All clear – how to reduce airport downtime to a minimum

UBIMET's unique lightning safety concept reduces thunderstorm-related ground handling stops by 50-70%. It enables objective and transparent decision-making based on high-quality, real-time data.

Thunderstorms and lightning activity do not only put people at risk, they also pose a significant risk to the profitability of airports, when ground handling has to stop because of inclement weather. The longer the interruptions, the higher the costs. Consequently, airports strive to minimise weather-related downtimes and streamline decision-making procedures.

The challenge for airport operators is to find the optimum balance between human safety and operational efficiency. An overly cautious protocol will unnecessarily increase operational inefficiency, delay flights and cause avoidable knock-on impact on the schedules of airlines, airports and handlers.

Full situational awareness on three pillars

In close cooperation with its airport customers, UBIMET has, therefore, developed a comprehensive lightning safety concept, enabling full situational awareness at any stage of a thunderstorm. It encompasses three elements:

1. The most accurate lightning detection network

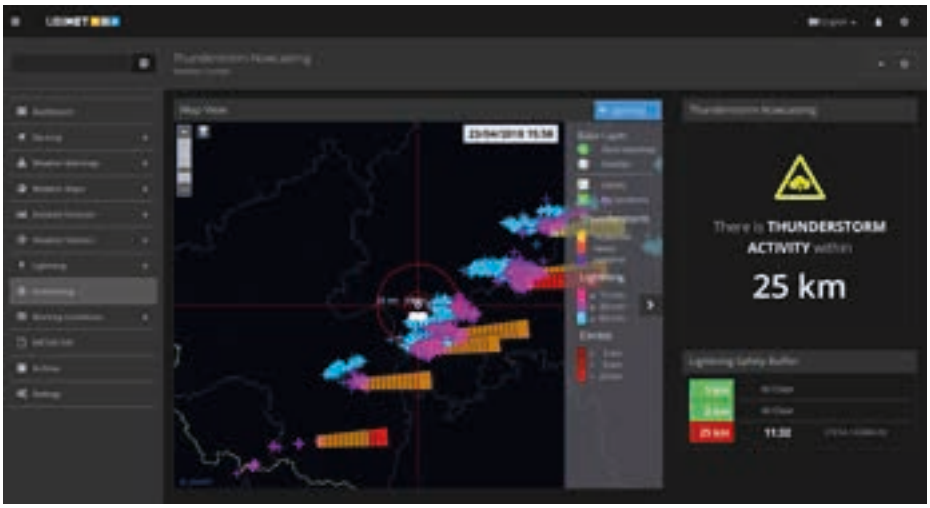
The proprietary global lightning detection system LINET of UBIMET's lightning specialist nowcast is able to detect lightning strikes with unmatched sensitivity, accuracy and detection in 3D, giving it the capability to separate between 'cloud to cloud' and 'cloud to ground' strikes. These features make it the most advanced commercially available system, similar to special solutions for militaries or NASA. It provides the best lightning data on the market and forms the core of UBIMET's lightning safety concept. LINET warns airports in real-time of lightning strikes in their vicinity.

2. Real-time thunderstorm tracking

The second element is thunderstorm nowcasting and cell tracking in real-time based on a highly sophisticated algorithm called rTNT. Within minutes of the first lightning strike, rTNT calculates the thunderstorm's movement and shows a 60-minute preview, indicating the thunderstorm's expected route and position. Ground handling managers therefore know exactly when a thunderstorm will hit the airport.

3. Local field mills covering the airport

The third element are local electrostatic field mills installed directly at the airport to detect potential lightning strikes above or in close vicinity of it. When a field mill measures a voltage of less than 100 V/m it is safe to assume that there is no chance of a lightning strike close or above the airport.



50-70% percent less downtimes and automated decision-making

An intelligent algorithm combines the data from lightning detection, nowcasting and the field mills to indicate the perfect moment when to stop or resume ground handling activities. Visualised in the Weather Cockpit®, using the traffic light system with the colours red, yellow and green, the UBIMET system provides an automated, reliable, transparent and easy-to-use decision-making tool. If the situation is "All Clear", ground handling can resume.

Renowned airports all over the world from Frankfurt to Vienna use the integrated UBIMET lightning safety concept to reduce ground handling stops by 50-70%.

www.ubimet.com