Case Study

METEO SWISS

Zurich Airport, Switzerland

Branch

Weather services: Weather forecasts, weather consulting, flight weather services, but also meteorological forecasts and consulting for authorities, population, air traffic and the economy.

Project

Upgrading the meteorological centre to meet more advanced requirements by deploying a video wall solution and other technical adaptations in preparation for the centralisation of weather services, and in particular the Swiss aviation weather services at the Zurich Airport location.

Client

MeteoSwiss is the national weather and climate service for Switzerland, whose public service mandate is to monitor weather conditions, and generate forecasts and warnings for operational authorities and the general public regarding dangerous climate developments.

MeteoSwiss provides comprehensive weather services for civil, military and private aviation. As a partner of the Zurich Airport, MeteoSwiss provides important data for air traffic control which is indispensable for decision-making for Skyguide, the airport and the airlines.

Additionally, MeteoSwiss serves the private sector with specialised weather forecasts covering the meteorological information needs for work, sport and leisure. MeteoSwiss has 350 employees and operates centres in Zurich, Geneva, Payerne and Locarno, maintaining a presence in all three linguistic regions in Switzerland.

In the near future, all weather services and forecasts for the aviation industry will be carried out exclusively from Zurich.

Challenge

Through the use of modern technology, meteorologists today have significantly more digital meteorological data available to them than 10 years ago. In order to use the diversity of data in a flexible and efficient manner, solutions are needed to visualise the information and make it available to a large number of employees and stakeholders.

During the day-to-day activities of meteorologists, team discussions about weather monitoring, forecasts and warnings are extremely important to ensure that appropriate measures are taken to protect the safety of air traffic and the general public. In this regard, systems must be adapted to modern, dynamic work processes. The highest levels of reliability and system quality are indispensable.

Goal

In view of the centralisation of the entire Swiss Aviation Weather Services in Zurich, the existing paper visualisation method needed to be optimised. Previously, MeteoSwiss's meteorological data was presented, evaluated and discussed using DIN-A1 paper format. By implementing a suitable visualisation solution designed for 24/7 operations, the tried-and-true but no longer up-to-date working processes could be optimised and to a great extent,

Facts & Figures

- Briefing Wall
    - 4 x 46" eyevis Displays
    - 1 MK06 Multifunctional Keyboard
    - 1 EK11 Multifunctional Keyboard
    - 2 x IP Remote (4x DVI)
    - 1 Control Desk
- Meteo Wall
    - 10 x46" eyevis Displays
    - 2 MK06 Multifunctional Keyboards
    - 4 x IP Remote (8x DVI)
    - 2 Control Desks
- Meteo Office
    - 10 EK11 Multifunctional Keyboards
    - 2x Mouse Switching
    - 40 Computers shared and operated from
    - 11 Desks
    - 9 Computers are Sun Microsystems

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phased-out. Another goal was to provide the multiplicity of information and data to all the employees and interest groups as needed and immediately per mouse click, in order to lay the basis for modern and dynamic work processes. Equally important was the time frame of the project, which had to be completed within only a few months, from the planning phase through to the implementation and training.

Solution

The WEYTEC solution for MeteoSwiss consists of the digitalisation of the Meteo wall, which is now a generously sized video wall in a 5x2 format with ten 46" eyevis displays. The combination of extremely slim bezels between the units and the uniform, high-quality illumination and colouration results in a large scale, homogenous video wall with perfect image reproduction.

Additionally, a second and smaller so-called "Briefing Wall" was also installed, deploying 2x2 LCD screens. This is where pilots are briefed on weather conditions in preparation for their flights.

Both video walls utilise a control technology developed by WEYTEC, making it possible to implement an efficient and secure system using a modest amount of hardware which nonetheless fully satisfies the specified

MeteoSwiss:
Pilot Briefing Room

requirements. The full range of content (e.g. basic MeteoSwiss content, content from desk1 and desk2 etc., or a videoconference) can be easily and quickly switched to the video wall. WEYTEC Multifunctional Keyboards are used to intuitively control all of the sources and operate the video wall itself, ensuring great flexibility when handling the media. For example, with a simple press of a button, operators can fine-tune the brightness of the video wall to adjust to changing light conditions in the room.

Future Expansions

Future expansions which are already being considered include additional screens as well as the enlargement of the existing video wall. These steps are planned after a transitional phase during which the remaining paper visualisations will be eliminated. Furthermore, the remotisation of all the PCs and the graphic controller to a centralised system room would offer clear benefits for the climate in the Meteo office. Not only would heat and noise emissions in the workplace be significantly reduced, but operational and maintenance security would be optimised.

View from the pilot briefing room into the work area of MeteoSwiss at Zurich Airport

Benefits

Why did MeteoSwiss decide to implement this project with WEY Technology? According to Dr. Hans Romang, Head of Forecasts and Aviation Weather Services for MeteoSwiss, WEYTEC's products and problem-solving expertise best met the special needs of the Swiss weather service. MeteoSwiss and the meteorologists are now benefiting from a more comfortable, efficient and dynamic working environment. The weather service's unique requirements for modern workflows have been optimally met with the WEYTEC Solution.

Important information can be processed in a timely manner. The easy and intuitive switching of individual monitors serves to present a clear overview of the data and enhanced security. The ability to reuse and integrate existing MeteoSwiss hardware into today's solution was a further benefit of the new concept and another reason for choosing WEYTEC.

Thanks to the modular structure of the WEYTEC solution, future extensions are always possible, making the solution sustainable and advantageous for the long-term.

WEYTEC develops and manufactures products in Switzerland, offering complete turn-key solutions and many years of know-how in the control room and surveillance branches. This guarantees optimal customer services and long-term spare parts availability.

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Working with WEYTEC

Upgrading the meteorological centre was an ambitious project for MeteoSwiss because the work processes themselves were optimised following the digitalisation of the weather data. According to Dr. Romang, however, the decision makers were quickly convinced of the immediate and long-term benefits of working with WEYTEC.

WEYTEC's know-how became evident starting in the planning phase, with the conceptualisation and clear formulation of the solution. Hans Romang: "With WEYTEC, we felt that our requirements were completely understood from the very beginning and that we were consistently given competent advice. Timelines for the project were precisely adhered to and scheduled deadlines were met without exception. WEYTEC also proved to be a competent partner throughout the implementation phase."

Testimonial

According to Dr. Romang, all the project requirements have been met in full. "MeteoSwiss would not hesitate to recommend WEYTEC to companies or organisations which operate in control room and surveillance fields; in particular, when they rely on stable systems with special requirements and are looking for a partner who can provide the appropriate support."

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