half of the 18th century, Grand Duke Peter Leopold suspended the work needed for its burdensome maintenance, so many of the park's sculptures were moved to the Boboli Gardens in Florence. Ferdinando III conferred the Bohemian gardener Joseph Frietsch with the restoration of Pratolino in 1814, which eventually took place as the Medici garden was expanded and transformed into a landscape park. Whilst those works were being undertaken, the 16th-century building was demolished to be replaced by a neo-classical structure. However, Ferdinand III's death in 1824 prevented the completion of that project. Pratolino was sold by the Habsburg Lorraine, as their private property, to the Demidoff princes in 1872. Having been sold to the Società Generale Immobiliare SOGENE in 1969, it was purchased in 1982 by the Provincial Administration of Florence, which opened it to the public four years later.

VILLA LA MAGIA

Villa La Magia was a simple tower-house built by the Panciatichi family in the first half of the 14th century. Enlarged between 1427 and 1465, it finally took on the appearance of an actual dwelling arranged around a central courtyard. Beginning in the second half of the 15th century, the Panciatichi family grew stronger both economically and politically. Hence, the Villa la Magia began to be the venue for important visits, feasts, and hunting parties such as the occasion held in honour of Emperor Charles V in 1536. A grand feast was also held at the villa in 1579 for the wedding of Grand Duke Francesco I to Bianca Cappello. Because of the financial downturn of Niccolò Panciatichi, the residence was sold to Grand Duke Francesco I de' Medici in 1584. The next year, renovations were undertaken and an artificial lake was built in the area behind the villa, under the guidance of court architect Bernardo Buontalenti. Among the interventions on the building called for by Buontalenti were the paving of the courtyard, the walling in of the western loggia, and the raising of the rectangular dovecote. Because it favoured the presence of wild ducks, the lake was mainly built for the Grand Duke's recreational vagaries involved in hunting whilst it also allowed fishing. The villa remained a Medici family property until 1645. That very same year, Villa la Magia was purchased by Pandolfo Attavanti of Castelfiorentino. The new owner and his son Amerigo, who succeeded Pandolfo, took special care with the garden facing the villa's southern façade. There, the architects Jacopo and Carlo Antonio Arighi undertook a large terracing project, which was completed in the form of parterres around 1710. To modernise the villa's appearance according to the taste of the time,

Amerigo Attavanti commissioned a significant enlargement and decoration of the building between 1708 and 1716. The work involved the construction of a monumental staircase, along with the pictorial and sculptural decoration of many of the rooms on the ground and first floors. In 1752, when the Attavanti family had died out, the villa went to the Bindaccio brothers and then to Leone Ricasoli. In 1766, Villa La Magia was purchased by the Amati family, who, in the final decade of the 18th century, commissioned the organisation, according to the dictates of landscape gardening, of a 16th-century "wild" garden. When the Amati family died out in the 19th century, the property was inherited by Giulio di Luigi Cellesi. Finally in 2000, to give the villa a cultural destination, the municipal administration of Quarrata purchased it.

VILLA OF ARTIMINO

Based on a project by the Medici architect Bernardo Buontalenti, by order of Ferdinando I, the Villa of Artimino was built between 1596 and 1600. The Grand Duke, who loved to hunt, wanted it there because it was centrally located between the "Barco reale" on Montalbano and the other Medici properties in the area. Ferdinando I would use it for hunting in the nearby dense woods and for fishing in the Arno during the winter, whilst during the summer months, the villa would become the holiday residence for the Medici court. Ferdinando I commissioned the Flemish painter Giusto Utens to paint the famous lunettes depicting the Medici villas and properties found today at Artimino. He also commissioned Domenico Cresti, known as *il Passignano*, and Bernardino Poccetti to fresco the villa's central hall, the Grand Duke's personal apartments, the loggia, and the chapel with mythological subjects and allusions to his virtues. In August 1608, Galileo Galilei was invited there to teach maths to the young prince Cosimo II. The villa was also where many experiments were conducted by the Accademia del Cimento. In September 1657, many measurements of atmospheric humidity under different weather conditions were made using a condensation hygrometer. The villa was sold In 1782 by Grand Duke Peter Leopold of Habsburg-Lorraine to Lorenzo Bartolomei, Marquis of Montegiovi. It then went to Count Silvio Passerini da Cortona by succession. In 1911, the property was purchased by the Honourable Emilio Maraini, and upon his death in 1916, his wife Carolina Maraini Sommaruga inherited it. She was responsible for having the external staircase built by architect Enrico Lusini In 1930, based on a sketch by Buontalenti, which had been identified in the *Gabinetto Disegni e Stampe degli Uffizi*. In August 1944, the villa suffered serious damages, which were repaired through a restoration project supervised by Ferdinando Poggi. At the end of the 1950s, the villa was purchased by the entrepreneur Emilio Riva. Then in 1969, all its furnishings were sold at auction, and the Utens lunettes were moved to the Museo "Firenze come era" [Florence "as it was" Museum]. In 1970 the Artimino complex was purchased by the Anonima Investimenti Mobiliari e Immobiliari Company of Rome, now owned by the Melià Group, to create a tourist development centre, and a venue where congresses, seminars, conventions and cultural activities could be held.

VILLA OF POGGIO IMPERIALE

The villa, which had belonged to the Baroncelli, Pandolfini and Salviati families, was confiscated from them by Cosimo I who, in 1565, gave it to his daughter Isabella, who was married to Paolo Giordano Orsini. In 1622, it was purchased by the Grand Duchess Maria Magdalena of Habsburg. At that time, based on a project by Giulio Parigi, the villa was considerably enlarged and embellished in its architectural structure. In addition, an imposing access avenue connecting it to the Piazzale di Porta Romana was built. The work was completed in 1624. Henceforth, the villa was called "Villa del Poggio Imperiale" in honouring memory of the Grand Duchess who had refurbished it. In 1681, the Grand Duchess Vittoria della Rovere commissioned additional work to be done by the architects Diacinto Maria Marmi and Ferdinando Tacca. Almost a century later, the villa underwent even more new construction. At that time, Pietro Leopoldo, who had travelled in 1765 to the Villa at Poggio Imperiale with his wife the Grand Duchess, decided, because of the beauty of its surroundings and its location, to make it his preferred residence. The architect Niccolò Gaspero Maria Paoletti was commissioned to realise the project. He transformed the original T-shaped plan into a large, compact rectangular volume and added two large courtyards which were symmetrical to the older central one. Then, in 1806, Maria Luisa of Bourbon, Queen of Etruria, commissioned Pasquale Poccianti, one of Paoletti's disciples, to remake the façade in the neoclassical style. Of his design, only the central ashlar portico with five arches and side ramps were completed. Subsequently, Napoleon's sister, Elisa Baciocchi, commissioned Giuseppe Cacialli to complete the work on the portico, which he raised by one storey so that a loggia formed by five Ionic arches, surmounted by a triangular pediment decorated with bas-reliefs, could be added. In 1814, more work was completed with the construction of the two lateral foreparts with porticoes on the same façade. This intervention brought the villa to a definitive close, with its current neoclassical connotation. In 1864, with the imminent transfer of the capital from Turin to Florence, the government ceded the villa to the *Educandato della Santissima Annunziata*, which is still headquartered there today.

ANNEX 3
REGULATORY FRAMEWORK FOR PROTECTION AND CONSERVATION

PROTECTION OF HERITAGE AT THE INTERNATIONAL LEVEL

- **1931, The Athens Charter for the Restoration of Historic Monuments (International Museums Office, later ICOMOS)**: this charter enshrined the universal value of historic heritage and signalled the commitment of all Member States to its protection and conservation through the discipline of restoration;
- **1964, The Venice Charter (ICOMOS)**: conceived to provide shared guidelines on the restoration and conservation of monuments and historic sites, the charter extended the concept of monument to include "modest works";
- **1972, Convention Concerning the Protection of the World Cultural and Natural Heritage (UNESCO)**: Member States commit to ensuring the identification, protection, conservation, enhancement and transmission to future generations of the cultural and natural heritage located on their territory. This Convention was ratified by the Italian government with Law No. 184 of 6 April 1977;
- **1987, International Charter for the Conservation of Historic Towns and Urban Areas or the Washington Charter (ICOMOS)**: this was the first specific document on urban evolution. Historic cities should adopt measures for coherent and harmonious development compatible with contemporary life;
- **1994, Nara Document on Authenticity**: this charter provides a concrete basis for examining the authenticity of the cultural heritage and establishes the practice of heritage preservation;
- **1999, Burra Charter (ICOMOS Australia)**:building on the Venice Charter, this document establishes that conservation is an integral part of the management of heritage and sites of cultural significance, representing a permanent responsibility;
- **2000, Council of Europe Landscape Convention (Council of Europe)**: this agreement defines the policies, objectives, protection and management related to landscape heritage. It recognises the cultural, environmental, social, and historical importance of landscape as a component of European heritage and a fundamental element in ensuring the quality of life of populations;
- **2002, Budapest Declaration on World Heritage (UNESCO)**: adopted during the 26th session of the Committee, this declaration invites Member States to enhance the effective protection of individual properties inscribed (or proposed for inscription) on the World Heritage List, ensuring a fair balance between conservation, sustainability and development of the various sites, which are not only culturally, but also economically and socially significant;
- **2003, Convention for the Safeguarding of the Intangible Cultural Heritage (UNESCO)**: this treaty aims to ensure that intangible cultural heritage is safeguarded and integrated into planning programmes;
- **2005, Faro Convention (Council of Europe)**: though this "framework" agreement has no specific obligations for Member States, it aims to promote individual and collective responsibility for cultural heritage by linking it to human rights and democracy;
- **2005, Vienna Memorandum (UNESCO)**: anticipating the 2011 Recommendations, this guideline deals with the historic urban landscape defined by its characterising elements. Specific emphasis is placed on the protection of city views, roofscapes, and major visual axes, considered integral parts of the identity of the historic urban landscape.
- **2011, Recommendation on the Historic Urban Landscape (UNESCO)**: this document defines the historic urban landscape as the result of a historic layering of cultural and natural values and attributes, extending beyond the notion of "historic centre" or "ensemble" to include the broader urban context in its geographical setting. Furthermore, paragraph 9 states that it also includes social and cultural practices and values, economic processes and the intangible dimensions of heritage as related to diversity and identity. The Recommendations are followed by a set of operational manuals periodically updated on the World Heritage Centre webpage: https://whc.unesco.org/en/hul/
- **2015, The 2030 Agenda for Sustainable Development (United Nations)**: this plan strengthens efforts to protect and safeguard cultural and natural heritage within the broader framework of just and sustainable development for all humanity.

PROTECTION OF HERITAGE AT THE NATIONAL LEVEL

- **1947, Constitution of the Italian Republic, Article 9**: "The Republic promotes the development of culture and of scientific and technical research. It safeguards natural landscape and the historical and artistic heritage of the Nation";
- **2004 et seq. Code on Cultural Heritage and Landscape**: enacted by Legislative Decree No. 42 of 22 January 2004, this code regulates all interventions on the cultural heritage on behalf of the Ministry of Culture. Since 2004, the Code has been regularly updated, with the most recent amendment introduced by Law No. 136 of 9 October 2023, based on Decree-Laws No. 104 and No. 112 of 10 August 2023. The Code decrees that buildings of particular significance and their gardens or parks are subject to monumental constraints under Laws 364/1909 and 1089/1939, enacted by Article 10, as part of the national heritage and therefore of public interest. Any conservation, consolidation or restoration work on these sites must, in any case, be subject to prior authorisation by the Superintendency, a peripheral body of the State. The same procedure applies to landscape properties, protected by Law 1497/1939, included in Article 136 of the Code. As concerns the Medici Villas and Gardens sites, eight out of twelve components fall within areas subject to landscape constraints pursuant to Article 136 letter c) "properties that comprise a characteristic aspect having aesthetic and traditional value" and/or d) " scenic beauties, including viewpoints or belvederes". The Cafaggiolo and Trebbio components also fall within the protection zones of rivers, streams and watercourses identified under Article 142 of the same Code.

PROTECTION AT THE REGIONAL LEVEL: FOCUS ON THE PIT-PPR

The Territorial Coordination Plan with landscape value (PIT-PPR) was approved by the Region of Tuscany with Regional Council Resolution no. 37 of 27 March 2015 in compliance with the provisions of the Code of Cultural Heritage and Landscape. The European Landscape Convention, signed in Florence in 2000 and ratified by Italy in 2006, introduced a broader concept of landscape, including not only landscape excellence but also the everyday landscape as perceived and experienced by the inhabitants themselves. Similarly, the aforementioned Code requires that Landscape Plans

deal with the entire regional territory, which includes not only excellent landscapes and their conservation, but also those of the suburbs, urbanised countryside, incremental subdivisions, abandoned areas, degraded industrial areas, river basins at risk, abandoned inland areas and so forth. Considering these important innovations introduced by both the European Landscape Convention and by the Code, the Tuscany Regional Authority has chosen to structure the PIT as a regional territorial planning instrument that contains both territorial and landscape dimensions. The landscape component maintains its own clearly highlighted and recognisable identity within this framework. The PIT-PPR is also, pursuant to the Code and its contents, "co-planned" with the Ministry of Culture: a superior plan to which other regional and local plans and programs must conform. Though the restrictions in force, applied through specific decrees over time, and those provided for certain categories of assets by the so-called Galasso law (Legislative Decree 42/2004, Article 142(c.1) have not been eliminated, they have been contextualised and specified in coherence with the knowledge, interpretations and regulations laid down by the plan for all of Tuscany. Granted that these regulations arose from the prescriptive regional planning regulations derived from the Code's restrictive framework, the plan's objective is to go beyond mere protection. Instead it seeks to codify publicly deliberated and shared regulations that can anticipate and direct the development of individual projects aimed at ensuring good governance of the landscape and its transformations.

Assuming that the landscape is a common good that requires protection, care and maintenance, it must also be viewed as a factor in the area's growth, and in its economic and social development. Hence, the regional action through the PIT-PPR, has redefined the "meta-objectives", which can be itemised as:

- greater knowledge of the identifying features that distinguish Tuscany's territory, and of the role that its landscapes can play in regional development policies;
- greater awareness that a clearer comprehension of the landscape will lead to the development of more fully integrated policies at the different levels of government;
- strengthening the relationships between landscape and participation, and between landscape care and active citizenship.

