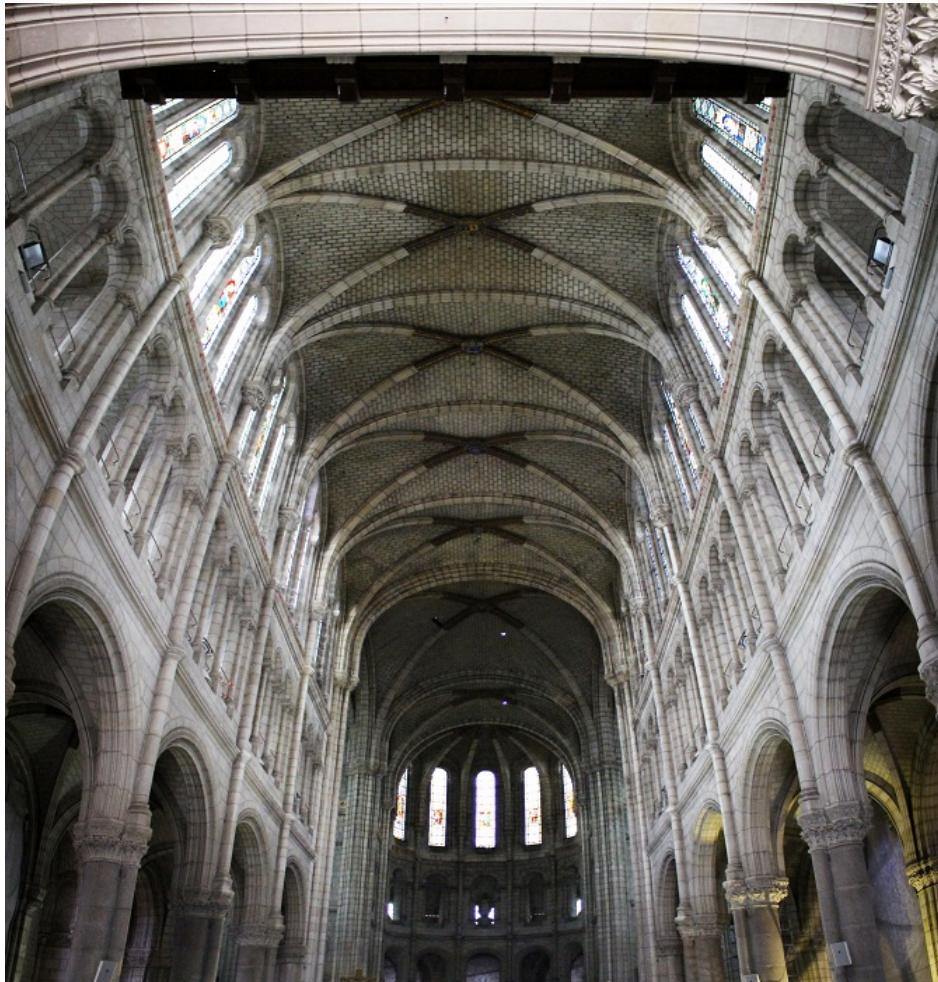




## France: Monitoring the Structural Renovation of a Basilica

*Post-fire restoration work*



A spectacular fire destroyed three-quarters of the roof of the Basilica of Saint Donatian and Saint Rogatian in Nantes in June of 2015. Restoration work began in January of 2016 with securing the construction site. The architect requested the installation of 26 wire extensometers (or distance sensors) above the vaults of the choir and transept. With these electronic sensors in place, it was possible to monitor the settling of the vaults during the installation of the immense temporary roof structure and the shoring of the vaults inside the building.

Two CR1000 and CR6 dataloggers were used to record and analyze the data from the sensors. Each data value had to be analyzed every second to trigger an alarm above the vaults and another alarm inside the basilica in case of significant settling. Moreover, the alarms would notify the relevant personnel via SMS that an identifiable sensor had exceeded its alert threshold.

