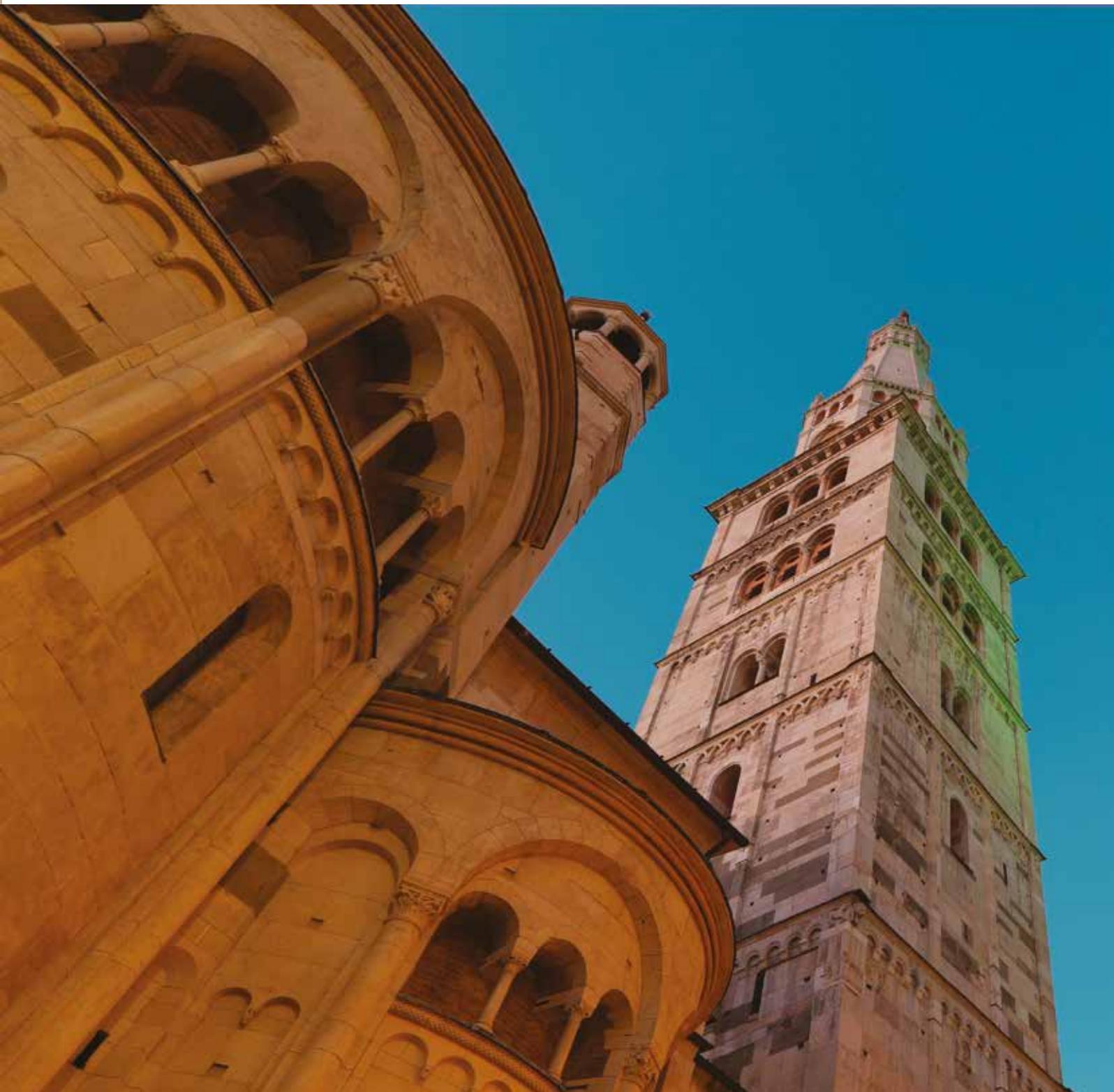


Management Plan for the Unesco Site of Modena Upgrade 2018/2020



**Management
Plan for the Unesco Site
of Modena
Upgrade 2018/2020**

**Piano di Gestione
del Sito Unesco di Modena**

Aggiornamento
2018/2020



A CURA DI

Ufficio Coordinamento Sito Unesco – Musei Civici di Modena
Simona Pedrazzi
Francesca Piccinini

SOGGETTO REFERENTE

Comune di Modena

COORDINATORE

Francesca Piccinini
Direttrice Musei Civici

COMITATO DI PILOTAGGIO (2018)

Gianpietro Cavazza
Vicesindaco e Assessore Cultura e Istruzione Comune di Modena

Mons. Luigi Biagini
Arciprete Maggiore della Cattedrale di Modena

Cristina Ambrosini
Soprintendente Archeologia Belle arti e Paesaggio per la città metropolitana di Bologna e le province di Ferrara, Modena, Reggio Emilia

COMITATO TECNICO (2018)

Giovanni Bertugli, Pietro Morselli, Giulia Severi
Comune di Modena

Giovanna Caselgrandi, Simona Roversi, Mario Silvestri,
Elena Silvestri
*Arcidiocesi di Modena - Nonantola
Basilica Metropolitana della Cattedrale*

Cinzia Cavallari, Leonardo Marinelli
Soprintendenza Archeologia Belle arti e Paesaggio per la città metropolitana di Bologna e le province di Ferrara, Modena, Reggio Emilia

Licia Giannelli
Segretariato Regionale per i Beni Culturali e Paesaggistici dell'Emilia Romagna

TESTI

Giovanni Bertugli, Giovanna Caselgrandi, Lucio Fontana, Pietro Morselli, Irma Palmieri, Simona Pedrazzi, Silvia Pellegrini, Francesca Piccinini, Simona Roversi, Elena Silvestri, Giorgia Torricelli

REDAZIONE

Elena Grazia Fè
Simona Pedrazzi

CREDITI FOTOGRAFICI

Archivio fotografico del Museo Civico d'Arte di Modena

Foto di:

Paolo Terzi (p. 14), Ghigo Roli (pp. 41, 63, 112)
Paolo Borghi (p. 62)

Il Museo si scusa per eventuali omissioni e resta a disposizione degli aventi diritto

SI RINGRAZIANO PER LA COLLABORAZIONE

Paola Bonetti, Francesca Fontana, Maria Grazia Lucchi,
Roberto Lugli, Annalisa Lusetti, Maria Sergio, Milvia Servadei,
Anna Romano, Isabella Turchi

PROGETTO GRAFICO

Claudia Caffagni
Ufficio Comunicazione - Comune di Modena

ELABORAZIONE MAPPE

Sonia Corradi
*Servizio urbanistica Settore Pianificazione territoriale
e rigenerazione urbana Comune di Modena*
Cinzia Casasanta
Ufficio Comunicazione - Comune di Modena

COORDINAMENTO DEL SITO UNESCO



Musei Civici d'Arte di Modena
viale Vittorio Veneto 5
41124 Modena
Tel 059 2033122
Fax 059 2033110
info@unesco.mo.it
www.unesco.mo.it

CON IL CONTRIBUTO DI



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Foreword

The City of Modena's adoption of the 2018-2020 Management Plan marks the official opening of the third stage of coordinated programming that has involved the collaboration of the different entities involved in managing the Site for more than ten years.

Already in 2005 the participating entities identified the City of Modena as the operator of the monumental complex that was added to the World Heritage List in 1997 for which purpose the Civic Museums were appointed to handle the related coordination functions.

The Modena Site is among the least extensive in terms of surface area, but it corresponds to the living heart of the city, loved by the Modenese and increasingly acclaimed by tourists, sometimes arriving from the most distant shores and often drawn to the city precisely because of its prestigious recognition. While the Site's heritage status is a motive for pride among the local community, it simultaneously makes local residents responsible for preserving the characteristics of uniqueness and authenticity that resulted in the UNESCO recognition.

The Site management bodies, i.e. the Steering Committee and the Technical Committee, which bring together representatives from the owner entities, City of Modena and Basilica Metropolitana, and the competent bodies in territorial terms, i.e. Superintendency and Regional Administration, have been working towards these primary objectives since 2005.

Planning and monitoring conducted in liaison have made it possible to achieve extremely positive results to date in terms of both protection and presentation. Achievements include the recent restoration campaigns of the Ghirlandina Tower and the Cathedral, the integrated instrumental monitoring system – upgraded to provide antiseismic capabilities following the 2012 earthquake – which makes our Site one of the most closely monitored in absolute terms, and also the promotion of tourism implemented from 2015, thanks to a policy of extending the opening times and opportunities to visit the monuments, with the creation of a unified ticket for the Ghirlandina, the Cathedral Museums and the historic chambers of the City Hall.

On completion of an articulated coordination process, 2017 saw the adoption of the Site Regulations aimed at guaranteeing high quality exploitation and use of the open air and communal spaces, in compliance with the authenticity and integrity of the complex.

Significant objectives were accomplished also in relation to education of upcoming generations and inter-cultural dialogue, with the aim of aiding the diffusion of the values linked to the World Heritage Convention of 1972 and promoting sustainable development based on the concepts of peaceful coexistence and participation. These goals were achieved thanks to the launch and consolidation, starting from 2012, of the “A scuola con l'Unesco” (at school with UNESCO)” and “Culture in dialogo” (cultures in dialogue) projects, which are primarily addressed to school students of all levels and secondarily to those learning Italian as a second language at provincial adult education centres.

The 2018 update of the Management Plan is a continuation of the previous Plan (2012), with respect to which it implements or develops several of the key objectives. From the perspectives of protection and preservation, the objectives in question clearly include the campaign of repair and antiseismic reinforcement of the Cathedral, already carried out to a large extent in 2018 and scheduled for completion by the end of January 2019. Another of the key objectives is the planning of parallel campaign on the Ghirlandina Tower, both initiatives being possible thanks to the Regional funding allocated

following the 2012 earthquake. A critical factor in relation to cultural promotion and tourism is the project for redeveloping and extending the Cathedral Museums, which has been a focus of Basilica Metropolitana over the past few years. This initiative became a tangible reality only starting in 2017, thanks also to the mediation provided by the City of Modena in its role as Site operating entity, which led to the signing of agreements in 2018 to purchase the necessary premises from the Ministry of Justice, and the launch of the museographic plan whereby the Cathedral Museums' exhibition layout will be integrated in 2020 with a new itinerary devoted to the history of the complex recognised by UNESCO. This initiative will be financed by the funds provided by the law supporting UNESCO Sites and by the sponsorship of Fondazione Cassa di Risparmio di Modena and Unicredit. Finally, among the defining objectives of the Plan I wish to draw attention to the efforts of the Technical Committee in assuring the tangible application of the Regulations approved with the previous Plan and the creation of the Site Supervision Committee, which will bring together top experts from several Italian universities, pooling their expertise in the drive to preserve the condition of the most precious heritage of our city.

Gian Carlo Muzzarelli
Mayor of Modena

Introduction to the management plan

The Statement of Outstanding Universal Value illustrates the reasons for inscription of each property in the World Heritage List and constitutes the basic point of reference for development of the Management Plan (MP). The Management Plan consists of a short description of the Site and of the criteria on the basis of which it was selected, including also the statement of integrity and authenticity and the methods of management and protection of the heritage (chapter 2.1).

Planning of Site management also proceeded in strict compliance with all applicable international and national legislation. With regard to international legislation, in addition to the 1972 Convention concerning the Protection of World Cultural and Natural Heritage, several recent UNESCO documents are of key importance, including, in particular:

- The *Budapest Declaration on World Heritage* (2002), which invites the States Parties of the Organisation to strengthen their initiatives to protect the World Cultural Heritage, incentivising effective protection of the single properties appearing in the World Heritage List thus guaranteeing the correct balance between preservation, sustainability and development, not merely from a cultural perspective but also in economic and social terms;
- the *Vienna Memorandum* (2005), which prescribes special attention for all the distinctive features of historic urban landscapes (uses of space and structures, spatial organisation, visual relationships, ground topography, vegetation and all infrastructure elements, including construction details such as footways, paved roads and public lighting);
- the *Recommendation on the Historic Urban Landscape*, 2011, which defines the historic urban landscape as the result of a process of historic stratification of cultural and natural values that extend beyond the notion of “historic centre” to include the broader urban context and the city’s geographical setting, in addition to the practices, social and cultural values, economic processes and intangible dimensions of the heritage.

Another important source of reference is the *Faro Convention* (2005) of the Council of Europe, which emphasises the value of cultural heritage for society. The document defines cultural heritage as a dynamic set of values with which populations can identify and it recognises individual and collective responsibility toward the heritage, encouraging active participation of communities, emphasising the value and potential of a cultural heritage that is exploited wisely as a resource for sustainable development and for the quality of life in a constantly evolving society.

This update to the Plan was drafted also in consideration of the results of the latest *Periodic Report for Europe*, published between 2015 and 2016 (chapter 3.1). UNESCO stresses the importance of diffusing knowledge of the values and key processes of the 1972 *Convention*, both among the authorities and among local communities, insisting on the need to involve the latter in managing Sites through actions that promote a sense of pride and hence the adoption of caring strategies. The organisation has also highlighted the pressing need to support and train World Heritage professionals to allow them to develop clear and effective management strategies aimed at achieving sustainable and eco-compatible development and to promote specific educational programmes. With regard to the Modena Site, UNESCO’s main request is that the anti-seismic measures be upgraded.

The results of the Quality survey conducted in 2016 among citizens and visitors to the Site in parallel

(chapter 3.3) constituted another key source of reference for the update since they generated a large number of indications that were then developed by the Technical Committee and translated into objectives and actions.

The layout of the 2018-2020 Management Plan is substantially identical to that of the previous plan, although with several differences designed to make the structure clearer and above all to highlight the fundamental reference points, as summarised above and illustrated in greater detail in the related paragraphs.

The **first part** presents the **Reference framework**, describing the protected properties in relation to the context of the city, the significance of the OUV or Statement of Outstanding Universal Value, and the legislative framework and the relationship between the Site and the municipal zoning plan. It outlines risks and constraints and introduces several opportunities that the new plan seeks to develop. Finally, it illustrates the governance system and the choice of new projects, with more information provided in relation to those considered to be strategic.

The **second part, Objectives and actions**, contains the objective sheets of the new projects, divided into six thematic sections: 1. Governance; 2. Research and knowledge sharing; 3. Protection and preservation of the historic-artistic heritage; 4. Cultural and economic promotion; 5. Development and management of tourism; Participation and accessibility. Each sheet contains: a short general description of the project followed by a table showing actions, projected times, costs and sources of funding; this is followed by a list showing the objectives, monitoring indicators and the parties involved. Each sheet ends with a table to be used for the purposes of monitoring, which is planned for 18 months after the plan's launch date and at the end of the three-year period.

Francesca Piccinini
UNESCO Site Coordinator

Site in numbers

Inscription number

827

Inscription date

1997

Criteria

I, II, III, IV

Geographical coordinates

Latitude - **N44 38 46.464**

Longitude - **E10 55 32.448**

Surface area

Inscribed zone - **1.2 ha**

Buffer zone - **1.1 ha**

Site in proportion to the Historic Centre

UNESCO Site residents (Site and buffer zone)

73

Historic centre residents

11.247

UNESCO Site businesses (with buffer zone)

79

Historic centre businesses

980

Visitors to the Ghirlandina Tower

2017

42086

Didactic course participants

2017/2018 school year

6924

Law on UNESCO Sites (77/06) in numbers

Projects funded **16**

2006

Programme of diagnostic surveys to establish conservation conditions and to plan restoration and monitoring activities (phase 1)

2006

Programme of diagnostic surveys to establish conservation conditions, planning of restoration works and monitoring (phase 2) and actions to spread awareness of the Modena UNESCO Site

2007

Upgrading of public services and Site promotion

2007

Implementation and verification of the 2008/2009 Management Plan

2008

Updating and implementation of the Management Plan

2009

Creation of signposted routes for tourism and publication of updated Management Plan

2010

Communication, didactics and sharing of Modena UNESCO Site restoration campaign

2011

Laser measurement of Cathedral sculptural works (completion)

2013

Action programme for Cathedral-Tower complex static and dynamic monitoring and anti-seismic protection

2014

Redevelopment of the Cathedral Museums bookshop and ticket office to improve the cultural assistance and hospitality services offered

2014

Integrated maintenance plan of the Modena UNESCO Site and of its Management Plan

2015

New entrance for the Ghirlandina tower. Provision of safe access for visitors

2015

Redevelopment of the Modena Cathedral Lapidary Courtyard as waiting and hospitality area

2016

"A portata di mano" (in fingertip reach). Tactile paving for the Modena UNESCO Site

2017

New technologies for sharing of information and protection of the Modena UNESCO Site

Grants obtained

€ 1.131.615,94

Management Plan in numbers

Objectives	23
Actions	92
Resources estimate including L. 77/06 and 2012 earthquake funds	7,029,137

Core premises of monitoring and related objectives

OUV - Outstanding Universal Value

Heritage:	3.2, 3.3, 3.7, 6.1
Authenticity:	1.1, 2.2
Intactness:	1.1, 2.2
Management:	1.1, 1.2

Periodic report

1972 convention:	1.1, 4.2, 6.3, 6.4
Education:	6.2, 6.3, 6.4
Participation:	4.2, 5.2
Sustainable development:	1.2, 4.2, 6.1

Survey

Hospitality quality:	6.2, 6.4
Identity:	4.2, 6.1
Participation:	4.2, 6.1
Presentation:	4.1, 5.1, 5.3



Cathedral, Porta Regia detail and view on Piazza Grande

Part I

Reference framework

Part 1

The Modena Cathedral, Civic Tower and Piazza Grande UNESCO Site and the city's cultural heritage

1.1 Cultural heritages and urban space

The Modena World Heritage Site includes the Cathedral, the Civic Tower and Piazza Grande (the main square on which the buildings stand). The perimeter of the monumental complex includes also the cathedral forecourt, the Presbytery, Piazza della Torre, the colonnade of the City Hall, the building on the east side of Piazza Grande and the frontages of the buildings on the south side. The buffer zone includes also the *Palazzo Comunale* (City Hall), Piazzetta delle Ova, the buildings on Via Emilia between Via Scudari and Corso Duomo, the buildings on Corso Duomo between Via Emilia and Corso Canalchiaro, and the buildings at the south-west and south-east corners of Piazza Grande.

Modenese cultural heritages in the urban setting of the old town

In addition to the UNESCO Site, Modena has several other attractions, as described briefly below. The **Palazzo Ducale**, built starting from 1634 around the inner ward of the Estense castle, erected in the 1300s and transformed into the seat of the court in 1598. Home to the military academy since 1862, the ducal palace contains a large number of frescoed rooms, including the *Salone d'onore* (reception room) decorated by Marco Antonio Franceschini and an adjoining room containing frescoes by Francesco Stringa.

There are many churches in the old town, including: **chiesa di San Pietro**, which assumed its current appearance at the end of the 1400s, and which contains several statues and figures by Antonio Begarelli (1499-1565); **chiesa di Sant'Agostino**, founded in the 1300s, transformed in the 17th century into the pantheon of the Este dynasty, where visitors can admire a *Lamentation* by Begarelli and a *Madonna* by Tomaso da Modena (1326-1379); the 14th century **chiesa di San Biagio** renovated first in the 1400s and later in the 17th century, with a major fresco cycle painted by Mattia Preti on the Apsidal vault and dome (1613-1699); **chiesa del Voto**, erected to fulfil a pledge made by the local population praying for the end of the plague that afflicted the city in 1630 and containing works by Francesco Stringa (1635-1709) and Ludovico Lana (1597-1646), in addition to a sacristy with 18th century wooden furniture and fittings and a rare *apparato effimero*, or monumental temporary structure, erected in the 19th century to celebrate the Holy Week. Some of the churches mentioned are currently inaccessible due to the 2012 earthquake, although restoration work is nearing completion.

There are two major theatres in the city. The **Luciano Pavarotti Municipal Theatre**, which is dedicated to the memory of the famous Modenese tenor and inaugurated in 1841, has maintained its ornate beauty intact without undergoing any significant transformation: every year it offers one of the most exciting programmes of the region, with opera, ballet and concert seasons from autumn to late spring. The **Storchi Theatre**, built in 1886 at the behest of local merchant Gaetano Storchi, who wished to devolve the proceeds to charitable causes, is today home to the *ERT – Emilia Romagna Teatro Fondazione* theatre company. The Storchi offers an exiting programme of drama and performing arts.

There are also several cultural institutes in the old town in close proximity to the UNESCO Site. In addition to several **important libraries**, including the Delfini Civic Library, the Luigi Poletti Civic

1. The Modena Cathedral, Civic Tower and Piazza Grande UNESCO Site



Old town of Modena and its cultural heritage

- ① Palazzo Ducale
- ② Chiesa San Pietro
- ③ Chiesa Sant'Agostino
- ④ Chiesa San Biagio
- ⑤ Chiesa del Voto
- ⑥ Teatro Comunale Luciano Pavarotti
- ⑦ Teatro Storchi
- ⑧ Palazzo Santa Margherita
- ⑨ Palazzina dei Giardini ducali
- ⑩ Complesso ex-ospedale Sant'Agostino
- ⑪ Palazzo dei Musei
- ⑫ Museo Casa Enzo Ferrari

Library of art and architecture, and the Estense University Library, and two archives, in the form of the National Italian Archive and the Historic Municipal Archive, the city offers a large number of museums and several temporary exhibition sites.

Opened in 1959, the **Galleria Civica (Civic Gallery)** has been one of the most authoritative centres of art and creativity in the Italian contemporary art panorama for more than half a century. In addition to promoting its own collection in the field of contemporary graphic art, the Palazzo Santa Margherita and Palazzina dei Giardini Ducali venues regularly host travelling exhibitions of national and international prestige dedicated to the most experimental idioms of art production and presentation.

The **Museo della Figurina** (Trading Cards Museum) has been in operation since 1992, when the City of Modena took possession of a huge collection of small colour prints as a bequest from local entrepreneur Giuseppe Panini. The museum, which is located in Palazzo Santa Margherita, has been open to the public since 2006. In the city dubbed world capital of trading cards, the museum, which is unique in consideration of the sheer size and quality of its collection, presents an assortment of technically and functionally associated materials alongside the trading cards: a documentary heritage that allows visitors to follow the development of production techniques and the changing focus of the messages conveyed by the cards through time.

Fondazione Fotografia Modena (Photographic Foundation), whose gallery is currently located in the MATA exhibition space in the old tobacco works, is a contemporary art centre and an advanced training institute dedicated to photography and graphics. Set up in 2007 as a cultural project sponsored by Fondazione Cassa di Risparmio di Modena, the centre's activities range from conventional photographic genres to experimental art forms, exploring the many languages of the image and their development as a reflection of social and cultural changes occurring within the society that produced them.

In 2017, the Civic Gallery, Trading Cards Museum and Photographic Foundation were combined within **Fondazione Modena Arti Visive**, a newly formed cultural institution dedicated to the presentation and promotion of contemporary visual art and culture, created in common accord by the City of Modena and Fondazione Cassa di Risparmio di Modena. All three exhibition sections are to be relocated to the ex-Sant'Agostino hospital complex, which is currently being renovated.

Finally, the 18th century Palazzo dei Musei, which lies within the boundary of the old town and accommodates the **Poletti** and **Estense** libraries, the **Historic Archive** and the offices of **Festivalfilosofia**, the **Estense Art Gallery** and the **Civic Museums**, with the *Giuseppe Graziosi Plaster Gallery* and the *Roman Lapidary*, containing several works taken from the World Heritage Site. The Civic Museums contain several Gothic frescoes that were originally located on the outer walls of the cathedral. In turn, the **Estense Lapidary Museum** accommodates a collection of steles, sarcophagi and Roman sculptural fragments originally repositioned in the cathedral and in the Ghirlandina Tower or displayed in the area adjoining the cathedral.

Museo Casa Enzo Ferrari (Enzo Ferrari's birthplace museum), located near Modena's train station, was inaugurated in 2012. The structure includes the historic house in which Enzo Ferrari was born in 1898 and a futuristic structure designed to resemble a car bonnet and fitted out with inspirational interiors and thematic exhibitions.

1.2 The three monuments recognised as World Heritages: Cathedral, Civic Tower and Piazza Grande

The Cathedral and its heritage

The 9th of June 1099 was a highly significant date for the city of Modena and beyond, because that is the date when the first stone was laid for construction of the Duomo di Modena, a superb example

of Romanesque art that captured the imagination of people at the time and continues to exert its irresistible appeal thanks to its exceptional beauty and originality. An account from the time, preserved in a more recent transcription, entitled *Relatio de innovatione ecclesie sancti Gemeniani*¹, tells us that the choice of architect was made by divine inspiration: the church and the city of Modena awarded the assignment to design the cathedral to Lanfranco, “admirable artist and marvellous artificer”, who produced a bold new style of architecture that was to exert a profound influence on the Romanesque art that flourished after his time. The stone facing of the building was created mainly using material salvaged from the Roman town of *Mutina*.

The structural frame designed by **Lanfranco** was then combined with exceptional harmony with the sculptural craft of **Wiligelmo** who, together with his school, was responsible for the magnificent decoration of the loggia capitals, depicting imaginary creatures and plant motifs, as well as the half-columns and ledges of the underlying arches, creating a leitmotif that is repeated around the entire perimeter of the cathedral at regular intervals.

Wiligelmo also created the sculptures on the facade, with sacred and pagan, celestial and monstrous scenes that summarise the spiritual world of man in mediaeval times, his faith, aspirations, fears and convictions. But Wiligelmo’s extraordinary art is even more impressively shown in the decoration of the *Portale Maggiore* (main doorway), where he uses primitive and powerful techniques to capture the world-view of his contemporaries.

The sheer expressive force of Wiligelmo’s craft is however most clearly evident in the *Reliefs from Genesis*, carved on four large figured slabs. The bas reliefs showing the stories of Adam and Eve, Cain and Abel, and Noah’s ark still retain their intensity, expressive force and exceptional narrative power.

Wiligelmo and his apprentices also worked on the other two doorways Lanfranco created for the Cathedral. The *Porta dei Principi* (doorway of the princes), on Piazza Grande, welcomed worshippers arriving for baptism ceremonies, narrating the history of Saint Geminianus, patron of Modena, represented in pictures on this doorway and transformed into a story for the first time around seven hundred years after his death.

On the northern side, in the vicinity of the Ghirlandina Tower, we find the *Porta della Pescheria* (fish market gate), whose originality lies in the almost human appearance of the two sculpted Telamones, which seem almost to appeal to those who cross the threshold for assistance in supporting their immense burden. The sculptures of the internal jambs of this doorway are dedicated to the labours of man, with a human depiction of the twelve months through representations of seasonal work in field and farm. The exceptional archivolt however draws inspiration from the realms of fantasy and storytelling, with a set of reliefs showing the story of King Arthur, both on the jambs and on the lintel, where animals from ancient fables can be seen emerging from among intertwined plants.

Special mention should also be made of the *Metopes*, the reliefs located on the roof projections, which depict a vivid cast of hideous imaginary beasts. The metopes that can be seen on the cathedral today are copies, the originals having been removed to the *Cathedral Lapidary Museum* for conservation.

From the final decades of the 12th century up to the early 14th century, Lanfranco and Wiligelmo were succeeded by the **Maestri Campionesi**, master stone masons from Campione on lake Lugano, organised along the lines of family-run workshops. The Campionesi were responsible for creating the false transept, opening the great rose window, the two side doors in the facade and the magnificent *Porta Regia* (royal doorway) on Piazza Grande, which stands out against the sheer white of the cathedral wall thanks to the chromatic interplay of its precious pink marble components.

The entirely brick-built interior has a layout with three naves and false transept. Above the main doorway we find the *Monument to Francesco Ferrari*, bishop of Modena (circa 1510), with fonts carved out of classical capitals on each side of the entrance. In the right-hand nave visitors are pre-

¹ Modena, Capitular Archive, code O.II.11, early 13th century

sented with *Lucia Rangoni's Funerary Monument* by Marco Antonio da Morbegno and Anzelino da Mantova (1515), *Cappella Bellincini* by Cristoforo da Lendinara (circa 1472-1476), the terracotta *Presepio* (nativity scene) by Modenese sculptor Antonio Begarelli (1527), and *Francesco Molza's Funerary Monument* by Bartolomeo Spani (1516). The left-hand nave alongside the entrance contains Bishop Roberto Fontana's Funerary Monument by Tommaso Loraghi and Ercole Ferrata (1652), with a wooden statue of *Saint Geminianus* (early 14th century), a fresco entitled *Madonna of the Ortolane* (circa 1345) which was once located outside on the south facade, *Altare delle Statuine* by Michele da Firenze (1440-1441), and *San Sebastiano fra i Santi Girolamo e Giovanni Battista* (St Sebastian with St Jerome and John the Baptist) by Dosso Dossi (1518-1521).

On the left of the central nave is the *Pulpit* by Enrico da Campione (1322), decorated with terracotta figures that have been heavily restored over the years, and Cristoforo da Modena's *Sant'Ignazio in carcere* (St. Ignatius in prison) and *Sant'Ignazio scrive alla Vergine* (St. Ignatius' epistle to the Virgin Mary) frescoes (early 15th century). The *Rood screen*, with parapet composed of five polychrome slabs, stands at the end of the nave. From left to right, the reliefs, which date from the Campionesse period (second half of the 12th century), show the *Washing of feet*, the *Last Supper*, the *Judas Kiss*, *Jesus before Pilate*, the *Scourging* and *Simon of Cyrene*. There is an ambon pulpit on the left side of the rood screen supported by two columns standing on telamons: from the left, the slabs depict the *Learned Fathers of the Western Church*, the *Benedictory Redeemer teaching among the Evangelists*, and *Jesus awakening Peter*. The three-nave crypt extends across the full width of the presbytery, supported by columns with capitals in the Lombard architectural style from the end of the 11th century. The central apse accommodates the *Tomb of Saint Geminianus*; the right-hand apse is home to Guido Mazzoni's polychrome *Madonna della Pappa* group in terracotta (circa 1480-1485).

In the raised presbytery area, accessed from stairways at the sides of the crypt, the walls alongside the south stairs feature fragments of votive frescoes with *St Christopher* (circa 1240), *St George and St Mary Magdalene* (circa 1325), and *St James the Just* (mid-14th century). The main altar, supported on six pairs of columns and one central spiral column, symbolising *Christ and the apostles* (12th century), stands at the centre. The inlaid wooden chancel is by Cristoforo and Lorenzo Canozzi of Lendinara (1461-1465), as are the four panels depicting the *Evangelists* (1477).

The northern apse is home to a Polyptych by Serafino de' Serafini with *L'incoronazione della Vergine* (*Coronation of the Virgin*), *la Crocifissione e Santi* (*Crucifixion and Saints*) (1385). Proceeding toward the stairway we encounter Agostino di Duccio's statue of *Saint Geminianus* (circa 1442) and a *Madonna with Child* bas-relief from the Tuscan school of the 1400s. Finally, *Claudio Rangoni's Funerary Monument*, created to a design by Giulio Romano (circa 1542) can be viewed above the stairway leading to the nave.

The Civic Tower, known as the Ghirlandina

The perfectly proportioned *Ghirlandina Tower*, the city's emblem, soars gracefully skyward from its position on the northern side of the cathedral alongside the apses. The affectionate local name for the tower probably originated from the exquisitely graceful marble balustrades surrounding the spire, which were likened to floral garlands or "ghirlande".

Built as the cathedral's bell tower, the *Ghirlandina* played an important civic role from its origins: its bells marked the times around which life proceeded in the city, heralding the opening of the gates in the city wall and sounding the alarm to bring the citizens to a place of safety in the presence of danger. The massive walls of the tower provided the perfect protection for the so-called municipal *Sacrestia*, where the treasure chests and public records were held; the tower is also home to the famous *Secchia rapita* or "stolen bucket" (the tower currently only contains a replica since the original is kept in the City Hall), the humble and supreme object contested between the Modenese and the Bolognese in the heat of the historic battle of Zappolino (1325).

The debate concerning the precise chronology of the *Ghirlandina* is ongoing because all direct historical records documenting the initial stages of construction were destroyed in a fire in the 13th century. The analyses carried out at the time of the recent restoration works, which were completed in 2011, confirmed that the tower was constructed in parallel with the Cathedral and on the same construction site. The first period (circa 1100) was taken up with the foundation excavations and the start of construction of the walls up to a height of 11 metres. In the second period (1167-1184) the work was resumed after an interruption that was probably due to structural movements caused by settlement. This phase was terminated with the construction of the *Stanza dei Torresani* floor, surmounted by its four corner turrets. 1261 saw the construction of the bell chamber, which incorporates the turrets. The octagonal structure topped by the spire was completed in 1319, in accordance with Enrico da Campione's design.

The exterior of the *Ghirlandina* is adorned with a rich array of sculptural works and stone cladding, created using material salvaged from the Roman *Mutina*: only the bell chamber and spire are clad with materials acquired specifically for the purpose. Each string course cornice has a lombard band composed of simple or intertwined arches, and is adorned with figured protoms, many of which replaced by geometrical consoles during earlier restoration campaigns. There are also large cornerstones on the first three cornices, carved with imaginary figures from medieval bestiaries (first cornice), animals (second cornice) and people (third cornice).

The *Ghirlandina* contains the Sala della Secchia, the only completely frescoed chamber in the Tower, with a vair fur pattern on the walls and a starred sky on the vaulted ceiling, probably painted in the 14th century, showing the importance of this chamber, used as the "stanza del tesoro" (treasury) for several hundred years.

On the fifth level is the Stanza dei Torresani, once occupied by the Torresani, or tower guards. This chamber contains prestigious capitals originating from the Campionesse construction work (second half of the 12th century) like the sculptures of the Rood screen in the Cathedral: the most significant items are the Capital of the Judges, the Capital of David and the Capital of the lions.

Piazza Grande

Piazza del Duomo (cathedral square) is located opposite the apsidal zone on the south side of the cathedral. Created in the 12th century, the square became known as *Piazza Grande* from the latter half of the 17th century. The piazza is the vibrant heart of the city, evocatively framed by the cathedral, the *Ghirlandina* Tower, and the broad colonnade of the City Hall, historic symbols of the city's political and religious institutions. This has been the seat of the city's spiritual and temporal powers for many centuries: the ordinances and dictates of city life have been pronounced through the years from the *Porta Regia* steps or from the balcony of the City Hall. The important civic role of the square is confirmed by the *Preda Ringadora*, an extremely unusual artefact that never fails to arouse interest and questions. The Ringadora is a large rectangular slab of Veronese red nodular limestone located alongside the City Hall colonnade facing the stairway leading into the municipal chambers. Colloquially, the *Preda Ringadora* means the "haranguing stone": several experts claim that the stone table was used originally as a podium and pulpit by local orators who would address the citizenry in mediaeval times during town meetings.

Once it was no longer used for its original purpose, in the 15th century the Ringadora started to be used as a stone of dishonour and a reminder of the harsh justice of commercial law; debtors however were not alone in being exposed to public humiliation, since also blasphemers were liable to be punished on the Ringadora stone. The stone was not used exclusively for punishment however: drowned corpses were laid out here for identification purposes and to allow the hunt for the slayer to proceed if the event was deemed to be due to foul play.

The square functioned also as the court of justice: this was the place of execution and of exemplary

punishments inflicted on the guilty, although it was also used for banquets, games, masked parades during the carnival and horse races in which riders competed to gain the *palio* or winning banner.

In addition, Piazza Grande was the marketplace and centre of trade for many centuries. We can still see the ancient measures used by merchants marked in the walls of the cathedral apse, including the cup, the brick, the rod and the arm. In the Middle Ages there was also an *Ufficio della Buona Stima*, a kind of office of fair trading, the symbol of which may have been a female statue known as the *Bonissima* by the inhabitants of Modena. The distinctive figure of the *Bonissima* stands to this day on a modillion projecting from the corner of the City Hall that overlooks the historic Via Castellaro. The woman depicted is dressed in a simple style with a mediaeval costume and a long braid of hair flowing over her shoulders. Traditionally, it is believed that the statue was made in the 13th century to celebrate a fabulously wealthy local woman named *Bona*, who provided the citizenry with large amounts of cash to purchase wheat at the time of the great famine. Some historians claim the *Bonissima* is based on Countess Matilda of Tuscany, an authoritative witness of the construction of Modena's Romanesque cathedral. Conversely, other experts believe the *Bonissima* was the symbol of a public department of the City Council called *Ufficio della Buona Stima*, opposite which it was originally located.

1.3 Other properties included in the World Heritage Site

Palazzo Comunale (City Hall)

The handsome colonnade of the City Hall borders the north-east side of Piazza Grande. The colonnade was created in compliance with the original modulus adopted by Raffaele Rinaldi called *Menia* in the 17th century project, built in several stages and completed in 1825 with the addition of three arches to the five existing ones on the right-hand side.