All three meta-objectives clearly underscore the landscape's central role as a distinguishing element of Tuscany's identity and the importance of involving its citizens in its care (consistent with the European Convention). In fact, it is precisely around this component that local policies should be harmoniously structured.

From this viewpoint, the PIT-PPR has been arranged first of all, as an instrument for sharing knowledge and interpretations of the landscape, so that appropriate consideration for the heritage will be ensured in government actions and when public policy is made. The Plan endeavours to promote and implement sustainable and durable socio-economic development and the conscious use of the regional territory. This can be achieved through reducing land use, conservation, recovery and promotion of the special aspects and features of the territory's social, cultural, economic and environmental identity, on which the value of the Tuscan landscape depends. Cogent with and in execution of the territory's regulations, the PIT-PPR pursues development of the local urban and rural landscape capable of reconciling competitiveness, environmental quality and protection of the heritage. The policy regulates the entire region, mindful of all of Tuscany's landscapes. Thus, by acknowledging the values and criticalities of the physical, hydrogeological, ecological, cultural, and settlement structures including the infrastructure that distinguishes the territorial heritage, rules for conservation, protection, transformation and enhancement, as well as strategic guidelines for the territory's future socio-economic development can be defined. The PIT-PPR regulations are structured in two parts:

- provisions integrating the PIT with the territory's Statute concerning landscape;
- provisions on the Territorial Development Strategy.

The Statute's rules are the set of regulatory choices which define the territory, its resources, structural invariants, landscape areas and assets, and its hydrographic system. These include provisions for compatibility of the landscape with extractive activities, common rules for renewable energy management as well as directives that will guide Municipalities and Provinces as they administer their planning programmes. The plan contains general and specific objectives concerning quality, together with directives, guidelines, requirements, and policies on landscape assets. It also includes specific requirements for their employment that will influence the sustainable and conscious use and enhancement of the territorial heritage.

Consistent with the Regional Development Programme and its objectives, the plan's strategy adopts rationales and tools from the local governments which are most suited to the openness, dynamism and quality of regional development. Therefore, investments can be directed toward conscious and sustainable transformations that arise from a vision for the future. Indeed, such development strategies support and promote decisive aims for the region's sustainable development. These include the enhancement of hospitality services through the establishment of urban residential offerings through the recovery and redevelopment of existing building stock. This heritage can provide better and more congruous hospitality for foreign scholars and students, as well as those from Tuscany and Italy: off-site learners seeking high quality instructional, didactic or research experiences in the Tuscan university and educational systems. Clearly, the improvement of existing infrastructure and mobility services and the Tuscan production system, are significant and necessary factors for becoming competitive again. The plan's strategy also includes landscape projects, whose objectives involve fostering the development of Tuscan districts starting from the protection and enhancement of those landscape features that distinguish the various localities through their unique environmental and cultural identities.

Returning to the statute, the territorial heritage in Tuscany has been divided into four structural invariants which identify the specific characteristics, generative principles and reference rules that define the conditions under which the region can be transformed; they are as follows:

- "The hydrogeomorphological features of the hydrographic basins and morphogenetic systems", defined by the territory's set of geological, morphological, pedological, hydrological and hydraulic details;
- "The landscape's ecosystem features", defined by the set of elements of ecological and naturalistic value found in the natural, semi-natural and anthropic areas;
- "The polycentric character of the community, urban and infrastructure systems", defined by the set of towns, villages and smaller settlements, including infrastructure, and the productive and technological systems

found in the territory;
- "The morphological typing of rural landscape features", defined by the set of elements that structure agro-environmental systems.

The third and fourth invariants directly concern the knowledge, protection, conservation and enhancement of the Medici villas and gardens. Specifically, the third invariant, "The polycentric character of the community, urban and infrastructure systems", which defines the general objectives pertaining to the protection and enhancement of the multi-centred character and specific landscape identities of each settlement morpho-type, is to be pursued through:
- enhancement of historic towns and villages and the conservation of their territorial surroundings and networks (whether tangible or intangible); the recovery of the centrality of their morphologies by maintaining and developing the complexity of high-level urban functions;
- requalification of contemporary urbanised morpho-types and their criticalities;
- requalification of city-countryside margins with the resulting definition of urban boundaries and the promotion of multifunctional peri-urban agriculture as a means of improving urban standards of living;
- overcoming settlement models of "monofunctional platforms";
- rebalancing and reconnecting community systems between the lowland, hill and mountain areas; rebalancing large infrastructure corridors, with strengthened services extending out to the diffuse network of polycentric territorial systems;
- development of soft mobility networks that integrate the accessibility of the networked community systems allowing enjoyable tourism of the landscape features.

Starting from the assumption that the historic centres and nuclei constitute a substantial factor within Tuscan landscapes, the PIT-PPR is asking the municipalities to protect and enhance the material and multifunctional identities of the historical centres. This should include the nuclei, and aggregates and that their various transformations be regulated through the application of municipal, territorial and urban planning policy instruments. Furthermore, also through enhancement initiatives, the permanence of the historical and testimonial values, the architectural features of the territorial assemblages defined by the presence of parish churches, hamlets and fortifications, farm-villa systems, and the persistence of the relations between these and their accoutrements should be ensured.
As concerns the rural features of Tuscan landscapes, the fourth invariant, "The morphological typing of rural landscape features", defines the general objective of protecting and enhancing the multifunctional character of the regional rural landscapes. Since these are a network of open spaces potentially usable by the community, they are also an expression of high aesthetic and perceptive values and of historical-cultural evidence. At the same time, they continue to represent strong prospects for future economic development. Some actions in pursuit of this objective are:
- maintenance of the relationship between the agricultural landscape and the system of communities, of the cultivated surroundings, and containment of additional consumption of rural land;
- maintenance of the continuity of the rural infrastructure network;
- conservation of the structural features found in the historical regional rural landscapes in their transformation, also through protecting their historical-architectural excellence and their surrounding landscapes;
- defence of the aesthetic-perceptual and historical-testimonial values found in agricultural landscapes through planning and streamlining technological infrastructure;
- protection of agricultural and natural open spaces especially of peri-urban localities.

In this regard, the PIT-PPR specifies that the Regional administration and competent local bodies should pursue those general objectives contained in its four invariants and its provisions for historic centres and nuclei. Clearly, these should apply to the formation and application of territorial and urban planning policy instruments, and to the plans and programmes that produce effects on the local territory. Furthermore, to achieve the plan objectives, the programmes must refer to policy guidelines, apply the directives and comply with the use requirements contained in the plan's statutory regulations.
As shown in the figure below, the PIT-PPR architecture is organised on

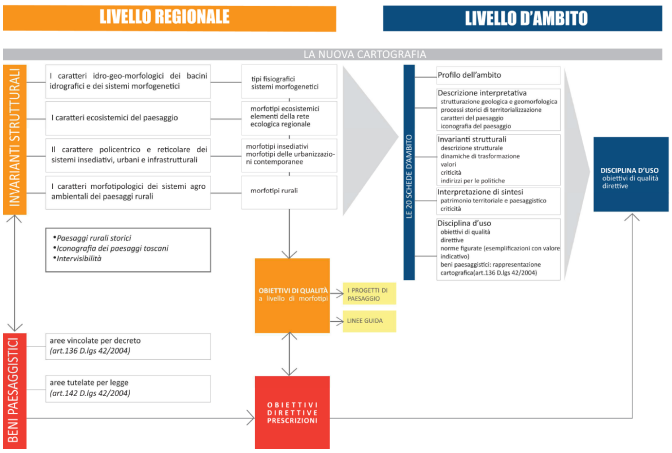


Figure 1: PIT-PPR Organisation

two levels: the regional and the area level. The regional level is divided into one part that concerns the entire regional territory, specifically dealt with through the device of "structural invariants", and another part that concerns "landscape assets".

At the level of its scope and its implementation of the Code provisions, the PIT-PPR identifies the landscape areas in Tuscany in its recognition of the region's main points, special features and landscape characteristics. This way, it delimits them, and prepares a specific regulation for use that is structured with quality objectives, utilisation regulations and cartographic representations of the landscape assets. Numerous parameters and physical and perceptive elements were analysed. These included hydro-geomorphological systems, eco-systemic features, long-term settlements and infrastructure, the rural territory's features, its broad perceptive horizons, the sense of belonging within the settled communities, local socio-economic systems, settlement dynamics and the forms of intercommunity relations, whose evaluation has led to the identification of 20 landscape areas. Each area contains a specific area sheet, which expands on the regional level descriptions in greater detail. These particulars illustrate the interrelationships so that their relative values and criticalities can be summarised, whilst specific quality objectives are formulated. The outcome constitutes a reference for the application of the regulations at an area level to guarantee the quality of the transformations of the landscape. References to the Medici villas can be found within the relative area sheets, (in the "Interpretative description", "Policy guidelines" and "Quality objectives and directives" sections). Specifically, the area sheets within which the Medici villas fall are:
- Area Sheet 2 "Versilia and the Apuan Riviera": Palazzo di Serravezza
- Area Sheet 5 "Val di Nievole and the lower Val d'Arno": Villa di Cerreto Guidi
- Area Sheet 6 "Firenze-Prato-Pistoia": Villa of Careggi, Villa in Fiesole, Pratolino Gardens, Villa of Castello, Villa of Poggio a Caiano, Villa La Petraia, Boboli Gardens, Villa La Magia, Villa of Artimino, Villa of Poggio Imperiale
- Area Sheet 7 "Mugello": Villa of Cafaggiolo, Villa of Trebbio

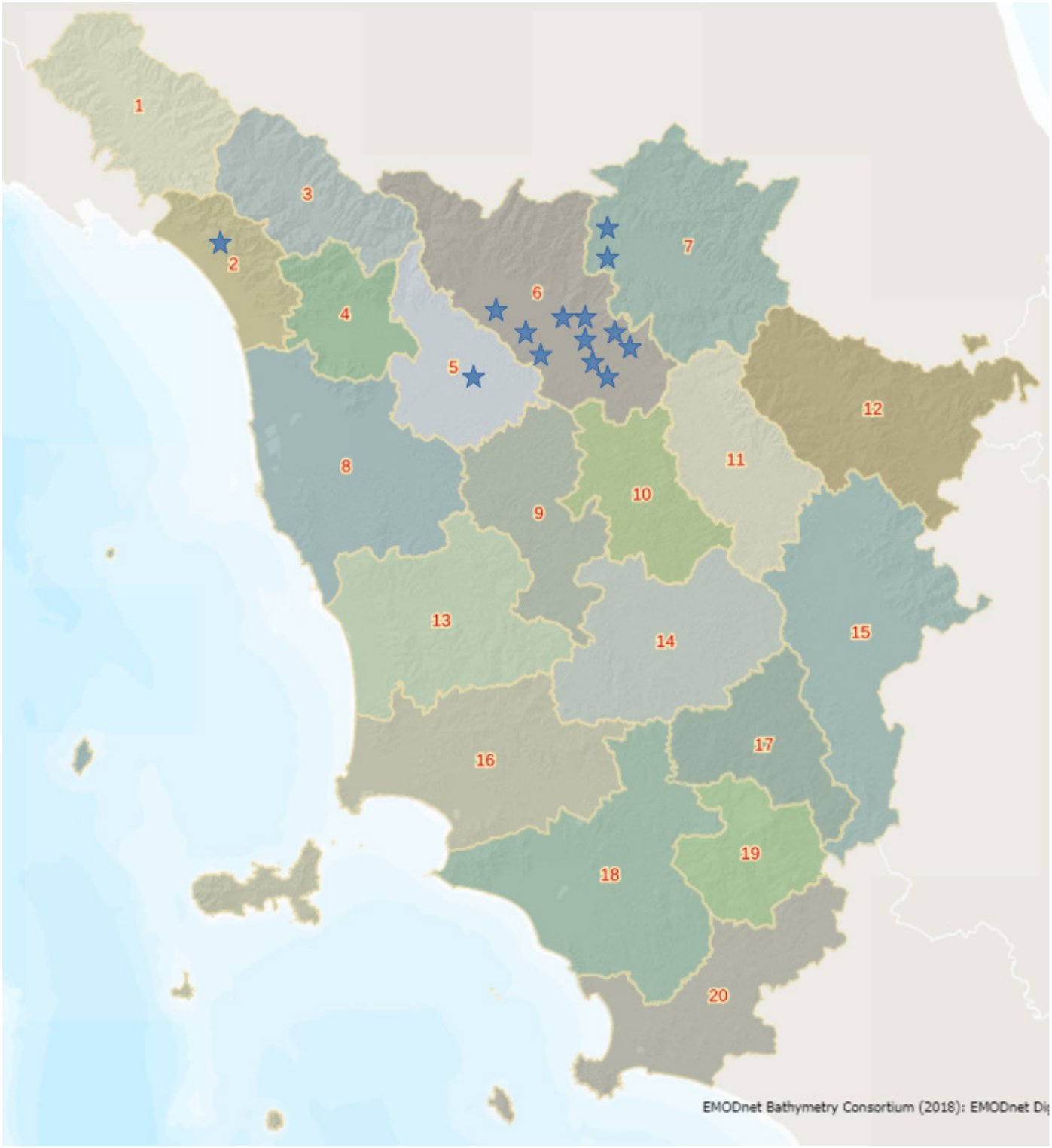


Figure 2: Location of the Medici Villas and Gardens with respect to the landscape areas in the PIT-PPR

ANNEX 4
ANALYSIS OF CURRENT CONDITIONS

S.W.O.T. ANALYSIS

The first step towards the development of the Action Plan was taken in March 2022. A structured questionnaire was sent to the component referents. The survey was based on the SWOT (Strengths, Weaknesses, Opportunities, Threats) model, a well-established tool for laying the foundations for management policy development. The questionnaire allowed conclusions to be drawn on the state of the art of the site's fourteen components as a whole. The answers gathered and a final summary are below.

