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THE DIGITAL TRANSFORMATION COMPANY

INSTANT PAPER

Digital Experience: culture & tourism

Let's redesign the way we experience cultural sites, contribute to the revival of tourism and local development.

Autori

Erika Bressani
Tech Strategy Senior Manager

MUNICIPIA
erika.bressani@eng.it
in Erika Bressani

Alessia Freda
Strategic Marketing & Content Senior Specialist

ENGINEERING
alessia.freda@eng.it
in Alessia Freda

Eleonora Marzano
Junior Account Manager

MUNICIPIA
eleonora.marzano@eng.it
in Eleonora Marzano

00 Summary

A new strategic vision

01

A new strategic vision

Enhancing the identity of places and the uniqueness of heritage through technology and experience

Italy is the world's leading country in terms of the number of sites recognized by UNESCO[1], and the tourism sector, both direct and indirect, accounts for **13% of the GDP**, confirming its importance to the Italian economy; indeed "every 100 euros of transactions in tourism generate an additional 86 euros in other sectors"[2]. Markets are constantly evolving, shifting **from "seeing and doing" to "living and experiencing."** People, thanks to new technologies, the web, and social media, are organizing themselves, experimenting, and seeking engagement and emotional connection. This requires increasingly precise responses from administrations.

Investing in innovation, therefore, is a fundamental requirement to reactivate local development processes at every level and geographic area, thereby creating new job opportunities. **New technologies contribute to making the offering competitive, renewing its spirit, and redefining its scope and meaning to some extent.** When digital technology enters art, history, and nature, it can significantly increase both the tangible value of heritage and the perceived value of the experience, expanding and managing tourist flows, and enabling socio-economic improvement and revitalization of the territory.

Administrations and stakeholders must position themselves as "smart destinations," providing tourists with suitable infrastructure and tools. The digital transformation process has finally been initiated, thanks in part to the funds from the **National Recovery and Resilience Plan (NRRP).**

A new approach and strategic vision are necessary, based on the ability to share positive experiences and replicate them in multiple territories, create new circuits based on experience and perception, overcome language barriers and potential sensory and mobility difficulties, and go beyond the logic of "hit-and-run tourism" by attracting and retaining people.

Destination management, digitization, flow control, and management for safety purposes, creation of immersive and personalized paths, including for children and vulnerable groups, metaverse, chatbots, and video games are just a few of the innovative tools that can meet these new needs. Adequate planning for the implementation of these tools must be accompanied by equally appropriate **territorial marketing** to bring tourists not only to major cities but also to lesser-known destinations, stepping out of traditional circuits (think, for example, of **historic villages**). The identity of a place and the uniqueness of its heritage are enhanced by technology and experience.

It is clear therefore that culture, tourism, and technology can support and propel each other towards the common goal of making culture, art, and tourism truly democratic, sources of knowledge and growth for individuals, communities and territories.

A new strategic vision

1. "L'Italia in 10 selfie" (2022), Fondazione Symbola, Unioncamere, Assocamerestero
2. Conto Satellite del Turismo (CST) – ISTAT, 2020

02

Our approach

Our approach

Special public-private partnership

Creating a network of operators, activities, services, points of interest, and citizens is fundamental to a participatory tourist reception and cultural heritage management service. This is the direction that the Engineering Group looks towards, particularly with its company Municipia dedicated to the digital transformation of cities of all sizes, providing modular digital solutions to support local authorities in designing services, optimizing economic resources and knowledge, enhancing professional skills, and providing short and long-term answers for tourist management and visitor experience.

The goal is to make the storytelling of heritage and culture more democratic, consistent, immersive, sensory, and customizable. It is not the visitor who should choose the best technology or connectivity, but rather the technological architecture that should adapt to the environment and offer the best support to the visitor. A narrative built on these assumptions also contributes to the enhancement of the heritage and the places themselves.

These objectives allow for the collaboration with public authorities through the **Special Public-Private Partnership (SPPP)** formula, a form of collaboration between the public entity and a private partner characterized by simplified governance, operational flexibility, and extensive technical discretion aimed at maximizing the value of the asset. **The SPPP acts as a multiplier of the resources from the National Recovery and Resilience Plan (NRRP)**, as private intervention brings additional financial resources, involves the territory and the local community, and establishes collaborations with voluntary and third sector organizations.

What changes:

- Single and coordinated management of cultural and tourist offerings.

- Innovative modes of representation of the community's tangible and intangible historical and cultural heritage.

- Innovative modes of user-tourist enjoyment.

- A seamless user experience without disruptions in transitioning between physical and virtual environments when accessing territorial services as a tourist-citizen.

- Destination marketing and promotion.

Therefore, it is possible to:

- Manage digital content (images, videos, virtual and augmented reality).