The palazzo in its current form is a coherent volume created by combining a series of single buildings from different historic periods as the seat of the Community and thereafter – starting in the 17th century – refurbished and adapted to create a single consistent building complex. At the centre of the palazzo is the *Torre dell'Orologio* (clock tower), which assumed its present appearance between the end of the 15th and start of the 16th century. In 1480 the clock face was decorated with the insignia of the House of Estense and the Community by Francesco Bianchi Ferrari. In 1508 the octagonal rotunda and dome designed by Bartolomeo Bonascia was erected at the top of the tower, with the balustrade surrounding the square volume added in 1520. In 1868 Ludovico Gavioli designed the clock that is still installed. The clock has two faces: one facing Piazza Grande and the other facing *Piazzetta delle Ova*; even though the faces are some 40 metres apart, originally they were operated by the same mechanism.

In 1761 Domenico Puttini built the marble balustrade that surrounds the balcony of the *Immacolata*, the statue of the Madonna placed here in 1805, to replace the *Madonna di Piazza* by Antonio Begarelli, which was positioned in an aedicule at the side of the tower in 1528 and removed during the French Revolution (it is currently in the **Civic Museums** collection).

The main entrance is in Piazza Grande: at the level of the first arch of the east colonnade is the entrance to the sweeping Renaissance staircase that leads to the loggia, which provides access to the interior of the building where several historic rooms on the first floor are open to visitors. *Sala della Torre Mozza* (chamber of the truncated tower), so called because the wall of an ancient civic tower is still visible here, testifying to the Mediaeval origins of the Palazzo. *Camerino dei Confermati* (chamber of the Confirmed), currently containing the notorious *Secchia rapita*, the humble and supreme object of contention between Modena and Bologna in the 1300s that inspired Alessandro Tassoni to write his celebrated verses. The renowned bucket was originally kept in the Ghirlandina Tower. *Sala del*

fuoco (chamber of fire), where the large and elegant fireplace (constructed in the 1500s by Gaspare da Secchia) was used to prepare the embers to warm the merchants trading in Piazza Grande during the winter months: the room is full of splendid art works painted in 1546 by Nicolò dell'Abate on commission of the Registrars, showing events from the *War of Modena* (43-42 b.c.). *Sala del Vecchio Consiglio* (chamber of the old council), the ceiling of which was decorated by Bartolomeo Schedoni and Ercole dell'Abate at the start of the 1600s, with scenes promoting the causes of good governance and patriotism. *Sala degli Arazzi* (chamber of tapestries), the walls of which are adorned with 18th century faux tapestries painted on canvas by Girolamo Vannulli and Francesco Vaccari, showing parts of the Peace of Constance agreement (1183). *Sala dei matrimoni* (marriage hall), the ceiling of which painted by Francesco Vaccari in 1767 with a broad monochrome volute motif surrounding a central oval field containing Modena's coat of arms supported by two cherubs.

The walls of this room are adorned with a large number of works by Adeodato Malatesta, the most important Modenese painter of the 19th century, with several of the paintings on permanent loan from the Estense Art Gallery.

The City Hall has been subject to a large number of restoration and refurbishment works that have altered its function and perception over the years. The large size and layout of the palazzo, the constant use of the rooms as offices and for public functions, mean that restoration is possible only of one part at a time, which is why maintenance and restoration works are carried out continually.

The upgrades carried out in the 1980s, which concerned the historic-monumental part of the Palazzo, are still in good condition; restoration of some wooden floors of the historic rooms on the first floor has, however, yet to be completed.

The new entrance to the Palazzo was restored in 2004 and from February 2005 to 2012 the entire building was subjected to a major operation to upgrade the antiseismic characteristics and repair the damage caused by the earthquakes of 1996 and 2001. The work was mainly concentrated at the top of the building, including some parts of the roof, the *Torre dell'Orologio* and other areas, with targeted structural interventions. Also the City Council Meeting room was restored, along with a large portion of the building facing Piazza Grande, while additional maintenance was carried out on the windows and parapet of the *Torre dell'Orologio*. Improvements were made to the lighting system of the colonnade on the square and the ground floor spaces were adapted to host a tourist information service.

In 2017 the preliminary project for repair of the damage caused by the 2012 earthquake was submitted to the Regional Reconstruction Agency, which will provide 100% of the necessary capital. The Agency's analysis of the project revealed the need for further investigations, architectural surveys and type studies, which are currently being prepared: the executive project will be consigned to the Agency before the end of 2019.

Palazzo Arcivescovile (Archbishopric Palazzo)

Although the origin, location and initial form of the palazzo that was home to the first bishops of Modena are not documented, many factors suggest a walk back through time to the end of the fourth century, when Bishop Teodorico, the immediate successor of Saint Geminianus, erected the first cathedral on the arc containing the remains of his predecessor.

It is possible and indeed likely that from its origins the bishops and church officials responsible for governing the diocese lived in the building to the south west of the cathedral, corresponding to the bishopric of today, allocating the house or houses between the cathedral and Via Emilia to the clergy; it may be, however, that this division occurred more recently.

It is probable, although not documented, that also the Archbishopric Palazzo was rebuilt in 1099, or at least the part that is next to the cathedral and faces Piazza Grande.

The time of bishop Enrico, who headed the Modenese church from 1157 to 1173, corresponds to the restoration or partial reconstruction of the bishopric: the west part was most likely rebuilt, i.e. the

part facing Sant'Eufemia. In the 1200s the bishopric was already a large palazzo with many rooms: at that time the bishopric was almost as large as it is today, and also of exceptional elegance such that it was deemed to be the finest palazzo in Modena.

In the middle of the 1400s, although it maintained the solemnity invoked by its crenellations, windows and balconies, and although it was easily on a par with the other buildings surrounding the cathedral, the Bishopric Palazzo was showing its age and needing some drastic repairs.

On 7 June 1465, shortly after the death of bishop of Modena Delfino Pergola, Pope Paul II appointed his successor in the person of Nicolò Sandonnini da Lucca, who was to govern the diocese until 15 November 1478.

His successor, appointed on the same day, was to be Giovanni Andrea Boccaccio of Reggio Emilia, who died on 11 September 1495. It is to Sandonnini and Boccaccio that we owe the radical innovations made to the bishopric. Sandonnini rebuilt the part towards Piazza Grande. There are only two graphic representations of this building in existence: a panel by Angelo degli Erri and a primitive woodcut forming part of a life of Saint Geminianus.

The work of bishop Sandonnini was completed by his successor, Boccaccio, who renovated the opposite part of the building, toward the west. Boccaccio is responsible for both the reconstruction of the foundations in the western part of the building, and for the corner structure between Corso Duomo and Via Sant'Eufemia, composed of diamond cut ashlar stone, with Euganean trachyte in the lower section and Verona marble at the top, alternated with arenaceous limestone and capped by a fine terracotta bust of the bishop himself, surmounting an inscribed plaque.

The Archbishopric Palazzo underwent several repairs in the 1500s, due to the numerous earthquakes recorded at that time. In 1532 bishop Giovanni Morone had his coat of arms painted on the building facade overlooking the square. In 1543 the six businesses located under the bishopric towards the square were granted to six Modenese citizens and their male offspring as a perpetual fief-holding. Thereafter, bishop Egidio Foscherari refurbished the part of the Palazzo that overlooked the garden, located to the south of Corso Duomo, and he built the existing doorway, surmounted by his insignia.

Modenese citizen Roberto Fontana, elected bishop in 1646, was one of the most deserving holders of the position, considering also the works he carried out in the cathedral at his own expense. Among various initiatives, note the replacement of the wooden portico that joined the two sections of the bishopric above the "timber market" with a brick-built vault and upper gallery, which was partly used to accommodate a chapel.

Mons. Lodovico Masdoni, bishop from 1691 to 1716, carried out significant restoration works, also on other buildings owned by the Church. Among his main achievements are the rebuilding of the stables on the site of the original structures in the south-west part of the courtyard, with the newly built structures remaining unchanged until 1958; he built a balcony and railing that proceeded across the entire the facade of the building facing the square at the first floor level, which remained intact up to the end of the 1800s; he also rebuilt the building's entrance steps. The state of repair of the palazzo worsened significantly after his death. Only mons. Fogliani, who was made bishop in 1758, commissioned a few urgent consolidation works and exterior and interior aesthetic upgrades of the building, which was by then in very poor condition. In addition, he raised the part of the building over the central vault by one storey, thereby impairing the perspective view of the cathedral in the opinion of several critics. Subsequently, with the works commissioned by mons. Fogliani, the bishopric assumed its current exterior appearance: the only change of note was the raising of the vaults, which was carried out in 1858 under the direction of Cesare Costa. Mons. Natale Bruni, bishop from 1901 to 1926, ordered the demolition of the vault extending between the bishopric and the cathedral and the balcony and railing was removed from the entire facade of the building overlooking Piazza Grande.

The Archbishopric Palazzo was subject to refurbishment works in the 1930s. The restoration project involved repair of the brickwork and refurbishment of the rendering, removing, as far as possible, all externally mounted electrical equipment and large signs.

Finally, after the bombing raids that damaged the south side of the cathedral in 1944, in 1949 restoration works were carried out also on the Archbishopric Palazzo by the provincial infrastructure department.

Palazzo Cassa di Risparmio or Palazzo Unicredit, as it is now called

The *Palazzo di Giustizia* (palace of justice), built on the south side of the piazza in place of the “council houses in Piazza Grande opposite the cathedral”², was inaugurated in 1892 based on the plans of Luigi Giacomelli, a Treviso architect who won a tender held in 1885, giving the square a facelift with a more harmonious and prestigious appearance: the two upper floors were used to accommodate “i servizi Giudiziari” (judicial functions), that were hitherto taking up most of the City Hall, while several discreet and tasteful “botteghe” were opened on the ground floor.

The imposing building in the Umbertino style, which was in vogue at the time, was soon found to be too small to accommodate the real needs of the judicial offices and courts. Also, the associated costs were excessively onerous for the coffers of the municipal administration, with the need for an endless succession of expensive maintenance operations due to the manifestly poor quality of construction, which resulted in several collapses and functional problems. In the light of these problems, the building was demolished in 1963 and replaced by the Palazzo Cassa di Risparmio, the bank that is now called Unicredit. The new bank headquarters are located in a significantly more forward position with respect to the square than the previous building. The decision to demolish the palace of justice and construct the new headquarters of the local Cassa di Risparmio bank was preceded and accompanied by a heated debate, not only locally but also nationwide, due to recognition of the importance of the historic site, also in symbolic terms.

Construction of the new bank headquarters should be viewed against the backdrop of a more general reorganisation plan of the Site, which includes the new building and the entire City Hall. By building the Cassa di Risparmio headquarters, the municipal administration intended to free up the space in the city hall previously occupied by the historic offices of the bank, which was created in the early 1900s, in the original site of the mediaeval council building, which had already been used as the law court and later as a theatre called *Teatro della spelta*. Construction of the new headquarters thus solved both the problem posed by the need to increase the space available to the city council, at the time located entirely in the city hall building, which contained all municipal offices, including the registry office and public hygiene department, and also the problems affecting the palace of justice due to its substandard construction.

An international call for tender was announced to assign the contract to design the new bank headquarters. The winning bid arrived in 1961 from Gio Ponti, whose project, consisting of a “modern” design, with the main facade entirely clad in white marble, was the subject of a fierce debate that involved the most famous architects and art historians of the time, leading to the decision of the municipal authorities to set up a special commission chaired by Giovanni Michelucci. Following the instructions of the Commission, the original idea was therefore modified repeatedly to take account of requirements of a functional nature and for conservation reasons. In fact, while the incompatibility of modern architecture in the context of old towns – a position held by a section of the experts up to the 1960s – had helped to raise awareness among the general public in relation to the problem of preservation of historic centres under threat from the growing voracity of building construction speculators, it simultaneously gave rise to a climate of distrust in relation to all types of innovative ideas, irrespective of their actual value.

The Commission’s requests resulted in complete overturning of the original project, which had ad-

² ASCMO, *Printed Deeds of Modena City Council*, Council meeting of 5 February 1883, *Deed of donation of Modenese citizen Antonio Morandi for construction of a new Palace of Justice for the city*.

dressed the need to integrate the new building into its surroundings by re-proposing the architectural characteristics of the palazzi surrounding the piazza rather than the architectural features of the cathedral itself; the decisions of the municipal commission substantially reflected the matters debated on the theoretical level over a period of some twenty years, ultimately resulting in the plan to camouflage the Cassa di Risparmio building based on the environmental colour and seek to maximise stylistic uniformity while removing all references to the architectural features of the cathedral. However, the excessive focus on reducing compositional features of the building led to the paradoxical result of altering the footprint, resulting in an increase in the surface area of the bank headquarters, with the colonnade frontage of the new palazzo some nine metres closer to the southern side of the cathedral, altering the perspective and depth of field when viewing the square itself.

While the new space layout, the new headquarters of the Cassa di Risparmio bank, and indeed Gio Ponti's architectural design were the subject of intense criticism and debate, both in the local and national press as mentioned earlier, today, apart from the theme concerning the integration of contemporary architecture in historic settings, we can witness a reevaluation of the architectural criticism of Gio Ponti's Modenese building, which is no longer viewed as a "minor" work suffering from a lack of coherence due to the excessive number of constraints and restrictions, but rather a work with a unique and clearly defined aesthetic quality that is especially evident in the definition of the various parts making up the building (front and lateral colonnades, gallery, etc.) and in the resolution of details and correspondence between form and materials (double cornices of the colonnade in brick and marble, connections between vertical and horizontal elements, relationship between structural surfaces and skins).

The basement floors of the bank, which are open to the public, contain fragments of Roman mosaics uncovered during the excavation work. This is in line with Modena City Council's emerging policy, announced at the time, of protecting the old town with the utmost sensitivity in order to safeguard sites of the greatest interest to the community.

Piazza Torre

Piazza Torre, whose name derives from the bell tower standing on its southern side, is located on Via Emilia with the Ghirlandina standing its south side. The appearance of this square changed significantly in 1988 when it was pedestrianised. At this time, the central garden was removed, and the square was paved with slabs and cobblestones. In the centre of Piazza Torre we find the *Monument to Alessandro Tassoni*, an important figure in the city's literary history and author of the famous mock-heroic poem entitled *La secchia rapita* (the stolen bucket). The marble statue, which is 2.60 metres in height, was completed in 1859 and is the work of Modenese sculptor Alessandro Cavalcade, while the inscription on the pedestal in Rosa Ravenous granite on an octagonal design, was composed by Carlo Malthusian. There is a plaque affixed to the side of the palazzo on the east of *Piazza Torre*; unveiled in 1988, the plaque commemorates the sacrifice of the Jewish editor Angelo Fortunato Formiggini, who threw himself from the fifth floor of the Ghirlandina in 1938 in protest against the racial laws that had just been enacted by the Fascist regime, discriminating against Jews in all sections of society.

Via Lanfranco and Cortile delle Canoniche

There was a cloister on the northern side of the cathedral already in the 13th century, surrounded by the Presbyteries, sacristies and several shops. From 1474 to 1477 the Presbytery rooms were completely renovated and an upper colonnade was added, partially adjoining the northern face of the cathedral. Apart from the damage to the cathedral itself, the 1501 earthquake affected also these buildings, which subsequently underwent the necessary repairs. After the Council of Trent, the Pres-

bytery building, which occupied the entire block from the cathedral to Via Emilia, was partly adapted to accommodate the Seminary.

In the following centuries the cloister was used also as a burial site. Towards the end of the 18th century, in the context of the general urban redevelopment plan for the city championed by Francesco III d'Este, both the part functioning as a Seminary and the part granted for use by the Chapter and by the Presbyteries were completely rebuilt and the building assumed its present form. The buildings were confiscated following the Napoleonic laws of 1798, returning to the church only in 1803.

In 1826 the Seminary was transferred to the ex-Franciscan monastery in Corso Canalchiaro, where it remains to this day. The Lapidary, dedicated to preserving relics of the cathedral and safekeeping of some of its sculptural works, was created at the end of the 1800s in the colonnade to the north of the courtyard. At the time of the works of the early 1900s, which were aimed at isolating the cathedral from adjoining external structures in order to restore its original Romanesque design, the colonnade and arcade that stood in the position of today's via Lanfranco were demolished, despite opposition from the Giunta Superiore delle Belle Arti, i.e. the competent regulatory body. A portion of the arcade was rebuilt against the east wall of the courtyard as a reminder of the previous architectural complex. At the time of these works the courtyard was surfaced with gravel and a garden with different trees was created in the centre. In the 20th century the building was split up into separate properties and sold to different buyers. The Ministry of Justice purchased the majority of the spaces and converted them to accommodate the Notarial Archive.

The buildings around the courtyard were severely damaged by bombing raids in the Second World War so they underwent extensive reconstruction works. At the time of the 2000 Jubilee, the first floor rooms on the north of the courtyard – belonging partly to the Metropolitan Chapter and partly to the Ministry of Justice – were converted to house the **Cathedral Treasury museum**, which, together with the **Lapidary Museum**, located on the ground floor and refurbished at the same time, are part of the **Cathedral Museums**.

Sacristy

Up to 1475 there was an historic sacristy on the ground floor adjoining the north side of the cathedral, although it was abandoned after the construction of a new and far larger sacristy that was more in keeping with the dignity of the cathedral on the upper floor. This new space, severely damaged by the 1501 earthquake, was almost entirely rebuilt in 1506.

The groin of the cross vaults over the new sacristy was decorated by Francesco Bianchi Ferrari in 1507 with three painted medallions depicting the *Passover lamb*, *Saint Geminianus* and *the Madonna with Child*. Along the walls we find the altar tables and an inlaid wooden console by Cristoforo da Lendinara (1471-1477), while the stone laver is the work of Giacomo Varignana and Manfredino di Cadiroggio (1476). The walls are adorned with paintings by Modenese artists and there is a statue of the *Immaculate Conception* (1694) by Honoré Pellé above the altar. Renders and decorations were recovered in a restoration project carried out in 1997.

Cathedral Museums

The Cathedral Lapidary Museum was created in the area once occupied by the buildings of the Presbytery between the late 1800s and early 1900s to accommodate bas-reliefs and sculptures salvaged during the major restoration campaign in progress on the cathedral at the time. Thereafter, the Museum was enriched with the inclusion of fortuitously salvaged materials and with works at risk of complete destruction if they were to remain outdoors, such as the series of Metopes.

Up to the end of the 20th century the exhibition criteria adopted did not follow any kind of systematic order, whether chronological or typological. In anticipation of the ninth centennial of the foundation of the cathedral (1999) a global reorganisation project was launched in 1994 covering

1. The Modena Cathedral, Civic Tower and Piazza Grande UNESCO Site

both the architectural setting and the collection. The aim of the new layout was to provide visitors with a coherent interpretative view and to make the collection of important archaeological materials accessible to the general public. On the one hand, the items were sorted in accordance with a thematic approach, while on the other hand an attempt was made to present them in context, with an indication of their probable original position by placing them on a display wall with references to the architectural context of the cathedral. The Cathedral Treasury Museum was set up at the time of the 2000 Jubilee, in several rooms specifically renovated to accommodate a valuable collection of artworks, ceremonial objects and liturgical artefacts testifying to the vitality of the Modenese cathedral church and the power of aggregation of the cult of Modena patron Saint Geminianus over the centuries.

This museum is focused not only on the conservation and display of art objects of relevance to the cathedral, but above all it refers to their intrinsic significance and their association with the Modenese church. Among the most precious objects on show are the Saint Geminianus Altarpiece (11th century), the Gospel Book, the 16th century crosier by master Zonchino of Brandenburg, several paintings by Bernardino Cervi, Francesco Stringa and Bartolomeo Schedoni, and tapestries from an exquisite series of 16th century Flemish artefacts depicting scenes from Genesis, which were exhibited in the cathedral during Lent (17th century). One of the Museum rooms is dedicated to the precious codices of the Capitular Archive, which contains the most ancient historic documentation concerning the foundation of the cathedral, including the Relatio with its superb miniatures, and concerning the activities of the Chapter, and also a major collection of manuscripts, many of which sumptuously illuminated. The Museums will be the subject of a major redevelopment and expansion project, which is the most important objective of the Management Plan described herein³.

³ See below, Reference framework, paragraph 4.6 The Cathedral Museums extension project and Objectives and actions, sheet 3.1 Extension of the Cathedral Museums and 4.1 Cathedral Museums new fit-out.



Modena old town, aerial view

Chapter 2

Outstanding Universal Value and legislative framework

2.1. Statement of Outstanding Universal Value

The inscription of a site in the List of properties considered to be World Heritages is not only a confirmation that its importance has been recognised, it is a responsibility in relation to a heritage that can no longer be deemed to belong to a local or national community but that has become a heritage of all of humankind, and is therefore a world heritage, in a vision that includes past, present and future generations. This valuable recognition makes the Site unique, of exceptional value on the world stage, and hence the entire international community is obliged to participate in the efforts to protect it.

At the same time, inscription in the list provides a valuable moment of reflection and analysis of the opportunities available for development that can involve local resources in a broader network of integrated actions of protection, conservation and promotion of the Site in cultural and economic terms.

The core document for protection of the properties included in the World Heritage is the *Convention concerning the Protection of the World Cultural and Natural Heritage*, adopted on 16 November 1972, whereby participating countries assume the obligation, as defined in article 4, to ensure the identification, protection, conservation, presentation and transmission to future generations of their cultural and natural heritages. The international community, the national community and, especially, the local community are required to defend the Outstanding Universal Value of the properties recognised by the UNESCO World Heritage list, in the awareness that their reduction/damage/destruction would be a very serious loss for the entirety of humanity. It is important to gain an understanding of the values underpinning UNESCO, an organisation that was created on 16 November 1945 with the role of contributing to world peace and security by promoting inter-country collaboration through education, science, culture and communication. To achieve this goal, the organisation made an undertaking to maintain, increase and diffuse knowledge to guarantee preservation and protection of the world's heritage of books, artworks and monuments of historic or scientific interest⁴. Correct management of a Site identified as a World Heritage must therefore be assured in the drive to spread awareness of the property and above all to guarantee active preservation strategies.

Operational Guidelines for implementation of the World Heritage Convention

The World Heritage Committee, the overarching organisation appointed to implement the World Heritage Convention, has developed clear-cut criteria for the inscription of properties in the World Heritage List and to provide international assistance through the World Heritage Fund to Sites in countries unable to independently guarantee maintenance of the conditions on the basis of which the Sites were originally recognised. First issued in 1977, these operational guidelines are periodically updated, with the last revision carried out in 2017⁵.

The **Statement of Outstanding Universal Value** illustrates the reasons why each Property/Site has

⁴ Constitution of the United Nations Educational, Scientific and Cultural Organization, art.1.

⁵ The latest available guidelines can be consulted and downloaded at: <http://whc.unesco.org/en/guidelines/>

2. Outstanding Universal Value and legislative framework

been inscribed in the List and it is the point of reference for development of the Management Plan (MP). For a Property/Site to be inscribed in the World Heritage List it must offer Outstanding Universal Value and it must be clearly identified.

Outstanding Universal Value (OUV) means:

“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 of humanity. As such, permanent protection of this heritage is of the highest importance to the international community as a whole”.

Interpreting Outstanding Universal Value and communicating it is at the centre of the implementation of the *World Heritage Convention*.

It is also important to understand that Outstanding Universal Value is not a static concept, but that it must instead adapt to match changes in the surroundings of each individual Site. This is particularly true for properties located in cities, as is typically the case of Italian heritage Sites. In this case, the challenge concerns the ability of the persons responsible for governance to maintain an equilibrium where-in tradition and development are correctly expressed within a constantly changing urban setting.

In order to be considered of Outstanding Universal Value a property must:

- 1) meet one or more selection criteria;
- 2) meet the Integrity and Authenticity requirements;
- 3) have an adequate system of protection and management to ensure its conservation.

WORLD HERITAGE SELECTION CRITERIA

Cultural Heritage:

Criterion I - to represent a masterpiece of the human creative genius;

Criterion II - to 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, in monumental arts, town-planning, or landscape design;

Criterion III - to bear a unique or at least exceptional testimony to a cultural tradition or to a civilization that is living or that has disappeared;

Criterion IV - to 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 - to 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 - to be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance.

Natural Phenomena or beauty:

Criterion VII - to contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;

Criterion VIII - to 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 - to be outstanding examples representing significant on-going ecological and biolog-

ical processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals;

Criterion X - to 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

(both for the natural and cultural heritage – from criterion I to criterion X)

Integrity is a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes. The condition of integrity is based on three elements: the property must include all elements necessary to express its Outstanding Universal Value; it must be of adequate size to ensure the complete representation of the features and processes which convey the property's significance; it must not suffer from adverse effects of excessively intensive development or, conversely, of neglect or abandonment.

Authenticity

(for cultural heritage only - from criterion I to criterion VI)

Authenticity can be defined as the set of physical characteristics, values and meanings that the property has assumed and maintains through time. The concept has a complex definition, in relation to which the need is now recognised for an assessment that takes into consideration the cultural context to which the property belongs. However, a property can generally be defined as authentic if its cultural value is expressed in a truthful and credible manner through multiple attributes, including form and design; materials and substance; use, function, traditions and techniques; location and setting; language and other forms of intangible heritage; spirit and feeling; other internal and external factors.

STATEMENT OF OUTSTANDING UNIVERSAL VALUE OF THE MODENA SITE

At the time of the 21st session of the World Heritage Committee, which was held in Naples in December 1997, the Modenese monumental complex composed of the Cathedral, Ghirlandina Tower and Piazza Grande was included in the World Heritage List, together with a further five Italian Sites: Su Nuraxi in Barumini, the archaeological areas of Agrigento and of Pompei, Herculaneum and Torre Annunziata, Villa Romana del Casale of Piazza Armerina, the Amalfi Coast, and the Residences of the Royal House of Savoy. The Statement of Outstanding Universal Value of the Site was updated in 2016⁶. The text of the statement is given below.

Overview

Cathedral, Civic Tower and Piazza Grande, Modena

Together Modena's magnificent 12th century cathedral and soaring bell tower serve as a supreme example of early Romanesque art comprised of exceptional architectural and sculptural quality. In addition to the cathedral and spectacular Civic Tower, also known as "Ghirlandina", the property includes the Piazza Grande surrounded by the City Hall, and the Archibishopric and a part of the

⁶ Report of the Decisions adopted during the 40th session of the World Heritage Committee (Istanbul/UNESCO, 2016), WHC/16/40.COM/19, Paris, 2016, p. 251, available for consultation and download at: <https://whc.unesco.org/en/decisions/6841>.

canonical buildings and the sacristy to the north. The entire property is relatively small, covering 1.2 ha surrounded by a buffer zone of 1.1 ha.

Attributed to the architect Lanfranco, the cathedral was begun in 1099, replacing an early Christian basilica, and is the home of the mortal remains of Saint Geminianus, the patron of Modena (4th century). The building is covered with ancient Roman stones, linking it to the splendour of the temples of antiquity. Wiligelmo's rich sculptures are found on both external walls and the interior capitals. The bell tower, started in the beginning of the 12th century, is of similar style and materials. Originally a five-storey structure, it was completed in 1319 with an octagonal section and additional decoration. The Piazza Grande, located along the historic Via Emilia in the medieval centre of town, was founded in the second half of the 12th century.

The cathedral and the "Ghirlandina" Tower appear as a consistent complex in terms of material and structural criteria, and construction of the two buildings kept the city of Modena busy for over two centuries, from 1099 to 1319.

The rebuilding of Modena cathedral in 1099 is a key landmark in medieval history for many reasons, of which two are of most importance. First, the building is a characteristic and documented example of the reuse of ancient remains, which was common practice in the Middle Ages before the quarries were reopened in the 12th and particularly the 13th centuries. Secondly, at the turn of the 11th and 12th centuries, this was one of the first buildings, and certainly the most important one, where collaboration between an architect (Lanfranco) and a sculptor (Wiligelmo) has been documented by explicit inscriptions, found in the building. It also marked the shift from a conception of artistic production emphasizing the quality of the buildings as a masterpiece of the munificence of its founder, to a more modern concept in which the role of the creator is recognised.

Later, the documented presence of the Campionesi masters in Modena between the last decades of the 12th and the early 13th centuries provides a great deal of information about how the works were managed in a perfectly organised medieval construction site. The art of the cathedral and the tower developed considerably under the influence of the Campionesi, always taking into account progress and themes of the post-Wiligelmo Emilian Romanesque School (especially the cathedrals at Ferrara and Piacenza) and innovations of Benedetto Antelami, and shows interesting resemblances with contemporary sculpture of Provence, particularly the superb facades of Saint-Gilles and Arles.

Criteria

Criterion (I): The joint creation of Lanfranco and Wiligelmo is a masterpiece of human creative genius in which a new dialectical relation between architecture and sculpture was created in Romanesque art.

Criterion (II): Between the 12th and 13th centuries, the monumental complex represented one of the principal forming grounds for a new figurative language, destined greatly to influence the development of the Romanesque in the Po valley. Wiligelmo's great innovations were to have a wide-reaching influence over late Italian medieval sculpture. At the European level, the sculpture of the Cathedral of Modena represents a privileged observatory for the understanding of the cultural context accompanying the revival of monumental stone sculpture. Only very few other monumental complexes, such as Toulouse and Moissac, can claim to be so important in this respect.

Criterion (III): The Modena complex bears exceptional witness to the cultural traditions of the 12th century in northern Italy's urban society where its organization, religious character, beliefs, and values are all reflected in the history of the buildings.

Criterion (IV): The monumental complex constituted by the cathedral, the tower, and the square is one of the best examples of an architectural complex where religious and civic values are com-

bined in a medieval Christian town; when urban development was closely connected with the values of civic life, especially in the relationships it reveals between economy, religion and the political-social life of the city.

Integrity

Over time, Modena's monumental complex has retained its historical, social and artistic features that define its Outstanding Universal Value. The works carried out over the centuries on the World Heritage monumental complex were always aimed at keeping the buildings efficient and useful while basically preserving the spatial proportions and volumes, prolonging its life without altering its physiognomy and functions.

The complex has survived relatively intact with the cathedral, tower and buildings with a traditional relationship to the church around the Piazza Grande. Minor changes include the replacement of eight original metopes from the roof with copies and the placement of the originals in the museum.

Threats to the property are primarily related to earthquake risk due to a fault line extending east-west to the south of the Po River. Following the 1996 earthquake, a restoration intervention was carried out on the complex. As a result, the recent seismic event that occurred the region of Emilia (May 2012) did not cause any significant damage to the inscribed buildings, only minor cracks to the cathedral. Additional threats have been identified relating to environmental pollution and the impact of a trolleybus route in front of the cathedral and unsuitable cultural and commercial activities held in Piazza Grande.

Authenticity

The nominated monumental complex is undeniably authentic as far as its design, form, materials, and function are concerned.

Although the cathedral has undergone a number of renovations over time, it retains its original use and the monumental complex is undeniably authentic as far as its design and form. Its preservation history also confirms its authenticity. From the point of view of restoration and preservation, Modena cathedral represents an exemplary case, showing as it does a century-long history of interventions and initiatives, warranting a chapter of importance in the history of Italian heritage conservation. Damage caused by Second World War bombing resulted in "conservative restoration" immediately the post-war period. While the crypt restoration in the 1950s involved the removal of later Renaissance elements in favour of restoring the original Romanesque style, this approach was discontinued in future projects. Restoration to address issues of deterioration of stone walls in the late 1970s and early 1980s were based on extensive research and investigation.

Protection and management requirements

The management system for Modena's Cathedral, Civic Tower and Piazza Grande includes legislation and policies operating at national, regional and local levels and involves the Episcopal Curia of the Diocese of Modena (the ecclesiastical body that manages the church's local properties). The City of Modena and the peripheral offices of the Ministry of Cultural Heritage and Activities (Superintendencies) are responsible for the protection and preservation of the above-mentioned property.

The property is located in Modena's city centre that, according to the current urban planning initiative held at the municipal level, is subject to general protection, preservation and use restrictions. The urban planning initiative includes the perimeter of the World Heritage property (heritage property and buffer zone), while the accompanying regulatory document acknowledges

the Management Plan as the implementation plan for the site's preservation and management. According to Modena's urban planning instrument, any work permitted on the monumental complex must be rigorously supervised and selected for the purpose of ensuring the preservation of its Outstanding Universal Value. Moreover, the whole city centre is subject to pre-emptive archaeological preservation restrictions.

In 2005, a steering committee was established involving the property's owners – Basilica Metropolitana di Modena (connected with Episcopal Curia of the Diocese of Modena) and the City of Modena – together with the supervisory bodies, and the Province of Modena. The committee was responsible to draft the Management Plan and follow up with relevant implementation and updates.

2.2. Legislative framework of conservation and protection

Protection of the Heritage on the international level

1964, ICOMOS - *Venice Charter* for the restoration and conservation of monuments and historic Sites.

1972, UNESCO - *Convention concerning the Protection of the World Cultural and Natural Heritage* whereby signatory countries assumed the obligation - art. 4 of the Convention - to ensure the identification, protection, preservation, presentation and transmission to future generations of the cultural and natural heritage situated on their territory, as ratified in Italy with Law no. 184 of 6 April 1977.

1987, ICOMOS, *The international charter on the conservation of historic towns and urban areas, known as the 'Washington Charter'*.

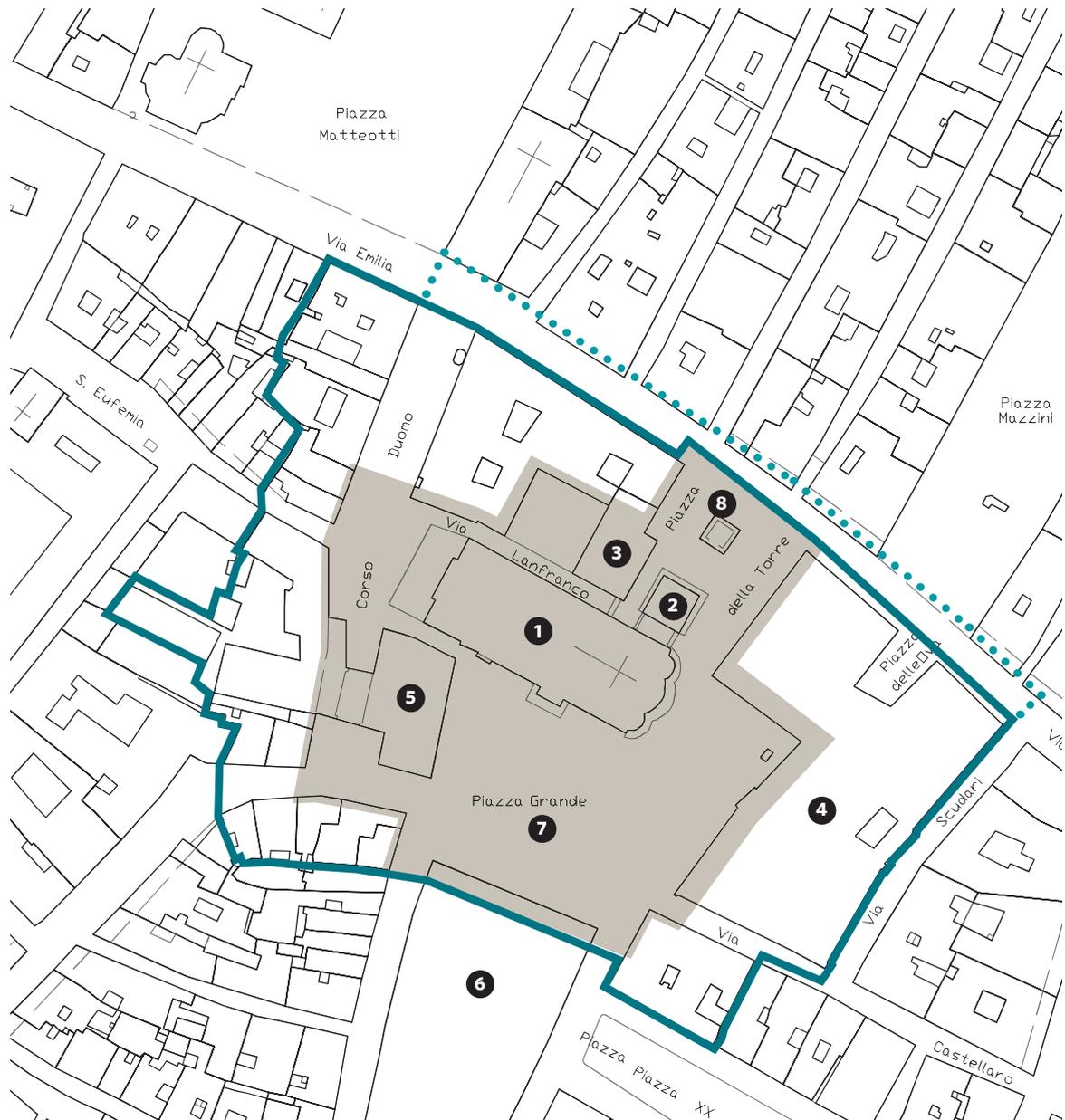
1994, *The Nara Document on Authenticity*: supplies a tangible basis to examine the authenticity of the cultural heritage and establishes the practise for preservation of the related properties.

