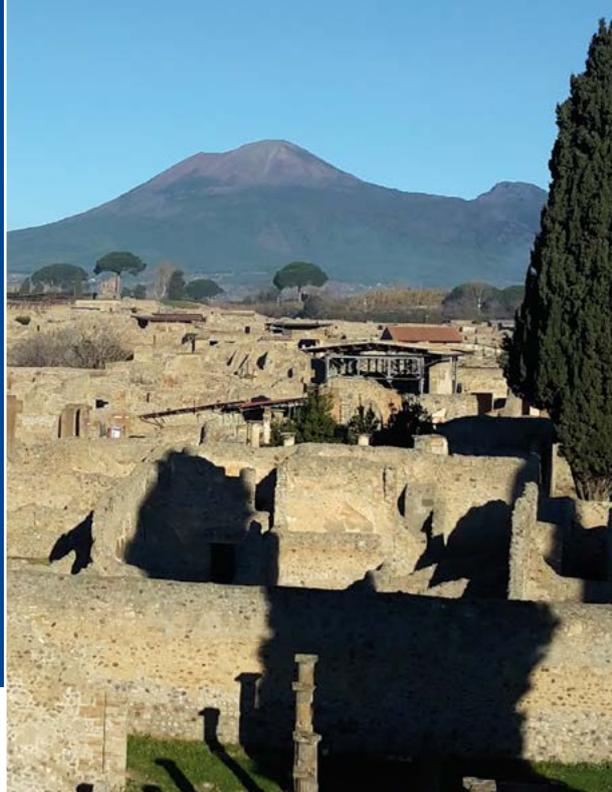


UNESCO World Heritage Site  
Pompeii, Italy

# MOBOTIX

## CASE STUDY



## MOBOTIX At The Service Of Archeology

### A world heritage site

"Many disasters have occurred in the world, but few have also provided so much delight for posterity." There probably are no better words to describe Pompeii than Goethe's during one of his trips to Italy – the area of Pompeii encompasses 440,000 square meters that include the archaeological excavations of the ancient Roman city submerged by the eruption of Mount Vesuvius in 79 AD, frozen in time by the sudden rain of ash and lava rock that preserved it for centuries.

In 1997 UNESCO declared Pompeii a World Heritage Site, on account of the fact that the extraordinary findings in the cities of Pompeii, Herculaneum and neighboring cities buried by the eruption provide a complete and vivid picture of society and daily life that have been preserved nearly intact for two millennia.

Presently Pompeii is the flagship of the Pompeii Authority, an Institute of the Ministry of Cultural Heritage and Activities and Tourism provided with special autonomy, which is active in the area of protection, conservation, and public access to cultural heritage sites.

### The Great Pompeii project

The need to install a video security system was born of the Great Pompeii project, an undertaking ordered by the Italian Government for the purpose of reinforcing the effectiveness of the conservation actions and programs in the archaeological area of Pompeii, by developing an extraordinary and urgently needed program of conservation, prevention, maintenance, and restoration.

An important and demanding operation, also in financial terms – €105 million from Fesr and national funding – with the objective of modernizing the Pompeii archaeological site, not only by stabilizing and restoring decorated walls and surfaces, but also by means of security and leveraging the video security system.



## The Great Pompeii Project: Security Is Guaranteed By MOBOTIX

### **Metoda: the value of large numbers and the experience that goes with it**

The project, supported and accompanied by a suitable scientific and technical study plan for the purposes of identifying, researching the scientific knowledge and guiding the operating choices, called for launching a bid for tenders for a new video security system, which was eventually awarded to Metoda in August 2014.

A leading Italian company in the provision of solutions, software projects, and consulting in diverse IT and telecommunications sectors – from mobile payments to building management, including civil protection, security and networking – Metoda employs more than 300 experts, from professionals and specialized technicians involved in the business units dedicated to specific applications, including research and development, which collaborates with prestigious research institutes and universities for many years.

“The feather in the cap for Metoda is SOA certification, which was received precisely because of our complex internal organization and attests to the financial and technical capacity of the firm to qualify for designing and implementing large scale public tenders,” explains Cesare Gonnelli, Deputy Manager of Metoda.

### **Transitioning from “under observation” to “under video surveillance”**

“The reasons underlying the need to implement a video security system were multifaceted, from protection of the

archaeological findings, which are often the object of theft and vandalism, to tourist control,” adds Gonnelli.

The archaeological site, which may receive up to 15,000 tourists in a single day – a numerical turnout second to only the Coliseum – sends us very frequent reports of graffiti, scratches, and defacing of the walls and frescoes of the Roman Domus villas, which are at the heart of the archaeological site. These acts of vandalism are carried out by tourists with their pens and fingernails when they somehow manage to stay within the walls on purpose even after the site is closed to the public.