Strengths

State of conservation	9
Physical proximity to other attractions	7
International visibility	5
Cultural enhancement initiatives	5
Awareness of historical, cultural, and naturalistic value	4
Public transport	2
Business environment enthusiasm	2
Accessibility	1
Inclusion in tourist circuits	1
Dimensions	1

Weaknesses

Public transport	7
Funds	5
Personnel	4
Partial inaccessibility	3
Collaboration with public bodies	2
Governance structure	1
State of conservation	2
Additional services	1
Cultural enhancement initiatives	1
International visibility	1
Dimensions	1

Opportunity

Transport	5
Inclusion in cultural circuits	4
Development of tourist accommodation businesses	3
Recovery of brownfield sites and underused spaces	3
Collaboration with public bodies	2
Cultural enhancement initiatives	2
Improvement of accessibility	2
Slow mobility	2
Local community involvement	1
Openness to different types of users	1
Enhancement of services	1

Threats

Climate change	5
Vehicle traffic	3
Air traffic	2
Excessive tourist flows	2
Landscape degradation	2
Hydrogeological risk	1
Vandalism	1
Bird species	1
Declining tourist flows	1
New pathogens	1

Below are the responses, used to organise the meeting of the Technical Office members on 9 March 2022. First of all the responses that were used to identify a few recognisable issues for discussion were broken down into the three lines of action provided for the draft of the Management Plan update[1]:

- **protection and conservation** | active and integrated conservation of the heritage
- **enhancement** | from a cultural, environmental, economic, social and landscape standpoint, as an innovative territorial development strategy
- **accessibility** | universal: not just physical but also economic and intellectual

As concerns the conditions of **conservation of the movable heritage, the real properties and the outdoor spaces**, most of the component managers have stated that these are, on the whole, good. This is partly because they are subject to protective restrictions under national legislation and are guaranteed by the work of the Superintendencies. In general, it has emerged that there are several funding channels for extraordinary maintenance, whereas ordinary maintenance seems to be more difficult to sustain. Both property owners or managing bodies have shown their awareness of funding opportunities and appear to be actively participating in the respective calls for tenders. Although interventions have shown that the component managers are active and directly committed to the issue, the site's state of conservation nevertheless remains one of the Management Plan's fundamental lines of intercession.

The macro-theme of **accessibility** is the second most recurring issue in the answers. Some trials have already begun but nothing has taken on any permanence. Currently, accessibility has mainly been viewed as one of the site's weaknesses, or perhaps it is an opportunity though far less a strength. Many of the component managers have complained about the menace that vehicle traffic might incur, altering the state of conservation or the usability of the site. Others, because they are located on an airport's flight path, cite air traffic as an issue. There are several objectives to be achieved. The first would be to make all components reachable by public transport. Then there is the idea of integrating the sites as destinations served by typically "tourist" transportation carriers. Perhaps, alternate routes could be found to alleviate the amount of traffic, especially heavy vehicles, that could jeopardise some components. The most difficult issue to resolve would be to ensure connections among the villas and that they are effectively perceived as a single site. In this sense, the recent develop-

[1] *The three lines of action were replaced by the six Macro Areas, in the process of drafting the Management Plan, which led to the current version.*

ment of soft mobility routes could help. Linked to the issue of accessibility is also the problem of resources. The question revolves around staff availability to guard the spaces. The lack of personnel results in the component managers having to reduce their opening hours.

Concerning the macro-theme of **enhancement**, the component managers are well aware that the single constituent's proximity to other attractions, international visibility and the site's historical, cultural and naturalistic value are among its main strengths. Though there are already some initiatives in progress, site enhancement should be implemented through the organisation of other activities whilst including the villas in already established cultural circuits. Another opportunity would be the availability of tourist accommodations and a lively business environment in the area. The component managers have also proposed the recovery of disused areas or underused spaces, the aforementioned improvement of accessibility and the opening to different types of users as possible actions related to enhancement that could be implemented. Within the scope of enhancement actions, the issue of human resources has been called into question as a weakness. This refers to the fact that administrative officials, who are poorly represented among site personnel, are needed for the planning and implementation of each activity. That is also why it has emerged how important the Tuscan Regional Authority is as site manager, acting as the promoter of enhancement actions, for the serial site. This way what is already in place under the Authority's coordination can be implemented (e.g. transversal projects such as website design and updating, the *Iter Mirabilis* and the *Officina Mirabilis*).

Finally, confirming the need to redefine its function, the macro-theme of **governance** is first of all perceived as one of the points to be strengthened. This should also include collaboration between the component managers and public bodies.

COMPREHENSIVE INTERVIEWS

The *Operational Guidelines* for the Implementation of the 1972 Convention reiterate that an effective management system must use inclusive and participatory planning and stakeholder consultation processes (paragraph 111.b). Consequently, it is essential that mechanisms for the involvement and coordination of various activities among the different responsible actors and stakeholders be provided for (paragraph 111.e). These principles have also been ratified in the Recommendation on the Historic Urban Landscape, which suggests that civic involvement tools be adopted. That way, heterogeneous categories of stakeholders can be involved by enabling them to identify site values, set objectives and agree on actions to safeguard the heritage. Therefore, though a participatory and inclusive approach was applied when the Management Plan was being drafted, foundations were also being laid for the future use of that same approach in the same Plan's implementation. Indeed, to successfully achieve the site Management Plan goals, it would be necessary to ensure the effective involvement of different categories of stakeholders. These would include public administration offices and departments due to their territorial and spatial planning and design competencies, cultural heritage enhancement and conservation offices, cultural attractions in the vicinity, businesses, with a focus on transportation, the academic community, associations and civic organisations. In autumn 2022, work began on the identification of stakeholders and the definition of the approach towards enhanced involvement. From a methodological standpoint, an approach to stakeholder classification was adopted that took into account their actual "power" and "interest" with respect to the issue. Views were gathered from different stakeholders, namely those with expert knowledge, institutional knowledge, management knowledge, local knowledge and everyday practical knowledge of the localities. From an operational point of view, a database of referents and contact persons was populated for each of the site's components. The core of the database comprised subjects who had already worked with governance in the past. It was then gradually supplemented by targeted research on each of the fourteen components, including during detailed surveys. From November 2022 to May 2023, many detailed interviews were conducted that included respondents with a broad knowledge of each of the site's components (17 surveys for 26 subjects). These interviews contributed to providing information on the participatory process, whilst they supplemented the stakeholder database. This was achieved by completing a mapping of actors, so that the degree of readiness of local parties to become an active part of the process on an ongoing basis could be checked as well as the types of expectations that are at stake. The existence of conflicting issues to be taken into account when local "alliances" were created in community engagement was also verified. The persons interviewed were employees of the public components' management bodies, the owners or managers of the private villas, representatives of the municipalities in which the villas and gardens are located, and representatives of the associations that work on site activities. All these detailed interviews were conducted according to a uniform schedule that sought to briefly address a series of similar topics for each site component. This was regardless of the diversity of the contexts in which the components exist and of how they are managed. Naturally, it was necessary that the analyses take the enormously heterogeneous nature of the serial site components into account. Specifically, three elements of heterogeneity were identified that greatly influenced the conditions found during the detailed surveys. These were first, the type of management, whether public (state, regional, municipal) or private, then, the reference context (whether Florence-centric or peripheral), and third, the site's relevance to tourists with respect to the reference context (whether peak or secondary).

Interviews conducted during the Management Plan update

Date	Component	Activity	Who was present
11.11.2022	Boboli Gardens	Visit and interview	Bianca Maria Landi (Director and Head of the Garden Department), Paola Ruggeri (Head of the Architecture Department), Francesca Sborghi (Head of Digital Strategies – IT Department)
11.16.2022	Villa la Petraia	Visit and interview	Marco Mozzo (non-executive Director)
	Garden of Castello	Interview	
	Villa di Cerreto Guidi	Interview	
11.23.2022	Villa in Fiesole	Visit and interview	Donata Mazzini (owner)
11.25.2022	Villa of Careggi	Visit and interview	Paolo Baldi (sector director) and Enrica Buccioni (assigned staff)
12.14.2022	Villa Medici of Artimino	Visit and interview	Elena Naldi (Villa Director)
12.14.2022	Villa La Magia Quarrata	Visit and interview	Claudia Cappellini (Head of the Quarrata Municipal Culture Service)
12.15.2022	Villa of Poggio a Caiano	Visit and interview	Lorenzo Sbaraglio (Director)
12.23.2022	Pratolino Gardens	Visit and interview	Lara Fantoni (Manager), Emanuele Sbaffi (Environmental Education Laboratory)
1.13.2023	Villa of Trebbio	Interview	Serena Barlacchi
1.18.2023	Villa of Castello	Visit and interview	Delia Bonfanti
1.20.2023	Villa in Seravezza	Visit and interview	Debora Simonelli
1.23.2023	Villa of Poggio Imperiale	Visit and interview	Giorgio Fiorenza (Director) and Cinzia Palumbo
1.25.2023	Villa of Cafaggiolo	Interview	Sheila Cipriani
2.8.2023	Villa di Cerreto Guidi	Visit and interview	Valerio Bonfanti (Municipality), Silvia Matteuzzi (DRM and Association), Paolo Tinghi (Association)
3.7.2023	Transversal	Interview	Paolo Casciu, Director of the Regional Museums Directorate

COMPILATION OF CYCLE III OF THE PERIODIC REPORT

The Periodic Report is a monitoring and self-assessment tool used when the State Parties to the Convention send their report to the World Heritage Committee about every eight years. It is in the form of an online questionnaire, where the respondent indicates its compliance and implementation of the Convention at a national level (Section I) and the State of Conservation and Management of each site (Section II). To make the process easier, it is filled out by geographic area. For Europe and North America, the first Periodic Report cycle took place in the period between 2001-2006 and the second was between 2012-2014. For Cycle III, conducted in the years between 2022 to 2024, Periodic Reporting was in parallel with the Management Plan update of the site in question.The Periodic Report Cycle III questionnaire contains several innovations compared to the previous cycle. Some of these new features were introduced to include topics and procedures whose importance had only recently become apparent. Consider, for instance, sustainability, integration with other UNESCO conventions and the role of monitoring. Since the Cycle III survey was more detailed than Cycle II, its compilation made it possible to gather information useful for the update and innovation of the management of the site in question.

Comparison of sections of the Cycle II and Cycle III Periodic Report

Section	Cycle II – 2014	Cycle III – 2023
1	Property Data	=
2	Statement of Outstanding Universal Value	Other UNESCO and non-UNESCO Conventions/Programmes
3	Factors that impact the property	Statement of Outstanding Universal Value (including attributes identified)
4	Protection, management and monitoring	Factors that impact the property (including 4.13 "management" and 4.17 "serial inscriptions")
5	Summary and conclusions	Protection and Management
6	Effects of WH recognition and conclusions on the exercise of the PR	Financial and human resources
7		Scientific studies and research projects
8		Education, information and awareness
9		Tourism Management
10		Monitoring
11		Identifying management priorities
12		Summary and conclusions
13		Effects of World Heritage recognition
14		Best Practices for the Implementation of the Convention
15		Considerations on the exercise of the Periodic Report

In fact, much of the data included in the Report were able to be adapted to the Management Plan structure. The Periodic Report sometimes referred back to the Management Plan, which dealt with certain issues in greater detail. For example, this was true for the list of the main projects called for on the site that were only mentioned in the Report; they were suitably described in in Chapter 4 of the Action Plan.

Lastly, it would be worth pointing out that based on the Report's approach, the Management Plan also seeks to keep the close connection between negative impacts, OUV, site attributes and hence the monitoring system for the state of conservation of the site values. The Action Plan has also been organised in macro-areas. These areas were ordered so that a response can be given to the major critical issues and threats that impact the site's OUV, through projects that spread the responsibility over multiple parties.

Impact factor assessment: differences between Cycle II and Cycle III for the Medici Villas and Gardens

Section IV of the Cycle III form is completely dedicated to the analysis of factors that impact the OUV. Furthermore, details of the factors affecting each component is requested for serial sites. To meet this request, a questionnaire was drawn up to collect the negative and positive factors considered relevant by each of the fourteen villas or gardens. The results of the survey are summarised in the table below. Note that not only the most common impactors were taken into consideration but also those factors which, although relevant to a limited number of components, were so incisive that they should be monitored in future.

Impact factors on the Medici Villas and Gardens site reported in Cycle II and Cycle III of the Periodic Report

Negative Factors for the conservation of the Site Values	**Cycle II – 2014**	**Cycle III – 2023** (and the number of components for which the impact is significant)
Transportation infrastructure	Significant	Significant for 7 components
Renewable energy infrastructure	Not significant	Significant for 2 components
Exploitation of natural resources – marble mining	Not significant	Significant for 1 component
Socio-cultural use – Impacts of tourism	Not significant	Significant for 11 components
Climate change – storms and hydrogeological risk	Not significant	Significant for 6 components
Sudden ecological-geological events – Earthquakes	Significant	Significant for 3 components
Management/institutional factors – Human resources	Not present	Significant for 10 components
Management/institutional factors – Financial resources	Not present	Significant for 9 components

Transport infrastructure

Both through the SWOT analysis and the Report compilation, several component managers mentioned the lack of public transport as one of the main critical issues for the site. For that matter, the topic of the need to improve transport was raised in the CLT/WHC/EUR/20/12851 letter dated September 2020: "*it is often impossible to reach the villas if one does not have private motorised transport*". Transport infrastructure such as motorways (Cafaggiolo), the airport (Castello and Petraia), and the tramway are at the same time relevant for accessibility and for their potential impact on site integrity, although this latter point seems to be less severe.

Renewable energy infrastructure
The management of two villas (Castello and Petraia) have deemed the installation of photovoltaic systems inside and outside their buffer zone perimeters as a factor that would negatively impact the perception of the landscape heritage surrounding the villas (negative visual impact). These are factors that could lead to the degradation of the landscape and that may be in contrast to the components' sylvan and rural surroundings, which, as an attribute, contribute to maintaining the site's OUV. It will be crucial to find a balance, on the one hand, between measures related to energy efficiency and environmental sustainability and on the other hand, the visual impact that these may incur on the landscape.