1999, Australia ICOMOS - *Burra Charter*: based on the *Venice Charter*, establishes that conservation is an integral part of managing properties and places of cultural significance and is an enduring responsibility.

2000, European Council - *European Landscape Convention*: sets out provisions in relation to recognition and protection that the States Parties undertake to apply. Policies, objectives, protection and management are defined in relation to the landscape heritage, having recognised its cultural, environmental, social and historic importance as a component of the European heritage and a key element to guarantee the quality of life of populations.

2002, UNESCO - *Budapest Declaration on World Heritage*: during its 26th session the World Heritage Committee adopted the *Budapest Declaration*, whereby States Parties of the Organisation are invited to strengthen their world cultural heritage protection initiatives, creating incentives for effective protection of the individual properties already inscribed (or hopefully to be inscribed) in the World Heritage List, in such a way as to assure the correct balance between preservation, sustainability and development in the various sites, of significance not merely on the cultural level but also from an economic and social perspective.

2. Outstanding Universal Value and legislative framework



Modena UNESCO Site boundary

- | | |
|---|---|
| <p> Zone 1
The Site, Cathedral, Civic Tower and Piazza Grande</p> <p> Zone 2
Buffer zone</p> <p> Zone 3
Respect area</p> | <p>1 Cattedrale</p> <p>2 Torre Civica "Ghirlandina"</p> <p>3 Canoniche</p> <p>4 Palazzo Comunale</p> <p>5 Palazzo Arcivescovile</p> <p>6 Ex Palazzo di Giustizia</p> <p>7 Piazza Grande</p> <p>8 Piazza della Torre</p> |
|---|---|

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2005, UNESCO - *Vienna Memorandum*: in the definition of compatible actions within a World Heritage Site the document prescribes special attention to the historic urban landscape as defined by its distinguishing features including use of the land and buildings, spatial organisation, visual relationships, ground topography, vegetation and all infrastructure, including small scale objects and construction details (footways, paved roads, rainwater collection systems, public lighting, etc.). Special emphasis is placed on protection of views of the city, views of rooftops, and of the main lines of sight, which are construed as an integral part of the identity of the historic urban landscape. The quality of the urban landscape must be managed in the framework of the enhancement of spatial and functional values; it follows that any addition of contemporary architecture must be accompanied by studies to assess the visual and cultural impact⁷.

2005, Council of Europe – *Faro Convention* concerning the value of cultural heritage for society; defines cultural heritage as a dynamic complex of values in which populations find their identity; recognises an individual and collective responsibility in relation to the heritage, encouraging active participation of the community and stressing the value and potential of a cultural heritage used wisely as a resource for sustainable development and for the quality of life in a constantly evolving society.

2011, UNESCO, (*Recommendation on the Historic Urban Landscape*): adopted in November 2011 and approved in May 2012, paragraph 8 of the recommendation defines the Historic Urban Landscape as the urban area understood as the result of an 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. Moreover, paragraph 9 asserts that this includes also the social and cultural practices and values, economic processes and the intangible dimensions of heritage as related to diversity and identity.

Protection of the Heritage on the national levele

Art. 9 of the *Constitution of the Italian Republic*: “The Republic promotes the development of culture and of scientific and technical research. It safeguards the natural landscape and the historical and artistic heritage of the Nation”;

Cultural Heritage and Landscape Code: also known as the “Urbani Law” enacted with Legislative Decree of 22 January 2004 no. 42, subsequently amended by Legislative Decree of 24 March 2006, no. 156, by Legislative Decree of 24 March 2006, no. 157, by Legislative Decree of 26 March 2008, no. 62, and by Legislative Decree of 26 March 2008, no. 63. The law was later changed due to the effects of Legislative Decree of 31 May 2014, no. 83. The Code governs all actions concerning the cultural heritage performed on behalf of the Italian Ministry of Cultural Heritage and Activities.

2.3 Modena city planning towards the General Strategic Plan

The Site designated Cathedral, Civic Tower and Piazza Grande, Modena - composed of Piazza Grande and the Duomo (Romanesque cathedral) and the Ghirlandina Tower (Civic Tower), Sacristy and Lapidary Museum, City Hall and Clock Tower, Ex Palace of Justice (currently accommodating tertiary businesses) and the Archbishopric Palazzo - was declared to be a Cultural Heritage of Outstanding Universal Value at the 21st session of the World Heritage Committee of the United Nations educational, scientific and cultural organization (UNESCO) held on 6 December 1997. The boundary of the UNESCO Site and the required buffer zones - as shown on Drawing 1 of the

⁷ *bel_Vedere_firenze*, by C. Capitanio, C. Francini, Florence, 2008.

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Land Registry Map in 1:2,000 scale in the 2008 edition of the geodatabase of Italian World Heritage Sites: IT 827, Entry 1997 - were assimilated by Modena Municipal Administration in 2004. The Territorial Planning Department introduced, within the Coordinated Text of the municipal structural plan (PSC), the municipal operational plan (POC), and the town planning and construction regulation (RUE), a specific article for “assimilation of UNESCO Site boundaries”, with inclusion of Art.13.23 bis, the contents of which were approved with Council decision no. 132 of 20/12/2004. A subsequent deed incorporated the change of the buffer zone of the UNESCO Site, since the zone was not originally present but is a requirement in order to bring the Management Plan of the site into force: shown in Elementary Zone no. 3016 of the Historic Centre, approved with Council decision no.16 of 25 February 2008.

The PSC-POC-RUE regulations consolidated text in force (Part IV, Chapter XIII – Historic settlement system) states that the Old Town of Modena comprises the historic settlement system, subject



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to a specific discipline that prescribes planning choices that are commensurate with the principles of safeguarding and restoring the overall organic nature of the traditional environment of the ancient city centre with the aim of reclaiming the existing historic identity solely in relation to the method of conservative restoration, to be extended to include all component elements of public spaces; the discipline also prescribes that reconstruction of roads and other public spaces, with refurbishment of



Institutional areas

 Romanesque Cathedral. Founded in 1099 and consecrated in 1106; with the Ghirlandina Tower and Piazza Grande it has been declared World Heritage Site in 1997.

 UNESCO Site (zone 1)

 Buffer zone
 Extended perimeter (zone 2)

Italian World Heritage Site: IT 827, Inscription 1997. Transposition by Resolution of Municipal Council n. 16 of 25/02/2008

Building heritage

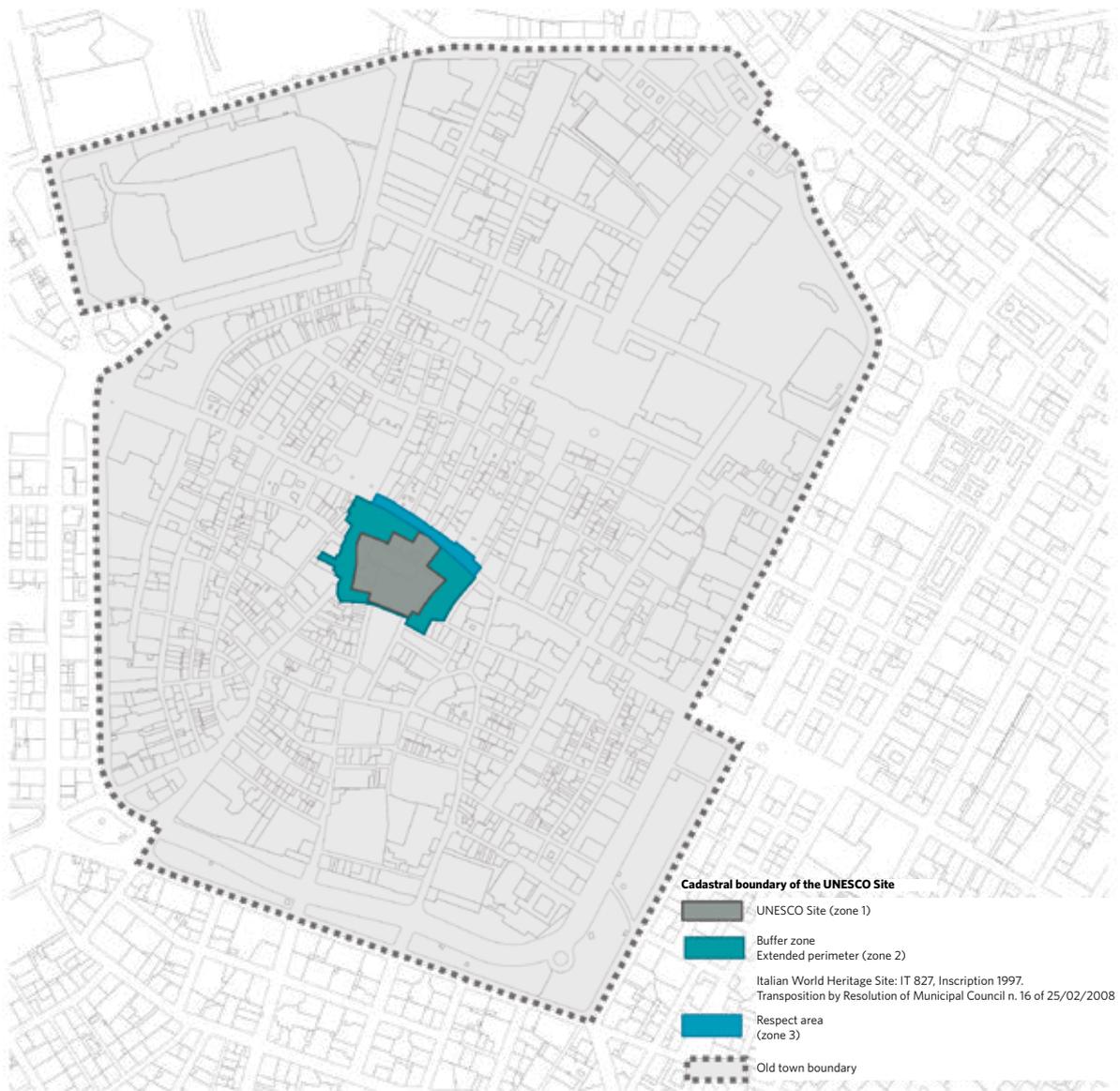
 Protected properties

 Properties with architectural value

 Properties with historical value

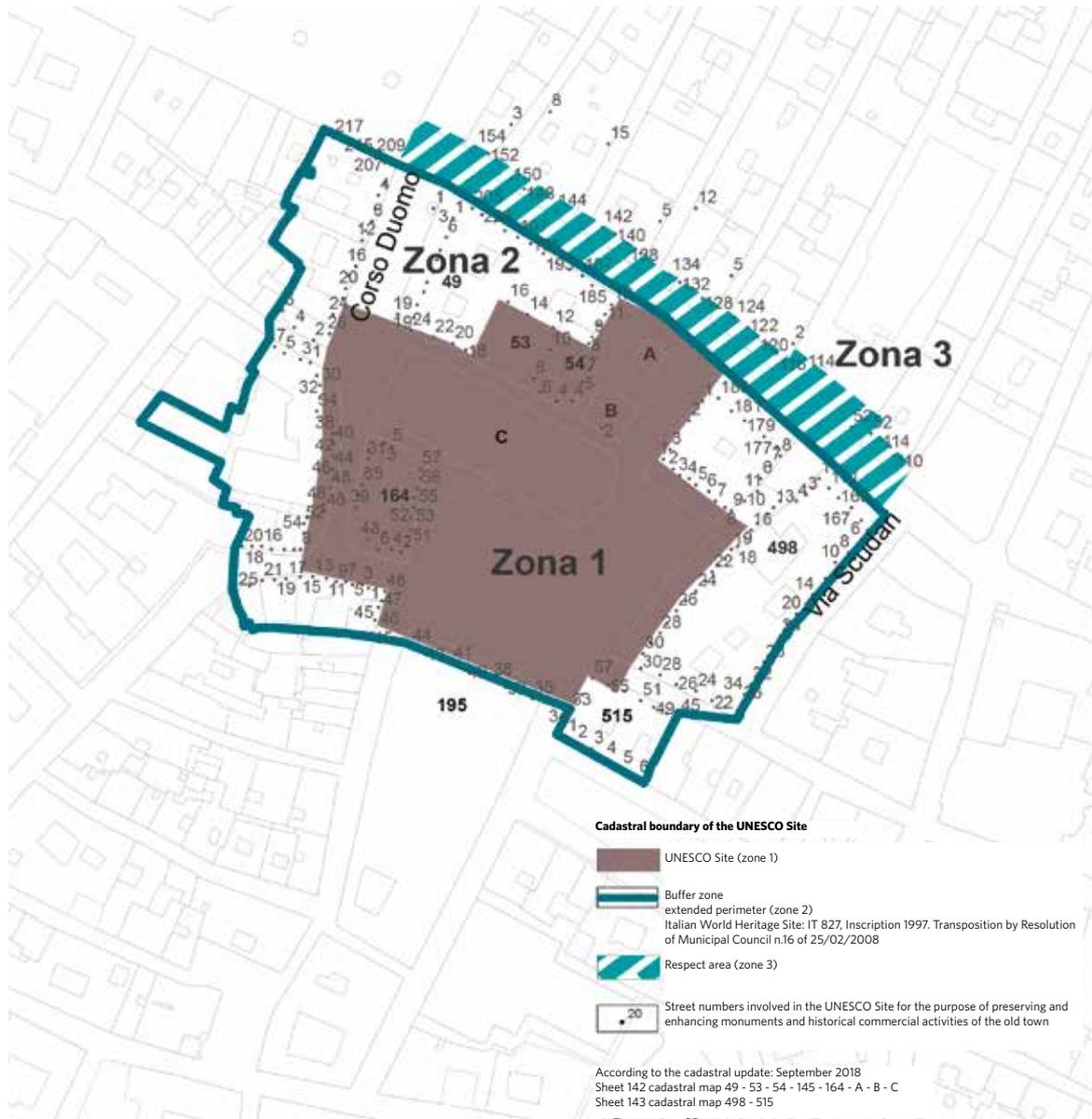
 Streets, squares and public spaces

paving or public lighting systems, and with the installation of urban furniture, must be in compliance with the contents of documents for management of the quality of urban furniture in the Historic Centre. The Historic Centre - construed as an urban fabric formed in ancient times that has retained the distinguishing features of the settlement and the layering of formation processes: the building heritage, the road network, open spaces and historic properties - is identified by a “boundary” defined



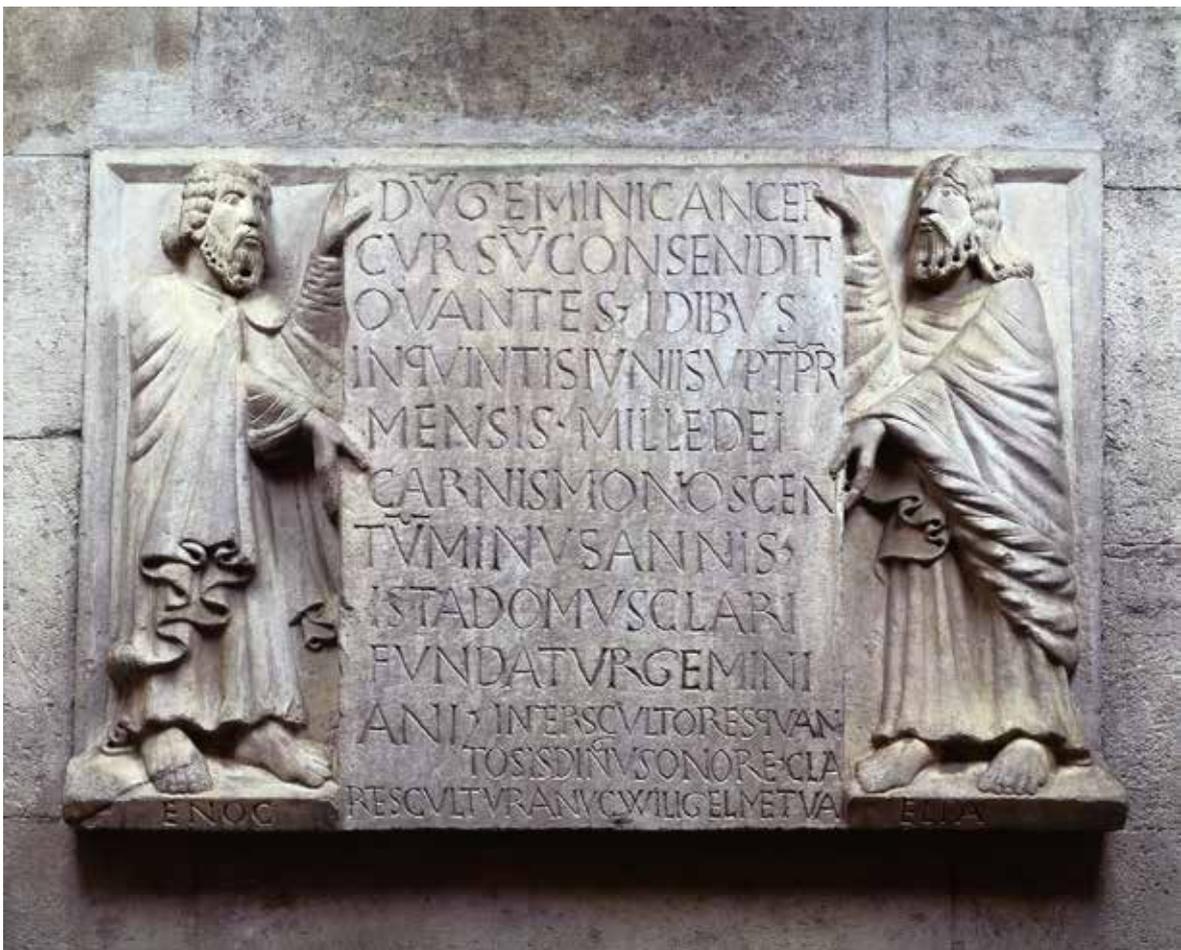
2. Outstanding Universal Value and legislative framework

by the statutory legislative provision (see maps, chart 2tI of the Municipal Structural Plan), and consistent with the actions required by Regional Law 21 December 2017, no.24, which came into force on 1 January 2018, in reference to the Historic Centre regulations in compliance with the principles of Art. 32 paras 5-6-7 concerning delimitation of the Historic Centre and its regulation at the time of formation of the Knowledge base of the future General Strategic Plan (GSP)



Specifically, the town planning regulation in force⁸ recognises the “UNESCO Site Boundary” (Part IV, Art.13.23 bis, PSC) in compliance with the statement of UNESCO on 6/12/1997 through the “Site identification boundary” and the “buffer zone identification boundary”: within which the Management Plan is implemented, as coordinated by the City of Modena and approved with Council decision no. 2 of 14/01/2013, in accordance with the model developed by the advisory committee for UNESCO Site Management Plans and for local tourism systems of the Ministry of Cultural Heritage and Activities (MiBAC).

⁸ References of the statutory planning instrument: the City of Modena’s existing plan was approved by Council decision no. 132 of 20 December 2004. Development of this instrument was prepared to adapt to the requirements of regional law no. 20 of 2000, which prescribed a new form of management of territorial governance designed around the articulation of the plan into a structural part (Structural Plan) and an operational part (Operational Plan), aimed at improving planning times and transparency. The strategic and policy component of the existing plan is rooted in the general zoning plan adopted in 1989 and approved in 1991, which already anticipated the contents of the regional law enacted in 2000. Modena’s municipal structural plan (PSC) to represent the strategic direction and long-term scenario, the fixed infrastructure points and the strategic policies, identifies 9 areas in the territory, i.e. parts of the territory that pursue common town planning objectives and within which multiple intervention policies are recognisable. Therefore, historic city centres are identified as aggregations of elementary zones (in provincial capitals identifying the UNESCO Site, and in suburban centres); in the urban territory: consolidated urban environments, environments to be upgraded, environments for new settlements, specialised environments for production activities and functional hubs; in rural areas: areas of natural and environmental value, areas with high agricultural production vocation and near-urban agricultural environments.



Cathedral, facade detail, inscription supported by Enoch and Elijah prophets with founding date and name of the sculptor Willigelmo

Chapter 3

Risks, constraints and opportunities

3.1. Periodic Report and results of the second cycle for Europe

Article 29 of the *World Heritage Convention* (1972) establishes that the *Periodic Report* (PR) is the procedure whereby the States Parties inform the UNESCO General Conference, with the mediation of the World Heritage Committee, of the progress of application of the *Convention* in the respective countries.

The main objectives of the Periodic Report are to:

- ① provide an assessment of the application of the *Convention* by State Parties;
- ② provide an assessment as to whether the Statement of Outstanding Universal Value (OUV) of World Heritage properties, meaning properties inscribed on the World Heritage List, has been maintained;
- ③ provide updated information about the properties and make a note of any changes;
- ④ create a mechanism of co-operation and exchange of information and experience between State Parties concerning the implementation of the *Convention* and *World Heritage* conservation.

In this framework, the second cycle of the Periodic Report for Europe and North America was decided during the 36th General Conference held in St Petersburg in 2012, while the first conference took place in 2005-2006. The on-line questionnaire compiled in 2014 included a general part completed in each of the 48 European convention signatory countries, followed by a first section that concerns: the inventory of properties of each country, the candidacy procedures, the legislative measures for protection and conservation of the properties, the financial aspects and human resources, the research and education programmes, and international cooperation. The second part of the questionnaire concerns the individual Sites, which totalled 432 at the time, and it included: the Statement of Universal Value, the conservation conditions, the factors that affect such conditions, conservation and the management system, the requirements (in the fields of management, research and education), and the recommendations of the World Heritage Centre. The results were submitted at the General Conferences of Bonn and Helsinki between 2015 and 2016⁹.

On the general level, the priorities that emerged concern four key actions that constitute the same number of objectives for the near future:

- ① define a regular monitoring system using, in particular, the Periodic Report;
- ② review and update the Management Plans before the next Periodic Report;
- ③ clearly identify the attributes of the statement of Outstanding Universal Value and include them as key elements in the Management Plans;
- ④ clarify and agree on the roles and responsibilities of national, regional and local authorities in relation to protection and conservation and involve local communities in managing the Sites.

⁹ Final report on the results of the second cycle of the Periodic Reporting Exercise for the Europe region and action plan, Thirty-ninth session, Bonn, 28 June – 8 July 2015, WHC-15/39.COM/10A, Paris, 2015 available consultation and download at: <http://whc.unesco.org/archive/2015/whc15-39COM-10A-en.pdf>; Helsinki Action Plan Monitoring Survey. Presentation of results for the reporting period from July 2015 to October 2016, available for consultation and download at: <https://whc.unesco.org/en/events/1318/>. Refer also to World Heritage in Europe today, Paris, 2016, available for consultation and download at <https://whc.unesco.org/en/world-heritage-in-europe-today/>.

There are several further priorities correlated with these aims, including the need to spread awareness of the key concepts and processes of the *Convention*, both among the authorities and in local communities, making reference to the official documents of the World Heritage Committee. It will also be important to be able to involve the communities in the Sites governance system by means of actions that stimulate them to adopt a proud and caring attitude in respect of their properties. Also for this reason it is essential to support and train World Heritage professionals to ensure they disseminate relevant and credible information and present a clear management strategy. The same professionals must also be made aware of environmental impact aspects, also by means of exchange and cooperation initiatives. Finally, the education activity, performed both through specific programmes prepared on the local level and also with reference to the activities and materials produced by the World Heritage Centre, will be of foundational importance.

Specifically, the second cycle of the *Periodic Reporting* (2014) produced the findings set down below with regard to the Modena Site.

Possible **conservation problems** may originate from the seismic risk due to the fact that the property is located in a high seismic potential zone, from the hydrogeological risk, linked to climate change associated with changes in the water table, and from pollution caused by vehicular traffic and heating systems. With regard to **protective measures**, in order to maintain OUV status it would be helpful to be able to rely on updating of the legal framework, to be implemented by applying an overall conservation order to replace the one that is currently in force concerning the individual monuments, even though the Site is recognised and hence protected by the City of Modena's General Zoning Plan.

Furthermore, the **management system** launched with the 2012-2015 Management Plan offers sufficient guarantees to maintain OUV status, since it also provides for the adoption of a specific regulation for the use of open air spaces.

In relation to **human and financial resources**, it was noted that a dedicated department is lacking, and there is no specific funding defined beyond the funds allocated to defined projects.

With respect to **tourism**, the management system reveals a limited ability to manage the flow of visitors, which nonetheless appears to be of modest entity and thus not significant for the purposes of funding of Site management; nonetheless, in the context of the mentioned Management Plan there is a specific improvement objective.

From the **scientific studies** perspective, in addition to the recent publications concerning the Ghirlandina Tower released at the time of the restoration works, a volume dedicated to the cathedral is also to be published showing the results of the multidisciplinary studies likewise carried out at the time of the latest restoration campaign. In the field of **education and dissemination**, it is noted that the existing Museum in the Site is not intended to communicate the characteristics, history or values of the Site; it is also noted that a specific educational programme aimed at the schools was launched starting from the 2013-2014 academic year, while specific communication campaigns to inform the population are planned.

Finally, with regard to **monitoring**, this activity has been started even though it is not specifically oriented toward verification of the maintenance of OUV status; the **recommendations** prepared by the Commission sent by the World Heritage Centre can be satisfied by planning an upgrade in the antiseismic protection measures.

3.2. Risks and constraints

The reference framework and analysis of the scenario make it possible to identify a series of risks and constraints are examined in detail in this section, taking into account first risks of a structural nature and then conservation risks concerning individual monuments, and finally, the constraints imposed by national legislation and local regulations.

Risks

The initial stage of assessment of the static and dynamic condition of the Cathedral-Ghirlandina monumental complex consisted of a survey of the de-facto condition. For this purpose, the following investigation campaigns were carried out starting from 2003:

- structural surveys, by means of measurements made with laser scanners, georadar surveys, ultrasound and thermographic investigations, endoscopies, and foundation core sampling, for precise identification of the geometry of the structure considered globally (load-bearing walls, cladding, timber roof, vaulted ceiling) and, above all, the essential dimensional characteristics and the real level of deterioration and/or instability;
- analysis of materials, by means of core sampling and laboratory tests, for precise classification of the materials making up the structure and to assess their characteristic mechanical properties (e.g. flat jacks, etc.);
- geological/geotechnical surveys, by means of geognostic investigations (geognostic surveys, on-site tests and/or borehole tests, cone penetration tests, geophysical tests, laboratory tests) and topographic surveys (ground plan, levelling), for precise identification of the stratigraphy of the underlying terrain, the physical and mechanical characteristics of the various strata, and the topographical characteristics of the site on which the monuments stand.

The second stage of the works concerning the static and dynamic conditions of the monumental complex, which was started in 2010, involves integration of the electronic monitoring system that is already installed and has been operating since 2003, thus making it possible to identify any ongoing or pending dynamic phenomena, such as subsidence of foundations, opening and/or expansion of cracks, increase in deformations.

This monitoring process becomes extremely important in the light of interaction between the Cathedral and the Ghirlandina Tower, and the stresses caused by the latest seismic events. Monitoring is performed by means of levelling and electronic instruments (settlement strain gauges, piezometers, joint meters, electronic plumb indicators, deformeters, thermometers, data acquisition instruments, etc.).

On 20 and 29 May 2012, the Management Plan having just been completed, two major earthquakes occurred (20 May 2012 at 4.04 am: 5.9 magnitude with epicentre in Finale Emilia; 29 May 2012 at 9.00 am: 5.8 magnitude with epicentre in Medolla). Even though Modena lies at the margin of the earthquake zones, the monuments and buildings of the old town and of the UNESCO Site suffered widespread damage. This event also highlighted the importance of having a specific Management Plan for the seismic risk of the Site, which points to the need to set up a Committee for scientific supervision of the Site¹⁰.

Considered globally, the **cathedral** structures responded positively to the 2012 earthquake, although several elements were damaged, with the appearance of new cracks and worsening of existing lesions. The cross vaults in brickwork built in approximately 1450 once again proved to be the most vulnerable structures, having already suffered damage with a partial collapse at the time of historic seismic events. Two bricks fell after becoming detached from two ribs, one from the first vault to the west of the central nave and one from the vault of the lateral nave above the *Porta Regia*. The areas beneath the vaults in question were cordoned off by the Fire Department following inspection of the site and works to restore conditions of safety were carried out immediately. Thanks to the funds provided by the Emilia Romagna Regional authorities for post-earthquake reconstruction, a project of *local repair and reinforcement* was prepared. The works, which were started in October 2017 and are currently nearing completion, consist of consolidation of the vaults on the extrados by the application

¹⁰ Below, *Objectives and actions, sheet 2.2 Integrated instrumental monitoring and scientific supervision.*

of fibreglass membranes, wrapping of the ribs on the intrados with safety mesh, insertion of new steel tie rods in the arch footing and for connection of the walls, filling of all lesions by deep injection of lime mortar, connection of all timber roof beams by means of metal components, and consolidation of the facade turrets.

The instrumental monitoring system in the **Ghirlandina Tower** detected a temporary pendulum shift of the tower by as much as 12 mm. The structural test carried out on 31 May, up to a height of 21 metres using an elevating work platform, showed damage of the decorative system, notably the precious sculpture showing *Samson opening the lion's mouth*, which developed a diagonal split with detachment of several small fragments. This crack is parallel to a lesion that has been present for a long time and in relation to which the stone slab on which the Biblical scene is sculpted had already been repaired several times, also by installing two metal anchors. The experts from the scientific committee agree on the need to remove the anchors, increasing the space that separates the bas-relief from the arches connecting it to the cathedral to avoid possible future stresses caused by the close proximity of the slabs.

There are several small cracks in the filler applied in the connecting points between the elements of the balconies. The movement of vertical fractures can be observed inside the tower.

A recommendation was also made to install accelerometers to provide high precision monitoring of the structure's behaviour.

Overall, the studies and research projects pursued in recent years have been aimed at solving two types of problems:

- ① Reciprocal static and dynamic interaction between the Ghirlandina Tower and the Cathedral:
 - due to the high vertical loads on the foundations that result in lowering of the terrain in a limited adjacent area;
 - due to reciprocal horizontal actions caused by seismic events, wind loads, and the increase in the angle of inclination of the Ghirlandina Tower, all actions being transmitted between the two monuments due to their connection by means of the Gothic buttresses originally erected to provide a temporary supporting structure for the tower.
- ② Differential foundation subsidence of the cathedral, especially on the east-west axis, because it was erected on ground to the west that had already been consolidated by the action of the pre-existing church, while the ground to the east was presumably a greenfield site. The verification calculations will be carried out by means of finite element modelling (a method of verifying the structural calculation of a building) of the Cathedral and of the Cathedral-Ghirlandina monumental complex, in order to obtain:
 - static analysis of the structures capable of identifying possible criticalities to be compared with the lesions actually present;
 - dynamic analysis and vulnerability assessment with verification of safety, in accordance with guidelines for assessment of the seismic risk of the cultural heritage and in compliance with technical construction standards;
 - an assessment of the static and dynamic interaction between the Ghirlandina Tower and the Cathedral.

The Cathedral situation

In 2006, following the detachment of small pieces of material from the cathedral cornices, a restoration campaign was conducted to repair the exterior of the monument. The works, which were completed in 2013, were carried out by the Metropolitan Chapter of Modena in liaison with the Emilia Romagna Regional Department for Cultural and Landscape Heritage and the Archaeology Fine Art and Landscapes Superintendency for the provinces of Bologna, Modena, Reggio Emilia and Ferrara,

thanks to the funds provided by Fondazione Cassa di Risparmio di Modena, Unicredit, the Ministry of Cultural Heritage and Activities (MiBAC) and the City of Modena. The project resulted in the restoration and consolidation of the external stone walls and total reworking of the claddings.

In 2017 it became possible to extend the restoration campaign to include the sculpted features, namely Porta della Pescheria, *Porta dei Principi*, *Pulpito di Piazza*, the bas-relief by Agostino di Duccio and the lower more degraded level of *Porta Regia*.

The main sculptural features were analysed by laser scanner: digital scanning with precision in the order of microns and digital filing techniques make it possible to preserve and reproduce the original with the consequent ability to monitor the progress of deterioration, and to carry out virtual or actual reconstructions in the case of acts of vandalism.

As described above, repair and local reinforcement works following the 2012 earthquake were started in 2017. The operations, which are currently in progress, are as follows:

1. Works on the ceilings

- 1.A Consolidation of joints on the extrados; refilling and insertion of wedges in the cracks
- 1.B Filling and insertion of wedges in the cracks and consolidation of renders on the intrados
- 1.C Lengthening and consolidation of extrados ties
- 1.D Protection in the form of an anti-detachment mesh for the ribs on the intrados
- 1.E Glass fibre mesh embedded in lime mortar and Eco-Pozzolan on three quarters of the extrados

2. Installation of new chains

Integration of the existing chains by installing new transverse and longitudinal tie rods, upper and lower, to connect the walls where they were found to be most vulnerable

3. Works on the walls

- 3.A Restoration of transverse connection of wall braces
- 3.B Pouring of mortar on brick diaphragms and installation of connecting tie rods through the core-and-veneer walls.
- 3.C Injection of mortar into cracks and insertion of wedges into arches
- 3.D Sealing of filler that has redeveloped cracks

4. Works on the roof structure

- 4.A Localised actions to restore loose connections, re-tension brackets and repair any damage or deteriorated areas
- 4.B Connection of all detached elements (connection between rafters, purlins, beams)
- 4.C Light metal strap

5. Works on the facade and protection of the rose window

- 5.A Reinforcement of existing anti-tipping protections
- 5.B Mesh to protect against possible detachments from the rose window

6. West turrets protection

Installation of a steel brace in the interior cavity

7. Strengthening of the portal architraves

Metal protections in the concealed and unsculpted part of the architraves of Porta Pescheria and Porta Principi

8. Investigations during the work

Video endoscopies, georadar and thermographic surveys, where necessary, laboratory research and consolidation tests, final as-built survey.

At the time of the ceiling consolidation works the Geology Department of the University of Modena and Reggio Emilia took samples of mortar and brick from the extrados so they could be dated using the most innovative techniques available, namely carbon dating (14C) for mortars and thermoluminescence dating for bricks. This activity revealed the fact that various parts of the ceilings have been reconstructed through the years due to widespread and repeated collapses.

The instrumental monitoring system installed in the cathedral and the tower was implemented by means of a network of accelerometers in a project conducted by Turin Polytechnic and the University of Nagoya. This new instrumentation makes it possible to monitor the seismic response of the various structural elements of the Cathedral and of the Tower, at different heights. Restoration of the interior walls and the artwork contents are excluded from the scope of post-earthquake works.

The interior surfaces of the monument are covered by more or less consistent deposits of dust, diffused by the hot air heating system, also with a patina of soot due to the burning of candles. For the best possible conservation of the brick and stone surfaces they should be subjected to thorough cleaning, this being especially important for sculptural elements such as the great capitals on top of the columns and the smaller capitals of the false *matronea triforium*. The deposits in question can conceal cracks and areas of more or less serious detachment that call for consolidation works rather than merely cleaning to eliminate the risk of debris falling onto worshippers or tourists in the cathedral. Another form of deterioration may be areas of salt efflorescence and patches of rising damp. In this case the situation can be rectified by means of cleaning and refurbishment works, combined with investigations to identify the causes of rainwater infiltration or rising damp. Maintenance work is also needed in the attics between the vaults, built in around 1450, and on the timber roof structure. The sections of wall that appear between the connection of the vaults and the beam supports are of exceptional historic value because they were left untouched by the demolition work carried out in the early 20th century and they therefore retain the red and white decorated renders that probably date back to the Campionesa era (13th century). The ideal course of action would be works to make safe or consolidate these ancient renders in order to keep them intact. It is also the intention of the Chapter to allow periodic public access to the attic spaces for a small number of visitors by creating an informative tour ascending the spiral staircases below the turrets to accompany parties through the spaces of the greatest historic and documentary importance, allowing all to view the antique decorations, the ceilings and the timber roof structure. There are numerous artistic masterpieces preserved inside the cathedral. These too, however, are subject to deterioration due to dust deposits, accumulation of soot from candle smoke, rising damp, the hot air heating system, and, in certain cases, non-breathable protective or consolidating films (such as Paraloid) applied during past restoration campaigns.

The Molza monument in the south nave was restored in 2016 thanks to a private donation. Among the many works requiring restoration are: the *S. Sebastiano panel* by Dosso Dossi (XVI); the terracotta polyptych entitled *Altar of the figurines* (1442) and, below it, the plasterwork *Paliotto di Santa Caterina* (early 18th century); the many frescos on the cathedral walls dating back to the 13th century including the *Saint Christopher* (1240); the Campionesa era *Pulpit*, with stairway frescoes by Cristoforo da Modena (1380); *Claudio Rangoni's Funerary Monument* (16th century); the panels and chancel with wooden inlays by the Lendinara brothers (15th century). To guarantee proper conservation of the artworks located inside the cathedral while also allowing an appreciable saving in energy consumption, the existing heating system should be replaced. The cathedral currently has a hot air system with forced recirculation via outlet grilles on the walls and intake grilles on the floor. A study was carried out in 2017 to analyse temperature variations at different heights of the monument, in relation to ambient temperature, system settings and energy consumption. This study also simulated the lower consumption possible with new radiant type heating systems that could be installed under the benches in the centre nave inside purpose-built wooden platforms¹¹.

