

HERIT DATA PROJECT



ÁVILA, SPAIN



Best practice,
case study

EXISTING NEED/ISSUE

Most of the tourists visiting Avila come at the same time from Madrid by bus and stay in the city only for three or four hours. This results in crowding of some areas of the destination, such as the Medieval Market and the ancient Wall. Avila's archaeology department also noticed that this tourism activity was negatively impacting the preservation of the city's historical heritage as well.

DECISION MAKING PROCESS

The decision to take action came with the opportunity to be funded by the Interreg MED, SHCity project. The main reason to be involved in the project was heritage conservation, but the possibility of measuring the economic impact of tourism in the city was also a decisive point in approving the project. Fundación Santa María la Real, which coordinated the project, Avila City Council, which provided the facilities, and technological entities such as Novatech, Tecnalía, etc., were involved in the process.

METHODOLOGY

The degree of conservation of the inside and outside of the monuments was measured using different climate variables and people counting sensors. For this purpose, cameras were installed at the access gates of the city walls and inside the streets. This made it possible to increase the cleaning and security services when the number of visits exceeded the site's capacity. For the conservation of the wall, temperature sensors, fissure meters and inclinometers were installed. The heritage department assessed the risks for preservation of the wall and mitigation measures. Measurement occurs in real time, every millisecond. The data is processed in a central node that uploads it to the cloud and there is a platform with dashboards managed by different departments of the city council.

MEASURES TAKEN

After data collection, the use of Big Data and analytics to improve real-time guidelines and to make decisions on event and police brigade schedules, and ticket rotation to manage tourist flows was implemented. The energy efficiency of the ancient wall was also improved by using LED lights and adapting to the amount of light needed to ensure the preservation of the wall. The number of staff working in ticket sales was redefined, as well as the daily routes of the local police. Fines for entering prohibited places were also implemented. The data also helped to avoid closing spaces, keeping them open when it is be more profitable.

Entities behind this case study: Fundación Santa María la Real, CARTIF, UNINOVA, AIDIMME, & TECNALIA

HERIT DATA
Pilot site



FLORENCE, ITALY



EXISTING NEED / ISSUE

Florence suffered from overflow of tourists specially from spring to autumn. This translated in long queues to visit the main attractions of the destination. Other cultural value areas were not enough promoted, and therefore less visited. Public Administrations were aware of this issue and wanted to better manage tourist flows, especially considering that many of the main attractions in Italy are located in Florence and this could affect the quality of the visitor experience and the consequent reviews.

DECISION MAKING PROCESS

The city of Florence has been aware of the issue for many years, as tourism has been rapidly growing year after year for the last few decades. Therefore, some corrective actions were already put in place. However, the situation was not improving as expected and it was clear that new and more effective actions were necessary. Considering this, the Public Administration decided to open a stakeholders working to tackle the situation from different points of view and find the best tools and methodologies to solve it. Thanks to this pre-existing scenario, it was quite natural for the interested stakeholders to support and get involved within the Herit Data project.

METHODOLOGY

Florence now has in action an Internet of Things (IoT) solution integrating several technological tools such as traffic control cameras, security cameras, Wi-Fi access control points and environmental sensors. Within Herit-Data project, sentiment analysis data was also collected exploiting Twitter, and, hopefully, some more data will be gathered from nudging actions, other kind of sensors, new data sources (e.g. events, weather, et al.) and new technological solutions (e.g. thermal imaging cameras et al.). The data is collected in real time from different sources such as Wi-Fi access, traffic sensors et al. Then this data is ingested by the Herit Data project platform in order to be processed and analyzed, and then returned in a meaningful way for decision-makers, but also citizens and tourists.

MEASURES TAKEN

The Municipality of Florence, exploiting all the available data, has developed a Mobile App and a webApp, "FeelFlorence". These app and webApp offer additional activities and attractions to be enjoyed and provides timely information to help visitors to orient and plan the order of their visits. Thanks to the Wi-Fi access points, data heat-maps are displayed for users to be able to see, in real time, the most crowded areas in the city which are highlighted in green, orange or red depending on the people density in that spot. As a consequence of the zone coloring, alerts are delivered by the FeelFlorence App, to alert the visitor about the risk of overcrowding, suggest a better time to visit the area and providing alternative activities or places to visit in the meantime.

Entities behind this pilot site: Municipality of Florence, Metropolitan City of Florence, Tuscany Region, Foundation for Research and Innovation, Disit Lab, other relevant tourism actors

For more information on the project, click [here](#)