

German Mining Museum Bochum protects its sensitive exhibits with Kentix



They are sensitive and must therefore be protected particularly carefully against external influences: Many exhibits in museums are susceptible to cold, heat, moisture, dust or light and suffer irreparable damage as a result. The protection of exhibits is therefore of immense importance in order to preserve the exhibits for posterity. The objects must be carefully protected against all dangers from the environment. Physical security and monitoring of critical parameters is a major issue for museums and exhibitions.



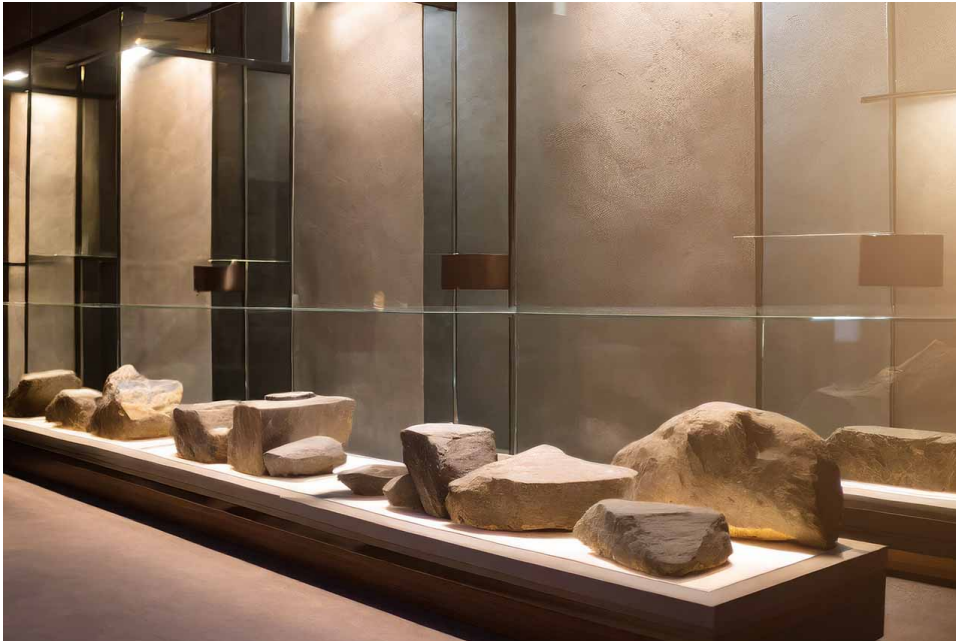
The German Mining Museum in Bochum also houses numerous exhibits that are very sensitive. The valuable objects are particularly sensitive to cold, heat, humidity and light and must therefore be carefully and continuously protected against these hazards to prevent damage.

The museum's insurance company had imposed conditions in advance to protect the exhibits against the parameters of temperature and humidity. This should also be verifiable. To meet these requirements, a reliable monitoring solution was needed that would provide accurate data and at the same time be as easy to install as possible.

Original planning too expensive and too complicated

A monitoring system was already in use at the mining museum. And this should actually be expanded further. However, this solution did not meet the new requirements and also required costly and complex cabling. The museum's IT team then turned to the system house P&W Netzwerk in Haltern am See. As a system house specializing in complex IT/OT infrastructures, network analysis has been a focus topic at P&W since 2003. So when it comes to performance, vulnerabilities or security incidents in wired or wireless systems, P&W Netzwerk is the right partner for you. The P&W experts presented the IoT-based Kentix solution to the mining museum. And this was particularly convincing due to the possibility of modular construction. During the installation itself, the Kentix system proved to be very simple: the devices could all be installed and

implemented by the customer. A LAN infrastructure only had to be provided for the MultiSensors in a few places.



Kentix has completely replaced the old monitoring solution in the museum. A MultiSensor-LAN-RF is now located in a central position in each hall. Among other things, this monitors humidity and ambient temperature – important parameters for guaranteeing optimum conditions for the exhibits. In addition, several MultiSensor-DOORs were placed near the sensitive objects to monitor their condition.

These smaller devices also register whether (display case) doors are open or closed. The sensors are distributed flexibly and efficiently for changing objects and exhibitions. A total of over 50 MultiSensors are now in use in the mining museum. The museum plans to further expand the Kentix solution. Further rooms are to be equipped, and rack protection is also on the agenda for the future.

The MultiSensor: numerous functions in one device

The [MultiSensor](#) impressed the museum with its diverse features, which are combined in just one single device:

- **Versatile detection of climate factors:** The Kentix MultiSensor monitors several climate factors simultaneously, including temperature, humidity, air quality (e.g. CO2 concentration) and air pressure. This comprehensive

recording enables museums to keep an eye on all the important environmental parameters that are crucial for the preservation of their exhibits. Depending on the model, the MultiSensor even detects impending fires well in advance (more on [early fire detection](#))

- **Easy installation:** The MultiSensor from Kentix is easy to mount on walls or ceilings, which makes installation simple and flexible. Wireless connectivity facilitates setup and integration into existing surveillance systems.
- **Real-time monitoring and notifications:** The MultiSensor continuously provides real-time data via its sensors. If predefined limit values for temperature, humidity or other parameters are exceeded, the system automatically sends warning messages or alarms by e-mail or push SMS. In this way, museum staff are immediately informed of critical conditions.
- **Compact design:** The Kentix MultiSensor is housed in a compact casing that blends discreetly into its surroundings without detracting from the aesthetics of the exhibition space.
- **Remote monitoring:** By networking the sensors, museums can manage and monitor their systems centrally. This enables convenient remote monitoring and control from different locations.
- **Expandability:** The MultiSensor can be expanded and combined with all other Kentix devices. This creates a comprehensive security and monitoring system for the entire museum.

Comprehensive monitoring of museum objects is simple and straightforward

Even though Kentix's origins – its home, so to speak – lie in the server room and its monitoring, the possibilities opened up by IoT technology are almost limitless. The monitoring solution is used practically everywhere where environmental conditions need to be monitored or access needs to be controlled and regulated. The example of the German Mining Museum in Bochum is an impressive demonstration of the wide range of possible applications for Kentix monitoring solutions. [Read more about environmental monitoring](#)