¹¹ Below, Objectives and actions, sheet 3.5 New heating system for the Cathedral.

With regard to security, there are anti-intrusion systems installed in the Cathedral and in the Sacristy. Construction of a new video surveillance system is planned, to be integrated with the system already present in the Cathedral Museums. There is a video monitoring system installed by the City of Modena on Via Lanfranco; the system needs to be upgraded, with night-time infra-red image capture capabilities and a connection to an operational control centre.

With regard to the Lapidary Museum, the Cathedral Treasury Museum and the Ex Presbyteries Courtyard, major redevelopment work and extension of the exhibition spaces are planned to take place over the next few years¹².

The situation of the Ghirlandina Tower

The set of actions on the internal structure of the Tower that the Municipal Administration intends to carry out in the coming years is aimed at keeping the structure in good condition, conserving the interiors correctly and improving the visitor experience.

The main problems of degradation observed are: presence of humidity due to infiltration, vertical cracks visible in the section with the largest openings (two and three-light windows), presence of cement mortar finish in certain chambers, deterioration of part of the frescoes of the *Sala della Secchia* and of the capitals in the *Sala dei Torresani*, presence of a translucent film on the brickwork in the lower zones of the stairway, giving rise to surface detachments, and general problem of low lighting levels in all areas.

Based on the investigations carried out in the preliminary stage, the Superintendency authorised a global restoration operation based on the principles of minimum invasiveness, reversibility, and reduced environmental impact. Once the scaffolding has been erected inside the building it will be possible to access all points of the surface to check for the potential need for additional work. The need for safe access is however paramount, given the sheer drop of approximately 30 metres inside the tower.

The deposits are spread across the entire surface, especially in the upper regions of the open chambers, and they were found to be generally of low consistency and with poor anchorage to the substrate. However, the deposits have led to deterioration in many areas, such as on stone materials, with the formation of black encrustations in areas in direct contact with the elements, hence mainly on the Torresani and bell chamber floors. The black patina, which currently consists of a thin coating, covers the columns entirely, becoming denser especially in the decorated parts of the capitals that grace the chamber and the stone benches on the Torresani floor. The phenomenon of vertical lesions is typical of towers in general, and the Ghirlandina only goes to confirm this rule. The main lesions are vertical, sited between the third and sixth external levels, i.e. in correspondence with the most open parts of the tower due to the presence of large windows. To limit this phenomenon the building has been encircled on the outside of the fifth cornice string course with a clamping ring. In the interior of the building, in exposed brickwork, “reinforced reshaping” is required of the horizontal joints, to be carried out in the main lesion areas.

Through the process of time almost all the original renders have been replaced, and the renders applied in the entrance chamber and the large scale repairs carried out on the *Secchia* floor and on the Torresani and bell chamber floors are formed of cement-based composites, leading to humidity problems resulting in detachments and surface efflorescence.

The entire wall has been pointed with cement; the material cannot be removed however without loss of original material because the cement mortar remains securely anchored in most cases. The work will therefore be aimed exclusively at the mechanical removal of exclusively areas showing signs of detachment, and operations to extract soluble salts from the walls will also be carried out; missing

¹² Below, Reference framework, paragraph 4.6 The Cathedral Museums redevelopment and extension project and Objectives and actions, sheet 3.1 Extension of the Cathedral Museums.

renders will be replaced with a lime mortar comparable to the existing material in terms of particle size and composition, as determined by samples analysis.

Along the walls of the stairway a transparent and high-gloss film is visible up to a height of approximately 1.5 metres, with chalky deposits beneath. The analyses conducted have confirmed the presence of a siloxane based synthetic resin which, in certain cases, has resulted in local swelling and surface detachments.

In order to remove the film, 10 samples were treated with 4 different products; unfortunately, none of the solvents used gave noticeable results and the most efficient solution was found to be washing with a steam jet. This process was found to mitigate the glossy finish and remove crypto-crystalline gypsum. This operation was therefore planned for the entire surface area.

The tower has only a limited number of timber structures, found only in the Torresani level ceiling structure and on the floor above, to support the bells; however, even though such structures are located inside the bell tower they are still subject to seasonal temperature gradients and humidity variations because they are in positions that are mainly open to the elements and are anyway unheated.

The analysis carried out on the bell chamber showed the presence of holes caused by woodworm: a complete treatment of the structures will therefore be carried out using a Permethrin based vapour active pyrethroid insecticide of long persistence and low toxicity for humans, in accordance with the methods already employed for the spiral staircase.

From the structural perspective, the resistographic analyses carried out confirm that the timber structure retains a good degree of strength.

Nonetheless, the supports, connections and anchors in the masonry will be checked individually.

Also the wooden windows and all metal components (chains, fasteners, gates) will be restored.

There are four metal chains in the uppermost area of the bell chamber, located parallel to the wall at a distance of 45 cm from the outer wall. The chains are responsible for interconnecting the inner walls of the four hollow corner pillars. The chain on the east side has been doubled up at a later date, adding a second parallel chain. The chains do not reach the outer walls and they are not interconnected, but they are instead anchored to the masonry walls of the hollow pillars. To avoid this problem, an outer encircling band was designed and subsequently installed. The existing chains, which are partly affected by surface corrosion due to water infiltration from the roof, will be cleaned; also, the connections in the walls will be checked, wire-brushed and passivated to prevent the re-formation of rust. Also the gates, the railings on the Torresani floor and the massive grate closing *Sala della Secchia* will all be cleaned.

On the bell floor where the corner pillars have been reopened, small gates will be installed, styled in the fashion of the existing gates.

The stone pavement on the Torresani floor is composed of slabs of Verona nodular limestone of different colours, from white to red. The surface will be cleaned, and the components will be filled with suitably coloured lime mortar. Since the chamber is open on four sides by large three-light windows and the floor is frequently in contact with the elements, once the work has been completed it will be possible to apply a protective treatment, as already sampled and used on the exterior wall.

The restoration work on the Torresani floor and the preparations for the winter opening were completed in July of 2015. The project envisaged restoration of the columns and capitals and cleaning of the walls up to a height of approximately 3.60 m on the Torresani floor, in accordance with the methods already defined during the long campaign of investigations performed during restoration of the external surfaces. The intervention was restricted to the walls and did not therefore include restoration of the floors, the upper parts of the walls and the ceiling, since these activities were not financed in the project.

The work is part of the more general project for restoration of the interiors, which was authorised by the competent Superintendency with note number 2522/2012.

The project involved works on the entrance floor and on the Torresani floor, in addition to the in-

3. Risks, constraints and opportunities

stallation of video cameras on each floor. Windows, screens and removable systems were installed to facilitate use of the tower in the winter. These elements do not affect the structure: they are simply part of the operational accessories and can be removed whenever necessary.

In August 2015 the two 16th century bench seats of the Torresani chamber and the adjacent portion of floor were restored.

The same cleaning and filling work will be carried out for all elements in stone on the stairway. The first section of stairway in sandstone will be cleaned, filled or, if it is found that the material is no longer consistent, the surfaces will be treated with a consolidating primer based on ethyl-silicate, a product that has been widely tested and proven to be effective on this type of stone.

The Ghirlandina Tower has always suffered from major problems related to humidity, mainly originating from infiltration of rainwater at the top of the structure, while in the case of the underground section the problem is caused by rising damp.

The brickwork and stonework was re-pointed during the restoration project of the outer walls so the problem of water infiltration should be mitigated. Also the lead cladding on the bell chamber roof was repaired by patching the numerous holes and splits. The newly repaired membrane should prevent any further water infiltration in this area.

Steps must anyway be taken to ensure a good level of air circulation to prevent the accumulation of humidity and assist the evaporation process so that the surfaces can gradually dry out. Periodic checking of ambient conditions will be carried out to prevent the occurrence of situations that lead to the formation of new areas of efflorescence.

There are several technical systems installed in the Tower: electrical circuits, sound diffusion system in the bell chamber, civil defence video cameras and data transmission system for instrumental monitoring of the Tower and the Cathedral.

This combination of systems was installed in different stages without paying any particular attention to the related impact on the monument. All wiring in the building is surface mounted, ascending vertically through openings cut into the floors. Most of the wiring is routed through industrial grade plastic conduit.

The entire Tower is poorly lit, with an assortment of fixtures of different types.

Also the line feeding the loudspeakers in the bell chamber must be replaced, together with electrical panels and light bulbs.

The bell ringing gear will be re-engineered to reduce its visual impact and the loading of historic wooden structures, which have recently been restored in a manner not compatible with their current function, although the existing clapper mechanism will be retained.

February 2018 saw the end of the scientific restoration works aimed at opening a new entrance to allow the transit of visitors in safety. The work therefore proceeded on the raised floor of the Tower (entrance chamber), with restoration of the existing floor, steps and metal railings, refurbishment of the existing windows, overhaul of the cotto floor surface, and restoration of the stone cornices, and touch up of renders and paint, performed after preliminary stratigraphic surveys.

The work was completed by replacing the existing furniture (consisting of mass produced items that were incompatible with the age and character of the monument) with suitable bespoke items.

Other completion works concerned the adaptation of part of the electrical system, after removing the plastic ducts of the existing systems (conduit, boxes, etc.) and replacing them with new mineral-insulated copper-clad cables in the entrance area.

It is anyway planned to proceed in stages, gradually upgrading the existing electrical systems, which are clearly incompatible with the nature of the monument.

When the work is completed also on the exterior of the monument, a maintenance plan will be prepared to complete the action and guarantee the maximum possible durability through time.

The situation of Piazza Grande

For redevelopment of the distribution routes the Archaeology Superintendency has already received the project for a new footway in natural stone slabs on the south side of Piazza Grande connecting Corso Duomo and Via Castellaro to allow access to the monumental complex also by mobility-impaired users. The existing cobblestone pavement makes the square inaccessible to reduced mobility users.

In relation to the City Hall facades, it is planned to remove the shutters and replace them with elements that are more in keeping with the architectural style of the palazzo.

Piazza Torre

An area of Piazza Torre has been repaved with cobblestones in accordance with the provisions of the *Maintenance Plan*.

Constraints

With regard to the Cathedral and the Ghirlandina Tower, since both have been recently restored, the existing legislation calls for a series of periodic checks and analyses to be planned for monitoring purposes, for the preparation of a *Maintenance Plan* for each monument.

The Plans must be capable of guaranteeing the maximum durability of the efficacy of the works, with accurate checks on performance of the restoration products used and the materials installed.

The ***Ghirlandina Maintenance Plan*** was developed on the basis of a series of analyses performed before the restoration was started and while it was in progress, and it has been in force since 2014. The most critical condition is caused by the height of the monument, which means that most of the surface cannot be reached, thus making checking activities objectively problematic.

For this reason, most tests are carried out on sample areas that are always accessible.

This critical aspect clearly produces problems both in relation to the inspection of inaccessible areas, having to rely on remote optical equipment (video and photo) and the use of drones, and due to the difficulty of carrying out any necessary maintenance works.

In the light of the analytical evidence that has emerged, starting from areas of uniform behaviour it is possible to identify diversified situations for which to establish different acceptability limits on a case by case basis, although tending towards the definition of a fairly broad tolerance range. By way of example we can consider the contact angle parameter, to check that wettability of the different surfaces remains within acceptable values or whether reapplication of protective treatments is necessary.

Starting from the sequence of procedures, methods of execution of tests and related time-scale, as specified in the *Maintenance Plan*, the ideal next step would be to prepare a technical manual that makes possible to integrate the results obtained with events that affect the structure (emergence of lesions, reciprocal dislocations, etc.) and more in general with the structural monitoring programme in progress.

Preparation of the ***Cathedral Maintenance Plan***, which is configured in coordination with the Tower maintenance plan, is currently ongoing, pending completion of the post-2012 earthquake consolidation works. Assessment of the results of the *Maintenance Plan* of the two monuments, interpretation of the data supplied by the integrated instrumental monitoring systems and the need for fast identification of any problems that may emerge in relation to the described situation, all confirm the need to guarantee scientific supervision for the complex by setting up a Scientific Committee that combines the two separate committees responsible for designing and following up the recent restoration work carried out on the two monuments¹³.

¹³ Below, *Objectives and actions*, sheet 2.2 *Integrated instrumental monitoring and scientific supervision*.

3.3 The first quality survey addressed to citizens and tourists

The survey conducted in 2016¹⁴ among tourists and among local citizens in parallel to gain an understanding of the perception of the UNESCO Site among both groups is unprecedented. While this factor clearly affected the assessment of the results and consequent reflections, it also emphasised the need to repeat the survey periodically, classifying it as a monitoring tool. The goals of this Management Plan therefore include that of performing a new quality survey, scheduled for 2020, in parallel with the latest update of the plan. The first survey was created in order to supply elements that could be used to update the 2018-2020 Management Plan. The decision to proceed in parallel with the questions given to tourists and those given to citizens was taken in order to identify strengths and criticalities, both of which (especially the latter) are precious indicators that can be used to orient the planning process. In addition, several questions were included asking respondents to give their opinion on specific aspects, with answers potentially providing precious indications on how to proceed, especially to strengthen and qualify existing resources, including instruments of communication and information systems. In general, the 2016 survey confirmed that compared to the end of the 1990s, when Modena obtained World Heritage recognition, far more people and, in particular, far more Modenese citizens are aware that the Cathedral, the Ghirlandina and Piazza Grande are included in the World Heritage List and they consider this to be a status that adds value to the Site. The overall evaluation of the Site that emerges from the survey is extremely positive (average score of 7.9). Modena is considered to be a tourist-friendly city, offering exceptional cuisine (score of 8). This highly positive feedback must certainly be in part credited to the commitment and hard work in recent years of the City of Modena and the other institutions involved in managing the Site.

Public transport and parking emerged among aspects in need of improvement and also the presentation and promotion of the Site, the tourism hospitality system, including direction signs, and the availability of information material, including documents and static displays (information panels). Overall, the main recommendation made by citizens and tourists was to improve communication in order to promote the UNESCO complex more effectively: this led to the creation of a specific communication campaign with parallel on-line and off-line actions¹⁵.

The primary source of information was the Internet and in this context the two institutional websites (www.visitmodena.it and www.unesco.modena.it) are seen as key strengths for the diffusion of practical information and of historic-artistic details. However, documents and information panels located within the Site must be updated and implemented to reflect the value ascribed to the complex, especially in the realms of culture (citizens) and aesthetics/emotion (tourists).

The survey confirmed that the least-visited locations are the Cathedral Museums and the Historic chambers of the City Hall: measures should therefore be adopted to increase the visibility of these attractions and promote them, also through the use of dedicated initiatives. The project for the extension and redevelopment of the Cathedral Museums is of strategic importance in this context¹⁶.

Many Modenese citizens also expressed their support for the organisation of a 'dedicated' annual event and staging of activities capable of involving and raising awareness of the UNESCO heritage in more intimate detail. This proposal was translated into the *Modena Patrimonio Mondiale Fest* objective, which provides an annual appointment dedicated to the Site in the first week of October, with initiatives addressed to different types of audiences¹⁷.

The survey carried out among Modenese citizens offers several additional indications to be kept in

¹⁴ The full publication can be found here: http://www.unesco.modena.it/en/institutional-scientific-area/management-of-unesco-site?set_language=en; for a summary of results, refer to Annex 2.

¹⁵ Below, *Objectives and actions*, sheet 6.1 *Campaign Io sono patrimonio dell'umanità (I am World Heritage)*.

¹⁶ Below, *Reference framework*, paragraph 4.6 *Cathedral Museums redevelopment and extension project; Objectives and actions*, sheet 3.1 *Cathedral Museums Extension* and 4.1 *Cathedral Museums new fit-out*; Annex 5.

¹⁷ Below, *Objectives and actions*, sheet 4.2 *Modena Patrimonio Mondiale Fest (Modena World Heritage Fest)*.

consideration. For example, the majority of respondents were opposed to the introduction of special access times and charges for tourists, a proposal that was formulated specifically to gather feedback from the local community. With respect to access to the spaces available in Piazza Grande for celebrations and events, which have been increasing in recent years, the majority were in favour of regulated and selective use of the space, a condition that can be guaranteed by enforcement of the *Regulations*¹⁸.

¹⁸ Below, *Objectives and actions*, sheet 1.2 *Enforcement of the regulations*.



Ghilrandina Tower, diagnostic surveys by ultrasound

Chapter 4

Governance and Management Plan

4.1 UNESCO office, Steering Committee and Technical Committee

The UNESCO Site Coordination Office, set up in Modena Civic Museums, was created with the undertaking made by the City of Modena in 2005 to equip the Site recognised by the World Heritage Committee in 1997 with a Management Plan and with the enactment of Italian Law 77/2006. The first Management Plan was officially adopted on an experimental level in March 2008 and it remained in force for two years. Between 2008 and 2018, the Office made an update to the Management Plan. The updated plan was drafted between 2011 and 2012 with the consultancy of the Economy and Management Department of the University of Ferrara and adopted in January 2013¹⁹. The UNESCO Office also handled the preparation and subsequent implementation of 16 projects funded under the provisions of Law 77/2006, managing total financing of more than 1,130,000 Euro allocated to the Site and concerning both the updating of the Management Plan and specific technical and scientific themes as required by the Management Plan itself, and also cultural and tourism development projects.

From 2010, the Office followed the complex procedure of drafting the UNESCO Site Regulations, which were adopted in October 2017²⁰; the Office also prepared the questionnaire concerning the second cycle of the periodic report and updating of the Statement of Outstanding Universal Value (2014-2015).

Between 2012 and 2013 the Office prepared and launched the didactic project entitled *A scuola con l'Unesco. La cattedrale, la torre e Piazza Grande Raccontano*, (At school with UNESCO, the Cathedral, Tower and Piazza Grande tell their story)²¹. Finally, the Office is responsible for administration and constant updating of the official website²², focusing on communicative and informative aspects, events and initiatives concerning the Site, constant monitoring, and updating of the Management Plan.

The governance system identified as the most suitable for management of the Modena Site was direct management on a time and materials basis, selected when the experimental Management Plan was adopted, at the time of signing also of the first *Memorandum of Understanding*, which establishes the City of Modena as the reference entity²³ as confirmed by subsequent agreements²⁴. This management format consists of direct administration of the properties on the Site by the proprietor entities – Modena City Council for the Tower, Piazza Grande and City Hall, Basilica Metropolitana and the Diocesan Curia for the Cathedral and the Archbishopric Palazzo – based on programming shared within the Site governance structure, as guaranteed by the activities of two bodies: the Steering Committee and the Technical Committee.

¹⁹ Refer to the following official acts: *Modena Council Decision* no. 29 of 16 May 2005; D.G. no. 127 of 18 March 2008; *Council Decision* no. 2 of 14 January 2013.

²⁰ Below, *Reference framework*, paragraph 4.5 *Site Regulations*.

²¹ Below, *Reference framework*, paragraph 4.3 *Didactic projects A scuola con l'Unesco (at school with UNESCO)* and *Culture in dialogo (cultures in dialogue)*.

²² www.unesco.modena.it

²³ The *Memorandum of understanding* of 22 February 2005 was officially adopted with *Modena Council decision* no. 29 of 16 May 2005.

²⁴ Below, *Objectives and actions*, sheet 1.1 *Governance of the Site*.

The Steering Committee is composed of representatives of the following bodies: The City of Modena; Basilica Metropolitana di Modena; the Ministry of Cultural Heritage and Activities, and Emilia Romagna Regional Administration. This committee has the task of defining strategies, actions and financial priorities for meeting the Plan objectives on the basis of indications furnished by the Technical Committee. The Steering Committee meets at least once a year. The meetings are attended by the Site Coordinator in charge of the Civic Museums Coordination Department, who operates as the interface with the Technical Committee. The Technical Committee is composed of officers and technicians appointed by the Steering Committee, from the following entities: The City of Modena and Basilica Metropolitana as the owner entities; Superintendency; Emilia-Romagna Regional Secretariat. The Technical Committee has the task of furnishing the necessary elements for updating the Management Plan and of following its implementation, monitoring and periodic updating, also making use of the collaboration of other expert bodies; the Committee may meet in the form of select groups depending on the specific nature of the items on the agenda and on the basis of specific competences. The Technical Committee normally meets at least three times a year.

In its role of reference entity, the City of Modena has appointed the Civic Museums to handle general coordination and compliance matters related to applications for funding and to reporting matters pursuant to Law 77/2006. It follows that the Civic Museums Director, dott.ssa Francesca Piccinini, has been confirmed in her role as Technical Committee coordinator and guarantor for the interface between this latter and the Steering Committee.

4.2 Choice of projects for the 2018-2020 Management Plan

The structure of this three-year update of the Management Plan – as described in the introduction – is substantially unchanged with respect to the previous version; the objectives collected in the second part of the document are aimed at consolidation and development of the projects implemented in recent years, from the post-earthquake cathedral consolidation works to integrated instrumental monitoring of the entire complex and application of the *Regulations*.

The choices made take account of the results of the quality survey conducted in 2016 in order to orient the management plan update, the results of which are illustrated in the previous chapter of this general introductory and orientation part, highlighting the projects put in place based on the feedback received²⁵. In this context, note the contents of plan section **5. Development and management of tourism** in which the plan envisages actions such as the updating of signs and the creation of new visit support devices²⁶, indicated as appropriate by part of the interviewees, while periodic monitoring of perception of the Site among citizens and visitors has become an additional specific objective²⁷.

In relation to point **2. Research and knowledge sharing** there are three objectives (2.1, 2.2, 2.3) deemed to be strategic: creation of the Scientific Supervision Committee, which combines the two previous Scientific Committees that oriented the recent restoration campaigns of the tower and cathedral; creation of a Site work database, containing all knowledge and scientific data acquired in recent years, which will be at the disposal of the technical personnel involved in the management and the experts on the Committee, but that can be consulted, under certain conditions, also by others who submit a motivated request; an articulated research programme on the most ancient history of the site on which the Romanesque complex recognised by UNESCO was erected, calling for a more detailed study based on recently emerged data, the interpretation of which has yet to find a full consensus.

Concerning point **3. Protection and preservation of the heritage** several maintenance actions have been identified as required, namely refurbishment of the communal areas and the interior of the Ghirlandina. The aim of this latter action also includes preparation of the plan for anti-seismic con-

²⁵ Above, *Reference framework*, paragraph 3.3 *Results of the quality survey addressed to tourists and citizens*.

²⁶ Below, *Objectives and actions*, sheet 5.1 *New devices for visiting the Site* and 5.3 *Updating of visitor signs*.

²⁷ Below, *Objectives and actions*, sheet 5.2 *Quality survey*.

solidation as financed by the Regional authorities in 2018. The most significant initiative, which also concerns the sphere of cultural promotion, is anyway the extension of *Cathedral Museums*, thanks to which it will be finally possible to provide adequate documentation within the Site, explaining the reasons for the heritage recognition and the history of the various properties²⁸.

Point 4. **Cultural and economic promotion** includes, in addition to the *Cathedral Museums*²⁹ new fit-out, also the annually held event *Modena Patrimonio Mondiale Fest (Modena World Heritage Fest)*³⁰, likewise defined on the basis of the results of the quality survey, which also suggested the communication campaign *Io sono patrimonio dell'umanità*³¹ (I am world heritage), both of which addressed first and foremost to citizens with the aim of boosting levels of involvement among the local community. This latter objective is included in section 6. **Participation and accessibility**, which combines the projects concerning teaching and cultural integration, and also a specific objective dedicated to accessibility³².

4.3 Didactic projects *A Scuola con l'Unesco (At School with Unesco)* and *Culture in dialogo (Cultures in dialogue)*

The need to disseminate and share the most precious heritage of the city with new generations so that they will come to understand the importance of protecting it and presenting it, not only for the local community but also for citizens of the entire world, has persuaded the UNESCO Site Coordination Office to prepare an articulated didactic project in liaison with the Cathedral Museums, to be presented in schools of all types and levels. The project, which initially included seven different didactic programmes and was extended at a later date with new proposals, was launched in January 2014. Implementation of the project was possible once the Capitular Archive had been relocated to alternative premises, thus freeing up a large space connected to the Cathedral Museums, which, in liaison with Basilica Metropolitana, responsible for creating and managing the managing the Museums, was allocated for use as a didactic workshop. In this context it should be noted that all proposals must be closely related to the school syllabus and should also reflect an active student-participation type approach.

The project management is regulated by the terms of a memorandum of understanding entered into between the Civic Art Museum and Cathedral Museums in 2013 and renewed in 2016. Created in liaison between the two entities, the memorandum calls for a Technical-Scientific Committee responsible for supervising the operation of guided tours and workshops in order to guarantee correct transmission of the cultural and religious contents and presentation of the properties in compliance with their most intimate nature, and preparation, assessment and approval of all didactic, informative and promotional material in respect of the teaching project, which is essentially self-financed by the income deriving from course fees. The sponsorship initially granted by Unicredit (2013-2016), which was bolstered between 2017 and 2018 by the participation of Palatipico s.r.l. and Consorzio Zampone e Cotechino, has thus far made it possible to expand the courses offered and keep the equipment and fittings in perfect working order.

The project pursues three general objectives: understanding UNESCO, its organisation and its values; understanding the Cathedral, the Ghirlandina Tower, and Piazza Grande, their history and the artistic heritage they preserve; increasing the sense of connection to the territory and awareness of the identity as heirs and custodians of a property recognised as a Word Heritage. All the programmes and

²⁸ Above, *Reference framework*, paragraph 4.6 *Cathedral Museums redevelopment and extension project* and below, *Objectives and actions*, sheet 3.1 *Cathedral Museums Extension* and 4.1 *Cathedral Museums new fit-out*.

²⁹ Below, *Objectives and actions*, sheet 4.1 cit.

³⁰ Below, *Objectives and actions*, sheet 4.2 *Modena Patrimonio Mondiale Fest (Modena World Heritage Fest)*

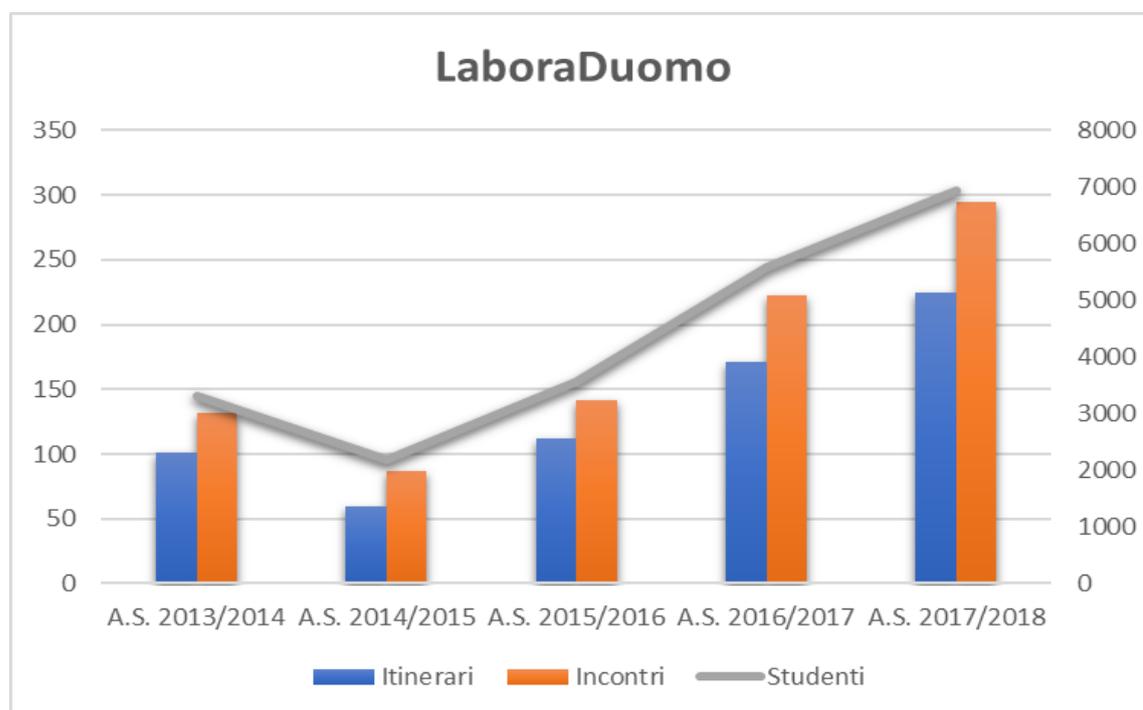
³¹ Below, *Objectives and actions*, sheet 6.1 *Campaign Io sono patrimonio dell'umanità (I am World Heritage)*.

³² Below, *Objectives and actions*, sheet 6.2 *For a Site without barriers*.

respective course descriptions are included in a dedicated document that is published annually and sent out to schools in the municipality and in the wider province. The document is also uploaded on the website of MEMO (City of Modena Sergio Neri Educational Resource Centre) and on the specific World Heritage Site³³ web pages, from where it can be downloaded in Pdf format. The experimental programme launched in January of the 2013-2014 school year met with resounding success from the very first months of operation: 2,300 students made use of the proposals in just five months, with a total of 132 classes, 34 of which from outside Emilia Romagna. The number of users rose steadily over the following years until reaching 6,924 in the 2017-2018 school year, for a total of 225 classes, 24 of which from outside Emilia Romagna.

The numbers shown in the following table provide an indication of the proposal's success.

School Year	Itineraries	Meetings	Students
2013/2014	101	132	3300
2014/2015	60	87	2175
2016/2017	112	142	3530
2017/2018	171	223	5575
2018/2019	225	295	6925



³³ From: <http://www.unesco.modena.it/it/didattica-e-divulgazione/didattica-1/materiali-didattici>.

4. Governance and Management Plan

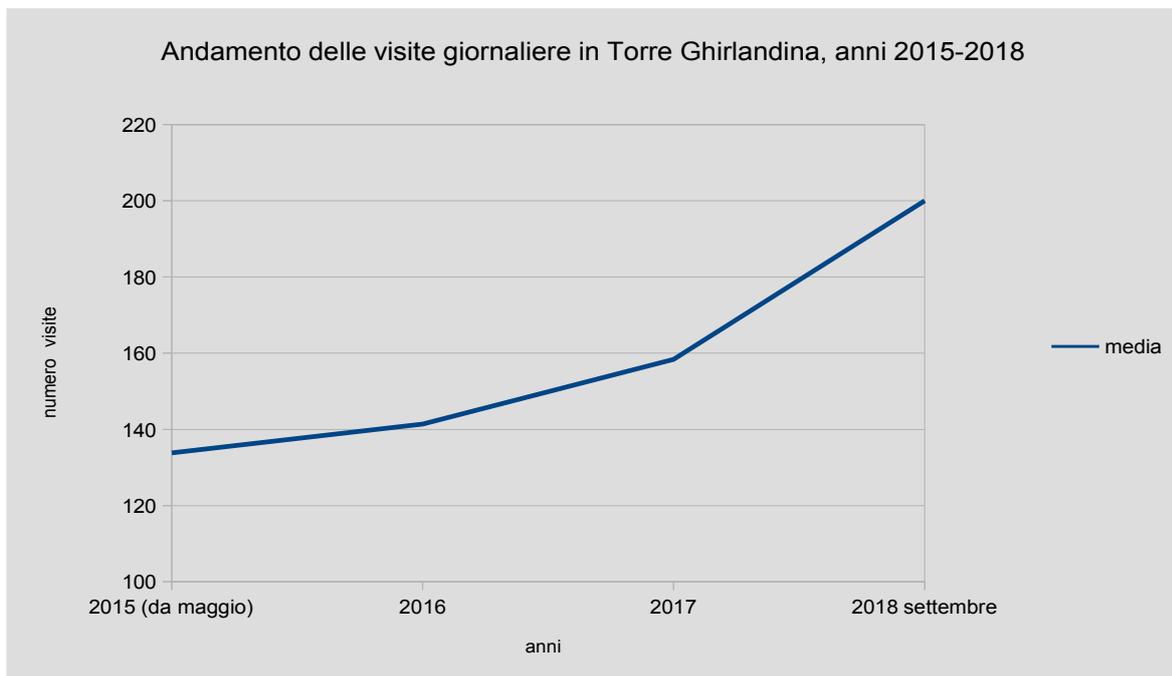
The importance assumed by the project in the context of Site management and the intention of keeping it active in the future, updating it and strengthening it, explains why it has been allocated a specific objective in the Management Plan.

The training activity proposed by the UNESCO Site Coordination team has been extended to include also foreigners studying Italian thanks to collaboration with Modena C.P.I.A. (Emilia Romagna adult education service), which was launched in 2012. The *Culture in dialogo* project contains specific proposals which, starting from awareness and communication of the Modena World Heritage Site, are aimed at assisting dialogue between different cultures and awareness of the immense and exceptionally diverse heritage safeguarded by UNESCO. Also this latter project, whose continuation through time with associated updating and strengthening is deemed to be a priority, is the subject of a dedicated objective of the Plan.

4.4 Unified ticket and opening of the Ghirlandina Tower

From May 2015, in the context of a more far-reaching project for tourism promotion of the city, the City of Modena launched a major coordinated action to promote the Site in terms of ease of access, animation and promotion of tour itineraries.

Thanks to synergistic and constructive coordination between the City and Tourism Promotion Service, UNESCO Site Coordination, and the Cathedral Museums, important collaboration agreements were entered into in the drive to create new itineraries and opportunities for visits among both citizens and tourists.



The results achieved include the unified UNESCO Site admission ticket, which includes entry to the Ghirlandina Tower, the Cathedral Museums, and the historic chambers of the City Hall, with a guided tour of the municipal balsamic vinegar plant in the City Hall attics. Special attention was devoted

to accessibility and to the possibility of visiting the Ghirlandina Tower, which is open all year round with professional staff, with extended opening hours and a guided tour service. In 2016 an annual cultural animation programme was launched in the Ghirlandina Tower and at the historic chambers of the City Hall. The programme offers a yearly calendar designed around the requirements of citizen and visitor target groups (theatrical tours, events for children, combined visits to the Tower and the historic City Hall Chambers, thematic tours of the Tower with in-depth information, evening tours with aperitifs in July and August, short tours of the Tower every day, also in English and/or French). Special attention was focused on communication, which is always coordinated and based on various on-line and off-line tools.

In the framework of the overall promotion project, an experimental project launched in liaison with the Basilica Metropolitana Chapter and now fully operational, involving opening of the Cathedral at lunchtime thus allowing a significant increase in the influx of cultural and tourism visitors without affecting religious services.

The results recorded to date are encouraging. Analysing the historic data for access to the Ghirlandina Tower we see a significant rise in the number of visitors, especially in the number of foreign visitors, with a twofold increase in average daily attendance levels. Tourists were primarily from France (16%), Spain (13%), UK and Germany (around 12% each), while visitors from the US, Germany and Spain showed a particularly marked increase compared to 2015.

4.5 Site Regulations

The Regulations are one of the tools required by the 2012-2015 Management Plan; prepared by a cross-disciplinary work group from the City of Modena, which brought in six departments (Culture, Business and Tourism, Historic Centre, Town Planning, Mobility, and Environment and Services). They were drafted based on numerous meetings with the entities represented on the Steering and Technical Committees, especially with the peripheral bodies of the Ministry of Cultural Heritage, (which have been undergoing major structural reforms in recent years with significant turnover of executive and managerial positions), and also on a detailed programme of gathering feedback and exchanging views with trade associations and stakeholder representatives.

Approved by the City Council in its meeting of 26 October 2017, the text aims to guarantee a measure of equilibrium between the needs for protection and the need that the UNESCO Site remain a living and inhabited space, in the awareness of the world heritage nature of a complex for which the citizens of Modena, hence the Municipal administration above all, are guarantors and custodians.

The Regulations identify four areas in which application of certain rules is differentiated, from the inscribed perimeter, which is subject to the highest level of attention and the most stringent rules, to the entire Historic Centre as defined by the zoning plan, with regard to environmental protection and protection of lines of sight.

There are four regulated sectors: accessibility and routes; type and décor of business premises; type and characteristics of temporary events; personal rules of conduct in the area.

In relation to accessibility and routes, having established the pedestrianisation of Piazza Grande and Piazza Torre and imposed significant limits on traffic in Corso Duomo and on the relevant section of Via Emilia Centro, the Regulations define the times and methods of access to the Site for loading and unloading and for staging of temporary events.

With regard to business premises and their permanent and temporary fit-outs, activities linked to the promotion of traditional local foods and wines and activities that preserve or re-propose values connected to history and local business and commercial traditions are to be facilitated and preferred. New businesses must have street terraces, shop windows, and furniture that complies with the indications given in the attached Schedule. Conversely, existing businesses must upgrade their appearance

in terms of windows, roller shutters and signs at the time of any changes made to the business and/or the furniture; in any case, awnings and lights must be adapted within a period of four years from the time of enforcement of the Regulations. The principle is that of a gradual process until including all the aesthetic and functional criteria established in accordance with a more authentic and consistent image of the area. The possibility is also provided for the municipal administration to pass acts granting incentives to aid the adaptation process.