Furthermore, as a result of the recent terrorist attacks, the Authority evaluated the opportunity of utilizing an advanced video security system in support of the physical surveillance activity of the guards. “In fact one of the priorities was being able to clearly distinguish the face of the people and monitoring behavior that looked out of place inside the area, as well as any objects left behind and considered potentially suspicious,” continues Gonnelli.

### **The great MOBOTIX project**

Partnering with MOBOTIX since 2011, Metoda had no doubt about the best product to offer to the Pompeii Authority for implementing the video surveillance project.

“MOBOTIX easily satisfied the requirements of the bid for tenders, and was in fact the only technology truly capable of providing an answer to the actual requirements of the Authority.



D25 Ceiling Mount



D15 Ceiling Mount

A resounding victory, most of all because of the quality of the images, which completely surpassed all the expectations of the customer.”

The installation of the first video cameras – almost all of them D15, with the exception of about ten D25 chosen to blend with the architecture and style – started in July 2015, but already in December Pompeii was under surveillance by 240 video cameras, with the objective of reaching more than 380 before the end of the summer, installed both on the light posts placed both along the perimeter of the archaeological site, and on the internal and external walls of the Roman Domus villas.

In any event, the video security system is a much more complex IT and telecommunications project, as it required the implementation of a complex network support infrastructure (12 fiber optic rings and 88 nodes) thanks to the strong expertise of Metoda in networking, with a department specifically dedicated to software development and the integration of IT and telecommunication systems.

**“Precious” video surveillance**

The video cameras are in operation 24 hours a day, but with the exception of special particular requirements, are only event-activated, in order not to overload the storage, notwithstanding the 700-TB NAS archive system. The recordings can later be viewed on nine 42-inch monitors in a dedicated control room provided with four workstations dedicated for the monitoring personnel.

No issues were encountered during neither the installation phases nor the deployment of the system, thanks also to the technical expertise of Metoda.

“Likewise, no complaints from the personnel in charge of using the system (for the time being the same guards at the park), who received a minimum amount of training, but certainly cannot be called ‘expert’ in the utilization of advanced technology systems. The ease of use of MOBOTIX solutions certainly gave us an advantage in the quick deployment of the project,” concludes Gonnelli.

As in most of the projects implemented by MOBOTIX, the praise should also be attributed in this case to the excellent quality of the images, which cannot be compared – also according to Metoda – to any other system available in the market. Certainly the decentralized concept of MOBOTIX played an important role in promoting all the virtues of the system, especially because of the number of video cameras involved, which prevents overloading the network under “critical” utilization conditions.

Both Metoda’s and the end user’s needs have been satisfied – a fact only confirmed by the idea that considerations are being made to implement a video analysis system to support the anti-graffiti activities, with the objective of studying behaviors considered “suspicious.” As such, they could prevent acts of vandalism that could cause irreparable damage to the artistic and cultural heritage.



## MOBOTIX – Made in Germany: Innovative Technology, Reduced Total Costs

The German company MOBOTIX AG is known as the leading pioneer in network camera technology since its founding in 1999, and its decentralized concept has made high-resolution video systems cost-efficient.

### Increased Resolution Reduces Amount Of Cameras Needed

High-resolution sensors of up to 6 megapixels provide a better overview and allow an entire room to be monitored with just one camera.

### Reduced Installation Costs At Any Distance

A standard Ethernet connection enables the use of readily available IT network components, such as copper, optical fiber, and wireless.

### Intelligent Cameras Reduce The Number Of Recording Devices

The decentralized MOBOTIX concept makes it possible to store data from approximately ten times more cameras to a single storage device than is normally possible.

### Event-Controlled Image Format Minimizes Storage Costs

Automatic image adjustment (frame rate, size) based on movement, sound or signal input reduces the bandwidth and storage requirements.

### Low Power Costs, No Extra Heating

Anti-fogging without heating allows usage of standard PoE technology to power the system via Ethernet or two-wire cable, saving power cabling costs.

### Backup Power Supply Costs Reduced By Over 80 Percent

Low power consumption, approximately four watts, enables year-round PoE (no heating required) with one centralized UPS from installation room using the network cabling.

### Robust And Practically Maintenance-Free

Fiberglass-reinforced composite housing with built-in cable protection and no mechanical moving parts (no auto iris) guarantees longevity.

### Software For Thousands Of Cameras And Storage Devices Included

The right premium user interface software for every application: MxEasy for compact video solutions, MxManagementCenter for the professional control center and the MOBOTIX App for on the go.

### Unlimited Scalability And High Return On Investment

While in use, more cameras and storage can be added at any time; image format, frame rate & recording parameters are camera specific.

### Additional Functions And Other Extras Included

Audio support, lens, wall mount and weatherproof housing (-30 to +60 °C; -22 to +140 °F) are included; microphone & speaker available in almost all models.

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