Exploitation of natural resources
Another element that may impact the site is the ongoing and planned exploitation of the marble quarries near the Villa in Seravezza. Although an integral part of the history of the Versilia area, this is in fact an activity that can potentially impact the environment and landscape to a significant degree. Generally, degradation of the landscape should be understood as the occurrence of any of those transformations of the territory, which, if left unchecked, would negatively alter the particularly harmonious arrangement between the buildings and the natural environment. This would include their designed contiguous spaces, their rural surroundings and, as may be the case, the outdoor ambience that allowed the site to be inscribed as "cultural landscape heritage". Therefore, above all soil transformations are to be monitored. This should include those regional policy instruments put in place to regulate them, such as the Regional Quarry Plan, which are of great importance.

Socio-cultural use – Impacts of tourism
This is a critical factor common to all components, although it may become apparent in different ways, if not actually in opposition. For many components, apart from Boboli Gardens, the opportunities of a potentially lively tourism involving rural zones outside the Florentine area are limited, mainly due to the difficulty of reaching the properties and their often restricted opening hours. Conversely, the Boboli Gardens are subject to the pressure of very significant tourist flows.

Climate change and sudden events (weather, hydrogeological, seismic, etc.)
Climate change has recently emerged as a critical issue. Through the Periodic Report questionnaire and the interviews conducted, the component referents reported that extreme events such as windstorms and sudden, heavy rainfall have lately intensified. In addition, rising temperatures and droughts are factors that jeopardise some plant species in the villa gardens. Added to these negative aspects are seismic and hydrogeological risk factors. Not all the components have identified these as threats to the site. Nevertheless, the whole of Tuscany is subject to seismic and geo-morphological phenomena. Hence, any changes in the risk level to which the villas or gardens are exposed deserve attention.

Management/institutional factors – human and financial resources
A topic that also emerged from the compilation of the Periodic Report was the importance of enhancing financial and human resources. The same applies to the issue of governance, which must be worked on to cope with the coordination of a multiplicity of actors. Another element that emerged is the difficulty in providing comprehensive "communications" about the site. That is to say, conveying how diverse the components are, whilst at the same time, transmitting those common values on which the site's inscription is based. Although a coordinated communication strategy exists, it can be improved, as can initiatives aimed at specific targets. Most of the actors, or at least the managers of the components open to the public, agree that communications and the sale of services and products related to the site should go hand in hand. This means that there is a point of contact with what has already emerged for the cultural/operational tourism offer. Clearly, a site that is better known will also be one that is frequented more often and that will have more resources to be enhanced and vice versa.

TECHNICAL OFFICE MEETINGS
Since one of the central themes of the new Management Plan concerns site governance, it was important to propose a collaborative approach from the outset. This also concerns management of the Technical Office meetings that were held in 2023. In particular, although tiring, given the remoteness of the site's components, it was decided to promote face-to-face meetings. These were necessary in the post-pandemic period to re-establish personal relations among the managers and to propose activities structured according to a participatory and collegial approach, aimed at building a group identity that would have an affirmative effect on operational cooperation with site management.
On 13 April 2023 at the Villa of Poggio Imperiale, the Technical Office's first participatory meeting was held with "Let's build the new management plan together" on the agenda. The day's activities were structured according to the OPERA method. OPERA involves five work phases: individual reflection (Own suggestions), comparison in small groups (Pair suggestions), plenary (Explanations), Sorting preferences for proposed responses (Ranking), Final summary (Arranging). The proposed framework question was: *Medici Villas and Gardens of Tuscany: what are the new Management Plan's objectives and projects?* The specific questions sought to bring out a collective reflection on the site's vision and mission and to draw some indications on the Action Plan's macro-areas. Here is a summary of what emerged from the digital bulletin board.

- WHO ARE WE – What does being part of the UNESCO heritage mean to you?

"Testify through action, so foster culture and care also for future generations. Spread awareness and a sense of responsibility. Stimulate a process of reinterpretation of values in relation to contemporary reality. Preserve and enhance the site's identity values and the unique context where it is located. Give them visibility, and safeguard them, include everyone and exclude no one."

- WHAT CAN WE DO TOGETHER – How can we increase the degree of collaboration among the component managers? What activities and projects can we implement together? What do we need to do together?

"Get to know each other and collaborate through periodic meetings. Share information, gain awareness, foster dialogue and plan together. Give added value to the differences between public and private and the skills present. Find economic resources for conservation and enhancement. Promote an effective tourism approach. Create a coordinated communications plan. Activate initiatives to promote site circularity. Produce a common action plan to publicise both individual sites and the entire serial site."

- HOW CAN WE DECIDE TOGETHER – How can collaboration/participation in the new governance model be consolidated? What do we need to decide together?

"Schedule quarterly meetings at the different sites to get to know each other and define common activities. These should include scheduled monitoring of interventions, a regional steering committee with continuous encouragement and coordination functions, technical-political sharing, and collaboration with experts to facilitate dialogue. Also a new memorandum of understanding that takes into account the peculiarities of the components and defines common management methods, the establishment of technical and thematic commissions, and jointly competing for funding should be addressed."

- HOW CAN WE BE RECOGNISED – How can we launch the serial site abroad? What do we need to do to be recognised?

Fig.1: Word cloud used to answer the questions "Who are we?" "What can we do together?"

Fig.2: Group work

Fig.3: Plenary session

Fig.4: The bulletin board

"Common communication strategies, marketing and commercialisation of itineraries, working on the promotion of tourism by creating more tourist routes between the components. Share and review the already existing brand strategy, and a common communication plan. Strengthen the presence of professional figures linked to reference communication especially for the "smaller" sites. Produce didactic and narrative materials. Create diversified communication products based on the audience with references to other sites."

The second participatory Technical Office meeting, "Towards the construction of the Action Plan", was held at the Tuscan Regional Authority headquarters – Culture sector – on the morning of 6 July 2023, at Via Farini in Florence. The session sought to share the serial site's vision and mission and to present the Action Plan's macro-areas. Afterwards, there was a proposal for a collective activity to construct the Action Plan through the consideration of projects to be included in it and the collaborative activity of writing project sheets, bulletin board composition and restitution.

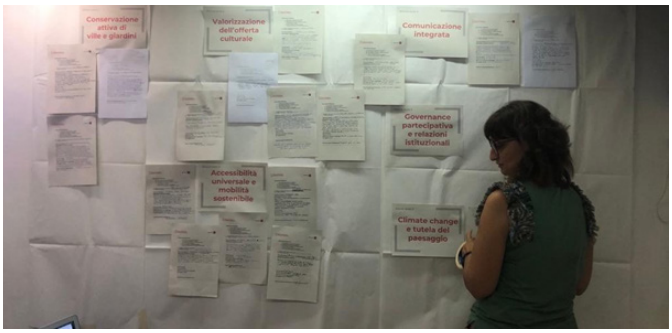


Fig.5-6: Construction of the Action Plan during the meeting on 6 July 2023

THE ONLINE QUESTIONNAIRE

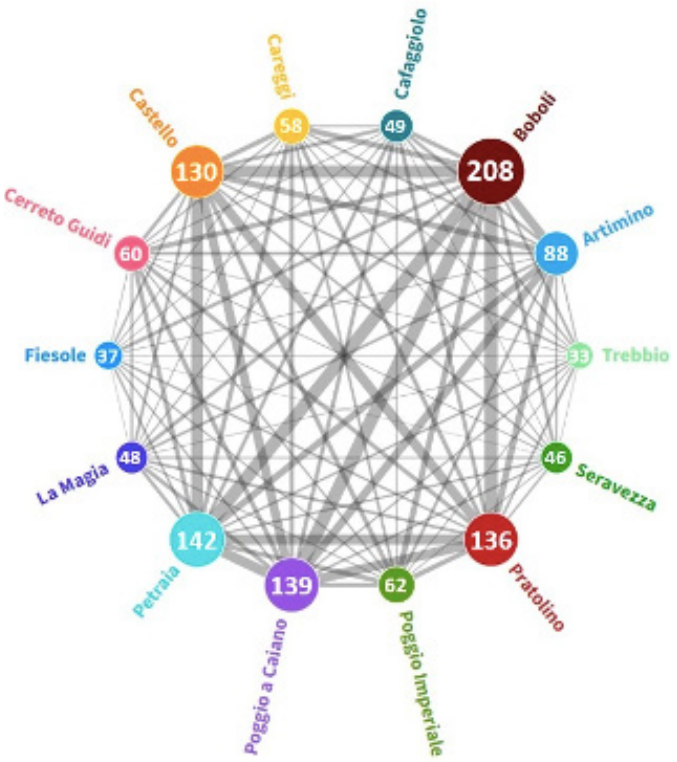
In 2023, a questionnaire was developed that sought to broaden public consultation to include the reference communities and to validate or supplement the analyses performed as well as the priorities identified.

The survey questions were completed with the working group and then discussed at the Technical Office meeting on 6 July, so that the questionnaire could be computerised as soon as possible. The survey, which was finally uploaded to a dedicated section of the villegiardinimedicei.it website, was publicised on related social networks and through press releases issued by the Tuscan Regional Authority. It was made available for completion beginning in February 2024.

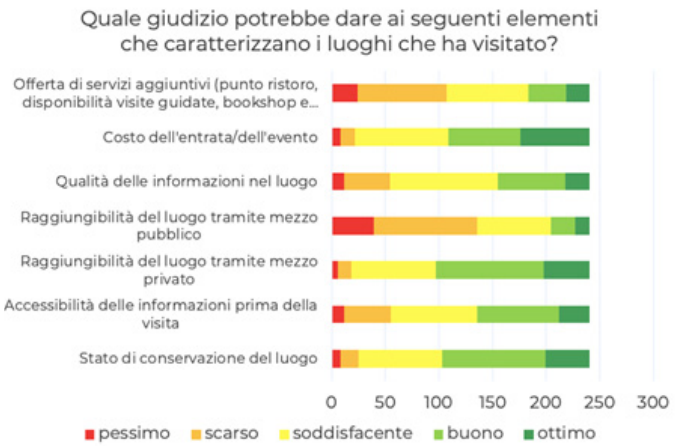
From 01.02.2024 to 10.03.2024, about 250 valid responses were collected. Of all the respondents, 88.3% were from Tuscany, and 60.5% from the Metropolitan City of Florence. These were mostly "serial" visitors, in the sense that half had visited at least six site components, and 73% at least four site components, with 77% declaring that they had visited other UNESCO World Heritage sites in the last year.

A total of 63% of respondents went to the site by private car (43.8% by choice, 19.2% due to lack of public transport). In 75% of the cases the visit did not require an overnight stay away from home.

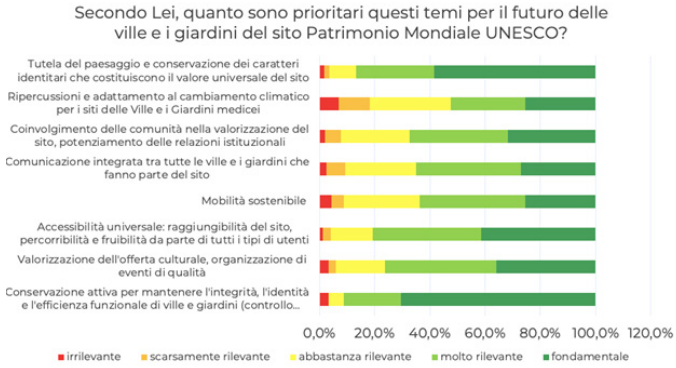
Based on the answers collected, the network of relationships among the serial site components can be viewed in a specific diagram.



The visitors who responded to the questionnaire mainly used the web to organise their visit. For the most part, they browsed search engines, but they also consulted the serial site website or the individual website of the component visited.



Satisfaction with the elements characterising the visit was quite good.



It is important to underscore that all the themes identified in the Management Plan were generally considered very significant.
About 90 open-ended responses were also collected. These concerned "general suggestions and/or ideas and/or projects for the future of the UNESCO Medici Villas and Gardens World Heritage site". There is a summary of these topics listed below:

1. Increase the opening period and extend opening hours: it was suggested that the days when the villas are accessible be increased and that the opening hours be lengthened. It was also suggested that more private villas be opened as well.
2. Enhance the heritage through cultural events and meetings: it was suggested that cultural events be organised to enhance the historical and artistic heritage of the Medici villas.
3. More integrated projects among the Medici villas and gardens: events and initiatives that connect the various Medici villas in a more concrete manner should be organised. An effort should be made to include clear sign posting.
4. Improve information and organisation: there should be greater clarity in the information provided to visitors and more effective organisation of events and visits, also with regard to the accessibility of the sites.
5. Maintain both the architectural and woodland heritage.
6. Improve the guided tours: the quality of guided tours needs to be improved, with the aid of better trained staff or the use of audiovisual devices.
7. Collaborate with local authorities and associations: it was proposed that there be greater collaboration (economic and organisational) with local authorities and associations for the promotion of events and guided tours.
8. Involve schools and young people: it was proposed that more schools be actively involved, that more school trips be organised and that knowledge of the Medici heritage be fostered among young people.
9. Promote the site through social media also using influencers and content creators.
10. Maintain free or subsidised access: it was proposed that free or subsidised access be maintained, especially for local residents. Instead, some indicated they would be willing to make a small contribution.

The provisional outcomes of the questionnaire were presented and discussed at the Technical Office meeting on 10 April 2024. The survey form is still active on the institutional website. It is possible that it will be modified following the approval of the Action Plan and relaunched as an ongoing monitoring tool.

ANNEX 5
POSSIBILITIES FOR IMPROVING ACCESSIBILITY

INTRODUCTION

The research described below is part of the review process of the Medici Villas and Gardens in Tuscany World Heritage Site Management Plan coordinated by the Cultural, Museum and Documentary Heritage Sector. UNESCO Sites. Tuscany Regional Authority for Contemporary Art.

The Tuscan Regional Authority in its role as site manager, employed the technical and scientific expertise of the University of Florence – Department of Architecture (DIDA). The issue being discussed was accessibility, which had been indicated as a priority by the members of the Technical Office, a body with operational and monitoring functions. This came to light when the Technical Office filled in a form that sought to identify the site's strengths, weaknesses, opportunities and threats, in early 2022. The research was structured in clear steps for easy reading:

- STEP 1: definition of a system for analysing and monitoring the conditions required for opening to the public;
- STEP 2: analysis of the state of the art of local public transport;
- STEP 3: observation of the "A", "T", and "B" indices;
- STEP 4: hypotheses for the improvement of mobility and application cases:
  - modify existing lines;
  - demand-responsive transport;
  - fixed itinerary collective transport;
  - "last kilometre": rail transport + micro-mobility.

