

## **Virtual paths for the enhancement of archaeological landscapes: the “Via Gallica” project**

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### **Abstract**

Today, the ability to revitalize and promote the complex system of resources pertaining to a specific territory in order to develop cultural tourism is based on the identification of instruments that facilitate a more natural process of communication and connections between all the components involved in the mechanisms of composition of the cultural and tourist proposal in its widest sense.

One of the design models used in recent years – employed with differing distinctive features in different territories and in various situations – is the cultural itinerary. It lends itself to a new understanding and interpretation of the landscape, valorising through a bottom-up approach the everyday cultural heritage that determines the very identity of each community.

This paradigm can also be applied to the field of archaeology, as experimented in Italy in a recent project financed by the Lombardy Regional Authority and developed by the ArcheoFrame Laboratory of IULM University, Milan, in partnership with five museums and the Lombardy Archaeology Superintendency.

The project involves the production of a historical and archaeological itinerary which winds its way through five key places in north Italy (Milan, Como, Bergamo, Brescia, Lake Garda), in search of the line of the ancient “Via Gallica” (Gaulish Way) in use during the Roman and Early Medieval period.

The itinerary is available to the general public by means of smartphone and tablet applications with innovative multimedia content - including video clips, 3D scans of artefacts and augmented reality – and was designed according to the principle of sustainable mobility, so as to relocate visitor flows from the main town centres to the surrounding areas and stimulate the search for information about the manmade landscape and evidence of its historical development.

Crucial to the last aim is the use of storytelling: employing different literary forms, four historical figures help the visitor to discover the places of which they speak through their own eyes and experiences, giving an overview of the various historical epochs. The app allows you to pursue diverse lines of interest, so as to offer an integrated guide to the archaeological remains in their geographical context.

The aim is to stimulate local communities' awareness of the historical landscape and to propose alternative tourist opportunities, transforming cultural assets into active features able to furnish younger generations with a new perspective from which to understand the value and strategic potential of heritage for sustainable territorial development, focussing on cultural diversities and dialogue, while exploiting the synergies of new technologies in order to enrich the heritage itself.

**Keywords:** *cultural itineraries, archaeology, sustainable development, tourism, heritage, ICT.*

### **Cultural itineraries as a means of understanding and valorising the landscape**

Italy is a country “based on beauty” (Lazarotto, 2013), second to none for the number of sites in the UNESCO World Heritage List (51) and for the quantity of historical, artistic and architectural heritage – and archaeological – sites scattered throughout the country. According to data from the *Osservatorio Nazionale Cultura e Turismo, Impresa e Lavoro* (2015), in the tourism sector the cultural component continues to be a strong motive for visits to Italy, influencing almost 40% of international tourists: 18 million foreigners, in addition to 13 million Italians, are attracted by culture. This interest seems no longer to be limited to mere enjoyment of artistic and monumental features, but is seen as a “more wide-ranging experience that may involve an entire territory and its heritage” (Grossi, 2006), including the intangible (customs, dress, traditions, and even the stratified knowledge that has accumulated in a place over time) and productive (food, wine and crafts). In the current situation, then, we are faced with a wider public, less specialistic but in search of clear information with a wide range of reference, that improves its appreciation of a place and awareness of local history and culture. Those who stand to benefit from the growth potential of this new and extensive tourist requirement are the localities – perhaps minor and peripheral – that are best able to meet these new needs, offering users experience-devices that can be employed in “multidimensional” and “polythematic” ways (Gregori, 2005).

So the challenge is to identify and experiment methods, strategies and tools suitable for increasing awareness regarding cultural heritage resources, including emphasizing latent or neglected aspects that are rich in potential, so as to encourage a more natural process of communication and organized integration between all of the elements involved in the process of formulation and enhancement of a region's tourist and cultural assets. An area of experimentation which has been explored in recent years – with marked differences from place to place and diverse motivations and backgrounds – is that of the design of cultural itineraries, both in the concrete sense of routes to actually be followed, and in the abstract sense of conceptual journeys of discovery and learning about the landscape – and also from an operative point of view, suggesting best practices for wide-ranging territorial valorisation. It is at the same time an instrument for the development and interpretation of the landscape, be it physical or cultural, and for communication and spreading shared values and ideas for the purpose of encouraging the everyday awareness of local heritage that is the underlying essence of a region and a community. The cultural itinerary, considered in all respects as an innovative tourism product, needs to be based on a “virtuous circle” with three components: resource/project/territory (Lajarge & Roux, 2007), closely linked and interdependent. In this way, then, the resources and specific features of an area do not remain “inanimate” resources (Kebir & Crevoisier, 2008) but – if inserted in a virtuous cycle, distinguished by a unifying theme which gives meaning and importance to the entire itinerary – allow the networking of a widespread heritage and the development of diverse forms of “immersion” and “narration” of the layered history of the chosen locations, which can then be presented and communicated as territorial theme-concepts (CUEIM, 2006). One of the principle merits of cultural itineraries is also their capacity to make explicit the *genius loci*, or the culture of a specific place. The definition of this topic is a crucial aspect of their design, which starts with a careful analysis of the local characteristics of the chosen place, in order to comprehend what kinds of resources, already rooted there, have the greatest potential for development.

