DIGITAL EXPERIENCE: CULTURE & TOURISM

Redefining the way we manage, live and think about art, the promotion of local areas and everything that revolves around two key engines of the Italian economy: culture and tourism.

WHAT ARE WE DISCUSSING?

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WHAT IS DIGITAL EXPERIENCE: CULTURE & TOURISM?

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According to the Italian National Institute of Statistics's (Istat) Satellite Tourism Account (CST), the value of tourism in Italy was 93 million Euros in 2017. A fact that strongly confirms the importance of the sector, which has close ties to culture. Two critical sectors, key engines of the Italian economy, which have finally started to pursue transformation and digitalisation processes, so far only wished for and rarely put into practice.

The market is constantly evolving. **It has gone from "Seeing and doing" to "Living and feeling"**: people in general are more aware, they rely on the Internet to look for information and organise themselves before leaving on a trip, they want to experiment, to be engaged, to be excited and excite those around them, also thanks to social media networks.

Added to these, **we have the new post-Covid provisions**, social distancing, the ability to be accessible even from a distance and at any time, from any corner of the world.

And all this requires a prompt response from Italian Public Administrations, for some of which, unfortunately, these areas present an extraordinary potential that is still unexplored. Territorial marketing strategies must therefore be accompanied by adequate planning, in order to bring tourists not only to large cities, but also to lesser-known destinations. In other words, attracting people and keeping them interested, moving beyond the "hit and run" logic that many European cities are already trying to discourage. **The goal is to create new circuits, based on experience and perception**, while also overcoming language barriers and any sensory and motor challenges that may exist.

Local administrations and stakeholders must adopt an innovative approach throughout the supply chain, presenting themselves as smart destinations, making adequate infrastructures and tools available to tourists, which will reactivate local development processes: every 100 Euros of transactions in the tourism sector generate an additional 87 Euros in other sectors.

A qualitative leap necessary in order to become Augmented Cities: in other words, technological, resilient and inclusive cities at the service of citizens.

Destination management, digitalisation, the control and management of flows (including for safety purposes), the creation of immersive and personalised itineraries, including for children, Augmented and Virtual Reality, chatbots and videogames, are just some of the many innovative tools that can satisfy these needs. In fact, new technologies directly contribute to making the product and services offer in the sector more competitive, renewing its spirit and, to a certain extent, rewriting its scope and meaning: the digital element integrated into places of art and history can increase both the real value of the artistic and cultural heritage, and the perceived value of experience, **by expanding and managing tourist flows, while enabling a socio-economic improvement and revitalisation of the territory**.

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

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OUR APPROACH

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Until now, tourism and culture have been sectors in which the importance of technology has been largely underestimated in the product and market innovation strategy. Indeed, creating a network of operators, activities, services, points of interest and citizens is the foundation for a service involving tourism reception and management of participatory cultural heritage, which also accompanies targets that are potentially excluded from using such services.

It is precisely in this direction that Municipia, an Engineering Group company, is focussing its attention, offering **modular digital solutions that support local authorities in the design of services, optimising economic resources and knowledge and taking full advantage of the professional expertise available**, thus providing short- and long-term answers for the tourism management sector and for the visitor experience.

The contribution of ICT, together with the diffusion of mobile devices (smartphones and tablets) can, for example, provide tourists and citizens with mobile services (98% of Internet users), effectively sanctioning the transition from e-tourism to mobile tourism. ICT and mobile devices are tools that accompany a tourist from the early stages of planning a trip and/or cultural visit, contributing to making the latter a unique experience. But it is also possible to guarantee the remote use of artistic and cultural sites, perhaps even for a fee, thanks to AR / VR / MR. The goal is **to make access to our heritage assets and culture increasingly more democratic, coherent, immersive, sensorial and even customisable**. Because it is not the visitor who should have to choose the best technology or connectivity, but it is the technological architecture itself that should adapt to the environment and offer the best support to the visitor, in a transparent manner.

