

Case Study - Movement Monitoring

Palmenhaus

Burghauptmannschaft Wien 
Vienna, Austria 

Background

The Burghauptmannschaft Wien manages and maintains numerous buildings and infrastructures forming part of the architectural heritage of Austria, such as the Hofburg, Belvedere, Federal Chancellery, and the Palmenhaus.

To optimally preserve the historic building fabric, various methods and procedures are employed, including monitoring systems for securing and documenting the historic structural substance.



Requirements

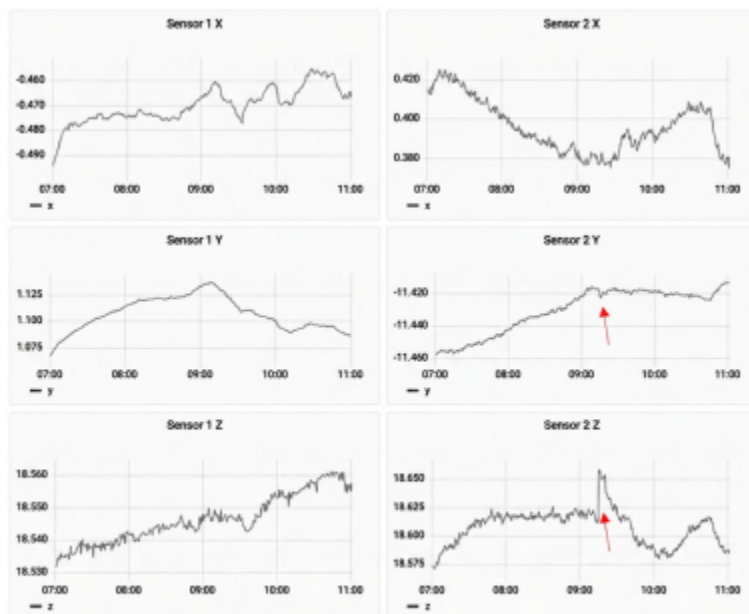
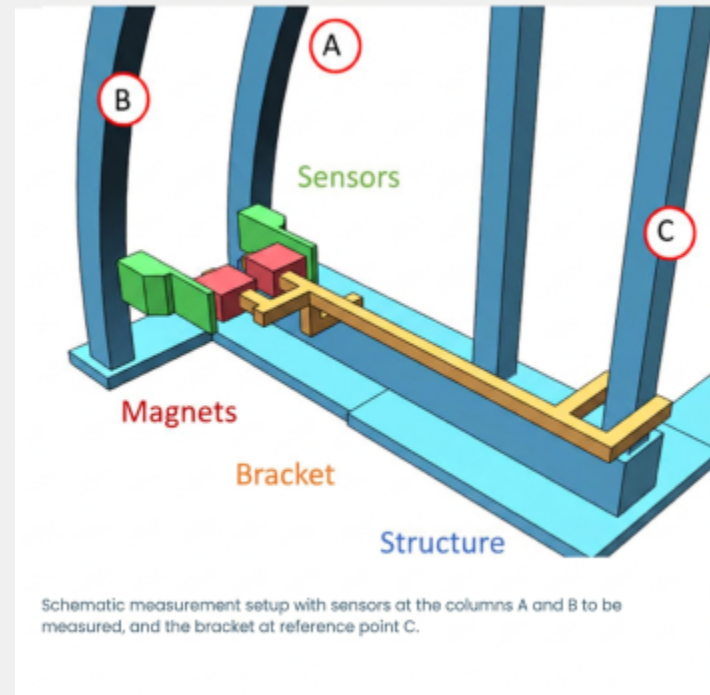
Due to displacements in the area of the Butterfly House, SuessCo Sensors was commissioned to install a monitoring system for the digital capture of movements at the Palmenhaus. Based on the monitoring data, the optimal steps for renovation and maintenance work are to be determined.

Solution

To capture movement data at critical points of the Palmenhaus (structural transitions between concrete, steel, and glass), the digital SuessCo monitoring system consisting of sensors and software was installed.

The 6D-Sensors enable the capture of 3 linear axes, 3 spatial angles, and additionally temperature data. The data is automatically transmitted digitally via IoT network and made available to the client through the SuessCo Datahub.

Based on the solid data foundation from the digitally captured movement data, the experts (structural engineers, civil engineers) were able to determine the appropriate measures.



Result

Based on the monitoring data, a detailed assessment of the structure's condition can be carried out, enabling renovation requirements to be accurately identified, prioritized, and planned.

Additionally, a measure to enhance building safety was implemented as part of the project.

Using automated alarm thresholds, warning notifications are sent to a predefined group of individuals to identify relevant changes and determine the necessary next steps.