The first two steps were an analysis of current conditions (opening conditions and public transport). The third step was to observe emerging results and the fourth aimed to formulate four different proposals for improving mobility and applying them to the components.

It should be pointed out that the period between March and September 2022 was when the data was collected to take a snapshot of current conditions and to produce the considerations indicated. Consequently, if the data were to be used for monitoring the Management Plan, they would have to be updated.

STEP 1: DEFINITION OF A SYSTEM FOR ANALYSING AND MONITORING THE CONDITIONS REQUIRED FOR OPENING TO THE PUBLIC

The main prerequisite for formulating a mobility proposal is to identify which components open to the public are those where visitors tend to go because there they can find space and facilities ready to receive them. In fact, it became clear, from the earliest stages of the research, how diverse the serial site components were. This contrast was not found so much in each of the properties' historical and architectural features, but in their vocation, which depends on their ownership and management structures and directly affects their opening policies. What is meant by vocation is the role that the villas and gardens play, as cultural heritage, for the reference territory.

To do this, there is a system proposed below, which on the basis of the available information, would be able to assign a single value to each component, **Index "A"**, which quantifies its level of being open to the public. In order of priority, the data was drawn from the responses to the questions in the survey filled in by the members of the Technical Office, from the reference web pages of the components and ultimately from the villegiardinimedicei.it website. The information gathered relates to:

- access mode (**coefficient "m"**):
  - if the component is not accessible, the value assigned is 0;
  - if the component is accessible only extraordinarily, i.e. only for specific recurrences estimated at 6-7 days/year, the value assigned is 0.02;
  - if the component is accessible through booking, the value assigned is 0.5;
  - if the component is freely accessible, with no need for reservations, the value assigned is 1;

Since, in most cases, these components have indoor and outdoor spaces, whose access can be regulated separately. The mode of access to both the villa (m1) and the garden (m2) has been assigned a value whose coefficient "m" represents the mean or average.

- opening period (**coefficient "p"**):
  - this value is calculated by summing up the months open in a year and dividing the sum by 12;
- opening days (**coefficient "g"**):
  - this value is calculated by summing up the days open in a year and dividing the sum by 7; When the villas or gardens are only open 2 days per month (usually, 2 Sundays per month), the value assigned is 0.5;
- opening hours (**coefficient "o"**):
  - if the component is accessible both in the morning and in the afternoon, the value assigned is 1;
  - if the component is accessible in the morning or in the afternoon, the value assigned is 0.5;
  - if the component is not accessible, either in the morning or in the afternoon, the value assigned is 0.0;

Fig.1: Graph of index "A" quantifying the level of being open to the public

Index "A" is nothing more than the product of the coefficients "m", "p", "g", and "o". Based on the above, the following points emerge concerning the villas' level of being open to the public. First, there is the fact that three villas are currently inaccessible: Cafaggiolo, Careggi and Trebbio. The first two are currently undergoing substantial refurbishment works, which will preclude their being visited for some years. the third, Trebbio, has not yet reopened to visits by the public since after the pandemic, and in any case visits had to be booked in advance. These components have a low index "A". At (0.02), the villas of Artimino and Poggio Imperiale are only accessible for extraordinary events. At (0.05), Castello and La Magia, which adopt different policies for outdoor spaces – free – and indoor spaces – by reservation only or by extraordinary opening, are open only a few days a week. Then, there is Fiesole at (0.09), where only the garden can be visited. The villas with museum spaces that can be visited a few days a week have a greater level of being open to the public: Poggio a Caiano at (0.48), Seravezza at (0.29), Cerreto Guidi at (0.29) and Pratolino at (0.25). As can be imagined, Boboli at (0.93) and La Petraia at (0.79) are the villas with the highest Index "A", since they offer visits, with no booking required, almost every day of the year. This first step provides a summarised view of the components' opening conditions. These seem to be in line with the admissions numbers declared by those who answered the questionnaire, sent to the members of the Technical Office. In addition to being functional for the later stages of the research, this framework in and of itself, providing that the data on the opening of the villas are updated regularly, appears to be a sufficiently simple and reliable site monitoring system. It should be said that although these data could be intended, as a tool for "internal use", for decision-making by management and specifically for monitoring operations, they could also become a tool directed externally to communicate the status of the site.

STEP 2: ANALYSIS OF THE STATE OF THE ART OF LOCAL PUBLIC TRANSPORT

The second research step looked into the possibilities of reaching the components using public transport. The main alternative to using a private car is public transport. A car is usually chosen, though not always correctly, because it seems to be the fastest way travel to the villas. This research was conducted using Gmaps and the Autolinee Toscane Travel Planner tool as references. The data was verified as needed through the transport companies' travel plans. The information gathered was the same for both vehicles analysed, i.e. train/tram and bus:

- stop: the nearest stop to the component;
- line: public transport line(s) serving the stop;
- distance: distance between the stop and the component considering the shortest walking distance
  - if the distance is < 0.3 km, the value assigned to the coefficients t1-b1 is 1
  - if the 0.3 + km distance is < 0.6 km, the value assigned to the coefficients t1-b1 is 0.8
  - if the 0.6 + km distance is < 0.9 km, the value assigned to the coefficients t1-b1 is 0.6
  - if the 0.9 + km distance is < 1.2 km, the value assigned to the coefficients t1-b1 is 0.4
  - if the 1.2 + km distance is < 1.5 km, the value assigned to the coefficients t1-b1 is 0.2
  - if the distance is > 1.5 km, the value assigned to the coefficients t1-b1 is 0.0
- trips: number of daily trips, on a weekday, connecting the stop with significant infrastructure hubs (e.g. train stations, bus stations, ...)
  - if the number of trips is > 70, the value assigned to the t2-b2 coefficients is 1
  - if the < 70 trips is > 50, the value assigned to the coefficients t2-b2 is 0.8
  - if the < 50 trips is > 30, the value assigned to the coefficients t2-b2 is 0.6
  - if the < 30 trips is > 15, the value assigned to the coefficients t2-b2 is 0.4
  - if the < 15 trips is > 5, the value assigned to the coefficients t2-b2 is 0.2
  - if there are < 5 trips, the value assigned to the coefficients t2-b2 is 0.0

Fig.2: Graphs of the "T" and "B" indices quantifying the reachability of rail and road public transport

The **"T" Index** expresses reachability via rail transport whilst the "B" Index expresses reachability via public road transport, both of which are depicted in the graphs above. The resulting picture shows that the villas can often be reached by bus, much less by train. Only three villas are served by rail transport: Careggi (0.6), Boboli (0.2) and Castello (0.16). Despite a widespread rail network and the good number of trips on their respective lines, all the others are penalised by the fact that they are > 1.5 kilometres from the stations, which is too difficult a distance for most visitors to cover on foot. A different outlook emerges from viewing the public road transport index, capable of serving all the components except for Trebbio and Artimino. Indeed, among the eleven villas that are less than one kilometre from a bus stop, five are actually less than three hundred metres away. With reference to the number of trips, the villas in the Florence urban area appear to have an advantage in that they are served by urban bus lines that guarantee a high frequency of bus trips, generally more than one hundred per day. Extra-urban trips on lines serving the villas in the Mugello and Monte Albano areas are less frequent. Looking at the "T" and "B" indices, we can affirm that there is a fairly good possibility of reaching the components by public transport, even though this could be improved. To this end, four possible paths are indicated in STEP 4 of the research.

STEP 3: EXAMINATION OF THE "A", "T", AND "B" INDICES TO FORMULATE PROJECT HYPOTHESES ON MOBILITY

The third step seeks to identify the most suitable components for the application of a mobility design hypotheses. It comprises the comparison, on the one hand, of the "A" openness index, and on the other, the "T" and "B" reachability indexes. For example, from the graph at the end of this section, it can be seen that the Boboli component, which has been open to the public for the longest time, is very well served by public road transport and to a lesser extent by rail too. Paradoxically, the opposite is true for the Villa of Careggi. Although Careggi has the highest accessibility indices, as mentioned, it is closed to the public for restoration work. These two examples underscore how high levels of accessibility are desirable for high levels of openness, in principle. Nevertheless, for components that are predominantly closed to the public, the improvement of accessibility is clearly less urgent. The latter statement refers specifically to villas that are used as residences or that are otherwise privately owned. Hence, for obvious reasons, these villas do not open their doors to the public for prolonged periods. Based on this logic, Trebbio, Fiesole, Cafaggiolo, Artimino, or the Boboli Gardens will not be considered to such a degree in STEP 4, since they are already easily reachable using public transport. Instead the Petraia, Poggio a Caiano, Cerreto Guidi, and Seravezza components, which by vocation are – or potentially could be even more – open to the public but do not present a very high index of reachability, will be examined. Vice versa, this exercise can be useful for acknowledging those components with good accessibility indices (see Careggi, Castello, Pratolino, Poggio Imperiale) but that are rarely open to the public. It should be highlighted how the system of mobility would be a point in favour of increasing access hours for the public.

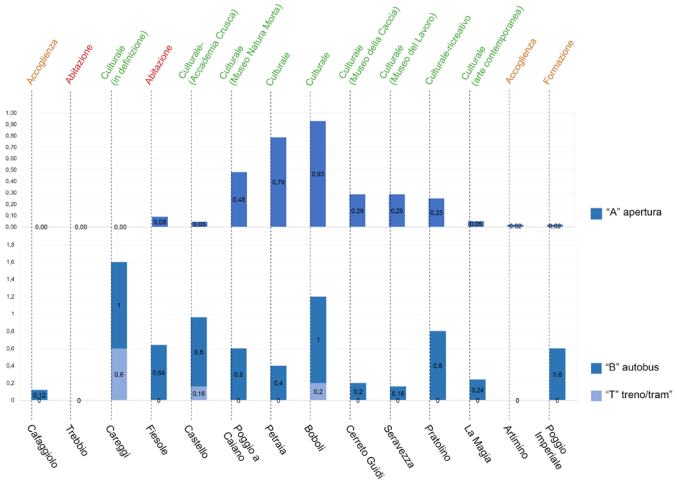


Fig.3: Graph comparing the "A", "T" and "B" Indices

STEP 4: HYPOTHESES FOR THE IMPROVEMENT OF MOBILITY AND APPLICATION CASES

As pointed out in STEP 2, the reachability of the serial site by public transport has been guaranteed to a large extent by bus lines. The bus routes often include stops in the immediate vicinity of those components. To further improve this service, it has been deemed necessary to consider these factors on a case-by-case basis, especially when considering the specific circumstances under which the villas are found. Of those formulated during the research, below are four hypotheses, which are not necessarily alternatives. They are listed from the most "immediate" application to the one that will require greatest investment for its possible realisation. In the end, for each of these possibilities, a number of application cases are presented and developed graphically in the attached sheets.

Regardless of any model that might be proposed, there will still be the need, in common with the discussion on the opening of the villas in the previous paragraph, to make public transport offerings, which are capable of reaching the serial site, comprehensible to the public.

Modify existing lines

In this case, though no new public transport road lines will be introduced, some modifications to the existing lines have been called for. Essentially, this means moving on two fronts. First, extend the urban line routes and reorganise the extra-urban lines timetables by increasing the frequency of trips (with the aim of guaranteeing at least two trips per hour during the hours that the villas are open) and second, ensure that public holidays are covered. Such an approach would benefit not only visitors to the villas, but also the inhabitants of the localities where the components are located. Clearly, they would see an increased number of connections to the main infrastructure nodes. An example of this is the "Al Sacro Monte in Bus" service. This is a proposal by Autolinee Varesine to use urban line C to reach Varese's Sacro Monte, including on Saturdays and Sundays when the sanctuary is busiest.

Poggio a Caiano – Extension of urban line 35

SDF (current conditions): the villa is currently served by two extra-urban lines, the PF [Poggio a Caiano to Florence route] with 10 trips/day (weekdays) and the 51PQF [Pistoia-Quarrata-Florence route] with 21 trips/day (weekdays). On Sundays and holidays, connections are less frequent (6).

SDP (project status): extension of urban line 35 [Firenze Leopolda Porta al Prato-Indicator] to Poggio a Caiano [Medici Villa stop]. The solution would guarantee, with the maintenance of the line's current travel plan, one trip every 15 minutes on weekdays and one trip every 30 minutes on Sundays and holidays.

La Magia – Reorganisation of the timetable and relocation of a stop on suburban line 51-PQF

SDF: the villa is only served by the extra-urban 51-PQF, the Pistoia-Quarrata-Florence line with 21 trips/day (weekdays) and 6 trips/day (holidays).

SDP: increase in the number of trips on the 51-PQF line, at least on Sundays, the only day when it is possible to visit not only the park but also the garden and inside the villa. Move the bus stop [via Vecchia Fiorentina 38] to a position closer to the villa's entrance avenue. Alternatively, build a footway to make the pedestrian route safe. Poggio a Caiano, which is on the same line, would also receive benefit from the intervention.

Seravezza – Reorganisation of the E35 extra-urban line timetables

SDF: the villa is served by the E35 Lucca extra-urban line [Circular to the left: Pietrasanta-Querceta-Forte dei Marmi-Vittoria Apuana-Station-Seravezza-Vallecchia-Pietrasanta]. It takes 10 minutes to reach the Medici Villa from the railway station [Forte dei Marmi Querceta Seravezza], 25 minutes from the centre of Forte dei Marmi. There are 12 trips/day on weekdays and holidays.

SDP: increase the number of trips on the E35 line, especially on Saturdays and Sundays when the Museo del Lavoro is open to the public both in the morning and in the afternoon so that a stable connection between the coast and the inland area of Versilia would be created.

Poggio Imperiale - Reorganisation of timetables and extension of urban line 38

SDF: the Villa of Poggio Imperiale can be reached on the urban bus line 11 [Salviatino-Galluzzo la Gora], which stops 600 metres away [Gelsomino Malagotti] or the urban line 38 [S. Giusto della Calza-Fermi], which runs along Viale del Poggio Imperiale and stops a few metres from the entrance to the villa. Line 38 offers 14 connections on weekdays and none on public holidays.