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What is changing

- Innovative ways of representing the community's material and immaterial historical and cultural heritage

- Innovative ways for the user-tourist to take advantage of the heritage available

- A seamless user experience, without discontinuity in the transition between physical and virtual environments, of territorial fruition services available to the citizen-tourist

It therefore becomes possible to:

- Manage digital content (images, videos, Virtual Reality, Augmented Reality)

- Collect information from interactions with users, both in the promotion phase and while the goods and services are being used

- Learn and predict user preferences, in order to help Local Administrations to offer a more attractive and competitive tourism product

- Improve the promotion of local resources

- Increase engagement in the use phase

- Analyse the data available, in order to acquire strategic information, including in real time.

Advantages for local Authorities and for local territory

- **Economic impacts:** improved accessibility and the development of cultural resources and the involvement of stakeholders; the reception system supports and facilitates the cultural tourism visit, creating value for the entire sector, ensuring the survival of businesses of all sizes and protecting employment levels

- **Storytelling relating to current events:** the use of multimedia and technological channels guarantees constant updating and safeguards investments and the environment

- **Planning tools:** by monitoring the data available and collecting quantitative and qualitative feedback, it is possible to effectively manage and plan investments, pursuing the development of the territory based on an approach that best fits the real needs and aspirations

Advantages for users

- **Information and services, always on hand:** new technologies facilitate the interaction between local Public Administrations and city users, enhancing communication and ensuring that data and information are available to everyone, including based on a targeted approach. This translates into a simplified and clear access to services: it is the specific information that reaches users, not the latter who must look for the information themselves

- **Direct experience and sharing opportunities:** the use of technologies is appealing and engaging, favouring peer-to-peer information diffusion and exchange mechanisms. Indeed, by sharing their experiences and emotions, users become real ambassadors of the territories' cultural and tourist treasures

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OUR SOLUTIONS

Integration and digitalisation are the keywords that characterise the evolutionary process at the centre of the 2017-2022 Strategic Tourism Plan, developed by the Permanent Tourism Promotion Committee, with the coordination of the MiBACT (Italian Ministry of Cultural Heritage and Activities) General Directorate of Tourism.

Technologies for governance and experiences

Multichannel portal
Multi-channel management and access (web, app, chat, social) to information, content and purchases

eTicketing
Cross-platform electronic payments services

Digital assistance
Artificial assistence, Deep Learning, analytics and NLP for conventional and multilingual access to content

Immersive technologies
Augmented and virtual reality, 3D models, interactive touch supports, gaming for user engagement

On demand fruition
Use of historical and cultural content through multimodal video experiences (TV, mobile, web, installations)

Visitor experience
User experience management and user relationship: profiling, customization, analytics

IoT and geofencing
Indoor location, geofencing and proximity marketing

The solutions offered by Municipia and its partners are therefore aimed at developing a new way of accessing and using spaces and events, taking advantage of a series of highly innovative tools which, at the same time, enable the governance of the cultural tourism site.

Augmented Reality (AR) and Virtual Reality (VR) make it possible to expand the cultural tourism experience, making it as engaging and participatory as possible. They also enable on-demand use, including remotely, and ensure compliance with the rules introduced by the New Normal.

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Through Augmented Reality, **it is possible to reconstruct a different environment from the one perceived with the naked eye**, integrating real elements with virtual ones, reproducing past or futuristic architectural characteristics and providing additional information and content. Greater user engagement is also obtained through Mixed Reality (MR), which integrates digital models into the physical world and allows people to interact with virtual objects displayed in their visual field using mobile devices.

These technologies make it possible to create an additional level of interaction with the tourist, which makes the visit experience even more engaging: what is referred to as **gamification**. With Augmented Reality and interactive maps, it is now possible to involve visitors, relying on rules and interaction mechanics borrowed from the gaming world, in challenges that stimulate them to interact with the cultural and tourist heritage. This is in order to achieve certain objectives, solve problems and propose solutions, increasing their motivation through the stimulus provided by prizes and competitions and transforming tourists into positive ambassadors of the tourist attraction.