In respect of temporary events held in Piazza Grande, the Regulations impose a limit of 24 initiatives a year and supplies the related qualification indications. By way of example, the list of permitted events includes: the traditional Fairs of S. Antonio and of S. Geminianus; the traditional Fat Thursday carnival; the antique books fair; the antiques market (12 editions); The philosophy festival *Festivalfilosofia*; the New Year's Eve Celebrations. The 24 annual events include three additional commercial type events, to be arranged with the Superintendency on the Site Technical Committee. The annexed Schedule also specifies possible stage positions for performances in Piazza Grande; the dimensions and positions of gazebos for trade events; the layout of stalls for the city's fairs. It also establishes sound limits for potentially high noise events.

The rules also include a code of conduct for the public, with related administrative penalties likewise described in the Schedule.

Application of the Regulations is normally guaranteed by the municipal administration through its competent departments, while problematic cases concerning adaptation to the rules set down in the Regulations will be submitted to the Technical Committee for vetting.

Finally, the Municipal Executive undertakes to carry out an annual check on the results of application of the Regulations, with the related report to be submitted to the UNESCO Site Steering Committee.

4.6 Cathedral Museums redevelopment and extension project

Within the perimeter of the UNESCO Site, Basilica Metropolitana has set up and currently operates the Cathedral Museums, inaugurated at the time of the 2000 Jubilee and composed of the Lapidary Museum, located on the ground floor and overlooking the Presbytery Courtyard, and the Cathedral Treasury Museum, which is housed in several rooms on the first floor, most of which owned by the neighbouring Notarial Archive.

Since 2014 the Museums have been participating in running the *A scuola con l'Unesco (At school with UNESCO)* didactic project, for which a room has been provided that initially functioned as the seat of the Capitular Archive and was then used as a workshop to hold courses³⁴, but that is inadequate for requirements, also in consideration of the growing success of the proposal.

Already from 2008 the Basilica Metropolitana took action to extend the exhibition spaces of the Museums on the second floor of the "ex Canoniche" building, with planning proposals and preliminary negotiations for purchase or rental of premises it does not own. This project was one of the primary objectives of the Multi-annual plan produced by the Basilica on 31/12/2008 *Modena Cathedral: layout of restoration works already carried out, currently in progress and pending execution*, this document being subsequently disclosed during a meeting of the Site Technical Committee and integrated in the *Modena UNESCO Site Management Plan. 2012-2015 Update*.

The tourism development projects of the Site promoted by the Steering and Technical Committees confirmed the need to revamp and upgrade this major museum facility to allow it to illustrate, using the latest methods and languages, not only the heritage of art and faith linked to the Cathedral, but also the entire complex recognised by UNESCO, given the importance of informing visitors of its cultural and artistic value, while also illustrating its history and documenting its authenticity and integ-

³⁴ Above, *Reference framework*, paragraph 4.3 *Didactic projects A scuola con l'Unesco (At school with UNESCO)* and *Culture in dialogo (Cultures in dialogue)*.

rity. An initial result in this direction was accomplished in 2016 when the spaces accommodating the entrance and the Museum bookshop were redeveloped, thanks to the funding made available by Law 77/2006 (2014 financial year). In the interim, the Cathedral Museums extension project was defined, going on to become the most important and ambitious objective of the 2018-2020 Management Plan. In this context additional spaces have been made available, adjoining and interconnected with the spaces occupied to date, in several rooms owned by the Notarial archives administration located on the second floor and in the attic of the same building designated the “ex canoniche”. In its role as Site operator, the City of Modena therefore conducted an important operation between 2017 and 2018 in liaison with Basilica Metropolitana and with the support of Fondazione Cassa di Risparmio di Modena and of Unicredit, which allowed it to acquire – on loan from the Notarial Archives Administration - ³⁵ the part of the building currently occupied by the Cathedral Museums on the first floor and the portion identified for the future extension on the second floor. With a subsequent agreement, to be signed by the end of 2018, the City Council will transfer the entire portion of the building to Basilica Metropolitana, which will carry out the extension work, providing a space in the exhibition path to host the history and conservation of the monumental complex recognised by UNESCO, thanks to the sponsorship of Fondazione Cassa di Risparmio di Modena and Unicredit and to financing granted under the provisions of Law 77/2006.

³⁵ With an Agreement signed on 30 July 2018.



A packed Piazza Grande during the 2006 *Festival della Filosofia*



Cathedral, Portale Maggiore (Main doorway)

Parte II

Objectives and actions

1.1 SITE GOVERNANCE

Responsible party

UNESCO Site coordination

Time-frame

Medium time-frame (1-3 years)

Description

Site governance is exercised through the Site Coordination Office which, immediately after approval of the document by the Municipal Council, will handle definition of the new 2018-2020 MP implementation programme Agreement and signing thereof by all entities involved in managing the Site (City of Modena, Basilica Metropolitana, Archaeology, Fine Arts and Landscapes Superintendency, Emilia-Romagna Regional Administration).

For the entire duration of the Plan the Site Coordination Office will organise periodic meetings of the Steering Committee (at least one every year) and Technical Committee (at least three every year) and it will monitor the Plan through annual updating of the related indicators.

The Site Coordination Office will also manage Law 77/2006 projects, preparing applications after disclosing them during Technical Committee meetings and drafting the periodic reports required by the competent MiBAC department (Ministry of Cultural Heritage and Activities), assuming responsibility for relations with the Ministry and with the Association of Italian UNESCO World Heritage Properties.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	New programme agreement	3 months (within March 2019)	Internal resources	City of Modena
Specific action II	Periodic meetings of the Steering and Technical Committees	Entire duration of 2018-2020 Plan	5,000€/year	City of Modena
Specific action III	MP monitoring	Entire duration of 2018-2020 Plan	5,000€/year	City of Modena
Specific action IV	Projects management Law 77/2006, relations with Italian UNESCO properties association and MiBAC	Entire duration of 2018-2020 Plan	10,000€/year	City of Modena and Law 77/2006 projects

PROJECT OBJECTIVES

1. Guarantee joint management of the UNESCO Site
2. Monitor progress of Management Plan

Result indicators

- Signing of New programme agreement
- Number of periodic meetings of the Steering and Technical Committees
- Number of Law 77/06 projects completed each year

Other parties involved

Modena Basilica Metropolitana
 Archaeology, Fine Arts and Landscapes Superintendency
 Regional Secretariat
 Emilia-Romagna Regional Administration

Human resources

City of Modena internal personnel
 External personnel

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
New Programme Agreement Signed	YES		
Number of periodic meetings of the Steering and Technical Committees	3/year		
Number of Law 77/06 projects completed each year	1/year		

1.2 APPLICATION OF THE REGULATIONS

Responsible party

City of Modena
Site Technical Committee

Time-frame

Medium time-frame (1-3 years)

Description

The Site Regulations were among the objectives of the previous MP. Approved by the City Council in its meeting of 26 October 2017, the Regulations aim to guarantee a measure of equilibrium between the needs for protection and the need that the UNESCO Site remains a living and inhabited space, in the awareness of the world heritage nature of a complex for which the citizens of Modena, hence the Municipal administration above all, are guarantors and custodians.

There are four regulated sectors: accessibility and routes; type and décor of business premises; type and characteristics of temporary events; rules of conduct for visitors.

To guarantee application of the Regulations in compliance with the principles of gradual enforcement and progressive adaptation, these being underlying assumptions, the municipal executives responsible for the authorisations concerning commercial businesses and events and the Site Technical Committee have decided to launch a periodic testing procedure concerning: assessment of applications deemed to be problematic by the receiving offices (City of Modena business advisory centre - SUAP, City and Tourism Promotion Service, Superintendency) related to the business and related fixed and movable décor and assessment of the annual programming of events, with the objective of qualifying them progressively.

It is planned to keep the procedure in place; the procedure does not replace the authorisation processes handled by the Superintendency, but it simplifies them, for the entire duration of the 2018-2020 MP. The procedure is, in fact, considered to be the most suitable one in terms of tangible support for application of the Regulations.

Based on Management Plan annual monitoring, the Municipal Executive will perform an annual check on the results of application of the Regulation as required by the Regulation itself.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Progressive qualification of events	Entire duration of 2018-2020 Plan	Internal resources	Bodies involved
Specific action II	Adaptation of retail businesses to bring them into line with the provisions of the Regulations	Entire duration of 2018-2020 Plan	Internal resources	Bodies involved

PROJECT OBJECTIVES

1. Guarantee better use of Piazza Grande
2. Guarantee greater respect for the UNESCO Site

Result indicators

- Problematic applications assessed jointly
- Businesses making the necessary changes to comply with the Regulations

Other parties involved

UNESCO Site coordination
Modena Basilica Metropolitana

SUAP

City and Tourism Promotion Service

Municipal Police Sector and Policies for Legality and Security

Environmental impact office

Mobility and traffic service

Archaeology, Fine Arts and Landscapes Superintendency

Human resources

City of Modena internal personnel

External personnel

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
Problematic applications assessed jointly	100%		
Businesses complying with the Regulations	50%		

2.1 CREATION OF A COMPUTERISED WORKING DATABASE

Responsible party

UNESCO Site coordination

Time-frame

Short time-frame (0-1 years)

Description

In recent years several scientific research projects, technical reports, laser scanner surveys, 3D models, ground plans, sectional views, photographs, and instrumental monitoring reports in the framework of the previous Management Plan.

The aim of this project is to create a digital archive to collect, organise and share this substantial legacy of data, the majority of which are connected to the restoration works carried out on the Cathedral (from 2006 to 2014) and on the Ghirlandina Tower (from 2007 to 2011).

The aim is to make the information accessible not merely to the personnel responsible for managing and caring for the World Heritage complex, but also to any students who request access. Students will be granted access to only a selection of data using temporary credentials, and they will be required to comply with a specific regulations.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Inventory, organisation and subdivision of data according to shared criteria concerning search functions and utilisation	December 2018	15,000€	Law 77/06 (2017 financial year)
Specific action II	Database programming	December 2018	14,000€	Law 77/06 (2017 financial year)
Specific action III	Data upload to the database	June 2019	5,000€	Law 77/06 (2017 financial year)
Specific action IV	Go-live online and checking of database operation	June 2019	Internal resources	City of Modena

PROJECT OBJECTIVES

1. Collection and organisation of the legacy of data held by the Site owner entities (City of Modena and Modena Basilica Metropolitana)
2. Sharing of the data by the technicians responsible for overseeing and managing the Site
3. Spreading awareness of the studies by consulting the database available on www.unesco.modena.it

Result indicators

- Completion of archive within 2019
- Number of consultations in 2020

Other parties involved

Modena Basilica Metropolitana
 City of Modena ICT Projects, communication and smart city service
 City of Modena Public Works, Historic Buildings and Ordinary Maintenance of the city
 Company for database programming

Human resources

City of Modena internal personnel
 Specialised personnel under contract

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
Completion of archive within 2019	YES		
Number of consultations in 2020	100		

2.2 INTEGRATED INSTRUMENTAL MONITORING AND SCIENTIFIC SUPERVISION

Responsible party

City of Modena
Basilica Metropolitana
in collaboration with the Superintendency

Time-frame

Medium time-frame (1-3 years)

Description

At the time of the recent restoration campaigns concerning both the Cathedral and the Ghirlandina Tower, two separate Scientific Committees were set up to orient and guide the choices made, research, studies and surveys were planned and conducted, producing a wealth of new information on the two monuments and on their conservation history.

Once the restoration works are completed, a single Committee should be created for Scientific Supervision of the complex by means of: interpretation of data supplied by the Cathedral and Tower restoration maintenance plans and by the integrated instrumental monitoring system launched in 2003 and upgraded after the 2012 earthquake; identification of further investigations needed; planning of new restoration works that become necessary.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Formation of the Scientific Supervision Committee	2018-2020	50,000€/year (estimate)	To be identified
Specific action II	Cathedral restoration maintenance plan and interpretation activity			
Specific action III	Tower restoration maintenance plan and interpretation activity			
Specific action IV	Integrated instrumental monitoring and interpretation activity			

PROJECT OBJECTIVES

1. Guarantee scientific supervision of the monumental complex through the activity of the Committee.
2. Guarantee continuation of integrated instrumental monitoring of the complex in order to assure the best possible conservation and promote any necessary consolidation and restoration actions.

Result indicators

- Number of documents in the archive (from 2000)
- Instrumental monitoring report
- Minutes of Scientific Supervision Committee meetings

Other parties involved

University of Modena and Reggio Emilia
 Turin polytechnic
 Other universities and research institutes
 External companies and technicians

Human resources

City of Modena internal personnel
 Specialised personnel under contract

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
Number of documents in the archive	100%		
Instrumental monitoring report	1/year		
Minutes of Scientific Supervision Committee meetings	1/year		

2.3 BEFORE THE CATHEDRAL: RESEARCH AND SURVEYS OF THE SITE BETWEEN LATE ANTIQUITY AND EARLY MIDDLE AGES

Responsible party

UNESCO Site coordination

Time-frame

Medium time-frame (1-3 years)

Description

The aim of the research is to define the construction phases of the cathedral between Late Antiquity and the Dark Ages in relation to the city's evolution in terms of environment, demographics and town planning. Archaeological, anthropological, historical, structural and construction data concerning the cathedral will be analysed with an integrated multidisciplinary approach, also with the support of archaeological analyses.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Archaeological and stratigraphic analysis of the structures and remains related to the initial phases of construction of the religious building uncovered in recent digs	1 year	15,000€ (estimate)	To be identified
Specific action II	Structural and historical-archaeological analysis of the stratified plano-altimetric complex from Saint Geminianus to the present. Multidisciplinary reading of the data and interpretative hypotheses	2 years (to start after Action I)	10,000€ (estimate)	To be identified
Specific action III	Definition of geological-environmental and ethnobotanical profile	3 years	10,000€ (estimate)	To be identified
Specific action IV	Definition of burial ground: topography, rites, social and anthropological components	3 years	15,000€ (estimate)	2500€ Regional Law L.R.18/2000 4000€ Museum 2019 8500€ pending definition
Specific action V	Evolution of the urban space between the Roman era and the Middle Ages	3 years	Pending definition	To be identified
Specific action VI	Disclosure of the results, also in the restructured Cathedral Museums	3 years	5,000€ (estimate)	To be identified

PROJECT OBJECTIVES

1. Obtain archaeological data concerning the oldest phases of the Cathedral
2. Obtain topographical and chronological data concerning funereal and anthropological rituals on the city's burial grounds
3. Archaeo-environmental and geological reconstruction of the urban space from Late Antiquity to the Dark Ages
4. Definition of construction phases of the cathedral and its architectural-spatial configuration with respect to the current monument
5. Reconstruction of the evolution of urban space from Late Antiquity to the Dark Ages.

Result indicators

- 1 ground plan per phase and 2 archaeological sections. Date analysis of 10 samples of mortars and renders
- 1 integrated map between current cathedral and pre-Lanfranco phases
- 1 altimetric reconstruction. Analysis of 55 pollen samples and 40 carpological samples; pollen analysis of 10 mortar samples
- Anthropological analysis of 100 persons; map of burial grounds; 1 anthropological data table; 1 table with carbon and nitrogen isotope analysis results; 1 table with strontium isotope analysis results
- Map of historic centre with city limits, places of worship and urban fabrics.

Other parties involved

Archaeology, Fine Arts and Landscapes Superintendency.

University of Modena and Reggio Emilia, Chemical and Geological Sciences Department; Life Sciences Department.

University of Bologna, Physical Anthropology and antique DNA Laboratory of the Cultural Heritage Department (Ravenna faculty).

Basilica Metropolitana: Cathedral Museums.

Studio Silvestri of Modena – Cathedral restoration works Planning and Management.

Human resources

Archaeological and historical research: Silvia Pellegrini and Francesca Piccinini (Civic Museums), Cinzia Cavallari (Superintendency of Archaeology, Fine Arts and Landscape for the Metropolitan city of Bologna and the provinces of Modena, Reggio Emilia and Ferrara).

Geological and environmental evolution and archaeometric analysis of cathedral materials: Stefano Lugli (Chemical and Geological Science Department).

Analysis of vegetable macro-remains of food plants: Giovanna Bosi (Department of Life Sciences of the University of Modena and Reggio Emilia).

Anthropological and cultural analyses: Antonino Vazzana and Eugenio Bortolini (Laboratory of Physical Anthropology and ancient DNA at the Cultural Heritage Department under the tutelage of professor Stefano Benazzi of the University of Bologna - Ravenna faculty).

Chemical isotope analysis: Anna Cipriani (Chemical and Geological Science Department of the University of Modena and Reggio Emilia).

Structural and historic-architectural analysis: Elena Silvestri.

Students and researchers appointed by the Bodies participating in the project.

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
1 ground plan per phase and 2 archaeological sections. Date analysis of 10 samples of mortars and renders	1		
1 integrated map between current cathedral and pre-Lanfranco phases	1		
1 altimetric reconstruction. Analysis of 55 pollen samples and 40 carpological samples; pollen analysis of 10 mortar samples	1		
Anthropological analysis of 100 persons; map of burial grounds; 1 anthropological data table; 1 table with carbon and nitrogen isotope analysis results; 1 table with strontium isotope analysis results	100+4		
Map of historic centre with city limits, places of worship and urban fabrics	1		

3.1 EXTENSION OF THE CATHEDRAL MUSEUM

Responsible party

Basilica Metropolitana (in collaboration with City of Modena actions I, II and III; action IV)
City of Modena (in collaboration with Basilica Actions I, II and III)

Time-frame

Medium time-frame (1-3 years)

Description

In its role as Site operator, in 2017 the City of Modena launched a major operation in collaboration with Basilica Metropolitana, Fondazione Cassa di Risparmio di Modena and Unicredit. The initiative, which is scheduled for completion before the end of 2018, will allow the Operator Entity to acquire - on loan from the Notarial Archives Administration - the part of the building currently occupied by the Cathedral Museums on the first floor and the portion identified for the future extension on the second and third (attic) floors.

The project calls for the subsequent sale by the City of the entire building area to Basilica Metropolitana which, thanks to funds provided by Fondazione Cassa di Risparmio di Modena, Unicredit and Law 77/2006, will extend the Cathedral Museums, providing a suitable area on the exhibition path for presentation of the history and conservation efforts of the Cathedral and of the complex recognised by UNESCO, and allocating suitable new spaces for didactic activities and temporary events.

For this purpose, the City of Modena and the Basilica agree to place the development of the extension project, to be approved by both bodies, in the hands of a work group composed of representatives of each body, a representative of Fondazione Cassa di Risparmio and two technical experts.

An initial planning hypothesis, presented to the public in March 2018, considers extending the exhibition spaces by renovating the rooms located on the floor above the current museums and redevelopment and exploitation of the courtyard as a public hospitality and meeting space for students, parties, and groups of tourists.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Agreement between City of Modena and Notarial Archives Management and between City of Modena and Basilica Metropolitana	18 months (2017-2018)	700,000€ + 100,000€	FCRMO and Unicredit + Law 77/2006
Specific action II	Preparation of final museographic project	6 months (2019)		
Specific action III	Works approval procedure	4 months (2019)		
Specific action IV	Works execution	18/24 months (2019-2020)		

PROJECT OBJECTIVES

1. Extend the Cathedral Museums, allocating new spaces to present the history and conservation events concerning the cathedral and the complex recognised by UNESCO, and to accommodate didactic and informative activities
2. Redevelop the Cathedral Museums courtyard

Result indicators

- Filing of executive plans
- Issue of permits
- Contracting of works

Other parties involved

FCRMO
Unicredit
Companies and experts

Human resources

To be identified

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
Filing of executive plans	YES		
Issue of permits	YES		
Contracting of work	YES		

3.2 REDEVELOPMENT AND MAINTENANCE OF COMMUNAL AREAS

Responsible party

UNESCO Site coordination
 City of Modena Public Works, Mobility and Urban Maintenance Sector – City of Modena Public Building
 Planning and Historic Building Service

Time-frame

Long time-frame (3-6 years)

Description

Over the years, also following implementation of new technologies, overhead or otherwise visible infrastructure, including cables, junction boxes, air conditioners, trunking, exterior utility connections, etc. installed on the facades of buildings within the boundary of the World Heritage Site have reached a level of density such as to detract from the appearance of the oldest palazzi in the city, including the Archbishopric Palazzo in Corso Duomo.

Many of these systems, partly installed on a temporary basis for the fairs and markets held on weekends or during the Christmas period, can be installed in concealed fixed locations by creating underground culverts and utility conduits.

Moreover, even though both the Cathedral and the Ghirlandina Tower have their own Maintenance Plans for constant monitoring of the restoration actions performed in the recent campaigns, a series of actions must be planned for maintenance of the Site's communal areas to keep the level of efficiency and functionality of the works carried out through time, and more generally to improve the quality of the monumental complex.

In particular, works are planned on the cobblestone paving of Piazza Grande, which currently has various problems in terms of bed-in and adhesion. First of all an experimental action will be conducted on a limited area to test the methodology and results.

Moreover, in relation to recent acts of vandalism and theft involving the Cathedral it was decided to dedicate a specific action to the control and upgrading of security measures.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Experimental action for reshaping of cobbled paving in Piazza Torre	December 2018	29,000€	Law 77/2006 (2014 financial year)
Specific action II	Relocation and burying of current overhead fixed and temporary utility infrastructure	2020-2021	50,000€	City of Modena
Specific action III	Scheduling of maintenance actions	Annually	Internal resources	City of Modena
Specific action IV	Additional maintenance actions of Site communal areas	2020-2022	Pending definition	To be identified
Specific action V	Security control and upgrading	2019-2020	Pending definition	To be identified

PROJECT OBJECTIVES

1. Substantially improve the aesthetic appearance of buildings within the Site boundary
2. Maintain the efficiency and functionality of the works performed through time

Result indicators

- Improvement in accessibility and appearance of Piazza Grande
- Quality improvement of the monumental complex
- Relocation of overhead infrastructure in fixed and concealed locations

Other parties involved

City of Modena Public Works, mobility and urban maintenance sector
 City of Modena ICT projects, communication and smart city service - Communication department
 Telecom
 Inrete
 SETA
 HERA

Human resources

City of Modena internal personnel
 External companies under contract

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
Improvement in accessibility and appearance of Piazza Grande	YES		
Quality improvement of the monumental complex	YES		
Relocation of overhead infrastructure in fixed and concealed locations	YES		

3.3 POST 2012 EARTHQUAKE REPAIRS AND REINFORCEMENT OF THE CATHEDRAL

Responsible party

Basilica Metropolitana

Time-frame

Short time-frame (0-1 years)

Description

The 2012 earthquake in Emilia caused damage to the Cathedral's ceilings, walls, roof and turrets, calling for local Repair and Reinforcement actions. The Emilia Romagna Regional administration allocated 1,300,000 euro to the Cathedral for this purpose in its Programme of Public Works - Cultural Properties, 2013-2014 Public Properties Plan.

The works, which were started in October of 2017, are currently nearing completion and they consist of consolidation of the ceiling on the extrados by the application of fibreglass membranes, wrapping of the ribs on the intrados with safety mesh, insertion of new steel tie rods in the arch footing and for connection of the walls, filling of all lesions by deep injection of lime mortar, connection of all wooden beams of the roof by means of metal components, consolidation of the facade turrets.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Preliminary project	3 months	1,300,000€	Emilia Romagna Region - Programme of Public Works/Cultural Properties
Specific action II	Executive project	3 months		
Specific action III	Call for tender	2 months		
Specific action IV	Works execution	October 2018 January 2019		

PROJECT OBJECTIVES

1. Repair and reinforcement of the following vulnerable elements: ceilings; walls; turrets; roof

Result indicators

- Executive plan authorisation
- Contracting of works
- End of works

Other parties involved

Archdioceses of Modena and Nonantola
Emilia Romagna Regional Administration
Superintendency

3. Protection and preservation of the historic-artistic heritage

Human resources

Technicians and Companies

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
Executive plan authorisation	YES		
Contracting of work	YES		
End of works	YES		

3.4 PROTECTION AND ENHANCEMENT OF THE CATHEDRAL'S ARTWORKS

Responsible party

Basilica Metropolitana

Time-frame

Medium time-frame (1-3 years)

Description

The main project phases are as follows:

- General verification of the artworks preserved in the Cathedral and identification of works in need of attention.
- Analysis of state of conservation.
- Static check.
- Ordinary maintenance (localised consolidation, dusting, preservative and anti-woodworm treatments).

The artworks identified for the project are as follows:

- Cristoforo and Lorenzo Canozzi of Lendinara, 15th century, *Chancel*, carved and inlaid wood.
- Modenese workshop (1642), *Chancel lectern*, carved and inlaid wood.
- Modenese workshop, 18th century, *Altar frontal*, plasterwork; first altar of the left-hand nave.
- Michele Dini di Niccolò alias Michele dello Scalcagna (1440-1441), Polyptych entitled *Altar of the figurines*, in moulded and painted terracotta.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Verification and analysis of the state of preservation of the artworks in the Cathedral, identifying works in need of attention. Drafting of restoration and maintenance estimate/project by a qualified restorer	2 months	Internal resources	Curia and Modena Basilica Metropolitana
Specific action II	Application to the bodies in charge of protection for authorisation to proceed	4 months	Internal resources	Curia and Modena Basilica Metropolitana
Specific action III	Search for sources of finance/sponsors	3-6 months	Internal resources	Curia and Modena Basilica Metropolitana
Specific action IV	Execution of the work (localised consolidation, dusting, preservative and anti-woodworm treatments)	1 year	16,124€ + legally applicable rate of VAT (estimate)	To be identified

PROJECT OBJECTIVES

1. Monitor the state of conservation of the artworks in Modena Cathedral
2. Carry out special maintenance and, wherever necessary, targeted restoration actions.

Result indicators

- Monitoring and successive restoration/maintenance actions will make it possible to halt phenomena of deterioration of the works and return them to a good level of conservation. This will allow more effective exploitation of the works, which are displayed to the large numbers of worshippers and tourists who visit the Cathedral every day.
- Once the actions have been completed, reports will be drafted to allow the data to be retained through time and future checks to be scheduled.

Other parties involved

None

Human resources

Qualified restorer for work on protected cultural heritages

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
Initial monitoring	YES		
Action projects	4		
Restoration reports	4		

3.5 NEW HEATING SYSTEM FOR THE CATHEDRAL

Responsible party

Basilica Metropolitana

Time-frame

Medium time-frame (1-3 years)

Description

The current Cathedral heating system is hot air type with forced circulation via delivery grilles on the walls and intake grilles on the floor, visible in the north lateral nave.

The hot air originates from an underground passage crossing via Lanfranco and created in the 1970s, connecting the Cathedral with an underground air handling room located in the Lapidary Museum courtyard and connected to the central heating plant alongside the entrance to the Museums.

Although it is in good working order, the hot air system is dated and obsolete, with very high energy consumption.

A recent study confirmed that the current system suffers from very high heat loss in the upper reaches of the building, with massive costs for very little benefit.

In addition, this type of system is harmful for the artworks in the Cathedral because it dries the air, causing shrinkage of the component materials of the wood carvings, paintings and frescoes.

These reasons provide ample justification for complete replacement of the existing system with a lower consumption floor type system with platforms or radiant panels. The new system could be positioned, based on a dedicated plan, with radiant platforms under the benches in the naves and the crypt, to avoid any need to damage the existing floor with its alternating bands of white and red Verona marble.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Plant engineering and architectural project	2019-2020	70,000€	To be identified
Specific action II	Obtaining the necessary permits			
Specific action III	Collection of bids and award to contractor company			
Specific action IV	Construction of new system and decommissioning of the existing system			

PROJECT OBJECTIVES

1. Correct thermohygrometric indices for the internal artworks
2. Energy saving
3. Thermal comfort of visitors

Result indicators

- Comfortable conditions inside the building in winter
- Measurable energy savings shown by heating bills

3. Protection and preservation of the historic-artistic heritage

Other parties involved

None

Human resources

Technicians and Companies

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
Comfortable conditions inside the building in winter	YES		
Measurable energy savings shown by heating bills	YES		

3.6 SPECIAL MAINTENANCE OF THE TAPESTRIES

Responsible party

Basilica Metropolitana

Time-frame

Short time-frame (0-1 years)

Description

The action calls for controlled atmosphere disinfestation of 14 Flemish tapestries from the second half of the 16th century and forming part of the Cathedral Museums collection.

The treatment assures complete eradication of insects in all stages of development (eggs, larvae, adults) and will be followed by a cleaning operation performed by means of controlled macro-suction.

Cataloguing of the tapestries will also be carried out, by compiling conservation sheets in order to establish the condition of each item and identify and plan for future restoration actions.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Verification and analysis of tapestries conservation condition. Drafting of restoration estimate/project and maintenance by qualified restorer	2 months	Internal resources	Curia
Specific action II	Application to the bodies in charge of protection for authorisation to proceed	4 months	Internal resources	Curia
Specific action III	Search for sources of finance/sponsors	3-6 months	Internal resources	Curia
Specific action IV	Execution of special maintenance actions (disinfestation, cleaning)	Pending definition	20,000€ + VAT (estimate)	To be identified

PROJECT OBJECTIVES

1. Protection of the works by means of disinfestation and cleaning actions
2. Drafting of conservation sheets
3. Planning of future actions
4. Photographic documentation
5. Training of museum staff in relation to maintenance activities

Result indicators

- The restoration work makes it possible to arrest phenomena of deterioration of the tapestries and guarantee their correct preservation in the serviced warehouse of the Cathedral Museums.
- Also, reports and conservation sheets will be prepared to allow future actions of actual restoration to be planned.

3. Protection and preservation of the historic-artistic heritage

Other parties involved

None

Human resources

Qualified restorer for work on protected cultural properties; Cathedral Museum personnel.

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
Action project	YES		
Conservation sheets	14		

3.7 REDEVELOPMENT AND ANTISEISMIC REINFORCEMENT OF THE GHIRLANDINA TOWER

Responsible party

UNESCO Site coordination
City of Modena Public Works, Mobility and Urban Maintenance Sector – Public Works and Historic Building Service

Time-frame

Long time-frame (3-6 years)

Description

It is not currently sustainable to plan restoration of the interiors of the Ghirlandina Tower (up to the bell floor) to complete the works carried out on the exterior of the structure between 2008 and 2011.

Despite this, several works have been carried out in this direction in recent years, including redevelopment of the tower entrance door. Proceeding from this perspective, a series of works are planned to redevelop the Tower, with visits numbering more than 40,000 per year and rising constantly.

After having created the new entrance, which has also greatly improved the working conditions of the operators responsible for monitoring the tower chambers, several minor actions are required in order to allow access by the public to the bell chamber floor and the spire, which are currently not open to visitors. Moreover, again from the perspective of the working conditions of operators, a booth is required – mainly constructed of transparent material – to protect the operator in the Torresani chamber from the cold and damp.

Actions to upgrade the Ghirlandina lighting system will also be carried out in preparation for future additional work on the electrical systems.

Construction of the entrance lighting system further emphasised the lack of light in the Tower. This project is designed to upgrade the lighting system, also with the aim of improving the level of safety for persons on the stairs. In particular, the *Sala della Secchia* and the *Scientific instruments chambers* could be used more efficiently thanks to the new electrical system. Moreover, operations to refurbish and improve the safety systems in the Tower must be carried out to make the ascent to the spire safer for operator personnel.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Operator booth in the Sala dei Torresani	December 2018	Internal resources 6,000€	City of Modena
Specific action II	Works to allow limited access to the spire	December 2020	3,000€	City of Modena
Specific action III	Final planning of new lighting system	June 2019	Internal resources	City of Modena
Specific action IV	Execution of works for construction of the new lighting system	December 2019	41,000€	Law 77/06 (2018 financial year – pending review)
Specific action V	Maintenance and refurbishment of safety systems (lifeline)	December 2019	80,000€	City of Modena
Specific action VI	Planning of works for repair of the damage caused by the 2012 earthquake and additional works to reduce seismic vulnerability and start-up of works	2019-2020	2,293,750€	Order of the Emilia Romagna Regional Administration no. 25 of 25-10-2018

PROJECT OBJECTIVES

1. Improve working conditions of operators in the Tower
2. Redevelop the interior of the Ghirlandina, viewed by thousands of visitors each year
3. Make the bell floor accessible and the floor at the base of the tower's spiral staircase, which is currently closed to the public
4. Increase safety of persons on the stairs

Result indicators

- Improvement of the working conditions of operators
- Improvement of sightseeing conditions inside the Tower
- Access to zones hitherto closed to the public
- Increased visibility inside the Tower
- No. of new light fixtures
- Antiseismic consolidation project

Other parties involved

City of Modena Public Works, mobility and urban maintenance sector
 City and Tourism Promotion Service of the City of Modena

Human resources

City of Modena internal personnel
 Operators responsible for monitoring the spaces in the Ghirlandina Tower
 External companies under contract

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
Improvement of the working conditions of operators	YES		
Improvement of sightseeing conditions inside the Tower	YES		
Access to zones hitherto closed to the public	YES		
Enhanced visibility inside the Tower	YES		
No. of new light fixtures	10		
Antiseismic consolidation project	1		

3.8 REPAIR AND REINFORCEMENT OF THE CITY HALL

Responsible party

City of Modena Public Works, Mobility and Urban Maintenance Sector – Public Works and Historic Building Service.

Time-frame

Medium time-frame (1-3 years)

Description

Following the earthquake that struck Modena in May 2012 repair works are needed with consequent localised reinforcement of parts of the historic City Hall that stands on Piazza Grande.

Firstly, the preliminary project includes a feasibility study designed mainly to identify damage and define possible solutions to be developed in detail in the final planning and executive phases. Special attention will be devoted to identifying the various construction phases of the individual palazzi, reading the nature of damage within the relevant construction phases, and defining possible structural intervention units. Finally, an initial functional stage will be developed concerning the north-east and north-west wings of the complex.

Another area in which it is important to take action concerns the mechanical and electrical systems, which are due for updating, replacing obsolete components and proceeding with a focus on energy saving solutions.

Finally, it is planned to enlarge the municipal balsamic vinegar plant by extending it into the attic area adjacent to the current volume, because the ever greater number of visitors means that more space is required to improve hospitality and functionality of the tour.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Executive planning of the intervention to repair damage caused by the 2012 earthquake	December 2019	1,319,316.50€	Order of the Emilia Romagna Regional Administration no. 25 of 25-10-2018
Specific action II	Rewiring - stage I	December 2019	100,000.00€	City of Modena
Specific action III	Rewiring - stage II	December 2020	100,000.00€	City of Modena
Specific action IV	Mechanical systems upgrade - stage I	December 2019	150,000.00€	City of Modena
Specific action V	Mechanical systems upgrade - stage I	December 2020	150,000.00€	City of Modena
Specific action VI	Municipal vinegar plant extension	June 2019	120,000.00€	City of Modena

PROJECT OBJECTIVES

1. Repair and reinforce the City Hall with respect to the 2012 earthquake damage
2. Identify the construction phases of the individual buildings located in the aggregate of which the City Hall is composed
3. Upgrade electrical appliances with solutions capable of reducing energy consumption
4. Extension of the municipal vinegar plant in the attic

Result indicators

- Repair of damage to the City Hall post 2012 earthquake
- Reinforcement of the City Hall Palazzo
- Upgrading of mechanical and electrical systems

Other parties involved

External professionals

Human resources

City of Modena internal personnel

External companies under contract

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
Repair of damage to the City Hall post 2012 earthquake	YES		
Reinforcement of the City Hall building	YES		
Upgrading of mechanical and electrical systems	YES		

4.1 CATHEDRAL MUSEUMS NEW FIT-OUT

Responsible party

Basilica Metropolitana
in collaboration with the City of Modena

Time-frame

Medium time-frame (1-3 years)

Description

The availability of spaces comparable to those that contain the current Cathedral Treasury Museum on the first floor, located on the upper floor and easily connected by installing an internal staircase, makes it possible to accommodate new sections focusing on the history of the Cathedral and the UNESCO Site. The information will be communicated via multimedia installations and modern communication techniques. The new layout will also provide new and more suitable spaces for teaching activities and to create multi-purpose areas for conferences and temporary shows.

The Project committee formed to finalise the museographic project for the Cathedral Museums extension will also be charged with specifying the fit-out and contents of the new museum, also in relation to documentation of the history and conservation efforts devoted to the monumental complex recognised with World Heritage status.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Definition of museographic fit-out project by the Project Committee	2019 (6 months)		
Specific action II	Procedure for approval of the works and search for sources of funding	2019 6 months		
Specific action III	Creation of fit-out	2020	Pending definition	To be identified Law 77/2006, 2017 financial year: 40,000€
Specific action IV	Communication, inauguration and promotion	2020	Pending definition	To be identified

PROJECT OBJECTIVES

1. Create a dedicated space in the Cathedral Museums to display the history of the cathedral and the monumental complex recognised with World Heritage status, capable of communicating the meaning and value of the UNESCO property efficiently with up-to-date information.
2. Allocate new, more suitable spaces to didactic activities and temporary events.