Lombardy is certainly rich in historical evidence, distributed throughout its extensive territory and often little known, but of great interest to those who pay attention to the stratification of the past; a diverse cultural inheritance that corresponds well to the concept of “widespread heritage” (Ferrara, 2010), and lends itself to the experimentation of appropriate methods for awareness-building and enhancement.

S.F.

### **The “Via Gallica” archaeological itinerary in Lombardy**

Lombardy's geography is very varied, from the extensive plain of the River Po and its tributaries to the massive mountain range of the Alps, which is crossed by a series of

strategic passes that have always permitted communication between the Italian peninsula and Europe to the north. Between these two extremes lies a zone of great interest, both with regard to its scenery and its history: the Alpine foothills, among which lie the three great lakes (Maggiore, Como and Garda), renowned the world over as attractive tourist destinations.

In this area during the course of the 1<sup>st</sup> millennium BC four large towns grew up, which during the Roman period (starting in the mid-1<sup>st</sup> century BC) became sizeable urban centres, further developing during the Early Middle Ages to become the provincial capitals they are today: Milan, Como, Bergamo and Brescia. Around these, on the basis of diverse settlement models, there developed a considerable number of satellite communities which owed their vitality to their various functions: economic, religious and military. Our knowledge of the Lombardy landscape in different historical periods, enabling its evolution to be followed up to the present day, is founded on archaeological remains, which include large towns with religious and civil public buildings, dwellings, cemeteries, defensive structures, villages, agricultural and industrial centres, rural and luxury villas, fortified settlements, rural temples, monasteries, roads and their related infrastructure (Grassi & Frontini, 2008).

Milan and Brescia were the two main towns, both with the status of capitals of the Celtic tribes living respectively in western Lombardy (Insubres) and Western Lombardy (Cenomani) and therefore important political centres: from AD 286 to 402 Milan was seat of the Roman Imperial court, and became a key locality for western Christianity thanks to Bishop Ambrose, while from his court in Brescia the last Lombard king Desiderius participated in the end of Lombard rule in Italy in AD 774. In Milan, then, you can see the remains of an exceptional Roman urban centre: as well as the town wall, the forum, baths, theatre, amphitheatre and luxurious residences there are the imperial palace and adjacent circus, to which may be added the Bishop's complex and remarkable Early Christian churches, that continued in use during the Early Medieval Epoch (Fedeli, 2015). In Brescia, on the other hand, the principal monumental complex present in every Roman city may still be experienced in all its majesty: the forum with a temple dedicated to the Capitoline triad (the *Capitolium*), the basilica, other public buildings, shops and the nearby theatre (Rossi, 2014). The Santa Giulia – City Museum complex, as well as sumptuous Roman *domus*, also includes the church of San Salvatore, a masterpiece of Lombard religious architecture which belongs – together with the Roman Brescia Archaeological Area – to the UNESCO serial site “Longobards in Italy. Places of Power (568-774 A.D.)” (Brogiolo, 2014). Como and Bergamo owe their emergence in Celtic times and importance through to the Early Middle Ages to their strategic positions of territorial control. They are also good examples of smaller settlements: Como's town centre preserves eloquent remains of when it was a colony founded by Caesar, while its modern churches conceal evidence of Christianity's

spread through the Alpine foothills (Gioacchini & Albini, 2008); place-names in Bergamo are the key to discovering the remains of the Lombard court that are scattered throughout the Upper Town, partially overlying those of the Roman centre (Fortunati & Poggiani Keller, 2007).