The offer is structured based on a **scalable and modular model** that can be customised according to the context of intervention. It relies on the adoption of open standards and interfaces, open-source software components and a micro-services and web-based architectural style, which makes it possible to integrate existing services, taking advantage of the investments already made or planning for future developments and additions.

In greater detail:

- Content management system associated with the integrated tourism solution designed to support the creation and updating of content stored in multimedia applications available to visitors on the web, on multimedia displays at the cultural site and in apps. The CMS enables the separation of the multimedia and web application containers of the tourist site from their respective content, allowing the integration with existing devices or solutions and facilitating a modular configuration. Egnition is a true content management system for all intents and purposes, residing on the web and delivered in SaaS mode

- A system that supports the management of multimedia guides in indoor and outdoor areas, which integrates Augmented Reality and proposes pre-defined or customised itineraries according to the specific preferences of the tourist (age, nationality and personal interests)

- A virtual reality and immersive visits environment that enables users to explore virtual worlds based on an innovative and multimedia-driven approach, accessible via computers, smartphones and headsets

- A system of interactive holograms, based on chatbots as well as live broadcasts, designed to work based on a projection on an orographical surface (flat or shaped) and adaptable to environments of various levels of brightness

- An original storytelling format typically used in exhibitions (as both permanent and temporary installations and displays). A new way of providing content for exhibitions, no longer intended as collections of art or exhibits, but as exhibitive storytelling experiences. Whether dealing with exhibitions involving science, art, culture, tourism and much more, Stelly is a format with extremely precise and original timeframes, approaches and content that makes it possible to organise "turnkey" exhibitions

- A system/platform designed to support visits to urban areas, with a strong link to weather and events related to climate change and issues involving environmental sustainability. The platform enables the decision-maker to configure routes for managing tourist flows, taking into account various factors, including the weather, environmental conditions, pollution levels, with which the platform is strongly integrated. The tours can be customised by age, nationality and interests, thus creating specific itineraries suited to the preferences and characteristics of each user, which take into account everything offered by local services

- A distance education platform based on virtual reality, which enables a more immersive and engaging training and information experience.

Within this framework, technological innovation enables and supports the territorial development process in terms of services, participation and the conservation of the historical and cultural heritage. A heritage that must be enhanced and protected, but also "opened up" and made accessible to everyone in any condition. A new life for culture and tourism, with a focus on the digital future. A New normal better suited to people's needs.

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MUNICIPIA

Municipia is part of the Engineering Group, the largest Italian Digital Transformation company, with 12,000 employees worldwide, 65 offices and more than a billion Euros in annual revenues. Municipia supports cities of all sizes in the Digital Transformation process, managing services for Local Administrations and for their citizens, enabling them to achieve greater levels of efficiency, effectiveness, transparency and sustainability through digital technology. Municipia also intervenes with public-private partnership formulas and project financing, with investments and risks borne by the same and the relative sharing of benefits resulting from the increase in revenues and the decrease in costs. Municipia capitalises on existing investments and technologies, making the Engineering Group's experience and technological solutions available to customers. The company relies on both vertical initiatives and transversal projects to improve the quality of city life and simplify the relationship between Public Administrations and citizens.
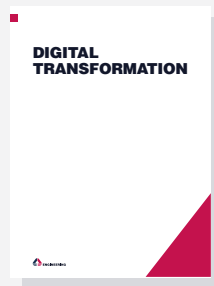
Municipia continues to drive forward the Augmented City project, the technological, resilient and inclusive city, at the service of people, leveraging the five pillars of a single technological ecosystem: financial and environmental sustainability, security, mobility, welfare and interactivity.
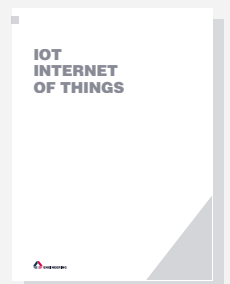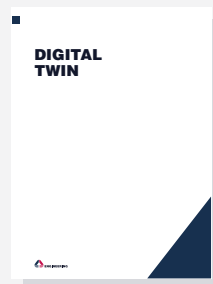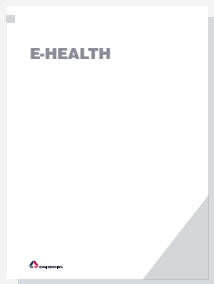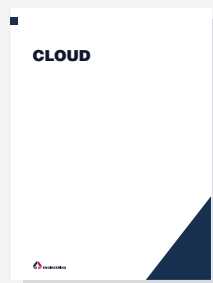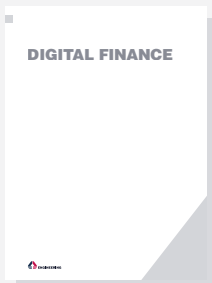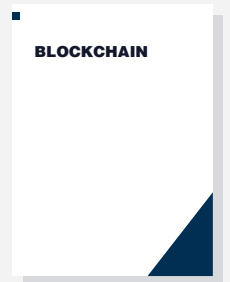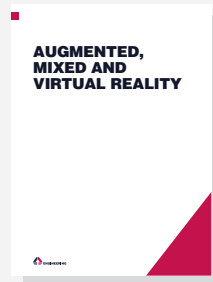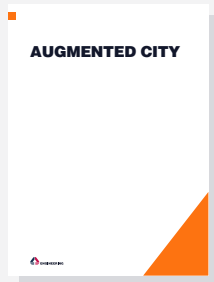
ENGINEERING