Result indicators

- Museographic project
- Project approval
- Works execution

Other parties involved

Fondazione Cassa di Risparmio
External companies and technicians

Human resources

To be identified

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
Museographic project	1		
Project approval	YES		
Works execution	YES		

4.2 MODENA PATRIMONIO MONDIALE FEST (MODENA WORLD HERITAGE FEST)

Responsible party

UNESCO Site coordination

Time-frame

Medium time-frame (1-3 years)

Description

In the 2016 quality survey more than 60% of the population of Modena expressed their support for an annual event dedicated to the Site.

This feedback led to the idea of organising a series of initiatives every autumn aimed at promoting the World Heritage Site and highlighting its qualities.

With first appointment held in October of 2018, each year the *Modena Patrimonio Mondiale Fest* will assume a different identity with a range of initiatives addressed to different audiences and extension of monument opening times, with opportunities for special and high-appeal visitor experiences.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Organisation and implementation of 1st edition	June - September 2018	Internal resources	City of Modena
Specific action II	Organisation and implementation of 2nd edition	June - October 2019	Pending definition	To be identified
Specific action III	Organisation and implementation of 3rd edition	June - October 2020	Pending definition	To be identified

PROJECT OBJECTIVES

1. Increase interaction of local citizens with their Heritage
2. Raise awareness and sense of identity with respect to the World Heritage Site
3. Promote and maximise the appeal of the monumental complex

Result indicators

- No. of initiatives held in each edition
- No. of participants at each edition

Other parties involved

City and Tourism Promotion Service of the City of Modena
 Modena Basilica Metropolitana
 Modena Cathedral Museums
 IAT - Tourist Information and Hospitality Service

Human resources

City of Modena internal personnel
 Artists and experts involved in creating the initiatives

4. Cultural and economic promotion

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
No. of initiatives held in each edition	8		
No. of participants at each edition	1000		

4.3 PROMOTION OF MODENESE TOURISM AND LOCAL FOOD AND WINE

Responsible party

Dr. Giovanni Bertugli – City and Tourism Promotion Service Manager

Time-frame

Short time-frame (0-1 years)

Description

Creation of a coupon to be distributed together with UNESCO Site Unified Ticket sales (ticket offices: IAT, Ghirlandina, Cathedral Museums, City Hall Historic Chambers), which will entitle the holder to enjoy traditional Modenese products at special prices, sold by businesses in the area around the UNESCO Site that agree to participate in the initiative.

The coupon can also provide discounts or special conditions for tours and guided itineraries to discover the places of production of Modena's unique and speciality products (vinegar plants, wineries, dairies, salami factories) and the "Museums of Taste" in the province of Modena.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Design and management of agreements for participation in the project, of sampling of products from Modenese gastronomical and oenological tradition at concessionary prices available on presentation of the coupon, and of the monitoring and checking methodology employed	March 2018	8,000€	80% Emilia-Romagna Regional Administration 20% City of Modena
Specific action II	Design, planning and creation of an integrated and coordinated communication plan to launch the coupon (graphic design and printing of materials, advertising and Web campaign)	April/September 2018	20,000€	80% Emilia-Romagna Regional Administration 20% City of Modena
Specific action III	Design, planning and creation of a programme of diverse events and initiatives in compliance with the project objectives for the coupon launch	April/September 2018	12,000€	80% Emilia-Romagna Regional Administration 20% City of Modena

PROJECT OBJECTIVES

1. Conduct awareness raising initiatives to promote and present excellence in local foods and wines, notably Modena PDO and PGI agribusiness products and traditional products combined under the Chamber of Commerce's "Tradizione e Sapori di Modena" brand
2. Develop value added services aimed at the "tourism" target, with an offering of experiences that combine food, wine, culture and entertainment
3. Reinforce the link between culture, history and food
4. Highlight and promote sales of the UNESCO Site unified ticket and knowledge about the Site
5. Stimulate new planning creativity among economic operators in terms of hospitality and services for visitors and tourists.

Result indicators

A series of numerical and qualitative indicators is envisaged in order to check, at the time of assessment, whether expected results in relation to specific objectives have been reached:

- % of coupons used with respect to coupons distributed
- no. of operators (bars, restaurants, cafeterias, etc.) taking part in the initiative
- no. of "Museums of Taste" taking part in the initiative
- no. of production businesses (vinegar producers, dairies, wineries, etc.) taking part in the initiative
- no. of social media and advertising promotion campaigns
- no. of events and initiatives

Also a qualitative type assessment is planned, to be conducted by means of interviews among business operators and the operators in the PDO and PGI products sector, concerning the level of appreciation among visitors and tourists.

Other parties involved

Modena Trade and Small Industry Associations (Confcommercio - Confesercenti - Cna - Lapam)
 Economic operators of Piazza XX Settembre, Via Albinelli, vicolo Forni and Via Mondatora
 Consortium of Albinelli Market traders
 Albinelli Market traders.

Human resources

General Manager: dr. Giovanni Bertugli - City of Modena

Officer in charge: dr.ssa Angela Gori - City of Modena

Palatipico Modena srl - the organisation appointed by the City of Modena to carry out all the proposed activities (arrange tasting menus with the operators - create a communication plan and events for the coupon launch - prepare a system for monitoring the coupons distributed and used)

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
% of coupons used with respect to coupons distributed	20%		
no. of operators (bars, restaurants, cafeterias, etc.) taking part in the initiative	6		
no. of "Museums of Taste" taking part in the initiative	1		
no. of production businesses (vinegar producers, dairies, wineries, etc.) taking part in the initiative	10		
no. of social media and advertising promotion campaigns	1		
no. of events and initiatives	3		

5.1 NEW DEVICES FOR VISITING THE SITE

Responsible party

Dr. Giovanni Bertugli – City and Tourism Promotion Service Manager

Time-frame

Short time-frame (1-3 years)

Description

The project is articulated in two functional and consequential steps. The first step is composed of a study of the requirements of the target, the status of existing facilities in the local context and the price policies of the main tourism-cultural services that are potentially affected by synergistic or competitive logic.

The situation thus analysed defines the contents of the second step, which concerns the definition of the typological characteristics of the instruments to be acquired, quantification of the necessary budget, identification of sources of funding, selection of the administrative procedure, acquisition of the product and the use thereof.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Analysis of the main devices used in comparable cities/places of cultural interest	October/December 2018	Internal resources	City of Modena
Specific action II	Analysis of requirements expressed by visitors to the UNESCO Site	January/February 2019	Internal resources	City of Modena
Specific action III	Analysis of sightseeing routes within the UNESCO site, also in relation to the offers already available and the associated price policy	January/March 2019	Internal resources	City of Modena
Specific action IV	Development of a design and management proposal	April/May 2019	Internal resources	City of Modena
Specific action V	Identification of financial resources and economic partnerships	June/September 2019	To be defined based on action IV	To be identified
Specific action VI	Identification of the administrative acquisition procedure	September/December 2019	Internal resources	City of Modena
Specific action VII	Acquisition	January/March 2020	To be defined based on actions IV and V	City of Modena and Specific action V partners
Specific action VIII	First use of instrumentation	April 2020	Internal resources	City of Modena

PROJECT OBJECTIVES

1. Improve access to information/hospitality of the Site
2. Increase effectiveness of the information system during access to the monumental complex
3. Enrich the general offering of the city's tourism-cultural services

Result indicators**Step 1:**

- List of public/private parties subject to the analysis Specific action II

Step 2:

- Number of UNESCO unified tickets sold (percentage increase)
- Number of requests concerning the "Art and Culture" theme of visitors at the Tourist Information Office (percentage increase)

Other parties involved

Archaeosystems

Cathedral Museums

Tourist Information Office IAT

Human resources

General Manager: dr. Giovanni Bertugli - City of Modena

Officer in charge: dr.ssa Paola Bonetti - City of Modena

IAT Manager: dr.ssa Francesca Soffici - Modenatur

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
List of public/private parties subject to the analysis Specific action II	10		
Number of UNESCO Unified Tickets sold	% increase		
Number of requests concerning "Art and Culture" theme of visitors at the Tourist Information Office	% increase		

5.2 QUALITY SURVEY

Responsible party

UNESCO Site coordination
in collaboration with the City and Tourism Promotion Service and the Cathedral Museums

Time-frame

Medium time-frame (1-3 years)

Description

The first UNESCO Site quality survey was conducted in 2016, correlating the opinions of visitors in parallel with those of residents in order to assess how the complex recognised as a World Heritage is evaluated from multiple perspectives. This survey supplied useful recommendations for updating of the Management Plan and the Technical Committee intends to repeat it periodically.

A new quality survey will therefore be proposed in 2020, four years after the first one.

The questionnaire will be once again addressed in parallel to both visitors and Modenese residents and its layout will be such as to allow correlation with data already acquired, without discounting the possibility of including new questions that may be useful for the purpose. The results of the 2020 survey can also be correlated with the data concerning the presence of tourists (overnight stays) and attendance at the main cultural sites of the city.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Design of new surveys	2019 (6 months)	14,000€ (estimate)	City of Modena and Law 77
Specific action II	Implementation	2020 (6 months)		
Specific action III	Processing of results	2020 (6 months)		

PROJECT OBJECTIVES

The aim is to obtain updated knowledge of how the Site is perceived and evaluated by visitors and citizens, also in order to orient management decisions, communication and promotion.

Result indicators

- Number of questions
- Number of interviewees

Other parties involved

Basilica Metropolitana - Cathedral Museums

Human resources

Personnel from the City of Modena and the Cathedral Museums
Specialised external companies

5. Tourism development and management

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
Number of questions	20		
Number of interviewees	400		

5.3 UPDATING OF TOURISM SIGNS

Responsible party

UNESCO Site coordination

Time-frame

Medium time-frame (1-3 years)

Description

Thanks to the previous Management Plan and financing provided by Law 77/2006, a number of actions have been carried out over recent years concerning signs. First of all, tourism-pedestrian signs were installed on the approach routes to the World Heritage Site from all possible points of arrival, proposing also sight-seeing itineraries in the historic centre and indicating the main historic-artistic attractions.

In addition, information plaques were installed in the main points of interest of the Site, with coordinated panels and captions in two languages inside the buildings.

At this point, the existing signs require revision and maintenance, with an update of their contents. Some of the tourism-pedestrian signs have been vandalised, thus calling for special maintenance or, in certain cases, replacement. Conversely, the contents of the information signs outside the monuments must be updated, especially in relation to opening times and other practical information.

The ultimate aim is to implement the signs and panels inside the Site, also further to the results of a recent quality survey conducted among tourists and residents. The survey highlighted several areas in need of attention, notably the tourist hospitality system, including direction signs and the availability of information material including printed matter and signs.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Maintenance of tourist-pedestrian information signs	December 2018	Internal resources 1500€	City of Modena Law 77/2006 (2014 financial year)
Specific action II	Maintenance of information plaques	December 2018	Internal resources 1500€	Law 77/2006 (2014 financial year)
Specific action III	Implementation of direction signs and informative material	2019 and 2020	Pending definition	To be identified

PROJECT OBJECTIVES

1. Improve the tourist hospitality system within the Site boundary
2. Carry out maintenance on existing signs and implement additional ones
3. Respond to a demand that emerged during the quality survey conducted among tourists and residents

Result indicators

- No. of tourist-pedestrian signs on which maintenance was carried out
- No. of new/updated tourism-pedestrian signs
- No. of informative products

Other parties involved

City of Modena Public Works, mobility and urban maintenance sector
 City and Tourism Promotion Service of the City of Modena
 City of Modena ICT Projects, communication and smart city service – Communications Department
 Cathedral Museums

Human resources

City of Modena internal personnel
 Cathedral Museums personnel
 External companies under contract

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
No. of tourism-pedestrian signs on which maintenance work has been carried out	100%		
No. of new/updated tourism-pedestrian signs	30%		
No. of informative/promotional products	6		

6.1 CAMPAIGN IO SONO PATRIMONIO DELL'UMANITÀ (I AM WORD HERITAGE)

Responsible party

UNESCO Site coordination

Time-frame

Short time-frame (0-1 years)

Description

The quality survey conducted in 2016 on the Modena Site showed that far more people today are aware that the Cathedral, Ghirlandina Tower and Piazza Grande appear in the List of World Heritage Sites. It is still necessary however to increase the number of residents who are aware of and proud of their Heritage, with information campaigns and initiatives to promote active participation in the protection and promotion of the monumental complex.

The communication campaign has multiple aims, traversing the historic-cultural sphere and engendering social dynamics capable of raising awareness among Modenese residents. The strategies proposed are thus capable of acting primarily on an informative level, while secondarily it will be attempted to stimulate curiosity and affection for the Heritage, thus provoking a high level of empathy in the involvement of the local community.

The purpose is to maximise the sense of belonging around the World Heritage Site and stimulate active participation and a focus on conservation, protection and exaltation of an immense heritage for the city and a motive for pride in its history.

The ideas developed consider both digital campaigns on social media and offline actions geared toward assuring accomplishment of the objectives. All actions are designed to assure immediate and readily comprehensible representation of historic and cultural contents.

The involvement of Upper secondary schools is planned for certain actions via specific projects.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Creation of a timeline with secondary schools	October 2018 June 2019		
Specific action II	The digital heritage (development of software and creation of photographic sets) with high schools	October 2018 June 2019		
Specific action III	Design and creation of a multimedia centre for the Modena World Heritage Fest	2019	Pending definition	To be identified
Specific action IV	"Quanta Modena sai" quiz (Modena general knowledge)	2019 or 2020	Pending definition	To be identified
Specific action V	"È Patrimonio di Casa" (Home-made Heritage) installation in Piazza Grande	2019 or 2020	Pending definition	To be identified

PROJECT OBJECTIVES

1. Increase the number of citizens informed about and with a sense of pride in their heritage Site
2. Raise awareness among citizens in relation to protection and promotion of the monumental complex
3. Increase awareness in the province of Modena that the Site is the property of all and as such it must be lived, respected and protected

Result indicators

- No. of actions carried out
- No. of people reached

Other parties involved

City of Modena ICT Projects, communication and smart city service - Communications Department
Modena upper secondary schools

Human resources

City of Modena internal personnel
Modena upper secondary school students
Experts and consultants

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
No. of actions carried out	6		
No. of people reached	3000		

6.2 FOR A SITE WITHOUT BARRIERS

Responsible party

UNESCO Site coordination

Time-frame

Medium time-frame (1-3 years)

Description

This project is intended to make the Modenese Site more accessible to residents and tourists.

The idea is to create a new footway in stone slabs on the south side of Piazza Grande connecting the pedestrianised areas of Via Castellaro and Corso Duomo in order to facilitate access to the monumental complex and allow also persons with impaired mobility to participate in events. This is important, since the existing cobblestone pavement makes the Piazza inaccessible to users with impaired mobility.

With regard to the tactile paving of the *A portata di mano (in fingertip reach) project*, which was inaugurated in 2017, in the broader context of the redevelopment of the Cathedral Museums the final objective is to integrate, as far as possible, the visual sphere with the tactile sphere, as occurs in other recent fit-outs of major museums.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Final planning of the new footway in Piazza Grande	June 2019	Internal resources	City of Modena
Specific action II	Execution of works for construction of the new footway	December 2019	65,000€	To be identified
Specific action III	Planning of an integrated multi-sensory fit-out for the renovated Cathedral Museums	2019 - 2020	Pending definition	To be identified

PROJECT OBJECTIVES

1. Make the Modena Site more accessible
2. Offer alternative experiences that allow multi-sensory interaction with the architectural heritage
3. Make the most of 3D laser measurements of sculptures carried out for scientific and conservation reasons, also for the purposes of information and presentation

Result indicators

- Construction of a new footway in Piazza Grande
- Planning of an integrated multi-sensory fit-out

Other parties involved

Basilica Metropolitana

Cathedral Museums

City of Modena Public Works - Mobility and urban maintenance service

City of Modena Public Works, Historic Buildings and Ordinary Maintenance of the city

City of Modena Social Policies Service

Human resources

City of Modena internal personnel

Cathedral Museums personnel

Company for construction of the new footway in Piazza Grande

Company for new Cathedral Museum fit-out

Contracted personnel

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
Construction of a new footway in Piazza Grande	YES		
Planning of an integrated multi-sensory fit-out	YES		

6.3 DIDACTIC PROJECT A SCUOLA CON L'UNESCO (AT SCHOOL WITH UNESCO)

Responsible party

UNESCO Site coordination

Time-frame

Medium time-frame (1-3 years)

Description

Thanks to collaboration between the Civic Art Gallery and the Cathedral Museums, the project entitled *A scuola con l'Unesco* was launched in the 2013/2014 school year. The diversified offering of didactic proposals addressed to schools of all types and levels is aimed at informing young people of the Modenese heritage complex, maximising their sense of connection with the territory, together with the awareness that they are heirs and custodians of a property recognised as a World Heritage to be passed down to future generations, bearing in mind the values and objectives of UNESCO.

The project is included in the school-city itineraries offering of MEMO (City of Modena's Sergio Neri Educational Resource Centre) and it is linked to a voluntary teacher training course provided free of charge each year. The proposals are addressed not only to schools in the area however, but also to those in Emilia-Romagna and neighbouring regions.

There has been an increase in time in the number of didactic courses (up from 8 to 14) and participating students (from 2300 to around 7000), but it remains necessary to revise the proposals, taking on board new contents linked, as always, to the ministerial programmes.

These activities are conducted alongside other initiatives addressed to a non-school audience: story-telling, games, publication of the 2nd and 3rd volume of the "Scoperte" (discoveries) series, workshops for families.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Revision of didactic courses	June 2019	Internal resources	City of Modena
Specific action II	Proposal of new didactic courses	September 2019	Internal resources	City of Modena
Specific action III	Proposal of after-school activities and initiatives	2019 and 2020	Internal resources	City of Modena and Cathedral Museums
Specific action IV	Completion of the "Scoperte" series	2019 and 2020	2,000€	Conad sponsorship

PROJECT OBJECTIVES

1. Inform students about UNESCO: general objectives, history, organisation and functions
2. Inform children, adolescents and families about the Modenese monumental complex recognised as a World Heritage Site
3. Develop the sense of connection with the territory and awareness of the position of heirs and custodians of a property recognised as a World Heritage, to be passed down to future generations

Result indicators

- No. of updated didactic courses
- No. of after-school activities and initiatives created
- No. of volumes of the “Scoperte” series published

Other parties involved

Cathedral Museums

Memo (City of Modena’s Sergio Neri Educational Resource Centre)

Human resources

City of Modena internal personnel

Cathedral Museums personnel

LaboraDuomo personnel

Personnel contracted to create the volumes of the “Scoperte” series

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
No. of updated didactic courses	30%		
No. of after-school activities and initiatives created	6		
No. of volumes of the Scoperte series published	2		

6.4 PROJECT CULTURE IN DIALOGO (CULTURES IN DIALOGUE)

Responsible party

UNESCO Site coordination

Time-frame

Medium time-frame (1-3 years)

Description

The long collaboration between the Civic Museums, especially the Modena UNESCO site Coordination Office, and CPIA - Emilia Romagna adult education service - has been constantly expressed in the form of itineraries aimed at promoting dialogue between different cultures.

Starting from the World Heritage composed of the Modenese monumental complex recognised by UNESCO in 1997, a project is developed each school year as an occasion for Italian language study and learning about Modenese culture, and also to develop reciprocal awareness and understanding between different cultures, represented by the students taking part, many of whom are from other countries or different regions of Italy.

The courses, which are designed together with the CPIA tutors, are articulated flexibly and organised thematically: meetings at school, guided tours, and discussions. The programme terminates with the publication of a study book containing the texts written in Italian by the course participants, which will be presented at the final event.

This project helps to promote a diverse culture that is open and tolerant or inclusive, meaning aware that in today's global society the cohabitation of different traditions and cultures is a source of enormous wealth for the entirety of humanity.

	<i>Description</i>	<i>Time schedule</i>	<i>Costs</i>	<i>Source of financing</i>
Specific action I	Planning of itinerary concerning the specific action 2018/2019	December 2018	Internal resources	City of Modena
Specific action II	School meetings, guided tours, discussion groups and final event	January - June 2019	Internal resources	City of Modena
Specific action III	Planning of itinerary concerning the specific action 2019/2020	December 2019	Internal resources	City of Modena
Specific action IV	School meetings, guided tours, discussion groups and final event	June - January 2020	Internal resources	City of Modena

PROJECT OBJECTIVES

1. Communicate and share the values linked to the cultural identity of the community that hosts the World Heritage Site
2. Increase participation of new Modenese residents in the city's Heritage
3. Offer new methods of learning Italian for new Modenese residents
4. Develop dialogue between different cultures cohabiting in the area

Result indicators

- Organisation of meetings, guided tours and discussions
- Organisation of event and/or publication of study book

Other parties involved

CPIA - Emilia Romagna adult education service

Human resources

City of Modena internal personnel

Tutors at CPIA - Emilia Romagna adult education service

External experts involved in CPIA workshop activities

<i>Indicators</i>	<i>Target result</i>	<i>Result achieved June 2019</i>	<i>Result achieved December 2020</i>
Organisation of meetings, guided tours and discussions	9		
Organisation of event and/or publication of study book	3		



Ghirlandina Civic Tower, detail

Part III

Annexes

Cronistoria dei restauri e delle trasformazioni: Duomo, Ghirlandina e Piazza Grande

I restauri della Cattedrale

L'aspetto attuale della Cattedrale non corrisponde a quello originale, ma è frutto delle trasformazioni derivanti da secoli di interventi di completamento, modifica e restauro. Si elencano di seguito i più significativi.

1435-1455 - Le precedenti coperture vengono sostituite da volte in laterizio, sormontate da una nuova struttura di copertura lignea.

Secoli XV-XVI - Vengono innalzate cappelle private a ridosso delle murature esterne delle navate laterali.

1878-1881 - Si procede al consolidamento delle travature lignee sopra le volte sotto la direzione del Genio Civile. Il progetto prevede il consolidamento delle travi che, dal precedente intervento del 1455, posavano sui diaframmi trasversali sostenuti dagli archi, e non sui muri longitudinali. Si realizzano, inoltre, i salienti sulle navate laterali, come contrafforti che vanno a raccordarsi ai semipilastri addossati ai muri della navata maggiore.

1881-1885 - All'interno della stessa campagna di restauri viene inoltre ripavimentata la cripta, consolidata la Porta dei Principi, viene aperto un fossato attorno alle absidi per risanarle dall'umidità e vengono demolite le quattro botteghe addossate al fronte sud del Duomo in corrispondenza del Palazzo Vescovile.

1887 - In nome del ripristino dell'aspetto originario del paramento murario, vengono demoliti tutti gli strati di intonaco sovrappostisi negli anni, tra cui ricordiamo quello più antico del 1230 con decorazione di carattere architettonico imitante un paramento murario in bicromia rossa e bianca e quello più recente rinascimentale (secoli XV-XVI), dei quali rimane ancora visibile qualche traccia. In questi anni vengono inoltre ridipinte le calotte delle absidi con finti mosaici in stile bizantino.

1891-1894 - Raffaele Faccioli dell'Ufficio Regionale realizza i restauri della facciata secondo il precedente progetto del Barberi, eseguendo i seguenti interventi: chiusura delle finestre quadrilobate, ripristino delle antiche monofore, restauro del rosone con sostituzioni lapidee e consolidamenti con grappe e staffe, rimozione dei manifesti e degli annunci funerari in pietra applicati sulla facciata, rimozione dell'intonaco nelle gallerie delle loggette, smontaggio e rimontaggio del protiro di facciata.

1896 - Si costituisce il Comitato per i Restauri del Duomo, il cui segretario è Tommaso Sandonini.

1897-1898 - Il Barberi, tecnico incaricato dalla Fabbriceria, riporta le absidi alle originarie forme romaniche. Riduce l'abside settentrionale, che tra il 1651 e il 1664 era stata rialzata con un tamburo finestrato per ospitare la *Cappella delle Reliquie* e ripristina le antiche aperture, riducendo le ampie finestre settecentesche alle originarie monofore.

1898-1905 - Vengono realizzate le proposte di isolamento del fianco nord e sud del Duomo. Secondo il progetto dell'architetto Tosi dell'Ufficio Regionale, in seguito al benestare del Ministero, viene demolito il loggiato quattrocentesco delle canoniche che si addossavano alla navata nord e viene demolita la sagrestia cinquecentesca. Una parte di loggiato viene ricostruito sul fronte sud del cortile. Per collegare la nuova sagrestia alla Cattedrale viene costruito un passaggio in stile, recuperando una bifora esistente. Vengono inoltre demoliti e ricostruiti gli arconi cuspidati di collegamento della Ghirlandina con il Duomo. Sul fianco sud viene demolita una porzione del Palazzo Vescovile, aprendo un passaggio su Piazza Grande.

1911-1912 - Restauro dell'intera fiancata meridionale e dei protiri.

1912-1914 - Si procede ai lavori di restauro dell'interno, tra cui il rifacimento della scala a sud del presbiterio e l'abbassamento del livello della pavimentazione delle navate di 40 cm. Lo scavo permette di riscoprire alcune fondazioni delle antiche basiliche. Vengono inoltre demolite le cappelle che erano state costruite a ridosso delle pareti interne delle due navate laterali e vengono diradati gli altari e gli arredi. L'unica superstite a questa campagna di "spoliazione" promossa dal Comitato è la cappella quattrocentesca di San Bernardino detta anche *Bellincini*.

1917-1920 - Il Comitato affida all'Ing. Barbanti il progetto di ripristino del *pontile* campionesse, secondo le ricerche e gli studi di Sandonnini.

1923 - Viene rinnovata la pavimentazione del sagrato e costruito un basamento su tre gradini davanti al *Portale Maggiore*. Vengono inoltre ricollocati alla base del protiro i leoni romani originali.

1936 - Vengono ricostruite le due Torrette cuspidate sui salienti della facciata, crollate durante il sisma del 1671.

1946-1948 - Si procede al consolidamento e completamento delle parti danneggiate dai bombardamenti bellici del 1944, tra cui la *Porta dei Principi* e la settima e la ottava semicolonna e i relativi basamenti del fronte nord su via Lanfranco.

1956 - Restauri della cripta e apertura del *Museo del Lapidario*. Le metope in pietra di Vicenza, vulnerabile agli agenti atmosferici, vengono protette nel Lapidario e sostituite con delle copie in pietra d'Istria.

1975-1978 - Restauro dei rilievi Wiligelmic e delle sculture di facciata secondo le indicazioni dell'ISCR.

1979-1984 - I lavori di restauro si estendono all'intera facciata, sotto la supervisione della Soprintendenza di Bologna e la direzione dei lavori affidata al restauratore Uber Ferrari. Sul rosone si interviene rimuovendo le grappe e le staffe metalliche ossidate e consolidando le fessurazioni con perni metallici e iniezioni di resina epossidica. Si restaurano, inoltre, le vetrate, sostituendo le parti non originali e rinnovando i listelli in piombo.

1984-1996 - La campagna di restauri si estende al lato nord e alla *Porta della Pescheria*, al *pontile* campionesse (1988), alla copertura (1989), alle *Porte Regia e dei Principi*, concludendosi con il restauro del lato sud e delle absidi (1994). Dalle relazioni di restauro ci è noto che le operazioni effettuate sul paramento lapideo consistono, oltre ad interventi puntuali di stuccatura, nel consolidamento con perni in acciaio, nella pulitura mediante impacchi di soluzione acquosa di carbonato di ammonio e nel consolidamento e nella protezione finale mediante resina acrilica paraloid e cera microcristallina.

2005-2014 - A seguito del distacco di un frammento di cornice dalla facciata del Duomo, nel 2005 viene effettuato un immediato sopralluogo dai tecnici del Capitolo, dal Comune e dalla Soprintendenza. Il paramento lapideo del monumento appare seriamente compromesso, per cui si decide di programmare un piano di intervento. In una prima fase si interviene sul rosone e si avvia una manutenzione straordinaria della copertura sul lato nord.

Negli anni successivi si estende l'oggetto di intervento all'intera facciata su corso Duomo, al fianco settentrionale su via Lanfranco, al fianco meridionale su Piazza Grande e infine alle absidi, con il parere positivo dell'ISCR. Il progetto di restauro del paramento lapideo mira a risolvere i sintomi di sofferenza e rischio locale, avviando allo stesso tempo un processo di conoscenza pluridisciplinare e di raccolta dati, che possa presto confluire nella fase successiva, lo studio del comportamento statico e dinamico globale del complesso Duomo-Ghirlandina. Con questa intenzione, il Capitolo e la Fabbriceria nell'ottobre 2008 istituiscono un Comitato Scientifico per indagare le questioni strutturali più complesse, relative al lungo periodo e alle sollecitazioni globali del sistema Duomo-Ghirlandina. Nell'arco temporale 2005-2014, il monumento può beneficiare, in sintesi, delle seguenti indagini:

- Mappatura del degrado
- Mappatura dei litotipi e analisi delle malte
- Indagini di laboratorio sul paramento lapideo esterno
- Catalogazione in archivio informatico SICAR degli interventi di restauro eseguiti
- Endoscopie sul paramento lapideo, sulla struttura muraria della facciata e sul retro delle lastre wigelmiche
- Indagini soniche e radar sul rosone, sul protiro di facciata e sui torrini
- Indagini soniche e radar per la determinazione della consistenza e delle caratteristiche meccaniche delle murature
- Indagini radar sul pavimento delle navate
- Indagini soniche delle lesioni nei piani d'appoggio delle colonnine dei matronei esterni
- Rilievo del quadro fessurativo e studio dei dissesti storici
- Rilievo laser scanning della struttura e livellazione topografica altimetrica
- Rilievo laser scanning dell'apparato scultoreo
- Studi sul comportamento statico e sulla vulnerabilità sismica
- Piccoli sondaggi e scavi archeologici
- Carotaggi localizzati sulle strutture di fondazioni a scopi diagnostici
- Prove penetrometriche e studi geotecnici
- Implementazione del sistema di monitoraggio strumentale
- Indagini su micro campioni di pittura murale
- Indagini sulle malte

2011-2014 - Il sisma del 2012 induce una serie di danneggiamenti per cui vengono avviate immediate opere di messa in sicurezza per consentire di tenere aperta la Cattedrale. Negli anni successivi viene elaborato ed approvato il *Progetto di Riparazione con Rafforzamento locale*. I lavori, iniziati nel novembre 2017, sono ora in fase di conclusione¹.

I recenti interventi sul patrimonio storico-artistico

Dal 1997 in poi la vicenda conservativa ha trovato forti motivazioni nella valorizzazione e nella promozione di opere d'arte della Cattedrale, soprattutto con la partecipazione finanziaria di associazioni di privati cittadini.

1997 - Si è visto così il recupero della decorazione ad affresco dell'ambito del Bianchi Ferrari della vol-

¹ Supra, Quadro di riferimento, paragrafo 3.2 Rischi e vincoli.

ta della Sagrestia, con l'aggiunta di un fondo privato a quello del Mibac. Nello stesso frangente si restaurarono alcune delle pale d'altare, di Ludovico Lana e di Giuseppe Romani, che ornano la sagrestia.

1999 - Al restauro avviato dal Capitolo per il fonte battesimale nel 1999, fece seguito, con contributo privato, quello per il *Presepe* in terracotta di Antonio Begarelli.

2000 - Sempre su iniziativa di sponsor, è stata restaurata, con recupero dell'antica cromia, la statua in marmo del *San Geminiano* di Agostino di Duccio.

2001 - Subito dopo l'inaugurazione dei *Musei del Duomo* per l'evento del Giubileo, si fece manutenzione sugli affreschi romanici staccati raffiguranti *Apostoli* e *Angeli*, che ancora attendono una più mirata sistemazione rispetto a quella, ancora provvisoria, che li vede appesi lungo le pareti della scala di accesso al *Tesoro*. Tale Museo ospita due degli arazzi fiamminghi del Maestro della Marca Geometrica (sec. XVI), l'*Adamo ed Eva nel Paradiso Terrestre* ed il *Diluvio Universale*, che sono stati i primi della serie di venti ad essere scelti per il restauro dalla Fondazione Rangoni Machiavelli di Modena.

2007-2009 - L'arredo fisso interno della Cattedrale ha visto dal 2007 al 2009 la manutenzione conservativa della *Cappella Bellincini* e, nel 2008, l'intervento conservativo per le sculture dei Maestri Campionesi che, sotto al *pontile*, ornano la loggia di accesso alla cripta.

2012 - Ancora in corso. Grazie ad un cospicuo finanziamento del MiBAC è stato avviato il restauro di cinque arazzi: due sono ancora in fase di restauro, mentre altri tre – raffiguranti le Storie della Genesi, *Il sacrificio di Caino e Abele*, *La costruzione dell'Arca* e *L'imbarco degli animali sull'Arca* - sono stati oggetto di pulizia e manutenzione e riconsegnati ai *Musei del Duomo* nel 2017.

Grazie all'interessamento del Capitolo Metropolitano e con fondi stanziati da fondazioni e istituzioni private e sponsor, negli ultimi anni sono stati effettuati alcuni restauri conservativi:

2016 - *Monumento funebre di Francesco Maria Molza* del 1516.

2017 - Rilievi scultorei nelle *Porte della Pescheria*, *dei Principi* e nel *Pulpito* su Piazza Grande.

2018 - Portoni lignei degli ingressi in facciata.

2018-2019 - È già stato finanziato grazie al concorso *Opera Tua 2018* bandito da Coop Alleanza sostenuto da Fondaco e sarà eseguito a inizio 2019 il restauro conservativo della grande *Pala di San Sebastiano* di Dosso Dossi.

I restauri della Torre

La Torre è stata oggetto di una numerosa serie di restauri, iniziati poco dopo il suo completamento edilizio e continuati fino ad oggi. Problemi legati alla caduta di fulmini, al susseguirsi di terremoti, di infiltrazioni e di crolli sono documentati ripetutamente, come pure all'inclinazione, che è stata studiata e corretta fin dall'inizio della costruzione.

1484-1492 - Vengono montate delle impalcature fino al pomo dorato per condurre parecchi lavori di restauro sotto la direzione di Giacomo da Varignana e Giacomo da Ferrara, i quali, lavorando solo di fino, necessitano di altri operai che si occupino di sgrossare le pietre, molte delle quali vengono mandate a prendere nella zona di Monte Gibbio e a Ferrara.

1502-1530 - Si apportano riparazioni alla Torre per le conseguenze del forte terremoto del 1501.

Secondo Sandonnini in questo periodo viene tolto il parapetto che corre tra le Torrette angolari sui quattro lati della Torre quadrata oltre che le torricelle minori che ornavano la ghirlanda di mezzo e quella superiore.

1547 - La Torre appare in gravissime condizioni per cui il Comune decide di finanziare la riparazione degli interni lignei, della scala a chiocciola e del tassello del piano delle campane, marciti a causa delle infiltrazioni di acqua.

1554-1556 - Paolo Castro, responsabile dei lavori pubblici del Comune, redige un elenco delle riparazioni di cui la Torre necessita e che saranno poi eseguite nell'arco di due anni: sistemazione delle finestre, restauro del pavimento del piano delle campane e della scala a chiocciola che collega questo piano alla *Stanza dei Torresani*. Nella parte ottagonale, vengono chiuse tutte le crepe, aggiustate le decorazioni a rosette e le volte delle finestre, messi i parapetti alla scala di legno, rimossa l'erba cresciuta tra le pietre, sostituite le lastre poco fissate e le colonne fatiscenti, rifatti i bancali delle finestre. Le spese per questi lavori vengono equamente divisi tra Comunità e Canonici.

1572-1587 - Continuano a cadere dei pezzi di pietra dalla Torre, per cui viene eletta una commissione che deve discutere le riparazioni dell'edificio. In questi anni lavorano al cantiere dei maestri ferraresi che reperiscono a Verona il materiale lapideo, fatto arrivare a Modena per via fluviale passando per Ferrara. Inoltre, si propone di coprire la parte sommitale della Torre con lastre di piombo che non solo costano meno rispetto alla pietra, ma che dovrebbero risolvere il problema delle infiltrazioni: tuttavia si decide poi di utilizzare il marmo per ragioni estetiche. Il pomo e la croce della Torre vengono fatti pulire e restaurare prima di essere benedetti e ricollocati sulla guglia. Secondo alcuni studiosi, durante questa lunga fase di restauro dovrebbe essere stata eliminata la più vistosa decorazione gotica della parte piramidale.

1606 - L'architetto comunale Raffaele Rinaldi detto il Menia viene incaricato della costruzione della scala nella parte terminale della Torre fino alla guglia.