Figure 1: The itinerary of the so-called “Via Gallica” in Lombardy

These four towns have always been connected by a road system that is only known in part, but of which there are traces from ancient writings, place-names and the sporadic physical remains of stretches of road and allied structures (town gates, bridges, milestones, roadhouses, see Basso, 2007). In particular, there is a route that starts in Verona (where it joined up with the larger Via Postumia), passes along the southern shore of Lake Garda near Sirmione – the first locality in Lombardy – and crosses the region from east to west, running mainly through the piedmont belt, which is known as the “Via Gallica” (Fig. 1). This name is conventional (Filiassi, 1792), for it does not in fact correspond to a construction project or single road that was formally recognized, as was the case for the principal Roman roads named after consuls, but is instead a route whose component parts have been subject to some variation over the ages. In the Iron Age, road connections existed between the Celtic peoples' main settlements, these were rebuilt in Roman times and accompanied by additional facilities that have also left archaeological survivals (Palestra, 1984). Historical sources attest that the most intense use of this piedmont route was in late Roman and Early Medieval times, as a result of the construction of lines of defence and the emergence of the phenomenon of pilgrimage, in first place to the Holy Land following a terrestrial route from Gaul to Jerusalem such as that illustrated by the *Itinerarium Burdigalense*. Principal nodes on this itinerary were *Mediolanum*-Milan, *Bergomum*-Bergamo and *Brixia*-Brescia, from which branched out other roads large and small, giving rise to alternative paths following the same overall direction. An example is the stretch between *Mediolanum*-Milan and *Novum Comum*-Como, crucial for communications

between the most important commercial centre on the plain and the lands beyond the Alps – reached by means of Lake Como and the Splügen Pass.

Thus the “Via Gallica”, rather than being a concrete physical link between these various places, is the idealized path of a tourist and cultural itinerary, an opportunity to discover the territory of Lombardy and its historical development through archaeology.

G.Z.

### **An App for the enjoyment of the Via Gallica archaeological itinerary**

The archaeological patrimony of the larger and smaller towns on the Via Gallica route in Lombardy is to be found in well-known archaeological areas, and also in small sites hidden in urban centres and the surrounding countryside, mostly disconnected from the traditional tourist routes that are the prerogative of famous artistic centres. Alongside these are long-standing archaeology museums with abundant collections, the “organized deposits of memory” (Montella, 2003) of towns or indeed larger territories, also not always integrated into large-scale tour circuits, although they are the access points to understanding the key aspects of a particular geographical and cultural context. Sites and museums are thus complementary and inseparable resources for exploring the human landscape, in an ongoing exchange between past and present, wider context and local community, as well as the various components and peculiarities that make up the identity of the locality in question and constitute its historical memory. Sites and museums are also places of valorisation, understood as a dynamic process within an integrated system based on dialogue between the various actors who rotate around an archaeological resource, the public bodies in charge of heritage tutelage, local councils, tourist operators, and those who make use of the patrimony. Our approach to the development of archaeological resources must therefore be twofold: on one side the inevitable top-down intervention of the institutions responsible, defining the guidelines and programming of operations on the basis of available funding, and on the other the bottom-up consultation with regard to aims, methods and means between all parties involved.

These are the premises to the design of a tool for the development of this heritage, its organization and improved public accessibility through the archaeological and cultural itinerary dedicated to the Via Gallica. Thanks to funding by the Lombardy Regional Authority through a “Call for presentation of applied research projects for the development of Lombardy’s cultural heritage, addressed to universities in Lombardy, year 2015” the project “Retracing the Via Gallica: a multimedia archaeological itinerary through Roman and Early Medieval Lombardy” was designed by the ArcheoFrame Laboratory of the Milan Independent University of Languages and Communication, or IULM, directed by Prof.

