DTN MetConsole Automated Weather Observation System

Meet your aviation weather needs with inherent flexibility and proven reliability

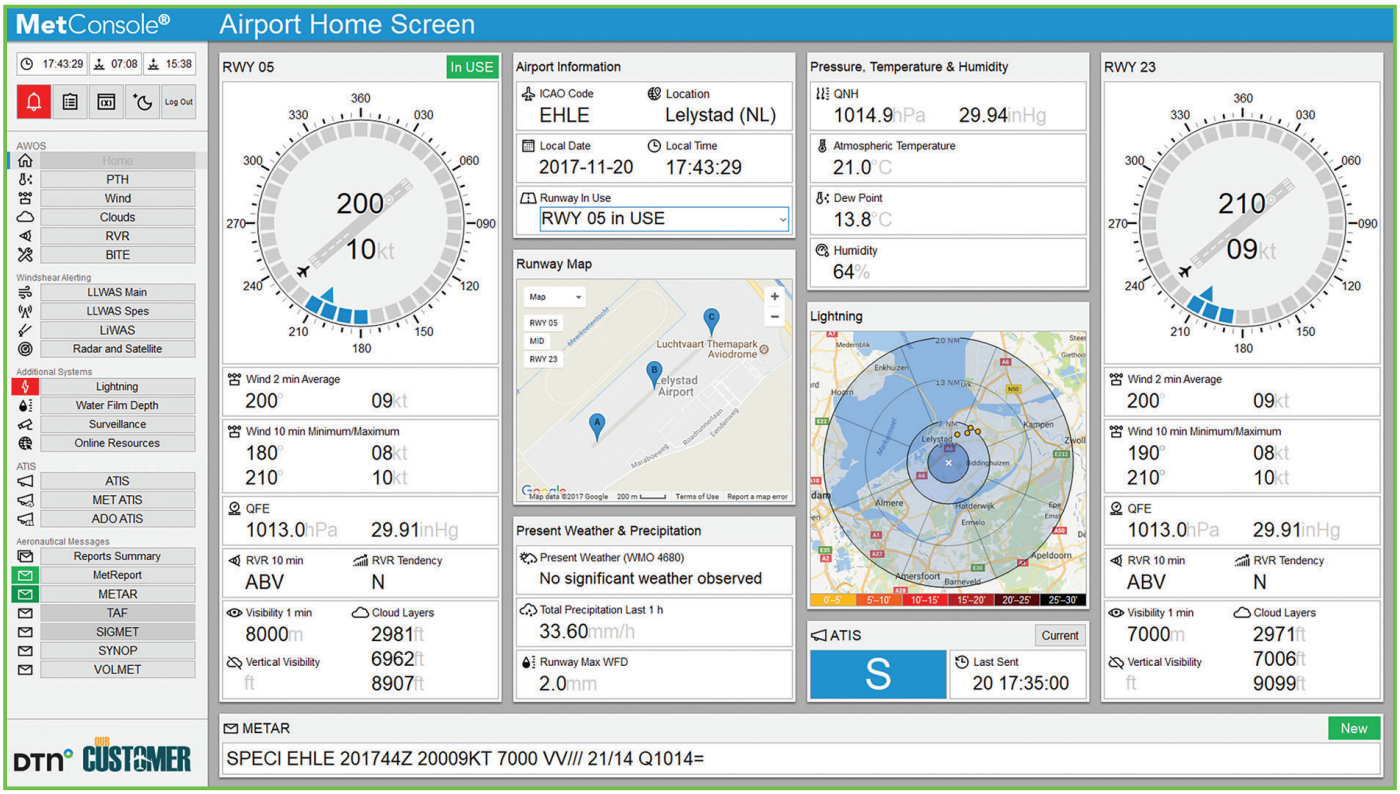
Configurable weather data in aviation

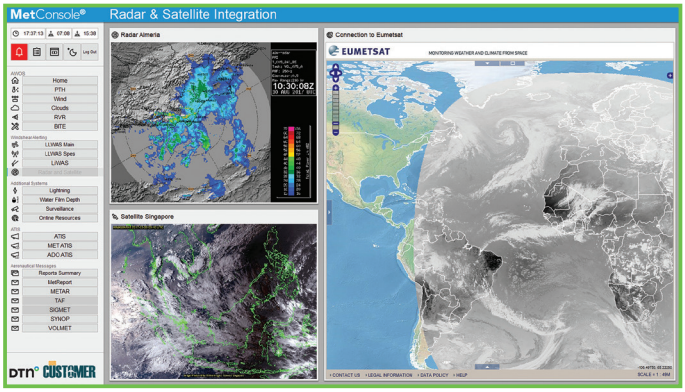
As the aviation industry is impacted by rapid technological advances, airlines and air traffic management are becoming more effective and efficient, particularly in the use of weather data. The ability to rely on accurate weather information is critical for enabling safer, more efficient flight operations. According to the University Corporation for Atmospheric Research's COMET Program, weather is responsible for up to 76% of air traffic delays. The reliable and secure management of weather observation systems — with the flexibility to meet specific observational requirements — is therefore critical to airports worldwide.