Engineering is one of the main players in the field of Digital Transformation of public and private companies and organizations, offering an innovative offer targeted at the main market segments. Together with its subsidiaries, the Engineering Group is committed to pushing the envelope as regards the application of emerging technologies. It also works in the area of system implementation and integration and on redefining processes in order to promote innovation for the benefit of businesses and Public Administrations.

With around 12,000 professionals in 65 locations spread across Italy, Belgium, Germany, Norway, Republic of Serbia, Spain, Sweden, Switzerland, Argentina, Brazil and the USA, Engineering manages projects in over 20 countries, supporting customers in the business areas where digitalization is having the biggest impact. Its products and services cover all strategic sectors, including Digital Finance, Smart Government & E-Health, Augmented Cities, Digital Industry, Smart Energy & Utilities, Digital Media & Communication. The group aims to help change the way in which the world lives and works, by combining technological infrastructures organized in a single hybrid multicloud, the capability to interpret new business models and specialist competences in all next-generation technologies: AI & Advanced Analytics, Cybersecurity, RPA, Digital Twin, IoT, Blockchain. With significant investments in R&D, Engineering plays a leading role in research, by coordinating national and international projects thanks to its team of 450 researchers and data scientists and a network of academic partners and universities throughout Europe. One of the group's key strategic assets is its carefully considered staff training policy. Engineering, since 1999, has had its own dedicated multidisciplinary training academy, the "Enrico Della Valle" School of IT & Management. With 300 certified trainers and hundreds of courses, the School has delivered more than 19,000 days of technical, methodological and process training during the last year.

Our point of view on

DIGITAL TRANSFORMATION

ENGINEERING INNOVATION

ENGINEERING THE NEW NORMAL

Coming Soon

AUGMENTED CITY

DIGITAL DEFENSE, AEROSPACE & HOMELAND SECURITY

DIGITAL INDUSTRY

AUGMENTED, MIXED AND VIRTUAL REALITY

BLOCKCHAIN

DIGITAL MEDIA & COMMUNICATION

SMART ENERGY & UTILITIES

DIGITAL FINANCE

CLOUD

CYBERSECURITY

DIGITAL RETAIL & FASHION

E-HEALTH

SMART AGRICULTURE

DIGITAL TWIN

ROBOTIC PROCESS AUTOMATION

SMART GOVERNMENT

SMART TRANSPORTATION

AI & ADVANCED ANALYTICS

IOT INTERNET OF THINGS

DIGITAL WORKPLACE

DIGITAL WASTE

DIGITAL EXPERIENCE: CULTURE & TOURISM

SUPPLY CHAIN

DIGITAL AUTOMOTIVE

PROJECT MANAGEMENT

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