

# MOTION - MONITORING

Case Study Palmenhaus Vienna



## Initial situation

The Burghauptmannschaft Wien manages and looks after numerous buildings and infrastructures of the architectural heritage of the Republic of Austria, such as the Hofburg, Belvedere, Federal Chancellery and the Palmenhaus.

Various procedures and methods, including monitoring systems for safeguarding and documenting the historic building fabric, are used to ensure optimal preservation of the historic building fabric.



## Requirements

Due to displacements in the area of the "Schmetterlinghaus", SuessCo Sensors is commissioned to install a monitoring system to digitally record movements at the Palmenhaus. The monitoring data will be used to determine the optimum steps for renovation and maintenance work.



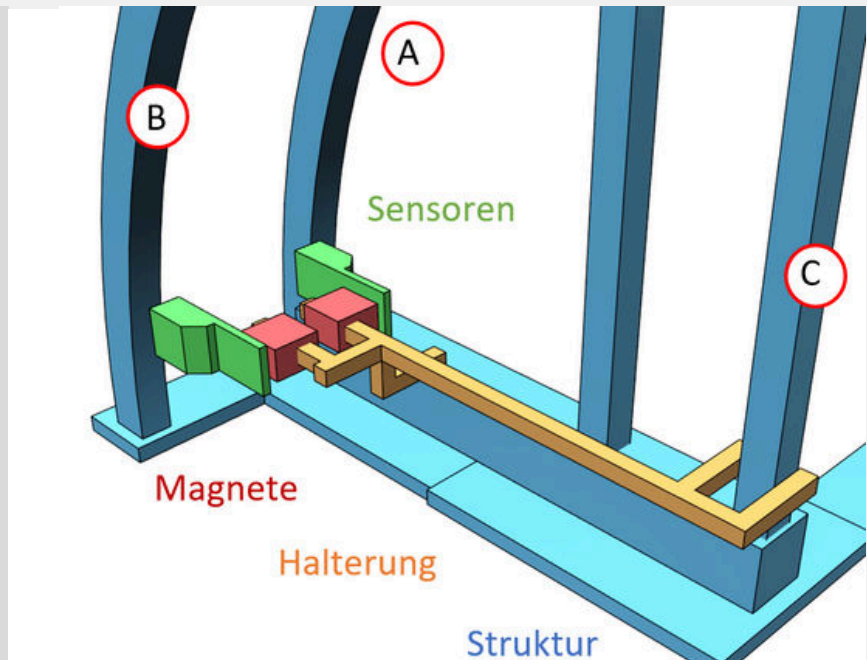
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### SOLUTION

To record the movement data of neuralgic points on the Palmenhaus (component transitions between concrete, steel and glass), the digital SuessCo monitoring system consisting of sensors and software was installed.

The 6D sensors make it possible to measure 3 longitudinal axes, 3 spatial angles as well as the temperature data. The data is automatically transmitted digitally via the IoT network and made available to the client via the SuessCo portal.

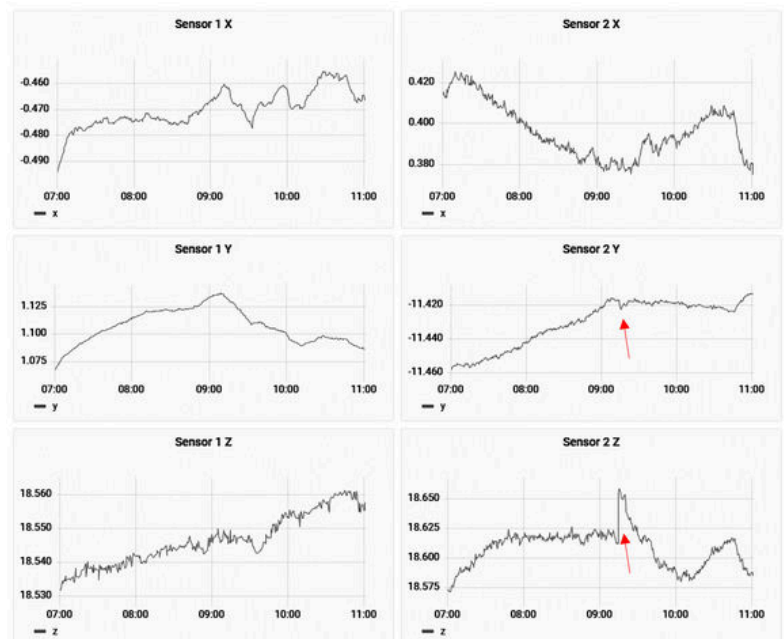
Thanks to the sound data basis of the digitally recorded movement data, the experts (structural engineer, civil engineer) were able to decide on the appropriate measures.



Schematic measurement setup with the sensors on the supports A and B to be measured and the bracket to reference point C.

### RESULT

- This measurement data can be used to carry out an exact condition analysis
- the appropriate refurbishment requirements can be determined and better planned.
- In addition, a measure to increase building security was implemented as part of the project.
- Automated alarm values are used to send warning messages to a predefined group of people in order to identify relevant changes and derive the necessary steps.



Measured values from two sensors in the X, Y and Z axes.