SDP: since the villa is a school, it can be surmised that visits would remain limited to Saturdays and Sundays. Consequently the proposal would be to keep line 38 running on these days as well. The 38 bus route could also be extended towards the entrance to the Boboli Gardens [Pitti] and towards the Lungarno to intercept tourist flows.

Cerreto Guidi - Reorganisation of the 49 extra-urban line timetables

SDF: currently the villa is served by the extra-urban line 49 [Empoli-Sovegliana-Crocefisso-Vinci] with 10 trips/day on weekdays and 4 trips/day on Sundays and holidays.

SDP: revise the timetable for line 49 to allow arrival at the [Piazza XX Settembre] stop in time for visits at scheduled times (or vice versa). Add more trips if opening policies provide for access without a reservation.

Demand-responsive transport

Normally, demand-responsive transport (DRT) is introduced in extra-urban contexts to meet limited and variable demand in terms of routes and timetables. With reference to the Medici villas, the flexibility of the service could meet the need to move small groups of people from the surrounding area to the components and vice versa. Above all but not only, consider a DRT service with local scope aimed at those who reside in smaller towns or who are staying in accommodations not served by public transport. A booking management system would have to be set up, either through an app, a website or a call centre, to organise the journey. As examples of similar services there are the ColBus by TPER, and the San Benedetto-Val di Sambro and Porretta Terme-Corno alle Scale dial-a-ride lines, that run on weekdays and holidays respectively. There is also the Bummelbus, in northern Europe, which runs using the same modalities.

SDF: currently, the only DRT service that involves the site appears to be the Autolinee Toscane Pronto Bus, which connects Poggio a Caiano, Carmignano, Seano, Comeana, Bacchereto, Artimino, Poggio alla Malva, the Carmignano railway station, and the towns of Isola and Spazzavento from Monday to Saturday.

SDP: the components potentially involved are all those located far from the main centres whose surroundings are not adequately served by local public transport. Precisely, just think about Poggio a Caiano, La Magia, Cerreto Guidi, Seravezza and, when there are extraordinary openings, Artimino, Trebbio and Cafaggiolo. A DRT service could also be a valid link to the railway stations. Actually, it could be a first step to test the tourist flows moving to the components in view of a regular service such as in the next hypothesis.

Fixed route collective transport (shuttle bus, minibus, bus)

This proposal would create a road transport service to the components for visitors that would minimise stops between the point of departure and arrival, increasing the service's efficiency. Just imagine component-to-component connections that could be extended to the nearest infrastructure node as needed. The suggestion takes into consideration those occasions when the villas' admissions history and the cultural offer indicate conside-

rable tourist flows that would justify a scheduled service. A more precise demand estimate would indicate, on a case-by-case basis, whether to use a shuttle bus (9 seats), a minibus (16-25 seats) or a normal bus (50 seats). Two examples are the 3M line dedicated to the main museums in Naples [Capodimonte, Catacombs of San Gennaro, National Archaeological Museum] and the Magic Electric Bus [Libreria Luxemburg-Piazza Castello-Rivoli Castle] in Turin.

Shuttle between Careggi, Petraia, Castello

SDF: to date there is no direct connection running among the three components. However, Careggi, Castello and to a lesser extent Petraia, are easily accessed by public transport. The first thanks to the T1.3 tramway and the urban bus lines 33 and 43. The second and third via the Florence-Prato railway line at the Castello stop and then using the urban bus lines 2 and 28.
SDP: Careggi's proximity with respect to Petraia and Castello, should be the starting point when providing for a shuttle service with regular trips (15-20 minutes) connecting the three villas located on the same side. Nevertheless, activation would still be subject to the reopening of the Villa of Careggi, which is closed for restoration work, and to the hoped for extension of Castello's opening hours, currently limited to 1.5 days/week. The Careggi-Petraia route is just under 3 km long and can be covered by a shuttle bus in 5-10 minutes, whilst the distance between Petraia and Castello, being about 1 km, could also be covered on foot.

Bus between Poggio a Caiano and Cerreto Guidi

SDF: at this time, there is no direct connection running between the two components. To reach Poggio a Caiano one can take the PF and 51PQF lines from Florence. For Cerreto Guidi one can take the 21 and 49 from Empoli.
SDP: this proposal considers the idea of using a transport service operating during common opening hours to unite the two most frequented villas of Monte Albano (2019 data indicate 53,000 admissions for Poggio a Caiano, 34,000 for Cerreto Guidi). The two villas are 26 km apart. Travel time on the route without intermediate stops is about 40 minutes. It is estimated that a visit to both components plus return would take about 6 hours. The proposal could also provide for coordination of the cultural offer between the Museo della Natura Morta and the Museo della Caccia, as well as between the municipalities of Poggio a Caiano and Cerreto Guidi.

"Last kilometre": rail transport + micro-mobility

Apart from adopting the solutions put forward in the three previous hypotheses, it would be useful to think about the possibility of rail transport, which is hardly ever taken into consideration as a way to reach the villas. Indeed, on the one hand, rail travel is not affected by the main problem of the Florentine metropolitan area, namely heavy traffic. On the other, train travel falls within the sphere of ecologically sustainable solutions that all mobility policy documents seek to increase. The fourth project hypothesis would aim to make use of the existing railway network to allow visitors to get as close as possible to the different components and to cover the remaining distance usually called the "last kilometre" using light transport vehicles such as bicycles, electric scooters, hoverboards, etc..... Actually, though the distance between the railway stations and the villas, almost all of which are located outside the city centres, is a little more than one kilometre, they would still be accessible using light transport vehicles. Essentially, the distance to be travelled would be on scenic roads allowing visitors to cross landscape that has been acknowledged as an integral part of the site. Since not all visitors have their own vehicles, it is supposed that several "bike points" would be set up at the railway stations for bicycle hire, repair and information on the route to be followed. Then at the villas, suitable spaces would be created for parking and recharging electric vehicles. There is the fact that the proposal has been essentially conceived of as a supplement to rail transport. Then, micro-mobility would not necessarily exclude the use of DRT, which could give everyone the possibility of travelling the "last kilometre", even in the winter months. To provide a rough indication of the economic feasibility of the project, the start-up costs, operating costs and potential revenues are outlined below.

Project start-up costs

- Bike point set-up. Costs to set-up a space in or near the train stations where visitors to the villas would be welcomed. The space should act as a vehicle hire and repair shop, an information point and a starting point for guided tours. Considering the spaces already available, the following cost items have been envisaged:
  - Systems upgrade;
  - Purchase of fixtures and repair equipment;
  - Painting;
  - Purchase and placement of information totems;
  - Purchase of mountain-bikes;
  - Purchase of electric mountain bikes;
- Purchase of equipment. Costs for the purchase and installation of equipment to be placed outside the "bike point":
  - Purchase of information and directional signs (about 1 every 200 metres);
  - Purchase and placement of charging stations at the villas;
- Design. Costs for the design of physical spaces, business plan drafting, coordination and communication activities and setting up a vehicle booking portal online:
  - Design;
  - Communication activities;
  - On-line booking system.

Operating Costs

- Costs for hiring staff to service the bike point;
- Costs for cleaning and maintaining the space;
- Costs for utilities;
- Costs for taking out a rental business insurance policy.

Revenues

Revenues would be generated by the vehicle rental business. It is hoped that the rental rates together with rail transport and possible entrance fees for the villas would be competitive. To estimate those rates, the following should be taken into account:

- Number of vehicles available;
- Price for daily hire;
- Opening days for the villa and therefore for the rental business;
- Utilisation rate, i.e. vehicles used/vehicles available, estimated over the long-term.

Poggio a Caiano

The Signa train station is located on the rail line connecting Firenze SMN and Firenze Porta al Prato train stations to the Livorno, Pisa, Siena, Grosseto, La Spezia rail lines. Signa is served by regional trains with a frequency of about 30 minutes and is located about 7 km, as the crow flies, from the Medici Villa of Poggio a Caiano. The shortest road route to the villa is the SP45. However, to stay on low-traffic roads, an alternative route is suggested. Take via Cavalcanti, cross the Ombrone River at the old Carmignano train station. Keep west of Comeana, and arrive at Poggio a Caiano going through Calcinaia. This way about 10 km are covered in about forty minutes. This would allow you to reach your destination in about an hour. The trip would start from the Santa Maria Novella train station and would also consider the time on the train. Excursion time – round trip from Florence plus the visit to the villa, could be done in half a day. Ideally, the restoration of the Carmignano railway stop would make it even easier to reach the Villas of Poggio a Caiano and Artimino by bicycle.

Poggio a Caiano and Artimino

Still stopping at the Signa train station on the outbound and return journey, the relative proximity of the Poggio a Caiano and Artimino villas suggests that both can be visited in one day. The designated ring route, because of the several existing excursion routes, is just one example of the possibility of modulating the journey depending on the time available and the visitor's level of preparation.

Cerreto Guidi

The railway connections between Florence and Empoli run very frequently: one about every 15 minutes. Starting from the Empoli train station, the fastest roadway to reach the Villa of Cerreto Guidi is SP13. However, if one is planning to cycle the route, it would be advisable to choose roads with less traffic. Specifically, take Via della Motta and then after crossing the Arno, take Via Motta in Poggio and Via S. Zio. Going this way, the route is about 12 km long, without having to encounter any significant slopes. Starting from the station it takes just under an hour to reach the villa. So it would take less than a half-day for the round trip plus the visit to the villa.

Castello, La Petraia and Careggi

As already mentioned in application case 3a the three villas are located close to one another. This would suggest that one can move independently from one to the other either by bicycle or scooter. From the Castello railway station, to avoid the traffic on Via Sestese, it is suggested that one takes Via Giuliani south bound. The Viale di Parco Mario Luzi gives access to the Villa of Castello, whilst going just a little further south, Via della Petraia leads to the villa of the same name. Instead, the Petraia-Careggi connection would take via di Boldrone, via della Quiete, via Cacciaguida and via delle Oblate. In this case, the bicycle and scooter hire point should be located near Firenze SMN Station and the recharge points should be near the villas of Careggi and Petraia.

Pratolino

The Fiesole-Caldine station is the second stop (after Firenze S. Marco) on the Firenze-Faenza line. It can be reached from Santa Maria Novella in 12 minutes by train and there are 20 trips per day that stop there. The journey from the station to the Pratolino park is 6 km if one cycles along Via S. Andrea a Sveglia and Via S. Jacopo. This way the very busy SS65 Via dell Futa (the old Via Bolognese) would be avoided. However, the significant slope – an average of 6% – means that it takes about fifty minutes to travel along this scenic road to reach the park. It has been proposed that a bicycle point be installed at the Fiesole-Caldine railway station and a recharging station at the parking lot in front of it.

ANNEX 6
ANALYSIS OF GOVERNANCE MODELS

INTRODUCTION

Already during the 37th session of the World Heritage Committee in Phnom Penn in 2013, attention was being drawn to the composition of the site management system and its operation. Then came the information requests from UNESCO in 2015, 2020 and 2021, where, once again demonstration of the effective operation of the cross-site management system was requested. In July 2023, ICOMOS sent a technical report to the Tuscan Regional Authority discussing the topic of management (see Section 3.2 of the Management Plan).

In response to international considerations and requests, an analysis of some best management practices from other World Heritage Sites, and other complex territories, even without this designation, was performed at the same time the Site Management Plan was updated. The aim of the evaluation was to find a viable new governance model for the Medici Villas and Gardens circuit in Tuscany, that could be put into practice in the future.[1]

Eight cases were selected based on similarities with the site in question. These included seriality, territorial extension, uniformity of ownership, management organisation and destination, the large number of stakeholders involved, etc., whether in Italy or Europe.

The analysis of the five Italian management models focused on their legal status so that their operations could emerge together with the competencies and responsibilities of their administrative bodies. On the other hand, the three European cases were selected to find strategies for involving not just institutional actors, such as local communities. Because of their innovation or clear efficiency, the projects' integrated and participatory governance and potential repeatability in other contexts, through accommodation to the specific conditions and attributes of each instance, all the cases brought especially interesting points to light. Hence, on the one hand, this annex intends to summarise the results of the analysis conducted, whilst on the other, to highlight and consider a number of potentially valid practices and solutions for launching a deliberation on the reorganisation of the management of the Medici Villas and Gardens in Tuscany.

For the sake of completeness, some other case studies taken into consideration during the inquiry are indicated below. They were discarded because the governance characteristics they listed were deemed less comparable to the context of the Medici Villas and Gardens in Tuscany serial site:

- Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato (Italy);
- Landscape of Val d'Orcia (Italy);
- Portovenere, Cinque Terre and the Islands (Palmaria, Tino and Tinetto) (Italy);

Table x - Case studies for this analysis

	Case studies	Designation	Site type
Italian cases	1. Amalfi Coast	World Heritage Site	Cultural Landscape
	2. Metropolitan City of Bari		Metropolitan area
	3. UNESCO Dolomites	World Heritage Site	Serial site – 9 components
	4. Veneto Villa System	Includes the World Heritage Site (Palladian Villas)	Serial site – 4,243 components
	5. Savoy Royal Residences	World Heritage Site	Serial site – 22 components
European Cases	6. Hadrian's Wall	World Heritage Site	Transnational site – 414 components
	7. Loire Valley	World Heritage Site	Cultural Landscape
	8. Regensburg Historical Centre	World Heritage Site	Historical City Centre

[1] *In this regard, a new Collaboration Agreement was signed in autumn 2022 between the Tuscan Regional Authority and the University of Florence – Department of Architecture for the Update Project of the "Medici Villas and Gardens in Tuscany" World Heritage Site Management Plan.*

- Public Consortium of the Navigli Municipalities (Italy);
- Doge's Palace Foundation for Culture, and the Strade Nuove and the system of the Palazzi dei Rolli in Genoa, (Italy);
- Castles and Town Walls of King Edward in Gwynedd (North Wales);
- Palaces and Parks of Potsdam and Berlin (Germany);
- Works of Antoni Gaudí (Spain);
- The San Antonio Missions (USA);
- The 20th century architectural works of Frank Lloyd Wright (USA);
- The Architectural Works of Le Corbusier (cross-border);
- The Great Spas of Europe (cross-border).