Luca Peyronel, in partnership with the Lombardy Archaeology Superintendency, the Lombardy Museums Group, Milan Civic Archaeology Museum, the Paolo Giovio Como Archaeology Museum, Bergamo Civic Archaeology Museum and Santa Giulia – Brescia City Museum/Brescia Museums Foundation. This concerted project has led to the design and production of an innovative multimedia tool for the enjoyment of this archaeological itinerary by means of two different instruments, each one fashioned with a mixed public in mind. The “Via Gallica” mobile app for smartphones and tablets may be used to facilitate a traditional sightseeing tour: it furnishes all the information needed to plan a town-centre route or itinerary between the various nodes on the reconstructed line of the ancient road and gives a summary of the main Roman, Early Christian and Early Medieval attractions, both standing monuments and specific objects kept in museums. The second aid to fruition takes the form of an original approach based on narrative, or storytelling: the visitor is guided along the Via Gallica by four historical personages who lived in different epochs and who, through their own eyes and based on their personal experiences attested in historical sources (and others that were invented), provide in various literary formats (letters and diaries) an evocative account of the most distinctive parts of the towns and villages, thus bringing to life remains that for laypeople are often difficult to understand. The virtual guides on this journey through times long gone are: for the Roman period the writer Pliny the Younger, who was born in Como, and the patron saint of Bergamo, Saint Alexander; for the Early Christian era Serena, niece of Emperor Theodosius who lived in the Milan court; for the Early Medieval period Ansa, wife of King Desiderius, who in Brescia was involved in the end of the Lombard kingdom in Italy. Forms of entertainment such as these narratives also constitute means of instruction, for which the term “edutainment” has been coined (Addis, 2002); they enrich the visitor's experience by establishing a broadly emotional interaction with the monuments, which favours the assimilation of more detailed and correct information, without trivialization.

S.F., G.Z.

### **App development, graphic design, multimedia and 3D scanning**

The strategy followed in designing the app for the fruition of the “Via Gallica” cultural tourist itinerary, and the creation of a coordinated image for the various products related to the valorisation project, was based on the notion of travelling through time and space. By means of a linear pathway, the itinerary connects diverse territories and cultures, offering various views in various timespans. The logo is based on the aspect that the road would have had in Roman times. If you had walked along it 2000 years ago, you would have encountered travellers on foot and on horseback, soldiers and above all merchants who transported their goods on four-wheeled carts. After some research into relevant ancient imagery, we selected several Imperial Roman low-relief carvings from Campania (such as

the Stele of Marco Viriato Zosimus with four-wheeled carriage pulled by a mule in the Museo della Civiltà Romana, Rome) as a basis for the graphic image of the “Via Gallica” logo. The wheel, symbol par excellence of travel, was chosen as the first element to represent the idea of movement in a general sense: the movement of cultures, traditions, the spread of habits and customs over time and through space, from one place to another. The app is intended to be an instrument that offers guidance to the modern traveller setting out to discover ancient landscapes – a sort of compass. The wheel and compass together form the main graphic component of the logo (Fig. 2).

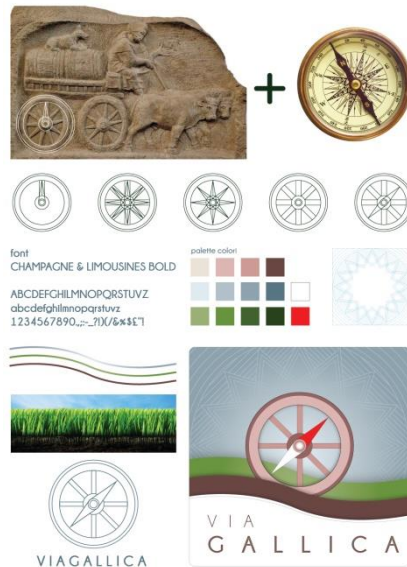


Figure 2: “Via Gallica” App - Logo development

In addition, by uniting the main stops between Sirmione and Como, a line that is emblematic of the territory through which passes the Via Gallica was created. This is a three-part “wave”, composed of symbols representing the natural environments present in the Alpine foothill strip of Lombardy: fields and other cultivated land on the plain (brown); verdant, wooded hillsides (green), lakes and rivers (blue). In the background there is a white pattern vaguely resembling a map. After devising the logo, we proceeded to design the rest of the app, which adopts the colours of the logo.

Mobile devices are now extremely widespread, use many different operating systems and vary considerably in screen size; it was thus clear that the product needed to be very versatile: a cross-platform app, able to function on different machines and with diverse



software. Thanks to the acquisition of the web space [www.viagallica.it](http://www.viagallica.it), it was possible to create an online archive of all the media (images, video, 3D) to which the app has access without directly incorporating the data (Filippini-Fantoni & Bowen, 2008). Thus it is light and may be rapidly downloaded from the principal stores for which it was made: iTunes (Apple) and Google Play (Android). All of the architecture was created using opensource (Keene, 2011 and Forbes, 2011) and free programmes and libraries, such as Notepad++, Lightbox, and so on, using the html-based programming language Bootstrap 3.0.

