

### **New service from Bosch Building Technologies for early detection of vegetation fires**

**Wildfire Detection relies on the advantages of digitalization, connectivity and artificial intelligence**

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- ▶ Early fire detection in forests, recreation areas, natural areas near infrastructure, and outdoor environments close to buildings
- ▶ End-to-end solution combines state-of-the-art sensor technology and automated alerting of emergency services
- ▶ Bosch supports the entire process from consulting, planning and implementation to operation

In vegetation fires, the combination of early detection and accurate information is critical to preventing an initial smoldering fire from developing into a large fire. Bosch Building Technologies' new service Wildfire Detection combines these key aspects into an integrated solution. The use of advanced technologies enables early detection of vegetation fires in forests, recreational areas, natural areas near infrastructure, and outdoor environments close to buildings. Responsible parties and emergency services are automatically alerted and receive all relevant information immediately. This allows countermeasures to be taken quickly and safely.

"As a partner with many years of experience in networked solutions for fire protection, we are also leveraging the benefits of digitalization, connectivity, and artificial intelligence in our new Wildfire Detection service," says Thomas Reinicke, head of the Solutions Business Life Safety at Bosch Building Technologies. "We're proud to be able to use our expertise in fire protection not only to protect people and property, but also to help preserve nature."

Vegetation fires can endanger people and damage the habitats of many animals and plant species. In addition, the fires often cause economic losses. They pose a constant threat to the important forest ecosystem: According to the German Federal Office for Agriculture and Food, a total of 7,500 hectares of forest have

been affected by fires in the last five years. This is the equivalent of nearly 11,000 German soccer fields.

### **Wildfire Detection – digital interaction of state-of-the-art technologies**

The end-to-end solution from Bosch Building Technologies includes a network of special detectors that integrate the intelligent BME690 gas sensors from Bosch Sensortec for early fire detection. The sensors are placed around the vegetation area and use an AI-based algorithm to detect smoke gases in the early stages of smoldering. In addition, they continuously provide information of interest to forestry, such as temperature and humidity. The detectors are energy self-sufficient thanks to a built-in solar panel. They recharge even in cloudy conditions or under a tree canopy. They are designed to operate for ten to 15 years without maintenance.

As soon as a sensor triggers an alarm, the potential fire is automatically reported to the fire department and other involved parties in accordance with the "Regulations of Authorities and Organizations with Security Tasks" (BOS). With this alert, Bosch Building Technologies' cloud-based BOS portal provides the control center with all the critical information it needs to guide emergency services safely to the scene. In addition to the exact geographical position of the sensor that reported the possible fire, information on temperatures and weather data, including wind direction and speed, is available at a glance. Bosch Building Technologies' fire safety experts have also integrated an alarm server into the BOS portal. This allows all relevant messages to be sent to firefighters' mobile devices.

### **Complete solution from a single source**

Based on local requirements and individual customer needs, BT manages the entire process, from consulting to planning, implementation and operation. The size of the network is scalable. This means the solution can be used for early fire detection in small vegetation areas as well as large forest landscapes.

Depending on local requirements, the fire protection experts also integrate other modern technologies, such as the video-based early fire detection system Aviotec, which can also be used outdoors. Bosch Building Technologies also offers rapid assistance from the air with a drone service linked to the control center. The transmission of live, high-resolution video can provide emergency services with crucial information for assessing the situation in the event of a fire, saving valuable time. With the Wildfire Detection service, Bosch Building Solutions offers early fire detection for forests in Germany. It is also a comprehensive solution that can be used to protect buildings and infrastructure surrounded by fields and green spaces. The new service is also of interest for storage facilities with highly flammable organic materials such as wood.

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**Press photos:**

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**Contact person for press inquiries:**

Tina Kumpf

Phone: +49 711 3653-1095

E-Mail: [Tina.Kumpf@de.bosch.com](mailto:Tina.Kumpf@de.bosch.com)

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