SUMMARY OF THE GOVERNANCE MODELS ANALYSED

Case study 1 – Amalfi Coast

Chapter 5 of the World Heritage Site of the Amalfi Coast Management Plan[2] (1997) offers an intriguing governance model that advances the systematic integration of competencies and cooperation among the different actors involved in the site's management. The Management Conference, which sets the site's strategic objectives, is the political body where the local and territorial authorities are represented. This primarily institutional-political organisation, receives assistance from a "decision support structure", made up of technicians and experts, who are charged with planning studies and scenarios for the best management of the site, furthered by its sustained exchange of research and information with other World Heritage sites. This group of experts also monitors the implementation of the Management Plan.

Then there is the supra-municipal territorial body that supports and coordinates the various stakeholders' actions. Either directly or through ad hoc public-private companies, this body implements the actions and interventions called for by the Management Plan. At the same time it also looks after the promotion of the site and its offerings aimed at tourists and cultural enthusiasts. Finally, there are the freely constituted interest groups (also in temporary form), which play a proactive role with respect to the Conference and, as required, an advisory role in relations with the support structure.

Case study 2 – Metropolitan City of Bari

In 2015, the Metropolitan City of Bari the process of adopting and implementing the Land of Bari[3] Metropolitan Strategic Plan was started. This was a real opportunity to rethink the governance of the metropolitan community with a view to achieving integrated and participatory territorial management. Therefore, the forty-one municipalities that are part of the Metropolitan City of Bari entered into an association (Article 30 of Legislative Decree no. 267 of 18 August 2000), and defined a management structure for this vast area.

In addition to the Metropolitan Council, which is the body that brings the political representatives of the local authorities of the former province of Bari together, a Control Room was set up. This new body has the function of driving and coordinating the territorial actors involved. The Control Room, which comprises the President of the Metropolitan City and three mayors, who rotate annually, defines common territorial management strategies and sends them to the Metropolitan Council for approval. Together, the Scientific Committee and the Technical Group represent the "technical-scientific" component that brings experts and scholars together to support the Control Room. There is also a linking Technical Office, which enables the administrative class to be directly involved in the innovation processes, whilst it circulates information to local authorities. The Technical Office is convened periodically by the Metropolitan Mayor in his capacity as head of the Control Room. Finally, there are the three Stakeholder Assemblies (public institutions, associations and active citizenship, and the young generations) that formulate proposals for action and new objectives to be included in the Strategic Plan whilst it is being updated. The assemblies meet in a plenary session at least once a year.

Case study 3 – UNESCO Dolomites

The body charged with coordinating the nine components of the Dolomites World Heritage Site since 2009 is the UNESCO Dolomites Foundation[4]. This entity was established by an act ratified by the Province of Belluno, the Autonomous Province of Bolzano, the Autonomous Province of Trento, the Province of Udine, the Province of Pordenone, the Veneto Regional Authority and the Autonomous Region of Friuli Venezia Giulia. The Foundation has been recognised as a legal entity under private law in compliance with articles 14 et seq. of the Italian Civil Code.

The Foundation can also be qualified as:

- a body governed by public law, since it meets the requirements under Article 2(1)(4) of EU Directive 2014/24;
- a body governed by private law under public control in compliance with Article 1(2)(c) of Legislative Decree 39/2013;
- a body governed by private law under public control in compliance with Article 2-bis(2)(c) of Legislative Decree 33/2013 as amended by Legislative Decree 97/2016.

Alongside the Board of Directors, which defines the Foundation's objectives and strategies and promotes the integrated tourism offer, there is a Scientific Committee. This body, appointed by the same Board of Directors, supports decision-making through detailed advice and opinions, monitors site management impartially, as an unbiased third-party, and can drive Foundation activities. Lastly, there is a Board of Supporters, comprising the founding and supporting members, who meet annually. This body can intervene with opinions on and proposals for Foundation activities and programmes, and can recommend the amount of contributions to be paid to the management fund.

Case study 4 – Veneto Villa System

The Veneto Villa System has a total of 4,243 properties, with 3,807 in Veneto and 436 in Friuli Venezia Giulia. There are also the twenty-four components in the "City of Vicenza and the Palladian Villas of the Veneto" World Heritage serial site, whose recognition by UNESCO dates back to the 1990s. This very large number of properties together with their acknowledged historical and cultural value called for the creation of an ad hoc body: the Regional Institute for Venetian Villas (IRVV), which administers their cataloguing, conservation and enhancement. This organisation is under public law pursuant to Veneto Regional Law No. 63 of 24 August 1979.

The Institute's main function has always been to assist private owners in the conservation of their villas, which are subject to the provisions of Part II of Legislative Decree No. 42 of 22 January 2004. This is accomplished by providing technical as well as economic assistance to ensure that adequate consolidation and restoration requirements can be met by each component. If the property owners' efforts are not sufficient, the IRVV will intervene through granting loans and contributions from its own and government resources. In addition to this, the Institute will also provide for the restoration of the villas owned by the Regional Authority whilst collaborating in the enhancement of the collections they contain. In addition, the IRVV administers regional villas in implementation of specific

[2] Ferrigni F., 2020, The Management Plan of the UNESCO site "Amalfi Coast": problems, purpose, structure. European University Center for cultural heritage, Ravello

[3] Metropolitan City of Bari Strategic Plan, approved by D.C.M. [Deliberation of the Metropolitan Council] no. 144 of 12/30/2016

[4] Fondazione Dolomiti UNESCO, 2015, Strategia Complessiva di Gestione [UNESCO Dolomites Foundation, 2015, Comprehensive Management Strategy] https://www.dolomitiunesco.info/attivita/strategia-complessiva-di-gestione

agreements with the Regional Authority, as it provides support for the villa circuit promotions policy towards tourists. At the same time, it conducts studies and research and issues publications whilst participating in national, European and international projects, whilst also promoting training courses for cultural heritage restoration technicians.[5]
Through offering opinions and specialised advice on technical issues, studies and research the Regional Monitoring Centre acts to support the Institute's decision-making bodies. In 2019, at the Veneto Regional Council, a single information point for the Veneto Villa System was also set up. This service, through the provision of information services and advice, seeks to represent a link between the IRVV, the local authorities and, above all, the private owners.

Case study 5 – Savoy Royal Residences

The Residences of the Royal House of Savoy, which have been on the World Heritage List since 1997, comprise an extensive serial inscription including twenty-two palaces and villas in and around Turin. Since the ownership of these residences is both private and public, the overall management structure is heterogeneous. Imposed by the need to find a coordination mechanism among the multiple managers, in 2017, an agreement was signed by the residence owners identifying the Piedmont Museums Centre (MiC) as the referent agency for the World Heritage site. Also in 2017, pursuant to Articles 112 and 115 of the Code of Cultural and Landscape Heritage, the Consortium Savoy Royal Residences was created to provide direct management of the two sites: La Venaria Reale Reggia [Royal Palace of Venaria] (owned by the State) and the Mandria Gardens and Castle (owned by the Region), as well as for the enhancement of the entire circuit of residences. The consortium members are the then Ministry of Culture and Tourism, the Piedmont Regional Authority, the City of Venaria Reale, Compagnia di San Paolo, and the 1563 Foundation for Art and Culture. Other public and private parties may also join the Consortium through agreements or the contribution of cultural heritage.[6]

Case study 6 – Hadrian's Wall

This Roman Fortifications site, which is cross-border, includes the three sections listed here from the most recent to the least in terms of its recognition by UNESCO. They are the Antonine Wall (2008), the Upper Germanic-Rhaetian Limes (2005), and Hadrian's Wall (1987). Hadrian's Wall, which is the subject of the analysis in question, extends for 117 km and involves a large number of private and public parties, including seven different local authorities, some of which exercise overlapping jurisdictions and powers.
These circumstances made it appropriate to adopt a governance system that is extended to the numerous stakeholders organised in permanent working groups. These groups can be accessed either individually or in associated form depending on competencies or interests related to the site. The working groups' operational areas are: a) planning and protection, b) conservation, agriculture and land management, c) access and transport, d) visitor facilities, marketing and tourism, e) education and learning, and f) research. The local authorities, the university and research sector – the Archaeology Departments of the universities in the area – archives and museums, national organisations such as Historic England, English Heritage, Natural England, local business partnerships, Hadrian's Wall Marketing Group and, finally, local communities as individuals or associations are all participants. Each group prepares an Action Plan for its thematic area. In their Plans, they develop site policies and strategies, identify those responsible for their implementation, monitor their progress and effectiveness, and review outcomes, and they propose amendments or additions as required. Each group drafts and submits a report on progress and achievements annually. The Annual General Conference is a time for all stakeholders to come together. This is an opportunity to also involve and survey local communities on the site's priorities, in line with the "Engaging with communities"[7] strategic objective of the Site Management Plan.

Case study 7 – The Loire Valley

The Loire Valley World Heritage site between Sully-sur-Loire and Chalonnes, listed in 2000, includes the regions of Centre-Val-de-Loire and Pays-de-la-Loire, extending from Sully-sur-Loire to Chalonnes. This cultural landscape comprises the cities of Blois, Chinon, Orléans, Samur and Tours. There are also many castles and villages, the windmill port of Turquant-Souzay, the sanctuary of Sainte-Gemmes-sur-Loire and equally as many churches. The governance system has been structured so that it represents the interests of several of the actors involved, in their differing capacities, in the management of this extensive site. The site is all the more challenging because it includes not only the landscape component, but also several different types of properties.
The Development Commission is the advisory body open to all stakeholders, especially those from the fields of economics, tourism, environment, culture, education and research. With the support and coordination of the Loire Mission Committee – an operational body endowed with a team of experts – the Development Commission assumes an advisory role because it is the proactive and inspirational force for the political steering committee, organised in a territorial conference. The Development Commission meets every 18 months.[8]

Case study 8 – Regensburg Historical Centre

The City of Regensburg, the body responsible for the management of the Old Town Regensburg with Stadtamhof World Heritage site, has developed its own method for the site's participatory management. To achieve broad support, identification and recognition – and thus implementation – of the Management Plan, the City of Regensburg UNESCO Office initiated a participatory process involving many citizens and urban stakeholders. This was accomplished through the establishment of a Local support group, which organises its activities in these fields of action: a) tangible cultural heritage, b) economic development, culture and tourism, c) urban planning and development, d) environment and leisure, e) awareness raising and research. Proposals are put forward and actions are discussed for each area. Municipal and state authorities and the several local associations are all members of the local support group. Even the civic component plays a significant role: two representatives were elected and admitted to the work of the Local Support Group.[9]

[5] Veneto Regional Law 63/1979 "Norme per l'istituzione ed il funzionamento dell'Istituto regionale per le ville venete «I.R.V.V.»"[Rules for the establishment and operation of the Regional Institute for the Veneto Villas "I.R.V.V."] Article 2
[6] Consortium Savoy Royal Residences, Charter and Deed of Incorporation, approved on 09/20/2021, https://lavenaria.it/it/atti-generali
[7] Hadrian's Wall Country, 2014, Management Plan, https://hadrianswallcountry.co.uk/management-plans/
[8] Loire Valley World Heritage, 2022, Management Plan, https://loirevalley-worldheritage.org/
[9] Ripp M., 2017, Regensburg's World Heritage Management Plan Creation of a World Heritage Strategy Together With The Citizens, seminar

SUMMARY OF EMERGING FACTORS

Case studies	Factors of interest for the Medici Villas and Gardens in Tuscany
1. Amalfi Coast	Provide for a team of technicians and experts in World Heritage Site management having functions of: A) support, advice and input to the decision-making centre B) Management Plan updating and monitoring
2. Metropolitan City of Bari	Provide for a "Control Dashboard" with the function of driving and coordinating the many managers Provide for a team of technicians and experts to support the activities of the Control Room Provide for a linking Technical Office to inform/train politicians, technicians and administrators of the local authorities involved
3. UNESCO Dolomites	Provide for a Scientific Committee, which offers advice and opinions to the decision-making body and monitors the site's overall management Legal-administrative form suitable for ensuring greater operational and financial autonomy of the body in charge of site coordination
4. Veneto Villa System	Create a legal entity with autonomy, financial and managerial capacity to relate to the private owners and the public components (which can manage the public components and enter into agreements with private parties) The Regional Monitoring Centre to offer specialised opinions and advice to property owners/managers on technical issues, and conduct studies and research to ensure up-to-date site management Provide for a regional services desk offering information and advice to private owners
5. Savoy Royal Residences	Create an ad hoc legal entity, the result of a legally recognised voluntary aggregation among public bodies, which, with greater autonomy, coordinates and regulates the initiatives relevant to their components. This body can enter into agreements with private parties
6. Hadrian's Wall	Organisation into (permanent) thematic working groups for implementation and monitoring of the Action Plan. Monitoring is conducted annually through a report from each roundtable on progress and achievements. The roundtables can be accessed either individually or in associated form depending on skills or interests related to the site (or a part of it)
7. Loire Valley	Provide for a team of technicians and experts that enhances the ideas, opinions and skills and experience of the several territorial actors involved. This should be accomplished by surveying or consulting with these actors, to then transform their emergent ideas into proposals to be submitted to the political steering committee
8. Regensburg Historical Centre	Involvement and dialogue established among municipal and state authorities on the one hand and the different local associations on the other. This should be accomplished through the creation of a "local support group", from which important political policy-making drivers originate There should be the utmost openness towards the civic component: two community representatives (citizens) will be admitted to the working group

COMPARING FACTORS

Summary of emerging factors	Amalfi Coast	Bari Metropolis	UNESCO Dolomites	Veneto Villas	Savoy Royal Residences	Hadrian's Wall	Loire Valley	Regensburg Historical Centre
driver and coordination centre		X					X	
new legal-administrative form			X	X	X			
provide for a team of experts	X	X	X	X		X	X	X
information/training for local authorities		X		X				
information/dialogue towards private owners				X				
stakeholder involvement	X	X	X			X	X	X
Action Plan and monitoring working groups		X				X	X	X

SOME THOUGHTS ON REORGANISING THE MANAGEMENT OF THE "MEDICI VILLAS AND GARDENS IN TUSCANY" SITE

As explained in Chapter 5.2 of the Management Plan, a "Control Room" – to be set up along the lines of the case of the Bari Metropolis – has already been tried. This attempt took into consideration the results of this analysis and adapted them, where possible, to the peculiarities of the "Medici Villas and Gardens in Tuscany" site. Below, those aspects, i.e. factors that emerged from the survey, considered more decisive than others in the process of regulating the site's current governance system are underscored.