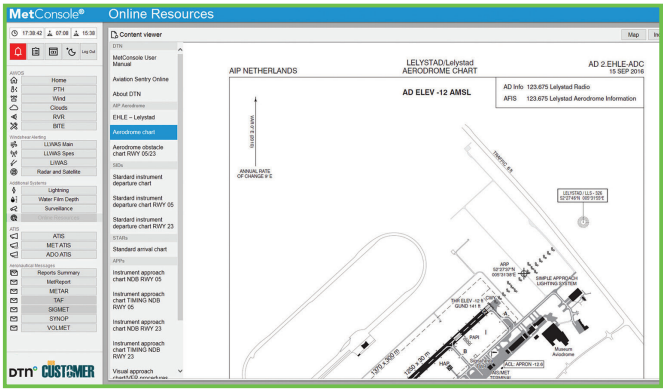
- Enhance efficiencies by automating operational processes.
- Keep passengers and personnel out of harm's way.
- Decrease weather-related delays and cancellations.
- Ensure efficient integration with other air traffic management systems.

Configurable aviation weather information system

DTN, with more than 40 years of experience providing aviation weather systems, has reinvested in the software-based MetConsole® Automated Weather Observation System (AWOS) platform to help you better manage your weather observation system with the latest technology. Our newly re-engineered multilingual-capable MetConsole AWOS provides a flexible and reliable solution for automating weather observation functions critical to safe, efficient airport operations. With its enhanced real-time operational weather intelligence, independent meteorological organizations — such as national meteorological services, civil aviation authorities, airports, and air traffic management authorities — can focus on traffic control while minimising flight delays and runway accidents attributed to adverse weather.







Greater functionality

- MetConsole AWOS automates the weather observation functions that are vital to safe, efficient airport operations. Its interoperability and adaptability are enabled by its flexible architecture and modern technology frameworks.
- MetConsole AWOS's open and modular architecture allows you to deploy the necessary functions — from the simplest AWOS up to a nationwide network of CAT III AWOS with contingency and training systems. It provides a complete set of calculations, quality checks, and algorithms that can be configured to generate the data you need.
- MetConsole AWOS's graphical editor and configuration tools allow you to design the human/machine interface to meet your specific requirements. The configuration information is stored in a database, allowing it to be customised and upgraded on demand during the system's lifecycle.
- The system meets stringent aeronautical weather observation requirements and complies fully with all relevant international standards — such as ICAO Annex and Doc, WMO Guides, ARINC, EUROCAE, ESARR, ISO, EN, and CE — ensuring efficient integration with other air traffic management systems.
- MetConsole AWOS's standardised design is sensor-agnostic, enabling the use of best-in-class sensors tailored to your operation and allowing the system to scale as needed.
- Enhanced communication tools enable the system to configure automatic generation and deliver METARs, including trend forecasts and other necessary messages or bulletins.
- A technician/maintenance tool provides a robust range of functions for technicians and system administrators for more efficient maintenance.

A comprehensive, flexible networked system

Our fully customisable and automated MetConsole AWOS collects data and performs quality checks with dual redundancy, optimising data availability and ensuring high reliability and consistency.

- Independent meteorological sensors and AWS automatically update current temperature, visibility (RVR), cloud height, wind direction and speed, dew point, barometric pressure, and other parameters.
- Redundant servers receive, validate, disseminate, and store the data for retrieval.
- Windows®-based user clients featuring graphic displays, report generation tools and statuses, and maintenance monitoring interfaces make the information readily available to your meteorological office, air traffic control, and airport operations staff.
- MetConsole AWOS interface provides users with a quick and easy way to access the information they need. You can customise the screen layout as you work or access the system using Web displays via your local area network. The interface also offers day and night modes to ensure optimal visibility 24/7.
- MetConsole AWOS has simulation and training tools to prepare your staff to safely manage real-life scenarios. These tools are fully configurable and have access to real-time data to improve effectiveness.

Seamless automation and data sharing

MetConsole AWOS' client/server architecture enables reliable data sharing across systems.

- Reliable Web-based delivery of information — no additional development required, thanks to the embedded Web GUI, which can also run on Linux® or any other operating system with a browser.
- Exchange data with third parties using XML-based formatting.
- Seamless access to data from backup systems, as if sourced locally.
- Automatic receipt of reports from a national meteorological office during unmanned hours, on a scheduled basis or in response to special meteorological conditions.
- Work simultaneously with a remote forecaster or observer to create periodic METAR reports.
- Take advantage of centralised nationwide technical monitoring and maintenance to ensure proper operation, software upgrades, and configuration.

MetConsole AWOS works for you

MetConsole AWOS's extensibility maximises your investment. End users can customise algorithms to support specialized applications. The solution's modular, standardised design and TCP/IP networking enable flexible deployment and integration.

Unmatched professional expertise

We are continually delivering aviation weather solutions with MetConsole technology. Many of these installations have MetConsole AWOS exchanging information with other solutions in the MetConsole Aviation Weather Suite, such as MetConsole ATIS/VOLMET and LLWAS modules, or with third-party systems to provide a complete aviation meteorological solution.

In addition, our aviation systems are supported by an in-house team of professional meteorologists and aviation application specialists. Clients benefit from streamlined implementation guided by our experienced project managers and technical staff throughout the project lifecycle.

Contact us for more information on deploying these advanced aviation weather systems to work at your airport.

DTN