### Case Study Summary

#### Application

Construction worker safety

#### Location

Nantes, France

#### Products Used

CR6, CR1000

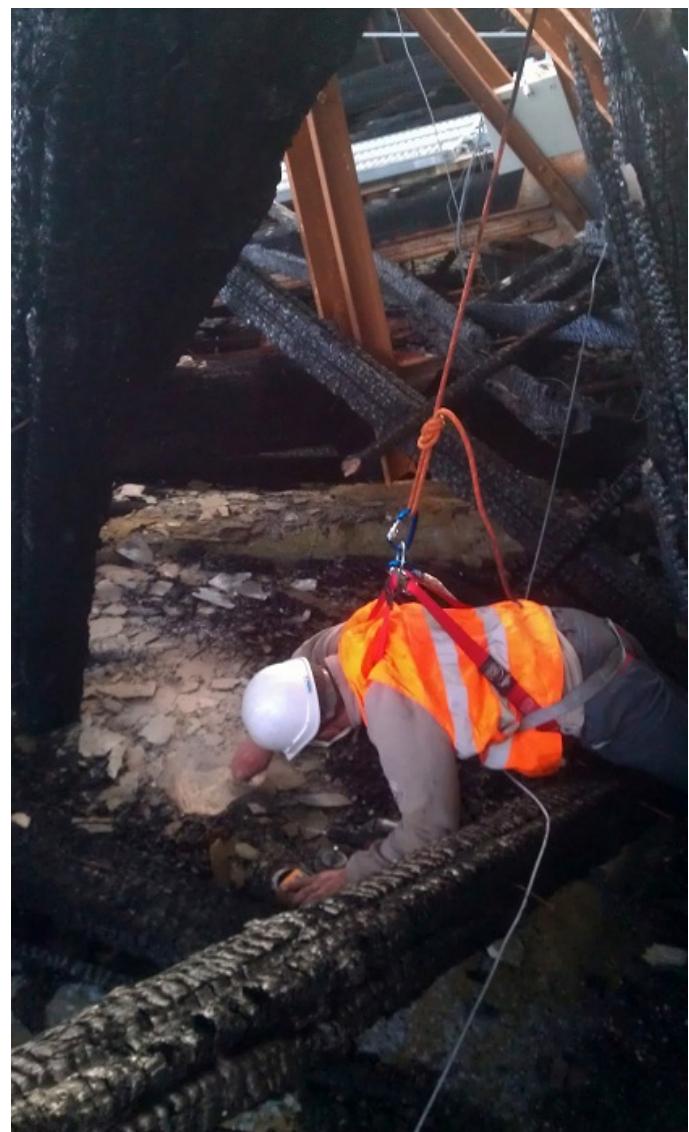
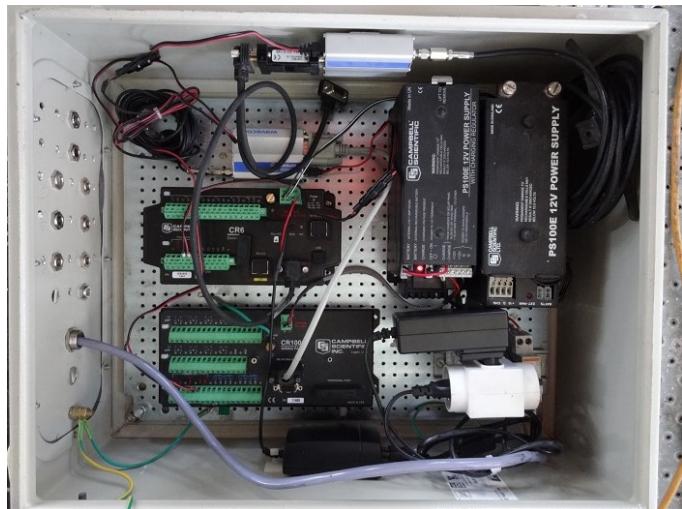
#### Contributors

M Sébastien Clabaut, 1strumesure  
(35200 Rennes)

#### Related Website

[1strumesure website](http://1strumesure.com)

This instrumentation allowed construction personnel to work safely from the very beginning of the restoration of this 19th-century building. The restoration of the vaults, the framework, and the roof continued for several years.



View online at: [www.campbellsci.com/france-monitoring-structural-renovation-basilica](http://www.campbellsci.com/france-monitoring-structural-renovation-basilica) 



Campbell Scientific, Inc. | 815 W 1800 N | Logan, UT 84321-1784 | (435) 227-9120 | [www.campbellsci.com](http://www.campbellsci.com)  
AUSTRALIA | BRAZIL | CANADA | CHINA | COSTA RICA | FRANCE | GERMANY | INDIA | SOUTH AFRICA | SPAIN | THAILAND | UK | [USA](http://USA)