Customer project summary

**Winter services XXL at Germany’s largest airport**

Starting this winter, Fraport AG will be using Workforce Planner from Quintiq to plan winter service deployment.
Non-stop snow for eight hours – what is a dream for Alpine winter sport resorts is nightmare for an airport. It certainly is a considerable challenge for Frankfurt Airport, the largest commercial airport in Germany. Here, an area of around nine million square metres has to be cleared of snow. Two special deposit spaces of 27,500 square meters (22,500 south and 5,000 north of the airport) are ready to take the cleared snow. Still, if snowfall continues for several hours it piles up and has to be continually kept in check by two high performance snow groomers.

The challenge

Like all German commercial airports, Frankfurt Airport is required to maintain continual operations. It has to be permanently open to allow for scheduled and unscheduled take-offs and landings. In snowy weather, this poses a great challenge for everyone involved. The clearing service in particular has an important and extremely demanding task. For example, the crew has to clear a four-kilometer long and 60-meter wide runway within 30 minutes. In addition to the runway, the apron (the handling, taxiing, parking and maintenance areas) also has to be continuously open for service. At Frankfurt Airport this total area covers 7.5 million square meters – the 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, 20-meter-long sweeper-blowers and 40-meter-wide gritters. All this equipment has to be operated by specially trained staff.

Depending on the weather, up to 200 employees per shift work in the winter service. These workers are usually deployed by an employment agency. Roland Schwarz (Vice President Airport Infrastructure - Airport Facilities & Area Services) 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 these are called from the employment agency.
After a detailed internal analysis of the requirements the solution became clear to Dr Wolfgang Pelzer, Vice President Application Development ERP, Scheduling and Management Information Systems at Frankfurt Airport. He recommended Quintiq: “The architecture of the Quintiq platform allowed our special Fraport requirements to be modelled 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 described in July and finalized by the teams involved from Fraport and Quintiq. Once the operations director gave approval, the implementation began with an ambitious timetable of 12 weeks – which was met through a joint effort between IUK and Quintiq. The first three test runs were carried out in November.

Roland 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 modelled and used by the IUK team. Within a few weeks a system has been installed here with which we can organise the winter service much more efficiently.”

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, using Excel lists and small Access databases. That system often meant that even after agency workers arrived at the airport, they had to wait for paperwork – such as registration and allocation – to be completed before they could get to work. Extra time was also taken up at the end of shifts for reports to be prepared. All this time spent on administrative work was costing 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 quickly reached five figures.

This in itself was a good reason for Roland Schwarz and his team to consider a more efficient way to plan winter services. They needed a solution that ensured quick and correct allocation of trained employees to the right vehicles while simultaneously complying with legal working times and providing the necessary data for the subsequent reports. They were helped here by their colleagues from the Frankfurt Airport Information and Communications Services service unit (IUK). The IUK is responsible for all IT and communications solutions and thus for smoothly and efficiently controlling and networking all airport-specific processes.
The solution

As soon as the weather makes deployment of the winter service necessary and the clearance teams have been defined, the solution from Quintiq will come into use and permanently give the operations manager the planning status – in real time. All important information will be seen on the computer monitor at a glance. The areas that require attention area and the vehicles are shown at the top of the monitor. Drivers are automatically assigned to vehicles they are certified to operate. Furthermore, the system has an interface to the working terminal and records every employee arriving in real time. As well as the current staffing level, the operations manager has visibility of information that makes it easier for him 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 significant contribution to the efficient planning and coordinating of our winter service. It was possible to model the versatile software according to our needs and quickly implement it. I would recommend Quintiq,” says Dr Wolfgang Pelzer.