The homepage (Fig. 3a) displays all the other pages in a tree-shaped diagram; here you can start from the roots, choosing which branches to follow to reach the leaves. Every page has the same layout, so that the user can easily and rapidly choose the one he or she wants. Possible choices from the homepage lead to a specific topic in 3 clicks (Zeldman, 2001). The main branches are:

- main stage pages (Como, Bergamo, Milan, Brescia and Sirmione).
- intermediate stage pages (grouped into sections or journey sectors, such as Milan-Bergamo, Bergamo-Brescia etc.)
- narratives

The main stages are structured with a videoclip as header, filmed in the town in question, in which the protagonist uses the app as a compass to get their bearings and reach the most important monuments, with an emphasis on Roman and Early Medieval items. There follows a brief introduction to the section and a description of the Roman and Early Medieval itineraries, which are positioned directly on an interactive map, with markers that are colour-coded with respect to different historical routes (red: Roman; green: Early Medieval). Each of these corresponds to a POI – Point of Interest, described by a complex layout (LAY 1 - Fig. 3b) – with links to further pages containing more detailed information – or a simple layout (LAY 2 - Fig. 3c). The “Museum” pages (Fig. 3d) are a special category. These present the most significant finds from the area dating from the two periods of interest, and also indicate the presence of monuments within the museum buildings (for example the Market-garden domus in the Santa Giulia Museum); all are chronologically colour-coded as either red (Roman) or green (Early Medieval) features. A further subsection allows the immediate identification of the most important objects to be found in a museum, distinguishing between 'masterpieces' of any type (Fig. 3d, top) and those selected to represent the Via Gallica (Fig. 3d, bottom). The first of these categories has a video header (e.g. the Brescian “Winged Victory”) or 3D header, obtained by means of a photography-based 3D-modelling technique, in which a point cloud that can be modelled in 3D is obtained from ordinary photos.



Figure 3: Screenshots of the App “Via Gallica”. From left to right: the Homepage (3a), a main stage page – LAY1 (3b), a POI page – LAY2 (3c), a Museum page (3d), an Intermediate stage page (3e)



Figure 4: Screenshots of the App “Via Gallica”. Some pages of the storytelling section

The 3D models have the twin aim of recording archaeological objects in three dimensions – useful also for conservation work – and of making accessible to a wider public items that may be difficult to see in large museums, or the display of which is problematic, by creating highly versatile models that are compatible with other procedures such as virtual and augmented reality, video production etc. (Guidi et alii, 2003).

The pages of the intermediate stages are divided into between-town sections, such as Milano-Bergamo (MI-BG), Bergamo-Brescia (BG-BS) etc. Each of these section pages features the relevant stretch of the Via Gallica and descriptions of all the stages on it, thanks to the use of “accordion” lists which can expand or contract for individual items and into which written or multimedia contents may be inserted (Fig. 3e).

The storytelling section, dedicated to the discovery of localities presented by four historical characters, has a different structure, of more literary inspiration. The narrative texts are accompanied by photographs of monuments and equipped with links to the POI in the main towns, or to pages such as LAY1 and LAY2 (Fig. 4). The appearance of each character was based on a careful study of the pictorial records available, with corrections according to the stylistic inclinations of the historical period in question (Cowan, 2003).

The app is available in Italian and English and distributed thanks to our partners in the project: all printed material for promotion and distribution, such as stickers, posters, cards and bags features the image and logo. Thanks to a research group set up by IULM University, the Via Gallica valorisation project has combined applied and teaching research in the experimentation of new forms of communication, with promotion of this cultural itinerary using social networks.

The app's structure – which will be subject to updates and additions – permits the development of various types of multimedia utilisation and the involvement of local participants in the creation of additional content, with a particular focus on young people and creative enterprises, for the broad-based development of archaeological resources.

The Via Gallica project aims to demonstrate that if local communities themselves encourage the discovery of their historical landscapes, they will create alternative tourist opportunities and transform cultural remains into active features, able to furnish younger generations with new ways of interpreting the value and strategic potential of heritage for the sustainable development of their territories. This kind of development is open to cultural diversity and dialogue, and uses the synergy of new technologies as a means of enriching the heritage itself.

D.B.

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