- Collect information from user interactions, both during the promotion and enjoyment of goods and services.

- Learn and predict user preferences to help the administration offer a more appealing and competitive "tourist product."

- Enhance the promotion of territorial resources.

- Increase engagement during the enjoyment phase.

- Analyze data to acquire strategic information, including real-time insights.

Our approach

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For the Authority and the local territory:

- **Economic impact**: Improves accessibility and development of cultural resources, involving stakeholders. The hospitality system supports and facilitates tourist-cultural visits, creating value for the entire sector and ensuring the survival of businesses of all sizes while safeguarding employment levels.

- **Current storytelling**: The use of multimedia and technological channels ensures constant updates, protects investments, and the environment.

- **Planning tools**: By monitoring data and gathering quantitative and qualitative feedback, it is possible to effectively manage and plan investments, pursuing the development of the territory in line with real needs and aspirations.

- **Destination marketing and promotion** on national and international channels and circuits.

For users:

- **Information and services always at hand**: new technologies facilitate interaction between the local public administration and city users, increasing communication and delivering data and information to everyone, even in a targeted manner.

  This translates into simplified and clear access to services: it is specific information that reaches users, rather than users having to search for information.

- **Direct experience and sharing opportunities**: The use of technologies is attractive and engaging, fostering mechanisms for the dissemination and exchange of peer-to-peer information. By sharing their experiences and emotions, users become true "ambassadors of the cultural and tourist beauties of the territories."

Benefits

Engineering ©

03

Our solutions, from Metaverse to gamification
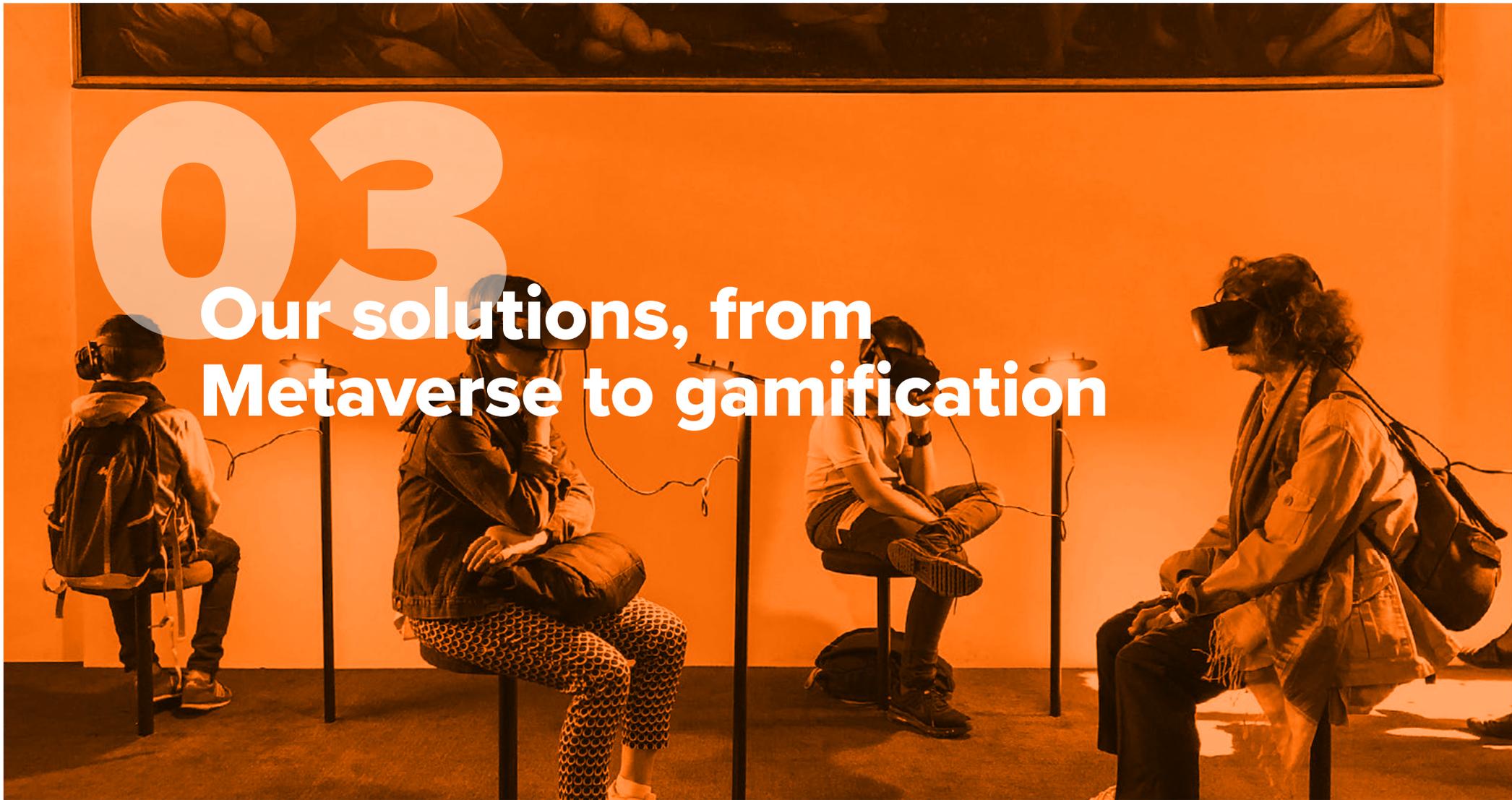
The solutions offered by Municipia-Gruppo Engineering and its partners aim to develop a new mode of access and enjoyment of spaces and events by utilizing highly innovative tools that enable the governance of cultural tourist sites.