1607-1609 - L'edificio presenta dei problemi di stabilità, per cui si decide di eseguire uno scavo per esaminare le fondamenta della Torre. Il sotterraneo manifesta problemi di infiltrazione e ristagni d'acqua dovuti principalmente alla presenza di una falda acquifera sotto la base della Torre, per cui si decide di fare una gettata di calcestruzzo. In una sua relazione il Menia appare molto preoccupato per la situazione che provoca l'instabilità della Torre, per cui propone di consolidare le fondamenta e ingrossare i contrafforti interni al piano delle campane ancorandoli al muro sottostante.

1608 - Alcune lastre in piombo portate alla luce durante i lavori di restauro della guglia eseguiti nel 2009, riportano una iscrizione di lavori eseguiti in quell'anno.

1640 - Il cornicione in pietra posto a coronamento del fusto della Torre viene coperto in piombo su incarico dei rappresentanti della comunità dal Magnifico Cristoforo Malagola detto il Galaverna. Una lastra in piombo che riporta la data del «24 settembre 1640», scritta dal milanese Giuliano Negri, che lo ha eseguito è stata rinvenuta durante i restauri del 2011.

1666-1667 - L'architetto Marco Costa dirige ulteriori interventi di restauro durante i quali si effettuano nuove impiombature e stuccature: al posto del piombo, viene utilizzato stucco solido, costituito da calce, polvere di marmo, bitume di ferro e fior di pietra, il tutto impastato con olio di noce.

1733 - Riprendono i lavori di riparazione della parte sommitale della Torre, in quanto l'acqua conti-

nuova a infiltrarsi in molti punti danneggiando l'interno in mattoni e le chiavi orizzontali che servono a rinforzare la struttura: si decide di intervenire con un'incamiciatura generale in piombo.

1765 - Vengono demolite le botteghe alla base della Torre e in alcuni punti vengono rimesse nuove pietre. Inoltre, viene fatto un nuovo scavo per ispezionare le fondamenta: il lato occidentale risulta fortemente danneggiato, tanto che si decide di sostituire alcuni pezzi del rivestimento lapideo.

1781-1789 - Si registrano continui ordini per materiale, soprattutto piombo, e manodopera per i lavori di riparazione della Torre.

1794-1796 - Si registrano svariati pagamenti per alcuni lavori di muratura e di riparazione del paramento esterno della Torre.

1807-1815 - A causa dell'urgenza di nuovi lavori e interventi sull'edificio vengono richieste una serie di perizie a Soli, Blosi e Manetti, i quali propongono differenti metodi di intervento e non risparmiano le critiche sui restauri precedenti. Vengono sostituite le catene logore e applicata pece e catrame alle altre per difenderle dall'umidità.

Vengono, inoltre, fatte costruire quattro aperture circolari per garantire un adeguato ricambio d'aria nella parte piramidale e viene riparata la scala a chiocciola in legno.

1869 - Continuano i problemi di infiltrazione, per cui si rinnova e si prolunga di sei metri la coperta di piombo, si ripara il pomo alla sommità e si stucca il rivestimento lapideo esterno. Anche questi interventi risultano tuttavia inefficaci.

1889-1898 - Il Comune nomina una Commissione Tecnica d'indagine costituita dall'architetto Raffaele Faccioli, dal professor Cesare Razzaboni e dall'ingegnere Vincenzo Maestri, che elabora un progetto incentrato principalmente sul problema delle infiltrazioni.

1898-1899 - Il Comune fa pulire tutta la parte quadrata dell'edificio dalle erbacce e fa eseguire alcuni scavi nel fondo interno della Torre: si scoprono l'architrave di una feritoia e l'architrave della porta originaria di accesso della Torre, chiusa dal Menia nel 1607.

1899-1901 - Sono necessari nuovi interventi finalizzati a risolvere il problema della stabilità: i lavori vengono affidati a Silvio Canevazzi e a Francesco Cavani. Si eseguono alcuni scavi che arrivano al di sotto del selciato romano della via Emilia, dove poggiano le fondamenta della Torre. Inoltre, lo studio dell'inclinazione della Torre dimostra che i vari piani non pendono nello stesso modo: quello superiore pende meno rispetto a quello inferiore, confermando la stratificazione di differenti fasi costruttive e la progressiva correzione della pendenza durante i lavori di costruzione.

1968-1974 - Il Comune elabora un progetto di restauro dettato dall'urgenza di attuare un intervento globale di carattere puramente conservativo: infatti, il degrado causato da agenti atmosferici e gas corrosivi ha provocato distacchi di grosse porzioni lapidee, causando gravi pericoli per la pubblica incolumità. Innanzitutto, si redige una relazione tecnica in cui si evince che i marmi utilizzati nella Torre sono di diversa qualità e, accostati, conferiscono alla costruzione una particolare colorazione. Per quanto riguarda l'esterno, si sistemano gli elementi in pietra pericolanti, si rimuovono o si riparano i pezzi staccati e si sostituiscono quelli particolarmente manomessi, utilizzando materiale della stessa natura di quello originale. Per rinforzare le parti apparentemente instabili si collocano protezioni in piombo e zanche e vengono sigillate con cemento tutte le fessure. Infine, si procede con la pulizia, il diserbo, la disinfezione, i trattamenti idrorepellenti e la protezione elettrostatica. Nell'interno

vengono rifatti l'intonaco e la tinteggiatura, si controllano tutte le parti lignee e si affronta il problema delle infiltrazioni nella parte ottagonale. Al termine dei lavori il Comune redige una breve relazione nella quale elenca tutte le operazioni eseguite e i trattamenti effettuati.

1988 - Vengono eseguite opere di manutenzione sugli impianti elettrici della Torre e si affida a una ditta di restauri il consolidamento di tutte le parti lignee. Viene inoltre rimossa una parte pericolante della prima cornice, in corrispondenza della scultura raffigurante il centauro sul lato est.

2002-2011 - L'Amministrazione comunale ha avviato dal 2002 una serie di interventi volti a conoscere lo stato di fatto del monumento per predisporre il progetto di conservazione.

In particolare, per tenere sotto controllo lo stato di conservazione dei materiali lapidei esterni, sono stati eseguiti nel 2002 e nel 2006 il monitoraggio visivo diretto delle superfici, tramite calate di tipo alpinistico effettuate dal CAI. Un sistema di monitoraggio strumentale, installato nel 2003, consente di seguire il comportamento statico del Duomo e della Torre nell'arco stagionale, verificando la presenza di una modesta attività.

2007-2011 - Nel 2007 l'Amministrazione comunale istituisce un Comitato Scientifico di esperti per progettare l'intervento di restauro in modo pluridisciplinare, affrontando sia gli aspetti relativi alla conservazione dei materiali, sia gli aspetti più propriamente strutturali e le dinamiche di interazione Torre-Cattedrale. Si avvia così un'ampia campagna di studi che spazia dagli studi storici a quelli geologici e paleontologici, dalle verifiche statiche e di comportamento sismico a quelle sui materiali e sulla stabilità della Torre. Viene redatta una completa mappatura di tutti i materiali, dello stato di degrado e su questi viene avviato un vero e proprio progetto diagnostico, testando i prodotti e le tecniche per individuare le migliori soluzioni, selezionate secondo criteri di minima invasività, bassa tossicità, privilegiando prodotti all'acqua, reversibili e a ridotto impatto ambientale.

Al progetto è seguita la fase attuativa di restauro, avviata nel 2008 e terminata nel settembre 2011 che ha riguardato il paramento esterno e compreso alcuni interventi di consolidamento strutturale. Durante tutta la fase di cantiere, durata quasi tre anni, sono stati eseguiti controlli in corso d'opera, per valutare il comportamento dei prodotti e la correttezza delle modalità esecutive. I dati ricavati sono stati utilizzati come base di partenza per i controlli periodici che vengono costantemente eseguiti secondo il piano di manutenzione programmata.

Nel corso dei lavori è stato realizzato un archivio informatico, con sistema GIS WEB Based denominato SICaR, che raccoglie i dati su tecniche e prodotti, centinaia di immagini e i principali documenti ed elaborati scientifici redatti per il restauro.

Al termine dei lavori è stato eseguito il rilievo laser scanner e fotografico di tutto l'apparato decorativo disposto sulle pareti esterne.

Il progetto unitario e multidisciplinare e i lavori di restauro sono stati pubblicati in due volumi a cura di Rossella Cadignani: *La Torre Ghirlandina: un progetto per la conservazione* del 2009 e *La Torre Ghirlandina: storia e restauro* del 2010.

2015-2016 - Per ottemperare alle richieste del Comitato Mondiale a seguito del terremoto del 2012, il sistema di monitoraggio è stato implementato con l'installazione di alcuni accelerometri sia nel Duomo che nella Torre.

L'evoluzione di Piazza Grande nei secoli

La piazza nella sua configurazione planimetrica non ha subito nel tempo sostanziali modifiche, mentre sono state numerose le manutenzioni del fondo che essa ha subito nel corso dei secoli. I periodici

rifacimenti della pavimentazione e le continue attenzioni dei funzionari municipali hanno sempre contribuito a mantenere entro i limiti di una decorosa dignità lo spazio comune.

1412 - Le prime notizie circa il selciato della piazza risalgono al Quattrocento. Nel 1412 si riassetta il fondo della piazza con «pietre sistemate di coltello, unite con calce proveniente dalla fornace di Gorzano.

1431 - Si cominciano a «tavellare», ovvero selciare con tavelle di cotto, larghe e quadre, tutte le parti della piazza che erano rimaste fuori dalla prima selciatura.

1580 - Il Duca Alfonso II di Ferrara, amante delle arti e protettore degli artisti, fa allestire feste in piazza, e per decoro della medesima, la fa «salegare»: viene cioè selciata con pietre messe di coltello e con tavelloni, ovvero pietroni quadri di terracotta. Per l'occasione verrà redatto il primo disegno planimetrico della piazza con i suoi contorni e le sue «bocche» o ingressi, a cura del perito comunale Paolo Castro, disegno ora conservato presso l'Archivio Storico Comunale di Modena.

Gran parte delle antiche pavimentazioni rinascimentali in «cotto di coltello» furono rinvenute in livelli sottostanti le pavimentazioni in «ciottoli di fiume» (la prima in sasso risale al Seicento) nel corso dei lavori di scavo nell'anno 1985, quando al di sotto delle più recenti selciature in «giaroni» di fiume di forma tronco-conica si evidenziarono chiaramente i sottostanti pavimenti in «pietra cotta».

1522 - Si hanno le prime testimonianze archeologiche, in concomitanza con la costruzione del portico del Palazzo Comunale presso la *Torre dell'Orologio*. Il 7 novembre di quell'anno, Tommasino de' Bianchi, nella sua cronaca, descrive il ritrovamento di una tomba a cassa laterizia e di una stele figurata iscritta. È probabile che la stele fosse stata reimpiegata con testo e decorazione a vista, come copertura di una sepoltura tardoantica.

1692 - Si comincia di nuovo a lavorare per rifare il fondo della piazza, ormai molto dissestato: il perito Carl'Antonio Loranghi presenta un semplice disegno che ne mette in evidenza i limiti e gli scomparti. Nel disegno, conservato anch'esso presso l'Archivio Storico Comunale di Modena, il lastricato della piazza è diviso in scomparti che rispettavano gli ambiti di pertinenza del Comune e dei Canonici per la manutenzione. Di vario tipo erano i materiali usati per la pavimentazione: lastre di selce, tavelloni di cotto e ciottoli di fiume con mattoni messi di coltello per le cordonature.

1776 - Nella seconda metà del Settecento la piazza si presenta, a causa della gran quantità di rivenditori disposti in ordine sparso, senza una netta distinzione fra «piazza del Comune» e «sagrato della Cattedrale». A quest'epoca risale la mappa disegnata dal perito comunale Giovan Battista Massari nel 1776, conservata presso l'Archivio Storico Comunale di Modena, nella quale il selciato della piazza è costituito da pietre disposte in coltello.

1888-1892 - Furono abbattuti i vecchi edifici sul lato meridionale della piazza e fu costruito il Palazzo di Giustizia.

Fine '800 - Venne presentato un progetto per la realizzazione di una fontana da porre al centro di Piazza Grande. La perforazione del pozzo, a causa del suo scarso apporto idrico, non riuscì però a sostenere l'iniziale idea di realizzare un'opera monumentale: il risultato finale apparve infatti molto modesto, tanto che la fontana rimase per alcuni decenni in uno stato di provvisorietà, per poi essere successivamente rimossa.

Anni Trenta del '900 - Nell'ambito del programma di rinnovamento attuato con lo spostamento delle bancarelle nel nuovo Mercato Coperto in via Albinelli, la Piazza viene illuminata con lampadine elettriche.

1940-1943 - Si avviò la costruzione delle strutture protettive a difesa dagli attacchi aerei, in alcuni casi anche attraverso la rimozione di elementi di arredo urbano. Nel 1943 furono scavati due rifugi antiaerei in piazza: il primo sul lato del Palazzo di Giustizia, il secondo sul versante della Cattedrale del medesimo livello, entrambi alla profondità di 3 metri.

Anni '60 - Piazza Grande viene trasformata in un parcheggio per automobili.

1963 - Sull'area del Palazzo di Giustizia, demolito perché in poco più di sessanta anni aveva costretto l'Amministrazione Comunale ad una continua e costosa manutenzione, fu costruito il palazzo della Cassa di Risparmio, ora Unicredit, in posizione decisamente più avanzata sulla piazza rispetto al precedente edificio.

1966 - Il Comune decise di affidare a Carlo Scarpa un nuovo progetto di sistemazione di Piazza Grande, del quale rimangono a testimonianza due fotografie del modello di una prima soluzione e il modello vero e proprio in legno di una seconda, conservati entrambi presso l'Archivio di deposito del Comune di Modena e una serie di schizzi conservati all'Archivio Carlo Scarpa, oggi conservato presso l'archivio di Stato di Treviso; negli stessi anni viene affidato all'architetto Scarpa sempre da parte del Comune di Modena lo studio dell'ampliamento del cimitero monumentale di san Cataldo, in funzione della sua notorietà, per la progettazione in ambienti o edifici storici.

L'incarico a Scarpa da parte dell'Amministrazione comunale per la sistemazione della piazza è conseguente alla costruzione della nuova sede della cassa di Risparmio, opera di Gio Ponti, realizzata tra il 1963 e lo stesso 1966, e si poneva come obiettivi la pedonalizzazione dello spazio ancora adibito a parcheggio e la ridefinizione complessiva dell'intero nucleo storico della città nel quale erano presenti i principali monumenti religiosi e civici, di seguito alle polemiche suscitate, proprio per l'inserimento di un edificio "nuovo", per quanto opera di un architetto prestigioso, in un ambiente antico.

L'idea di Scarpa è essenzialmente il tracciamento di percorsi di collegamento diretto, quindi non necessariamente ortogonali, tra gli edifici che insistono sullo spazio aperto e le vie di accesso alla piazza. I tracciati derivano dall'osservazione (dopo una nevicata, si desume da note bibliografiche) dei percorsi spontanei dei pedoni che attraversano la piazza per spostarsi da un edificio all'altro e dalla volontà di collegare attraverso andamenti di livello diversi e a piani inclinati le diverse zone. I camminamenti sono concepiti su canali vuoti che ne richiamano la presenza storica e amplificano il risuono dei passi sottolineando l'aura del sito e, per contrasto, il "silenzio" di una piazza finalmente svuotata dal traffico automobilistico.

Varie sono le soluzioni proposte via via affinate nel corso dell'iter progettuale che giunge a una fase quasi definitiva, ma che non troverà poi attuazione (al pari dell'ampliamento proposto per il cimitero monumentale). Di fatto, al di là del rifacimento a ciottoli di fiume dell'intera area, piazza grande non sarà oggetto di ridefinizioni progettuali.

Il primo modello del progetto scarpiano propone due diagonali tracciate dai vertici della piazza, attraversate da una terza linea che da via Castellaro si dirige, spezzandosi in prossimità dell'abside meridionale, verso Piazza Torre. La piazza si definisce così lungo linee di percorso che diagonalmente incidono di volta in volta i campi di pavimentazione in ciottoli di fiume nell'intorno del Duomo, di lastre di gneis in Piazza Torre e di cemento lavorato lungo le direttrici di via Canal Chiaro e di via Castellaro. I diversi colori dei materiali, la loro natura scabra e levigata insieme, qualificano organicamente i luoghi caricandoli di significati nascosti che mutano secondo la variazione dei toni e la dissonante qualità dei materiali.

Sulla destra della *Porta Regia* il piano già inclinato delle pavimentazioni in ciottoli diventa più ripido, consentendo di congiungere senza soluzione di continuità il livello più basso del piano di calpestio dietro le absidi. Qui la sensibilità storica di Carlo Scarpa permette di riscoprire l'antico piano di fondazione del Duomo e l'altezza reale della zoccolatura che sul fianco meridionale era stata gradualmente annunciata.

Gli ingressi alla piazza su via Canalchiaro e via Castellaro, come quelli dalla Piazza Torre e dal sagrato della facciata sono tutti sbarrati a terra da fasce e lastre di biancone di Verona, arricchite ad intarsio, che introducono ai percorsi pedonali.

Nella soluzione maggiormente definita una serie di paracarri di forme e dimensioni simili, ma in realtà modulate in maniera percettibilmente diversa, chiude lo spazio come fosse uno spazio autonomo, un'opera autonoma, pur progettata per relazione spazi diversi.

1974 - Piazza Grande viene chiusa al traffico.

1986-1987 - Alcuni interventi sulle pavimentazioni portano la piazza allo stato attuale reintroducendo i ciottoli di fiume, tipici del Settecento e preesistenti in molte strade e piazze del centro.

Risultati dell'Indagine di qualità 2016

Le opinioni dei visitatori

Profilo del visitatore del Sito

I visitatori del Sito UNESCO di Modena si possono dividere in quattro gruppi:

- 1 Il primo e più numeroso gruppo di visitatori (39,5%) si caratterizza per aver dichiarato un'alta intenzionalità (cioè in larga parte è a Modena per turismo, ha programmato la visita) ma anche un alto livello di conoscenza e informazione sul Sito (estensione della visita e informazioni raccolte). In questo gruppo sono presenti in percentuale superiore al totale le femmine, la fascia d'età 45-64 anni, coloro che hanno come titolo di studio la maturità, gli italiani, in particolare residenti nel centro e sud Italia.
- 2 Il secondo gruppo ha una dimensione del 25,6% del totale e si caratterizza per un'elevata intenzionalità nella visita e un basso livello informativo. Sono presenti in misura più marcata coloro che hanno più di 65 anni, chi ha una scolarità più bassa, chi non lavora (prevalentemente pensionati), chi proviene dall'estero.
- 3 Il terzo gruppo ha una numerosità del 21,1% ed è caratterizzato da una bassa intenzionalità della visita e un basso grado di informazione. Sono maggiormente presenti rispetto al totale i più giovani (18-30 anni ma anche 31-44 anni), coloro che hanno una bassa scolarità, chi proviene da fuori Europa; la presenza a Modena per motivi di lavoro non è maggioritaria ma è molto più accentuata rispetto agli altri gruppi.
- 4 Infine il quarto gruppo che ha la dimensione più piccola (13,9%) e che ha una bassa intenzionalità nella visita e un alto livello di informazione. Sono più presenti rispetto al totale gli studenti e coloro che provengono dal sud Italia o dalle isole.

Valutazioni e giudizi

Nel complesso, il Sito UNESCO di Modena raccoglie una valutazione di soddisfazione alta con media voto pari a 7,9.

Concorrono a questo giudizio complessivo le *condizioni di visita dei monumenti (affollamento, luminosità, tempi di attesa ecc.)* e la *comodità per raggiungere il Sito*, rispettivamente con un voto medio di 7,7 e 7,8. Meno brillante, ma comunque buona, la valutazione di alcuni aspetti informativi tipo le *indicazioni per raggiungere il Sito* (voto medio 7,1), la *presenza di pannelli illustrativi presso il Sito* e la *qualità delle informazioni presenti sui pannelli illustrativi* (voti medi 7 e 7,2), la *reperibilità di materiale informativo cartaceo* (voto medio 7,2). Più alto invece il voto medio di soddisfazione circa la *reperibilità del materiale informativo on-line* pari a 7,5. Voto medio pari a 7,3 sia per il costo del biglietto per la visita di Ghirlandina, museo Duomo e Palazzo Comunale che per gli orari di visita.

Intorno al voto medio 8 si posizionano anche l'organizzazione del Sito UNESCO e la manutenzione e cura del Sito con voti medi rispettivamente di 7,8 e 8,1.

Il voto medio complessivo alla visita del Sito UNESCO di Modena è pari a 8.

Tra le cose che sono piaciute di più, spicca al primo posto con oltre il 42% l'area "Musei – storia – arte - architettura", poi a seguire "pulizia e ordine" con il 21% circa delle affermazioni.

Sono piaciute di meno l' "Accessibilità alle informazioni – accoglienza – apparato didattico" (25%), poi ciò che riguarda l' "Organizzazione – gestione" al 22,8%.

Intorno al Sito

L'ultima area d'indagine – per i visitatori - ha riguardato ciò che c'è “intorno al Sito” ovvero ciò che concorre all'accoglienza turistica o, in altri termini, la capacità di Modena di essere città accogliente e turistica.

Sono stati rilevati cinque aspetti con i seguenti risultati:

- ① La disponibilità dei modenesi a dare informazioni e la reperibilità di informazioni on line su Modena ottengono entrambe un voto medio pari a 7,6;
 - ② Il materiale informativo sulla città ottiene una valutazione media buona ma non brillante pari a 7,1, a confermare che su questa parte della informazione le attese sono probabilmente superiori a quanto sperimentato direttamente;
 - ③ Il trasporto pubblico registra un voto di 6,9 con una percentuale di non risposta (quasi sicuramente non lo hanno utilizzato) del 22%;
 - ④ Infine il maggiore apprezzamento riguarda i servizi di ristorazione con una media voto pari a 8.
- Nel complesso Modena è apparsa agli intervistati una città turisticamente accogliente, con un voto medio pari a 7,8, superiore alla media dei voti di dettaglio sopra esaminati.

Le opinioni dei cittadini modenesi

Valutazioni e giudizi sul Sito UNESCO

Il voto medio complessivo al Sito è di 7,8 per i modenesi.

Nel dettaglio, i voti sui singoli aspetti del Sito UNESCO registrano medie voto comprese fra il 6,5 e il 7,5. Nel dettaglio, voto medio pari o superiore a 7 lo ottengono le condizioni di *visita dei monumenti* (voto medio 7,5), le *occasioni straordinarie di visita* (voto medio 7,3), la *reperibilità del materiale informativo on-line* e il *costo del biglietto* (entrambe con media voto pari a 7,1), gli *orari di visita* (voto medio 7).

Il voto medio più basso (6,5) è relativo alle *indicazioni per raggiungere il Sito*, ma anche la *promozione e valorizzazione del Sito* e la *presenza di pannelli illustrativi* (voto medio 6,6 per entrambe le voci). In questi tre casi la percentuale di non risposta è attorno al 25%; nell'insieme si ha l'impressione della richiesta di una spinta alla promozione/informazione, in sostanza ad una maggiore valorizzazione del Sito.

In posizione intermedia si trovano *l'offerta di visite guidate a pagamento* (voto medio 6,7), la *reperibilità di materiale informativo cartaceo* e la *comodità per raggiungere il Sito* (entrambi questi aspetti registrano media voto di 6,8). Infine la *qualità dell'informazione dei pannelli illustrativi presso il Sito UNESCO* riporta una media voto pari a 6,9.

Nel complesso la valutazione dei modenesi sugli aspetti proposti è sufficiente ma contiene anche indicazioni ad investire maggiormente su questo patrimonio. La *manutenzione e cura del Sito* registra un voto medio di 7,7.

Il voto complessivo raggiunge la media più alta di tutte le singole valutazioni relative ai singoli aspetti del Sito e alla sua manutenzione e cura con un voto medio di 7,8. Da ciò si può dedurre che la valutazione complessiva del Sito ottiene dai modenesi un “valore aggiunto” rispetto alla valutazione di ogni singolo aspetto o all'insieme delle valutazioni di dettaglio.

Anche ai modenesi è stato chiesto un giudizio, un aggettivo che sintetizzi l'impressione che hanno del Sito UNESCO con parole loro: in primo luogo, al 25,4% emerge interesse, valore, rilevanza culturale; al secondo posto con il 20,4% impatto estetico; poi l'area dell'emozione-suggestione che pesa il 18,7%.

Intorno al Sito

L'ultima area d'indagine anche per i modenesi ha riguardato ciò che c'è "intorno al Sito". Emerge che:

- i servizi di ristorazione sono apprezzati, con un voto medio pari a 8;
- buona anche la valutazione della disponibilità dei modenesi a dare informazioni con un voto medio di 7,5;
- la reperibilità di informazioni on line su Modena ottiene un voto medio pari a 7,2 ma qui la percentuale di non risposte arriva al 24,3%; evidentemente la ricerca di informazioni on line sulla propria città non è particolarmente frequente o diffusa;
- voto medio di 6,9 per il materiale informativo sulla città;
- infine la valutazione più critica, ma comunque sufficiente, relativa al trasporto pubblico, con un voto medio di 6,4;

Alla richiesta di una valutazione diretta su quanto Modena è accogliente per un turista la risposta degli intervistati è coerente con i voti sopra riportati: il voto medio è pari a 7,5 e pochissime non risposte. Dunque Modena è considerata dai suoi cittadini una città "abbastanza" accogliente per un turista.

In conclusione di intervista sono state rivolte tre domande, due relative a questioni specifiche come l'utilizzo di Piazza Grande e l'accesso al Duomo in orari specifici, l'altra relativa all'interesse personale a partecipare ad un evento annuale dedicato al Sito UNESCO. Emerge che:

- i cittadini chiedono la vivibilità della piazza anche con eventi e manifestazioni purché selezionate e regolamentate, compatibili con le caratteristiche del Sito.
- l'ipotesi avanzata circa un possibile ingresso a pagamento al Duomo di Modena esclusivamente dedicato ai turisti nell'ora di pranzo, registra oggi una prevalenza dei contrari, ma lo scarto non è particolarmente alto (49,2% di contrari contro il 41,6% di favorevoli).
- un interesse potenziale molto consistente a partecipare ad un evento annuale dedicato al Sito, che sottolinea come il Sito rivesta un valore simbolico che coinvolge e va oltre il normale interesse culturale ed artistico verso il monumento.

Finanziamenti ottenuti sulla Legge 77/2006

E.F.	D.M.	Denominazione	Contributo
2006	10/04/2008	Programma di indagini diagnostiche per la conoscenza delle condizioni conservative, la progettazione degli interventi di restauro e il monitoraggio (fase 1)	€ 50.000
2006	12/12/2008	Programma di indagini diagnostiche per la conoscenza delle condizioni conservative, la progettazione degli interventi di restauro e il monitoraggio (fase 2) e azioni per la diffusione della conoscenza del Sito Unesco di Modena	€ 100.000
2007	17/11/2009	Potenziamento dei servizi per il pubblico e promozione del Sito	€ 5.936,94
2007	23/12/2010	Attuazione e verifiche del Piano di Gestione 2008/2009	€ 100.000
2008	23/12/2010	Aggiornamento e implementazione del Piano di Gestione	€ 100.000
2008	23/12/2010	Servizio di audioguide e supporti multimediali per la conoscenza del Sito Unesco di Modena	€ 19.000
2009	23/12/2011	Realizzazione percorso di segnaletica turistica e pubblicazione aggiornamento Piano di Gestione	€ 100.000
2010	23/12/2011	Comunicazione, didattica e condivisione della campagna di restauri del Sito Unesco di Modena	€ 100.000
2011	23/12/2011	Rilievo laser dell'apparato scultoreo della Cattedrale (completamento)	€ 45.000
2013	26/08/2014	Programma di interventi per il monitoraggio statico e dinamico del complesso Duomo - Torre e la protezione antisismica	€ 93.000
2014	10/02/2016	Riqualificazione del bookshop e della biglietteria dei Musei del Duomo per un migliore servizio di assistenza culturale e ospitalità del pubblico	€ 41.668
2014	24/11/2015	Piano di manutenzione integrata del Sito Unesco di Modena e del suo Piano di Gestione	€ 95.553

Annexes 3

2015	24/03/2016	Un nuovo ingresso per la Ghirlandina. Accoglienza turistica in sicurezza	€ 39.838
2015	01/07/2016	Riqualificazione del Cortile del Lapidario del Duomo di Modena come area di sosta e di accoglienza	€ 100.000
2016	04/01/2017	A portata di mano. Percorso tattile per il Sito Unesco di Modena	€ 41.620
2017	24/01/2018	Nuove tecnologie per la conoscenza e la tutela del Sito Unesco di Modena	€ 100.000

Totale contributi dal 2006 al 2018: € 1.131.615,94

Prima della Cattedrale: ricerche e indagini sul Sito tra tardo-antico e Alto Medioevo

Abstract:

Obiettivo della ricerca è la definizione delle fasi costruttive della cattedrale tra tardoantico e alto-medioevo in rapporto all'evoluzione sociale e urbanistica della città. Le fasi prelanfranchiane saranno messe in relazione ai rilievi architettonico-strutturali eseguiti sulla Cattedrale attuale. I dati (archeologici, antropologici, storici, strutturali e costruttivi della Cattedrale) saranno analizzati con una impostazione multidisciplinare integrata e avvalendosi del supporto di analisi archeometriche.

Azione specifica I:

Le fasi dell'edificio di culto: dal sacello edificato sulla tomba del martire alla Cattedrale lanfranchiana

Scavi archeologici eseguiti recentemente all'interno e nello spazio esterno alla Cattedrale saranno analizzati per acquisire dati sulle strutture e sulla cronologia delle fasi antecedenti alla Cattedrale lanfranchiana. Su questi materiali è possibile eseguire indagini archeometriche volte principalmente alla definizione cronologica (datazioni e analisi palinologiche su campioni di malte, analisi dei pigmenti conservati su frammenti di intonaco parietale e delle volte, analisi sui laterizi). Si cercherà anche di individuare le demarcazioni interne della chiesa in modo da tentare una ricostruzione degli aspetti liturgici sottesi al progetto architettonico.

Obiettivi: analisi dei dati ottenuti dagli scavi riferibili alle fasi prelanfranchiane. Definizione cronologica e stratigrafica delle strutture rivenute nei singoli scavi.

Azione specifica II:

Analisi strutturale e storico-architettonica del complesso plano-altimetrico stratificatosi da San Geminiano alla Cattedrale lanfranchiana

I dati ad oggi disponibili sui numerosi scavi archeologici effettuati nella Cattedrale necessitano di essere inseriti in un unico sistema di riferimento plano-altimetrico che permetta di interpretarne la corretta stratigrafia, alla luce anche dei cedimenti differenziali subiti dal complesso monumentale nella storia. Essendo disponibile un rilievo 3d a nuvola di punti della Cattedrale, eseguito mediante laser scanner negli anni passati, si propone di inserire in questo modello anche i rilievi plano-altimetrici degli scavi archeologici documentati. Sono previste le seguenti azioni:

- ① Ricerca d'archivio dei rilievi originali quotati degli scavi effettuati nella Cattedrale dai primi del Novecento ad oggi.
- ② Rielaborazione dei rilievi plano-altimetrici degli scavi archeologici e dei carotaggi eseguiti nella Cattedrale e loro inserimento nel modello 3d ottenuto da laser scanner.
- ③ Tomografie del modello 3d, rielaborazione grafica di piante e sezioni e lettura stratigrafica integrata con i dati sui cedimenti differenziali del terreno manifestatisi dalla costruzione lanfranchiana ad oggi.
- ④ Lettura interdisciplinare dei dati e ipotesi interpretative.

Obiettivi: analisi d'insieme dei dati degli scavi archeologici documentati mediante il loro inserimento in un unico sistema di riferimento plano-altimetrico (modello 3d); lettura stratigrafica generale del complesso monumentale integrata con i dati dei cedimenti differenziali del terreno e ipotesi interpretative sulle fasi costruttive da San Geminano alla Cattedrale lanfranchiana.

Azione specifica III

L'evoluzione geologica e ambientale

Per comprendere le dinamiche che portarono allo spostamento del fulcro della città, dal foro romano all'area della attuale Piazza Grande, con la conseguente modificazione del confine cittadino, è necessario tenere in considerazione i cambiamenti climatici, il dissesto idrogeologico, e le caratteristiche ambientali nel periodo storico preso in esame. Verranno effettuate analisi archeobotaniche su campioni di terreno prelevati in scavi archeologici urbani: tali analisi consentiranno di acquisire dati utili alla ricostruzione dell'evoluzione climatica e ambientale. Inoltre, si effettueranno analisi volte ad individuare piante coltivate e consumate per l'alimentazione umana e animale, per integrare con informazioni di tipo etnobotanico il quadro della ricostruzione ambientale e dei suoi risvolti legati all'impatto antropico attraverso coltivazioni e alimentazione. Le analisi stratigrafiche, sedimentologiche e geologiche consentiranno di ricostruire l'evoluzione idrografica dell'area urbana (canali interni al perimetro urbano e corsi d'acqua limitrofi responsabili dei fenomeni alluvionali), le dinamiche sedimentarie dei depositi alluvionali e i corsi d'acqua da cui provenne la portata sedimentaria. Sulla base della quota dei piani di frequentazione individuati dalle analisi dei dati archeologici verrà elaborata una ricostruzione altimetrica dei piani antichi distinta per fasi. Sarà così possibile analizzare l'evoluzione della formazione dei piani d'uso dall'età romana al medioevo.

Obiettivi: definire gli aspetti della sedimentazione alluvionale (dinamiche, corsi d'acqua di pertinenza della formazione, punti di rotta degli alvei e modalità della deposizione); ricostruire l'evoluzione del tessuto idrografico della città e del suburbio; ricostruire l'evoluzione climatica e ambientale, elaborare una ricostruzione piano altimetrica per fasi dall'età romana al medioevo.

Azione specifica IV:

La definizione dello spazio funerario: topografia, ritualità, componenti sociali e antropologiche

Un elemento strettamente connesso allo sviluppo dei tessuti urbani è lo spazio funerario: le chiese martiriali divennero centri di attrazione, per ragioni di fede (la vicinanza ai corpi santi) dei sepolcreti cristiani. Tale fenomeno si verifica a partire da VI-VII secolo e costituisce anch'esso un elemento di discontinuità rispetto all'età romana: lo sviluppo di aree cimiteriali in urbe, comportò un totale sovvertimento nella tradizionale separazione tra spazio dei vivi e dei morti, sancita anche dalla legislazione che prescriveva il seppellimento fuori dai confini urbani, lungo gli assi viari. Le ricerche archeologiche condotte intorno alla Cattedrale e nello spazio urbano e suburbano hanno portato in luce svariate aree cimiteriali tardoantiche e medievali. Dall'analisi della ritualità sepolcrale, che comprende non soltanto i riti e le modalità di seppellimento dei defunti ma anche aspetti archeobotanici, si cercherà di riconoscere modalità e tempi del processo di cristianizzazione della popolazione della città. Sugli individui sepolti saranno effettuate analisi antropologiche, in parte già avviate, che consentiranno di acquisire dati importanti sullo sviluppo economico e sociale della popolazione di Modena. Le analisi consentiranno, grazie a innovativi sistemi di ricerca archeometrica, di mappare la circolazione degli individui e la definizione cronologica delle sepolture e dei materiali ad esse associate. Saranno affrontate sei tematiche principali e fortemente complementari, basate tanto sull'analisi dei resti scheletrici quanto sulle espressioni culturali:

1. Ricostruzione delle caratteristiche paleodemografiche

Valutazione del sesso, dell'età alla morte, delle proporzioni corporee degli individui, analizzati sia come singoli che come gruppo;

Stima del livello di stress fisiologico e ricostruzione di un possibile modello di questo stress legato all'età, il sesso, lo status sociale, e l'origine geografica.

Identificazione e ricostruzione del quadro patologico e del tipo di malattie di cui soffrivano gli individui e i gruppi analizzati.

Ricostruzione del grado di violenza intenzionale e stima delle possibili differenze fra categorie di individui. Identificazione di gruppi potenzialmente più esposti a violenza intenzionale e lesioni traumatiche associate a episodi di violenza.

Riconoscimento/individuazione di possibili differenze intra ed inter gruppo in termini di media di età alla morte, aspettativa di vita, mortalità infantile, con conseguente identificazione delle possibili cause di queste differenze.

Tali rilevazioni saranno effettuate attraverso osservazione diretta oppure, in caso di reperti estremamente fragili, avvalendosi di metodi non invasivi come l'acquisizione tramite CT scanning, lavorando sui modelli digitali dei reperti ossei in ambiente virtuale

2. Dieta e sussistenza

Ricostruzione della dieta in termini di consumo di piante vs. prodotti animali, e la proporzione fra fonti di cibi terrestri vs. acquatici/marini attraverso le analisi dei valori isotopici di carbonio (C13 e C12) e dell'azoto (N15 e N14).

Identificazione delle possibili differenze fra individui e gruppi basata sulla localizzazione geografica dei siti analizzati, ma anche sesso, età e stato sociale.

