

## Fortecho Solutions: Case Study Louvre Abu Dhabi

The Louvre Abu Dhabi is harnessing Fortecho Solutions' pioneering wireless surveillance technology to protect its 86,000 square feet of gallery space.

Opened to the public in November 2017, the Louvre Abu Dhabi is at the forefront of what is possible for a cultural institution. Designed by Jean Nouvel, the £1 billion space encompasses interior and exterior aquatic features & enormous internal courtyards, leading to over 60,000 square feet of permanent gallery space and a further 26,000 square feet of temporary exhibition galleries.

First instructed in 2012, Fortecho Solutions worked closely with engineers and security consultants to design and implement a bespoke active RFID asset protection solution. 250 network readers were installed in hidden but accessible locations across the museum during its construction. This IP reader network affords the Louvre complete RFID coverage without compromising the museum's pristine aesthetic.

By employing an 'active RFID' reader infrastructure and a variety of specialist invisible wireless sensors, Fortecho™ protects every object and display case in the collection. A combination of Fortecho tags and integrated third party hardware allows the Louvre to protect their artworks against theft, proximity & damage (both accidental and intentional) and any adverse changes in temperature and relative humidity.

Fortecho Solutions installed over 900 sensors in a variety of form factors into the Louvre. Adhered to the back of flat artworks are ultra-thin credit-card shaped tags fitted with kinetic motion switches, monitoring for any movement on an X/Y/Z axis. Within

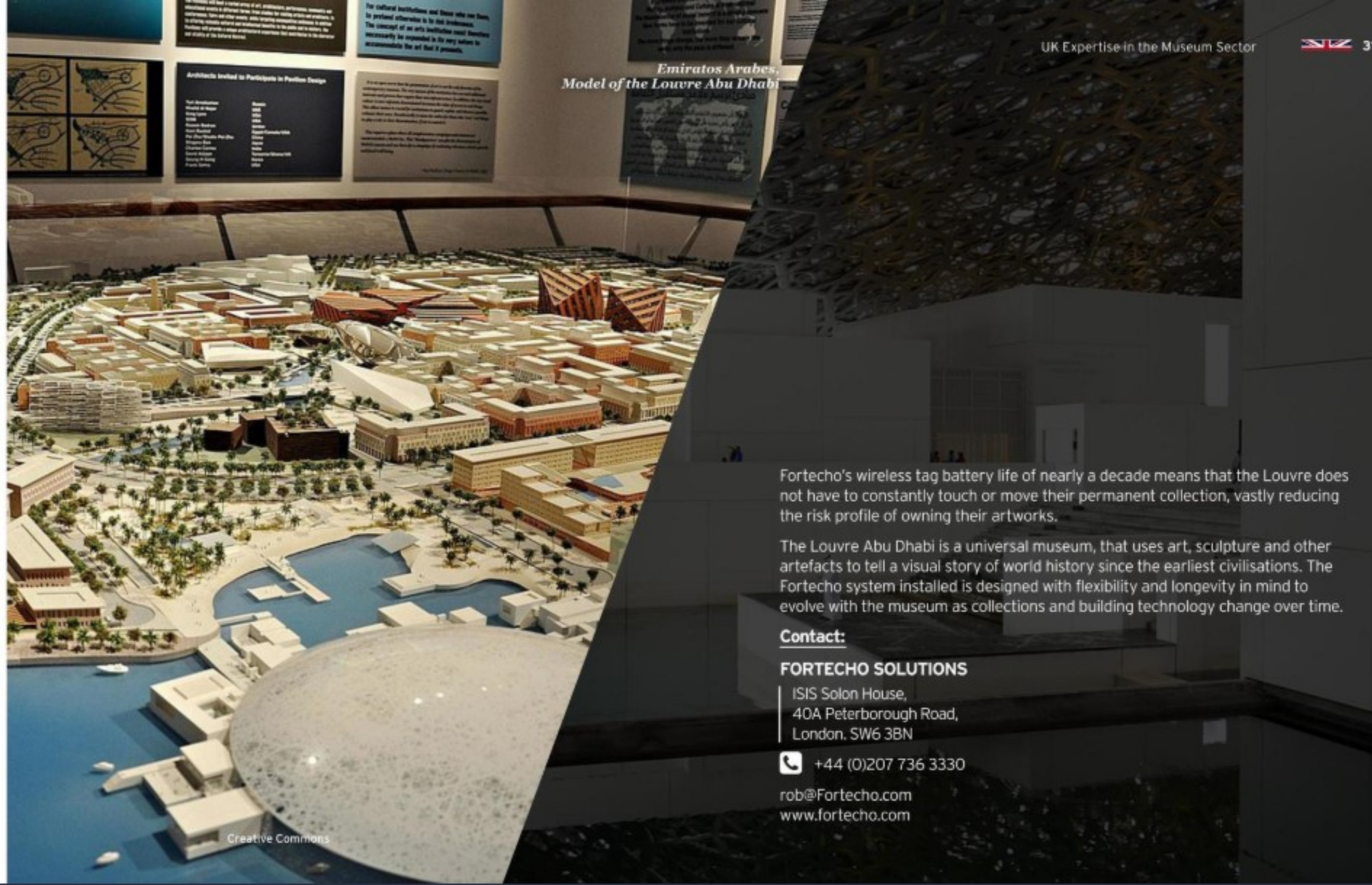
every display case are tags monitoring for unauthorised access, as well as any attempted attack or shock to the case.

Security sensors are complemented by an array of 300 object-specific temperature and relative humidity sensors, monitoring for the slightest change at artwork level and alerting curators before harm is done. There is also a network of 20 laser scanners, allowing seamless and invisible proximity detection for the Louvre's highest value and most fragile works.

Fortecho™ software is integrated into three key aspects of the Louvre's Security, BMS and collection tracking software. The first integration into the wider security network pushes Fortecho alarms through to the main operating system, allowing guards to monitor artworks, building intrusion and CCTV footage simultaneously from one set of screens, pulling up the necessary information and cameras as an alarm is triggered.

The second integration is into the BMS - the Fortecho™ software records and stores object-specific environmental information, which is subsequently pushed into the BMS meaning that subtle adjustments in temperature and humidity can be made automatically, maintaining ideal conditions in the galleries for each artwork.

The final integration is into the zonal tracking software. As tagged artworks move into and out of storage and through the building, nearby readers record tag location data every 300 milliseconds. As the artwork moves the Louvre's zonal tracking software pulls in this data and creates a snail trail interface showing the movement of the artwork throughout the galleries and storage areas.



Fortecho's wireless tag battery life of nearly a decade means that the Louvre does not have to constantly touch or move their permanent collection, vastly reducing the risk profile of owning their artworks.

The Louvre Abu Dhabi is a universal museum, that uses art, sculpture and other artefacts to tell a visual story of world history since the earliest civilisations. The Fortecho system installed is designed with flexibility and longevity in mind to evolve with the museum as collections and building technology change over time.

### Contact:

#### FORTECHO SOLUTIONS

ISIS Solon House,  
40A Peterborough Road,  
London, SW6 3BN

+44 (0)207 736 3330

rob@fortecho.com  
[www.fortecho.com](http://www.fortecho.com)