

all clear

Frankfurt Airport can easily cope with winter weather thanks to an efficient shift planning solution

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Non-stop snow for eight hours – a dream for Alpine winter sport resorts, a nightmare for airports. It certainly is a tremendous challenge for Frankfurt Airport – as the largest commercial airport in Germany is required to maintain continuous operations even in snowy weather.

Winter service

When it snows at Frankfurt Airport, an area of around 96,000,000ft² has to be cleared. Two special deposit spaces of 296,000ft² (242,000ft² south and 54,000ft² north of the airport) are prepared to take the cleared snow, but even these spaces are insufficient if snowfall continues for several hours. The massive snow pile-up has to be managed by two high performance snow groomers.

Snowfall is tough on everyone involved. The clearing service, in

ABOVE: The 2.5-mile long runway must be cleared in 30 minutes
RIGHT: High-performance snow groomers help the airport to cope during heavy snowfall

particular, has an important and extremely demanding task. One of its duties is to clear the 2.5-mile-long and 196ft-wide runway within 30 minutes. In addition to the runway, the apron also has to be continuously open for service. At Frankfurt Airport, this total area covers 80,730,000ft² – equivalent to 1,000 football pitches. A job of this scale requires a lot of equipment. Around 200 vehicles are used per shift, including high-performance snow blowers, wheel loaders, 65ft-long sweeper-blowers and 131ft-wide gritters. To make matters more complicated, all this equipment has to be operated by specially trained staff.



Depending on the weather, up to 200 employees work in the winter service per shift. These workers are usually deployed by an employment agency. Roland Schwarz, vice president of airport infrastructure at Frankfurt Airport, and his task force get detailed updates three times a day from the German Weather Service. The number of people assigned to each shift is based on this data and they are called from the employment agency 14 to 16 hours before deployment. They are then assigned to the vehicles according to their certifications.

In the past all this had to be coordinated manually with Excel lists and small Access databases. It

often meant that even after agency workers arrived at the airport they had to wait for their paperwork – for instance, registration and allocation – to be completed before they could get to work. Extra time would also be taken at the end of shifts for reports to be prepared. All this time spent on administrative work cost the airport a lot of money. With up to 200 employees per shift – and the need for winter service 60 to 70 times a year – the amount spent quickly reached five figures.

Higher productivity

The time and cost factors were good reasons for Schwarz and his team to consider a more efficient way to plan for winter service. They needed a solution that would ensure quick and correct allocation of trained employees to the right vehicles, while simultaneously complying with legal working times and providing necessary data for subsequent reports. They were helped in these areas by their colleagues from the Frankfurt Airport Information and Communications Services service unit (IUK). The IUK is responsible for all IT and communications solutions, ensuring smooth and efficient controlling and networking of all airport-specific processes.

After a detailed study of the requirements, the solution became clear to Dr Wolfgang Pelzer, vice president of application development at Frankfurt Airport. He recommended the Quintiq software. According to Pelzer, “The architecture of the Quintiq platform allowed our special Fraport requirements to be modeled



LEFT: As many as 200 employees can be working per shift in the winter
RIGHT: Staff clear snow from an area measuring 96,000,000ft²

on the basis of industry-specific functionalities. With this approach, we provided users with a tailored solution in the shortest project time, which achieved directly measurable results after starting operations.”

The winter service requirements were specified in July 2014 and finalized by the teams involved from Frankfurt Airport and Quintiq. Once the operations director gave approval, the implementation began with an ambitious schedule of 12 weeks – which was met through a joint effort between IUK and Quintiq. The first three test runs were carried out in November.

So far the project has been very encouraging. Schwarz says, “The cooperation between my employees, our colleagues from the IUK and the specialists from Quintiq went completely smoothly. The Quintiq software solution has proved to be extremely versatile and could be very quickly modeled and used by the IUK team. Within a few weeks a system has been installed here with which we can organize the winter service much more efficiently.”

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Workforce optimization

As soon as the weather makes deployment of winter service necessary, and the clearance teams have been defined, the solution from Quintiq will come into use. The operations manager will be able to view the planning status in real time, with all-important information available on the computer monitor at a glance. At the top of the screen, the areas that require attention and the vehicles will be shown. With the improved system, drivers are automatically assigned to the vehicles they are certified to operate. The system is also linked to the working terminal and records the arrival of every employee in real time. As well as the current staffing level, the operations manager has full visibility of information, making it easier to observe working time regulations, plan breaks and manage the fleet. If necessary, the operations manager can also make manual changes to the plan.

“Quintiq has made a huge contribution to efficiently planning and coordinating our winter service. It was possible to model the versatile software according to our needs and quickly implement it. I would recommend Quintiq,” says Pelzer.

With the staff all in place to tackle winter service operations more efficiently, travelers can look forward to a great and stress-free experience at Frankfurt Airport – with or without snowfall.

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