Identificazione delle possibili differenze nelle abitudini/comportamenti alimentari e differenze accessibilità alle fonti di cibo fra "immigranti" e "locali", per esempio rilevando la possibile introduzione di nuovi alimenti con l'arrivo di nuovi gruppi.

3. Mobilità

Identificazione di individui che sono migrati nel corso della vita confrontandoli con coloro che risultano "locali" di nascita, attraverso le analisi degli isotopi stabili dello stronzio (Sr87 e Sr86). Questo tipo di analisi può aiutare a comprendere la mobilità geografica delle persone durante la loro vita, infatti gli isotopi rilevati nello smalto (che si forma una volta sola nella vita), indicano la provenienza o comunque il luogo dove si trovava la persona al momento della formazione di un determinato dente; gli isotopi rilevati nella dentina e nell'osso (che si rigenerano continuamente), invece, indicano l'ultima dimora del soggetto in vita.

4. Rapporti parentali all'interno della popolazione e rapporti filogenetici tra popolazioni

Ricostruzione dei possibili cambiamenti nella struttura della popolazione e grado di commistione attraverso analisi genetiche e dei caratteri non metrici dentali. Stabilire l'omogeneità di specifici loci genetici i quali forniscano prove di cambiamenti nell'endogamia. Ricostruzione della relazione fra "immigranti" e "locali" in termini di modelli matrimoniali.

5. Studio delle espressioni culturali

Studio della ritualità funeraria e delle loro trasformazioni su base cronologica nei diversi gruppi/individui presenti all'interno delle aree sepolcrali (struttura e orientamento delle aree sepolcrali, presenza o assenza di corredi e descrizione sistematica degli stessi).

6. Modellazione dei processi culturali

Studio della distribuzione spazio/temporale dei marcatori/indicatori culturali per esplorare processi di cambiamento/interscambio che si intersecano con lo spostamento e la sostituzione tra popolazioni. La quantificazione della variabilità dei corredi sarà effettuata sia all'interno di ciascun sito sia fra siti diversi, affinché le misure scelte per valutare il cambiamento possano essere valutate direttamente sulla base di quelle derivate da tutte le altre fonti di informazione (tratti bioarcheologici, livelli di isotopi, marcatori genetici e distanze). Per la completezza del progetto di ricerca sarebbe importante effettuare delle analisi antropologiche che potranno essere estese anche alle reliquie di San Geminiano. Le analisi non invasive (autoptiche) possono essere eseguite direttamente presso la tomba del santo, senza prevedere uno spostamento del corpo, mediante l'ausilio di attrezzature portatili (come ad esempio scanner 3D senza contatto). Le analisi invasive prevedono il campionamento di alcuni distretti ossei tramite prelievo di pochi milligrammi di materiale osseo da un dente e sulla rocca petrosa (base del cranio). Seguendo il protocollo di indagine applicato dal gruppo di ricerca anche su altri corpi santi sarà possibile ottenere anche una ricostruzione tridimensionale del volto del santo.

Obiettivi: elaborare i dati antropologici (che saranno eseguiti su un campione di circa 200 individui) attraverso analisi statistiche, sulla ritualità funeraria, sulle migrazioni. Realizzazione di un DB collegato a un GIS che permetta di analizzare la topografia degli spazi funerari, la distribuzione delle tipologie sepolcrali e degli individui.

Azione specifica V

Lo spazio urbano della città cristiana e il "confine del sacro"

Lo sviluppo di cattedrali ed episcopi, nuovi centri di potere nella città tardoantica, risulta determinante nella definizione del perimetro dello spazio urbano e della rete infrastrutturale di collegamento tra città e territorio. A Modena tra tardoantico e altomedioevo si verificarono dinamiche sociali che portarono allo spostamento del centro cittadino: la città medievale, definita dai suoi confini, le mura, fu generata intorno al luogo di culto sorto sulle spoglie di San Geminiano, che si trovava all'esterno dei confini della città romana. La ricostruzione del perimetro della città tra età romana e XIII secolo, allo stato attuale delle ricerche, risulta di difficile definizione. La scomparsa o la conservazione di residuali tratti delle cinte murarie tardoantiche non consente una ricostruzione puntuale dei nuovi confini, suggeriti, tuttavia, soprattutto a partire dall'alto medioevo, dalla dislocazione di luoghi di culto (intitolazione delle porte ai martiri eponimi, oratori e santuari) ubicati nello spazio periurbano. Lo sviluppo del cristianesimo comportò sul piano urbanistico un processo di sacralizzazione dei confini, non soltanto riferito alla definizione degli spazi sacrali ma esteso anche al limite per eccellenza, le mura urbane.

Obiettivi: realizzazione di un DB e GIS elaborato sulla base dei dati storici e archeologici con particolare riferimento alla definizione del perimetro urbano, della dislocazione dei luoghi di culto interni alla città e suburbani, dei principali luoghi legati agli aspetti sociali e economico-produttivi (canali, mulini, fontane, lavatoi, ecc.). Puntualizzazione cronologica delle fasi.

Azione specifica VI

Elaborazione di testi, grafiche e immagini finalizzati specificatamente alla divulgazione dei risultati anche negli spazi del nuovo Museo del Duomo, da definire sulla base del progetto museografico definitivo la cui elaborazione costituisce un obiettivo del presente Piano di Gestione².

² Supra, Obiettivi e azioni, schede 3.1 Riqualificazione e ampliamento dei Musei del Duomo e 4.1 Nuovo allestimento dei Musei del Duomo.

PROGETTO DI RIQUALIFICAZIONE E AMPLIAMENTO DEI MUSEI DEL DUOMO DI MODENA – SITO UNESCO

Domanda Finanziamento FCRMo - 03.02.2017



Richiedente:
per la Basilica Metropolitana di Modena
Arciprete del Capitolo Mons. Luigi Biagini

Tecnico:
per lo Studio Silvestri – Ingegneria e Architettura
Elena Silvestri Architetto

PROGETTO DI RIQUALIFICAZIONE E AMPLIAMENTO DEI MUSEI DEL DUOMO DI MODENA - SITO UNESCO

Richiedente: Basilica Metropolitana di Modena

Il progetto mira alla Riqualificazione degli spazi espositivi, turistici e didattici connessi al Sito Unesco.

Gli OBIETTIVI per il quadriennio 2017-20 sono:

- 1- **LA RIQUALIFICAZIONE DEL CORTILE DEI MUSEI**
- 2- **L'AMPLIAMENTO DEGLI SPAZI ESPOSITIVI** mediante la Ristrutturazione di nuovi locali siti al piano soprastante gli attuali Musei

Tali obiettivi sono previsti dal Piano di Gestione del Sito Unesco, stabilito in comune accordo tra Comune di Modena, Basilica e Coordinamento del Sito.

Già alcuni interventi sono stati avviati in questa direzione: grazie ai fondi ministeriali della legge 77/2006, si è potuto di recente ristrutturare la Biglietteria e il Bookshop dei Musei del Duomo (39.668,00 euro lordi) e si potrà dare inizio ai lavori di Riqualificazione del Cortile (112.124,00 euro lordi).

-Il Cortile dei Musei è un luogo strategico nell'ambito del Sito perché funge da raccordo tra le diverse mete turistiche del Sito. L'intervento di Riqualificazione mira a valorizzarlo come luogo aperto al pubblico di accoglienza e ritrovo delle scolaresche, delle comitive e dei gruppi turistici.

-L'attuale Museo del Tesoro è costretto all'interno delle sue poche sale. L'esistenza di un ulteriore piano superiore libero e della medesima metratura è certamente un'occasione di ampliamento che non può perdersi. E' in corso al tal fine una trattativa per l'acquisizione di quella parte di locali di proprietà del Ministero di Grazia e Giustizia. L'estensione delle superfici espositive dei Musei può offrire la possibilità di dare spazio a nuovi percorsi sulla Storia della Cattedrale e del Sito Unesco, mediante installazioni multimediali e tecniche comunicative contemporanee. Sono altresì necessari spazi polivalenti per laboratori didattici, sale conferenze e mostre temporanee.

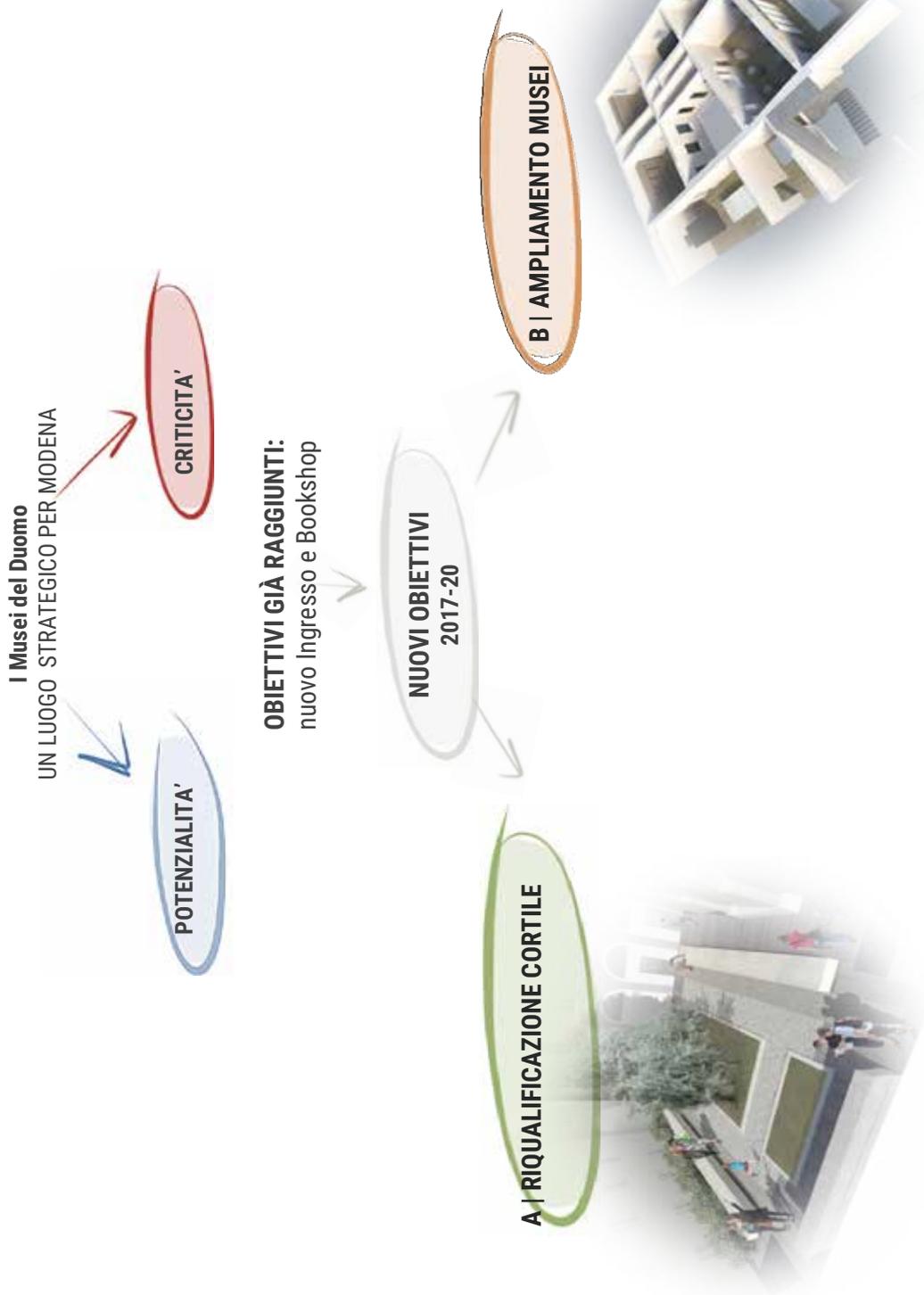
La presente Domanda per il quadriennio 2017-20 riguarda le spese previste per la sola ristrutturazione dei locali del secondo piano. Restano esclusi i costi relativi ad arredi, allestimenti, installazioni multimediali, pannelli grafici, attrezzature per sale conferenze e laboratori e corpi illuminanti, oggetto di una fase di finanziamento successiva.



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Progetto di Riqualificazione e Ampliamento
dei MUSEI DEL DUOMO di Modena – Sito Unesco
INDICE DELLA PRESENTAZIONE

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3

Progetto di Riqualificazione e Ampliamento
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OBIETTIVI DEL PROGETTO

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OBIETTIVI 2017-20

B | AMPLIAMENTO MUSEI



A | RIQUALIFICAZIONE CORTILE



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Progetto di Riqualificazione e Ampliamento
dei MUSEI DEL DUOMO di Modena – Sito Unesco

POTENZIALITA' DEL LUOGO



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I Musei del Duomo:
UN LUOGO STRATEGICO PER MODENA,
CUORE DEL SITO UNESCO



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Progetto di Riqualificazione e Ampliamento
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È il luogo attorno cui ruotano i Musei e altre attività culturali del Sito



6

Progetto di Riqualificazione e Ampliamento
dei MUSEI DEL DUOMO di Modena – Sito Unesco

CRITICITA' DEL LUOGO

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CRITICITA':

Il Cortile attualmente è degradato, poco fruibile, non valorizzato



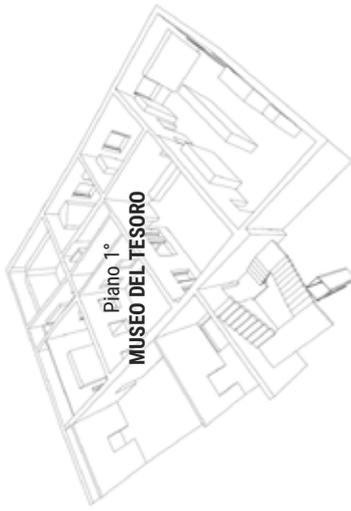
IL CORTILE DEI MUSEI ALLO STATO ATTUALE

7

Progetto di Riqualificazione e Ampliamento
dei MUSEI DEL DUOMO di Modena – Sito Unesco

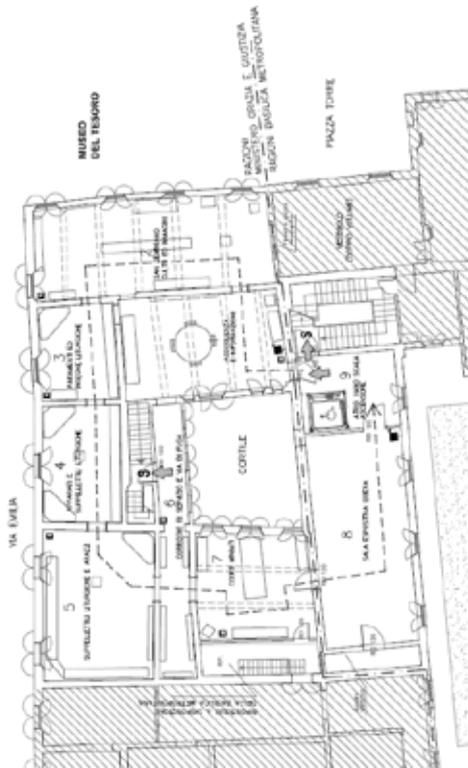
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CRITICITA'

Gli spazi degli attuali Musei sono ridotti e gli allestimenti necessitano di un rinnovamento e di un adeguamento ai nuovi sistemi comunicativi. Attualmente non ci sono sale dedicate alla Storia della cattedrale.



AMBIENTI DEL MUSEO DEL TESORO ALLO STATO ATTUALE

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OBIETTIVI GIÀ RAGGIUNTI

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**Cosa è già stato fatto:
NUOVO INGRESSO E BOOKSHOP**

La recente RIQUALIFICAZIONE DELL'INGRESSO, della BIGLIETTERIA E DEL BOOKSHOP DEI MUSEI costituisce il primo passo di un progetto più ampio di RIQUALIFICAZIONE DEL CORTILE e dei MUSEI ad esso collegati, previsto dal Piano di Gestione del Sito Unesco.



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OBIETTIVI GIÀ RAGGIUNTI

I lavori al Bookshop, l'introduzione del 'biglietto unico' e le attività del laboratorio didattico hanno fatto registrare ai Musei un notevole **INCREMENTO DEGLI INGRESSI** ai Musei e degli acquisti.



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NUOVI OBIETTIVI 2017-20

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Progetto di Riqualificazione e Ampliamento
dei MUSEI DEL DUOMO di Modena – Sito Unesco
A- RIQUALIFICAZIONE CORTILE

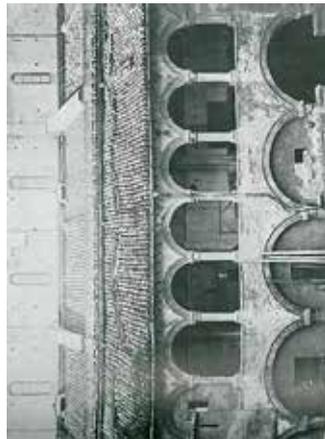
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A | RIQUALIFICAZIONE CORTILE

Il cortile del Museo Lapidario era in origine un chiostro attorno a cui si affacciavano, già a partire dal XII secolo, i locali delle Canoniche. In occasione degli interventi dei primi anni del 1900, volti ad isolare il Duomo dagli addossamenti esterni, vennero demoliti il portico e il loggiato che occupavano l'attuale Via Lanfranco e una porzione di essi fu ricomposta a ridosso della parete est del cortile (cfr. fotografie del 1898 e del 1905). In occasione di tali interventi il cortile fu sistemato a ghiaia e al centro fu creata un'aiuola di verde in cui furono piantumate essenze arboree.

Attualmente il cortile, che nel corso del secolo scorso ha subito diversi interventi (in particolare, si ricorda la realizzazione dei condotti per il riscaldamento del Duomo interrati nel 1968), presenta alcune situazioni di degrado.

L'intenzione di tale progetto è trasformare il cortile in un punto di accoglienza per i gruppi turistici. Esso infatti gode di una posizione strategica all'interno del sito, pur restando un luogo appartato e silenzioso, ideale per le spiegazioni introdotte dalle guide e per la sosta e l'accoglienza dei gruppi. A seguire si sintetizzano alcuni interventi di sistemazione che sarebbero opportuni ai fini della nuova funzione proposta.



Fotografia del lato nord del Duomo nel 1898, prima della demolizione del portico e del loggiato ad esso addossati



Fotografia del cortile nel 1905, dopo le demolizioni. Si noti la porzione di portico e di loggiato ricomposti sulla parete est.

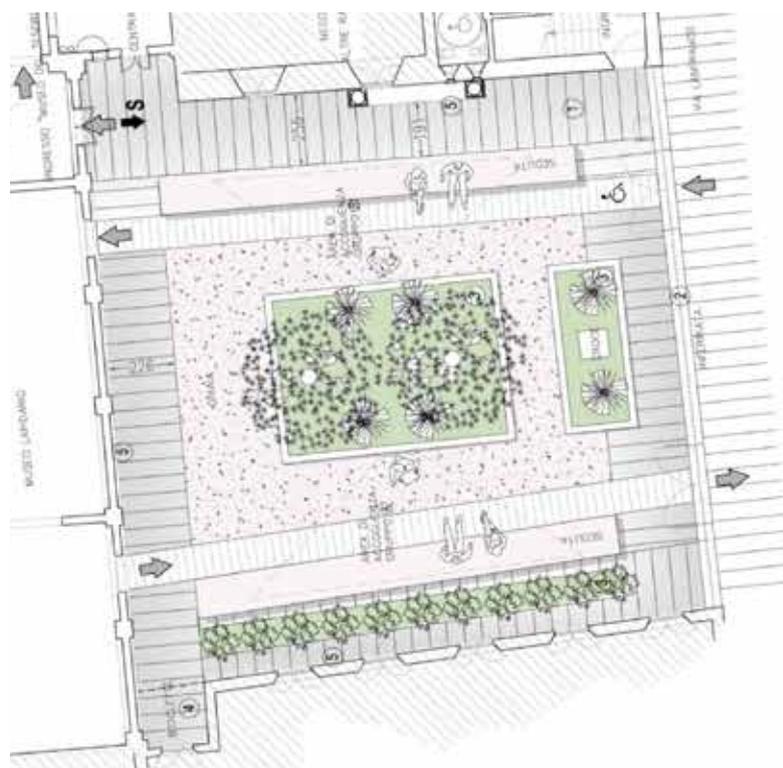


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Progetto di Riqualificazione e Ampliamento
dei MUSEI DEL DUOMO di Modena – Sito Unesco
A- RIQUALIFICAZIONE CORTILE

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A | RIQUALIFICAZIONE CORTILE



Obiettivi per il Cortile del Lapidario:

- ✓ creare un luogo di ACCOGLIENZA per i turisti del sito Unesco
- ✓ segnalare e valorizzare la presenza dei MUSEI
- ✓ renderlo uno spazio fruibile alla CITTÀ, fulcro di attività e di eventi culturali
- ✓ mantenere la NATURALITÀ del luogo e la sua vocazione a spazio verde e di riposo
- ✓ consentire un più agile accesso ai DISABILI

Interventi previsti:

- ✓ rinnovo della pavimentazione e della ghiaia, creazione di percorsi e sedute in pietra
- ✓ restauro dell'inferrata
- ✓ risistemazione del verde
- ✓ rifacimento di parti di intonaco degradato e ritinteggiatura a calce
- ✓ nuova illuminazione

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RENDERING DEL FUTURO ASSETTO DEL CORTILE (PROGETTO PRELIMINARE)

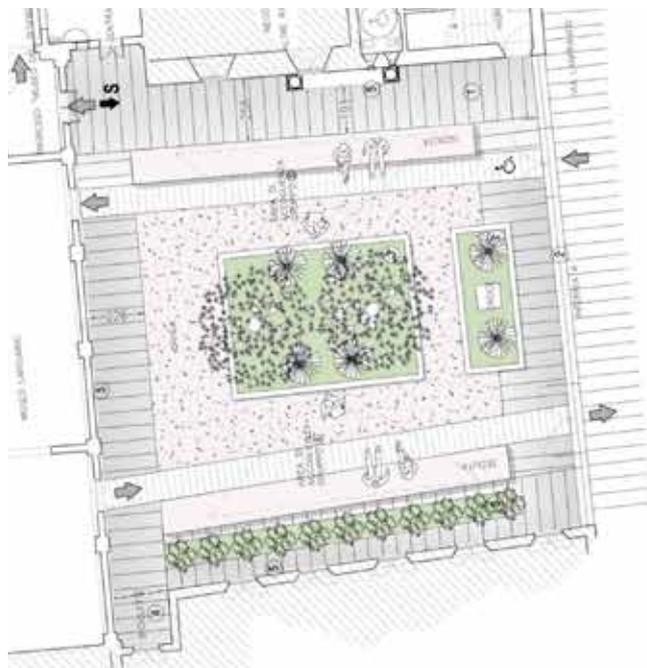
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A | RIQUALIFICAZIONE CORTILE

PROGETTO



STATO ATTUALE



A | RIQUALIFICAZIONE CORTILE

MATERIALI CHE SI UTILizzeranno PER IL CORTILE:

- ✓ pietra di lucerna (o gneiss) in lastre o quadrotti
- ✓ blocchi di Bianco di Verona rigato per le sedute
- ✓ ghiaia



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RENDER DEL NUOVO CORTILE (PROGETTO PRELIMINARE)



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A - RIQUALIFICAZIONE CORTILE

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RENDER DEL NUOVO CORTILE (PROGETTO PRELIMINARE)

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RENDER DEL NUOVO CORTILE (PROGETTO PRELIMINARE)

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RENDER DEL NUOVO CORTILE (PROGETTO PRELIMINARE)

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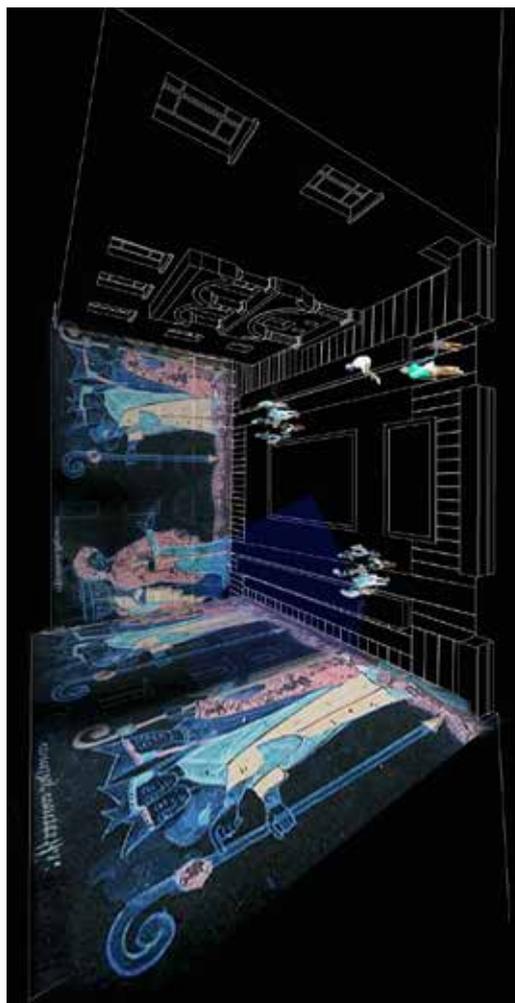
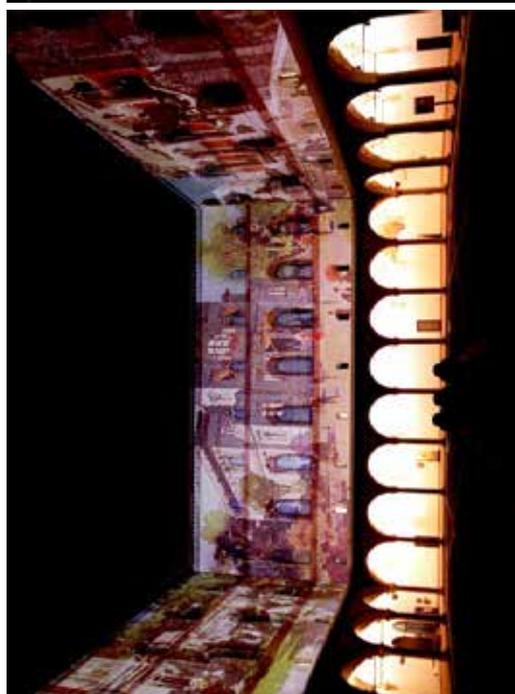
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POSSIBILITA' DI UTILIZZARE LE FACCIATE DEL CORTILE PER VIDEO-PROIEZIONI NOTTURNE SULLA STORIA DELLA CATTEDRALE (IN OCCASIONE DI UN EVENTO CON PROGETTO DEDICATO)

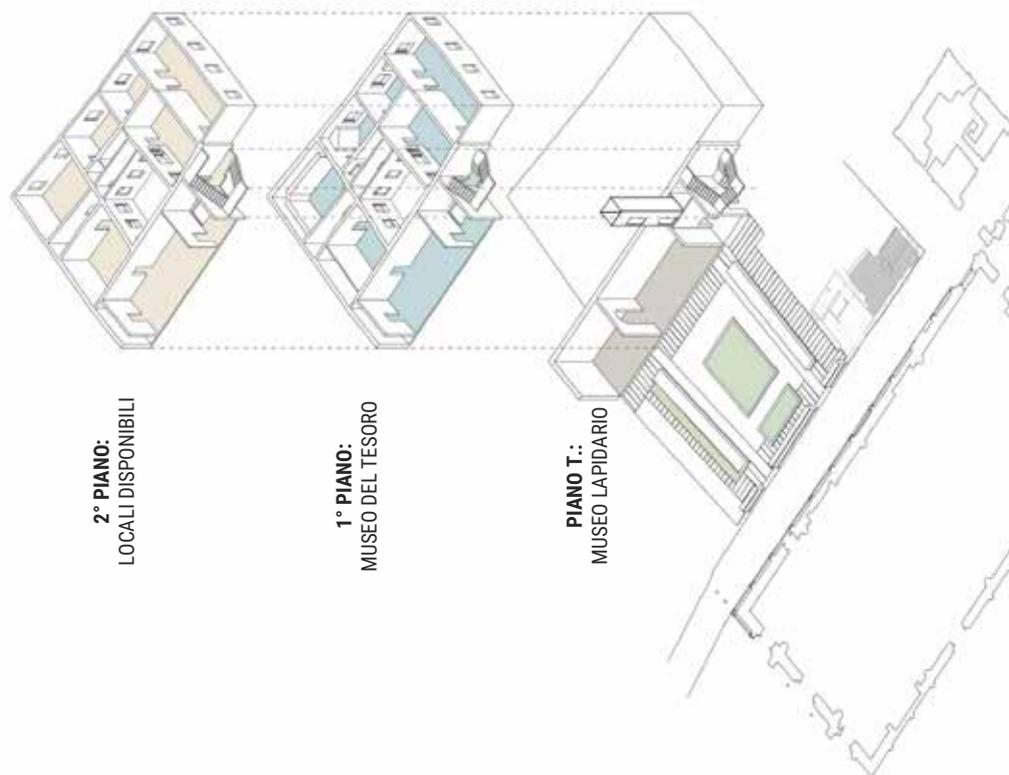
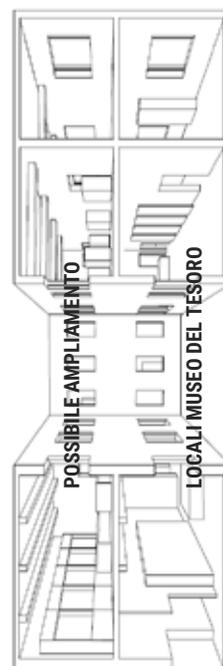


B | AMPLIAMENTO MUSEI

Il piano soprastante il Museo del Tesoro, in parte di proprietà della Basilica e in parte del Ministero di Grazia e Giustizia, è da anni vuoto e inutilizzato. Da tempo la Basilica si sta adoperando per ottenere il Comodato d'uso degli ambienti del Ministero e da recenti incontri pare che a breve la situazione possa avere un esito positivo. I Musei del Duomo potrebbero in tale modo entro breve ampliarsi al piano secondo, acquisendo una nuova superficie espositiva di 443 mq.

La posizione dei nuovi locali è strategica poiché permetterebbe l'ampliamento degli spazi esistenti mediante un semplice collegamento funzionale con la scala esistente e il prolungamento del vano ascensore al secondo piano. Il nuovo piano espositivo, inoltre, sarebbe del tutto corrispondente a quello sottostante, senza dover incorrere in ingenti opere murarie o strutturali.

L'estensione degli spazi consentirebbe di differenziare i contenuti dell'esposizione, per raggiungere un pubblico più ampio, e ospitare installazioni multimediali. Sarebbe inoltre possibile ricavare spazi polivalenti, dedicati ad attività didattiche, comunicative e sociali.



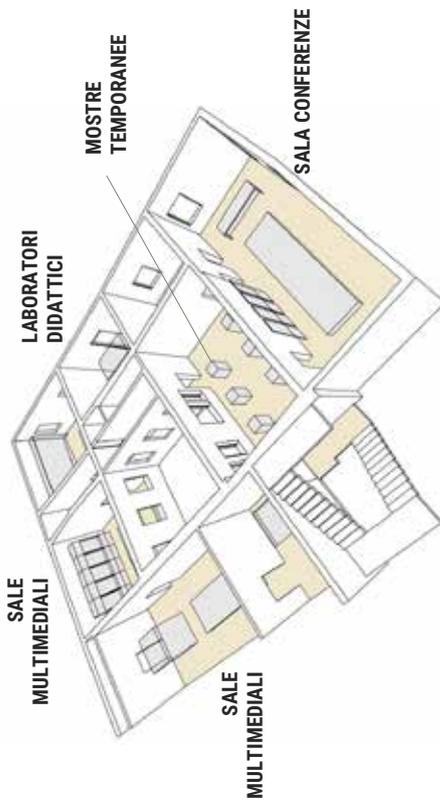
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B- AMPLIAMENTO MUSEI

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POSSIBILE CONFIGURAZIONE DEL SECONDO PIANO:



POTENZIALITA' PROGETTUALI DEGLI AMBIENTI DEL SECONDO PIANO



Esempi di progetti similari

SALE TEMATICHE

All'interno dei nuovi spazi acquisiti del piano secondo potrebbero allestirsi con tecniche multimediali, ad esempio, le seguenti sale tematiche :



- STORIA DELLA CITTÀ E DELLA SUA CATTEDRALE

L'attuale Museo del Tesoro non racconta la Storia della Cattedrale, che è invece uno dei contenuti di maggior richiamo per i turisti ed è inoltre fondamentale per comprendere la configurazione della Città storica.

Come per la altre grandi cattedrali italiane, è auspicabile l'allestimento di un percorso che racconti la costruzione e la storia architettonica e artistica del monumento, la sua interazione con la storia cittadina, con esposizione di opere e di contenuti anche mediante tecniche interattive e multimediali.



- SALA DEGLI ARAZZI

La Basilica possiede 20 arazzi capolavori fiamminghi di metà Cinquecento, di cui due restaurati di recente. Trattasi di opere uniche, di valore inestimabile. Un nuovo percorso tematico potrebbe esporre i pezzi già restaurati, mostrare con tecniche multimediali gli altri, raccontarne la storia e le tecniche di realizzazione e di restauro.

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Plan for the Unesco Site
of Modena 2018-2020

L'ampliamento ai piani superiori permetterebbe di ricavare nuovi spazi per
INSTALLAZIONI E LABORATORI DIDATTICI PER I BAMBINI



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MODELLO 3D DEL NUOVO MUSEO (PROGETTO PRELIMINARE)

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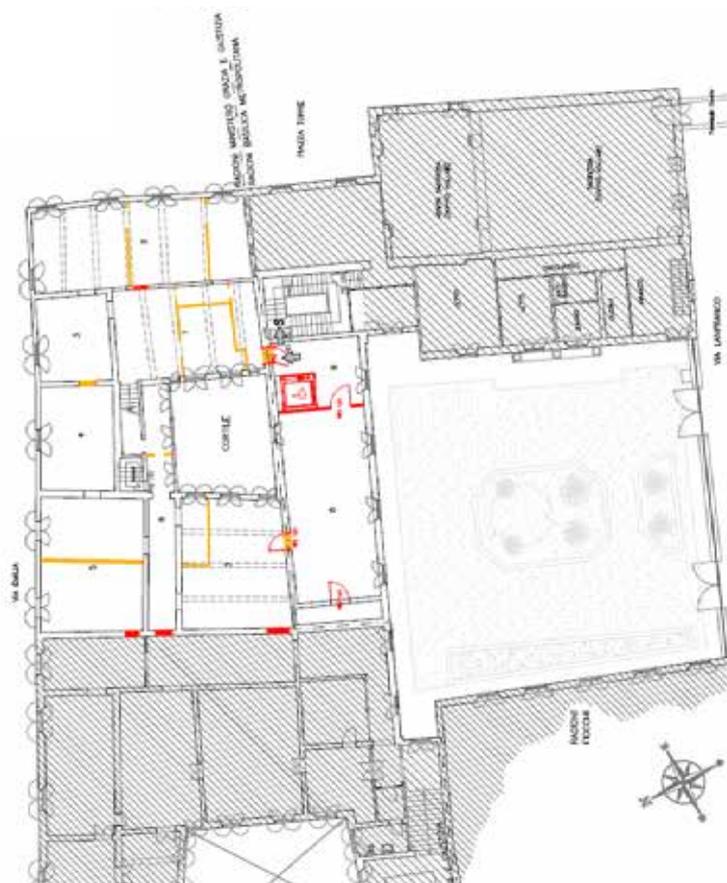
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RENDER DI UNA SALA DEL NUOVO MUSEO (PROGETTO PRELIMINARE)



INTERVENTI DI RISTRUTTURAZIONE NECESSARI



OPERE EDILI	demolizione pavimenti e sottofondo esistenti demolizione tramezze rimozione di rivestimento in piastrelle bagni e cucine rimozione finestre esistenti rimozione porte esistenti rimozione radiatori esistenti nuovo sottofondo per pavimento nuova pavimentazione riteggiatura pareti riteggiatura soffitti nuove finestre inferriate Nuove porte REI 90x205 Nuove porte REI 120x205 con maniglione antipanco Nuova parete divisoria in cartongesso REI 120 assistenza muraria impianti etc.
OPERE STRUTTURALI	PROLUNGAMENTO ASCENSORE al secondo piano apertura 3 porte in muri portanti
OPERE IMPIANTISTICHE	nuovo impianto elettrico, di allarme e di illuminazione (esclusi corpi illuminanti) nuovo impianto riscaldamento e raffrescamento
SICUREZZA e ANTINCENDIO	opere sicurezza e impianto antincendio

N.B. La presente Domanda per il quadriennio 2017-20 riguarda le spese previste per la sola ristrutturazione dei locali del secondo piano. Restano esclusi i costi relativi ad arredi, allestimenti, installazioni multimediali, pannelli grafici, attrezzature per sale conferenze e laboratori e corpi illuminanti, oggetto di una fase di finanziamento successiva.

