

## SUCCESS STORY



# THE LOUVRE BUILDING MANAGEMENT SYSTEM

#### Solution with PcVue reaching up to 30% energy savings.

The building's owner SFL (Lyon Property Company) recently undertook extensive renovation of the Louvre office space. An efficient BMS was needed to enable the company to monitor and operate the 37,000m2 (400,000 ft2) building.

The objective is to allow energy consumption to be reduced by 20% to 30%. This building dates from 1852 and is situated opposite the Louvre Museum in Paris.

It was built at the direction of French emperor Napoleon III and was initially used for shops. Today, the first two levels of the Antique Dealers' Louvre contains over 250 shops in 10,000 m2 (108,000 ft2) including 30 artistic specialty shops with artifacts from Europe, Asia and the Middle East.

Six upper floors are dedicated to the business Center called The Business Louvre (Louvre des Entreprises) which has hosted prestigious tenants since 1990, including the Ministry of Finance, the U.S. Embassy and the Bank of France.

The PcVue supervision monitors various equipment including:

- France Energie heat pumps with KARNO OEM regulators; in all, 1,200 heat pumps will be monitored.
- Lighting with ACELIA infrared multi-sensor modules.
- Blinds with ACELIA modules for 230V motors.
- THERMOKON remote controls for centralized control of heat pumps, lighting and blinds.
- Data acquisition from divisional panels on several levels, via Johnson Controls FX15 PLCs.

### **BUSINESS OBJECTIVE**

- Monitor and operate a 37,000 m2 (400,000 ft2) building efficiently
- Reduce energy consumption by 20% to 30%







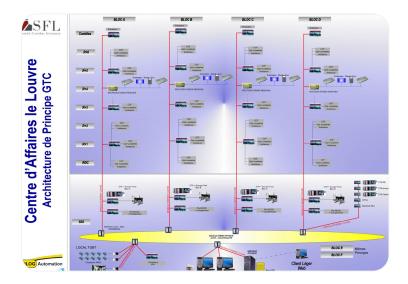
This architecture uses LonWorks  $\mbox{\bf @}$  technology and is complemented by:

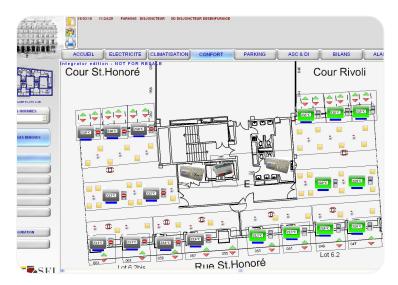
- Supply equipment: air conditioning units and substations for electrical regulation and distribution, controlled via TREND IP devices.
- All of the tenants' meters and the central low-tension boards: PcVue processes and analyzes data from some 250 meters on Modbus.
- A TSX PLC supports management of the backup supply (GE).

The BMS architecture consists of 36 Loytec L-INX servers, 3 PcVue supervisory stations with WebVue thin-client access via Internet/intranet and NL Facilities from Newron System (using the Monitoring and Zoning version for surveillance and subdivision of areas).

Together with PcVue's flexibility and advanced technology, APILOG AUTOMATION was able to achieve open systems integration of the hardware and software. The solution provides for management of all of the building's equipment and quick response times in case of emergency. It exhibits easy-to-use, effective behavior that affords quick control of each area while allowing for dynamic reconfiguration.

This application is outstanding for its management and optimization of energy consumption, meeting expected energy savings in the order of 20% to 30%.







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# **KEYS TO SUCCESS**

- Integration of all building equipment and control panels using a variety of communication protocols including 2,500 LonWorks® nodes
- Remote access to graphical screens

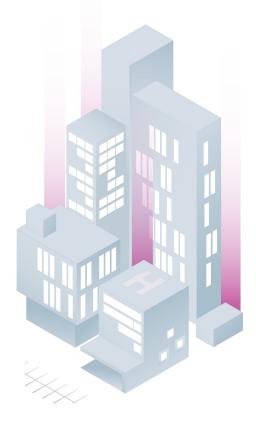


## **RESULTS**

Solution with PcVue results in energy savings up to 30%

PcVue platform allows rapid control and dynamic reconfiguration of each building area enabling quick response to emergencies









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