Augmented Reality (AR) and Virtual Reality (VR), including the latest "version," the **Metaverse**, allow for an expanded and engaging tourist-cultural experience. They also enable on-demand remote access.

Through **Augmented Reality**, it is possible to reconstruct a three-dimensional environment different from what is perceived with the naked eye by integrating real elements with virtual elements that reproduce architectural features from the past or futuristic ones and provide additional information and content.

Greater user engagement is achieved through **Mixed Reality (MR)**, which integrates digital models into the physical world and allows people to interact with virtual objects displayed in their field of view through mobile devices. These technologies create an additional level of interaction with tourists, making the visiting experience even more engaging through gamification.

With **Augmented Reality** and interactive maps, visitors can be engaged through game-inspired rules and interaction mechanics, involving challenges that require them to interact with cultural and tourist heritage to achieve specific objectives, solve problems, and propose solutions. Motivation is increased through incentives and competitions.

The offering is structured on a scalable and modular model that can be customized based on the intervention context, adopting open standards and interfaces, open-source software components, and a microservices and web-based architectural style, allowing for the integration of existing services, leveraging previous investments, or anticipating future developments and integrations.

In detail:

- **Content management systems** (web-based and delivered as SaaS) to create and update the content of multimedia applications accessible to visitors on the web, multimedia panels at cultural sites, or consumption apps. The CMS allows for the separation of multimedia and web application containers from the site's content, integrating everything with existing devices or solutions, and enabling a modular approach.

- **Systems for managing multimedia guides** both indoors and outdoors, integrated with Augmented Reality, capable of offering predefined or personalized itineraries based on tourist preferences (age, accessibility features, nationality, and interests).

- **Virtual reality environments and immersive tours** that allow remote access to virtual worlds with an innovative and multimedia approach, usable via PCs, smartphones, and headsets.

- **Interactive hologram systems**, based on chatbots or live broadcasts, projected onto an orographic plate, even with varying levels of brightness, adaptable to different environments.

- **Storytelling** for exhibitions, installations, both permanent and

temporary, to have a ready-to-use exhibition event.

- **Systems/platforms** to accompany urban area visits, considering themes related to climate change and environmental sustainability. For example, they enable the design of tourist flow management routes taking into account weather conditions, environmental conditions, pollution levels, etc. Visits can be personalized based on age, nationality, and interests, creating tailor-made itineraries that align with each user's preferences and characteristics, calibrated according to the territory's offerings.

- **Distance education platforms** based on virtual reality to make training and information more immersive and engaging.

Our solutions, from Metaverse to gaming

Our solutions, from Metaverse to gaming

An Integrated Digital System for Innovative Visitor Experience:

- **Multichannel Access and Payment**
  Multichannel management and access (web, app, chat, social media) to information, content, and multiplatform electronic purchases: mobile, PagoPA, Satispay, credit cards.

- **Digital Assistant**
  Artificial intelligence, deep learning, analytics, and NLP for conversational access and multilingual guidance to assets.

- **Immersive Technologies**
  Augmented and virtual reality, 3D models, interactive touch displays, video projections, headsets, and immersive surfaces for gaming and user engagement.

- **Visitor Experience**
  Management of user experience and relationship: profiling, personalization, analytics (predictive, digital listening, FAQ, loyalty, campaigns, etc.).

- **On-Demand Park**
  Enjoyment of the Park through a video store enabling multimodal experiences: TV, mobile, web, indoor/outdoor installations.

- **IoT and Blockchain**
  Indoor localization, geofencing, proximity marketing, management of conservation and certification/notarization of works.

Technological innovation enables and supports the process of territorial valorization in terms of services, participation, and preservation of historical and cultural heritage.

A heritage that needs to be enhanced, protected, and made "open" and accessible to everyone, under any condition.

Our solutions, from Metaverse to gaming

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