A narrower dashboard for coordination and connection among the managers: from this tool stimuli and inputs can begin to define and implement actions and strategies for the management of the overall site in a more effective and rapid manner	Metropolitan City of Bari
A team of professionals and experts ready to offer technical and scientific support to the coordinating body and/or site managers	Nearly every case study
Provide for a technical-scientific team to manage relations with private owners and other stakeholders, promoting their most committed participation	Veneto Villa System
Some of the governance systems analysed were distinguished by their calling for structures for the training/information of local authorities and/or other territorial stakeholders. It would be useful to consider whether the same Control Room could also conduct briefing and capacity building activities aimed at the many subjects involved in different ways in the territorial network of the Medici villas. This could be made possible thanks to the different offices and agencies involved at the level of the regional authority (landscape, hydro-geological risk, seismic risk, public works, tourism promotion) and with the support of teams of experts and researchers	Metropolitan City of Bari Veneto Villa System
Taking other best practices as examples should engender reflection on a possible modus operandi for future governance of the site in question. For instance, organisation into permanent and/or temporary thematic working groups or roundtables would make it easier to identify actions and strategies for the site. Clearly these would then be more likely to be implemented effectively whilst management performance could be monitored constantly, and changes or additions could be proposed as needed	Metropolitan City of Bari Hadrian's Wall Loire Valley Regensburg Historical Centre
Provide for an ad hoc legal form that would allow the site and its human and financial resources to be managed with greater independence and effectiveness. At the same time, a specially created legal entity of this kind would be more suited to promoting the entire villa circuit to the outside world, enhancing its uniqueness	Savoy Royal Residences Consortium Veneto Villa Institute UNESCO Dolomites Foundation

ANNEX 7
RISK MANAGEMENT

INTRODUCTION

An effective risk management system should contain an assessment of the site's vulnerabilities, which should also be considered in relation to environmental risks that impact values and attributes. Responses to be adopted for risk mitigation and prevention should also be indicated for implementation at local, provincial and regional levels.[1]
A Periodic Report was sent to the World Heritage Centre in 2014. The latest report, sent in the spring of 2023, highlighted the main natural risks for the site in question. Furthermore, the Tuscan Regional Authorities have always been well aware of the region's seismic threats and hydrogeological hazards. Hence, they are prepared to respond appropriately to such calamitous events with suitable facilities and policy.

Because they provided the necessary data on the seismic and hydrogeological risk within the areas affecting the World Heritage Site properties, the contributions of the Tuscan Regional Authority Soil Conservation Directorate and Seismic Research Sector as well as the Civil Protection Service was essential for this comprehensive discussion.

THE MAIN RISK MANAGEMENT ACTORS

Following the strong earthquake that struck central Italy in 2012, the **National Crisis Coordination Unit (UCCN-MiC)** was established within the Ministry of Culture's General Secretariat. The Unit has operated in recent years along two vectors. On the one hand, it works on risk prevention aimed at minimising immediate damage through reducing vulnerabilities of the cultural heritage. On the other, it administrates emergency management aimed at mitigating any lingering damage through the reduction of response times and the planning of post-earthquake interventions. The National Crisis Coordination Unit and its regional branches work synergistically with the Prefectures, Fire Departments, Law Enforcement Agencies, Basin Authorities, volunteers, etc., coordinating the oversight and support activities throughout each phase of the emergency. The **Tuscany UCCR-MiC** [Tuscany Regional Crisis Coordination Unit] was organised within the Tuscan Regional Authority Secretariat. This unit operates in cooperation with and the support of the Superintendents, the Carabinieri Cultural Heritage Protection Command and other peripheral offices and institutes. Specifically, the Tuscany UCCR-MiC is charged with ensuring seismic safety in cultural sites through liaison activities with those territorial bodies responsible for emergency interventions. The unit identifies and manages the teams that survey damage to the cultural heritage, whilst also identifying cultural heritage recovery sites. The regional UCCR-MiC's task is to provide the **Regional Civil Protection Department** with precise information on the seismic phenomena taking place in specific areas in the territory so that the Department will be able to promptly manage the criticalities and inform other local actors charged with risk management.

The **Basin Authorities** play an important role in mitigating hydrogeological risk through their adoption of Flood Risk Management Plans, whilst under Law No. 183 of 18 May 1989, the Hydrogeological Structure Plan became a regional responsibility.

FLOOD RISK AND GEOMORPHOLOGICAL INSTABILITY OF THE 14 COMPONENTS

According to the analyses, undertaken by ISPRA [Italian Institute for Environmental Protection and Research], contained in the 2021 Report on Flood Hazard Conditions in Italy and Associated Risk Indicators, the Lombardy, Veneto, Friuli Venezia Giulia, Emilia-Romagna, Tuscany and Calabria Regions are where the percentages of territory subject to potential flooding are higher than the values calculated nationally, within the three hazard/probability scenarios. The highest territorial percentages subject to potential flooding are in Calabria (17.1%) and Emilia-Romagna (11.6%), whereas in Tuscany, it is 6.1%.
Below is a classification of the risk of flooding and of geomorphological instability based on information provided by the Tuscany Regional Authority, relative to the areas where the components are found. The data provided were drawn from the Flood Risk Management Plan and the basin Hydrogeological Structure Plan.

[1] *Paragraph 118 of the Operative Guidelines (2023). Also see, "Managing Disaster Risks for World Heritage" 2010.*

	Flood risk	Risk from geomorphological instability
Villa of Cafaggiolo	does not fall within the hazard zone boundaries	does not fall within the hazard zone boundaries
Villa of Trebbio	does not fall within the hazard zone boundaries	in the P3 hazard zone (due to landslide and potentially unstable inactive slow flow)
Villa of Careggi	does not fall within the hazard zone boundaries	in the P2 hazard zone (due to the presence of a mixed debris cone and an alluvial fan)
Villa in Fiesole	does not fall within the hazard zone boundaries	in the P3 hazard zone (due to landslide and potentially unstable inactive slow flow)
Villa of Castello	within the P1 hazard zone boundaries	in the P2 hazard zone (due to the presence of a mixed debris cone and an alluvial fan)
Villa of Poggio a Caiano	within the P1, P2 and P3 hazard zone boundaries	within the P1 low hazard zone boundaries ("with a propensity toward instability")
Villa la Petraia	does not fall within the hazard zone boundaries	in the P3 hazard zone (due to landslide and potentially unstable inactive slow flow)
Boboli Gardens	does not fall within the hazard zone boundaries	in the P2 hazard zone (due to the presence of a mixed debris cone and an alluvial fan)
Villa of Cerreto Guidi	does not fall within the hazard zone boundaries	in the P4 hazard zone (due to landslide and potentially unstable inactive slow flow)
Villa in Seravezza	within the P1 hazard zone boundaries	a marginal part of the site falls within the P4 hazard zone (unstable areas affected by active instability phenomena)
Pratolino Gardens	does not fall within the hazard zone boundaries	in the P4 hazard zone (due to landslide and potentially unstable inactive slow flow)
Villa La Magia	does not fall within the hazard zone boundaries	within the P1 low hazard zone boundaries ("with a propensity toward instability")
Villa of Artimino	does not fall within the hazard zone boundaries	in P2 areas with a propensity towards medium hazard (stabilised areas, which, though stable are however affected by lithologies and structural and geomorphological conditions that may cause alterations to their stability)
Villa of Poggio Imperiale	does not fall within the hazard zone boundaries	does not fall within the hazard zone boundaries

The Villas of Cafaggiolo, Trebbio, Careggi, Fiesole, Petraia, Boboli, Cerreto Guidi, La Magia, Artimino, Poggio Imperiale and the Pratolino Gardens are not within flood hazard zones. Villa of Castello and the Villa of Seravezza are located within the P1 hazard zone boundaries; therefore they are at low risk.1 Poggio a Caiano is instead located within the P1, P2 and P3 hazard zone boundaries.

Only two components, Villa of Cafaggiolo and Villa of Poggio Imperiale, are not affected by geomorphological instability. Though Poggio a Caiano and La Magia fall within the P1 low hazard zone boundaries, they still have a propensity toward instability. The Villa of Careggi, Castello, and Boboli and Artimino are within the P2 hazard zone boundaries. Found in the P3 hazard zone are the Villa of Trebbio, the Villa of Fiesole and La Petraia. Finally, the remaining three components are subject to a P4 hazard level.

SEISMOTECTONICS OF THE 14 COMPONENTS

Seismic risk represents a hazard to the territories where the villas and gardens are located, with the most vulnerable being the Mugello area. The regional seismic classifications, containing the list of municipalities and the seismic classification map, were approved under GRT [Tuscany Regional Council] Resolution no. 421 of 26/05/2014 (published in Part Two of the BURT [Region of Tuscany Official Bulletin] no. 22 of 04/06/2014). On the basis of this documentation, which updates the previous classification approved by GRT Resolution no. 878 of 8/10/2012, the Tuscan Regional Authority Seismic Sector prepared the data sheets relating to seismic risk and seismic hazard in the areas where the fourteen site components are located. Although no reference is made to the vulnerability of individual buildings to seismic hazards, the reports are still a useful tool. Through understanding which properties are most exposed to risk, preventive strategies designed to protect the components can be identified. The seismotectonic framework provided by the Regional Seismic Service is summarised in the following table.

Based on the area where each component is located, a "seismic classification" is given and its seismic risk is calculated. This latter risk value is the combination of hazard, vulnerability and exposure factors.

	Seismic classification	Hazard level	Vulnerability	Exposure	Seismic risk
Villa of Cafaggiolo	High	Medium-high	High	Medium-high	High
Villa of Trebbio	High	Medium-high	High	Medium-high	High
Villa of Careggi	Medium-high	Medium-low	High	High	High
Villa in Fiesole	Medium-high	Medium-low	High	Medium-high	High
Villa of Castello	Medium-high	Medium-low	High	High	High
Villa of Poggio a Caiano	Medium-high	Medium-low	High	High	High
Villa la Petraia	Medium-high	Medium-low	High	High	High
Boboli Gardens	Medium-high	Medium-low	High	High	High
Villa of Cerreto Guidi	Medium-high	Low	High	High	Medium-high
Villa in Seravezza	Medium-high	Medium-low	High	High	High
Pratolino Gardens	High	Medium-low	Medium-high	High	High
Villa La Magia	Medium-high	Medium-low	High	High	High
Villa of Artimino	Medium-high	Medium-low	High	Medium-high	High
Villa of Poggio Imperiale	Medium-high	Medium-low	High	High	High

Micro-zoning and seismic vulnerability studies of individual buildings would be necessary to generate more detailed assessments, on which possibly more targeted structural safety interventions may depend. The Tuscan Regional Authority is promoting several seismic micro-zoning studies, within the framework of local seismic hazard research, which can be consulted at the following link: http://www.regione.toscana.it/speciali/rischio-sismico.

EXCURSUS ON NOTABLE PAST EARTHQUAKES (FROM THE HISTORICAL EARTHQUAKES CATALOGUE)

An account of the most significant earthquakes that have struck the municipal territories in which the villas and historical gardens in question are located was created From the Catalogue of Historical Earthquakes (CPTI15-DBI15).

Province of Lucca (PIT Areas 1 to 4)

The Catalogue lists a number of earthquakes, such as those in 1902 in Lunigiana, in 1914 in Lucca and in 1929 in Garfagnana, none of which caused serious damage to the cultural heritage, nor to the Medici Villa in Seravezza.

Florence-Prato-Pistoia (PIT Area 6)

The Florence area has also seen a high number of seismic events. In May 1895, a 5.50 Richter scale magnitude earthquake caused minor damage to dwellings around the villas of Castello, Petraia, Vaglia and Fiesole. Some slight detachments and a very slight rotation of one of the turrets at the Pitti Palace were found whilst numerous cracks in the church of San Pietro near the Medici Villa of Careggi were also discovered. The tremor was also felt strongly in the province of Prato (Artimino and Poggio a Caiano), although it did not cause any damage to any of the components there. However, it did do damage to one of the Poggio Imperiale Institute buildings, which was 5.4 km from the epicentre. The 29 June 1919 earthquake, just like the one 10 years earlier, was felt over a large part of the region. No damage to any of the villas was noted or documented.

Mugello (PIT Area 7)

Even in recent times, strong seismically intense events have also stricken the Mugello area, as occurred in December 2019. Two remote but significant seismic events at Cafaggiolo are reported in the Catalogue of Historical Earthquakes. The first was the quake in June 1542, which caused cracks in the Medici palace, damage to farmers' houses and to the parish church (there are no historical records mentioning the Villa of Trebbio for that same tremor). The second earthquake was on June 29, 1919. It rendered some homes unsafe, without causing any notable damage to the Medici Villas of Cafaggiolo or Trebbio.

CONCLUSIONS

The most recent classification of the regional territory approved by DGR 421/2014 identifies 3 seismic zones. Overall, the ranking recognises a medium seismic hazard (for frequency and intensity of the phenomena), a high vulnerability (for the fragility of the buildings, infrastructure, industrial, productive and service heritage) and a high level of exposure (due to population density and the presence of historical, artistic and monumental heritage). Starting from this, the Tuscan Regional Authority has set up a multiannual programme of interventions aimed at preventing seismic risk, modulated in relation to resources, pursuant to Regional Law 58/2009.

This policy of progressive risk reduction has been gradually implemented over the years thanks to European funding (POR-FESR 2021-2027) as well as national funding (Article 1(134) of Law 145/2018 and Article 11 of Law 77/2009), which permitted the implementation of a series of priority prevention activities that achieved:

- a marked improvement in the knowledge, in terms of seismic hazard, of the ground and subsoil in general;
- a greater knowledge of these buildings through surveys and technical verifications;
- finally, an increase in the level of safety through the design and implementation of structural interventions for seismic prevention of the building heritage especially as concerns significant, strategic public and private buildings.

The Seismic Sector continues to play a central role as an administrative body called upon to perform all tasks related to risk reduction intervention planning, implementation and control, and in support of the implementing bodies themselves by providing real fact-finding tools that are especially useful for monitoring.

Regione Toscana